

**GROVE CITY, OHIO COUNCIL
LEGISLATIVE AGENDA**

August 17, 2015

6:30 Caucus

7:00 – Reg. Meet.

Presentations: Hunger Awareness

NANCE: Mr. Bennett

Ordinance C-42-15

Declare the Improvement of certain parcels of Real Property to be a Public Purpose and Exempt from Taxation; Providing for the Collection and Deposit of Service Payments; and Specifying the purposes for which the Service Payments may be expended. Second reading and public hearing.

Ordinance C-48-15

Appropriate \$25,000.00 from the General Fund for the Current Expense of Demolition and Nuisance Abatement for the Property located at 3909 Curtis Ave. Second reading and public hearing.

Ordinance C-49-15

Authorize an Assessment for a Portion of the Orders Road Trunk Sanitary Sewer in the amount of \$164,400.00. Second reading and public hearing.

Ordinance C-50-15

Amend Ordinance C-02-03 to Increase the Annual Salary of the Mayor of the City. Second reading and public hearing.

Ordinance C-51-15

Amend Section 121.01(a) of the Codified Ordinances titled Council Salary. Second reading and public hearing.

Ordinance C-52-15

Appropriate \$100,000.00 from the General Fund for the Current Expense of the Construction of the Buckeye Ranch "Gates of Hope". Second reading and public hearing.

Ordinance C-53-15

Provide for the Issuance and Sale of Bonds in the Maximum Principal Amount of \$5,200,000.00 for the purpose of paying the costs of providing for the Construction of a Multi-Family Housing Complex and providing for all related site improvements, together with all necessary appurtenances thereto, all in support of Economic Development, Creating or Preserving Jobs and Employment Opportunities and Providing Housing within the City. First reading.

Ordinance C-54-15

Appropriate \$4,400,000.00 from the General Fund for the Current Expense of entering into a Development Agreement with Pizzuti. First reading.

SAFETY: Mr. Davis

Ordinance C-55-15

Amend Various Sections of Chapter 1101 of the Codified Ordinances titled Development Standards. First reading.

SERVICE: Ms. Lanese

Ordinance C-56-15

Amend Part 9 of the Codified Ordinances and Enact Title 7 titled Stormwater. First reading.

LANDS: Ms. Klemack-McGraw

Ordinance C-57-15

Approve the Plat of Claybrook Crossing, Section 6, Part 1. First reading.

Ordinance C-58-15

Approve the Plat of Margie's Cove, Section 2, Part 2. First reading.

Ordinance C-59-15

Approve the Rezoning of 97.81 acres located south and west of Marlane Dr. from R-2, SD-3, & SD-4 to IND-1. First reading.

Resolution CR-49-15

Approve the Development Plan for London Place located on the northwest corner of S.R. 665 and Summit Way.

Date: 07/14/15
Introduced By: Mr. Bennett
Committee: Finance
Originated By: Mr. Smith
Approved: _____
Emergency: 30 Days: XX
Current Expense: _____

No.: C-42-15
1st Reading: 07/20/15
Public Notice: 07/23/15
2nd Reading: 08/03/15
Passed: _____ Rejected: _____
Codified: _____ Code No: _____
Passage Publication: _____

Postponed to 8/17

ORDINANCE NO. C-42-15

AN ORDINANCE DECLARING THE IMPROVEMENT TO CERTAIN PARCELS
OF REAL PROPERTY TO BE A PUBLIC PURPOSE AND EXEMPT FROM TAXATION;
PROVIDING FOR THE COLLECTION AND DEPOSIT OF SERVICE PAYMENTS; AND
SPECIFYING THE PURPOSES FOR WHICH THOSE SERVICE PAYMENTS MAY BE EXPENDED

WHEREAS, the City has prepared a strategy for comprehensive development for the area within the City's Town Center known as the "Lumberyard" (which area is referred to herein as the "*Project Site*") and has endeavored to work collaboratively with public entities, including the Southwestern City School District, and private entities to plan for and facilitate the development of the Project Site; and

WHEREAS, the City's strategy for development within the Town Center generally, and the Lumberyard in particular, is primarily focused on creating a new, more urban core for the City, including a dynamic mix of commercial and residential development types; and

WHEREAS, Pizzuti GCA LLC has proposed to enter into a development agreement with the City which will generally provide for the redevelopment of the Parcels (as defined in Section 1) and the construction of a redevelopment project consisting of commercial apartment buildings and related improvements; and

WHEREAS, to facilitate redevelopment of the Project Site and the Project, this Council has determined pursuant to Ohio Revised Code Sections 5709.41, 5709.42 and 5709.43 (collectively, the "*TIF Statutes*") to declare the improvement to the Project Site to be a public purpose and exempt from taxation, require the owner of the Project Site to make service payments in lieu of taxes, establish an urban redevelopment tax increment equivalent fund for the deposit of the those service payments, specify the purposes for which money in that fund will be expended, and provide for the distribution of an applicable portion of such service payments to the Southwestern City School District; and

WHEREAS, as required by the TIF Statutes, the City acquired fee title to the Parcels prior to enacting this Ordinance and has or will transfer title to the Parcels to Pizzuti GCA LLC or its designee for the development of the Project; and

WHEREAS, the Board of Education of the Southwestern City School District has heretofore adopted a resolution waiving the provision of certain notices, approving the tax exemption provided herein, authorizing an agreement between the City and the Southwestern City School District providing for certain payments to the Southwestern City School District (the "*Revenue Sharing Agreement*") and making other findings with respect to the tax exemption and this ordinance;

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF GROVE CITY, STATE OF OHIO, THAT:

SECTION 1. Parcels. The parcels of real property subject to the exemption granted by this ordinance are identified and depicted in **EXHIBIT A** attached hereto (each, as currently or subsequently configured,

individually, a "Parcel" and collectively, the "Parcels"). This Council finds that the City acquired the Parcels while engaged in urban redevelopment.

SECTION 2. Urban Redevelopment Costs. Money deposited into the TIF Fund (as defined in Section 5) may be used to pay for or finance the costs of improvements to or on, or servicing, the Parcels or the Project, including but not limited to the acquisition of the Parcels, site preparation and construction of the Project, together with all necessary appurtenances and related costs, including but not limited to all costs enumerated in Ohio Revised Code Section 133.15(B), together with any other costs hereafter designated by ordinance (collectively, the "*Urban Redevelopment Costs*").

SECTION 3. Authorization of Tax Exemption. This Council hereby finds and determines that 100% of the increase in assessed value of each Parcel subsequent to the acquisition of that Parcel by the City (which increase in assessed value is hereinafter referred to as the "*Improvement*" as defined in Ohio Revised Code Section 5709.41) is hereby declared to be a public purpose and will be exempt from taxation for a period commencing on the effective date of this ordinance with respect to that Parcel and ending on the earlier of (a) 30 years after such commencement or (b) the date on which the City can no longer require service payments in lieu of taxes, all in accordance with the requirements of the TIF Statutes. Notwithstanding any other provision of this ordinance, the exemption granted pursuant to this Section 3 and the payment obligations established pursuant to Section 4 of this ordinance are subject and subordinate to any tax exemption applicable to the Improvement approved by the City pursuant to Ohio Revised Code Sections 3735.65 through 3735.70.

SECTION 4. Service Payments and Property Tax Rollback Payments. Subject to any tax exemption applicable to the Improvement approved by the City pursuant to Ohio Revised Code Sections 3735.65 through 3735.70, and pursuant to Ohio Revised Code Section 5709.42, the owner of each Parcel is hereby required to and shall make annual service payments in lieu of taxes with respect to the Improvement to that Parcel to the Treasurer of Franklin County, Ohio (the "*County Treasurer*") on or before the final dates for payment of real property taxes. Each service payment in lieu of taxes, including any penalties and interest at the then current rate established for real property taxes (collectively, the "*Service Payments*"), will be charged and collected in the same manner and in the same amount as the real property taxes that would have been charged and payable against the Improvement if it were not subject to the exemption granted in this Ordinance. The Service Payments, and any other payments with respect to each Improvement that are received by the County Treasurer in connection with the reduction required by Ohio Revised Code Sections 319.302, 321.24, 323.152 and 323.156, as the same may be amended from time to time, or any successor provisions thereto as the same may be amended from time to time (the "*Property Tax Rollback Payments*"), will be allocated and distributed in accordance with Section 6 of this ordinance.

SECTION 5. TIF Fund. This Council hereby establishes, pursuant to and in accordance with the provisions of Ohio Revised Code Section 5709.43, the Lumberyard Urban Redevelopment Tax Increment Equivalent Fund (the "*TIF Fund*"). The TIF Fund shall be maintained in the custody of the City and shall receive all distributions to be made to the City pursuant to Section 6 of this ordinance. Those Service Payments and Property Tax Rollback Payments received by the City with respect to the Improvement of each Parcel and so deposited pursuant to Ohio Revised Code Section 5709.42 shall be used solely for the purposes authorized in the TIF Statutes or this ordinance. The TIF Fund shall remain in existence so long as such Service Payments and Property Tax Rollback Payments are collected and used for the aforesaid purposes, after which time the TIF Fund shall be dissolved and any incidental surplus funds remaining therein transferred to the City's General Fund, all in accordance with Ohio Revised Code Section 5709.43.

SECTION 6. Distributions. Pursuant to the TIF Statutes, the County Treasurer is requested to distribute the Service Payments and Property Tax Rollback Payments to the City for further deposit into the TIF Fund and use for (a) payment of Urban Redevelopment Costs, including, without limitation, debt charges on any securities

of the City issued to pay or reimburse financing costs or Urban Redevelopment Costs, (b) payment to the Southwestern City School District in accordance with the Revenue Sharing Agreement and (c) any other lawful purpose.

All distributions required under this Section are requested to be made at the same time and in the same manner as real property tax distributions.

SECTION 7. Further Authorizations. This Council hereby authorizes and directs the Mayor, the City Administrator, the Director of Finance, the Director of Law, the Clerk of Council or other appropriate officers of the City to make such arrangements as are necessary and proper for collection of the Service Payments and the Property Tax Rollback Payments. This City Council further hereby authorizes and directs the City Administrator, the Director of Finance, the Director of Law, the Clerk of Council or other appropriate officers of the City to prepare and sign all documents and instruments and to take any other actions as may be appropriate to implement this ordinance, including without limitation the Revenue Sharing Agreement with the Southwestern City School District.

SECTION 8. Tax Incentive Review Council. The applicable Tax Incentive Review Council, with the membership of that Council to be constituted in accordance with Ohio Revised Code Section 5709.85, shall, in accordance with Ohio Revised Code Section 5709.85, review annually all exemptions from real property taxation granted by this ordinance and any other such matters as may properly come before that Council, all in accordance with Ohio Revised Code Section 5709.85.

SECTION 9. Filings with Ohio Development Services Agency. Pursuant to Ohio Revised Code Section 5709.41(E), the City Administrator is hereby directed to deliver a copy of this ordinance to the Director of the Ohio Development Services Agency within fifteen days after its effective date. Further, and on or before March 31 of each year that the tax exemption authorized by Section 3 remains in effect, the City Administrator or other authorized officer of the City is directed to prepare and submit to the Director of the Ohio Development Services Agency the status report required under Ohio Revised Code Section 5709.41(E).

SECTION 10. This Council finds and determines that all formal actions of this Council and any of its committees concerning and relating to the passage of this ordinance were taken in an open meeting of this City Council or any of its committees, and that all deliberations of this Council and any of its committees that resulted in those formal actions were in meetings open to the public, all in compliance with the law including Ohio Revised Code Section 121.22.

SECTION 11. This Ordinance take effect at the earliest opportunity allowed by law.

Ted A. Berry, President of Council

Passed:

Richard L. Stage, Mayor

Effective:

Attest:

Tami K. Kelly, MMC, Clerk of Council

I certify that this Ordinance is correctas to form.

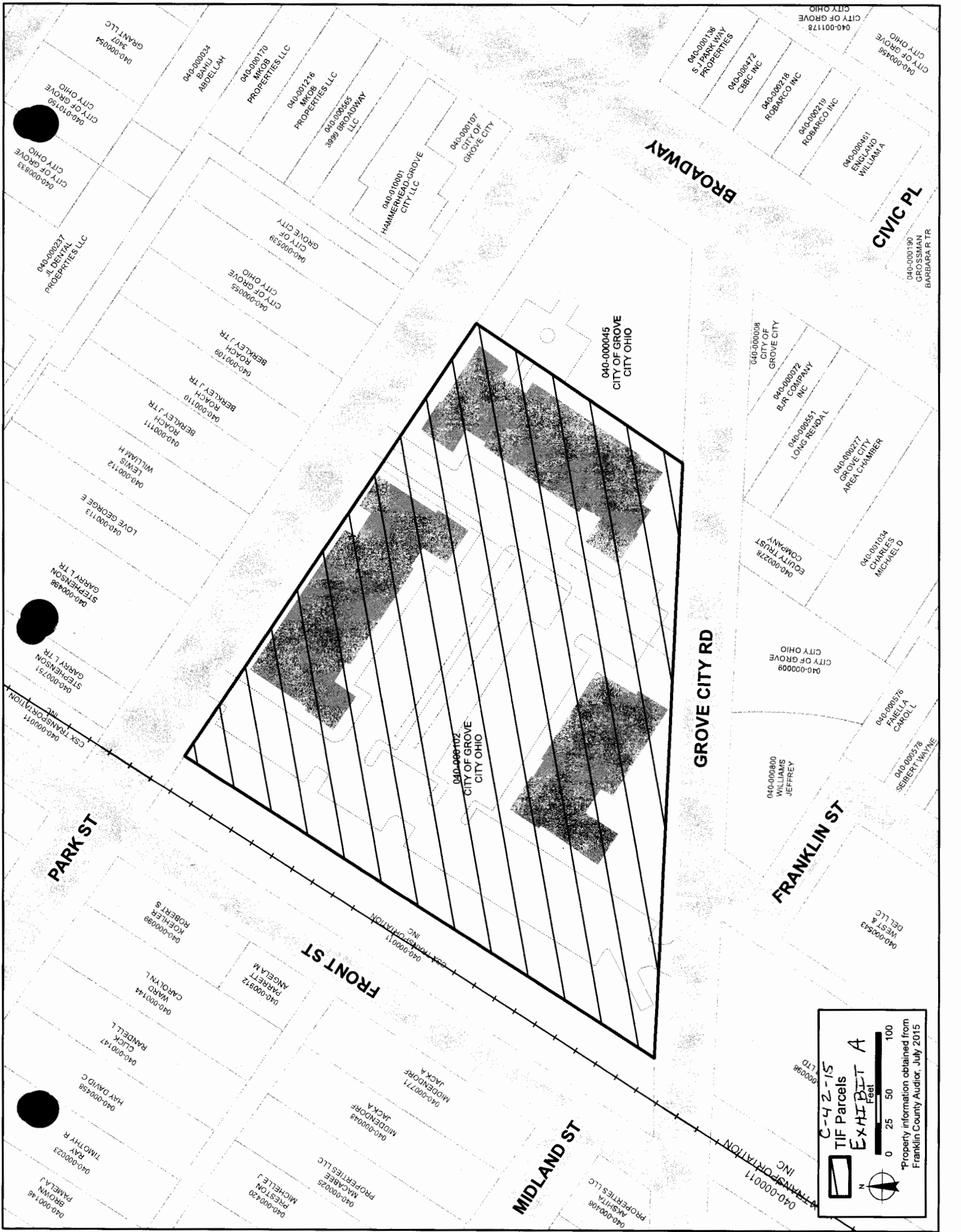
Stephen J. Smith, Director of Law

EXHIBIT A

IDENTIFICATION AND MAP OF THE PARCELS

The shaded area on the following map specifically identifies and depicts the Parcels and constitutes part of this **EXHIBIT A**. The Parcels include, without limitation, the following tax parcels: 040-000102 and 040-000045 (partial) (as they existed in the County Auditor's records on July 10, 2015), and are included for ease of reference only.

[attached]



C-42-15
TIF Parcels
EXHIBIT A

0 25 50 100
Feet

Property information obtained from
Franklin County Auditor, July 2015

Date: 07/28/15
Introduced By: Mr. Bennett
Committee: Finance
Originated By: Mr. M. Boso
Approved: Mr. C. Boso
Emergency: 30 Days:
Current Expense: XX

No.: C-48-15
1st Reading: 08/03/15
Public Notice: 08/06/15
2nd Reading: 08/17/15
Passed: Rejected:
Codified: Code No:
Passage Publication:

ORDINANCE C-48-15

AN ORDINANCE TO APPROPRIATE \$25,000.00 FROM THE GENERAL FUND FOR THE CURRENT EXPENSE OF DEMOLITION AND NUISANCE ABATEMENT FOR THE PROPERTY LOCATED AT 3909 CURTIS AVENUE

WHEREAS, the property located at 3909 Curtis Avenue is owned by the Estate of Bob Spriggs, who passed away; and

WHEREAS, since Mr. Spriggs' passing, the property has fallen into a state of disrepair; and

WHEREAS, on April 27, 2015 a Notice of Violations was posted, in a conspicuous place, on the property by the Chief Building & Zoning Official declaring that the property was "dangerous, unsafe, unsanitary or otherwise unfit for human habitation or occupancy"; and

WHEREAS, the Notice of Violations contained seven (7) separate violations and required that the Property demolished or brought into compliance by May 25, 2015; and

WHEREAS, Section 110.3 of the 2015 International Property Maintenance Code, adopted by reference in Ordinance C-69-14, provides that "if" the owner of a premises fails to comply with a demolition order within the time prescribed, the Code Official shall cause the structure to be demolished and removed at the property owner's expense"; and

WHEREAS, since the Property has not been demolished or brought into compliance and remains a danger to the health, safety and welfare of the neighbors and residents of Grove City, the City wishes to move forward with demolition of the Property pursuant to the provisions of the 2015 International Property Maintenance Code; and

WHEREAS, it is necessary to appropriate funds to be used for this demolition and nuisance abatement.

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF GROVE CITY, STATE OF OHIO, THAT:

SECTION 1. There is hereby appropriated \$25,000.00 from the unappropriated monies of the General Fund into account #100120.541000 for the Current Expense of demolition and nuisance abatement of 3909 Curtis Avenue.

SECTION 2. This ordinance appropriates for current expenses and shall therefore go into immediate effect.

Ted A. Berry, President of Council

Passed:

Richard L. Stage, Mayor

Effective:

Attest:

Date: 07/28/15
Introduced By: Mr. Bennett
Committee: Finance
Originated By: Mayor Stage
Approved: _____
Emergency: 30 Days: _____
Current Expense: _____

No.: C-49-15
1st Reading: 08/03/15
Public Notice: 08/06/15
2nd Reading: 08/17/15
Passed: _____ Rejected: _____
Codified: _____ Code No: _____
Passage Publication: _____

ORDINANCE C-49-15

AN ORDINANCE TO AUTHORIZE AN ASSESSMENT FOR A PORTION OF THE ORDERS ROAD TRUNK SANITARY SEWER IN THE AMOUNT OF \$164,400.00

WHEREAS, in 2014, the City began working on roadway improvements to Orders Road; and

WHEREAS, while the City was beginning the roadway improvements, new development projects necessitated extending the sanitary sewer trunk line along Orders Road ; and

WHEREAS, on July 20, 2015 City Council enacted Ordinance C-34-15 which appropriated \$690,000.00 for the sewer project; and

WHEREAS, the City has been negotiating cost sharing with the abutting landowners and obtaining the easements necessary for the project; and

WHEREAS, abutting property owners, Mr. and Mrs. Brown, have granted the City the necessary easements for the sewer project; and

WHEREAS, the Brown's have requested, in writing, that their portion of the cost sharing (as determined by the City) be assessed to their property; and

WHEREAS, the terms of the assessment have been reviewed by and approved by the City's Director of Finance.

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF GROVE CITY, STATE OF OHIO, THAT:

SECTION 1. The City Council hereby authorizes the assessment for a portion of the sewer project in the amount of \$164,400.00 upon the terms and conditions in Exhibit "A".

SECTION 2. The Director of Finance is hereby directed to file any necessary paperwork with the County to place this assessment on the tax duplicate.

SECTION 3. This Ordinance shall take effect and be in force from and after the earliest date permitted by law.

Passed:

Effective:

Attest:

Ted A. Berry, President of Council

Richard L. Stage, Mayor

Tami K. Kelly, MMC, Clerk of Council

C-49-15
EXHIBIT A

**REQUEST FOR
SEWER IMPROVEMENTS/ASSESSMENT**

To: City of Grove City
County of Franklin, Ohio

Joseph D. and Marcia L. Brown (collectively referred to as "Owner") own the real property located at 3655 Orders Road, Grove City, Ohio 43123 ("Property").

In order to provide a mechanism by which the City of Grove City ("City") will be reimbursed for its costs associated with the sewer extension along Orders Road ("Project"), the undersigned, being owners of real property, by this writing filed with the City of Grove City, Ohio, request that the City provide for payment of the Project Costs and that such costs be assessed on the Owners.

WHEREAS, the cost estimates have been prepared for the Project and Owner has agreed to pay their portion of the cost by having the cost assessed to their Property;

NOW, THEREFORE, Owner does hereby state and agree as follows:

1. Owner requests that the City agrees to provide for the payment of the cost of the Project as described in Section 6 below.
2. The construction of the Project will benefit Owner.
3. Owner agrees that they be assessed for their portion of the full cost of the Project.
4. With full knowledge of our rights under Chapter 729 of the Ohio Revised Code, Owner hereby waives and relinquishes rights to notice and the publication of all resolutions and legal notices provided for in Chapter 729, without any reservation or retention of right to contest, on the basis of want of the same, any proceedings which may be undertaken in furtherance of the acquisition and construction of the Project, the assessment requested herein and the payment of costs relative thereto.
6. Owner acknowledges that they have examined the estimated Project costs and their proportionate share is equal to One Hundred and Thirty Seven Thousand Dollars (\$137,000) and they have no objection

thereto and accept and approve same. Owner understands that they will have the opportunity to pay the assessment over the period not to exceed Fifteen (15) years with interest at an annual rate of Two and One Half Percent (2.5%). The estimated amount of said interest shall be calculated and added to the final assessment. Owner understands that on completion of the Project the Owner shall have the payment options of said final assessment as indicated herein.

7. Owner agrees that an executed copy or copies, if executed in counterparts, of this shall be filed with the County Auditor and the Clerk of the City of Grove City.

IN WITNESS WHEREOF, we have subscribed our names below.



Joseph D. Brown



Marcia L. Brown

Date: 07/28/15
Introduced By: Mr. Bennett
Committee: Finance
Originated By: Mr. Boso
Approved: _____
Emergency: 30 Days
Current Expense: _____

No.: C-50-15
1st Reading: 08/03/15
Public Notice: 08/06/15
2nd Reading: 08/17/15
Passed: _____ Rejected: _____
Codified: _____ Code No: _____
Passage Publication: _____

ORDINANCE C-50-15

AN ORDINANCE TO AMEND ORDINANCE C-02-03 TO INCREASE THE ANNUAL SALARY OF THE MAYOR OF THE CITY

WHEREAS, Section 3.04 of the Charter of the City of Grove City, Ohio provides that the Mayor shall receive an annual salary of \$2,400.00 per annum and also provides that the Council may, by ordinance, change this salary but no increase may become effective until the beginning of the next term of office after its adoption; and

WHEREAS, Ordinance C-40-77 did increase the annual salary of the Mayor to \$6,000.00 per annum; Ordinance C-4-83 amended Ord. C-40-77 and increased the annual salary of the Mayor on a graduated scale, ending at \$12,000.00; and

WHEREAS, Ordinance C-02-03 amended Ord. C-40-77 to increase the annual salary of the Mayor to \$20,000.00; and

WHEREAS, the Mayor has not had a salary increase since 2003; and

WHEREAS, for comparison, Social Security has increased 28.8% with cost of living adjustments from the period of 2004 to 2015.

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF GROVE CITY, STATE OF OHIO, THAT:

SECTION 1. The Mayor of the City of Grove City, Ohio shall receive an annual salary of \$25,000.00 effective January 1, 2016; \$30,000 effective January 1, 2017; and \$40,000.00 effective January 1, 2018. Said annual salary shall be divided into twenty-six (26) equal amounts and paid to the Mayor in bi-weekly installments along with the regular payroll of all city employees.

SECTION 2. This Ordinance shall take effect at the earliest opportunity allowed by law.

Ted A. Berry, President of Council

Passed:
Effective:

Richard L. Stage, Mayor

Attest:

Tami K. Kelly, MMC, Clerk of Council

I Certify that this ordinance

Date: 7/28/15
Introduced By: Mr. Bennett
Committee: Finance
Originated By: Mr. Boso
Approved: _____
Emergency: 30 Days: X
Current Expense: _____

No.: C-51-15
1st Reading: 08/03/15
Public Notice: 08/06/15
2nd Reading: 08/17/15
Passed: _____ Rejected: _____
Codified: _____ Code No: _____
Passage Publication: _____

ORDINANCE NO. C-51-15

AN ORDINANCE TO AMEND SECTION 121.01(a) OF THE CODIFIED ORDINANCES TITLED COUNCIL SALARY

WHEREAS, Section 2.04 of the Charter provides that the Council may, by ordinance, provide a different rate of salary for council members; and

WHEREAS, Ordinance C-112-03 stated the annual salary of each member of Council shall be six thousand dollars (\$6,000.00) and the President shall receive six thousand five hundred dollars (\$6,500.00) payable in twelve monthly installments; and

WHEREAS, Council Members have not had a salary increase since 2003; and

WHEREAS, for comparison, Social Security has increased 28.8% with cost of living adjustments from the period of 2004 to 2015; and

WHEREAS, due to the increase in the duties and activities of the council members, it is necessary and proper to compensate them for the time so expended and for the responsibility of carrying out the duties of their office, however, according to Section 2.04 of the Charter of the City, no increase in salary may be paid to any member during the term which is being served. Therefore, any increase will not take place until 2016; and

WHEREAS, in 2013 PERS made changes requiring that Council Members be compensated a minimum of \$600.00 per month to receive full-time service credit.

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF GROVE CITY, STATE OF OHIO, THAT:

SECTION 1. Section 121.01(a) of the Codified Ordinances of the City is hereby amended to read:

- (a) The annual salary of each member of Council, whether elected or appointed, shall be ~~six~~ **nine** thousand dollars (~~\$6~~**9**,000.00) effective 1/1/16, and eleven thousand dollars (\$11,000.00) effective 1/1/18; payable in twelve monthly installments.

SECTION 2. Section 121.01(b) of the Codified Ordinances of the City is hereby amended to read:

- (b) The annual salary for the President of Council shall be ~~six~~ **nine** thousand five hundred dollars (~~\$6~~**9**,500.00) effective 1/1/16, and eleven thousand five hundred dollars (\$11,500.00) effective 1/1/18; payable in twelve monthly installments.

SECTION 3. This ordinance shall take effect at the earliest opportunity allowed by law.

Date: 07/28/15
Introduced By: Mr. Bennett
Committee: Finance
Originated By: Mr. Berry
Approved: _____
Emergency: 30 Days: _____
Current Expense: XX

No.: C-52-15
1st Reading: 08/03/15
Public Notice: 08/06/15
2nd Reading: 08/17/15
Passed: _____ Rejected: _____
Codified: _____ Code No: _____
Passage Publication: _____

ORDINANCE C-52-15

AN ORDINANCE TO APPROPRIATE \$100,000.00 FROM THE GENERAL FUND FOR THE CURRENT EXPENSE OF THE CONSTRUCTION OF THE BUCKEYE RANCH "GATES OF HOPE"

WHEREAS, the Buckeye Ranch is one of the largest private non-profit companies of its type in Ohio with headquarters in Grove City Ohio; employing 493 people; with \$195,188.00 in annual tax revenue staying in Grove City each year; and

WHEREAS, the Buckeye Ranch has become the "safety net" for 1,900 of Ohio's most vulnerable children since the 1960's and has become a leader in the field of behavioral health; and

WHEREAS, most of the buildings on the Grove City Campus were built in the 60's and 70's and are outdated; not meeting the needs of the children the facility serves today; and are in desperate need to be replaced; and

WHEREAS, the Buckeye Ranch will undergo a massive \$21 million dollar reconstruction campaign that will include an 87,000 square feet new intensive care center; new dormitories; new school building; cafeteria; kitchen; sensory rooms; a library; a computer lab and gymnasium. The facility currently serves 89 children at a time on its Grove City Campus with a planning increase of 100 after the new facility is completed; and

WHEREAS, a grand, new front entrance gate will be constructed symbolizing the safety and care the children will receive within and the promise and hope of a new life as they pass through the gates when they leave. A plaque with a message of hope will be placed on the gates to be read as each child passes back through them to start a new.

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF GROVE CITY, STATE OF OHIO, THAT:

SECTION 1. This Council finds that the Buckeye Ranch has had a significant impact on Grove City and the thousands of children it has served since opening.

SECTION 2. This Council supports the efforts of the Buckeye Ranch and encourages support by others to contribute to this worthy cause.

SECTION 3. There is hereby appropriated \$100,000.00 from the unappropriated monies of the General Fund into account #100120.551300 for the Current Expense of the construction of the Buckeye Ranch "Gates of Hope".

SECTION 4. This ordinance appropriates for current expenses and shall therefore go into immediate effect.

Ted A. Berry, President of Council

Date: 07/28/15
Introduced By: Mr. Bennett
Committee: Finance
Originated By: Mr. Boso
Approved: _____
Emergency: 30 Days
Current Expense: _____

No.: C-53-15
1st Reading: 08/17/15
Public Notice: 08/20/15
2nd Reading: 09/08/15
Passed: Rejected
Codified: Code No:
Passage Publication:

ORDINANCE NO. C-53-15

AN ORDINANCE PROVIDING FOR THE ISSUANCE AND SALE OF BONDS IN THE MAXIMUM PRINCIPAL AMOUNT OF \$5,200,000.00 FOR THE PURPOSE OF PAYING THE COSTS OF PROVIDING FOR THE CONSTRUCTION OF A MULTI-FAMILY HOUSING COMPLEX AND PROVIDING FOR ALL RELATED SITE IMPROVEMENTS, TOGETHER WITH ALL NECESSARY APPURTENANCES THERETO, ALL IN SUPPORT OF ECONOMIC DEVELOPMENT, CREATING OR PRESERVING JOBS AND EMPLOYMENT OPPORTUNITIES AND PROVIDING HOUSING WITHIN THE CITY

WHEREAS, the City of Grove City, Ohio is authorized by virtue of the laws of the State of Ohio, including, without limitation, Section 13 of Article VIII, Ohio Constitution and Chapter 165, Ohio Revised Code (the "*Act*"), among other things, to issue bonds or notes to acquire, construct, furnish, equip or improve a "project" as defined in Section 165.01, Ohio Revised Code, for the purpose of creating or preserving jobs and employment opportunities and improving the economic welfare of the people of the City and of the State of Ohio; and

WHEREAS, the City is also authorized by virtue of the laws of the State of Ohio, including, without limitation, Section 16 of Article VIII, Ohio Constitution, and the Act, among other things, to make provision for or assist in the provision of housing for individuals and families; and

WHEREAS, the City has heretofore determined to facilitate the construction of a multifamily housing complex and providing for all related site improvements, together with all necessary appurtenances thereto, all in support of economic development, creating or preserving jobs and employment opportunities and providing housing within the City to be proximately located in the Town Center area of the City; and

WHEREAS, the Grove City Community Improvement Corporation, as the City's designated community improvement corporation, has approved the construction of the Project as a project in accordance with Chapter 165, Ohio Revised Code, and the plan for the industrial, commercial, distribution and research development of the City; and

WHEREAS, to expedite and facilitate the economic development of the various parcels, the City has determined to construct the Project and this Council finds and determines that the City should issue nontax revenue bonds of the City (the "*Bonds*"), for the purpose of paying the costs of providing for the Project;

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF GROVE CITY, STATE OF OHIO, THAT:

SECTION 1. Definitions and Interpretation. In addition to the words and terms elsewhere defined in this Ordinance, unless the context or use clearly indicates another or different meaning or intent:

"*Act*" means the laws of the State of Ohio, including, without limitation, Section 13 of Article VIII, Ohio Constitution and Chapter 165, Ohio Revised Code.

