

STORMWATER DRAINAGE
AND DETENTION, SOIL EROSION
AND SEDIMENT CONTROL CODE
FOR THE
VILLAGE OF
CARBON CLIFF, ILLINOIS

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ARTICLE I

Authority and Purpose; Other Relevant Permitting; Applicability; Exemptions; Exceptions; and Separability:

Section 10 - Authority and Purpose: This ordinance is enacted pursuant to the police powers granted to the Village of Carbon Cliff, Illinois, by the Illinois Compiled Statutes, 65 ILCS 5/1-2-1, 5/11-12-12, 5/11/30-2, and 5/11/31-2.

The purpose of this ordinance is to diminish threats to public health and safety, protect property, prevent damage to the environment and promote public welfare by guiding, regulating, and controlling the design, construction, use, and maintenance of any new development or redevelopment or other activity which disturbs or breaks the topsoil or otherwise results in the movement of earth and/or changes the stormwater drainage pattern and/or stormwater flows from that which would have occurred if the land had been left in its natural state. This stormwater runoff and resulting soil erosion could result in the inundation of damageable properties, the erosion and destabilization of downstream channels, and the pollution of valuable stream and lake resources. One cause of increases in stormwater runoff quantity or rate and impairment of quality, and loss of valuable topsoil is the new development or redevelopment of the land. This ordinance regulates these activities to minimize adverse impacts.

This ordinance is adopted to accomplish the following objectives:

- a.) To assure that new development or redevelopment does not increase the drainage or flood hazards, or create unstable conditions susceptible to soil erosion;
- b.) To protect new buildings and major improvements to buildings from flood damage due to increased stormwater runoff and soil erosion;
- c.) To protect human life and health from the hazards of increased flooding and soil erosion on a watershed basis;
- d.) To lessen the burden on the taxpayer for flood control projects, repairs to flood-damaged public facilities and utilities, correction of channel erosion problems, and flood rescue and relief operations caused by stormwater runoff and soil erosion quantities from new development or redevelopment;
- e.) To protect, conserve, and promote the orderly development of land and soil, water, air, animal, and plant resources;
- f.) To preserve the natural hydrologic and hydraulic functions of watercourses, wetlands and flood plains for protecting water quality, and enhance stormwater management and aquatic habitats;
- g.) To preserve the natural characteristics of stream corridors in order to manage flood

and stormwater impacts, improve water and groundwater quality, reduce soil erosion, protect aquatic and riparian habitat, maintain quality forest resources, provide recreational opportunities, provide aesthetic benefits, enhance community and economic development.

Section 11 - Other Relevant Permitting: Before a Development Permit under this ordinance becomes effective, all required Federal, State, and Local permits will have been received for the site subject to new development or redevelopment. The acquisition of these permits shall be the sole responsibility of the applicant. These may include but are not limited to Section 404 of the Clean Waters Act; Section 106 of the National Historic Preservation Act; Section 10 of the Rivers and Harbors Act; or permitting required by the Illinois Department of Natural Resources, Office of Water Resources in accordance with the Rivers, Lakes and Streams Act, 615 ILCS; the Soil and Water Conservation Districts Act, 70 ILCS; the Farmland Preservation Act, 505 ILCS; the Illinois Groundwater Protection Act, 415 ILCS; and the National Pollutant Discharge Elimination System Permit (NPDES) and Section 401 of the Clean Water Act thru the Illinois Environmental Protection Agency, Division of Water Pollution Control; and the Threatened and Endangered Species Act, 16 USC 1531 ET. SEQ. Compliance is also required with but not limited to the Zoning Ordinance of the Village of Carbon Cliff, Illinois, and the Uniform Building Code, most recent edition adopted by the Village, Chapter on Excavation and Grading.

Section 12 - Applicability: This ordinance shall apply to all new development or redevelopment in the Village. Except as otherwise provided in this ordinance, no person, firm or corporation, public or private, the State of Illinois and its agencies or political subdivisions, the United States of America, and its agencies or political subdivisions, any agent, servant, officer or employee of any of the foregoing which meets the following provisions or is otherwise exempted in this ordinance, shall not commence any development activities without first having obtained a development permit from the Zoning Officer.

12.01 - Any new development or redevelopment that will include an area that will meet or exceed ten thousand (10,000) square feet of total impervious surface (i.e., streets, roof, patio or parking area or any combination thereof); or

12.02 - Any land disturbing activity (i.e., clearing, grading, stripping, excavation, fill, or any combination thereof) that will affect an area that will meet or exceed ten thousand (10,000) square feet or that will exceed 100 cubic yards; or

12.03 - Any land disturbing activity greater than 500 square feet if the activity is within 100 feet of a river, lake, pond, stream, abandoned mine, or wetland; and is done in conjunction with sub sections 12.01 or 12.02; or

12.04 - Any land disturbing activity on the sloping side of the slope disturbance line and is in conjunction with sections 12.01, 12.02, or 12.03; or

12.05 - Any tree cutting or mechanized land clearing where the tree, native to Northwestern Illinois, is in excess of eight (8) inches in diameter and is done in conjunction with Article I, Sections 12.01, 12.02, 12.03 or 12.04.

12.06 - The construction of one single family dwelling that is not constructed as part of a residential development shall not be subject to the provisions of this ordinance regarding permanent stormwater control measures.

12.07 – The Village in consultation with the Rock Island County Soil and Water Conservation District (RISWCD), reserves the right to require any non-agricultural, construction development activity, regardless of disturbed area or type of activity, to comply with this ordinance if it is determined to be the cause of or a contributor to an existing or potential erosion, sediment, or stormwater impact.

- a.) Soil erosion and sediment control planning for individual home sites may utilize a soil erosion and sediment control planning “kit” provided by the Rock Island County Soil and Water Conservation District.

Section 13 - Exemptions: A development permit shall not be required for the following:

- a.) Any new development, redevelopment or other activity falling below the minimum standards as set forth in Article I, Section 12.
- b.) The agricultural use of land, including the implementation of conservation measures included in a farm conservation plan approved by the Natural Resources Conservation Service, and including the construction of agricultural structures.
- c.) The maintenance of any existing stormwater drainage/detention component or structure or any existing soil erosion/sediment control component or structure; including dredging, levee restoration, tree removal or other function which maintains the original design capacities of the above.
- d.) The construction of, improvements to, or the maintenance of any street, road, highway or interstate highway performed by any unit of government whose powers grant such authority.

Section 14 - Variances: The Board of Appeals, after a public hearing, may determine and vary the requirements and regulations of this ordinance in harmony with its general purpose and intent, where the Board of Appeals make written findings of fact in accordance with the standards herein after prescribed and further, find that there are practical difficulties or particular hardships in the way of carrying out the strict letter of requirements and regulations of this ordinance.

14.01 - Application for variance shall be made by a verified petition of the applicant for a development permit, stating fully the grounds of the petition and the facts relied upon by the applicant. Such petition shall be filed with the development permit application. Each application for a variance shall be made in writing and filed with the Zoning Officer. The Zoning Officer and the Village Engineer will review and transmit recommendations to the Board of Appeals, which shall review such recommendations prior to granting or denying the variance.

14.02 – Standards for variance. The Board of Appeals shall not vary the requirements and regulations of this ordinance, as authorized in this section, unless there is evidence presented to it in each specific case:

14.021 - The land is of such shape or size or is affected by such physical conditions or is subject to such title limitations of record, that it is impossible or impractical for the applicant to comply with all of the requirements of this ordinance;

14.022 - The variance is necessary for the preservation and enjoyment of a substantial property right of the applicant; and

14.023 - The granting of the variance will not be detrimental to the public welfare, environment
or
injurious to other property in the vicinity of the subject’s property.

14.03 - The Board of Appeals shall hold a public hearing on each application for variance, in accordance with Article XV subsection 157.022 of the Village of Carbon Cliff Zoning Ordinance. Within thirty (30) days after the public hearing, the Board of Appeals shall either approve the site development permit application with the variances and conditions it deems necessary or it shall disapprove such development permit application and variance application or it shall take other such action as appropriate.

Section 15 - Responsibility: The applicant shall not be relieved of responsibility for damage to persons or property otherwise imposed by law, and the Village or its officers or agents, including the directors and staff of the Rock Island County SWCD will not be made liable for such damage, by (1) the issuance of a development permit under this ordinance, (2) compliance with the provisions of that development permit or conditions attached to it by the Zoning Officer (3) failure of the Village of Carbon Cliff Officials to observe or recognize hazardous or unsightly conditions, (4) failure of the Village officials to recommend denial or to deny a development permit, or (5) exemptions from development permit requirements of this ordinance.

Article II - Definitions:

Section 20 - Definitions: For the purposes of this ordinance certain terms are defined and set forth below:

20.01 - Abandoned Mine: An abandoned mine is a large excavation in the earth that is no longer being used. These conditions make such areas unstable and susceptible to subsidence and surface collapse. Subsurface excavations and fractures in the bedrock may channel runoff water to public or private water supplies, making those sources especially susceptible to groundwater contamination.

20.02 - Adverse Impacts: Any negative impact on plant, soil, air or water resources affecting their beneficial uses including recreation, aesthetics, aquatic habitat, quality, and quantity.

20.03 - Applicant: Any person, firm, or governmental agency who executes the necessary forms to procure official approval of a development or permit to carry out construction of a new development or re-development from the Village of Carbon Cliff, Illinois.

20.04 - Base Flood Elevation: The elevation at all locations delineating the level of flooding resulting from the 100-year frequency flood event, which has a one percent (1%) probability of being equaled or exceeded in any given year. The base flood elevation at any location is defined in Article III, Section 38.03. of Ordinance No. 85-35, The Village of Carbon Cliff Zoning Ordinance.

20.05 – Board of Appeals: “ Board of Appeals” shall mean the Zoning Board of Appeals of the Village of Carbon Cliff, Illinois, with the jurisdiction as set forth in Article XV, Section 152, of ordinance No. 85-35, “Village of Carbon Cliff Zoning Ordinance.”

20.06 – Building Official: Is the officer or other designated authority charged with the administration and enforcement of the Uniform Building Code for the Village of Carbon Cliff, Illinois.

20.07 - Building Permit: A permit issued by the Village of Carbon Cliff, Illinois, for the construction, erection or alteration of a structure or building and the related ground and surface preparation prior to and after completion of construction, erection or alteration of a structure or building.

20.08 - Bypass Flows: Stormwater runoff from upstream properties tributary to a property's drainage system but not under its control.

20.09 - Certify or Certification: Formally attesting that the specific inspections and tests were performed, and that such inspections and tests comply with the applicable requirements of this ordinance.

20.10 - Channel: Any defined river, stream, creek, brook, branch, natural or artificial depression, ponded area, on-stream lake or impoundment, abandoned mine, flowage, slough, ditch, conduit, culvert, gully, ravine, wash, or natural or manmade drainageway, which has a definite bed and bank or shoreline, in or into which surface or groundwater flows, either perennially or intermittently.

20.11 - Channel Modification: Alteration of a channel by changing the physical dimensions or materials of its bed or banks. Channel modification includes damming, riprapping (or other armoring), filling, widening, deepening, straightening, relocating, lining, and significant removal of bottom or woody rooted vegetation. Channel modification does not include the man-made clearing of debris or removal of trash.

20.12 - Clearing: Any activity, which removes the natural vegetative ground cover.

20.13 - Compensatory Storage: An artificially excavated, hydraulically equivalent volume of storage within the floodplain used to balance the loss of natural flood storage capacity when fill or structure are placed within the floodplain.

