

# CITY OF ALBUQUERQUE



October 20, 2015

David Tull, P.E.  
Superior Stormwater Services, LLC  
8505 Paseo Alameda NE  
Albuquerque, NM 87113

**Re: Valle Prado Unit 3  
Erosion Sediment Control Plan  
Engineer's Stamp Date 6-27-15 (C09D011A)**

Dear Mr. Tull,

Based upon the information provided in your submittal received 10-16-15 the above referenced plan has the following comments to be addressed prior to approving it to be included in the SWPPP and for Grading Permit/Building Permit.

1. Include the construction entrance at Paseo Del Norte and the haul/construction road. The road appears to drain into a pond about 2/3 of the way to Paseo Del Norte, which can act as a sediment trap.
2. On Two Rock Rd., how is sediment from Unit 3 to be minimized from entering the street in Unit 2? Or is it acceptable to allow sediment onto this road as it drains to a pond at the south end, then the sediment gets removed from the pond later?
3. The plan does not appear to specify any sediment controls (silt fence, wattles, front yard pond). Silt fence or similar should be specified on the east side of Lot 24 with a "J-hook" or similar at the southeast corner of the lot.

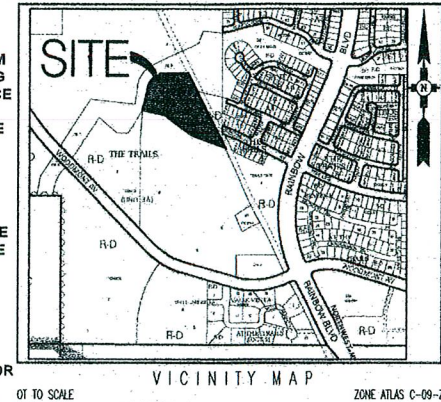
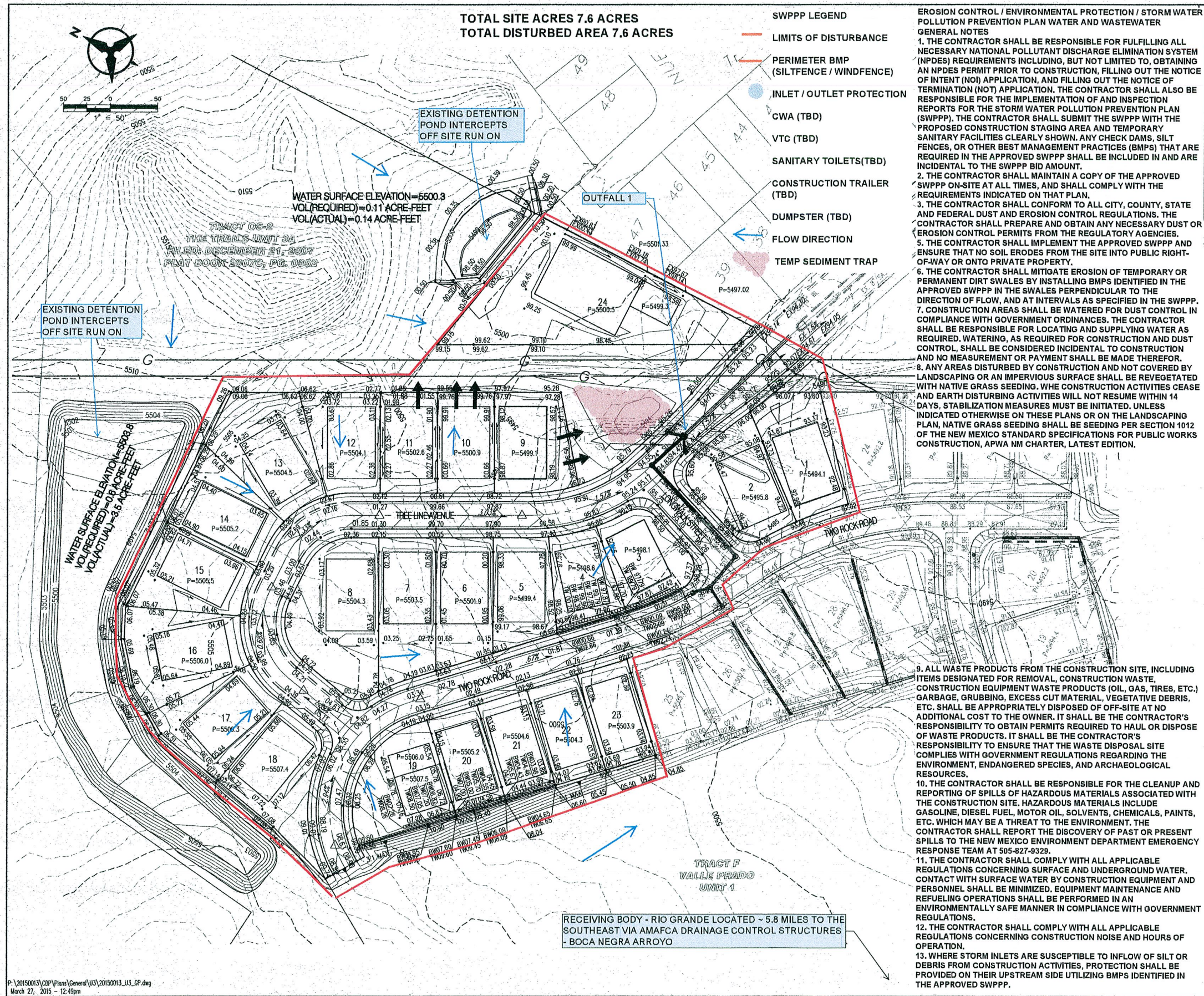
If you have any questions, you can contact me at 924-3420.

