

The diagram illustrates the design of a concrete washout area. The top portion is a plan view showing a rectangular area with a central square section labeled 'B X 8 MIN.' and four surrounding rectangular sections, each labeled '3:1'. A 'CONCRETE WASHOUT SIGN' is indicated at the top. To the right of the central area is a hatched region labeled 'VEHICLE TRACKING CONTROL (SEE VTC DETAIL) OR OTHER STABLE SURFACE'. Dimensions include '1' MIN.' for the central square and '25' MIN.' for the hatched area. A circular stamp 'CWA' is in the top right corner.

The bottom portion is a cross-section view labeled 'SECTION A'. It shows a '12" TYP.' thick concrete slab on 'UNDISTURBED OR 3" COMPACTED SOIL'. The slab has a '1:4' slope on the left and a '3:1' slope on the right. A 'COMPACTED BERM AROUND THE PERIMETER' is shown. The central area is labeled 'B X 8 MIN.' and the right side is labeled '3:1'. A '2% SLOPE' is indicated on the right. A hatched area on the right is labeled 'VEHICLE TRACKING CONTROL (SEE VTC DETAIL)'.

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- November 2010
Urban Drainage and Flood Control District
Urban Storm Drainage Criteria Manual Volume 3
CWA-3

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CR. MAINTENANCE NOTES

1. INSPECT MATRIS EACH MORNING, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF MATRIS SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT MATRIS AS SOON AS POSSIBLE AND ALWAYS WITHIN 24 HOURS FOLLOWING A STORM THAT CAUSES SURFACE DAMAGE. REPAIRS SHOULD BE COMPLETED WITHIN 72 HOURS OF THE STORM.

2. FREQUENT OPERATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN MATRIS IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE MATRIS HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. THE CR. SHALL BE REPAIRED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN ADEQUATE CONCRETE SURFACE AREA. CONCRETE MATERIALS ACCUMULATED IN PIT, SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF 2".

5. CONCRETE WASHOUT WATER, MIXED PORTIONS OF CONCRETE AND ALL OTHER DEBRIS OF THE CONCRECES PIT SHALL BE TRANSPORTED FROM THE JOB SITE IN A WATER-TIGHT CONTAINER AND DISPOSED OF PROPERLY.

6. THE CR. SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.

7. WHEN THE CR. IS REMOVED, COVER THE DISTURBED AREA WITH TOP SOIL, SEED AND MULCH. 20 OTHERS SHOULD BE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAIL ADDED FROM DODGAS COUNTY, COLORADO AND THE CITY OF PUEBLO, COLORADO, AND ANNEAUX IN ARIZONA)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM USUALLY STANDARD DETAILS. LOCAL CR. JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

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STABILIZED, STAGING AREA, MAINTENANCE NOTES

5. STABILIZED STAGING AREA SHALL BE ENHANCED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING/LOADING OPERATIONS.

6. STABILIZED AND STAGING AREAS REMOVED OR NOT REMOVED AS PART OF CONSTRUCTION, THE GRANULAR MATERIALS SHALL BE REMOVED OR APPROVED BY THE LOCAL JURISDICTION, OR CONFINED AND STABILIZED WITH A GRANULAR FILL, SEEDS, AND MULCH OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.

NOTE: MANY JURISDICTIONS PROHIBIT THE USE OF RECYCLED CURBSETS AS GRANULAR MATERIALS FOR STABILIZED STAGING AREAS THAT ARE APPLIED WITH RE-ESTABLISHMENT OF VEGETATION AND MULCH. PLEASE CHECK WITH LOCAL AGENCIES.

NOTE: MANY JURISDICTIONS HAVE REQUIREMENTS THAT VARY FROM USUAL STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAILS SHOULD BE USED WHEN INTERFERING WITH NOTES.

(DETAILS ADAPTED FROM COLORADO COUNTY, COLORADO, NOT APPLICABLE IN ARIZONA)

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STABILIZED CONSTRUCTION ENTRANCE/EXIT INSTALLATION NOTES

1. SEE PLAN VIEW FOR
LOCATION OF CONSTRUCTION ENTRANCE(S)/EXIT(S).
-TYPE OF CONSTRUCTION ENTRANCE(S)/EXIT(S) (with/without wheel, WASH, STABILIZATION MAT OR OTHER)

2. CONSTRUCTION MAT OR STABILIZED CONSTRUCTION ENTRANCES ARE ONLY TO BE USED ON SHORT DURATION PROJECTS (TYPICALLY RANGING FROM A WEEK TO A MONTH) WHERE THERE WILL BE LIMITED VEHICULAR ACCESS.

