

*** ZONE 3**

*** 100-YEAR, 6-HR STORM (UNDER EXISTING CONDITIONS)**

START TIME=0.0
TYPE=1 RAIN QUARTER=0.0 IN
RAINFALL RAIN ONE=2.14 IN RAIN SIX=2.60 IN
RAIN DELAY=3.10 IN DT=0.00512 HR

*** OFF-SITE BASIN A**
COMPUTE NM HYD ID=1 HYD NO=101.0 AREA=0.000169 SQ MI
PER A=0.00 PER B=100.00 PER C=0.00 PER D=0.00
TP=0.1333 HR MASS RAINFALL=-1

*** ON-SITE**
COMPUTE NM HYD ID=1 HYD NO=103.0 AREA=0.001137 SQ MI
PER A=0.00 PER B=100.00 PER C=0.00 PER D=0.00
TP=0.1333 HR MASS RAINFALL=-1

*** 10-YEAR, 6-HR STORM (UNDER EXISTING CONDITIONS)**

START TIME=0.0
TYPE=1 RAIN QUARTER=0.0 IN
RAINFALL RAIN ONE=1.43 IN RAIN SIX=1.73 IN
RAIN DAY=2.07 IN DT=0.03333 HR

*** OFF-SITE BASIN A**
COMPUTE NM HYD ID=1 HYD NO=111.0 AREA=0.000169 SQ MI
PER A=0.00 PER B=100.00 PER C=0.00 PER D=0.00
TP=0.1333 HR MASS RAINFALL=-1

*** ON-SITE**
COMPUTE NM HYD ID=1 HYD NO=113.0 AREA=0.001137 SQ MI
PER A=0.00 PER B=0.00 PER C=100.00 PER D=0.00
TP=0.1333 HR MASS RAINFALL=-1

*** 100-YEAR, 6-HR STORM (UNDER PROPOSED CONDITIONS)**

START TIME=0.0
TYPE=1 RAIN QUARTER=0.0 IN
RAINFALL RAIN ONE=2.14 IN RAIN SIX=2.60 IN
RAIN DELAY=3.10 IN DT=0.03333 HR

*** ON-SITE**
COMPUTE NM HYD ID=1 HYD NO=103.1 AREA=0.001137 SQ MI
PER A=0.00 PER B=20.00 PER C=12.00 PER D=68.00
TP=0.1333 HR MASS RAINFALL=-1

*** 10-YEAR, 6-HR STORM (UNDER PROPOSED CONDITIONS)**

START TIME=0.0
TYPE=1 RAIN QUARTER=0.0 IN
RAINFALL RAIN ONE=1.43 IN RAIN SIX=1.73 IN
RAIN DAY=2.07 IN DT=0.03333 HR

*** ON-SITE**
COMPUTE NM HYD ID=1 HYD NO=113.1 AREA=0.001137 SQ MI
PER A=0.00 PER B=20.00 PER C=12.00 PER D=68.00
TP=0.1333 HR MASS RAINFALL=-1

FINISH

DRAINAGE PLAN:

LEGAL DESCRIPTION: LOT 9C, LA VISTA AT DESERT RIDGE SUBDIVISION

SITE AREA: 0.24 ACRES

FLOOD HAZARD STATEMENT: F.E.M.A. FLOODWAY BOUNDARY AND FLOODWAY MAP DATED AUGUST 16, 2012 (PANEL NO. 35001C0133G & 35001C0141G) INDICATES A FLOOD HAZARD ZONE X WHICH IS AN AREA DETERMINED TO BE OUTSIDE THE 500-YEAR FLOODPLAIN. THE NORTH LA CUEVA CHANNEL AT THE SOUTHWEST CORNER HAS A FLOOD HAZARD ZONE A WITH A 1% ANNUAL CHANCE FLOOD DISCHARGE CONTAINED IN CHANNEL.

LOCATION AND DESCRIPTION: THE LOT IS LOCATED ON EAGLE ROCK AVENUE WEST OF WYOMING BOULEVARD. AT THE SOUTHWEST CORNER OF THE PROPERTY IS THE NORTH LA CUEVA CHANNEL.

EXISTING DRAINAGE CONDITIONS:

THE DRAINAGE ANALYSIS FOR THIS SITE IS IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE DEVELOPMENT PROCESS MANUAL SECTION 22.2, HYDROLOGY. THE PROPERTY IS LOCATED IN ZONE 3. THE 100-YEAR, 6-HOUR STORM IS 2.60 INCHES.

THE SITE CURRENTLY DRAINS FROM EAST TO WEST TO THE NORTH LA CUEVA CHANNEL. CURRENTLY THERE ARE OFFSITE FLOWS FROM THE EAST AND NORTH.

