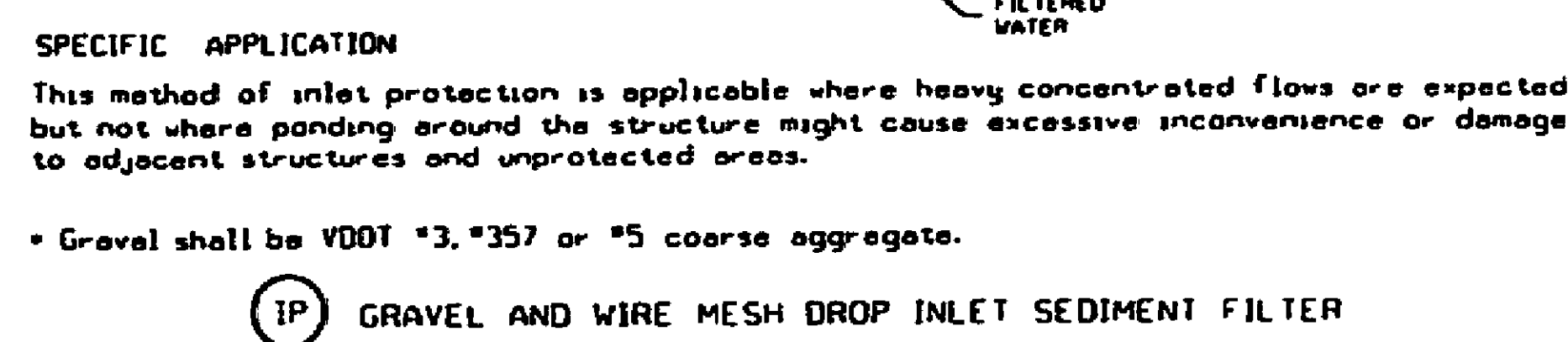
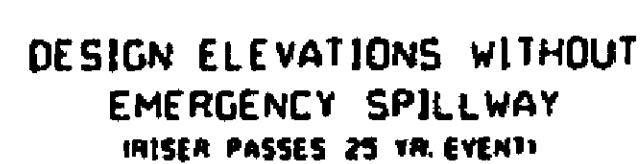


