GENERAL NOTES

THE TWISTED WIRE MESH SHALL BE FORMED IN A UNIFORM HEXAGONAL PATTERN WITH NONRAVELING DOUBLE TWISTS. THE PERIMETER EDGES OF THE MESH FOR EACH PANEL SHALL BE TIED TO A SELVEDGE WIRE HAVING A MINIMUM SIZE OF 0.144 INCH DIAMETER (U.S. WIRE GAGE NO. 9) SO THAT THE SELVEDGE IS AT LEAST THE SAME STRENGTH AS THE BODY OF THE MESH.

3. PLACING PANELS

THE JOINTS SHALL BE TIED IN SUCH A MANNER THAT STRENGTH AND FLEXIBILITY AT THE POINT OF CONNECTION IS AT LEAST EQUAL TO THE MESH. THE CONNECTING WIRE IS TO MEET OR EXCEED THE SAME SPECIFICATIONS AS THE WIRE USED IN THE MESH.

LACING WIRE FOR ASSEMBLING BASKETS AND INTERCONNECTING ADJACENT BASKETS AND INTERNAL CONNECTING WIRE FOR REINFORCING SIDE PANELS SHALL BE COATED STEEL WIRE HAVING A MINIMUM SIZE OF 0.082 INCH DIAMETER (U.S. WIRE GAGE NO. 13.5).

ALTERNATE METHODS AND FASTENERS FOR ASSEMBLING BASKETS AND INTERCONNECTING ADJACENT BASKETS IN LIEU OF LACING WIRE AND SPIRAL BINDERS MUST BE ACCEPTABLE TO THE GABION MANUFACTURER. ALTERNATE FASTENERS MUST REMAIN CLOSED WHEN SUBJECTED TO A 600 POUND TENSILE FORCE WHILE CONFINING THE MAXIMUM NUMBER OF WIRES TO BE CONFINED BY THE FASTENER GABION STRUCTURE. INSTALLATION PROCEDURES, FASTENER TEST RESULTS, AND GABION MANUFACTURER'S ACCEPTANCE SHALL BE SUBMITTED FOR APPROVAL OF ALTERNATE METHODS AND FASTENERS.

4. COATINGS

THE WIRE SHALL BE GALVANIZED WITH A MINIMUM ZINC COATING OF 0.8 OUNCES PER SQUARE FOOT OF WIRE SURFACE.

WHERE ADDITIONAL COATING IS REQUIRED BY THE PLANS THE GALVANIZED WIRE SHALL BE COATED WITH PVC OR A FUSION BONDED EPOXY. THIS COATING SHALL BE GREY IN COLOR.

5. TESTS AND CERTIFICATION

EACH SHIPMENT OF UNITS TO A JOB SITE SHALL BE ACCOMPANIED BY A CERTIFICATION WHICH STATES THAT THE MATERIAL CONFORMS TO THE REQUIREMENTS OF THIS SPECIFICATION. A SHIPMENT SHALL CONSIST OF ALL MATERIAL ARRIVING AT THE JOB SITE AT SUBSTANTIALLY THE SAME TIME. THE CERTIFICATION SHALL BE ON COMPANY LETTERHEAD AND SHALL BE SIGNED BY AN OFFICER OF THE COMPANY HAVING LEGAL AUTHORITY TO BIND THE COMPANY.

THE GABION BASKETS MAY BE OBTAINED FROM THE FOLLOWING MANUFACTURERS:

LANE ENTERPRISES INC.
BOX 345
PULASKI, PA 16143
(412) 652-7747

TERRA AQUA GABIONS
4930 ENERGY WAY
RENO, NV 89503

MACCAFERRI GABIONS, INC.
RR #2, BOX 43a
WILLIAMSPORT, MD 21795

RIVERDALE-MILLS CORP.
130 RIVERDALE STREET
NORTHBRIDGE, MA 01534
(508) 234-8715 OR 8716

A. ELONGATION

THE WIRE MESH SHALL HAVE SUFFICIENT ELASTICITY TO PERMIT ELONGATION OF THE MESH EQUIVALENT TO A MINIMUM OF 10 PERCENT OF THE LENGTH OF THE SECTION OF THE MESH UNDER TEST WITHOUT REDUCING THE GAGE OR TENSILE STRENGTH OF THE INDIVIDUAL WIRE. ELONGATION TESTING SHALL OCCUR PRIOR TO COATING AND FABRICATION OF THE MESH.