DEVELOPED DRAINAGE CONDITIONS:

THERE IS ONE OFF-SITE BASIN DRAINING ONTO LOT 9C. THE OFF-SITE BASIN IS DIRECTLY EAST OF LOT 9C. RUNOFF FROM THE OFF-SITE BASIN WILL BE COLLECTED IN A SWALE ALONG THE LOT 9C EAST PROPERTY LINE AND WILL BE DIVERTED TO EAGLE ROCK AVENUE THROUGH THE DRIVEWAY FOR LOT 9C. THE PEAK FLOW OF 2.54 CFS WILL BE DISCHARGED TO EAGLE ROCK AVENUE THROUGH THE DRIVEWAY AND WILL EVENTUALLY DRAIN TO THE NORTH LA CUEVA CHANNEL.

RUNOFF FROM THE ON-SITE BASIN, WHICH INCLUDES ALL OF LOT 9C, WILL DRAIN TO A RETENTION POND ALONG THE WESTERN RETAINING WALL ADJACENT TO THE AMAFCA CHANNEL. RUNOFF FROM THE PROPOSED HOUSE WILL BE COLLECTED IN SWALES TO THE NORTH AND EAST, WHICH WILL DRAIN TO THE RETENTION POND. THE RETENTION POND WILL HOLD THE 100-YEAR, 10-DAY VOLUME OF 2,079 CUBIC FEET. THE RETENTION POND WILL HAVE A MAXIMUM DEPTH OF 1.5 FEET.

100-YEAR HYDROLOGIC CALCULATIONS

BASIN #	AREA (acres)	LAND TREATMENT				WEIGHTED E (in)	100-YEAR PRECIPITATION			
		A (%)	B (%)	C (%)	D (%)		V (6-hr) (in-hr)	V (10-day) (in-hr)	V (6-hr) (in-hr)	V (10-day) (in-hr)
EXISTING CONDITIONS										
OFF-SITE	1.3602	100.00	0.00	0.00	0.00	0.06	0.07	3.259	0.07	3.259
ON-SITE	0.2436	100.00	0.00	0.00	0.00	0.06	0.01	0.04	0.01	0.04
TOTAL RUNOFF	1.6038						0.09	3.342	0.09	3.342
PROPOSED CONDITIONS										
ON-SITE	0.2436	0.00	49.30	14.30	36.80	1.51	0.03	1.331	0.05	2.079
TOTAL RUNOFF	0.24						0.03	1.331	0.05	2.079
EXCESS PRECIP.		0.05	0.92	1.28	2.38	6 (in)				
PEAK DISCHARGE		1.87	2.6	3.45	5.02	Q ₁₀ (CFS)				

WEIGHTED E (in) = (E₁(%A) * (E₂(%B) * (E₃(%C) * (E₄(%D))

V₁₀₀ (acres-ft) = (WEIGHTED E)/(AREA)*12

V₁₀₀ (acres-ft) = V₁₀₀ * (A₁)/P₁₀₀ + (P₁₀₀)/12

Q₁₀ (CFS) = (Q₁₀(A) * (C₁)/P₁₀₀ + (Q₁₀(B) * (C₂)/P₁₀₀ + (Q₁₀(C) * (C₃)/P₁₀₀ + (Q₁₀(D) * (C₄)/P₁₀₀)