ALL COSTS GIVEN ARE COMPLETE IN PLACE

SEDIMENT BASIN SCHEMATIC
ELEVATIONS

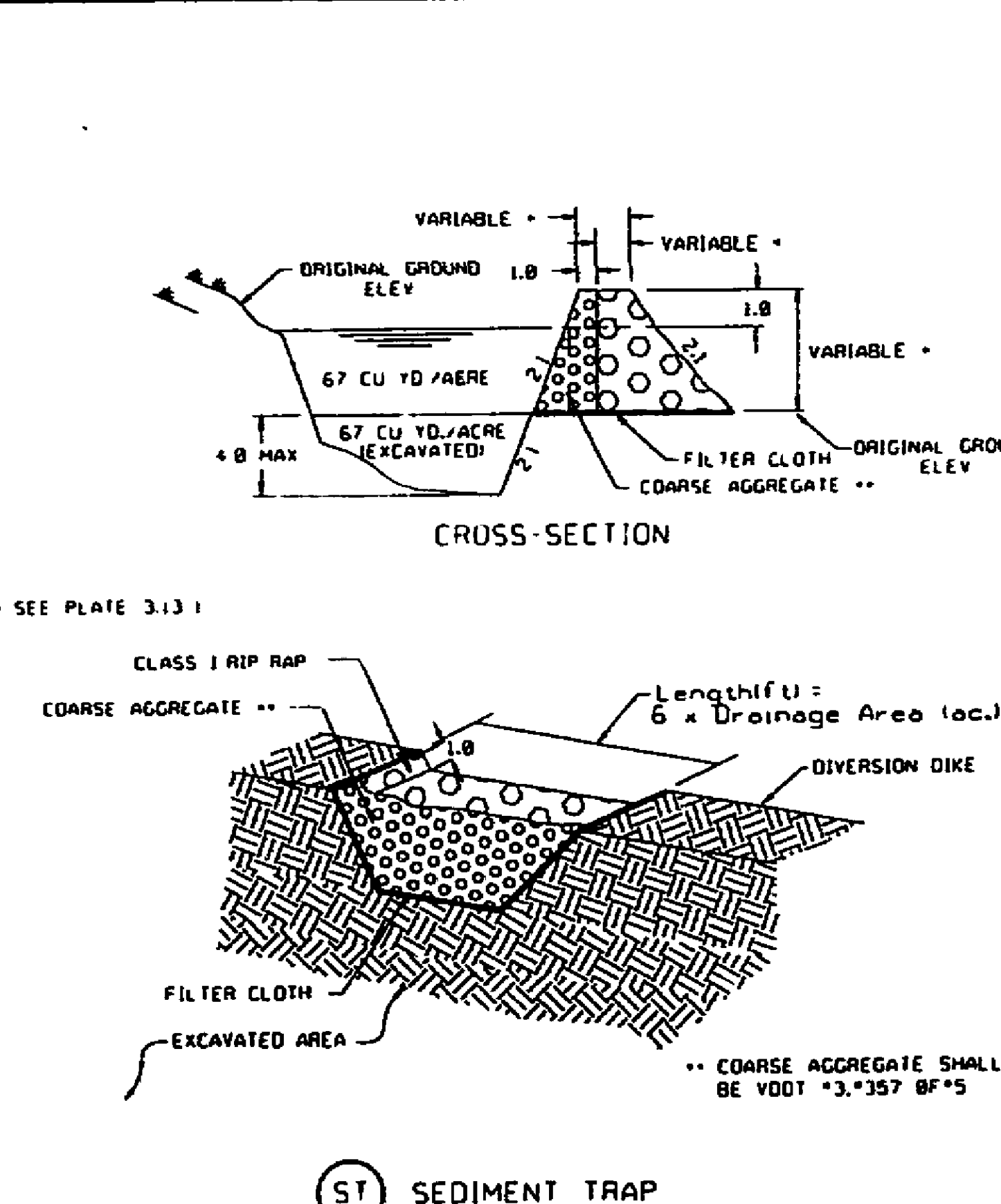
