SEDIMENT AND EROSION CONTROL NOTES

TIMING OF SEDIMENT – TRAPPING PRACTICES

Sediment control practices shall be functional throughout earth-disturbing activity.

Settling facilities, perimeter controls, and other practices intended to trap sediment shall be implemented as the first step of grading and within seven days from the start of grubbing. They shall continue to function until the upslope development area is restabilized.

STABILIZATION OF DENUDED AREAS

Denuded areas shall have soil stabilization applied within seven days if they are to remain dormant for more than forty-five days. Permanent or temporary soil stabilization shall be applied to denuded areas within seven days after final grade is reached on any portion of the site, and shall also be applied within seven days to denuded areas which may not be at final grade, but will remain dormant (undisturbed) for longer than forty-five days.

SETTLING FACILITIES

Concentrated stormwater runoff from denuded areas shall pass through a sediment-settling facility.

The facility's storage capacity shall be sixty-seven cubic yards per acre of drainage area.

SEDIMENT BARRIERS

Sheet flow runoff from denuded areas shall be filtered or diverted to a settling facility.

Sediment barriers such as sediment fence or diversions to settling facilities shall protect adjacent properties and water resources from sediment transported by sheet flow.

Temporary erosion control features shall be acceptably maintained and shall be removed or replaced when directed by the Engineer at no cost to the Owner. All work shall be performed in accordance with the specifications.

All concentrated water sources, shall discharge into a viable sediment basin.

All water sources shall discharge in a non-erosive manner.

All soil stockpiles shall be protected from erosion by perimeter control devices such as straw bale dikes or silt fences. And, these perimeter control devices shall be maintained throughout the life of the project.

Streams including bed and banks shall be re-established immediately after in channel work is completed, interrupted or stopped.

Permanent vegetation shall not be considered established until ground cover is achieved which, in the opinion of the engineer, provides adequate cover and is mature enough to control soil erosion satisfactorily and to survive adverse weather conditions.

CHANNEL FLOW APPLICATIONS

Bales shall be placed in a single row, lengthwise, oriented perpendicular to the contour, with ends of adjacent bales tightly abutting one another.

The remaining steps for installing a straw bale barrier for sheet flow applications apply here, with the following addition.

The straw bales shall be installed such that undercutting beneath the bales is minimized by the use of rock check dams placed adjacent to the straw bales.

The barrier shall be extended to such a length that the bottoms of the end bales are higher in elevation than the top of the lowest middle bale to assure that sediment-laden runoff will flow either through or over the barrier but not around it.

Maintenance

Straw bales shall be inspected immediately after each rainfall and at least daily during prolonged rainfall.

Close attention shall be paid to the repair of damaged bales, end runs and undercutting beneath bales.

Necessary repairs to barriers or replacement of bales shall be accomplished promptly.

Sediment deposits should be removed after each rainfall. They must be removed when the level of deposition reaches approximately one-half the height of the barrier.

Any sediment deposits remaining in place after the straw bale barrier is no longer required shall be dressed to conform to the existing grade, prepared and seeded.

SEDIMENT FENCE

This sediment barrier utilizes standard strength or extra strength synthetic filter fabrics. It is designed for situations in which only sheet or overland flows are expected.

1. The height of a sediment fence shall not exceed 36-inches (higher fences may impound volumes of water sufficient to cause failure of the structure).
2. The filter fabric shall be purchased in a continuous roll cut to the length of the barrier to to avoid the use of joints. When joints are necessary, filter cloth shall be spliced together only at a support post, with a minimum 6-inch overlap, and securely sealed.
3. Posts shall be spaced a maximum of 10-foot apart at the barrier location and driven securely into the ground (minimum of 12-inches). When extra strength fabric is used without the wire support fence, post spacing shall Not exceed 6-feet.
4. A trench shall be excavated approximately 4-inches wide and 4-inches deep along the line of posts and upslope from the barrier.
5. When standard strength filter fabric is used, a wire mesh support fence shall be fastened securely to the upslope side of the posts using heavy duty wire staples at least 1-inch long, tie wires or hog rings. The wire shall extend into the trench a minimum of 2-inches and shall not extend more than 36-inches above the original ground surface.
6. The Standard Strength Filter fabric shall be stapled or wired to the fence, and 8-inches of the fabric shall be extended into the trench. The fabric shall not extend more than 36-inches above the original ground surface. Filter fabric shall not be stapled to existing trees.
7. When extra strength filter fabric and closer post spacing are used, the wire mesh support fence may be eliminated in such a case, the filter fabric is stapled or wired directly to the posts with all other provisions of Item No. 6 applying.
8. The trench shall be backfilled and soil compacted over the filter fabric.
9. Sediment fences shall be removed when they have served their useful purpose, but not before the upslope area has been permanently stabilized.

