CITY OF GAHANNA,
CHAPTER 1193 - STORMWATER MANAGEMENT POLICY

1193.01 ENFORCEMENT AND COMPLIANCE

(a) The City Engineer shall be responsible for enforcement of the Stormwater Management Policy and shall not allow any development of land area exceeding one acre in size unless such development meets the design requirements herein.

(b) The Planning Commission shall not approve the final plat of any development or subdivision over which it has jurisdiction without certification from the City Engineer that such development or subdivision shall be in full compliance with the design requirements herein. (Ord. 117-91. Passed 7-16-91).

1193.02 DESIGN STANDARDS.

(A) PURPOSE. THESE STANDARDS (1193 & 1195) ARE TO ESTABLISH STORMWATER MANAGEMENT USING BEST MANAGEMENT PRACTICES AND CONSERVATIONS PRACTICES TO MINIMIZE THE IMPACT TO PUBLIC WATERS FROM ACCELERATED SOIL EROSION AND STORMWATER RUNOFF CAUSED BY EARTH DISTURBANCE ACTIVITIES, SUBSURFACE DRAINAGE AND LAND USE CHANGES CONNECTED WITH ACTIVITIES WITHIN A DEVELOPMENT AREA, AND SHALL INCLUDE, AT A MINIMUM, ALL REQUIREMENTS OF THE OEPA CONSTRUCTION GENERAL PERMIT FOR CONSTRUCTION ACTIVITIES (CGP).

(a**B**) The design standards contained in the ~~Stormwater Design Manual~~ **OHIO DEPARTMENT OF NATURAL RESOURCES (ODNR) RAINWATER AND LAND DEVELOPMENT MANUAL, LATEST EDITION,** shall be used to determine the technical acceptability of land development stormwater management methods **AS APPLICABLE AND SHALL BE USED AS TECHNICAL GUIDANCE.** The City Engineer shall determine the acceptability of ~~the~~ **ALL** hydraulic **AND HYDROLOGIC ENGINEERING AND** design.

(b**C**) The United States Department of Agriculture Natural Resource Conservation Service **(NRCS)** soil classification mapping of the City shall be used to determine soil classification for the purpose of all stormwater management design unless more detailed data is prepared by a competent authority and accepted by the City Engineer.

(c**D**) The condition of property prior to earth disturbing activity shall be used to determine predevelopment runoff coefficients **AND RUNOFF CURVE NUMBERS BASED ON THE MOST RECENT NCRS VALUES.** (Ord. 117-91. Passed 7-16-91.)

1193.03 STORMWATER RUNOFF POLICY.

(a) The Stormwater Runoff Policy requires that land uses and developments which increase the runoff rate or volume shall control the discharge rate of runoff prior to its release to off-site land. The purposes of this policy are to:

(1) Permit development without increasing the flooding potential of other lands;

EXHIBIT A

(1) Permit development without increasing the flooding potential of other lands;

(2) Reduce damage to receiving streams and impairment of their capacity which may be caused by increases in the quantity and rate of stormwater discharge; and

(3) Establish a basis for design of stormwater drainage systems on lands below undeveloped areas which shall preserve the rights and options of both dominant and servient property owners and assure long-term adequacy of storm drainage systems.

(b) The Stormwater Runoff Policy applies to all land developments not specifically exempted under Section 1193.04 or granted a waiver as provided by Section 1193.05.

(c) Other sections of this chapter specify the performance requirements of on-site drainage systems and runoff control standards. (Ord. 117-91. Passed 7-16-91.)

1193.04 EXEMPTIONS.

Exemptions are appropriate for certain land use activities which clearly do not generate significant increases in stormwater runoff. Where exemptions are granted under this section, they shall apply to the requirements for runoff control only and do not in any way imply a relaxation of requirements for adequate and proper on-site drainage or the ability of the system to accept runoff from the tributary land **NOR A RELAXATION OF ANY OTHER LOCAL, STATE OR FEDERAL REQUIREMENTS.** The following land uses and developments are exempted from stormwater runoff controls:

(a) Land preparation for **ACTIVE** agricultural ~~crops~~ **AREAS**, orchards, ~~woodlots~~, sod farms and nursery operations;

(b) Land grading or leveling for erosion control under direction of the local soil conservation district;

~~(c) Land subdivisions for residential purposes with minimum lot size of one acre and;~~

(d) Land located within the Regulatory Flood Hazard Area established under Chapter 1191 when developed for permitted or conditional uses defined under Sections 1191.13 and 1191.15.(Ord. 117-91. Passed 7-16-91).

1193.05 WAIVERS.

(a) It is conceivable that development situations not automatically subject to exemptions under Section 1193.04 may exist such that development shall have none of the harmful effects associated with increases in runoff rates and volume. Such developments are eligible for a waiver. The waiver applies only to the requirement that runoff be controlled, and does not in any way imply a relaxation in the requirement for adequate on-site drainage or the ability to accept runoff from land tributary to the development.

(b) The waiver application shall request in writing that such requirements for stormwater runoff control be waived. The application shall include sufficient detail to determine that granting a waiver shall not results in increased flooding and that the added volume of runoff shall not damage the receiving stream.

(c) A condition of the waiver shall be that any addition, extension or modification of a development for which a waiver has been granted shall be required to provide stormwater runoff control for the entire site if preceding limitations are exceeded by subsequent additions, extensions or modifications.

(d) The following land uses and developments are eligible to apply for a waiver on stormwater runoff control requirements contained in this chapter:

~~(1) Single family residential developments~~

~~Minimum Lot Size~~	~~Maximum Subdivision Size~~
~~1 acre~~	~~10 acres~~
~~½ acre~~	~~5 acres~~
~~15,000 square feet~~	~~2 acres~~

~~(2) Multi-family residential developments which total two acres or less;~~

~~(3) Buildings, their related parking lots and structures where less than two acres are to be altered by grading, draining, removing existing ground cover or paving and of which one acre or less shall be impervious areas, such as roofs, walks and parking areas;~~

~~(4) Situations where existing and adequate off-site stormwater runoff control facilities provide the required control. However, this shall not be construed to imply the first development requesting use shall have full use of available capacity. Rather, such waiver may grant a proportional use of available storage capacity to ensure that later developments have a similar opportunity to utilize a portion of the storage capacity; and~~

(5) Development areas abutting and tributary to Big Walnut Creek on which surface watershed flows directly into Big Walnut Creek.

(e) All waiver applications shall be recommended by the City Engineer and the Planning Commission and approved by Council

(f) IN NO CASE SHALL A WAIVER ELIMINATE OR REPLACE ANY OTHER LOCAL, STATE OR FEDERAL PERMIT OR COMPLIANCE REQUIREMENTS.
(Ord. 117-91. Passed 7-16-91).

1193.06 STORMWATER RUNOFF CONTROL CRITERIA.

(a) Stormwater runoff control shall address both peak rate **OF RUNOFF** and total volume of runoff. 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 all **RETURN PERIOD** storms from one year up to a 100-year ~~frequency~~ **RETURN PERIOD**; twenty-four hour storm. In addition, if it is found a proposed development shall increase the volume of runoff from an area, the peak rate of runoff from certain more frequent storms shall be controlled further.

There are two reasons why increases in volume of runoff require a **PEAK RUNOFF** control standard more restrictive than controlling to the predevelopment condition. First, increases in volume mean runoff ~~shall~~ **WILL** be flowing for a longer period of time. When routed through a watershed, these longer flows may join at some point or points downstream ~~thereby~~ creating new peak flows and **CREATE FLOODING AND EROSION** and ~~the~~ problems associated with **INCREASED** peak flow ~~such as flooding~~. This is known as the "routing problem". Second, longer flow periods of large runoff quantities place a highly erosive stress on natural channels. This stress ~~can~~ **MAY** be minimized by reducing the rate of discharge. The permissible peak rates shall be determined as follows:

1. Determine the total volume of runoff from a one-year ~~frequency~~ **RETURN PERIOD**, twenty-four hour storm, occurring over the area before and after development; and

2. **USING TR-55 METHODOLOGY, OR OTHER VOLUME BASED METHODOLOGY ACCEPTABLE TO THE CITY ENGINEER (THE RATIONAL METHOD IS NOT ACCEPTABLE),** determine the percentage of increase in volume due to development and using this percentage, pick the critical storm from the following table:

If the percentage of increase in volume of runoff is

Equal to or Greater than	**And Less than**	**The critical storm for discharge limitations shall be (years)**
-	10	1
10	20	2
20	50	5
50	100	10
100	250	25
250	500	50
500	-	100

(b) The peak rate of runoff from the critical storm occurring over the development shall not exceed the peak rate of runoff from a one-year **RETURN PERIOD** ~~frequency~~ storm occurring over the same area under predevelopment conditions. Storms of less frequent occurrence (longer return period) than the critical storm, shall have a peak rate **OF** runoff not greater than ~~for~~ the same storm under predevelopment conditions. As an example, if the total volume is to be increased by thirty-five percent (35%), the critical storm is a five year storm. The peak rate of runoff for all storms up to this intensity shall be controlled so as not to exceed the peak rate of runoff from a one-year ~~frequency~~ **RETURN PERIOD** storm under predevelopment conditions in the area. The runoff from a more intense storm, up to a 100-year **RETURN PERIOD** storm ~~need only~~ **MUST** be controlled so as not to exceed the predevelopment peak rate from the same ~~frequency~~ **RETURN PERIOD** storm.

