VI. DESIGNCRITERIA AND SPECIFICATIONS FOR SUBDIVISION IMPROVEMENTS

6.1 *General:*

(A) *Approval of Improvements.* All plans, specifications, and calculations involving streets, sidewalks, drainage, sewer, and other subdivision improvements shall be prepared and stamped by a professional engineer currently licensed in the State of New Hampshire and shall conform to the most recent edition of the City of Manchester, Highway Division "Standard Specifications for Road, Drain, and Sewer Construction," [hereinafter referred to as the "Standard Specifications"] unless otherwise noted.

(B) *Installation and Maintenance.* The applicant is responsible for the satisfactory installation of all required improvements and maintenance of these improvements in a satisfactory condition without cost to the City until their acceptance by the City.

(C) *Timing of Improvements.* The Board may require that the applicant enter into a Subdivision Improvement Agreement to relate the timing of public improvements to private development and to minimize hardships or other adverse effects which might arise from unanticipated delays in completion of all required improvements. Failure to comply with the terms of this agreement may be considered as failure on the part of the applicant to provide the required improvements, and may be considered adequate grounds for action against the applicants financial guarantee in order to guarantee the completion of those required improvements.

6.2 ***Street Construction and Design.*** All streets shall be designed and constructed in accordance with the Standard Specifications of the Highway Division and in accordance with standards established in Section VI of these regulations. The Board shall encourage the reduction of street pavement width for Local Streets in single-family subdivisions that are not intended to serve significant amounts of through traffic.

6.3 ***Sanitary Sewers.*** The Board shall require the installation of sanitary sewers in any subdivision located within or reasonably close to the public sanitary sewer system of the City. Sanitary sewers shall be located within street rights-of-way unless topography dictates otherwise. When located in easements on private property, the sub-divider shall deed access to the City and shall identify the sanitary sewer easement on the final plan. All plans and profiles shall be designed in accordance with the Standard Specifications and these regulations. In areas not presently served by the city sewer systems, it shall be the responsibility of the applicant to provide the required state approvals for the installation and operation of an individual sewage disposal system.

6.4 ***Storm Drainage.*** Adequate storm water drainage systems, independent of sanitary sewer systems, shall be provided that take into account potential runoff from the upstream drainage area and the effect upon existing downstream facilities. The minimum design criteria for all systems shall be a 10-year storm and shall be constructed in accordance with the Standard Specifications. The Board may require the installation of additional facilities such as detention ponds in order to maintain pre-development runoff rates. These areas shall be fenced, loamed and seeded, and conveyed to the City in a property interest acceptable to the Department of Public Works.

All detention ponds shall be privately owned and maintained. Applicants shall provide easements to the City for access to all inlet and outlet structures connected to the City system.

6.5 ***Pedestrian Walks/Curbing.*** Applicants shall construct sidewalks when their properties abut streets identified as "Key Streets", "School Approach and Staging Streets" and all streets within the urban core as shown on the most recent map adopted by the Committee on Community Improvement of the Board of Mayor and Aldermen. Applicants shall also construct sidewalks when doing so would continue an existing sidewalk. The Planning Board may require the construction of sidewalks in subdivisions involving commercial or multifamily development. The Planning Board may also require construction of sidewalks in single-family and duplex subdivisions in the following instances: 1) Where a street is designated for sidewalks or vertical granite curbing under the Master Plan or a special streetscape plan adopted by the Board; 2) Where the subdivision abuts a high-traffic-volume street; or 3) sidewalks/curbing are necessary to protect pedestrian safety. All curbs shall be vertical, granite curbing. All sidewalks shall include street trees in either the accompanying grass panel, for 6' sidewalks, or in grates, for 10' sidewalks, at distances acceptable to the Planning Board.

Mailboxes shall be sited so as to meet U.S. Postal Service standards without encroaching into minimum sidewalk widths.

6.6 ***Survey Monuments and Bounds.*** Survey monuments and bounds shall be shown and described on the Final Subdivision Plan and a notation is required on the Final Subdivision Plan signed by the surveyor certifying that the monuments and bounds shown thereon have been found or set or will be set under his supervision prior to conveyance of approved lots. The placement of all survey monuments depicted on the plan shall occur prior to final approval. All monuments shall be placed in accordance with *N.H. Admin. Rules* Lan 503.08.

Street monuments for new streets shall be granite, shall be dimensioned and installed in accordance with any requirements of the Standard Specifications, and shall be located on street right-of-way lines at every change in horizontal direction, at PC and PT of every curved line, and at the point of intersection of

right-of-way lines where there are no curved corners. In subdivision of land on an existing street, the plan shall show reference data to an existing street monument or one that has been set for reference purposes. Monuments or durable bounds shall also be set to identify the sidelines of Public easements and in such other locations as may be specified in the review and consideration process.

In addition, for all subdivisions, durable lot bounds shall be set at all corners and/or changes in direction of all lot boundary lines, or of off-set reference lines as appropriate, and shall be of such material and set in such manner as recognized land survey procedures may recommend for durability and future usefulness.

6.7 ***Easements.*** All easements that affect the existing property, or are proposed to affect the property, shall be shown on a submitted plan. Easements, at least twenty (20) feet in width, shall be provided for all stormwater and sanitary sewer pipes that are located other than in the streets. Easements shall also be provided for the full width of the channel of any stream or drainage ditch which will carry drainage runoff from any proposed street, existing street or street which may be constructed in the future on the undeveloped land within the watershed area. Easements shall be provided for stormwater and sanitary sewer pipes that may need to be installed in the future to serve undeveloped land within the watershed that drains across the area of the proposed subdivision. For private streets, easements shall be granted to the Water Works Department for all underground water mains. Easements shall be subject to the requirements of the Department of Public Works.

