EROSION & SEDIMENT CONTROL PLAN

Temporary Construction Staging Site
1893 Woodland Avenue East
Palo Alto, CA 94303

Erosion & Sediment Control BMPs and Implementation

The approach is to minimize erosion & sediment runoff from the site, is to minimize the amount of sediment that is mobilized by air or water, and to trap as much as possible of what is mobilized prior to it leaving the site, maintaining a clean site, and inlet protection measures will form the backbone of this ESCP.

The Best Management Practices (BMPs) listed below are to be employed on this project. BMPs are to be inspected daily during the rainy season and also before and after any rain events. Inspections shall occur at least weekly at other times of the year.

Street Cleaning
- Streets to be swept daily using hand or mechanical methods such as vacuuming.

Dust Control
- Sweeping combined with light application of water to damp down the site will minimize the amount of dust and prevent it becoming airborne.
- Stockpiles that are not being actively used to be covered or removed from the site

Inlet and Catch basin Protection
- Inlet protection fabric to be installed at each location on all inlets in and at surrounding the property. The fabric acts as a filter removing preventing particulates as the water passes slowly through. Replace any ripped fabric as necessary. - Geotextile fabric shall be installed under the grate.

Sanitary Waste Management
-Portable toilets shall be located/maintained at appropriate locations for the duration of the project.
- Portable sanitary facilities must be placed at least 50 feet away from storm drains, receiving waters and flow lines.

Water Conservation
- Avoid overfilling water equipment
- On site vehicle washing is discouraged
- If water is required to clean storage area, first sweep it to minimize the sediment remaining
- Water equipment to be kept in good working order and any leaks promptly fixed.
- When applying water for dust control, use the minimum amount of water necessary to dampen down the area.

Material Storage

- Store hazardous materials in their original containers with original product labels attached.
- Containers of hazardous materials are not to be left uncovered/exposed to rain.
- Containers of hazardous waste to be stored within secondary containment

Stockpile Management

- Stockpiles to be covered when not in use
- Fiber rolls/gravel bag berm to be installed around perimeter of stockpiles that will remain on site.

Spill Prevention & Control

- Spill control/cleanup kits to be kept in the storage containers
- Implement spill and leak prevention procedures for chemicals and hazardous substances when encountered on the job site.

Maintenance & Inspection

- The Best Management Practices (BMPs): Vehicle Tracking & Dust Control are to be inspected weekly during the rainy season and also before and after any rain events.

Site Plan

- Please refer to area drawings attached, showing the extent of the usage.

EROSION & SEDIMENT CONTROL PLAN

Temporary Construction Staging Site
1893 Woodland Avenue
East Palo Alto, CA 94303

Materials and Equipment Storage:
-Manhole Materials
-Storm Drain Pipe
-Construction Machinary Equipment: (Excavator, Backhoe, Skid Steer, Tool Trucks, Water trucks ETC..)
NS-8, NS-10, WM1, WM-4WM-9

N

Soil Stockpile Area
(covered & surrounded by wattles)
SC-11, WE-1W, M-3

Perimeter Chain Link Fence

Entry Point
TC-1

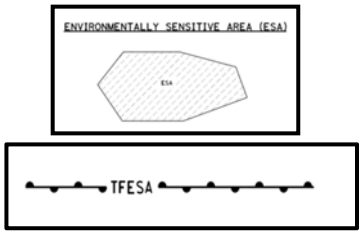
Entry and Exit Point
TC-1

NOTES:
1. Install perimeter BMPS: place storm drain inlet fabric protection where needed as need
2. Cover stockpiles using visqueen plastic .
3. Identify and protect areas where existing vegetation, such as trees, will not be disturbed.
4. Maintain stabilized entrance to prevent track-out. Remove mud and dirt from the tires of construction vechicles before they enter the street.
5. Tracks and trails left by equipment leading to and from the site should be cleaned up immediately.
6. Inspect BMPs weekly and after storm events. 7. Maintain Spill kits. Ensure vehicles and equipment leaks are cleaned up immediately
7. Remove BMPs and restore site after project completion

Project: Temporary Staging Yard Sheet:
Erosion Control Plan

Date: 1/29/2026
Scale: NTS

Preservation of Existing Vegetation SS-2



Standard Symbol

BMP Objectives

Soil Stabilization	☑
Sediment Control	☐
Tracking Control	☐
Wind Erosion Control	☐
Non-Stormwater Management	☐
Materials and Waste Management	☐

Definition and Purpose

Preservation of existing vegetation is the identification and protection of desirable vegetation that provides erosion and sediment control benefits.

Appropriate Applications

- Preserve existing vegetation at areas on a site where no construction activity is planned or will occur at a later date. This BMP is very applicable for multi-year or multiple location projects, where existing vegetation can be preserved until the area becomes active.
- On a year-round basis, temporary fencing shall be provided prior to the commencement of clearing and grubbing operations or other soil-disturbing activities in areas.
- Clearing and grubbing operations should be staged to preserve existing vegetation.
- Areas where natural vegetation exists and is designated for preservation. Such areas often include steep slopes, watercourse, and building sites in wooded areas.
- Areas where local, state, and federal government require preservation, such as vernal pools, wetlands, marshes, certain oak trees, etc.
- Clearly marking and leaving a buffer area around these unique areas during construction will help to preserve these areas as well as take advantage of natural erosion prevention and sediment trapping.
- During clearing and grubbing do not injure standing trees, plants, and improvements shown in the plans to be protected.
- For any trenching or tunneling. Trenching shall be as far away from tree trunks as possible, usually outside of the tree drip line or canopy. Curve trenches around trees to avoid large roots or root concentrations. If roots are encountered, consider tunneling under them.

- When trenching and/or tunneling near or under trees to be retained, tunnels shall be at least 8 in below the ground surface, and not below the tree center to minimize impact on the roots. Tree roots shall not be left exposed to air; they shall be covered with soil as soon as possible, protected, and kept moistened with wet burlap or peat moss until the tunnel and/or trench can be completed.

Limitations

- Protection of existing vegetation requires planning, and may limit the area available for construction activities.
- For sites with diverse topography, it is often difficult and expensive to save existing trees while grading the site satisfactory for the construction project.

Standards and Specifications

General Requirements

- Specifications for preservation of existing vegetation can be found in Standard Specifications Section 5-1.36A.
- Section 14 "Environmental Stewardship" of the Standard Specifications specifies the requirements related to environmental compliance and resource management, including requirements related to Environmentally Sensitive Areas (ESAs).
- Refer to Section 16-2.03 of the Standard Specifications for "High-Visibility Fences" used to delineate ESAs.
- Refer to 16-2.04 of the Standard Specifications for "Temporary Construction Mats" used to protect wetlands and other areas.

Schedule

- Preservation of existing vegetation must be provided prior to the commencement of clearing and grubbing operations or other soil-disturbing activities in areas identified on the plans to be preserved, including areas designated as ESAs.
- Preservation of existing vegetation should conform to scheduling requirements set forth in the special provisions.

Design and Layout

- Mark areas to be preserved with temporary fencing (Type ESA). The temporary fencing must be made of high visibility fabric secured with 6 foot (minimum) posts. Refer to Section 16-2.03B of the Standard Specifications for more information on temporary high-visibility fence materials.
- Fence posts can be either wood or steel, at the Contractor's discretion, as appropriate for the intended purpose. The post spacing must be 8 feet center-to-center (maximum) and embedded at least 16 inches into the ground to completely support the fence in an upright position.
- See Standard Plan T65 for "Temporary Fence (Type ESA)."

Installation

- Construction materials, equipment storage, and parking areas should be located where they will not cause damage to vegetation designated for preservation. This could include: keeping equipment away from trees to prevent trunk and root damage, considering the impact of grade changes to existing vegetation

and the root zone, and minimizing disturbed areas by avoiding stands of trees and shrubs and following existing contours to reduce cutting and filling for temporary roads.

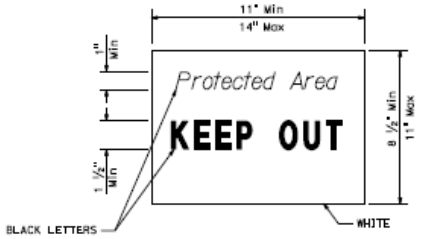
- Maintain existing irrigation systems.
- Employees and subcontractors must be instructed to honor protective devices. No heavy equipment, vehicular traffic, or storage piles of any construction materials is permitted within the drip line of any tree to be retained. Removed trees should not be felled, pushed, or pulled into any retained trees. Fires should not be permitted within 100 ft of the drip line of any retained trees. Any fires must be of limited size, and must be kept under continual surveillance. No toxic or construction materials (including paint, acid, nails, gypsum board, chemicals, fuels, and lubricants) should be stored within 50 feet of the drip line of any retained trees, nor disposed of in any way which would injure vegetation.
- After all other work is complete, fences and barriers must be removed last. This is because protected trees may be destroyed by carelessness during the final cleanup and landscaping.

Maintenance and Inspection

- During the entire construction phase, the limits of disturbance must remain clearly marked to avoid damage to the existing vegetation during site cleanup and stabilization. Irrigation or maintenance of existing vegetation must conform to the requirements in the landscaping plan. If damage to protected trees still occurs, maintenance guidelines described below must be followed:
  - Serious tree injuries must be attended to by an arborist.
  - During construction, the District Environmental Branch must be contacted to ensure that ESAs are protected and any environmental regulations are followed.
  - Existing Vegetated Areas to be Preserved must be clearly demarcated in the WPCDs.

SWPPP or WPCP

- Preservation of Existing Vegetation must be discussed in Section 500.3 of the SWPPP or Section 30.2 of the WPCP.