(c) ~~Storage volume does not have to be provided for off-site upstream drainage areas. (Ord. 117-91. Passed 7-16-91.)~~ **APPROPRIATE STORMWATER RUNOFF CONTROL ADDRESSES BOTH PEAK RATE AND TOTAL VOLUME OF RUNOFF. IN ADDITION TO PEAK RATES OF STORMWATER RUNOFF, METHODS FOR MINIMIZING POST CONSTRUCTION INCREASES IN STORMWATER RUNOFF VOLUMES ARE STRONGLY ENCOURAGED. METHODS FOR REDUCING RUNOFF VOLUMES MAY INCLUDE THOSE LISTED BELOW.**

(1) RETARDING FLOW VELOCITIES BY INCREASING FRICTION; FOR EXAMPLE, GRASSED ROAD DITCHES RATHER THAN PAVED STREET GUTTERS WHERE PRACTICAL; DISCHARGING ROOF WATER INTO VEGETATED AREAS; OR GRASS AND ROCK LINED DRAINAGE CHANNELS;

(2) GRADING AND CONSTRUCTION OF TERRACES AND DIVERSIONS TO SLOW RUNOFF AND USE OF GRADE STABILIZATION STRUCTURES TO PROVIDE A LEVEL OF CONTROL IN FLOW PATHS AND STREAM GRADIENTS;

(3) INDUCED INFILTRATION OF TERRACES AND DIVERSIONS TO SLOW RUNOFF AND USE OF GRADE STABILIZATION STRUCTURES TO PROVIDE A LEVEL OF CONTROL IN FLOW PATHS AND STREAM GRADIENTS;

(4) PROVISIONS FOR RETENTION AND DETENTION; FOR EXAMPLE, PERMANENT PONDS AND LAKES WITH STORMWATER BASINS PROVIDED WITH PROPER DRAINAGE, MULTIPLE USE AREAS FOR STORMWATER DETENTION AND RECREATION, WILDLIFE, TRANSPORTATION, FIRE PROTECTION, AESTHETICS, OR SUBSURFACE STORAGE AREAS.

(5) OTHER METHODS FOR CONTROLLING POST CONSTRUCTION WATER QUALITY AS APPROVED BY THE CITY ENGINEER.

(6) ATTENUATION OF RUNOFF RATES FROM UPSTREAM AREAS IS NOT REQUIRED TO BE PROVIDED. FLOW FROM SUCH AREAS WILL BE ROUTED THROUGH THE DRAINAGE SYSTEM IN THE DEVELOPMENT UNDER CONSIDERATION AT A RATE DETERMINED IN THE SAME MANNER AS THE ON-SITE SYSTEM. ANTICIPATED FUTURE DEVELOPMENT, HOWEVER, MUST BE CONSIDERED IN THE DESIGNERS' HYDROLOGIC ANALYSIS. OFF-SITE LAND USES PRIOR TO DEVELOPMENT, OR ANTICIPATED TO BE CONSTRUCTED IN

THE FUTURE, SHALL BE CONSIDERED AS THE PRE-DEVELOPMENT CONDITION FOR THE PURPOSE OF CALCULATING CHANGES IN RUNOFF.

(7) ALL STORMWATER MANAGEMENT AND SEDIMENT CONTROL PRACTICES SHALL BE DESIGNED, CONSTRUCTED AND MAINTAINED WITH CONSIDERATION FOR THE PROPER CONTROL OF MOSQUITOES AND OTHER VECTORS. PRACTICES MAY INCLUDE, BUT ARE NOT LIMITED TO:

i. THERE SHOULD BE NO DEPRESSIONS IN A NORMALLY DRY DETENTION FACILITY WHERE WATER MIGHT PUDDLE WHEN THE WATER LEVEL IS RECEDING. UNDERDRAINS ARE ENCOURAGED WHERE APPROPRIATE.

ii. ALL STRUCTURES SHALL BE DESIGNED IN ACCORDANCE WITH ODNR'S RAINWATER AND LAND DEVELOPMENT HANDBOOK (MOST RECENT EDITION).

(d) NUMEROUS METHODS OF RAINFALL-RUNOFF COMPUTATION ARE AVAILABLE ON WHICH THE DESIGN OF STORM DRAINAGE AND FLOOD CONTROL SYSTEM MAY BE BASED. THE RATIONAL METHOD, THE NRCS HYDROLOGIC METHODS (AVAILABLE IN TR-20, TR-55 AND HEC-1) ARE ACCEPTED AS ADEQUATE FOR DETERMINING PEAK RUNOFF RATES FOR DRAINAGE AREAS. USGS METHODOLOGIES ARE ALSO ACCEPTABLE. OTHER METHODS MAY BE ACCEPTED WITH THE CONCURRENCE OF THE CITY ENGINEER.

THE TOTAL WATERSHED THAT PRODUCES STORMWATER RUNOFF ACROSS THE SITE PROPOSED TO BE DEVELOPED SHALL BE INCLUDED WHEN ESTIMATING FLOOD DISCHARGE RUNOFF. DEPENDENT ON WATERSHED SIZE, THE FOLLOWING PRINCIPLE METHODS SHALL BE CONSIDERED ACCEPTABLE TO ESTIMATE DESIGN DISCHARGE.

(1) FOR SMALL WATERSHEDS OF 25 ACRES OR LESS, THE DESIGN RUNOFF MAY BE DETERMINED BY THE RATIONAL METHOD. THIS METHOD MAY ALSO BE USED FOR CATCH BASIN HYDROLOGY. THE RATIONAL METHOD SHALL NOT BE USED FOR SIZING ATTENUATION BASINS OR ANY OTHER FACILITY THAT REQUIRES ESTIMATION OF RUNOFF VOLUMES.

(2) FOR 5 – 100 ACRES OF AN URBANIZING WATERSHED, THE DESIGN RUNOFF MAY BE ESTIMATED BY USING THE METHOD AS PUBLISHED, URBAN HYDROLOGY FOR SMALL WATERSHEDS (TR55). THIS METHOD MAY BE APPLICABLE TO AREAS UP TO 300 ACRES DEPENDING UPON THE TOPOGRAPHY. TR-20 AND HEC-1 MAY BE ACCEPTABLE FOR LARGER AREAS. THE DESIGNER IS ENCOURAGED TO MEET WITH THE CITY DRAINAGE ENGINEER PRIOR TO SELECTING A METHODOLOGY FOR LARGE WATERSHEDS.

(3) OTHER METHOD APPROVED BY THE CITY ENGINEER.

1193.07 STORMWATER SYSTEM DESIGN CRITERIA.

(a) Design Storms / **SYSTEM DESIGN**

(1) Initial drainage system. The initial drainage system is the part of the storm drainage system which is used regularly for collecting, transporting and disposing of stormwater runoff, snowmelt and miscellaneous minor flows. The capacity of the initial drainage system should be equal to the maximum rate of runoff expected from a design storm of established frequency.

~~For purposes of design, the initial drainage portion of the drainage system shall be designed to carry the runoff from a storm with a return period of not less than five years~~

i. ALL NEW STORM SEWER SYSTEMS MUST BE ADEQUATE TO CONVEY ANTICIPATED RUNOFF OF A WATERSHED FROM A 5-YEAR STORM AT JUST FULL FLOW. PRESSURE FLOWS FOR 5 YEAR DESIGN STORMS ARE UNACCEPTABLE.

ii. THE STORM SEWER HYDRAULIC GRADE LINE SHALL BE DETERMINED FOR THE 10 YEAR STORM EVENT. THE HYDRAULIC GRADE LINE AT THE 10 YEAR STORM SHALL BE BELOW THE GRATE AND/OR COVER OF ALL STRUCTURES. THE HYDRAULIC GRADE LINE SHOULD NEVER BE BELOW THE NORMAL DEPTH OF FLOW IN THE CONDUIT. IF CALCULATIONS ILLUSTRATE THIS CONDITION, THEN THE DESIGNER SHALL USE THE NORMAL DEPTH OF FLOW ELEVATION AS THE HYDRAULIC GRADE LINE (HGL) ELEVATION.

iii. DISCHARGE OUTLETS MUST BE ADEQUATE TO ACCEPT ADDITIONAL RUNOFF FROM THE PROPOSED DEVELOPMENT WITHOUT OVERLOADING. IF THE EXISTING OUTLET IS INADEQUATE FOR SUCH ADDITIONAL FLOW, AN IMPROVED OUTLET OR SOME TIME-RELEASE METHOD OF DISCHARGE (DETENTION), SATISFACTORY TO THE CITY ENGINEER, MUST BE PROVIDED. A TAILWATER ANALYSIS MUST BE COMPLETED AND USED AS PART OF ALL HYDRAULIC DESIGN.

iv. HYDRAULIC ANALYSIS OF ALL CULVERTS SHALL BE PERFORMED PER FEDERAL HIGHWAY ADMINISTRATION, REPORT NO. FHWA-IP-85-15, HYDRAULIC DESIGN SERIES NO. 5, "HYDRAULIC DESIGN OF HIGHWAY CULVERTS", SEPTEMBER 1985. CULVERTS SHALL BE DESIGNED TO EASILY CONVEY THE 10-YEAR DESIGN STORM. HEADWATER DEPTH SHALL NOT BE

WITHIN 12" OF THE FINAL PAVEMENT (LOWEST POINT IN ROAD) ELEVATION FOR THE 50-YEAR STORM.

v. ALL CULVERTS SHALL BE DESIGNED WITH A UNIFORM BARREL CROSS SECTION THROUGHOUT THEIR LENGTH. LOCATION ALIGNMENT, MATERIAL SPECIFICATIONS, AND END TREATMENTS, (E.G., HEADWALLS, WINGWALLS, RIPRAP, APRON SLABS), SHALL BE APPROVED BY THE CITY ENGINEER.

