

PART 5: DESIGN STANDARDS

DIVISION 19.05.0100 GENERAL DESIGN STANDARDS

SECTION 19.05.0101 ACCESS TO PUBLIC STREETS

This Section sets forth vehicular access requirements for proposed site plans for developments which abut arterial, collector, and minor streets. This Ordinance recognizes that public streets are a public investment that requires control mechanisms to assure both public safety and functional capacity. Proposed development for residential and nonresidential uses shall meet the following requirements:

- A. **Access Standards for All Residential and Nonresidential Uses.** All proposed site plans proposed for residential and/or nonresidential uses in residential and/or nonresidential zoning districts shall meet the following standards:
1. **Controlled Access to Public Streets.** Lot and parcel vehicular access points shall be permitted only at locations according to this Ordinance and other Village of Grafton adopted plans and ordinances. The Plan Commission may limit vehicular access to any adjoining arterial, collector, or minor street.
 2. **Distance Between Vehicular Access Points.** Within the MFR-1, MFR-2, C-1, C-2, C-3, C-4, O, BP, M-1, PID, I, PR, and PUD Districts, the spacing of vehicular access points from arterial streets and highways to lots and parcels created after the effective date of this Ordinance shall be determined as a function of arterial street and highway operating speeds. The minimum spacing between vehicular access points along such streets or highways, to the extent deemed practicable by the Plan Commission, shall be determined according to Table 19.05.0101(A). These spacings are based upon average vehicle acceleration and deceleration rates and are considered necessary to maintain safe traffic operation.

Table 19.05.0101(A)

ARTERIAL STREET AND HIGHWAY OPERATING SPEED AND MINIMUM SPACING BETWEEN DIRECT VEHICULAR ACCESS POINTS

Street/Highway Speed Limit (miles per hour)	Minimum Driveway Spacing Measured at the Street Right-of-Way Line (feet)
25	105
30	125
35	150
40	185
45	230
50	275

Source: Institute of Transportation Engineers. *Traffic Engineering Handbook (4th Edition)*, Englewood Cliff, N.J.: Prentice Hall, 1992, p. 379 and the American Planning Association. *Planning Advisory Service (PAS) Memo*, July 1983.

3. **Limitation of Access to Interstate, United States, State Trunk Highways, and County Trunk Highways.** No new direct vehicular access shall be allowed to interstate, United States, and state or county trunk highway public rights-of-way unless approved by the authority having jurisdiction and the Village Plan Commission.

4. **Temporary Access.**
 - a. **Village Streets.** On Village streets, the Village Board may grant temporary access to properties and require their closure when access through adjoining properties is acquired upon recommendation by the Plan Commission. Such access shall be temporary, revocable, and subject to any conditions required and shall be issued for a period not to exceed twelve (12) months.
 - b. **County Streets and Highways.** Temporary access to Ozaukee County street and highway rights-of-way are reviewed and may be approved by the Ozaukee County Highway Department. It is the applicant's responsibility to obtain all necessary approvals from the Ozaukee County Highway Department for all such temporary access points proposed before site plan approval by the Village.
 - c. **State Highways.** Temporary accesses to State highway rights-of-way are reviewed and may be approved by the Wisconsin Department of Transportation. It is the applicant's responsibility to obtain all necessary approvals from the Wisconsin Department of Transportation for all such temporary access points proposed before site plan approval by the Village.
5. **Area Circulation Plan May Be Required.** The Plan Commission may require the preparation of an area circulation plan for the proposed development covering several properties in an area surrounding a proposed site plan. The delineation of the area for the preparation of an area circulation plan shall be determined by the Plan Commission upon recommendation of the Village Engineer or Village Planner. Such a plan may require the sharing of access locations or temporary access. All landowners, except those with a previously approved site plan, shall be required to conform to such an area circulation plan once it is adopted by the Plan Commission as a component, or element, of the Village of Grafton Comprehensive Plan. The Plan Commission may require that such an area circulation plan be prepared based upon the conduct of a traffic impact analysis conducted by a licensed professional engineer with expertise in traffic engineering. The Village Engineer and Village Planner shall review all such studies and assist the Plan Commission.
6. **Vehicular Non-access Reservations Required.** The Plan Commission may require deed restrictions to be placed on a lot or parcel for which a site plan is proposed to limit vehicular access to abutting arterial, collector, or minor streets and highways. A landscaped bufferyard of an adequate bufferyard intensity level, as determined by the Plan Commission or by Division 19.05.0300 of this Ordinance, shall be provided in vehicular non-access reservations along the property line abutting a public street right-of-way. In such situations, vehicular access to such lots may be provided by an abutting minor or collector street at designated access driveways. Such vehicular nonaccess reservations shall be graphically so noted on site plans, as a formal deed restriction, subdivision plat, or by certified survey map formally filed with the Ozaukee County Register of Deeds before their approval by the Village.
7. **Arterial Street and Highway Access and Street Intersections.** No new direct public or private access shall be permitted to an arterial street or highway within two hundred and fifty (250) feet of the intersection of the right-of-way lines of another arterial street or highway unless shown on the Village adopted Comprehensive Plan or component thereof.
8. **Minor Streets and Vehicular Access Point Alignments.** Minor streets and vehicular access points along both sides of a collector and/or arterial street shall be aligned to assist in reducing the number of driveways needed and to improve safety conditions related to access to the street system.
9. **Sight Distance and Driveway Placement.** Direct vehicular access placement on abutting collector and arterial streets and highways shall be such that an exiting vehicle has a minimum unobstructed sight distance according to Table 19.05.0101(B) based upon the operating design speed of the abutting collector or arterial street or highway.

Table 19.05.0101(B)

**HIGHWAY DESIGN SPEED AND MINIMUM REQUIRED SIGHT DISTANCE
FOR DIRECT VEHICULAR ACCESS POINT PLACEMENT**

Highway Design Speed (miles per hour)	Minimum Sight Distance (feet)
30	200
35	225
40	275
45	325
50	350

Source: American Planning Association. *Planning Advisory Service (PAS) Memo, July 1983.*

B. **Access Standards for Nonresidential and Multiple-Family Residential Uses.** All proposed site plans proposed for nonresidential and multiple-family residential uses in nonresidential and/or multiple-family residential zoning districts shall meet the following standards:

1. **Maximum Number of Vehicular Access Points Per Lot.** Generally, along arterial streets and highways (including lots that abut the frontage roads of said rights-of-way), where the abutting street frontage is less than three hundred and fifty (350) feet, a maximum of one (1) vehicular access point shall be permitted to a particular lot from each of any one (1) or two (2) abutting arterial streets and highways. One (1) additional driveway entrance along a single continuous lot with frontage greater than three hundred fifty (350) feet may be permitted by the Plan Commission. When a shared vehicular access point is used by two (2) or more abutting lots, said shared vehicular access point shall be considered as one (1) single vehicular access point for each lot or parcel served. These standards are subject to meeting the other standards of this Division.
2. **Provision of Shared Vehicular Access Points Between Lots.** Vehicular access points planned to be located along property lines, or closer than six (6) feet from a property line, shall be shared vehicular access points with the abutting lot or parcel. The vehicular access point centerline may be the property line between two (2) lots or parcels of land or may be a mutually agreed upon land access easement. Shared vehicular access points within single and two family districts may be permitted with Plan Commission approval. (Ord. 031, Series 2000, Part 1)

SECTION 19.05.0102 EASEMENTS

- A. **Natural Resource Features Protection/Mitigation, Conservation, Landscape Bufferyard, and Utility Easements Required.** The Plan Commission shall require natural resource features protection/mitigation, conservation, landscape bufferyard, and/or utility easements of widths deemed adequate for the intended purpose on each side of all rear lot lines and on side lot lines or across lots where necessary or advisable for natural resource feature protection, landscape bufferyards (see Division 19.05.0300 of this Ordinance), electric power and communication lines, wires, conduits, storm and sanitary sewers, and gas, water, and other utility lines.
- B. **Site Traversed by Watercourse, Drainage way Channel, or Stream** Where a site is traversed by a watercourse, drainage way channel, or stream, an adequate drainage way or easement shall be provided as may be required by the Village Engineer. The location, width, alignment, and improvement of such drainage way or easement shall be subject to the approval of the Plan Commission, and parallel streets or parkways may be required in connection therewith. Where necessary, stormwater drainage shall be maintained by landscaped open channels of adequate size and grade to hydraulically accommodate 100-year recurrence interval storm flows. These design details are subject

to review and approval by the Village Engineer.

- C. **Minimum Width Required for All Utility Easements.** All utility easements shall be a minimum of twelve (12) feet in width when recommended by the Village Engineer.

SECTION 19.05.0103 STORMWATER MANAGEMENT PLAN

[See Chapter 23.01 of the Village of Grafton Municipal Code.]

SECTION 19.05.0104 BUILDING, PARKING LOT, CIRCULATION DRIVE, AND LOADING AREA SETBACK REQUIREMENTS ALONG ARTERIAL STREETS AND HIGHWAYS

Except in the R-RE, R-E, R-1, R-S, R-2, R-3, R-4, R-5, R-6, MFR-1, MFR-2, CBD, and I Districts and except in any PUD District located in the area subject to the Grafton Downtown Master Plan as adopted by the Village Plan Commission on February 23, 1999, the following Table 19.05.0104 sets forth the minimum required building, parking lot, circulation drive, and loading area setbacks for lots or parcels that abut the indicated arterial streets and highways.

Table 19.05.0104

REQUIRED INCREASED BUILDING, PARKING LOT, CIRCULATION DRIVE, AND LOADING AREA SETBACKS ALONG ARTERIAL STREETS AND HIGHWAYS

Types of Arterial Street or Highway by Jurisdiction	Minimum Required Setback from Ultimate Arterial Street or Highway Right-of-Way Line (a,b)
U.S. Highways	50
State Trunk Highways	50
County Trunk Highways	40
Locally Designated Arterial Streets and Highways	40

(a) Based upon the distance from the ultimate right-of-way width established by the adopted County jurisdictional highway plan and/or the adopted Village of Grafton Official Map as amended.

(b) Setbacks indicated in this Table apply to buildings, parking lots, circulation drives, and loading areas.

DIVISION 19.05.0200 TRAFFIC, OFF-STREET PARKING AND LOADING, AND HIGHWAY ACCESS

SECTION 19.05.0201 TRAFFIC VISIBILITY

In order to provide adequate vision clearance, no obstructions are permitted between the heights of two and one-half (2.5) feet and ten (10) feet above the plane through the mean curb grades within the triangular space formed by any two (2) existing or proposed intersecting street right-of-way or alley right-of-way lines and a line joining points on such lines, located a minimum of fifteen (15) feet from their intersection. In the case of arterial streets, the corner cut-off distances establishing the triangular vision clearance space shall be increased to a minimum of fifty (50) feet on the arterial street.

