GENERAL NOTES

1. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF ONE FOOT.

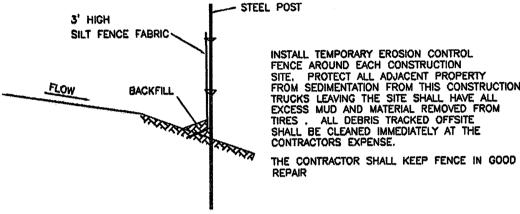
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (e.g. PAVEMENT), WEIGHT FABRIC FLAP WITH ROCK ON UPHILL SIDE TO PREVENT FLOW FROM SEEPING UNDER FENCE.

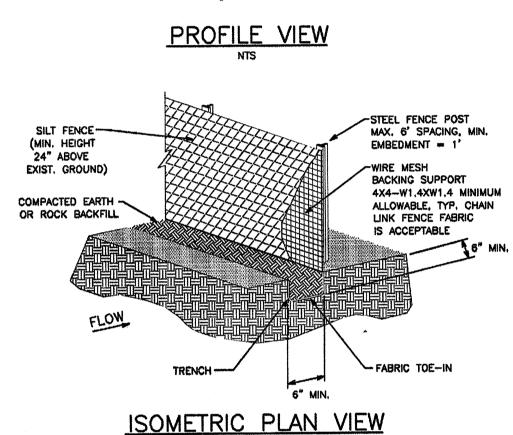
3. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED

4. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POST. THERE SHALL BE A 3 FOOT OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET, 5. INSPECTION SHALL BE MADE WEEKLY AND AFTER EACH RAINFALL. REPAIR OR

REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED. 6, SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF HALF THE HEIGHT OF THE FENCE. THE SILT SHALL BE DISPOSED OF AT AN APPROVED SITE AND IN SUCH A MANNER AS NOT TO CONTRIBUTE TO ADDITIONAL SILTATION.





## STABILIZED CONSTRUCTION ENTRANCE

GENERAL NOTES:

STONE SHALL BE 3 TO 5 INCH DIAMETER CRUSHED ROCK NO PORTLAND CEMENT CONCRETE ALLOWED.

2. LENGTH SHALL BE SHOWN ON PLANS, WITH A MINIMUM LENGTH OF 30 FEET FOR LOTS WHICH ARE LESS THAN 150 FEET FROM EDGE OF PAVEMENT. THE MINIMUM DEPTH IN ALL OTHER CASES SHALL BE 50 FEET.

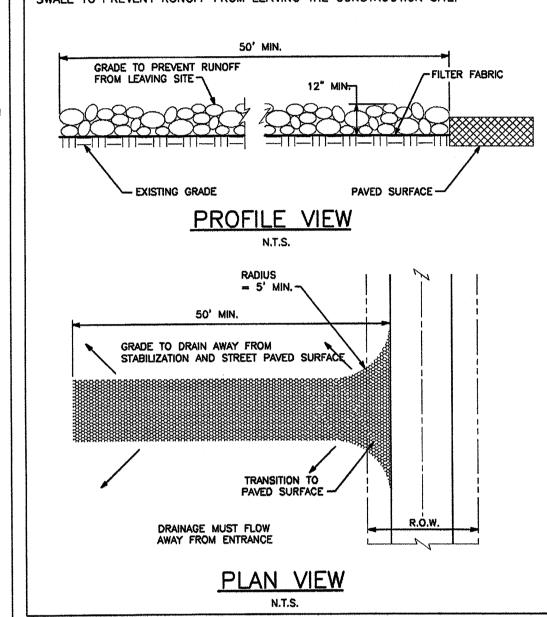
3. THE THICKNESS SHALL NOT BE LESS THAN 12 INCHES.

4. THE WIDTH SHALL BE NO LESS THAN THE FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.

WHEN NECESSARY, VEHICLES SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO A PUBLIC ROADWAY. WHEN WASHING IS REQUIRED. IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WITH DRAINAGE FLOWING AWAY FROM BOTH THE STREET AND THE STABILIZED ENTRANCE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.

6. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PAVED SURFACES. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PAVED SURFACES, MUST BE

THE ENTRANCE MUST BE PROPERLY GRADED ON INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.



LIME STABILIZED SURFACE -ROUGHENED SLOPE ---

PRIMARY USE
This BMP consists of a series of techniques that should be

Each of the techniques listed can be used under a variety of quantity of area to be stabilized, proximity of nearby water courses and other BMP's employed at the site. The use of diversion dikes and interceptor swales (see appropriate fact

Geotextile fabrics such as those used for silt fence should n be used to address lime since the grain size of lime is significantly smaller than the equivalent opening the size of

use of a curing seal such as Liquid Asphalt, Grade MC-250 or MC-800 applied at a rate of 0.15 gallons per square yard of surface can be used to protect the base. Use of sediment basins with a significant (>36 hour) drawdown time is encouraged for large stabilized areas (see Sediment Basin BMP).

Thse techniques are part of an overall plan to reduce pollutants from an active construction site. In the case of pollution due to lime, prevention of contamination is the only effective method to address the position. Proper application and mixing along with avoiding applications when there is a significant probability of rain will reduce lime runoff. MAINTENANCE REQUIREMENTS

**Applications** Perimeter Control Slope Protection Sediment Trapping Channel Protection Temporary Stabilization Permanent Stabilization Waste Management

Targeted Constituents

Toxic Materials

O Oil & Grease

O Capital Costs

Slopes > 5%

Maintenance

O Training

O Sediment

Nutrients

A number of water quality parameters can be affected by introduction of concrete - especially fresh concrete. Concrete affects the pH of runoff, causing significant chemical changes in water bodies and harming aquatic life. Suspended solids in the form of both cement and aggregate dust are also generated from both fresh and demolished concrete waste. Current Unacceptable Waste Concrete Disposal Practices Dumping in vacant areas on the job—site,

APPLICATIONS

Illicit dumping off-site. Dumping into ditches or drainage facilities.

Recommended Disposal Practices Avoid unacceptable disposal practices listed above. Develop pre-determined, safe concrete disposal areas. Provide a washout area with a minimum of 6 cubic feet

of containment area volume for every 10 cubic yards of concrete poured. Never dump waste concret illicitly or without property owners knowledge and consent. Treat runoff from storage areas through the use of structural controls as required.

Concrete Waste Management

Concrete waste at construction sites comes in two forms:

1)excess fresh concrete mix including truck and equipment

through storm water runoff contact with the waste.

washing, and 2) concrete dust and concrete debris resulting from

Concrete waste is present at most construction sites. This BMP

should be utilized at sites in which concrete waste is present.

O Floatable Materials O Other Construction Drivers and equipment operators should be instructed on proper disposal and equipment washing practices (see above). Supervisors must be made aware of the potential enviornmental consequences of improperly handled concrete Implementation Requirements

The construction site manager or foreman must ensure that employees and pre-mix companies follow proper procedures for concrete disposal and equipment washing. Employees violating disposal or equipment cleaning directives must be re-educated or disciplined if necessary.

Demolition Practices Monitor weather and wind direction to ensure concrete dust in not entering drainage structures and surface waters. Where appropriate, construct sediment traps or other types of sediment detention devices downstream of demolition activities

Use pre-determined disposal sites for waste concrete. Prohibit dumping waste concrete anywhere but pre-determin Assign pre-determined truck and equipment washing areas Educate drivers and operators on proper disposal and equipment cleaning procedures.

Minimal cost impact for training and monitoring. Concrete disposal cost depends on availability and distance to suitable disposal areas. Additional costs involved in equipment washing could be significant.

Perimeter Control Slope Protection Sediment Trapping **Channel Protection** Waste Management

Taraeted Constituents

O Sediment

Nutrients Toxic Materials

O Oil & Grease Floatable Materials

Implementation Requirements Capital Costs

Training O Suitability for

Legend Significant Impact **⊖** Medium Impact O Low Impact

FILL FILTER FABRIC VIEW LOOKING UPSTREAM 1/2" FILTER

PRIOR TO FINAL APPROVAL OF THE PROJECT.