"*Additional Bonds*" means any additional bonds or bond anticipation notes of the City which may be subsequently issued and payable solely from the Nontax Revenues on parity with the Bonds.

"Authorized Denominations" means the denomination of \$5,000 or any integral multiple in excess thereof.

"Bond Proceedings" means, collectively, this Ordinance, the Certificate of Award, the Continuing Disclosure Agreement, the Purchase Agreement, the Registrar Agreement and such other proceedings of the City, including the Bonds, that provide collectively for, among other things, the rights of holders and beneficial owners of the Bonds.

"Bond Register" means all books and records necessary for the registration, exchange and transfer of Bonds as provided in Section 6.

"Bond Registrar" means a bank or trust company authorized to do business in the State of Ohio and designated by the Director of Finance in the Certificate of Award pursuant to Section 5 as the initial authenticating agent, bond registrar, transfer agent and paying agent for the Bonds under the Registrar Agreement and until a successor Bond Registrar shall have become such pursuant to the provisions of the Registrar Agreement and, thereafter, *"Bond Registrar"* shall mean the successor Bond Registrar.

"Bonds" means, collectively, the Serial Bonds and the Term Bonds, each as is designated as such in the Certificate of Award.

"Book entry form" or *"book entry system"* means a form or system under which (a) the ownership of beneficial interests in the Bonds and the principal of and interest and any premium on the Bonds may be transferred only through a book entry, and (b) physical Bond certificates in fully registered form are issued by the City and payable only to a Depository or its nominee as registered owner, with the certificates deposited with and "immobilized" in the custody of the Depository or its designated agent for that purpose. The book entry maintained by others than the City is the record that identifies the owners of beneficial interests in the Bonds and that principal and interest.

"Certificate of Award" means the certificate authorized by Section 7, to be executed by the Director of Finance, setting forth and determining those terms or other matters pertaining to the Bonds and their issuance, sale and delivery as this Ordinance requires or authorizes to be set forth or determined therein.

"Closing Date" means the date of physical delivery of, and payment of the purchase price for, the Bonds.

"Continuing Disclosure Agreement" means the Continuing Disclosure Agreement which shall constitute the continuing disclosure agreement made by the City for the benefit of the holders and beneficial owners of the Bonds in accordance with the Rule, as it may be modified from the form on file with the Clerk of Council and executed by the Mayor and the Director of Finance, all in accordance with Section 9(c).

"Depository" means any securities depository that is a clearing agency registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934, operating and maintaining, with its Participants or otherwise, a book entry system to record ownership of beneficial interests in Bonds or the principal of and interest and any premium on the Bonds, and to effect transfers of Bonds, in book entry form, and includes and means initially DTC.

"Director of Finance" means the Director of Finance of the City.

"Economic Development Bond Retirement Fund" means the Economic Development Bond Retirement Fund created pursuant to Section 8.

"Financing Costs" shall have the meaning given in Section 133.01 of the Ohio Revised Code.

"Interest Payment Dates" means June 1 and December 1 of each year that the Bonds are outstanding, commencing on the date specified in the Certificate of Award.

"Mandatory Redemption Date" shall have the meaning set forth in Section 4(b).

"Mandatory Sinking Fund Redemption Requirements" shall have the meaning set forth in Section 4(e)(i).

"Mayor" means the Mayor of the City.

"Nontax Revenues" means all moneys of the City which are not moneys raised by taxation, to the extent available for such purposes, including, but not limited to the following: (a) grants from the United States of America and the State of Ohio; (b) payments in lieu of taxes now or hereafter authorized by State statute; (c) fines and forfeitures which are deposited in the City's General Fund; (d) fees deposited in the City's General Fund from properly imposed licenses and permits; (e) investment earnings on the City's General Fund and which are credited to the City's General Fund; (f) investment earnings of other funds of the City that are credited to the City's General Fund; (g) proceeds from the sale of assets which are deposited in the City's General Fund; (h) rental income which is deposited in the City's General Fund; (i) gifts and donations; and (j) proceeds from the sale of any portion of the Project.

"Original Purchaser" means the purchaser of the Bonds specified in the Certificate of Award.

"Participant" means any participant contracting with a Depository under a book entry system and includes securities brokers and dealers, banks and trust companies, and clearing corporations.

"Payment Date" means, as the case may be, an Interest Payment Date and/or a Principal Payment Date.

"Principal Payment Dates" means December 1 of any year as determined by the Director of Finance in the Certificate of Award in such manner as to be in the best interest of and financially advantageous to the City; *provided* that in no case shall the final Principal Payment Date of the Bonds exceed thirty (30) years from the Closing Date, which determination shall be made by the Director of Finance in the Certificate of Award.

"Purchase Agreement" means the Bond Purchase Agreement between the City and the Original Purchaser, as it may be modified from the form on file with the Clerk of Council and executed by the Mayor and the Director of Finance, all in accordance with Section 7.

"Registrar Agreement" means the Bond Registrar Agreement between the City and the Bond Registrar, as it may be modified from the form on file with the Clerk of Council and executed by the Mayor and the Director of Finance, all in accordance with Section 5.

"Rule" means Rule 15c2-12 prescribed by the SEC pursuant to the Securities Exchange Act of 1934.

"SEC" means the Securities and Exchange Commission.

"Serial Bonds" means those Bonds designated as such and maturing on the dates set forth in the Certificate of Award, bearing interest payable on each Interest Payment Date and not subject to mandatory sinking fund redemption.

"Term Bonds" means those Bonds designated as such and maturing on the date or dates set forth in the Certificate of Award, bearing interest payable on each Interest Payment Date and subject to mandatory sinking fund redemption.

Capitalized terms not otherwise defined in this Ordinance have the meanings assigned to them in the Act. The captions and headings in this Ordinance are solely for convenience of reference and in no way define,

limit or describe the scope or intent of any Sections, subsections, paragraphs, subparagraphs or clauses hereof. Reference to a Section means a section of this Ordinance unless otherwise indicated.

SECTION 2. Findings. This Council hereby finds and determines that the Project is a “project” as defined in the Act and is consistent with the purposes of Sections 13 and 16 of Article VIII, Ohio Constitution; that the utilization of the Project is in furtherance of the purposes of the Act and will benefit the people of the City and of the State by creating or preserving jobs and employment opportunities and improving the economic welfare of the people of the City and of the State and providing housing; and that the amount necessary to finance the Project will require the issuance, sale and delivery of the Bonds, which Bonds shall be payable and secured as provided herein.

SECTION 3. Authorized Principal Amount and Purpose; Application of Proceeds. This Council determines that it is necessary and in the best interest of the City to issue bonds of this City in the maximum principal amount of \$5,200,000 (the “Bonds”) for the purpose of paying the costs of providing for the construction of a multifamily housing complex and providing for all related site improvements, together with all necessary appurtenances thereto, all in support of economic development, creating or preserving jobs and employment opportunities and providing housing within the City (the “Project”). The Bonds shall be issued pursuant to the Act, the Charter of the City, this Ordinance and the Certificate of Award.

The principal amount of Bonds to be issued shall not exceed the maximum principal amount specified in this Section and shall be an amount determined by the Director of Finance in the Certificate of Award to be the principal amount of Bonds that is required to be issued at this time for the purpose stated in this Section, taking into account the costs of constructing the Project, the estimates of the Financing Costs and the interest rates on the Bonds.

The proceeds from the sale of the Bonds received by the City (or withheld by the Original Purchaser on behalf of the City) shall be paid into the proper fund or funds, and those proceeds are hereby appropriated and shall be used for the purpose for which the Bonds are being issued, including without limitation but only to the extent not paid by others, the payment of the costs of issuing and servicing the Bonds, printing and delivery of the Bonds, legal services including obtaining the approving legal opinion of bond counsel, fees and expenses of any municipal advisor, paying agent and rating agency, any fees or premiums relating to municipal bond insurance or other security arrangements determined necessary by the Director of Finance, and all other Financing Costs and costs incurred incidental to those purposes. The Certificate of Award and the Purchase Agreement may authorize the Original Purchaser to withhold certain proceeds from the purchase price of the Bonds to provide for the payment of Financing Costs related to the Bonds on behalf of the City. Any portion of those proceeds received by the City representing premium (after payment of any Financing Costs identified in the Certificate of Award) or accrued interest shall be paid into the Economic Development Bond Retirement Fund.

SECTION 4. Denominations; Dating; Principal and Interest Payment and Redemption Provisions. The Bonds shall be issued in one lot and only as fully registered bonds, in Authorized Denominations, but in no case as to a particular maturity date exceeding the principal amount maturing on that date. The Bonds shall be dated as provided in the Certificate of Award, *provided* that their dated date shall not be more than sixty (60) days prior to the Closing Date.

(a) **Interest Rates and Payment Dates.** The Bonds shall bear interest at the rate or rates per year (computed on the basis of a 360-day year consisting of twelve 30-day months) as shall be determined by the Director of Finance, subject to subsection (c) of this Section, in the Certificate of Award. Interest on the Bonds shall be payable at such rate or rates on the Interest Payment Dates until the principal amount has been paid or provided for. The Bonds shall bear interest from the most recent date to which interest has been paid or provided for or, if no interest has been paid or provided for, from their date.

(b) **Principal Payment Schedule.** The Bonds shall mature or be payable pursuant to Mandatory Sinking Fund Redemption Requirements on the Principal Payment Dates in principal amounts as shall be

determined by the Director of Finance, subject to subsection (c) of this Section, in the Certificate of Award, which determination shall be in the best interest of and financially advantageous to the City.

Consistent with the foregoing and in accordance with the determination of the best interest of and financial advantages to the City, the Director of Finance shall specify in the Certificate of Award (i) the aggregate principal amount of Bonds to be issued as Serial Bonds, the Principal Payment Date or Dates on which those Bonds shall be stated to mature and the principal amount thereof that shall be stated to mature on each such Principal Payment Date and (ii) the aggregate principal amount of Bonds to be issued as Term Bonds, the Principal Payment Date or Dates on which those Bonds shall be stated to mature, the principal amount thereof that shall be stated to mature on each such Principal Payment Date, the Principal Payment Date or Dates on which Term Bonds shall be subject to mandatory sinking fund redemption (each a "*Mandatory Redemption Date*") and the principal amount thereof that shall be payable pursuant to Mandatory Sinking Fund Redemption Requirements on each Mandatory Redemption Date.

(c) Conditions for Establishment of Interest Rates and Principal Payment Dates and Amounts. The true interest cost for the Bonds determined by taking into account the respective principal amounts of the Bonds and terms to maturity or Mandatory Sinking Fund Redemption Requirements of those principal amounts of Bonds shall not exceed 7.00%.

(d) Payment of Debt Charges. The debt charges on the Bonds shall be payable in lawful money of the United States of America without deduction for the services of the Bond Registrar as paying agent. Principal of and any premium on the Bonds shall be payable when due upon presentation and surrender of the Bonds at the designated corporate trust office of the Bond Registrar. Interest on a Bond shall be paid on each Interest Payment Date by check or draft mailed to the person in whose name the Bond was registered, and to that person's address appearing, on the Bond Register at the close of business on the 15th day of the calendar month next preceding that Interest Payment Date. Notwithstanding the foregoing, if and so long as the Bonds are issued in a book entry system, principal of and interest and any premium on the Bonds shall be payable in the manner provided in any agreement entered into by the Director of Finance, in the name and on behalf of the City, in connection with the book entry system.

(e) Redemption Provisions. The Bonds shall be subject to redemption prior to stated maturity as follows:

(i) Mandatory Sinking Fund Redemption of Term Bonds. If any of the Bonds are issued as Term Bonds, the Term Bonds shall be subject to mandatory redemption in part by lot and be redeemed pursuant to mandatory sinking fund redemption requirements, at a redemption price of 100% of the principal amount redeemed, plus accrued interest to the redemption date, on the applicable Mandatory Redemption Dates and in the principal amounts payable on those Dates, for which provision is made in the Certificate of Award (such Dates and amounts being referred to as the "*Mandatory Sinking Fund Redemption Requirements*").

The aggregate of the moneys to be deposited with the Bond Registrar for payment of principal of and interest on any Term Bonds on each Mandatory Redemption Date shall include an amount sufficient to redeem on that Date the principal amount of Term Bonds payable on that Date pursuant to the Mandatory Sinking Fund Redemption Requirements (less the amount of any credit as hereinafter provided).

The City shall have the option to deliver to the Bond Registrar for cancellation Term Bonds in any aggregate principal amount and to receive a credit against the then current or any subsequent Mandatory Sinking Fund Redemption Requirement (and corresponding mandatory redemption obligation) of the City, as specified by the Director of Finance, for Term Bonds stated to mature on the same Principal Payment Date and bearing interest at the same rate as the Term Bonds so delivered. That option shall be exercised by the City on or before the 45th day preceding any Mandatory Redemption Date with respect to which the City wishes to obtain a credit, by furnishing the Bond Registrar a

certificate, signed by the Director of Finance, setting forth the extent of the credit to be applied with respect to the then current or any subsequent Mandatory Sinking Fund Redemption Requirement for Term Bonds stated to mature on the same Principal Payment Date and bearing interest at the same rate as the Term Bonds so delivered. If the certificate is not timely furnished to the Bond Registrar, the current Mandatory Sinking Fund Redemption Requirement (and corresponding mandatory redemption obligation) shall not be reduced. A credit against the then current or any subsequent Mandatory Sinking Fund Redemption Requirement (and corresponding mandatory redemption obligation), as specified by the Director of Finance, also shall be received by the City for any Term Bonds which prior thereto have been redeemed (other than through the operation of the applicable Mandatory Sinking Fund Redemption Requirements) or purchased for cancellation and canceled by the Bond Registrar, to the extent not applied theretofore as a credit against any Mandatory Sinking Fund Redemption Requirement, for Term Bonds stated to mature on the same Principal Payment Date and bearing interest at the same rate as the Term Bonds so delivered, redeemed or purchased and canceled.

Each Term Bond so delivered, or previously redeemed, or purchased and canceled, shall be credited by the Bond Registrar at 100% of the principal amount thereof against the then current or subsequent Mandatory Sinking Fund Redemption Requirements (and corresponding mandatory redemption obligations), as specified by the Director of Finance, for Term Bonds stated to mature on the same Principal Payment Date and bearing interest at the same rate as the Term Bonds so delivered, redeemed or purchased and canceled.

(ii) Optional Redemption. The Bonds of the maturities and interest rates specified in the Certificate of Award (if any are so specified) shall be subject to optional redemption by and at the sole option of the City, in whole or in part in integral multiples of \$5,000, on the dates and at the redemption prices (expressed as a percentage of the principal amount to be redeemed), plus accrued interest to the redemption date, to be determined by the Director of Finance in the Certificate of Award; *provided* that the redemption price for any optional redemption date shall not be greater than 103%.

If optional redemption of Term Bonds at a redemption price exceeding 100% of the principal amount to be redeemed is to take place as of any Mandatory Redemption Date applicable to those Term Bonds, the Term Bonds, or portions thereof, to be redeemed optionally shall be selected by lot prior to the selection by lot of the Term Bonds of the same maturity (and interest rate within a maturity if applicable) to be redeemed on the same date by operation of the Mandatory Sinking Fund Redemption Requirements. Bonds to be redeemed pursuant to this paragraph shall be redeemed only upon written notice from the Director of Finance to the Bond Registrar, given upon the direction of the City by passage of an ordinance or adoption of a resolution. That notice shall specify the redemption date and the principal amount of each maturity (and interest rate within a maturity if applicable) of Bonds to be redeemed, and shall be given at least 45 days prior to the redemption date or such shorter period as shall be acceptable to the Bond Registrar.

(iii) Partial Redemption. If fewer than all of the outstanding Bonds are called for optional redemption at one time and Bonds of more than one maturity (or interest rate within a maturity if applicable) are then outstanding, the Bonds that are called shall be Bonds of the maturity or maturities and interest rate or rates selected by the City. If fewer than all of the Bonds of a single maturity (or interest rate within a maturity if applicable) are to be redeemed, the selection of Bonds of that maturity (or interest rate within a maturity if applicable) to be redeemed, or portions thereof in amounts of \$5,000 or any integral multiple thereof, shall be made by the Bond Registrar by lot in a manner determined by the Bond Registrar. In the case of a partial redemption of Bonds by lot when Bonds of denominations greater than \$5,000 are then outstanding, each \$5,000 unit of principal thereof shall be treated as if it were a separate Bond of the denomination of \$5,000. If it is determined that one or more, but not all, of the \$5,000 units of principal amount represented by a Bond are to be called for redemption, then, upon notice of redemption of a \$5,000 unit or units, the registered owner of that Bond shall surrender the Bond to the Bond Registrar (A) for payment of the redemption price of the \$5,000 unit or units of

principal amount called for redemption (including, without limitation, the interest accrued to the date fixed for redemption and any premium), and (B) for issuance, without charge to the registered owner, of a new Bond or Bonds of any Authorized Denomination or Denominations in an aggregate principal amount equal to the unmatured and unredeemed portion of, and bearing interest at the same rate and maturing on the same date as, the Bond surrendered.

(iv) Notice of Redemption. The notice of the call for redemption of Bonds shall identify (A) by designation, letters, numbers or other distinguishing marks, the Bonds or portions thereof to be redeemed, (B) the redemption price to be paid, (C) the date fixed for redemption, and (D) the place or places where the amounts due upon redemption are payable. The notice shall be given by the Bond Registrar on behalf of the City by mailing a copy of the redemption notice by first-class mail, postage prepaid, at least 30 days prior to the date fixed for redemption, to the registered owner of each Bond subject to redemption in whole or in part at the registered owner's address shown on the Bond Register maintained by the Bond Registrar at the close of business on the 15th day preceding that mailing. Failure to receive notice by mail or any defect in that notice regarding any Bond, however, shall not affect the validity of the proceedings for the redemption of any Bond.

(v) Payment of Redeemed Bonds. In the event that notice of redemption shall have been given by the Bond Registrar to the registered owners as provided above, there shall be deposited with the Bond Registrar on or prior to the redemption date, moneys that, in addition to any other moneys available therefor and held by the Bond Registrar, will be sufficient to redeem at the redemption price thereof, plus accrued interest to the redemption date, all of the redeemable Bonds for which notice of redemption has been given. Notice having been mailed in the manner provided in the preceding paragraph hereof, the Bonds and portions thereof called for redemption shall become due and payable on the redemption date, and, subject to the provisions of Sections 4(d) and 6, upon presentation and surrender thereof at the place or places specified in that notice, shall be paid at the redemption price, plus accrued interest to the redemption date. If moneys for the redemption of all of the Bonds and portions thereof to be redeemed, together with accrued interest thereon to the redemption date, are held by the Bond Registrar on the redemption date, so as to be available therefor on that date and, if notice of redemption has been deposited in the mail as aforesaid, then from and after the redemption date those Bonds and portions thereof called for redemption shall cease to bear interest and no longer shall be considered to be outstanding. If those moneys shall not be so available on the redemption date, or that notice shall not have been deposited in the mail as aforesaid, those Bonds and portions thereof shall continue to bear interest, until they are paid, at the same rate as they would have borne had they not been called for redemption. All moneys held by the Bond Registrar for the redemption of particular Bonds shall be held in trust for the account of the registered owners thereof and shall be paid to them, respectively, upon presentation and surrender of those Bonds; *provided* that any interest earned on the moneys so held by the Bond Registrar shall be for the account of and paid to the City to the extent not required for the payment of the Bonds called for redemption.

SECTION 5. Execution and Authentication of Bonds; Appointment of Bond Registrar. The Bonds shall be signed by the Mayor and the Director of Finance, in the name of the City and in their official capacities, *provided* that either or both of those signatures may be a facsimile. The Bonds shall be issued in the Authorized Denominations and numbers as requested by the Original Purchaser and approved by the Director of Finance, shall be numbered as determined by the Director of Finance in order to distinguish each Bond from any other Bond, and shall express upon their faces the purpose, in summary terms, for which they are issued and that they are issued pursuant to the Act, the Charter of the City, this Ordinance and the Certificate of Award.

The Director of Finance is hereby authorized to designate in the Certificate of Award a bank or trust company authorized to do business in the State of Ohio to act as the initial Bond Registrar. The Mayor and the Director of Finance shall sign and deliver, in the name and on behalf of the City, the Registrar Agreement between the City and the Bond Registrar, in substantially the form as is now on file with the Clerk of Council. The Registrar Agreement is approved, together with any changes or amendments that are not inconsistent with

this Ordinance and not substantially adverse to the City and that are approved by the Mayor and the Director of Finance on behalf of the City, all of which shall be conclusively evidenced by the signing of the Registrar Agreement or amendments thereto. The Director of Finance shall provide for the payment of the services rendered and for reimbursement of expenses incurred pursuant to the Registrar Agreement, except to the extent paid or reimbursed by the Original Purchaser in accordance with the Certificate of Award and the Purchase Agreement, from the proceeds of the Bonds to the extent available and then from other money lawfully available and appropriated or to be appropriated for that purpose.

No Bond shall be valid or obligatory for any purpose or shall be entitled to any security or benefit under the Bond Proceedings unless and until the certificate of authentication printed on the Bond is signed by the Bond Registrar as authenticating agent. Authentication by the Bond Registrar shall be conclusive evidence that the Bond so authenticated has been duly issued, signed and delivered under, and is entitled to the security and benefit of, the Bond Proceedings. The certificate of authentication may be signed by any authorized officer or employee of the Bond Registrar or by any other person acting as an agent of the Bond Registrar and approved by the Director of Finance on behalf of the City. The same person need not sign the certificate of authentication on all of the Bonds.

SECTION 6. Registration; Transfer and Exchange; Book Entry System.

(a) Bond Register. So long as any of the Bonds remain outstanding, the City will cause the Bond Registrar to maintain and keep the Bond Register at its designated corporate trust office. Subject to the provisions of Sections 4(d) and 9(c), the person in whose name a Bond is registered on the Bond Register shall be regarded as the absolute owner of that Bond for all purposes of the Bond Proceedings. Payment of or on account of the debt charges on any Bond shall be made only to or upon the order of that person; neither the City nor the Bond Registrar shall be affected by any notice to the contrary, but the registration may be changed as provided in this Section. All such payments shall be valid and effectual to satisfy and discharge the City's liability upon the Bond, including interest, to the extent of the amount or amounts so paid.

(b) Transfer and Exchange. Any Bond may be exchanged for Bonds of any Authorized Denomination upon presentation and surrender at the designated corporate trust office of the Bond Registrar, together with a request for exchange signed by the registered owner or by a person legally empowered to do so in a form satisfactory to the Bond Registrar. A Bond may be transferred only on the Bond Register upon presentation and surrender of the Bond at the designated corporate trust office of the Bond Registrar together with an assignment signed by the registered owner or by a person legally empowered to do so in a form satisfactory to the Bond Registrar. Upon exchange or transfer the Bond Registrar shall complete, authenticate and deliver a new Bond or Bonds of any Authorized Denomination or Denominations requested by the owner equal in the aggregate to the unmatured principal amount of the Bond surrendered and bearing interest at the same rate and maturing on the same date.

If manual signatures on behalf of the City are required, the Bond Registrar shall undertake the exchange or transfer of Bonds only after the new Bonds are signed by the authorized officers of the City. In all cases of Bonds exchanged or transferred, the City shall sign and the Bond Registrar shall authenticate and deliver Bonds in accordance with the provisions of the Bond Proceedings. The exchange or transfer shall be without charge to the owner, except that the City and Bond Registrar may make a charge sufficient to reimburse them for any tax or other governmental charge required to be paid with respect to the exchange or transfer. The City or the Bond Registrar may require that those charges, if any, be paid before the procedure is begun for the exchange or transfer. All Bonds issued and authenticated upon any exchange or transfer shall be valid obligations of the City, evidencing the same debt, and entitled to the same security and benefit under the Bond Proceedings as the Bonds surrendered upon that exchange or transfer. Neither the City nor the Bond Registrar shall be required to make any exchange or transfer of (i) Bonds then subject to call for redemption between the 15th day preceding the mailing of notice of Bonds to be redeemed and the date of that mailing, or (ii) any Bond selected for redemption, in whole or in part.

(c) Book Entry System. Notwithstanding any other provisions of this Ordinance, if the Director of Finance determines in the Certificate of Award that it is in the best interest of and financially advantageous to the City, the Bonds may be issued in book entry form in accordance with the following provisions of this Section.

The Bonds may be issued to a Depository for use in a book entry system and, if and as long as a book entry system is utilized: (i) the Bonds may be issued in the form of a single, fully registered Bond representing each maturity, and, if applicable, each interest rate within a maturity, and registered in the name of the Depository or its nominee, as registered owner, and immobilized in the custody of the Depository or its designated agent for that purpose, which may be the Bond Registrar; (ii) the beneficial owners of Bonds in book entry form shall have no right to receive Bonds in the form of physical securities or certificates; (iii) ownership of beneficial interests in book entry form shall be shown by book entry on the system maintained and operated by the Depository and its Participants, and transfers of the ownership of beneficial interests shall be made only by book entry by the Depository and its Participants; and (iv) the Bonds as such shall not be transferable or exchangeable, except for transfer to another Depository or to another nominee of a Depository, without further action by the City.

If any Depository determines not to continue to act as a Depository for the Bonds for use in a book entry system, the Director of Finance may attempt to establish a securities depository/book entry relationship with another qualified Depository. If the Director of Finance does not or is unable to do so, the Director of Finance, after making provision for notification of the beneficial owners by the then Depository and any other arrangements deemed necessary, shall permit withdrawal of the Bonds from the Depository, and shall cause Bond certificates in registered form and Authorized Denominations to be authenticated by the Bond Registrar and delivered to the assigns of the Depository or its nominee, all at the cost and expense (including any costs of printing), if the event is not the result of City action or inaction, of those persons requesting such issuance.

The Director of Finance is hereby authorized and directed, to the extent necessary or required, to enter into any agreements, in the name and on behalf of the City that the Director of Finance determines to be necessary in connection with a book entry system for the Bonds.

SECTION 7. Sale of the Bonds to the Original Purchaser. The Director of Finance is authorized to sell the Bonds at private sale to the Original Purchaser at a purchase price, not less than 97% of the aggregate principal amount thereof, as shall be determined by the Director of Finance in the Certificate of Award, plus accrued interest (if any) on the Bonds from their date to the Closing Date, and shall be awarded by the Director of Finance with and upon such other terms as are required or authorized by this Ordinance to be specified in the Certificate of Award, in accordance with law, and the provisions of this Ordinance and the Purchase Agreement.

The Director of Finance shall sign and deliver the Certificate of Award and shall cause the Bonds to be prepared and signed and delivered, together with a true transcript of proceedings with reference to the issuance of the Bonds, to the Original Purchaser upon payment of the purchase price.

The Mayor and the Director of Finance shall sign and deliver, in the name and on behalf of the City, the Purchase Agreement between the City and the Original Purchaser, in substantially the form as is now on file with the Clerk of Council, providing for the sale to, and the purchase by, the Original Purchaser of the Bonds. The Purchase Agreement is approved, together with any changes or amendments that are not inconsistent with this Ordinance and not substantially adverse to the City and that are approved by the Mayor and the Director of Finance on behalf of the City, all of which shall be conclusively evidenced by the signing of the Purchase Agreement or amendments thereto.

The Mayor, the Director of Finance, the Director of Law, the Clerk of Council and other City officials, as appropriate, each are authorized and directed to sign any transcript certificates, financial statements and other documents and instruments and to take such actions as are necessary or appropriate to consummate the transactions contemplated by this Ordinance. The actions of the Mayor, the Director of Finance, the Director of

Law, the Clerk of Council or other City officials, as appropriate, in doing any and all acts necessary in connection with the issuance and sale of the Bonds are hereby ratified and confirmed.

SECTION 8. Security for and Covenants Relating to Bonds.

(a) The Bonds and any Additional Bonds that may be issued hereafter on a parity therewith, are special obligations of the City, and the principal and interest on the Bonds are payable solely from, and such payment is secured by a pledge of and lien on, those Nontax Revenues established by and as provided in this Ordinance which are on deposit in the Economic Development Bond Retirement Fund, as described below.

There is hereby created by the City a separate fund named the Economic Development Bond Retirement Fund (the "*Economic Development Bond Retirement Fund*") into which Nontax Revenues shall be deposited in accordance with the following provisions.

The City hereby covenants and agrees that on or before each Payment Date it shall deposit in the Economic Development Bond Retirement Fund from Nontax Revenues selected by the City an amount equal to the amount of principal and interest due on the Bonds on that Payment Date, less, in the discretion of the City, any interest earnings or other moneys accumulated in the Economic Development Bond Retirement Fund which have not theretofore been used as a credit against a prior payment obligation. Moneys in the Economic Development Bond Retirement Fund shall be used solely and exclusively to pay principal and interest on the Bonds and any hereafter designated Additional Bonds when due.

The City hereby covenants and agrees that so long as Bonds are outstanding, it will appropriate and maintain sufficient Nontax Revenues each year to make each payment due under this Section and to pay principal and interest when due; *provided, however*, the payments due hereunder and under the Bonds are payable solely from Nontax Revenues, which Nontax Revenues are hereby selected by the City pursuant to Section 165.12, Ohio Revised Code, as moneys that are not raised by taxation. The Bonds are not secured by an obligation or pledge of any moneys raised by taxation. The Bonds do not and shall not represent or constitute a debt or pledge of the faith or credit or taxing power of the City, and the owners of the Bonds have no right to have taxes levied by the City for the payment of principal and interest on the Bonds.

Nothing herein shall be construed as requiring the City to use or apply to the payment of principal and interest on the Bonds any funds or revenues from any source other than Nontax Revenues. Nothing herein, however, shall be deemed to prohibit the City, of its own volition, from using, to the extent that it is authorized by law to do so, any other resources for the fulfillment of any of the terms, conditions or obligations of this Ordinance or of the Bonds.