Sincerely,

Curtis Cherne, P.E.  
Principal Engineer, Stormwater Quality  
Planning Dept.

C: email





- GENERAL NOTES**
1. CONTRACTOR MUST OBTAIN A TOPSOIL DISTURBANCE PERMIT FROM THE ENVIRONMENTAL HEALTH DIVISION PRIOR TO CONSTRUCTION.
  2. THE CONTRACTOR IS TO REFER TO EARTHWORK SPECIFICATION AS NOTED IN THE SOILS REPORT.
  3. THE CONTRACTOR SHALL CONFORM TO ALL CITY, COUNTY, STATE, AND FEDERAL DUST CONTROL MEASURES & REQUIREMENTS AND WILL BE RESPONSIBLE FOR PREPARING AND OBTAINING ALL NECESSARY APPLICATIONS AND APPROVALS.
  4. THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHT-OF-WAY. THIS CAN BE ACHIEVED BY CONSTRUCTING TEMPORARY BERM AS PER DETAIL, SHEET 3B, AND WETTING THE SOIL TO KEEP IT FROM BLOWING.
  5. ALL SPOT ELEVATIONS ARE TO FLOWLINE UNLESS OTHERWISE NOTED.
  6. BOULDERS GREATER THAN 3 FEET IN DIAMETER EXCAVATED DURING GRADING ACTIVITIES SHALL BE STOCKPILED AND DISPOSED OF AT THE DISCRETION OF THE OWNER.
  7. ALL WALLS SHOWN ARE TO BE PLACED ALONG PROPERTY LINE. WALLS ARE SHOWN OFFSET FOR VISUAL PURPOSE ONLY.




**CITY OF ALBUQUERQUE**  
**PUBLIC WORKS DEPARTMENT**

**VALLE PRADO**  
**EROSION AND SEDIMENT CONTROL PLAN - UNIT 3**

Design	Review	Committee	City Engineer	Approval	Mo./Day/Yr.	Mo./Day/Yr.

