

CHAPTER 19

SITE PLAN REVIEW AND DESIGN GUIDELINES

SECTION 1901. PURPOSE AND INTENT.

The purpose of site plan review and design guidelines is to determine compliance with the provisions and intent set forth in this ordinance and to promote the orderly development of the Township and to prevent the development or alteration of land without proper attention to siting and appearance.

SECTION 1902. SITE PLAN REVIEW.

Prior to the erection of any building or structure or additions thereto, change in use in any zoning district, any land use requiring special approval or any planned unit development, a site plan shall be submitted for review and approval. This review and approval shall be performed by the Zoning Administrator or by the Township Planning Commission.

At no time shall a site plan be reviewed when considering a request for rezoning. A decision to rezone property should be based on the long-term goals and the Future Land Use as determined in the Master Plan of the Township. Also, it is important to consider the timeliness of the development and the long-term use of land.

A. Administrative Site Plan review by the Zoning Administrator. The Zoning Administrator shall perform a site plan review for:

1. A residential structure having four (4) or fewer dwelling units therein and accessory structures and uses;
2. A change in the use of a structure or land that does not require additional parking and does not involve structural alterations;
3. An accessory building containing one thousand (1,000) square feet or less;
4. An addition to an existing structure if the addition totals twenty-five (25%) percent or less of the existing structure, and only if the addition will be surfaced with material or materials which do not differ from materials on the existing structure.
5. In order to perform this review, the Zoning Administrator may require the submission of information set forth in this section.

6. The Zoning Administrator will transmit copies of the site plan to the departments as appropriate for review. Upon receiving recommendations from the different departments, the Zoning Administrator shall transmit the recommendations to the applicant, and if the applicant concurs with the staff recommendations, the site plan will be approved along with all the recommendations as agreed to by the applicant.
7. In instances where the applicant does not concur with recommendations or where the Zoning Administrator deems Planning Commission review necessary during the administrative site plan review, the applicant or the Zoning Administrator may request the site plan be transmitted to the Township Planning Commission. The applicant will be required to pay the appropriate associated fee for site plan review.

B. Site Plan review by the Township Planning Commission. All other structures and uses of land or buildings not covered in Section 1902 shall be reviewed by the Township Planning Commission, and the following site plan review procedures shall be followed:

1. Application Deadlines. If a zoning application requires a site plan review by the Planning Commission pursuant to Section 1902 a complete application package must be received according to the policy and procedure set by the Township Planning Commission.
2. Application. The application requesting a site plan review must be accompanied by a fee, as established by the Township Board. The application will not be reviewed until all requirements are met, including the requirements that the fee has been paid. The site plan must include all relevant items listed below.
 - a. Scale. The site plan must be drawn to a consistent scale of not less than one inch equals fifty feet (1" = 50') for sites of three acres or less, or one inch equals two hundred feet (1" = 200') for larger sites.
 - b. Identification. The applicant's name, address and telephone number and the name and address of the firm(s) responsible for preparation of the site plan must be included. If the applicant does not own the property, the owner must be identified and must sign a statement certifying that the applicant is acting in the owner's behalf.

- c. **Property Information.** The site plan must accurately depict the subject property and land adjacent to and across any thoroughfare from, including all existing and proposed easements or right-of-ways. Zoning of the site and the adjacent properties, and the current use of the site and of adjacent properties, must be identified. A legal description and computation of the area of the property must accompany the site plan.
- d. **Site Features.** The site plan should depict existing environmental conditions, including the location of wooded areas, isolated trees over six inches in diameter, topography, wetlands, any existing structures, including any site contamination, including those proposed for removal, and other significant conditions. The approximate location and use of structures and the location of the nearest driveways on adjacent or opposing parcels should be shown.
- e. **Transportation Features.** The site plan must show the location and surface type of all existing and proposed roads, access drives, internal vehicle circulation areas, all turning radii, parking lots (including number and location of handicapped parking spaces), sidewalks, loading areas or docks, truck bays, and refuse pickup stations. Developments located within Cardinal Square shall follow the guidelines, as listed in Section 1903.
- f. **Utilities.** The site plan must show the location and size of all existing and proposed public utilities. Waterline information shall include location of existing and proposed fire hydrants and valves. Sanitary sewer information shall include location of any pumping station and approximate location of manholes. Storm drainage information shall include any enclosed drains, flow restrictors and on-site retention. The site plan must also include any existing or proposed private utilities, such as natural gas, electricity, telephone and cable television.
- g. **Site Drainage and Grading.** The site plan must show the location of storm drains, invert elevations, proposed finished grades, drainage ditches, catch basins, manholes, flow restrictors and on-site retention. Allowable discharge and on-site storage calculations must also be included.