6.8 ***Land Grading, Slope Control, and Surface-Water Drainage.*** The standard for graded slopes of large areas shall be 3:1 and no steeper than 2:1 to provide for erosion control and vegetative establishment on those areas where the existing land surface is at risk of slippage, settlement, or other related problems. Any area to be mowed shall have no greater than a 4:1 slope. The proposed development shall provide for proper surface drainage so that removal of surface waters will not adversely affect neighboring properties or the public storm water system and will, so far as practicable, conserve the water resources of the area and avoid flooding, erosion, and sedimentation. The drainage system shall be so designed that, except in unusual circumstances, the rate of runoff from the site will not exceed the rate prior to construction.

6.9 ***Street Dedication.*** Applicants proposing to dedicate a new street for public acceptance shall provide a completed and fully executed document using the language stated in Appendix D of these regulations. Upon construction of the street and issuance of a certificate of occupancy, the Planning Board shall refer the language to the Board of Mayor and Aldermen. Where subdivisions adjoin or include existing streets that do not conform to widths, additional width may be required to be dedicated. If the subdivision is along one side only, one-half of the required extra width may be dedicated. When a subdivision includes a street of unknown or questionable status, it shall be the responsibility of the applicant to

construct the street to the Standard Specifications and to dedicate such rights as the applicant may have in that street area.

6.10 ***Street Lighting.*** In subdivisions involving new public streets, the applicant shall submit a street lighting plan to be reviewed by DPW. Any capital costs associated with installation of facilities identified by the plan shall be borne by the applicant. Any operating costs associated with the lights shall be borne by the applicant until acceptance of the street.

6.11 ***Non-Municipal Utilities.*** In subdivisions with new streets or extensions of existing streets, all utility facilities, including, but not limited to, gas, electric power, telephone, and cable television, shall be located underground throughout the subdivision. For subdivisions on existing streets, the Planning Board may require utilities to be placed underground. The applicant is responsible for all coordination with the utility companies to assure that non-municipal utilities are installed in accordance with plans approved by the Board pursuant to these regulations.

6.12 ***Public Sites and Open Spaces.*** Where the master plan or other city plan proposes a park, playground or school site or where a development is of a magnitude that would create a need for a park or recreational open space, the Board may require the dedication or reservation of such area within the subdivisions of greater than fifty (50) lots and where the Board considers such requirements to be reasonable. In no instance shall the dedication of land be required to amount to more than five (5) percent of the total tract area to be subdivided. In instances where the required area exceeds five (5) percent of the tract area, the excess area may be reserved and the City shall have one year from date of final approval of the plat in which to purchase or reject the land so reserved.

6.13 ***Other Improvements.*** The applicant shall be responsible for improvements or connections to adjoining developed areas unless relieved of that responsibility by the Board. The applicant shall be responsible for such off-site improvements in unaccepted streets as may be necessary in the opinion of the Board to achieve continuity of improvements. In cases in which the proposed development adjoins any other land which may be developed in the future and in which the Board requests provision for a future street connection or utility easement to that area the applicant shall provide engineering of future improvements in accordance with City specifications and shall provide a deed to the City of the area necessary for that future street or utility easement.

6.14 ***Conditions During Construction.*** The developer shall be responsible for minimizing and avoiding, to the extent possible, conditions that result in hardship, inconvenience or annoyance to early occupants of the development or abutters from construction activities, including but not limited to such conditions as unreasonable hours of operation, erosion, dust, odor, smoke, temporary changes of surface water runoff, or other similar conditions during construction activity.

The developer shall also be responsible for exercising reasonable care to avoid and prevent hazardous conditions on the site through excavation, clearing, storage of equipment, materials or debris, or other activity during construction. Should the developer not use reasonable care in preventing the above-described conditions, the Director of Planning and Community Development may withhold a certificate of occupancy or impose fines pursuant to RSA 676:17 and Subsection 1.7 of these Regulations.

VII. GENERAL REQUIREMENTS OF SITE PLANS

7.1 ***Review and Findings.*** In reviewing a site plan application, the Planning Board shall review the proposed plan in relation to existing neighborhood and City development patterns. An application may be disapproved based on one or more of the following findings:

(A) The layout, arrangement, or design of structures are not harmonious and aesthetically pleasing, either in and of themselves or in relationship to their environs, and could be improved through plan modification.

(B) The vehicular and pedestrian circulation on-site and onto the public street(s) will create safety hazards.

(C) Adequate utilities are not available nor provided for the proposed development.

(D) The development would significantly overcrowd the site and create an adverse affect on the surrounding area through lack of adequate provisions for parking, loading or other activities normally accessory to the development.

(E) The development would be inconsistent with adjoining development or conditions, and adequate screening or protection has not been provided to protect adjoining properties, or the subject property, from the adverse effects of lighting, noise or other factors.

(F) The landscaping is insufficient with regard to the surrounding area and does not reflect the Boards concern for environmental improvement through development.

(G) The development would result in a loss of natural features of the site that could be avoided through plan modification.

(H) The development would result in adverse environmental effects on adjoining properties.

(I) The development would be premature by reason of lack of utilities, transportation, schools, fire protection and other essential services or necessitate excessive expenditures of public funds to provide such services.

(J) Existing site characteristics such as soil conditions, lot configuration or access difficulties could not accommodate the proposed development.

(K) Adequate information necessary for the proper evaluation of the application is not provided.

(L) The proposed site plan is not in conformance with the Zoning Ordinance or other ordinances that may apply.

7.2 ***Occupancy Permit.***

(A) An occupancy permit shall only be issued when the applicant has completed the site improvements according to the approved site plan (with final approval by the Planning staff) unless otherwise provided for in this subsection.

(B) The Board may require, as a condition of approval, that the applicant post a guarantee with surety satisfactory to the Board in order to assure conformity with all proposed public and other improvements affecting the public interest. Procedures for guarantee shall be in accordance with Subsection 4.13, Financial Guarantees.

