

- NOTES:**
1. WHEN CUT/FILL SLOPE HAS BEEN COMPLETED, THE SLOPE SHOULD BE TRIMMED AND THE PERMANENT EROSION CONTROL MEASURES OF SEEDING AND MULCHING SHOULD BE CARRIED OUT. IF THE CUT/FILL IS TRIMMED "OUT OF SEASON" (FROM NOV. 1 THROUGH APRIL 1), MULCH THE SLOPE AND SEED ON TOP OF THE MULCH IN THE NEXT SEEDING SEASON.
  2. IF THE SLOPE CANNOT BE COMPLETED BECAUSE PAVING IS REQUIRED OR FOR OTHER REASONS, THE SEEDING AND MULCHING SHOULD BE COMPLETED TO THE MAXIMUM EXTENT POSSIBLE.
  3. WHEN THE CUT/FILL CANNOT BE BROUGHT TO FINAL GRADE IN A REASONABLE LENGTH OF TIME IT SHOULD BE MULCHED PER GP-10-01.
  4. PROVIDE A CONTINUOUS LINE OF SILT FENCE AT THE PERIMETER OF SLOPES UNTIL THE FINAL STABILIZATION HAS BEEN APPROVED BY THE DESIGN ENGINEER OR THE INSPECTING PROFESSIONAL.
  5. ALL FILL SLOPES AND CONSTRUCTED EMBANKMENTS SHALL BE INSTALLED IN ACCORDANCE WITH NYS DOT STANDARD SPECIFICATIONS SECTION 203 (EXCAVATION AND EMBANKMENT).
  6. TEMPORARY AND PERMANENT SEEDING AND MULCHING SELECTION AND APPLICATION RATES SHALL BE IN ACCORDANCE WITH THE NYS STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL, CHAPTER 3.

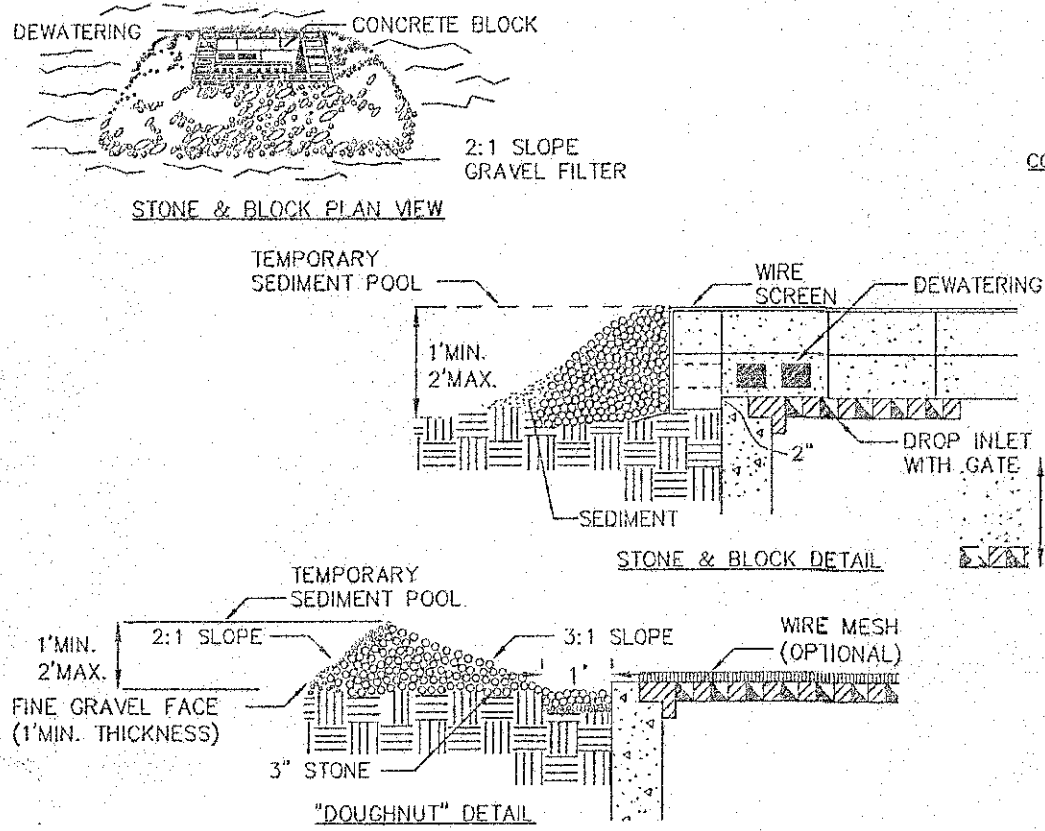
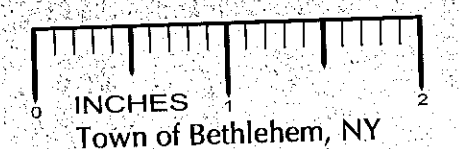
**SEEDING AND MULCHING GUIDES - CUT/FILL SLOPES**  
NOT TO SCALE

