

# SEE WHAT WE'RE SEEING



Stormwater Quality's perspective of your construction site.

# Best Management Practices



# Construction entrance/exit

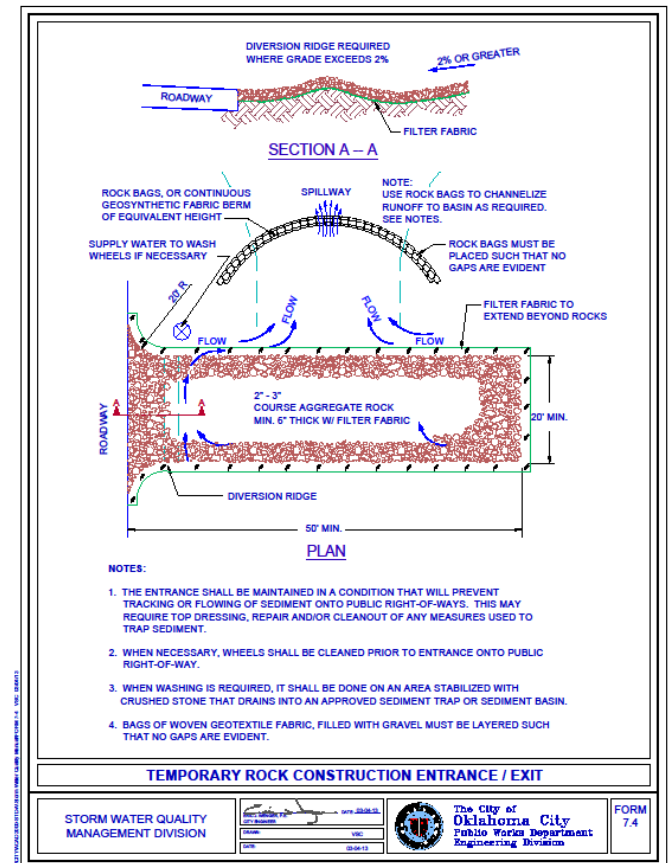
A good construction entrance



Not so good

# Construction entrance/exit requirements

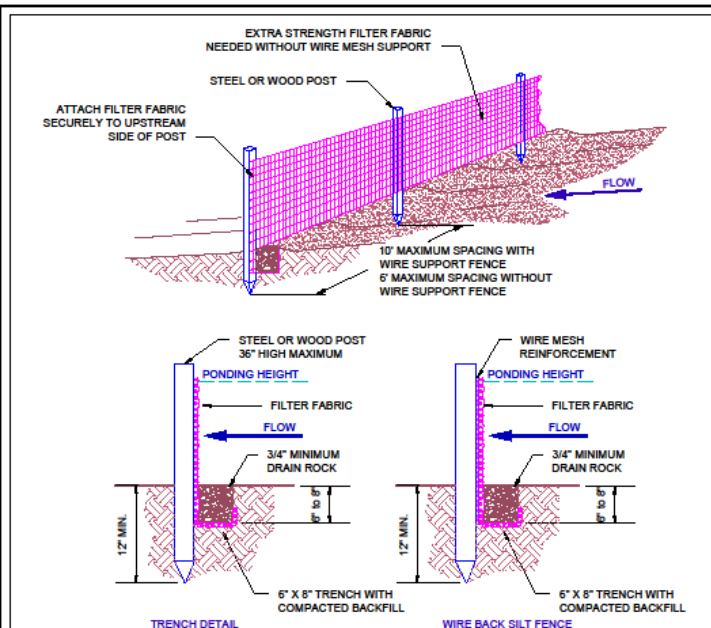
- 20' x 50'
- 2" to 3" course aggregate rock
- 6" thick
- Filter fabric underneath