Maintenance

Sediment fences and filter barriers shall be inspected immediately after each rainfall and at least daily during prolonged rainfall. Any required repairs shall be made immediately.

Should the fabric on a sediment fence or filter barrier decompose or become ineffective prior to the end of the expected usable life and the barrier is still necessary, the fabric shall be replaced promptly.

Sediment deposits should be removed after each storm event. They must be removed when deposits reach approximately one-half the height of the barrier.

Any sediment deposits remaining in place after the sediment fence or filter barrier is no longer required shall be dressed to conform with the existing grade, prepared and seeded.

INSPECTION SCHEDULE

1. Diversion Swale & Structural Protection – Inspect every 15 days or after each rainstorm producing runoff. Repair as required.
2. Inlet Protection – Inspect for sediment accumulation after each rainfall & daily during continued rainfall. Repair or replace when water flow is restricted by sediment.
3. Vegetative Planting – Inspect after sprouting occurs & replant bare areas. Inspect established cover every 15 days for damage; Replant as required. Maintain Established cover at Maximum 6" height. Irrigate as required during dry periods to maintain live vegetation.

SOIL PROTECTION CHART

Stabilization type — JAN. FEB. MAR. APR. MAY. JUN. JUL. AUG. SEPT. OCT. NOV. DEC.

Perm Seeding — A

Temp. Seeding — B

Mulching — C

A. 40% Kentucky Bluegrass, 40% Creeping Red Fescue, 20% Annual Ryegrass, 40 #/Acre
B. Oats – 4Bu./Ac. or Tall Fescue – 40 #/Ac.
C. Straw Mulch – 2 tons/Ac.

EROSION AND SEDIMENT CONTROL NARRATIVE

Plan Designer:
C.F. Bird & R.J. Bull, Inc.
2875 W. Dublin-Granville Rd.
Columbus, Ohio 43235
Phone: 614-761-1661
Fax: 614-761-1328

Owner/Developer
Bellows & Associates, Inc.
Attn: George Bellows
760 Northlawn Drive
Columbus, Ohio 43214
Phone: 614-422-0600
Fax: 614-422-9766

Project Description:
The 2.4 acre site will be developed into a two-story medical office building with accompanying parking.

Existing Site Conditions:
The existing site is mainly covered by grass and brush with some woods along the northern part of the site. The site drains generally from west to east. Existing storm sewer, waterline and sanitary sewer run through the site.

Adjacent Areas:
The site is bordered on the west by Jasonway Avenue, on the north and southwest by commercial development & associated parking and on the southeast by a grass area which slopes steeply away from the site.

Soils:
The original soil on the site consists of CfB-Celina-Urban land complex with slopes ranging from 2 to 6%. A soil investigation of the site revealed between 6 and 12 feet of clayey silt fill.

Critical Areas:
The critical area for the site is the southeast corner where the existing ground slopes sharply away from the site. A retaining wall will need to be provided to compensate for the grade differential.

Erosion Control Measures:
Erosion and site runoff will be controlled by the use of inlet protection at the proposed catch basins. A sediment fence will be constructed along most of the site perimeter.

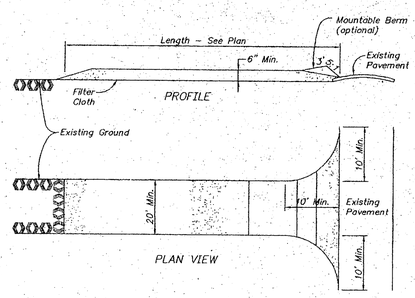
Sediment Control Measures:
The site will be stripped of topsoil and will be graded to drain toward the proposed catch basins. Inlet protection will be provided at each inlet.

Permanent Stabilization:
The site will be stabilized with aggregate base and asphalt in the pavement areas and seeding and mulching in non-pavement areas.

Maintenance:
All erosion control devices are to be inspected by the construction superintendent daily and after significant rainfalls. Any damaged facilities are to be replced/repaired immediately as may be necessary.

Construction Sequence:
The stabilized construction entrance and sediment fence will be installed along the site perimeter prior to the start of clearing and grading. The site will be graded and the storm sewers installed. Inlet protection will be placed at each catch basin. The erosion control devices may be removed and storm sewer pipe and inlets cleaned of all sediment incurred during construction only after areas have been paved and seeded.

