



Basin # _____
Paid On ___/___/___
Receipt _____

**APPLICATION FOR PAYMENT
IN LIEU OF CONSTRUCTING
STORM WATER DETENTION**

Section 1. GENERAL INFORMATION

APPLICANT: _____ DATE: _____

DEVELOPMENT: _____

LOCATION: _____
(Address, Block #, ¼ ¼ Section, Township, Range)

Section 2. DETENTION VOLUME DETERMINATION

Detention volume has been determined in accordance with the detention ordinance (check one).

- The required detention volume has been determined using the table in the detention ordinance. The use of this table is acceptable only for volumes below 5,000 c.f. Calculations, maps, etc., used to determine the required volume are being submitted with this application.

The required volume is _____ c.f.

- The required detention volume has been calculated by either SCS or Corps of Engineers methods and all supporting information including maps, detailed calculations, and computer input and output are being submitted with this application.

The required volume is _____ c.f.

Section 3. DOWNSTREAM IMPACT ANALYSIS

A Downstream Impact Analysis is necessary to show that detention for this development provides no downstream benefit. The analysis must extend downstream from the development to a point where the "10 Percent Rule" holds true. (The point where the area of the development is less than 10 percent of the total contributing drainage area.)

- All calculations, maps, etc., are being provided with this application to determine the location downstream of the site where the "10 Percent Rule" holds true.

If the "10 Percent Rule" holds true at the point runoff leaves the site, no further off-site analysis is necessary. The "*No Downstream Impact Certification Statement*" below must be signed and sealed.

Special Note Regarding Sinkholes: Based on the City Sinkhole Ordinance, any development within a sinkhole drainage area requires a study of the effects on sinkhole flooding. See the Sinkhole Ordinance for required calculations. The "10 Percent Rule" does not waive the requirements of the Sinkhole Ordinance.

If the "10 Percent Rule" does not hold true at the discharge point from the property, the downstream location where the "10 Percent Rule" does hold true must be determined to establish the limits of the required analysis. The following information must be submitted with this application:

- A map showing the proposed development, the total contributing drainage and all conveyance facilities within the limits of the analysis. Provide a complete inventory of all structures and distinct channel reaches within the limits of the analysis. Show at each structure and distinct reach the design flow and hydraulic capacity of the existing facilities. Provide information about known or determined flooding problems that exist within the limits of the analysis with an emphasis on flooding of buildings, streets, and yards.

If it is found that either the "10 Percent Rule" holds true at the discharge point from the property or if it is found that all downstream facilities within the limits of the analysis meet or exceed City standards under post-developed conditions, then the following statement must be signed and sealed:

No Downstream Impact Certification Statement

As the professional engineer or architect of record, I certify that, based on my analysis using standard engineering practices, storm water detention for this development will not provide any downstream benefits and the development will not increase downstream flooding.

Professional Engineer or Architect

The primary City standards for storm water improvements are as follows:

1. Culverts, pipes, and ditches draining more than 1 square mile must be designed for the 100-year storm.
2. Culverts, pipes, and ditches draining 1 square mile or less must be designed for the 25-year storm.
3. The storm sewer must commence in a street at the point where the 2-year storm is 5 cfs.
4. The maximum depth in a local street for a 2-year storm is 6 inches.
5. The maximum depth in a collector street for a 2-year storm is 6 inches with one 10-foot clear lane.
6. The maximum depth in an arterial street for a 2-year storm is 6 inches with two 10-foot clear lanes.

7. The maximum depth in an arterial street for a 100-year storm is 6 inches over the crown or 18 inches over the flowline of the gutter.
8. The maximum depth in a non-arterial street for a 100-year storm is 18 inches over the flowline of the gutter.
9. Where streets have no curbs, water encroachment shall not exceed past property lines.
10. No buildings may be inundated at the ground line for the 100-year storm.

Complete City standards for storm water improvements may be found in “Design Standards for Public Improvements.”