Hazardous Waste Management

storm water polluted with hazardous waste through spills or other

forms of contact. The objective of the Management Program is

common construction site hazardous wastes through appropriate

It is not the intent of this Management Program to supersede

replace normal site assesment and remediation procedures.

Significant spills and/or contamination warrant immediate

response by trained professionals. Suspected job-site contaminants should be immediately reported to regulatory

authorities and protective actions taken. The General Permit

requires reporting of significant spills to the National Response

These management practices along with applicable OSHA and EPA

guidelines should be incorporated at all construction sites which

use or generate hazardous wastes. Many wastes such as fuel,

INSTALLATION, APPLICATION AND DISPOSAL CRITERIA

The hazardous waste management techniques presented here are

based on proper recognition, handling, and disposal practices by

management program are education, proper disposal practices, a

well as provisions for safe storage and disposal. Following are

construction workers and supervisors. Key elements of the

lists describing the targeted materials and recommended

oil, grease, fertilizer and pesticide are present at most

to minimize the potential of stormwater contamination from

recognition, handling, storage and disposal practices.

Center (NRC) at (800) 424-8802.

□ Targeted Solid Waste Materials

Wood preservatives

Fuels and lube oils

construction site debris.

and catch basins.

materials handling procedures.

Lead based paints (Demolition)

Wherever possible, minimize use of hazardous materials.

Minimize generation of hazardous wastes on the job-site.

Designate a foreman or supervisor to oversee hazardous

Keep liquid or semi-liquid hazardous waste in appropriate

Use containment berms in fueling and maintenance areas and where the

Ensure tht hazardous waste collection containers are conveniently located.

Clearly mark on all hazardous waste containers which materials are acceptable

Do not allow potentially hazardous waste materials to accumulate on the ground.

Ensure that adequate hazardous waste storage volume is available.

Regularly schedule hazardous removal to minimize on-site storage.

Educate workers of potential dangers to humans and the environment from hazardous wastes.

□ Instruct workers on safety procedures for common construction site hazardous waster

Have regular meetings to discuss and reinforce identification, handling and disposa

Ensure that the hazardous waste disposal contractor is reputable and licensed.

Potential cost impact for hazardous waste collection and disposal by licensed hauler — actual cost depends on type of material and volume.

This practice is not intended to address site—assessments and pre—existing contamination.

Major contamination, large spills and other serious hazardous waste incidents require immediate response from specialists.

Demolition activities and potential pre—existing materials, such as asbestos, are not addressed by this program. Site specific information on plans is necessary.

FIGURE 4.3.B

**EROSION CONTROL PLAN** 

STANDARD GENERAL NOTES

1. EROSION CONTROL DEVICES AS SHOWN ON THE EROSION CONTROL PLAN FOR THE

PROJECT SHALL BE INSTALLED PRIOR TO THE START OF LAND DISTURBING ACTIVITIES ON

2. ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED IN ACCORDANCE WITH APPROVED PLANS AND SPECIFICATIONS FOR THE PROJECT. CHANGES ARE TO BE APPROVED BEFORE CONSTRUCTION BY THE DESIGN ENGINEER AND THE CITY ENGINEERING

3. IF THE EROSION CONTROL PLAN AS APPROVED CANNOT CONTROL EROSION AND OFF-SITE SEDIMENTATION FROM THE PROJECT THE EROSION CONTROL PLAN WILL BE

REQUIRED TO BE REVISED AND/OR ADDITIONAL EROSION CONTROL DEVICES WILL BE

4. IF OFF-SITE SOIL BORROW OR SPOIL SITES ARE USED IN CONJUNCTION WITH THIS

PROJECT, THIS INFORMATION SHALL BE DISCLOSED AND SHOWN ON THE EROSION CONTROL PLAN. OFF-SITE BORROW AND SPOIL AREAS ARE CONSIDERED A PART OF THE

PROJECT SITE AND THEREFORE SHALL COMPLY WITH THE CITY EROSION CONTROL PLAN

REQUIREMENTS. THESE AREAS SHALL BE STABILIZED WITH PERMANENT GROUND COVER

containers (closed drums or similar) and under cover.

