

SECTION 05-07 DESIGN STANDARDS

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Section 05-07-01. Conformity With the Comprehensive Plan and Zoning Ordinance. A proposed subdivision shall conform to the Comprehensive Plan, to related policies adopted by the City, and to the official Zoning Ordinance of the City.

Section 05-07-02. Land Requirements.

- A. Land shall be suited to the purpose for which it is to be subdivided. No plan shall be approved if the site is not suitable for the purposes proposed by reason of potential flooding, topography or adverse soil or rock formation.
- B. Land subject to hazards to life, health, or property shall not be subdivided until all such hazards have been eliminated or unless adequate safeguards against such hazards are provided by the subdivision plan.
- C. Proposed subdivisions shall be coordinated with surrounding jurisdictions and/or neighborhoods, so that the City as a whole may develop efficiently and harmoniously.

Section 05-07-03. Blocks.

- A. Block length and width or acreage within bounding streets shall be such as to

accommodate the size of residential lots required in the area by the Zoning Ordinance and to provide for convenient access, circulation control and safety of street traffic.

- B. Block Length: In general, intersecting streets shall be provided at such intervals so as to serve cross-traffic adequately and to meet existing streets. Where no existing plats control, the blocks in residential subdivisions should not exceed one thousand three hundred twenty (1,320) feet nor be less than three hundred thirty (330) feet in length, except where topography or other conditions justify a departure from this minimum. In blocks longer than six hundred (600) feet, ten (10) foot wide pedestrian rights-of-way and/or easements through the block may be required in locations deemed necessary for the public health, convenience and necessity. Suitable surfacing shall be provided in pedestrian ways.
- C. Block Width: The width of the block shall normally be sufficient to allow two (2) tiers of lots of minimum depth as required by the Zoning Ordinance except adjoining a lake, stream, river, railroad or arterial or where one tier or lot is necessary because of topographic conditions. Blocks intended for business or industrial uses shall be of such width as to be considered most suitable for their respective use, including adequate space for off-street parking, deliveries and loading. Such facilities shall be provided with safe and convenient limited access to the street system.

Section 05-07-04. Lots.

- A. Area: The minimum lot area, width and depth as defined by this Ordinance shall not be less than that established by the City Zoning Ordinance in effect at the time of adoption of the final plat.
- B. Side Lot Lines: Side lines of lots shall be at right angles to street lines, radial to curved street lines, or radial to lake or stream shores unless topographic conditions necessitate a different arrangement or the City Engineer finds such deviation acceptable.
- C. Building Sites: Each lot shall provide an adequate building site at least eighteen (18) inches above the top of the adjacent curb unless approved by the City Engineer upon the basis of plans submitted showing alternative, acceptable surface drainage measures.
- D. Butt Lots: Butt lots in subdivisions are to be discouraged. Where such lots must be used to fit a particular type of design, they shall be platted at least twenty (20) feet wider than the average width of interior lots in the block.
- E. Frontage: Every lot must have the minimum frontage on a City approved

public street other than an alley, as required in the City Zoning Ordinance.

- F. Access: Each lot shall directly access a public street. In cases where special conditions require an alternative means of access, it shall be subject to the review and approval of the City Council.
- G. Setback Lines: Setback or building lines shall be shown on all lots and shall not be less than the setback required by the City Zoning Ordinance, as may be amended.
- H. Watercourses: Lots abutting a watercourse, wetland, ponding area, drainageway, channel, or stream shall have additional depth and width, as required to comply with the approved drainage plan for the subdivision and to meet the provisions of the City Zoning Ordinance to assure building sites that are not subject to flooding. All lakeshore and stream regulations shall be strictly adhered to.
- I. Shoreland Frontage Lots: Lots that have frontage along the shorelines of waterbodies and watercourses shall be designed so that the 1~t lines extended shall maintain the closest approximation to riparian rights.
- J. Drainage: Lots shall be graded so as to provide drainage away from building locations, subject to the approval of the City Engineer. A development plan shall be submitted showing all lot grading and drainage provisions.
- K. Features: In the subdividing of any land, due regard shall be shown for all natural features, such as tree growth, watercourses, historic spots or similar conditions which, if preserved, will add attractiveness and stability to the proposed development.
- L. Irregular Shaped Lots: On lots determined to be irregular in shape (i.e., triangular), the developer shall demonstrate to the City an ability to properly place principal buildings and accessory structures upon the site which are compatible in size and character to the surrounding area.
- M. Regular Yard Setback Infringements: All lots shall be designed in consideration of potentials for buildings and accommodating three car garages, porches and decks, etc. Said buildings and structures are to be compatible in size and character with the surrounding area.
- N. Lot Remnants: All remnants of lots below minimum size for the respective zoning district in which they are located must be added to abutting lots or lots immediately adjoining. For remnants, separated by a public right-of-way, the lot remnants shall be designated an outlot. Lot remnants may be allowed if a plan for future use is found acceptable by the City Council.