(C) Where practical hardships, such as the onset of winter conditions, limit the ability of the developer to complete improvements such as landscaping, screening and buffering prior to opening of the facility, the developer may be granted a conditional certificate of occupancy if the site is otherwise suitable for occupancy. The improvements must be completed within a reasonable period as defined by staff or the conditional permit shall lapse.

(D) Where projects involve multiple buildings and/or phasing of construction, the Board may require that the applicant enter into a Site Improvement Agreement to relate the timing of the required improvements to the development and occupancy of buildings; and to minimize hardships or other adverse effects which might arise from unanticipated delays in completion of all required improvements.

7.3 ***Driveway Permit.*** The action of the Board or staff in approval of a site plan application, unless otherwise specified or regulated by other City Ordinances, shall be deemed to include approval of the plan for the driveways and other access points as required by NH RSA Chapter 249:17.

7.4 ***Department of Health.*** Developments proposing private water supply and/or sewage disposal systems shall be required to secure approval by the Department of Health prior to issuance of site plan approval.

VIII. DESIGN CRITERIA FOR SITE PLANS AND PLANNED DEVELOPMENTS

8.1 ***Building and Site Design Standards.*** The following standards are intended to promote harmonious and aesthetically pleasing development that leads to conditions favorable to health, safety, convenience, and prosperity throughout the City of Manchester, as authorized by RSA 674:44. The character of real estate has powerful effects beyond the boundaries of each lot, and the City of Manchester has an interest in promoting positive, rather than negative, effects. It is therefore the policy of the Planning Board to promote high-quality design in real-estate development that encourages investment in Manchester's businesses and homes, enhances property values, and provides a safe and pleasant environment for Manchester's citizens.

Generally, building and site design should be sensitive to its context and should promote a pedestrian-friendly character. If the context of a site or building includes design that does not conform to these standards, that shall not exempt the applicant from complying with these standards.

(A) *Site Design.*

(1) Unless significant factors such as topography or uniquely loud street noise dictate otherwise, buildings should meet the front setback line. If meeting the front setback line is not reasonably possible, landscaping elements should provide an identifiable, consistent edge along the setback line or streetscape. Examples of such landscape elements include trees, hedges, low walls, and low fences.

(2) Parking should be located behind buildings to create a strong street edge and pedestrian environment. For renovations of buildings or sites with parking already located in front of the building, landscaping should be added along the street edge to soften the appearance of the parking lot.

(B) *Building Design.*

(1) Buildings of all sizes should provide variety of architectural detail and interest, especially for the ground floor. Pedestrians walking on the nearest sidewalk or public right-of-way should be able to experience architectural variety and interest in the façade as they walk across it.

(2) The front façades of buildings should face the street. This means that the building's primary entrance and the most fenestration, articulation, and detail of the building should be oriented toward

the street, not parking lots, although secondary entrances from parking lots are allowable. On corner lots, buildings should face the street that is likely to receive the most pedestrian traffic.

(a) Buildings designed around a courtyard or other interior orientations should nevertheless provide the fenestration, articulation, detail, and prominent entrance appropriate to a front façade toward the street.

(b) Buildings primarily accessed by a private road as part of a planned development should orient their front facades toward the street of primary access.

(3) Vertical orientation of doors, windows, and detailing is preferable to horizontal orientation. Buildings should avoid long, horizontal stretches of windows or walls without variation.

(4) Mirrored or opaque windows are strongly discouraged, especially on ground floors.

(5) High-quality materials are encouraged for building exteriors. Glass, steel, brick, wooden clapboards, wooden shingles, and stone are all acceptable. Synthetic materials should closely approximate natural materials.

(6) All mechanical equipment on rooftops should be hidden from view.

(7) Buildings should be designed to allow adequate light to reach the street.

8.2 ***Pedestrian Walks/Curbing.*** Applicants shall construct sidewalks on the streets identified as "Key Streets", "School Approach and Staging Streets" and all streets within the urban core as shown on the most recent map adopted by the Community Improvement Program Committee of the Board of Mayor and Aldermen. Applicants shall construct sidewalks when doing so would continue an existing sidewalk. The Planning Board may require the construction of sidewalks in site plans involving commercial or multifamily development. All curbs shall be vertical-granite curbing. All sidewalks shall include street trees in either the accompanying grass panel, for 6' sidewalks, or in grates, for 10' sidewalks, at distances acceptable to the Planning Board.

8.3 ***Landscaping, Screening and Buffer Area Requirements.***

(A) *Intent.* These requirements are intended to: promote attractive development, reduce excessive heat, glare and accumulation of dust; provide privacy from noise and buffer protection between potentially conflicting uses; prevent soil erosion, excessive storm water runoff, and pollution of water bodies.

(B) *Landscaping Requirements.*

(1) General Standards. All portions of a lot or parcel that are not used

for buildings, structures, paving, or similar uses shall be landscaped in such a manner as to blend with the neighborhood and City as a whole. All plant materials shall be installed according to accepted horticultural methods. The following requirements shall apply to all landscaping and are minimum requirements that the Planning Board and its staff may exceed, depending on the existing conditions:

(a) Native plants shall be used whenever practicable. See Appendix E.

(b) No invasive plant material shall be planted, per RSA 430:51. See Appendix E.

(c) Plants shall have a minimum winter hardiness for Zone 5b according to the USDA Plant Hardiness Zone Map.

(d) The planting of trees, ground cover, or other vegetation shall meet the current specifications of the "American Standard for Nursery Stock" as published by the American Association of Nurserymen unless otherwise specified and must be of a suitable and/or native type (see attached reference list).

(e) Minimum sizes for plant material, unless indicated elsewhere in these regulations:
  (i) Deciduous shade trees 3-inch caliper
  (ii) Deciduous Ornamental 2-inch caliper
  (iii) Evergreen trees 6 feet in height
  (iv) Street Trees, 4-4½-inch caliper

(f) Landscaping as approved shall be maintained in good condition, and any dead vegetation shall be replaced.

(g) No more than 30 percent of landscaped areas may contain bark mulch or crushed stone.