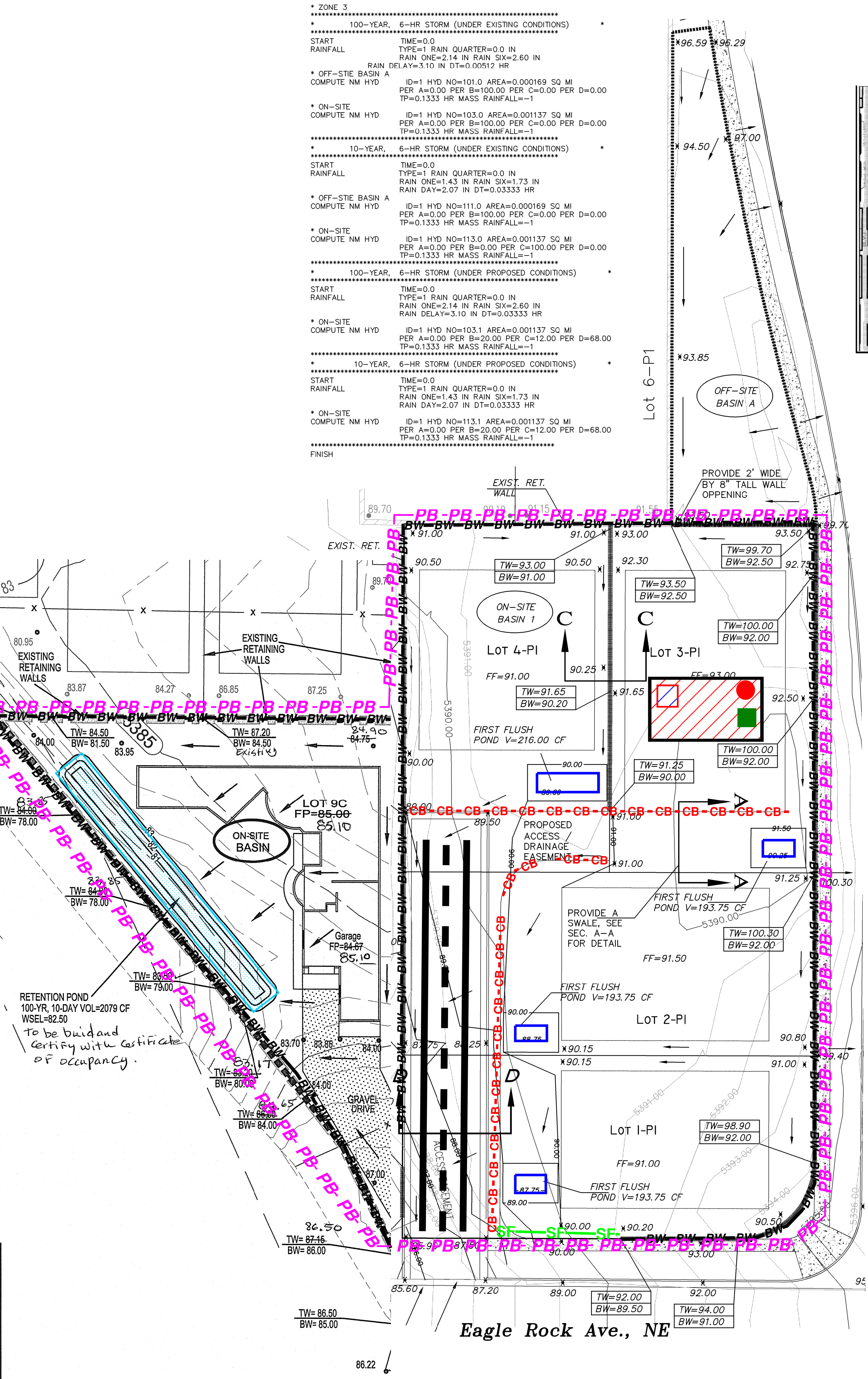
ZONE = 3

P₁₀₀ (in) = 2.60

P₁₀₀ (in) = 3.10

P₁₀₀ (in) = 4.90

86.22



LEGEND

TEMPORARY EROSION AND SEDIMENT CONTROL PLAN

PB -PB -PB -PB PROJECT PERIMETER & DISTURBED AREA

SF - SF - SF SILT FENCE

CB -CB - CUT BACK CURB

FLOW DIRECTION

STAGING AREA

STABILIZED CONSTRUCTION ENTRANCE

TRASH RECEPTACLE

CHEMICAL TOILET

CONCRETE WASHOUT

FIRST FLUSH POND

EXISTING BLOCK WALL

CHECK DAM

RETENTION POND

OUTFALL

POSTING SIGN

PRESERVED VEGETATION

PAVED ROAD

REQUIRED FIRST FLUSH PONDING CALCULATIONS

LOT 1-P1, IMPERVIOUS AREA = 5,430 CF
PONDING VOLUME REQUIRED = 5,430 X 0.34/12 = 153.85 CF

LOT 2-P1, IMPERVIOUS AREA = 5,770 CF
PONDING VOLUME REQUIRED = 5,770 X 0.34/12 = 163.48 CF

LOT 3-P1, IMPERVIOUS AREA = 4,547.50 CF
PONDING VOLUME REQUIRED = 4,547.50 X 0.34/12 = 153.85 CF

LOT 4-P1, IMPERVIOUS AREA = 5,142.50 CF
PONDING VOLUME REQUIRED = 5,142.50 X 0.34/12 = 145.70 CF

PROPOSED FIRST FLUSH PONDING VOLUME CALCULATIONS

LOT 1-P1, TOP AREA=260 SF, BOTTOM AREA=50 SF, DEPTH= 1.25'
PONDING VOLUME PROVIDED = (260 + 50)/2 * 1 = 193.75 CF

LOT 2-P1, TOP AREA=260 SF, BOTTOM AREA=50 SF, DEPTH= 1.25'
PONDING VOLUME PROVIDED = (260 + 50)/2 * 1 = 193.75 CF