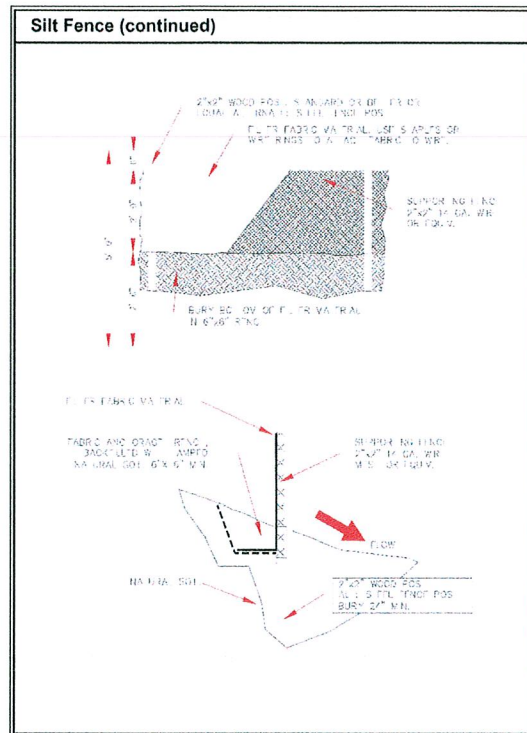
**OPERATOR: WEXFORD CONSTRUCTION INC.**  
**DATE 6-26-15**  
**SHEET 1 OF 3 ESC PLAN**



Silt Fence	Applications
	<ul style="list-style-type: none"><li>✓ Perimeter Control</li><li>✓ Slope Protection</li><li>✓ Sediment Trapping</li><li>Channel Protection</li><li>Temporary Stabilization</li><li>Permanent Stabilization</li><li>Waste Management</li><li>Housekeeping Practices</li></ul>
<b>DESCRIPTION</b> A silt fence consists of geotextile fabric supported by backing stretched between posts, with the lower edge securely embedded in soil downstream of disturbed areas. Intercepts runoff in the form of sheet flow and provides filtration, sedimentation, and velocity reduction. <b>PRIMARY USE</b> Silt fences are used as perimeter control downstream of disturbed areas, and for non-concentrated sheet-flow conditions. <b>APPLICATIONS</b> Silt fences provide an economical way to mitigate overflow, non-concentrated flows, and as a perimeter control device. Best with coarse to silty soil types and to control wind erosion on sandy soils. <b>LIMITATIONS</b> Minor ponding will likely occur at the upstream side of the silt fence, resulting in minor localized flooding. Fences that are constructed in swales or low areas subject to concentrated flow may be overtopped, resulting in failure of the filter fence. Silt fences subject to areas of concentrated flow (waterways with flows >1 cfs) are not acceptable. Silt fence can interfere with construction operations; therefore, planning of access routes onto the site is critical. Silt fence can fail structurally under heavy storm flows, creating maintenance problems and reducing the effectiveness of the system. <b>MAINTENANCE REQUIREMENTS</b> Inspections should be made on a weekly basis, especially after large storm events. If the fabric becomes clogged, it should be cleaned or, if necessary, replaced. Sediment should be removed when it reaches approximately one-half the height of the fence.	<b>Targeted Constituents</b> <ul style="list-style-type: none"><li>✓ Sediment</li><li>Nutrients</li><li>Toxic Materials</li><li>Oil and Grease</li><li>✓ Floatable Materials</li><li>Construction Wastes</li></ul> <b>Impact</b> <ul style="list-style-type: none"><li>✓ Significant</li><li>Medium</li><li>Low</li><li>Unknown or Questionable</li></ul>