20.14 - Conduit: Any channel, pipe, sewer or culvert used for the conveyance or movement of water, whether open or closed.

20.15 – County: County of Rock Island, Illinois.

20.16 - Cubic Yard: A one- (1) yard by one (1) yard by one (1) yard amount of material in excavation and/or fill.

20.17 - Detention Basin: A facility constructed or modified to provide for the temporary storage of stormwater runoff and the controlled release by gravity of this runoff at a prescribed rate during and after a flood or storm.

20.18 - Detention Time: The amount of time stormwater is held within a detention basin.

20.19 - Development: Any manmade change to real estate or property, including:

- a.) The division or subdivision of any duly recorded parcel of property;
- b.) Construction, reconstruction or placement of a building or any addition to a building valued at more than one thousand dollars (\$1,000);
- c.) Installation of a manufactured home on a site, preparing a site for a manufactured home, or installing a travel trailer on a site for more than 180 days per year;
- d.) Construction of roads, bridges, or similar projects;
- e.) Redevelopment of a site;
- f.) Filling, dredging, grading, clearing, excavating, paving drilling, mining or other non-agricultural alterations of a ground surface;
- g.) Storage of materials or deposit of solid or liquid waste;
- h.) Any other activity that might alter the magnitude, frequency, direction, or velocity of stormwater flows from a property.

20.20 - Drainage Plan: A plan, including engineering drawings and supporting calculations, which describes the existing stormwater drainage system and environmental features, including grading, as well as proposed alterations or changes to the drainage system and environment of a property.

20.21 - Dry Basin: A detention basin designed to drain after temporary storage of stormwater flows and to normally be dry over much of its bottom area.

20.22 - Erosion: The general process whereby soil or earth is moved by rainfall, flowing water, wind or wave action.

20.23 - Excavation: Any act by which organic matter, earth, sand, gravel, rock or any other similar material, is cut into, dug, quarried, uncovered, removed, displaced, re-located or bulldozed and shall include the conditions resulting from such actions.

20.24 - Excess Stormwater Runoff: The volume and rate of flow of stormwater discharged from a new development or re-development, which is or will be in excess of that volume and rate which existed before development or re-development.

20.25 - Existing Grade: The vertical location of the existing ground surface prior to excavation or filling.

20.26 - Fill: Any act by which earth, sand, gravel, rock, or any other material, is deposited, placed, replaced, pushed, dumped, pulled, transported or moved by man to a new location and shall include the conditions resulting therefrom.

20.27 - Final Grade: The vertical location of the ground surface after grading work is completed in accordance with the engineering plans.

20.28 - Flood Fringe: That area as designated by the Federal Emergency Management Agency (FEMA) on either side of the floodway. This area is subject to inundation from the base flood but conveys little or no flow.

20.29 - Flood Hazard Boundary Map (FHBM): A very generalized map prepared by the Federal Emergency Management Agency (FEMA) which shows only where floodplains are located based on very basic data. FHBM's do not include base flood elevations.

20.30 - Flood Insurance Rate Map (FIRM): A map prepared by the Federal Emergency Management Agency (FEMA) that depicts the special flood hazard area (SFHA) within a community. This map includes insurance rate zones and regulatory floodplains and may or may not depict regulatory floodways.

20.31 - Floodplain: That land adjacent to a body of water with ground surface elevations at or below the base flood or the 100-year frequency flood elevation which is subject to inundation. The floodplain as designated by the Federal Emergency Management Agency (FEMA) is also known as the Special Flood Hazard Area (SFHA). This area is the collective combination of the regulatory floodway and the flood fringe.

20.32 - Floodway: The channel and that portion of the floodplain, including on-stream lakes, adjacent to a stream or watercourse which is needed to store and convey the anticipated existing and future 100-year frequency flood discharge with no more than a 0.1 foot increase in stage due to any loss of flood conveyance or storage and no more than a ten percent (10%) increase in velocities.

20.33 - Grading: The excavation or fill or any combination thereof and shall include the conditions resulting from any excavation or fill.

20.34 - Hydrograph: A graph showing for a given location on a stream or conduit, the flow rate with respect to time.

20.35 - Hydrograph Method: This method estimates runoff volume and runoff hydrographs for the point of interest by generating hydrographs for individual subareas, combining them, and routing

them through stream lengths and reservoir structures. Factors such as rainfall amount and distribution, runoff curve number, time of concentration, and travel time are included.

20.36 - Impervious Surface: That area of property that is covered by materials other than soil and vegetation and that has no intended capacity to absorb stormwater, such as parking lots, driveways, sidewalks, patios, tennis courts, roofs and other structures.

20.37 - Infiltration: The passage or movement of water into the soil surfaces.

20.38 - Loessal Soil: A sediment, commonly non-stratified and unconsolidated, composed predominately of silt sized particles with accessory clay and sand.

20.39 - Lot: An individual platted parcel in an approved subdivision.

20.40 - Major Drainage System: That portion of a drainage system needed to store and convey flows beyond the capacity of the minor drainage system.

20.41 - Minor Drainage System: That portion of a drainage system designed for the convenience of the public. It consists of street gutters, storm sewers, small open channels, and swales and, where manmade, is to be designed to handle the 10-year runoff event.

20.42 - Mitigation: Mitigation is when the prescribed controls are not sufficient and additional measures are required to offset the development, including those measures necessary to minimize the negative effects which stormwater drainage and development activities might have on the public health, safety and welfare. Examples of mitigation include, but are not limited to compensatory storage, soil erosion and sedimentation control, and channel restoration.

20.43 - Natural: Conditions resulting from physical, chemical, and biological processes without intervention by man.

20.44 - Natural Drainage: Channels formed in the existing surface topography of the earth prior to changes made by unnatural causes.

20.45 - One Hundred-Year Event: A rainfall, runoff, or flood event having a one percent (1%) probability of equaled or exceeded in any given year. A 24-hour storm duration is assumed unless otherwise noted.

20.46 - Parcel: All contiguous land in one ownership.

20.47 - Peak Flow: The maximum rate of flow of water at a given point in a channel or conduit.

20.48 - Permittee: Any person to whom a building permit or a development permit is issued.

20.49 - Person: Any individual, firm or corporation, public or private, the State of Illinois and its agencies or political subdivisions, the United States of America, and its agencies or political subdivisions, and any agent, servant, officer or employee of any of the foregoing.

20.50 - Plan Commission: Plan Commission shall mean the Plan Commission of the Village of Carbon Cliff, Illinois, as created and with the jurisdiction as set forth in Article XV, Section 153, of ordinance No. 85-35, "Village of Carbon Cliff Zoning Ordinance."

20.51 - Positive Drainage: Provision for overland paths for all areas of a property including depressional areas that may also be drained by storm sewer.

20.52 - Prime Farmland: Prime farmland is land that is best suited to food, feed, forage, fiber and oilseed crops. It may be cropland, pasture, woodland, or other land, but it is not urban and built up land or water areas. It is either used for food or fiber or is available for those uses. The soil qualities, growing season and moisture supply are those needed for a well-managed soil to economically produce a sustained high yield of crops. Prime farmland produces the highest yields with minimum inputs of energy and economic resources, and farming it results in the least damage to the environment.

20.53 - Property: A parcel of real estate.

20.54 - Retention Basin: A facility designed to completely retain a specified amount of stormwater runoff without release except by means of evaporation, infiltration, emergency bypass or pumping.

20.55 – Rock Island County SWCD/RICSWCD: Rock Island County Soil & Water Conservation District.

20.56 - Sedimentation: The process that deposits soils, debris, and other materials either on other ground surfaces or in bodies of water or stormwater drainage systems.

20.57 - Site: A parcel of land, or a contiguous combination thereof, where grading work is performed as a single unified operation.

20.58 - Slope Disturbance Line: The line which delineates relatively level building areas from areas where slopes exceed 7 percent (7%) and where special precautions must be taken.

20.59 - Stormwater Drainage System: All means, natural and manmade, used for conducting stormwater to, through or from a drainage area to the point of final outlet from a property. The stormwater drainage system includes but is not limited to any of the following: conduits and appurtenance features, canals, channels, ditches, streams, culverts, streets, storm sewers, detention basins, swales and pumping stations.

20.60 - Stormwater Runoff: The waters derived from melting snow or rain falling within a tributary drainage basin which are in excess of the infiltration capacity of the soils of that basin, which flow over the surface of the ground or are collected in channels or conduits.

20.61 - Storm Sewer: A closed conduit for conveying collected stormwater.

20.62 - Stream: Any river, creek, brook, branch, flowage, ravine, or natural or man-made drainage way which has a definite bed and banks or shoreline, in or into which surface or

groundwater flows, either perennially or intermittently.

20.63 - Stripping: Any activity which removes the vegetative surface cover including tree removal, by spraying or clearing, and storage or removal of topsoil.

20.64 – Ten-Year Event: A runoff, rainfall, or flood event having a ten percent (10%) chance of occurring in any given year. A 24 hour storm duration is assumed unless otherwise note.

20.65 - Time of Concentration: The elapsed time for stormwater to flow from the most hydraulically remote point in a drainage basin to a particular point of interest in that watershed.

20.66 - Tributary Watershed: All of the land surface area that contributes runoff to a given point.

20.67 – Two-Year Event: A runoff, rainfall, or flood event having a fifty percent (50%) chance of occurring in any given year. A 24-hour storm duration is assumed unless otherwise noted.

20.68 - Vacant: Land on which there are no structures or only structures which are secondary to the use or maintenance of the land itself.

20.69 – Village: Village of Carbon Cliff, Illinois.

20.70 – Village Attorney: Attorney for the Village of Carbon Cliff, Illinois.

20.71 – Village Engineer: Engineer for the Village of Carbon Cliff, Illinois.

20.72 - Watershed: All land area drained by, or contributing water to, the same stream, creek, ditch, lake, marsh, stormwater facility, groundwater or depressional area.

20.73 - Wet Basin: A detention basin designed to maintain a permanent pool of water after the temporary storage of stormwater runoff.

20.74 - Wetlands: Wetlands are defined by regulation as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." For general, but not inclusive locations of designated wetlands refer to mapping prepared jointly by the U.S. Department of Interior, Fish and Wildlife Service and the Illinois Department of Natural Resources, Office of Resource Conservation; National Wetlands Inventory Mapping, 1987. More specific wetland information is published in the Rock River Wetlands Special Area Management Plan, by the Bi-State Regional Commission in cooperation with the Natural Resources Conservation Service (NRCS), the US Fish and Wildlife Service and the US Army Corps of Engineers. The applicant may be required to provide a field investigation by a qualified wetland delineator.

20.75 – Zoning Officer: Zoning Officer for the Village of Carbon Cliff, Illinois, with the powers and duties as set forth in Article XV, Section 151, of Ordinance No. 85-35, "Village of Carbon Cliff Zoning Ordinance."

Article III- Stormwater Drainage and Detention:

Section 30 - Drainage Plan Submittal Requirements: Each applicant shall submit the following information, to ensure that the provisions of this ordinance are met. The submittal shall include sufficient information to evaluate the environmental characteristics of the property, the potential adverse impacts and benefits of the development on water resources both on-site and off-site, and the effectiveness of the proposed drainage plan in managing stormwater runoff, and meet the provisions of Article I, Section 11. The applicant shall certify on the drawings that all clearing, grading, drainage, and construction shall be accomplished in strict conformance with the drainage plan. The following information shall be submitted for both existing and proposed property conditions for all new developments or re-developments that meet or exceed the minimum requirements of Article I, Section 12.