# Perimeter Controls



# Approved plans for silt fence and straw waddles



**EXTRA STRENGTH FILTER FABRIC NEEDED WITHOUT WIRE MESH SUPPORT**

ATTACH FILTER FABRIC SECURELY TO UPSTREAM SIDE OF POST

STEEL OR WOOD POST

10' MAXIMUM SPACING WITH WIRE SUPPORT FENCE  
6' MAXIMUM SPACING WITHOUT WIRE SUPPORT FENCE

FLOW

STEEL OR WOOD POST 36" HIGH MAXIMUM

PONDING HEIGHT

WIRE MESH REINFORCEMENT

3/4" MINIMUM DRAIN ROCK

6' X 8' TRENCH WITH COMPACTED BACKFILL

6' X 8' TRENCH WITH COMPACTED BACKFILL

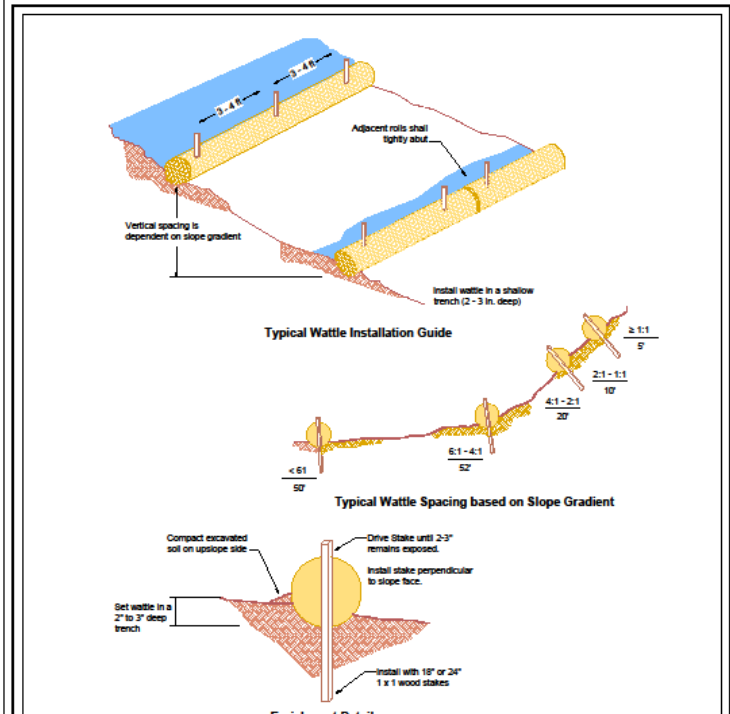
**TRENCH DETAIL**

**WIRE BACK SILT FENCE**

**NOTES:**

- MUST BE INSTALLED PROPERLY TO AVOID NOTICE OF VIOLATION.
- SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE POUNDING EFFICIENCY.
- INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY. ACCUMULATED SEDIMENT SHOULD BE REMOVED FROM THE FENCE BASE WHEN THE SEDIMENT REACHES ONE-THIRD TO ONE-HALF THE FENCE HEIGHT.
- REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE TO SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.

**SILT FENCE**



3-4 ft

3-4 ft

Adjacent rolls shall tightly abut

Vertical spacing is dependent on slope gradient

Install wattle in a shallow trench (2-3 in. deep)

**Typical Wattle Installation Guide**

Typical Wattle Spacing based on Slope Gradient

2:1 - 1:1 5'

4:1 - 2:1 10'

6:1 - 4:1 20'

< 6:1 50'

Compact excavated soil on upslope side

Drive Stake until 2-3" remains exposed

Install stake perpendicular to slope face

Set wattle in a 2" to 3" deep trench

Install with 18" or 24" 1 x 1 wood stakes

**Enrichment Detail**

**NOTES:**

- Begin at the location where the wattle is to be installed by excavating a 2-3" deep x 9" wide trench along the contour of the slope. Excavated soil should be placed up-slope from the anchor trench.
- Place the wattle in the trench so that it contours to the soil surface. Compact the soil from the excavated trench against the wattle on the uphill side. Adjacent wattles should tightly abut.
- Secure the wattle with 18-24" stakes every 3-4' with a stake on each end. Stakes should be driven through the middle of the wattles leaving at least 2-3" of stake extending above, the wattle stakes should be driven perpendicular to slope face.

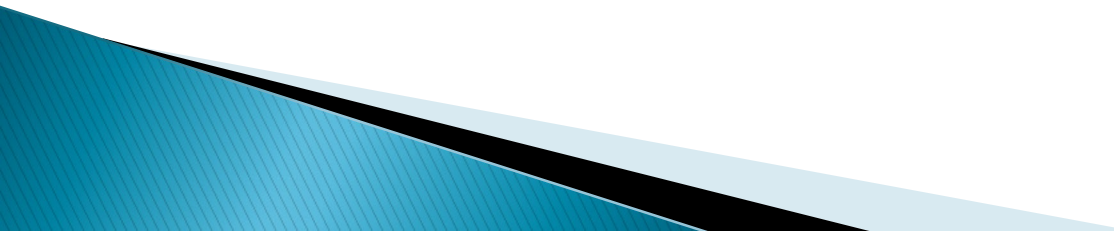
**STRAW WATTLE INSTALLATION**

Leave as much green stuff as Possible!