(2) Major drainage system. The major drainage system is that part of the storm drainage system which carries the runoff which exceeds the capacity of the initial drainage system. The major drainage system shall have the capacity to carry runoff from a storm with a return period of not less than 100 years without posing significant threat to property or public safety.

i. MAJOR SYSTEM DESIGN SHALL BE CONSIDERED AND ACCOMPLISHED FOR ALL DEVELOPMENT TO ALLEVIATE POTENTIAL ADVERSE IMPACT FROM FLOODING DUE TO INFREQUENT STORMS. SUFFICIENT EASEMENTS SHALL BE PROVIDED TO PROTECT THE MAJOR FLOW PATHS FROM BEING FILLED, BLOCKED OR OTHERWISE DISTURBED.

ii. WHERE A SYSTEM OUTLETS TO AN ERODIBLE CHANNEL, MEASURES SHALL BE TAKEN TO LESSEN POTENTIALLY DESTRUCTIVE VELOCITIES. MAXIMUM VELOCITIES FOR DISCHARGE INTO ERODIBLE CHANNELS SHALL FOLLOW ODOT STANDARDS.

b) Initial Storm: Physical Design Criteria for On-Site Improvements.

(1) Depth of flow in natural channels shall not exceed bank full stage with backwater effects considered.

(2) Depth of flow in artificial channels shall not exceed 0.8 bank full stage. Velocity of flow shall be determined in accordance with the design criteria for open channels and shall not exceed seven feet per second. Where flows exceed this rate, special channel lining and erosion protection shall be provided. **DESIGN APPROACH SHALL FOLLOW THE GUIDELINES OF THE ODNR RAINWATER AND LAND DEVELOPMENT MANUAL.**

(3) Depth of flow in road side ditch swales shall not exceed one foot or be of such depth that flow would extend out of the right of way if the side ditch is less than one foot in depth. Velocity at this depth shall not exceed six feet per second with grass swales or ten feet per second with paved ditches.

(4) Depth of flow in streets with curb and gutter shall not exceed the curb height.

Velocity of flow in the gutter at design depth shall not exceed ten feet per second. In addition to the above, the following are maximum encroachments of the minimum five—year initial design storm unto the pavement.

A. For minor streets carrying traffic from the individual residence to collector and secondary streets, the flow may spread to the crown of the street.

B. For collector or secondary streets, one lane shall be free from water.

C. For primary streets, one lane in each direction shall be free from water.

D. For freeways, no encroachment is allowed on traffic lanes.

(5) In the design of the conduit, the conduit may be designed on the basis of flowing full with surcharge to gutter line. Backwater effects shall be considered.

(c) Major Storm: Physical Design Criteria for On-Site Improvements.

(1) The major storm floodway and floodway fringe for natural streams shall be as defined by the U.S. Army Corps of Engineers, the U.S. Department of Housing and Urban Development or the Ohio Department of Natural Resources, where such determinations have been made.

(2) Many of the drainageways associated with the major storm system are in areas beyond those designated as floodway or floodway fringe. For these areas, the major storm flood limits shall be determined by the U.S. Corps of Engineers HEC-2 method or other accepted methods of determining water **SURFACE** profiles using the major design storm runoff. One-half foot elevation shall be added to the flood profile as freeboard for protection in the event of future encroachments into the floodway fringe or in the drainageway.

(3) Where the street is designed as the major drainageway, the depth of flow shall not exceed eighteen inches **OF WIDTH** at gutter line for local and collector streets and shall not exceed six inches depth at **ROADWAY** crown for primary streets and freeways. The same maximum depth criteria shall apply where a major drainageway crosses the street. Where a major drainageway is located outside a street, ~~right-of-way~~ **DEDICATED STORMWATER EASEMENTS** shall be provided.

(4) In determining the required capacity of surface channels and other drainageways provided for the major storm runoff, the street storm inlets and conduit provided for the initial design storm shall be assumed to be carrying not more than one-half their design capacity. This is a safety factor to allow for the surcharged outlets, obstructed inlets or other malfunctions.

(d) ~~Retention and Storage~~ **STORMWATER DETENTION / RETENTION.**

(1) **STORMWATER DETENTION OR RETENTION IS REQUIRED FOR ALL DEVELOPERS UNLESS A WAIVER IS GRANTED FOR** Areas designed ~~solely~~ for storage of stormwater by detention or retention shall be ~~avoided where possible. Such facilities, when necessary, shall be~~ incorporated

into the natural features of the general area. Cooperative planning and joint owner construction of detention discharge control or retention facilities and use of natural land contours is **STRONGLY** encouraged. No such facilities shall be permitted which may become aesthetically unpleasing, construction or maintenance problems. The City encourages such facilities which are designed as multipurpose spaces such as open space, recreation and/or scenic areas. **DETENTION/RETENTION AREAS SHALL ALSO COMPLY WITH ALL POST CONSTRUCTION RUNOFF REQUIREMENTS, INCLUDING THOSE OF THE OHIO EPA CONSTRUCTION GENERAL PERMIT.**

(Ord. 117-91. Passed 7-16-91).

1193.08 PUBLIC NOTIFICATION OF WATERCOURSE.

Land developers shall place sales offices copies of the land development grading plan with graphic and written descriptive information clearly showing and describing the purpose of all drainage easements, floodway routing, flood hazard areas and other watercourses contained on or designed unto the land development. (Ord. 117-91. Passed 7-16-91).

1193.09 RIGHT OF APPEAL

Any person dissatisfied with a decision made by the City Engineer pursuant to Chapter 1193 shall have the right to appeal in writing the decision to the Board of Zoning Appeals within ten days after such decision is made. The Planning Commission shall act upon the written appeal at its next regular meeting held after the receipt of such appeal by the Clerk or the appeal is deemed to be denied. If the appeal is denied by the Planning Commission the person filing the appeal may within ten days after such decision is made, appeal in writing such decision to Council which shall act upon the written appeal at its next regular meeting held after receipt of such appeal by the Clerk, or the appeal is deemed to be denied. (Ord. 117-91. Passed 7-16-91).

CITY OF GAHANNA
CHAPTER 1195 -
EROSION AND SEDIMENTATION/ POST CONSTRUCTION RUNOFF CONTROL

1195.01 PURPOSE.

This chapter is adopted for the purpose of controlling the pollution of the public waters by sediment from accelerated stormwater runoff caused by earth-disturbing activities and land use changes connected with developing urban areas. Control of such pollution shall promote and maintain the health, safety and general well-being of life and inhabitants within the City. (Ord. 118-91. Passed 7-16-91.)

1195.02 DEFINITIONS.

(a) For the purpose of this chapter, certain rules or word usage apply to the text as follows:

(1) Words used in the present tense include the future tense; and the singular includes the plural, unless the context clearly indicates the contrary.

(2) The term "shall" is always mandatory and not discretionary; the word "may" is permissive.

(3) The word or term not interpreted or defined by this section shall be used with a meaning of common or standard utilization, so as to give this chapter its more reasonable application.

(b) "Channel" means a natural stream that conveys water; a ditch or channel excavated for the flow of water.

(c) "Development area" means any contiguous (abutting) area owned by one person or operated as one development unit and used or being developed for non-farm commercial, industrial, residential or other non-farm purposes upon which earth-disturbing activities are planned or underway.

(d) "District" means the Franklin Soil and Water Conservation District, organized under Ohio R.C. Chapter 1515.

(e) "Ditch" means an excavation either dug or natural for the purpose of drainage or irrigation with intermittent flow.

(f) "Drainageway" means an area of concentrated water flow other than a river, stream, ditch or grassed waterway.

(g) "Dumping" means grading, pushing, piling, throwing, unloading or placing.

(h) Earth-disturbing activity" means any grading, excavating, filling or other alteration of the earth's surface where natural or man-made ground cover is destroyed and which may result in or contribute to erosion and sediment pollution.

(i) "Earth material" means soil, sediment, rock, sand, gravel and organic material or residue associated with or attached to the soil.

(j) "Erosion" means:

1. The wearing away of the land surface by running water, wind, ice or other geological agents, including such processes as gravitational creep.

2. Detachment and movement of soil or rock fragments by wind, water, ice or gravity.

3. Erosion includes:

A. "Accelerated erosion" means erosion much more rapid than normal, natural or geologic erosion, primarily as a result of the influence of the activities of man.

B. "Floodplain erosion" means abrading and wearing away of the nearly level land situated on either side of a channel due to overflow flooding.

C. "Gully erosion" means the erosion process whereby water accumulates in narrow channels during and immediately after rainfall or snow or ice melt and actively removes the soil from this narrow area to considerable depths such that the channel would not be obliterated by normal smoothing or tillage operations.

D. "Natural erosion" (geologic erosion) means wearing away of the earth's surface by water, ice or other natural environmental conditions of climate, vegetation, etc., undisturbed by man.

E. "Normal erosion" means the gradual erosion of land used by man which does not greatly exceed natural erosion.

F. "Rill erosion" means an erosion process in which numerous small channels only several inches deep are formed; occurs mainly on recently disturbed soils.

G. "Sheet erosion" means the removal of a fairly uniform layer of soil from the land surface by wind or runoff water.

(k) "Grassed waterway" means a broad or shallow natural course or constructed channel covered with erosion-resistant grasses or similar vegetative cover and used to conduct surface water.