SIGN DETAIL

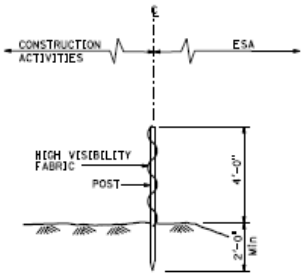
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

LICENSED LANDSCAPE ARCHITECT

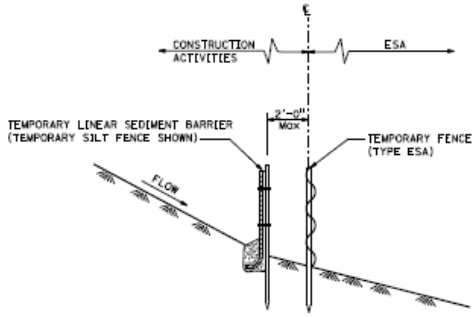
October 30, 2015
PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

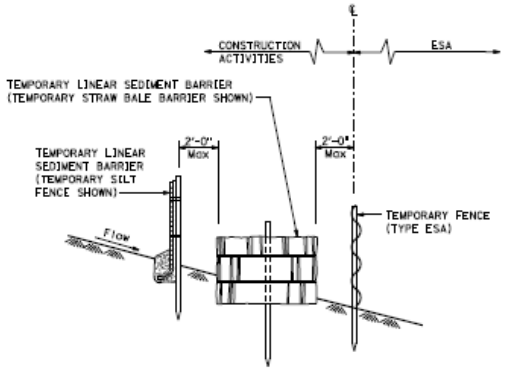
2015 STANDARD PLAN T65



SECTION
TEMPORARY FENCE (TYPE ESA)



SECTION
PLACEMENT DETAIL
FOR TEMPORARY LINEAR SEDIMENT BARRIER
USED WITH TEMPORARY
FENCE (TYPE ESA)



SECTION
PLACEMENT DETAIL
FOR TEMPORARY SILT FENCE
AND TEMPORARY STRAW BALE BARRIER
USED WITH TEMPORARY FENCE (TYPE ESA)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

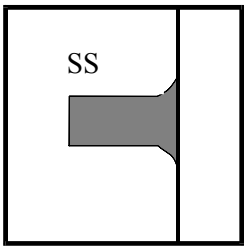
TEMPORARY WATER POLLUTION CONTROL DETAILS [TEMPORARY FENCE (TYPE ESA)]

NO SCALE

T65

Street Sweeping

SC-7



Standard Symbol

BMP Objectives

Soil Stabilization	☐
Sediment Control	☑
Tracking Control	☑
Wind Erosion Control	☑
Non-Stormwater Management	☐
Materials and Waste Management	☐

Definition and Purpose

Practices to remove tracked sediment to prevent the sediment from entering a storm drain or receiving waters.

Appropriate Applications

These practices are implemented anywhere sediment is tracked from the project site onto public or private paved roads, typically at jobsite entrances and exits.

Limitations

Sweeping and vacuuming may not be effective when soil is wet or muddy.

Standards and Specifications

General Requirements

- Sweep by hand or mechanical methods, such as vacuuming. Kick brooms or sweeper attachments may not be used.
- At least one street sweeper in good working order must be at the job site at all times when street sweeping work is required.
- Use one of the following types of street sweepers:
  - Mechanical sweeper followed by a vacuum-assisted sweeper;
  - Vacuum-assisted, dry, waterless, sweeper; or
  - Regenerative-air sweeper.
- Submit the number and type of street sweepers that will be used on the project for each activity at least 5 business days before starting the activities listed above. Keep and submit street sweeping activity records including sweeping times, locations, and the quantity of material collected.

- Sweep paved roads at construction entrance and exit locations and onsite paved areas:
  - During clearing and grubbing, earthwork, trenching, and pavement-structure construction activities.
  - When vehicles are entering and leaving the job site.
  - After soil-disturbing activities.
  - After observing off-site tracking of material.
- Sweep within 1 hour if sediment or debris is observed during the activities described above that require sweeping.
- Sweep within 24 hours if sediment or debris is observed during activities that do not require sweeping.
- Keep dust to a minimum during street sweeping activities. Use water for dust control or a vacuum whenever dust generation is excessive or sediment pickup is ineffective. Refer to WE-1 for "Wind Erosion Control" BMPs.
- Remove collected material, including sediment, from paved shoulders, drainage inlets, curbs and dikes, and other drainage areas.
- After sweeping is finished, collected material may be stockpiled. If not mixed with debris, trash or potentially hazardous objects, consider incorporating the removed sediment back into the project if approved by the RE. Otherwise, dispose of stockpiled material at least once per week according to Standard Specifications Section 14-10.
- Street sweeping does not void the requirements for residue collection included in other work activities, such as grooving, grinding, or asphalt concrete planing.

Maintenance and Inspection

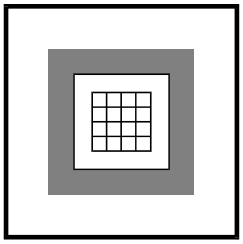
- Inspect potential sediment tracking locations daily.
- Monitor and inspect tracking control BMPs such as TC-1, "Temporary Construction Entrance/Exit," to reduce sediment accumulation on roads.
- Be careful not to sweep up any unknown substance or any object that may be potentially hazardous.
- Adjust brooms frequently; maximize efficiency of sweeping operations.
- Sweeper material must be disposed in compliance with waste regulations.

SWPPP or WPCP

- Street Sweeping must be discussed in Section 500.3.4 and 600.2 of the SWPPP or Section 30.2.3 of the WPCP.

Temporary Drainage Inlet Protection

SC-10



Standard Symbol

BMP Objectives

Soil Stabilization	☐
Sediment Control	☑
Tracking Control	☐
Wind Erosion Control	☐
Non-Stormwater Management	☐
Materials and Waste Management	☐

Definition and Purpose

Temporary drainage inlet protection consists of devices used at storm drain inlets that detain and/or filter sediment-laden runoff prior to discharge into storm drainage systems. This is achieved by allowing sediment to settle and/or filtering sediment upstream of a linear sediment barrier.

Appropriate Applications

- Where ponding will not encroach into highway traffic.
- Where sediment laden surface runoff may enter an inlet.
- Where disturbed drainage areas have not yet been permanently stabilized.
- Where the drainage area is 1 ac or less.
- Used year-round.

Limitations

- Requires an adequate area for water to pond without encroaching upon traveled way and should not present an obstacle to oncoming traffic.
- May require other methods of temporary protection to prevent sediment-laden stormwater and non-stormwater discharges from entering the storm drain system.
- Sediment removal may be difficult in high flow conditions or if runoff is heavily sediment laden. If high flow conditions are expected, use other on-site sediment trapping techniques, such as SC-4 “Check Dams,” in conjunction with temporary drainage inlet protection.
- Frequent maintenance is required.
- Silt fence inlet protection is appropriate in open areas that are subject to sheet flow and for flows not exceeding 0.5 cfs.

- Gravel bag barriers for inlet protection are applicable when sheet flows or concentrated flows exceed 0.5 cfs, and it is necessary to allow for overtopping to prevent flooding.
- Fiber rolls and foam barriers are not appropriate for locations where they cannot be properly anchored to the surface.
- Excavated drop inlet sediment traps are appropriate where relatively heavy flows are expected and overflow capability is needed.
- For drainage areas larger than 1 ac, runoff should be routed to a sediment trapping device designed for larger flows. See BMPs SC-2, "Sediment/Desilting Basin," and SC-3 "Sediment Trap/Curb Cutback."

Standards and Specifications

General Requirements

- Refer to Standard Specifications Section 13-6.03C for "Temporary Drainage Inlet Protection" and 13-6.03F for "Rigid Plastic Barriers."
- Identify existing and/or planned storm drain inlets that have the potential to receive sediment-laden surface runoff. Determine if storm drain inlet protection is needed, and which method or combination of methods to use. Update inlet protection as site conditions change.
- Use a linear sediment barrier to redirect runoff and control ponding in order to prevent ponding from encroaching on the traveled way or overtopping the curb or dike.
- Prior to installation, clear the area around each inlet of obstructions, including rocks, clods, and debris greater than 1-in. in diameter.
- Install linear sediment barriers upstream of the inlet and parallel with the curb, dike, or flow line to keep sediment from entering the inlet.
- Remove accumulated sediment according to Maintenance and Inspection recommendations. Accumulated sediment may be disposed of outside the highway right-of-way in conformance with the Standard Specifications Section 14-10.

Type 1 - Silt Fence

- This method should be used for drain inlets requiring protection in areas where finished grade is established and erosion control seeding has been applied or is pending. The silt fence (Type 1) protection is illustrated on Page 6. Do not place filter fabric underneath the inlet grate since the collected sediment may fall into the drain inlet when the fabric is removed or replaced.
- Type 2 - Excavated Drop Inlet Sediment Trap
- This method may be used for drainage inlets requiring protection in areas that have been cleared and grubbed, and where exposed soil areas are subject to grading. The excavated drop inlet sediment trap (Type 2) is illustrated on Page 7. Similar to constructing a temporary silt fence; see BMP SC-1, "Silt Fence." Size the excavated trap to provide a minimum storage capacity calculated at the rate of 67 yd3/ac of drainage area.

Type 3A – Gravel Bag Berm for Combined Inlets

- This method may be used for drain inlets surrounded by AC or paved surfaces. The gravel bag berm for combined inlets (Type 3A) is illustrated on Pages 8-9. Flow from a severe storm must not overtop the curb. In areas of high clay and silts, use filter fabric and gravel as additional filter media. Construct gravel bags in accordance with BMP SC-6, "Gravel Bag Berm." Gravel bags are used due to their high permeability.