LOT 3-P1, TOP AREA=260 SF, BOTTOM AREA=50 SF, DEPTH= 1.25'
PONDING VOLUME PROVIDED = (260 + 50)/2 * 1 = 193.75 CF

LOT 4-P1, TOP AREA=312 SF, BOTTOM AREA=120 SF, DEPTH= 1.0'
PONDING VOLUME PROVIDED = (312 + 120)/2 * 1 = 216.00 CF

RECEIVING WATERS: RIO GRANDE 2105_50 TIER II AND IMPAIRED WITH E. COLI, PCBs, AND DISSOLVED OXYGEN

CRITICAL HABITAT: CRITERION "A": NO CRITICAL HABITATS WITHIN PROJECT AREA

GPS LOCATION: 35.1877, -106.5603

ROHAN AND LOT 9C LA VISTA GRANDE SUBDIVISION

PROJECT TITLE

ALBUQUERQUE, BERNALILLO COUNTY, NM

CITY, COUNTY, STATE

01/23/2019 DATE

C. DURKIN DRAWN BY

01/23/2019 Engineer Stamp

CERTIFIED PROFESSIONAL

CPESC

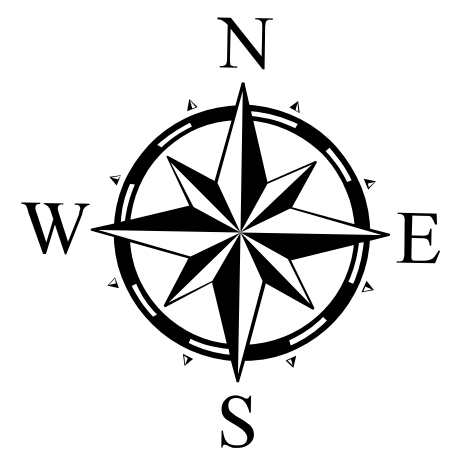
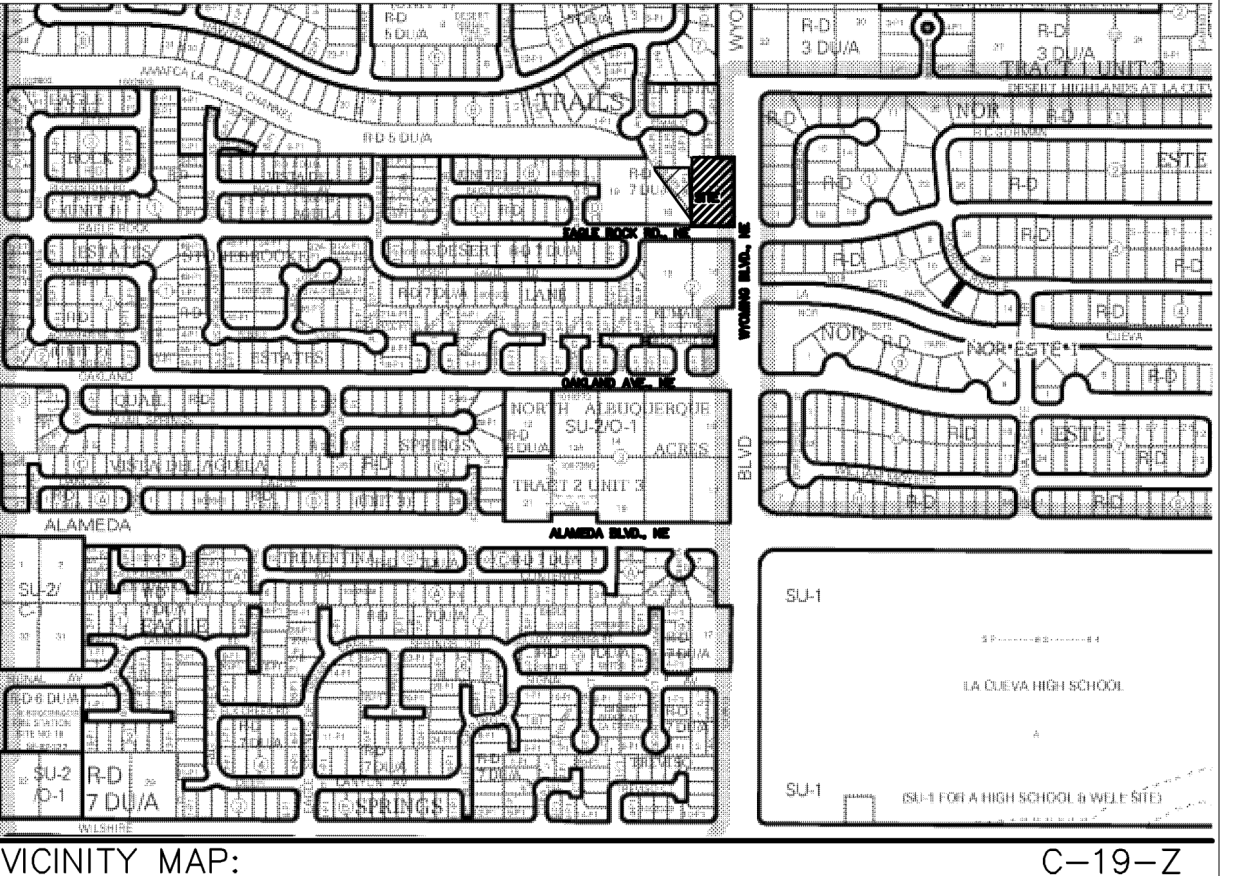
LELAN MORRISON

No. 8376

EXERCISE AND SIGNATURE

01/23/2019

Engineer Stamp



Curb Storm Inlet Protection with Wattles



Inlet Filter Installation Instructions:



1. Remove sediment, debris, ice and snow from the inlet grate surface and surrounding area.

2. Verify fit by placing filter over inlet grate to ensure that Inlet Filter extends at least one inch beyond the front and both curb ends. The overlap slows water

flow and starts filtering sediment and debris before water drops into the inlet.