(l) "Landslide" means the rapid downward and outward movement of large rock material and/or soil mass under the influence of gravity in which the movement of the soil mass occurs along an interior surface of sliding.

(m) "Person" means any individual, corporation, partnership, joint venture, agency, unincorporated association, municipal corporation, County or State agency, the Federal government, or any combination thereof.

(n) "Public waters" means water within rivers, streams, ditches and lakes except private ponds and

lakes wholly within single properties, or waters leaving property on which surface water originates.

(o) "Sediment" means solid material both mineral and organic, that is in suspension, is being transported, or has been moved from its site of origin by wind, water, gravity or ice, and has come to rest on the earth's surface above or below sea level.

(p) "Sediment basin" means a barrier, dam or other suitable detention facility built across an area of waterflow to settle and retain sediment carried by the runoff waters.

(q) "Sediment control plan" means a **COMPILATION OF MAPS AND A** written description, acceptable to the City Engineer, of methods for controlling sediment pollution from accelerated erosion on a development area of ~~five~~ **ONE** or more contiguous acres or from erosion caused by accelerated runoff from a development area of ~~five~~ **ONE** or more contiguous acres.

(r) "Sediment pollution" means failure to use management or conservation practices to abate wind or water erosion of the soil or to abate the degradation of the waters of the State by soil sediment in conjunction with land grading, excavating, filling or other soil-disturbing activities on land used or being developed for nonfarm commercial, industrial, residential or other non-farm purposes.

(s) "Slip" means landslide as defined in subsection (l) hereof.

(t) "Sloughing" means a slip or downward movement of an extended layer of soil resulting from the undermining action of water or the earth-disturbing activity of man.

(u) "Soil loss" means soil relocated on or removed from a given site by the forces of erosion and the redeposit of the soil at another site on land or in a body of water.

(v) "Storm frequency" means the average period of time within which a storm of a given duration and intensity can be expected to be equaled or exceeded.

(w) "Stream" means a body of water running or flowing on the earth's surface or channel in which such flow occurs. Flow may be seasonally intermittent.

(x) "Topsoil" means surface and upper surface soils which presumably are darker colored, fertile soil materials, ordinarily rich in organic matter or humus debris.

(y) "100-YEAR FLOODPLAIN" MEANS LAND SUSCEPTIBLE TO BEING INUNDATED BY WATER FROM A BASE FLOOD THAT HAS A ONE PERCENT OR GREATER CHANCE OF BEING EQUALED OR EXCEEDED IN ANY GIVEN YEAR.

(z) "CLEARING" MEANS THE REMOVAL OF TREES, BRUSH, AND OTHER UNWANTED MATERIAL IN ORDER TO DEVELOP LAND FOR OTHER USES, OR TO PROVIDE ACCESS FOR SITE WORK.

(aa) "BEST MANAGEMENT PRACTICE (BMP)" MEANS A WIDE RANGE OF MANAGEMENT PROCEDURES, SCHEDULES OF ACTIVITIES, PROHIBITIONS ON PRACTICES AND OTHER MANAGEMENT PRACTICES WHICH HAVE BEEN DEMONSTRATED TO EFFECTIVELY CONTROL THE QUALITY AND/OR

QUANTITY OF WATER RUNOFF AND WHICH ARE COMPATIBLE WITH THE PLANNED LAND USE.

(bb) "MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4)" REFERS TO A STORM SEWER SYSTEM OWNED AND OPERATED BY.THE MUNICIPALITY IN WHICH IT IS LOCATED. THESE STORM SEWER SYSTEMS MAY DISCHARGE INTO LOCAL RIVERS AND STREAMS AND ARE REGULATED BY THE ENVIRONMENTAL PROTECTION AGENCY TO REDUCE THE AMOUNT OF POLLUTANTS THAT REACH THESE BODIES OF WATER FROM THE STORM SEWER SYSTEM.

(Ord. 118-91. Passed 7-16-91).

1195.03 SEDIMENT AND EROSION CONTROL PLAN REQUIRED.

(a) A Sediment and Erosion Control Plan shall be submitted to the City Engineer prior to any earth disturbing activity on property of ~~five acres~~ **ONE ACRE** or more for residential development **OR RE-DEVELOPMENT**, and on all **LAND DISTURBANCES OF ONE ACRE OR MORE FOR** commercial, manufacturing, multi-family development **OR REDEVELOPMENT AND PUBLIC UTILITY CONSTRUCTION. SUCH PLAN MAY BE SUBMITTED AS A PART OF THE DETAILED ENGINEERING PLANS. A COPY OF THE APPROVED STORMWATER POLLUTION PREVENTION PLAN (SWPP) AND NOTICE OF INTENT (NOI) MUST BE POSTED ON SITE, SUBMITTED TO THE CITY FOR REVIEW, AND AVAILABLE FOR REVIEW THROUGHOUT THE ENTIRE CONSTRUCTION PROCESS.** For earth disturbing activity on residential property of less than ~~five~~ **ONE** acres, the need for erosion and sediment control activity shall be determined by the City Engineer, Chief Building ~~Official~~ **INSPECTOR** ~~and Zoning Administrator~~ **OR ZONING OFFICER.**

(b) Sediment Control Plan Content A Sediment control plan for a proposed development ~~are~~, with maps drawn to a scale of one inch equals fifty feet, shall be submitted to the City Engineer containing the following information:

(1) Location of the area and its relation to its general surroundings including but not limited to:

A. Off-site areas susceptible to sediment deposits or to erosion caused by accelerated runoff; and

B. Off-site areas affecting potential accelerated runoff and erosion control;

(2) Existing and proposed topography and drainage of the development area and adjacent land within 100 feet of the boundaries. A topographic map should contain an appropriate contour interval to clearly portray the conformation and drainage pattern of the area;

A. EXISTING AND PROPOSED DRAINAGE WATERSHEDS, INCLUDING THE SIZE OF EACH WATERSHED IN ACRES (ENTIRE WATERSHED AREA, NOT JUST THE INDIVIDUAL SITE).

B. SURFACE WATER LOCATIONS INCLUDING SPRINGS, WETLANDS, STREAMS, WATER BODIES, ETC. ON OR WITHIN 200 FEET OF THE SITE. THIS SHOULD INCLUDE THE LOCATIONS OF RIPARIAN, OR WETLAND SETBACKS, FLOODWAY, AND THE 100-YEAR FLOODPLAIN.

(3) The location of existing buildings, structures, utilities, drainage facilities, vegetative cover, paved areas, (streets, roads, driveways, sidewalks, etc.) and other significant natural or man—made features on the development area and adjacent land within 100 feet of the boundaries.

(4) A general description of the predominant soil types, their location and their limitations for the proposed used. Special attention should be given to hydric or highly erodible soils.

(5) Proposed use of the development area including present development and ultimate utilization with detail on soil cover, both vegetative and impervious;

(6) ~~All proposed earth disturbance including:~~ **SECTION / PHASING LIMITS OF THE DEVELOPMENT AREA;**

~~A. Areas of excavation, grading and filling;~~

~~B. The finished grade, stated in feet horizontal to feet vertical, of cut and fill slopes;~~

~~C. Kinds of utilities and proposed areas of installation;~~

~~D. Proposed paved and covered areas in square feet or to scale on a plan map;~~

~~E. Makeup of proposed surface soil (upper six inches) on areas not covered by buildings, structures or pavement. Description shall be in such terms as original surface soil, subsoil, sandy, heavy clay, stony, etc.; and~~

~~F. Proposed kind of cover on areas not covered by buildings, structures or pavement. Description shall be in such terms as: lawn, turf grass, shrubbery, trees, forest cover, rip-rap, mulch, etc.~~

(7) ~~Provisions for temporary and permanent erosion control as per U.S. Department of Agriculture Soil Conservation Service Manual titled "Water Management and Sediment Control for Urbanizing Areas";~~ **ALL PROPOSED EARTH DISTURBANCE INCLUDING:**

A. AREAS OF EXCAVATION, GRADING AND FILLING;

B. THE FINISHED GRADE, STATED IN FEET HORIZONTAL TO FEET VERTICAL, OF CUT AND FILL SLOPES;

C. KINDS OF UTILITIES AND PROPOSED AREAS OF INSTALLATION;

D. PROPOSED PAVED AND COVERED AREAS IN SQUARE FEET OR TO SCALE ON A PLAN MAP;

E. MAKEUP OF PROPOSED SURFACE SOIL (UPPER SIX INCHES) ON AREAS NOT COVERED BY BUILDINGS, STRUCTURES OR PAVEMENT. DESCRIPTION SHALL BE IN SUCH TERMS AS ORIGINAL SURFACE SOIL, SUBSOIL, SANDY, HEAVY CLAY, STONY, ETC.; AND

F. PROPOSED KIND OF COVER ON AREAS NOT COVERED BY BUILDINGS, STRUCTURES OR PAVEMENT. DESCRIPTION SHALL BE IN SUCH TERMS AS: LAWN, TURF GRASS, SHRUBBERY, TREES, FOREST COVER, RIP-RAP, MULCH, ETC.