- O. Political Boundaries: With the exception of school district boundaries, no singular plat shall extend over political jurisdictional boundaries. Where a singular plat extends over school district boundaries, no individual lot may extend over said school district boundary.
- P. Frontage on Two Streets:
 - 1. Double-frontage, or lots with frontage on two (2) parallel or non-intersecting streets shall not be permitted except:
 - a. Where lots back on arterial streets or highways, or
 - b. Where topographic or other conditions render subdividing otherwise unreasonable.
 - 2. Such double-frontage lots shall have an additional depth of at least twenty (20) feet or a reserve strip shall be created in order to allow space for screen planting along the rear lot line.
- Q. Turn-Around Access: Where proposed residential lots abut a collector street, they shall be platted in such a manner as to encourage turn-around access and egress on each lot and discourage direct access onto such streets.
- R. Access to Arterial Streets: In the case where a proposed plat is adjacent to a limited access highway, other major highway, or other arterial street, said streets to be defined by the City's Comprehensive Plan, there shall be no direct vehicular access from individual lots to such streets and roads. In the platting of small tracts of land fronting on limited access highways or arterial street where there is no other alternative, a temporary entrance may be granted, subject to terms and conditions defined by the City Council and applicable County or state agencies. As neighboring land becomes subdivided and more preferable access arrangements become possible, such temporary access permits shall become void.
- S. Access to Collector Streets: Direct vehicular access from individual lots to collector streets shall be prohibited where possible and subject to the determination of the City Council. In such cases where direct lot access to collector streets is allowed, special traffic safety measures including, but not limited to, provisions for on-site vehicle turn around shall be required.
- T. Outlots: The creation of outlots is to be discouraged. In such cases where outlots are created or exist, their area shall not be utilized in calculating minimums for buildable lot area requirements. Said outlots are also prohibited from qualifying for building permits.

Section 05-07-05. Streets.

- A. Proposed streets shall conform to State, County and City highway/street plans which have been prepared, adopted and/or filed as prescribed by law.
- B. Streets shall be logically related to the topography, so as to produce usable lots and reasonable grades.
- C. Access shall be given to all lots and portions of the tract in a subdivision and to adjacent unsubdivided parcels, unless the topography clearly indicates that such connection is not feasible. Reserved strips and land-locked areas shall not be created.
- D. The arrangement of streets in new subdivisions shall make provision for the appropriate continuation of existing streets in adjoining areas.
- E. Where adjoining areas are not subdivided, but may be subdivided, the arrangement of streets in a new subdivision shall make provision for the proper projection of streets into adjoining areas by carrying the new streets to the boundaries of the new subdivision at appropriate locations. A temporary turn-around facility shall be provided at the closed end, in conformance with cul-de-sac size requirements. Temporary facilities shall not require curb and gutter and the construction standards shall be established by the City Engineer. Construction of said streets shall be to the boundary of the plat.
- F. Local streets shall be laid out to discourage their use by through traffic. The arrangement of arterial and collector streets shall be considered in their relation to the reasonable circulation of traffic, to topographic conditions, to runoff of storm water, to public convenience and safety, to their appropriate relationship to the proposed uses of the area to be served and in compliance with the City's Comprehensive Plan.
- G. Provisions for Re-subdivision of Large Lots and Parcels: When a tract is subdivided into larger than normal building lots or parcels which have the potential for further subdivision with the installation of public utilities, such lots or parcels shall be so arranged as to permit the logical location and openings of future streets and appropriate re-subdivision, with provision for adequate utility connections for such Re-subdivision.
- H. Dead-end streets shall be prohibited, except as stubs to permit future street extension into adjoining tracts with temporary cul-de-sacs, or when designed as cul-de-sac streets.
- I. Private streets and reserve strips, except in the case of planned unit developments, shall be prohibited and no public improvements shall be approved for any private street. All streets shall be dedicated for public use. If any person applies to subdivide or replat any land or parcels adjoining an

existing private street, the private street shall be required to be dedicated for public use and scheduled for improvement to public street standards at the time of final plat.

- J. Where a subdivision abuts or contains an existing or planned arterial or a railroad right-of-way, a street approximately parallel to and on each side of such arterial and right-of-way may be required for adequate protection of residential properties and separation of through and local traffic. Such service streets shall be located at a distance from the major arterial or railroad right-of-way suitable for appropriate use of the intervening land, as for park purposes in residential districts, or for commercial and industrial purposes in appropriate districts. Such distances also shall be determined with due regard for the requirements of approach grades and future grade separations.
- K. The street design shall not be such as to cause hardship to owners of adjoining property in platting their land and providing convenient access thereto.

Section 05-07-06. Cul-De-Sac Streets.