SECTION 19.05.0202 OFF-STREET PARKING REQUIREMENTS

In all districts no vacant land shall be occupied or used and no building shall be erected, enlarged, extended, or increased, or used including, but not limited to, use by a new use or changed use, until and in connection with every use, there shall be provided off-street parking stalls for all vehicles according to the following:

- A. **Adequate Access.** Adequate access to a public street shall be provided for each parking space. Driveways shall be at least twelve (12) feet wide for one- and two-family dwellings, and twenty-four (24) feet wide for all other uses, except that driveways in the CBD District and PUD Districts within the area subject to the Grafton Downtown Master Plan may be reduced to twenty (20) feet in width. Each required off-street parking space shall open directly onto an aisle or driveway that is wide enough to provide safe and efficient means of vehicular access to the parking space. (Ord. 010, Series 2002, Part 14)
- B. **Minimum Parking Space Size.** Except as allowed below in the CBD District and PUD Districts within the area subject to the Grafton Downtown Master Plan, the size of each parking space shall be not less than one hundred and eighty (180) square feet in area nor less than nine (9) feet in width, exclusive of the space required for ingress and egress. In the CBD District and PUD Districts within the area subject to the Grafton Downtown Master Plan, the size of not more than twenty (20) percent of all parking spaces in a parking lot may be as small as one hundred and thirty (130) square feet in area and eight (8) feet in width, exclusive of the space required for ingress and egress and provided that such spaces are signed for "compact cars only". See Paragraph (I)(2) below for the minimum dimensions for off-street parking spaces provided for use by persons with disabilities. (Ord. 010, Series 2002, Part 15)
- C. **Minimum Required Parking Lot Setbacks and Screening/Landscaping.**
 1. **General.** Any building hereafter erected or structurally altered shall be provided with off-street parking spaces within the property line limits of the property being served, or within the limits of a common parking area serving one (1) or more buildings. Except where shared access or parking is permitted by the Plan Commission, off-street parking spaces and internal circulation drives shall in no case be closer than:
 - a. Four (4) feet to any property line including the base setback line in single family and two family residential districts and in Planned Unit Developments for single and two-family housing.
 - b. Three (3) feet to any property line in all zoning districts within the area subject to the Grafton Downtown master Plan, created after April 18, 2000, provided that a fully opaque decorative fence, wall or all season landscape screening is also planned in that strip. (Ord. 022, Series 2004, Part 1-part)
 - c. Zero (0) feet to any property line on any residential lot existing before April 17, 2000. However, existing driveways on lots created before that date shall not violate the setback or encroachment any further than already existing if the existing drive is closer than four (4) feet to the lot line. (Ord. 022, Series 2004, Part 1-part).
 - d. Six (6) feet to any property line (including the base setback line) in the MFR-1, MFR-2 and all multiple-family residential Planned Unit Development and non-residential zoning districts not within the area subject to the Grafton Downtown Master Plan, including the setbacks required in Table 19.05.0104 and in all individual zoning district development standard tables in Division 19.03.0300. (Ord. 010, Series

2002, Part 16; Ord. 031, Series, 2000, Part 2).

2. **Minimum Screening and Landscaping Requirements to be Met When Off-Street Parking Areas Abut the R-RE, R-E, R-1, R-S, R-2, R-3, R-4, R-5, R-6, MFR-1, MFR-2, and Residential PUD Districts.**

All off-street parking areas, except in the R-RE, R-E, R-1, R-S, R-2, R-3, R-4, R-5, R-6, MFR-1, MFR-2, and residential PUD Districts, shall be screened and maintained at the base setback from any abutting R-RE, R-E, R-1, R-S, R-2, R-3, R-4, R-5, R-6, MFR-1, MFR-2, and residential PUD Districts pursuant to the bufferyard and landscape requirements set forth in Division 19.05.0300 of this Ordinance. All screening and plant materials shall be a minimum of six (6) feet in height at the time of installation.

3. **Minimum Off-Street Parking Setback When the R-RE, R-E, R-1, R-S, R-2, R-3, R-4, R-5, R-6, MFR-1, MFR-2, and Residential PUD Districts Abut.**

In the R-RE, R-E, R-1, R-S, R-2, R-3, R-4, R-5, R-6, MFR-1, MFR-2, and residential PUD Districts, no parking stall or driveway shall be closer than four (4) feet to a side or rear lot line of abutting R-RE, R-E, R-1, R-S, R-2, R-3, R-4, R-5, R-6, MFR-1, MFR-2, and residential PUD Districts except where shared access or parking is permitted by the Plan Commission. (Ord. 031, Series 2000, Part 3).

4. **Minimum Distance of Truck Parking from Any Residential Zoning District.** No truck parking shall be allowed within one hundred and fifty (150) feet of any residential zoning district.

D. **Off-Street Parking Area Surfacing.** All open, off-street loading and parking spaces shall be improved with a pavement of either asphalt or concrete and storm water drainage facilities as approved by the Village Engineer. This Paragraph shall not apply to single-family residential districts or to single-family detached dwellings in the R-4, R-5, R-6, MFR-1, MFR-2, and residential PUD Districts.

E. **Concrete Curb Required.**

1. **Concrete Curb Required for Off-Street Parking Areas.**

a. Concrete curb meeting Village specifications shall be required for all off-street parking areas serving more than five (5) vehicles in all nonresidential zoning districts (including nonresidential PUD Districts). This requirement shall also apply to the expansion of any existing off-street parking lot where the number of off-street parking spaces is increased by twenty (20) spaces or more.

b. Concrete curb meeting Village specifications shall be required for all multiple-family residential developments within the first twenty-five (25) feet only of all development entry drives as measured from the public street right-of-way line.

2. **Minimum Distance of Required Concrete Curbing from Property Lines.** Required concrete curb and gutter for off-street parking areas shall be installed a minimum of six (6) feet from a property line (as measured from the back of the curb) to prevent the parked vehicles from extending over any lot lines.

F. **Off-Street Parking Stalls.** Off-street parking stalls shall be marked by painted lines or other approved material and shall be maintained to be legible at all times.

G. **Parking of Trucks and Equipment.** No truck or other vehicular equipment of a commercial or industrial nature shall be parked regularly on a lot or parcel in any zoning district except as hereinafter specifically provided or as follows:

1. Agricultural equipment in an A-1, A-2, or A-3 District; or

2. One (1) panel or pickup truck not to exceed three quarter (0.75) ton, in any residential districts.

- H. **Landscaping.** All public off-street parking areas that serve five (5) vehicles or more and are created or redesigned and rebuilt following the adoption of this Ordinance shall be provided with accessory landscape areas meeting all applicable requirements of Division 19.05.0300 of this Ordinance.
- I. **Parking Spaces for Use by Persons with Disabilities.** All open, off-street parking areas shall provide parking spaces for persons with disabilities meeting all applicable "Americans with Disabilities Act (ADA) Guidelines for Buildings and Facilities" as documented in the *Federal Register*, Vol. 56, No. 144, July 26, 1991 as amended. Unless conflicting with the above specified "Americans with Disabilities Act (ADA) Guidelines for Buildings and Facilities" requirements as amended, the following standards are applicable:
1. **Minimum Required Number of Accessible Off-Street Parking Spaces for Use by Persons with Disabilities.** The following Table 19.05.0202(I)(1) shall apply:

Table 19.05.0202(I)(1)

MINIMUM REQUIRED NUMBER OF ACCESSIBLE OFF-STREET PARKING SPACES

Total Number of Off-Street Parking Spaces in Parking Lot or Area	Minimum Required Number of Accessible Off-Street Parking Spaces
1 to 25	1
26 to 50	2
51 to 75	3
76 to 100	4
101 to 150	5
151 to 200	6
201 to 300	7
301 to 400	8
401 to 500	9
501 to 1,000	2 percent of total
1,001 and over	20 plus 1 for each 100 over 1,000

The minimum required number of accessible off-street parking spaces for use by persons with disabilities shall be considered as a part of the total off-street parking spaces required.

2. **Minimum Dimensions for Off-Street Parking Spaces Provided for Use by Persons with Disabilities.** The minimum dimensions for all parking spaces provided for use by persons with disabilities shall be thirteen (13) feet wide by twenty feet (20) feet long for automobiles and sixteen (16) feet wide by twenty (20) feet long for vans.
3. **Distance to Facility Entrances for the Location of Off-Street Parking for Persons with Disabilities.** Off-street parking spaces provided for persons with disabilities shall be as close as possible to an entrance that allows such persons to enter and leave the parking area without assistance.
4. **Signage of Off-Street Parking Spaces Serving Persons with Disabilities.** All parking spaces provided for disabled persons shall be marked by a sign that includes the international symbol for barrier-free environments and a statement informing the public that the parking space is reserved for use by disabled persons. Such signs shall comply with the requirements of the aforementioned "Americans with Disabilities

Act (ADA) Guidelines for Buildings and Facilities" as amended and with Sections 346.50, 346.503, and 346.505 of the Wisconsin Statutes as amended.

SECTION 19.05.0203 OFF-STREET PARKING SPACE AND ON-SITE QUEUING REQUIREMENTS FOR USE TYPES

A. **Minimum Number of Off-Street Parking Spaces and On-Site Queuing Required for Uses.** The minimum number of off-street parking spaces accessory to designated uses (except for nonresidential uses located in the CBD District and for a specific use that has a special ordinance with requirements for off-street parking in which event the special ordinance shall apply; such as for a PUD District or as a condition of the granting of a Conditional Use Permit) shall be provided as set forth in Table 19.05.0203. Table 19.05.0203 shall be applicable to all residential uses in the CBD District. Calculations resulting in fractional numbers of off-street parking and/or queuing spaces required shall be rounded to the next higher whole number.

Table 19.05.0203

OFF-STREET PARKING & ON-SITE QUEUING REQUIREMENTS FOR USE TYPES

Use	Minimum Required Parking Spaces per 1,000 Square Feet of Floor Area	Minimum Required On-Site Queuing Space to be Provided (number of vehicles)	Other Required Standard(s) for Off-Street Parking Spaces
Agricultural Uses:			
Agriculture	None Required	--	--
Nurseries	2	--	Plus 1 space per 4,000 sq. ft. of outdoor display area, plus 1 for each company vehicle plus 1 for each employee
Residential Uses:			
Single-Family Detached Dwelling Structure	--	--	2 spaces per D.U.
Two-Family Dwelling Structure	--	--	2 spaces per D.U.

