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&
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Consulting Engineers
and Land Surveyors

18 Locust Street
Albany, New York 12203

ALTERATION OF THIS
DOCUMENT EXCEPT BY A
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REMARKS	DATE
PLANNING BOARD COMMENTS	2/9/15
MEETING AT BBL WITH MONLTH	2/23/15
RESPONSE TO COMMENTS	3/2/15
RESPONSE TO COMMENTS	3/13/15
RESPONSE TO COMMENTS	3/13/15
RESPONSE TO COMMENTS	4/10/15

REVISIONS

NOTES:
1. INSTALL STONE CHECK DAM IN ACCORDANCE WITH THE NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL, SECTION 7A IN ALL TEMPORARY FLOWING STREAMS AND SWALES.
2. CHECK DAMS SHALL REMAIN IN PLACE UNTIL THE DRAINAGE SWALE IS STABILIZED.
3. LIGHT STONE FILL (NYSDOT ITEM 0203.0) SHALL BE PLACED ON FILTER FABRIC ACCORDING TO THE GRADES AND SWALE LINES SHOWN ON THE PLANS.
4. SET SPACING OF CHECK DAMS SO THAT THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION AS THE TOE OF THE UPSTREAM DAM.
5. EXTEND THE STONE A MINIMUM OF 1.5 FEET BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
6. PROTECT THE CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
7. ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO BLOCKAGE OR DAMAGE FROM DISPLACED STONE.
8. MAXIMUM DRAINAGE AREA 2 ACRES.
9. LOCATION OF CHECK DAMS SHALL BE AS REQUIRED TO PROVIDE ADEQUATE EROSION CONTROL AND MAY BE DIRECTED BY THE ENGINEER IN AREAS OTHER THAN SHOWN ON THIS PLAN DURING CONSTRUCTION AND UNTIL SITE IS STABILIZED.

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PLANNING BOARD
TOWN OF BETHLEHEM
ALBANY COUNTY, NEW YORK
By direction of the Chairman,
These drawings are hereby approved.
See sheet(s) 20 for date and signature.

FILE: 140057-4.dwg

SCALE: AS NOTED

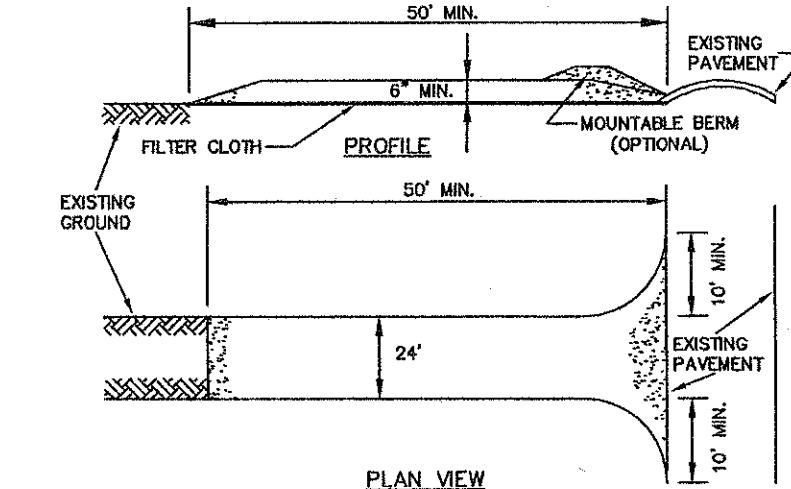
BY: MM

DATE: 1/30/15

CHG: DRH

FILE: 140057

PROPOSED EROSION AND SEDIMENT CONTROL PLAN FOR No. 21 VISTA BOULEVARD	NOT TO SCALE
VISTA TECHNOLOGY CAMPUS	
TOWN OF BETHLEHEM	
ALBANY COUNTY, STATE OF NEW YORK	
FILE: 140057	
SCALE: AS NOTED	
BY: MM	
DATE: 1/30/15	
CHG: DRH	



CONSTRUCTION SPECIFICATIONS

1. INSTALL CONSTRUCTION ENTRANCE IN ACCORDANCE WITH "NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL", SECTION 7A.
2. STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
3. LENGTH - NOT LESS THAN 50 FEET EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY.
4. THICKNESS - NOT LESS THAN (6) INCHES.
5. STABILIZATION FABRIC - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCE WILL BE PREVENTED FROM FLOWING INTO PIPING IF PRACTICAL. A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. ALL SEDIMENT SPILLS, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRANS ON AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

Design Criteria

Aggregate Size: Use a mixbox of 1-4 inch stone, or reclaimed or recycled concrete equivalent.

Thickness: Not less than six (6) inches.

Width: 12-foot minimum but not less than the full width of areas where ingress or egress occurs. 24-foot minimum if there is only one access to the site.