30.01 - Drainage Plan Requirements: A topographic survey of the property at two-foot (2) contours unless otherwise specified or approved by the Village Engineer. The plan map shall be keyed to a consistent datum specified by the Village. If the mapping is compiled using a digital format and the Global Positioning System (GPS), the applicant will provide both paper and digital copies including GPS points.

30.011 - Mapping and Descriptions: An existing drainage and proposed drainage plan for the property and one hundred (100) feet surrounding the property at a scale of not more than one hundred (100) feet to one (1) inch, and including the following: Unless otherwise specified by the Village Engineer

- a.) Property boundary, dimensions, and approximate acreage;
- b.) Building setback lines;
- c.) All existing and proposed structures and sizes;
- d.) Square feet of existing and proposed impervious surface;
- e.) All existing, or proposed easements;
- f.) All existing, abandoned, or proposed water or monitoring wellhead locations;
- g.) All sanitary or combined sewer lines and septic systems;
- h.) The banks and centerline of streams and channels;
- i.) Shoreline of lakes, ponds, and detention basins with normal water level elevation;
- j.) Farm drains and tiles;

- k.) Soils classifications;
- l.) Location, size and slope of stormwater conduits and drainage swales;
- m.) Depressional storage areas;
- n.) Detention facilities;
- o.) Roads, streets and associated stormwater inlets including finished grades;
- p.) Base flood elevation, flood fringe, and regulatory floodway;
- q.) Basis of design for the final drainage network components;
- r.) A statement giving any applicable engineering assumptions and calculations;
- r.) A vicinity map showing the relationship of the site to its general surroundings at a scale of not less than two thousand (2,000) feet to one (1) inch (1:24,000);
- t.) Title, scale, north arrow, legend, seal of Licensed Professional Engineer, date, and name of person preparing plans;
- u.) Cross-section data for open channel flow paths and designated overland flow paths;
- u.) Direction of storm flows;
- w.) Flow rates and velocities at critical points in the drainage system;
- x.) A statement by the design engineer of the drainage system's provision for handling events greater than the 100 year, 24 hour runoff;
- y.) A statement of certification of all drainage plans, calculations, and supporting data by a Licensed Professional Engineer;
- z.) Abandoned mine location and type; and
- aa.) Subwatershed boundaries within the property.

30.012 - Environmental Features: A depiction of environmental features of the property and immediate vicinity including the following:

- a.) The limits of designated regulatory and non-regulatory wetland areas;
- b.) The location and limits of abandoned mining activity;

- c.) The location of trees greater than eight (8) inches in diameter;
- d.) Any designated natural areas, prime farmland; and
- e.) Any proposed environmental mitigation features.

Section 31 - Minimization of Increases in Runoff Volumes and Rates: In the selection of a drainage plan for a new development or redevelopment, the applicant shall evaluate and implement site design features which minimize the increase in runoff volumes and rates from the site and addresses the water quality treatment requirements of this ordinance. The applicant's drainage plan submittal shall include evaluations of site design features which are consistent with the following hierarchy:

- a.) Preservation of regulatory floodplains, flood prone and wetland areas;
- b.) Minimize impervious surfaces on the property, consistent with the needs of the project;
- c.) Attenuate flows by use of open vegetated swales and natural depressions and preserves the existing natural stream channel;
- d.) Infiltration of runoff on-site;
- e.) Provide stormwater retention structures;
- f.) Provide wet or wetland detention structures;
- g.) Provide dry detention structures; and
- h.) Construct storm sewers.

Section 32 - Water Quality and Multiple Uses: The drainage system should be designed to minimize adverse surface and groundwater quality impacts off-site and on the property itself. Detention basins shall incorporate design features to capture stormwater runoff pollutants. In particular, designers shall give preference to wet bottom and wetland type designs and all flows from the development shall be routed through the basin (i.e. low flows shall not be bypassed). Detention of stormwater shall be promoted throughout the property's drainage system to reduce the volume of stormwater runoff and to reduce the quantity of runoff pollutants.

The drainage system should incorporate multiple uses where practicable. Uses considered compatible with stormwater management include open space, aesthetics, aquatic habitat, recreation (boating, fishing, trails, playing fields), wetlands and water quality mitigation.

Section 33 - Design Criteria, Standards, and Methods:

33.01 - Release Rates: The drainage system for new developments or redevelopments shall be

designed to control the peak rate of discharge from the property for the 2 year, 24 hour and 100 year, 24 hour events to pre project levels which will not cause an increase in flooding or channel instability downstream when considered in aggregate with other developed properties and downstream drainage capacities. The peak discharge rate from events less than or equal to the 2 year, 24 hour event and the peak discharge rate for the 100-year, 24 hour event shall be determined by the Village Engineer.

33.011 - Detention Basin Outlet Design: Backwater on the outlet structure from the downstream drainage system shall be addressed when designing the outlet.

33.02 - Detention Storage Requirements: The design maximum storage to be provided in the detention basin shall be based on the runoff from the runoff difference before and after development from the 100 year, 24 hour event. All detention basin storage shall be computed using Hydrograph Methods utilizing reservoir routing (also called modified pulse or level pool) or equivalent method as described in Section 33.04.

33.03 - Drainage System Design and Evaluation: The following criteria should be used in evaluating and designing the drainage system. The design will provide capacity to pass the 10 year, 24 hour peak flow in the minor drainage system and an overload flow path for flows in excess of the design capacity. Whenever practicable, the stormwater systems shall not result in the interbasin transfer of drainage unless no other alternative exists.

33.031 - Design Methodologies: Major and minor conveyance systems for areas up to 10 acres, may be designed using the Rational Formula. The Rational Formula may also be used in sizing the minor drainage system for larger sites up to 100 acres. Runoff hydrograph methods as described in Section 33.04 must be used for major drainage system design for all systems with greater than 10 acres of drainage area and for the design of all detention basins.

33.032 - Positive Drainage: Whenever practicable, all developments must be provided an overland flow path that will pass the 100 year, 24 hour flow at a stage at least one (1) foot below the lowest foundation grade in the vicinity of the flow path. Overland flow paths designed to handle flows in excess of the minor drainage system capacity shall be provided drainage easements. Street ponding and flow depths shall not exceed curb heights.

33.04 - Methods for generating runoff hydrographs: Runoff hydrographs shall be developed incorporating the following assumptions of rainfall amounts and antecedent moisture.

33.041 - Rainfall: Unless a continuous simulation approach to drainage system hydrology is used, all design rainfall events shall be based on the Illinois State Water Survey's Bulletin 70. The first quartile point rainfall distribution shall be used for the design and analysis of conveyance systems with critical durations less than or equal to 12 hours. The third quartile point rainfall distribution shall be used for the design and analysis of detention basins and conveyance system with critical durations greater than 12 and less than or equal to 24 hours. The fourth quartile distribution shall be used in the design and analysis of systems with durations greater than 24 hours. The first, third, and fourth quartile distributions described by Huff are presented in Table 37 of Bulletin 70. Refer to Table 13 of Bulletin 70 for rainfall depth, duration, and frequency. The NRCS Type II distribution

may be used as an alternate to the Huff distributions.

33.042 - Antecedent Moisture: Computations of runoff hydrographs, which do not rely on a continuous accounting of antecedent moisture conditions, shall use wet antecedent moisture condition as a minimum.

33.05 - Agriculture Tiles and Sanitary Sewers: Connections to sanitary sewers or existing agricultural stormwater management system (tiles) shall not be permitted for new developments. However, in exceptional circumstances and with the approval of the Village Engineer, connections to existing agricultural stormwater management systems may be allowed if the applicant demonstrates that the existing system, has adequate hydraulic capacity, and structural integrity. Additionally, development meeting the criteria in Section 33 shall either obtain a maintenance agreement or deed or plat restriction covering the entire downstream drain tile in accordance to be determined of this ordinance before a connection to that system is permitted. Field tile systems disturbed during the process of land development must be reconnected by those responsible for their disturbance unless the approved drainage plan incorporates the tiles in the land development design.

33.06 - Wet Detention Basin Design: Wet detention basins shall be designed to remove stormwater pollutants, to be safe, to be aesthetically pleasing, and as much as feasible to be available for recreational use.

33.061 - Wet Basin Depths: Wet basins shall be at least three feet deep, excluding near-shore banks and safety ledges. If fish habitat is to be provided they shall be at least ten (10) feet deep over twenty-five (25%) percent of the bottom area to prevent winterkill.

33.062 - Wet Basin Shoreline Slopes: The side slopes of wet basins at the normal pool elevation shall not be steeper than five to one (5 to 1 horizontal to vertical). It is recommended that native aquatic vegetation be established around the perimeter to provide protection from shoreline erosion.

33.063 - Permanent Pool Volume: The permanent pool volume in a wet basin at normal depth shall be equal to the runoff volume from its watershed for the 2 year, 24-hour event as a minimum.

33.064 - Wet Basin Inlet and Outlet Orientation: The distance between detention inlets and outlets shall be maximized. Inlets and outlets shall be at opposite ends of the basin providing that the orientation does not create undue hardship based on topography or other natural constraints. Designers are encouraged to use baffles or berms in the basin bottom to prevent short-circuiting. There shall be no low flow bypass between the inlet and outlet. Paved low flow channels shall not be used. The minimum flow length shall be ten (10) feet with a recommended minimum ratio of two to one (2:1) for width.

33.07 - Dry Detention Basin Design: In addition to the other requirements of this ordinance, dry basins shall be designed to remove stormwater pollutants, to be safe, to be aesthetically pleasing and as much as feasible to be available for multiple uses.

33.071 - Dry Basin Drainage: Dry basins shall be designed so that eighty percent (80%) of their bottom area shall have standing water no longer than seventy-two (72) hours for any runoff event

less than the 100-year, 24 hour event. Grading plans shall clearly distinguish the wet portion of the basin bottom. Underdrains directed to the outlet may be used to accomplish this requirement.

33.072 - Velocity Dissipation: Velocity dissipation measures shall be incorporated into dry basin designs to minimize erosion at inlets and outlets and to minimize resuspension of pollutants.

33.073 - Dry Basin Inlet and Outlet Orientation: Shall be the same as Article III, Section 33.064.

33.074 - Temporary Sediment Trap: A sediment trap shall be constructed at each major inlet to a dry basin during construction. The temporary sediment trap should be designed in accordance with criteria in the Illinois Urban Manual.

33.08 - Existing Depressional Areas: Existing depressional storage volume will be maintained and the volume of detention storage provided to meet the requirements of this ordinance shall be in addition to existing storage.

33.09 - Minimum Detention Outlet Size: Where a single pipe outlet or orifice plate is to be used to control discharge, it shall have a minimum diameter of twelve (12) inches. If design release rates call for smaller outlets, a design that minimizes the possibility of clogging shall be used. Minimum outlet restrictor size shall be 4" provided there is adequate downstream capacity. Detention volumes for a development shall be dictated by adherence to the release rates specified in Section 33.01.

33.10 - Detention in Flood Plains: The placement of detention basins within the flood plain is strongly discouraged because of questions about their reliable operation during flood events. However, the stormwater detention requirements of this ordinance may be fulfilled by providing detention storage within flood fringe areas on the project site provided the following provisions are met as well as compliance with Article I, Section 11.