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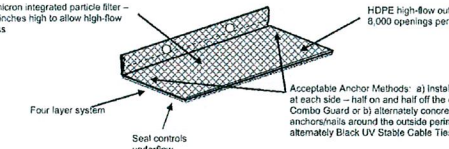
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Concrete Waste Management	Applications
<b>DESCRIPTION</b> Concrete waste management prevents or reduces the discharge of pollutants to storm water by conducting washout offsite, performing onsite washout in a designated area, and training employees and subcontractors. <b>APPLICATIONS</b> The following low-cost measures will help reduce storm water pollution from concrete wastes: <ul style="list-style-type: none"><li>• Store dry and wet materials under cover, away from drainage areas.</li><li>• Avoid mixing excess amounts of fresh concrete or cement onsite.</li><li>• Perform washout of concrete trucks offsite or in designated areas only.</li><li>• Do not wash out concrete trucks into storm drains, open ditches, streets, or streams.</li><li>• Do not allow excess concrete to be dumped onsite except in designated areas.</li><li>• For onsite washout:<ul style="list-style-type: none"><li>1. Locate washout area at least 50 feet from storm drains, open ditches, or water bodies. Prevent runoff from this area by constructing a temporary pit or bermed area large enough for liquid and solid waste.</li><li>2. Wash out wastes into the temporary pit where the concrete can set, be broken up, and then disposed of properly.</li></ul></li><li>• When washing concrete to remove fine particles and expose the aggregate, avoid creating runoff by draining the water to a bermed or level area.</li><li>• Do not wash sweepings from exposed aggregate concrete into the street or storm drain. Collect and return sweepings to aggregate base stock pile, or dispose in the trash.</li><li>• Train employees and subcontractors in proper concrete waste management.</li></ul> <b>LIMITATIONS</b> Offsite washout of concrete wastes may not always be possible. <b>MAINTENANCE REQUIREMENTS</b> Inspect subcontractors to ensure that concrete wastes are being properly managed. If using a temporary pit, dispose of hardened concrete on a regular basis.	<b>Targeted Constituents</b> <ul style="list-style-type: none"><li>Sediment</li><li>Nutrients</li><li>Toxic Materials</li><li>Oil and Grease</li><li>Floatable Materials</li><li>✓ Construction Wastes</li></ul> <b>Impact</b> <ul style="list-style-type: none"><li>Significant</li><li>✓ Medium</li><li>Low</li><li>Unknown or Questionable</li></ul>

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A5-13

SWPPP Binder Insert - Curb & Grate Inlet Protection  
ERTEC Combo Guard™

Product Designation	Grate Size
CG 28x22	Fits 25" by 19" Grate
CG 36x22	Fits 36" x 18" and 36" x 20" and 40" x 17" Grates
CG 48x27	Fits 40" x 24" Grate
CG 58x30	Fits 42" x 28" Grate

Custom sizes available upon request

**Definition - ERTEC Combo Guard**  
A temporary sediment filter made of high density polyethylene with an integrated filter. During construction, place device over the grate and curb opening of the drain inlet near disturbed soil. Anchor with 2 Gravel Bags, or alternately 2 ERTEC GR-8 Hooks™ or alternately concrete anchor/nails or alternately black UV stable cable ties (24 to 36").


**Purpose**  
Storm drain inlet protection is used to intercept sediment laden water at the curb and grate opening and prevent the sediment, associated pollutants and debris from entering the storm water underground pipe systems. The system reduces water velocity which causes heavier soil particles to be deposited above ground. While allowing flow through the module, the barrier filters certain smaller sized particles from suspension and prevents them from flowing through the device and into the pipes. Heavy flows are passed over the top of the filter. Advantages are that it is effective, durable, re-usable, easily installed and cleaned.

**Conditions Where the Practice Applies**  
It is recommended for use over curb & grate openings with small drainage areas. Generally, the drainage areas should be less than 1/3 acre and the total for inlets in series should be 1 acre or less with slopes flatter than 5 percent in the contributing drainage area.

**Design Criteria**

- Geotextile Filter: Apparent Opening Size (AOS) = 425 micron integrated particle filter. Flow rate (ASTM D-4991) = 145 gpm/ft². Provide a bypass over the top.
- Outer Jacket Material: HDPE. For detailed characteristics contact ERTEC. Module weight = 3 to 5 lbs. Module height = 8.0". Module length/opening size protected varies as per the chart above - according to grate size. Service temperature (deg F) = -30 to 160.
- Install system with the vertical section covering the curb inlet and the horizontal section covering the grate. Alternate anchor methods listed above. If using Gravel Bags - place small gravel bags containing clean, pea-sized graded gravel on each end of the cover and butt the bags tightly against the curb to keep water in the gutter from flowing behind the filter (do not use sandbags). The porosity of the gravel bag should allow for design flow rate through the bag. The bag should be durable enough to last the period of intended use. If the storm inlet opening exceeds 5'0" in length, overlap one module by 6" over side of adjoining module for a continuous run until the desired length is achieved. Anchor thru the overlap as necessary.

