

GENERAL NOTES

- SUBJECT PROPERTY ZONED R-12 PER THE 7/28/06 COMPREHENSIVE ZONING PLAN. REFERENCE FILE NUMBER: 23-5, CMP-5300
- COORDINATES BASED ON NAD 83, MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 38BA AND NO. 38DB.
- TOPOGRAPHIC AND BOUNDARY SURVEY COMPLETED BY FISHER, COLLINS AND CARTER, INC. IN MAY OF 2007.
- DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT TO ENSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING (MINIMUM) REQUIREMENTS:
 - WIDTH - 12 FEET (6 FEET SERVING MORE THAN ONE RESIDENCE)
 - SURFACE - SIX (6) INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING, 1/2" MINIMUM
 - GEOMETRY - MAXIMUM 15
 - STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (25-LOADING)
 - DEBRIS ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER SURFACE
 - STRUCTURE CLEARANCES - MINIMUM 12 FEET
 - MAINTENANCE - SUFFICIENT TO ENSURE ALL WEATHER USE
- THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE DEVELOPER'S EXPENSE.
- CONTRACTOR SHALL CHECK SEWER HOUSE CONNECTION ELEVATION AT PROPERTY LINE PRIOR TO CONSTRUCTION.
- FOR DRIVEWAY ENTRANCE DETAILS REFER TO HO. CO. DESIGN MANUAL VOL. IV DETAILS R.6.05.
- ANALYSIS DATA:
 - TOTAL PROJECT AREA: 7000 sq. ft. or 1506 AC.
 - TOTAL AREA OF IMPERVIOUS SURFACE PROPOSED: 3100 SQ.FT. OR 0.0712 AC.
- THIS SITE IS EXEMPT FROM THE CURRENT LANDSCAPING REQUIREMENTS. THE DEVELOPMENT OF THESE EXISTING LOTS IS NOT SUBJECT TO THE REQUIREMENTS OF THE LANDSCAPE MANUAL SINCE HARWOOD PARK WAS GRANTED PRELIMINARY PLAN APPROVAL PRIOR TO THE EFFECTIVE DATE OF THE 1993 EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.
- THIS PROJECT IS EXEMPT FROM FOREST CONSERVATION OBLIGATIONS IN ACCORDANCE WITH SECTION 15.202(b)(2) OF THE HOWARD COUNTY CODE AND FOREST CONSERVATION MANUAL SINCE IT HAD SUBDIVISION APPROVAL PRIOR TO DECEMBER 31, 1992.
- THIS SITE IS EXEMPT FROM THE 2000 MARYLAND STORMWATER MANAGEMENT REQUIREMENTS SINCE THE TOTAL IMPERVIOUS SURFACE PROPOSED IS LESS THAN 5000 SQUARE FEET.
- THE WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTING.
- THE MINIMUM SETBACKS FOR STRUCTURES SHALL BE AS FOLLOWS:

FRONT SETBACK	20' FROM THE PUBLIC STREET RIGHT OF WAY
REAR SETBACK	30'
SIDE SETBACK	7.5' FROM PROPERTY LINE
EXCEPT ZERO LOT LINE DWELLINGS	0 FEET
- IN ACCORDANCE WITH SECTION 129 OF THE HOWARD COUNTY ZONING REGULATIONS, BAY WINDOWS, CHIMNEYS OR EXTERIOR STAIRWAYS NOT MORE THAN 16 FEET IN WIDTH MAY PROJECT NOT MORE THAN 4 FEET INTO ANY SETBACKS, PORCHES OR DECKS OPEN OR ENCLOSED MAY PROJECT NOT MORE THAN 10 FEET INTO THE FRONT OR REAR YARD SETBACKS.
- PRECIOUS FILE NUMBERS FOR REFERENCE: 23-5, CMP-5300.
- THE MESH MUST BE INSTALLED WITH A MINIMUM 1.5-FOOT HORIZONTAL CLEARANCE AND 1-FOOT VERTICAL CLEARANCE, ABOVE THE SHC.
- IN ACCORDANCE WITH SECTION 133.D.2.a OF THE ZONING REGULATIONS, TWO (2) OF-STREET PARKING SPACES PER UNIT ARE REQUIRED AND SHALL BE PROVIDED. *Garage may not be converted to living space or for storage.*