B. LOAD TEST

A SECTION OF THE MESH 6 FEET LONG AND NOT LESS THAN 3 FEET WIDE, AFTER FIRST BEING SUBJECTED TO THE ELONGATION TEST DESCRIBED ABOVE, SHALL WITHSTAND A LOAD TEST OF 6,000 POUNDS APPLIED TO AN AREA OF ONE SQUARE FOOT APPROXIMATELY IN THE CENTER OF THE SECTION UNDER TEST.

C. SINGLE STRAND CUT

THE WIRE MESH SHALL BE FABRICATED IN SUCH A MANNER AS TO BE NON-RAVELING. THIS IS DEFINED AS THE ABILITY TO RESIST PULLING APART AT ANY OF THE TWISTS OR CONNECTIONS FORMING THE MESH.

D. TENSILE STRENGTH

THE TEST SHALL BE CONDUCTED ON THE WIRE MESH IN ACCORDANCE WITH DETAILS DESCRIBED IN ASTM A-392 EXCEPT THAT STRENGTH SHALL BE AS LISTED UNDER LOAD TEST. TENSILE TESTING SHALL OCCUR PRIOR TO COATING AND FABRICATION OF THE MESH.

E. ZINC COATING

THE MINIMUM WEIGHT OF COATING SHALL BE 0.8 OZ. PER SQ. FT.

THE TEST SHALL BE CONDUCTED IN ACCORDANCE WITH DETAILS DESCRIBED IN ASTM DESIGNATION A-90.

F. PVC COATING (MINIMUM THICKNESS 0.015 INCHES)

SPECIFIC GRAVITY SHALL BE 1.30 TO 1.35 Kg/Dm3 AS SPECIFIED IN ASTM D792.

HARDNESS SHALL BE 50 TO 60 AS SPECIFIED IN ASTM D2240.

RESISTANCE TO ABRASION SHALL BE TESTED AS PER ASTM D1242 WITH THE LOSS OF WEIGHT NOT BEING MORE THAN 0.195g.

EXPOSURE TO ULTRAVIOLET RAYS SHALL BE TESTED ACCORDING TO ASTM D1499 FOR 2000 HOURS AT 63 DEGREES CELSIUS.

G. FUSION BONDED EPOXY COATING

THE EPOXY SHALL BE FUSION BONDED IN ACCORDANCE WITH ASTM A884. ABRASIVE RESISTANCE SHALL BE TESTED AS PER ASTM D1242 WITH THE LOSS OF WEIGHT BEING NOT MORE THAN 0.19g.

B. FILL

1. SIZE

GABION BASKETS SHALL BE FILLED WITH APPROVED STONE WITH A NMINIMUM SIZE OF 4" AND A MAXIMUM SIZE OF 8", WITH BOTH STONE MEASUREMENTS MADE IN THE GREATEST DIMENSION. REVETMENT MATTRESS SHALL BE FILLED WITH SIZE NO. 1 STONE (AASHTO M43) IN ACCORDANCE WITH CMS TABLE 703-1.

2. THE STONE SHALL MEET THE FOLLOWING TESTS:

A. THE FREEZE-THAW TEST: A MAXIMUM OF TEN PERCENT LOSS, BY WEIGHT AFTER 25 CYCLES OF FREEZING AND THAWING IN ACCORDANCE WITH THE REQUIREMENTS OF AASHTO T103.

B. SODIUM SULFATE OR MAGNESIUM SULFATE SOUNDNESS TEST: A MAXIMUM OF TEN PERCENT LOSS, BY WEIGHT AFTER TEN CYCLES OF THE TEST IN ACCORDANCE WITH THE REQUIREMENTS OF AASHTO T104.

3. *BENCHING OF FOUNDATION SLOPES*

ALTHOUGH CROSS-SECTIONS INDICATE SPECIFIC DIMENSIONS FOR PROPOSED BENCHING OF THE EMBANKMENT FOUNDATION IN CERTAIN AREAS, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. ALL OTHER SLOPED EMBANKMENT AREAS SHALL BE BENCHED AS SET FORTH IN 203.09. NO ADDITIONAL PAYMENT WILL BE MADE FOR BENCHING REQUIRED UNDER THE PROVISIONS OF 203.09.