(h) All caliper measurements shall be taken six inches above the ground for required caliper dimensions up to 4 inches, which applies to all requirements listed in (e), above. For any requirement imposed by the Board of caliper dimensions above 4 inches, those measurements shall be taken at 12 inches from the ground.

(2) *Front Landscape Area.* The Board may require more than the minimum front setback area for landscaping when the use, buildings, or site conditions dictate that additional landscaping would better serve the intent of these regulations. Tree and shrub height will be appropriate to the area and in a manner as will not obstruct vehicular line of sight. Design of this area shall include such other standards as may be contained in any street landscape plan adopted by the Board.

(3) *On-Site Paving.* All paved areas shall have a minimum of one tree deciduous shade tree, as defined above, for each 900 square feet of the first 3600 square feet devoted to paving and one tree per 2000

square feet of paving area thereafter. Trees shall be a minimum of 3" caliper at one foot above the root crown. Trees shall be complemented with suitable ground cover for protection from soil erosion. Linear planting beds between parking bays should be incorporated whenever practicable. Said planting beds must be elevated at least four (4) inches above the parking surface with granite curbing and be graded to allow for proper drainage. Planting beds shall be planted with suitable material from Appendix E and will be mulched with no less than three (3) inches of organic material.

(4) *Buffer Strip.* Every lot that borders a zoning district shall reserve a buffer strip along all property lines abutting zoning district boundaries, public right-of-way and potentially incompatible land uses. The buffer strip shall include plantings of a type, height and spacing adequate to secure visual privacy from automobile lights, yard lights, electric signs, building lighting, mechanical equipment and trash containers. The buffer strip shall not be used for merchandise display, vehicle parking, storage, or any other use which conflicts with the purpose and standards of this landscape section. The buffer strip shall be a minimum of ten (10) feet in width, or more at the discretion of the Board, and shall be maintained as an integral part of the lot. A fence or wall, not to exceed six (6) feet in height may be used in conjunction with or substituted for any portion of the required buffer strip when approved by the Board. Where existing topography or landscaping provides adequate screening, the Board may modify these requirements. When this section conflicts with Article 6.08 of the Manchester Zoning Ordinance, the more stringent provision shall apply.

(5) *Protection from Vehicles.* Where vehicles will be located adjacent to sidewalks, fences, walls, trees, landscaping, or similar features, suitable curb or wheelstops shall be provided so that vehicles cannot overhang or otherwise damage those features. Vehicles shall not be parked, stored, or otherwise located on landscaping. It shall be a condition of approval for all vehicle-intensive uses, such as automobile dealerships, trucking services, and automobile rentals, that no vehicles shall be parked on landscaping and that shrubs, trees, rocks, or other features shall be located to prevent the parking of cars on the landscaping.

(6) *Preservation of Existing Vegetation.*
Buildings, parking, loading docks, access roads, and other site elements shall be sited to preserve existing, healthy, mature vegetation. Trees with a minimum 6" caliper and existing wooded areas are recommended for preservation, particularly those located within setbacks. Construction and site alterations shall not disturb root zones of the trees designated for preservation. The applicant

shall be responsible to replace any trees designated to remain that have been damaged, killed, or removed as a result of construction activities. The Planning Board shall require replacement as appropriate. The minimum size used for replacement will be 3" caliper for deciduous trees and 6' tall for evergreen trees. To the extent possible, the minimum landscape requirements shall be adhered to for any application involving the expansion or change of use of an existing building.

(7) *Xeriscaping.* The use of quality landscaping and drought resistant plants with the intention of water conservation and environmental protection shall be utilized wherever possible in the landscape plan and should consist of native plant species. See Appendix E

(8) *Irrigation.* Where drought tolerant natives are not used, landscape areas shall be provided with underground irrigation systems governed by rain sensors, unless waived by the Planning Board. Xeriscapes shall have drip irrigation, at a minimum.

(9) *Maintenance.* It is the intent of these regulations to specify certain minimum maintenance standards of watering, pruning, fertilizing and plant care. Trees should be limbed up to not interfere with pedestrians or auto travel and to ensure that vegetation is healthy and orderly. It is the responsibility of the owner to maintain street trees in the frontage of their lots and maintain their appearance. All landscaped areas and buffer strips shall be maintained for the duration of the use.

(C) *Preparation of Landscape Plan.* A landscape plan shall be prepared in sufficient detail to fulfill the requirements of this section. The plan shall be prepared by a professional landscape architect who is licensed as a landscape architect in the State of New Hampshire. The landscape architect shall sign and seal the plan as a requirement for a complete site plan application. The Board may waive the requirements of 8.3(C) in cases where the overall site and building development costs are, in total, less than $250,000.

The landscape plan shall be prepared to include the following certification:

"I, _____, hereby certify that I am the designer of this landscape plan and that I am a professional landscape architect licensed by the State of New Hampshire.

8.4 ***Land Grading, Slope Control, and Surface-Water Drainage.*** The standard for graded slopes of large areas shall be 3:1 and no steeper than 2:1 to provide for erosion control and vegetative establishment on those areas where the existing land surface is at risk of slippage, settlement, or other related problems. Mowed slopes shall be no greater than 4:1. The proposed development shall provide for proper surface drainage so that removal of surface waters will not adversely affect neighboring properties or the public storm water system and will, so far as

practicable, conserve the water resources of the area and avoid flooding, erosion, and sedimentation. The drainage system shall be so designed that, except in unusual circumstances, the rate of runoff from the site will not exceed the rate prior to construction.

8.5 ***Tree Removal:*** Should the plan propose that large areas of existing trees are to be cleared, the owner must stake, paint, or flag all trees to be removed on the property as well as existing tree lines. Areas should be flagged for review and approval by planning staff.

8.6 ***Off-street Parking and Loading Requirements.***

(A) *Intent.* Off-street parking and loading spaces shall be provided in accordance with this subsection. The number of parking and loading spaces required shall be based on the use of the structure and according to the requirements of the Zoning Ordinance. Parking and loading spaces shall be maintained and shall not be encroached upon for the duration of the use.