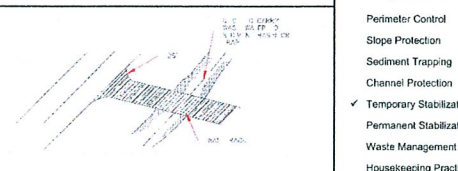
**Maintenance**  
Perform maintenance as required. Inspect following rainfall events and at least daily during prolonged rainfall. Maintain to provide an adequate sediment holding capacity. Debris shall be removed daily and sediment shall be removed when the sediment accumulation reaches 2 inches. Removed sediment shall be incorporated in the project at designated locations or disposed of outside the project or in conformance with requirements. Remove the device after final stabilization has been achieved.



**Combo Guard™**  
© 2009 ERTEC Environmental Systems  
www.ertecsystems.com  
Toll Free: 866-521-0724

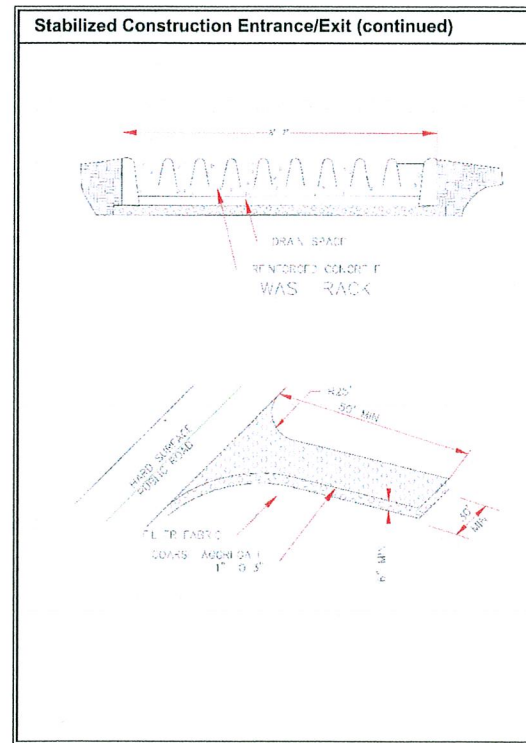
H400032 Updated: 8/11

A2-40

Stabilized Construction Entrance/Exit	Applications
	<ul style="list-style-type: none"><li>Perimeter Control</li><li>Slope Protection</li><li>Sediment Trapping</li><li>Channel Protection</li><li>✓ Temporary Stabilization</li><li>Permanent Stabilization</li><li>Waste Management</li><li>Housekeeping Practices</li></ul>
<b>DESCRIPTION</b> A stabilized construction entrance consists of a pad of crushed stone, recycled concrete, or other rock-like material on top of a geotextile filter cloth, which is used to facilitate the washdown and removal of sediment and other debris from construction equipment prior to exiting the site. During the construction phase of a project, regular street sweeping should be performed to remove debris carried from the site. <b>PRIMARY USE</b> Stabilized construction entrances are used to reduce offsite sediment tracking from trucks and construction equipment, and for sites where considerable truck traffic occurs each day. They also reduce the need to clean adjacent pavement as often, and help route site traffic through a single point. <b>APPLICATIONS</b> As a part of the erosion-control plan required for sites larger than five acres, and recommended for all construction sites. <b>LIMITATIONS</b> Selection of the construction entrance location is critical. To be effective, it must be used exclusively. Stabilized entrances are rather expensive, considering that they must be installed in combination with one or more other sediment control techniques. It may be more cost effective, however, than labor-intensive street cleaning. <b>MAINTENANCE REQUIREMENTS</b> Inspections should be made on a regular basis and after large storm events in order to ascertain whether or not sediment and pollution are being effectively detained on site. When sediment has substantially clogged the void area between the rocks, the aggregate mat must be washed down or replaced. Periodic re-grading and top dressing with additional stone must be done to keep the efficiency of the entrance from diminishing.	<b>Targeted Constituents</b> <ul style="list-style-type: none"><li>✓ Sediment</li><li>Nutrients</li><li>Toxic Materials</li><li>Oil and Grease</li><li>Floatable Materials</li><li>Construction Wastes</li></ul> <b>Impact</b> <ul style="list-style-type: none"><li>✓ Significant</li><li>Medium</li><li>Low</li><li>Unknown or Questionable</li></ul>