(b) The City will at all times faithfully observe and perform all agreements, covenants, undertakings, stipulations and provisions to be performed on its part under this Ordinance and the Bonds and under all proceedings of this Council pertaining thereto. The City represents that (i) it is, and upon delivery of the Bonds covenants that it will be, duly authorized by the Constitution and laws of the State including particularly and without limitation the Act, to issue the Bonds and to provide the security for payment of the debt service charges in the manner and to the extent set forth herein and in the Bonds; (ii) all actions on its part for the issuance of the Bonds have been or will be taken duly and effectively; and (iii) the Bonds will be valid and enforceable special obligations of the City according to their terms. Each obligation of the City required to be undertaken pursuant to this Ordinance and the Bonds is binding upon the City, and upon each officer or employee of the City as may from time to time have the authority under law to take any action on behalf of the City as may be necessary to perform all or any part of such obligation, as a duty of the City and of each of those officers and employee resulting from an office, trust or station within the meaning of Section 2731.01, Ohio Revised Code, providing for enforcement by writ of mandamus.

(c) All books and documents in the City's possession relating to the Nontax Revenues shall be open at all times during the City's regular business hours to inspection by such accountants or other agents of the owners of the Bonds as the owners may from time to time designate.

(d) The Clerk of Council, or another appropriate officer of the City, shall furnish to the Original Purchaser a true transcript of proceedings, certified by that officer, of all proceedings had with reference to the issuance of the Bonds along with such information from the records as is necessary to determine the regularity and validity of the issuance of the Bonds.

SECTION 9. Official Statement, Rating, Bond Insurance, Continuing Disclosure and Financing Costs.

(a) Primary Offering Disclosure -- Official Statement. The Preliminary Official Statement of the City relating to the Bonds, substantially in the form now on file with the Clerk of Council, is approved. The Mayor and the Director of Finance are each authorized and directed, on behalf of the City and in their official capacities, to (i) prepare or cause to be prepared, and make or authorize modifications, completions or changes of or supplements to, a disclosure document in the form of an official statement relating to the original issuance of the Bonds, (ii) determine, and to certify or otherwise represent, when the official statement is to be "deemed final" (except for permitted omissions) by the City as of its date or is a final official statement for purposes of paragraph (b) of the Rule, (iii) use and distribute, or authorize the use and distribution of those official statements and any supplements thereto in connection with the original issuance of the Bonds, and (iv) complete and sign those official statements and any supplements thereto as so approved, together with such certificates, statements or other documents in connection with the finality, accuracy and completeness of those official statements and any supplements, as they may deem necessary or appropriate.

(b) Application for Rating or Bond Insurance. If, in the judgment of the Director of Finance, the filing of an application for (i) a rating on the Bonds by one or more nationally recognized rating agencies, or (ii) a policy of insurance from a company or companies to better assure the payment of principal of and interest on the Bonds, is in the best interest of and financially advantageous to this City, the Director of Finance is authorized to prepare and submit those applications, to provide to each such agency or company such information as may be required for the purpose, and to provide further for the payment of the cost of obtaining each such rating or policy, except to the extent otherwise paid in accordance with the Purchase Agreement, from the proceeds of the Bonds to the extent available and otherwise from any other funds lawfully available and that are appropriated or shall be appropriated for that purpose. The Director of Finance is hereby authorized, to the extent necessary or required, to enter into any agreements, in the name of and on behalf of the City, that the Director of Finance determines to be necessary in connection with the obtaining of that bond insurance.

(c) Agreement to Provide Continuing Disclosure. For the benefit of the holders and beneficial owners from time to time of the Bonds, the City agrees to provide or cause to be provided such financial information and operating data, audited financial statements and notices of the occurrence of certain events, in such manner as may be required for purposes of the Rule. The Mayor and the Director of Finance are each authorized and directed to complete, sign and deliver the Continuing Disclosure Agreement, in the name and on behalf of the City, in substantially the form as is now on file with the Clerk of Council. The Continuing Disclosure Agreement is approved, together with any changes or amendments that are not inconsistent with this Ordinance and not substantially adverse to the City and that are approved by the Mayor and the Director of Finance on behalf of the City, all of which shall be conclusively evidenced by the signing of the Continuing Disclosure Agreement or amendments thereto.

The Director of Finance is further authorized and directed to establish procedures in order to ensure compliance by the City with its Continuing Disclosure Agreement, including timely provision of information and notices as described above. Prior to making any filing required under the Rule, the Director of Finance shall consult with and obtain legal advice from, as appropriate, the Director of Law and bond or other qualified independent special counsel selected by the City. The Director of Finance, acting in the name and on behalf of the City, shall be entitled to rely upon any such legal advice in determining whether a filing should be made. The performance by the City of its Continuing Disclosure Agreement shall be subject to the annual appropriation of any funds that may be necessary to perform it.

(d) Financing Costs. The expenditure of the amounts necessary to pay any Financing Costs in connection with the Bonds, to the extent not paid by the Original Purchaser in accordance with the Purchase Agreement, is authorized and approved, and the Director of Finance is authorized to provide for the payment of any such amounts and costs from the proceeds of the Bonds to the extent available and otherwise from any other funds lawfully available that are appropriated or shall be appropriated for that purpose.

SECTION 10. Additional Bonds. The City shall have the right from time to time to issue Additional Bonds on a parity with the Bonds, which Additional Bonds shall be payable solely from the Nontax Revenues, and such payment shall be secured by a pledge of and a lien on the Nontax Revenues as provided by the Act and by an ordinance passed by this Council authorizing the issuance of those Additional Bonds.

Before any Additional Bonds are issued, the City shall be required to furnish a certificate of the Director of Finance showing that the aggregate amount of Nontax Revenues received during the fiscal year immediately preceding the issuance of those Additional Bonds is at least equal to 300% of the largest amount required to be paid in any succeeding calendar year to meet interest and principal maturities of the Bonds and any Additional Bonds to be outstanding immediately after the issuance of such Additional Bonds, or in the case of the issuance of notes issued in anticipation of Additional Bonds, the largest amount required to be paid in any succeeding calendar year to meet the estimated interest and principal maturities of those Additional Bonds anticipated.

The proceeds of any sale of Additional Bonds shall be allocated in the manner provided in the ordinance authorizing their issuance. Junior lien or other subordinate bonds payable from the Nontax Revenues may be issued without limitation.

The Additional Bonds shall bear such designation as may be necessary to distinguish them from the Bonds or other Additional Bonds having different provisions and shall have maturities, interest rates, interest payment dates, redemption provisions, denominations and other provisions as provided in the ordinances hereafter adopted providing for the issuance of the Additional Bonds; *provided, however*, that those terms and provisions shall not be inconsistent with this Ordinance to the extent it governs the issuance and terms of Additional Bonds.

SECTION 11. Reimbursement Allocation. This Council hereby declares its official intent to reimburse prior expenditures of the City, incurred prior to the issuance and sale of the Bonds, related to the Project or portions thereof to be financed by the Bonds.

SECTION 12. Bond Counsel. The legal services of the law firm of Squire Patton Boggs (US) LLP are hereby retained. Those legal services shall be in the nature of legal advice and recommendations as to the documents and the proceedings in connection with the authorization, sale and issuance of the Bonds and rendering at delivery related legal opinions. In providing those legal services, as an independent contractor and in an attorney-client relationship, that firm shall not exercise any administrative discretion on behalf of this City in the formulation of public policy, expenditure of public funds, enforcement of laws, rules and regulations of the State, any county or municipal corporation or of this City, or the execution of public trusts. For those legal services that firm shall be paid just and reasonable compensation and shall be reimbursed for actual out-of-pocket expenses incurred in providing those legal services. The Director of Finance is authorized and directed to make appropriate certification as to the availability of funds for those fees and any reimbursement and to issue an appropriate order for their timely payment as written statements are submitted by that firm.

SECTION 13. Municipal Advisor. The services of PRISM Municipal Advisors, LLC, as municipal advisor, are hereby retained. The municipal advisory services shall be in the nature of financial advice and recommendations in connection with the issuance and sale of the Bonds. In rendering those municipal advisory services, as an independent contractor, that firm shall not exercise any administrative discretion on behalf of the City in the formulation of public policy, expenditure of public funds, enforcement of laws, rules and regulations of the State, the City or any other political subdivision, or the execution of public trusts. That firm shall be paid just and reasonable compensation for those municipal advisory services and shall be reimbursed for the actual out-of-pocket expenses it incurs in rendering those municipal advisory services. The Director of Finance is

authorized and directed to make appropriate certification as to the availability of funds for those fees and any reimbursement and to issue an appropriate order for their timely payment as written statements are submitted by that firm.

SECTION 14. Notification of Bond Issuance. The Director of Finance is authorized and directed to provide the notification required by Section 165.03(D) of the Ohio Revised Code to the Director of the Ohio Development Services Agency.

SECTION 15. Satisfaction of Conditions for Bond Issuance. This Council determines that all acts and conditions necessary to be done or performed by the City or to have been met precedent to and in the issuing of the Bonds in order to make them legal, valid and binding special obligations of the City have been performed and have been met, or will at the time of delivery of the Bonds have been performed and have been met, in regular and due form as required by law; that no statutory or constitutional limitation of indebtedness or taxation will have been exceeded in the issuance of the Bonds; and that the Bonds are being authorized and issued pursuant to the Act, the Charter of the City, this Ordinance, the Certificate of Award and other authorizing provisions of law.

SECTION 16. Compliance with Open Meeting Requirements. This Council finds and determines that all formal actions of this Council and any of its committees concerning and relating to the passage of this Ordinance were taken in an open meeting of this Council or any of its committees and that all deliberations of this Council and any of its committees that resulted in those formal actions were in meetings open to the public, all in compliance with the law, including Section 121.22 of the Ohio Revised Code and the Charter of the City.

SECTION 17. Effective Date. This Ordinance shall be in full force and effect at the earliest opportunity allowed by law.

Ted A. Berry, President of Council

Passed: _____, 2015

Richard L. Stage, Mayor

Effective: _____, 2015

Attest:

Tami K. Kelly, MMC, Clerk of Council

I certify that this Ordinance is correct
as to form.

Stephen J. Smith, Director of Law

Date: 08/07/15
Introduced By: Mr. Bennett
Committee: Finance
Originated By: Mr. Turner
Approved: Mr. Boso
Emergency: 30 Days:
Current Expense:

No.: C-54-15
1st Reading: 08/17/15
Public Notice: 08/20/15
2nd Reading: 09/08/15
Passed: Rejected:
Codified: Code No:
Passage Publication:

ORDINANCE C-54-15

AN ORDINANCE TO APPROPRIATE \$4,400,000.00 FROM
THE GENERAL FUND FOR THE CURRENT EXPENSE OF
ENTERING INTO A DEVELOPMENT AGREEMENT WITH PIZZUTI

WHEREAS, on August 3, 2015, City Council authorized the City Administrator to execute an agreement with Pizzuti GCA LLC; and

WHEREAS, this appropriation is necessary to bridge the gap until the bond funds are available; and

WHEREAS, funds must be lawfully appropriated in order to execute the Development Agreement.

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF GROVE CITY, STATE OF OHIO, THAT:

SECTION 1. There is hereby appropriated \$4,400,000.00 from the unappropriated monies of the General Fund to account number 100120.551300 for Current Expense of entering into a Development Agreement with Pizzuti.

SECTION 2. This ordinance appropriates for current expenses and shall therefore go into immediate effect.

Ted A. Berry, President of Council

Passed:

Richard L. Stage, Mayor

Effective:

Attest:

Tami K. Kelly, MMC, Clerk of Council

I Certify that this ordinance is correct as to form.

Stephen J. Smith, Director of Law

I certify that there is money in the treasury, or is in
the process of collection, to pay the within ordinance.

Michael A. Turner, Director of Finance

Date: 08/07/15
Introduced By: Mr. Davis
Committee: Safety
Originated By: Mr. Smith
Approved: Mr. Boso
Emergency: 30 Days: XX
Current Expense:

No.: C-55-15
1st Reading: 08/17/15
Public Notice: 08/20/15
2nd Reading: 09/08/15
Passed: Rejected:
Codified: Code No:
Passage Publication:

ORDINANCE C-55-15

AN ORDINANCE TO AMEND VARIOUS SECTIONS OF CHAPTER 1101 OF THE CODIFIED ORDINANCES OF GROVE CITY, OHIO TITLED DEVELOPMENT STANDARDS

WHEREAS, the City of Grove City is responsible for ensuring the City's stormwater management regulations meet the minimum requirements of the Ohio EPA's Small Municipal Separate Storm Sewer System (MS4) General Permit; and

WHEREAS, following a comprehensive review by City staff and the City's consulting Engineer, these changes were recommended to ensure compliance with the Ohio EPA Small MS4 General Permit; and

WHEREAS, amendments to Street Lighting and Submission Procedures are also necessary to assist with proper lighting and review of development applications.

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF GROVE CITY, COUNTY OF FRANKLIN, AND STATE OF OHIO, THAT:

SECTION 1. Section 1101.05(g) is hereby amended to read:

- (g) The Director of Public Service shall be responsible for enforcement of the Stormwater Design Requirements and shall not allow any development of land unless such development meets the design requirements specified in Chapter 971 and the City of Grove City's Stormwater Design Manual adopted by City Council. The Stormwater Design Manual shall be available on the City's website and hardcopies are on file with and available from the Director of Public Service and Clerk of Council. All natural open watercourses shall be protected by establishing a Stream Corridor Protection Zone as specified in the City's Stormwater Design Manual. All stormwater controls shall be designed in accordance with the design specifications provided in the City's Stormwater Design Manual. Storm drainage systems for land being developed or improved shall be designed so that the peak rate of stormwater runoff after development does not exceed the peak rate of runoff before development for all storms, from the critical storm up to a 100 year frequency-twenty-four hour storm, and does not exceed the peak rate of runoff for a one year frequency storm before development of the land for all storms, from a one year frequency-twenty-four hour storm through the critical storm.

SECTION 2. Section 1101.05(g)(3) is hereby amended to read, in part:

- (3) The development's interior drainage system shall be designed ~~to carry the runoff from a five year frequency twenty four hour storm,~~ per the design storm standards as outlined within the City's Storm Water Design Manual, except

that the year frequency twenty-four hour storm that is compatible with the existing drainage system shall be used when connecting directly to the existing system with the conduit flowing full with surcharge to the gutter line and the:

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~~Street pavement being dry for one twelve foot lane on local streets and two twelve foot lanes on thoroughfares.~~ **Street drainage shall be designed per the pavement spread standards as outlined within the City's Stormwater Design Manual.**

SECTION 3. Sections 1101.05(g)(5 - 9) are hereby amended to read:

- (5) ~~The rainfall intensity-duration-frequency curve for the Soil Conservation Service of the U.S. Department of Agriculture, Type II storm shall be used.~~ **For peak flow rate analysis, the 12-hour rainfall depths, shown on Table 3-3 from National Oceanic and Atmospheric Administration Atlas 14, Sullivant Avenue Station 33-1781, shall be used. The Midwest Climate Center Bulletin 71, Rainfall Frequency Atlas of the Midwest, shall be used as the reference document for selection of a rainfall distribution. For quantitative controls the Bulletin 71, 2nd Quartile, 0-10 square mile, 50% curve, and 12-hour duration storm shall be used. If required for water quality peak flow rate calculations, the 1st Quartile, 0-10 square mile, 50% curve, and 2-hour duration storm shall be used and the runoff curve number shall be calibrated to match or exceed the Ohio EPA water quality volume.**
- (6) Except as modified in the Codified Ordinances, the ~~Mid-Ohio Regional Planning Commission's~~ **City's Stormwater Design Manual** shall be used as the guide for designing storm drainage systems; however, storm drainage system designs that meet the intent and requirements of this subsection may be used.
- ~~(7) All storm water retention and detention basins shall be designed as "wet facilities". All storm water basins and/or lakes shall be designed using the City of Grove City's Storm Water Basins and Lake Design Manual as a design guideline.~~
- ~~(7)~~(8) Any portion of the drainage system, including on-site and offsite storage facilities, that is constructed by the developer will be continuously maintained by the owner or owners subsequent in title of the affected lands unless it is officially accepted by the City for City maintenance. The developer shall cause the maintenance obligation to be inserted in the chain of title to the affected lands as a covenant running with the land in favor of the City.
- ~~(8)~~(9) All natural open watercourses shall be protected using the City of Grove City ~~Natural Stream Protection Policy as a design guideline~~ **Stormwater Design Manual**.

SECTION 4. Section 1101.05(m) is hereby amended to read:

- (m) Street lighting shall be provided on public streets by means of lighting assemblies using a 100 watt, 120 volt high pressure or equivalent lighting assemblies, mounted on aluminum poles or decorative poles so approved by the Director of Public Service. ~~Aluminum poles shall meet Standard Construction Drawings G-52 and G-53. These lighting assemblies shall be no less than twenty four feet above the ground's surface at the pole base.~~ These assemblies and underground cables shall be located three feet in back of the street curb and beyond the edge of the paved shoulder for uncurbed streets. The assembly shall be installed not less than 250 feet nor more than 350 feet apart. One assembly shall be located within 200 feet on the end of each cul-de-sac. One assembly shall be located at each street intersection. Blocks shorter than 500 feet apart shall not require an intermediate lighting assembly.

SECTION 5. Section 1101.07(a) is hereby amended, in part:

- (a) An owner wishing to develop land shall submit ~~eighteen (18)~~ **twenty (20)** copies of a Development Plan, and such other information as the owner desires, to the Planning Commission ~~fourteen (14)~~ a minimum of thirty (30) days prior to the date of the Commission's meeting. . . .

SECTION 6. This ordinance shall take effect at the earliest opportunity allowed by law.

Ted A. Berry, President of Council

Passed:

Effective:

Richard L. Stage, Mayor

Attest:

Tami K. Kelly, MMC, Clerk of Council

I Certify that this ordinance is correct as to form.

Stephen J. Smith, Director of Law

Date: 08/07/15
Introduced By: Ms. Lanese
Committee: Service
Originated By: Mr. Smith
Approved: Mr. Boso
Emergency: 30 Days: X
Current Expense: _____

No.: C-56-15
1st Reading: 08/17/15
Public Notice: 08/20/15
2nd Reading: 09/08/15
Passed: _____ Rejected: _____
Codified: _____ Code No: _____
Passage Publication: _____

ORDINANCE C-56-15

AN ORDINANCE TO AMEND PART 9 OF THE CODIFIED ORDINANCES OF GROVE CITY, OHIO AND ENACT TITLE 7 TITLED STORMWATER

WHEREAS, the City of Grove City is responsible for ensuring the City's stormwater management regulations meet the minimum requirements of the Ohio Environmental Protection Agency's Small Municipal Separate Storm Sewer System (MS4) General Permit; and

WHEREAS, under the Ohio EPA Small MS4 General Permit the City is required to address: illicit discharge detection and elimination, construction site stormwater runoff control, and post-construction stormwater management in new development and redevelopment; and

WHEREAS, following a comprehensive review by City staff and the City's Consulting Engineer, amendments were recommended to ensure compliance with the Ohio EPA Small MS4 General Permit.

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF GROVE CITY, STATE OF OHIO, THAT:

SECTION 1. Section 939.06 is hereby amended to read:

Storm water and ~~all other unpolluted drainage~~ **non-stormwater discharges as allowable in 973.02(b) and authorized by an NPDES permit or exempt from NPDES permit regulations** shall be discharged to such sewers as are specifically designated as storm sewers or to a natural outlet approved by the City. ~~Industrial cooling water or unpolluted process waters may be discharged to a storm sewer or natural outlet.~~

SECTION 2. Part 9 is hereby amended to enact Title 7 – Stormwater, attached hereto and made a part hereof as Exhibit “A” and the Stormwater Design Manual dated June, 2015 attached hereto as Exhibit “B”.

SECTION 3. This Ordinance shall take effect at the earliest opportunity allowed by law.

Ted A. Berry, President of Council

Passed:

Richard L. Stage, Mayor

Effective:

Attest:

Tami K. Kelly, MMC, Clerk of Council

I certify that this
ordinance is correct as to form.

Stephen J. Smith, Director of Law

TITLE SEVEN – Stormwater

Chap. 971 Stormwater Management

Chap. 973 Illicit Discharge and Obstruction of the Municipal Separate Storm Sewer System

Chapter 971 Stormwater Management

<u>971.01</u>	<u>Purpose</u>	<u>971.06 Storm Sewer, Open Channel and Culvert</u>
<u>971.02</u>	<u>Applicability</u>	<u>Design, and Pavement Spread</u>
<u>971.03</u>	<u>Definitions and Acronyms</u>	<u>971.07 Operation and Maintenance of</u>
<u>971.04</u>	<u>Administration</u>	<u>Stormwater Facilities</u>
<u>971.05</u>	<u>Water Quality Requirements</u>	<u>971.08 Erosion and Sediment Control</u>
		<u>971.99 Penalty</u>

CROSS REFERENCES

971.01 PURPOSE

This Chapter establishes stormwater management requirements within the City. The City has a Stormwater Design Manual that gives more specific guidance on the procedures and calculation methodologies required to meet the requirements of this Chapter. While adherence will not eliminate non-point source pollution, stop flooding or prevent all damage caused by flooding, it does establish a basis for design which will:

- (a) Minimize the damage and inconvenience of flooding;**
- (b) Provide drainage systems which continue to provide benefit over the long term;**
- (c) Minimize the expense of maintaining the drainage facilities within the City;**
- (d) Reduce non-point-source pollution;**
- (e) Minimize new impacts on engineered and natural drainage systems; and**
- (f) Prevent or reduce impacts to stream and river ecosystems.**

971.02 APPLICABILITY

The applicability of this chapter shall govern all developments and redevelopments within the City; however it does not alleviate the requirement for permits from state and federal agencies. The following exceptions from the Peak Flow Rate Controls of Section 971.06 are as follows:

- (a) Single-family residential lot not part of a larger common development or sale;**
- (b) Two, three, or four unit multi-family structure not part of a larger common development or sale;**
- (c) Managed open space associated with parks, golf courses, cemeteries, and other similar land uses including associated paved trails and roadways needed for the function of the land use;**
- (d) Existing public right-of-way improvements including minor road widening increase in impervious area, and bridge crossings;**
- (e) Linear utility line installations;**
- (f) Land preparation for agricultural crops, orchards, woodlots, sod farms, and nursery operations;**
- (g) Land grading or leveling for erosion control under direction of the local soil conservation district;**
- (h) Land subdivisions for residential purposes with a minimum lot size of five acres;**

- (i) Developments with less than 1 acre of disturbance as long as the following requirements have been complied with:
1. Land uses and developments which increase runoff rate or volume shall control the discharge rate of runoff prior to its release to off-site land or the Municipal Separate Storm Sewer System (MS4).
 2. It is the responsibility of the property owner to not change or alter any drainage course, ditch, flood routing path or drainage system on the property that will cause increased runoff, or will damage or cause flooding to adjacent, upstream or downstream property owners.
 3. All stormwater drainage systems, including conveyances, within a development shall be designed to have capacity and depth, including sufficient invert elevations to permit future connections, to serve that total tributary area up to the 100-year storm frequency. The system for the upstream tributary area shall be extended through the development.
 4. All proposed developments with a runoff rate greater than that which the downstream system has capacity for, or will be designed for, will be required to control the rate of stormwater discharge.
 5. Any Site Improvement Plan shall be submitted to the City for review and approval prior to the commencement of work at any proposed development site.
 6. All information necessary shall be submitted to the City to determine how stormwater runoff should be controlled within the development prior to its release to downstream properties. The tributary area and the upstream watersheds should be determined using natural land divides unless man-made alterations are approved by the City's Engineer as the basis for watershed delineations.
- (j) Properly permitted environmental restoration projects including wetlands, stream restoration, and other related activities.
- (k) Developments within previously approved stormwater master plans.

971.03 DEFINITIONS & ACRONYMS

For the purpose of Chapter 971, Stormwater Management, the words and phrases shall be defined as follows, unless the context clearly indicates or requires a different meaning.

- (a) "Best Management Practice(s)" or "BMPs" means measures including structural and non-structural stormwater management and erosion control practices that are determined by the Ohio Environmental Protection Agency (OEPA) or Ohio Department of Natural Resources (ODNR) to be the most effective, practical means of preventing or reducing point source or non-point source pollution inputs to stormwater runoff and water bodies.
- (b) "Contamination" means the presence of or entry into a public water supply system, the municipal separate storm sewer system (MS4), or Waters of the United States of any substance which may be harmful to the public health and/or the quality of water.
- (c) "Development" means any action in preparation for construction activity which results in an alteration of either land or vegetation, including but not limited to clearing, grubbing, grading, filling, excavation or any other development operations and the construction of new facilities, buildings, parking areas, recreational areas, etc.
- (d) "Discharge" means any substance introduced to the Waters of the State or to surface runoff which is collected or channeled by the MS4 which does not lead to treatment works and/or the addition of any pollutant to the Waters of the State from a point source.
- (e) "Director" means the City of Grove City Public Service Director.

- (f) "Earth Disturbance" means any clearing, grading, excavating, filling, or other alteration of land surface where natural or man-made cover is destroyed in a manner that exposes the underlying soils.
- (g) "Erosion" means the general process whereby soil or surface material is moved by flowing surface or subsurface water or is worn away by the action of wind, water, ice or gravity.
- (h) "Impervious Area" means any constructed surface; including but not limited to, rooftops, sidewalks, roads, and parking lots; covered by impenetrable materials such as asphalt, concrete, brick, and stone. These materials seal surfaces, repel water and prevent precipitation and runoff from infiltrating soils.
- (i) "Larger Common Plan of Development or Sale" means a contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under one plan. For the purposes of determining the area of development, any development of land that was part of a larger common sale or development on or after April 1 of 2003, shall include the cumulative area of disturbance since April 1 of 2003 and meet the appropriate Ohio EPA requirements for that area.
- (j) "Managed Open Space" is defined as land that is regularly maintained via mowing, fertilizing, landscaping, and other actions that prevent the land from being in a natural state such as single-family residential lawns, golf courses, cemeteries, and other similar types of development.
- (k) "Pollution" means the alteration of the physical, thermal, chemical, or biological quality of, or the contamination of, any Water of the State or Water of the United States, that renders the water harmful, detrimental, or injurious to humans, animal life, vegetation, or property, or to the public health, safety, or welfare, or impairs the usefulness or the public enjoyment of the water for any lawful or reasonable purpose.
- (l) "Rainwater and Land Development Manual" means a manual describing construction and post-construction BMPs and associated specifications prepared by the Ohio Department of Natural Resources Division of Soil and Water Conservation. The compilation of technical standards and design specifications are methods of controlling construction related surface runoff, erosion and sedimentation. A copy of the manual may be obtained by contacting the Director of Public Service or the Ohio Department of Natural Resources, Division of Soil & Water Conservation.
- (m) "Sediment" means soils or other surface materials, including, but not limited to rock, sand, gravel and organic material or residue associated with or attached to the solid, that can be transported or deposited by the action of wind, water, ice or gravity as a product of erosion or sedimentation. (n) "Stormwater" means water runoff resulting from precipitation, snow melt, or irrigation runoff as defined in 40 Code of Federal Regulation 122.26(b)(13).
- (o) "Stormwater Master Plan" is a study prepared by a Professional Engineer to determine specific allowable discharge rates for a larger common development or watershed area. These types of studies are typically initiated due to downstream restrictions or other special circumstances that require a higher level of stormwater control within the study area.
- (p) "Stormwater Pollution Prevention Plan" or "SWP3" means a set of plans and specifications, prepared and approved in accordance with the specific requirements of the City's Engineer and the current OEPA, NPDES General Stormwater Permit. The SWP3 shall be certified by a Licensed Professional Engineer in the State of Ohio, and shall indicate the stormwater management strategy, including the specific measures and sequencing to be used to manage stormwater on a development site before, during and after construction and shows the details of any earth-disturbing activity on the site.

- (q) “Stream” means a system including permanent or seasonally flowing water, often with a defined channel (bed and bank), flood plain, and riparian ecosystem. To be classified as a stream, the waterway must meet certain requirements as defined by the OEPA and/or US Army Corps of Engineers and may then be classified as either an ephemeral, intermittent, or perennial stream.
- (r) “Structural BMP” is a constructed facility or measure to help protect receiving water quality and control stormwater quantity.
- (s) “Wetland” means an area that is inundated or saturated by surface or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated or hydric soil conditions as defined by the OEPA and/or US Army Corps of Engineers.

971.04 ADMINISTRATION

- (a) The Director of Public Service is authorized to administer, implement and enforce the provisions of this Chapter. The Director shall serve as the principal executive officer for stormwater management for the purposes of fulfilling the requirements of the OEPA’s NPDES Phase II Stormwater Program. Compliance with this Chapter will be determined by the Director and that department.
- (b) The Director of Public Service shall prepare, or cause to prepare, a storm water management plan, required as part of the NPDES Phase II storm water program in accordance with the requirements set forth by the Ohio Environmental Protection Agency, including all annual updates and amendments thereto.
- (c) Stormwater Management Plans shall be designed to meet the requirements of this Chapter and the Stormwater Design Manual and submitted to the City Engineer for review. Stormwater Management Plans shall be signed and sealed by an Ohio Professional Civil Engineer and reviewed and approved by the Director and the City’s Engineer.

971.05 WATER QUALITY REQUIREMENTS

Stormwater qualitative control must be implemented into sites in accordance with general and specific requirements outlined in the current OEPA’s general permit for stormwater discharges associated with construction activity. Water quality BMPs shall be designed according to the latest design standards as set forth by the Ohio Department of Natural Resources Rainwater and Land Development Manual. Supplemental information for specific BMPs is contained in the Stormwater Design Manual. In addition to the minimum standards set forth by the Ohio EPA, the following additional requirements of the City shall be required.

Dry basins as defined by the ODNR Rainwater Manual and OEPA are not permitted as a water quality BMP within the City unless otherwise approved by the Director of Public Service or designee.

971.06 STORM SEWER, OPEN CHANNEL & CULVERT DESIGN, AND PAVEMENT SPREAD

These stormwater conveyance features shall be designed per the requirements as outlined within the City of Grove City Stormwater Design Manual.

971.07 OPERATION AND MAINTENANCE OF STORMWATER FACILITIES.

- (a) For all sites over one acre with proposed water quality and quantity BMPs, all structural and non-structural BMPs shall be maintained in compliance with a stand-alone Operation and Maintenance Plan meeting the minimum requirements of the latest version of the City Stormwater Design Manual.

- (b) At a minimum, the Operation and Maintenance Plan shall include an Operation and Maintenance Agreement signed by the owner/developer and a requirement for annual inspection reports filed on forms provided by the City and conducted by a licensed Ohio Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), or Certified Professional in Storm Water Quality (CPSWQ).
- (c) The Operation and Maintenance Plan shall be submitted by the owner/developer to the City for review and be approved prior to the commencement of earth disturbing activities.