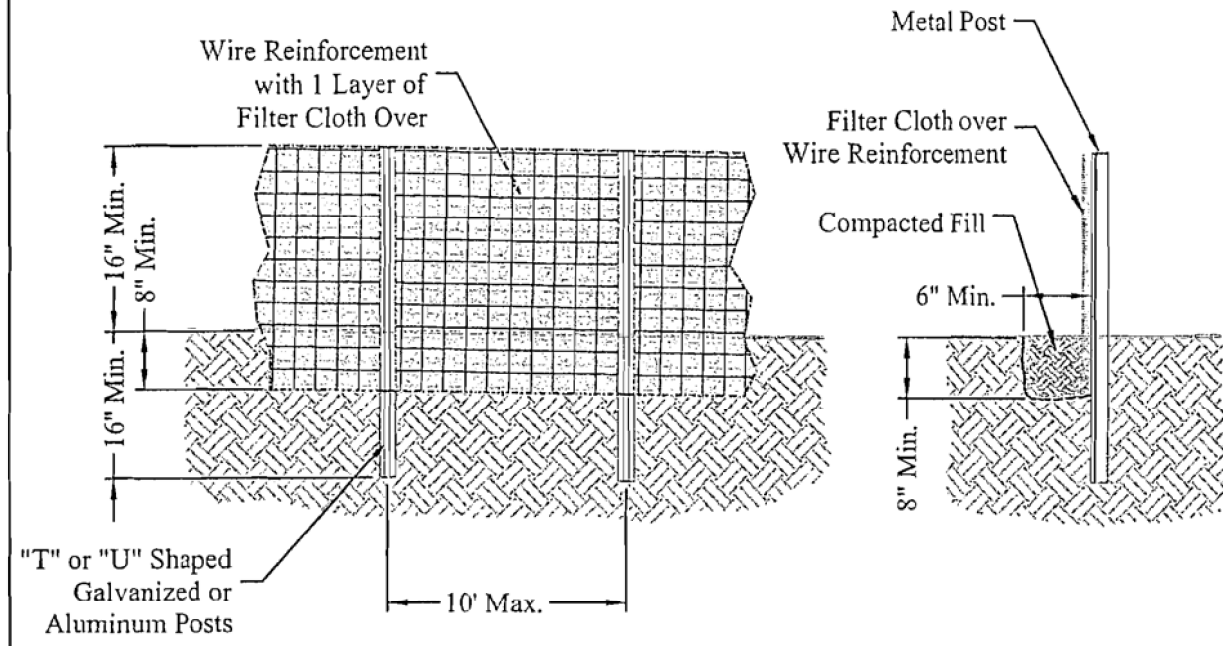


3. Position the mat. Place Inlet Filter on grate with the net side down, flush to the back edge and extending beyond the grate opening on the front and both sides. The zip ties attach Inlet Filter to the inlet grate cover WITHOUT LIFTING THE GRATE COVER.

4. The filter material covering the inlet can be any material that will prevent the sediment and other foreign matter from entering the

storm drain system.

Reinforced Silt Fence



Definition

A temporary barrier of Geotextile Class "F" over wire reinforcement used to intercept sediment laden runoff from small drainage areas.

Purpose

The purpose of silt fence is to reduce runoff where velocity and allow the deposition of transported sediment to occur. Limits imposed by ultraviolet light on the stability of the fabric will dictate the maximum period that the silt fence may be used.

1. Silt fence provides a barrier that can collect and hold debris and soil, preventing the material from entering critical areas, streams, streets, etc.
2. Silt fence can be used where the installation of a dike would destroy sensitive areas; woods, wetlands, etc.

Conditions where the Practice Applies

Silt Fence is limited to intercepting sheet flow runoff from limited distances according to slope. It provides filtering and velocity dissipation to promote gravity settling of sediment.

Design Criteria

Steel posts must be used. Silt Fence should be placed as close to the contour as possible. No section of silt fence should exceed a grade of 5 percent for a distance more than 50 feet. Where ends of the geotextile fabric come together, the ends shall be overlapped, folded, and stapled to prevent sediment bypass. The length of the flow contributing to silt fence shall conform to the following limitations.

Slope (%)	Slope Steepness	Slope Length (Ft.) (Maximum)	Silt Fence Length (Ft.) (Maximum)
0-10	0-10:1	Unlimited	Unlimited
10-20	10:1-5:1	200	1,500
20-23	5:1-3:1	100	1,000
33-50	3:1-2:1	100	500
50 +	2:1 +	50	250

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Erosion Control Notes

1. All perimeter erosion and sediment control measures shall be installed prior to the execution of any grading work and maintained by the grading contractor for the duration of the grading project. Failure to install and maintain erosion control is a violation of State Law and subject to fine.