|                        | TOWN POND<br>OUTFALL | CB 3<br>OUTFALL | SOUTHWEST<br>SWALE<br>OUTFALL | ARCH<br>CULVERT<br>OUTFALL |
|------------------------|----------------------|-----------------|-------------------------------|----------------------------|
| D= DIA. OF DISCH. PIPE | 12"                  | 12"             | 12"                           | 59"                        |
| LA= LENGTH OF APRON    | 6'                   | 6'              | 9'                            | 10'                        |
| W= LA+D                | 7'                   | 7'              | 10'                           | 15'                        |
| D 50 RIP-RAP SIZE      | 6"                   | 6"              | 6"                            | 6"                         |
| D 50 RIP-RAP DEPTH     | 14"                  | 14"             | 14"                           | 14"                        |

NOTE:  
D50 6" RIP-RAP SIZE EQUIVALENT  
TO NYS DOT LIGHT STONE FILL

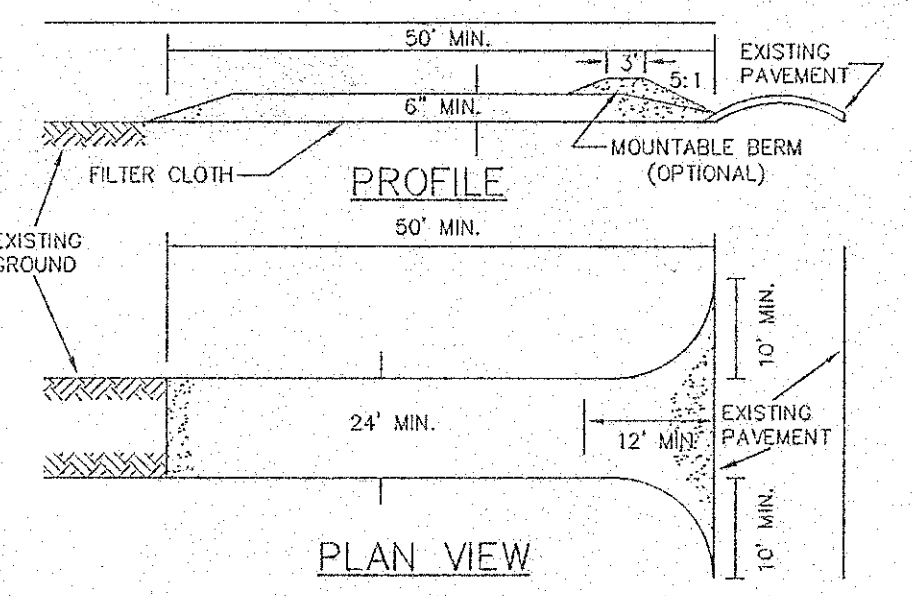
- CONCRETE WASHOUT AREA INSTALLATION NOTES**
1. SEE PLAN VIEW FOR LOCATIONS OF CONCRETE WASHOUT AREA
  2. THE CONCRETE WASHOUT AREA SHALL BE INSTALLED PRIOR TO ANY CONCRETE PLACEMENT ON SITE.
  3. VEHICLE TRACKING CONTROL IS REQUIRED AT THE ACCESS POINT.
  4. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE WASHOUT AREA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CONCRETE WASHOUT AREA TO OPERATORS OF CONCRETE TRUCKS AND PUMPS.
  5. EXCAVATED MATERIAL SHALL BE UTILIZED IN PERIMETER BERM CONSTRUCTION.
- CONCRETE WASHOUT AREA MAINTENANCE NOTES**
1. THE CONCRETE WASHOUT AREA SHALL BE REPAIRED AND ENLARGED OR CLEANED OUT AS NECESSARY TO MAINTAIN CAPACITY FOR WASTED CONCRETE.
  2. AT THE END OF CONSTRUCTION, ALL CONCRETE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AT AN APPROVED WASTE SITE.
  3. WHEN THE CONCRETE WASHOUT AREA IS REMOVED, COVER THE DISTURBED AREA WITH TOP SOIL, DRILL, SEED AND CRIMP MULCH OR OTHERWISE STABILIZE IN A MANNER APPROVED BY THE LOCAL JURISDICTION.
  4. INSPECT WEEKLY, DURING AND AFTER ANY STORM EVENT.