LEGEND

SYMBOL	DESCRIPTION
---	EXISTING CONTOUR, 2' INTERVAL
- - - -	PROPOSED CONTOUR
+152.2	SPOT ELEVATION
SF	SILT FENCE
---	DIRECTION OF DRAINAGE
---	LIMIT OF DISTURBANCE
SF	SUPER SILT FENCE
---	PERIMETER DIKE/SHALE
---	TREE PROTECTION FENCE
---	EXISTING TREES TO BE SAVED

ADDRESS CHART

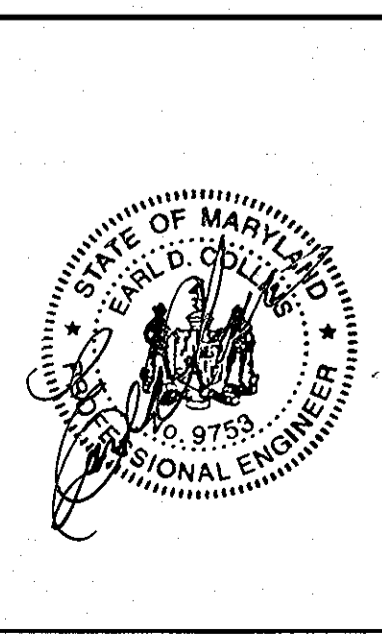
LOT NUMBER	STREET ADDRESS
671	6377 FOREST AVENUE
672	6375 FOREST AVENUE

INDEX CHART

SHEET	DESCRIPTION
SHEET 1	SITE DEVELOPMENT, S&E CONTROL PLAN
SHEET 2	SEDIMENT & EROSION CONTROL DETAILS, EXISTING CONDITIONS

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK • 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21114
(410) 461-2855

NO.	REVISION	DATE
2	Rev. Grid Lots 671 & 672 to show "as built" cond.	8-18-09
1	REVISION RETAINING WALL & REMOVED PER APPROVED PERMITS	5/23/09



ENGINEER'S CERTIFICATE
I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

Signature: *John W. Wiseman* Date: 5-28-08

BUILDER/DEVELOPER'S CERTIFICATE
I/We certify that all development and construction will be done according to this plan for sediment and erosion control and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District.

Signature: *John Wiseman* Date: 5-28-08

Reviewed for HOWARD SCD and meets Technical Requirements

Signature: *John W. Wiseman* Date: 6/3/08

OWNER/BUILDER
WILLIAM WELZENBACH
2434 WOOD STREAM COURT
ELLICOTT CITY, MD. 21042
301-529-9336

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Signature: *Kathleen Wood* Date: 6/17/08
Chief, Division of Land Development

Signature: *Mark A. Lynch* Date: 6/18/08
Chief, Development Engineering Division
Director - Department of Planning and Zoning

PROJECT: HARWOOD PARK
SECTION: N/A
LOTS NO.: 671 AND 672

PLAT	C.M.P. 5300	BLOCK NO.	13	ZONE	R-12	TAX	38	ELEC. DIST.	FIRST	CENSUS TR.	601202
WATER CODE	A 02	SEWER CODE	2152209								

SITE DEVELOPMENT, SEDIMENT AND EROSION CONTROL PLAN

SINGLE FAMILY ATTACHED UNITS HARWOOD PARK LOTS 671 AND 672

TAX MAP NO: 38 PARCEL NO: 873 GRID NO: 13
FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: JULY, 2007
SHEET 1 OF 2

SDP-08-042

20.0 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION DEFINITION

Using vegetation as cover for bare soil to prevent it from forces that cause erosion. **PERMITS:** Vegetative stabilization specifications are used to promote the establishment of vegetation on exposed soil. When soil is stabilized with vegetation, the soil is less likely to erode and more likely to allow infiltration of rainfall, thereby reducing sediment loads and runoff to downstream areas and receiving water bodies and flood reservoirs.