2. The appropriate erosion control devise(s) shall be installed prior to the inception of any land disturbing activity and shall be properly maintained for construction activities.

3. All Erosion Control devices and their installation shall meet the standards prescribed in the current guidelines for storm water management for construction activities.

4. Sediment collected behind the sediment filters and silt fences shall be removed when sediment reaches on third the height of the barrier.

5. Inspection of erosion and sediment control and other protective measures are required once every 7 days from July 1st to October 31st and once every 14 days from November 1st to June 30th and after a precipitation event of ¼ inch or greater until the site is considered stabilized by the City. Inspection reports are to be kept by the person or entity authorized to direct construction activities on the site

6. Construction Site Entrance: The contractor shall construct as a minimum one stabilized construction entrance at the location shown on the plans. If additional ingress and egress to the construction site is required, the contractor shall coordinate with the construction manager the location of these additional stabilized construction entrances. Usage of non-stabilized for ingress and egress will not be permitted. The stabilized entrances shall be maintained in a condition which will prevent tracking or flowing of sediment onto public right-of-way and paved driving lanes. This may require periodic top dressing with additional stone as conditions warrant. Repair of the entrances or cleaning of the right-of-way and paved driving lanes that have been soiled shall be performed by the contractor at his own expense satisfactory to the construction manager. When necessary, vehicle wheels and tires shall be cleaned to remove sediment prior to entering onto public right-of-way and public streets. When washing is required, it shall be done on an area stabilized with crushed stone.

7. The contractor shall at his own expense, periodically water the site to control dust.

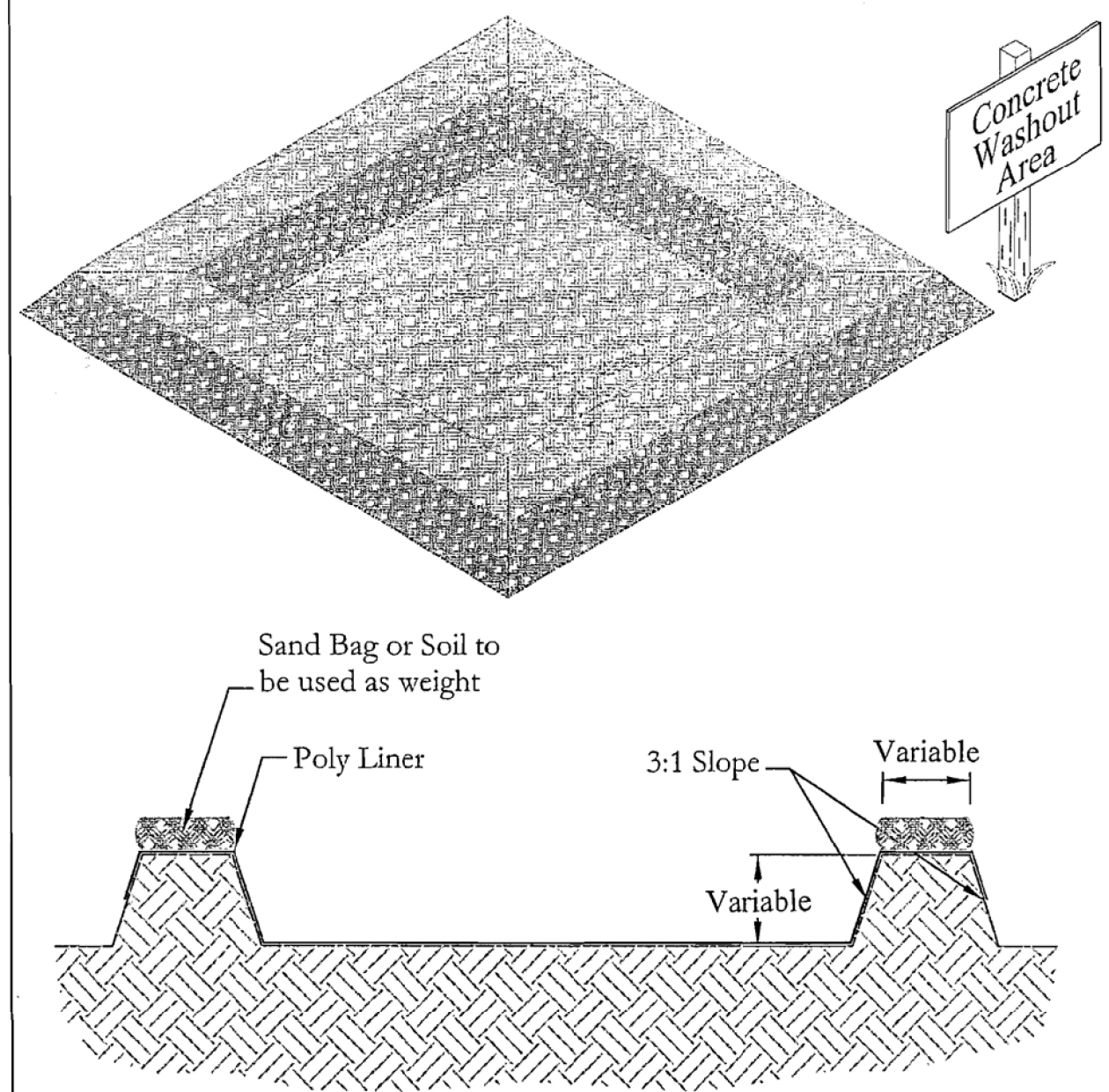
8. Sedimentation and erosion control measures shall be removed following construction or upon permanent stabilization of the disturbed and graded areas, whichever occurs last.