Type 3B – Gravel Bag Berm for Grate Inlets

- This method may be used for drainage inlets surrounded by AC or paved surfaces. The gravel bag berm for grate inlets (Type 3B) is illustrated on Page 10. In areas of high clay and silts, use filter fabric and gravel as additional filter media. Place gravel bags in accordance with BMP SC-6, "Gravel Bag Berm." Gravel bags are used due to their high permeability.

Type 4A – Flexible Sediment Barrier for Grate Inlets

- This method may be used for drainage inlets requiring protection in areas that have been cleared and grubbed, and where exposed soil areas subject to grading. Flexible Sediment Barrier for Grate Inlets (Type 4A) is placed around the inlet and keyed and anchored to the surface. Flexible Sediment Barriers are intended for use as inlet protection where the area around the inlet is unpaved and the foam barrier or fiber roll can be secured to the surface. Place fiber rolls over the erosion control blanket. RE or appropriate licensed professional approval is required.

Type 4B – Flexible Sediment Barrier for Combined Inlets

- This method may be used for drainage inlets requiring protection in areas that have been cleared and grubbed, and where exposed soil areas subject to grading. Flexible Sediment Barrier for Combined Inlets (Type 4B) is placed in rows upstream of the inlet and along the curb or dike. The barriers are keyed and anchored to the surface. Flexible Sediment Barriers are intended for use as inlet protection where the area around the inlet is unpaved and the foam barrier or fiber roll can be secured to the surface. Place the barrier to provide a tight joint with the curb or dike. Cut the cover fabric or jacket to ensure a tight fit. RE and Construction Storm Coordinator approval is required.

Type 5 – Sediment Filter Bag

- This method may be used in areas with vehicle and equipment traffic that could damage aboveground inlet protection devices. The Sediment Filter Bags are installed as follows: (1) Remove the drainage inlet grate, (2) Place the sediment filter bag in the opening, and (3) Replace the grate to secure the sediment filter bag in place.

Type 6A – Catch Basin with Grate

- Catch Basin with Grate (Type 6A) is shown on page 16. Cover grate inlet with rigid plastic barrier and secure on each end with gravel-filled bags. If using a rigid sediment barrier and the grated inlet does not have a curb opening, placed the barrier using a gasket to prevent runoff from flowing under the barrier. Secure the barrier to the pavement with nails and adhesive, gavel-filled bags, or a combination of both.

Type 6B – Curb Inlet without Grate

- Curb Inlet without Grate (Type 6B) is shown on page 16. Place the flexible sediment barrier across the curb inlet opening and secure with gravel-filled bags.

Maintenance and Inspection

General Requirements

- Inspect all drainage inlet protection devices before and after every rainfall event and weekly year round. During extended rainfall events, inspect inlet protection devices at least once every 24 hours.
- Inspect the storm drain inlet after severe storms to check for bypassed material.
- Remove all drainage inlet protection devices within thirty days after the site is stabilized, or when the inlet protection is no longer needed.
  - Bring the disturbed area to final grade and smooth and compact it. Appropriately stabilize all bare areas around the inlet.
  - Clean and re-grade area around the inlet and clean the inside of the storm drain inlet as it must be free of sediment and debris at the time of final inspection.

Type 1 - Filter Fabric Fence

- Make sure the stakes are securely driven in the ground and are structurally sound (i.e., not bent, cracked, or splintered, and are reasonably perpendicular to the ground). Replace damaged stakes.
- Replace or clean the fabric when the fabric becomes clogged with sediment. Make sure the fabric does not have any holes or tears. Repair or replace fabric as needed or as directed by the RE.
- At a minimum, remove the sediment behind the fabric fence when accumulation reaches one-third the height of the fence or barrier height.

Type 2 – Excavated Drop Inlet Sediment Trap

  - Remove sediment from basin when the volume of the basin has been reduced by one-half.

Type 3A - Gravel Bag Berm for Combined Inlets

- Inspect bags for holes, gashes, and snags.
- Check gravel bags for proper arrangement and displacement. Remove the sediment behind the barrier when it reaches one-third the height of the barrier.

Type 3B - Gravel Bag Berm for Grate Inlets

- Inspect bags for holes, gashes, and snags.
- Check gravel bags for proper arrangement and displacement. Remove the sediment behind the barrier when it reaches one-third the height of the barrier.

Type 4A Flexible Sediment Barrier for Grate Inlets

- Check flexible sediment barrier for proper arrangement and displacement. Remove the sediment behind the barrier when it reaches one-third the height of the barrier.

Type 4B Flexible Sediment Barrier for Combined Inlets

- Check flexible sediment barrier for proper arrangement and displacement. Remove the sediment behind the barrier when it reaches one-third the height of the barrier.

Type 5 Sediment Filter Bag

- Change sediment filter bag carefully ensuring not to spill captured sediment into the drainage inlet.

Type 6A Catch Basin with Grate

- Check barrier and gravel-filled bags for proper arrangement and displacement. Routinely remove accumulated sediment

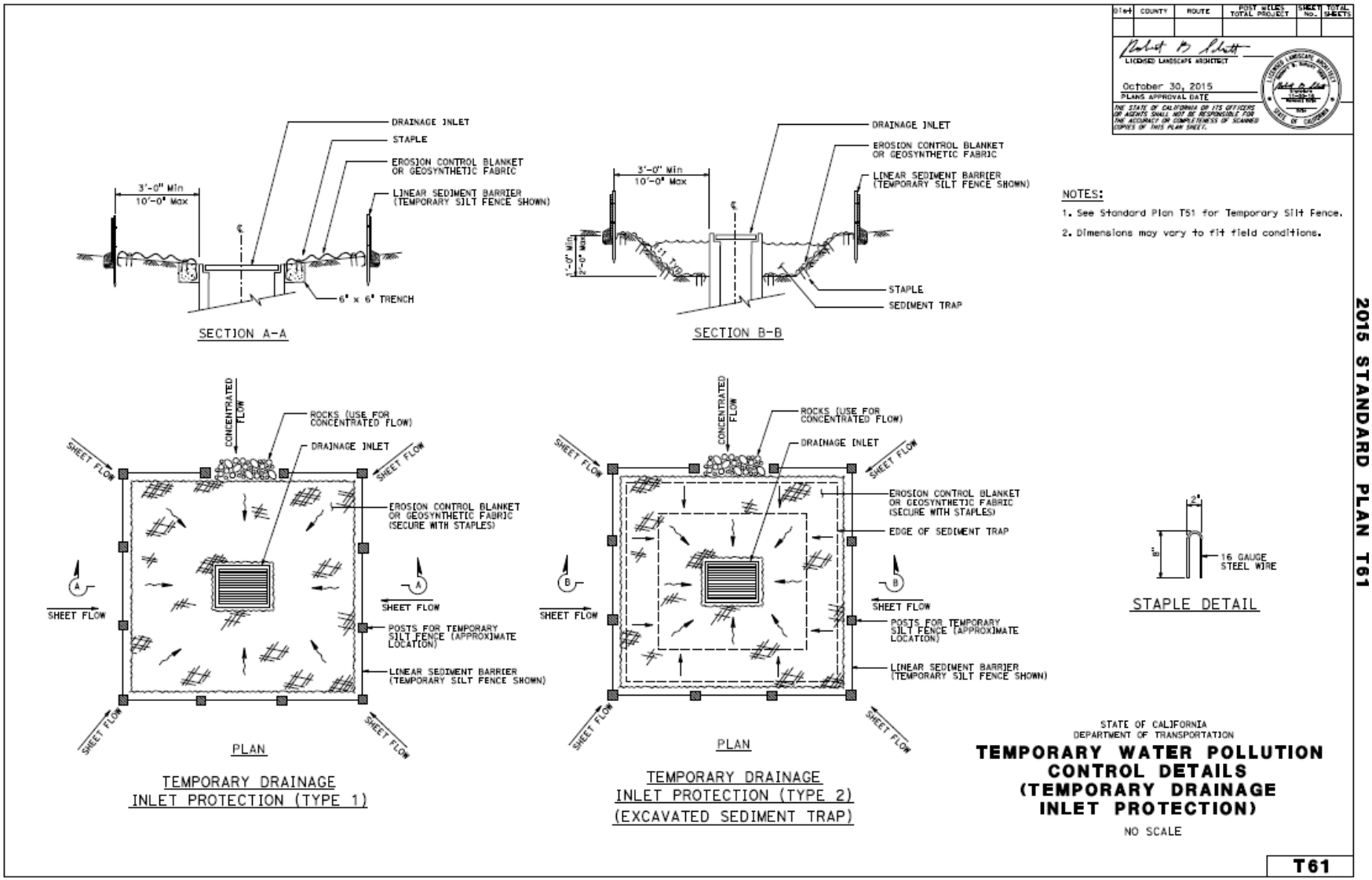
Type 6B Curb Inlet without Grate

- Check barrier and gravel-filled bags for proper arrangement and displacement.
- Remove the sediment behind the barrier when it reaches one-third the height of the barrier.

SWPPP or WPCP

- Temporary Drainage Inlet Protection must be discussed in Section 500.3.2 of SWPPP and/or Section 30.2.2 of the WPCP. Temporary Drainage Inlet Protection placement type must be shown on the WPCDs and reflect site temporary conditions.

Temporary Drainage Inlet Protection



Compost Socks

SC-11

//////CS///////

Standard Symbol

BMP Objectives	
Soil Stabilization	☑
Sediment Control	☑
Tracking Control	☐
Wind Erosion Control	☐
Non-Stormwater Management	☐
Materials and Waste Management	☐

Definition and Purpose

- Compost socks are a mesh sock containing compost that act as three dimensional, biodegradable structures that intercept and filter sheet flow. Compost socks can filter runoff, retain sediment, and reduce sheet flow velocities. Compost socks may be used as either a temporary or permanent sediment control measure.