- h. Structures. The site plan must show the location and dimensions, including height, of all proposed buildings, accessory structure and related features. Schematic plans and elevations of all structures must be included. The site plan should also show the location, arrangement, dimensions and type of proposed signs, lighting, landscaping, screening, fences, and decorative walls. Developments located within the Cardinal Square shall follow the guidelines as listed in Sec. 1903. For multi-family housing developments, the number of units in each building must be identified.
 - i. Supplementary Materials. The site plan shall be complemented by any additional information that, in the Zoning Administrator's discretion, is important for the Site Plan Review process. Applicants shall be responsible for all costs of required supplementary materials. This could include, but not be limited to, an assessment of the proposed project's impact on environmental, historic, social or economic conditions; traffic studies; or proposed measures to control or mitigate such impacts as noise, smoke, particulates, vibration, odors, or fire hazards.
 - j. Materials Board. The Township Zoning Administrator may request a materials board be submitted at the time of the site plan review. This board shall contain small, representative samples of all the exterior finishes proposed for the structure and associated elements of the site. This materials board will become part of the approval and will be used to ensure compliance.
3. Decision Guidelines for Site Plan Review. In order that buildings, open space and landscaping will be in harmony with other structures and improvements in the area, and to assure that no undesirable health, safety, noise and traffic conditions will result from the development, the Township Planning Commission shall determine whether the site plan meets the following criteria, unless the Township Planning Commission determines that one (1) or more of the criteria are inapplicable:
- a. The site plan shall comply with all requirements of the applicable zoning district and design guidelines, unless otherwise provided in this chapter;
 - b. The site plan is consistent with the intent and purpose of the ordinance and the intent of the district in which it is located;
 - c. The vehicular transportation system shall provide for circulation throughout the site and for efficient ingress and egress to all parts of the site by fire and safety equipment;

- d. Recreation and open space areas shall be provided in all multiple-family developments;
 - e. All developments occurring within the defined boundaries of Cardinal Square and the Mixed Use District should follow the design guidelines contained in this chapter.
 - f. The requirements for screening, fencing, walls and other protective barriers shall be complied with as provided in this chapter;
 - g. Pedestrian walkways and/or pathways shall be provided as deemed necessary by the Township Planning Commission for separating pedestrian and vehicular traffic.
 - h. All elements of the site plan shall be harmoniously and efficiently organized in relation to topography, the size and type of the lot, the character of adjoining property and type and size of buildings. The site shall be so developed as not to impede the normal and orderly development or improvement of surrounding property for uses permitted in this Ordinance.
4. Approval Process. The site plan shall be reviewed by the Township Planning Commission and shall be approved, disapproved, approved with specific conditions, performance guarantees and/or bond requirements, or tabled as may be deemed necessary to carry out the purpose of this chapter and other codes and regulations of the Township. If, during review, the Planning Commission finds a site plan not in conformance with the provisions set forth in this section it may, at its discretion, return the site plan to the applicant with a written statement of the modifications necessary to secure approval.
- a. Approval. Following approval of the site plan, it shall become part of the record, and subsequent actions relating to the activity authorized shall be consistent with the approved site plan unless a change or addition conforming to this chapter received the mutual agreement of the landowner and the Township Planning Commission or Zoning Administrator, as appropriate. Incidental and minor variations of the approved site plan with written approval of the Zoning Administrator shall not invalidate prior site plan approval.
 - b. Denial for Specific Requirements. In instances where specific dimensional or area requirements of this chapter are not satisfied on the site plan, requests for variance(s) may be initiated by the applicant to the Township Zoning Board of Appeals. Requirements not met are grounds for denial.