33.1001 - Detention in Flood Fringe Areas: The placement of a detention basin in a flood fringe area shall require compensatory storage for 1.5 times the volume below the base flood elevation occupied by the detention basin including any berms. The release from the detention storage provided shall still be controlled consistent with the requirements of this section. The applicant shall demonstrate its operation for all stream-flow and flood plain backwater conditions. Excavations for compensatory storage along watercourses shall be opposite or adjacent to the area occupied by detention. All flood plain storage lost below the existing ten-year flood elevation shall be replaced below the existing ten-year elevation. All flood plain storage lost above the existing ten-year flood elevation shall be replaced above the existing ten-year flood elevation. All compensatory storage excavations shall be constructed to drain freely and openly to the watercourse and comply with Article I, Section 11.

33.1002 - Detention on Prime Farmland: The placement of detention basins shall avoid the utilization of prime farmland. All detention basin construction shall examine potential impacts to adjacent agricultural land and shall address measures that will be implemented to eliminate such impacts and comply with Article I, Section 11.

33.1003 - Detention in Floodways: Detention basins shall be placed in the floodway only in

accordance with Article III, Section 33.1004.

33.1004 - On-Stream Detention: On-stream detention basins are discouraged but allowable if they provide regional public benefits and if they meet the other provisions of this ordinance with respect to water quality and control of the 2 year and 100 year, 24 hour events from the property. Further criteria are presented in Article III, Section 34 of this ordinance. If on-stream detention is used in watersheds larger than one square mile, the applicant will use hydrographic modeling to demonstrate that the design will not increase the water level for any properties upstream or downstream of the property. Also, impoundment of the stream as part of on-stream detention:

- a.) Shall not prevent the migration of indigenous fish species, which require access to upstream areas as part of their life cycle, such as for spawning;
- b.) Shall not cause or contribute to the degradation of water quality or stream aquatic habitat;
- c.) Shall include a design calling for gradual bank slopes, appropriate bank stabilization measures, and a pre-sedimentation basin;
- d.) Shall not involve any stream channelization or the filling of wetlands;
- e.) Shall require the implementation of an effective non-point source management program throughout the upstream watershed which shall include as a minimum: runoff reduction "Best Management Practices" (BMP's) consistent with Article III, Section 31; 2 year, 24 hour detention / sedimentation basins for all development consistent with Article III, Section 33.074;
- f.) Shall not occur downstream of a wastewater discharge;
- g.) Shall not contribute to the duration or flood frequency of any adjacent land, and
- h.) Shall comply with Article I, Section 11.

33.11 - Drainage Into Wetlands, Rivers, Streams, Lakes, Ponds, and Depressional Storage Areas: Wetlands, lakes, ponds and depressional storage areas shall be protected from damaging modifications and adverse changes in runoff quality and quantity associated with land developments.

In addition to the other requirements of this ordinance, the following requirements shall be met for all developments whose drainage flows into wetlands, rivers, lakes, ponds or depressional storage areas:

33.1101 -Detention in Wetlands, Rivers, Streams, Lakes, Ponds or Depressional Storage Areas: Existing wetlands, rivers, lakes, ponds or depressional storage areas shall not be modified for the purposes of stormwater detention unless it is demonstrated that the proposed modifications will maintain or improve its habitat and ability to perform beneficial functions and shall comply with Article I, Section 11. Existing storage and release rate characteristics of wetlands, rivers, lakes,

ponds or depressional storage areas shall be maintained and the volume of detention storage provided to meet the requirements of this section shall be in addition to this existing storage.

33.1102 - Sediment Control: The existing wetlands, rivers, lakes, ponds, or depressional storage areas shall be protected during construction and as further regulated in Article IV of this ordinance, and shall not be filled.

33.1103 - Alteration of Drainage Patterns: Site drainage patterns shall not be altered to substantially decrease or increase the existing area tributary to wetlands, rivers, lakes, ponds or depressional storage areas. Drainage patterns shall not be altered by development to direct runoff offsite to other than natural drainage outlets existing prior to development.

33.1104 - Detention/Sedimentation: All runoff from the development shall be routed through a preliminary detention/sedimentation basin designed to capture the two-year, 24-hour event and hold it for at least 24 hours, before being discharged to the wetland, river, lake, pond, or depressional storage area. This basin shall be constructed before property grading begins and shall be maintained throughout the construction process. In addition, the drainage hierarchy defined in Article III, Section 30 should be followed to minimize runoff volumes and rates being discharged to the wetland, river, stream, lake, pond, or depressional storage area and as further regulated in Article II and Article IV of this ordinance.

33.1105 - Vegetated Buffer Strip: A buffer strip of at least 25 feet in width, preferably vegetated with native plant species, shall be maintained or restored around the periphery of a wetland, river, stream, lake, pond or depressional storage area.

33.1106 - Loessal Soils: Care must be taken to avoid open flow discharges of stormwater over silt (Loessal) soils due to high potential for erosion.

33.1107 - Abandoned Mines: The following requirements apply for new developments or re-developments where abandoned mines are determined to be present:

- a.) A stormwater detention basin shall not be placed in or over an abandoned mine;
- b.) Stormwater detention basins shall not be located closer than one hundred (100) feet from the opening of an abandoned mine;
- c.) The outflow from a stormwater detention basin, channel, ditch or any stormwater runoff generated as a result of a new development or redevelopment shall not empty into or be directed, redirected by any means into or through any abandoned mine;
- d.) If, after the review of the stormwater drainage plan, the Village Engineer may determine that more detailed information is required, a abandoned mine evaluation may be required. A abandoned mine evaluation which addresses the geologic, engineering and environmental factors resulting from a new development or redevelopment be performed by a professional with experience and expertise in abandoned mine topography, whom shall certify the results of the evaluation. This evaluation shall be

the responsibility of the applicant and performed at no cost to the Village. After a review of this evaluation and with the consultation of the Rock Island Soil and Water Conservation District, the Village Engineer may either approve or disapprove the drainage plan as submitted;

- e.) Whenever an abandoned mine is discovered or it becomes apparent that the abandoned mine has not yet been identified, it shall be reported to the Rock Island Soil and Water Conservation District; and
- f.) Shall comply with Article I, Section 11.

33.12 - Street Detention, Parking Lot Detention, and Culvert Drainage:

33.1201 - Street Detention: If streets are to be used as part of the minor or major drainage system, ponding depths shall not exceed curb heights and shall not remain flooded for more than eight (8) hours for any event less than or equal to the 100 year, 24 hour event.

33.1203 - Parking Lot Detention: The maximum stormwater ponding depth in any parking area shall not exceed six (6) inches for more than four (4) hours.

33.1203 - Culvert, Road and Driveway Crossings: Sizing of culvert crossings shall consider entrance and exit losses as well as tailwater conditions on the culvert.

33.13 - Infiltration Practices: To effectively reduce runoff volumes, infiltration practices including basins, trenches, and porous pavement and shall follow criteria in the Illinois Urban Manual with Article I, Section 11. An appropriate sediment control device shall be provided to remove coarse sediment from stormwater flows before they reach infiltration basins or trenches. Stormwater shall not be allowed to stand more than seventy-two hours over eighty percent of the dry basin's bottom area for the maximum design event to be ex-filtrated. The bottom of infiltration basins or trenches shall be a minimum of three feet above the seasonally high groundwater and bedrock level. Engineering calculations demonstrating infiltration rates shall be included with the application.

33.1301 - Vegetated Filter Strips and Swales: To effectively filter stormwater pollutants and promote infiltration of runoff, sites should be designed to maximize the use of vegetated filter strips and swales, shall be designed to follow criteria in the Illinois Urban Manual. Whenever practicable, runoff from impervious surfaces should be directed onto filter trips and swales comprised of native grasses and forbs before being routed to a storm sewer or detention basin.

33.14 - Safety Considerations: The drainage system components, especially all detention basins, shall be designed to protect the safety of any children or adults coming in contact with the system during runoff events and shall comply with Article I, Section 11.

33.1401 - Side Slopes: The side slopes of all detention basins at 100 year, 24 hour capacity shall be as level as practicable to prevent accidental falls into the basin and for stability and ease of

maintenance. Side slopes of detention basins and open channels shall not be steeper than three (3) to one (1) (horizontal to vertical).

33.1402 - Safety Ledge: All wet detention basins shall have a level safety ledge at least four feet in width 2.5 to 3 feet below the normal water depth.

33.1403 - Velocity: Velocities throughout the surface drainage system shall be controlled to safe levels taking into consideration rates and depths of flow.

33.1404 - Overflow Structures: All stormwater detention basins shall be provided with an overflow structure capable of safely passing excess flows at a stage at least one foot below the lowest foundation grade in the vicinity of the detention basin. The design flow rate of the overflow structure shall be equivalent to the 100 year, 24-hour inflow rate.

33.15 - Maintenance Considerations: The stormwater drainage system shall be designed to minimize and facilitate maintenance. Turfed side slopes shall be designed to allow lawn-mowing equipment to easily negotiate them. Wet basins shall be provided with alternate outflows, which can be used to completely drain the pool for sediment removal. Pumping may be considered if drainage by gravity is not feasible. Pre-sedimentation basins shall be included, where feasible, for localizing sediment deposition and removal. Site access for heavy equipment shall be provided. Use of native vegetation is strongly encouraged to reduce maintenance, increase wildlife habitat, and to provide other benefits.

33.1501 - A maintenance plan for the ongoing maintenance of all stormwater management system components including wetlands is required prior to plan approval. The plan shall include:

- a.) Maintenance tasks;
- b.) The party responsible for performing the maintenance tasks;
- c.) A description of all permanent public or private access maintenance easements and overland flow paths, and compensatory storage areas; and
- d.) A description of dedicated sources of funding for the required maintenance.

Section 34 - Accommodating Flows From Upstream Tributary Areas: Stormwater runoff from areas tributary to the property shall be considered in the design of the property's drainage system. Whenever practicable, flows from upstream areas that are not to be detained should be routed around the basin being provided for the site being developed.

34.01 - Upstream Areas Not meeting Ordinance Requirements: When there are areas not meeting the storage and release rates of this ordinance, tributary to the applicant's property, regionalized detention on the applicant's property shall be explored by the applicant. The following steps shall be followed:

- a.) The applicant shall compute the storage volume needed for his property using the

release rates of Article III, Section 33, the applicant's property area, and the procedures described in Article III, Section 32;

- b.) Areas tributary to the applicant's property, not meeting the storage and release rate requirements of this ordinance, shall be identified; and
- c.) Using the areas determined above plus the applicant's property area, total storage needed for the combined properties shall be computed.

Allowable release rates shall be computed using the combined property areas. Storage shall be computed as described in Article III, Section 33. If tributary areas are not developed, a reasonable fully developed land cover, based on local zoning, shall be used for the purposes of computing storage.

Once the necessary combined storage is computed the Village may choose to pay for over-sizing the applicant's detention basin to accommodate the regional flows. The applicant's responsibility will be limited to the storage for his property as computed above. If regional storage is selected by the Village then the design produced in Article III, Section 32 shall be implemented. If regional storage is rejected by the Village the applicant shall bypass all tributary area flows around the applicant's basin whenever practicable. If the applicant must route upstream flows through his basin and the upstream areas exceed one-square mile in size, the applicant must meet the provision of Section 33.1004 for on-stream basins.

34.02 - Upstream Areas Meeting Ordinance Requirements: When there are areas which meet the storage and release rate requirements of this ordinance, tributary to the applicant's property, the upstream flows shall be bypassed around the applicant's detention basin if this is the only practicable alternative. Storage needed for the applicant's property shall be computed as described in Article III, Section 34.01. However, if the Village decides to route tributary area flows through an applicant's basin, the final design stormwater releases shall be based on the combined total of the applicant's property plus tributary areas. It must be shown that at no time will the runoff rate from the applicant's property exceed the allowable release rate for his/her property alone.