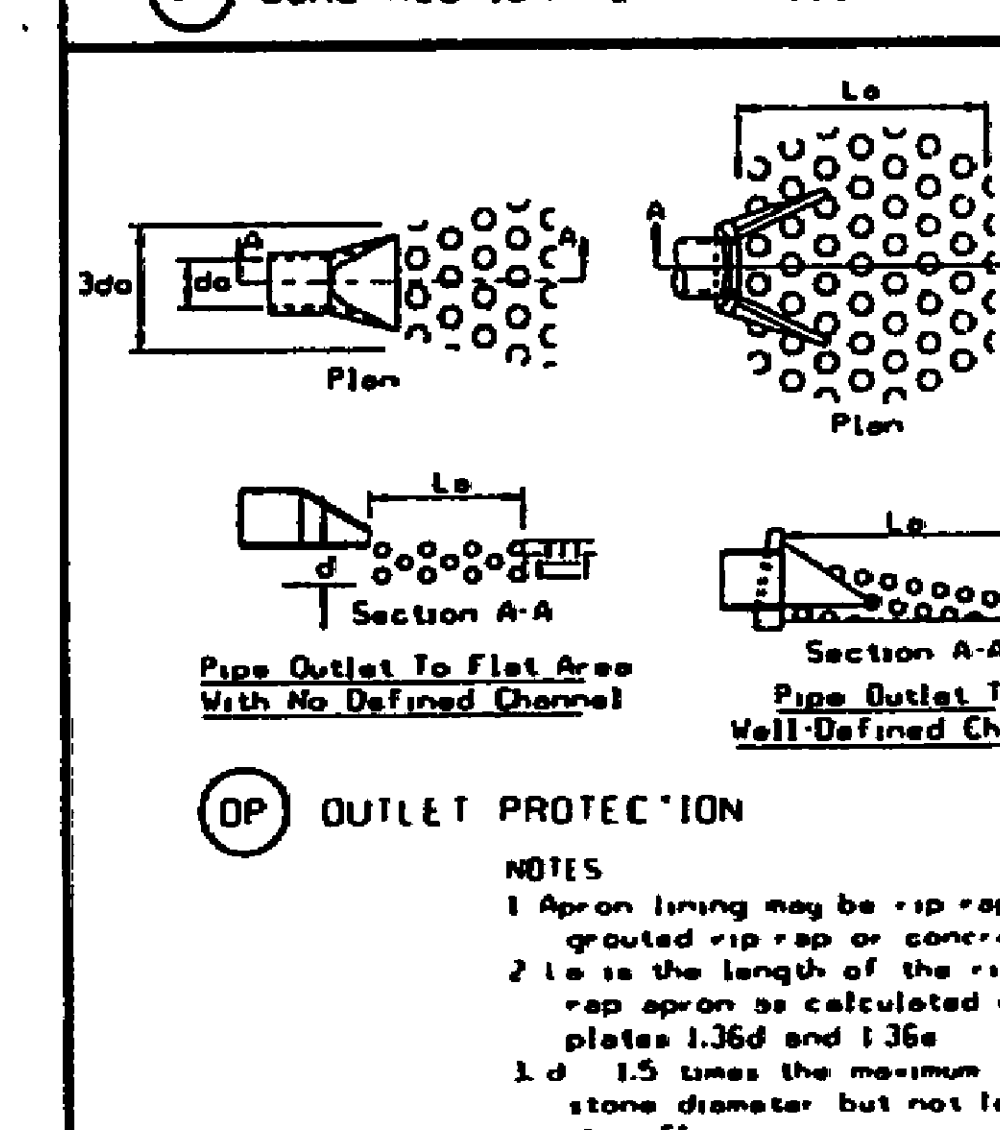
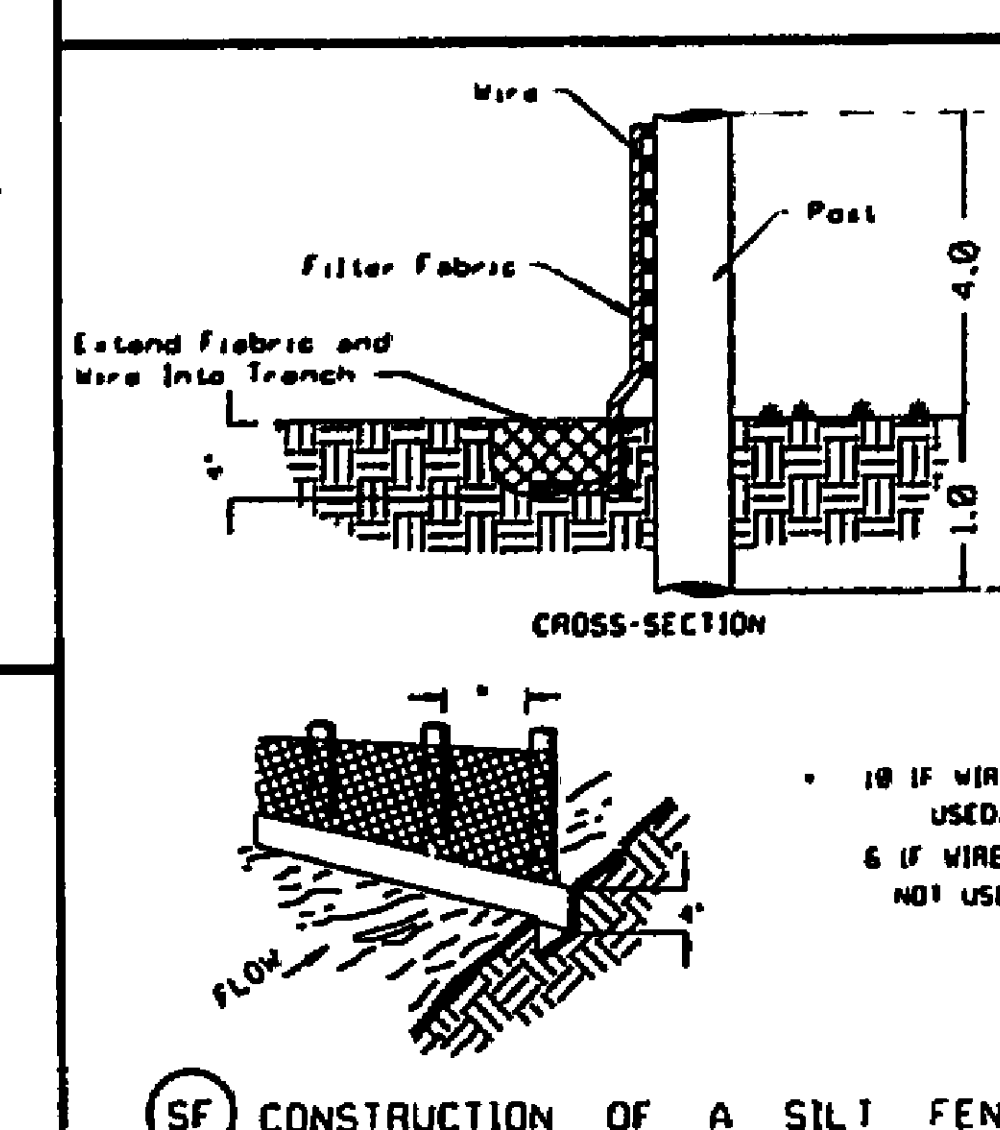