5. Approved Site Plan

- a. The approved site plan shall become part of the record of approval, and subsequent actions relating to the activity authorized shall be consistent with the approved site plan unless a change or addition conforming to this chapter receives the mutual agreement of the landowners and the Township Planning Commission or Zoning Administrator as appropriate. Incidental and minor variations of the approved site plan with written approval of the Zoning Administrator shall not invalidate prior site plan approval.
- b. The approved site plan shall be valid for a term of one year. Construction must begin within this time period.

C. **Supplemental Cost Recovery Ordinance of expenses incurred by the Township for applications, permits, or other similar services provided by the Township or its Agents. The Township of Kochville ordains:**

1. Purpose. In order to protect the township from extraordinary expenses resulting from the utilization of township resources in response to requests by any individual, firm, corporation, limited liability company, association, partnership, commercial entity, consortium, joint venture, government entity, or any other legal entity, this Ordinance authorizes the imposition of charges to recover actual costs incurred by the township in response to request for administrative review, mailing, publishing, public hearings, engineering, planning, environmental or fiscal impact consulting assistance, consultants, attorneys' fees, service charges and interest, and any other costs direct or indirect in connection with any established fee whether or not the services are provided by the township or by a third party on behalf of the township.
2. Definitions. Unless the context specifically indicates otherwise, the meaning of the terms used in this article shall be as follows:
 - a. Assessable Costs. Those costs for services incurred by the township for administrative review, mailing, publishing, public hearings, engineering, environmental or fiscal impact consulting assistance, consultants, attorneys' fees, service charges and interest, and any other costs direct or indirect in connection with any established fee established by the Township Board for various applications, permits, and other similar services whether or not the services are provided by the township or by a third party on behalf of the township.
 - b. Responsible Party. Any individual or any individual's parent or legal guardian, in the case of a minor, any firm, corporation,

limited liability company, association, partnership, commercial entity, consortium, joint venture, government entity or any other legal entity that is responsible for the payment of any fee to the township, and their heirs, estates, successors and assigns.

- c. Project. A specific plan or design beginning when the application is submitted and all associated fees are paid to the Township of Kochville and concluding when the final certificate of occupancy has been issued or when the owner of the property or person with authority to submit the plan or design to the Township notifies the Township in writing that it plans to abandon the plan or design submitted for a period not less than 3 months.

3. Cost Recovery Authorization and Procedure.

- a. The township may recover all assessable costs relating to any application, permit, and other similar services from any or all responsible parties jointly and severally.
- b. The Township Supervisor, Zoning Administrator, or his or her designee shall determine the total assessable costs for each various types of applications and administrative review procedures on a per application, review, or service basis. In making such determination, the following shall be considered:
 - c. After consideration of the factors in (b) immediately above, the Township Supervisor, Zoning Administrator, or his or her designee may allocate assessable costs among and between responsible parties, including allocating all or some of such costs jointly and severally against more than one responsible party.
 - d. The Township Board shall adopt a fee schedule for various applications, permits, and other similar services which may be amended from time to time by resolution of the Township Board. **Said fee is only an estimate as actual costs may vary.**

4. Billing and Collection of Assessable Costs.

- a. All fees collected with regard to any application, permit, or other similar services shall be deposited in such a way that expenditures can be tracked and an itemized bill can be provided if requested.
- b. If the account in which, the fee collected reaches a zero amount prior to the completion of the review or other action needed to take place, the township shall invoice the responsible party for the

estimated additional amount needed to complete the review or other action that needs to take place.

- c. If the township needs to invoice the responsible party for the estimated additional amount needed to complete the review or other action needed to take place, the Township Supervisor, or his or her designee shall have the authority to determine if the responsible party's application, permit, or other similar service continues in the process or if it the process shall be stopped until the additional requested fee is received and has been cleared by the township's banking institution.
- d. Upon the issuance of the final certificate of occupancy for the entire project, the township treasurer or his or her designee shall within ninety (90) days return to the responsible party any unused funds and an accounting of the expended funds. If all funds are expended, then the township treasurer or his or her designee shall only furnish an accounting if so requested by the responsible party.

If the project is of a nature that does not require an issuance of a certificate of occupancy at any time, from the start of the project to the finish, a written determination by the appropriate board or township official stating that the application, permit, or other similar services has been completed, the township treasurer or his or her designee shall within ninety (90) days return to the responsible party any unused funds and an accounting of the expended funds. If all funds are expended, then the township treasurer or his or her designee shall only furnish an accounting if so requested by the responsible party.