Section 35 - Early Completion of Detention Facilities: Where detention, retention, or depressional storage areas are to be used as part of the drainage system for a property, they shall be constructed as the first element of the initial earthwork program. Any eroded sediment captured in these facilities shall be removed by the applicant on a regular basis and before project completion in order to maintain the design volume of the facilities.

Section 36 - Fee in Lieu of Detention: All new development or redevelopment not exceeding fifteen thousand (15,000) square feet of impervious surface may pay a fee of \$10,000 for each acre-foot of detention which would be required under this ordinance rather than installing detention facilities on the property, unless specifically directed to do otherwise by the Zoning Officer. The Village, also shall have the option of requiring a fee of \$10,000 for each acre-foot of detention

needed in lieu of the applicant building a basin on-site provided a new development or re-development project exceeds fifteen thousand (15,000) square feet of impervious surface, provided the property will discharge stormwater to the Village storm drainage system, if applicable.

In instances where regional benefits and economies of scale can be achieved, it will be permissible for adjacent properties to utilize a common regional detention basin. Applicants shall have the option of paying a fee of \$10,000 for each acre-foot of detention required so that the Village can build regional facilities or the applicants can jointly build the necessary facilities themselves.

Article IV - SOIL EROSION AND SEDIMENT CONTROL:

Section 40 - Findings: The Village hereby finds that:

- a.) The soil types found in the Village Illinois are susceptible to erosion and if left unprotected could cause severe loss of soil with resultant damage to property;
- b.) The topography of the Village contains areas with steep slopes upon which, if clearing of trees and/or inappropriate construction takes place, could result in severe erosion and slope stability problems, which could result in damage to property;
- c.) Excessive quantities of soil may erode from areas undergoing development for certain non-agricultural uses including but not limited to the construction of dwelling units, commercial buildings and industrial plants, the building of roads and highways, the modification of stream channels and drainageways, and the creation of recreational facilities;
- d.) The washing, blowing, and falling of eroded soil across and upon roadways endangers the health and safety of users thereof, by decreasing vision and reducing traction of road vehicles;
- e.) Soil erosion necessitates the costly repairing of gullies, washed out fills, and embankments;
- f.) Sediment from soil erosion clogs drainage systems and pollutes rivers, streams, lakes, wetlands, and reservoirs;
- g.) Sediment limits the use of water and waterways for most beneficial purposes, promotes the growth of undesirable aquatic weeds, destroys fish and other desirable aquatic life,

and is costly and difficult to remove; and

- h.)** Sediment reduces the channel capacity of waterways and the storage capacity of flood plains and natural depressions, resulting in increased chances of flooding at risk to public health and safety.

Section - 41 - General Principles: It is the objective of this ordinance to control soil erosion and sedimentation caused by development activities, including clearing, grading, stripping, excavating, and filling of land, in the Village. Measures taken to control soil erosion and off-site sediment runoff shall be adequate to assure that sediment is not transported from the site by a storm event of ten-year, 24 hour frequency or less. The following principles shall apply to all new development or redevelopment activities within the Village and to the preparation of the submissions required under Article IV, Section 42 of this ordinance:

- a.)** New development or redevelopment shall be related to the topography and soils of the site so as to create the least potential for erosion. Areas of steep slopes greater than seven percent (7%) where high cuts and fills maybe required are to be avoided wherever possible, and natural contours should be followed as closely as possible,
- b.)** Natural vegetation shall be retained and protected wherever possible. Areas immediately adjacent to natural watercourses, lakes, ponds, and wetlands are to be left undisturbed wherever possible. Temporary crossings of watercourses, when permitted, must include appropriate stabilization measures,
- c.)** Special precautions shall be taken to prevent damages resultant from any necessary development activity within or adjacent to any stream, lake, pond, abandoned wetland or mine. Preventive measures shall reflect the sensitivity of these areas to erosion and sedimentation,
- d.)** The smallest practical area of land should be exposed for the shortest practical time during development,
- e.)** Sediment basins or traps, filter barriers, diversions, and any other appropriate sediment or runoff control measures shall be installed prior to site clearing and grading and maintained to remove sediment from run-off waters from land undergoing development,
- f.)** The selection of erosion and sediment control measures shall be based on assessment of the probable frequency of climatic and other events likely to contribute to erosion, and on evaluation of the risks, costs, and benefits involved,
- g.)** In the design of erosion control facilities and practices, aesthetics and the requirements of continuing maintenance must be considered,

- h.) Provisions shall be made to accommodate the increased run-off caused by changed soil and surface conditions during and after development.
Drainageways should be designed so that their final gradients and the resultant velocities and rates of discharge will not create additional erosion on-site or downstream,
- i.) Permanent vegetation and structures shall be installed and functional as soon as practical during development,
- j.) Those areas being converted from agricultural purposes to other land uses shall be vegetated with an appropriate protective cover prior to development,
- k.) All waste generated as a result of site development activity shall be properly disposed of and shall be prevented from being carried off the site by either wind or water,
- l.) All construction sites shall provide measures to prevent sediment from being tracked onto public or private roadways, and
- m.) All temporary soil erosion and sediment control practices shall be maintained to function as intended until the contributing drainage area has been permanently stabilized at which time they shall be removed.

Section 42 - Soil Erosion and Sediment Control Plan Submittal Requirements: Each applicant shall submit the information depending on development size, as regulated to ensure that the provisions of this ordinance are met. The submittal shall include sufficient information to evaluate the environmental characteristics of the property, the potential adverse impacts of the development related to erosion both on-site and off-site, and the effectiveness of the proposed erosion and sediment control plan in reducing sediment loss and meet the provisions of Article I, Section 11. The applicant shall certify on the drawing that all clearing, grading, drainage, and construction shall be accomplished in strict conformance with the erosion and sediment control plan. The following information shall be submitted for both existing and proposed property conditions; new developments or re-developments meeting the requirements of Article I, Section 12.

42.01 - Soil Erosion and Sediment Control Plan Requirements: Shall meet the requirements of Article III, Section 30.01, Section 30.011, and Section 30.012.

42.011 - Mapping and Descriptions: The existing and proposed erosion and sediment control features of the property and immediate vicinity including:

- a.) As required in Article III, Section 30.01, Section 30.011, and Section 30.012;
- b.) Location of the slope disturbance line;
- c.) Location and description of the soil erosion and sediment control measures to be

employed during construction;

d.) For any structures proposed to be located on the slope side of the slope disturbance line the map shall include the limits of disturbance including tree removal, soil erosion and sediment control measures during construction, cross section view of any proposed cut or fill, erosion and sediment control measures during construction, details of method (s) proposed for providing slope stability, permanent stormwater control measures, and permanent erosion and sediment control measures all being certified by a registered professional engineer or a "Certified Professional Erosion Control Specialist;"

e.) The predominant soil types on the site, their location, and their limitations for the proposed use as defined by the U.S.D.A. Natural Resources Conservation Service;

f.) The proposed use of the site, including present and planned development, areas of clearing, stripping, grading, excavation and filling; proposed contours, finished grades, and street profiles; the stormwater plan as required in Article II; kinds and locations of utilities, areas and acreages proposed to be paved, sodded or seeded, vegetatively stabilized, or left undisturbed; and the location of trees over eight (8) inches in diameter and their type;

g.) A soil erosion and sediment control plan, including a narrative, shall be submitted showing all measures necessary to meet the objectives of this ordinance throughout all phases of construction. The development of a soil erosion and sediment control plan shall follow the requirements of this ordinance and the procedures in the latest edition of the "Illinois Procedures and Standards for

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Soil Erosion and Sediment Control" (commonly known as the Greenbook), which is hereby incorporated into this ordinance by reference. The Village in consultation with the RISWCD, may waive specific requirements for the content of submissions upon finding that the information submitted is sufficient to show that the work will comply with the objectives and principles of this ordinance. Permanent soil erosion and sediment control features needed at the completion of any development site shall be included in the submittal. The submitted soil erosion and sediment control plan shall include:

1.) Location and description, including standard details, of all sediment control measures and specifics of sediment basins and traps, including outlet details;

2.) Location and description of all soil stabilization and erosion control measures, including seeding mixtures and rates, types of sod, method of seedbed preparation (type and extent of tillage, weed control, planting equipment, etc...), expected seeding dates, type, method and rate of lime

and fertilizer application (soil fertility testing required), kind and quantity of mulching for both temporary and permanent vegetative control measures, and types of non-vegetative stabilization measures;

- 3.) Location and description of all runoff control measures, including diversions, waterways, and outlets;
- 4.) Location and description of methods to prevent tracking of sediment off-site including construction entrance details, as appropriate;
- 5.) Description of dust and traffic control measures;
- 6.) Locations of stockpiles and description of stabilization methods;
- 7.) Description of offsite fill or borrow volumes, locations and methods of stabilization;
- 8.) Provisions for maintenance of control measures, including type and frequency of maintenance, easements, and estimates of the cost of maintenance; and
- 9.) Identification (name, address, and telephone) of the person(s) or entity which will have legal responsibility for maintenance of soil erosion control structures and measures during development and after development is completed.

Section 43 - Design and Operation Standards and Requirements:

The practice standards and specifications outlined in the Soil Erosion and Sediment Control plan shall follow criteria in the latest edition of the Illinois Urban Manual.

- a.) All clearing, grading, stripping, excavating, and filling which is subject to the approval requirements of this ordinance shall be subject to the applicable standards and requirements set forth and/or referenced in this ordinance;
- b.) Responsibility: The permittee shall not be relieved of responsibility for damage to persons or property otherwise imposed by law, and the Village or its officers or agents, including the Directors and Staff of the RISWCD will not be made liable for such damage by (1) the issuance of a permit under this ordinance, (2) compliance with the provisions of that permit or with conditions attached to it by the Village, (3) failure of the Village officials to observe or recognize hazardous or unsightly conditions, (4) failure of the Village officials to recommend denial of or to deny a permit, or (5) exemptions from the permit requirements of this ordinance; and
- c.) Site Design Requirements: Practice standards and specifications for measures

outlined in the soil erosion and sediment control plan shall follow criteria in the latest edition of the "Illinois Urban Manual: A Technical Manual Designed for Urban Ecosystem Protection and Enhancement", which is hereby incorporated into this ordinance by reference.

43.01 - Erosion and Sediment Control Design Requirements: New developments or re-developments shall comply with Article IV, Section 42 and meet the following:

43.011 - Control measures shall be constructed to control runoff from the property to such an extent possible that sediment is retained on-site.

43.012 - Temporary on-site control measures required shall be constructed and functional prior to initiating clearing, grading, stripping, excavating or fill activities on the site.

43.013 - Disturbed areas shall be stabilized with permanent measures within seven (7) calendar days following the end of active disturbance, or redisturbance consistent with the following criteria:

- a.) Appropriate permanent stabilization measures shall include seeding, mulching, sodding, with non-vegetative measures as a last resort; and
- b.) Areas having slopes greater than 12% shall be stabilized with sod, mat, or blanket in combination with seeding or equivalent.

43.014 - All temporary and permanent erosion and sediment control practices must be maintained and repaired as needed to assure effective performance of their intended function.

43.015 - All temporary erosion and sediment control measures shall be disposed in a proper manner within thirty (30) days after final site stabilization is achieved with permanent soil stabilization measures. Trapped sediment and other disturbed soils resulting from the disposition of temporary measures shall be permanently stabilized to prevent further erosion and sedimentation.