**CONCRETE WASHOUT AREA DETAIL**  
NOT TO SCALE



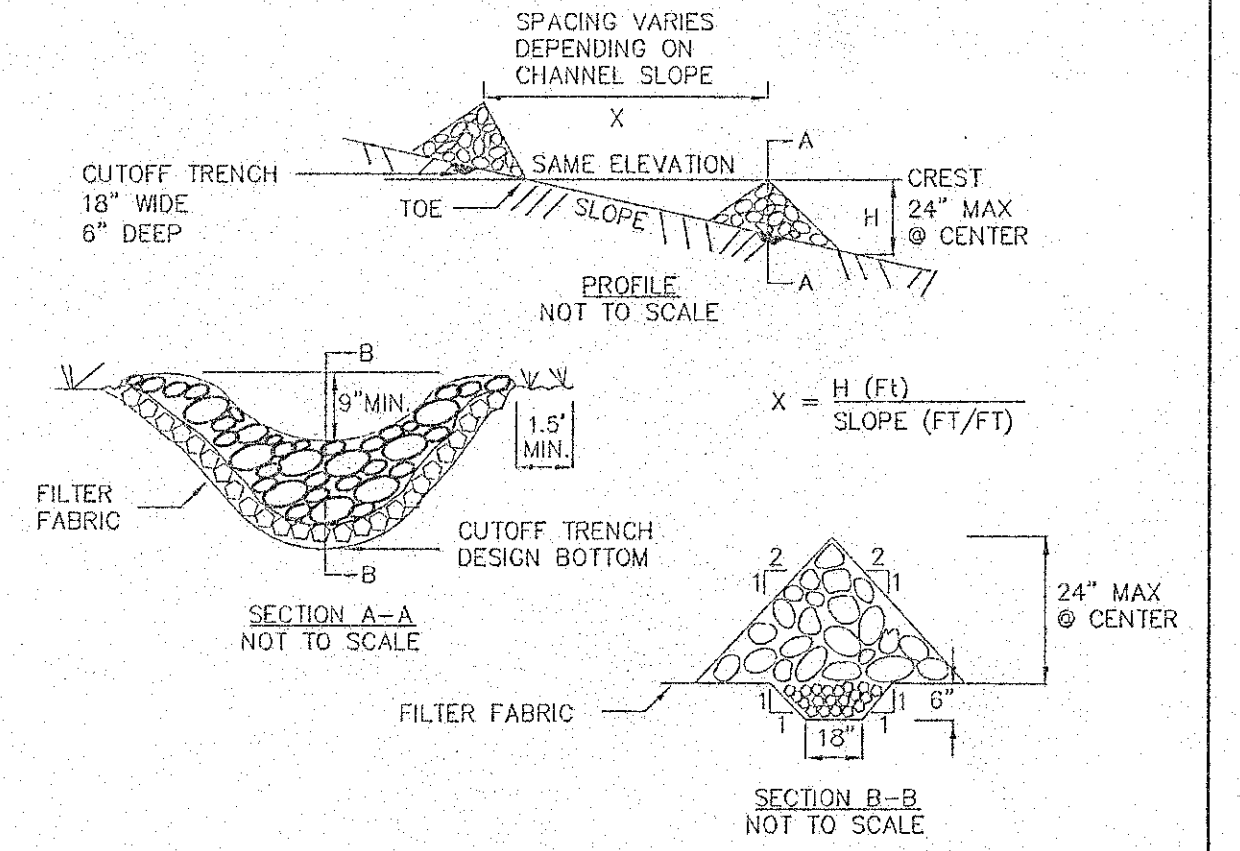
- CONSTRUCTION SPECIFICATIONS**
1. LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE FOR DEWATERING. FOUNDATION SHALL BE 2 INCHES MINIMUM BELOW REST OF INLET AND BLOCKS SHALL BE PLACED AGAINST INLET FOR SUPPORT.
  2. HARDWARE CLOTH OR 1/2" WIRE MESH SHALL BE PLACED OVER BLOCK OPENINGS TO SUPPORT STONE.
  3. USE CLEAN STONE OR GRAVEL 1/2"-3/4" INCH IN DIAMETER PLACED 2 INCHES BELOW TOP OF THE BLOCK ON A 2:1 SLOPE OR FLATTER.
  4. FOR STONE STRUCTURES ONLY, A 1 FOOT THICK LAYER OF THE FILTER STONE WILL BE PLACED AGAINST THE 3 INCH STONE AS SHOWN ON THE DRAWINGS. MAXIMUM DRAINAGE AREA 1 ACRE.