5. Procedure for Appealing Assessable Costs.

- a. Any responsible party who receives an accounting of assessable costs shall have an opportunity to meet with the Township Supervisor or his or her designee to request a modification of assessable costs. *The responsible party shall request a meeting with the Township Supervisor in writing within seven (7) calendar days of the date of receipt of the accounting of assessable costs.* Said meeting shall take place no later than fourteen (14) calendar days after the Township Supervisor receives the written request.
- b. If after meeting with the Township Supervisor or his or her designee the responsible party is still not satisfied, he or she may appear before the Township Board to further request a modification of assessable costs. A responsible party who desires to appear before the Township Board must first meet with the

Township Supervisor or his or her designee as provided above and shall *file a written request to appear before the Township Board with the Township Clerk within seven calendar days after the date of the meeting with the Township Supervisor:*

- 1) Any filed request to appear shall specifically identify and explain all reasons why the responsible party believes the assessable costs should be modified. Any reason, basis or argument for modification of assessable costs not set forth in the request to appear shall be deemed waived by the responsible party, unless the information presented is a new matter that was unknown to the applicant at the time the request to appear before the Township Board was made.
- c. Upon receipt of such request, the Township Clerk will place the responsible party on the agenda of the next regularly scheduled Township Board meeting, which meeting is at least 14 calendar days after the date on which the responsible party files the request to appear.
 - d. Failure to timely file a written request to appear either before the Township Supervisor or the Township Board shall constitute a waiver of the responsible party's right to appear before the Township Board; and shall further constitute the responsible party's agreement to pay the assessable costs.
 - e. After a responsible party has been given an opportunity to appear before it, the Township Board shall promptly determine whether to confirm, modify or void the payment of assessable costs invoiced and notify the responsible party in writing within thirty (3) days of its decision.
6. No Limitation of Liability. The recovery of assessable costs pursuant hereto does not limit the liability of a responsible party under applicable local, state or federal law.
 7. Severability. The provisions of this ordinance are hereby declared to be severable and if any clause, sentence, word, section or provision is declared void or unenforceable for any reason by any court of competent jurisdiction, it shall not affect any portion of the ordinance other than said part of portion thereof.

SECTION 1903. DESIGN GUIDELINES.

These guidelines are intended to serve as recommendations for all development and redevelopment projects by both the private and public sector within the area defined as Cardinal Square, from Freeland Road south to Tittabawassee Road, and from Mackinaw Road east to Davis Road.

SECTION 1904. FUNDAMENTAL DESIGN GUIDELINES.

The fundamental design guidelines are general in nature and were created to apply to the entire Cardinal Square area.

A. **Application of Design Guidelines.** The guidelines apply to the entire Cardinal Square area and every development within the defined area. As many developments exist and were constructed prior to the establishment of the guidelines, the following shall be used as a guide for when mandating compliance:

1. All new developments within Cardinal Square.
2. Any redevelopment which requires a site plan review by the Planning Commission.
3. All expansions, remodels, etc., including those reviewed administratively, shall make an effort to address the intent and purpose of these guidelines while understanding that the extent of the expansion or remodel may determine the extent to which the guidelines can be incorporated.
4. An addition of an accessory building containing one thousand (1,000) square feet or more along key roads.

B. **Area-Wide Design Guidelines**

1. Promote an understanding that this district is unique to the area and distinct.
2. Develop the public nature of the area and reinforce the sense that Cardinal Square belongs to everyone.
3. Foster physical continuity, meaning that there is freedom of movement for pedestrians, automobiles and transit systems.
4. Encourage a diversity of uses, activities and sizes of developments.

5. Encourage street level activity.
6. Create a hierarchy of transportation that begins with pedestrians. The hierarchy in order of priority:
 1. Pedestrians
 2. Bicycles
 3. Vehicles
 4. Transit
7. Encourage quality building.

C. Guidelines for the Public Streetscape

The streetscape environment includes all the elements that can make a pedestrian comfortable such as the sidewalk, street trees, street furniture, and the façade of the building.