CONTENTS WHERE PRACTICE APPLIES: This practice shall be used on disturbed areas to stabilize soil and may be used on highly erodible or critically eroding areas. This specification is intended to promote the establishment of vegetation on exposed soil. This specification is intended to promote the establishment of vegetation on exposed soil. This specification is intended to promote the establishment of vegetation on exposed soil.

EFFECTS ON WATER QUALITY AND QUANTITY: Planting vegetation in disturbed areas will have an effect on the water budget, especially on volume and rates of runoff. infiltration, evaporation, transpiration, percolation, and groundwater recharge. Vegetation, over time, will increase organic matter content and improve the water holding capacity of the soil and subsequent plant growth.

SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS: A. Site Preparation 1. Initial erosion and sediment control structures (either temporary or permanent) such as ditches, grade stabilization structures, berms, waterways, or sediment control basins.

SECTION 2 - VEGETATIVE STABILIZATION METHODS AND MATERIALS: A. Site Preparation 1. Initial erosion and sediment control structures (either temporary or permanent) such as ditches, grade stabilization structures, berms, waterways, or sediment control basins.

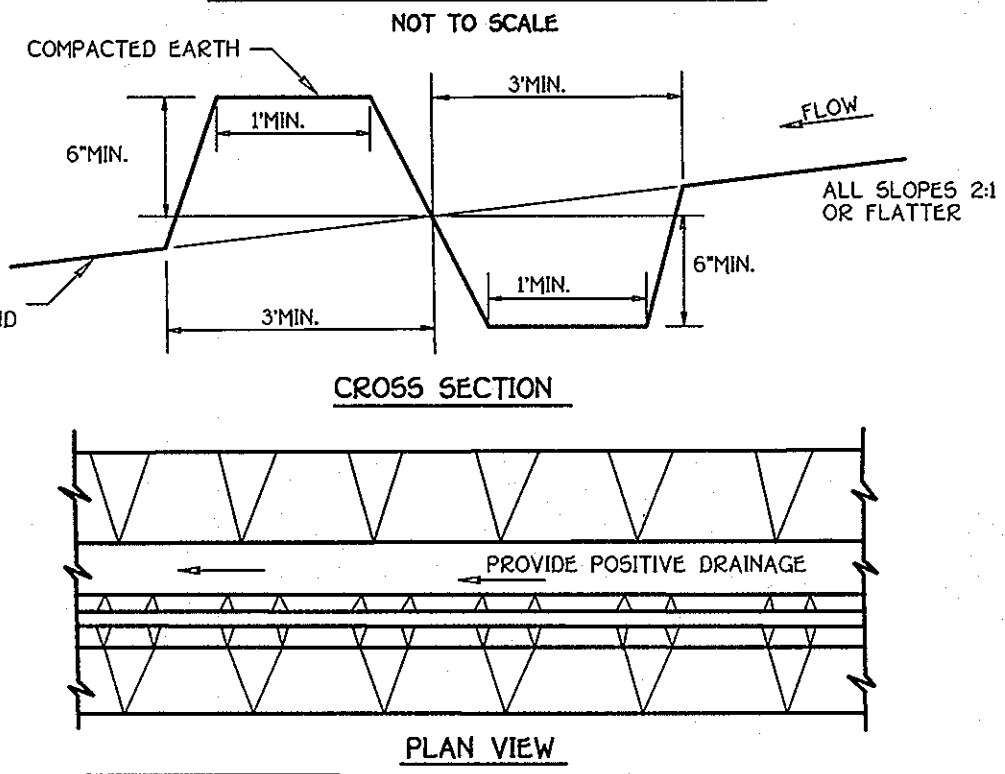
SEDIMENT CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSING AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1955).
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECS. FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.
- FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 30 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3:1, 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMITS FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- OFFSITE WASTE AREA TO BE DETERMINED
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