971.08 EROSION AND SEDIMENT CONTROL

- (a) The owner/developer shall prepare a SWP3 in accordance with the general and specific requirements outlined in the OEPA's permit for stormwater discharges associated with construction activity or its subsequent OEPA-issued revision. The SWP3 shall include erosion and sediment structural and non-structural BMPs to address the management of construction site stormwater runoff throughout earth disturbing activities. The SWP3 shall be submitted to the City for review and must be approved prior to the commencement of earth disturbing activities. A copy of the OEPA Notice of Intent (NOI) submission shall be made available to the City.
- (b) A copy of the approved SWP3 shall be maintained onsite in a location easily accessible by the City at all times during earth disturbing activities. The owner/developer is required to modify the SWP3 as necessary during earth disturbing activities to appropriately manage the construction site stormwater runoff during the various phases of construction. The SWP3 required to be kept on-site must be modified and revised to reflect the installed BMPs at all times.
- (c) It shall be the responsibility of the owner/developer to provide notification to the City 48-hours prior to commencement of initial site earth disturbance. No construction activity such as grading, cutting, or filling shall be commenced until erosion and sedimentation control devices have been installed to the satisfaction of the City.
- (d) No person shall cause or allow earth-disturbing activities on a development area except in compliance with the standards set out in this regulation and the applicable items below:
 - (1) A SWP3 shall be approved prior to any earth disturbing activities on development areas, including those development areas being a part of a larger common plan of development or sale. The person proposing such earth disturbing activities shall develop and submit for approval a plan, as part of the final site improvement plans, containing erosion and sediment pollution control practices so that compliance with other provisions of this regulation shall be achieved during and after development. Such a plan shall address specific requirements contained within this regulation.
 - (2) The SWP3 must contain a description of the controls appropriate for each construction operation covered by this regulation and the operator(s) must implement such controls. The terms must clearly describe for each major construction activity appropriate control measures and the general timing (or sequence) during the construction process that the measures will be implemented; and which contractor is responsible for implementation (e.g., contractor A will clear land and install perimeter controls and contractor B will maintain perimeter controls until final stabilization). The erosion and sediment control practices used to satisfy the conditions of this regulation shall meet the standards and specifications in the current edition of Ohio's Rainwater and Land Development manual or other standards acceptable to the City.

971.99 PENALTY

Whoever violates any provision of this Chapter or fails to comply therewith or with any order issued by any public official pursuant to the provisions hereof, shall:

- (a) Be fined not more than two hundred fifty dollars (\$250.00) or imprisoned for not more than thirty days, or both for each offense. A separate offense shall be deemed committed each day during or on which any offense occurs or continues; and/or**
- (b) Be liable to the City or any person or property owner damaged thereby for any and all expenses, penalties, fines, loss or damage occasioned by reason of any violation of this chapter and the damaged parties' efforts to eliminate or correct such violation.**

CHAPTER 973

Illicit Discharge and Obstruction of the Municipal Separate Storm Sewer System

<u>973.01</u>	<u>Definitions & Acronyms</u>
<u>973.02</u>	<u>Purpose</u>
<u>973.00</u>	<u>Penalty</u>

CROSS REFERENCES

973.01 DEFINITIONS & ACRONYMS

- (a) "Facility" means any operation, including construction sites, required by the Federal Clean Water Act to have a permit to discharge stormwater associated with activities subject to NPDES Permits as defined in 40 CFR, Part 122.
- (b) "Municipal Separate Storm Sewer System" or "MS4" as defined at 40 CFR 122.26(b)(8), means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):
 - (1) Owned or operated by a State, City, Town, County, District, Association, Political Subdivision or other public body (created by or pursuant to State law) including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity;
 - (2) Designed or used for collecting or conveying stormwater;
 - (3) Which is not a combined sewer; and
 - (4) Which is not part of a Publicly Owned Treatment Works (POTW) as defined in 40 CFR 122.2.
- (c) "National Pollutant Discharge Elimination System" or "NPDES" means a national program under the Clean Water Act that regulates stormwater discharges from point sources and non-point sources.
- (d) "NPDES Permit" means a permit issued by the OEPA that authorizes stormwater discharges to Waters of the United States, whether the permit is applicable on an individual, group, or general area-wide basis.

973.02 PURPOSE

- (a) No person, corporation or other entity shall introduce, or cause to be introduced, into the municipal separate storm sewer system (MS4) any discharge that is not composed entirely of storm water.
- (b) It is an affirmative defense to any prosecution brought under this section if the discharge is composed entirely of one or more of the following:
 - (1) A discharge authorized by, and in full compliance with, and NPDES permit, other than the NPDES permit for discharges from the MS4;
 - (2) A discharge or flow resulting from fire fighting by the Fire Department;
 - (3) A discharge of flow of fire protection water that does not contain oil or hazardous substances or materials that the Fire Code requires to be contained and treated prior to discharge, in which case treatment adequate to remove harmful quantities of pollutants must have occurred prior to discharge;
 - (4) Agricultural stormwater runoff;
 - (5) A discharge or flow from water line flushing or disinfection that contains no harmful quantity of total residual chlorine or any other chemical used in line disinfection;

- (6) A discharge or flow from lawn watering or landscape irrigation;
- (7) A discharge or flow from a diverted stream flow or natural spring;
- (8) A discharge of flow from uncontaminated pumped ground water or rising groundwater;
- (9) Uncontaminated groundwater infiltration, as defined at 40 C.F.R. 35.2005(20) to the MS4;
- (10) Uncontaminated discharge or flows from a foundation drain, crawl space pump, or footing drain;
- (11) A discharge or flow from a potable water source not containing any harmful substance or material from the cleaning or draining of a storage tank or other container;
- (12) A discharge or flow from air conditioning condensation that is unmixed with water from a cooling tower, emissions scrubber, emissions filter, or any other source of pollutant;
- (13) A discharge or flow from individual residential car washing;
- (14) A discharge of flow from a riparian habitat or wetland;
- (15) A discharge or flow from cold water, or hot water with prior approval of the Director of Public Service, used in street washing or cosmetic cleaning that is not contaminated with: any soap, detergent, degreaser, solvent, emulsifier, dispersant, or any other harmful cleaning substance;
- (16) Drainage from a private residential swimming pool or hot tub/spa containing no harmful quantities of chlorine or other chemicals. Drainage from swimming pool filter backwash is prohibited; or
- (17) A discharge or flow of uncontaminated storm water pumped from an excavation or existing pond.
- (c) The affirmative defenses listed in subsection (b) shall not apply when the discharger has continued after the expiration of the time given in the written notice to cease the discharge has been provided by the Director of Public Service.

973.99 PENALTY

Whoever violates any provision of this Chapter or fails to comply therewith or with any order issued by any public official pursuant to the provisions hereof, shall:

- (a) Be fined not more than two hundred fifty dollars (\$250.00) or imprisoned for not more than thirty days, or both for each offense. A separate offense shall be deemed committed each day during or on which any offense occurs or continues; and/or
- (b) Be liable to the City or any person or property owner damaged thereby for any and all expenses, penalties, fines, loss or damage occasioned by reason of any violation of this chapter and the damaged parties' efforts to eliminate or correct such violation.

C-56-15
EXHIBIT "B"
STORMWATER DESIGN MANUAL



June 2015

City of Grove City



Table of Contents

1.0	INTRODUCTION	1-1
	1.1 Administration.....	1-1
	1.2 Drainage Policy	1-1
2.0	STORMWATER SYSTEM DESIGN CRITERIA	2-1
	2.1 Design Storm Criteria	2-1
	2.2 Peak Discharge Calculation Methodology	2-1
	2.3 Pavement Spread.....	2-3
	2.4 Roadway Culverts	2-3
	2.5 Storm Sewers.....	2-5
3.0	PEAK FLOW RATE CONTROL FACILITIES CALCULATION REQUIREMENTS	3-1
	3.1 Runoff Curve Number	3-1
	3.2 Directly Connected Impervious Area	3-2
	3.3 Rainfall Depths and Rainfall Distributions	3-3
	3.4 Low Impact Design.....	3-3
	3.5 Time of Concentration Calculation	3-3
	3.5.1 Overland Sheet Flow ($T_{c \text{ sheet}}$).....	3-4
	3.5.2 Shallow Concentrated Flow ($T_{c \text{ shallow}}$).....	3-5
	3.5.3 Open Channel Flow ($T_{c \text{ channel}}$)	3-6
4.0	WATER QUALITY CONTROL CRITERIA	4-1
	4.1 Ohio EPA Water Quality Permit Supplemental Information	4-1
	4.1.1 Water Quality Volume (WQv):.....	4-1
	4.1.2 Approval for use of proprietary BMPs	4-3
5.0	WATER QUALITY AND DETENTION SYSTEM DESIGN CRITERIA.....	5-1
	5.1 Parking Lot Storage.....	5-1
	5.2 Water Quality Basins (Wet or Wetland).....	5-2
	5.3 Bioretention Basins.....	5-2
	5.3.1 Mulch	5-2
	5.3.2 Bioretention Soil	5-3
	5.4 Infiltration Trenches	5-4
	5.5 Stormwater Treatment Wetlands.....	5-4
	5.6 Sand Filters	5-5
	5.7 Permeable Pavement.....	5-5
	5.7.1 Pervious Pavement Stone Aggregate	5-6
	5.7.2 Pervious Interlocking Concrete Pavers.....	5-9
	5.7.3 Pervious Clay Brick Pavers	5-10

5.7.4	Pervious Concrete.....	5-11
5.7.5	Pervious Asphalt	5-12
5.8	Underground Storage	5-13
6.0	WET BASIN DESIGN STANDARDS	6-1
6.1	Existing Wet Basin Investigation Requirements	6-1
6.2	Dam Safety Classifications	6-1
6.3	Outlet/Inlet Treatment.....	6-1
6.4	Basin Grading	6-4
6.5	Geotechnical Considerations.....	6-4
6.6	Shoreline Protection	6-5
6.7	Wet Basin Amenities	6-5
6.7.1	Observation/Fishing Platform	6-5
6.7.2	Walkway.....	6-5
6.7.3	Landscape	6-5
6.7.4	Fountains and Aerators.....	6-5
6.7.5	Depth of Water Surface Elevation	6-5
6.7.6	Trash Racks	6-6
6.7.7	Wet Basin Vegetation	6-6
6.8	Wet Basin Maintenance	6-6
6.8.1	Treatment of Algae.....	6-6
6.8.2	Goose Control	6-67
7.0	DRAINAGE EASEMENTS	7-1
8.0	STREAM CORRIDOR PROTECTION ZONE REQUIREMENTS	8-1
8.1	SCPZ Delineation.....	8-1
8.1.1	Alternative SCPZ Delineation Method.....	8-1
8.2	Non-Conforming Structures or Uses	8-2
8.3	Permitted Uses.....	8-3
8.4	Prohibited Uses	8-4
8.5	Construction Requirements	8-5
8.6	Mitigation of SCPZ Disturbances	8-5
8.7	Exceptions.....	8-7
8.8	Flood Prone Area Stabilization	8-7
9.0	OPERATION AND MAINTENANCE PLANS.....	9-1
10.0	EROSION AND SEDIMENT CONTROL	10-1
11.0	GLOSSARY	G-1

Tables

Table 2-1: Design Storm Criteria	2-1
Table 2 2: Rational Method Intensity Formula Coefficients	2-2
Table 2-3: Pavement Spread Standards for the Design Storm	2-3
Table 2 4: Rational Method Runoff Coefficients	2-7
Table 3-1: Critical Storm Determination	3-1
Table 3-2: NRCS Runoff Curve Numbers	3-2
Table 3-3: 12-hour Rainfall Depths	3-3
Table 3-4: Manning's Roughness Coefficient (n) for Overland or Sheet Flow	3-4
Table 3-5: Intercept Coefficient for Shallow Concentrated Flow	3-5
Table 3-6: Values of Manning's Coefficient (n) for Open Channel Flow	3-6
Table 4-1: Water Quality Volume Runoff Coefficients Based on Land Use	4-2
Table 4-2: Target Draw Down (Drain) Times for Water Quality BMPs	4-3
Table 5-1: Water Quality and Peak Flow Rate Control Best Management Practices Applicability	5-1
Table 5-2: Approved Wetland Vegetation List	5-5
Table 5-3: Aggregate Compaction Allowable Deflection	5-7
Table 8-1: Species of Plants and Shrubs Recommended for Stabilizing Flood Prone Areas....	8-8

Figures

Figure 6-1: Standard Pond Grading Section	6-7
Figure 6-2: Submerged Outlet and Embankment Detail	6-8
Figure 6-3: Trash Rack Detail.....	6-9
Figure 6-4: Stone Facing Detail for Headwalls and Endwalls	6-10

STORMWATER DESIGN MANUAL

1.0 INTRODUCTION

This Manual establishes design criteria for stormwater facilities within the City of Grove City in conjunction with City Code, Section's 971 and 973, Part 11, Title 1, Section 1101 and the Ohio Environmental Protection Agency's (OEPA) NPDES Phase II Stormwater Program. While adherence to this Manual will not stop flooding or prevent all damage caused by flooding, it does establish a basis for design which will:

- a. Minimize the damage and inconvenience of flooding.
- b. Provide drainage systems which continue to provide benefit over the long term.
- c. Minimize the expense of maintaining the drainage facilities within the City.
- d. Reduce non-point-source pollution.
- e. Minimize new impacts on engineered and natural drainage system.
- f. Prevent or reduce impacts to stream and river ecosystems.

1.1 Administration

The Director of Public Service is authorized to administer, implement and enforce the provisions of this Manual. The Director shall serve as the principle executive officer for stormwater management for the purposes of fulfilling the requirements of the OEPA's NPDES Phase II Stormwater Program. Compliance with this Manual will be determined by the Director and his/her office.

Stormwater management facilities shall be designed to meet the requirements of this Manual and submitted to the City Engineer for review. Stormwater management facilities shall be included with the construction plans and shall be signed and sealed by an Ohio Professional Civil Engineer. The City shall not approve plans for any site improvement over which it has jurisdiction without documentation from the Director and the City Engineer, that such plan of improvement has been designed to be in compliance with the design requirements herein.

1.2 Drainage Policy

This drainage policy, control guidelines and criteria do not provide solutions to all drainage problems, nor is the Engineer restricted to these design criteria or procedures exclusively. Although the policies as stated will hold true for most development work, the City realizes that there may be individual projects involving special or unusual drainage design problems that should be reviewed prior to completing the requisite site improvements. Exceptions may be granted to the policies and criteria in such cases when engineering study(s) justify modification.

The general policy of the City shall be as follows:

- a. Land uses and developments which increase runoff rate or volume shall control the discharge rate of runoff prior to its release to off-site land or the Municipal Separate Storm Sewer System (MS4).
- b. It is the responsibility of the property owner to not change or alter any drainage course, ditch, flood routing path or drainage system on his/her property that will cause increased runoff, or will damage or cause flooding to adjacent, upstream or downstream property owners.
- c. All stormwater drainage systems, including conveyances, within a development shall be designed to have capacity and depth, including sufficient invert elevations to permit future connections, to serve that total tributary area up to the 100-year storm frequency. The system for the upstream tributary area shall be extended through the development.
- d. All proposed developments with a runoff rate greater than that which the downstream system has capacity for, or will be designed for, will be required to control the rate of stormwater discharge.
- e. Site improvement plans with supporting documentation shall be submitted to the City for review and approval prior to the commencement of work at any proposed development site.
 1. Supporting documentation shall be submitted to the City to determine how stormwater runoff should be controlled within the development prior to its release to downstream properties. The tributary area and the upstream watersheds should be determined using natural land divides unless man-made alterations are approved by the City's Engineer as the basis for watershed delineations.
- f. This Stormwater Design Manual applies to all land developments. The following exceptions from the Peak Flow Rate Controls are as follows:
 1. Single-family residential lot not part of a larger common development or sale.
 2. Two, three, or four unit multi-family structure not part of a larger common development or sale.
 3. Managed open space associated with parks, golf courses, cemeteries, and other similar land uses including associated paved trails and roadways needed for the function of the land use.
 4. Existing public right-of-way improvements including minor road widening increase in impervious area, and bridge crossings.
 5. Linear utility line installations.
 6. Land preparation for agricultural crops, orchards, woodlots, sod farms, and nursery operations.
 7. Land grading or leveling for erosion control under direction of the local soil conservation district.
 8. Land subdivisions for residential purposes with a minimum lot size of five acres.
 9. Developments with less than 1 acre of disturbance as long as the requirements of 1.2(a) through (f) have been complied with.
 10. Properly permitted environmental restoration projects including wetlands, stream restoration, and other related activities.
 11. Developments within previously approved Stormwater Master Plan.

2.0 STORMWATER SYSTEM DESIGN CRITERIA

2.1 Design Storm Criteria

The following table provides guidance on the design frequency for storm sewers, culverts, and pavement spread.

Table 2-1: Design Storm Criteria

	Collector/Secondary/ Arterial Streets	Residential/ Local/ Private Streets	Commercial, Industrial, Institutional and other Developments	Private Parking Lots
Storm Sewer Open Channel	5-year	2-year	2-year	2-year
Storm Sewer Hydraulic Grade	10-year	5-year	5-year	5-year
Pavement Spread	2-year	2-year	n/a	n/a
Roadway Ditch Design	10-year	5-year	5-year	5-year
Roadway Culverts (non-FEMA streams)	25-year	10-year	10-year	10-year
Roadway Culverts (FEMA streams)	100-year	100-year	100-year	100-year

2.2 Peak Discharge Calculation Methodology

The rational method ($Q = CIA$) may be used to determine peak discharge rates for storm sewers, culverts, pavement spread, and roadway ditch designs with individual tributary areas generally less than 10 acres using the following formula to determine rainfall intensity.

$$\text{Intensity} = X / (Y + T)^Z \quad (\text{see Table 2-2 for coefficients})$$

Where T is equal to the time of concentration in minutes

Alternative methods for determining peak flow rates include the National Resources Conservation Service (NRCS) TR-55 methodology and the Green-Ampt Method.

For larger watershed and floodplain studies, the United States Geological Survey (USGS) rural regression equation may be used, specifically Water Resources Investigation Report 89-4126¹ according to the following formulas:

$$Q_2 = (56.1)(\text{CONTDA})^{0.782}(\text{SLOPE})^{0.172}(\text{STORAGE})^{-0.297}$$

$$Q_5 = (84.5)(\text{CONTDA})^{0.769}(\text{SLOPE})^{0.221}(\text{STORAGE})^{-0.322}$$

$$Q_{10} = (104)(\text{CONTDA})^{0.764}(\text{SLOPE})^{0.244}(\text{STORAGE})^{-0.335}$$

$$Q_{25} = (129)(\text{CONTDA})^{0.760}(\text{SLOPE})^{0.264}(\text{STORAGE})^{-0.347}$$

$$Q_{50} = (148)(\text{CONTDA})^{0.757}(\text{SLOPE})^{0.276}(\text{STORAGE})^{-0.355}$$

$$Q_{100} = (167)(\text{CONTDA})^{0.756}(\text{SLOPE})^{0.285}(\text{STORAGE})^{-0.363}$$

Where CONTDA is the contributing drainage area in square miles, SLOPE in the main channel slope in feet/mile; and STORAGE is the storage area in percent. Main channel slope (SLOPE), in feet per mile; computed as the difference in elevation at points 10 and 85 percent of the distance along the main channel from a specified location on the channel to the topographic divide, divided by the channel distance between the two points.

Table 2-2: Rational Method Intensity Formula Coefficients

Storm Frequency (years)	X	Y	Z
2	54.64	10.04	0.88
5	45.04	7.91	0.78
10	48.25	7.38	0.78
25	27.24	3.24	0.59
100	24.83	1.74	0.51

¹ US Geological Survey. (1990). *Techniques for Estimating Flood-Peak Discharges of Rural, Unregulated Streams in Ohio: Water-Resources Investigations Report 89-4126* by G.F. Koltun and J.W. Roberts. Ohio Department of Transportation.

2.3 Pavement Spread

Table 2-3 Pavement Spread Standards for the Design Storm

Street Classification	Maximum Encroachment from Face of Curb	Maximum Inlet Spacing
Residential/Local Streets	14 feet	300 Feet
Collector, Secondary, or Arterial Street	10 feet	200 Feet

- a. Detailed calculations for spread are not required if the area to the inlet does not exceed 0.50 acres of area for local and 0.20 acres of area for collector per inlet.

2.4 Roadway Culverts

- a. Design Procedure: The culvert design procedure recommended for use is Hydraulic Design Series No. 5, U.S. Department of Transportation.
- b. Preferred Construction: Single span culverts, including concrete box and slab top are preferred. Multiple cell pipe culverts are discouraged, except when they are the only structures that will meet the physical requirements introduced by rigid headwater controls, will they be acceptable.
- c. Culvert/Storm Sewer Pipe Material: The installation of all sewer pipes on this project shall be in accordance with Section 901 of the CMSC, unless specifically indicated otherwise, with materials conforming to the appropriate referenced section of CMSC or ODOT CMS. The following pipe materials will be permitted for use for public sewers.

Outside of Pavement Limits

Flexible Pipe according to the following specifications:

- Polyvinyl Chloride (PVC) pipe ≤ 15 " diameter with minimum of 4 feet coverage and a maximum of 15 feet coverage shall conform to CMSC 720.08 and/or ODOT CMS 707.45.
- High Density Polyethylene (HDPE) pipe between 12" and 36" diameter conforming to CMSC 720.12 and/or ODOT CMS 707.33 with a maximum 20 feet coverage and a minimum 2 feet coverage.
- Polypropylene (PP) pipe between 12" and 36" diameter conforming to ODOT CMS 707.65 or 707.69 and/or COC CMS 720.13 or 720.14 with a maximum 20 feet coverage and a minimum 2 feet coverage.

Mandrel testing shall be performed on all flexible pipe per CMSC 901.21.

Rigid Pipe will be required for all sewers greater than 36" diameter (Reinforced Concrete Pipe CMSC 706.02, Concrete Box CMSC 706.05) and is also permitted on all sewers between 12" and 36" diameter.

Within Pavement Limits

Flexible Pipe according to the following specifications:

- Flexible pipe installation which conforms to ODOT CMS 605 may be used for 4" and 6" underdrain tiles.
- High Density Polyethylene (HDPE) pipe $\leq 36"$ diameter conforming to CMSC 720.12 and/or ODOT CMS 707.33 with a maximum 20 feet coverage and a minimum 2 feet coverage.
- Polypropylene (PP) pipe between $\leq 36"$ diameter conforming to ODOT CMS 707.65 and/or COC CMS 720.13 with a maximum 20 feet coverage and a minimum 2 feet coverage.

Mandrel testing shall be performed on all flexible pipe (except underdrains) per CMSC 901.21.

Rigid Pipe will be required for all sewers greater than 36" (Reinforced Concrete Pipe 706.02. Concrete Box 706.05) and is also permitted for use on 12" to 36" sewers.

- d. Inlet Elevation: The flowline elevation at the culvert inlet should be set deep enough to provide an adequate outlet for future storm sewer improvements upstream.
- e. Allowable Headwater shall not exceed any of the following controls for the design storm:
 1. 24 inches below the near, low edge of pavement for drainage areas of 1000 acres or more.
 2. 12 inches below the near, low edge of pavement for drainage areas of 1000 acres or less.
 3. 4 feet above inlet crown in deep ravine.
 4. 1 foot below near edge of pavement for bicycle pathways.
 5. Property Damage – 100-year frequency headwater plus 1 foot, shall not exceed any existing or proposed building first floor elevation.
- f. Maximum Allowable Outlet Velocity shall be:
 1. Turf Channel 5 feet per second.
 2. Rock Protection 18 feet per second.

Notes:

 - a. When the outlet velocity exceeds 18 feet per second, a stilling basin or other such energy dissipation structure shall be used.
 - b. The downstream channel shall have the ability to handle the flow satisfactorily.
- g. Structural Design Criteria for culverts shall be the same as that required by the Ohio Department of Transportation (ODOT).
- h. Emergency Flood Routing shall be capable of routing the 100-year storm over or around the culvert without creating a hazard or causing potential for erosion or personal property damage. Adequate scour protection shall be included in the design.
- i. End Protection should be as follows:
 1. 12-inch through 36-inch culverts – full-height headwall.
 2. 42-inch through 84-inch culverts – full height headwall with flared wings.
 3. Other special type headwalls shall be approved before use.

2.5 Storm Sewers

The criteria for designing storm sewer systems are listed below:

- a. All Storm Sewer Systems shall be designed using Manning's Equation or an EPA SWMM based modeling platform where the design storm flow doesn't exceed the flowing full capacity or hydraulic grade line does not exceed the crown of the pipe. For the Manning's Equation use the following formula:

$$Q = \frac{1.49}{n} R^{2/3} S^{1/2} A$$

and

$$Q = VA$$

Where:

Q = Rate of discharge (cfs)

A = Area of cross-section of flow (sq.ft.)

V = Mean velocity of flow (fps)

n = Manning's roughness coefficient

R = A/wp = Hydraulic radius (ft)

S = Slope of pipe or hydraulic grade line if surcharged (ft/ft)

wp = Wetted perimeter (ft)

- b. Hydraulic Gradient Requirement shall be:

1. For design storm, shall not exceed window or grate elevation for an inlet or catch basin.
2. Grade line is based on tailwater or 0.8 D at outlet (whichever is greater) or other critical points within the system.

- c. Design Flow Determination:

1. Areas under 10 acres use Rational Method $Q = CiA$.
2. Areas over 10 acres use Technical Release 55.

- d. Minimum time of Concentration: 5 minutes.

- e. Runoff Coefficient based on Table 2-4.

- f. Manning's "n" Value based on pipe material.

- g. Off-site Area: The sewer shall be deep enough and sized accordingly to receive the flow from all its sources within the watershed.

- h. Solids: The gradient of the sewer shall be sufficient to avoid deposition of solids by having a minimum full flow open channel velocity of 3.0 feet/second.

- i. Material: See Section 2.4(C).

- j. Manholes: The main conduit, if over 24 inches in diameter, will be required to be separated from all curb and gutter inlets unless a special design is approved by the Director of Public Service. Furthermore, the main conduit will be required to be separated

from all deep curb and gutter inlets, which have a depth greater than 6.5 feet from invert to the top-of-casting elevation.

- k. Flow Line: Unless otherwise approved by the Director of Public Service, the flow line of pipes should be set such that the crown of pipes, at junctions, are at the same elevation; if the outlet elevation permits, the crown of the outlet pipe may be lower. The flowline elevations of sewers should be set to avoid using concrete encasement.
- l. Specifications: The current City of Columbus and Ohio Department of Transportation (ODOT) "Construction and Material Specifications" (CMSC and ODOT CMS respectively) together with the requirements of the City of Grove City, Ohio, including all supplements thereto shall govern all materials and workmanship involved in the improvements. Please refer to the City of Grove City website Public Service Department Forms section for storm water improvement general notes.
- m. Submerged pipe inlets to basins:

The permanent submergence of a storm sewer at the inlet to a basin is discouraged and shall not be permitted to a depth greater than the ½ the pipe diameter or a depth of two-feet at the outlet, whichever is less. When submergence is allowed upon approval by the Director of Public Service, special requirements shall include, but may not be limited to:

 - 1. Submergence "zone" shall not extend beneath pavement.
 - 2. Submergence "zone" shall not extend beyond the first manhole.
 - 3. "O-ring" sealed gasketed pipe joints shall be installed along the storm sewer for the full length of the submergence zone.
 - 4. Anti- seepage collars shall be installed in the submergence "zone".
- n. End protection should be as follows:
 - 1. 12-inch through 36-inch culverts – full-height headwall. If the outlet is not located within a channel bank or within the direct flow path of crossing floodwaters, half-headwalls at the outlet may be used if approved by the Director of Public Service
 - 2. 42-inch through 84-inch culverts – full height headwall with flared wings.
 - 3. Other special type headwalls shall be approved before use.
- o. Minimum Cover to subgrade and Maximum Cover over pipe:

See Section 2.4(C).
- p. Encasement: See Section 2.4(C).
- q. Maximum Length between access structures:
 - 1. Pipes under 60 inch – 350 feet.
 - 2. Pipes 60 inch and over 500 feet.

Table 2-4: Rational Method Runoff Coefficients²

Hydrologic Soil Group	A			B			C			D		
Storm Recurrence Interval (year)	2-5	10	100	2-5	10	100	2-5	10	100	2-5	10	100
Land Use Or Surface Characteristics												
Business												
A. Commercial Area	.75	.80	.95	.80	.85	.95	.80	.85	.95	.85	.90	.95
B. Neighborhood Area	.50	.55	.65	.55	.60	.70	.60	.65	.75	.65	.70	.80
Residential												
A. Single Family	.25	.25	.30	.30	.35	.40	.40	.45	.50	.45	.50	.55
B. Multi-Unit (Detached)	.35	.40	.45	.40	.45	.50	.45	.50	.55	.50	.55	.65
C. Multi-Unit (Attached)	.45	.50	.55	.50	.55	.65	.55	.60	.70	.60	.65	.75
D. ½ Acre Lot Or Larger	.20	.20	.25	.25	.25	.30	.35	.40	.45	.40	.45	.50
E. Apartments	.50	.55	.60	.55	.60	.70	.60	.65	.75	.65	.70	.80
Industrial												
A. Light Areas	.55	.60	.70	.60	.65	.75	.65	.70	.80	.70	.75	.90
B. Heavy Areas	.75	.80	.95	.80	.85	.90	.80	.85	.95	.80	.85	.95
Parks, Cemeteries Playgrounds	.10	.10	.15	.20	.20	.25	.30	.35	.40	.35	.40	.45
Schools	.30	.35	.40	.40	.45	.50	.45	.50	.55	.50	.55	.65
Railroad Yard Areas	.20	.20	.25	.30	.35	.40	.40	.45	.45	.45	.50	.55
Streets												
A. Paved	.85	.90	.95	.85	.90	.95	.85	.90	.95	.85	.90	.95
B. Gravel	.25	.25	.30	.35	.40	.45	.40	.45	.50	.40	.45	.50
Drives, Walks, & Roofs	.85	.90	.95	.85	.90	.95	.85	.90	.95	.85	.90	.95
Lawns												
A. 50% - 75% Grass (Fair Condition)	.10	.10	.15	.20	.20	.25	.30	.35	.40	.30	.35	.40
B. 75% Or More Grass (Good Condition)	.05	.05	.10	.15	.15	.20	.25	.25	.30	.30	.35	.40
Undeveloped Surface (By Slope)												
A. Flat (0-1%)	0.04-0.09			0.07-0.12			0.11-0.16			0.15-0.20		
B. Average (2-6%)	0.09-0.14			0.12-0.17			0.16-0.21			0.20-0.28		
C. Steep	0.13-0.18			0.18-0.24			0.23-0.31			0.28-0.38		

² Iowa Stormwater Management Manual, Iowa State University, 2009. Available from <http://www.intrans.iastate.edu/pubs/stormwater/index.cfm>

3.0 PEAK FLOW RATE CONTROL FACILITIES CALCULATION REQUIREMENTS

This section provides guidance on the implementation of the peak flow control requirements consistent with the critical storm method. The NRCS runoff curve number (RCN) method is the preferred method to determine runoff volumes and peak flow rates to stormwater control facilities, although the Green-Ampt method coupled with an EPA SWMM modeling engine may be used with permission by the Director Public Service for special situations. Level pool routing calculations shall be performed using TR-20, EPA SWMM, or HEC-1 based modeling platforms.

The peak rate of runoff from an area after development shall not exceed the peak rate of runoff from the same area before development for the 1, 2, 5, 10, 25, 50, and 100-year return frequency storms. For sites that increase the volume of runoff, determine the percent increase in runoff for the 1-year, 24-hour storm using a rainfall depth of 2.20 inches and determine the critical storm from the following table. The critical storm shall be detained to the 1-year predeveloped rate.