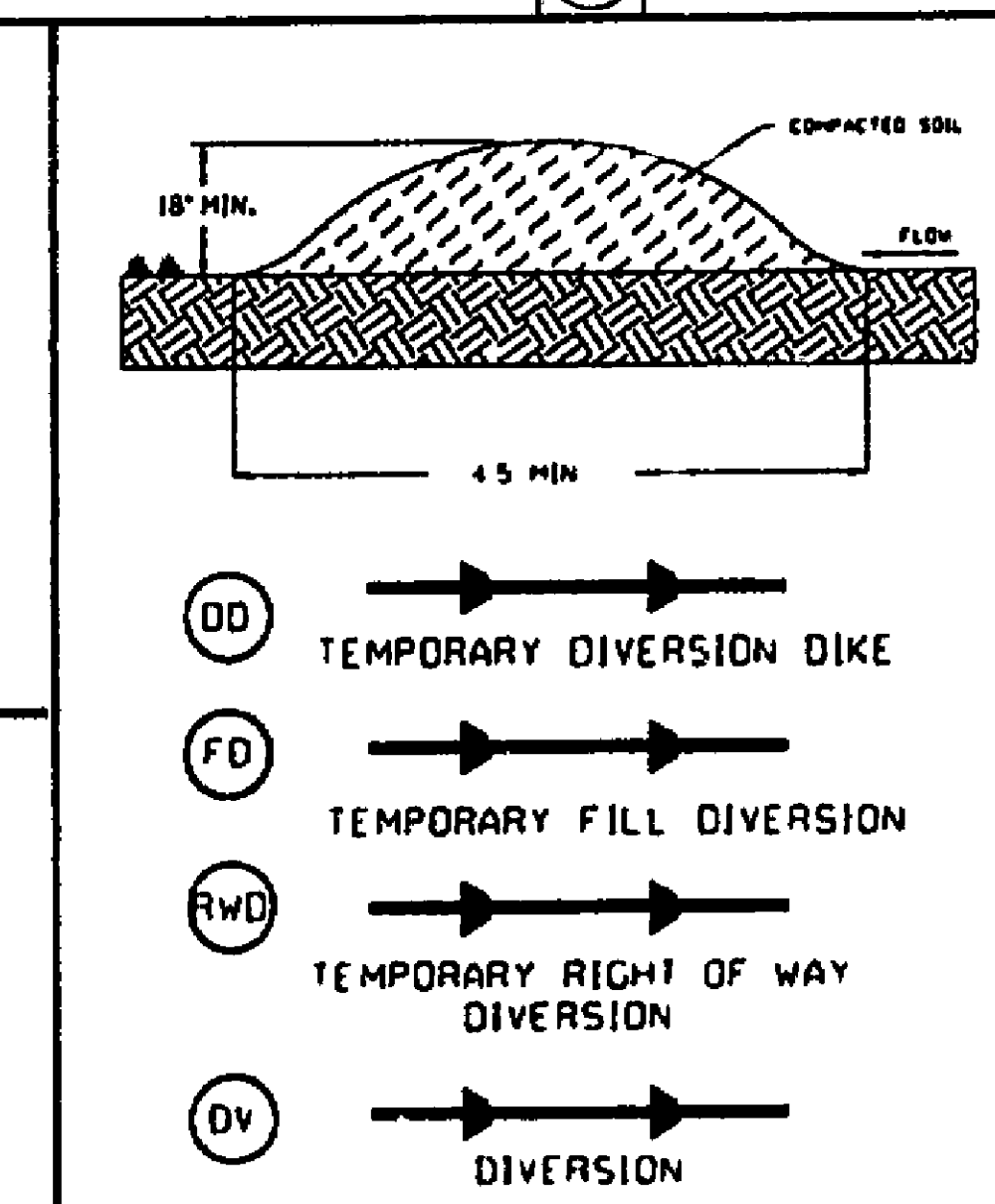
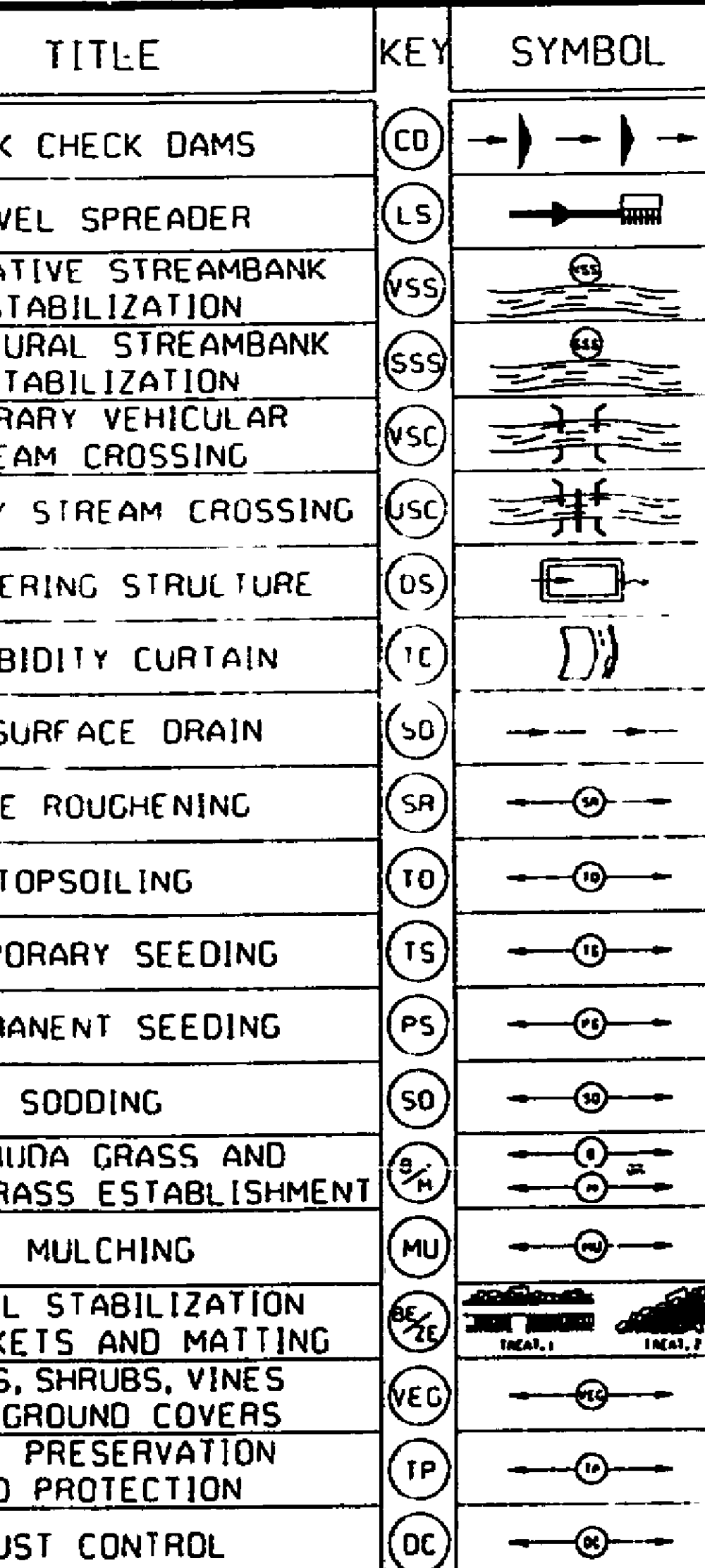
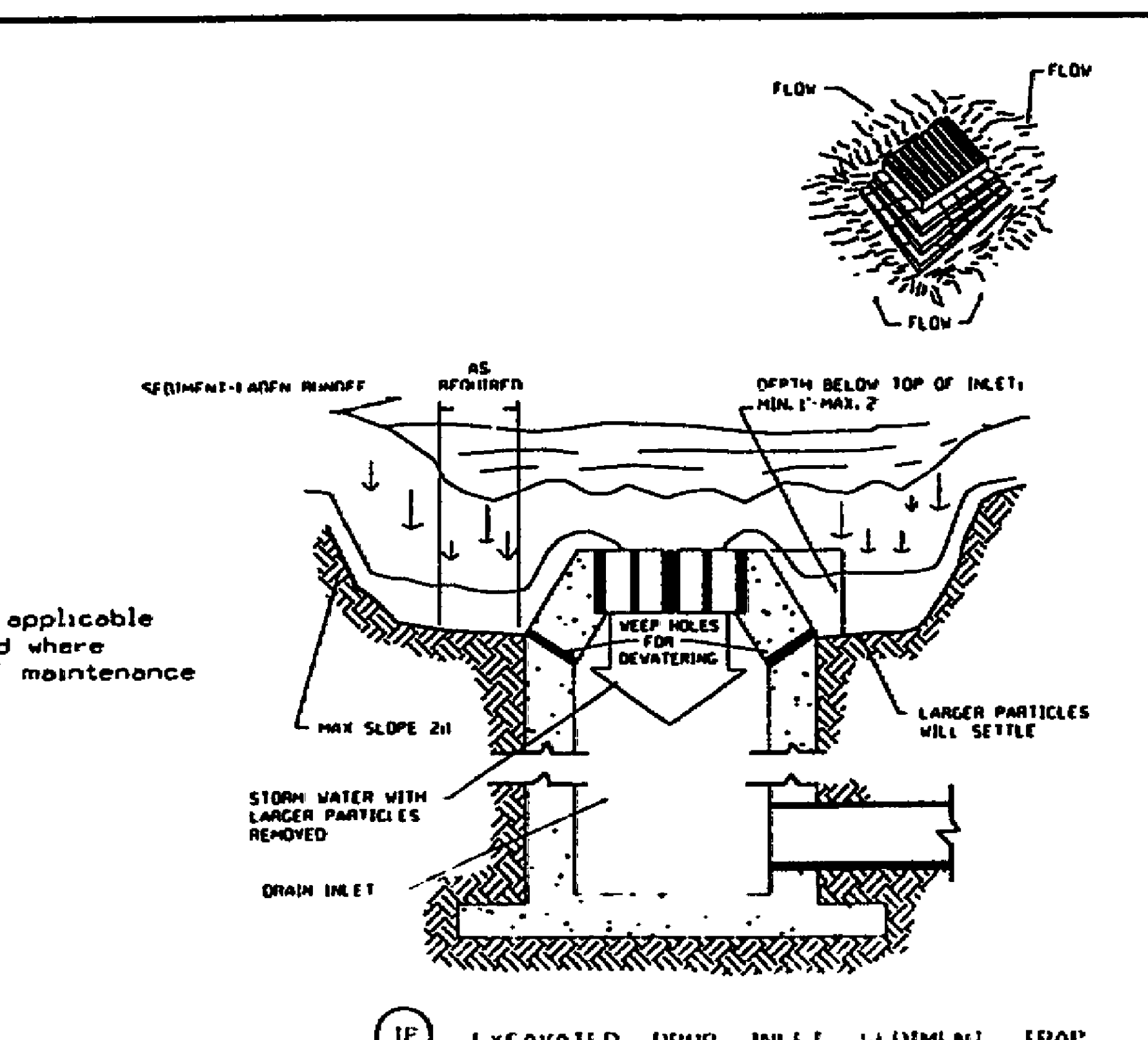