- A. Cul-de-sac streets shall only be allowed where one or more of the following criteria have been met:
 - 1. Area topography or other physical site conditions warrant a cul-de-sac, dead-end design.
 - 2. A through street is not physically feasible.
 - 3. Lots on the cul-de-sac turn-around shall exceed the zoning district minimum lot width (frontage) standard by ten (10) percent.
- B. Cul-de-sac streets permanently designed as such, shall not exceed five hundred (500) feet in length, including a terminal turn-around which shall be provided at the closed end, with a right-of-way radius of not less than sixty (60) feet. The length shall be measured along the centerline from the nearest intersection to the end of the right-of way.
- C. Where a temporary cul-de-sac is required, the turn-around right-of-way shall be placed adjacent to a plat boundary line and a right-of-way of the same width as the street shall be carried to said property line in such a way as to permit future extension of the street into the adjoining tract. At such time as such a street is extended, the acreage covered by the turn-around outside the boundaries of the extended Street shall revert in ownership to the property owner fronting on the temporary turn-around.

Section 05-07-07. Street Design.

- A. Widths: Street right-of-way widths shall be as determined in the Comprehensive Plan and official map, and where applicable, shall conform to County and State standards for trunk highways. In cases where no standard is provided, the following minimum standards shall apply:

Functional Classification	Right-of Way Width (feet)	Paving Width (feet)
Major Arterial	100 (1)	54
Minor Arterial	80 (1)	54
Major Collector	80 (1)	44
Minor Collector	66	36
Local Residential	60	32
Local Commercial/Industrial	80 (1)	44
Municipal/County State Aid Highway	MnDOT Standard	MnDOT Standard

1. increase an additional twenty (20) feet at intersections with multiple turn lanes.
- B. Street Intersections: Insofar as practical, streets shall intersect at right angles. In no case shall the angle formed by the intersection of two (2) streets be less than eighty (80) degrees. Intersections having more than four (4) corners shall be prohibited. Adequate land for future intersections and interchange construction needs shall be dedicated.
- C. Tangents: A tangent of at least one hundred (100) feet shall be introduced between reverse curves on arterial and collector streets.
- D. Deflections: When connecting street lines deflect from each other at one point by more than ten (10) degrees, they shall be connected by a curve with a radius adequate to ensure a sight distance of not less than five hundred (500) feet for arterial streets, three hundred (300) feet for collector streets, and two hundred (200) feet for all other streets. The City Council may allow greater or lesser sight distances.
- E. Street Intersection Offsets: Street intersection jogs with centerline offsets of less than two hundred (200) feet shall be prohibited.
- F. Centerline Gradients: All centerline gradients shall be at least five-tenths (0.5%) percent and shall not exceed the following:
1. Arterial and collector streets - five (5) percent.
 2. Local streets and frontage roads - eight (8) percent.

- G. Centerline Curvature: The minimum horizontal curvature of streets shall be in accordance with the MnDOT Highway Design Manual for the type of street and design speed. The minimum curvature shall be two hundred fifty (250) feet radius.
- H. Access to Limited Access Highways: In the case where a proposed plat is adjacent to a limited access highway, there shall be no direct vehicular or pedestrian access from individual lots to such highways. As a general requirement, access to such limited access highways shall be at intervals of not less than one-half ($\frac{1}{2}$) mile and through existing and established crossroads where possible. Any such proposed access shall be subject to state or County approval as may be applicable as well as City approval.
- I. Platting of Small Tracts: In the platting of small tracts of land fronting on a limited access highway where there is no convenient access to existing entrances and where access from such plat would be closer than one-half ($\frac{1}{2}$) mile from an existing access point, a temporary entrance permit may be granted. Provision shall be made in such plats for the connection of roads to neighboring land, as the neighboring land is platted and developed, and access becomes possible at a preferred location, such temporary entrance permits shall become void at the discretion of the City.
- J. Half Streets: Half streets shall be prohibited except where it will be practical to require the dedication of the other half when the adjoining property is subdivided, in which case the dedication of a half Street may be permitted. The probable length of time elapsing before dedication of the remainder shall be considered in this decision. No permanent street improvement shall be permitted within a half street right-of-way. All lots having frontage or access solely from a half Street are prohibited from being eligible for building permits.
- K. Reserve Strips. Reserve strips controlling access to streets shall be prohibited except under conditions accepted by the City Council.
- L. Reverse Curves. Minimum design standards for collector and arterial streets shall comply with Minnesota State Aid standards.
- M. Dedication: All proposed streets shown on the plat shall be in conformity to City, County and State plans and standards and be offered for dedication as public streets unless otherwise determined by the City Council.
- N. Where a subdivision abuts or contains an existing Street of inadequate width, sufficient additional width shall be provided to meet the standards of this Chapter.
- O. Additional right-of-way and roadway widths may be required by the Council

to promote public safety and convenience when special conditions require it.