Table 3:1 Critical Storm Determination

Percent Increase in Runoff Volume	Critical Storm
0-10	1-year
10-20	2-year
20-50	5-year
50-100	10-year
100-250	25-year
250-500	50-year
500+	100-year

3.1 Runoff Curve Number

- a. For the purpose of determining site pre-development conditions for previously undeveloped land a maximum runoff curve number of 77 shall be used. Areas with land use and soil types that correlate to a runoff curve number less than 77 shall use the lower runoff curve number for all predeveloped calculations. For redevelopment sites with no previously approved peak flow rate controls, a predeveloped runoff curve number equivalent to the existing conditions of the site may be used. The existing conditions may be determined using historical aerial photos dated 2003 or later.
- b. Hydrologic Soil Group (HSG) classifications are based on undisturbed, naturally occurring soils. During construction, soils are dramatically changed by the removal of topsoil, compaction of the underlying soil profile, and removal of vegetation. The runoff potential of these soils increase; therefore, for post-developed conditions the hydrologic soil group may require adjustment. The Ohio Department of Natural Resources has created a chart, Appendix 9 of the Rainwater Manual, for adjusting the hydrologic soil group following construction. For the disturbance area of a project, the hydrologic soil group shall follow the guidelines set forth by the Rainwater Manual.

Table 3-2: NRCS Runoff Curve Numbers³

Description of Land Use	Hydrologic Soil Group			
	A	B	C	D
Paved parking lots, roofs, driveways	98	98	98	98
Streets and Roads:				
Paved with curbs and storm sewers	98	98	98	98
Gravel	76	85	89	91
Dirt	72	82	87	89
Cultivated (Agricultural Crop) Land:				
With or without conservation treatment (terraces, contours)	62	71	78	81
Pasture or Range Land:				
Poor (<50% ground cover or heavily grazed)	68	79	86	89
Good (50-75% ground cover; not heavily grazed)	39	61	74	80
Meadow (grass, no grazing, mowed for hay)	30	58	71	78
Brush (good, >75% ground cover)	30	48	65	73
Woods and Forests:				
Poor (small trees/brush destroyed by over-grazing or burning)	45	66	77	83
Fair (grazing but not burned; some brush)	36	60	73	79
Good (no grazing; brush covers ground)	30	55	70	77
Open Spaces (lawns, parks, golf courses, cemeteries, etc.):				
Fair (grass covers 50-75% of area)	49	69	79	84
Good (grass covers >75% of area)	39	61	74	80
Commercial and Business Districts (85% impervious)	89	92	94	95
Industrial Districts (72% impervious)	81	88	91	93
Residential Areas:				
1/8 Acre lots, about 65% impervious	77	85	90	92
1/4 Acre lots, about 38% impervious	61	75	83	87
1/2 Acre lots, about 25% impervious	54	70	80	85
1 Acre lots, about 20% impervious	51	68	79	84

3.2 Directly Connected Impervious Area

The runoff volume and peak flow rates for all directly connected impervious areas should be calculated independently of other land uses and disconnected impervious area. Sites with disconnected impervious areas may be permitted to use a composite runoff curve number to determine runoff volumes and peak flow rates. Directly connected impervious areas are those impervious areas that are hydraulically connected to the conveyance system (i.e. streets with curbs, catch basins, storm drains, etc.) and thence to the basin outlet point (i.e. a retention/detention pond, existing storm sewer/ditch system, natural water body, etc.) without flowing over pervious areas. For example, roof drains that are piped to the back of curb, which then flows to a curb and gutter inlet, which conveys the runoff to a storm sewer system that conveys the runoff to a wet detention basin is considered a directly connected impervious area.

³ Chow, Ven Te (1988). *Open Channel Hydraulics*, McGraw Hill, Inc.

3.3 Rainfall Depths and Rainfall Distributions

For peak flow rate analysis, the 12-hour rainfall depths, shown on Table 3-3 from National Oceanic and Atmospheric Administration Atlas 14, Sullivant Avenue Station 33-1781, shall be used.

Table 3-3: 12-hour Rainfall Depths

Storm Event (yr)	Rainfall Depth (in)
1	1.88
2	2.25
5	2.79
10	3.24
25	3.88
50	4.42
100	5.00

The Midwest Climate Center Bulletin 71, Rainfall Frequency Atlas of the Midwest, shall be used as the reference document for selection of a rainfall distribution. For quantitative controls the Bulletin 71, 2nd Quartile, 0-10 square mile, 50% curve, and 12-hour duration storm shall be used. If required for water quality peak flow rate calculations, the 1st Quartile, 0-10 square mile, 50% curve, and 2-hour duration storm shall be used and the runoff curve number shall be calibrated to match or exceed the Ohio EPA water quality volume.

3.4 Low Impact Design

The City supports the use of Low Impact Development (LID) principles consistent with the "Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects under Section 438 of the Energy Independence and Security Act", December 2009. Two specific options are available in lieu of the peak flow requirements of this section:

- a. Prevent the off-site discharge of the precipitation from all rainfall events less than or equal to the 95th percentile rainfall event which is 1.17 inches for the City of Grove City. This is accomplished by the use of practices that infiltrate, evapotranspire, and/or harvest and reuse rainwater.
- b. By using continuous simulation modeling techniques, identify the pre-development condition of the site and quantify the post-development runoff volume and peak flow discharges that are equivalent to pre-development conditions. The post-construction rate, volume, and duration of runoff shall not exceed pre-development conditions. The use of flow duration curves is acceptable.

3.5 Time of Concentration Calculation

Use the following formulas to determine predeveloped and post-developed time of concentration with no more than 100' permissible for the overland sheet flow calculation for

both existing and proposed conditions unless it is a paved surface. Time of concentration calculations should be calculated independently for directly connected impervious areas where applicable with a minimum time of concentration of 5 minutes. The time of concentration may include up to three components, overland sheet flow, shallow concentrated flow, and channel flow.

3.5.1 Overland Sheet Flow ($T_{c \text{ sheet}}$)

Overland sheet flow is the shallow mass of runoff over plane surfaces (e.g. parking lots, lawns). Overland sheet flow usually occurs over a short distance at the hind end of a drainage area. NRCS recommends limiting overland sheet flow to 100 feet for unpaved areas. For paved surfaces, the maximum is 300 feet. Use the following equation to estimate $T_{c \text{ sheet}}$:

$$T_{c \text{ sheet}} = 0.014 \left(\frac{nL}{\sqrt{s}} \right)^{0.75} \quad 4$$

Where:

n = Manning's roughness coefficient for overland flow (see Table 3-4), based on very shallow flow depth of up to 0.10 feet

L = Overland flow path length, ft

s = Slope of overland flow path, ft/ft

Table 3-4: Manning's Roughness Coefficient (n) for Overland or Sheet Flow

Surface description	N
Asphalt and concrete: New Existing	0.016
Cement rubble surface	0.024
Fallow (no residue)	0.05
Cultivated Soils: Residue cover $\leq$ 20% Residue cover $>$ 20% Range (natural)	0.06 0.17 0.13
Grass: Short grass prairie (fields) Dense grasses (lawns)	0.15 0.24
Woods: Light underbrush Dense underbrush	0.40 0.80

⁴ Zomorodi, Kaveh, *Revising the NRCS Sheet Flow Travel Time Equation for Flatlands*, AWRA 2005 Annual Water Resources conference, Seattle Washington.

3.5.2 Shallow Concentrated Flow ($T_{c \text{ shallow}}$)

After a short distance (depending on ground cover, but always less than 100 feet), overland sheet flow starts to concentrate in rills, and then in gullies. This flow is referred to as shallow concentrated flow. The velocity of this flow is estimated using a relationship between velocity and slope. To calculate the shallow concentrated flow time of concentration or $T_{c \text{ shallow}}$, first estimate the velocity of flow using the following equation:

$$V = K_u k \sqrt{S}$$

Where:

V = Velocity of flow, ft/s

S = Slope, ft/ft

k = intercept coefficient (see Table 3-5)

K_u = Units conversion factor, 33

Table 3-5: Intercept Coefficient for Shallow Concentrated Flow⁵

Land cover/flow regime	k
Forest with heavy ground litter; hay meadow	0.076
Trash fallow or minimum tillage cultivation; contour or strip cropped, woodland	0.152
Short Grass Pasture	0.213
Cultivated straight row	0.274
Nearly bare and untilled	0.305
Grassed waterway	0.457
Unpaved	0.491
Paved Area; small upland gullies	0.619

Once velocity has been determined, use the equation below to calculate $T_{c \text{ shallow}}$.

$$T_{c \text{ shallow}} = \frac{L}{60V}$$

Where:

$T_{c \text{ shallow}}$ = Shallow concentrated flow travel time, minutes

L = Flow length, ft

V = Velocity of flow, ft/s

⁵ Iowa Department of Transportation Office of Design, Design Manual, Chapter 4, November 2010. Available from <http://www.iowadot.gov/design/dmanual/04a-05.pdf>

3.5.3 Open Channel Flow ($T_{c \text{ channel}}$)

Open channel flow may consist of gutter flow, pipe flow, or flow through a drainage swale. Various forms of the Manning's equation may be used to estimate the velocity in the channel. Use Table 3-6 for Manning's 'n' value for open channel flow through vegetation and use the following equation to determine a travel time:

$$T_{c \text{ channel}} = \frac{L}{60V}$$

Where:

$T_{c \text{ shallow}}$ = Shallow concentrated flow travel time, minutes

L = Flow length, ft

V = Velocity of flow, ft/s

Table 3-6: Values of Manning's Coefficient (n) for Open Channel Flow⁶

Channel material	Manning's 'n'
Concrete	
Trowel finish	0.013
Float finish	0.015
Concrete bottom with rubble or riprap sides	0.030
Vegetation	
Depth of flow up to 0.7 feet	
Lawns cut 4 to 8 inches	0.070
Good stand cut to 12 inches	0.140
Good stand cut to 24 inches	0.250
Fair stand cut to 12 inches	0.120
Fair stand cut to 24 inches	0.200
Depth of flow from 0.7 to 1.5 feet	
Lawns cut 4 to 8 inches	0.050
Good stand cut to 12 inches	0.100
Good stand cut to 24 inches	0.150
Fair stand cut to 12 inches	0.080
Fair stand cut to 24 inches	0.140
Bare Soil	
Recently completed	0.035
Clean after weathering	0.040

⁶ Iowa Department of Transportation Office of Design, Design Manual, Chapter 4, November 2010. Available from <http://www.iowadot.gov/design/dmanual/04a-05.pdf>

4.0 WATER QUALITY CONTROL CRITERIA

Stormwater qualitative control shall be implemented into sites in accordance with general and specific requirements outlined in the current OEPA's general permit for stormwater discharges associated with construction activity. Water quality BMPs shall be designed according to the latest design standards as set forth by the Ohio Department of Natural Resources Rainwater and Land Development Manual. The Ohio EPA refers to the Ohio Department of Natural Resources (ODNR) Rainwater and Land Development Manual for technical design standards for individual Best Management Practices (BMPs) to meet General Construction Permit requirements. Supplemental information for specific BMPs are contained in this Manual. In addition to the minimum standards set forth by the Ohio EPA, the following additional requirements of the City shall be required.

Dry basins as defined by the ODNR Rainwater Manual and Ohio EPA are not permitted as a water quality BMP within the City unless otherwise approved by the Director of Public Service.

4.1 Ohio EPA Water Quality Permit Supplemental Information

The following sections provide guidance pertinent to the design of water quality BMPs within the City of Grove City.

4.1.1 Water Quality Volume (WQv):

The selected BMP(s) shall be sized to treat the water quality volume and ensure compliance with Ohio EPA General Construction Permit. The WQv shall be equivalent to the volume of runoff from a 0.75-inch rainfall using the following formula.

- a. Standard Equation:

$$WQv = C * P * A / 12$$

Where:

WQv = water quality volume in acre-feet

C = runoff coefficient appropriate for storms less than 1 inch (see Table 4-1)

P = 0.75 inch precipitation depth

A = area draining into the BMP in acres

- b. Alternate runoff coefficient (C) calculation

$$C = 0.858i^3 - 0.778i^2 + 0.774i + 0.04$$

i = percent imperviousness of tributary area

Table 4-1: Water Quality Volume Runoff Coefficients Based on Land Use

Land Use	Runoff Coefficient
Industrial & Commercial	0.8
High Density Residential (>8 Dwellings/Acre)	0.5
Medium Density Residential (4 To 8 Dwellings/Acre)	0.4
Low Density Residential (<4 Dwellings/Acre)	0.3
Open Space And Recreational Areas	0.2

Where the land use will be mixed, the runoff coefficient should be calculated using a weighted average. For example, if 60% of the contributing drainage area to the stormwater treatment structure is low density residential, 30% is high density residential, and 10% is open space, the runoff coefficient is calculated as follows $(0.6)(0.3) + (0.3)(0.5) + (0.1)(0.2) = 0.35$.

Drawdown times are intended to provide both stream channel erosion protection and 80% annual total suspended solids (TSS) removal. BMPs that are a direct tributary to the Scioto River, a 4th Order stream, are not required to provide stream channel erosion protection measures, therefore alternative BMPs that are able to demonstrate 80% TSS removal are acceptable.

Table 4-2: Target Drawdown (Drain) Times for Water Quality BMPs

Best Management Practice	Drain Time of WQv
Infiltration Basin [^]	24 – 48 Hours
Enhanced Water Quality Swale	24 Hours
Wet Extended Detention Basin [*]	24 Hours
Constructed Wetlands (above Permanent Pool) ⁺	24 Hours
Sand & Other Media Filtration	40 Hours
Bioretention Cell [^]	24 Hours
Pocket Wetland [#]	24 Hours
Vegetated Swale and Filter Strip	24 Hours
Pervious Pavement (extended detention)	24 Hours
Pervious Pavement (infiltration)	48 Hours

*Provide both a permanent pool and an EDv above the permanent pool, each sized at 75% of the WQv.

⁺Extended detention shall be provided for the full WQv above the permanent water pool.

[^]The WQv shall completely infiltrate within 24 hours so there is no standing or residual water in the BMP.

[#]Pocket wetlands shall have a wet pool equal to the WQv, with 25% of the WQv in a pool and 75% in marshes. The EDv above the permanent pool shall be equal to the WQv.

4.1.2 Approval for use of proprietary BMPs

Approval of alternative BMPs by the Ohio EPA is required prior to approval from the Director of Public Service except for the following:

- a. For sites less than 5 acres and not part of a larger common development, or a site of any size directly tributary to the Scioto River, alternative BMPs can be approved by the Director of Public Service with sufficient evidence from the manufacturer that the BMP is able to achieve 80% TSS removal on an average annual basis or current state standard.
- b. For sites or larger common developments over 5 acres and not directly tributary to the Scioto River, a 24-hour drawdown time for the water quality volume will be required.

5.0 WATER QUALITY AND DETENTION SYSTEM DESIGN CRITERIA

Although every water quality and peak flow rate control BMP is unique and designed based on specific site conditions, the standards set forth within this section are intended to establish the guidelines for the layout and design of public or residential BMPs within the City of Grove City.

The design of all stormwater BMPs shall conform to the standards set forth within this section and those in Section 4 of this manual. The site and/or construction plans, engineering documents and specifications shall include all pertinent details for any permanent BMP feature.

Table 5-1 provides guidance on the recommended BMPs to use to meet water quality requirements and peak flow rate control requirements. Conditional uses shall seek approval of that particular water quality BMP or peak flow rate control BMP during the Development Plan approval process.

Table 5-1: Water Quality and Peak Flow Rate Control Best Management Practices Applicability

P = Permitted C = Conditional X = Not Permitted	Wet basin	Dry Basin	Wetland Basin	Bioretention	Permeable Pavement Privately Maintained	Permeable Pavement Publicly Maintained	Parking Lot Storage	Infiltration Trench	Sand Filter	Underground Storage	Proprietary Device
Water Quality											
Area of Disturbance < 1 Acre	Not Applicable										
Area of Disturbance 1 to 5 Acres	C	C	P	P	P	C	X	C	C	X	C
Area of Disturbance > 5 Acres	P	C	P	P	P	C	X	C	C	X	C ¹
Peak Flow Rate Control											
Multi-Family Residential Privately Maintained	P	C	P	P	P		P	C	C	P	
Single Family Residential Publicly Maintained	P	X	C	P		C		X	X	X	
Commercial & Industrial	P	C	P	P	P	C	P	C	C	P	

¹Permitted if Directly Tributary to Scioto River

5.1 Parking Lot Storage

Parking lot storage is surface storage where shallow wet ponding is designed to flood specific graded areas of the parking lot. Controlled release features are incorporated into the surface drainage system of the parking lot. Parking lot storage is a convenient multi-use structural control method where impervious parking lots are planned. Design features include small wet ponding areas with controlled release by pipe-size and slope, and increased curb heights.

The major disadvantage is the inconvenience to users during the wet ponding function. This inconvenience can be minimized with proper design consideration. Clogging of the flow control device and icy conditions during cold weather are maintenance problems. Parking lot design and

construction grades are critical factors. This method is intended to control the runoff directly from the parking area, and is usually not appropriate for storing large runoff volumes.

Wet ponding areas in parking or traffic areas shall be designed for a maximum potential depth of twelve (12) inches. Flood routing or overflow shall occur after the maximum depth is reached.

The minimum allowable unprotected orifice size is 4" in diameter unless adequate protection to protect it from clogging is provided or the use of vortex flow control valves.

5.2 Water Quality Basins (Wet or Wetland)

Please refer to the latest version of the Ohio Department of Natural Resources Rainwater and Land Development Manual for design specifications.

5.3 Bioretention Basins

For sizing and construction of bioretention basins, please refer to the latest version of the Ohio Department of Natural Resources Rainwater and Land Development Manual.

For the materials to be used in a bioretention basin, supplemental information has been provided for the mulch and bioretention soil. The bioretention soil specification is the most important aspect of the design. An improperly designed soil that lacks sufficient infiltration capacity can have long periods of standing water rendering the basin ineffective and adding stress to the vegetation. Improper organics can also have detrimental consequences on the health of selected vegetation.

5.3.1 Mulch

ORGANIC MULCH: Mechanically chipped, shredded, hammered or ground raw wood material from either hard or soft timber. Mulch shall be free of mold, dirt, sawdust, and foreign and deleterious material and shall not be in an advanced state of decomposition. Mulch shall not contain chipped or shredded manufactured boards or chemically treated wood, including but not limited to wafer board, particleboard, chromated copper arsenate (CCA) or penta treated wood.

- a. Color: Natural, undyed.
- b. Size Range: 3 inches (76 mm) maximum, 1/2 inch (13 mm) minimum.
- c. pH: 6.0 to 7.5.
- d. Salinity: less than 3.0 millimhos per cm (mS / cm).
- e. Carbon: Nitrogen Ratio: less than 36:1.

5.3.2 Bioretention Soil

SAND: Clean, natural sand meeting the requirements of ASTM C 33 for fine aggregate. Other Graduation Characteristics shall fall within the limits specified below:

- a. Fineness Modulus (FM) – 2.5 to 3.1.
- b. Coefficient of Uniformity – 2.5 to 3.5 preferred (<4.1 acceptable).

ORGANIC AMENDMENT: Mature/stable aerobically composted yard debris (green waste) compost, animal manure compost, biosolids compost or compost derived from a combination three of these feedstocks:

- a. pH: 6.0 to 7.5.
- b. Salinity: less than 6.0 millimhos per cm (mS / cm).
- c. Organic Matter: not less than 35% by weight.
- d. Carbon: Nitrogen Ratio: less than 36:1.
- e. Solvita® Maturity Index: between 6 and 7.

The compost shall meet all applicable state regulations based on the feedstock type or U.S. EPA 503 Regulations for bio solids compost.

TOPSOIL (optional): A loamy, friable soil essentially free from heavy or stiff clay lumps, stones, cinders, concrete, brick, roots, sticks brush, litter, plastics, metals, refuse or other deleterious materials in accordance with ASTM D 5268. The soil shall be free of herbicides, petroleum-based materials or other substances of a hazardous or toxic nature which may inhibit plant growth. The soil shall be free of noxious weeds, seeds or vegetative parts of weedy plants that cannot be selectively controlled in the planting.

- a. pH: 6.0 to 8.0.
- b. Salinity: less than 1.5 millimhos per cm (mS / cm).
- c. Organic Matter: 3 to 8% by weight.

The soil shall be taken from a well-drained site and have a USDA soil texture classification of a Clay Loam or Loam.

- a. Existing topsoil at the site may be used provided it meets the requirements of this section for topsoils.
- b. Off-site (borrow) topsoils may be used provided they meet the requirements of this section and their source or location is submitted to and approved by the Engineer or Landscape Architect.

ENGINEERED SOIL MIX: Mix Sand, Organic Amendment and Topsoil components by volume, to obtain Engineered Soil Mix meeting the specified requirements:

- a. pH: 5.5 – 7.5 (ASTM D4972).
- b. Salinity: less than 0.8 millimhos per cm (mS / cm).
- c. Organic Matter: 2 - 10% by weight (ASTM F1647).
- d. Phosphorus: Not to exceed 69 mg / kg.
- e. Cation Exchange Capacity (CEC): Minimum of 10.
- f. Infiltration Rate: 4 to 12 inches per hour (with soil compacted sample to 85% standard proctor), as determined by ASTM F1815 or ASTM D5856.

Mix Design Submittal: Contractor shall submit proposed mix to Director of Public Service for approval prior to final mixing and shipment to project site. Report percentage by volume of Sand, Organic Amendment and Topsoil. Furnish laboratory analysis and a written report, less than six months old, by a qualified testing laboratory stating compliance with the above parameters.

5.4 Infiltration Trenches

Please refer to the latest version of the Ohio Department of Natural Resources Rainwater and Land Development Manual for design specifications.

5.5 Stormwater Treatment Wetlands

Please refer to the latest version of the Ohio Department of Natural Resources Rainwater and Land Development Manual for design specifications.

Use Table 5-2 for approved wetland vegetation within the City of Grove City.

Table 5-2: Approved Wetland Vegetation List

Type	Botanical Name	Common Name
Herbaceous Plants	<i>Sagittaria latifolia</i>	Common Arrowhead
	<i>Saururus cernuus</i>	Lizard's Tail
	<i>Scirpus acutus</i>	Hard-stemmed Bulrush
	<i>Scirpus americanus</i>	Chairmaker's Rush
	<i>Scirpus atrovirens</i>	Dark Green Rush
	<i>Scirpus cyperinus</i>	Wool Grass
	<i>Scirpus pungens</i>	Chairmakers' Rush
	<i>Scirpus tabernaemontani</i>	Soft-stem Bulrush
	<i>Scirpus validus</i>	Great Bulrush
	<i>Solidago ohioensis</i>	Ohio Goldenrod
	<i>Solidago riddellii</i>	Riddell's Goldenrod
	<i>Sparganium americanum</i>	American Bur Reed
	<i>Sparganium eurycarpum</i>	Common Bur Reed
	<i>Verbena hastate</i>	Blue Vervain
	<i>Verbesina alternifolia</i>	Wingstem
Shrubs	<i>Amphora furicosa</i>	Indigo Bush
	<i>Rosa palustris</i>	Swamp Rose
	<i>Cephalanthus occidentalis</i>	Buttonbush
	<i>Cornus amomum</i>	Silky Dogwood
	<i>Cornus sericea</i>	Red Oiser Dogwood
	<i>Ilex verticillata</i>	Winterberry
	<i>Salix amygdaloides</i>	Peachleaf Willow
	<i>Salix discolor</i>	Pussy Willow
	<i>Salix sercea</i>	Silky Willow
	<i>Spiraea tomentosa</i>	Steeple Bush

5.6 Sand Filters

Please refer to the latest version of the Ohio Department of Natural Resources Rainwater and Land Development Manual for design specifications.

5.7 Permeable Pavement

For general requirements of pervious pavement systems, please refer to the latest version of the Ohio Department of Natural Resources Rainwater and Land Development Manual. For structural design refer to the Interlocking Concrete Pavement Institute (ICPI), Permeable Interlocking Concrete Pavements Design Manual, Chapter 37.

To meet Ohio Department of Natural Resources Rainwater Manual guidance, maximum ratio of impervious area draining onto the surface area of the pervious paver system shall be no greater than 2:1 especially in areas with high potential for organic contaminants such as leaves and tree nuts for example. Higher ratios up to 5:1 may be permissible on a case by case basis for areas with minimal contamination potential.

For all pervious pavement systems, do not use sand or cinders for deicing. Moreover, when this green infrastructure practice is used in areas with potential for organic matter to accumulate such as nuts and leaves, monthly maintenance using a vacuum/regenerative air sweeper may be required during growing season.

For frost depth considerations, the pavement thickness from surface to subgrade is recommended to be $\frac{1}{2}$ of the frost depth; however research has shown that as long as there is sufficient void space for water to expand (9%), it can freeze without movement (Smith, p. 23).⁷ For Central Ohio, the frost depth is approximately 34"; therefore a minimum section thickness of 17" should be used.

It is recommended that impervious areas sheet flow onto pervious asphalt surfaces and not be point loaded onto a small area. The maximum surface slope for pervious asphalt surface is 5% (Smith, p. 14).⁸

The following information is in addition to the ODNR guidelines providing additional detail on the use of various types of pavement systems.

5.7.1 Pervious Pavement Stone Aggregate

- a. Aggregates should be crushed with minimum 90% fractured faces and a minimum Los Angeles (LA) abrasion <40 per ASTM C131 and C535 (Smith, p. 28).⁹
- b. All shall be clean, washed and free of fines with <2% passing the No. 200 sieve per ASTM C 136 (Smith, p. 28).¹⁰
- c. A porosity of at least 30% for the No. 8, 89, or 9 jointing material using ASTM C 29 (Smith, p. 28).¹¹
- d. A porosity of at least 32% for the No. 57 bedding and No. 2, 3, or 4 subbase and base layers approximately using ASTM C 29 (Smith, p. 28).¹²
- e. No. 8 Setting Bed Material: Narrowly graded mixture of washed, crushed stone, or crushed gravel; in accordance with CMSC Section 703.01; coarse-aggregate grading Size 8; with 100 percent passing a $\frac{1}{2}$ -inch (12.5-mm) sieve and 0 to 5 percent passing a No. 16 (1.18-mm) sieve. Setting bed material shall be installed with a

⁷ Smith, David R., *Permeable Interlocking Concrete Pavements*, Interlocking Concrete Pavement Institute, Herndon, VA, Fourth Edition, 2011.

⁸ Ibid

⁹ Ibid

¹⁰ Ibid

¹¹ Ibid

¹² Ibid

screed to the maximum extent possible to achieve a level surface for placement of pervious paver clay or concrete bricks.

- f. No. 8, 89, or 9 jointing material: Narrowly graded mixture of washed, crushed stone, or crushed gravel; in accordance with CMSC Section 703.01; coarse-aggregate grading Size 8; with 100 percent passing a 1/2-inch (12.5-mm) sieve and 0 to 5 percent passing a No. 16 (1.18-mm) sieve; grading Size 89; with 100 percent passing a 1/2-inch (12.5-mm) sieve and 0 to 10 percent passing a No. 16 (1.18-mm) sieve; grading Size 9; with 100 percent passing a 3/8-inch (9.5-mm) sieve and 0 to 10 percent passing a No. 16 (1.18-mm) sieve.
- g. No. 57 Bedding Layer: Narrowly graded mixture of washed, crushed stone, or crushed gravel; in accordance with CMSC Section 703.01; coarse-aggregate grading Size 57; with 100 percent passing a 1 1/2-inch (37.5-mm) sieve and 0 to 5 percent passing a No. 8 (2.36 mm) sieve.
- h. No. 2, 3 or 4 Subbase and Base Layer: Narrowly graded mixture of washed, crushed stone, or crushed gravel; in accordance with CMSC Section 703.01; coarse-aggregate grading Size 2 with 100 percent passing a 3-inch (100-mm) sieve, 0 to 5 percent passing a 3/4-inch (19-mm) sieve, and less than 2 percent passing the No. 200 sieve. Grading size 3 with 100 percent passing the 2 1/2-inch (63 mm) sieve, 0 to 5 percent passing a 1/2 inch (12.5 mm) sieve, and less than 2 percent passing the No. 200 (75 um) sieve. Grading size 4 with 100 percent pass the 2-inch (50 mm) sieve, 0 to 15 percent passing the 3/4-inch (19 mm) sieve, and less than 2 percent passing the No. 200 (75 um) sieve.
- i. Compaction of the bedding, subbase, and base layers of material shall be done with a 10-12 ton vibratory roller with aggregate lifts of no more than 6 inches. Compaction of the setting bed material is not required except after placement of pavers and jointing material using walk behind compaction equipment.
- j. The compaction of aggregates will be determined by testing with a Light Weight Deflectometer (LWD) apparatus, in accordance with Indiana Department of Transportation Test Method (ITM 508 12T. More specifically, the preferred testing device is a Zorn ZFG 3.0 Light Weight Deflectometer.

The maximum allowable deflection will be in accordance with Table 5-3.

Table 5-3: Aggregate Compaction Allowable Deflection

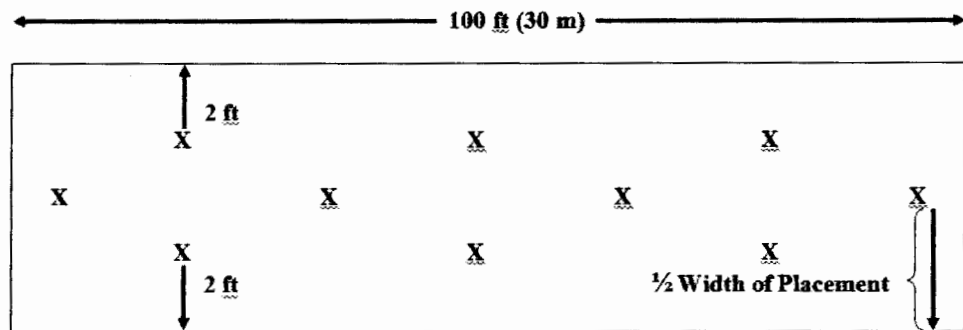
Material Type	Maximum Allowable Deflection (mm)
Lime Modified Soil	0.30
Cement Modified Soil	0.27
Aggregates over Lime Modified Soil	0.30
Aggregates over Cement Modified Soil	0.27

For materials not included in Table 5-3, a test section shall be constructed to determine the maximum allowable deflection with the maximum deflection of open graded aggregates typically being in the 0.40 to 0.50 mm range with a resulting stiffness of over 45 MPa.

Test sections shall be constructed in the presence of the Engineer with the available equipment of the Contractor to determine the roller type, pattern, and number of passes for the maximum allowable deflection.

The Engineer will select an area approximately 100 ft (30 m) by the width of the material placed for the test section. Areas not meeting these minimum testing area criteria will be considered. The subgrade shall be proof rolled in accordance with CMSC Item 204 prior to construction of the test section for aggregates and the geotextile, geogrid, and/or geomembrane used for the installation installed on the subgrade. Chemically modified soils shall be cured at least 24 hours prior to testing of the test section.