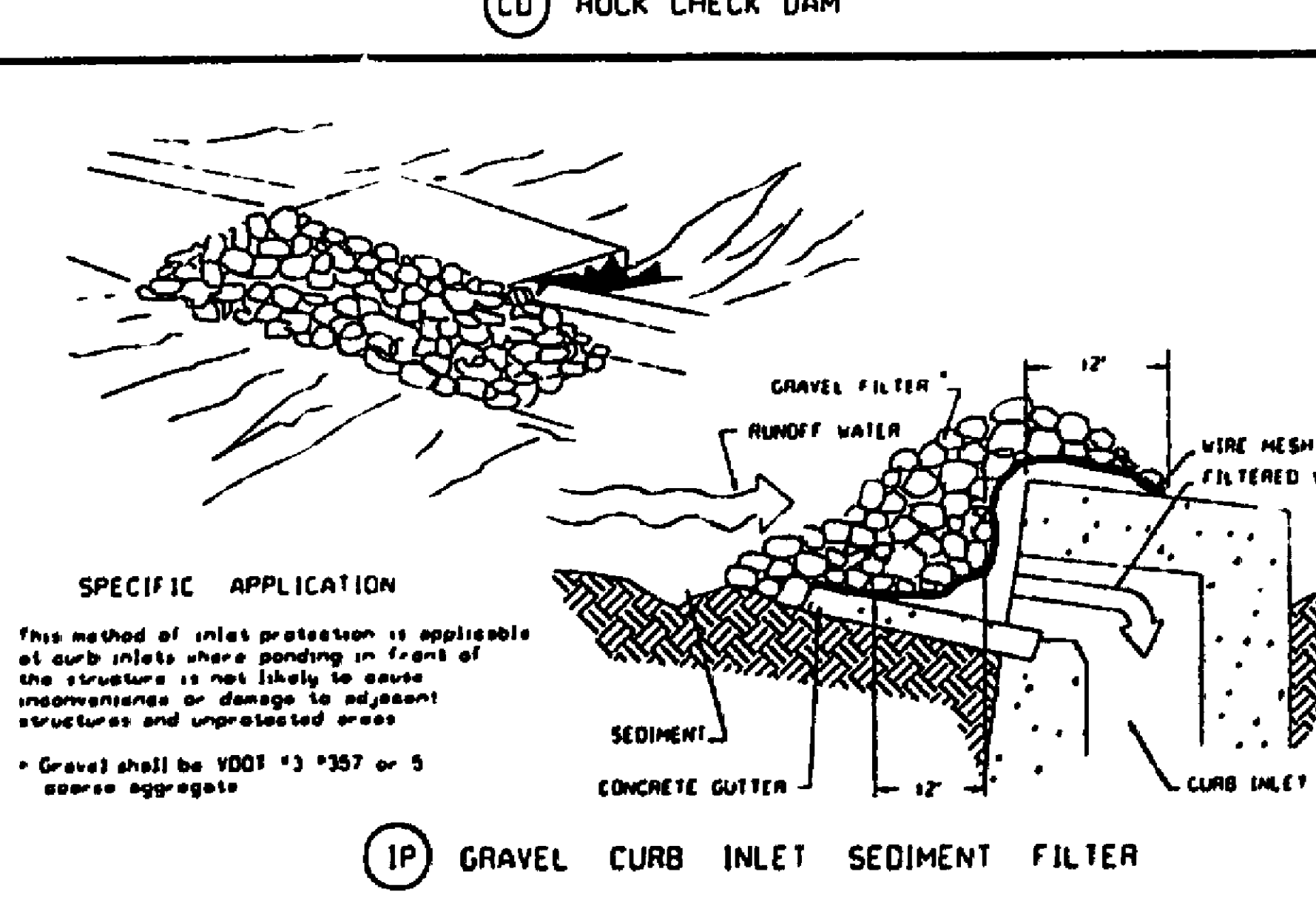
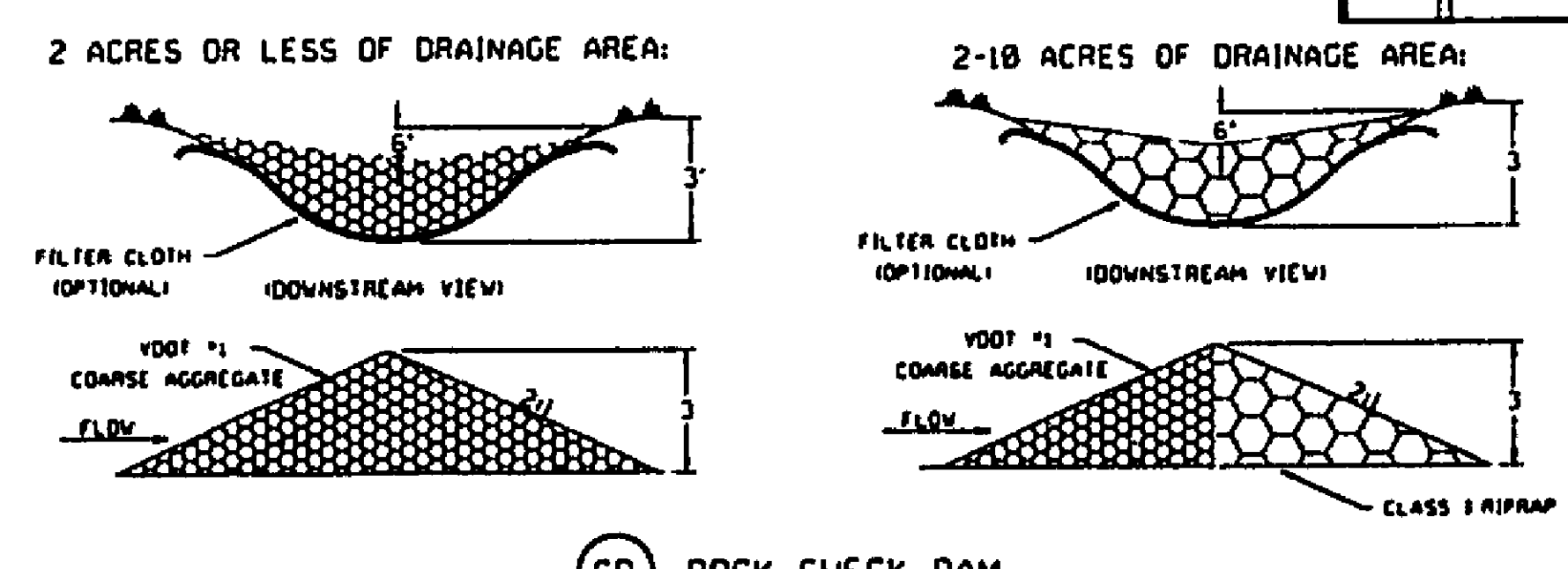