(B) *Design Requirements.* The general layout and traffic circulation of parking and loading areas shall be designed so as to avoid unsafe conditions and traffic congestion in the adjacent streets, and to provide for the safety of vehicles and pedestrians using the area.

(1) Parking lots shall be laid out in accordance with the Zoning Ordinance. In addition, all proposed curb cuts, access drives, fire lanes, maneuvering areas and parking areas shall comply with all requirements of the Highway Division, Fire Department and Police Department of the City.

(2) Loading spaces shall be so designed that trucks, when loading and unloading, will have adequate maneuvering area and will not project over any street line.

(3) Individual parking and loading spaces, entrances and exits shall be suitably identified with directional signs, lines and arrows.

(4) Off-street parking and loading areas shall be suitably improved, paved and maintained so as to create no hazard from surface water runoff, dust, or erosion and shall be separated from the street by a curb, fence, landscaping or other suitable barrier.

(5) Where curbing is required within a commercial site, the use of sloped granite curbing is required.

(6) Pedestrian walkways and crosswalks should be incorporated into asphalt and landscaping whenever pedestrians must traverse parking fields.

(7) Bypass lanes shall be provided for all sites with drive-through windows or similar features that allow for the stacking or queuing of vehicles onsite.

(8) Driveways shall have proper and safe sight distances.

8.7 *Outdoor Lighting*

(A) *Intent.* These requirements are intended to provide for outdoor lighting that will compliment the appearance and quality of the city, reduce glare, decrease costs and lower energy consumption, and enhance safety.

(B) *Illumination Plan.* When outdoor lighting is part of a proposed project, an illumination plan shall be submitted along with the Site Plan/Planned Development application materials and shall be prepared in sufficient detail to demonstrate illumination levels throughout the subject property. The plan shall provide details of all fixtures, including accent lighting. The color and height of all light poles to the top of the fixture shall be noted on a detail of the poles.

(C) *General Lighting Requirements.*

(1) All new lighting sources, appurtenances, and construction thereof shall be in accordance with all local utility company standards and acceptable to the City. Light emitting diode (LED) fixtures, or similarly efficient lighting, shall be used.

(2) The use of motion detectors, timers, remote controls, and photocells to reduce waste and conserve energy are encouraged.

(3) Pole-mount or wall-pack luminaries should be consistent with the architectural theme of the building/development or be decorative in nature.

(4) All site and parking area lighting shall be full cut-off type fixtures that provide a reasonably uniform level of illuminance and do not direct light beyond the boundaries of the area.

(5) All exterior lights shall be designed, located, installed and directed in such a manner as to prevent objectionable light and glare at any location on or off the property. The "maintained horizontal illuminance recommendation" set by the Illuminating Engineers Society of North America (IES), latest edition, shall be observed.

(6) Light shall not trespass onto abutting properties beyond 0.5 footcandles.

(D) *Height Requirements.* For the purposes of these regulations, the mounting height of a lighting fixture shall be the vertical distance from the grade elevation of the surface being illuminated to the bottom of the light fixture. The height of poles and luminaire mounts should emulate the architecture and scale of the area within and surrounding the site.

(E) *Light Pole Bases.* The exposed height of concrete bases used to anchor pole mounted fixtures shall conform to the following:

(1) A maximum of 2'-6" when the pole is within a parking field

(2) A maximum of 0'-6" when the pole is in landscaped or lawn areas

(3) A maximum of 0'-4" when the pole is within the limits of hard-surfaced sidewalks and pedestrian walkways.

(4) The use of ornamental bases shall be encouraged with all new light-pole installations.

(F) *Flood Lighting.* Flood lighting is discouraged but, if used, must be shielded to prevent: glares for drivers or pedestrians, light trespass beyond the property line, and light above the horizontal plane (90 degrees). Wall-pack fixtures shall be shielded.

(G) *Gas Station Island/Canopy Lighting.* It is the purpose of this Subsection to provide standards that allow for lighting that will create security while avoiding light trespass, skyglow and glare.

(1) Light fixtures mounted under the canopy shall be recessed and flush with the underside as to not direct the light anywhere but the ground below.

(2) No lighting fixtures shall be mounted on the sides or top of the canopy.

(H) *Uplighting.* Lights that face upward are discouraged, unless used to highlight specific architectural features of a building and shielded so that their light does not spill outward.

8.8 ***Signage.*** The purpose of this Subsection is to provide standards for: (1) the effective use of signs as a means of communication, (2) the harmonious and aesthetically pleasing development of the City of Manchester, and (3) the health, safety, and welfare of the public. These regulations do not supersede the requirements stated in Article 9 of the Manchester Zoning Ordinance. Rather, they provide more detailed guidance for applicants and the Planning Board when signs are proposed as part of an application before the Planning Board.

(A) *On-Site Consistency.* The design and overall appearance of signs shall be in harmony with the building or buildings on the site. The scale and proportion of signs shall not overwhelm or obscure on-site buildings. Signs should be subordinate, consistent elements of the architecture of on-site buildings.

(B) *Off-Site Context.* Signs should not obscure buildings or landscaping features of nearby sites. Signs should respect the context of nearby buildings by not overpowering them in scale, lighting, or position.

(C) *Pedestrian Legibility.* When sidewalks are nearby, signs should be comfortably legible to pedestrians who are walking on the sidewalk closest to the sign. Freestanding signs taller than 10 feet are discouraged near sidewalks due to their conflict with the pedestrian environment.

(D) *Illumination.* Light from signs shall not trespass onto adjacent properties. External lighting of signs is preferable to internal illumination. Internally illuminated signs should provide opaque backgrounds or other non-illuminated elements of the sign itself to reduce glare and light trespass. Flashing, illuminated signs are strongly discouraged. Downward lighting is preferred for externally lit signs, as opposed to upward lighting. External sources of light shall be shielded to prevent glare and trespass.