**STONE & BLOCK DROP INLET PROTECTION  
DETAILS FOR PAVED AREAS**  
NOT TO SCALE



- CONSTRUCTION SPECIFICATIONS**
1. STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
  2. LENGTH - NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FEET MINIMUM LENGTH WOULD APPLY).
  3. THICKNESS - NOT LESS THAN SIX (6) INCHES.
  4. WIDTH - TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.
  5. FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
  6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
  7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS - OF - WAY. ALL SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO PUBLIC RIGHTS - OF - WAY MUST BE REMOVED IMMEDIATELY.
  8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
  9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

**STABILIZED CONSTRUCTION  
ENTRANCE DETAILS**  
NOT TO SCALE

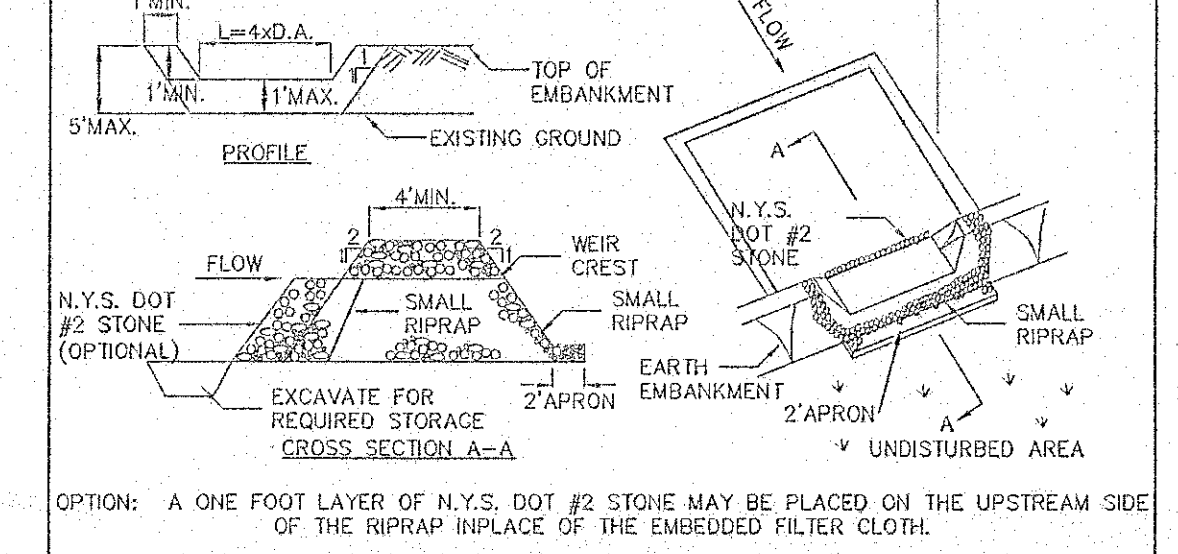


- CONSTRUCTION SPECIFICATIONS**
1. STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION TO THE LINES, GRADES AND LOCATIONS SHOWN IN THE PLAN.
  2. SET SPACING OF CHECK DAMS TO ASSUME THAT THE ELEVATIONS OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION OF THE TOE OF THE UPSTREAM DAM.
  3. EXTEND THE STONE A MINIMUM OF 1.5 FEET BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
  4. PROTECT THE CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
  5. ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONE. MAXIMUM DRAINAGE AREA 2 ACRES.

**CHECK DAM DETAIL**  
NOT TO SCALE

U.S. DEPARTMENT OF AGRICULTURE  
NATURAL RESOURCES CONSERVATION SERVICE  
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE

**RIPRAP OUTLET PROTECTION**



OPTION: A ONE FOOT LAYER OF N.Y.S. DOT #2 STONE MAY BE PLACED ON THE UPSTREAM SIDE OF THE RIPRAP IN PLACE OF THE EMBEDDED FILTER CLOTH.