Enforce hazardous waste handling and disposal procedures.

Use only reputable, licensed hazardous waste haulers.

Educate all workers on hazardous waste storage and disposal procedures

procedures (incorporate in regular safety seminars).

hazardous waste storage and disposal procedures. Educate and if necessary, discipline workers who violate procedures.

☐ Compliance by workers.
☐ Sufficient and appropriate hazardous waste storage containers.

Possible modest cost impact for additional hazardous storage containers.

☐ Timely removal of stored hazardous waste materials.

Small cost impact for training and monitoring.

Contaminated soils are not addressed.

LIMITATIONS

□ Establish a continuing education program to indoctrinate new employees.

D Foreman and/or construction supervisor shall monitor on-site

Job-site hazardous waste handling and disposal education and awareness pro

Commitment by management to implement hazardous waste management practices.

Commitment by management to implement hazardous waste management practices

One part of a comprehensive construction site waste management program.

Instruct workers in identification of hazardous waste

□ Store waste materials away from drainage ditches, swales

Segregate potentially hazaedous waste from non-hazardous

Cutting oils

Roofing tar

Pesticides

Storage Procedures

Solvents

Greases

Stains

construction sites.

Perimeter Control

Slope Protection

Sediment Trapping

Channel Protection

Temporary Stabilization

Permanent Stabilization

Waste Management

Targeted Constituents

Toxic Materials

O Floatable Materials

Other Construction

Implementation

Requirements

Capital Costs

Maintenance

O Suitability for

Legend

Significant Impact

Medium Impact

? Unknown or

Questionable Impact

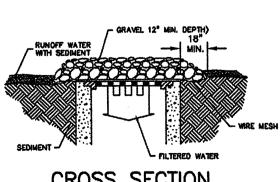
Training

Nutrients

Oil & Grease



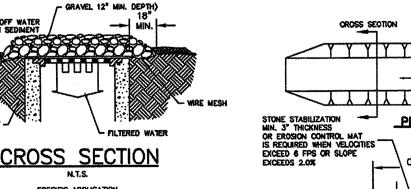




I. STANDARD INSTALLATION

SPECIFIC APPLICATION THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY CONCENTRATION FLOWS ARE EXPECTED, BUT NOT WHERE PONDING AROUND THE STRUCTURE MIGHT CAUSE EXCESSIVE AND UNPROTECTED

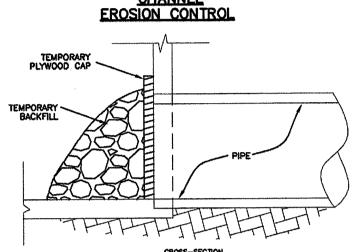
INLET PROTECTION WIRE MESH AND GRAVEL

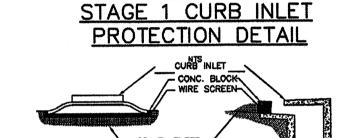


PLAN VIEW CROSS SECTION A STONE STABILIZATION (REQUIRED FOR VELOCITIES IN EXCESS OF 6 fps) SHALL CONSIST OF TYPE "A" RIP-RAP CONFORMING TO NOTICOG STANDARD SPECIFICATION 2.1.8.(b)(2).

8 GEOTEXTILE FABRIC SHALL BE A NON-WOVEN POLYPROPYLENE FABRIC CONFORMING TO NOTICOG SPECIFICATION NUMBER 2.2.3.3 AND BE DESIGNED SPECIFICALLY FOR USE AS A SOIL FILITATION MEDIA WITH MEDIA WITH AN APPROXIMATE WEIGHT OF 6 02/yd2, BURST RATING OF 140 psi AS MEASURED BY ASTM D 751 AND HAVING AN EQUIVALENT OPENING SIZE OF (EOS) GREATER THAN A #50 SEVE AS MEASURED BY ASTM 4751.