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A5-20

project title

VALLE PRADO UNIT 3

sheet title

EROSION AND SEDIMENT CONTROL PLAN

revision

by

date

rev



8505 Paseo Alameda Albuquerque NM 87113 505-433-3693

drawn by KPV

project manager DAVID TULL

date 06/14



sheet-



## SWPPP Cut Sheet:

### Filtrex® Sediment Control

#### Sediment & Perimeter Control Technology

##### PURPOSE & DESCRIPTION

Filtrex® Sediment control is a three-dimensional modular sediment control and storm water runoff filtration device typically used for perimeter control of sediment and other soluble pollutants (such as phosphorus and petroleum hydrocarbons), on and around construction activities.

##### APPLICATION

Filtrex® Sediment control is to be installed down slope of any disturbed area requiring erosion and sediment control and filtration of soluble pollutants from runoff. Sediment control is effective when installed perpendicular to sheet or low concentrated flow. Acceptable applications include:

- Site perimeters
- Above and below disturbed areas subject to sheet runoff, in-canal and fill erosion
- Above and below exposed and erodible slopes
- Around area drains or inlets located in a 'sump'
- On compacted soils where trenching of silt fence is difficult or impossible
- Around sensitive trees where trenching of silt fence is not beneficial for tree survival or may unnecessarily disturb established vegetation
- On frozen ground where trenching of silt fence is impossible
- On paved surfaces where trenching of silt fence is impossible

##### INSTALLATION

1. Sediment control used for perimeter control of sediment and soluble pollutants in storm runoff shall meet Filtrex® Soxx® Material Specifications and use Certified Filtrex® FilterMedia™.
2. Contractor is required to be Filtrex® Certified™ as determined by Filtrex® International, LLC

(440-926-2607 or visit website at [www.filtrex.com](http://www.filtrex.com)). Certification shall be considered current if appropriate identification is shown during time of bid or at time of application (current listing can be found at [www.filtrex.com](http://www.filtrex.com)). Look for the Filtrex® Certified™ Seal.

3. Sediment control will be placed at locations indicated on plans as directed by the Engineer.
4. Sediment control should be installed parallel to the base of the slope or other disturbed area. In extreme conditions (i.e., 2:1 slopes), a second Sediment control shall be constructed at the top of the slope.
5. Effective Soxx™ height in the field should be as follows: 8" Diameter Sediment control = 6.5" high, 12" Diameter Sediment control = 9.5" high, 18" Diameter SiltSoxx™ = 14.5" high, 24" Diameter Sediment control = 19" high.
6. Stakes shall be installed through the middle of the Sediment control on 10 ft (3m) centers, using 2 in (50mm) by 2 in (50mm) by 3 ft (1m) hard wood stakes. In the event staking is not possible, i.e., when Sediment control is used on pavement, heavy concrete blocks shall be used behind the Sediment control to help stabilize during rainfall/runoff events.
7. Staking depth for sand and silt loam soils shall be 12 in (300mm), and 8 in (200mm) for clay soils.
8. Loose compost may be backfilled along the upslope side of the Sediment control, filling the seam between the soil surface and the device, improving filtration and sediment retention.
9. If the Sediment control is to be left as a permanent filter or part of the natural landscape, it may be seeded at time of installation for establishment of permanent vegetation. The Engineer will specify seed requirements.

10. Filtrex® Sediment control is not to be used in perennial, ephemeral, or intermittent streams.

See design drawing schematic for correct Filtrex® Sediment control installation (Figure 1.1).