If it is found through the Downstream Analysis that the conveyance facilities do not meet City standards, one or both of the following conditions will exist. **(Following the condition is the required response in bold print):**

- Facilities with the limits of the analysis meet or exceed City design standards under existing conditions but increased design flows will exceed the capacity of the facilities under post-development conditions. **The capacity of the facilities must be increased so that the capacity of the new facilities meets or exceeds the increased design flows.**
- Facilities within the limits of the analysis do not meet City design standards under existing conditions and design flows to these facilities will be increased under post-development conditions. **The capacity of the facilities must be increased by the amount of the increase in design flows.**

Once the downstream improvements have been designed based on the above requirements, the following statement must be signed and sealed:

No Downstream Impact With Improvements Certification Statement

As the professional engineer or architect of record, I certify that, based on my analysis using standard engineering practices, with the proposed downstream storm water improvements, the development will not increase downstream flooding.

Professional Engineer or Architect

Note: It is required that, when possible, additional runoff from developments flow to a public right-of-way or drainage easement. When neither of these is available, it is required that the professional engineer or architect of record certify that the discharge is to a natural channel and will not exceed the capacity of that channel. This statement must be placed on the plans at the point of discharge and a letter from the engineer or architect of record must be sent certified mail to all downstream property owners within the limits of the analysis certifying a portion of their land is a natural channel. A copy of the letter of certification and the mail receipts must be submitted to the Public Works Engineering Division. A sample letter containing the minimum necessary information is attached to this application.

Section 4. AMOUNT OF PAYMENT

The rate structure used to determine the amount of the payment is based on the proposed land use. The two categories are (check one):

- One or two family residential
- Other land uses

Table of Payment Rates

<u>Volume of Detention</u>	<u>one or two family residential</u>	<u>other land uses</u>
0-24,000 c.f.	\$1 per c.f.	\$2.50 per c.f.
24,000-100,000 c.f.	\$0.50 per c.f.	\$1.50 per c.f.
>100,000 c.f.	\$0.50 per c.f.	\$1.00 per c.f.

- Amount: \$_____

Section 5. THIS SECTION IS FOR CITY USE ONLY

Payment in lieu of detention without downstream improvements

- Detention volume determination is acceptable.
- The approved payment amount is \$_____.
- The downstream impact analysis is acceptable.
- The application for payment in lieu of detention is DENIED.

Approval of this payment in lieu of detention is recommended.

Storm water Plan Reviewer _____

Payment in lieu of detention with downstream improvements

- Detention volume determination is acceptable.
- The approved payment amount is \$_____.
- The downstream impact analysis is acceptable.
- The downstream storm water improvement plans are acceptable. File No. _____.
- The cost of downstream improvements is \$_____.
- The payment due is \$_____.
- The application for payment in lieu of detention with downstream improvements is DENIED.

Approval of this payment in lieu of detention with the downstream improvements is recommended.

Storm water Plan Reviewer

Comments: _____

Approval of payment in lieu of detention

Principal Civil Engineer

CUBIC FEET OF DETENTION REQUIRED
% IMPROVED

A C R E S		20	30	40	50	60	70	80	90	100
	0.10	250	390	500	640	765	900	1,020	1,150	1,280
0.20	500	765	1,020	1,275	1,530	1,800	2,040	2,300	2,550	
0.30	765	1,150	1,530	1,920	2,300	2,680	3,060	3,450	3,830	
0.40	1,020	1,530	2,040	2,550	3,060	3,570	4,080	4,600		
0.50	1,280	1,910	2,550	3,200	3,830	4,460				
0.60	1,530	2,300	3,060	3,830	4,600					
0.70	1,800	2,680	3,570	4,460						
0.80	2,040	3,060	4,080							
0.90	2,300	3,450	4,590							
1.00	2,550	3,830								
1.25	3,190	4,780								
1.50	3,830									
1.75	4,470									

- Notes:
1. Detention may be bought out if no immediate flooding exists.
 2. If detention was previously bought out and this buy out together with the previous buy out is larger than the allowed then all the detention must be constructed with no refund.