Table 19.05.0203

**OFF-STREET PARKING & ON-SITE QUEUING REQUIREMENTS
FOR USE TYPES**

Use	Minimum Required Parking Spaces per 1,000 Square Feet of Floor Area	Minimum Required On-Site Queuing Space to be Provided (number of vehicles)	Other Required Standard(s) for Off-Street Parking Spaces
Mobile Home	--	--	2 spaces per D.U.
Mobile Home Park	--	--	2 spaces per D.U., plus 0.5 space per D.U. for guest parking
Efficiency Apartment, Townhouse, or Condominium	--	--	1.5 spaces per D.U., plus 0.5 space per D.U. for guest parking
One Bedroom Apartment, Townhouse, or Condominium	---	--	1.5 spaces per D.U., plus 0.5 space per D.U. for guest parking
Two Bedroom Apartment, Townhouse, or Condominium	--	--	2 spaces per D.U., plus 0.5 space per D.U. for guest parking
Three or More Bedroom Apartment, Townhouse, or Condominium	--	--	2.5 spaces per D.U., plus 0.5 space per D.U. for guest parking
Group Homes or Institutional Residential	--	--	1 space per bedroom
Outdoor Recreational Uses:			
Camps, Day or Youth	--	--	1 space per employee

Table 19.05.0203

**OFF-STREET PARKING & ON-SITE QUEUING REQUIREMENTS
FOR USE TYPES**

Use	Minimum Required Parking Spaces per 1,000 Square Feet of Floor Area	Minimum Required On-Site Queuing Space to be Provided (number of vehicles)	Other Required Standard(s) for Off-Street Parking Spaces
Campgrounds	--	--	1 space per travel trailer space
Golf Course	--	--	3 spaces per hole, plus any required for other uses which are a part of the facility
Golf Driving Range or Rifle Range	--	--	1 space per 10 linear ft. of driving or firing line plus 1 space per employee
Outdoor Arenas	--	--	1 space per 3 seats, or 1 space per 30 sq. ft. of floor area used for seating, or 1 space per 5 ft. of bench length, whichever is appropriate
Playing Fields	--	--	1 space per 4,000 sq. ft. of outdoor playfield area, plus 1 space per acre of passive recreation area
Resorts	--	--	1 space per 3 patrons
Riding Arenas, Equestrian Centers, or Public Stables	--	--	1 space per 4 equestrian stalls, plus 1 per 2,000 sq. ft. of riding area, plus 1 per employee
Riding Stables	--	--	1 space per employee, plus 1 space per 4 equestrian stalls
Skating Rink	--	--	6 spaces per 1,000 sq. ft. of rink area, plus additional parking spaces as may be required by buildings or areas used for other purposes

Table 19.05.0203

**OFF-STREET PARKING & ON-SITE QUEUING REQUIREMENTS
FOR USE TYPES**

Use	Minimum Required Parking Spaces per 1,000 Square Feet of Floor Area	Minimum Required On-Site Queuing Space to be Provided (number of vehicles)	Other Required Standard(s) for Off-Street Parking Spaces
Swimming Pool	--	--	1 space per 100 sq. ft. of pool area, plus 1 per employee, plus additional parking spaces as may be required by buildings or areas used for other purposes
Tennis Courts	--	--	2 spaces per court
All Others	--	--	1 space per 10,000 sq. ft.
Indoor Recreational Uses:			
Bowling Alleys	--	--	6 spaces per lane, 1 space per employee, 2 spaces per pool/billiard table, plus additional parking spaces as may be required by buildings or areas used for other purposes
Dance Halls	--	6	1 space per each 3 patrons based on the maximum number of persons that can be accommodated at the same time in accordance with design capacity and Village fire regulations, and 1 space per each 0.5 employee
Health Club or Spa	--	--	1 space per exercise station, 4 spaces per sauna or similar facility, 4 spaces per 1,000 sq. ft. of other activity area, plus 1 space per employee
Indoor Arenas or Stadiums	--	--	1 space per 3 seats, or 1 space per 30 sq. ft. of floor area used for seating, or 1 space per 5 ft. of bench length, whichever is appropriate
Library	3.5	--	--

Table 19.05.0203

**OFF-STREET PARKING & ON-SITE QUEUING REQUIREMENTS
FOR USE TYPES**

Use	Minimum Required Parking Spaces per 1,000 Square Feet of Floor Area	Minimum Required On-Site Queuing Space to be Provided (number of vehicles)	Other Required Standard(s) for Off-Street Parking Spaces
Museum	3.5	--	--
Recreation Center	5	6	Plus 1 space for each 0.5 employee
Swimming Pool (Public)	--	--	1 space per 100 sq. ft. of pool area, plus 1 space per employee
Tennis, Racquetball, or Handball	--	--	4 spaces per court, plus 1 space per employee
Theaters, Assembly Rooms, Gymnasiums, Grandstands, Meeting Halls, Convention Halls, or Exhibition Halls	--	--	0.33 space per seat if seats are fixed, or 0.33 space per 20 lineal inches of seating, or 1 space per 30 sq. ft. of floor area, whichever is greater. When such facilities for public assembly are accessory to a school, and when approved by the Plan Commission, the required number of parking spaces may be reduced by the number of spaces provided as required herein, for the applicable type of school (see requirements for Elementary, Junior High, and Senior High Schools set forth below).
Other Indoor Recreational Uses	--	--	1 space per 4 patrons
Institutional Uses: Indoor			
Church or Synagogue	--	6	0.25 space per seat if seats are fixed, or 0.25 space per 20 lineal inches of seating, or 1 space per 30 sq. ft. of floor area used for seating in the main sanctuary, whichever is greater

Table 19.05.0203

**OFF-STREET PARKING & ON-SITE QUEUING REQUIREMENTS
FOR USE TYPES**

Use	Minimum Required Parking Spaces per 1,000 Square Feet of Floor Area	Minimum Required On-Site Queuing Space to be Provided (number of vehicles)	Other Required Standard(s) for Off-Street Parking Spaces
Clubs, Lodges, or Associations	--	5	1 space per 50 sq. ft. of gross building floor area
Hospital	--	8	1 space per employee plus 2 spaces per bed
Nursing Homes	--	6	1 space per employee plus 1 space per 3 beds
Schools: Elementary or Junior High (Public or Private)	--	10	1 space per employee, plus 1 space per 3 seats or 1 space per 30 sq. ft. of floor area used for seating or 1 space per 5 ft. of bench length in the auditorium, gymnasium, or other similar place of assembly, whichever is greater
Schools: Senior High (Public or Private)	--	12	1 space per employee, plus 1 space per 7 students at ultimate school capacity or 1 space per 3 seats or 1 space per 30 sq. ft. of floor area used for seating, or 1 space per 5 ft. of bench length in the auditorium, gymnasium, or other similar place of assembly, whichever is greater
Colleges, Junior Colleges, or Universities (Public or Private)	--	--	0.5 space per classroom seat, or the maximum number of students that can be accommodated in accordance with design capacity, whichever is greater
Trade School, Music, School, Dance School, or Business School	--	--	1 space per student based upon the maximum number of students that can be accommodated within the design capacity of the facility

Table 19.05.0203

**OFF-STREET PARKING & ON-SITE QUEUING REQUIREMENTS
FOR USE TYPES**

Use	Minimum Required Parking Spaces per 1,000 Square Feet of Floor Area	Minimum Required On-Site Queuing Space to be Provided (number of vehicles)	Other Required Standard(s) for Off-Street Parking Spaces
Rooming or Boarding Houses including Apartment Hotels	--	--	1.5 spaces per lodging room, suite of rooms to accommodate 1 lodger, or dwelling unit
Public Service or Utilities	--	--	1 space per employee plus 1 space per stored vehicle
Day Care Home (In Residential Structure)	--	--	As required per type of D.U. plus 1 space for picking up and dropping off children
Day Care Center or Nursery School	--	6	1 space per employee, plus 1 space per 10 children
Commercial Uses: Office			
General, including Government Offices	3.3	--	--
Medical	10	6	Plus 1 space per each practitioner and/or employee
Commercial Uses: Retail			
Convenience Market	8	--	--
Department Stores	4	--	--
Drugstores	5	--	--

Table 19.05.0203

**OFF-STREET PARKING & ON-SITE QUEUING REQUIREMENTS
FOR USE TYPES**

Use	Minimum Required Parking Spaces per 1,000 Square Feet of Floor Area	Minimum Required On-Site Queuing Space to be Provided (number of vehicles)	Other Required Standard(s) for Off-Street Parking Spaces
Grocery or Foodstores	5	--	--
Furniture Stores, Carpet Stores, Appliance Stores	1.5	--	--
Hardware, Paint or Home Improvement	3.5	--	--
Liquor Store	5	--	--
Shopping Centers (3 stores or more)	5	--	--
Other Miscellaneous Freestanding Retail Stores	5	--	--
Commercial Uses: Heavy Retail/Service			
Auto Sales	2	--	Or 2 spaces per salesman, whichever is greater; plus 1 space per 1,500 sq. ft. of outdoor vehicle display space inclusive of drives to outdoor vehicle display spaces
Building Materials	3	--	Plus 1 space per 1,500 sq. ft. of outdoor sales/display areas inclusive of drives to outdoor sales/display areas

Table 19.05.0203

**OFF-STREET PARKING & ON-SITE QUEUING REQUIREMENTS
FOR USE TYPES**

Use	Minimum Required Parking Spaces per 1,000 Square Feet of Floor Area	Minimum Required On-Site Queuing Space to be Provided (number of vehicles)	Other Required Standard(s) for Off-Street Parking Spaces
Vehicle Repair Shop (without the Dispensing of Gasoline)	--	--	4 spaces per service bay
Commercial Uses: Light Auto Service			
Automobile Laundries or Car Washes	--	10 per wash bay for automatic wash and 6 per wash bay for manual wash bay	Plus 1 space per employee and 1 space per bay
General Auto Service Station (with the Dispensing of Gasoline)	1.5 without convenience market; 8 with convenience market	--	Or 4 spaces per service bay, whichever is greater
Commercial Uses: Services			
Beauty Parlors, Salons, or Barber Shops	--	--	3 spaces per chair, plus 1 space per employee

Table 19.05.0203

**OFF-STREET PARKING & ON-SITE QUEUING REQUIREMENTS
FOR USE TYPES**

Use	Minimum Required Parking Spaces per 1,000 Square Feet of Floor Area	Minimum Required On-Site Queuing Space to be Provided (number of vehicles)	Other Required Standard(s) for Off-Street Parking Spaces
Commercial Laundry or Dry Cleaner	--	--	1 space per employee, 1 space per company vehicle, plus 1 space per 170 sq. ft. of customer service area
Financial (with Drive Thru Service Lanes)	5	6 per drive thru service lane	Plus 1 space for each employee
Financial (without Drive Thru Service Lanes)	5	--	--
Funeral Homes, Funeral Parlors, or Undertaking Establishments	--	12	1 space per 30 sq. ft. of floor area of assembly rooms, plus 1 space per employee, plus 1 space for each vehicle owned by the establishment
Gunsmith	2	--	--
Laundromat	--	--	1 space per washer or dryer, plus 1 space per employee
Repair Shops	2	--	Plus 1 space per employee, plus 1 space for each company vehicle
Taxidermist	2	--	--
Commercial Uses: Bars or Restaurants			