1. All projects must incorporate pedestrian access from the street and parking areas.
 - a. All development and redevelopment must include sidewalk and sidewalk connections as deemed appropriate by Planning Commission.
 - b. All new development and redevelopment must include the extension of the multi-use path when located on or adjacent to their property.
 - c. Multi-use pathway connections are encouraged, even though it may not be directly adjacent to the development.
 - d. In order to provide safe and convenient pedestrian access, all crosswalks on streets whether public or private and driveways shall be denoted by a change in surface consistent with the intent of the Design Guidelines and as approved by the Zoning Administrator.
2. Terminal street views (the point where a street connects perpendicular to a second street) shall focus on a significant built or natural feature (a building, landscaping, public space – not a parking lot).
3. Street trees and landscaping should be designed and maintained to enhance pedestrian access and levels of comfort.

4. Wrought iron or simulated wrought iron fences with brick columns shall be installed at key points along key road frontages, as determined by the Zoning Administrator.
 - a. A minimum of sixteen (16) and a maximum of thirty-two (32) feet length of wrought iron or simulated wrought iron fence shall be installed between each brick column.
 - b. All fences shall be between thirty-two (32) and thirty-six (36) inches in height.
 - c. Brick columns shall be twenty-four (24) x twenty-four (24) inches in width with a twenty-seven (27) x twenty-seven (27) inches in width limestone cap. The overall height should be forty-two (42) inches to forty-eight (48) inches above finished grade. The brick colors of the columns shall match existing columns within Cardinal Square or the building on the site, as determined by the Zoning Administrator.
 - d. All fences shall be located between four (4) and eight (8) feet behind the sidewalk or pathway, or match the fence on adjoining properties, as determined by the Zoning Administrator.
 - e. Low profile landscaping that enhances the fence, preferably a mix of ornamental grasses, perennials and shrubs, as determined by the Zoning Administrator, shall be installed between the fence and the sidewalk or the pathway.
5. Buildings, not parking lots, should be the primary feature at the entrance to a development.
6. Facades facing streets or public walkways shall incorporate windows and doors so as to encourage pedestrian activity. Mirrored or smoked glass is discouraged as it acts as a wall and prevents pedestrian interaction.

D. Guidelines for Public Spaces

These guidelines encourage open spaces, plazas and parks as public spaces, and that these natural amenities encourage human occupancy.

1. A complete network of sidewalks and pathways should be constructed in the Cardinal Square area to create a walking/strolling environment as deemed necessary by the Planning Commission.

2. Developments should provide pedestrian amenities, such as benches, trash receptacles, and bike racks at key locations on site that are consistent with the area.
3. When public spaces are designed, care should be taken to preserve enough open space to reasonably handle an open-air special event, such as an art fair or outdoor concert.

E. Guidelines for Buildings

These guidelines include recommendations for the physical makeup and shape of construction inside the property lines.

1. Entries shall be the highlight of the building.
2. Buildings should be developed that relate to people at all publicly visible sides; eliminate a back door appearance from parking lots and rear entrances.
3. Each building shall be encouraged to explore some level of individual expression in order to reflect the sense of a distinct area rather than a linear shopping center.
4. A minimum of fifty (50%) percent of the building materials should be natural brick or stone. The remainder of the building should be constructed in approved complimentary, natural materials. This regulation applies to all sides of the principal structure. Accessory structures must be constructed of materials that are consistent and compatible with the architectural style of the principal structure.

SECTION 1905. MIXED USE DISTRICT DESIGN GUIDELINES.

The Mixed Use District Design Guidelines elaborate on themes established in the fundamental guidelines and provide guidance about how the fundamentals should be applied to sites within the Mixed Use District. These guidelines are in addition to the Fundamental Guidelines Section 1904 and are intended to supplement them rather than supplant them. These guidelines apply to all parcels zoned MU-1 Mixed Use.

A. Guidelines for the Public Streetscape

The streetscape environment includes all the elements that can make a pedestrian comfortable such as the sidewalk, street trees, street furniture, and the façade of the building.

1. Pedestrian access should be a primary focal point of all new developments and redevelopments within the Mixed Use District.