# Perimeter controls Checklist

## Silt Fence :

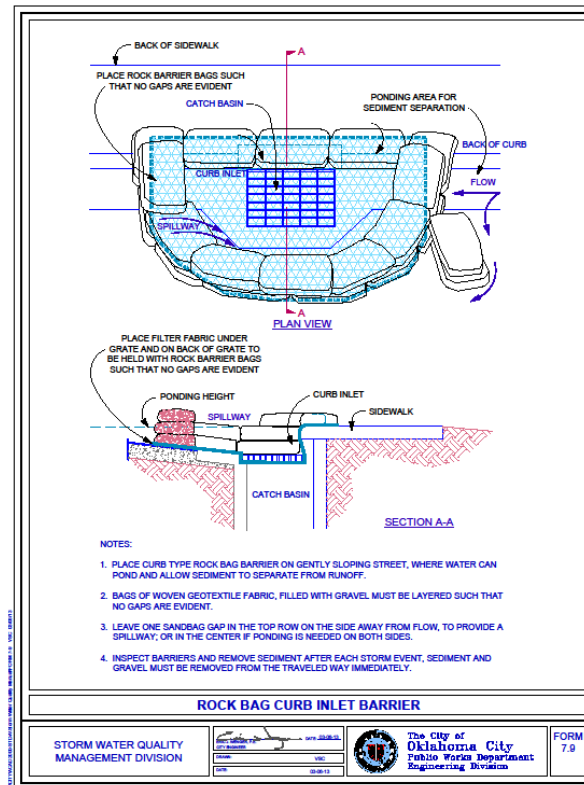
- Trenched in at least 6” deep
  - Stakes on the downhill side
  - In good shape, free of tears
  - Not blowing in the wind
  - “J Hooked” on the ends
- 



# Not an Accepted BMP!



# Storm drain inlet protection



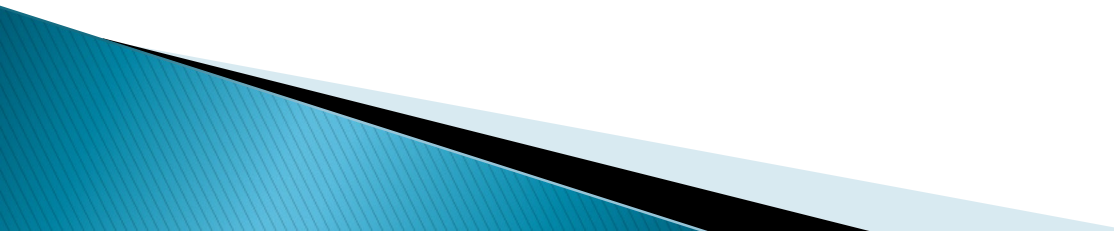
# Concrete Washout

“Self-installed concrete washout facilities can be built on site, although self-installed structures are much less reliable than prefabricated containers and are prone to leaks. One of the most common problems with self-installed concrete washout facilities is that they can leak or be breached as a result of over use, so care should be taken to use quality materials and inspect the facilities on a daily basis.”

– OKC BMP Manuel



# Concrete Washout Checklist

- Should be carefully inspected for leaks.
  - Easily accessed for the truck drivers
  - Emptied or cleaned out as needed
  - If it is away from a paved roadway, a controlled construction entrance/ exit should be used
  - Clearly marked for the truck drivers to see
- 

# Paper work



# Permit


- The Stormwater permit is required for most Land disturbance in Oklahoma City.
- The permit needs to be site specific and Up to date.
- The permit also needs to be onsite at all times



# Notice of Intent

- Filled out fully, and correctly.
- Information should be current.
- Should be onsite and available for review.