Appropriate Applications

- Compost socks may be applied as both temporary and permanent sediment controls.
- Along the toe, top, face, and at grade breaks of exposed and erodible slopes to shorten slope length and spread runoff as sheet flow.
- Along the perimeter of a project.
- As check dams in unlined ditches.
- Down-slope of exposed soil areas.
- At operational storm drains as a form of inlet protection.
- Around temporary stockpiles.

Limitations

- Compost can potentially leach nutrients into runoff and negatively affect water quality. Compost should not be used directly upstream from a nutrient-impaired water body.
- Compost socks are susceptible to damage by traffic. Compost socks may be used around heavy machinery, but frequent disturbance decreases sock performance.

Standards and Specifications

General Requirements

- Compost socks must comply with Standard Specifications 21-2.02Q and 21-2.03Q.

- Compost for compost socks must comply with Standard Specifications Section 21-2.02K, except the particle size must be for coarse compost.
- Compost sock installation is illustrated in Standard Plan H51.
- Compost socks consist of a 12-inch diameter mesh tube that is filled with compost. The mesh tube must be composed of a natural biodegradable product such as cotton, jute, sisal, burlap, or coir. The mesh tube must be clean, evenly woven, and free of encrusted concrete or other contaminating materials, cuts, tears, broken or missing yarns, and thin, open, or weak places.
- Compost socks must have a functional longevity of one year.

Installation

- Before installing compost sock, remove obstructions from the ground including rocks, clods, and debris greater than 1 inch in diameter.
- For any 20-foot section of compost sock, prevent the compost sock from varying more than 5 percent from level.
- Use the following spacing unless otherwise noted on the project plans or special provisions:
  - 10 feet apart for slopes steeper than 2:1 (H:V)
  - 15 feet apart for slopes from 2:1 to 4:1 (H:V)
  - 20 feet apart for slopes from 4:1 to 10:1 (H:V)
  - 50 feet apart for slopes flatter than 10:1 (H:V)
- Place mesh tube, secure the end, and fill uniformly with compost. Secure the remaining end.
- For Type 1 installations:
  - Place in a furrow that is from 2 to 4 inches deep.
  - Fasten with wood stakes every 4 feet along the length of the compost sock.
  - Fasten the ends of the compost sock by placing a stake 6 inches from the end of the sock.
  - Drive the stakes into the soil so the top of the stake is less than 2 inches above the top of the compost sock.
- For Type 2 installations:
  - Fasten with notched wood stakes and rope.
  - Drive stakes into the soil until the notch is even with the top of the compost sock.
  - Lace the rope between stakes and over the compost sock. Knot the rope at each stake.

  - Tighten the fiber roll to the surface of the slope by driving the stakes further into the soil.

- If more than one compost sock is placed in a row, the socks should be overlapped; not abutted. Stagger overlapping joints in adjacent rows by 5 to 10 feet.

Removal

- For permanent installations: do not remove compost socks. Compost socks will degrade over time.
- For temporary installations: remove sock, rope and stakes if ordered by the RE. Cut sock and empty contents in place.

Other Considerations

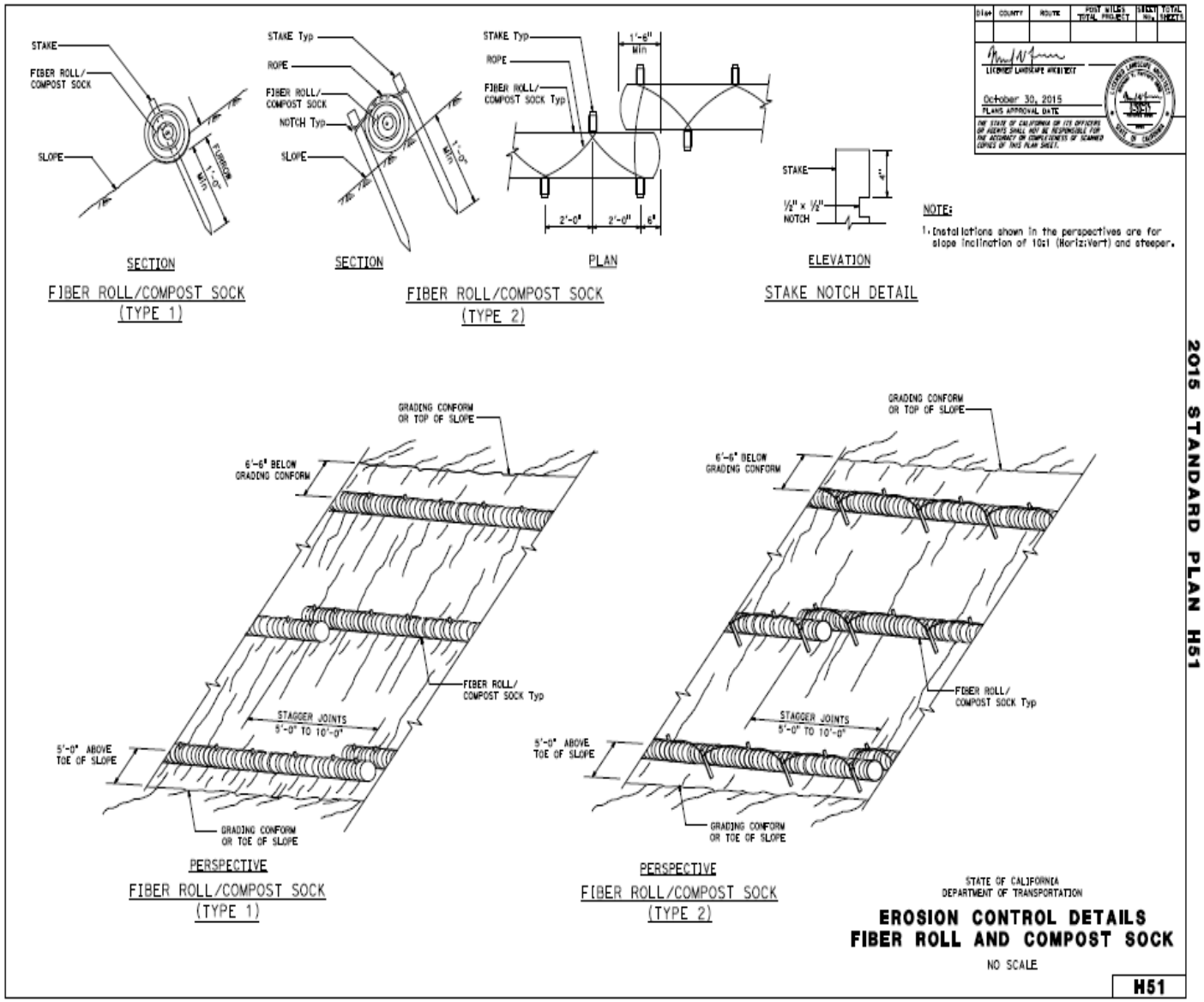
- Compost may be pre-seeded before placement into the mesh tube to assist in establishing vegetation. Once established, vegetation root systems provide additional soil stability and runoff filtration.
- Permanent compost sock applications are particularly advantageous below embankments, especially adjacent streams, by limiting re-entry and the disturbance to sensitive areas.
- Organic material in compost is important for pollutant removal and vegetation establishment. Organic content of the compost should range from 30 to 65% depending on site conditions.

Maintenance and Inspection

- Inspect compost socks before and after each rainfall event, and weekly year round.
- Remove sediment from behind the compost sock if sediment is 1/3 of compost sock height above ground.
- Repair or adjust the compost sock if rills or other evidence of concentrated runoff occur beneath the sock.
- Repair or replace compost socks if they become split, torn, or unraveled.
- Add stakes if the compost sock slumps or sags.
- Replace broken or split wood stakes.
- Maintain compost socks to provide an adequate sediment holding capacity and runoff velocity reduction.

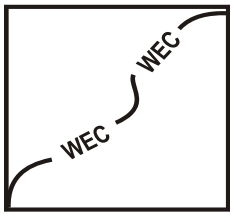
SWPPP or WPCP

- Compost Socks must be discussed in Section 500.3 of the SWPPP or Section 30.2 of the WPCP.


STAKE
FIBER ROLL/ COMPOST SOCK
SLOPE
1'-0" Min
SECTION
FIBER ROLL/COMPOST SOCK (TYPE 1)
STAKE Typ
ROPE
FIBER ROLL/ COMPOST SOCK
NOTCH Typ
SLOPE
1'-0" Min
SECTION
STAKE Typ
ROPE
FIBER ROLL/ COMPOST SOCK Typ
1'-6" Min
2'-0"
2'-0"
6"
PLAN
FIBER ROLL/COMPOST SOCK (TYPE 2)
STAKE
½" x ½" NOTCH
ELEVATION
STAKE NOTCH DETAIL
NOTE:
1. Installations shown in the perspectives are for slope inclination of 1:1 (Horiz:Vert) and steeper.
October 30, 2015
PLANS APPROVAL DATE
GRADING CONFORM OR TOP OF SLOPE
6'-6" BELOW GRADING CONFORM
FIBER ROLL/ COMPOST SOCK Typ
STAGGER JOINTS 5'-0" TO 10'-0"
5'-0" ABOVE TOE OF SLOPE
GRADING CONFORM OR TOE OF SLOPE
PERSPECTIVE
FIBER ROLL/COMPOST SOCK (TYPE 1)
GRADING CONFORM OR TOP OF SLOPE
6'-6" BELOW GRADING CONFORM
FIBER ROLL/ COMPOST SOCK Typ
STAGGER JOINTS 5'-0" TO 10'-0"
5'-0" ABOVE TOE OF SLOPE
GRADING CONFORM OR TOE OF SLOPE
PERSPECTIVE
FIBER ROLL/COMPOST SOCK (TYPE 2)
2015 STANDARD PLAN H51
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
EROSION CONTROL DETAILS
FIBER ROLL AND COMPOST SOCK
NO SCALE
H51

Wind Erosion Control

WE-1



Standard Symbol

BMP Objectives	
Soil Stabilization	☑
Sediment Control	☑
Tracking Control	☐
Wind Erosion Control	☑
Non-Stormwater Management	☐
Materials and Waste Management	☐

Definition and Purpose

- Wind erosion control consists of applying water or other dust palliatives as necessary to prevent or alleviate erosion by the forces of wind. Dust control must be applied in accordance with Caltrans standard practices. Covering of small stockpiles or areas is an alternative to applying water or other dust palliatives; see SS-7 for "Temporary Cover and Rolled Erosion Control Products"
- Must comply with local agencies such as Air Quality Management District's requiring dust control plans or dust control permits as well as any Air Clean Act requirements.