(E) *Landscaping.* Free-standing signs shall be landscaped at their base. In no circumstance shall concrete or other supporting material be visible.

8.9 ***Wetlands and Vernal Pools.*** The location of all wetlands and vernal pools shall be shown on plans submitted for site-plan approval. Wetlands and vernal pools shall be field delineated and certified by a certified wetland scientist whose stamp shall appear on all plans showing wetlands and vernal pools.

8.10 ***Area of Special Flood Hazard.*** Notwithstanding the requirements herein, the Board may, when deemed necessary for the public health, safety and welfare of present and future residents of the City, and when necessary for the conservation of water, drainage and sewer facilities, prohibit the development of any portion of property which lies within the Area of Special Flood Hazard.

(A) *Area of Special Flood Hazard.* All site plans and planned developments having lands identified as special flood hazard areas in the "Flood Insurance Study for the county of Hillsbourgh, NH," dated September 25, 2009, or as amended, together with the associated Flood Insurance Rate Maps bearing the effective date of September 25, 2009, or as amended, which are hereby declared to be part of these Regulations by reference, shall meet the following requirements:

(1) The Board shall review the proposed subdivision to assure that all necessary permits have been received from those governmental agencies from which approval is required by federal or state law, including Section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334.

(2) The Board shall require that all site plan proposals to include flood elevation data, if published. Sufficient evidence (construction drawings, grading and land treatment plans) shall be submitted so as to allow a determination that:

(a) All such proposals are consistent with the need to minimize flood damage;

(b) All public utilities and facilities, such as sewer, gas, electrical and water systems are located and constructed to minimize or eliminate flood damage;

(c) Adequate drainage is provided so as to reduce exposure to flood hazards;

(d) Areas of Special Flood Hazard shall be preserved from any destruction or damage resulting from cleaning, grading, or dumping of earth, waste material, or debris; and

(e) There is no net loss of flood-storage area within the 100-year flood zone.

(B) *Other Areas.* For any other brook, stream, or river not identified as a Special Flood Hazard Area, the Board may require the applicant to identify on the plan a channel encroachment line based on sound engineering calculations anticipating a 25-year storm or 100-year flood potential. Such areas shall be subject to the same restrictions as in (A) above.

8.11 ***Refuse Removal & Containers:*** All non-residential developments and all residential developments containing four (4) or more dwelling units shall use private refuse removal. Refuse containers, such as dumpsters or other bulk containers, shall be screened and located to minimize adverse visual impacts on abutting properties and public streets. They shall be located on concrete pads and shall be enclosed on all sides by a solid enclosure that is eight (8) feet in height. The location shall not interfere with circulation necessary for emergency access and loading operations and shall comply with the Zoning Ordinances. The type and location of pads and enclosures shall be appropriately identified on the site plan. It shall be the responsibility of property owners to properly maintain dumpsters, pads, and enclosures for the duration of their use.

8.12 ***Off-Site Improvements.*** Where a project necessitates the provision of public facilities not on the project site, it shall be the responsibility of the applicant to provide such facilities at their cost and in accordance with the requirements of the appropriate Department. Such facilities may include but are not limited to: drainage systems, sewers, water mains and roadway improvements such as intersection signalization, sidewalks, and widening.

8.13 ***Utility Boxes, Condensers, Generators etc.***

(A) Plans submitted to the Planning Board shall depict the location of and screening for utility boxes, condensers, generators, and other similar structures.

(B) Where a project requires the need for utility boxes and similar structures, it shall be the responsibility of the applicant to properly screen the units as well as design and locate the units to avoid auditory and visual impact on abutting parcels and the public. To the greatest extent possible, units should be screened from view of nearby properties and city right-of-ways in a manner that reduces noise and visual prominence. Vegetation or fencing compatible with the surrounding area shall be provided in the vicinity of the equipment if deemed necessary by the Planning

Staff/Board.

(C) The design of the units shall reflect the urban character and pedestrian orientation of the area where it is located. Any equipment deemed an accessory structure shall conform to the city setback requirements of the zoning ordinances. Where suitable, placement of these structures on rooftops is encouraged. Rooftop equipment shall be screened through the use of parapets or other opaque walls constructed of materials complimentary to the exterior as to disguise the apparatus.

8.14 ***Certified Sites.*** The City of Manchester participates in the "ReadySetGo!" program of certified sites administered by the Southern New Hampshire Planning Commission, up to the Level 1 category. The purpose of the program is to list properties with various levels of governmental approval on a nationally accessible website. For the City of Manchester, applicants may engage in non-binding, Design Review with the Board, pursuant to Subsection 3.2 of these regulations, and qualify for Level 1 of "ReadySetGo!" Applicants are responsible for coordinating all aspects of the "ReadySetGo!" program with the SNHPC. Only properties located in the General Industrial/Industrial Park Districts are eligible for the program. Participation in the "ReadySetGo!" program shall not grant the applicant any additional vesting or other rights not specifically stated in these regulations or State law.

IX. SPECIAL STUDIES REQUIRED

9.1 ***General.*** In accordance with the provisions of NH RSA 674:44(V) and 676:4(I)(g) the Planning Board may require special investigative studies and the review of documents by independent parties with the costs to be borne by the applicant.

9.2 ***Traffic-Impact Letters and Studies.***

(A) *When Required.* The following criteria determine when a traffic-impact letter or traffic-impact study shall or shall not be required:

(1) Neither a traffic-impact letter nor a traffic-impact study shall be required for projects expected to have a negligible impact on the traffic system, unless special circumstances warrant it. Normally, projects with a negligible impact would include residential projects creating fewer than 10 dwelling units or lots, additions to existing facilities with no significant additional activity expected, storage/ warehousing projects, and manufacturing facilities under 20,000 square feet.