(8) ~~Provisions for the management of stormwater, derived both on-site and from upper watershed areas, including the control of accelerated on-site runoff, to a stable receiving outlet; provisions for temporary and permanent erosion control shall~~ **PROVISIONS FOR TEMPORARY AND PERMANENT EROSION CONTROL SHALL FOLLOW THE LATEST EDITION OF THE OHIO DEPARTMENT OF NATURAL RESOURCES (ODNR), RAINWATER AND LAND DEVELOPMENT MANUAL AND SHALL BE DEPICTED ON THE PLAN AND SHALL ALSO COMPLY WITH OEPA CGP REQUIREMENTS.**

(9) ~~Provisions for maintenance of control facilities including easements to ensure short as well as long term erosion and sediment pollution control and stormwater management;~~ **PROVISIONS FOR THE MANAGEMENT OF STORMWATER, DERIVED BOTH ON-SITE AND FROM UPPER WATERSHED AREAS, INCLUDING THE CONTROL OF ACCELERATED ON-SITE RUNOFF, TO A STABLE RECEIVING OUTLET;**

(10) ~~Proposed construction sequence and time schedule for all earth disturbing activities and installation of provisions for erosion and stormwater management;~~ **LOCATION OF DESIGNATED CONSTRUCTION ENTRANCES WHERE VEHICLES WILL ENTER / EXIT SITE.A DETAIL FOR THIS ENTRANCE MUST BE INCLUDED ON THE PLAN.**

(11) ~~Design computations and applicable assumptions for all structural measures for erosion and sediment pollution control and water management. Volume and velocity of flow shall be given for all surface water conveyance. This information shall also be provided for surface water outlets;~~ **PROVISIONS FOR MAINTENANCE OF CONTROL FACILITIES INCLUDING EASEMENTS TO ENSURE SHORT AS WELL AS LONG TERM EROSION AND SEDIMENT POLLUTION CONTROL AND STORMWATER MANAGEMENT;**

(12) ~~Seeding mixtures and rates, lime and fertilizer application rates, and kind and quantity of mulching for both temporary and permanent vegetative control measures;~~ **PROPOSED CONSTRUCTION SEQUENCE AND TIME**

SCHEDULE FOR ALL EARTH DISTURBING ACTIVITIES AND INSTALLATION OF PROVISIONS FOR EROSION AND STORMWATER MANAGEMENT;

(13) ~~Estimate of cost of erosion and sediment control and water management structures and features;~~ **DESIGN COMPUTATIONS AND APPLICABLE ASSUMPTIONS FOR ALL STRUCTURAL MEASURES FOR EROSION AND SEDIMENT POLLUTION CONTROL AND WATER MANAGEMENT. VOLUME AND VELOCITY OF FLOW SHALL BE GIVEN FOR ALL SURFACE WATER CONVEYANCE. THIS INFORMATION SHALL ALSO BE PROVIDED FOR SURFACE WATER OUTLETS;**

(14) ~~Title, scale, direction, legend and date of all plan maps;~~ **SEEDING MIXTURES AND RATES, LIME AND FERTILIZER APPLICATION RATES, AND KIND AND QUANTITY OF MULCHING FOR BOTH TEMPORARY AND PERMANENT VEGETATIVE CONTROL MEASURES;**

(15) ~~Names and address of the person(s) preparing the plan, the owner and the person responsible for the development area; and~~ **LOCATION OF ANY IN STREAM ACTIVITIES, INCLUDING STREAM CROSSINGS**

(16) ~~Certification that all earth disturbance, construction and development shall be done pursuant to the plan.~~ **LOCATION OF PERMANENT STORM WATER MANAGEMENT PRACTICES TO BE USED TO CONTROL POLLUTANTS AFTER CONSTRUCTION OPERATIONS ARE COMPLETE.**

(17) **ESTIMATE OF COST OF EROSION AND SEDIMENT CONTROL AND WATER MANAGEMENT STRUCTURES AND FEATURES;**

(18) **TITLE, SCALE, DIRECTION, LEGEND AND DATE OF ALL PLAN MAPS;**

(19) **NAMES AND ADDRESS OF THE PERSON(S) PREPARING THE PLAN, THE OWNER AND THE PERSON RESPONSIBLE FOR THE DEVELOPMENT AREA;**

(20) **CERTIFICATION THAT ALL EARTH DISTURBANCE, CONSTRUCTION AND DEVELOPMENT SHALL BE DONE PURSUANT TO THE PLAN.**

(21) **TOTAL AREA OF THE SITE, AND THE AREA OF THE SITE THAT IS EXPECTED TO BE DISTURBED, INCLUDING OFF-SITE BORROW AREAS.**

(22) **A CALCULATION OF THE RUNOFF COEFFICIENTS FOR BOTH THE PRE-CONSTRUCTION AND POST CONSTRUCTION SITE CONDITIONS.**

(23) **AN ESTIMATE OF THE EXISTING PERCENTAGE BASED ON THE SITES PREDEVELOPMENT CONDITION AS WELL AS PROPOSED PERCENTAGE BASED ON THE SITE POST-DEVELOPMENT CONDITION IMPERVIOUS AREA CREATED BY THE CONSTRUCTION ACTIVITY.**

(24) **LOCATION OF STORM WATER AND SEDIMENT AND EROSION CONTROL BMP'S. A DETAIL SPECIFICATION FOR EACH MUST BE INCLUDED IN THE PLAN.**

The City Engineer may waive specific requirements for plan detail or may require additional information to show that work shall conform to basic requirements of this chapter, **SOLELY AT HIS/HER DISCRETION**.

(c) Plan Review. The City Engineer shall within fifteen working days of receipt of a Sediment Control Plan, indicate its approval or disapproval (status of compliance or noncompliance) to the person who filed the plan. Indication of disapproval (non-compliance) shall include the plan deficiencies and the procedures for filing a revised plan. Pending preparation and approval (determination of compliance) of a revised plan, earth-disturbing activities shall proceed only in accordance with conditions outlined by the City Engineer.

(Ord. 118-91. Passed 7-16-91).

SEDIMENT AND EROSION CONTROL STANDARDS AND CRITERIA.

(a) In order to control sediment pollution of water resources, the owner or person responsible for the development are shall use conservation planning and practices to maintain the level of conservation planning and practices to maintain the level of conservation established by the following standards:

(1) Timing of sediment-trapping practices. Sediment control practices shall be functional throughout earth-disturbing activity.

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

(3) Stabilization of denuded areas. Denuded areas shall have soil stabilization applied within (7) seven days if they are to remain dormant for more than (21) twenty-one days. Ares within (50) fifty feet of a stream must be seeded within (3) three days if they are to remain dormant for more than (21) twenty-one days. Permanent or temporary soil stabilization shall be applied to denuded areas within seven days after final grade is reached on any portion of the site, and shall also be applied within (7) seven days to denuded areas which may not be at final grade, but shall remain dormant (undisturbed) for longer than (21) twenty-one days. Temporary seeding, and mulching may be disturbed several times during construction, and replacement applications will be required. The design standards contained in the latest edition of

ODNR's Rainwater and Land Development Manual shall be used to determine appropriate stabilization specifications and methods.

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

The facility's storage capacity shall be ~~sixty-seven cubic yards per acre of drainage area~~. **SHALL BE SIZED PER THE CURRENT REQUIREMENTS OF THE CONSTRUCTION GENERAL PERMIT.**

(4) Sediment barriers. Sheet flow runoff from denuded areas shall be filtered or diverted to a settling facility. Sediment barriers such as sediment fence or diversions to settling facilities shall protect adjacent properties and water resources from sediment transported by sheet flow.

(5) Storm Sewer Inlet Protection. All storm sewer inlets which accept water runoff from the development area shall be protected so that sediment-laden water shall not enter the storm sewer system without first being filtered or otherwise treated to remove sediment, unless the storm system drains to a settling facility.

(6) Working in or crossing streams.

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

To the extent practicable, construction vehicles shall be kept out of streams. Where in-channel work is necessary, precautions shall be taken to stabilize the work area during construction to minimize erosion. **THE DESIGN STANDARDS CONTAINED IN THE LATEST EDITION OF OHIO DEPARTMENT OF NATURAL RESOURCES' RAINWATER AND LAND DEVELOPMENT MANUAL SHALL BE USED TO DETERMINE APPROPRIATE STABILIZATION SPECIFICATIONS AND METHODS.**

B. If a live (wet) stream shall be crossed by construction vehicles regularly during construction, a temporary stream crossing shall be provided.

(7) Construction access routes.

A. Measures must be taken to prevent soil transport onto surfaces where runoff is not checked by sediment controls or onto public roads.

(8) Sloughing and dumping.

A. No soil, rock, debris or any other material shall be dumped or placed into a water resource or into such proximity that it may readily slough, slip or erode into a water resource unless such dumping or placing is authorized by the City Engineer and, when applicable, the U.S. Army Corps of Engineers, for such purposes as, but not limited to constructing bridges, culverts and erosion control structures.

B. Unstable soils prone to slipping or landsliding shall not be graded, excavated, filled or have loads imposed upon them unless the work is done in accordance with a qualified professional engineer's recommendations to correct, eliminate or adequately address the problems.

(9) Cut and Fill slopes. Cut and fill slopes shall be designed and constructed in a manner which shall minimize erosion. Consideration shall be given to the length and steepness of the slope, soil type, upslope drainage area, groundwater conditions and slope stabilization.

(10) Stabilization of outfalls and channels. Outfalls and constructed or modified channels shall be designed and constructed to withstand the expected velocity of flow from a post-development, ten-year frequency storm without eroding.

(11) Establishment of permanent vegetation. A permanent vegetation shall not Be considered established until ground cover is achieved which, in the opinion of the approving agency, provides adequate over and is mature enough to control soil erosion satisfactorily and to survive adverse weather conditions.