- P. Restriction of Access: Access of local streets onto arterial and collector streets shall be discouraged at intervals of less than five hundred (500) feet.
- Q. Corner Radii: Roadways of street intersections shall be rounded by a radius of not less than fifteen (15) feet. Corners at entrances to the turn-around portions of cul-de-sacs shall be rounded by a radius of not less than fifteen (15) feet. Corner radius to arterial and collector streets shall be no less than fifty (50) feet.
- R. Curb and Gutter: All urban streets, and all streets in commercial and industrial areas, shall have curb and gutter in compliance with established City standard design detail plates.
- S. Street Designation: Streets shall be designated pursuant to established City and County standards in compliance with these standards and as approved by the City Council. The following policies may be generally applied when designating awkward street and avenue configurations.
 - 1. Cul-de-sacs less than three hundred (300) feet shall assume the designation of the street or avenue they abut.
 - 2. No street names shall be used that will duplicate or be confused with the names of existing streets.
 - 3. Loops shall be designated avenues, streets or a combination of both, depending on the depth of the configuration. Generally, the longer the length or depth, the greater the applicability for a separate street and avenue designation. For short loops, the word "circle" shall be used to indicate the configuration.
 - 4. Names of new streets shall not duplicate existing or platted street names, unless a new street is a continuation of or in alignment with the existing or platted street. In that event, it shall bear the same name of the existing or platted street. Street names shall conform to the City's Street Naming and Property Numbering System as applicable.
- T. Streets in Flood Hazard Area: No street shall be approved if its final surface is at a lower elevation than two (2) feet below the regulatory flood protection elevation. The City Council may require profiles and elevations of finished streets for areas subject to flooding. Fill may be used for streets, provided such fill does not unduly increase flood heights and provided any such fill would not result in a stage increase violating the requirements of Minnesota Statutes, Chapters 104 and 105, as may be amended, and any applicable

requirements imposed by the Federal Emergency Management Agency pursuant to its rules and regulations. Drainage openings shall not restrict the flow of water so as to unduly increase flood heights and provided any such drainage opening would not violate the requirements of Minnesota Statutes, Chapters 104 and 105, as may be amended, and any applicable requirements imposed by the Federal Emergency Management Agency pursuant to its rules and regulations.

Section 05-07-08. Alleys.

- A. Location Requirements: Alleys or service drives shall be prohibited. In commercial and industrial districts, the City Council may waive this requirement where no other definite and assured provisions are possible for service access. All loading and unloading facilities shall be located wholly within the private property, and no such facilities shall be located on or in such a way as to obstruct the free use of the City streets.
- B. Widths: The right-of-way width of any permitted alleys or service drives shall be at least twenty-four (24) feet.
- C. Cul-de-Sacs: Cul-de-sac alleys shall be prohibited. If found to be unavoidable, they shall be provided with adequate turnaround facilities at the dead end as determined by the City.
- D. Grades: All centerline gradients in permitted alleys shall be at least five-tenths (0.5%) percent and shall not exceed four (4) percent.
- E. Prohibited: No alleys shall be permitted in residential areas platted after 1 July 1996.

Section 05-07-09. Sidewalks/Pedestrian Ways. Adequate provisions for pedestrian movement within the subdivision, along the subdivision, and to adjoining property shall be provided in compliance with the Comprehensive Plan and policies established by the City Council. All sidewalks and pedestrian ways shall be designed and constructed according to established City standards.

Section 05-07-10. Public Utilities.

- A. All extensions of public utilities, including water and sanitary sewer systems, shall be approved by the City Engineer.
- B. Water Supply: Extensions of the public water supply system, when available, shall be designed so as to provide public water service to each lot. All water systems located in flood-prone areas, whether public or private, shall be floodproofed to a point at or above the regulatory flood protection elevation.

- C. Sewage Disposal: Extension of the public sanitary sewer system, when available, shall be designed so as to provide public sewer service to each lot,

Section 05-07-11. Sewage Disposal and Storm Drainage for Areas Without Central or Public Services. In areas being platted without central or public sewers, the on-site sewer system, including the size and relative location of same, shall be in conformance with City, State and Federal requirements including specifically any FEMA rules and regulations pertinent to on-site sewer and water. When such requirements conflict, the most restrictive shall apply. In addition to those standards, the following requirements shall also apply unless in conflict with a more restrictive requirement referenced above:

- A. The subdivision shall be subject to soil and percolation tests being made to determine whether or not the lot sizes proposed will meet minimum standards of health and sanitation due to limitations of soils as shown on existing soils maps. Such tests shall be made at the expense of the applicant and a sketch map shall be submitted with the preliminary plat to identify the specific locations where tests were made.
- B. No cesspools or seepage pits shall be allowed.
- C. The City may prohibit installation of sewage disposal facilities requiring soil absorption systems where such systems will not function due to high ground water, flooding, or unsuitable soil characteristics.
- D. Storm Water Drainage Facilities: Storm water drainage facilities, where required, shall be designed to convey the flow of surface waters without damage to persons or property. The system shall insure drainage at all points along streets, and provide positive drainage away from building and on-site waste disposal to accommodate frequent floods. Drainage plans shall be consistent with local and regional drainage plans. The facilities shall be designed to protect against surface erosion and siltation of surface water and to prevent the discharge of excess runoff onto adjacent properties.
- E. Storm Water Drainage Standards: All developments shall be responsible for control of surface or storm water to equal or improve pre-development conditions. Developmental drainage systems shall be provided that accept flow from upstream areas, that control, convey, and pond developmental runoff, that limit outflow to the natural pre-development rate, and that do not have detrimental impacts on downstream properties. All pipe conveyance shall be to five (5) year design return frequency. Flood protection shall be provided for one hundred (100) year design return frequency. All ponding, detention or retention shall be designed for one hundred (100) year frequency storm condition with a positive outlet. Flood protection for public and personal property shall be one (1) foot plus any encroachment above the floodplain.