(2) A traffic-impact letter shall usually be required when a project would have a measurable impact on the traffic system, but will not impact a signalized intersection.

(3) A traffic-impact study shall usually be required when a project would impact a signalized intersection, would involve the construction of new public streets, or would be a use typically associated with significant traffic, such as fast-food restaurants, strip shopping centers, and residential developments over 50 dwelling units.

For projects that meet criteria from multiple categories listed above, the more stringent requirement shall apply. The Board shall have the discretion to require a traffic-impact letter or a traffic-impact study for any project, should special circumstances warrant it, such as site location, sight distance onto public streets, existing traffic on public streets, or the nature of the proposed use.

Should the Board determine that adequate information was not provided by the applicant, the Board shall have the discretion to require additional study by the applicant or by a third party chosen by the Board and paid for by the applicant.

Questions regarding the necessity of a traffic-impact letter or traffic-impact study should be discussed with planning staff as early as possible, preferably before the filing of an application.

(B) *Traffic-Impact Letter*. The purpose of a traffic-impact letter shall be to provide a basic analysis of the traffic generated by a project and any safety issues impacting public streets, sidewalks, and rights of way. Accordingly, the following information shall be the minimum requirements for a traffic-impact letter:

(1) Certification by a professional engineer;

(2) A description of the streets in the study area, including the number of lanes, speed limits, major intersections, and locations of existing driveways;

(3) A statement regarding the available site distance and confirmation that it meets the guidelines for stopping distance in the AASHTO "Policy on Geometric Design of Highways and Streets," most recent edition. Subdivisions of five units or more, multi-family developments, and non-residential developments should also consider the AASHTO guidelines for intersection site distance; and

(4) Trip generation for the site based upon the ITE Trip Generation Handbook, most recent edition, for AM peak hour, PM peak hour, and weekend peak hour. The applicant may provide an alternative estimation of trip generation, in addition to the trips predicted by the ITE Handbook, if necessary.

(C) *Traffic-Impact Study.* The purpose of a traffic-impact study shall be to provide a thorough analysis of the traffic generated by a project, the impacts of that traffic on roadway intersections, and all safety issues impacting public streets, sidewalks, and rights of way.

Scoping Meeting. The type and scope of the study shall be determined at a scoping meeting with the Planning staff. The staff may also involve representatives of or request assessments from the Highway Division, Fire Department, and Police Department, and the Southern New Hampshire Planning Commission as may be required. Also to be included would be the traffic consultant retained by the applicant. These meetings shall occur prior to submission of a formal application.

The elements to be determined at the scoping meeting shall include:

(1) Definition of Impact Area. The points of access and Key Streets and intersections that may be impacted constitute the Impact Area. Traffic recorder and turning movement locations shall be determined;

(2) Period of Analysis. Periods of analysis may include: daily traffic, AM, PM or weekend peak hour;

(3) Analysis Scenarios. Scenarios for analysis include: Existing Conditions, Opening Year Conditions with and without development, and 10 years after opening with and without development;

(4) Process for determining trip generation and distribution including: trip generation category, diversion assumptions and distribution assumptions;

(5) Site distances;

(6) Growth Rate Assumption;

(7) Developments in the area that have been approved or are under review; and

(8) Access location and design elements.

Traffic-Impact Study Elements. A traffic-impact study shall include those elements agreed upon in the scoping meeting. At a minimum, a traffic-impact study shall include the following elements:

(1) Certification by a professional engineer with a professional-traffic-operations-engineer (PTOE) designation;

(2) Existing Condition Survey

  (a) Street system description. The street system shall be described including geometric features, lane usage, traffic control, signage, sight distances and adjacent uses and curb cuts.

  (b) Traffic volumes. Existing traffic volumes shall be provided for the impact area including both AADT (Average Annual

Daily Traffic) and "Design" peak hour volumes. AADT may be derived from current counts of the NH DOT (if available) and peak hour volumes shall be done from field counts. Data shall be adjusted for daily and seasonal variations. Turning movement counts for the peak hour shall be provided for critical intersections. Peak hour period(s) shall be as determined at the scoping meeting.

(c) Capacity analysis. Existing capacity of signalized and unsignalized intersections.

(d) Other items may be required at the discretion of the staff depending upon the type and scale of the project. These may include but are not limited to: Queue length analysis, pedestrian counts, accident data, traffic speeds (both 50th and 85th percentile), and stopping sight distances;

(3) Future Without Development. Capacity analysis is to be provided for opening year and plus ten year for key intersections (and roadway segments where appropriate) without the development but including any planned developments. The analysis shall be based upon the Highway Capacity Manual or other methodologies approved in advance by the Planning staff;

(4) Future With Development

(a) Projections of the daily and peak hour traffic generation of the project shall be made using the latest edition of the Institute of Transportation Engineers Trip Generation Report unless the staff determines that locally derived data will provide more accurate forecasts. Data from similar facilities may be used where the information is not available from ITE.

(b) The projected trips shall be distributed onto the street network as agreed in the scoping meeting.

(c) Capacity analysis for opening year and plus ten year for key intersections (and roadway segments where appropriate).

(d) Special analysis as may be required to determine warrants for signalization, minimum safe sight distances, gap analysis, turning radius requirements, queue length analysis, turning lane length analysis, curb cut locations or similar requirements; and

(5) A statement regarding the available site distance and confirmation that it meets the guidelines for stopping distance in the AASHTO "Policy on Geometric Design of Highways and Streets," most recent edition. Subdivisions of five lots or more, multi-family developments, and non-residential developments should also consider the AASHTO guidelines for intersection site distance.

(D) *Mitigation Plan.* Where analysis indicates that the project will create deficiencies in the impact area, improvements shall be recommended on a plan of suitable scale and shall include projected cost estimates. The design of improvements shall be in accordance with specifications of the Highway Division and, where appropriate, the N.H. DOT. Where the Planning Board determines that a mitigation plan is not adequate to address the traffic impacts of the project, it may serve as a basis for denial in accordance with Subsection 6.6(E)(2).