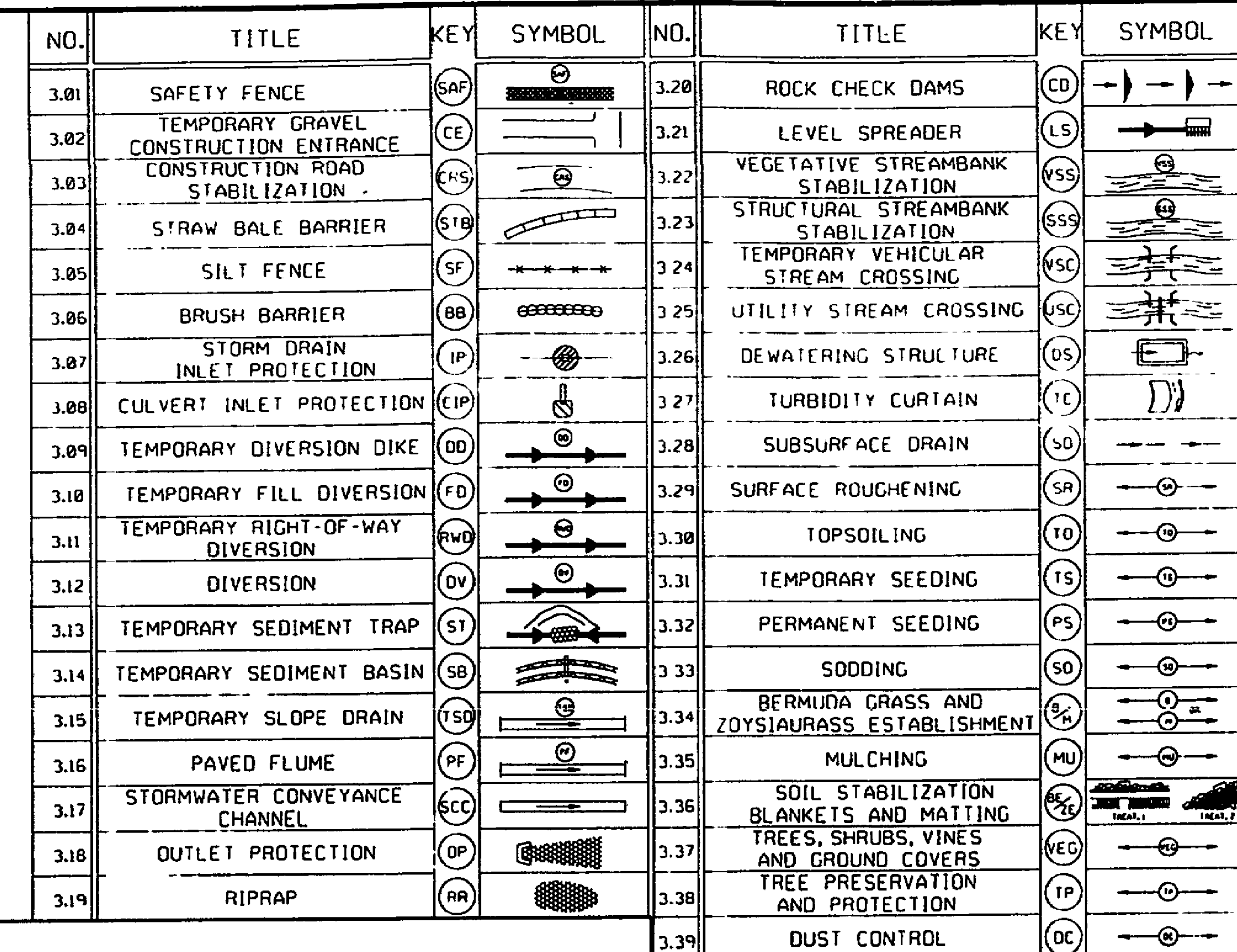
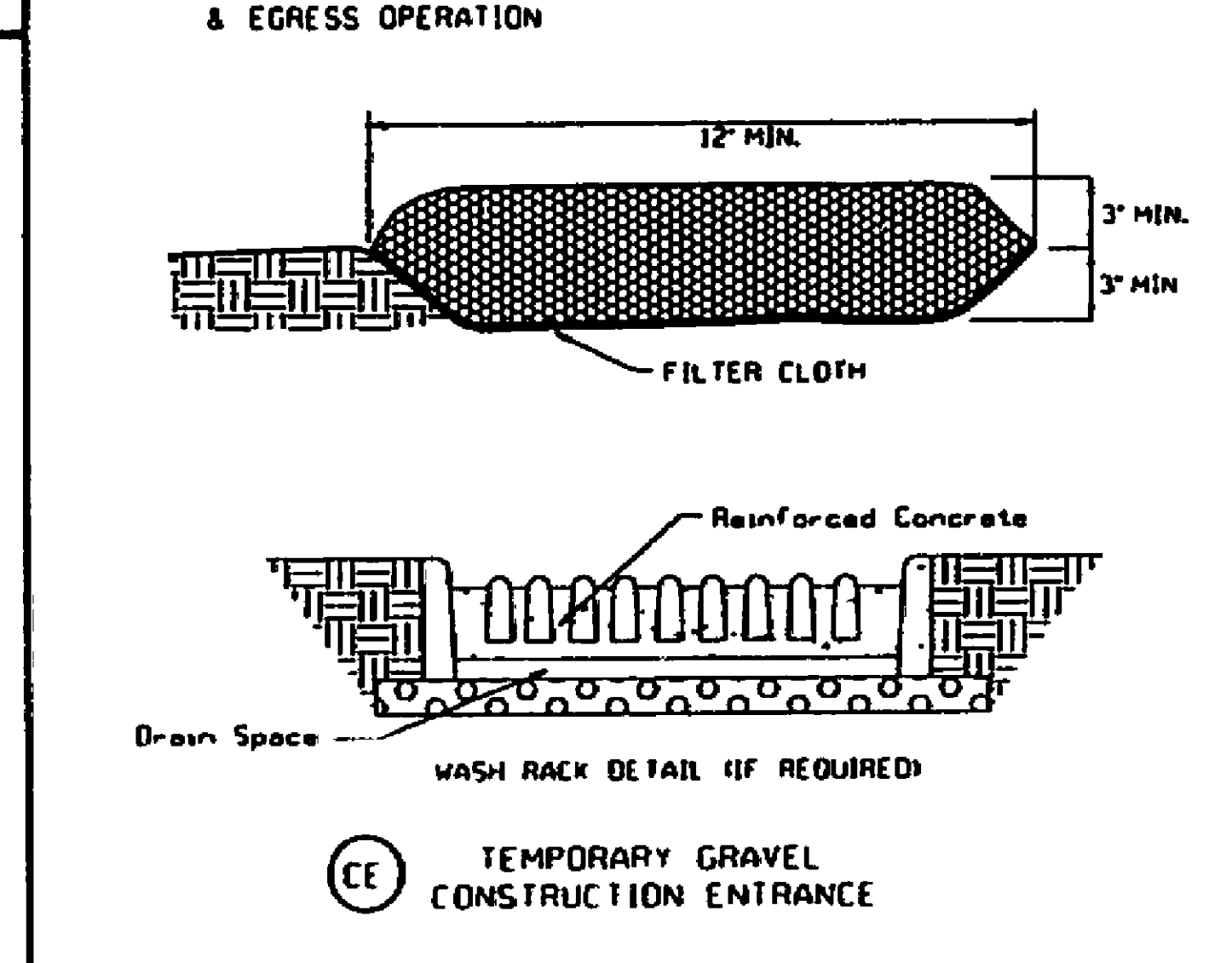
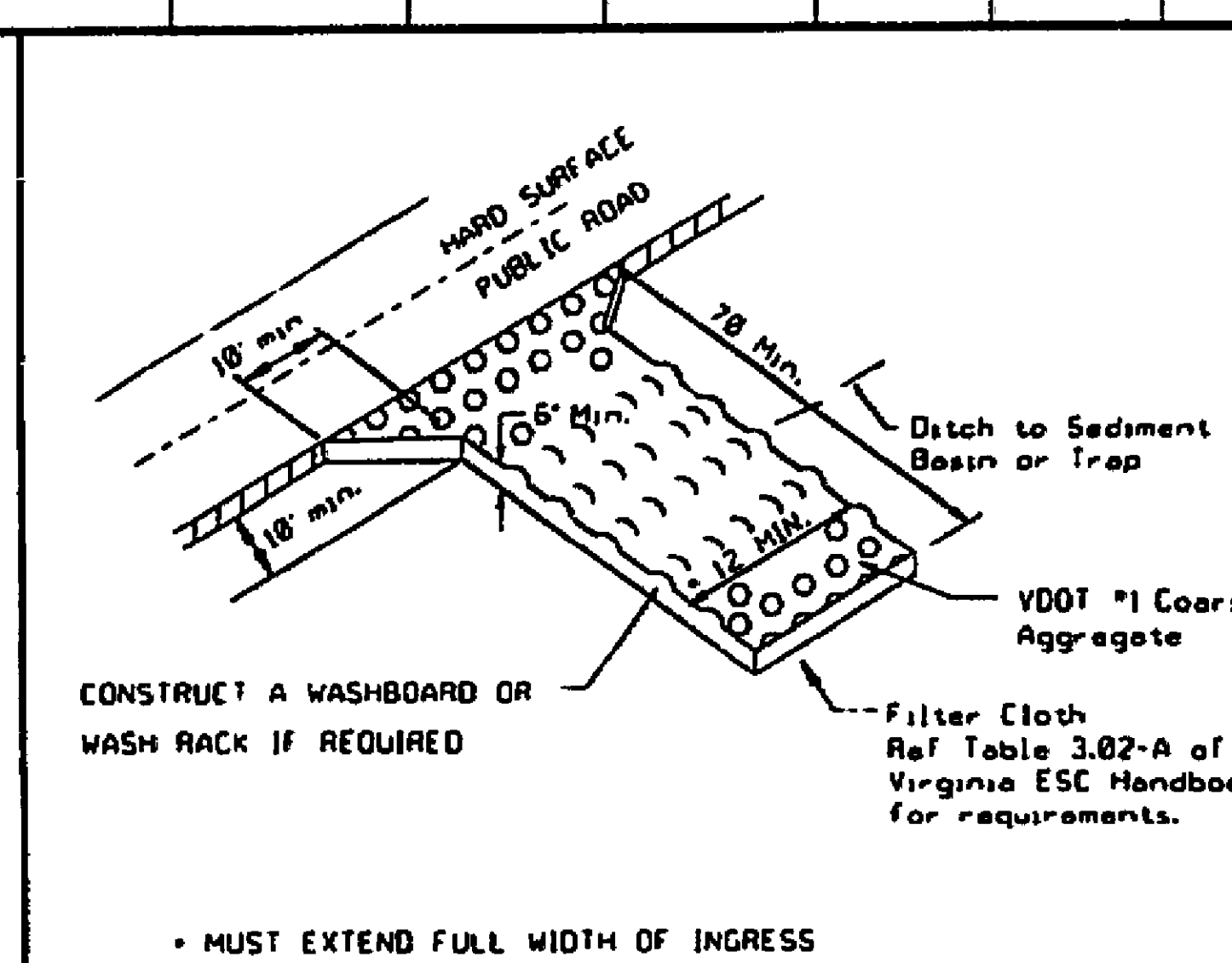