Table 19.05.0203

**OFF-STREET PARKING & ON-SITE QUEUING REQUIREMENTS
FOR USE TYPES**

Use	Minimum Required Parking Spaces per 1,000 Square Feet of Floor Area	Minimum Required On-Site Queuing Space to be Provided (number of vehicles)	Other Required Standard(s) for Off-Street Parking Spaces
Bars or Taverns	10	--	Or 1 space per 2 seats or stools, plus 1 space per employee, whichever is greater
General Restaurant (without Drive-in/Drive-thru Facility)	20	--	--
Restaurant (with Drive-in/Drive-thru Facility)	20	7 per service lane	--
Commercial Uses: Commercial Lodging			
Convention Center (with Lodging)	--	--	1 space per guest room (in suite, each bedroom shall constitute a separate guest room), plus 1 space per 30 sq. ft. of assembly room, plus 1 space per 500 sq. ft. of accessory commercial space
Hotels and Motels (Non-Convention Center Lodging)	--	--	1 space per guest room (in suite, each bedroom shall constitute a separate guest room), plus 1 space for each 3 employees, plus 1 space per 500 sq. ft. of accessory commercial space
Dude or Guest Ranch	--	--	1 space per rental unit
Bed or Breakfast	--	--	2.5 spaces per D.U. and 1 space per rental room

Table 19.05.0203

**OFF-STREET PARKING & ON-SITE QUEUING REQUIREMENTS
FOR USE TYPES**

Use	Minimum Required Parking Spaces per 1,000 Square Feet of Floor Area	Minimum Required On-Site Queuing Space to be Provided (number of vehicles)	Other Required Standard(s) for Off-Street Parking Spaces
Agricultural Support or Services	5	--	--
Home Uses:			
Home Occupations or Home Businesses	--	--	As required per type of D.U. plus 1 space for any allowed business vehicle
Day Care Home (In Residential Structure)	--	--	As required per type of D.U. plus 1 space for picking up and dropping off children
Industrial Uses:			
Bakeries (Nonretail)	0.25	--	Plus 1 space per employee, plus 1 space per company vehicle
Light Industrial Uses:			
Light Industry	2	--	--
Contractor Shop	1	--	Plus 1 space per company vehicle
Warehouse	0.5	--	or 1 space per employee, whichever is greater, plus 1 space for each company vehicle stored on the premises
Mini-warehouses	--	--	1 space per employee, plus 1 space per 10 storage units

Table 19.05.0203

**OFF-STREET PARKING & ON-SITE QUEUING REQUIREMENTS
FOR USE TYPES**

Use	Minimum Required Parking Spaces per 1,000 Square Feet of Floor Area	Minimum Required On-Site Queuing Space to be Provided (number of vehicles)	Other Required Standard(s) for Off-Street Parking Spaces
Industrial Uses: Heavy Industry			
Heavy Industry	2.5	--	or 1 space per employee, plus 1 space per company vehicle, plus 1 space per 5,000 sq. ft. of visitor parking, whichever is greater
Trucking (no loading or warehousing)	1.5	--	or 1 space per employee, plus 1 space per company vehicle, plus 1 space per 5,000 sq. ft. of visitor parking, whichever is greater
Industrial Uses: Extraction or Disposal			
Extraction or Disposal	--	--	1 space per employee
Junkyards	--	--	1 space per employee
Special Land Uses:			
Commercial Communication Towers	--	--	1 space per employee
Landing Strips, Heliports, or Airports	--	--	7 spaces per daily airplane movement (i.e., one way airplane trip)
Temporary Uses:			
Christmas Tree Sales	--	--	Plus 1 space per 1,000 sq. ft. outdoor sales and display area, plus 1 per employee

Table 19.05.0203

**OFF-STREET PARKING & ON-SITE QUEUING REQUIREMENTS
FOR USE TYPES**

Use	Minimum Required Parking Spaces per 1,000 Square Feet of Floor Area	Minimum Required On-Site Queuing Space to be Provided (number of vehicles)	Other Required Standard(s) for Off-Street Parking Spaces
Contractor's Construction Site Office	10	--	--
Public Interest Events	--	--	1 space per 3 attenders
Special Event	--	--	1 space per 3 attenders
Real Estate Sales Office	3.3	--	--
Farm Stand	5	--	Plus 1 space per 1,000 sq. ft. of outdoor sales and display area, plus 1 space per employee
Concrete or Asphalt Batch Plant	--	--	1 space per employee, plus 1 space for each truck stored on-site
Off-Street Parking Requirements for Uses Not Listed: See Section 19.05.0203(B) of this Ordinance			

- B. **Uses Not Listed in Table 19.05.0203 and Other Uses.** Parking spaces for Permitted Uses not listed in Table 19.05.0203 shall be provided according to requirements designated by the Plan Commission upon recommendation of the Zoning Administrator. For conditional uses, parking spaces for conditional uses not listed in Table 19.05.0203 shall be provided according to requirements designated by the Plan Commission upon recommendation of the Zoning Administrator and as may be required by the Village Board. The provisions for a use deemed similar by the Plan Commission may be applied upon recommendation of the Zoning Administrator.
- C. **Employee Parking.** Parking spaces required on an employee basis as set forth in Table 19.05.0203 shall be based on the average number of employees on duty or residing, or both, on the premises at any one time.
- D. **Off-Street Parking Requirements for Mixed or Combined Uses Located within the Same Building or On the Same Lot or Parcel.** Combinations of any of the uses set forth in Table 19.05.0203 shall provide the total number of off-street parking stalls and/or queuing space required for each individual use.
- E. **Potential Reductions of Required Off-Street Parking Spaces and the Provision of Reserve Off-Street Parking Area.**
 - 1. The Plan Commission may decrease the required number of off-street parking spaces by up to twenty-five (25) percent of the requirement based upon one or more of the following criteria:
 - a. Technical documentation furnished by the applicant which indicates, to the satisfaction of the Plan Commission, that actual off-street parking demand for that particular use is less than the required standard set forth in Table 19.05.0203 of this Ordinance.
 - b. Bicycle parking facilities will be provided through racks, lockers, or equivalent structures located convenient to the proposed use.
 - c. A public transportation route is located within five hundred (500) feet of the property.
 - 2. In the event the number of required off-street parking spaces is reduced as allowed under this Section, the Plan Commission may also require that sufficient area on the property be held in reserve for the potential future development of off-street parking to meet the requirements of Table 19.05.0203. If required by the Zoning Administrator or Plan Commission, such reserve off-street parking area shall be shown and noted on the site plan, maintained as open space, and developed with off-street parking spaces when the Village determines that such off-street parking is necessary due to parking demand on the property which exceeds original expectations, of the loss of bicycle or public transit access or facilities. The property owner or applicant shall provide the Village with a financial surety in a form acceptable to the Village Attorney and in an amount of one hundred twenty-five (125) percent of the cost to construct the additional off-street parking spaces prior to the issuance of a Certificate of Occupancy.

SECTION 19.05.0204 OFF-STREET PARKING LOT DESIGN

- A. **Minimum Width of Off-Street Parking Rows and Aisles.** The design of all off-street parking regulated by this Ordinance shall be in conformance with the requirements set forth in Table 19.05.0204.

Table 19.05.0204

MINIMUM WIDTH OF OFF-STREET PARKING ROWS AND AISLES

Type of Row	Parallel Spaces	45 Degree Angle Spaces	60 Degree Angle Spaces	90 Degree Angle Spaces
Single Row & Aisle	20 ft. (one-way aisle)	30 ft. (a) (one-way aisle)	32 ft. (a) (one-way aisle)	44 ft. (a) (two-way aisle)
Double Row & Aisle	28 ft. (one-way aisle)	48 ft. (b) (one-way aisle)	52 ft (b) (one-way aisle).	64 ft. (b) (two-way aisle)

(a) Required width may be reduced by two(2) feet where concrete curb and gutter section provided.

(b) Required width may be reduced by four (4) feet where concrete curb and gutter section provided.

(Ord. 008, Series 2001, Part 15)

B. **Required Curbs, Barriers, and Overhangs.** See Section 19.05.0310(C).

SECTION 19.05.0205 OFF-STREET LOADING REQUIREMENTS

Off-street loading spaces accessory to designated uses shall be provided as follows:

- A. **Location.** All required loading spaces shall be on the same lot as the use served. No permitted or required loading space shall be within forty (40) feet of the nearest point of intersection of any two (2) streets. No loading space shall be in a required side yard abutting a residential zoning district, a residential portion of a PUD District, or a required front yard. Except where shared loading access is permitted by the Plan Commission, off-street loading spaces and internal circulation drivers shall in no case be closer than six (6) feet to any property line. (Ord. 031, Series 2000, Part 4).
- B. **Access.** Each required off-street loading space shall be designed with appropriate means of vehicular access to a street or alley in a way that will least interfere with traffic movement. Loading spaces on lots located adjacent to public ways shall be so situated as to enable the vehicles to back into the loading dock from areas other than public ways. The blocking of loading spaces by other loading spaces, permanent or moveable structures of any type, including trash receptacles or compactors, shall be prohibited.
- C. **Surfacing.** All open off-street loading spaces shall be improved with pavement and storm water drainage facilities according to such standards set forth in Section 19.05.0202 of this Ordinance.
- D. **Computation.** Where the total floor area of the use being served is less than two thousand (2,000) square feet, the required off-street loading spaces may be used to satisfy the requirements for any off-street parking spaces. Employee parking maneuver areas may also be used for access to loading docks and as truck standing areas.
- E. **Repair and Service.** No motor vehicle repair work or service of any kind shall be permitted with loading facilities provided in any residential or nonresidential zoning districts.
- F. **Maneuvering Space Required to Service Outdoor Loading Areas.** Adequate off-street truck maneuvering area shall be provided on-site and not within any public street right-of-way or other public lands.