(12) Disposition of Temporary Practices

(13) Dewatering. Sediment laden water that is removed from trenches, or other facilities must be directed to a sediment basin, detention/retention pond, or other equally effective sediment control device. Dewatering activities shall not cause turbid discharges to surface waters. At no time can untreated discharge from any sediment laden depression, structural, or non-structural, be pumped directly into a stream, storm sewer inlet, or onto the street.

(14) Maintenance. All temporary and permanent erosion and sediment control practices shall be designed and constructed to minimize maintenance requirements **AND BE COORDINATED WITH POST CONSTRUCTION RUNOFF CONTROLS.** They shall be maintained and repaired as needed to assure continued performance of their intended function. The person or entity responsible for the continued maintenance of permanent erosion controls, **AND ASSURANCE OF ADEQUATE FUNDING,** shall be identified to the satisfaction of the plan-approving authority.

(Ord. 118-91. Passed 7-16-91).

1195. 05 POST CONSTRUCTION RUNOFF CONTROL.

(a) POST-CONSTRUCTION RUNOFF CONTROLS ARE PERMANENT CONTROLS DESIGNED TO MAINTAIN A RECEIVING STREAM'S CHARACTERISTICS. OWNER / DEVELOPER MUST PROVIDE DETAILED DRAWINGS AND MAINTENANCE PLANS FOR ALL POST-CONSTRUCTION BEST MANAGEMENT PRACTICES (BMPS). MAINTENANCE PLANS SHALL ALSO BE PROVIDED BY THE PERMITTEE TO THE POST-CONSTRUCTION OPERATOR OF THE SITE (INCLUDING HOMEOWNER ASSOCIATIONS).

THE PERMITTEE, LAND OWNER OR OTHER ENTITY WITH LEGAL CONTROL OVER THE PROPERTY SHALL BE REQUIRED TO DEVELOP AND IMPLEMENT A MAINTENANCE PLAN TO COMPLY WITH LOCAL MS4 REQUIREMENTS. THE USE OF INNOVATIVE AND/OR EMERGING STORM WATER MANAGEMENT POST-CONSTRUCTION TECHNOLOGIES SHALL BE AT THE DISCRETION OF THE CITY ENGINEER AND COULD REQUIRE MONITORING TO ENSURE COMPLIANCE WITH OEPA'S CONSTRUCTION GENERAL PERMIT (CGP) REQUIREMENTS PART III, SECTION G.2E. THE POST-CONSTRUCTION PORTION OF THE STORM WATER POLLUTION PREVENTION PLAN SHALL INCLUDE THE FOLLOWING:

(1) DESCRIPTION OF POST-CONSTRUCTION BMPS TO BE INSTALLED DURING CONSTRUCTION, INCLUDING ESTIMATED INSTALLATION SCHEDULE AND SEQUENCING PLAN (INCLUDING POST-CONSTRUCTION SEDIMENT REMOVAL AND INSTALLATION OF FINAL OUTLETS).

(2) RATIONALE FOR SELECTION – TO ADDRESS ANTICIPATED DOWNSTREAM IMPACTS (ON THE CHANNEL AND FLOODPLAIN, MORPHOLOGY, HYDROLOGY AND WATER QUALITY).

(3) DETAILED POST-CONSTRUCTION BMP DRAWINGS AND SPECIFICATIONS.

(4) BMP MAINTENANCE PLAN FOR ALL BMPS SELECTED AND PRESENTED TO POST- CONSTRUCTION OPERATOR. THIS MAINTENANCE PLAN SHALL INCLUDE A DISPOSAL STATEMENT FOR STRUCTURAL BMPS TO ENSURE POLLUTANTS COLLECTED WITHIN STRUCTURAL BMPS ARE DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

(b) <u>POST-CONSTRUCTION RUNOFF CONTROL DESIGN.</u>

SELECTED STRUCTURAL BMPS SHALL BE SIZED FOR PROTECTION OF WATERCOURSES FROM EROSION (QUANTITY) AND INCLUDE WATER QUALITY VOLUMES FOR CONTROLLING SEDIMENT VOLUMES

WQ_V = VOLUME OF RUNOFF FROM A 0.75 INCH RAIN EVENT

WQ_V IS DETERMINED ACCORDING TO FOLLOWING METHOD:

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

WHERE:

WQ_V = CHANNEL PROTECTION AND WATER QUALITY VOLUME IN ACRE-FEET

C = RUNOFF COEFFICIENT APPROPRIATE FOR STORM LESS THAN 1 INCH

(TABLE 1195.1 OR $C = 0.858I^3 - 0.78I^2 + 0.744I + 0.4$ THE EQUATION BEING THE PREFERRED METHOD)

P = 0.75 INCH PRECIPITATION DEPTH

A = AREA DRAINING INTO THE BMP IN ACRES

I = WATERSHED IMPERVIOUSNESS RATIO (PERCENT TOTAL IMPERVIOUS DIVIDED BY 100)

TABLE 1195.1 RUNOFF COEFFICIENTS FOR WQV CALCULATIONS

LAND USE	RUNOFF COEFFICIENT (C)
INDUSTRIAL & COMMERCIAL	0.8
HIGH DENSITY RESIDENTIAL (8 DWELLINGS / ACRE)	0.8
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

NOTES:

- **WHERE THE LAND USE WILL BE MIXED, THE RUNOFF COEFFICIENT SHOULD BE CALCULATED USING A WEIGHTED AVERAGE.**

- **AN ADDITIONAL VOLUME EQUAL TO 20 PERCENT OF THE WQV SHALL BE INCORPORATED INTO THE BMP FOR SEDIMENT STORAGE AND/OR REDUCED INFILTRATION CAPACITY DURING CONSTRUCTION.**

- **BMPS SHALL BE DESIGNED SUCH THAT THE DRAIN TIME IS LONG ENOUGH TO PROVIDE SETTLEMENT TREATMENT, BUT SHORT ENOUGH TO PROVIDE STORAGE AVAILABLE FOR SUCCESSIVE RAIN EVENTS AS DESCRIBED IN TABLE 1195.2**

TABLE 1195.2 DRAWDOWN TIMES FOR POST CONSTRUCTION BMPS

BEST MANAGEMENT PRACTICE (BMP)	DRAWDOWN TIME OF WQV (HOURS)
INFILTRATION	24 TO 48
VEGETATED SWALE OR FILTER STRIP	24
EXTENDED DETENTION BASIN (DRY BASIN)	48
RETENTION BASIN (WET BASIN)	24
CONSTRUCTED WETLAND (ABOVE PERMANENT POOL)	24
MEDIA FILTRATION, BIO-RETENTION	40

***PROVIDE BOTH A PERMANENT POOL AND AN EXTENDED DETENTION VOLUME ABOVE THE PERMANENT POOL, EACH SIZED FOR 75% WQV.**

(c) **RECOMMENDED POST-CONSTRUCTION BEST MANAGEMENT PRACTICES. THE POST-CONSTRUCTION BEST MANAGEMENT PRACTICE CONTROLS IN TABLE 1195.2 ARE IDENTIFIED IN OEPA'S CGP AND SHALL BE INCORPORATED IN PROJECT DEVELOPMENT AND DESIGN.**

THE CITY ENGINEER WILL ALSO CONSIDER NON-STRUCTURAL PRACTICES IN COMBINATION WITH THESE STRUCTURAL PRACTICES IN REVIEWING SITE PLANS. SUPPORTING DOCUMENTATION OF NON-STRUCTURAL BMP ESTIMATED POLLUTANT REMOVAL INFORMATION, MAP OF ON-SITE BMP LOCATIONS, DESCRIPTION OF BMP TYPE, AND FREQUENCY WITH WHICH THE BMPS INCLUDE: SITE IMPERVIOUS AREA SWEEPING, NATURAL BUFFERS, PERVIOUS PAVEMENTS, ETC.

ALL BMPS SHALL BE DESIGNED AND CONSTRUCTED PER THE ODNR RAINWATER AND LAND DEVELOPMENT MANUAL.

(d) **POST CONSTRUCTION RUNOFF BMP DRAWDOWN CURVE. A DRAWDOWN CURVE (VOLUME VS. DRAWDOWN TIME) SHALL BE CALCULATED AND DRAWN FOR EACH BMP AND SUBMITTED TO THE CITY ENGINEER.**

(e) **STORMWATER CONTROL – PONDS ARE ONE OF THE MOST WIDELY USED BMPS FOR MEETING WATER QUANTITY REQUIREMENTS AND PROVIDING WATER QUALITY TREATMENT. THE POND IMPROVES WATER QUALITY BY DETAINING STORMWATER FOR AN EXTENDED PERIOD OF TIME IN A PERMANENT POOL TO ALLOW POLLUTANTS TO SETTLE. POLLUTANTS REMOVED INCLUDE SUSPENDED SOLIDS, ORGANIC MATTER, DISSOLVED METALS, AND NUTRIENTS. THESE ARE ENHANCEMENTS THAT CAN BE ACCOMPLISHED WITH PONDS TO INCREASE THE EFFECTIVENESS OF POLLUTANT REMOVAL.**

THESE ENHANCEMENTS ARE OUTLINED IN ODNR'S RAINWATER AND LAND DEVELOPMENT MANUAL. SOME OF THEM ARE SPECIFICALLY REQUIRED BY THE OEPA'S CGP. BOTH THE HANDBOOK AND MANUAL SHALL BE FOLLOWED IN DESIGNING AND CONSTRUCTING PONDS AND OTHER APPROVED BMPS. THIS ARTICLE INCLUDES SOME OF THE OEPA REQUIREMENTS AND ODNR GUIDELINES, BUT DOES NOT REPLACE THOSE DOCUMENTS. POND BMPS MUST SPECIFICALLY FOLLOW THESE GUIDELINES. BMPS OTHER THAN PONDS SHALL INCLUDE CONSIDERATION FOR ALL OF THE BELOW ELEMENTS AND SHALL ADDRESS EACH ITEM TO THE GREATEST EXTENT PRACTICAL.