- CONSTRUCTION SPECIFICATIONS**
1. AREA UNDER EMBANKMENT SHALL BE CLEARED, CRUBBED AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE POOL AREA SHALL BE CLEARED.
  2. THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS AND OTHER WOODY VEGETATION AS WELL AS OVER-SIZED STONES, ROCKS, ORGANIC MATERIAL OR OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED.
  3. ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER.
  4. THE STONE USED IN THE OUTLET SHALL BE SMALL RIPRAP 4"-8" ALONG WITH A 1" THICKNESS OF 2" AGGREGATE PLACED ON THE UP-GRADE SIDE ON THE SMALL RIPRAP OR EMBEDDED FILTER CLOTH IN THE RIPRAP.
  5. SEDIMENT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP.
  6. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED.
  7. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION IS MINIMIZED.
  8. THE STRUCTURE SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

**STONE OUTLET SEDIMENT TRAP DETAIL**  
NOT TO SCALE

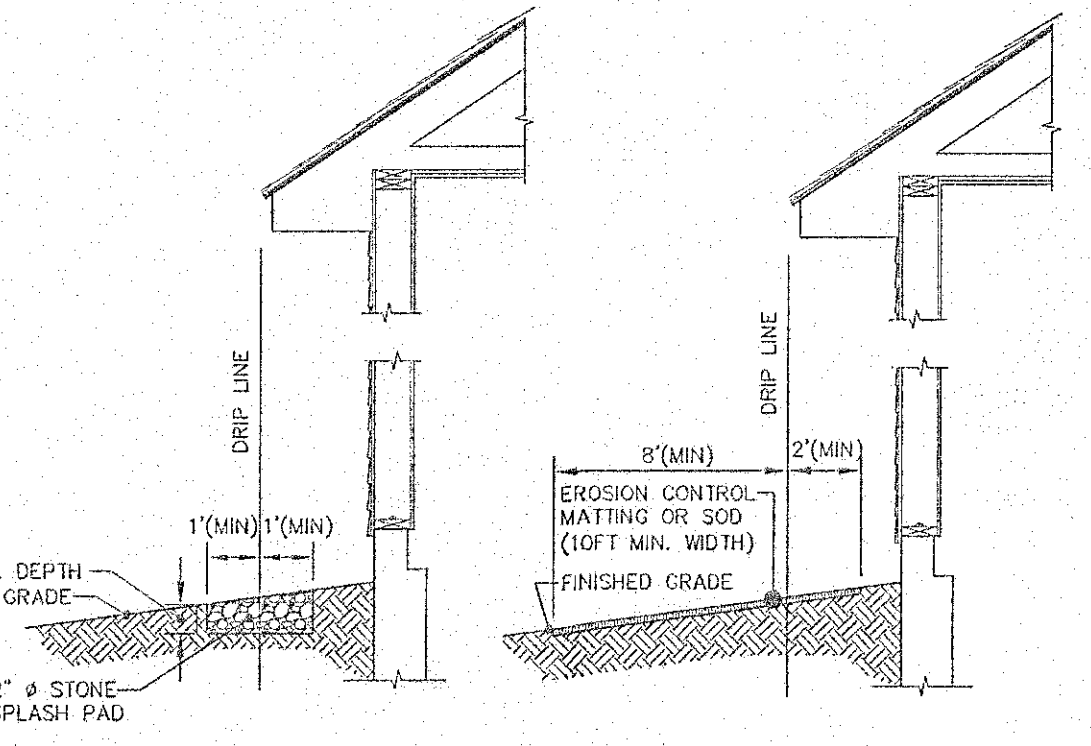
TOWN OF BETHLEHEM PLANNING BOARD

Town of Bethlehem Planning Board  
By direction of the Chairman  
these plans are hereby approved.  
See first sheet for date & signature.  
213