SEQUENCE OF CONSTRUCTION

1. OBTAIN GRADING PERMIT	7 DAYS
2. INSTALL SEDIMENT AND EROSION CONTROL DEVICES AS SHOWN ON PLAN	7 DAYS
3. CLEAR AND GRUB TO LIMITS OF DISTURBANCE	4 DAYS
4. INSTALL TEMPORARY SEEDING	2 DAYS
5. CONSTRUCT BUILDINGS	60 DAYS
6. FINE GRADE SITE AND INSTALL PERMANENT SEEDING AND LANDSCAPE	14 DAYS
7. REMOVE SEDIMENT CONTROL DEVICES AS UPLAND AREAS ARE STABILIZED AND PERMISSION IS GRANTED BY E/S CONTROL INSPECTOR.	7 DAYS

PERIMETER DIKE / SWALE



STABILIZATION

- PD/S-1 SEED AND MULCH (DRAINAGE ≤ 1 ACRE)
PD/S-2 SEED AND COVER WITH SOIL STABILIZATION MATTING OR LINE WITH SOD (DRAINAGE BETWEEN 1 AND 2 ACRES)
- All perimeter dike/swales shall have an uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%.
 - Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.
 - Runoff diverted from an undisturbed area shall outlet into an undisturbed stabilized area at a non-erosive velocity.
 - The swale shall be excavated or shaped to line, grade, and cross-section as required to meet the criteria specified in the standard.
 - Fill shall be compacted by earth moving equipment.
 - Stabilization with seed and mulch or as specified of the area disturbed by the dike and swale shall be completed within 7 days upon removal.
 - Inspection and required maintenance shall be provided after each rain event.
- Note: The maximum drainage area for this practice is 2 acres.

PERMANENT SEEDING NOTES

Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed. **Seedbed Preparation:** Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, if not previously loosened. **Soil Amendments:** In lieu of soil test recommendations, use one of the following schedules:

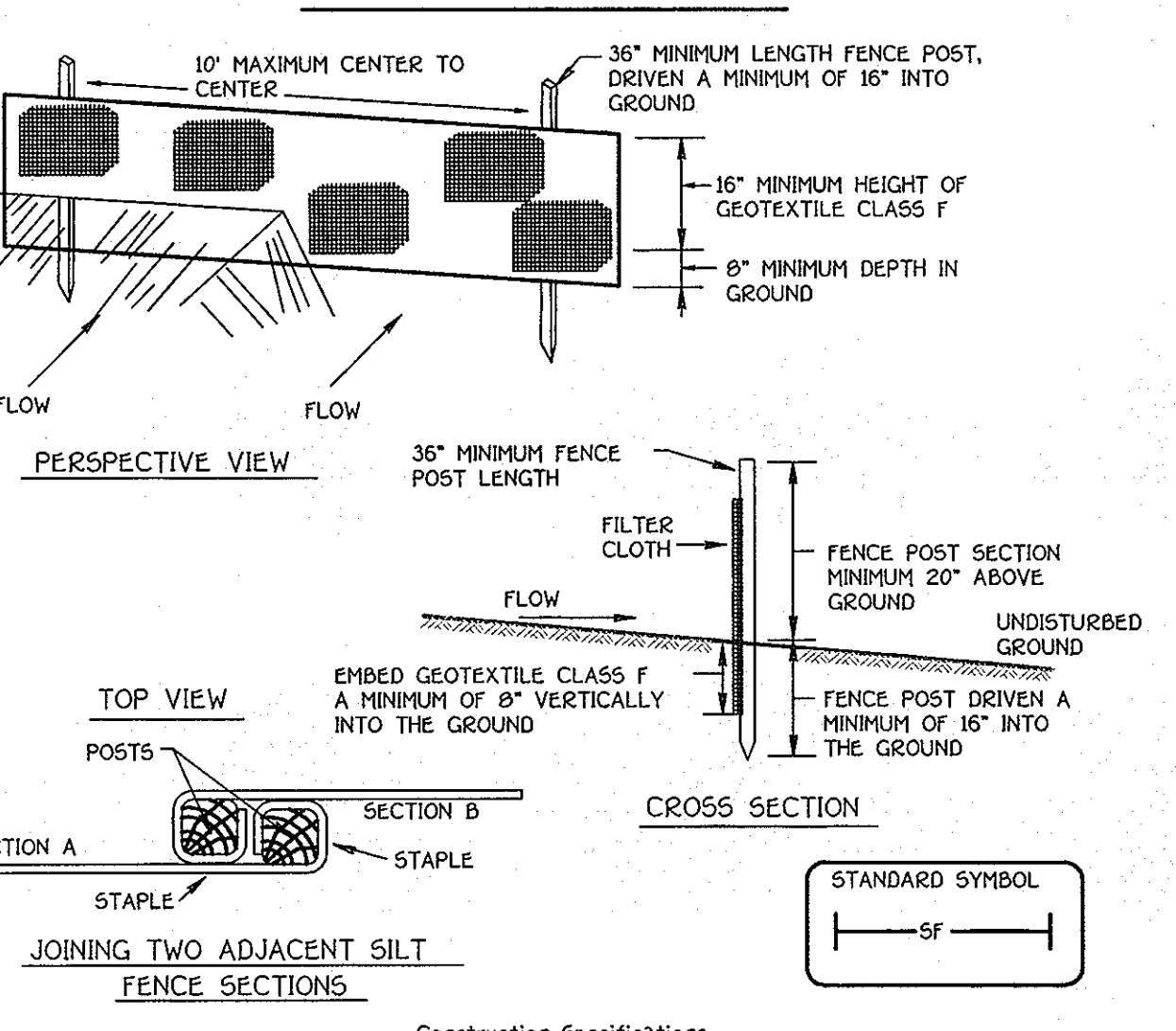
- Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs. per 1000 sq.ft.) and 600 lbs. per acre 10-10-10 fertilizer (14 lbs. per 1000 sq.ft.) before seeding. Harrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs. per acre 30-0-0 ureaform fertilizer (9 lbs. per 1000 sq.ft.).
- Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs. per 1000 sq.ft.) and 1000 lbs. per acre 10-10-10 fertilizer (23 lbs. per 1000 sq.ft.) before seeding. Harrow or disc into upper three inches of soil.

Seeding: For the period March 1 thru April 30 and from August 1 thru October 15, seed with 60 lbs. per acre (1.4 lbs. per 1000 sq.ft.) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs. Kentucky 31 Tall Fescue per acre and 2 lbs. per acre (0.05 lbs. per 1000 sq.ft.) of weeping lovegrass. During the period October 16 thru February 28, protect site by one of the following options:

- 2 tons per acre of well-anchored mulch straw and seed as soon as possible in the spring.
- Use sod.
- Seed with 60 lbs. per acre Kentucky 31 Tall Fescue and mulch with 2 tons per acre well anchored straw.

Mulching: Apply 1-1/2 to 2 tons per acre (70 to 90 lbs. per 1000 sq.ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal. per acre (5 gal. per 1000 sq.ft.) of emulsified asphalt on flat areas. On slopes, 8 ft. or higher, use 347 gal. per acre (8 gal. per 1000 sq.ft.) for anchoring. **Maintenance:** Inspect all seeded areas and make needed repairs, replacements and reseedings.