(1) LAND AREA – LAND CONSTRAINTS, SUCH AS SMALL SITES OR HIGHLY DEVELOPED AREAS, MAY PRECLUDE THE INSTALLATION OF A POND. THE WET POND BMP IS MOST USEFUL FOR LARGE SUBDIVISIONS, OR DEVELOPMENT SITES. OWNERS OF SMALL PROPERTIES MAY COOPERATIVELY CONSTRUCTION A SINGLE LARGE WET POND TO SERVE SEVERAL SITES. FEWER PONDS ARE

PREFERRED TO NUMEROUS INDIVIDUAL SMALL PONDS. WET DETENTION PONDS ARE EFFECTIVE IN MEETING STORMWATER QUANTITY AND WATER QUALITY (POST CONSTRUCTION RUNOFF CONTROL) GOALS. WELL DESIGNED WET PONDS CAN ALSO PROVIDE AN AESTHETIC AMENITY.

(2) SOILS AND MINIMAL WATER SUPPLY – WET DETENTION PONDS MUST MAINTAIN A PERMANENT POOL OF WATER. WET PONDS ARE RECOMMENDED FOR MEDIUM TO LARGE DRAINAGE AREAS (GENERALLY GREATER THAN 10 ACRES).

(3) RETROFIT – WET PONDS PROVIDE OPPORTUNITIES FOR RETROFIT COVERAGE FOR EXISTING DEVELOPMENT. WITH MINOR EXCAVATION AND/OR MODIFICATION OF THE OUTLET, EXISTING DRY PONDS CAN BE CONVERTED TO WET PONDS. THE RETROFITS CAN GENERATE GREATER WATER QUALITY BENEFITS FOR THE RECEIVING STREAM, HELPING THE (COMMUNITY) MEET WATER QUALITY GOALS. RETROFIT OPPORTUNITIES ARE ENCOURAGED IN THE CITY OF GAHANNA.

(4) MAINTENANCE – ADEQUATE MAINTENANCE ACCESS AND EASEMENTS FROM PUBLIC OR PRIVATE RIGHT-OF-WAY TO THE BASIN SHALL BE RESERVED. THE ACCESS SHALL BE ON A SLOPE OF 5:1 (VERTICAL TO HORIZONTAL) OR SHALLOWER, STABILIZED TO SUPPORT HEAVY CONSTRUCTION EQUIPMENT, AND PROVIDE DIRECT ACCESS TO BOTH THE FOREBAY AND THE RISER OUTLET. AN ADEQUATE AREA FOR TEMPORARY STAGING OF SPOILS, PRIOR TO ULTIMATE DISPOSAL SHALL BE PROVIDED. THIS AREA SHALL BE PROTECTED SUCH THAT NO SEDIMENT LADEN RUNOFF WILL BE DIRECTED BACK INTO THE STORMWATER MANAGEMENT SYSTEM OR ONTO PRIVATE PROPERTY. AN EASEMENT MUST BE PROVIDED OVER THE DISPOSAL AREA.

(5) POND SHAPE AND DEPTH- SURFACE AREA TO VOLUME RATIO SHALL BE MAXIMIZED TO THE EXTENT FEASIBLE. DEPTHS OF THE PERMANENT POOL SHOULD BE VARIED AND AVERAGE BETWEEN 3 AND 6 FEET. A MINIMUM LENGTH-TO-WIDTH RATIO OF 3:1 SHOULD BE USED UNLESS STRUCTURAL MEASURES ARE USED TO EXTEND THE FLOW PATH. PONDS SHOULD BE WEDGE-SHAPED, NARROWER AT THE INLET AND WIDER AT THE OUTLET. IRREGULAR SHORELINES ARE PREFERRED. A MARSH FRINGE SHOULD BE ESTABLISHED NEAR THE INLET OR FOREBAY AND AROUND AT LEAST 50 PERCENT OF THE POND'S PERIMETER. A SHELF, A MINIMUM OF 4 FEET WIDE AT A DEPTH OF ONE FOOT, WILL SURROUND THE INTERIOR OF THE PERIMETER TO PROVIDE SUITABLE CONDITIONS FOR THE ESTABLISHMENT OF AQUATIC VEGETATION, AND TO REDUCE THE POTENTIAL SAFETY HAZARD TO THE PUBLIC. FOR SAFETY PURPOSES AND TO MINIMIZE EROSION, BASIN SIDE SLOPES WILL NOT BE FLATTER THAN 20:1, NOR STEEPER THAN 3:1. STEEPER SLOPES MAY BE ALLOWED IF

FENCING AT LEAST 5 FEET IN HEIGHT IS PROVIDED, ALTHOUGH FENCING IS DISCOURAGED FOR AESTHETIC REASONS.

(6) BASIN INLET/OUTLET DESIGN – VELOCITY DISSIPATION MEASURES SHALL BE INCORPORATED INTO BASIN DESIGNS TO MINIMIZE EROSION AT INLETS AND OUTLETS, AND TO MINIMIZE THE RES-SUSPENSION OF POLLUTANTS. INVERTS FOR INLET PIPES SHALL DISCHARGE AT THE ELEVATION OF THE PERMANENT POOL AND PERPENDICULAR TO THE SURFACE TO ALLOW THE POOL TO DISSIPATE THE ENERGY OF THE INFLOW. STONE RIPRAP SHALL EXTEND FROM THE PIPE INVERT TO THE POND BOTTOM TO PREVENT EROSION. ANTISEEP COLLARS SHOULD BE INSTALLED ON ANY PIPING PASSING THROUGH THE SIDES OR BOTTOM OF THE BASIN TO PREVENT LEAKAGE THROUGH THE EMBANKMENT. TO THE EXTENT FEASIBLE, THE DISTANCE BETWEEN INLET AND OUTLET SHALL BE MAXIMIZED. THE LENGTH AND DEPTH OF THE FLOW PATH ACROSS BASINS CAN BE MAXIMIZED BY:

(A) INCREASING THE LENGTH-TO-WIDTH RATIO OF THE ENTIRE DESIGN.

(B) INCREASING THE DRY WEATHER FLOW PATH WITHIN THE SYSTEM TO ATTAIN MAXIMUM SINUOSITY.

7) DUAL ORIFICES, OR OTHER DESIGNS SHOULD BE USED TO ASSURE AN APPROPRIATE DETENTION TIME FOR ALL STORM EVENTS. WHERE A PIPE OUTLET OR ORIFICE PLATE IS TO BE USED TO CONTROL DISCHARGE, IT SHOULD HAVE A MINIMUM DIAMETER OF SIX (6) INCHES. IF THIS MINIMUM ORIFICE SIZE PERMITS RELEASE RATES GREATER THAN THOSE SPECIFIED IN THESE RULES, ALTERNATIVE OUTLET DESIGNS WILL BE UTILIZED THAT INCORPORATE SELF-CLEANING FLOW RESTRICTORS, SUCH AS PERFORATED RISERS, THAT PROVIDE THE REQUIRED RELEASE RATE. THE OUTLET SHOULD BE WELL-PROTECTED FROM CLOGGING. A REVERSE-SLOPE-SUBMERGED ORIFICE OR HOODED, BROAD CRESTED WEIRS ARE RECOMMENDED OPTIONS. IF A REVERSE-SLOPE PIPE IS USED, AN ADJUSTABLE VALVE MAY BE NECESSARY TO REGULATE FLOWS. ORIFICES USED TO MAINTAIN A PERMANENT POOL LEVEL SHOULD WITHDRAW WATER AT LEAST ONE FOOT BELOW THE SURFACE OF THE WATER.

(8) BACKWATER (TAILWATER) ON THE OUTLET STRUCTURE FROM THE DOWNSTREAM DRAINAGE SYSTEM SHALL BE EVALUATED WHEN DESIGNING THE OUTLET. ALL OUTLETS SHALL BE DESIGNED TO BE EASILY ACCESSIBLE FOR HEAVY EQUIPMENT REQUIRED FOR MAINTENANCE PURPOSES.

(9) ALL BASINS SHALL INCLUDE PROVISIONS FOR A DEFINED EMERGENCY SPILLWAY CONSTRUCTED ON UNDISTURBED SOIL.

THE EMERGENCY SPILLWAY SHOULD BE SET AT THE ELEVATION OF THE 100-YEAR OR MORE FREQUENT STORM. WHERE FEASIBLE, A DRAIN FOR COMPLETELY DE-WATERING WET PONDS SHOULD BE INSTALLED FOR SEDIMENT REMOVAL AND OTHER MAINTENANCE PURPOSES.

(10) RISER DESIGN – HOODS OR TRASH RACKS SHOULD BE INSTALLED ON THE RISER TO PREVENT CLOGGING. GRATE OPENINGS SHOULD BE A MAXIMUM OF 3 INCHES. THE RISER SHOULD BE PLACED NEAR OR WITHIN THE EMBANKMENT, TO PROVIDE FOR READY MAINTENANCE ACCESS. INLET AND OUTLET BARRELS AND RISERS SHOULD BE CONSTRUCTED OF MATERIALS THAT WILL REDUCE FUTURE MAINTENANCE REQUIREMENTS. THE RISER PIPE SHOULD BE A MINIMUM OF 24 INCHES IN DIAMETER FOR RISER PIPES UP TO 4 FEET IN HEIGHT. RISER PIPES GREATER THAN 4 FEET IN HEIGHT SHOULD BE 48 INCHES IN DIAMETER. RISER PIPES SHALL BE CONSTRUCTED WITH POURED-IN-PLACE CONCRETE BOTTOMS.