- a. All development and redevelopment must include sidewalk and sidewalk connections as deemed appropriate by Planning Commission.
 - b. All new development and redevelopment must include the extension of the multi-use path when located on or adjacent to their property.
 - c. Multi-use pathway connections are encouraged, even though it may not be directly adjacent to the development.
 - d. In order to provide safe and convenient pedestrian access, all crosswalks on streets whether public or private and driveways shall be denoted by a change in surface consistent with the intent of the Design Guidelines and as approved by the Zoning Administrator.
2. Developments should provide pedestrian amenities, such as benches, trash receptacles, and bike racks at key locations on site that are consistent with the area.
 3. Decorative metal tree guards as approved by the Township shall be installed around all street frontage trees. Additionally, weather protected electrical outlets shall be provided adjacent to all street frontage trees.
 4. Encourage on-street parking within the Mixed Use District when appropriate, to achieve traffic calming, to create a more active street environment, and to make a better transition between traffic and pedestrians.
 5. Wrought iron fences with brick columns shall be installed at key points along road frontages, as determined by the Zoning Administrator.
 6. Buildings shall be placed near the street to create a strong edge to the street, a sense that you are passing something and an opportunity to see into a building from the sidewalk or see the activity of the street from the building.
 7. Facades facing streets or walkways intended for public use shall be articulated with clear windows and doors resulting in a minimum of fifty (50) percent window or door area at street level (sidewalk to twelve feet high).

B. Guidelines for Public Spaces

These guidelines encourage open spaces, plazas and parks as public spaces, and that these natural amenities encourage human occupancy.

1. Public areas should incorporate natural gathering areas, seating areas, paved walking paths, picnic areas and should be urban, not suburban in nature.
2. Landscaping in open spaces should be designed so as not to prohibit public access but to control it when necessary.

C. Guidelines for Buildings

These guidelines include recommendations and requirements for the physical makeup and shape of construction inside the property lines.

1. Formula and “corporate” architecture, and franchise designs are strongly discouraged. Building architecture should rely on found character instead of introduced character.
2. Buildings must be developed that relate to people at all publicly visible sides; eliminate a back door appearance from parking lots and rear entrances.
 - a. All building shall have their primary entrances face an abutting street, rather than the parking area. Primary entrance is defined as the principal entry through which people enter the building. A well-defined building entrance adjoining the parking area shall be included.
 - b. Primary building entrances shall be architecturally emphasized and visible from the street and shall incorporate arcades, roofs, porches, alcoves, porticoes and awnings that protect pedestrians from the rain and sun.
 - c. If the building has frontage on more than one street, the building shall provide a primary entrance oriented to one of the streets or a single entrance to the corner where two streets intersect.
3. A minimum of sixty (60%) percent of the building materials should be natural brick or stone. The remainder of the building should be constructed in approved complimentary, natural materials. Concrete masonry units are not acceptable.
4. Building materials should be durable, easily maintained, and attractive at close distances; materials shall be scaled to pedestrians when structures are within 10 feet of a right-of-way or a walkway that is intended for public use.

5. Detail shall be integral to the building, not elements that are applied to a standard building shell (such as a clock tower or dormers with no usable space behind.)
6. Awnings shall be continuous only by storefronts occupied by a single tenant; awnings shall not be allowed to extend across the face of more than one building, even if the same tenant occupies the buildings.
7. Canvas awnings or extension of the roof material for awnings is encouraged; nylon awnings or other synthetic materials as well as those awnings meant to be illuminated from within, are not acceptable.
8. Signage should be incorporated into the building façade, windows or awnings, or placed as individual letters on the building face.
9. Trash storage areas shall be completely enclosed and integrated into the design of the building.
10. All rooftop and ground mounted mechanical equipment shall be shielded from view by either the building elevation or with materials equal to the height of the equipment, which are consistent and compatible with the architectural style of the building.

D. Utilities

1. All new development within the Mixed Use District shall install underground utilities unless shown that the utilities cannot be safely placed underground. Electrical power transmission lines over fifty thousand (50,000) volts, primary feeder lines, and transformer vaults or transformer pad installation within the public right-of-way are exempt from these requirements.

SECTION 1906. ADMINISTRATION OF THE DESIGN GUIDELINES.

The design guidelines in this chapter are to be used as guides for the Township when reviewing site plans and special land uses within the Cardinal Square and Mixed Use District areas.