##### INSPECTION AND MAINTENANCE

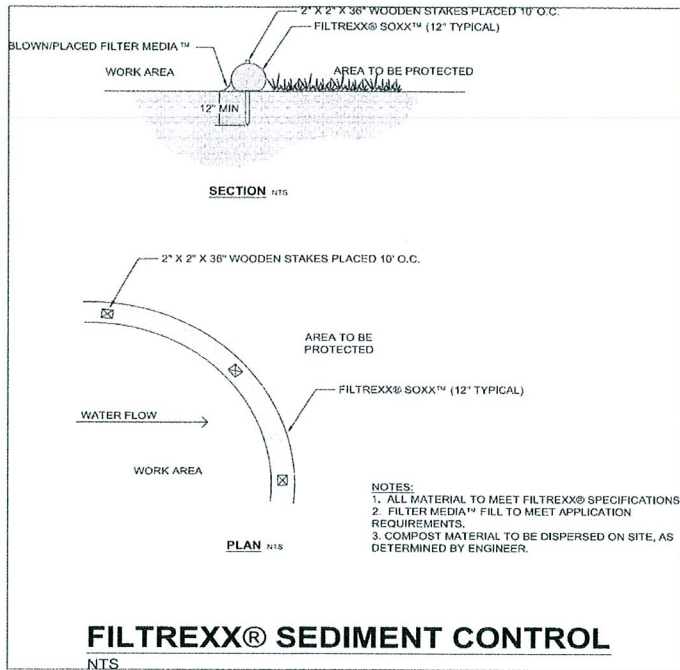
Routine inspection should be conducted within 24 hrs of a runoff event or as designated by the regulating authority. Sediment control should be regularly inspected to make sure they maintain their shape and are producing adequate hydraulic flow-through. If ponding becomes excessive, additional Sediment control may be required to reduce effective slope length or sediment removal may be necessary. Sediment control shall be inspected until area above has been permanently stabilized and construction activity has ceased.

1. The Contractor shall maintain the Sediment control in a functional condition at all times and it shall be routinely inspected.
2. If the Sediment control has been damaged, it shall be repaired, or replaced if beyond repair.

3. The Contractor shall remove sediment at the base of the upslope side of the Sediment control when accumulation has reached 1/2 of the effective height of the Sediment control, or as directed by the Engineer. Alternatively, a new Sediment control can be placed on top of and slightly behind the original one creating more sediment storage capacity without soil disturbance.
4. Sediment control shall be maintained until disturbed area above the device has been permanently stabilized and construction activity has ceased.
5. The FilterMedia™ will be dispersed on site once disturbed area has been permanently stabilized, construction activity has ceased, or as determined by the Engineer.
6. For long-term sediment and pollution control applications, Sediment control can be seeded at the time of installation to create a vegetative filtering system for prolonged and increased filtration of sediment and soluble pollutants (contained vegetative filter strip). The appropriate seed mix shall be determined by the Engineer.

Slope Percent	Maximum Slope Length Above Sediment Control in Feet (meters)*				
	8 in (200 mm) Sediment control	12 in (300 mm) Sediment control	14.5 in (360 mm) Sediment control	19 in (480 mm) Sediment control	24 in (600 mm) Sediment control
2 (or less)	6.5 in (160 mm)**	9.5 in (240 mm)**	14.5 in (360 mm)**	19 in (480 mm)**	24 in (600 mm)**
5	800 (190)	750 (225)	1300 (390)	1300 (400)	1550 (500)
10	400 (120)	500 (150)	550 (185)	650 (200)	750 (225)
15	200 (60)	250 (75)	300 (90)	400 (120)	500 (150)
20	140 (40)	170 (50)	200 (60)	275 (80)	450 (140)
25	100 (30)	125 (38)	140 (42)	200 (60)	400 (120)
30	80 (24)	100 (30)	110 (33)	200 (60)	275 (80)
35	60 (18)	75 (23)	90 (27)	130 (40)	200 (60)
40	50 (15)	60 (18)	80 (24)	110 (33)	150 (45)
45	40 (12)	50 (15)	60 (18)	100 (30)	125 (38)
50	30 (9)	40 (12)	50 (15)	80 (24)	100 (30)

\* Based on a failure point of 30 in (76.2 mm) super silt fence (wire reinforced) at 1000 ft (300 m) of slope, watershed width equivalent to receiving length of sediment control device. 1 in/24 hr (25 mm/24 hr) rain event.  
\*\* Effective height of Sediment control after installation and with constant head from runoff as determined by Ohio State University.