3. A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE LOCATED AT ALL ACCESS POINTS WHERE VEHICLES ACCESS THE CONSTRUCTION SITE FROM PAVED HIGH-WAYS.

4. STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

5. A NON-HIGHWHEEL GEOTEXTILE FABRIC SHALL BE PLACED UNDER THE STABILIZED CONSTRUCTION ENTRANCE/EXIT.

6. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SPEC. #703, #803D #3 COURSE AGGREGATE OR 6" (MINUS) ROCK.

STABILIZED CONSTRUCTION ENTRANCE/EXIT MAINTENANCE NOTES

1. INSPECT BUMP EACH MORNING AND MAINTAIN THEM IN EFFECTIVE OPERATIONAL CONDITION. MAINTENANCE OF BUMP SHOULD BE DONE PRIOR TO REACTING. RESPECT BUMP AS SOON AS POSSIBLE, LONG ALWAYS WITHIN 24 HOURS FOLLOWING A STORM THAT CAUSES SURFACE DAMAGE. REPAIRS TO REPAIR BUMP SHOULD BE COMPLETED AS SOON AS POSSIBLE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BUMP IN EFFECTIVE OPERATIONAL CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BUMP ARE DAMAGED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON OCCURRENCE OF THE FAILURE.

4. ROCK SHALL BE REAPPLIED OR REGRANDED AS NECESSARY TO THE STABILIZED ENTRANCE/EXIT TO MAINTAIN A CONSISTENT DEPTH.

5. SEDIMENT TRAPPED ON PAVED ROADS WILL BE REMOVED THROUGHOUT THE DAY AND NIGHT BY THE DAY. SEDIMENT FROM DRIVEWAYS SHOULD NOT BE REMOVED DOWN STORM DRAIN DRAINS.

6. THE LOCATION AND DEPTH OF BUMP DETAILS THAT VARY FROM USUO STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN OBSERVING THE NEEDS.

(DETAILS ADAPTED FROM CITY OF BROOMFIELD, COLORADO, NOT AVAILABLE IN AUTOCAD)

(DETAILS ADAPTED FROM CITY OF BROOMFIELD, COLORADO, NOT AVAILABLE IN AUTOCAD)

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- 1. **SILT FENCE INSTALLATION NOTES**
 - a. **SILT FENCE MUST BE PLACED AWAY FROM THE TOE OF THE SLOPE TO ALLOW FOR WATER CONVEYANCE.** THE FENCE AT THE TOE OF A SLOPE SHOULD BE INSTALLED IN THE FLAT STAKE AT LEAST 15 FEET (4.57 - 4.57 M) FROM THE TOE OF THE SLOPE TO ALLOW FOR RUN OFF OF THE SEDIMENTATION.
 - b. **A UNIFORM 4" X 4" ANCHOR TRENCH SHALL BE EXCAVATED USING TRENCHER OR SLIT TRENCHER.** NO ROAD GRADERS, BACKHOES, OR SIMILAR EQUIPMENT SHOULD BE USED FOR INSTALLATION DUE TO ROAD HANDS, BACKHOES, OR SIMILAR EQUIPMENT BEING USED FOR INSTALLATION DUE TO ROAD HANDS, BACKHOES, OR SIMILAR EQUIPMENT BEING USED FOR INSTALLATION.
 - c. **COMPACT ANCHOR TRENCH BY HAND WITH A "JUMPING JACK" OR BY WHEEL ROLLING.** EQUIPMENT SHOULD BE USED TO SET THE SILT FENCE RESISTS BEING PULLED OUT OF ANCHOR TRENCH BY HAND.
 - d. **SILT FENCE SHALL BE PULLED TIGHT AS IF IT WERE ANCHORED TO THE STAKES.** THERE SHOULD BE NO SIGNIFICANT SAG BETWEEN THE STAKES.
 - e. **SILT FENCE FABRIC SHALL BE ANCHORED TO THE STAKES USING 1" HEAVY DUTY STAPLES OR NAILS WITH 1" HEADS.** STAPLES AND NAILS SHOULD BE PLACED 1' ALONG THE FABRIC AND 1' ALONG THE STAKES.
 - f. **AT THE END OF A RUN OF SILT FENCE ALONG A CONTOUR, THE SILT FENCE SHOULD BE SECURED TO AN ANCHOR OR TO A CONTOUR STAKE.** THE SILT FENCE SHOULD BE SECURED TO AN ANCHOR OR TO A CONTOUR STAKE.
 - g. **EXTENDING PERPENDICULAR TO THE CONTOUR SHOULD BE OF SUFFICIENT LENGTH TO KEEP RAINFALL FROM WASHING OVER THE END OF THE SILT FENCE (APPROXIMATELY 20').**
- 2. **SILT FENCE SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.**
- 3. **SILT FENCE MAINTENANCE NOTES**
 - a. **INSPECT BATHS EACH MORNING, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION.** MAINTENANCE OF BATHS SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BATHS AS SOON AS POSSIBLE ALWAYS WITHIN 24 HOURS OF NOTICING A PROBLEM THAT CAUSES SLURRY, EROSION, AND PERFORM NECESSARY MAINTENANCE.
 - b. **FREQUENT OPERATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BATHS IN EFFECTIVE OPERATING CONDITION.** INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
 - c. **IF BATHS BATHS HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.**
 - d. **SEGMENT ACCUMULATED UPSTREAM OF THE SILT FENCE SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONING OF THE BATH. TYPICALLY WHEN 50% OF ACCUMULATED SEDIMENT IS APPROXIMATELY 6".**
 - e. **REPAIR OR REPLACE SILT FENCE WHEN THERE ARE SIGNS OF WEAR, SUCH AS STAGNANT WATER, CRACKS, OR SAGGING.**
 - f. **SILT FENCE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED.**