- G. **Interference With Fire Exit or Emergency Access Prohibited.** Off-street loading facilities shall be designed so as not to interfere with any fire exits or emergency access facilities to either a building or site. All facilities shall comply with the Wisconsin Fire Code and The Wisconsin Enrolled Commercial Building code as amended. (Ord. 025, Series 2002, Part 1).
- H. **Off-Street Loading in the CBD District.** Off-Street loading in the CBD District is not required. However, when off-street loading areas are provided they shall meet the minimum requirements of this Division

SECTION 19.05.0206 OFF-STREET LOADING SPACE DESIGN

- A. **Minimum Required Off-Street Loading Spaces Accessory to Nonresidential Uses in Business and Public and Semi-Public Districts.** The minimum number of required off-street loading spaces accessory to nonresidential uses in the C-1, C-2, C-3, C-4, I, and PR Districts shall be one (1) loading space for buildings containing ten thousand (10,000) to one hundred thousand (100,000) square feet of gross floor area, plus one (1) additional loading space for each additional one hundred thousand (100,000) square feet of gross floor area or fraction thereof. The minimum required size of such loading space shall be ten (10) feet in width and twenty five (25) feet in length, exclusive of aisle and maneuvering space, and it shall have a vertical clearance of not less than fifteen (15) feet.
- B. **Minimum Dimensional Standards for Off-Street Loading Spaces Accessory to Nonresidential Uses in Industrial Districts.** The minimum size of off-street loading spaces accessory to uses in the BP, M-1, and PID Districts shall be according to Table 19.05.0206. Loading spaces on lots on public ways shall be so situated as to enable the vehicles to back into the loading dock from areas other than the public way.

Table 19.05.0206

**MINIMUM DIMENSIONAL STANDARDS FOR OFF-STREET LOADING SPACES
ACCESSORY TO NONRESIDENTIAL USES IN INDUSTRIAL DISTRICTS
AND RELATED MINIMUM DIMENSIONAL REQUIREMENTS**

Gross Floor Area of Building/Use Served	Minimum Size of Required Off-Street Loading Spaces	Minimum Vertical Clearance Required for Each Off-Street Loading Space
5,000 to 10,000 sq.ft.	10 ft. x 35 ft.	15 ft.
10,000 to 25,000 sq.ft.	12 ft. x 40 ft.	15 ft.
25,000 to 40,000 sq.ft.	12 ft. x 50 ft.	15 ft.
40,000 to 100,000 sq.ft.	12 ft. x 60 ft.	15 ft.

SECTION 19.05.0207 DRIVEWAYS

All driveways installed, altered, changed, replaced, or extended after the effective date of this Ordinance shall meet the following requirements and also those set forth in Section 19.05.0101 of this Ordinance.

- A. **Islands.** Except where shared vehicle access is permitted by the Plan Commission in all single-family and two-family residential districts, islands between driveway openings shall be provided with a minimum of twelve (12) feet between all driveways and six (6) feet from all lot lines. (Ord. 031, Series 2000, Part 5).
- B. **Openings.** In all single-family and two-family residential districts, openings for vehicular ingress and egress shall not exceed twenty- four (24) feet at the street right-of-way line and thirty (30) feet at the roadway. In all nonresidential districts, minimum openings for vehicular ingress and egress shall be determined by the Plan Commission during Site Plan Review.

- C. **Vehicular Entrances and Exits.** Vehicular entrances and exits to drive-in theaters; banks; restaurants; motels; funeral homes; vehicular sales, service, washing and repair stations; garages; and public parking lots shall be not less than two hundred (200) feet from any pedestrian entrance or exit to a school, college, university, church, hospital, park, playground, library, public emergency shelter, or other place of public assembly.
- D. **Fire Apparatus Access.** Where required, fire apparatus access lane width shall be a minimum of twenty (20) feet. Such lanes or public street access shall extend to within 150 feet of any portion of the exterior wall of the first story, except as may otherwise be provided under the Wisconsin Enrolled Commercial Building Code as amended. The inside turning radius of a fire lane shall be 28 feet, except as otherwise required by the Fire Chief. (Ordinance No. 025, Series 2002, Part 2)

SECTION 19.05.0208 HIGHWAY ACCESS

No direct private access shall be permitted to the existing or proposed rights-of-way of expressways nor to any controlled access arterial street without permission of the highway agency that has access control jurisdiction. Additional access requirements are set forth in greater detail in Section 19.05.0101 of this Ordinance.

SECTION 19.05.0209 MINIMUM PERMITTED THROAT LENGTH

The minimum permitted throat length for vehicles accessing property used for multiple-family dwellings or for nonresidential purposes shall be established by the Plan Commission during site plan review, but in no case (except in the CBD District) shall be less than twenty-five (25) feet for properties used for multiple-family dwellings and nonresidential properties with a total building gross floor area of fifty thousand (50,000) square feet or less, fifty (50) feet for nonresidential properties with a total building gross floor area of fifty thousand (50,000) square feet to two hundred thousand (200,000) square feet, and seventy-five (75) feet for nonresidential properties with a total building gross floor area of two hundred thousand (200,000) square feet or more.” The Plan Commission may waive or modify these requirements for parking lot expansion or reconfiguration projects where the configuration of pre-existing parking lots, access drives, or circulation drives make the requirements impractical. (Ord. 008, Series 2001, Part 16).

SECTION 19.05.0210 AREA CIRCULATION PLAN REQUIRED

To minimize the number of vehicular access points on arterial and collector streets when development occurs in an area, the Village may require an area circulation plan be prepared pursuant to the requirements set forth in Section 19.05.0101(A)(5) of this Ordinance.

DIVISION 19.05.0300 LANDSCAPE AND BUFFER DEVELOPMENT REGULATIONS

SECTION 19.05.0301 LANDSCAPE AND BUFFER DEVELOPMENT REGULATIONS

A. GENERAL PROVISIONS

1. Purpose. This Section is established to create uniform landscape, screening and tree preservation standards for development of property in the Village of Grafton and the review of plans in order to ensure that the Village remains attractive, safe and comfortable. This Ordinance shall govern all developments except detached single-family and attached two-family residentially used and zoned structures. Every development shall provide sufficient landscaping so that neighboring properties are shielded from the negative visual influence of development, and the appearance and desirability of development contributes to the overall attractiveness and economic health of the Village of Grafton.
2. Plan Requirements. The following shall establish the standards for the preparation and submission of required plans for landscape, screening and tree preservation:

- a. Landscape Plan Required. A landscape plan following the standards set forth in this Section shall be required for all projects requiring Site Plan Review. The Landscape Plan shall be prepared by a landscape architect, certified nursery professional or master gardener. Landscaping on any existing or proposed street right-of-way shall comply with the requirements as set forth by the Village of Grafton Public Works Director pursuant to street construction standards. Landscape Plans shall be reviewed and approved as a part of the Site Plan Review procedures contained in Section 19.06.0100.
- b. Content of Landscape Plan. All landscape plans shall include or have attached thereto the following information:
 - (i) North arrow, scale, date of plan and any subsequent revisions.
 - (ii) The location and dimensions of all existing and proposed buildings, structures, parking lots and driveways, roadways and rights-of-way, sidewalks, bicycle paths, signs, refuse disposal areas, fences, free standing electrical equipment, light fixtures, other surface utility structures, and other free standing structural features, recreational facilities, setbacks and easements. The landscape plan shall be drawn at a scale not smaller than 1 inch = 100 feet.
 - (iii) The location, quantity, size at planting, and both scientific and common names of all proposed plant materials.
 - (iv) Existing and proposed contours, including the location of all proposed berming, at a one foot contour interval. Also included shall be the location, extent and general elevations of all detention and retention areas and drainage ways.
 - (v) Specification of the type and boundaries of all proposed ground cover, including both scientific and common names of all proposed plant materials.
 - (vi) The designation, location, type, and size of all existing trees 4 inches and larger in trunk diameter measured one foot above natural grade. Any trees to be removed should be clearly identified. Trees which will be used to meet landscape requirements shall also be indicated. If required for reasons of clarity, this information may be placed on an additional illustration.

Where existing trees are grouped in a dense cluster, an overall tree mass may be used without a specific delineation of individual trees. If this technique is used, protected trees used to meet site landscape requirements must be tagged on-site and identified on the plan in tabular form.
 - (vii) Details of all fences and walls proposed to be constructed on the site.
 - (viii) Elevations, cross-sections and other site or construction details determined to be necessary by the Director of Planning and Development.
 - (ix) The following notes shall be included on the face of all plans:
 - (1) The landscape installer must receive approval from the Director of Planning and Development for any substitutions or alterations to the plan.
 - (2) It is the responsibility of the landscape installer to have underground utilities located by Diggers Hotline prior to installation.
 - (x) Name and contact information of the property owner.
 - (xi) Name and contact information of the person/company who prepared the plan.
3. Timing of Landscape Improvements. All required landscaping shall be installed prior to the issuance of a Certificate of Occupancy. The best times for planting in this area are early spring and early fall. Plants planted in the summer run the risk of dehydration.

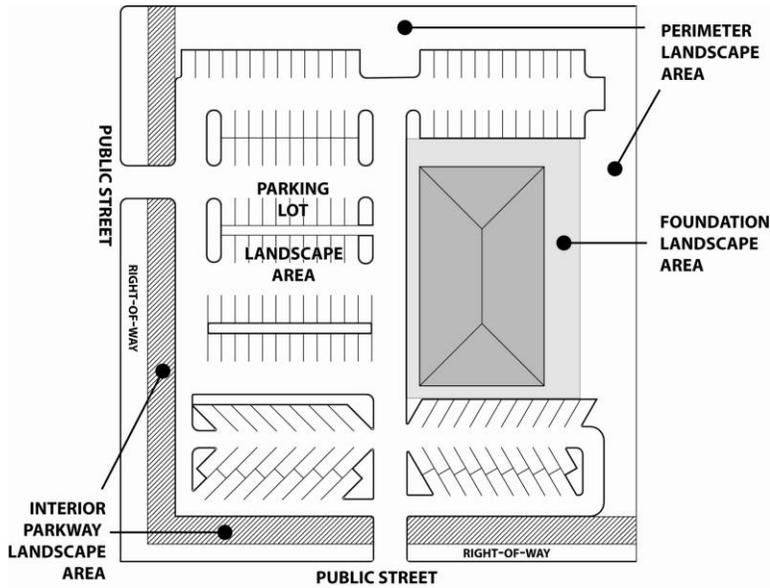
If weather conditions or other circumstances beyond the developer's control prevent installation of all or portions of the landscape materials the procedures outlined for Certificate for Occupancy in Section 19.07.0104 must be followed.

4. Guarantee. All plantings shall be guaranteed by the property owner or business to be in a healthy and flourishing condition at all times.