One moisture test will be performed in accordance with AASHTO T 255 for aggregates prior to compaction of the test section. The moisture content value shall be within -3 percentage points of optimum moisture content and the optimum moisture content prior to placement. Ten LWD tests will be performed on the test section at the following approximate locations:



Aggregate Test Section with LWD only - A test section shall be constructed and LWD testing will be performed to determine the maximum allowable deflection if only the LWD is used. The roller shall be operated in the vibratory mode and initially 4 passes shall be placed on the aggregate in the test section. The average deflection of the 10 random tests will be determined after completion of the 4 passes. One additional pass of the roller in the vibratory mode shall be made and 10 LWD tests will be taken at the same locations. If the difference between the average LWD test values obtained from 4 and 5 passes is equal to or less than 0.02 mm, the compaction will be considered to have peaked and the average of the 10 LWD values at 5 passes will be used as the maximum allowable deflection. If the difference between the average LWD test values is greater than 0.02 mm, an additional roller pass in the vibratory mode shall be placed and 10 LWD tests will be taken at the same locations. This procedure will continue until the difference of the average of the 10 LWD tests between consecutive roller passes is equal to or less than 0.02 mm. The maximum allowable deflection will be the lowest average of the 10 LWD test values.

Acceptance of the compaction of aggregates or chemically modified soils will be determined by averaging three LWD tests obtained at a random station determined by the Engineer. The location of the three tests will be at 2 ft. from each edge of the construction area and at 1/2 of the width of the construction area. The average deflection shall be equal to or less than the maximum allowable deflection allowed in Table 5-3 or determined by the test section. The frequency of testing will be one test for each 800 t for compacted aggregate.

If the average deflection is not equal to or less than the maximum allowable deflection, a moisture test will be performed. Additional LWD tests will be taken at the same locations after 24 hours and the material will be accepted if the LWD tests are equal to or less than the maximum allowable deflection. Otherwise additional compaction may be required.

5.7.2 Pervious Interlocking Concrete Pavers

Pervious pavers can be used on any surface ranging from pedestrian plazas, low speed roadways to heavy industrial and shipping yards. Pervious pavers are not recommended for high speed roadways with posted speed limits above 25 MPH or high volume roadways.

- a. Pervious concrete pavers are referred to as Permeable Interlocking Concrete Pavements (PICP) in the paver industry. PICP shall conform to ASTM C936 which limits length-to-thickness ratio to no more than 4:1 to provide interlocking effect. It also limits face area to no more than 101 sq. in.
- b. A minimum average compressive strength of 10,000, psi is preferred with no individual unit testing less than 9,200 psi. At a minimum be resistant to freeze/thaw durability when tested according to CSA A231.2 which is the Canadian version of ASTM C1645.
- c. For vehicular applications, the majority of the pavers shall have a minimum joint width of 10 mm or larger as joint widths less than 10 mm are harder to maintain, require a smaller stone chip that is more susceptible to washing out or migrating into the underlying No. 57 aggregate. Smaller joints associated with soldier courses or other embedded pavers are acceptable.
- d. "L" shape pavers shall be used in all public roadway driving lanes.. Other geometries may be used for soldier courses, replacement for striping, parking lanes, parking lots, alleys, sidewalks, and other non-vehicular use applications.
- e. All paver areas shall have concrete edge restraints.
- f. PICP structural design for vehicular applications requires a minimum soil CBR (96-hour soaked per ASTM D 1883 or AASHTO T 193) of 4%, or a minimum R-value = 9 per ASTM D 2844 or AASHTO T-190, or a minimum Mr of 6,500 psi per AASHTO T-307 to qualify for use under vehicular traffic. Compaction or treatment of the subgrade with cement, lime, or lime/flyash may be required to achieve at least 4% soaked CBR. Expansive soils will need to be treated and will significantly reduce the infiltration capabilities of the native soil. (Ref: Smith Chapter 3)
- g. The pavement system from surface to subgrade should be designed using the 1993 AASHTO Method for flexible pavements. The paver and setting bed have a structure layer coefficient of 0.30. The No. 57 aggregate has a structural layer coefficient of 0.09. The No. 2, 3 or 4 aggregates have a structural layer coefficient of 0.06. Care should be taken to obtain a subgrade CBR value and an estimation of traffic load. When a CBR value is not available use a value of 3 (Smith, Chapter 3).¹³

¹³ Smith, David R., *Permeable Interlocking Concrete Pavements*, Interlocking Concrete Pavement Institute, Herndon, VA, Fourth Edition, 2011

- h. The soldier course paver shall be a full-length rectangular pervious paver brick of the same thickness as the main system capable of accepting a No. 8, 89, or 9 chip material.
- i. Color and finish are important decisions that need to be considered during the design process. Specialized face mixes can provide enhanced color durability to prevent fading and alternative textures for specialized applications.

5.7.3 Pervious Clay Brick Pavers

Pervious clay brick pavers are 2¾ inch thick solid interlocking paving units made of fired clay that allows water to flow through joints between the individual paving units. The joints are filled with open graded, small aggregate to allow for the units to interlock and still provide void space for the water to flow through.

Pervious clay brick pavers may be used in all areas where traditional pavement would be considered for pedestrian use. In addition, pervious clay brick pavers may be used in low volume and low speed (less than 25 MPH) vehicular use areas such as public roads, parking lots and roadside parallel parking.

- a. Clay brick pavers are categorized as ASTM C902 for Pedestrian and Light Traffic Paving Brick or ASTM C1272 for Heavy Vehicular Paving Brick. Provide joint widths of at least 6 mm to allow for adequate infiltration capacity. If clay pavers are to be used in roadway applications, the setting bed shall be No. 8 stone and the joints filled to the maximum extent practical with the larger of No. 8, No. 89, or No. 9 stone.
- b. At a minimum be resistant to 50 freeze and thaw cycles when tested according to ASTM C67.
- c. All paver areas shall have concrete edge restraint.
- d. Structural design for vehicular applications assumes a minimum soil CBR (96-hour soaked per ASTM D 1883 or AASHTO T 193) of 4%, or a minimum R-value = 9 per ASTM D 2844 or AASHTO T-190, or a minimum Mr of 6,500 psi per AASHTO T-307 to qualify for use under vehicular traffic. Compaction or treatment of the subgrade with cement, lime, or lime/flyash may be required to achieve at least 4% soaked CBR. Expansive soils will need to be treated and will significantly reduce the infiltration capabilities of the native soil (Smith, Chapter 3).¹⁴
- e. The pavement system from surface to subgrade should be designed using the 1993 AASHTO Method for flexible pavements. The paver and setting bed have a structure layer coefficient of 0.30. The No. 57 aggregate has a structural layer coefficient of 0.09. No. 2, 3, or 4 aggregates have a structural layer coefficient of 0.06. Care should be taken to obtain a subgrade CBR value and an estimation of traffic load. When a CBR value is not available use a value of 3 (Smith, Chapter 3).¹⁵

¹⁴ Smith, David R., *Permeable Interlocking Concrete Pavements*, Interlocking Concrete Pavement Institute, Herndon, VA, Fourth Edition, 2011

¹⁵ Ibid

- f. Pavers shall be laid in a herringbone pattern to increase interlocking stability.
- g. The soldier course paver shall be a full-length rectangular pervious paver brick of the same thickness as the main system capable of accepting a No 8, 89, or 9 chip material.
- h. Color and finish are important decisions that need to be considered during the design process.

5.7.4 Pervious Concrete

Pervious concrete is a type of pervious pavement that when cast has between 15-25% void space within the concrete. These void spaces are interconnected so that water and air are able to pass through from the top surface of the concrete down into aggregate storage layers below. Pervious concrete does not contain fine aggregates and is sometimes referred to as 'no-fines' concrete. Coarse aggregate, Portland cement, water and admixtures are the component materials of pervious concrete.

Pervious concrete may be used in all areas where traditional concrete would be considered for pedestrian use. In addition, pervious concrete may be used in vehicular use areas such as parking lots and roadside parallel parking. It is not recommended for travel lanes on public roadways, but has been successful in low volume residential streets and alleys. Pervious concrete shall comply with current editions of ACI 522.1 and ASTM C94.

- a. A model specification and structural design guidance is available from the Ohio Ready Mixed Concrete Association with the following exceptions:
 - 1. Wet cure with UltraCure by McTech Group or equivalent;
 - 2. Placement of concrete should be done with a hydraulically actuated pipe roller and;
 - 3. Joints shall be saw-cut; rolled joints are not to be permitted.¹⁶
- b. Slump tests and traditional strength tests cannot be used with pervious concrete. Testing shall be for density (unit weight), void content and thickness. These tests include ASTM C 172, ASTM C 29, ASTM C 42 and ASTM C 1688.
- c. All pervious concrete areas shall have concrete edge restraints.
- d. Structural design for vehicular applications assumes a minimum soil CBR (96-hour soaked per ASTM D 1883 or AASHTO T 193) of 4%, or a minimum R-value = 9 per ASTM D 2844 or AASHTO T-190, or a minimum Mr of 6,500 psi per AASHTO T-307 to qualify for use under vehicular traffic. Compaction or treatment of the subgrade with cement, lime, or lime/flyash may be required to achieve at least 4% soaked CBR. Expansive soils will need to be treated and will significantly reduce the infiltration capabilities of the native soil (Smith, Chapter 3).¹⁷

¹⁶ Maloney, M. (2013). Pervious pavement as public infrastructure [Powerpoint slides].

¹⁷ Smith, David R., *Permeable Interlocking Concrete Pavements*, Interlocking Concrete Pavement Institute, Herndon, VA, Fourth Edition, 2011

- e. Pervious concrete can be colored with pigment during the mixing process and should be considered during the design process.

5.7.5 Pervious Asphalt

Pervious asphalt is a type of asphalt with approximately 16-20% air void space within the asphalt after installation. These void spaces are interconnected so that water and air are able to pass through from the top surface of the asphalt down into aggregate storage layers below. Pervious asphalt does not contain fine aggregates smaller than a No. 8 aggregate. A polymer modified asphalt binder (6%) is the main component that differentiates standard asphalt from pervious asphalt. Pervious asphalt has been around since the early 1970s and was previously referred to as open graded friction course and used on highways to reduce road spray.

Pervious asphalt may be used in all areas where traditional asphalt would be considered for pedestrian use. In addition, pervious asphalt may be used in low volume and low speed (less than 25 MPH) vehicular use areas such as parking lots and roadside parallel parking. It also has been successful in low volume residential streets and alleys.

- a. The ODNR considers The University of New Hampshire Stormwater Center (UNHSC) Design Specification for Porous Asphalt Pavement a reliable specification for pervious asphalt mix design.¹⁸
- b. Pervious asphalt structural design for vehicular applications assumes a minimum soil CBR (96-hour soaked per ASTM D 1883 or AASHTO T 193) of 4%, or a minimum R-value = 9 per ASTM D 2844 or AASHTO T-190, or a minimum Mr of 6,500 psi per AASHTO T-307 to qualify for use under vehicular traffic. Compaction or treatment of the subgrade with cement, lime, or lime/flyash may be required to achieve at least 4% soaked CBR. Expansive soils will need to be treated and will significantly reduce the infiltration capabilities of the native soil. (Smith, Chapter 3).¹⁹
- c. The pavement system from surface to subgrade should be designed using the 1993 AASHTO Method for flexible pavements. The No. 57 aggregate has a structural layer coefficient of 0.09. No. 2, 3, or 4 aggregates have a structural layer coefficient of 0.06. Care should be taken to obtain a subgrade CBR value and an estimation of traffic load. When a CBR value is not available use a value of 3 (Smith, Chapter 3).²⁰

¹⁸ University of New Hampshire Stormwater Center (2009). *Design specifications for Porous Asphalt Pavement and infiltration Beds*.

¹⁹ Smith, David R., *Permeable Interlocking Concrete Pavements*, Interlocking Concrete Pavement Institute, Herndon, VA, Fourth Edition, 2011

²⁰ Ibid

5.8 Underground Storage

Underground storage may be used to provide storage volume to meet the peak control rate requirements, but shall not be used to provide water quality on its own unless coupled with an approved water quality BMP.

- a. Adequate flood routing shall be provided if the system becomes clogged or surcharges onto the surface.
- b. The minimum allowable unprotected orifice size is 4" in diameter unless adequate protection is provided to protect it from clogging or the use of vortex flow control valves.
- c. The maximum ponding depth at any point in the parking lot is 12" for the 100-year storm.
- d. The use of perforated pipe to maximize storage volume in the surrounding stone backfill is not permitted without an approved pretreatment device.

6.0 WET BASIN DESIGN STANDARDS

Although every wet basin is unique and designed based on specific site conditions, the standards set forth within this section are intended to establish the guidelines for the layout and design of wet basins within the City.

6.1 Existing Wet Basin Investigation Requirements

When existing wet basins are proposed to become part of a stormwater management system to meet peak flow rate and water quality requirements and to be incorporated into a development the following information is required:

- a. Photos of the existing basin.
- b. Bathymetry Survey.
- c. Discussion of the current conditions, including the presence of trees, inlet/outlet structures, etc.
- d. A proposed usage description outlining any changes, including increased embankment height, inlet/outlet structures, etc.
- e. Stone facing shall be installed on all existing and proposed basin inlet and outlet structures per Figure 6-4.

6.2 Dam Safety Classifications

All dams shall adhere to the State of Ohio's Dam Safety Regulations (Title XV, Chap. 1521 of the Ohio Revised Code, Rule 1501:21-13-01).

The following dam types do not require construction permits per Ohio Dam Safety Laws, Section 1521.06:

- a. A dam that is or will be less than 10 feet in height and greater than 6 feet and that has or will have a storage capacity of not more than 50 acre-feet at the elevation of the top of the dam, as determined by the ODNR Chief. For the purposes of this section, the height of a dam shall be measured from the natural stream bed or lowest ground elevation at the downstream or outside limit of the dam to the elevation of the top of the dam.
- b. A dam, regardless of height, that has or will have a storage capacity of not more than 15 acre-feet at the elevation of the top of the dam.
- c. A dam, regardless of storage capacity, that is or will be 6 feet or less in height.
- d. A dam, dike or levee that belongs to a class exempted by the ODNR Chief.

6.3 Outlet/Inlet Treatment

a. Submerged Outlet/Inlet Structures

The City encourages the use of submerged storm pipes in lieu of exposed outlet/inlet structures. Submerged Outlets may consist of a siphon pipe where such pipe is no smaller than 6 inches in diameter (refer to Figure 6-2). Inlet pipes that are equal to or larger in

diameter than 36 inches should be submerged to at least the "springline" of the pipe (i.e., normal pool at a depth equal to the elevation at one-half the diameter of the pipe). The City requires the remaining exposed portion of pipe headwall include stone-facing (refer to Figure 6-4). When an inlet pipe is at least partially submerged at the wet basin, the conditions listed below shall also be met.

1. Submergence of inlet pipes is limited to the next upstream manhole or catch basin along the storm sewer system.
2. All lengths of submerged storm pipe shall include "O-ring" sealed gasket pipe joints.
3. All lengths of the submerged storm pipe shall have bedding and backfill material consistent with the compacted embankment material.

b. Riser Outlet Structures

Catch basins/manholes used as the outlet structures may have a maximum elevation that is no more than 1.5 feet above the normal pool elevation and may include windows and grate-top openings. Where a catch basin is used as a second-stage outlet structure, the slope of the pond embankment must be graded to reduce the visibility of the structure.

c. Structure Requirements

All headwall structures shall be in accordance with City of Grove City Standard Drawing C-GC-24 (36-inch diameter or less) or City of Columbus Standard Drawings AA-S167 (greater than 36-inch diameter). All riser structures shall be in accordance with City of Grove City Standard Drawing C-GC-4 (modified as necessary).

d. Bedding/Backfill Material

The bedding and backfill material for all storm pipe outlets shall consist of 100 percent cohesive embankment material or controlled-density fill. Where inlet storm pipes are submerged, bedding and backfill material for those pipes shall consist of 100 percent cohesive embankment material to the next structure upstream along the storm sewer system.

e. Anti-Seep Collars

Anti-seep collars shall be used at all outlet storm pipe locations and shall be located (spaced) and sized in accordance with the criteria provided below. All anti-seep collars shall be constructed with material that provides a watertight connection to the pipe and is of a material that is compatible to the pipe. Anti-seep collars shall also be used along the submerged portion of any storm inlet pipes.

The anti-seep collars shall be located along the length of the outlet pipe within the saturation zone of the embankment (refer to Figure 6-1), at approximately equal spacing and at intervals not exceeding 25 feet. The saturation zone is considered to extend through the embankment from the elevation of the riser (normal pool) to the downstream embankment toe.

The anti-seep collars shall be designed to increase the length along the line of seepage (along the outlet pipe) by at least 15 percent. The proper design of the anti-seep collars may be achieved by either:

1. Selecting the number of collars and determining the minimum projection of the collar away from the outlet pipe: $V = 0.075 \times (L/N)$; or
2. Selecting the projection of the collar away from the outlet pipe and
3. Determining the minimum number of collars: $N = 0.075 \times (L/V)$.

f. Wall/Façade Appearance

All headwalls, endwalls, catch basins or exposed structures within the pond are required to include natural or manufactured stone facing on the exposed faces of the structure. Stone is to be north shore buff limestone. Alternate selections must be approved by the City Service Director. A sample pallet is to be submitted to the City's Service Director for approval. Refer to Figure 6-4 for a graphical representation of the required stone facing detail and related features.

g. Emergency Spillways

Emergency Spillways should meet all of the following criteria unless they are located in areas where a basin is not located adjacent to a stream or roadway, in which case, an emergency spillway is then not required. However, an adequate flood routing path is required from the basin.

1. They shall not operate (convey flow) for any routed design storm less than the 50-year event.
2. They shall be reinforced with concrete or designed erosion control materials (geotextiles) consisting of 100 percent synthetic, non-biodegradable materials (the plans should include a specification for the intended geotextile, referencing the required physical properties or the specific material). Reference the State of Ohio, Department of Transportation Construction and Material Specifications Section 712.11, Type "E".
3. They shall be designed to pass the 50-year peak inflow to the basin on its own without attenuation (the plans shall include a detail demonstrating the necessary dimensions of the control section, both width and breadth).

h. Miscellaneous

The following general criteria must be met:

1. Roof drain (downspout) outlets directly to a wet basin are not permitted.
2. All orifice plates may conform to the requirements of City of Columbus Standard Drawing, No. AA-S145. The minimum allowable installed orifice size is 4 inches in diameter unless protected by a means acceptable to the City.
3. All inlet structures (e.g., pipe headwalls) shall be recessed into the adjoining wet basin grading to diminish the amount the structure is visible.

6.4 Basin Grading

Refer to Figure 6-1 for a graphical representation of the required pond grading and related features.

6.5 Geotechnical Considerations

Design of wet basin liners and embankments shall be by a qualified geotechnical engineer or geologist to design the liner. Acceptable soils used in wet basin liners or embankments shall meet the following minimum criteria:

- a. Free of large rocks, roots, limbs and other deleterious materials which would adversely affect the design integrity of the liner.
- b. Classified under the Unified Soil Classification System as CL, CH or SC.
- c. Minimum 15% passing the No. 200 sieve.
- d. Have a plasticity index (PI) ≥ 15 .
- e. Have a laboratory permeability of 1×10^{-6} cm/sec or less based on a minimum of two undisturbed core (tube) samples taken from the liner.

1. Wet Basin Liner

Wet basin liners consisting of acceptable soils as described above shall be a minimum of 2 feet in thickness. Localized granular, organic, or other deposits (which would be sources for wet basin leakage) shall be removed and replaced with suitable soils. Disking of up to 6 inches of surface material for re-compaction is acceptable, if necessary. The material shall be compacted at optimum moisture content to (but not exceeding) 3 percent above optimum moisture content in loose lifts not to exceed 8 inches in thickness. The installation of wet basin liners shall be under the supervision of a geotechnical engineer, geologist or other City of Grove City approved entity who shall certify that the liner was installed in accordance with this policy. Alternative wet basin liners accompanied by a geotechnical report may be used upon review and approval by the City of Grove City. These include, but are not limited to poly-liners (minimum 30 mil) and bentonite (typically 1 to 3 lb/ft²).

2. Embankment Materials

All outlet embankment materials shall consist of cohesive soils compacted to a minimum of 98 percent of the maximum density obtainable with the Standard Proctor Test method (ASTM Standard D-698). Certified test results shall be submitted to the City prior to installation or the test is to be performed at the time of installation, in the presence of the City or its assigned representative. The compacted outlet embankment shall be free of vegetative material and other construction debris. The engineering plan shall include notes and other references regarding the conditions and requirements for construction of the outlet embankment, including design information for a key trench, if necessary.

6.6 Shoreline Protection

Shoreline protection shall be installed below and above the normal pool elevation of the basin to prevent erosion along the perimeter. The protection shall be comprised of a 6" depth of 1" to 3" diameter, clean and washed limestone cobbles or tied concrete block matting per ODOT Item 601. Refer to Figure 6-1 for a graphical representation of the required shoreline protection features.

6.7 Wet Basin Amenities

When developing wet basins, it is the intent of the City to incorporate features within the basin as amenities to the development. The following amenities may be required to be included with the basin design at the discretion of the City.

6.7.1 Observation/Fishing Platform

Any wet basin that includes an incoming stormwater pipe of 30 inches or greater may be required to include at least one platform made of wood or other material. The size of the platform shall be a minimum of 10' x 10'.

6.7.2 Walkway

Installation of an 8-foot minimum bituminous walkway around the circumference of the wet basin edge for wet basins within residential subdivisions. The walk may be at generally the same elevation around the wet basin but shall vary in distance from the normal water surface. The construction of the path will be in conformance with City Standard Specifications.

6.7.3 Landscape

All basins are required to meet the minimum standards for landscape plantings based upon information provided within the City's codified ordinances. All disturbed areas are to be stabilized per the requirements outlined within Section 10.0 of this manual.

6.7.4 Fountains and Aerators

For wet basins are to include one (1) fountain for every $\frac{3}{4}$ of an acre of surface area. In addition, the basin must include an air diffuser below the fountain to improve water circulation and quality.

6.7.5 Depth of Water Surface Elevation

The water surface elevation is a critical aspect of the general aesthetics of a wet basin. For this reason, the proposed water surface elevation for wet basins within residential subdivisions

and publicly viewed private developments shall not be any lower than 5-feet below any adjoining roadway or viewing area, so long as adequate freeboard is available for stormwater detention. The viewing area is defined as the level area above the freeboard of the wet basin. This area may be comprised of the finished floor elevation of the homes nearest to the wet basin or the finished grade between the nearest homes.

6.7.6 Trash Racks

At a minimum, all outlet structures shall have a grate to prevent large debris from passing through. Trash racks may be constructed from galvanized metal (rebar) and shall meet the specifications provided below.

- a. Catch basin riser structures shall have imbedded rebar at all window openings with a height of 1-foot or greater, spacing not to exceed 4-inches, and a pre-fabricated grate top.
- b. Pipe and headwall structures shall have a fabricated galvanized metal grate of the type similar to that shown on Figure 6-3. The City, upon review, may approve other types and forms of trash racks.

6.7.7 Wet Basin Vegetation

The City permits the planting of wetland species vegetation within designated areas of a wet basin for purposes of general water quality considerations or as mitigation in conformance with the requirement for State of Ohio 401 Water Quality Certification. The wetland planting area must not exceed 50 percent of the total pond surface area. Refer to Table 5-2 for a listing of acceptable wetland species vegetation. Deviation from the plants listed in Table 5-2 must be submitted to the City's Urban Forester and Engineer for approval.

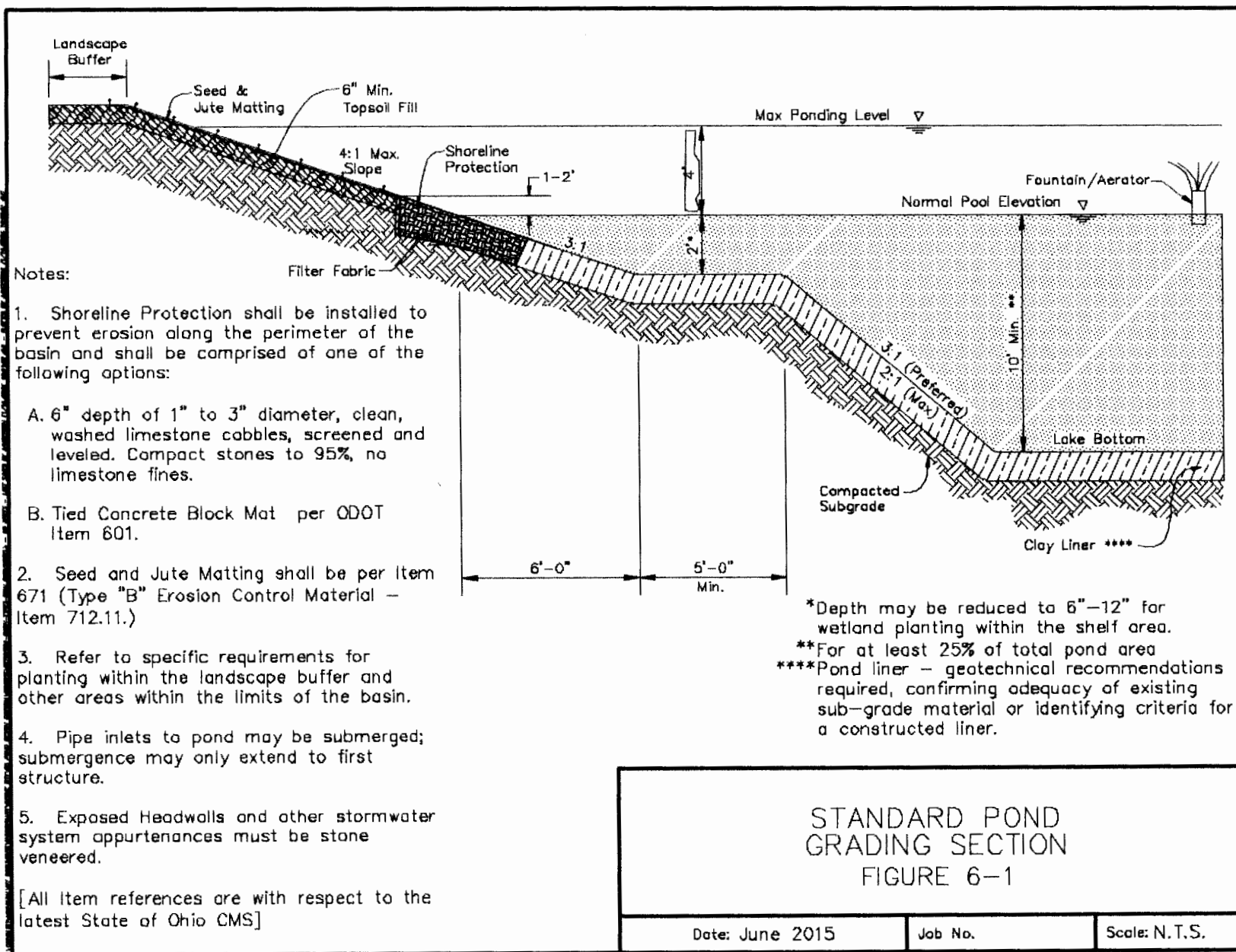
6.8 Wet Basin Maintenance

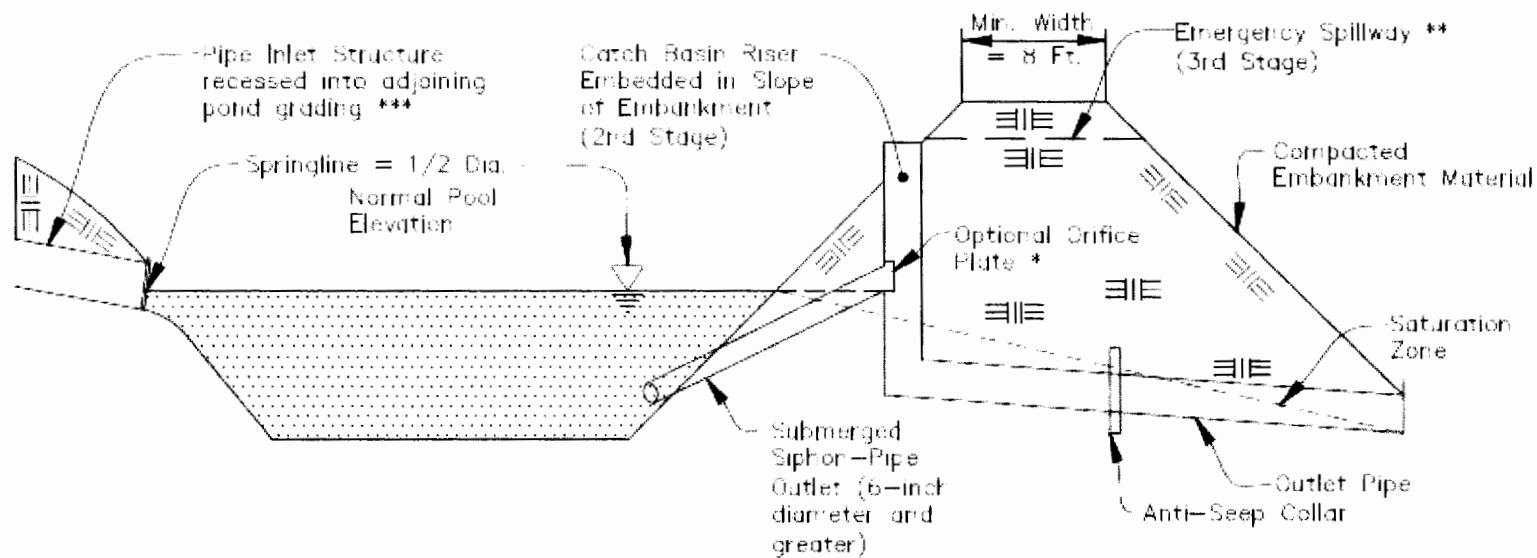
6.8.1 Treatment of Algae

The use of herbicides/pesticides to control the growth of aquatic vegetation is regulated by the State of Ohio. Private or public wet or wetland basins that are within the regulatory jurisdiction of the State of Ohio are subject to the criteria of the Ohio Surface Water Regulations (Ohio Administrative Code 3745-1 Water Quality Standards), pertaining to the application of chemicals. Refer to the Ohio State University Extension fact sheet associated with notifying the Ohio EPA prior to applying aquatic herbicides in ponds for additional information.

6.8.2 Goose Control

Stormwater basins are often constructed with mowed turf grass around the perimeter making it an ideal habitat for geese as they can walk into and out of wet basins easily to forage on grass and escape back to the water when threatened. Tall vegetation at the edge of the pond can discourage geese as they are not able to see through the taller grass and are less likely to venture out of pond to forage. Another up and coming solution is to plant turf type grasses that do not taste well to geese, which discourages their use of the pond and they will seek other areas. Such grasses include Titan Limited, Turf-type Tall Fescue or Jacklin Pixie.