(E) The Planning Board may require that an independent consultant be hired by the city to perform a special study, or to review all or part of an application. The staff is authorized to administer the contracts for such consultants.

(1) The Planning staff shall determine the scope of services to be performed by the independent consultant and receive a cost estimate of such services.

(2) The applicant shall provide an amount equal to the estimate to the city, who will deposit the amount in an escrow or special account set up for this purpose. Any funds not used for the independent consultant shall be returned to the applicant in a timely manner without interest.

(3) The Planning Board may require additional fees for the independent review if: the Planning Board expands the scope of the required review; the applicant substantially amends the application; additional meetings involving the consultant(s) are requested by the applicant; the consultant's appearance is requested at the Planning Board, Board of Mayor and Aldermen or Zoning Board of Adjustment meetings beyond what was initially anticipated; or the consultant's attendance is required at meetings with regional, state, or federal agencies or boards which were not anticipated in the earlier scope of services.

9.3 ***Soil Studies.***

Areas dependent upon on-site septic systems shall be classified by soil type lot size determinations, as set forth under RSA 485

Soil analysis and core sampling is required for new construction where subsurface soil conditions are being disturbed. Projects that would automatically require a study would include new construction of septic systems or underground drainage systems.

The elements to be included and determined in the study are as follows; the composition of the soil and its ability to support a structure, the absorption and drainage rate of the soil, and how well it will accommodate septic and water.

9.4 ***Additional Studies.***

Pursuant to RSA 676:4, the Planning Board may request that additional studies be completed to provide necessary information for the Board's decision. These studies may include, but are not limited to, environmental studies and fiscal impact analyses. It shall be the responsibility of the applicant to pay the reasonable fees charged for such studies.

APPENDIX A

PLANNING BOARD APPLICATION FEES

I. NOTIFICATION FEES

Postage fees for notification of a public hearing to abutters and other legally required parties shall be $10.00 per recipient. The one exception to this fee shall be voluntary lot mergers, as these do not require public hearings.

II. APPLICATION FEE

All applications shall be subject to a nonrefundable $300 fee to cover administrative expenses. The one exception to this fee shall be voluntary lot mergers.

III. SUBDIVISIONS

In addition to the Notification and Application fees, applicants for subdivisions shall also submit fees according to the requirements listed below. These fees may be refunded if an applicant withdraws a proposal prior to the plans being distributed to City agencies like the Highway Division, the Fire Department, and the Water Works Department.

(A) Subdivisions with a new street proposed

(1) Planning Review Fee: $125 for each lot created, including the parent lot

(2) Interdepartmental Review Fee: $200 for each lot created, including the parent lot

(B) Subdivisions with no streets proposed

(1) Planning Review Fee: $100 for each lot created, including the parent lot

(2) Interdepartmental Review Fee: $100 for each lot created, including the parent lot

(C) Lot-Line Adjustments

A lot-line adjustment in which one or more lot lines between two or more lots is moved and no new building lots are created shall be charged the Notification and Application fees, but no additional subdivision fees.

(D) Voluntary Lot Mergers

The Notification, Application, and Subdivision fees shall not apply to lot mergers. The fee for a lot merger shall be $100.

IV. RESIDENTIAL SITE PLANS AND PLANNED DEVELOPMENTS

In addition to the Notification and Application fees, applicants for residential site plans and planned developments shall also submit fees according to the requirements listed below. These fees may be refunded if an applicant withdraws a proposal, depending upon the amount of time that staff from Planning, DPW, Fire, Water, and other departments have spent reviewing the proposal.

(A) Up to and including the first fifteen dwelling units:

(1) Planning Review Fee: $150 for each dwelling unit

(2) Interdepartmental Review Fee: $150 for each dwelling unit

(B) For all additional dwelling units in excess of the first fifteen:
(1) Planning Review Fee: $100 for each dwelling unit
(2) Interdepartmental Review Fee: $100 for each dwelling unit

V. NON-RESIDENTIAL SITE PLANS AND PLANNED DEVELOPMENTS
In addition to the Notification and Application fees, applicants for non-residential site plans and planned developments shall also submit fees according to the requirements listed below. These fees may be refunded if an applicant withdraws a proposal, depending upon the amount of time that staff from Planning, DPW, Fire, Water, and other departments have spent reviewing the proposal.

(A) Up to and including the first 5,000 gross square feet of new or renovated building area:
(1) Planning Review Fee: $100 per 1,000 SF, or fraction thereof
(2) Interdepartmental Review Fee: $200 per 1,000 SF, or fraction thereof

(B) For all additional gross square feet of new or renovated building area in excess of 5,000:
(1) Planning Review Fee: $100 per 1,000 SF, or fraction thereof
(2) Interdepartmental Review Fee: $100 per 1,000 SF, or fraction thereof

VI. CONDITIONAL USE PERMITS
The fee for Conditional Use Permits shall be charged the Notification and Application fees.

VII. AMENDMENTS
Amendments to conditions of approval of a conditionally approved or finally approved plan shall be subject to the Notification and Application fees.

All other amendments to finally approved plans, such as further subdivision of lots or additional construction, shall be subject to the same fees as comparable, new applications.

VIII. RE-INSPECTIONS
The fees charged for all applications include the cost of one site inspection by planning staff. If additional inspections are necessary, the planning staff may impose an additional fee of $100 for each subsequent inspection.

IX. EXTENSIONS OF APPROVAL
The fee for any extension of the Planning Board's approval shall be $100.

X. COMPLIANCE HEARINGS
The fee for holding a public hearing to determine compliance with a condition of approval shall be $100.

X. FEE REVISIONS

The Planning Board may revise all fees listed above as necessary, but should review the fees no less than every two years to assess their effectiveness in covering the costs of plan review to the Planning and Community Development Department, the Highway Division, the Fire Department, and the Water Works Department.

Effective July 1, 2014