DIVERSION DIKE CHANNEL LONGITUDINAL SECTION **EROSION CONTRO** 

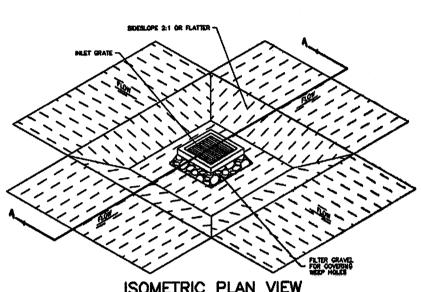


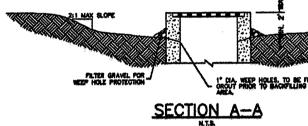


CONCRETE BLOCKS ARE TO BE PLACED ON THEIR SIDES IN A SINGLE ROW AROUND THE PERIMETER OF THE INLET WITHENDS ABUTTING, OPENING IN THE BLOCKS SHOULD FACE OUTWARD, NOT UPWARD, WIRE MESH SHALL THEN BE PLACED OVER THE OUTSIDE FACE OF THE BLOCKS COVERING THE HOLES, FILTER STONE SHALL THEN BE PILED AGAINST THE WIRE MESH TO THE TOP OF THE BLOCKS WITH THE BASE OF THE STONE BEING A MINIMUM OF 18 INCHES FROM THE BLOCKS, PERIODICALL WHEN THE STONE FILTER BECOMES CLOGGED, THE STONE MUST BE REMOVED AND CLEANED IN A PROPER MANNER OR REPLACED WITH NEW STONE AND PILED BACK AGAINST THE WIRE MESH. STAGE 2 CURB INLET PROTECTION DETAIL

VIEW LOOKING UPSTREAM SECTION A-A L=THE DISTANCE SUCH THAT POINTS AND B ARE OF EQUAL ELEVATION.

SPACING BETWEEN CHECK DAMS ROCK CHECK DAM





INLET PROTECTION EXCAVATED IMPOUNDMENT

NOTIFICATION TO THE · (CENSE) RESPONSIBLE ENGINEER IS AN PATE & ENGINEERS

OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.

THE SEAL APPEARING ON THIS

DOCUMENT WAS AUTHORIZED

BY RUSTY L. PRENTICE, P.E.

100191 ON 06/17/08

ALTERATION OF A SEALED

DOCUMENT WITHOUT PROPER

8150 BROOKRIVER DRIVE SUITE S-700

DALLAS, TEXAS, 75247 PH. (214) 357-2981 FAX (214) 357-2985 JOB NO. 182800100

**RECORD DRAWING** 

THIS DRAWING REFLECTS REVISIONS AS FIELD VERIFIED BY ENGINEER AND

CONTRACTOR

DATE:\_\_\_\_

水

RUSTY L. PRENTICE

100191

REVISION DESCRIPTION DATE ROCKWALL MEDICAL OFFICE

LOTS 14 AND 15, BLOCK A PRESBYTERIAN HOSPITAL OF ROCKWALL ADDI EROSION CONTROL DETAILS

> CITY OF ROCKWALL ROCKWALL COUNTY, TEXAS

SCALE SHEET NUMBER DATE C6.2 PATE RLP 06/2008

Lime Stabilization BMP DESCRIPTION region to stabilize pavement subbases for roadways, parking lots and other paved surfaces. Hydrated lime is applied to the soil and mixed through disking and other techniques, then allowed to cure. This practice will reduce the potential for runoff to carry lime offsite, where it may impact aquatic life through changing

the pH balance of streams, ponds, and other water bodies. Housekeeping Practices

implemented when lime is required for soil stabilization.

conditions. The engineer should determine the applicability of the technique based on site conditions such as available open space, sheets) to divert runoff away from areas to be stabilized can be used in conjunction with these techniques to reduce the impact

DESIGN CRITERIA The contractor shall limit lime operations to that which can be thoroughly mixed and compacted by the end of each

No traffic other than water trucks and mixing equipment shall be allowed to pass over the spread lime until after completion of mixing. Areas adjacent and downstream of stabilized areas shall be roughened to intercept lime from runoff and reduce runoff

O Suitability for For areas which phasing of lime operations is impractical,

Legend Significant Impact **⊖** Medium Impact

O Low Impact Unknown or Questionable Impact

> S - 11This concrete waste management program is one part of a comprehensive construction site

demolition. Both forms have the potential to impact water quality **Temporary Stabilization** Permanent Stabilization

Housekeeping Practice

Other Construction

Unknown or Questionable Impact W-3

Solid Waste Management

Large volumes of solid waste are often generated at construction

sites including: packaging, pallets, wood waste, concrete waste,

soil, electrical wiring, cuttings, and a variety of other materials.

the potential of storm water contamination from solid waste

through appropriate storage and disposal practices.