9. All disturbed areas that are not to be paved shall be re-seeded unless noted otherwise.

10. The contractor shall deep the site clean at all times and control dust resulting from the earthwork operation. The contractor shall not track mud onto the public streets.

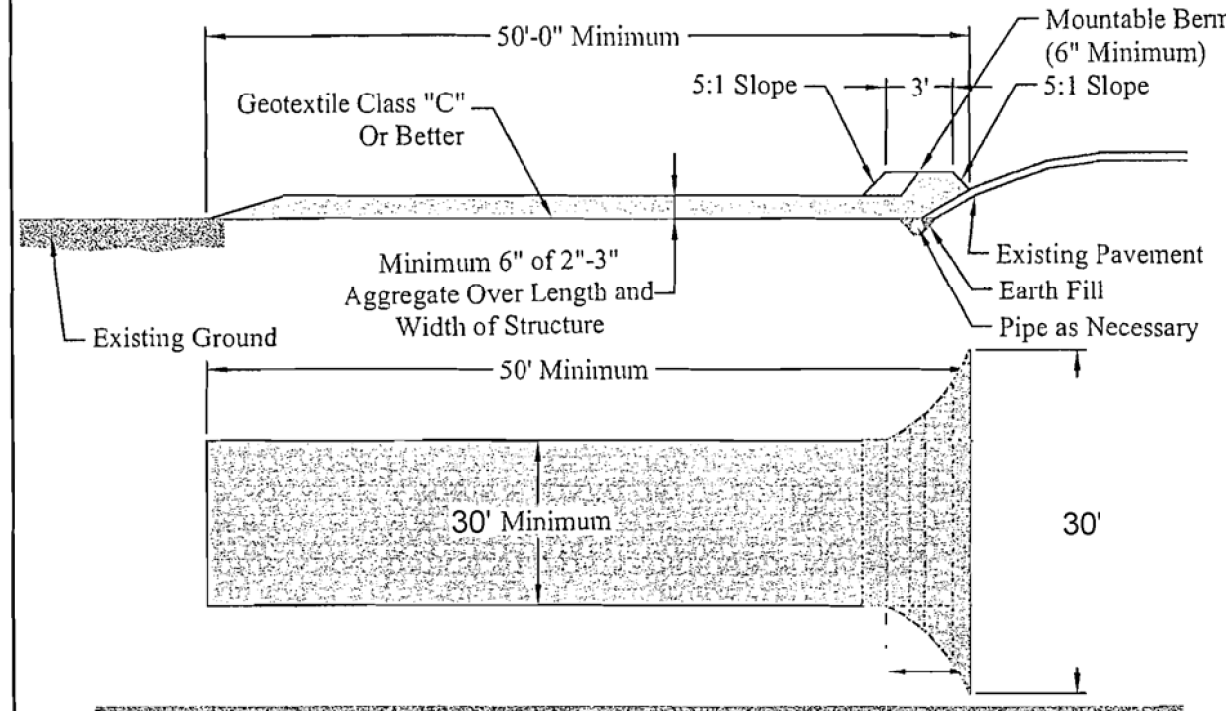
Concrete Washout Area

For use in High Water Table Areas



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Stabilized Construction Entrance



Definition

A stabilized layer of aggregate that is underlain with Geotextile Class "C" (See Standards for Geotextile). Stabilized entrances are located at any point where traffic enters or leaves a construction site.

Purpose

The purpose of the stabilized construction entrance is to reduce tracking of sediment onto streets or public rights-of-way and provide a stable area for entrance or exit from the construction site.