GENERAL NOTES

1. DESIGN OF DETENTION BASINS SHALL CONFORM TO THE REQUIREMENTS OF THE COUNTY OF ROANOKE DRAINAGE STANDARDS (REF SECTIONS 585.82, 585.83, AND 585.82). THE DESIGN OF THE FACILITY AND PREPARATION OF AS-BUILT PLANS SHALL BE BY A QUALIFIED PROFESSIONAL ENGINEER CAPABLE TO PRACTICE IN THE COMMONWEALTH OF VIRGINIA
2. ACCESS TO THE FACILITY MUST BE PROVIDED IN ACCORDANCE WITH THE COUNTY OF ROANOKE DESIGN AND CONSTRUCTION STANDARDS FOR DETENTION PONDS LATEST EDITION
3. IF THE FACILITY IS OVER 10' OR 4 FEET DEEP, TAKES OVER TWO (2) HOURS TO DRAIN OR THE INTERIOR SURFACE EXCEEDS 1 PM, 1 IN 100 FENCING SHALL BE REQUIRED. ADDITIONALLY, IF THE FACILITY IS IN A CONGESTED AREA OF FILING WILL IN ANY WAY POSE A HAZARD TO THE GENERAL PUBLIC PUBLIC BEING IN THE VICINITY, FENCING SHALL BE A MINIMUM OF SIX (6) FEET HIGH WITH A MINIMUM OF STANDARD NINE GAUGE LINE FENCE, AND MUST HAVE ONE OR MORE LOCKING DOUBLE GATE KICKS MINIMUM TEN FEET WIDE FOR ACCESS
4. DETENTION PONDS SHALL BE BONDED IN ACCORDANCE WITH THE ROANOKE COUNTY BONDING POLICY FOR SUBDIVISION AND SITE DEVELOPMENT. A SEPARATE BOND FOR THE DETENTION FACILITY WILL BE REQUIRED AND ADMINISTERED APART FROM THE SUBDIVISION DEVELOPMENT BOND (REFERENCE ESTIMATE - THIS SHEET)
5. REFERENCE THE COUNTY OF ROANOKE DESIGN AND CONSTRUCTION STANDARDS FOR DETENTION PONDS, LATEST EDITION FOR ACCEPTANCE AND MODIFICATION OF THE FACILITY. CERTIFIED AS-BUILTS ARE REQUIRED AND MUST INCLUDE:
 - A DIMENSIONS OF THE FACILITY
 - B VOLUME & MAXIMUM DEPTH
 - C ELEVATIONS OF STRUCTURES SPILLWAYS AND TOP
 - D MATERIALS VERIFICATION INCLUDING RESULTS OF DENSITY TESTS CONDUCTED BY AN INDEPENDENT SOIL TESTING LABORATORY
 - E LOCATION AND ELEVATION OF BENCHMARK
6. ONE FOOT MINIMUM FREEBOARD REQUIRED FOR THE 100 YR WATER SURFACE ELEVATION

CONSTRUCTION NOTES

5. SITE PREPARATION SHALL BE IN ACCORDANCE WITH THE COUNTY OF HONOLULU DESIGN AND CONSTRUCTION STANDARDS FOR DETENTION POND LATEST EDITION
6. SLOPES STEEPER THAN 3 TO 1 HORIZONTAL TO 1 VERTICAL SHALL BE BENCHMARKED OR STEPPED PRIOR TO PLACING FILT. ON THEM
7. ON-SITE FILL MATERIAL (OR BORROW FILL MATERIAL) MAY BE UTILIZED. FILL MATERIAL SHALL BE GENERAL:
 - A. SHALL BE COMPACTABLE
 - B. SHALL BE WITHIN AN ACCEPTABLE RANGE OF MOISTURE CONTENT AND SHALL BE EASILY COMPACTION
 - C. SHALL NOT BE HIGHLY SUSCEPTIBLE TO VOLUME CHANGE (SHRINKAGE OR SWELL) ON SETTLEMENT
8. FILL MATERIALS CONTAINING ROCKS LARGER THAN SIX (6) INCHES (15.2 CM) SHALL NOT BE USED. THE UPPERMOST TWO (2) FEET (61 CM) OF DIAMETER
9. THE APPROVED FILL SHALL BE PLACED IN EIGHT (8) INCH (2 CM) LAYERS. LISTS EACH FILL SHALL BE SPREAD IN UNIFORM LAYERS. FILL SHALL BE UTILIZED ON WITHIN A MOISTURE RANGE OF $\pm 2\%$ OF THE OPTIMUM MOISTURE CONTENT. COMPACTION OF THE FILL SHALL BE PERFORMED WITH APPROVED EQUIPMENT. COMPACTION OF THE LAYERS SHALL BE CONTINUOUS AND UNIFORM
10. EMBANKMENT MATERIAL IN FILL AREAS SHALL BE PLACED IN LISTS NOT EXCEEDING EIGHT (8) INCHES AND SHALL BE COMPACTED TO A MINIMUM 95 DENSITY IN ACCORDANCE WITH SECTION 303 OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE SPECIFICATIONS
11. FIELD DENSITY TESTS ARE TO BE CONDUCTED BY AN INDEPENDENT SOILS TESTING LABORATORY UNDER THE DIRECTION OF A QUALIFIED GEOTECHNICAL ENGINEER. THE RESULTS OF THESE TESTS SHALL BE SUBMITTED TO THE COUNTY OF HONOLULU AND SEBASTIAN PLAINS AS CONDITION OF ACCEPTANCE OF THE FACILITY BY THE COUNTY FIELD INSPECTOR. THE ENGINEER SHALL BE PERFORMED PERIODICALLY TO DETERMINE THE DEGREE OF COMPACTION. ANY AREAS NOT MEETING THE FIELD DENSITY REQUIREMENTS SHALL BE REWORKED AND/OR RECOMPACTED UNTIL THE REQUIRED DEGREE OF COMPACTION IS ACHIEVED.
12. ANTI-SEEP COLLARS SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.
13. ALL DISTURBED AREAS SHALL BE COVERED WITH FOUR (4) INCHES OF TOPSOIL AND SEEDED.
14. THE MINIMUM SLOPE OF THE BASIN TYPICAL SHALL BE ONE (1) PERCENT GRADIENT TO DRAIN TO THE PRINCIPAL SPILLWAY