- A. **Flexibility of the Guidelines.** Because not every development may be able to meet each specific design guideline, the guidelines were written to be flexible and to expand, and contract, to fit the development and achieve the intent of the Mixed Use District as described in the ordinance and in the Master Plan.

- B. **Applicable to all Developments.** Although not all developments will meet all the guidelines, each new or redevelopment project in the area should meet most of the design guidelines.

SECTION 1907. STORMWATER MANAGEMENT DESIGN GUIDELINES.

The intent of Stormwater Management Design Guidelines is to encourage the use of structural, vegetative, or managerial practices, commonly referred to as Best Management Practices (BMPs), designed to treat, prevent, or reduce degradation of water quality due to stormwater runoff. All development projects subject to review under the requirements of this Ordinance shall be designed, constructed, and maintained using BMPs to prevent flooding, protect water quality, reduce soil erosion, maintain and improve wildlife habitat, and contribute to the aesthetic values of the project. The particular facilities and measures required on-site shall reflect and incorporate existing grade, natural features, wetlands, and watercourses on the site to the maximum extent feasible.

- A. **Stormwater Drainage.** All stormwater drainage plans shall meet the standards adopted by Kochville Township for design and construction and shall, to the maximum extent feasible, utilize various control techniques, including but not limited to:

1. Limitation of land disturbance and grading
2. Maintenance of vegetated buffers and natural vegetation
3. Minimization of impervious surfaces
4. Use of terraces, contoured landscapes, runoff spreaders, vegetated or rock-lined swales
5. Use of infiltration devices, soil permitting
6. Shared use of detention basins

- B. **General Standards**

1. Stormwater management systems shall be designed to prevent flooding and the degradation of water quality related to stormwater runoff and soil erosion from proposed development.
2. All properties that are subject to this ordinance shall provide for on-site storage of stormwater. Facilities shall be designed to provide a volume of storage and discharge rate that meets the standards of the Kochville Township Stormwater Engineering and Design Guidelines.

3. Priority shall be placed on site design that maintains natural drainage patterns and watercourses. Alterations to natural drainage patterns shall not create flooding or degradation in water quality for adjacent or downstream property owners. The Saginaw County Public Works Commissioner must approve site designs if it is a watercourse under their jurisdiction. The Saginaw County Road Commission and the Michigan Department of Transportation must also approve site designs for watercourses within their jurisdictional right-of-ways.
4. The use of swales and vegetated buffer strips (containing desirable native plant materials) or other infiltration practices is encouraged as a method of stormwater conveyance so as to decrease runoff velocity, allow for biofiltration, allow suspended sediment particles to settle, and to remove pollutants. Tolerance for water saturation, sunlight, pesticides, metals, and salts, shall be required in determining appropriate plantings in these areas.
5. Drainage systems shall be designed to be visually attractive. The integration of stormwater conveyance systems and retention and detention basins in the overall landscape concept is recommended. Ponds with a naturally contoured, rather than square or rectangular, design and appearance shall be encouraged.
6. Where large amounts of grease and oil may accumulate, as in the case of commercial/industrial developments and large areas of pervious surfaces for parking, approved oil separators shall be required.
7. For sites that store or use chemicals, a spill response plan shall be submitted and approved by Kochville Township, or the site can provide the Township evidence of a Michigan Department of Environmental Quality approved Stormwater Pollution Prevention Plan and certificate of coverage.

C. **Stormwater Management and Wetlands.** Wetlands may be used for stormwater management if all the following conditions are met:

1. Wetlands and their current functions shall be protected from impairment due to the discharges of stormwater. Measures such as a vegetated forebay shall be taken to reduce erosive velocities of stormwater discharge and remove sediment and other pollutants prior to discharge to a wetland. The volume of a vegetated forebay is defined the Kochville Township Stormwater Management Plan.
2. Wildlife, fish or other beneficial aquatic organisms and their habitat within the wetland will not be impaired.

3. The wetland has sufficient holding capacity for stormwater, based upon calculations prepared by the proprietor and reviewed and approved by Kochville Township, and that the additional stormwater will not impair the wetland's current functions.
4. On-site erosion and sediment control shall be provided to protect the natural function of the wetland.
5. Provisions approved by Kochville Township shall be established so as to insure that the wetland is not disturbed or impaired in the future relative to the needed storage capacity.
6. Applicable permits from the local government and the Michigan Department of Environmental Quality are obtained.