43.016 - Site Development Requirements: On-site sediment control measures, as specified by the following criteria, shall be constructed as specified in the referenced handbooks, and functional prior to initiating clearing, grading, stripping, excavating or fill activities on the site.

- a.) For new developments or redevelopments less than one (1) acre, filter barriers (including filter fences, straw bales, or equivalent control measures) shall be constructed to control all on-site runoff. Vegetated filter strips, with a minimum width of twenty-five (25) feet, may be used as an alternative only where runoff in sheet flow is expected;
- b.) For new developments or re-developments more than one (1) acre but less than five (5) acres, a sediment trap or equivalent control measure shall be constructed at the downslope point of the disturbed area,

- c.) For new developments or re-developments greater than five (5) acres, a sediment basin or equivalent control measure shall be constructed at the down slope point of the disturbed area;
- d.) Sediment basin and sediment trap designs shall provide for both "dry" detention and "wet" detention sediment storage. The detention storage shall be composed of equal volumes of "wet" detention storage and "dry" detention storage and each shall be sized as regulated in Article III, Section 33. The release rate of the basin shall be that rate as regulated in Article III. The elevation of the outlet structure shall be placed such that it only drains the dry detention storage;
- e.) The sediment storage shall be sized to store the estimated sediment load generated from the site over the duration of the construction period with a minimum storage equivalent to the volume of sediment generated in one year. For construction periods exceeding one year, the 1-year sediment load and a sediment removal schedule may be substituted; and
- f.) To the extent possible or as otherwise regulated in this ordinance all desirable trees eight (8) inches in diameter and larger shall be protected for their present and future value for erosion protection and other environmental benefits. Trees that have been selected for preservation shall be marked prior to the beginning of any clearing, grading, stripping, excavation, or filling of the site. A "No" construction zone shall be established and marked at the perimeter of the dripline of each tree which is to be preserved.

43.017 - Stormwater conveyance channels, including ditches, swales, and diversions, and the outlets of all channels and pipes shall be designed and constructed as regulated in Article III. All constructed or modified channels shall be stabilized within 48 hours, consistent with the following standards and as required in the referenced handbooks:

- a.) For grades up to 4 percent, seeding in combination with mulch, erosion blanket, or an equivalent control measure shall be applied. Sod or erosion blanket or mat shall be applied to the bottom of the channel;
- b.) For grades of 4 to 8 percent, sod or an equivalent control measure shall be applied in the channel; and
- c.) For grades greater than 8 percent, rock, riprap, or an equivalent control measure shall be applied over filter fabric or other type of soil protection, or the grade shall be effectively reduced using drop structures.

43.018 - Land disturbance activities in stream channels shall be avoided, where possible, or as

regulated in Article III. If disturbance activities are unavoidable, the following requirements shall be met.

- a.) Construction vehicles shall be kept out of the stream channel to the maximum extent practicable. Where construction crossings are necessary, temporary crossings shall be constructed of non-erosive material, such as riprap or gravel;
- b.) The time and area of disturbance of stream channels shall be kept to a minimum. The stream channel, including bed and banks, shall be stabilized within 48 hours after channel disturbance is completed, interrupted, or stopped; and
- c.) Whenever channel relocation is necessary, the new channel shall be constructed under dry conditions and fully stabilized before flow is diverted, incorporating meanders, pool and riffle sequence, and riparian planting.

43.019 - Storm sewer inlets and culverts shall be protected by sediment traps or filter barriers meeting accepted design standards and specifications.

43.020 - Soil storage piles containing more than 10 cubic yards of material shall not be located with a downslope drainage length of less than 50 feet to a roadway, drainage channel, or abandoned mine. Filter barriers, including straw bales, filter fence, or equivalent, shall be installed immediately surrounding the perimeter of the pile.

43.021 - If dewatering devices are used, discharge locations shall be protected from erosion. All pumped discharges shall be routed through appropriately designed sediment traps or basins, or equivalent and shall not be deposited into an abandoned mine.

43.022 - Each site shall have graveled (or equivalent) entrance roads, access drives, and parking areas of sufficient length and width to prevent sediment from being tracked onto public or private roadways. Any sediment reaching a public or private road shall be removed by shoveling or street cleaning (not flushing) before the end of each workday and transported to a controlled sediment disposal area.

Section 44 - Maintenance of Control Measures: All soil erosion and sediment control measures necessary to meet the requirements of this ordinance shall be maintained by the applicant or subsequent land owner during the period of land disturbance and development of the site in a satisfactory manner to ensure adequate performance. The applicant or contractor responsible for maintaining the soil erosion and sediment control practices shall inspect all such practices at least once every 7 days or within 24 hours of a precipitation event equal to or exceeding 0.5" of rainfall.

Article V - Long Term Maintenance Responsibility:

Section 50 - Long Term Maintenance Responsibility: Maintenance of stormwater drainage, and

soil erosion and sediment control facilities located on private property shall be the responsibility of the owner of that property. Before an appropriate permit is obtained from the Village, the applicant shall execute a maintenance agreement with the Village guaranteeing that the applicant and all future owners of the property will maintain its stormwater drainage and soil erosion and sediment control system. Such agreement shall be recorded with the Recorder of Deeds of the County. The maintenance agreement shall include a schedule for regular maintenance of each aspect of the property's stormwater drainage and soil erosion and sediment control system and shall provide for access to the system for inspection by authorized personnel of the Village. The maintenance agreement shall also stipulate that if the appropriate personnel of the Village, notify the property owner in writing of maintenance problems which require correction, the property owner shall begin such corrections within twenty four (24) hours and shall not extend beyond seven (7) calendar days of such notification. If the corrections are not made within this time period the Village may have the necessary work completed and assess the cost to the property owner. The Village shall require a bond to be filed by the property owner for maintenance of the stormwater drainage and soil erosion and sediment control system.

Article VI - Inspections:

Section 60 - Inspections: The Rock Island County SWCD shall make inspections as hereinafter required and shall either approve that portion of the work completed or shall notify the permittee wherein the work fails to comply with the site development or erosion and sediment control plan as approved. The Rock Island County SWCD will notify the Village of permittees failure to comply with ordinance regulations. Plans for grading, stripping, excavating, and filling work bearing the stamp of approval of the Village and Rock Island County SWCD shall be maintained at the site during progress of the work. In order to obtain inspections and to ensure compliance with the approved erosion and sediment control plan, the grading or building permit, and this Ordinance, the permittee shall notify the Village and the Rock Island County SWCD within two (2) working days of the completion of the construction stages specified below:

- a.) Upon completion of installation of sediment and runoff control measures (including perimeter controls and diversions), prior to proceeding with any other earth disturbance or grading;
- b.) After stripping and clearing;
- c.) After rough grading;
- d.) After final grading;
- e.) After seeding and landscaping deadlines; and
- f.) After final stabilization and landscaping, prior to removal of temporary sediment controls.

If stripping, clearing, grading and/or landscaping are to be done in phases or areas, the permittee shall give notice and request inspection at the completion of each of the above work stages in each phase or area. If an inspection is not made and notification of the results given within five (5) working days after notice is received by the Village from the permittee, the permittee may continue work at his/her own risk, without presuming acceptance by the Village. Notification of the results of the inspection shall be given in writing at the site. A duplicate copy shall be kept by the enforcing agency of the Village and/or the Rock Island County SWCD.

Section 61 - Special Precautions: If at any stage of the grading of any development site the Rock Island County SWCD determines by inspection that the nature of the site is such that further work authorized by an existing permit is likely to imperil any property, public way, stream, lake, wetland, or drainage structure, the Village shall require, as a condition of allowing the work to be done, that such reasonable special precautions to be taken as is considered advisable to avoid the likelihood of such peril. "Special precautions" may include, but shall not be limited to, a more level exposed slope, construction of additional drainage facilities, berms, terracing, compaction, or cribbing, installation of plant materials for erosion control, and recommendations of a registered soils engineer and/or engineering geologist which may be made requirements for further work.

61.01 - Where it appears that storm damage may result because the grading on any development site is not complete, work shall be stopped and the permittee required to install temporary structures or take such other measures as may be required to protect adjoining property or the public safety. On large developments or where unusual site conditions prevail, the Zoning Officer shall specify the time of starting grading and time of completion or may require that the operations be conducted in specific stages so as to ensure completion of protective measures or devices prior to the advent of seasonal rains.

Section 62 - Amendment of Plans: Major amendments to stormwater drainage and detention or erosion and sediment control plans shall be submitted to the Zoning Officer and the Rock Island County Soil and Water Conservation District. Plan amendments shall be processed and approved or disapproved in the same manner as the original plans. Field modification of a minor nature may be authorized by the Zoning Officer and/or Rock Island County Soil and Water Conservation District, by written authorization to the permittee.

Article VII - Permitting:

Section 70 - Application for Permit: Application for a development permit shall be made by the owner of the property or his authorized agent to the Zoning Officer on a form furnished for that purpose. Each application shall bear the name(s) and address(es) of the owner or developer of the site, the contractor(s) and of any consulting firm retained by the applicant together with the name of the applicant's principal contact at such firm. Each application shall include certification that any land clearing, construction, or development involving the movement of earth shall be in accordance with the plans approved upon issuance of the permit.

Section 70.01 – Application Fee: All applications for a development permit shall be accompanied with an application fee as set forth in Exhibit A, attached hereto and incorporated

herein. In addition, the applicant shall be responsible for reimbursing the Village for any additional cost necessary for review, inspection, and approval of this project including, but not limited to the engineering services of the Village Engineer. The Zoning Officer shall require a \$500.00 deposit to cover these additional costs.

Section 71 - Bond Required: The applicant for a development permit shall be required to file with the Village a faithful performance bond or bonds, letter of credit, or other improvement security satisfactory to the Village Attorney, in an amount deemed sufficient by the Zoning Officer, and for such period as specified by the Village. These faithful performance bond or bonds, letter of credit, or other improvement security would be used to cover engineering and inspection costs, and the cost of failure or repair of improvements installed on the site.

Section 72 - Review and Approval: Each application for an erosion and sediment control plan shall be reviewed and acted upon according to the following procedures:

- a.) As a condition of this ordinance, the Village shall require the applicant, or designated agent, to consult with the Rock Island County Soil and Water Conservation District (RISWCD) on soil erosion and sediment control plans. The applicant shall submit all required items to the RISWCD the same day that the application is made to the Village.

The RISWCD shall:

1. Review the applicant's soil erosion and sediment control plans and provide written evaluation to the Village regarding the adequacy (effectiveness) to address the provisions of this ordinance. The RISWCD shall retain the services of a professional trained in the implementation of soil erosion and sediment control practices to perform the services outlined in this section. The RISWCD will assess a fee as set forth in Exhibit B, attached hereto, and incorporated herein to be paid by the applicant for performing these services;
2. Attend a pre-construction meeting with the applicant or designated agent to review implementation of erosion and sediment control plans;
3. Conduct onsite inspections during the active construction phases of land development projects to determine whether site development is in compliance with the approved erosion and sediment control plans, and determine adjustments needed to the approved plans. After construction has been completed, determine whether permanent site stabilization has been achieved and identify operation and maintenance needs;
4. Prepare correspondence as needed regarding the effectiveness (or corrective measures needed) or adequacy of soil erosion and sediment control measures, and

5. Consult with land developers, consultants, and contractors concerning the design criteria, installation and maintenance procedures and other information regarding conservation practices recommended under the provisions of this ordinance.