[illegible]

ALL COSTS GIVEN ARE COMPLETE IN PLACE

DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST
CONSTRUCTION ENTRANCE	EA		\$	\$
SILT FENCE	LF	300	4.00	1200.00
INLET PROTECTION	EA			
TEMPORARY DIVERSION DIKE	LF			
TEMPORARY FILL DIVERSION	LF			
SEDIMENT TRAP	EA			
CHECK DAM	EA			
PERMANENT SEEDING	1000 SF	90	30.00	1800.00
OUTLET PROTECTION	EA			
SEDIMENT BASIN	EA			
SUB TOTAL				\$ 1350.00
10% CONTINGENCY				\$ 135.00
TOTAL PROJECT COST				\$ 1485.00

RM	GENERAL EROSION AND SEDIMENT CONTROL NOTES
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1. ALL SOIL EROSION & SEDIMENT CONTROL MEASURES SHALL BE ACCOMPLISHED IN STRICT ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS CONTAINED IN THE VIRGINIA EROSION & SEDIMENT CONTROL HANDBOOK, LATEST EDITION.
2. THE PERMITTING AUTHORITY MAY ADD TO, DELETE, RELEGATE, CHANGE, OR OTHERWISE MODIFY CERTAIN EROSION AND SEDIMENT CONTROL MEASURES WHERE FIELD CONDITIONS ARE ENCOUNTERED THAT WARRANT SUCH MODIFICATIONS.
3. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN ON THE PLANS SHALL BE PLACED IN ADVANCE OF THE WORK BEING PERFORMED, AS FAR AS PRACTICAL.
4. IN NO CASE DURING CONSTRUCTION SHALL WATER RUNOFF BE DIVERTED OR ALLOWED TO FLOW TO LOCATIONS WHERE ADEQUATE PROTECTION HAS NOT BEEN PROVIDED.
5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LEAVE THE SITE ADEQUATELY PROTECTED AGAINST EROSION AND/OR DAMAGE TO ANY ADJACENT PROPERTY AT THE END OF EACH DAY'S WORK.
6. FOR THE EROSION CONTROL "E" SYMBOLS SHOWN ON THE PLANS, REFER TO THE VIRGINIA EROSION & SEDIMENT CONTROL HANDBOOK, LATEST EDITION, FOR THE SPECIFICATIONS CONTAINED IN THE VIRGINIA EROSION & SEDIMENT CONTROL HANDBOOK, LATEST EDITION. THESE SYMBOLS AND KEYS ARE TO BE UTILIZED ON ALL EROSION CONTROL MEASURES.

(PS) PERMANENT SEEDING MIXTURE

TYPE A

15 OCTOBER TO 1 FEBRUARY
K-3 FESCUE @ 5 LB / 1000 SF
BONRY WINTER AVE @ 1/2 LB / 1000 SF

1 FEBRUARY TO 1 JUNE
K-3 FESCUE @ 5 LB / 1000 SF
ANNUAL AVE @ 1/2 LB / 1000 SF

JUNE TO 1 SEPTEMBER
K-3 FESCUE @ 5 LB / 1000 SF
GERMAN MILLET @ 1/2 LB / 1000 SF

1 SEPTEMBER TO 15 OCTOBER
K-3 FESCUE @ 5 LB / 1000 SF
ANNUAL AVE @ 1/2 LB / 1000 SF

TYPE B ISOLATES 30 TO STEEPEN

15 MARCH TO 1 MAY
CROWN VETCH @ 1/2 LB / 1000 SF
PERENNIAL RYEGRASS @ 1/2 LB / 1000 SF
REHMAN AVE @ 1/8 LB / 1000 SF

15 AUGUST TO 1 OCTOBER
CROWN VETCH @ 1/2 LB / 1000 SF
PERENNIAL RYEGRASS @ 1/2 LB / 1000 SF
RED TOP @ 1/8 LB / 1000 SF

LIME: 140 LB / 1000 SF. PULVERIZED AGRICULTURAL LIMESTONE

FERTILIZER: 5-20-10 @ 25 LB / 1000 SF
39-0-0 @ 10 LB / 1000 SF

MULCH: IF REQUIRED, SHALL BE USED OVER ALL SEEDED AREAS AND SHALL BE APPLIED IN ACCORDANCE WITH SECTION 175 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.

SOIL CONDITIONING:
INCORPORATION OF LIME AND FERTILIZER, SELECTION OF CERTIFIED SEED, MACHING, MAINTENANCE OF NEW SEEDINGS, AND RESEEDING SHALL BE IN ACCORDANCE WITH SPECIFICATIONS CONTAINED WITHIN THE VIRGINIA SOIL EROSION AND SEDIMENT CONTROL HANDBOOK. LATEST EDITION. ADDITIONAL SEEDING TO BE PERFORMED AS REQUIRED BY THE INSPECTOR.

SEED APPLICATION: APPLY SEED UNIFORMLY WITH A CYCLOE SEEDER, DRILL, CULPEPPER SEEDER, OR HANDSEEDER ON A FIRM, FINISHED, SEEDBED.

TOTAL DISTURBED AREA : AC. = SQ. FT.

1	ENGR. & INSPEC	04 10 93
2	ENGR. & INSPEC	08 05 94
3	ENGR & INSPEC.	10 27 93
4		
5		
6		
NO.	REVISIONS	DATE

COUNTY OF KUANUKI

DATE: 11/02/93
SCALE: NO SCALE
DRAWING BY: CLN,AF IC:CAD/DETAILED/ENRUSI
DESIGNED BY:
APPROVED BY: GWS,III

EROSION & SEDIMENT CONTROL
STORMWATER MANAGEMENT DETAILS

SHEET
4 OF 4

JOB NUMBER 94128
SC-0309