Appropriate Applications

This practice is generally implemented on all exposed soils subject to wind erosion.

Limitations

- Effectiveness depends on soil, temperature, humidity and wind velocity.
- Chemically treated subgrades could cause soil to become water repellant, preventing infiltration or the long-term re-vegetation of the site.

Standards and Specifications

Standard Specification Section 10-5 contains general requirements for "Dust Control."

- Effective dust control is accomplished by applying dust palliatives, temporary Soil Stabilization BMPs, Tracking Controls and managing stockpiles.
- "Dust Palliatives" are covered under Section 18 of the Standard Specifications. Acceptable dust palliatives include water, dust control binders, and dust suppressants. Dust control binders must comply with specifications for tackifier. Dust suppressants include petroleum-based organic product, nonpetroleum-based organic product, hygroscopic product, and synthetic polymer emulsion.

- If a dust suppressant or tackifier is used, submit a Dust Treatment Plan. Submit a certificate of compliance for dust suppressants, tackifiers, and fibers.
- Identify and stabilize key access points with the use of Tracking Control BMPs.
- Minimize the impact of dust by anticipating the direction of prevailing winds.
- Temporary soil stabilization BMPs, such as SS-3 "Hydraulic Mulch", SS-4 "Hydroseed, SS-5 "Soil Binders, also provide wind erosion control benefits.
- Ensure proper implementation of BMPs WM-3, "Stockpile Management," and SC-7, "Street Sweeping," as these BMPs provide wind erosion control benefits.
- Ensure that water is applied by means of pressure-type distributors or pipelines equipped with a spray system or hoses and nozzles to ensure even distribution.
- All distribution equipment should be equipped with a positive means of shutoff.
- Chemical dust suppression products could have environmental water quality impacts. Depending on the product and the time of application, water quality sampling for non-visible pollutants should be assessed when a storm even is forecasted.
- For chemical or petroleum based organics stabilization, there are many products available. These products should not create any adverse effects on stormwater, plant life, groundwater and should meet all applicable regulatory requirements including inspection, documentation, monitoring and reporting requirements.
- Unless water is applied by means of pipelines, at least one mobile unit should be available at all times to apply water or dust palliative to the project.
- If reclaimed water is used, the sources and discharge must meet California Department of Health Services water reclamation criteria and the RWQCB requirements. Non-potable water must not be conveyed in tanks or drain pipes that will be used to convey potable water and there must be no connection between potable and non-potable supplies. Non-potable tanks, pipes and other conveyances must be marked "NON-POTABLE WATER - DO NOT DRINK."
- Appendix B of this Manual includes additional information on selecting temporary soil stabilization products that could be used for Wind Erosion Control.

Maintenance and Inspection

- Check areas where wind erosion controls have been implemented daily for erosion and visible dust.
- Most water-based dust control measures require frequent application. Obtain vendor or independent information on longevity of chemical dust suppression.

SWPPP or WPCP

- Wind Erosion Control must be discussed in Section 500.3.5 of the SWPPP or Section 30.2.4 of the WPCP.

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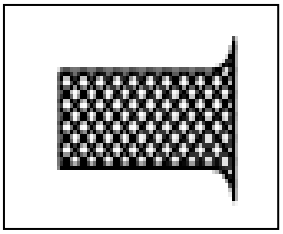
Temporary Construction Entrance/ Exit

TC-1



Standard Symbol

BMP Objectives	
Soil Stabilization	☑
Sediment Control	☐
Tracking Control	☑
Wind Erosion Control	☑
Non-Stormwater Management	☐
Materials and Waste Management	☐

Definition and Purpose

A temporary construction entrance/exit is defined by a point of entrance/exit to a construction site that is stabilized to reduce the tracking of mud and dirt onto public roads by construction vehicles.

Appropriate Applications

- Where dirt or mud can be tracked onto public roads.
- Adjacent to water bodies.
- Where poor soils are encountered.
- Where dust is a problem during dry weather conditions.

Limitations

- Site conditions will dictate design and need.
- Limit the points of entrance/exit to the construction site.
- Limit speed of vehicles to control dust.

Standards and Specifications

General Requirements

- Temporary construction entrance/exit must comply with Standard Specification Section 13-7.03 Temporary Construction Roadways and Entrances.
- Corrugated steel panels must be pressed or shop welded. They should have a slot or hook for coupling the panels together.
- Class 8 RSP fabric shall be used to line temporary construction entrance/exit. Do not drive on the fabric until the rock is spread. Repair damaged fabric by placing new fabric over the damaged area with at least an 18-inch overlap on all edges.

- Type A rock should be used for a Type 1 temporary construction entrance/exit. Type A rock must comply with Section 13-7.03B (2) of the Standard Specifications.
- Type B rock should be used for a Type 2 temporary construction entrance/exit. Type B rock must comply with Section 13-7.03B (2) of the Standard Specifications.
- Submit details for alternative construction entrances at least 5 business days before installation. This may include alternatives for the sump and corrugated steel panels or to eliminate the sump.

Installation

- Prepare the location for the temporary construction entrance/exit as follows:
  - Remove vegetation and clear debris.
  - Grade the ground to a uniform plane.
  - Remove sharp objects that could damage the fabric.
  - Compact the top 1.5 feet of soil to at least 90 percent relative compaction.
- Construct the temporary construction entrance/exit as follows (standard plans attached below):
  - Place the fabric along the length of the construction entrance/exit.
  - Overlap fabric ends by at least 12 inches.
  - Cover the fabric with rock within 24 hours.
  - Spread rock over the fabric in the direction of traffic.
  - Keep a 6-inch layer of rock over the fabric to prevent damage from the spreading equipment.
- For a Type 2 temporary construction entrance/exit, place rock under the corrugated steel panels. Use at least 6 corrugated steel panels for each entrance. Couple the panels together to prevent movement.
- If a sump is used, install it within 20 ft of the temporary construction entrance/exit.

Other Considerations

- Implement BMP SC-7, "Street Sweeping" as required under Section 13-4.03F and 13-7 of the Standard Specifications.
- Require all employees, subcontractors, and suppliers to utilize the temporary construction entrance/exit. If the construction entrance/exit has metal plates as part of the BMP, all vehicles must be required to utilize them.
- Route runoff from temporary construction entrances/exits through a sediment-trapping device before discharge.

Temporary Construction Entrance/ Exit

TC-1

- Design a temporary construction entrance/exit to support the heaviest vehicles and equipment that will use it.
- The use of asphalt concrete (AC) grindings is not allowed (high potential for leaching hydrocarbons) unless it complies with Section 6.8 of the 2016 Caltrans SWMP. Designate combination or single purpose entrances and exits to the construction site to maintain smooth flow of traffic.

Maintenance and Inspection

- Inspect before and after each rainfall event, and weekly year round.
- Inspect immediate site access roads daily, implement SC-7, "Street Sweeping" as needed.
- Remove aggregate, separate, and dispose of sediment if temporary construction entrance is clogged with sediment.
- Keep all temporary construction entrance/exit ditches clear.

SWPPP or WPCP

- Tracking Control BMPs are to be included and discussed in section 500.3.4 or Section 600.2[1] for SWPPP and Section 30.2.3 of the WPCP.

[1]Section 600.2 for the LTCGP SWPPP

Water Conservation Practices

NS-1

Standard Symbol

BMP Objectives

Soil Stabilization	☐
Sediment Control	☐
Tracking Control	☐
Wind Erosion Control	☐
Non-Stormwater Management	☑
Materials and Waste Management	☐

Definition and Purpose

Water conservation practices are construction methods that minimize the use of water onsite or use water in a manner that avoids causing runoff, erosion and/or the discharge of pollutants to the storm drain system or receiving waters. Proper utilization of this BMP reduces or prevents non-stormwater discharges.

Appropriate Applications

Water conservation practices are implemented on all construction sites wherever water is used.

Limitations

- If not implemented correctly, discharges may trigger reporting and monitoring requirements and delay construction work.

Standards and Specifications

- Keep water equipment in good working condition.
- Ensure tracking controls are implemented in, near and around water truck filling areas.
- Repair water leaks promptly.
- Authorization is required for activities that could potentially discharge water into a storm drain system or receiving waters.
- Avoid using water to clean construction areas. Do not wash paved areas with water. Paved areas and roadways should be swept and vacuumed in accordance with SC-7 “Street Sweeping.”
- Apply water for dust control in accordance with Standard Specifications Section 10-4 Water Usage and BMP WE-1, “Wind Erosion Control.”
- Direct construction water runoff to areas where it can infiltrate into the ground or be collected and reused.
- Manage run-on to minimize contact with job site.

- Retain water spilled while filling water trucks within the designated water truck filling areas. Prevent tracking from water trucks and other equipment.
- Report discharges to the RE and the WPC Manager immediately.