* Refer to City of Columbus Std. Dwg. AA-S-45

** Reinforced with Erosion Control Material

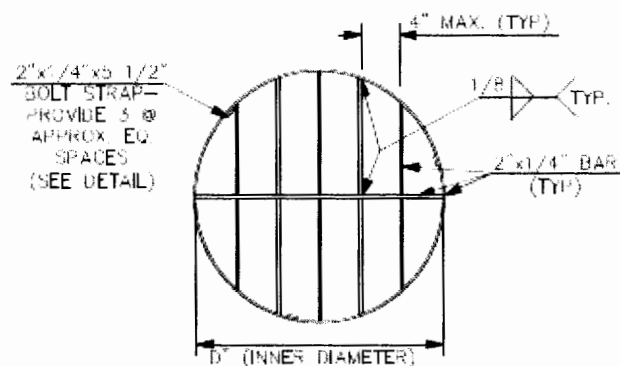
*** Pipe inlets $\geq$ 36-inches in diameter must be Submerged to the SpringLine.

SUBMERGED OUTLET AND
EMBANKMENT DETAIL
FIGURE 6-2

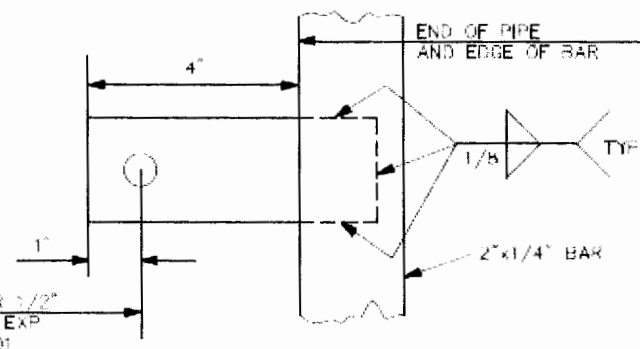
Date: May 2015

Job No.

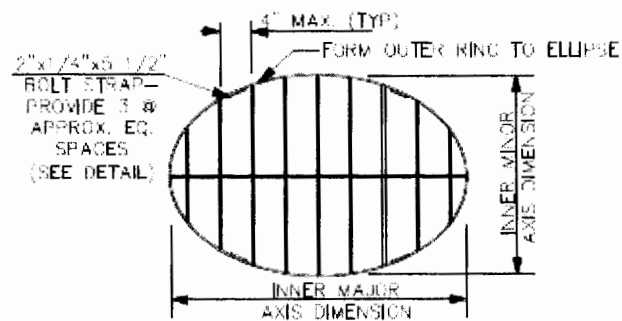
Scale: N.T.S.



SAFETY GRATE DETAIL



BOLT STRAP DETAIL



SAFETY GRATE DETAIL

Riverside Drive and Hannah Hills Drive

Notes:

1. Grates shall be fabricated from ASTM A-36 steel and be galvanized in accordance with CMS 711.02.
2. Geometry, size and shape may be revised to accommodate box culvert outlets.

TRASH RACK DETAIL
FIGURE 6-3

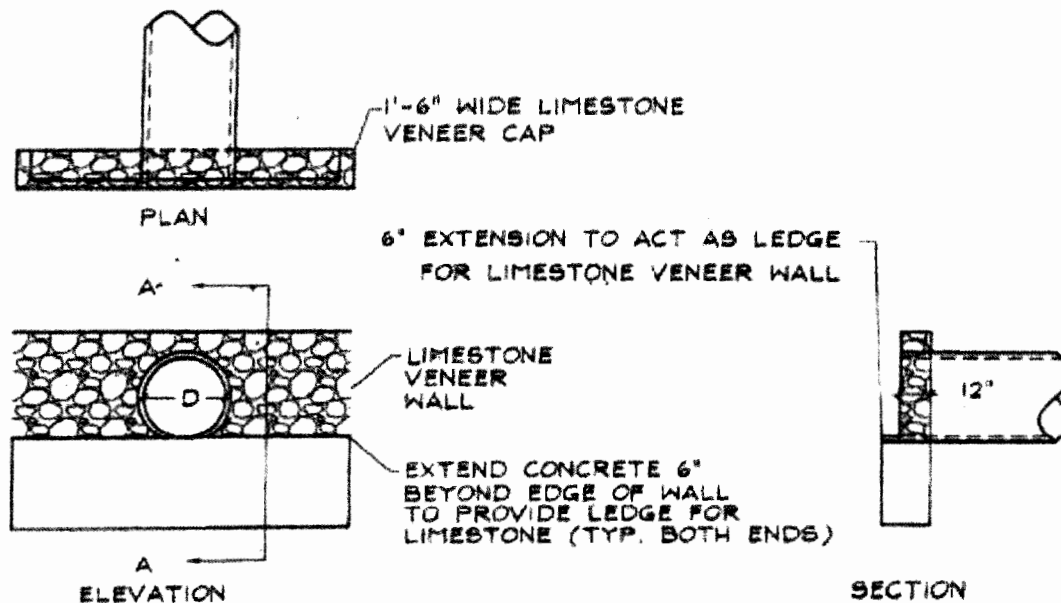
Date: May 2015

Job No.

Scale: N.T.S.

NOTE:

- * STONE FACING SHALL BE ON ALL EXPOSED SURFACES OF THE OUTLET STRUCTURES.
- * STONE IS TO BE NORTH SHORE BLUFF LIMESTONE. ALTERNATE SELECTIONS MUST BE APPROVED BY THE CITY SERVICE DIRECTOR.
- * 1/2" MAX DRY LAID LOOK JOINTS HOLD MORTAR BACK 3" MIN.
- * VARY THICKNESS OF ADJACENT HORIZONTAL STONE COURSES, WHENEVER POSSIBLE LAY LARGE CHUNKS AND FILL IN AROUND WITH THINNER STONES.



**STONE FACING DETAIL
FOR HEADWALLS AND ENDWALLS**

FIGURE 6-4

Date: January 10, 2006

Job No.

Scale: N.T.S.

7.0 DRAINAGE EASEMENTS

In order to provide access for City personnel for inspection and maintenance, the Owner or Developer is required to procure and convey to the City a minimum 20-foot easement and/or declaration of restrictions for any tile, pipe, detention basin, water quality BMP, drainage way, flood routing path, ditch, watercourse, natural stream, man-made stream, storm sewer, or other stormwater component that is to be maintained by the City or drains runoff from publicly owned land owned by the City.

The Owner and/or Developer shall comply with the procurement, execution, and maintenance of the Easement, and their responsibilities to the City and to adjacent and downstream property owners. The easement shall be of sufficient width, minimum of 20-foot, to allow cleaning, widening, deepening, replacing or other general maintenance of such drainage course or piped system. Such declaration of restrictions shall include the operation and maintenance requirements as specified in the City approved plans.

When it is necessary to convey stormwater outside the property lines of a proposed improved area in order to discharge into an adequate outlet, the Owner or Developer:

- a. Is required to obtain easements and/or maintenance agreements, in a form and substance satisfactory to the City, from abutting property owners; and
- b. Is responsible for maintenance agreements of such drainage course unless the easements and/or maintenance agreements require the abutting property owners to repair and maintain the drainage course satisfactorily.

Any required drainage easement, preservation areas, reserves and other similar areas shall be shown on the required plans and reflected on the final plat or a separate recorded document approved by the City.

8.0 STREAM CORRIDOR PROTECTION ZONE REQUIREMENTS

The Stream Corridor Protection Zone (SCPZ) is established through designation of a riparian setback that will be required on all jurisdictional streams. The Director of Public Service may request from a developer or owner confirmation from a regulatory authority that a particular drainage system is or is not a jurisdictional stream. The riparian setback shall be kept in a natural state to the maximum extent practical so that it can perform its inherent function of erosion protection, flood storage, and water quality protection. Encroachments into the SCPZ for the purposes of development can be permitted with mitigation as required per Sec. 8.6 of this Manual.

8.1 SCPZ Delineation

For all jurisdictional streams a riparian setback will be required and shown on all site improvement plans. The full setback width shall be centered on the stream or on the valley of the stream, per 8.1.1. For all jurisdictional streams except the Scioto River the full setback width is defined by Equation 1, which was developed by the Ohio Department of Natural Resources (ODNR) based on regional curve analysis. Exceptions to the full SCPZ are provided in 8.1.a. The Scioto River SCPZ shall be extended 50-feet from the FEMA Floodway limits or the 100-year floodplain limits, whichever is less.

(Equation 1)

$$\text{SCPZ} = 1.47 \times \text{DA}^{0.38}$$

SCPZ = Total riparian setback width measured in feet, centered on the watercourse

DA = Drainage area in square miles

a. Exceptions to Equation 1

1. The SCPZ shall be expanded to the FEMA floodway if the Equation 1 width is less
2. Any wetlands partially located within the SCPZ setback limits shall have the SCPZ expanded to include the entire wetland.
3. The SCPZ shall consist of a minimum width of 25 feet centered on the stream or valley
4. The SCPZ width may be reduced to 100-feet each side of the ordinary high water mark as long as the width is greater than the floodway or wetland.

8.1.1 Alternative SCPZ Delineation Method

Once the total SCPZ width has been determined, the following method can be used to determine a more accurate site-specific position of the riparian setback boundaries (either side of the SCPZ limits):

The delineation of the zone is based on centering the stream within the zone which creates an equal setback distance on either side of the stream. For streams with well-defined meander patterns this creates an unusual setback geometry often protecting areas of higher elevation outside the floodplain and not protecting areas within the floodplain or even floodway at

lower elevations on the other side. The SCPZ concept was meant to protect the valley of stream within its anticipated potential meander pattern.

To create a modification and thus, a more accurate SCPZ, the Ohio Department of Natural Resources (ODNR) provides guidance in the Rainwater and Land Development Manual, Chapter 2, page 21-26, on how to more accurately delineate the SCPZ boundary. The following steps summarize the technique:

Step 1: On a plot of the stream valley, draw cross-section lines at a width wider than the total SCPZ distance and at a desired spacing through the valley of the stream generally perpendicular to the centerline of the valley and to contours lines near the anticipated SCPZ boundary. The more cross-section lines that are drawn, the more accurate the delineation will be.

Step 2: Draw a circle with diameter equal to the total SCPZ width and place center of circle onto center of cross-section line. Move center of circle along cross-section line in either direction until the intersection point of the circle and cross section are at the same elevation on both sides of the stream valley. When equal elevations are obtained, this defines the SCPZ boundary at the cross section, place a mark at each intersection location. Repeat for each cross section.

Step 3: Connect the SCPZ marks on each cross section with straight lines along valleys that are generally straight which should keep the SCPZ line outside of any drawn circles. For curved stream valleys, the SCPZ should generally follow the curvature of the valley keeping the width equal to the calculated SCPZ width and most, if not all, of the lines outside of the drawn circles.

Delineation Exceptions:

- a. The SCPZ shall not be any closer to the edge of the stream channel (ordinary high water mark) than 10% of the total SCPZ width or 25 feet whichever is greater. When this occurs, the SCPZ shall be shifted away from the stream so that the side closest to the stream is no closer than 10% or 25 feet whichever is greater, from the ordinary high water mark. The total width of the SCPZ remains consistent with the calculated width.
- b. The SCPZ shall be extended to the top of slope if the SCPZ line intersects a slope of greater than 15%. In this case, the SCPZ width increases on the side with the 15% slope, the other side remains as calculated.
- c. The SCPZ shall be increased to include FEMA designated floodway limits.

8.2 Non-Conforming Structures or Uses

- a. Man-made roadside ditches specifically used for roadside drainage that are classified as jurisdictional by the Ohio EPA or United States Army Corps of Engineers are exempt from the provisions of this section.

- b. Non-conforming structures and uses within the SCPZ, existing at the time of passage of this Manual, that are not permitted under this Manual may be continued but shall not be expanded, changed or enlarged except as set forth in this title.
- c. Non-conforming structures may be repaired or restored if damaged, destroyed, terminated or abandoned within six months from the date of damage/destruction or the adoption of this Manual, whichever is later, at the property owner's own risk. The owner shall also comply with applicable requirements of Chapter 1329, the City of Grove City Code of Ordinances.
- d. Residential and associated accessory structures or use within the SCPZ existing at the time of passage of this Manual may be expanded subject to the following provisions:
 - 1. The expansion conforms to existing zoning regulations.
 - 2. The expansion shall not impact the stream channel or the floodway.
 - 3. The expansion shall not exceed an area of 15% of the footprint of the existing structure (or use) that lies within the SCPZ. Expansions exceeding 15% of the footprint within the SCPZ shall be obtained through the variance process as set forth in Chapter 1133, the City of Grove City Code of Ordinances.
- e. Non-residential structure (or use) expansions will be permitted only through the variance process as set forth in Chapter 1133, the City of Grove City Code of Ordinances.

8.3 Permitted Uses

- a. Passive Uses: Uses that are passive in character shall be permitted in the SCPZ, including, but not limited to, passive recreational uses such as hiking, fishing, and picnicking, as permitted by federal, state and local laws. Construction of paved trails to further such passive recreational uses is also permitted as well as associated structures including boardwalks, pathways constructed of pervious material, picnic tables, playground equipment, athletic fields, and wildlife viewing areas.
- b. Removal of Damaged or Diseased Trees: Damaged or diseased trees as determined by the City of Grove City Urban Forester may be removed by the property owner or easement holder from the SCPZ. To prevent felled logs and branches from damaging downstream properties and/or blocking watercourses or otherwise exacerbating flooding, logs and branches resulting from the removal of damaged or diseased trees greater than 6 inches in diameter at the cut end shall be cut into sections no longer than 6 feet, anchored to the shore in an acceptable manner or removed.
- c. Revegetation and/or Reforestation: Revegetation and/or reforestation of the SCPZ shall use species pursuant to Table 8-1 within the Stormwater Drainage Manual, which lists species of plants and shrubs recommended for stabilizing flood prone areas. Proper selection of species is dependent on soil conditions, available water and amount of sun exposure. Species selection should be coordinated with and approved by the City's Urban Forester.
- d. Public Utilities: Placement or crossing of the SCPZ with sanitary sewer, storm sewer, and/or water lines and public utility transmission lines may be located within the SCPZ and disturbances of the setback necessary to place and/or maintain such utilities are also authorized. The placement, construction and maintenance of such utilities shall minimize disturbance to riparian areas and shall mitigate any necessary disturbances. The developer and/or landowner shall secure the appropriate state and federal permits required for installations of this type.
- e. Public Roadways: Crossings of streams and SCPZs for roadways shall be minimized

and approved at the discretion of the City. The placement, construction and maintenance of the roadway shall minimize disturbance to riparian areas and shall mitigate any necessary disturbances. The developer and/or landowner shall secure the appropriate state and federal permits required for installations of this type. The addition of a designated bike path as part of the roadway crossing may be required by the City.

- f. Stream Restoration: Construction activities associated with properly permitted stream or wetland restoration projects shall be permitted within the SCPZ. Copies of the appropriate permits shall be made available to the City two weeks prior to the commencement of earth disturbing activities.
- g. Emergency Channel Maintenance Activity: Activity to restore or maintain the flood carrying capacity of the main channel area by the property owner or easement holder may be permitted, subject to authorization by the Director of Public Service and, if applicable, by appropriate state and/or federal agencies. Such activity may include, but not be limited to removal of offending trees or brush or the accumulation of sediment in the main channel that is necessary to restore flow carrying capacity of the main channel.
- h. Stormwater outfalls, including headwalls, endwalls, and associated outlet open ditches.

8.4 Prohibited Uses

Any use not permitted under Section 8.3 shall be prohibited in the Stream Corridor Protection Zone unless otherwise approved by the City and mitigated through the requirements of Section 8.7. The following is a list containing some of the uses that are specifically prohibited:

- a. Structures of any kind including buildings, swimming pools, signs, billboards, electric lines, telecommunication lines (with the exception of transmission lines), cable TV lines, and other improvements deemed unacceptable by the Director of Public Service.
- b. Dredging or filling: There shall be no drilling, filling, dredging, diking, ditching, grading, or dumping of soils, spoils, liquid, or solid materials. No floodplain fill will be grated for areas within the Stream Corridor Protection Zone except those that are required for permitted uses.
- c. Parking lots, roads, driveways, or other human-made impervious cover
- d. Parallel utility lines, above or below grade.
- e. Stormwater detention and/or water quality BMPs.
- f. Motorized vehicles, except as needed for permitted uses.
- g. Herbicides and pesticides, except as approved by the Director of Public Service.
- h. Removal of topsoil, sand, gravel, rock, native ground cover/vegetation, oil or gas, with the exception of permitted uses or as approved by the Director of Public Service.
- i. Disturbance of natural vegetation except for the following:
 - 1. Maintenance of lawns, landscaping, shrubbery, or trees existing at the time of passage of this ordinance.
 - 2. Cultivation of lawns, landscaping, shrubbery, or trees in accordance with an approved landscaping plan submitted in conformance with this Manual.
 - 3. Conservation measures designed to remove damaged or diseased trees or to

control noxious weeds or invasive species.

- j. Any subsurface or surface sewage disposal or treatment area except for:
 - 1. Undeveloped parcels that have received site evaluation approval and/or permit approval prior to the enactment of this ordinance.
 - 2. Dwellings served by disposal/treatment systems existing at the time of passage of this Manual when such systems are properly sited (approved site evaluation) and permitted or in accordance with the Franklin County Public Health Department and/or the Ohio Environmental Protection Agency. Existing failing systems which are located within the SCPZ can be upgraded with approval of the Franklin County Public Health Department and/or the Ohio Environmental Protection Agency.

8.5 Construction Requirements

The following conditions shall apply to all Stream Corridor Protection Zones:

- a. Except as otherwise provided in this Manual, the Stream Corridor Protection Zone shall be preserved in its natural state.
- b. Prior to any soil disturbing activity, the Stream Corridor Protection Zone shall be clearly delineated by the applicant or their designated representative on the site. Such delineation shall also be identified on the Erosion and Sediment Control Plan and this delineation shall be maintained throughout soil disturbing activities.
- c. No later than the conclusion of construction, the applicant shall permanently delineate the Stream Corridor Protection Zone in an aesthetically harmonious manner, approved by the City, such that the location of the riparian setback boundary defining the Stream Corridor Protection Zone is apparent to the casual observer and permits access to the zone.
- d. Language preventing property owners from constructing facilities and performing activities that are prohibited within the Stream Corridor Protection Zone shall be shown on the plat or separate instrument and reflected on all deeds.
- e. Land within the SCPZ may be deeded fee simple to the City, pending City approval.
- f. The applicant shall obtain all necessary permits from the Army Corps of Engineers, Ohio EPA, and other regulatory agencies. The applicant is responsible for all permitting fees.

8.6 Mitigation of SCPZ Disturbances

For proposed non-compliant uses within the SCPZ not permitted under this section, mitigation shall be provided for proposed impervious area or managed open space encroachments as follows.

- a. Proposed Impervious Area. Proposed impervious areas within the SCPZ not permitted under this section shall be mitigated one of the following ways upon approval by the Director of Public Service:
 - 1. Mitigation by reducing the impervious area within an existing offsite or onsite SCPZ by two times the proposed impervious area encroachment, re-vegetating

according to specifications in this Manual, and placing the area into a conservation easement.

2. Mitigation by reducing the managed open space or agricultural area within an existing offsite or onsite SCPZ by four times the proposed impervious area encroachment, re-vegetating according to specifications in this Manual, and placing the area into a conservation easement.
 3. Install an intensive or extensive Green Roof equal in surface area to managed open space within the SCPZ or two times the proposed area of impervious surface within the SCPZ.
- b. Proposed Managed Open Space. Proposed managed open space area within the SCPZ not permitted under this section shall be mitigated as described below upon approval by the Director of Public Service:
1. Mitigation by reducing the managed open space or agricultural area within an existing offsite or onsite SCPZ by two times the proposed managed open space area encroachment, re-vegetating according to specifications in the Stormwater Design Manual, and placing the area into a conservation easement.

All areas that are designated to be used for SCPZ mitigation shall be permanently restricted by a recorded conservation easement held by the City. The easement shall be required to be recorded prior to the completion of proposed site improvement construction activities. The conservation easement is only required for SCPZ mitigated areas.

- a. It is the responsibility of the property owner to properly maintain the SCPZ. The conservation easement shall include the right of the City or its authorized agents, upon reasonable notice to the property owner, to enter upon the property for the purposes of accessing the Stream Corridor to inspect and monitor compliance with the terms of the conservation easement and this article. The conservation easement shall be perpetual, shall be in the form approved by the City, and shall run with the land and be binding upon the property owner and the successors in interest in the property or in any part thereof. Conservation easements shall be established by deed if no subdivision map is being filed, or by plat filed with the Franklin County Recorder's Office. The recorded conservation easement shall, at a minimum, also include:
1. Date of issuance, a written narrative of authorized regulated activities permitted in this section of this Ordinance, all of the prohibitions set forth, and in the case of permitted disturbances, a description of the disturbance(s) to be implemented;
 2. Survey plans for the property as a whole and, where applicable, for any additional properties subject to the conservation easements. Such survey plans shall be submitted on the surveyor's letterhead, signed and sealed by the surveyor, and shall include metes and bounds descriptions of the property, the site, and the areas subject to the conservation easement in Ohio State Plane Coordinates, North American Datum 1983, and shall depict the boundaries of the site and all areas subject to the conservation easement as marked with flags, signs or stakes on site. All such survey plans shall be submitted on paper and in digital CAD or GIS file on a media and format defined by the City. The flags, signs or stakes shall be numbered and identified on the survey plan; and
 3. A copy or copies of deeds for the property as a whole that indicate the deed book and pages where it has been recorded with Franklin County.

- b. The easement shall require the landowner to establish and maintain visible monuments at prominent locations along the boundary of the area subject to the easement.
- c. The conservation easement may include language reserving the right to make minor changes to accommodate necessary regulatory approvals upon the written consent of the City, provided such changes are otherwise consistent with this Manual. Any subsequent requests for minor changes to a conservation easement not associated with another land use application shall be subject to approval by the City. Such requests shall be in writing and shall be accompanied by all necessary supporting documentation. Upon the complete submittal of the written request and supporting documentation, the City shall have 90 days to decide whether to grant the request, pending an extension upon mutual agreement of all parties involved.

8.7 Exceptions

SCPZ requirement exceptions may be granted by the Director of Public Service, however, this shall not absolve the developer or property owner from complying with all applicable state and federal regulations.

8.8 Flood Prone Area and SCPZ Stabilization

Proper selection of species for stabilization of flood prone and SCPZ areas is dependent on several factors, including soil conditions, available water and amount of sun exposure. Proper species selection and installation shall account for these factors.

Table 8-1: Species of Plants and Shrubs Recommended for Stabilizing Flood Prone Areas

Riparian Corridor—Trees

Botanical Name	Common Name
<i>Acer spp.</i>	Maple(s)
<i>Betula nigra</i>	River Birch
<i>Carya spp.</i>	Hickory(s)
<i>Celtis occidentalis</i>	Common Hackberry
<i>Cercis Canadensis</i>	Eastern Redbud
<i>Crataegus phaenopyrum</i>	Washington Hawthorne
<i>Crataegus crusgalli</i>	Cockspur Hawthorne
<i>Fagus grandiflora</i>	Beech
<i>Fraxinus Americana</i>	White Ash
<i>Gleditsia triacanthos</i>	Honeylocust
<i>Hamamelis virginiana</i>	Common Witchhazel
<i>Liriodendron tulipifera</i>	Tulip Poplar
<i>Liquidambar styraciflua</i>	Sweetgum
<i>Platanus occidentalis</i>	Sycamore
<i>Populus deltoids</i>	Eastern Cottonwood
<i>Prunus serotina</i>	Black Cherry
<i>Quercus alba</i>	White Oak
<i>Quercus palustris</i>	Pin Oak
<i>Quercus rubra</i>	Red Oak
<i>Ulmus rubra</i>	Slippery Elm

Riparian Corridor--Shrubs

Botanical Name	Common Name
<i>Aronia melanocarpa</i>	Black Chokeberry
<i>Cornus racemosa</i>	Gray Dogwood
<i>Cornus stolonifera</i> *	Red-osier Dogwood
<i>Lindera benzoin</i>	Spicebush
<i>Salix spp.*</i>	Willow(s)
<i>Sambucus canadensis</i>	Elderberry
<i>Viburnum dentatum</i>	Southern Arrowwood
<i>Viburnum prunifolium</i>	Blackhaw Viburnum
<i>Viburnum lentago</i>	Nannyberry Viburnum
<i>Viburnum trilobum</i>	American Cranberrybush

*In stream plantings for rapid shade cover and bank stabilization

9.0 OPERATION AND MAINTENANCE PLANS

The owner/developer of a site that includes the implementation of structural and nonstructural BMPs to manage stormwater from the site and provide qualitative treatment shall prepare an Operation and Maintenance (O&M) Plan. The O&M plan shall be submitted to the City for review and shall be approved prior to the commencement of construction activities. The O&M Plan shall meet the minimum requirements of the latest version of the Ohio EPA General Construction Permit and include an O&M Agreement signed by the owner/developer and a requirement for annual inspection reports filed on forms provided by the City and conducted by a licensed Ohio Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), or Certified Professional in Storm Water Quality (CPSWQ).

The O&M plan shall be a stand-alone document which contains the following minimum requirements:

- a. A designated entity for stormwater inspection and maintenance responsibilities.
- b. The routine and non-routine maintenance tasks to be undertaken.
- c. A schedule for inspection and maintenance tasks.
- d. Any necessary legally binding maintenance easements and agreements.
- e. A map showing the location of the BMPs and access and maintenance easements.
- f. BMP details.
- g. Procedures for properly disposing of collected pollutants within the BMPs in accordance with local, state, and federal regulations.

10.0 EROSION AND SEDIMENT CONTROL

The developer shall prepare a Stormwater Pollution Protection Plan (SWP3) in accordance with the general and specific requirements outlined in the OEPA's permit for stormwater discharges associated with construction activity or its subsequent OEPA-issued revision. The SWP3 shall include erosion and sediment structural and non-structural BMPs to address the management of construction site stormwater runoff throughout land disturbing activities. The SWP3 shall be submitted to the City for review and shall be approved prior to the commencement of land disturbing activities. A copy of the OEPA Notice of Intent (NOI) submission shall be made available to the City.

A copy of the approved SWP3 shall be maintained onsite in a location easily accessible by the City at all times during construction activities. The owner/developer is required to modify the SWP3 as necessary during construction activities to appropriately manage the construction site stormwater runoff during the various phases of construction. The SWP3 required to be kept on-site shall be modified and revised to reflect the installed BMPs at all times.

It shall be the responsibility of the owner/developer to provide notification to the City 48 hours prior to commencement of initial site earth disturbance. No construction activity such as grading, cutting, or filling shall be commenced until erosion and sedimentation control devices have been installed to the satisfaction of the City.

No person shall cause or allow earth disturbing activities on a development area except in compliance with the standards set out in this manual and the applicable items below:

- a. An SWP3 shall be approved prior to any earth disturbing activities on development areas, including those development areas being a part of a larger common plan of development or sale. The person proposing such earth disturbing activities shall develop and submit for approval a plan, as part of the final site improvement plans, containing erosion and sediment pollution control practices so that compliance with other provisions of this manual shall be achieved during and after development. Such a plan shall address specific requirements contained within this Manual.
- b. The SWP3 shall contain a description of the controls appropriate for each construction operation covered by this Manual and the operator(s) shall implement such controls. The terms shall clearly describe for each major construction activity appropriate control measures and the general timing (or sequence) during the construction process that the measures will be implemented; and which contractor is responsible for implementation (e.g., contractor A will clear land and install perimeter controls and contractor B will maintain perimeter controls until final stabilization). The erosion and sediment control practices used to satisfy the conditions of this Manual shall meet the standards and specifications in the current edition of Ohio's Rainwater and Land Development manual or other standards acceptable to the City.

11.0 GLOSSARY

The following definitions shall apply to this Manual:

100-year flood: A flood which has the probability of occurring once every one-hundred (100) years or having a one (1) percent chance of occurring each year, otherwise known as the base flood.

Attenuation: Is the gradual loss of intensity of flow.

Best Management Practice(s) (BMP): Measures including structural and non-structural BMPs that are determined to be the most effective, practical means of preventing or reducing point source or non-point source pollution inputs to stormwater runoff and water bodies and reduction in peak flow rates.

Contamination: The presence of or entry into a public water supply system, the MS4, Waters of the State, or Waters of the United States of any substance which may be deleterious to the public health and/or the quality of water.

Conveyance: Any pipe, channel, inlet, drain, or other structure that facilitates the movement or removal of water.

Dam: An artificial barrier usually constructed across a stream channel to impound water. Dams shall have spillway systems to safely convey normal stream and flood flows over, around, or through the dam. Spillways are commonly constructed of non-erosive materials such as concrete. Dams should also have a drain or other water withdrawal facility to control the pool or lake level and to lower or drain the lake for normal maintenance and emergency purposes. A permit from ODNR is not required for impoundments with a total storage volume of less than 15 ac-ft, or less than 50 ac-ft for impoundments with a height of less than 10 feet, or unlimited storage for heights of less than 6 feet.

Detention Basin: A facility designed for the temporary storage of stormwater runoff for the purpose of delaying and attenuating flow to the downstream receiving system. For the purpose of this design manual, this definition excludes storage in areas of parking lots, rooftops, underground tanks and other water quality based applications, such as bio-retention basins.

Design Storm: A rainfall event of specified size and return frequency which is used to calculate the runoff volume and peak flow rate.

Development: Any action in preparation for construction activity which results in an alteration of either land or vegetation, including but not limited to clearing, grubbing, grading, filling, excavation or any other development operations and the construction of new facilities, buildings, parking areas, recreational areas, etc.

Dike: An artificial barrier used to divert or restrain flood waters from tidal bodies of water.

Discharge: Any substance introduced to the Waters of the State or to surface runoff which is collected or channeled by the MS4 which does not lead to treatment works and/or the addition of any pollutant to the Waters of the State from a point source.

Disturbance: Earth surface subject to erosion due to the removal of vegetative cover and/or earthmoving activities.

Ditch: An open channel constructed for the purpose of drainage or irrigation with intermittent flow.

Drainage: A general term applied to the removal of surface or subsurface water from a given area, either by gravity or by pumping, commonly applied herein to surface water.

Drainage System: The surface and subsurface system for the removal of water from the land, including both the natural elements of streams, marshes, swales and wet basins, whether of an intermittent or continuous nature, and man-made elements which include culverts, ditches, channels, storage facilities and the storm sewer system.

Easement: Property titled to the City for the operation and maintenance of stormwater drainage and management systems.

Engineer: A Professional Engineer registered in the State of Ohio as required by Chapter 4733 of the Ohio Revised Code.

Environmental Protection Agency (EPA): The Ohio and/or U.S. Environmental Protection Agency.

Erosion: The general process whereby soil or surface material is moved by flowing surface or subsurface water or is worn away by the action of wind, water, ice or gravity.

Erosion control: Measures that reduce or prevent erosion.

Extended Detention: A stormwater design feature that provides for the gradual release of a volume of stormwater (0.75 inch per impervious acre) over a 24 to 48-hour interval to increase settling of urban pollutants and protect channels from degradation.

Facility: Any operation, including construction sites, required by the Federal Clean Water Act to have a permit to discharge stormwater associated with activities subject to NPDES Permits as defined in 40 Code of Federal Regulations (CFR), Part 122.

Flood: A temporary rise in the level of rivers, streams, watercourses and lakes which results in inundation of areas not ordinarily covered by water.