Section 05-07-12. Conditions in Flood Hazard Areas. All developments in flood hazard areas shall include:

- A. Construction and modification of sewage, water supply and drainage facilities to meet the standards of this Chapter and to promote the health, safety and general welfare.
- B. Construction of channel modifications, dikes, levees and other protective measures to include filling in.
- C. Establishment of flood warning systems.
- D. Imposition of operational controls, sureties and deed restrictions enforceable by the City to restrict the type and design of uses. Such restrictions shall include floodproofing of intended uses mandated by the Minnesota State Building Code. Structurally dry floodproofing standards for construction shall be in accordance with the Minnesota State Building Code. (See Section 05-08-08 of this Ordinance, Minimum Floodproofing standards for Basement Construction.)

Section 05-07-13. Flood Warning Signs in Flood-Prone Areas.

- A. The limits of the areas which have been or would be inundated by the 100-year flood shall be delineated as reasonably practical at three hundred (300) foot intervals by means of firmly placed markers of sufficient size to be easily read from a distance of twenty (20) feet. The markers shall record the maximum known depth of flooding or height to the flood protection level, whichever is greater.
- B. All flood warning signs in flood-prone areas shall be in accordance with the above requirements or any other additional requirements as provided by the use of the 100-year flood profile and other supporting technical data in the Flood Insurance Study and the Flood Insurance Rate Map.
- C. The subdivision markers shall meet the following specifications:
 - 1. The marker(s) shall be on substantial permanent metal posts.
 - 2. The marker(s) shall have notification painted white and shall be stenciled or otherwise lettered with the inscription "100-year flood elevation". This lettering is to be of a permanent nature.
 - 3. The marker(S) be firmly placed in the ground and be at least two (2) feet above the ground.
 - 4. The cost of preparing and installing such marker(s) shall be borne

by the applicant and the marker(s) shall be installed prior to the sale of lots and construction of any buildings or structures.

Section 05-07-14. Drainage. A complete and adequate drainage system design shall be required for the subdivision and may include a storm sewer system or system of open ditches, culverts, pipes, catch basins and ponding areas, or a combination thereof.

Section 05-07-15. Easements. All easements shall be dedicated by appropriate language on the final plat as required by law and provisions of this Chapter.

- A. Drainage and Utility Easements: Easements of a minimum of twenty (20) feet wide or a width equal to the required side yard setback established by the respective zoning district in which the property is located, whichever is least, centered on rear and other lot lines, shall be provided for drainage and for public and private utilities. Lot easements shall be a minimum of ten (10) feet when no easement exists on the adjoining parcels. When it is not practical to center easements, the fully required easement width may be required along one property line. Said easements shall have continuity of alignment from block to block. The easements, when approved, shall not thereafter be changed without the approval of the City Council pursuant to established City Code procedures, as may be amended.
- B. Drainage: Easements shall be provided along each side of the centerline of any natural watercourse or drainage channel to a width sufficient to provide proper maintenance and protection and to provide for storm water runoff. Where necessary, drainage easements corresponding with lot lines shall be provided. Such easements for drainage purposes shall not be less than twenty (20) feet in width or a width equal to the required side yard setback established by the respective zoning district in which the property is located, whichever is least.
- C. Sight: Sight easements beyond required zoning setback regulations may be required by the City and State Highway Department to protect major intersections on the Street and highway system.
- D. Exclusion from Minimum Lot Area. Easements established over wetlands and utility/pipelines shall be excluded from the calculation of minimum lot area as defined by this Ordinance.
- E. Outlot Alternative: The City may at its discretion choose to require outlots rather than easements for wetlands, drainage ways and other natural features.

Section 05-07-16. Erosion and Sediment Control. The following guidelines shall be applied in the subdivision:

- A. The development shall conform to the natural limitations presented by

topography and soil so as to create the least potential for soil erosion.

- B. Land shall be developed in increments of workable size such that adequate erosion and siltation controls can be provided as construction progresses. Appropriate control measures shall be installed prior to development when necessary to control erosion. The smallest practical area of land shall be exposed at any one period of time.
- C. When soil is exposed, the exposure shall be for the shortest feasible period of time, as specified in the development agreements.
- D. Where the topsoil is removed, sufficient arable soil shall be set aside for re-spreading over the areas to be planted. The soil shall be restored to a minimum depth of four (4) inches or a depth as may be established by the City Engineer and shall be of a quality at least equal to the soil quality prior to development.
- E. Natural vegetation shall be protected wherever possible.
- F. As determined by the City Engineer, runoff water shall be diverted to a sedimentation basin before allowed to enter the natural drainage system. Storm water runoff from the developed site shall not, at any time, exceed the runoff rate existing prior to development except as may be approved by the City Council.
- G. The City shall have the authority to remove the topsoil for its own purposes from all dedicated streets within its corporate boundaries. Said topsoil shall be utilized in the development project from which it is taken unless otherwise specified as part of a development agreement.
- H. Erosion and sediment control plans shall be developed in accordance with Minnesota Pollution Control Agency regulations and are subject to review and approval of the City Engineer, prior to construction.