III. CONSTRUCTION DETAILS

A. ASSEMBLY

ASSEMBLY AND ERECTION OF THE BASKETS SHALL BE AS PER MANUFACTURER'S RECOMMENDATIONS.

B. INSTALLATION

THE ASSEMBLED UNITS SHALL BE CARRIED TO THE JOB SITE AND PLACED IN THEIR PROPER LOCATION. FOR STRUCTURAL INTEGRITY, ALL ADJOINING EMPTY BASKETS MUST BE LACED ALONG THE PERIMETER OF THEIR CONTACT SURFACES IN ORDER TO OBTAIN A MONOLITHIC STRUCTURE.

C. FILLING

BASKETS SHALL BE FILLED WITH STONE CAREFULLY PLACED BY HAND OR MACHINE TO ASSURE ALIGNMENT AND AVOID BULGES WITH A MINIMUM OF VOIDS. ALONG ALL EXPOSED FACES AND EDGES, THE OUTER LAYERS OF STONE SHALL BE CAREFULLY PLACED AND PACKED BY HAND, ENSURING A NEAT, COMPACT, SQUARE APPEARANCE.

GABIONS SHALL BE FILLED IN THREE LAYERS, APPROXIMATELY ONE FOOT AT A TIME. TWO CONNECTING WIRES SHALL BE PLACED BETWEEN EACH LAYER IN ALL CELLS ALONG ALL EXPOSED FACES OF THE GABION STRUCTURE. ALL CONNECTING WIRES SHALL BE LOOPED AROUND TWO MESH OPENINGS AND THE WIRE TERMINALS SHALL BE SECURELY TWISTED TO PREVENT THEIR LOOSENING.

THE CELLS IN ANY ROW SHALL BE FILLED IN STAGES SO THAT LOCAL DEFORMATION MAY BE AVOIDED, THAT IS, AT NO TIME SHOULD A CELL BE FILLED TO A DEPTH EXCEEDING ONE FOOT MORE THAN THE ADJOINING CELL.

THE LAST LAYER OF STONE SHALL BE LEVELED WITH THE TOP OF THE GABION TO ASSURE PROPER CLOSING OF THE LID AND PROVIDE AN EVEN SURFACE FOR THE NEXT COURSE.

D. LID CLOSING

THE LIDS SHALL BE CLOSED TIGHT OVER THE FILLING UNTIL THE LID MEETS THE PERIMETER EDGES OF THE FRONT AND END PANELS.

THE LID SHALL BE TIGHTLY LACED ALONG ALL EDGES, ENDS AND DIAPHRAGM(S) IN THE SAME MANNER AS DESCRIBED ABOVE FOR ASSEMBLY.

E. THE CONFIGURATIONS OF THE TOP SHALL COMPLY WITH THE REQUIREMENTS SHOWN ON SHEET NO. 40.

IV. PAYMENT

THIS ITEM SHALL INCLUDE THE GABIONS, FILL MATERIAL, ANY EXCAVATION, AND ALL EQUIPMENT, LABOR AND MATERIAL TO COMPLETELY INSTALL THE BASKETS. PAYMENT SHALL BE THE CUBIC YARDS IN PLACE AND ACCEPTED. PAYMENT SHALL BE MADE UNDER:

ITEM	UNITS	DESCRIPTION
SPECIAL	C.Y.	GABION, WITH ADDITIONAL COATING

EROSION CONTROL

TEMPORARY SOIL EROSION AND SEDIMENT CONTROL

THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES:

ITEM 207 TEMPORARY SEEDING AND MULCHING	1500 SQ. YD.
ITEM 207 STRAW OR HAY BALES	50 EACH
ITEM 207 FILTER FABRIC FENCE	300 LIN. FT.
ITEM 659 COMMERCIAL FERTILIZER	0.08 TON
ITEM 659 REPAIR SEEDING AND MULCHING	375 SQ. YD.
ITEM 659 WATER	4 M GAL

CALCULATED J.J.P.
CHECKED R.L.B.

GENERAL NOTES

LAK-2-9.46

BRIDGE 8x/A3