The Village of Carbon Cliff shall:

1. After review of the application and required submissions if it is found to be in conformance with the provisions of this ordinance, approve the erosion and sediment control plan;
 2. Approve the erosion and sediment control plan subject to such reasonable conditions as may be necessary to secure substantially the objectives of this ordinance, and issue the approval subject to these conditions; or
 3. Disapprove the erosion and sediment control plan, indicating the deficiencies and the procedure for submitting a revised application and/or submission.
- b.) No approval for an erosion and sediment control plan shall be issued for an intended development site unless one or more of the following have been obtained:
1. The development, including but not limited to subdivisions and planned unit development, has been approved by the Village where applicable; or
 2. Such permit is accompanied by or combined with a valid building permit issued by the Village Building Official; or
 3. The proposed earth moving is coordinated with any overall development program previously approved by the Village for the area in which the site is situated; and
 4. All relevant federal and state permits including, but not limited to: NPDES, 404, 401, NRI's, etc. have been received for the portion of the site subject to soil disturbance, and
 5. Applicant is successful in the appeals process.

72.01 - Failure of the Zoning Officer to act on an original or revised application within thirty (30) days of receipt shall authorize the applicant to proceed in accordance with the plans as filed and in compliance with the regulations contained herein, unless such time is extended by agreement between the Zoning Officer and the applicant. Pending preparation and approval of a revised plan, development activities shall be allowed to proceed in accordance with conditions established by the Zoning Officer.

Section 73 - Expiration of Permit: Every development permit shall expire and become null and

void if the work authorized by such permit has not been commenced within one hundred and eighty (180) days, or if not completed by a date which shall be specified in the permit; except that the Zoning Officer may, if the permittee presents satisfactory evidence that unusual difficulties have prevented work being commenced or completed within the specified time limits, grant a reasonable extension of time if written application is made before the expiration date of the permit. The Zoning Officer may require modification of the erosion control plan to prevent any increase in erosion or off-site sediment runoff resulting from any extension.

Section 74 – Scope of Appeals:

74.01 - An appeal may be taken to the Board of Appeals by the applicant, any person or agency which received notice of the filing of the application, or by any person, firm, corporation, office, department, board or bureau aggrieved by decision of the Zoning Officer. Such appeal shall be taken within such time as shall be prescribed by the Board of Appeals by general rule by filing with the Zoning Officer a notice of appeal specifying the grounds thereof. The Zoning Officer shall forthwith transmit to the Board of Appeals all of the papers constituting a record upon which the Section appealed from was taken.

74.02 - The Factors to be considered on appeal shall include, but need not be limited to, the effects of the proposed development activities on the surface water flow to tributary and downstream lands, any comprehensive watershed management plans, or the use of any retention facilities; possible saturation of fill and unsupported cuts by water, both natural and domestic; runoff surface waters that produce erosion and silting of drainageways; nature and type of soil or rock which when disturbed by the proposed development activities may create earth movement and produce slopes that cannot be landscaped; and excessive and unnecessary scarring of the natural landscape through grading or removal of vegetation.

74.03 – Findings on Appeal:

74.031 – An appeal shall stay all proceedings in furtherance of the action appealed from unless the Zoning Officer certifies to the Board of Appeals, after the notice of the appeal has been filed with him, that by reason of facts stated in the certificate a stay would, in his opinion, cause imminent peril to life or property.

74.032 – The Board of Appeals shall select a reasonable time and place for the hearing of the appeal, give due notice thereof to the parties, and shall render a written decision on the appeal without unreasonable delay. The Board of Appeals may affirm or may, upon the concurring vote of four (4) members, reverse wholly or in part or modify the order, requirement, decision, or determination that, in its opinion, ought to be done. To that end, the Board of Appeals shall have all the powers of the officer from whom the appeal is taken. The Zoning Officer shall maintain records of all actions of the Board of Appeals relative to appeals.

Section 75 - Retention of Plans: Plans, specifications, and reports for all site developments shall be retained in original form or on microfilm by the Zoning Officer.

Section 76 – Amendments:

76.01 – This ordinance may be amended, provided that in all amendments adopted under the authority of this Section, due allowance shall be made for existing conditions, the conservation of property values, and the direction of building development to the best advantages of the entire community.

76.02 – Initiations of Amendments: Amendments may be proposed by the Village Board, Plan Commission, Village President, Zoning Official or the Rock Island County SWCD.

76.03 – Application for Amendment: An application for an amendment shall be filed with the Zoning Officer in such form and accompanied by such information as required by the Zoning Officer. Such application shall be forwarded to the Plan Commission with the request to hold a public hearing on said application for amendment.

76.04 – Hearing on Application: The Plan Commission shall hold a public hearing on each application for an amendment at such time and place as shall be established by the Plan Commission. The hearing shall be conducted and a record of such proceedings shall be preserved in such manner, as the Plan Commission shall, by rule, prescribe from time to time.

76.05 – Notice of Hearing: Notice of time and place of such hearing shall be published at least once in one or more newspapers of general circulation in the Village of Carbon Cliff not less than fifteen (15) nor more than thirty (30) days before such hearing. Supplemental or additional notices may be published or distributed as the Plan Commission may, by rule, prescribe from time to time.

76.06 – Findings of Fact and Recommendation of the Plan Commission:

76.061 – Within forty-five (45) days after the close of the hearing on a proposed amendment, the Plan Commission shall make written findings of fact and shall submit same together with its recommendations to the Village Board.

76.062 – The Plan Commission shall not recommend the adoption of a proposed amendment unless it finds that the adoption of such amendment is in the public interest.

76.07 – Action by Village Board:

76.071 – The Village Board shall not act upon a proposed amendment to this Ordinance until it shall have received a written report and recommendation from the Plan Commission on the proposed amendment.

76.072 – The Village Board may grant or deny any amendment.

76.073 – The Village Board may request specific changes to a proposed amendment to this Ordinance once it has received a written report and recommendation from the Plan Commission on the proposed amendment. However, before the proposed amendment with the Village Board's specific changes, can be adopted by the Village Board; the proposed amendment with

the specific changes must be forwarded to the Plan Commission for another Public Hearing, Findings of Fact, and written recommendation.

76.074 – A proposed amendment or a proposed amendment with specific changes that doesn't receive a written recommendation from the Plan Commission, shall not be adopted except by a concurrence of two-thirds (2/3) of the Village Trustees then holding office.

76.08 – Effect of Denial of Amendment: No application for an amendment that has been denied wholly or in part by the Village Board shall be resubmitted for a period of one (1) year from the date of said denial except on the grounds of new evidence or proof of change of conditions found to be valid by the Plan Commission.

Article VIII - Enforcement:

Section 80 - Stop-Work Order; Revocation of Permit: In the event any person holding a development permit pursuant to this ordinance violates the terms of the permit, or carries on-site development in such a manner as to materially adversely affect the health, welfare, environment, or safety of persons residing or working in the neighborhood of the development site or so as to be materially detrimental to the public welfare or injurious to property or improvements in the neighborhood, the Zoning Officer shall suspend or revoke the development permit.

80.01 - Suspension of a permit shall be by a written stop-work order issued by the Zoning Officer and delivered to the permittee or his agent or the person performing the work. The stop-work order shall be effective immediately, shall state the specific violations cited, and shall state the conditions under which work may be resumed. A stop-work order shall remain in effect until appealed by the permittee to the Board of Appeals at which time the conditions of Article VII, Section 74 can be met or until the specific violations cited are corrected to the satisfaction of the zoning officer.

80.02 - No development permit shall be revoked until a hearing is held by the Board of Appeals. Written notice of such hearing shall be served on the permittee, either personally or by certified mail return receipt requested, and shall state:

- a.) The reasons for revocation, in clear and concise language; and
- b.) The time, date and place where such hearing will be held.

Such notice shall be served on the permittee at least five (5) days prior to the date set for the hearing. At such hearing, the permittee shall be given an opportunity to be heard and may call witnesses and present evidence on his behalf. At the conclusion of the hearing the Board of Appeals shall determine whether the permit shall be revoked.

Section 81 – Fees: The fee for variances and appeals shall be Seventy-five (\$75.) dollars.

Section 82 - Violations and Penalties: No person shall construct, enlarge, alter, repair or maintain

any grading, excavation or fill, or cause the same to be done, contrary to or in violation of any terms of this ordinance. Any person violating any of the provisions of this ordinance shall be deemed guilty of a misdemeanor, and each day during which any violation of any of the provisions of this ordinance is committed, continued, or permitted shall constitute a separate offense. Upon conviction of any such violation, such person, partnership, or corporation shall be punished by a fine of not less than Seventy Five dollar (\$75.00), and nor more than Seven Hundred Fifty dollars (\$750.00) for each offense. In addition to any other penalty authorized by this section, any person, partnership, or corporation convicted of violating any of the provisions of this ordinance shall be required to restore the site to the condition existing prior to commission of the violation, or to bear the expense of such restoration.

Article IX - Effective Date

This ordinance shall be in full force and effect from and after its passage and approval and publication, as required by law.

Passed by Village Board of the Village of Carbon Cliff, Illinois, this ____ day of _____, 2001.

ADOPTED by the Board of Trustees for the Village of Carbon Cliff this ____ day of _____, 2001.

	AYES	NAYS	ABSENT
Don Brewer	_____	_____	_____
Don Chapman	_____	_____	_____
Mark Gast	_____	_____	_____
Myron James	_____	_____	_____
Richard Wienandt	_____	_____	_____
Kindra Williams	_____	_____	_____
	AYES _____	NAYS _____	ABSENT _____

APPROVED by the President of the Board of Trustees of the Village of Carbon Cliff this _____
day of _____, _____.

Kenneth Williams, President

ATTEST:

Karen L. Hopkins, Village Clerk

SEAL

Appendix A

Desirable Trees Native to Northwestern Illinois

Ash, Blue, *Fraxinus quadrangulata*
Ash, Green, *Fraxinus pennsylvanica*
Ash, White, *Fraxinus americana*
Birch, River or Red, *Betula nigra*
Coffeetree, Kentucky, *Gymnocladus dioica*
Hackberry, Common, *Celtis occidentalis*
Hickory, Shagbark, *Carya ovata*
Ironwood (Hophornbeam), *Ostrya virginiana*
Larch, American (Tamarack), *Larix laricina*
Linden, American (Basswood), *Tilia americana*
Maple, Black, *Acer nigrum*
Maple, Red or Swamp, *Acer rubrum*
Maple, Sugar or Rock, *Acer saccharum*
Oak, Black, *Quercus velutina*
Oak, Bur, *Quercus macrocarpa*
Oak, Chinkapin, *Quercus muehlenbergii*
Oak, Pin or Swamp, *Quercus palustris*
Oak, Red, *Quercus rubra*
Oak, Swamp White, *Quercus bicolor*
Pecan, *Carya illinoensis*
Redbud, *Cercis canadensis*
Arborvitae, White Cedar, *Thuja occidentalis*
Juniper, Eastern Redcedar, *Juniperus virginiana*
Pine, Easter White, *Pinus strobus*

Appendix B

Desirable Trees Native to Areas South of Carbon Cliff, Illinois. Additional planting is encouraged.