FOR INFORMATION ONLY  
NOT FOR CONSTRUCTION

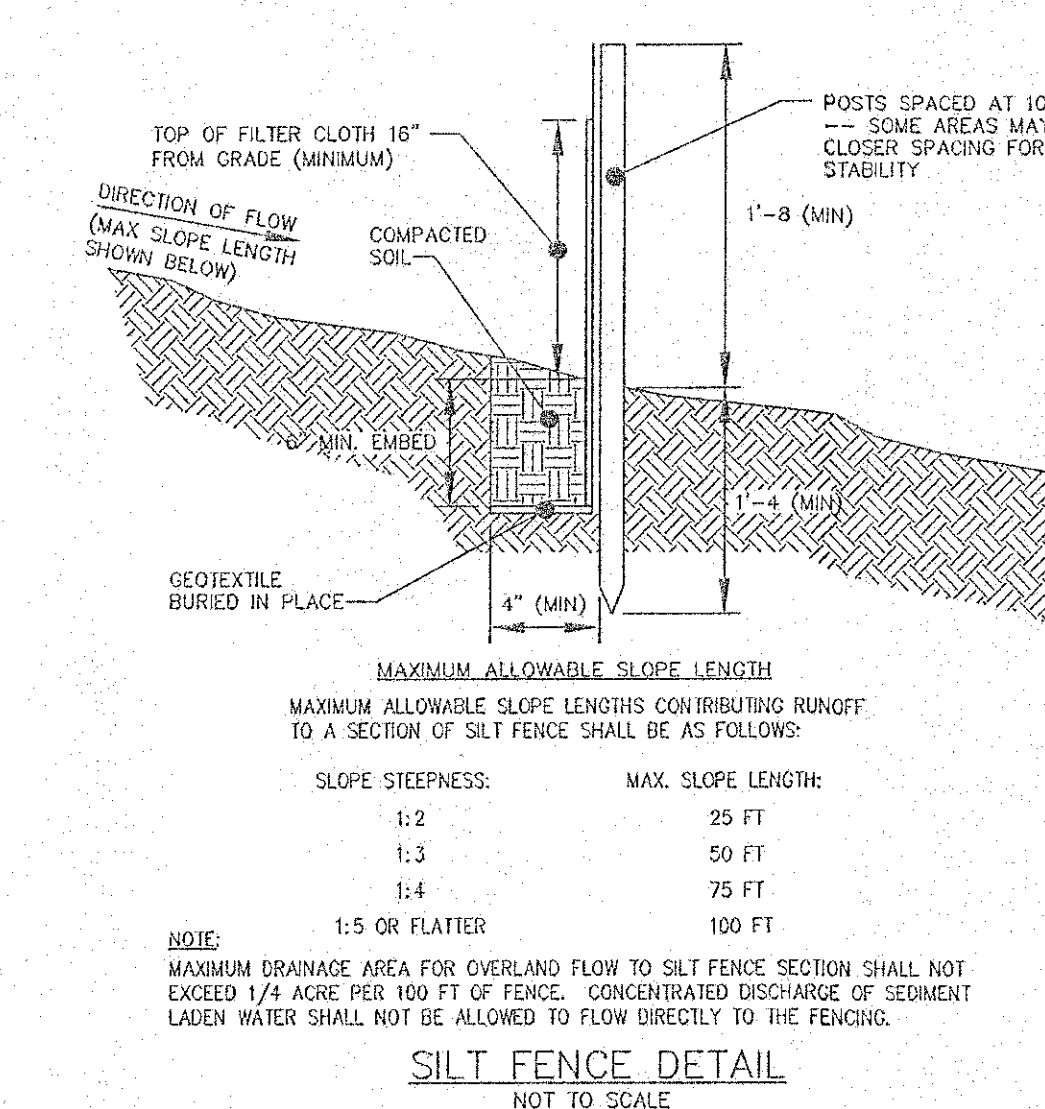
- CONSTRUCTION SPECIFICATIONS:**
1. CLEAR THE AREA OF ALL DEBRIS THAT WILL HINDER EXCAVATION.
  2. GRADE APPROACH TO THE INLET UNIFORMLY AROUND THE BASIN.
  3. WEEP HOLES SHALL BE PROTECTED BY GRAVEL.
  4. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED.
  5. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION SHALL BE MINIMIZED.
  6. UPON STABILIZATION OF CONTRIBUTING DRAINAGE AREA, SEAL WEEP HOLES, FILL BASIN WITH STABLE SOIL TO FINAL GRADE, COMPACT IT PROPERLY AND STABILIZE WITH PERMANENT SEEDING.