Flood Plain: The relatively level land to either side of a channel, which is inundated during high flows. It is often used to reference the 100-year flood plain.

Geotextile: A woven or nonwoven, water-permeable fabric generally made of synthetics such as polypropylene. It's used to slowly pass runoff or as bedding for rock to keep the rock separate from adjacent soil.

Grading: Changing the ground surface condition, elevation, and/or slope through excavation or fill of material.

Green Roof: A roof of a building that is partially or completely covered with vegetation and a growing medium, planted over a waterproofing membrane. It may also include additional layers such as a root barrier and drainage and irrigation systems.

Hydrologic Soil Group: One of four classifications of soil based on the minimum infiltration characteristics for bare soil after prolonged wetting as used by the United States Department of Agriculture Natural Resources Conservation Service *Technical Release No. 55, Urban Hydrology for Small Watersheds*. The Franklin County Soil Survey should be used as the reference source for soils types and hydrologic soil groups within the City of Grove City.

Impervious Surface: Any constructed surface; including but not limited to, rooftops, sidewalks, roads, and parking lots; covered by impenetrable materials such as asphalt, concrete, brick, and stone. These materials seal surfaces, repel water and prevent precipitation and runoff from infiltrating soils.

Infiltration: The gradual downward flow of water from the surface through soil to groundwater.

Jurisdictional Stream: Any watercourse that is deemed to be classified as Waters of the United States by a regulatory governmental agency such as the Ohio EPA or United States Army Corps of Engineers. Classifications include ephemeral, intermittent, and perennial.

Landscape: To mow, seed, sod, plant, and to do other activities which are not earth changes.

Larger Common Plan of Development or Sale: A contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under one plan. A common plan is broadly defined as any announcement or piece of documentation (including a sign, public notice or hearing, sales pitch, advertisement, drawing, permit application, zoning request, computer design, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor, markings, etc.) indicating that construction activities may occur. A larger common plan or sale needs to also consider spoil areas, staging areas and borrow sites. A public body need not consider all their construction projects within their entire jurisdiction to be part of an overall common plan. Discrete construction projects within a larger common plan or development or sale are located at least 1/4 mile apart and the area between the two projects is not being disturbed, each individual project can be treated as a separate plan of development or sale provided any interconnecting road, pipeline, or utility project that is part of the same "common plan" is not concurrently being disturbed.

Low Impact Development or "LID": A term used to describe a land planning and engineering design approach to manage stormwater runoff. One of the primary goals of LID is to reduce the volume of runoff

by infiltrating runoff, evaporation of rainwater back into the atmosphere, and finding other beneficial uses for excess runoff rather than exporting it as a waste product to downstream storm sewers.

Levee: An artificial barrier that diverts or restrains flood waters from streams and lakes. Per the Ohio Department of Natural Resources, sufficient freeboard shall be provided to prevent overtopping of the levee due to passage of the design flood or due to severe frost damage, ice damage, stream obstruction or wave action. The design freeboard shall not be reduced without the approval of the ODNR Chief.

- For levees in Class I, the minimum elevations of the top of the levee shall be three feet higher than the maximum adjacent water surface elevation during passage of the design flood.
- For levees in Class II and Class III, the minimum elevations of the top of the levee shall be two feet higher than the maximum adjacent water surface elevations during passage of the design flood.
- Where special condition of severe frost damage, ice damage, stream obstruction, wave action, or impact of other structures may occur, the ODNR Chief may require elevations higher than required item 1 above.

Managed Open Space: Land that is regularly maintained via mowing, fertilizing, landscaping, and other actions that prevent the land from being in a natural state such as single-family residential lawns, golf courses, cemeteries, and other similar types of development.

Material: Soil, sand, gravel, clay, or any other organic or inorganic material.

Municipal Separate Storm Sewer System (MS4): As defined at 40 CFR 122.26(b)(8), “means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

- Owned or operated by a state, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to state law)...including special districts under state law such as a sewer district, flood control district or drainage district, or similar entity.
- Designed or used for collecting or conveying stormwater;
- Which is not a combined sewer; and
- Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.”

National Pollutant Discharge Elimination System (NPDES): A national program under Section 402 of the Clean Water Act for regulation of discharges of pollutants from point sources to Waters of the United States. Discharges are illegal unless authorized by an NPDES permit.

NPDES Permit: A permit issued by the EPA (or by a state under authority delegated pursuant to 33 USC § 1342(b)) that authorizes the discharge of pollutants to Waters of the United States, whether the permit is applicable on an individual, group, or general area-wide basis.

OAC: Ohio Administrative Code.

Operate: To drive, conduct, work, run, manage, or control a tool, piece of equipment, vehicle, or facility.

Ordinary High Water Mark (OHWM): A line on the shore established by the fluctuations of water and indicated by physical characteristics, or by other appropriate means that consider the characteristics of the surrounding areas.

Owner: Any person with a legal or equitable interest in a piece of land or parcel.

Permeability: The capacity for transmitting runoff through a material or into soil. The relevant soil property is the saturated hydraulic conductivity, which is the amount of water that would move vertically through a unit of saturated soil per unit time under hydraulic gradient.

Person: Any individual, owner, operator, association, organization, partnership, firm, corporation, municipal corporation, joint venture, agency, County or State agency, unincorporated associate, party, the federal government, any combination thereof or other entity recognized by law.

Pollutant: Anything which causes or contributes to pollution.

Pollution: The alteration of the physical, thermal, chemical, or biological quality of, or the contamination of, any Water of the State or Water of the United States, that renders the water harmful, detrimental, or injurious to humans, animal life, vegetation, or property, or to the public health, safety, or welfare, or impairs the usefulness or the public enjoyment of the water for any lawful or reasonable purpose.

Practices: Schedules of activities, prohibitions of practices, maintenance procedures and other management practices and techniques (both structural and non-structural) used to lessen the environmental impacts of land use and to prevent or reduce the pollution of Waters of the State. BMPs also include treatment requirements, operating procedures and practices to control facility and/or construction site runoff, spillage or leaks, sludge or waste disposal or drainage from raw material storage. Techniques may involve basins, vegetation, altering construction operations, open space development, riparian buffers or other means of limiting environmental impacts.

Rainwater and Land Development Manual: A manual describing construction and post-construction BMPs and associated specifications prepared by the Ohio Department of Natural Resources Division of Soil and Water Conservation. The compilation of technical standards and design specifications are methods of controlling construction related surface runoff, erosion and sedimentation. A copy of the manual may be obtained by contacting the Director of Public Service or the Ohio Department of Natural Resources, Division of Soil & Water Conservation.

Riparian Setback: An area of trees, shrubs, and surrounding vegetation located adjacent to streams, rivers, lakes, ponds, and wetlands which serve to stabilize erodible soil, improve both surface and ground water quality, increase stream shading and enhance wildlife habitat.

Riprap: Rock or stone placed over a bedding of geotextile, sand or gravel used to armor slopes against flowing water or wave action.

Runoff: The portion of rainfall, precipitation, melted snow or irrigation water that flows across the ground surface and is eventually returned to streams.

Runoff coefficient: The fraction of total rainfall that will appear as runoff.

Sediment: Soils or other surface materials (including, but not limited to rock, sand, gravel and organic material or residue associated with or attached to the solid) that can be transported or deposited by the action of wind, water, ice or gravity as a product of erosion or sedimentation.

Sediment pollution: Degradation of Waters of the State by sediment as a result of failure to apply management or conservation practices to abate wind or water soil erosion, specifically in conjunction with earth disturbing activities on land used or being developed for commercial, industrial, residential or other non-farm purposes.

Sediment basin: A sediment trap, sediment basin or permanent basin that has been temporarily modified for sediment control, as described in the latest edition of the Rainwater and Land Development Manual.

Sedimentation: The processes that operate at or near the surface of the ground to deposit soils, debris and other materials either on the ground surfaces or in water channels or the action of deposition of sediment that is determined to have been caused by erosion.

Sheet Flow: Diffuse runoff flowing overland in a thin layer not concentrated and not in a defined channel.

Site: The entire area of land surrounding the discharge activity.

Soil Erosion: The movement of soils that occurs as a result of wind, rain, precipitation, or flowing water.

Stabilization: Vegetative or structural soil-cover controlling erosion (including but not limited to permanent and temporary seed, mulch, sod, pavement, etc.) or the use of vegetative and/or structural practices that prevent exposed soil from eroding.

Stormwater: Water runoff resulting from precipitation, snow melt, or irrigation runoff as defined in 40 Code of Federal Regulation 122.26(b)(13).

Stormwater Master Plan: A study prepared by a Professional Engineer to determine specific allowable discharge rates for a larger common development or watershed area. These types of studies are typically initiated due to downstream restrictions or other special circumstances that require a higher level of stormwater control within the study area.

Stormwater Pollution Prevention Plan (SWP3): A set of plans and specifications, prepared and approved in accordance with the specific requirements of the City Engineer and the Ohio EPA, NPDES Permit #OHC000004. The SWP3 shall be certified by an Engineer, and shall indicate the stormwater management strategy, including the specific measures and sequencing to be used to manage stormwater

on a development site before, during and after construction and shows the details of any earth-disturbing activity on the site.

Stormwater runoff: Surface water runoff which converges and flows primarily through water conveyance features such as swales, gullies, waterways, channels or storm sewers.

Stormwater Treatment: The removal of pollutants from urban runoff and improvement of water quality, accomplished largely by deposition and utilizing the benefits of natural processes.

Stream: A system including permanent or seasonally flowing water, often with a defined channel (bed and bank), flood plain, and riparian ecosystem. To be classified as a stream, the waterway shall meet certain requirements as defined by the Ohio EPA and/or US Army Corps of Engineers and may then be classified as either an ephemeral, intermittent, or perennial stream.

Stream Corridor Protection Zone" or "SCPZ": A transitional area between terrestrial and aquatic ecosystems, and adjacent to perennial, intermittent, and ephemeral streams, lakes, and estuarine-marine shorelines, that is distinguished by gradients in biophysical conditions, ecological processes, and biota, through which surface and subsurface hydrology connect water bodies with their adjacent uplands. The riparian zone includes those portions of terrestrial ecosystems that significantly influence exchanges of energy and matter with aquatic ecosystems (i.e., a zone of influence).

Structural BMP: A constructed facility or measure to help protect receiving water quality and control stormwater quantity.

Structure: Anything manufactured, constructed or erected which is normally attached to or positioned on land, including, but not limited to buildings, portable structures, earthen structures, roads, parking lots, and paved storage areas.

Water Quality Volume: A volume captured for the purposes of treating pollutants and protecting stream stability. This volume is prescribed by the Ohio EPA Construction General Permit and is equivalent to the volume generated by a 0.75 inch rainfall.

Watershed: A region draining to a specific river.

Wetland: An area that is inundated or saturated by surface or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated or hydric soil conditions as defined by the Ohio EPA and/or US Army Corps of Engineers.

Date: 08/07/15
Introduced By: Ms. K-McGraw
Committee: Lands
Originated By: Plan Comm
Approved: _____
Emergency: 30 Days: X
Current Expense: _____

No.: C-57-15
1st Reading: 08/17/15
Public Notice: 8/20/15
2nd Reading: 09/08/15
Passed: _____ Rejected: _____
Codified: _____ Code No: _____
Passage Publication: _____

ORDINANCE C-57-15

AN ORDINANCE TO ACCEPT THE PLAT OF CLAYBROOK CROSSING, SECTION 6, PART 1

WHEREAS, Claybrook Crossing, Section 6, Part 1, a subdivision containing lots 132, 173 to 176, 190 to 200, and 207 to 209, all inclusive has been submitted to Council for their consideration.

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF GROVE CITY, STATE OF OHIO, THAT:

SECTION 1. The Plat of Claybrook Crossing, Section 6, Part 1, situated in the State of Ohio, County of Franklin, Township of Jackson, City of Grove City and being part of Virginia Military Survey No. 1383, containing 6.551 acres of land, more or less. Said 6.551 acres being part of those tracts of land conveyed to Grand Communities, LTD, by deed, all being of record in the Recorder's Office, Franklin County, Ohio, is hereby accepted and this Council accepts for public use the street right of way that is within the boundaries of this subdivision.

SECTION 2. Easements, where indicated on the plat, are hereby accepted for operation and maintenance of public utility services including but not limited to water, sanitary sewers, electricity and telephone, and to companies providing cable television and cable signal transmission services and for storm water drainage systems for the construction, operation and maintenance of the facilities to provide such services and systems above and beneath the ground.

SECTION 3. This ordinance shall take effect at the earliest opportunity allowed by law.

Ted A. Berry, President of Council

Passed:

Effective:

Richard L. Stage, Mayor

Attest:

Tami K. Kelly, MMC, Clerk of Council

I Certify that this ordinance
is correct as to form.

Stephen J. Smith, Director of Law

Date: 08/07/15
Introduced By: Ms. K-McGraw
Committee: Lands
Originated By: Plan Comm
Approved: _____
Emergency: 30 Days: X
Current Expense: _____

No.: C-58-15
1st Reading: 08/17/15
Public Notice: 8/20/15
2nd Reading: 09/08/15
Passed: _____ Rejected: _____
Codified: _____ Code No: _____
Passage Publication: _____

ORDINANCE C-58-15

AN ORDINANCE TO ACCEPT THE PLAT OF MARGIE'S COVE, SECTION 2, PART 2

WHEREAS, Margie's Cove, Section 2, Part 2, a subdivision containing lots 50 to 66, both inclusive has been submitted to Council for their consideration.

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF GROVE CITY, STATE OF OHIO, THAT:

SECTION 1. The Plat of Margie's Cove, Section 2, Part 2, situated in the State of Ohio, County of Franklin, Township of Jackson, City of Grove City and being part of Virginia Military Survey No. 1383, containing 6.403 acres of land, more or less. Said 6.403 acres being part of those tracts of land conveyed to Grand Communities, LTD, by deed, all being of record in the Recorder's Office, Franklin County, Ohio, is hereby accepted and this Council accepts for public use the street right of way that is within the boundaries of this subdivision.

SECTION 2. Easements, where indicated on the plat, are hereby accepted for operation and maintenance of public utility services including but not limited to water, sanitary sewers, electricity and telephone, and to companies providing cable television and cable signal transmission services and for storm water drainage systems for the construction, operation and maintenance of the facilities to provide such services and systems above and beneath the ground.

SECTION 3. This ordinance shall take effect at the earliest opportunity allowed by law.

Ted A. Berry, President of Council

Passed:
Effective:

Richard L. Stage, Mayor

Attest:

Tami K. Kelly, MMC, Clerk of Council

I Certify that this ordinance
is correct as to form.

Stephen J. Smith, Director of Law

Date: 08/07/15
Introduced By: Ms. K-McGraw
Committee: Lands
Originated By: Plan. Comm.
Approved: _____
Emergency: 30 Days
Current Expense: _____

No.: C-59-15
1st Reading: 08/17/15
Public Notice: 08/20/15
2nd Reading: 09/21/15
Passed: _____ Rejected: _____
Codified: _____ Code No: _____
Passage Publication: _____

ORDINANCE C-59-15

AN ORDINANCE FOR THE REZONING OF 97.81 ACRES LOCATED SOUTH AND WEST OF MARLANE DRIVE FROM R-2, SD-3 & SD-4 TO IND-1

WHEREAS, a petition was filed with the Planning Commission of the City of Grove City praying for the recommendation of said Commission in regard to the rezoning of certain premises hereinafter described; and

WHEREAS, the Planning Commission approved the rezoning on August 04, 2015; and

WHEREAS, a copy of the ordinance, together with a map and plat and the report of the Planning Commission has been on file in the Clerk's office for thirty days for public inspection.

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF GROVE CITY, STATE OF OHIO, THAT:

SECTION 1. The following described premises are rezoned from R-2, SF-3 & SD-4 to IND-1:

Situated in the State of Ohio, County of Franklin, City of Grove City and being a part of Virginia Military Survey 8231, 6843, and being 97.81 acres conveyed to John Haag; Ohio Holding Company; and Herbert G. Carlisle, as recorded in Official Records, Recorder's Office, Franklin County, Ohio, and being more fully described in Exhibit "A" attached hereto and made a part hereof.

SECTION 2. The comprehensive zoning map is hereby amended to conform to the provisions of this ordinance.

SECTION 3. This Ordinance shall take effect at the earliest opportunity allowed by law.

Ted A. Berry, President of Council

Passed:
Effective:

Richard L. Stage, Mayor

Attest:

Tami K. Kelly, MMC, Clerk of Council

I Certify that this ordinance
is correct as to form.

Stephen J. Smith, Director of Law

C-59-15
Exhibit "A"

LEGAL DESCRIPTION OF THE PROPERTY

PARCEL NO. 1

Situated in the County of Franklin, in the State of Ohio, and in the City of Grove City, and bounded and described as follows:

Being part of Virginia Military Survey No. 8231; also being part of that certain 53.5 acre tract conveyed to John Haag by deed of record in Deed Book No. 1209, page 52, records of the Recorder's Office, Franklin County, Ohio and being more particularly described as follows:

Beginning at a point at the northwesterly corner of said tract shown of record in Deed Book 1209, page 52, said point being in the center line of Marlane Drive; thence S. 77° 46' 16" E. and along the center line of Marlane Drive, said Marlane Drive produced easterly, and along the northerly line of said 53.5 acre tract, a distance of 1641.46 ft. to a point in the southwesterly right-of-way line of proposed State Route 200, said point being witnessed by an iron pin 0.11 ft. South of said point; thence S. 55° 45' 49" E. and along the southwesterly limited access right-of-way line of said proposed State Route 200 a distance of 232.36 ft. to an iron pin; thence S. 53° 38' 01" E. and continuing along said limited access right-of-way line, a distance of 256.46 ft. to a point; thence S. 8° 44' 10" W. and crossing Marlane Drive and said 53.5 acre tract and along the westerly line of a certain 7.047 acre tract, and passing an iron pin at 103.15 ft. and passing the southwesterly right-of-way line of Marlane Drive at 114.37 ft., a total distance of 713.08 ft. to an iron pin in the southerly line of said 53.5 acre tract; thence N. 77° 29' 40" W. and along the southerly line of said tract shown of record in Deed Book 1209, page 52, a distance of 2261.21 ft., to an iron pin in the southwesterly corner of said 53.5 acre tract and in the easterly line of a drive 30 ft. in width; thence N. 20° 18' 44" E. and along the westerly line of said 53.5 acre tract, a distance of 901.73 ft. to the place of beginning, containing 43.817 acres, more or less, of which 2.813 acres lies within the right-of-way of said Marlane Drive; subject to all easements and restrictions shown of record; also subject to all legal highways.

Parcel No. 040-001144-00

PARCEL NO. 2

Situated in the County of Franklin, in the State of Ohio and in the City of Grove City, and bounded and described as follows:

Being situated in the State of Ohio, County of Franklin, City of Grove City, Virginia Military Survey Numbers 6843 and 8231, and being a part of 46.595 acre tract deeded to Ohio Holding Company in Deed Book 2435, Page 160, Recorder's Office, Franklin County, Ohio, and being a part of a 5.4155 acre tract deeded to Ohio Holding Company in Deed Book 2681, Page 409, Recorder's Office, Franklin County, Ohio, and being more particularly described as follows:

Commencing at an iron pin at the southwesterly corner of said 46.595 acre tract, said iron pin being at the northwesterly corner of the Robertshaw Fulton Control Company (Robertshaw Control Company, Deed Book 2590, Page 654), 31.0176 acre tract (Deed Book 2340, Page 524), said iron pin being in the easterly line of the David Davies, Inc. 178.5 acre tract (Deed Book 1162, Pages 17, 41);

thence South 89 degrees 56 minutes East, along the southerly line of said 46.595 acre tract; and along the northerly line of said 31.0176 acre tract, and along the southerly line of the Robertshaw Control Company 5.8797 acre tract (Deed Book 2590, Page 654, and Deed Book 2340, Page 520), a distance of 1,324.59 feet to an iron pin at the southwesterly corner of said 5.4155 acre tract, and the southeasterly corner of said 5.8797

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JUN 23 2015

GC PLANNING COMMISSION

acre tract, and the true point of beginning of this description, passing an iron pin on line at the southwesterly corner of said 5.8797 acre tract at 944.59 feet;

thence North 0 degrees 04 minutes East, along the westerly line of said 5.4155 acre tract, and along the easterly line of said 5.8797 acre tract, a distance of 674.00 feet to an iron pin at the northwesterly corner of said 5.4155 acre tract (northeasterly corner of said 5.8797 acre tract), and in a line of said 46.595 acre tract;

thence North 89 degrees 56 minutes West, along the northerly line of said 5.8797 acre tract, and along a line of said 46.595 acre tract, a distance of 380.00 feet to an iron pin at the northwesterly corner of said 5.8797 acre tract, and at a corner of said 46.595 acre tract;

thence North 64 degrees 29 minutes West, across said 46.595 acre tract, a distance of 130.01 feet to a point at the southeasterly corner of the North American Broadcasting Company 39.548 acre tract (Deed Book 2505, Page 403), and at a corner of said 46.595 acre tract;

thence North 37 degrees 22 minutes East, along the easterly line of said 39.548 acre tract, and along a line of said 46.595 acre tract, a distance of 1,124.01 feet to an iron pin at a corner of said 39.548 acre tract, and at a corner of said 46.595 acre tract;

thence North 8 degrees 46 minutes East, continuing along the easterly line of said 39.548 acre tract, and along a line of said 46.595 acre tract, a distance of 180.20 feet to an iron pin in the westerly line of proposed Robertshaw Drive, as shown on sheets 65, 66 and 67 of the right-of-way plan FRA-71-10.12, State Highway Department, Division Six Engineer, Delaware, Ohio;

thence along the westerly right-of-way line of said proposed Robertshaw Drive, the following distances and bearings.

South 30 degrees 38 minutes East, a distance of 264.52 feet to an iron pin;

South 18 degrees 30 minutes East, a distance of 190.52 feet to an iron pin;

South 0 degrees 59 minutes West, a distance of 378.58 feet to an iron pin;

South 21 degrees 46 minutes West, a distance of 367.95 feet to an iron pin, passing an iron pin on line in the northerly line of said 5.4155 acre tract at 367.00 feet,

South 17 degrees 42 minutes West, a distance of 425.08 feet to an iron pin;

South 25 degrees 26 minutes West, a distance of 297.30 feet to an iron pin in the southerly line of said 5.4155 acre tract, and in the northerly line of said 31.0176 acre tract;

thence North 89 degrees 56 minutes West, along the southerly line of said 5.4155 acre tract, and along the northerly line of said 31.0176 acre tract, a distance of 8.60 feet to the place of beginning, containing 14.417 acres.

Parcel No. 040-002121-00

PARCEL NO. 3

Situated in the County of Franklin, in the State of Ohio, and in the City of Grove City, and bounded and described as follows:

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GC PLANNING COMMISSION

In Virginia Military Survey No. 6843 and being a part of the 222. acre tract, the one-half interest of which was conveyed to Herbert G. Carlisle by Deed of Record in Deed Book 1535, Page 601, of record in Recorder's Office, Franklin County, Ohio, said part being more particularly described as follows:

Beginning at an iron pin at the northwest corner of said 222. acre tract; thence South 02° 37' 30" West, with the west line of said tract, 1331.98 feet to an iron pin; thence South 75° 00' 00" East 848.19 feet to an iron pin; thence North 40° 00' 00" East 1124.01 feet to an iron pin; thence North 11° 24' 00" East, 366.11 feet to an iron pin in the north line of said tract and in the north line of Virginia Military Survey No. 6843; thence North 78° 33' 30" West, with said north line, 610.00 feet to an iron pin; thence North 77° 35' 00" West, continuing with said north line, 977.97 feet to the place of beginning containing 39.559 acres and subject to all legal highways.

Except for the fee simple title and easement for highway purposes of a certain .011 acre parcel acquired by the State of Ohio in Case No. 219056, Franklin County, Ohio Court of Common Pleas pursuant to Journal Entry Settlement filed on March 19, 1964, and bounded and described as follows:

Beginning at a point in the northeast corner of the owner's 39.566 acre tract, said point also being located 338.01 feet right of Survey Station 370 plus 53.36 in the centerline of a survey made in 1961 for the Department of Highways of State Route 200, Section 8.04 in Franklin County, Ohio; thence north 78 degrees 33 minutes 24 seconds west, along the owner's northerly property line, a distance of 28.74 feet to a point; thence south 28 degrees 59 minutes 22 seconds east, a distance of 44.24 to a point in the owner's easterly property line; thence north 11 degrees 31 minutes 44 seconds east, along the owner's easterly property line to a point of beginning, containing 0.011 of an acre, more or less.

Together with all rights or easements of access to or from said limited access highway, from or to the land or said persons abutting upon that portion of said limited access highway, as shown by the plans of said improvement herein referred to. Said stations being the station numbers as stipulated in the hereinbefore mentioned survey.

Parcel No. 040-004148-00

RECEIVED

JUN 23 2015

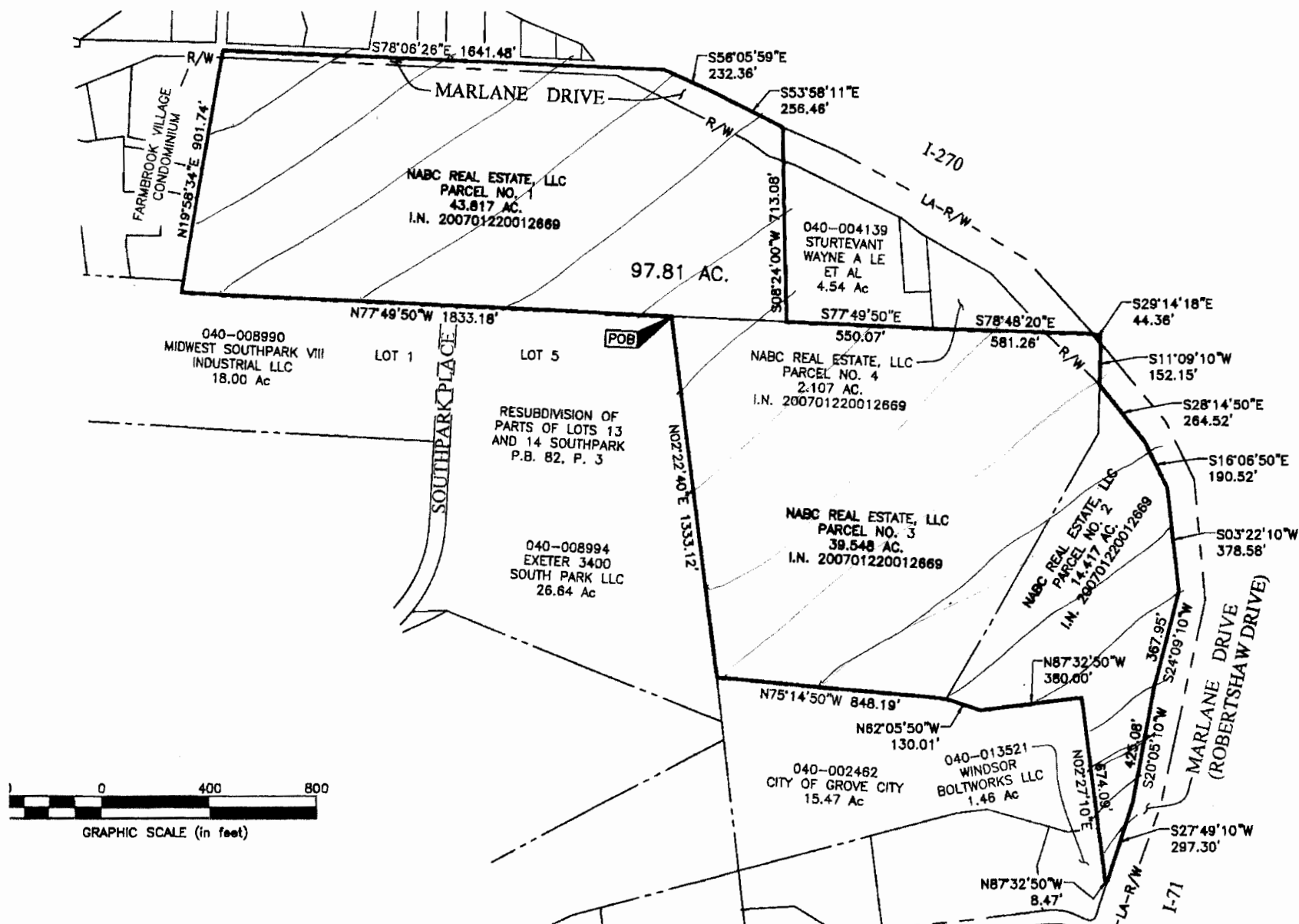
GC PLANNING COMMISSION

C-59-15

Scale: $1'' = 4'$

Job No: 2015-08

VIRGINIA MILITARY SURVEY NOS. 8231 & 6843
CITY OF GROVE CITY, COUNTY OF FRANKLIN, STATE OF OHIO



RECEIVED

JUN 23 2015

GC PLANNING COMMISSION

Date: 08/07/15
Introduced By: Ms. K-McGraw
Committee: Lands
Originated By: Plan. Comm.
Approved: _____
Emergency: 30 Days: _____
Current Expense: _____

No.: CR-49-15
1st Reading: 08/17/15
Public Notice: _____
2nd Reading: _____
Passed: _____ Rejected: _____
Codified: _____ Code No: _____
Passage Publication: _____

RESOLUTION NO. CR-49-15

A RESOLUTION TO APPROVE THE DEVELOPMENT PLAN FOR LONDON PLACE LOCATED AT THE NORTHWEST CORNER OF S.R. 665 AND SUMMIT WAY

WHEREAS, on August 4, 2015, the Planning Commission recommended approval of the Development Plan for London Place, with the following deviations and stipulations:

1. The 20' rear parking lot setback shall be permitted to **deviate** from the approved zoning text, requiring 30';
2. The 15' front parking lot setback shall be permitted to **deviate** from the approved zoning text, requiring 20';
3. The cross access easement shall be recorded with Franklin County prior to site improvement plan approval;
4. The sanitary sewer easement over the Rite Rug property shall be recorded with Franklin County prior to site improvement plan approval;
5. The 0.083 acre directly west of the site (approved by the 6/2/15 lot split) shall be combined with the London Place parcel prior to site improvement plan approval;
6. The flow of traffic shall be two-way on the north side of the building and one-way, moving clockwise, on the east, west and south sides of the building with two-way traffic within the parking lot connection at the southwest corner. All directional signage shall be noted with pavement markings.

NOW, THEREFORE BE IT RESOLVED BY THE COUNCIL OF THE CITY OF GROVE CITY, STATE OF OHIO, THAT:

SECTION 1. This Council hereby approves the Development Plan for London Place, contingent upon the deviations and stipulations set by Planning Commission.

SECTION 2. This approval shall be good for 12 months from the date passed, or as otherwise provided in Section 1101.07(b) of the Codified Ordinances of the City of Grove City, Ohio.

SECTION 3. This resolution shall take effect at the earliest opportunity allowed by law.

Ted A. Berry, President of Council

Richard L. Stage, Mayor

Passed:
Effective:

Attest:

Tami K. Kelly, MMC, Clerk of Council

I Certify that this resolution
is correct as to form.

Stephen J. Smith, Director of Law