B. LANDSCAPE REQUIREMENTS

The following shall establish standards for the landscape improvements required to be installed as part of the development of new buildings, structures and uses of land governed by this Section:

1. Types of Landscaped Areas. This article regulates landscaping of five distinct areas of a parcel as follows:
 - a. Interior Parkway
 - b. Perimeter Landscape Area
 - c. Foundation Area
 - d. Parking Lots



2. Landscaped Criteria.

- a. Interior Parkway Landscaping. An interior parkway shall be provided in all zoning districts identified in the following table:

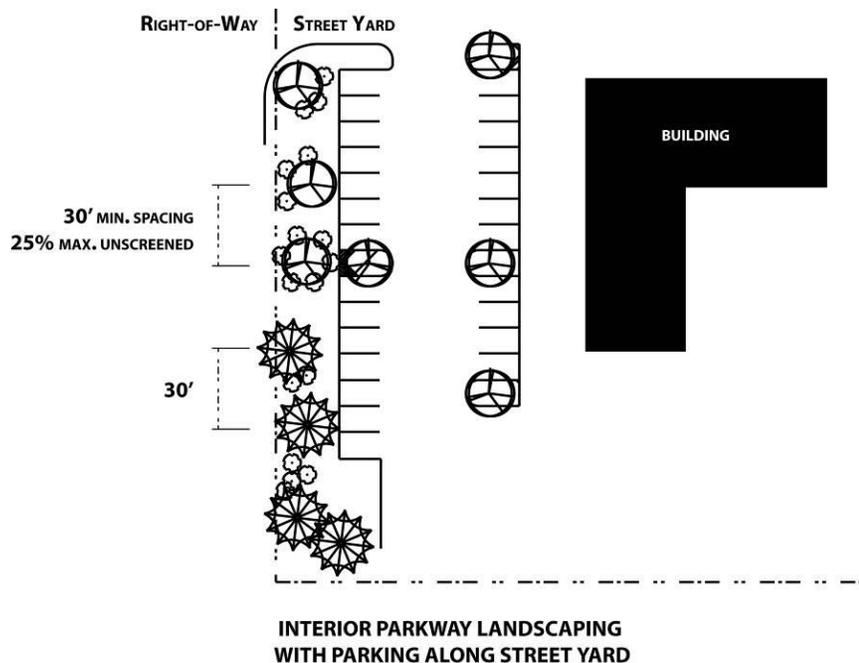
Zoning District	Minimum. Interior Parkway Depth
MFR-1 and MFR-2 Multi-Family Residential Districts	15'
Central Business (CBD) District (on-site parking not required for commercial businesses)	10'
C-1 Neighborhood Business District	15'
C-2 Community Business District	20'
C-3 Commercial Service Business District	20'
C-4 Freeway Interchange Business District	25'
BP Business Park District	25'
O Office District	25'
M-1 Industrial District	20'

PID Planned Industrial District	TBD
PUD Planned Unit Development	TBD
I Institutional District	30'
Zoning District	Minimum. Interior Parkway Depth
PR Parks and Recreation District	20'

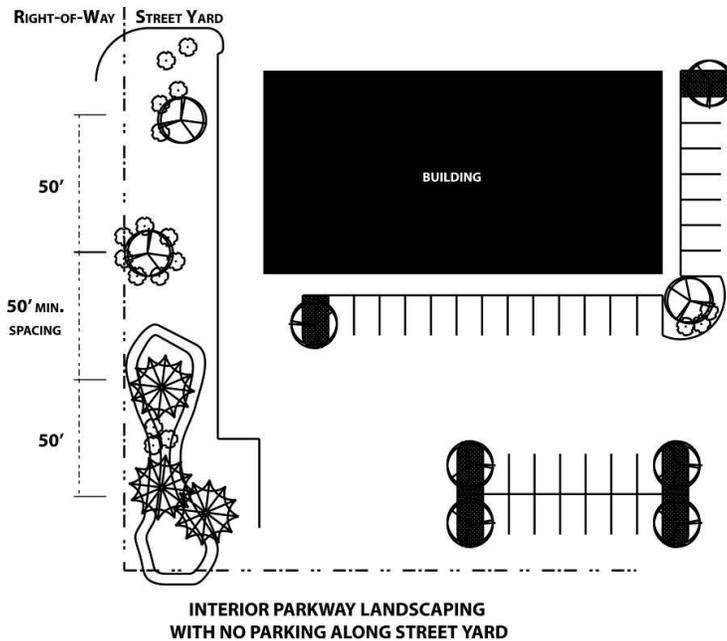
Except for access drives, interior parkways shall be landscaped as follows:

Where parking is provided in the street yard, 1 tree per 40 feet of street frontage shall be provided. At least 50 percent of the required trees shall be large deciduous or evergreen trees as identified in the Recommended Trees, Shrubs, Evergreen, and Ground Cover List subsection. Variety of species may vary depending on design intent.

In addition, shrub planting shall screen the parking area from the roadway. This shrub planting shall be a minimum of 3 feet in height and be located within the interior parkway. A maximum of 25 percent of the parking lot frontage may be left unscreened to permit design flexibility. The remainder of the interior parkway shall be planted with ground cover, flowers, or grass.



- (i) Where no parking spaces will be located in the front yard, 1 tree per 50 feet of street frontage shall be provided in the front yard. At least 50 percent of the required trees shall be large deciduous or evergreen trees as identified in the Recommended Trees, Shrubs, Evergreen, and Ground Cover List. Tree type may vary depending on design intent. The remainder of the interior parkway shall be planted with shrubs, ground cover, flowers, or grass.



(ii) For corner lots, interior parkways shall be provided along both streets.

b. Perimeter Landscape Area.

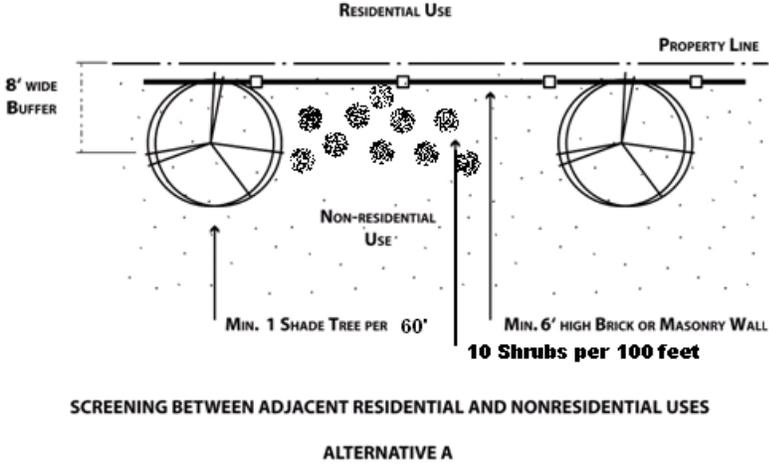
- (i) The perimeter area shall be equal to the required zoning district side and rear yard setbacks for the property as outlined in Development Standards Tables for each zoning district.
- (ii) Within the perimeter areas, berming, trees, and shrubs shall be provided to create a visual separation between properties. Appropriate berm height will depend on the width of the landscape area, with no berm having a slope greater than 3:1. A minimum of 40 percent of the length of the perimeter shall be planted with shrubs that will reach a height of at least 4 feet. Trees shall be provided in a quantity equal to one tree per 75 feet of perimeter length. Tree spacing shall be determined by tree species and design considerations. Up to 50 percent of the required trees in this screening alternative may be small deciduous trees.

c. Bufferyard Screening. The appropriateness of proposed bufferyard landscaping will depend upon the relationship between the proposed use of the property, the use on adjacent properties, and the master plan for the development of the area. Also, bufferyards will not be required for properties located in the downtown pursuant to the Village of Grafton Downtown Master. Three types of bufferyard screening have been defined. The particular type of screening that will be required shall depend upon the relationship of the proposed land use and the adjacent land uses. Minimum landscape requirements shall be as follows:

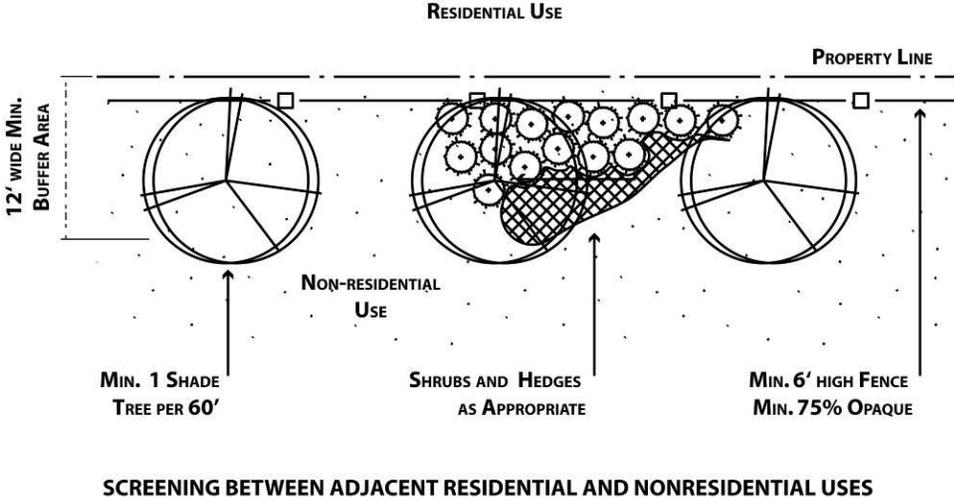
- (i) Screening Between Adjacent Residential and Non-Residential Uses. These landscape requirements are designed to provide a substantial buffer between residential and non-residential uses. Where a residential use abuts a non-residential use, one of the following three buffering alternatives shall be required. The property owner may select the buffering alternative which best meets the configuration of the site and the proposed development. All fences, walls and hedges shall comply with all Village of Grafton codes.

- (1) Alternative A: The buffering area shall be a minimum of 8 feet in width for this alternative. An opaque brick or other approved decorative masonry wall 6 feet high shall be constructed along the entire perimeter, excluding area within the required front yard setback. The wall may be continued within the front yard provided the height is reduced to 4 feet. Large

deciduous trees in a quantity equal to one tree per 60 feet of perimeter length shall be provided. Tree spacing shall be determined by tree species and design considerations, and are not required to be evenly spaced. Shrubs shall be planted within the buffer area at a minimum rate of 10 per 100 feet, massed appropriately in clusters.