Length: As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum would apply).

Geotextile: To be placed over the entire area to be covered with aggregate. Filter cloth will not be required on a single-family residence lot. Piping of surface water under entrance shall be provided as required. If piping is impossible, a mounting berm with 5:1 slopes will be permitted.

Criteria for Geotextiles

The geotextiles shall be woven or nonwoven fabric consisting only of continuous chain polymeric filaments or yarns of polyester. The fabric shall be inert to commonly used construction materials and shall be able to withstand UV resistance and conform to the fabric properties as shown:

Fabric Properties	Light Duty Roads Roads Subgrade	Heavy Duty Roads Roads Rough Graded	Test Method
Grob Tensile Strength (lbs)	200	220	ASTM D1682
Elongation at Failure (%)	50	60	ASTM D1682
Mullen Burst Strength (lbs)	190	430	ASTM D3786
Puncture Strength (lbs)	40	125	ASTM D751 modified
Equivalent	40-80	40-80	US Std Sieve
Opening Size			CW-02215
Aggregate Depth	6	10	--

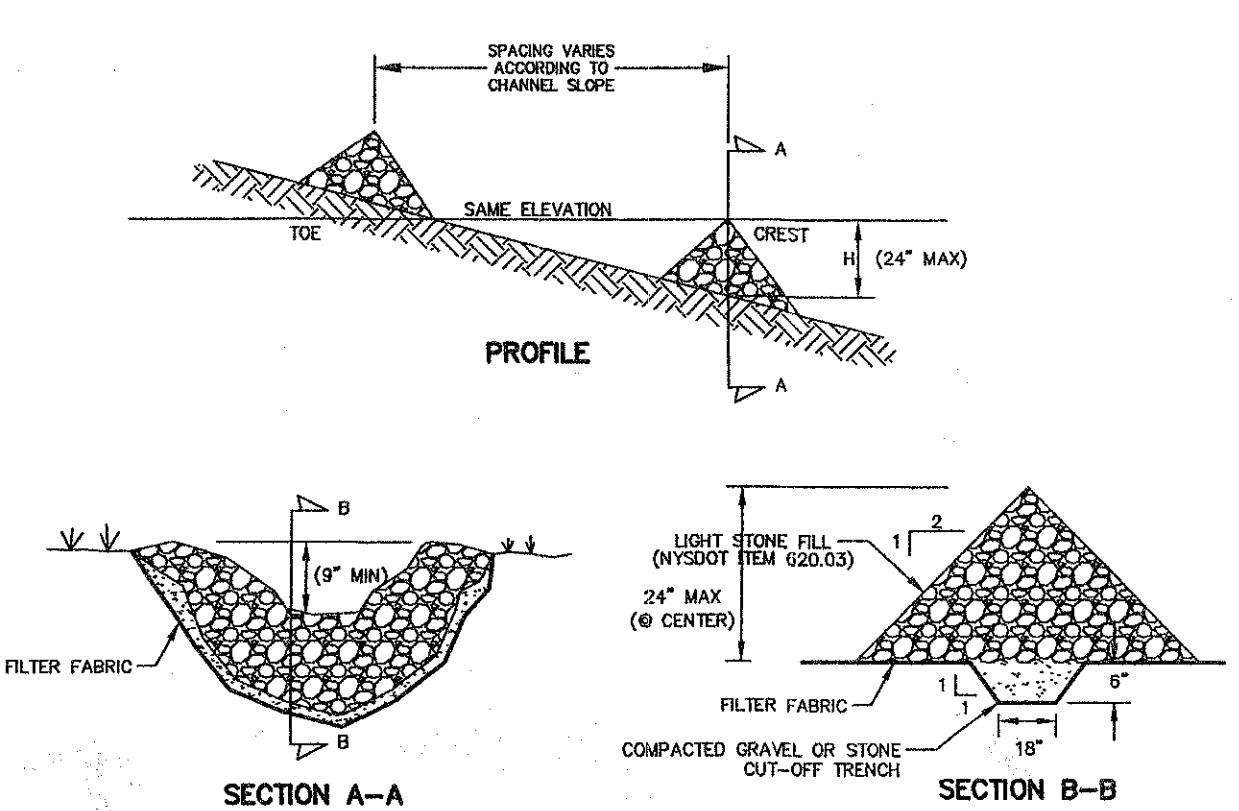
Light Duty Roads: Area sites that have been graded to subgrade and where most travel would be by single axle vehicles and an occasional multi-axle truck. Materials include: 100% Reclaimed Spurboard 1110, Miraf 100K, Type 3401, or equivalent.

Heavy Duty Roads: Area sites with only rough grading, and where most travel would be by heavy vehicles. Materials are 100% Reclaimed Spurboard 1130, Miraf 6002, or equivalent.