Section 05-07-17. Protected Areas.

- A. Where land proposed for subdivision is deemed environmentally sensitive by the City due to the existence of waterbodies, wetlands, drainageways, watercourses, floodable areas, vegetation, steep slopes or historic sites, the design of said subdivision shall clearly reflect all necessary measures of protection to ensure against adverse environmental impacts. Such measures, when deemed appropriate by the City, may include, but shall not be limited to, the following:
 - 1. The establishment of easements and/or outlots over wetlands, drainageways, watercourses, and waterbodies.

2. The implementation of flood control measures.
3. The enlargement of lots or redesign of the subdivision.
4. The submission of a tree preservation plan subject to the review of the City Engineer and approval of the City Council.
5. The utilization of appropriate erosion control measures subject to approval by the City Engineer.
6. Soil testing to determine the ability of the proposed subdivision to support development.
7. The limitation of development on slopes steeper than three to one (3:1).
8. Structure conformance to the natural limitations presented by the topography and soil so as to create the least potential of soil erosion.

Section 05-07-18. Tree Preservation. The following process for preserving significant trees shall be required of subdividers. Subdividers, however, are encouraged to preserve all established healthy trees even if the trees are less than six (6) inches in diameter.

A. Subdividers:

1. Subdividers shall:
 - a. Comply with all applicable landscape plan requirements outlined the Howard Lake Zoning Ordinance.
 - b. Prepare a Tree Preservation Plan which shall be incorporated on the grading plan.
 - c. Ensure the Tree Preservation Plan is followed during the plan development (mass grading).
 - d. Submit a five hundred dollar (\$500.00) security for the preparation of individual lot Tree Preservation Plans for each lot which has at least one significant tree to be saved. The security shall be included in the development contract,
2. The Tree Preservation Plan shall be certified by a forester or landscape architect. The forester or landscape architect shall include on the plan the following items:
 - a. Mass graded areas.
 - b. Custom graded lots.
 - c. Size, species, and location of all significant trees.
 - d. Identification of all significant trees proposed to be saved and significant trees proposed to be removed.

- e. Measures proposed to protect significant trees shall include but are not limited to:
 - (1) Marking with a red flag and installation of snow fencing or polyethylene laminar safety netting at the drip-line prior to excavation.
 - (2) Placing fill against the trunk of the tree, on the roof crown, and under the drip-line of the tree shall be prohibited.
 - (3) Installation of erosion control measures.
 - (4) Prevention of change in soil chemistry due to concrete washout and leakage or spillage of toxic materials such as fuels or paints.
 - (5) Pruning of oak trees shall not take place from April 15 through July 1. If wounding of oak trees occurs, a nontoxic tree wound dressing must be applied immediately. Excavators must have a nontoxic tree wound dressing with them on the development site.
- 3. The Tree Preservation Plan shall be subject to review and approval by the City Engineer.
- 4. The subdivider shall provide a financial guarantee as part of the development contract to ensure protection of all significant trees which are to be saved. The subdivider shall provide a financial security for each lot which has at least one significant tree to be saved. The financial security, generally one thousand (1,000.00) dollars per lot, shall be determined by the Zoning Administrator based on the number and size of trees to be saved. The security shall be included in the escrow deposit section of the development contract.
- 5. After the mass grading has been completed and streets and utilities installed, the forester or landscape architect shall:
 - a. Certify in writing to the City the Tree Preservation Plan was followed.
 - b. Certify in writing to the City the tree protection measures were installed.
 - c. Indicate which significant trees proposed to be saved have been destroyed or damaged.
- 6. If a significant tree indicated to be saved on the Tree Preservation Plan is destroyed or damaged, the City's tree replacement requirements as outlined in Section 05-07-18 (D) of this Ordinance shall be enforced.

7. The financial security shall be released upon: 1) certification in writing by the forester or landscape architect indicating the tree protection measures were installed on mass graded lots and tree replacement is completed, if necessary and/or 2) the builders have posted security for the custom graded lots. The location of the trees being replaced will be determined on the individual lot Tree Preservation Plan.
8. Tree preservation measures shall require written approval from the City Engineer prior to removal and shall not be removed from the site until the City Engineer has approved the grading as built plans for a mass graded site nor prior to the release of financial securities held by the City.