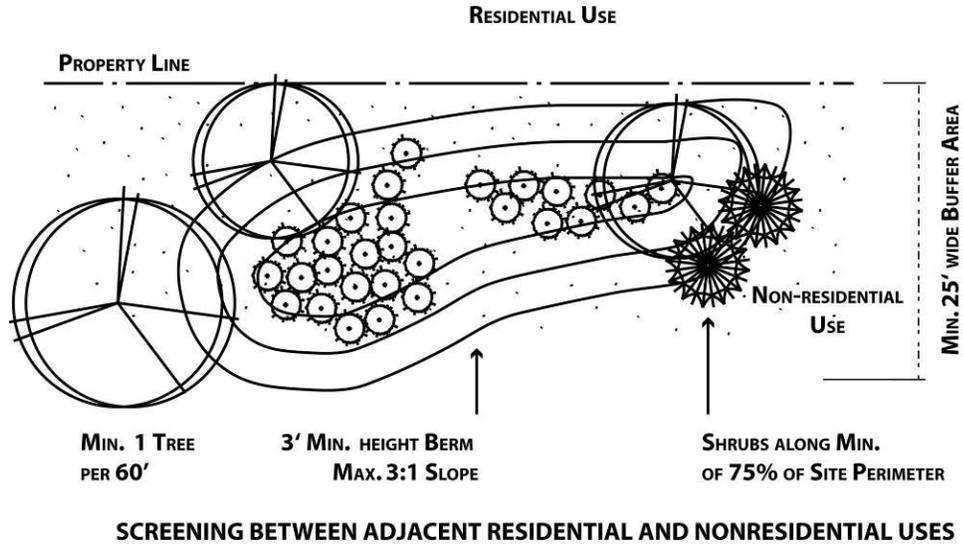


(2) Alternative B: A minimum 12 foot average buffer area shall be required for this alternative. A fence of wood or other approved material 6 feet high and at least 75 percent opaque shall be constructed along the entire perimeter, excluding area within the required front yard setback. The fence may be continued within the front yard provided the height is reduced to 4 feet. Shrubs shall be planted within the buffer area at a minimum rate of 15 per 100 feet, massed appropriately in clusters. Large deciduous trees shall be provided in a quantity equal to 1 tree per 60 feet of perimeter length. Tree location shall be determined by tree species and design considerations.



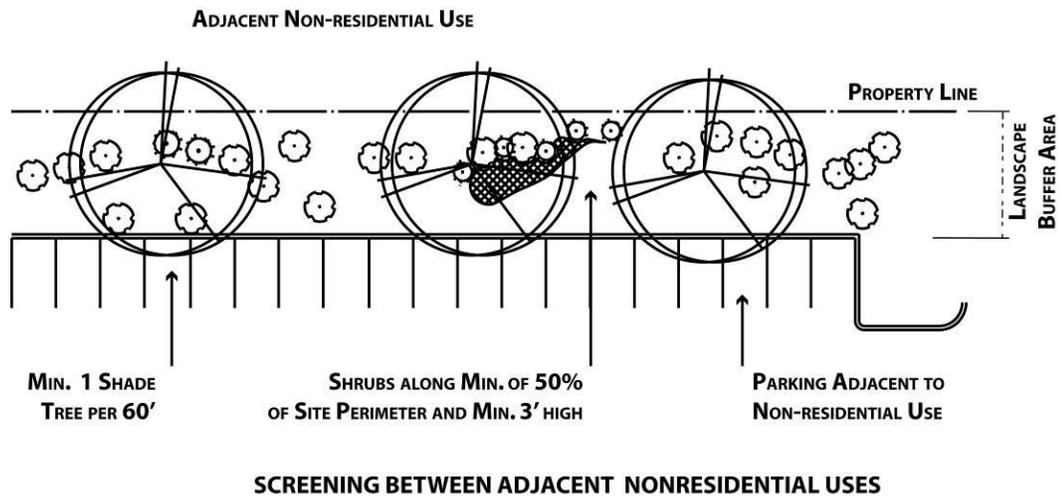
(3) Alternative C: A minimum 25 foot buffer area shall be required for this alternative. A berm at least 3 feet in height with a maximum 3:1 slope shall be constructed along the entire perimeter. Breaks in the berm may be provided as appropriate to accommodate drainage. The berm shall be planted with shrubs 4 feet or greater in height to provide screening along at least 75 percent of the perimeter length. Trees shall be provided in a quantity equal to one tree per 60 feet of perimeter length. Tree spacing shall be determined by tree species and

design considerations. Up to 25 percent of the required trees in this screening alternative may be small deciduous trees.

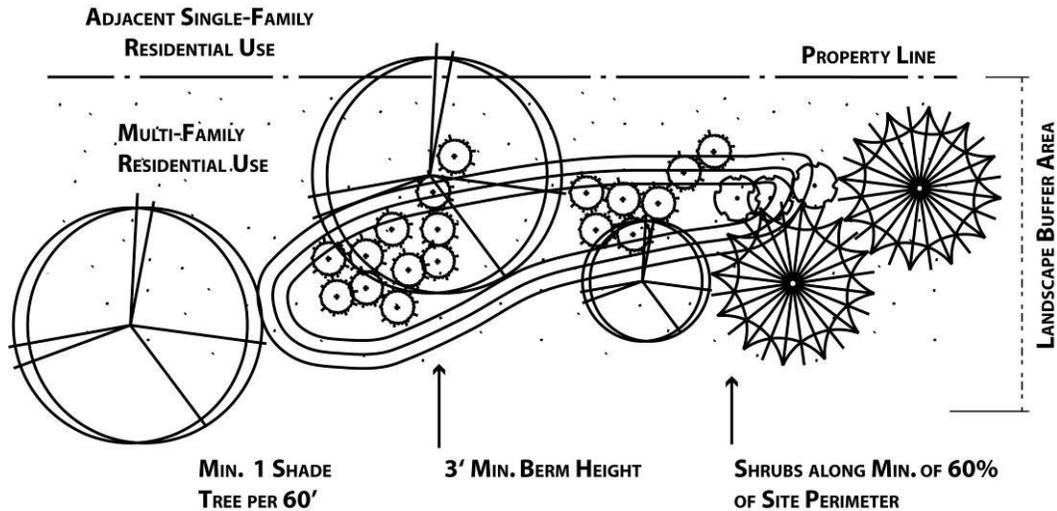


ALTERNATIVE C

- (ii) Screening of Parking Areas. The following landscape requirements are designed to screen parking areas from adjacent non-residential uses or multi-family residential uses. Where a non-residential or multi-family residential use parking lot will be located adjacent to a residential use, the landscaping shall comply with the screening regulations outlined in Subsection (i) above. A parking lot will be placed along a perimeter such that parked cars will face the abutting non-residential property. Shrubs and trees shall be appropriately placed to maximize the screening of automobiles. Shrubs shall be provided along at least 80 percent of the length of the parking area. Shrubs shall be a minimum of 3 feet in height at maturity when screening a parking lot. Trees shall be provided in a quantity equal to one large deciduous tree per 60 feet of parking lot length. Tree spacing shall be determined by tree species and design considerations. Up to 25 percent of the required trees in this screening alternative may be small deciduous trees.



- (iii) Screening Between Single- and Multi-Family Residential Uses (not including parking areas). This landscape screening is generally required between single- and multi-family residential areas. Berming, trees, and shrubs shall be provided to create a visual separation between properties. Appropriate berm height will depend on the width of the landscape area, with no berm having a slope greater than 3:1. A minimum of 60 percent of the length of the perimeter shall be planted with shrubs that will reach a height of at least 6 feet. Trees shall be provided in a quantity equal to one tree per 60 feet of perimeter length. Tree spacing shall be determined by tree species and design considerations. Up to 25 percent of the required trees in this screening alternative may be small deciduous trees.



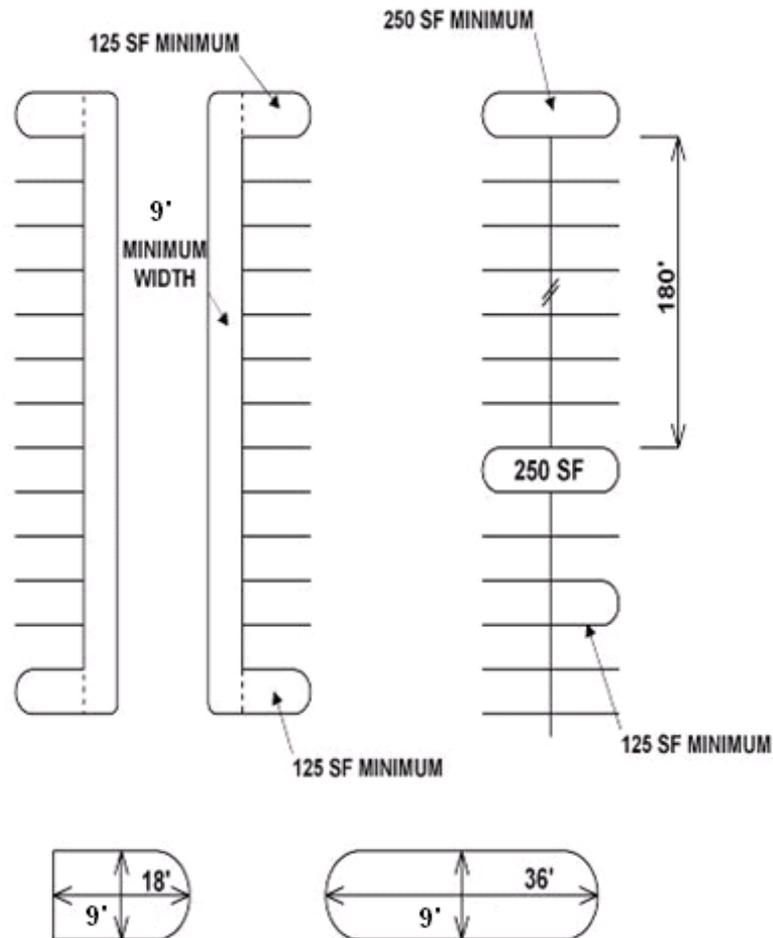
**SCREENING BETWEEN ADJACENT SINGLE-FAMILY
AND MULTI-FAMILY RESIDENTIAL USES**

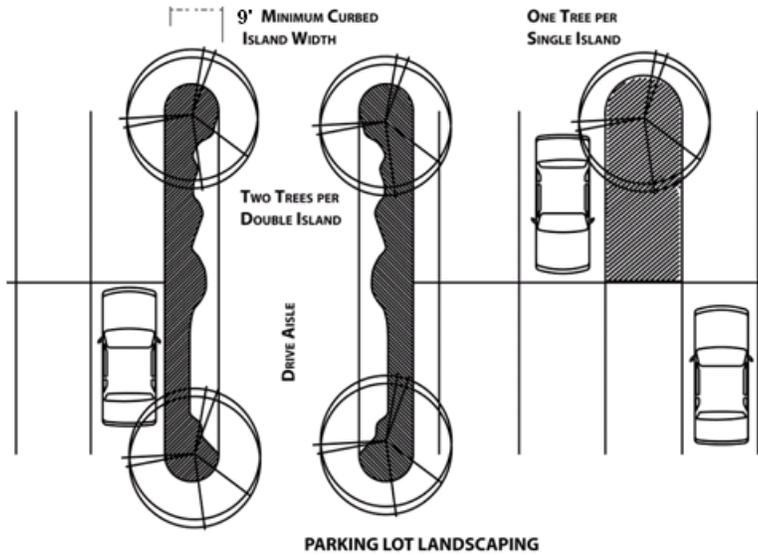
- d. Foundation Area Landscaping.
- (i) Purpose. Planting should emphasize softening large expanses of building walls, accenting building entrances and architectural features, and screening mechanical equipment. Where extended roofs or canopies are used to provide a covered walkway adjacent to a building, foundation plantings are not required. Landscaping is required to separate vehicular areas from buildings.
 - (ii) Location. Foundation landscaping areas shall be located along or adjacent to each applicable front, side or rear of a building, provided, however, where a portion of the front, side or rear of a building is devoted to pedestrian ingress/egress, vehicular ingress/egress, loading or drop-off zones, foundation landscaping areas may be aggregated into one or more locations along or abutting such front, side or rear of a building.
 - (iii) Relationship to Buildings. Foundation landscaping areas shall be located adjacent to the building; or begin within 12 feet of the building (in the case of a walkway which runs adjacent to the building).
 - (iv) Area. Foundation landscaping areas shall have a total area in square feet of not less than 2 feet times the length of the wall (2 feet x length of wall = area in square feet for foundation landscaping) to which the foundation landscaping is oriented.
 - (v) Plantings. Foundation landscaping areas shall be landscaped with grass, trees, or shrubs/hedge plants, or in combination with other suitable ground cover materials and maintained.