Fabrics not meeting these specifications may be used only when design procedure and supporting documentation are supplied to determine aggregate depth and fabric weight.

STABILIZED CONSTRUCTION ENTRANCE DETAIL

NOT TO SCALE



Design Criteria
Drainage Area: Maximum drainage area above the check dam shall not exceed two (2) acres.

Height: Not greater than 2 feet. Center shall be maintained 9 inches lower than outcgments at natural ground elevation.

Side Slopes: Shall be 2:1 or flatter.

Spacing: The check dams shall be spaced as necessary in the channel so that the crest of the downstream dam is at the elevation of the toe of the upstream dam. This spacing is equal to the height of the check dam divided by the channel slope.

Therefore:

$$S = h/s$$

Where:

$$S = \text{spacing interval (ft.)}$$

$$h = \text{height of check dam (ft.)}$$

$$s = \text{channel slope (ft./ft.)}$$

Example:

For a channel with a 4% slope and 2 ft. high stone check dams, they are spaced as follows:

$$S = \frac{h}{s} = 50 \text{ ft.}$$

.04 ft./ft.

Stone Check Dam: A well graded stone matrix 2 to 3 inches in size (NYS-DOT Light Stone Fill meets these requirements).

The overflow of the check dams will be stabilized to resist erosion that might be caused by the check dam. See Figure 5A.9 on page 5A.24 for details.

Check dams should be anchored in the channel by a cutoff trench 1.5 ft. wide and 0.5 ft. deep and lined with filter fabric to prevent soil migration.

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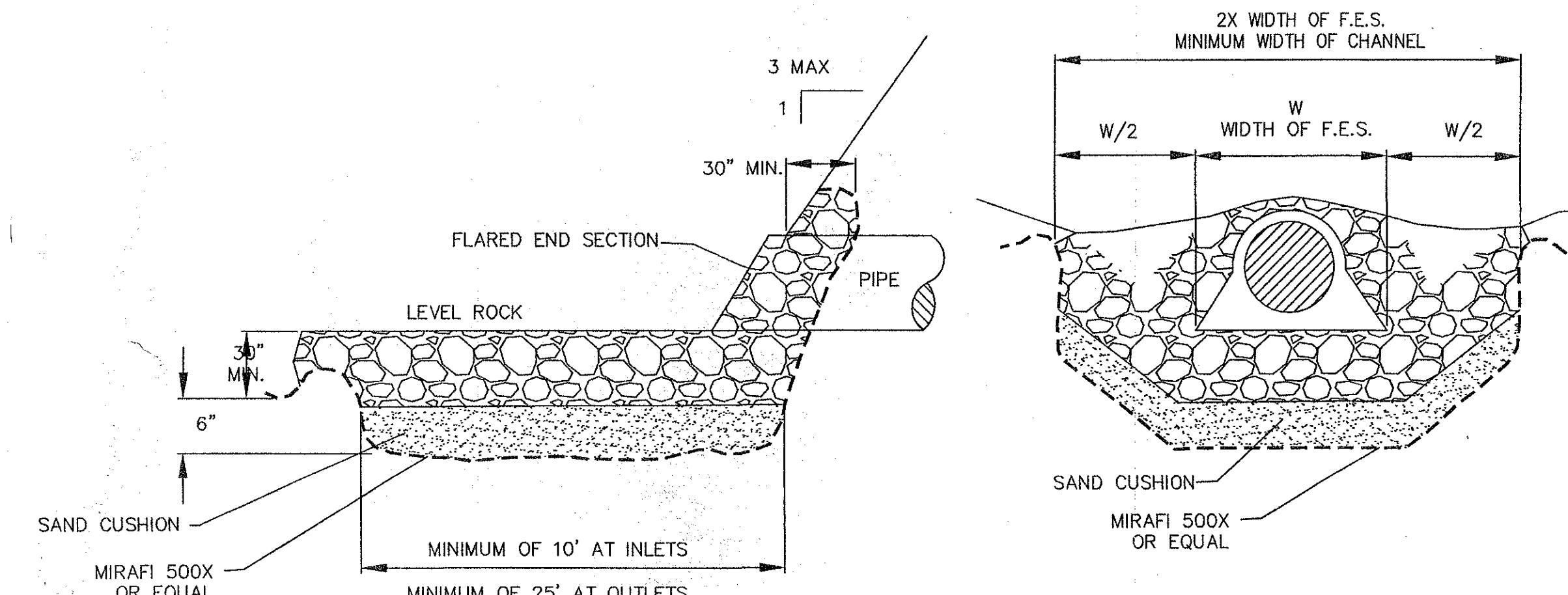
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STONE CHECK DAM DETAIL

NOT TO SCALE



FLARE END SECTION AND RIP-RAP DETAIL

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