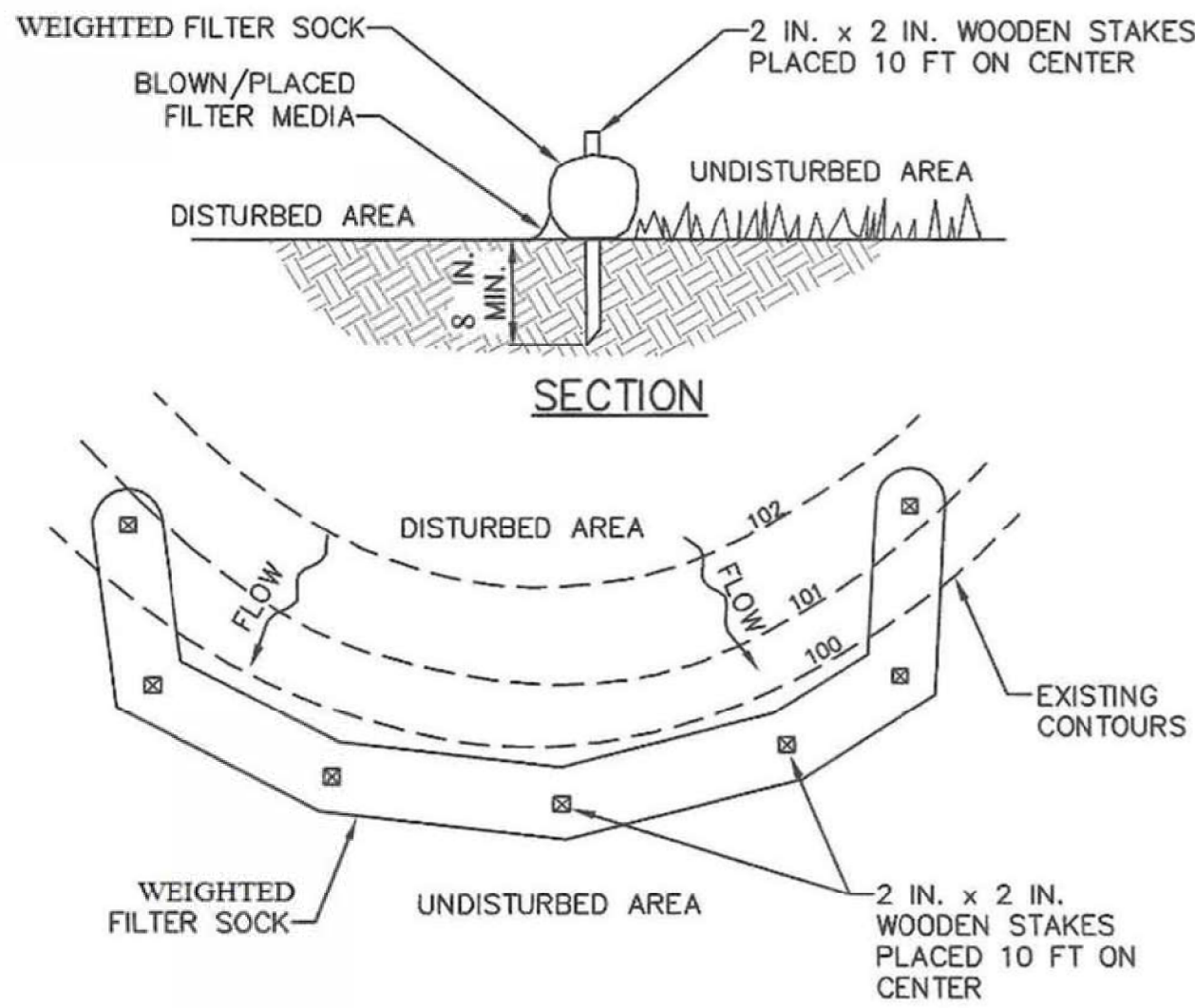
Conditions where the Practice Applies

1. Stabilized construction entrances shall be located at points of construction ingress and egress.
2. For single family residences, the entrance should be located at the permanent driveway.
3. Stabilized construction entrances should not be used on existing pavement.

Design Criteria

1. Length - Minimum of 50'-0"
2. Width - Minimum of 30'-0", should be flared at the existing road to provide a turning radius.
3. Geotextile Class "C" shall be placed over the existing ground prior to placing stone. The Plan approval authority may not require geotextile fabric for single family residence.
4. Stone-crushed aggregate 2"-3" (See Standards for Geotextile and Rock). Recycled concrete equivalent may be used also. The rock should be placed at least 6" deep over the length and width of the entrance.
5. Surface Water - All the surface water flowing to or diverted toward construction entrances shall be piped under the entrance to maintain positive drainage. Pipe installed under the construction entrance shall be protected with a mountable berm. The pipe shall be sized according to the drainage, with the minimum diameter being 6".
6. Location - A stabilized construction entrance shall be located at every point where construction traffic enter of leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

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01/23/2019

Engineer Stamp

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CRITICAL HABITAT: CRITERION "A"; NO CRITICAL HABITATS WITHIN PROJECT AREA

GPS LOCATION: 35.1877, -106.5603

ROHAN AND LOT 9C LA VISTA GRANDE SUBDIVISION

PROJECT TITLE

ALBUQUERQUE, BERNALILLO COUNTY, NM

CITY, COUNTY, STATE

01/23/2019

DATE

C. DURKIN

DRAWN BY