**EXCAVATED DROP INLET PROTECTION DETAILS FOR UNPAVED AREAS**  
NOT TO SCALE



- NOTES:**
1. EROSION CONTROL MATTING, SOD OR STONE SPLASH PAD SHALL BE INSTALLED EVERYWHERE ROOF RUNOFF FLOWS FREELY ONTO A GRASS SURFACE.
  2. EROSION CONTROL MATTING SHALL BE INSTALLED WITH SEAMS PARALLEL TO THE DIRECTION OF RUNOFF.
  3. WHERE ROOF RUNOFF DRAINS TO A GREEN AREA UPSLOPE FROM A PAVEMENT EDGE OR SIDEWALK LESS THAN 8 FT FROM THE DRIP LINE, STABILIZE THE SLOPE AS SHOWN TO THE PAVEMENT EDGE. IF RUNOFF CROSSES A SIDEWALK ONTO ANOTHER GREEN AREA, IT MAY BE NECESSARY TO INSTALL ADDITIONAL MATTING OR SOD ON THE DOWNSLOPE GREEN AREA TO PREVENT EROSION.

**TYPICAL SLOPE PROTECTION FROM ROOF RUNOFF**  
NOT TO SCALE



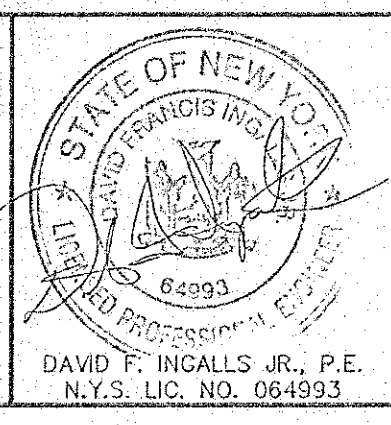
**CONSTRUCTION NOTES FOR FABRICATED SILT FENCE**

1. INSTALL SILT FENCE IN ACCORDANCE WITH THE "NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL", SECTION 7A.
2. FILTER CLOTH TO BE TO FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE WRAPPED TOGETHER PER DETAIL 4 ON THIS PAGE.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND SEDIMENT REMOVED WHEN ACCUMULATION REACHES 1/2 OF DESIGN CAPACITY OF FENCE (1/2 HEIGHT OF FILTER FABRIC) OR WHEN "BOUCES" DEVELOP IN FENCING.

| NO. | DATE    | REVISIONS                                     | BY: |
|-----|---------|---|-----|
| 9   | 9/27/12 | FINAL SUBMISSION                              | PJT |
| 8   | 8/24/12 | FINAL SUBMISSION                              | PJT |
| 7   | 7/10/12 | REVISIONS PER 2/3/12 IDE COMMENT LETTER       | PJT |
| 6   | 5/26/12 | REVISED PER TOWN PLANNING COMMENTS            | PJT |
| 5   | 6/14/12 | REVISED PER TOWN ENG. & PLANNING COMMENTS     | PJT |
| 4   | 5/30/12 | REVISED PER TOWN COMMENT LETTER DATED 5/29/12 | PJT |
| 3   | 5/15/12 | REVISIONS PER TOWN COMMENTS                   | PJT |
| 2   | 3/13/12 | REVISIONS PER TOWN AND IDE COMMENTS           | PJT |
| 1   | 1/27/12 | REVISIONS PER TOWN AND IDE COMMENTS           | PJT |

UNAUTHORIZED ALTERATION OR ADDITION TO THIS DRAWING IS A VIOLATION OF SECTION 7209 SUBDIVISION 2, OF THE NEW YORK STATE EDUCATION LAW. ONLY COPIES MADE FROM THE ORIGINAL OF THIS DRAWING BEARING AN ORIGINAL INKED OR EMBOSSED SEAL AND SIGNATURE SHALL BE CONSIDERED TO BE VALID TRUE COPIES.

© Copyright 2011 - Ingalls & Associates, LLP - All rights reserved.



**ingalls**  
ingalls & associates, LLP  
engineers / surveyors  
2803 CULDEHLAND AVENUE  
SCHENECTADY, N.Y. 12306  
PHONE: (518) 383-7725  
FAX: (518) 383-9323

**ESC DETAILS**  
32 UNIT MULTI-FAMILY DEVELOPMENT  
605 FEURA BUSH ROAD  
TOWN OF BETHLEHEM  
COUNTY OF ALBANY  
STATE OF NEW YORK

DATE: SEPTEMBER 20, 2011  
CHECKED BY: D.F.I.  
JOB NO. 11-030

SCALE: NTS  
DRAWN BY: P.J.T.  
CADD FILE: 110900F

SHEET 9 OF 12