(11) THE HEIGHT OF WATER IN DETENTION FACILITIES SHALL NOT BE EXCESSIVE AND SHALL COMPLY WITH THE ODNR DAMS AND RESERVOIR SAFETY REQUIREMENTS.

(12) A TABLE OF ELEVATIONS (STAGE-STORAGE-DISCHARGE TABLE WITH STORAGE VOLUME AND DISCHARGE RATES) SHALL BE PROVIDED WITH THE FINAL ENGINEERING AND CONSTRUCTION PLANS FOR ALL BASINS. PROFILE VIEW DRAWINGS OF THE OUTLET STRUCTURE, WITH ELEVATIONS, SHALL ALSO BE INCLUDED.

(13) PRIOR TO FINAL ACCEPTANCE OF THE POND IMPROVEMENTS, AS-BUILT DATA SHALL BE SUBMITTED TO THE CITY ENGINEER VERIFYING THAT THE STRUCTURE(S) HAVE BEEN BUILT AS DESIGNED AND WILL FUNCTION ACCORDINGLY. THE AS-BUILT INFORMATION SHALL BE PREPARED AND STAMPED BY A REGISTERED PROFESSIONAL CIVIL ENGINEER OR A REGISTERED LANDSCAPE ARCHITECT.

1195.06 MAINTENANCE AND OPERATION PLANS

ALL STORMWATER TREATMENT PRACTICES SHALL HAVE AN ENFORCEABLE OPERATION AND MAINTENANCE AGREEMENT TO ENSURE THE SYSTEM FUNCTIONS AS DESIGNED.

THIS AGREEMENT SHALL INCLUDE ANY AND ALL MAINTENANCE EASEMENTS REQUIRED TO ACCESS AND INSPECT THE STORMWATER TREATMENT PRACTICES, AND TO PERFORM ROUTINE MAINTENANCE AS NECESSARY TO ENSURE PROPER FUNCTIONING OF THE STORMWATER TREATMENT PRACTICE.

A LEGALLY BINDING COVENANT SPECIFYING THE PARTIES RESPONSIBLE FOR THE PROPER MAINTENANCE OF ALL STORMWATER TREATMENT PRACTICES SHALL BE SECURED PRIOR TO ISSUANCE OF ANY PERMITS FOR LAND DISTURBANCE ACTIVITIES. AN EXECUTED COPY OF THE AGREEMENT SHALL BE PROVIDED TO THE CITY OF GAHANNA, PRIOR TO PROJECT ACCEPTANCE.

1195. 07 FEES.

THE STORM WATER POLLUTION PREVENTION PLAN REVIEW, FILING, AND INSPECTION FEE IS PART OF A COMPLETE SUBMITTAL AND IS REQUIRED TO BE SUBMITTED TO THE CITY ENGINEER AND THE FRANKLIN COUNTY STORM WATER CONSERVATION DISTRICT BEFORE THE REVIEW PROCESS BEGINS. PLEASE CONSULT WITH THE CITY ENGINEER FOR CURRENT FEE SCHEDULE.

1195. 08 ENFORCEMENT.

(A) ALL DEVELOPMENT AREAS MAY BE SUBJECT TO EXTERNAL INSPECTIONS BY THE CITY OF GAHANNA, IT'S AUTHORIZED AGENTS, OR THE OHIO ENVIRONMENTAL PROTECTION AGENCY TO ENSURE COMPLIANCE WITH THE APPROVED SWPPP.

(B) AFTER EACH EXTERNAL INSPECTION, THE CITY OR IT'S AUTHORIZED AGENTS SHALL PREPARE AND DISTRIBUTE A STATUS REPORT TO THE APPLICANT.

(C) IF AN EXTERNAL INSPECTION DETERMINES THAT OPERATIONS ARE BEING CONDUCTED IN VIOLATION OF THE APPROVED SWPPP, THE CITY IS AUTHORIZED TO TAKE ACTION AS DETAILED IN SECTION 1195.09 OF THIS REGULATION.

1195. 09 VIOLATIONS

(A) NO PERSON SHALL VIOLATE OR CAUSE OR KNOWINGLY PERMIT TO BE VIOLATED ANY OF THE PROVISIONS OF THIS REGULATION, OR FAIL TO COMPLY WITH ANY OF SUCH PROVISIONS OR WITH ANY LAWFUL REQUIREMENTS OF ANY PUBLIC AUTHORITY MADE PURSUANT TO THIS REGULATION, OR KNOWINGLY USE OR CAUSE OR PERMIT THE USE OF ANY LANDS IN VIOLATION OF THIS REGULATION OR IN VIOLATION OF ANY PERMIT GRANTED UNDER THIS REGULATION.

(B) UPON NOTICE, THE AN AUTHORIZED REPRESENTATIVE OF THE CITY OF GAHANNA MAY SUSPEND ANY ACTIVE SOIL DISTURBING ACTIVITY FOR A PERIOD NOT TO EXCEED NINETY (90) DAYS, AND MAY REQUIRE IMMEDIATE EROSION AND SEDIMENT CONTROL MEASURES WHENEVER HE OR SHE DETERMINES THAT SUCH ACTIVITY IS NOT MEETING THE INTENT OF THIS REGULATION. SUCH NOTICE SHALL BE IN WRITING, SHALL BE GIVEN TO THE APPLICANT, AND SHALL STATE THE CONDITIONS UNDER WHICH WORK MAY BE RESUMED. IN INSTANCES, HOWEVER, WHERE THE CITY FINDS THAT IMMEDIATE ACTION IS NECESSARY FOR PUBLIC SAFETY OR THE PUBLIC INTEREST,

HE OR SHE MAY REQUIRE THAT WORK BE STOPPED UPON VERBAL ORDER PENDING ISSUANCE OF THE WRITTEN NOTICE.

1195. 10 APPEALS

ANY PERSON DISSATISFIED WITH A DECISION MADE BY THE CITY ENGINEER PURSUANT TO CHAPTER 1193 SHALL HAVE THE RIGHT TO APPEAL IN WRITING THE DECISION TO THE BOARD OF ZONING AND BUILDING APPEALS WITHIN TEN DAYS AFTER SUCH DECISION IS MADE. THE BZBA SHALL ACT UPON THE WRITTEN APPEAL AT IT'S NEXT REGULAR MEETING HELD AFTER THE RECEIPT OF SUCH APPEAL BY THE CLERK OR THE APPEAL IS DEEMED TO BE DENIED. IF THE APPEAL IS DENIED BY THE BZBA THE PERSON FILING THE APPEAL MAY WITHIN TEN DAYS AFTER SUCH DECISION IS MADE, APPEAL IN WRITING SUCH DECISION TO COUNCIL WHICH SHALL ACT UPON THE WRITTEN APPEAL AT ITS NEXT REGULAR MEETING HELD AFTER RECEIPT OF SUCH APPEAL BY THE CLERK, OR THE APPEAL IS DEEMED TO BE DENIED.

1195. 99 PENALTY

(A) Any person, firm, **ENTITY** or corporation, **INCLUDING BUT NOT LIMITED TO, THE OWNER OF THE PROPERTY, HIS AGENTS AND ASSIGNS, OCCUPANT, PROPERTY MANAGER, AND ANY CONTRACTOR OR SUBCONTRACTOR** ~~violating any provision, amendment or supplement of this chapter, or failing to obey any lawful order of the City Engineer, Chief Building Official or Planning and Zoning Administrator issued in pursuance thereof, shall be deemed guilty of a minor misdemeanor and upon conviction thereof, shall be fined not more than fifty dollar ($50.00).~~ **WHO VIOLATES OR FAILS TO COMPLY WITH ANY PROVISION OF THIS REGULATION IS GUILTY OF A MISDEMEANOR OF THE THIRD DEGREE.** ~~Each and every day during which such violation of any provision, amendment or supplement of this chapter occurs or each and every day during which there is a failure to obey any lawful order of the City Engineer, Chief Building Official or Planning and Zoning Administrator, may be deemed a separate offense. To guarantee completion of work, the City Engineer, Chief Building Official or Planning and Zoning Administrator may hold the issuance of occupancy permits, may not conduct inspections, or may place stop work orders on the project until such time the work needed to satisfy the requirements of this chapter is completed.~~ **A SEPARATE OFFENSE SHALL BE DEEMED COMMITTED EACH DAY DURING OR ON WHICH A VIOLATION OR NONCOMPLIANCE OCCURS OR CONTINUES.**

~~(Ord. 0124-2007 Passed 6-18-07).~~

(B) **THE IMPOSITION OF ANY OTHER PENALTIES PROVIDED HEREIN SHALL NOT PRECLUDE THE CITY INSTITUTING AN APPROPRIATE ACTION OR PROCEEDING IN A COURT OF PROPER JURISDICTION TO PREVENT AN UNLAWFUL DEVELOPMENT, OR TO RESTRAIN, CORRECT, OR ABATE A VIOLATION, OR TO REQUIRE COMPLIANCE WITH THE PROVISIONS OF THIS REGULATION OR OTHER APPLICABLE LAWS, ORDINANCES, RULES, OR REGULATIONS, OR THE ORDERS OF THE CITY OF GAHANNA.**