SILT FENCE



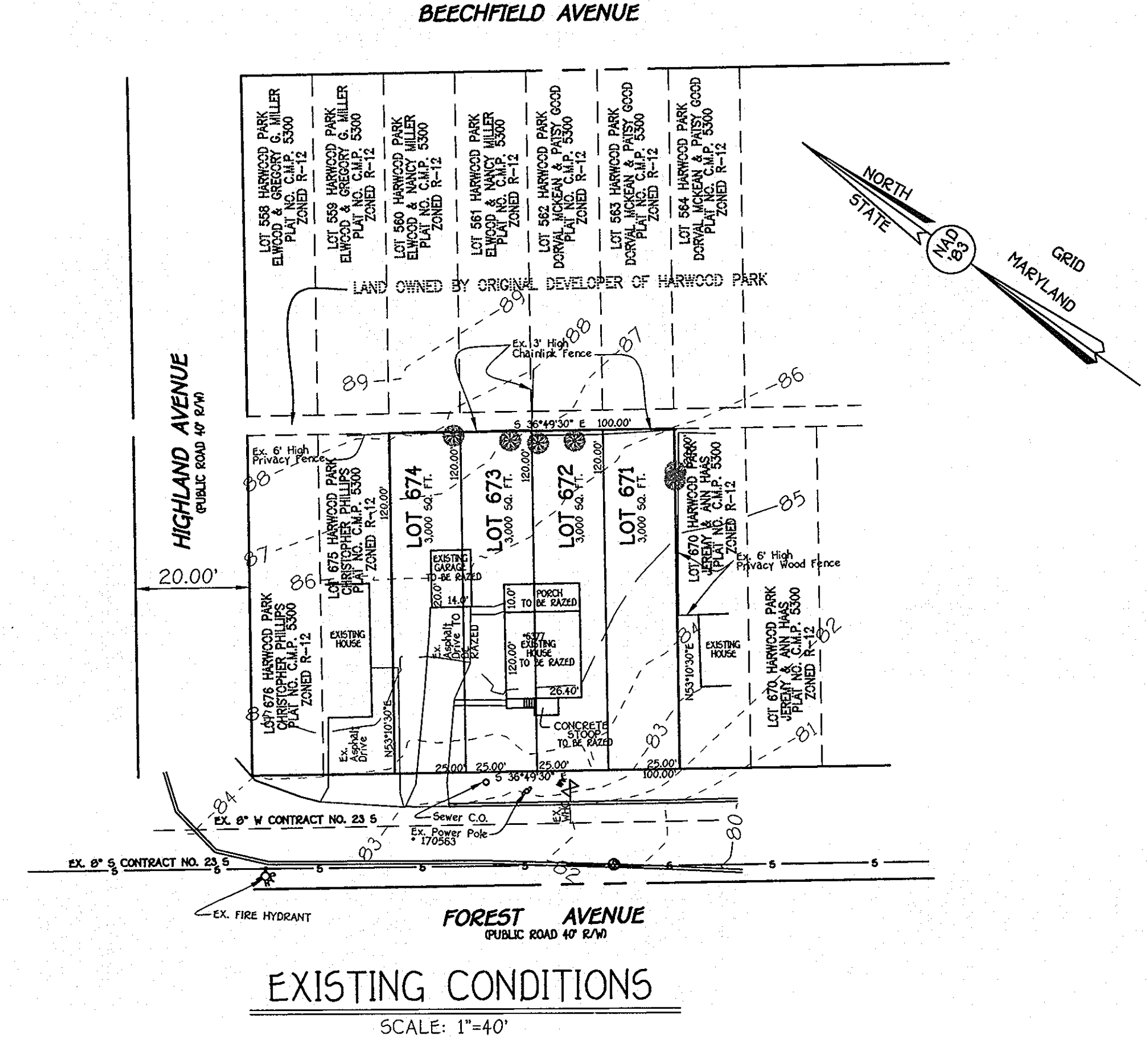
1. Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" square (minimum cut), or 1 3/4" diameter (minimum round) and shall be of liquid grade hardwood. Steel posts will be standard T or U section weighting not less than 100 lb. per linear foot.

2. Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:

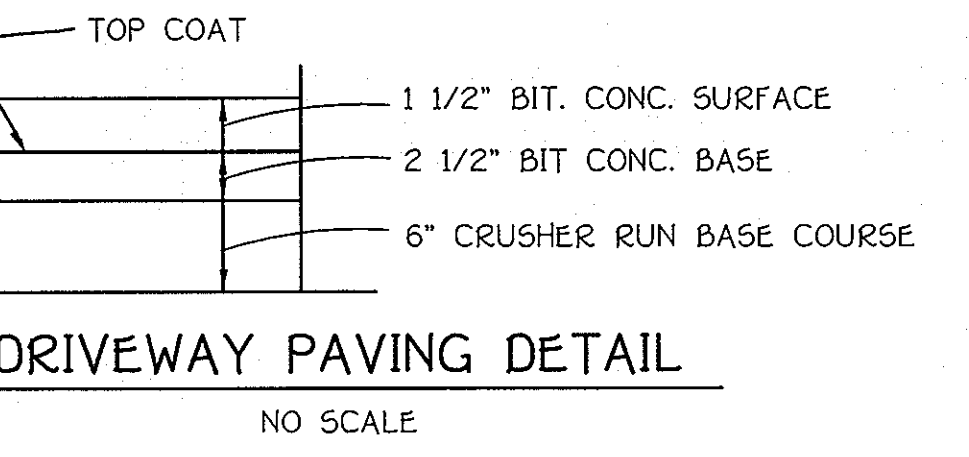
Tensile Strength	50 lbs/in (min)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min)	Test: MSMT 509
Flow Rate	0.3 gal/ft ² /minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min)	Test: MSMT 322

3. Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.

4. Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

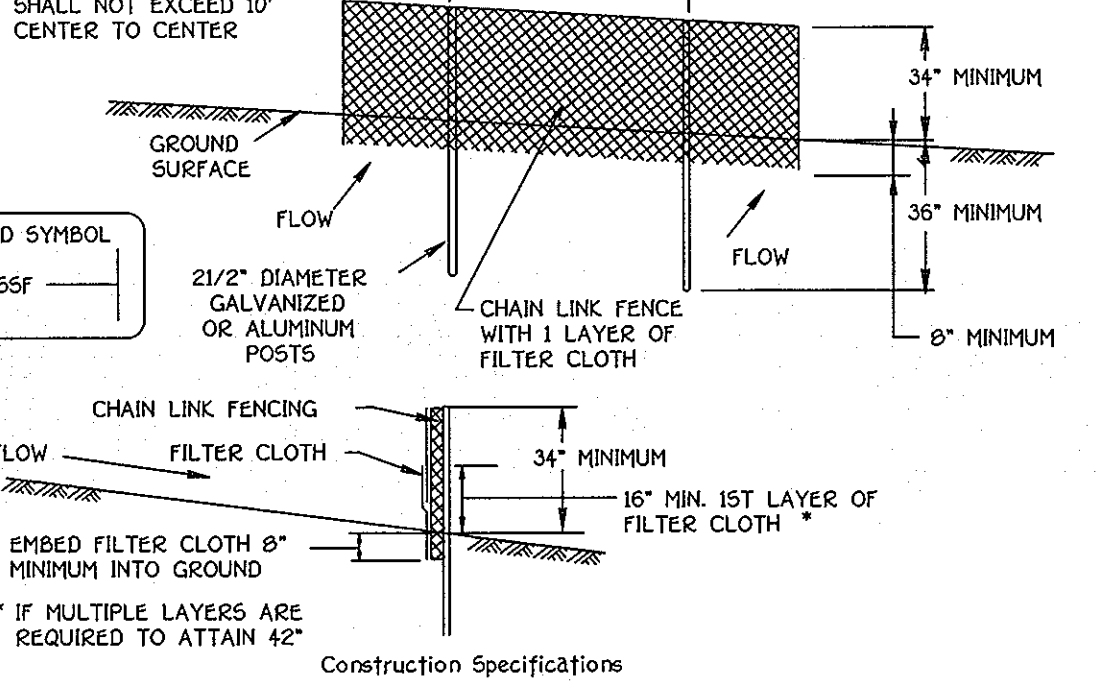


DRIVEWAY PAVING DETAIL



TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be redistributed where short-term vegetative cover is needed. **Seedbed Preparation:** Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, if not previously loosened. **Soil Amendments:** Apply 600 lbs. per acre 10-10-10 fertilizer (14 lbs. per 1000 sq.ft.). **Seeding:** For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2-1/2 bushels per acre of annual ryegrass (3.2 lbs. per 1000 sq.ft.). For the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (0.07 lbs. per 1000 sq.ft.). For the period November 16 thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod. **Mulching:** Apply 1-1/2 to 2 tons per acre (70 to 90 lbs. per 1000 sq.ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal. per acre (5 gal. per 1000 sq.ft.) of emulsified asphalt on flat areas. On slopes, 8 ft. or higher, use 347 gal. per acre (8 gal. per 1000 sq.ft.) for anchoring. Refer to the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.



1. Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6" fence shall be used, substituting 42" fabric and 6" length posts.

2. Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence.

3. Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.

4. Filter cloth shall be embedded a minimum of 6" into the ground.

5. When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.

6. Maintenance shall be performed as needed and silt buildups removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height.

7. Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F:

Tensile Strength	50 lbs/in (min)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min)	Test: MSMT 509
Flow Rate	0.3 gal/ft ² /minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min)	Test: MSMT 322

SUPER SILT FENCE

Slope	Slope Steepness	Slope Length (maximum)	Silt Fence Length (maximum)
0 - 10%	0 - 10%	Unlimited	Unlimited
10 - 20%	10% - 5%	200 feet	1500 feet
20 - 33%	5% - 3%	100 feet	1000 feet
33 - 50%	3% - 2%	100 feet	500 feet
50% +	2% +	50 feet	250 feet

STABILIZED CONSTRUCTION ENTRANCE



1. Length - minimum of 50' (30' for single residence lots).

2. Width - 10' minimum; should be fitted at the existing road to provide a turning radius.

3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. **The plan approval authority may not require single family residences to use geotextile.

4. Stone - crushed aggregate (2" to 3") or recycled or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.

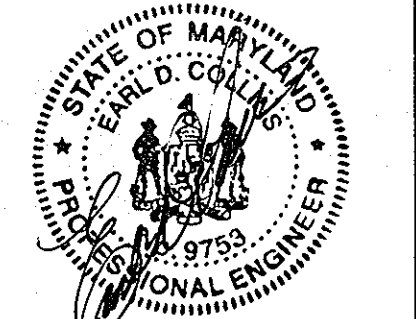
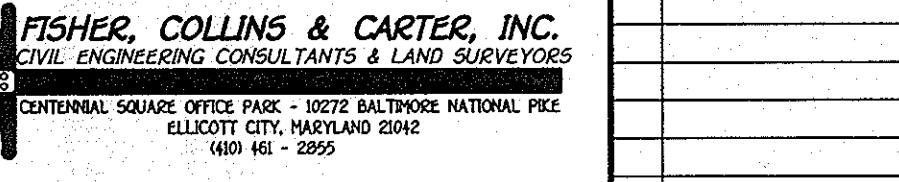
5. Surface Water - All surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 6" stone and a minimum of 6" of stone over the pipe. Pipe has to be used according to the details. When the SCD is located at a high spot and has no drainage to convey, a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.

Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

EXISTING CONDITIONS, SEDIMENT AND EROSION CONTROL DETAILS

SINGLE FAMILY SEMI-DETACHED UNITS
HARWOOD PARK
LOTS 671 AND 672

SCALE MAP NO: 308 PARCEL NO: 873 GRID NO: 13
FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: JULY, 2007
SHEET 2 OF 2



ENGINEER'S CERTIFICATE
"I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

E. D. COLLINS 5/28/08
Signature of Engineer Date

BUILDER/DEVELOPER'S CERTIFICATE
"We certify that all development and construction will be done according to this plan, for sediment and erosion control and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

John W. Wideman 5-28-08
Signature of Developer Date

Approved for HOWARD SCD and meets Technical Requirements.

U.S.D. - Natural Resources Conservation Service
The development is in compliance with erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

John R. Wideman 6/15/08
Signature of SCD Date

OWNER/BUILDER
WILLIAM WELZENBACH
2434 WOOD STREAM COURT
ELLICOTT CITY, MD. 21042
301-529-9336

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Karl J. ... 6/17/08
Chief, Division of Land Development

... 6/10/08
Chief, Development Engineering Division

... 6/18/08
Director - Department of Planning and Zoning

SDP-08-042