The solid waste management practice lists techniques to minimize

hese practices should be a part of all construction practices.

THe solid waste management practice for construction sites is

based on proper storage and disposal practices by construction

Cooperation and vigilance is required on the part of supervisors

and workers to ensure that the recommendations and procedure

are followed. Following are lists describing the targeted materials

workers and supervisors.. Key elements of the program are

education and modification of improper disposal habits..

Paper and cardboard containers

Styrofoam packing and forms

Pipe and electrical cuttings

Shingle cuttings and waste

Insulation materials (non-hazardous)

concrete, brick, and mortar waste

Steel (cuttings, nails, rust residue)

Gypsum board cuttings and waste

Miscellaneous cuttings and waste

Wherever possible, minimize production of solid waste

Designate a foreman or supervisor to oversee and enforce

Instruct construction workers in proper solid waste procedures

Keep solid waste materials under cover in either a closed

dumpster or other enclosed trash container that limits

Store waste materials away from drainage ditches, swales

Do not allow waste materials to accumulate on the ground.

If feasible, segregate recyclable wastes from non-recyclable waste materials and dispose

Runoff which comes into contact with unprotected waste shall be directed into structural

General construction debris may be hauled to a licensed construction debris landfill

☐ Enforce solid waste handling and storage procedures

(typically less expensive than a sanitary landfill).

be dirtreatment such as silt fence to remove debris.

□ Educate all workers on solid waste storage and disposal procedures.

Instruct workers in identification of solid waste and hazardous waste

Clearly mark on all solid waste containers which materials are acceptable

Job-site waste handling and disposal education and awareness program.

Possible modest cost impact for additional waste storage containers.

One part of a comprehensive construction site management program,

Have regular meetings to discuss and reinforce disposal procedures

Foreman and/or construction supervisor shall monitor on-site solid

Commitment by management to implement and enforce Solid Waste Management Program.

Use waste facilities approved by local jurisdiction.

(incorporate in regular safety seminars).

waste storage and disposal procedures.

Disipline workers who repeatedly violate procedures

Sufficient and appropriate waste storage containers.

Timely removal of stored solid waste materials.

Minimal overall cost impact.

Only addresses non-hazardous solid waste.

LIMITATIONS

Segregate potentially hazaedous waste from non-hazardous

Sheathing cuttings and waste

limiting the trash and debris on site, storm water quality is

improved along with reduced clean up requirements at the

DESCRIPTION

PRIMARY USE

**APPLICATIONS** 

completion of the project.

and recommended procedures:

Wood cuttings

Food waste

Storage Procedures

Demolaition waste

construction site debris.

and catch basins.

Disposal Procedures

of properly.

Quality Control

proper solid waste procedures.

contact with rain and runoff.

Do not allow trash containers to overflow.

Prohibit littering by workers and visitors. Police area daily for litter and debris.

☐ Targeted Solid Waste Materials

Plastic packaging

**Applications** 

Perimeter Control

Slope Protection

Sediment Trapping

Channel Protection

Temporary Stabilization

Permanent Stabilization

Waste Management

lousekeeping Practices

Targeted Constituents

O Sediment

Nutrients

O Oil & Grease

Floatable Materials

Other Construction

Implementation

Requirements

Capital Costs

Maintenance

O Suitability for

Legend

Significant Impact

Unknown or Questionable impact

O Low Impact

Training

PLAN VIEW (PER PLANS)

CROSS SECTION

INTERCEPTOR SWALE

STONE OUTLET SEDIMENT TRAP