Form 6.1  
See Reverse Side for Instructions

Oklahoma City Storm Water Quality Management Division	
OKC-SWQ FORM C 1 <small>September 6, 2008</small>	 <b>Notice of Intent (NOI) for Storm Water Discharges Associated With CONSTRUCTION ACTIVITY Under the OPDES General Permit</b>
<small>SUBMISSION OF THIS NOTICE OF INTENT CONSTITUTES THAT THE PARTY IDENTIFIED IN SECTION I OF THIS FORM INTENDS TO BE AUTHORIZED BY A SWQ PERMIT ISSUED FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY IN THE CITY OF OKLAHOMA CITY. BECOMING A PERMITTEE OBLIGATES SUCH DISCHARGER TO COMPLY WITH THE TERMS AND CONDITIONS OF THE PERMIT. IN ORDER TO OBTAIN AUTHORIZATION, ALL REQUESTED INFORMATION MUST BE PROVIDED ON THIS FORM. SEE INSTRUCTIONS. IF YOUR FACILITY OR SITE IS ON INDIAN LAND, FILE YOUR NOI WITH THE EPA.</small>	
<b>I. FACILITY OWNER/OPERATOR INFORMATION (If you are a Co-permittee check this box) <input type="checkbox"/></b>	
Name: _____ Phone: _____	
Street Address: _____ E-Mail Address: _____	
City: _____ State: _____ Zip Code: _____ Status of Owner/Operator: _____	
<b>II. FACILITY SITE INFORMATION</b>	
Name of the Project: _____	
Address: _____ Phone: _____	
City: _____ State: _____ Zip Code: _____	
Quarter: _____ Section: _____ Township: _____ Range: _____	
Latitude: _____ Longitude: _____ County: _____	
Is the construction site within any of the corridors of the listed sensitive waters or watersheds (Addendum A)? Federal _____ State _____ (Yes or No)	
Has Storm Water Pollution Prevention Plan (SWP3) been developed? <input type="checkbox"/> Yes <input type="checkbox"/> No Is SWP3 implemented? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Address of location of SWP3 for viewing: <input type="checkbox"/> Address in I, Above. <input type="checkbox"/> Address in II, Above. <input type="checkbox"/> Other, please specify below	
Address: _____ Phone: _____	
City: _____ State: _____ Zip Code: _____	
Has Historic Sites Preservation been Investigated? <input type="checkbox"/> Yes <input type="checkbox"/> No Is this facility/site on Indian land? <input type="checkbox"/> Yes <input type="checkbox"/> No (See Instructions)	
Other Operator OPDES Number(s): _____ Other Operator NPDES Number(s): _____	
Receiving Water Body: _____	
Estimated area to be disturbed (to nearest acre): _____	
Month _____ Day _____ Year _____ Construction Start Date	Month _____ Day _____ Year _____ Estimated Completion Date
Will Construction (and disturbing activities) be conducted for storm water control? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Is the Storm Water Pollution Prevention Plan in compliance with all applicable local sediment and erosion plans? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None	
<b>ENDANGERED SPECIES</b> <small>Based on the instructions provided in Part X and Addendum A of the Permit, is the proposed construction or land disturbing activity within the corridor of any of the listed sensitive waters or watersheds?</small> <input type="checkbox"/> Yes <input type="checkbox"/> No <small>If yes, please refer to Part X.B, Step 2.</small> <small>All Permit eligibility requirements with regard to protection of endangered species through the indicated Section of Part I.B.3a.(2) of the Permit have been complied with.</small> <small>(Check one or more boxes):</small> (a) <input type="checkbox"/> (b) <input type="checkbox"/> (c) <input type="checkbox"/> (d) <input type="checkbox"/> (e) <input type="checkbox"/> (f) <input type="checkbox"/>	
<b>III. CERTIFICATION</b>	
<small>I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.</small>	
<small>I understand that continued coverage under this permit is contingent upon maintaining eligibility as provided for in Part I.B.</small>	
Print Name: _____ Date: _____	
Signature: _____ Title: _____	

# SWPPP

Form 6.2

- Updated Regularly
- On-site and Available for review
- Contact information should be current.



**ONLY FOR USE OF LESS THAN ONE (1) ACRE OF DISTURBED AREA**  
**City of Oklahoma City**  
**Storm Water Quality**  
**STORM WATER POLLUTION PREVENTION PLAN**



**Section 1: SITE EVALUATION, ASSESSMENT AND PLANNING**

**1.1 Project/Site information:**

Project Name: \_\_\_\_\_

Site Location/Address: \_\_\_\_\_

Is this project located on Indian Land?  Yes  No

Is this project considered a federal facility?  Yes  No

**1.2 Contact Information/Responsible Parties:**

Company/Organization Name: \_\_\_\_\_

Address: \_\_\_\_\_

Phone/ Fax number:(Phone) \_\_\_\_\_ (Fax) \_\_\_\_\_

Email Address: \_\_\_\_\_

24-Hour Emergency Contact Name: \_\_\_\_\_

24-Hour Emergency Contact Number: \_\_\_\_\_

**1.3 Nature and Sequence of Construction Activity**

Function of Construction Activity:

Residential  Commercial  Linear  Demolition  Road Construction

Estimated Start Date: \_\_\_\_\_ Estimated Completion Date: \_\_\_\_\_

Construction Sequencing/Timing of all Major Events: (Phasing of the project, grading, installation of erosion controls, best management practices and stabilization activities)