B. Home Builders:

1. The City shall require an individual lot Tree Preservation Plan prepared and incorporated on the required site survey for each custom graded lot with at least one significant tree. The plan shall be consistent with the original Tree Preservation Plan for the plat. The homeowner, builder, and the forester or landscape architect shall meet prior to the development of the individual lot Tree Preservation Plan to determine the placement of the home where the fewest significant trees would be destroyed or damaged. The builder shall be responsible for ensuring the Tree Preservation Plan is followed during building construction.
2. On mass graded lots with at least one significant tree to be saved, builders shall follow the Tree Preservation Plan for the plat.
3. The individual lot Tree Preservation Plan shall be certified by a forester or landscape architect and signed by the homeowner. The forester or landscape architect shall indicate on the plan the following:
 - a. Size, species, and location of all significant trees.
 - b. Identification of all significant trees proposed to be saved and significant trees proposed to be removed.
 - c. Measures proposed to protect significant trees shall include but not limited to:
 - (1) Installation of snow fencing or polyethylene laminar safety netting placed at the drip-line.
 - (2) Placing fill against the trunk of the tree, on the root crown, and under the drip-line of the tree shall be prohibited.

- (3) Installation of erosion control methods.
 - (4) Prevention of change in soil chemistry due to concrete washout and leakage or spillage of toxic materials such as fumes or paints.
 - (5) Pruning of oak trees shall not take place from April 15 through July 1. If wounding of oak trees occurs, a nontoxic tree wound dressing must be applied immediately. Excavators shall have a nontoxic tree wound dressing with them on the development site.
4. Home builders shall be required to furnish the following items for tree preservation at the time the building permit application is submitted for all lots with at least one significant tree:
 - a. Security of one thousand (\$1,000.00) dollars per lot for tree protection requirements.
 - b. Certification from a forester or landscape architect indicating tree protection measures are installed.
 - c. Builders shall be liable for subcontractors which destroy or damage significant trees which were indicated to be saved on the individual lot Tree Preservation Plan.
5. The City Engineer shall monitor the tree protection measures at the time of routine inspections.
6. Prior to the issuance of a Certificate of Occupancy and release of tree preservation security, the applicant's forester or landscape architect shall certify to the City in writing that all the tree protection measures identified on the Tree Preservation Plan were installed from the start of construction to the end of construction and tree replacement is completed, if necessary.
- D. Tree Replacement Requirements: Subdividers and builders shall be required to replace the significant trees which were indicated on the Tree Preservation Plan to be saved, but ultimately were destroyed or damaged. The subdivider and builder shall be required to replace each of the significant trees destroyed or damaged with two (2) replacement trees. Replacement trees shall consist of nursery stock and be no less than the following sizes:
 1. Deciduous trees - no less than two (2) inches in diameter.
 2. Coniferous trees - no less than six (6) feet high.

Replacement trees shall be species similar to the trees which were destroyed or damaged and can include those species shown on the following table:

Deciduous Trees:	Maple	Oak
	Linden (Basswood)	Birch
	Ash	Ginko (male only)
	Honey Locust	Kentucky Coffeetree
	Hackberry	
Coniferous Trees:	Fir	Eastern Hemlock
	Spruce	Northern White Cedar
	Pine	Tamarack

Replacement trees shall not be placed on easements or street rights-of-way. If tree replacement is required on the individual lot because the builder destroyed or damaged a tree which was to be saved, the applicant's forester or landscape architect shall determine where the replacement trees shall be installed.

Section 05-07-19. Public Sites and Open Spaces (Park Land Dedication).

- A. As a prerequisite to final plat approval, and at the sole determination by the City, applicants and/or developers shall dedicate land for parks, playgrounds, public open spaces or trails and/or shall make a cash contribution to the City's Park and Multi-Purpose Trail Funds roughly related to the anticipated effect of the plat on the park and trail system. The amounts listed in this section are the City's best estimate of the dedication or cash contribution needed to offset the effect on those systems. The requirement may also be met with a combination of land and cash if approved by the City Council.
- B. Land to be dedicated shall be reasonably suitable for its intended use as determined by the City and shall be at a location convenient to the public to be served. Factors used in evaluating the adequacy of proposed park and recreation areas shall include size, shape, topography, geology, hydrology, tree cover, access and location.
- C. The applicant shall confer with City Staff and the Parks and Recreation Advisory Committee at the time the preliminary plat is under consideration, to secure a recommendation as to the location of any property that should be dedicated to the public, such as parks, playgrounds or other public property. The preliminary plat shall show the location and dimensions of all areas to be dedicated in this manner. Such contribution requirement recommendation(s) will be sent to the Planning Commission for review and comment and subsequently to the City Council for their approval.
- D. When a proposed park, playground, recreational area, or other public ground has been indicated in the City's official map or Comprehensive Plan and is located in whole or in part within a proposed plat, it shall be dedicated to the appropriate governmental unit. If the applicant elects not to dedicate an area in excess of the land required hereunder for a proposed public site that the

City feels is in the public interest to acquire, the City may consider acquiring the excess land through purchase or condemnation.

