APPENDIX B: DETAIL DRAWINGS OF SELECTED IMPROVEMENT TECHNIQUES
This appendix provides schematic drawings (not to scale) that illustrate the materials, form, and construction of selected improvement techniques. These drawings are not intended to substitute for site-specific engineering design. Site-specific calculations should be completed by a qualified hydrologist, engineer, and/or landscape architect to determine appropriate rock sizing, structure dimensions, etc. for installation in a particular location. In most cases, installation of these types of projects will require relevant State, County, and City permits. It is recommended that the publications, tables, and resources provided in chapter 4 of this document be consulted prior to designing or constructing any of these improvement measures. Particular care should be exercised when construction involves disturbance of areas within the annual high water level of any stream.

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Drawing 1. No-mow buffer.
Drawing 2. Vegetated soil lifts with rock toe protection.
Drawing 3. Vegetated modular block retaining wall.
Drawing 4. Vegetated crib retaining wall.
Drawing 5. Vegetated gabion basket retaining wall.
Drawing 7. Storm drain outlet protection using vegetated rock.
Drawing 8. Vegetated rock-lined swale.
REMOVE UPPER TIERS OF GABIONS (ABOVE AHWL). LAY BACK SLOPE TO GREATEST EXTENT POSSIBLE AND REVEGETATE USING TOPSOIL, SEED, AND BIOTECHNICAL STABILIZATION TECHNIQUES AS NEEDED.

RETROFIT LOWER GABION TIERS (WITHIN AHWL) WITH LIVE PLANT STAKES. CREATE PILOT HOLES WITH REBAR, PIPE, AND/OR DRILL EQUIPMENT. REWIRE BASKETS AS NEEDED WITH PVC-COATED WIRE.

EXISTING SLOPE

TOPSOIL, SEED, AND PLANTS. INCORPORATE BIOTECHNICAL METHODS ON SLOPES > 3:1

SLOPE AFTER RETROFIT

WATER SURFACE

EXISTING UNVEGETATED GABION BASKETS

SECTION VIEW

GABION BASKET RETROFIT

Drawing 12. Rock-lined tailwater pool (cross-section view).
ROCK VANES WITH J-HOOKS CAN BE COMBINED WITH BANK STABILIZATION STRUCTURES

SLOPE OF VANE > 2% (FROM SILL TO J-HOOK)

THE SUGGESTED DISTANCE BETWEEN STRUCTURES (WITH RELATIVELY GENTLE BEND CURVATURE) IS TWICE THE CHANNEL WIDTH

20° - 30° ANGLE FROM BANK LINE

ROCK VANES WITH J-HOOKS

Access steps.

**Drawing 18.** Access steps.
2.3' DIAMETER BOULDERS

FILL VOIDS WITH SAND OR SANDY LOAM AND SEED

WIDTH VARIES

PERMEABLE CONCRETE MODULAR PAVING BLOCKS

SPLIT RAIL FENCE

WATER FLOW

PLAN VIEW

EXISTING STREAM BANK

COMPACTED AGGREGATE SUB-BASE

WATER SURFACE

COBBLE TOE PROTECTION

CROSS-SECTION VIEW

STABILIZED PERVIOUS ACCESS RAMP

Drawing 19. Stabilized pervious access ramp.