3. REPAIR OR REPLACE SAFETY FENCE WHEN THERE ARE SIGNS OF WEAR, SUCH AS SPRINGING, TEARING, OR COLLAPSE.

GENERAL INLET PROTECTION, INSTALLATION NOTES

1. SEE PLAN VIEW FOR
-LOCATION OF INLET PROTECTION
-TYPE OF INLET PROTECTION (1, 2, P2, P3, P4, P5, P6)

2. INLET PROTECTION SHALL BE INSTALLED PROMPTLY AFTER INLET CONSTRUCTION OR PAVING IS COMPLETE, TYPICALLY WITHIN 48 HOURS IF A RAINFALL/RUNOFF EVENT IS FORECAST. INSTALL INLET PROTECTION PRIOR TO ONSET OF EVENT.

3. MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM USFED STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHAT DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

INLET PROTECTION MAINTENANCE NOTES

1. INSPECT BMPS EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATIONAL CONDITION. REPAIR OR REPLACE BMPS THAT ARE INEFFECTIVE, NOT REACTIVE, INSPECT BMPS AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION. PERFORM NECESSARY MAINTENANCE.


2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPS IN EFFECTIVE OPERATIONAL CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPS HAVE BEEN FALLED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE DEFECTURE.

4. SIGNIFICANT MAINTAIN BMP EFFECTIVENESS. TYPICALLY WHEN STORAGE VOLUME REACHES 50% OF CAPACITY, A DEPTH OF 6" WHEN SILT FENCE IS USED, OR 4" OF THE HEIGHT FOR STRIP.

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Diagram illustrating the compost filter sock assembly. The sock is shown with a mesh structure and a central opening. Arrows point to the sock and the central opening. A label indicates: "Compost filter sock".

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- Drainage grate

The diagram illustrates the installation of a filter sock in a drop inlet. The top view shows a circular inlet with a central grate, a filter sock around it, and a 3-inch O.C. wooden stake. The side view shows the filter sock installed in the inlet, with flow direction indicated by an arrow.



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DATE	DESCRIPTION
11-13-14	BERN. COUNTY 1ST SUBMITTAL
12-15-14	BERN. COUNTY 2ND SUBMITTAL

PROFESSIONAL SEAL

A circular professional engineer seal for the State of Florida. The outer ring contains the text "FLORIDA PROFESSIONAL ENGINEERS". The inner circle contains the word "LICENSED" at the top and "ENGINEER" at the bottom. In the center, there is a smaller circle containing the number "21007". A signature is written across the seal.

PROFESSIONAL IN CHARGE

PROJECT MANAGER
MARLEY PHILLIPS

KIEW KAM, PE

PROJECT NAME

**4400 COORS BLVD. SW
ALBUQUERQUE, NM 87121**

PROJECT NUMBER

SHEET TITLE

EROSION CONTROL

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