Maintenance and Inspection

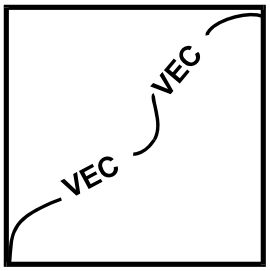
- Inspect water equipment areas at least weekly, prior to a forecasted rain event, daily during extended rain events and post-storm events.
- Inspect non-stormwater BMPs daily when non-stormwater operations are ongoing.
- Repair water equipment as needed.

SWPPP or WPCP

- Water Conservation Practices must be discussed in Section 500.3.5 of the SWPPP or Section 30.3.1 of the WPCP.

Vehicle and Equipment Cleaning

NS-8



Standard Symbol

BMP Objectives

Soil Stabilization	☐
Sediment Control	☐
Tracking Control	☐
Wind Erosion Control	☐
Non-Stormwater Management	☑
Materials and Waste Management	☐

Definition and Purpose

Vehicle and equipment cleaning procedures and practices are used to minimize or eliminate the discharge of pollutants from vehicle and equipment cleaning operations to storm drain systems or to watercourses.

Appropriate Applications

These procedures are applied on all construction sites where vehicle and equipment cleaning is performed.

Limitations

- This BMP may be limited or disallowed under regulatory agency permits, particularly near Environmentally Sensitive Areas (ESAs).
- Generates non-stormwater that requires management, and, in some cases, the disposal of hazardous waste.

Standards and Specifications

General Requirements

- Limit vehicle and equipment cleaning or washing at the job site except for the safety and protection of the equipment and as needed to comply with regulatory agency permits and approvals.
- Cleaning of vehicles and equipment with soap, solvents or steam shall not occur on the job site unless the RE has been notified in advance and the resulting wastes are fully contained in accordance with Standard Specifications Section 14-11 or 13-4.03D (5), whichever is applicable. Do not use diesel to clean vehicles and minimize the use of solvents.
- Vehicle and equipment wash water shall be contained for percolation or evaporative drying away from storm drain inlets or receiving waters and should not be discharged within the highway right-of-way. Apply other appropriate BMPs as applicable.

- All vehicles/equipment that regularly enter and leave the construction site must be cleaned off-site.
- Resulting wastes and by-products shall not be discharged or buried within the highway right-of-way, and must be captured and recycled or disposed according to the requirements of WM-10, "Liquid Waste Management" or WM-6, "Hazardous Waste Management," depending on the waste characteristics.

Implementation

- When vehicle/equipment washing/cleaning must occur onsite, and the operation cannot be located within a structure or building equipped with appropriate disposal facilities, the outside cleaning area shall have the following characteristics, and shall be arranged with the WPC Manager, QSD, or QSP as well as the Construction Storm Water Coordinator:
  - Located away from storm drain inlets, drainage facilities, or watercourses.
  - Paved with concrete or asphalt and bermed to contain wash waters and to prevent run-on and runoff.
  - Configured with a sump to allow collection and disposal of wash water.
  - Wash waters shall not be discharged to storm drains or watercourses.
  - Used only when necessary.
- When cleaning vehicles/equipment with water:
  - Use as little water as possible. High pressure sprayers may use less water than a hose, and shall be considered.
  - Use positive shutoff valve to minimize water usage.
  - Facility wash racks shall discharge to a sanitary sewer, recycle system or other approved discharge system and shall not discharge to the storm drainage system or watercourses.

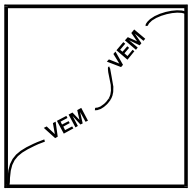
Maintenance and Inspection

- The control measure shall be inspected at least weekly, prior to a forecasted rain event, daily during extended rain events and post-storm events.
- Inspect wash area and sump regularly. Remove liquids and sediment as needed or as directed by the RE.

SWPPP or WPCP

- Vehicle Equipment Cleaning must be discussed in Section 500.4.2 of the SWPPP or Section 30.3 of the WPCP.

Vehicle and Equipment Maintenance NS-10



Standard Symbol

BMP Objectives

Soil Stabilization	☐
Sediment Control	☐
Tracking Control	☐
Wind Erosion Control	☐
Non-Stormwater Management	☑
Materials and Waste Management	☐

Definition and Purpose

Procedures and practices to minimize or eliminate the discharge of pollutants to the storm drain systems or to receiving waters from vehicle and equipment maintenance activities.

Appropriate Applications

These procedures apply on all construction projects where an onsite uncovered yard area is necessary for storage and maintenance of heavy equipment and vehicles.

Limitations

- This BMP may be limited or disallowed under regulatory agency permits, particularly near Environmentally Sensitive Areas (ESAs).
- Onsite vehicle and equipment maintenance should only be used where it's impractical to send vehicles and equipment off-site for fueling.

Standards and Specifications

- When maintenance must occur onsite, the contractor shall select and designate an area to be used, subject to approval of the RE and implement appropriate controls for the activities to be performed.
- Dedicated maintenance areas shall be on level ground and protected from storm water run-on and runoff, and shall be located at least 50 ft from downstream drainage facilities and receiving waters.
- Protect maintenance areas with berms or dikes to prevent run-on, runoff, and to contain spills.
- For long-term projects, consider constructing roofs or using portable tents over maintenance areas.
- Absorbent spill clean-up materials and spill kits shall be available in maintenance areas and used on small spills instead of hosing down or burying techniques. Affected absorbent material and spill kits should be removed promptly and disposed of properly after use.

- Drip pans or absorbent pads shall be placed under vehicles and equipment when performing maintenance work that involves fluids. Vehicles and equipment maintenance areas shall not be left unattended during maintenance activities.
- Drip pans or plastic sheeting shall be placed under all vehicles and equipment placed on docks, barges, or other structures over water bodies when the vehicle or equipment is planned to be idle for more than one hour.
- Properly dispose or recycle used batteries and tires as well as any other vehicle or equipment parts.
- Substances used to coat asphalt transport trucks and asphalt-spreading equipment shall be non-toxic.
- Properly dispose of used oils, fluids, lubricants, and spill cleanup materials.
- Do not dump fuels and lubricants onto the ground.
- Do not place used oil in a dumpster or pour into a storm drain or watercourse.
- Do not bury used tires.
- Repair fluid and oil leaks immediately.
- Provide spill containment dikes or secondary containment around stored oil and chemical drums. Refer to WM-1, "Material Delivery and Storage" for details.

Maintenance and Inspection

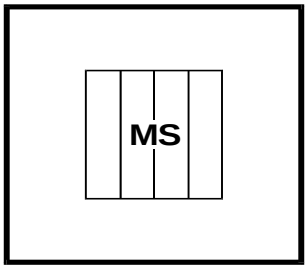
- Vehicles and equipment shall be inspected on each day of use for leaks. Leaks shall be repaired immediately or removed from the project site.
- Maintenance areas and storage tanks shall be inspected regularly.
- Maintain waste fluid containers in leak proof condition.
- Inspect equipment for damaged hoses and leaky gaskets routinely. Repair or replace as needed.
- Inspection and Maintenance of these areas must be properly documented and the WPC Manager must ensure no potential for discharges occur from these areas as part of the non-visible monitoring requirements.

SWPPP or WPCP

- Vehicle and Equipment Maintenance must be discussed in Section 500.4 of the SWPPP or Section 30.3 of the WPCP.

Material Delivery and Storage

WM-1



Standard Symbol

BMP Objectives

Soil Stabilization	☐
Sediment Control	☐
Tracking Control	☐
Wind Erosion Control	☐
Non-Stormwater Management	☐
Materials and Waste Management	☑

Definition and Purpose

Procedures and practices for the proper handling and storage of materials in a manner that minimizes or eliminates the discharge of these materials to the storm drain system or to receiving waters.

Appropriate Applications

These procedures are implemented at all construction sites with delivery and storage of the following:

- Hazardous chemicals such as:
  - Acids
  - lime
  - glues
  - adhesives
  - paints
  - solvents
  - curing compounds
- Soil stabilizers and binders
- Fertilizers
- Detergents
- Plaster
- Petroleum products such as fuel, oil, and grease

- Asphalt and concrete components
- Pesticides and herbicides
- Other materials that may be detrimental if released to the environment.

Limitations

- Space limitation may preclude indoor storage.
- Storage sheds must meet building & fire code requirements and be leak free.

Standards and Specifications

General

- Train employees and subcontractors on the proper material delivery and storage practices.
- Temporary storage area shall be located away from vehicular traffic.
- Safety Data Sheets (SDS) shall be supplied to the RE for all materials stored. Can be done at any time but at least 5 days prior to material being used or stored onsite.
- Must comply with Caltrans Standard Specification 13-4, "Job Site Management", and 14-11, "Hazardous Waste and Contamination."

Material Storage Areas and Practices

- Liquids, petroleum products, and substances listed in 40 CFR Parts 110, 117, or 302 shall be stored in approved containers and drums and shall be placed in temporary containment facilities for proper storage.
- Each temporary containment facility shall have a permanent cover and side wind protection or be covered during non-working days and whenever a storm event is forecasted.
- A temporary containment facility shall provide for a spill containment volume able to contain precipitation from a 24-hour, 25-year storm event, plus the greater of ten percent of the aggregate volume of all containers or 100 percent of the capacity of the largest container within its boundary, whichever is greater.
- A temporary containment facility shall be impervious to the materials stored therein for a minimum contact time of 72 hours.
- A temporary containment facility shall be maintained free of accumulated rainwater and spills. In the event of spills or leaks, accumulated rainwater and spills shall be collected and placed into drums. These liquids shall be handled as a hazardous waste unless testing determines them to be non-hazardous. All collected liquids or non-hazardous liquids shall be sent to an approved disposal site.