D. Site Plan Standards for Impervious Surface Reduction.

Kochville Township recognizes that, due to the specific requirements of any given development, inflexible application of the design standards may result in development with excessive paving, stormwater runoff, and a waste of space which could be left as an open space.

The Township may permit deviations from Ordinance requirements during the site plan review process to reduce impervious surfaces, as determined by the Kochville Township Zoning Administrator or Planning Commission. These deviations can be either prescribed by Ordinance or proposed through creative land development techniques that are permitted by the Ordinance. Kochville Township may permit deviations whenever it finds that such deviations are more likely to meet the intent and standards of this Ordinance and accommodate the specific characteristics of the use in question.

Kochville Township may attach conditions to the approval of a deviation that bind such approval to the specific use in question. Measures that reduce impervious surface and increase infiltration may include, but are not limited to, the following:

1. Streets and Access
 - a. Design residential streets with the minimum required pavement width needed to support travel lanes, on-street parking, and emergency (as defined by applicable emergency response agencies), maintenance, and service vehicle access and function based on traffic volumes.
 - b. Reduce the total length of residential streets by examining alternative street layouts to determine the best option for increasing the number of homes per unit length.

- c. Design street right-of-way widths/private road easements to reflect the minimum required to accommodate the travel-way, the sidewalk, and vegetated open channels.
- d. Minimize the number of street cul-de-sacs and reduce the radius of cul-de-sacs to the minimum required to accommodate emergency and maintenance vehicles. Alternative turnarounds shall be considered, including the use of mountable curbing and grass shoulders for the occasional event of access by fire trucks and other large commercial trucks. Provide landscape center islands wherever cul-de-sacs exist.
- e. Where density, topography, soils, and slope permit, use vegetated open channels in the street right-of-way/private road easements to convey and treat stormwater runoff.
- f. Use alternative driveway surfaces and shared driveways that connect two or more sites. (Use agreements should accompany any such application.)
- g. Promote more flexible design standards for residential subdivision sidewalks. Where practical, consider locating sidewalks on only one side of the street and providing common walkways linking pedestrian areas.

2. Parking

- a. Base parking requirements on the specific characteristics of the use, landbanking in open space parking required to satisfy Ordinance requirements.
- b. Reduce the overall imperviousness associated with parking lots by providing compact car spaces, minimizing stall dimensions, incorporating efficient parking lanes, depressed center islands with curb cuts, and using pervious materials in the spillover parking areas where possible.
- c. Encourage shared parking between compatible users.
- d. Encourage use of grass pavers or pervious pavers for little-used parking areas, for example, church parking lots that are used only once a week, etc.

3. Site Design

- a. Direct rooftop runoff to pervious areas such as yards, open channels, or vegetated areas and avoid routing rooftop runoff to the roadway and the stormwater conveyance system.
- b. Incorporate a "green roof" or a roof garden to create a vegetated roof system that retains and filters stormwater prior to drainage off building rooftops.
- c. Create naturally vegetated buffer systems, which may vary in width as determined by Kochville Township along all drainageways. Critical environmental features such as the 100-year floodplain, steep slopes, and wetlands shall be considered.
- d. Minimize clearing and grading of woodlands and native vegetation to the least amount needed to build lots, allow access, and provide fire protection.
- e. Conserve trees and other vegetation at each site by planting additional vegetation, clustering tree areas, and promoting the use of native plants.
- f. Incorporate shared use of detention/retention basins where feasible.

E. **Stormwater Facility Maintenance.**

Whenever a landowner is required to provide restricted discharge, on-site stormwater detention, and/or surface drainage to wetlands, or whenever other protective environmental measures including monitoring devices and oil & sediment separators are required, such measures or facilities shall be provided and maintained at the landowner's expense. The landowner shall provide assurance to Kochville Township that the landowner will bear the responsibility of providing and maintaining such methods or facilities, by written agreement, suitable for recording at the office of the Saginaw County Register of Deeds, that will act as a perpetual restriction on the land, the form and content of which shall be approved by the Kochville Township Attorney. A maintenance plan shall be provided including notation and description of maintenance requirements and timelines. Refer to the Kochville Township Stormwater Management Plan and Guidelines for a sample maintenance plan.