Site Contact:
Bellows & Associates, Inc.
Attn: George Bellows
Phone: 614-422-0600



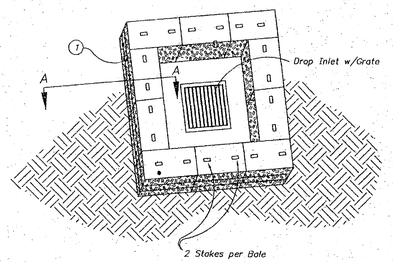
CE

STABILIZED CONSTRUCTION ENTRANCE

NO SCALE

CONSTRUCTION SPECIFICATIONS

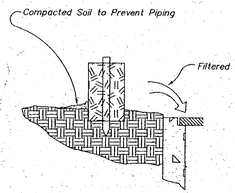
1. Stone Size – Use 2" stone, or reclaimed or recycled concrete equivalent.
2. Length – As required. (Minimum of 50')
3. Thickness – Not less than six (6) inches.
4. Width – Twenty (20) foot minimum, but not less than the full width at points where ingress or egress occurs.
5. Filter Cloth – Will be placed over the entire area prior to placing of stone.
6. Surface Water – All surface water flowing or diverted toward construction entrances shall be piped across the entrance.
7. Maintenance – The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public right-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.
8. Washing – Wheels shall be cleaned to remove sediment prior to entrance onto public right-of-ways. When washing is required, it shall be done on an area stabilized with stone and which drains into an on site containment area.
9. Periodic inspection and required maintenance shall be performed after each rain.
10. This construction shall include all materials and costs relative to constructing, maintaining, removal and restoration of stabilized entrance within the various sewer items.



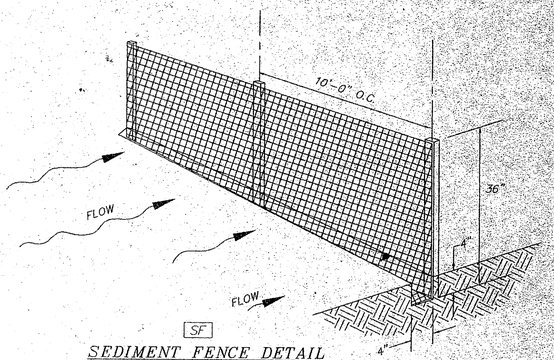
TPG

STRAW BALE DROP INLET SEDIMENT FILTER DETAIL

NO SCALE



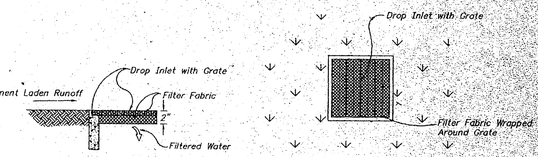
1 Straw or Hay bales – set 4" into ground & install per O.D.O.T. MC-11.



SF

SEDIMENT FENCE DETAIL

NO SCALE



IPP

FILTER FABRIC DROP INLET SEDIMENT FILTER DETAIL

NO SCALE

INLET PROTECTION

Contractor to provide filter fabric over the grate with a 2" minimum lap as shown.

MAINTENANCE

If the fabric becomes clogged with sediment so that it no longer adequately passes filtered water, the sediment shall be removed and the fabric shall be replaced. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.

The fabric shall be removed when the drainage area has been adequately stabilized.

Note: A Dandy Bag is an acceptable alternative.

ESTIMATE OF QUANTITIES

ITEM	QUANTITY	UNIT	DESCRIPTION
207	Lump	Sum	Temporary Seeding & Mulching
207	1265	L.F.	Sediment Fence
207	20	Ea.	Straw or Hay Bales
207	5	S.Y.	Inlet Protection Pavement
207	1	Ea.	Stabilized Construction Entrance
659	Lump	Sum	Seeding & Mulching

NOTE RE: ESTIMATE OF QUANTITIES

These quantities are approximate only and are not to be used for preparation of cost estimates, bids, or any other estimating purpose without verification by the user. Any discrepancies in the quantities shall be brought immediately to the attention of the ENGINEER for evaluation.

PRELIMINARY SUBJECT TO REVISION AND NOT TO BE USED FOR CONSTRUCTION

EASEMENT REFERENCE			
CITY NO.	COUNTY RECORDER VOL.	COUNTY RECORDER PAGE	GRANTOR

REVISIONS		
NO.	DESCRIPTION	APPROVAL/DATE

PLAN PREPARED BY:
C.F. BIRD & R.J. BULL, INC.
Consulting Engineers & Surveyors
2875 W. Dublin-Granville Road
Columbus, Ohio 43235

PROJECT TITLE:
PONDING AREAS, SITE GRADING & STORM SEWERS FOR JASONWAY MEDICAL PARK

CITY OF COLUMBUS, OHIO
DEPARTMENT OF PUBLIC UTILITIES
DIVISION OF SEWERAGE AND DRAINAGE

DIVISION USE ONLY

DIVISION USE ONLY	OWNER
	CONTRACTOR
	INSPECTOR
	AGREEMENT / COMPLETED
	RPD / CKD / CID / CON.DR.
	INDEX DETAIL / RECORD FILE

SCALE: NONE — SHEET 4 / 4
CONTRACT DRAWING NO. CC-
RECORD PLAN NO.

H:\JOBS\DRG\92-143\STORM\JASONST4.DWG