- Sufficient separation shall be provided between stored containers to allow for spill cleanup and emergency response access.
- Incompatible materials, such as chlorine and ammonia, shall not be stored in the same temporary containment facility.
- Materials shall be stored in their original containers and the original product labels shall be maintained in place in a legible condition. Damaged or otherwise illegible labels shall be replaced immediately.
- Bagged and boxed materials shall be stored on pallets and shall not be allowed to accumulate on the ground. To provide protection from wind and rain, bagged and boxed materials shall be covered during non-working days and prior to rain events.
- Stockpiles shall be protected in accordance with WM-3, "Stockpile Management."
- Have proper storage instructions posted at all times in an open and conspicuous location and include it as an informal training component of the tailgates and ongoing WPC training.
- Do not store hazardous chemicals, drums, or bagged materials directly on the ground. Place these items on a pallet, under cover in secondary containment.
- Keep ample supply of appropriate spill clean up material near storage areas.
- Also, see WM-6, "Hazardous Waste Management," for storing of hazardous materials.

Material Delivery Practices

- Keep an accurate, up-to-date inventory of material delivered and stored on-site.
- Employees trained in emergency spill clean-up procedures shall be present when dangerous materials or liquid chemicals are unloaded.

Spill Clean-up

- Contain and clean up any spill immediately.
- If significant residual materials remain on the ground after construction is complete, properly remove and dispose any hazardous materials or contaminated soil.
- See WM-4, "Spill Prevention and Control," for spills of chemicals and/or hazardous materials.

Maintenance and Inspection

- Storage areas shall be kept clean, well organized, and equipped with ample clean-up supplies as appropriate for the materials being stored.
- Perimeter controls, containment structures, covers, and liners shall be repaired or replaced as needed to maintain proper function.
- Inspect storage areas before, during and after rainfall events, and at least weekly during other times. Collect and place into drums any spills or accumulated rainwater and dispose of properly.
- Material Delivery and Storage areas must be shown on the WPCDs and reflect current site conditions.

SWPPP or WPCP

- Material Delivery and Storage must be discussed in Section 500.4.2 of the SWPPP or Section 30.3.2 of the WPCP.

Stockpile Management

WM-3

Standard Symbol

BMP Objectives

Soil Stabilization	☐
Sediment Control	☐
Tracking Control	☐
Wind Erosion Control	☐
Non-Stormwater Management	☐
Materials and Waste Management	☑

Definition and Purpose

Stockpile management procedures and practices are designed to reduce or eliminate air and storm water pollution from stockpiles of soil, and paving materials such as portland cement concrete (PCC) rubble, asphalt concrete (AC), asphalt concrete rubble, aggregate base, aggregate subbase or pre-mixed aggregate, asphalt binder (so called "cold mix" asphalt) and pressure treated wood.

Appropriate Applications

Implemented in all projects that stockpile soil and other materials.

Limitations

Use of plastic cover might be restricted depending on the location of the site and regulatory permits.

Standards and Specifications

- Stockpiles must comply with Standard Specification 13-4.03C (3) Stockpile Management.
- Protection of stockpiles is a year-round requirement.
- Locate stockpiles a minimum of 50 ft. away from concentrated flows of storm water, drainage courses, and inlets.
- Utilize run-on and run-off BMPs to ensure stockpile materials are protected and do not have the potential to discharge material.
- Implement wind erosion control practices as appropriate on all stockpiled material. For specific information see WE-1, "Wind Erosion Control."
- Stockpiles of contaminated soil shall be managed in accordance with WM-7, "Contaminated Soil Management."
- Bagged materials should be placed on pallets and under cover.

Protection of Inactive Stockpiles

Inactive stockpiles of the identified materials shall be protected further as follows:

- Soil stockpiles:
  - soil stockpiles shall be covered or protected with soil stabilization measures and a temporary perimeter sediment barrier at all times. If no longer needed, they should be removed and disposed of properly.
- Stockpiles of portland cement concrete rubble, asphalt concrete, asphalt concrete rubble, aggregate base, or aggregate subbase:
  - the stockpiles shall be covered or protected with a temporary perimeter sediment barrier at all times. If no longer needed, they should be removed and disposed of properly.
- Stockpiles of "cold mix":
  - Cold mix stockpiles shall be placed on and covered with plastic or comparable material at all times and surround by a berm.
- Stockpiles/Storage of pressure treated wood with copper, chromium, and arsenic or ammonical, copper, zinc, and arsenate:
  - Treated wood shall be covered with plastic or comparable material and placed on pallets.

Protection of Active Stockpiles

Active stockpiles shall be protected further as follows:

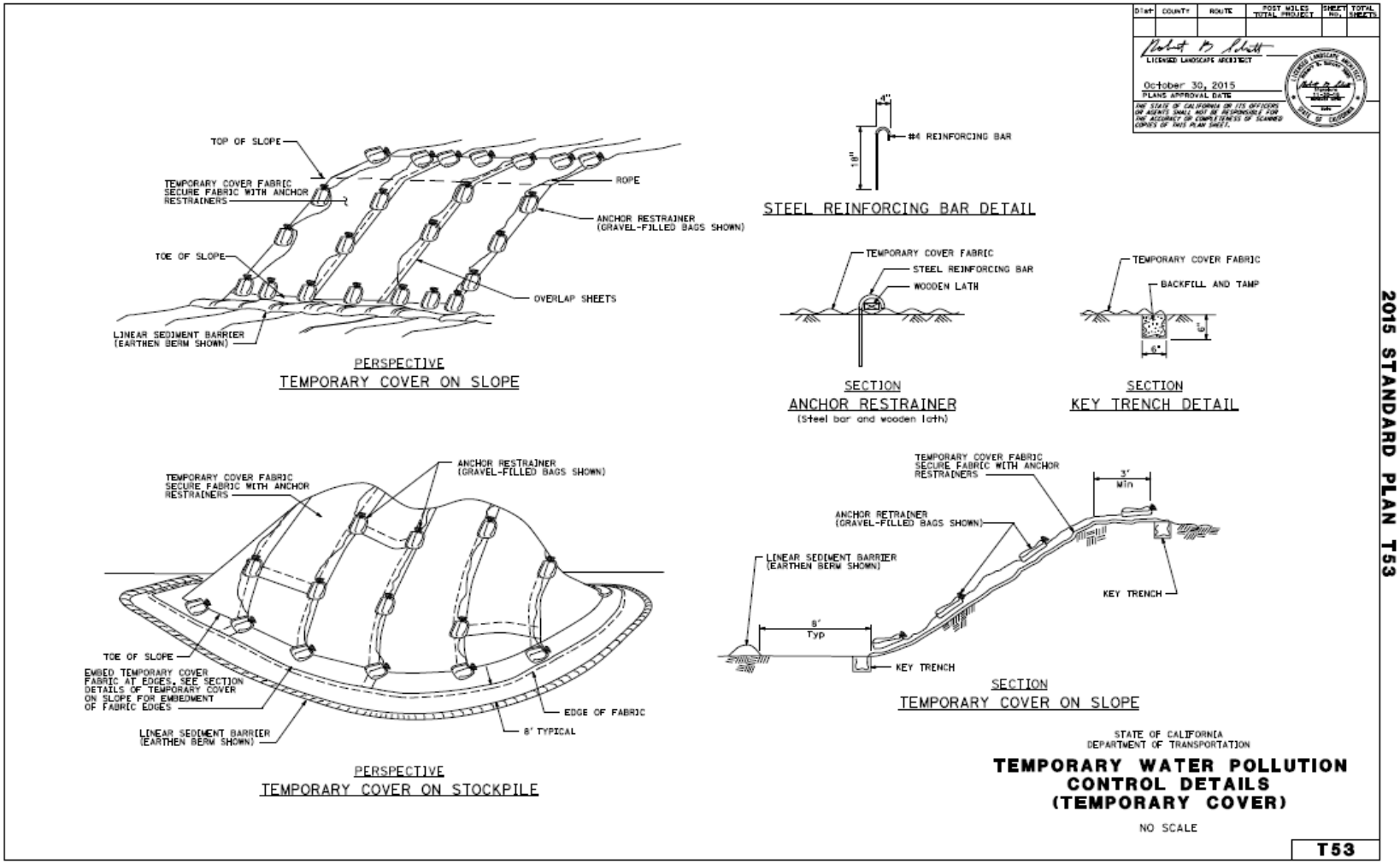
- All stockpiles shall be covered, stabilized, or protected with a temporary linear sediment barrier prior to the onset of precipitation.
- Stockpiles of "cold mix" shall be placed on and covered with plastic or comparable material prior to the onset of precipitation.
- All Stockpiles should be removed from the site and disposed of properly.

Maintenance and Inspections

- Inspect Stockpile Management areas before, during and after rainfall events, and at least weekly during other times.
- Repair and/or replace perimeter controls and covers to keep Stockpile Management functioning properly.
- Stockpile Management areas must be shown on the WPCDs and reflect site conditions.

SWPPP or WPCP

- Stockpile Management must be discussed in Section 500.4.2 of the SWPPP or Section 30.3.2 of the WPCP.