Baldcypress, *Taxodium distichum*

Beech, European, *Fagus sylvatica* (except)

Buckeye, Red, *Aesculus pavia*

Dogwood, Flowering, *Cornus florida*

Hickory, Shellbark, *Carya laciniosa* (for wet areas)

Persimmon, Common, *Diospyros virginiana*

Sassafras, Common, *Sassafras albidum*

Sourgum (Black Tupelo), *Nyssa sylvatica*

Sweetgum, *Liquidambar styraciflua*

Tuliptree, *Liriodendron tulipifera*

VILLAGE OF CARBON CLIFF
(309) 792-8235

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	APPLICANT (Owner/Developer)	Erosion Control Consultant/Engineer
Name		
Address		
City/State/Zip		
Phone		
Relationship to project		

Job site contact person: _____

Contact person phone number:(_____) - _____ - _____ **Fax number:**(_____) - _____ - _____

Village/Municipal contact person: _____ **Phone #**(_____) - _____ - _____

Township, range, & section: _____

Proposed land use: _____ **Acreage of land disturbance:** _____

Pre-construction meeting date (if known): _____ **Construction start date:** _____

Total number of phases _____ **Phase number** _____

The applicant agrees to the following conditions:

1. Submit all required information listed on the following page for each phase of development, regarding the soil erosion and sediment control (SE/SC) plan.
2. Upon submittal of this application, pay the applicable fee, based on the attached fee schedule, in accordance with total acres of disturbance to the original topography and/or vegetation.
3. Notify representatives from the Village of Carbon Cliff, Rock Island County Soil and Water Conservation District (SWCD) and the Natural Resources Conservation Service, (NRCS) of the pre-construction meeting to review implementation of the SE/SC plan.
4. Allow a Village of Carbon Cliff, Rock Island County SWCD, or NRCS representative the right to conduct on-site investigations throughout all active construction phases to determine whether all necessary SE/SC practices have been installed and are functioning properly.
5. Upon commencement of earthwork or construction, document SE/SC site inspections with all information being accurate and complete.
6. Comply with the Village of Carbon Cliff and Rock Island County SWCD's written and verbal recommendations regarding::
 - A. The SE/SC plan and corrections or changes made thereto.
 - B. Installation and maintenance requirements of the SE/SC practices on-site.
7. If any changes occur to the plans, schedules, etc., the applicant shall be responsible for notifying the Village of Carbon Cliff and the Rock Island County Soil and Water Conservation District.

Upon receipt of all required information, the SE/SC plan will be reviewed within 15 working days and all involved parties will be notified whether or not the plan meets technical standards.

Applicant's Signature: _____ **Date:** _____

Site Plan Checklist

The soil erosion and sediment control plan cannot be reviewed until all of the following information is submitted for each upcoming active construction phase:

1. Existing site conditions and natural resources present, including:

- _____ Site boundaries and adjacent lands which accurately identify site location.
- _____ Buildings, roads and utilities.
- _____ Topography, vegetation, drainage patterns, subwatershed delineation, critical erosion areas, and any subsurface drainage tiles.
- _____ Wetland and floodplain delineation.
- _____ Location and identification of soil types.
- _____ Adjacent areas that affect or are affecting the project site, e.g. drainage onto or through the site affecting wetlands, streams, lakes, and drainage areas downstream.
- _____ Vicinity map.
- _____ Show areas where trees and vegetation are to be preserved.
- _____ Map legend, including north arrow and scale on all materials submitted.

2. Final site conditions, including:

- _____ An accurate depiction of post-construction appearance, e.g. roads, buildings, open space.
- _____ Locations, dimensions, cross sections and elevations of all (temporary and permanent) stormwater management facilities (including sediment basins), plus inlet and outlet locations.
- _____ Surface flow direction, including sheet flow and concentrated flow direction.
- _____ Post-construction topography, final contours should be easily distinguished (2 foot contour is preferred) including subwatershed delineations.

3. A complete soil erosion and sediment control plan, including:

- _____ Location and detailed drawings of all permanent and temporary soil erosion and sediment control practices.
- _____ A schedule outlining the installation of the practices with the responsible parties identified.
- _____ Inspection, and maintenance schedules with responsible parties identified.
- _____ Seeding information: rates, species, dates, fertilization, temporary or permanent.
- _____ Location and dimension of all temporary soil and aggregate stockpiles.

4. Locations, dimension & phase timeline of all land disturbing activities, including:

- _____ Designate construction limits, areas that will be disturbed and areas of wetland fill.
- _____ Describe grading and building schedule and phasing timeline.

Narrative Checklist

The soil erosion and sediment control plan cannot be reviewed until all of the following information is submitted for each upcoming active construction phase:

- _____ **Project description** - Briefly describes the nature and purpose of the land disturbing activity, and the area (acres) to be disturbed.
- _____ **Existing site conditions**- A description of the existing topography , vegetation, drainageways, subsurface drain tile, buildings, roads and utilities.
- _____ **Adjacent areas**- A description of neighboring areas such as streams, lakes, residential areas, roads, etc. which might be affected by the land disturbance. Describe any adjacent or neighboring activities that may affect the soil erosion and sediment control plan.
- _____ **Off-site areas**- Will any other areas be disturbed? Describe any off-site land disturbing activities.
- _____ **Soils**- Provide a brief description of the soils on the site at the exposed soil horizon such as soil name, mapping unit, erodibility, permeability, texture, structure and depth to seasonal high groundwater. (this information is available from the local Soil and Water Conservation District).
- _____ **Critical areas**- A description of areas on the site which have potentially serious problems, e.g. steep or long slopes, channels, intermittent streams, and side hill seeps.
- _____ **Soil erosion and sediment control measures**- A description of the methods which will be used to control erosion and sedimentation on the site. Control methods should meet the standards in section 4 of the Illinois Urban Manual.
- _____ **Permanent stabilization**- A brief description including specifications of how the site will be stabilized after construction is completed.
- _____ **Stormwater runoff calculations**- Will the development site cause an increase in peak runoff rates? Will the increase in runoff cause soil erosion or channel degradation downstream? Describe the strategy to control stormwater runoff.
- _____ **Calculations**- Detailed calculations for the design of temporary sediment basins, permanent stormwater detention basins, diversions, channels, etc.. Include pre and post development runoff.
- _____ **Detail drawings**- Include detail drawings form the Illinois Urban Manual. Any structural practices used that are not referenced to the Illinois Urban Manual or local handbooks should be explained and illustrated with detail drawings.
- _____ **Maintenance** - Provide a schedule of maintenance for all temporary and permanent erosion and sediment control practices to ensure that they perform properly. Identify the parties responsible for maintenance.

EXHIBIT B

DEVELOPMENT APPLICATION FEE SCHEDULE

50 cubic yards (38.2 m ³) or less	\$23.50
51 to 100 cubic yards (40 m ³ to 76.5 m ³)	37.00
101 to 1,000 cubic yards (77.2 m ³ to 764.6 m ³)—\$37.00 for the first 100 cubic yards (76.5 m ³) plus \$17.50 for each additional 100 cubic yards (76.5 m ³) or fraction thereof.	
1,001 to 10,000 cubic yards (765.3 m ³ to 7645.5 m ³)—\$194.50 for the first 1,000 cubic yards (764.6 m ³), plus \$14.50 for each additional 1,000 cubic yards (764.6 m ³) or fraction thereof.	
10,001 to 100,000 cubic yards (7646.3 m ³ to 76,455 m ³)—\$325.00 for the first 10,000 cubic yards (7645.5 m ³), plus \$65.00 for each additional 10,000 cubic yards (7645.5 m ³) or fraction thereof.	
100,001 cubic yards (76,456 m ³) or more—\$919.00 for the first 100,000 cubic yards (76,455 m ³), plus \$36.50 for each additional 10,000 cubic yards (7645.5 m ³) or fraction thereof.	
Other Inspections and Fees:	
1. Inspections outside of normal business hours (minimum charge—two hours)	\$50.50 per hour
2. Reinspection fees assessed under provisions of Section 108.8	\$50.50 per hour
3. Inspections for which no fee is specifically indicated	\$50.50 per hour (minimum charge—one-half hour)

EXHIBIT C

FEE SCHEDULE

Fee is based on acreage of the site

Base Fee: \$100 (One acre or less)

*Round acres to nearest whole number

1600 acres = \$5 for each additional acre

Acres	Erosion and Sediment Control Program Fee Schedule		Erosion and Sediment Control Program Fee Schedule		Erosion and Sediment Control Program Fee Schedule		Erosion and Sediment Control Program Fee Schedule		Erosion and Sediment Control Program Fee Schedule		Erosion and Sediment Control Program Fee Schedule		Erosion and Sediment Control Program Fee Schedule		Erosion and Sediment Control Program Fee Schedule		Erosion and Sediment Control Program Fee Schedule		
	Fee	Acres	Fee	Acres	Fee	Acres	Fee	Acres	Fee	Acres	Fee	Acres	Fee	Acres	Fee	Acres	Fee	Acres	
1	100	31	981	41	2142	61	2512	81	2882	101	3252	121	3622	141	3992	161	4362	181	4732
2	100	32	1034	42	2167	62	2537	82	2907	102	3277	122	3647	142	4017	162	4387	182	4757
3	400	23	1102	43	2192	63	2562	83	2932	103	3302	123	3672	143	4042	163	4412	183	4782
4	400	24	1154	44	2217	64	2587	84	2957	104	3327	124	3697	144	4067	164	4437	184	4807
5	400	25	1224	45	2242	65	2612	85	2982	105	3352	125	3722	145	4092	165	4462	185	4832
6	400	26	1284	46	2267	66	2637	86	3007	106	3377	126	3747	146	4117	166	4487	186	4857
7	400	27	1344	47	2292	67	2662	87	3032	107	3402	127	3772	147	4142	167	4512	187	4882
8	400	28	1404	48	2317	68	2687	88	3057	108	3427	128	3797	148	4167	168	4537	188	4907
9	400	29	1464	49	2342	69	2712	89	3082	109	3452	129	3822	149	4192	169	4562	189	4932
10	400	30	1524	50	2367	70	2737	90	3107	110	3477	130	3847	150	4217	170	4587	190	4957
11	420	31	1584	51	2392	71	2762	91	3132	111	3502	131	3872	151	4242	171	4612	191	4982
12	554	32	1644	52	2417	72	2787	92	3157	112	3527	132	3897	152	4267	172	4637	192	5007
13	624	33	1704	53	2442	73	2812	93	3182	113	3552	133	3922	153	4292	173	4662	193	5032
14	684	34	1764	54	2467	74	2837	94	3207	114	3577	134	3947	154	4317	174	4687	194	5057
15	744	35	1824	55	2492	75	2862	95	3232	115	3602	135	3972	155	4342	175	4712	195	5082
16	804	36	1884	56	2517	76	2887	96	3257	116	3627	136	3997	156	4367	176	4737	196	5107
17	864	37	1944	57	2542	77	2912	97	3282	117	3652	137	4022	157	4392	177	4762	197	5132
18	924	38	2004	58	2567	78	2937	98	3307	118	3677	138	4047	158	4417	178	4787	198	5157
19	974	39	2064	59	2592	79	2962	99	3332	119	3702	139	4072	159	4442	179	4812	199	5182
20	1024	40	2124	60	2617	80	2987	100	3357	120	3727	140	4097	160	4467	180	4837	200	5207

SEND REQUIRED INFORMATION WITH FEE PAYABLE TO:

Rock Island County Soil and Water Conservation District
 1229 East 1st Ave
 Alton, IL 61264

Hours: M-F 8:00 a.m. - 4:30 p.m.
 Phone: (309) 793-5845 ext. 3
 Fax: (309) 793-5945
 E-mail: mtc@rockislandcounty.org

This notice will be issued on a non-dissemination basis without regard to race, color, religion, national origin, age, gender, handicap or marital status. The Rock Island County Soil and Water Conservation District is a nonprofit organization.

Revised Tuesday, September 21, 1999