

**Upper Makefield Township**  
**Department of Planning & Zoning**

## **Pavers, Patios, Sidewalks**

### **General Information**

Any construction with earth disturbance over 1,000 square feet must first have Grading Permit approval from the Bucks County Conservation District. A form is available from the Conservation District. **An additional Grading Permit from Upper Makefield Township is required.**

**If your project is under 1,000 square feet, you'll still** need to show on plans how water quality and recharge requirements will be met. See Guidance Below

### **Required Forms and Submissions**

- Zoning Use and Occupancy Permit Application** (with impervious calculations)
- Grading - Drainage Application.** With this application, you must submit 2 sets of sealed grading plans. The submission must include a copy of the completed Bucks County Conservation District application. The Conservation District's application is called the Erosion and Sediment Control Application.
- Professional Services Agreement** to pay for Township consultant reviews. Please see the current fee schedule for escrow dollar requirements to be submitted.
- Plot Plan** showing dimensions of proposed patio, pavers, and sidewalks, including distance to side and rear yards.
- Electrical Application.** With this application you must submit an electrical plan that has been approved by a third-party Electrical Inspector.
- Insurance.** Upper Makefield Township must be listed as "Certificate Holder" on a current Certificate of Insurance for all contractors, electricians and/or plumbers.

If the property owner is doing the work, please provide a copy of the homeowner's liability insurance. Please sign page three of the zoning application for homeowner exemption and have it notarized.

- PA Contractor Registration Certificate.** Please submit a copy of the contractor's PA Contractor Registration Certificate.

All Township forms can be found at the following link:

<https://uppermakefield.org/departments/planning-and-zoning/permits-applications/>

Applications and supporting documents can be submitted via email to [CodeOffice@uppermakefield.org](mailto:CodeOffice@uppermakefield.org)

## BUILDINGS & STRUCTURES

### DRAINAGE & WATER QUALITY REQUIREMENTS

To obtain an accessory building or structure permit from Upper Makefield Township, all proposed structures must meet the applicable requirements of the Delaware River South Watershed Act 167 Stormwater Management Ordinance for Upper Makefield Township, Per Section 402 of the Ordinance, construction or replacement of impervious area ranging up to 5,000 sq. ft. based on the criteria below, shall be exempt from comprehensive Drainage Plan requirements.

However, this exemption shall not relieve the Applicant from meeting the requirements of Section 303- Water Quality and Section 304- Groundwater Recharge. These requirements can be met through the installation of a stone filled infiltration trench near the proposed impervious area. The table below shows required storage trench sizes based on varying footprint areas of construction or replacement of impervious area.

<b>EXEMPTION CRITERIA</b> Parcel size $\leq$ 1/4 acre		<b>EXEMPTION CRITERIA</b> Parcel size $>$ 1/4 - 1 acre		<b>EXEMPTION CRITERIA</b> Parcel size $>$ 1 acre		Exemption Criteria From: Comprehensive Drainage Plan Only	
FOOTPRINT OF IMPERVIOUS (FT <sup>2</sup> )	VOLUME OF INFILTRATION (CF)*	FOOTPRINT OF IMPERVIOUS (FT <sup>2</sup> )	VOLUME OF INFILTRATION (CF)*	FOOTPRINT OF IMPERVIOUS (FT <sup>2</sup> )	VOLUME OF INFILTRATION (CF)*	FOOTPRINT OF IMPERVIOUS (FT <sup>2</sup> )	VOLUME OF INFILTRATION (CF)*
100	40	1,201	488	2,501	1,017	4,100	1,667
150	61	1,250	508	2,550	1,037	4,150	1,688
200	81	1,300	529	2,600	1,057	4,200	1,708
250	101	1,350	549	2,650	1,078	4,250	1,728
300	121	1,400	569	2,700	1,098	4,300	1,749
350	141	1,450	590	2,750	1,118	4,350	1,769
400	162	1,500	610	2,800	1,138	4,400	1,789
450	182	1,550	630	2,850	1,159	4,550	1,850
500	202	2,000	813	2,900	1,179	4,600	1,871
550	222	2,050	834	2,950	1,200	4,650	1,891
600	242	2,100	854	3,000	1,220	4,700	1,911
650	262	2,150	874	3,050	1,240	4,750	1,932
700	283	2,200	895	3,100	1,261	4,800	1,952
750	303	2,250	915	3,150	1,281	4,850	1,972
800	323	2,300	935	3,200	1,301	4,900	1,993
850	343	2,350	956	3,250	1,322	4,950	2,013
900	363	2,400	976	3,300	1,342	5,000	2,033
950	384	2,450	996	3,350	1,362		
1,000	404	2,500	1,017	3,400	1,383		
1,050	427			3,450	1,403		
1,100	447			3,500	1,423		
1,150	468			3,550	1,443		
1,200	488			3,600	1,464		
				3,650	1,484		
				3,700	1,505		
				3,750	1,525		
				3,800	1,545		
				3,850	1,566		
				3,900	1,586		
				3,950	1,606		
				4,000	1,627		
				4,050	1,647		

\*\*\*SEE FOR DETAIL OF STONE INFILTRATION TRENCH

\*The volumes shown on the chart on the reverse page are the volumes of the required stone filled trench and not the volume of stormwater required to be infiltrated. The stone filled infiltration trench must be filled with stone which has a 40% void ratio.



Note: If the example on-lot infiltration structure is not preferred the applicant may submit an engineered system which meets all the requirements referenced on the reverse page.

## EXAMPLE BUILDING STRUCTURE:

10 X 10 STRUCTURE FOOTPRINT

REQUIRED TRENCH SIZE = 40 CF

2 TRENCHES (LOCATED AT ROOF DRIP LINE)  
EACH 10' LF X 2' X 1' = 20 CF

REQ'D  $\geq$  40 CF  
2 TRENCHES = 40 CF

## EXAMPLE PATIO STRUCTURE:

10 X 20 PATIO FOOTPRINT

REQUIRED TRENCH SIZE = 81 CF

40 LF OF TRENCH REQUIRED (LOCATED AT EDGES OF PATIO)  
40 LF X 2' X 1' = 80 CF, THEREFORE, 40 LF X 2.25' X 1' = 90 CF

REQ'D  $\geq$  81 CF  
2 TRENCHES = 90 CF

\*\*Pursuant to the Upper Makefield Township Code of Ordinance 264, Section 304-1.3, if an on-lot infiltration structure is proposed by the applicant's design professional, it must be demonstrated to the municipality that the soils are conducive to infiltration in the area identified.

Applicant shall provide a professional certification that the soils are appropriate for the system to function.