- E. Land area conveyed or dedicated to the City shall not be used in calculating density requirements of the City Zoning Ordinance and shall be in addition to and not in lieu of open space requirements for planned unit developments.
- F. Where private open space for park and recreation purposes is provided in a proposed subdivision, such areas shall not be used for credit against the requirement of dedication for park and recreation purposes, unless the City Council finds it is in the public interest to do so.
- G. The City, upon consideration of the particular type of development, may require that a lesser parcel of land should be dedicated due to particular features of the development. In such cases, a cash contribution shall be required above the land dedication to insure that compensation is received for the full amount of the impact on the City's park and trail system.
- H. In all new subdivisions, ten (10) percent of the gross area subdivided, or a different percentage as the City Council shall determine to be reasonably necessary as a result of the subdivision approval, shall be dedicated for public recreation space or other public use as established by City Council resolution. The dedicated percent of the gross area subdivided shall be in addition to property dedicated for streets, alleys, easements, or other public ways. No areas may be dedicated for public use until such areas have been approved by the City Council as suitable and necessary for the health, safety, convenience and general welfare of the City.
- I. When a subdivision is proposed, the Developer shall make a dedication of land for public park use, as provided for in Section 05-07-19 (H) of this Ordinance, or shall pay a fee in lieu of such land dedication as established by City Council resolution. Said amount is the City's best estimate of the effect of the subdivision on the City's park system.
- J. All land proposed for trail and/or bikeway dedication shall be subject to the recommendations of the Parks and Recreation Advisory Board and the approval of the City Council.
- K. When a subdivision is proposed, the Developer shall make a dedication of land for public trail use, as provided for in Section 05-07-19 (H) of this Ordinance, or shall pay a fee in lieu of such land dedication as established by City Council resolution. Said amount is the City's best estimate of the effect of the residential subdivision on the City's trail system.
- L. The City may elect at its sole discretion to receive a combination of cash, land, and development of the land for park and/or trail use. The potential

cash donation generated by the dedicated land and/or the value of the development of land shall be calculated. That amount shall be subtracted from the cash contribution required by the Subsections I and K above.

- M. Planned unit developments with mixed land uses shall make cash and/or land contributions in accordance with this Section based upon the percentage of land devoted to the various uses.
- N. Park cash contributions are to be calculated and established at the time of final plat approval. The Council may require the payment at the time of final plat approval or at a later time under terms agreed upon in the development agreement. Delayed payment may include interest at a rate set by the City.
- O. Cash contributions for parks and trails shall be deposited in either the City's Park Fund or multi-purpose trail fund and shall only be used for park acquisition or development, and trail acquisition or development as determined by the City. Additionally, said funds may be utilized anywhere within the City park and trail systems.
- P. Wetlands, ponding areas, and drainageways accepted by the City may not be considered in the park land and/or cash contribution to the City.
- Q. Property being replatted with the same number of lots and same number of dwelling units shall be exempt from all park land dedication requirements. If the number of lots or the number of dwelling units is increased, or if land outside the previously recorded plat is added, then the park land dedication and/or park cash contributions shall be based on the additional lots and on the additional land being added to the plat. If the additional land does not create additional lots, then each one-third (1/3) acre added shall be considered a new lot for purposes of calculating the dedication requirements.
- R. When land is dedicated and deeded to the City for park purposes, it shall be the responsibility of the City to maintain such dedicated property.
- S. Land dedication to the City shall be in the form of lots or outlots with approved lot and block numbers.
- T. If the applicant or developer does not believe that the estimates contained in this section fairly and accurately represent the effect of the subdivision on the park or trail system of the City, the applicant or developer may request that the City prepare an in-depth study of the effect of the subdivision on the park and trail system and an estimate of that effect in money and/or land. All costs of such study shall be borne by the developer or applicant. If the developer or applicant requests the preparation of such a study, no application for development submitted shall be deemed complete until the study has been completed and a determination is made as to the appropriate

amount of land or money necessary to offset the effects of the subdivision.

Section 05-07-19. Dedication of Storm Water Holding Areas or Ponds. Upon approval by the City Council, the applicant may be required to dedicate to the public up to five (5) percent of the land proposed to be subdivided for storm water holding areas or ponds. The five (5) percent dedication shall not be considered part of the dedication for parks and recreation purposes or trail/bikeway purposes.

Section 05-07-20. Maintenance of Private Open Space. In the event certain land areas or structures are provided within the subdivision for private recreational use or as service facilities, the owner of such land and buildings shall enter into an agreement with the City to assure the continued operation and maintenance to a predetermined reasonable standard. These common areas may be placed under the ownership of one of the following depending upon which is most appropriate:

- A. Dedicated to public where a community-wide use would be anticipated;
- B. Applicant's ownership and control; or
- C. Property owners association ownership and control, provided all of the following conditions are met:
 - 1. The property owners association must be established prior to the sale of any lot.
 - 2. Membership must be mandatory for each owner and any successor in interest.
 - 3. The open space restrictions must be in perpetuity not for a given period of years.
 - 4. The association must be responsible for liability insurance, local taxes and the maintenance of the recreational area and facilities.
 - 5. Landowners (homeowners) must pay their prorated share of the cost and any assessment levied by the association that can become a lien on the property in accordance with law.
 - 6. The association must be able to adjust the assessment to meet changed needs.

Section 05-07-21. Minimum Design Features. The design features set forth in this Chapter are minimum requirements. The City may impose additional or more stringent requirements concerning lot size, streets and overall design as deemed appropriate considering the property being subdivided based upon site considerations and the Howard Lake Comprehensive Plan.