Dist
COUNTY
ROUTE
POST MILES TOTAL PROJECT
SHEET NO.
TOTAL SHEETS
LICENSED LANDSCAPE ARCHITECT
October 30, 2015
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
TOP OF SLOPE
TEMPORARY COVER FABRIC SECURE FABRIC WITH ANCHOR RESTRAINERS
ROPE
ANCHOR RESTRAINER (GRAVEL-FILLED BAGS SHOWN)
TOE OF SLOPE
OVERLAP SHEETS
LINEAR SEDIMENT BARRIER (EARTHEN BERM SHOWN)
PERSPECTIVE
TEMPORARY COVER ON SLOPE
#4 REINFORCING BAR
18"
STEEL REINFORCING BAR DETAIL
TEMPORARY COVER FABRIC
STEEL REINFORCING BAR
WOODEN LATH
SECTION
ANCHOR RESTRAINER
(Steel bar and wooden lath)
TEMPORARY COVER FABRIC
BACKFILL AND TAMP
6"
SECTION
KEY TRENCH DETAIL
TEMPORARY COVER FABRIC SECURE FABRIC WITH ANCHOR RESTRAINERS
ANCHOR RESTRAINER (GRAVEL-FILLED BAGS SHOWN)
TOE OF SLOPE
EMBED TEMPORARY COVER FABRIC AT EDGES, SEE SECTION DETAILS OF TEMPORARY COVER ON SLOPE FOR EMBEDMENT OF FABRIC EDGES
LINEAR SEDIMENT BARRIER (EARTHEN BERM SHOWN)
EDGE OF FABRIC
8' TYPICAL
PERSPECTIVE
TEMPORARY COVER ON STOCKPILE
TEMPORARY COVER FABRIC SECURE FABRIC WITH ANCHOR RESTRAINERS
3' Min
ANCHOR RETRAINER (GRAVEL-FILLED BAGS SHOWN)
LINEAR SEDIMENT BARRIER (EARTHEN BERM SHOWN)
KEY TRENCH
8' Typ
KEY TRENCH
SECTION
TEMPORARY COVER ON SLOPE
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY COVER)
NO SCALE
T53
2015 STANDARD PLAN T53

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Spill Prevention and Control

WM-4

Standard Symbol

BMP Objectives

Soil Stabilization	☐
Sediment Control	☐
Tracking Control	☐
Wind Erosion Control	☐
Non-Stormwater Management	☐
Materials and Waste Management	☑

Definition and Purpose

These procedures and practices are implemented to prevent and control spills in a manner that minimizes or prevents the discharge of spilled material to the drainage system or watercourses.

Appropriate Application

This best management practice (BMP) applies to all construction projects. Spill control procedures are implemented anytime chemicals and/or hazardous substances are stored. Substances may include, but are not limited to:

- Soil stabilizers/binders.
- Dust Palliatives.
- Herbicides.
- Growth inhibitors.
- Fertilizers.
- Deicing/anti-icing chemicals.
- Fuels.
- Lubricants.
- Other petroleum distillates.

■ To the extent that the work can be accomplished safely, spills of oil, petroleum products, substances listed under 40 CFR parts 110, 117, and 302, and sanitary and septic wastes shall be contained and cleaned up immediately.

Limitations

- This BMP only applies to spills caused by the contractor. Other spills or discharges observed or discovered must be reported to the RE.
- Procedures and practices presented in this BMP are general. Contractor shall identify appropriate practices for the specific materials used or stored on-site and follow the appropriate Safety Data Sheets (SDS).

Standards and Specifications

- Must comply with Caltrans Standard Specifications 13-4.03B Spill Prevention and Control.
- To the extent that it doesn't compromise clean up activities, spills shall be covered and protected from stormwater run-on.
- Spills shall not be buried or washed with water. Potable water has chlorine and therefore should not be allowed to be discharged off the project site.
- Used clean up materials, contaminated materials, and recovered spill material that is no longer suitable for the intended purpose shall be stored and properly disposed of.
- Water used for cleaning and decontamination shall not be allowed to enter storm drains or watercourses and shall be collected and disposed of in accordance with WM-10, "Liquid Waste Management."
- Water overflow or minor water spillage shall be contained and shall not be allowed to discharge into drainage facilities or watercourses.
- Proper storage, clean-up and spill reporting instruction for hazardous materials stored or used on the project site shall be posted at all times in an open, conspicuous and accessible location.
- Waste storage areas shall be kept clean, well organized and equipped with ample clean-up supplies as appropriate for the materials being stored. Perimeter controls, containment structures, covers and liners shall be repaired or replaced as needed to maintain proper function.

Education

- Educate employees and subcontractors on what a "significant spill" is for each material they use, and what is the appropriate response for "significant" and "insignificant" spills.
- Educate employees and subcontractors on potential dangers to humans and the environment from spills and leaks.
- Hold regular meetings to discuss and reinforce appropriate disposal procedures (incorporate into regular safety meetings).
- Establish a continuing education program to indoctrinate new employees.

- The WPC Manager shall oversee and enforce proper spill prevention and control measures.
- The list of reportable quantities can be found at https://www.bnl.gov/esh/env/compliance/docs/SaraTitleList.pdf.

Cleanup and Storage Procedures

- Minor Spills:
  - Minor spills typically involve small quantities of oil, gasoline, paint, etc., which can be controlled by the first responder at the discovery of the spill.
  - Use absorbent materials on small spills rather than hosing down or burying the spill.
  - Remove the absorbent materials promptly and dispose of properly.
  - The practice commonly followed for a minor spill is:
    - Contain the spread of the spill.
    - Recover spilled materials.
    - Clean the area and/or properly dispose of contaminated materials.
- Semi-Significant Spills:
  - Semi-significant spills still can be controlled by the first responder along with the aid of other personnel such as laborers and the foreman, etc. This response may require the cessation of all other activities.
- Clean-up spills immediately:
    - Notify the WPC Manager immediately. The WPC Manager shall notify the RE and prepare the proper notifications as required.
- Contain spread of the spill.
    - If the spill occurs on paved or impermeable surfaces, clean up using "dry" methods (absorbent materials, cat litter and/or rags). Contain the spill by encircling with absorbent materials.
    - If the spill occurs in dirt areas, immediately contain the spill. Dig up and properly dispose of contaminated soil.
    - If the spill occurs during rain, cover spill with tarps to prevent contaminating runoff.

- Significant/Hazardous Spills:
  - For significant or hazardous spills that cannot be controlled by personnel in the immediate vicinity, the following steps shall be taken:
    - Notify the RE immediately and follow up with a written report.
    - Notify the local emergency response by dialing 911. In addition to 911, the contractor will notify the proper county officials. It is the contractor's responsibility to have all emergency phone numbers at the construction site.
    - Notify the Governor's Office of Emergency Services Warning Center, (800) 852-7550 or 1-916-845-8911.
    - For spills of federal reportable quantities, in conformance with the requirements in 40 CFR parts 110,119, and 302, the contractor shall notify the National Response Center at (800) 424-8802.
    - Notification shall first be made by telephone and followed up with a written report. The reporting form is located at http://www.caloes.ca.gov/FireRescueSite/Documents/304%20-%20Written%20Report%20Form.pdf.
    - The services of a spills contractor or a Haz-Mat team shall be obtained immediately. Construction personnel shall not attempt to clean up the spill until the appropriate and qualified staff have arrived at the job site.
    - Other agencies which may need to be consulted include, but are not limited to, the Fire Department, the Public Works Department, the Coast Guard, the Highway Patrol, the City/County Police Department, Department of Toxic Substances, California Division of Oil and Gas, Cal/OSHA, RWQCB, etc.

Maintenance and Inspection

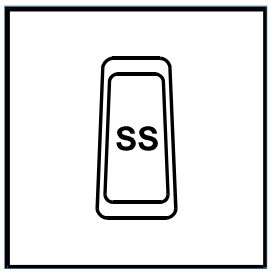
- Verify weekly that spill control clean-up materials are located near material storage, unloading, and use areas.
- Update spill prevention and control plans and stock appropriate clean-up materials when changes occur in the types of chemicals used or stored onsite.
- Improper clean-up might trigger need for water quality or soil testing. The WPC Manager should be proactive in ensuring controls are in place and adequate to contain and prevent further issues.

SWPPP or WPCP

- Spill Prevention and Control must be discussed in Section 500.4 of the SWPPP or Section 30.3.2 of the WPCP.

Sanitary and Septic Waste Management

WM-9



Standard Symbol

BMP Objectives

Soil Stabilization	☐
Sediment Control	☐
Tracking Control	☐
Wind Erosion Control	☐
Non-Stormwater Management	☐
Materials and Waste Management	☑

Definition and Purpose

Procedures and practices to minimize or eliminate the discharge of construction site sanitary and septic waste materials to the storm drain system or to receiving waters.

Appropriate Applications

Sanitary/septic waste management practices are implemented on all construction sites that use temporary or portable sanitary and septic waste systems.

Limitations

None identified.

Standards and Specifications

Education

- Educate employees, subcontractors, and suppliers on sanitary and septic waste storage and disposal procedures.
- Educate employees, subcontractors, and suppliers of potential dangers to humans and the environment from sanitary/septic wastes.
- Instruct employees, subcontractors, and suppliers in identification of sanitary/septic waste.
- Hold regular meetings to discuss and reinforce disposal procedures (incorporate into regular safety meetings and tailgates).
- Establish a continuing education program to indoctrinate new employees.

Storage and Disposal Procedures

- Temporary sanitary facilities shall be located away from drainage facilities, receiving waters, and from traffic circulation.
- When subjected to high winds or risk for overtopping, temporary systems must be properly secured.
- Wastewater shall not be discharged or buried within the highway right-of-way.
- Sanitary and septic systems that discharge directly into sanitary sewer systems, where permissible, shall comply with the local health agency, city, county, and sewer district requirements.
- If using an on-site disposal system, such as a septic system, comply with local health agency requirements.
- Properly connect temporary sanitary facilities that discharge to the sanitary sewer system to avoid illicit discharges.
- Ensure that sanitary and septic facilities are maintained in good working order by a licensed service.
- Use only reputable, licensed sanitary/septic waste haulers.

Maintenance and Inspection

- Inspect onsite sanitary and septic waste storage and disposal procedures at least weekly, prior to a forecasted rain event, daily during extended rain events and post-storm events.
- Locations for portable Santiary Systems must be shown on the WPCDs and reflect current site conditions.

SWPPP or WPCP

- Sanitary and Septic Waste Management must be discussed in Section 500.4.2 of the SWPPP or Section 30.3.2 of the WPCP.