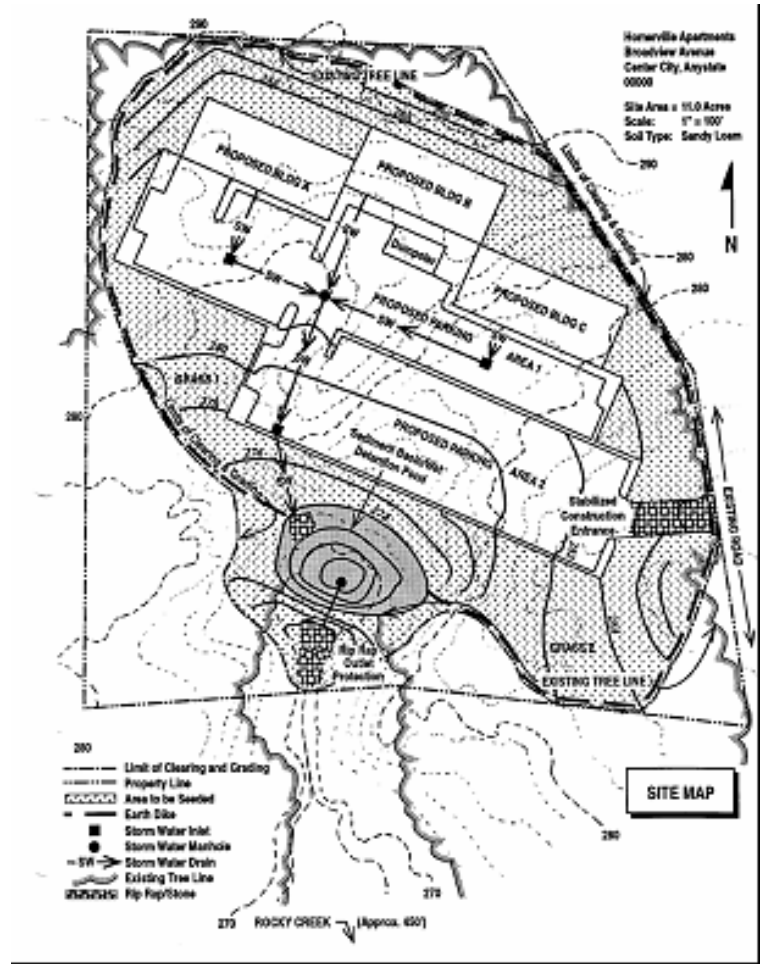
The order of activities will be as follows:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_



# Site Map

- The site map should always reflect the CURRENT condition of the site.
- Erosion controls should be clearly marked on the map.



# Inspection Reports

- Should be filled out completely.
- Inspections should be done at the frequency stated in the SWPPP.
- Should be kept in the SWQ File on-site

General Information			
<b>Project Name</b>			
<b>NPDES Tracking No.</b>		<b>Location</b>	
<b>Date of Inspection</b>		<b>Start/End Time</b>	
<b>Inspector's Name(s)</b>			
<b>Inspector's Title(s)</b>			
<b>Inspector's Contact Information</b>			
<b>Inspector's Qualifications</b>	Insert qualifications or add reference to the SWPPP. (See Section 5 of the SWPPP Template)		
<b>Describe present phase of construction</b>			
<b>Type of Inspection:</b> <input type="checkbox"/> Regular <input type="checkbox"/> Pre-storm event <input type="checkbox"/> During storm event <input type="checkbox"/> Post-storm event			
Weather Information			
<b>Has there been a storm event since the last inspection?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <b>If yes, provide:</b> Storm Start Date & Time:                  Storm Duration (hrs):                  Approximate Amount of Precipitation (in):			
<b>Weather at time of this inspection?</b> <input type="checkbox"/> Clear <input type="checkbox"/> Cloudy <input type="checkbox"/> Rain <input type="checkbox"/> Sleet <input type="checkbox"/> Fog <input type="checkbox"/> Snowing <input type="checkbox"/> High Winds <input type="checkbox"/> Other:    Temperature:			
<b>Have any discharges occurred since the last inspection?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <b>If yes, describe:</b>			
<b>Are there any discharges at the time of inspection?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <b>If yes, describe:</b>			

# Corrective Action Log

	BMP	BMP Installed?	BMP Maintenance Required?	Corrective Action Needed and Notes
1		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
5		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
6		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
7		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
8		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
9		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
10		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
11		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	

A good way to keep track of the corrections needed, and if the corrections have been made or not.

Questions?

A black marker is shown drawing a curved line under the word 'Questions?' on a piece of lined paper. The marker is positioned at the bottom right of the frame, with its tip pointing towards the end of the underline.