### Drop Inlet Protection

TYPE I

**Applications**

- Perimeter Control
- Slope Protection
- Sediment Trapping
- Channel Protection
- Temporary Stabilization
- Permanent Stabilization
- Waste Management
- Housekeeping Practices

**Targeted Constituents**

- Sediment
- Nutrients
- Toxic Materials
- Oil and Grease
- Floatable Materials
- Construction Wastes

**Impact**

- Significant
- Medium
- Low
- Unknown or Questionable

**DESCRIPTION**

A variety of drop inlet protection methods are used to intercept sediments at inlets through the use of stone, filter fabric, or other materials.

**PRIMARY USE**

Drop inlet protection is normally used as a second defense in site erosion control. A backup to onsite systems that have limited effectiveness.

**APPLICATIONS**

- Filter barrier when site is less than one acre and slope is less than 5%
- Block and gravel are used when flows exceed 0.5 cfs
- Wire mesh and gravel are used where traffic crosses inlet

**LIMITATIONS**

Ponding will occur at the inlet, with possible flooding as a result. Inlet protection is only viable at low-point inlets. Inlets that are on a slope cannot be effectively protected because storm water will bypass the inlet and continue downstream, causing an overload condition at inlets beyond.

**MAINTENANCE REQUIREMENTS**

Inspections should be made on a weekly basis, especially after large (>0.5 inches) storm events. When silt fence is used and the fabric becomes clogged, it should be cleaned or, if necessary, replaced. Also, sediment must be removed when it reaches approximately one-half the height of the fence. If a sump is used, sediment should be removed when the volume of the basin is reduced by 50%.

For systems using stone filters, when the stone filter becomes clogged with sediment, the stones must be pulled away from the inlet and cleaned or replaced. Since cleaning of gravel at a construction site may be difficult, an alternative approach would be to use the clogged stone as fill material and put new stone around the inlet.

### Drop Inlet Protection (continued)

## SWPPP Binder Insert - Curb Inlet Protection ERTEC Curb Inlet Guard™

Inlet Size	# of Modules
6\"/>	

**Definition - ERTEC Curb Inlet Guard**  
A temporary sediment barrier, "L" shaped, made of high density polyethylene (HDPE) with an integrated filter (woven geotextile). During construction, place device over the opening of the curb storm inlet near where soil is disturbed (See drawings).

**Purpose**  
Storm drain inlet protection is used to intercept sediment laden water at the curb gutter opening and prevent sediment, debris and associated pollutants from entering the storm water underground pipe systems. The barrier reduces water velocity which in turn causes heavier soil particles to be deposited in front. While allowing flow through the module, the barrier filters certain smaller sized particles from suspension and prevents them from flowing through the device and into the pipes. Excessive flows are passed over the top of the filter. Advantages are that it is effective, durable, re-usable, easily installed and cleaned.

**Conditions Where the Practice Applies**  
It is recommended for use in curb openings in front of areas with small drainage areas. Generally, the drainage areas should be less than 1/3 acre and the total for inlets in series should be 1 acre or less with slopes flatter than 5 percent in the contributing drainage area.

**Design Criteria**

- Geo-textile Filter: See drawing for dimensions. Apparent Opening Size (AOS) = 425 micron integrated particle filter. Flow rate (ASTM D-4491) = 145 gpm/ft². Provide a bypass over the top.
- Outer Jacket Material: HDPE. For detailed characteristics contact ERTEC. Module weight = 3.5 lbs. Module height = 7.5\"/>

**Maintenance**  
Perform maintenance as required. Inspect following rainfall events and at least daily during prolonged rainfall. Maintain to provide an adequate sediment holding capacity. Trash shall be removed daily and sediment shall be removed when the sediment accumulation reaches 1 inch. Removed sediment shall be incorporated in the project at designated locations or disposed of outside the project or in conformance with requirements. Remove the device after final stabilization has been achieved.

**ERTEC**  
Curb Inlet Guard™  
ERTEC Environmental Systems  
[www.ertecsystems.com](http://www.ertecsystems.com)  
Toll Free: 866-521-0724