(vi) **Minimum Dimension.** Foundation landscaping areas shall maintain a minimum depth in the smallest dimension of 6 feet, provided, however, the Director of Planning and Development may approve up to 25 percent of a foundation landscaping area to be included in above-ground planters having a minimum dimension of 3 feet.

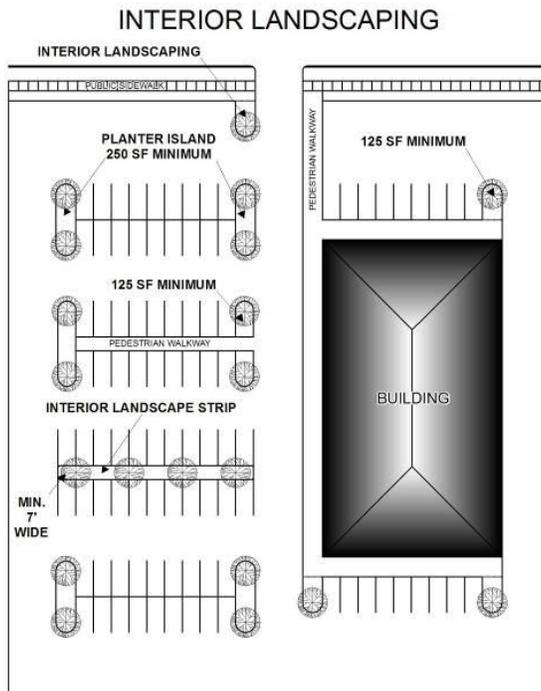
e. **Parking Lot Landscaping.** Landscaping shall be required within all parking lots to meet the following standards:

(i) There shall be a minimum 9 foot wide curbed planting island at both ends of every parking row. The depth of the planting island shall be equal to the depth of the parking stalls.





- (ii) All trees within a landscape island shall be pruned to have branching starting no less than 6 feet above the pavement.
- (iii) To break up long expanses of parking rows, landscape islands are required. One of the following alternatives shall be used to divide rows of parking spaces.



- (1) Alternative A. A continuous curbed landscape island between rows may be provided in lieu of full stall planting islands between parking bays. Where such a continuous island is provided, it shall be a minimum of 9 feet in width and shall contain a minimum of one tree per 10 lineal parking spaces.

- (2) Alternative B. One landscape island shall be constructed for every 10 parking stalls. A curbed island at least 9 feet-wide and as deep as the parking stalls shall be provided to divide the bay length. There shall be a minimum of one large deciduous tree per island.

In addition to required trees, an appropriate planting of shrubs, ground cover plants, flowers, sodded lawn and natural mulch only shall be provided within all landscape islands. To insure vehicular visibility, shrubs shall not exceed a mature height of 30 inches above pavement on landscape islands at the end of parking rows.

3. Landscape Design Requirements. Functional activities within and adjoining the development site must be considered in the design of landscape improvements, including consideration of the following:
 - a. Service Area Screening. All service areas shall be screened from view through the use of evergreen plant materials, a fence, or masonry screen wall compatible with the proposed building design.
 - (i) Trash dumpsters and other waste receptacles or equipment shall be screened with a fence or 3 sided brick or other approved masonry walls at least 6 feet in height, with a solid, attractive single or double access gate on one side only.
 - (ii) All utility equipment (air conditioners, transformers, etc.) shall be provided with appropriate planting screens. All dish antennas greater than 36 inches in diameter shall be adequately screened from adjoining properties by an opaque wall, fence, hedge or berm.
 - (iii) All loading areas shall be fully screened so as not to be visible from adjoining rights-of-way and property zoned for any residential use.
 - (iv) All outdoor storage facilities for fuel, raw materials and products within 500 feet of a residential district shall be effectively screened and enclosed by a solid wall or fence 8 feet in height. If materials to be stored outdoors are in excess of 8 feet in height, then landscape screening shall be provided in addition to the fence or wall installed along the outside perimeter of the fence or wall, equal or exceeding the height of the materials to be stored outdoors.
 - b. Traffic Visibility. Landscaping must be designed and installed pursuant to Section 19.05.0201 on the Village of Grafton Zoning Code.
 - c. Berming shall not exceed a maximum slope of 3:1 except in parking islands, where the maximum slope shall not exceed 2:1.
 - d. Mulch materials shall be shredded bark or other organic material best suited for the Village of Grafton. Gravel and stone mulches are not permitted, unless specifically approved in writing by the Director of Planning and Development.
 - e. All fences proposed to be used to meet landscape requirements shall be comply with all municipal codes.

C. LANDSCAPE PLAN AND DESIGN REVIEW

The following guidelines shall be considered in reviewing the design and implementation of landscape plans in conjunction with review of site plans and special use permits.

1. Standards for Plant Materials. Materials planted in any development shall comply with the following requirements:
 - a. The quality and size of plant material selected shall comply with the latest edition of the "American Standard of Nursery Stock" published by the American Association of Nurserymen unless otherwise indicated.
 - b. No artificial plants of any type shall be used to meet the requirements of this Ordinance in any landscape area within the parcel.
 - c. Minimum sizes for plant materials at time of installation for all landscape areas shall be as follows:

- (i) Deciduous trees shall be a minimum trunk size of 2½ inch caliper when installed. Evergreen trees shall be a minimum 6 feet in height when installed.
 - (ii) Deciduous shrubs (other than dwarf varieties) shall be a minimum of 30 inches in height at time of installation if used as a perimeter screen planting, and 24 inches in height for all other installations. Dwarf varieties and plants normally measured by spread shall be a minimum of 18 inches in height/spread.
 - (iii) Ground cover shall be so planted and spaced that complete coverage can be obtained within two years after date of installation. Only ground cover plants, flowers, sodded lawn and natural mulch will be considered appropriate ground cover.
 - (iv) Flower beds and the use of native grasses is encouraged and shall be mass planted in acceptable areas to create color, texture and interest.
- d. Property owners shall be responsible for maintaining all landscaping shown on the approved landscape plan throughout the life of the development. All dead plants shall be replaced with plants which meet original requirements. No changes shall be permitted without the approval of the Director of Planning and Development or his/her designee.
2. Guide for Landscape Planting. The plant materials recommended in Subsection (3) below have minimal maintenance requirements. However, all landscape material must receive a certain degree of care, especially during and immediately after planting. To protect an investment in new landscaping, proper horticultural techniques should be followed. The following recommendations are provided as a guide for planting based on current horticultural practice.
- a. The best times for planting are early spring and early fall. Plants planted in the summer run the risk of dehydration.
 - b. Plant trees and shrubs at least 3-feet from the back of curb along head-in parking spaces to prevent damage from car overhangs. Mulch, lawn or planted ground cover shall be further help avoid damage.
 - c. Dig tree pits at least one foot wider than the root ball.
 - d. Especially in areas where construction activity has compacted the soil, the bottom of the pit should be scarified or loosened with a pick ax or shovel.
 - e. After a pit is dug, observe subsurface drainage conditions. Where poor drainage exists, special provisions should be made to ensure proper drainage around the tree.
 - f. Backfill should include a proper mix of soil, peat moss, and nutrients. All roots must be completely covered. Backfill should be thoroughly watered as it is placed around the roots.
 - g. Plants should remain plumb and level. Newly planted trees may be supported with stakes and ties to hold it firmly in place. Remove stakes and ties after one year.
 - h. Spread at least two inches of mulch over plant beds in order to retain moisture and keep down weeds. A 3 inch deep saucer should be provided to form a basin around the trunk of the tree. This saucer helps catch and retain moisture.
 - i. The lower trunks of new trees may be wrapped with burlap or paper to prevent evaporation and sun scald. The wrapping should remain on the tree for at least one year.
3. Lists of Recommended Trees, Shrubs, Evergreen, and Ground Cover. The following lists indicate plantings which will meet the landscape requirements of this Ordinance. The lists are by no means comprehensive and are intended merely to suggest the types of flora which would be appropriate for these purposes. Plants were selected for inclusion on these lists according to four principal criteria: (i) general suitability for the climate and soil conditions of this area, (ii) ease of maintenance, (iii) tolerance of Village conditions, and (iv) availability from area nurseries. All plantings shall be approved by the Director of Planning and Development.

Trees

Botanical Name	Common Name	Height / Spread
* <i>Acer freemanii</i>	Freeman Maple	H 40-80 S 25-50
<i>Acer nigrum</i>	Black Maple	H 50-75 S 50
* <i>Acer platanoides</i>	Norway Maple	H 40-50 S 35-40
* <i>Acer rubrum</i>	Red Maple	H 40-60 S 30-50
* <i>Acer saccharium</i>	Sugar Maple	H 50-75 S 50
* <i>Acer Tataricum</i>	Tartarian Maple	H 15-20 S 15-20
* <i>Amelanchier</i>	Serviceberry	H 25-30 S 25-30
<i>Betula alleghaniensis</i>	Yellow Birch	H 50-75 S 35-50
<i>Betula nigra</i>	River Birch	H 50-75 S 35-50
<i>Betula papyrifera</i>	Paper Birch	H 50 S 35
<i>Betula populolia</i>	Whitespire Birch	H 20-40 S 10-20
<i>Carpinus caroliniana</i>	Musclewood	H 25-30 S 25-30
<i>Celtis occidentalis</i>	Hackberry	H 60-75 S 40-60
<i>Cercis Canadensis</i>	Eastern Redbud	H 20-30 S 25-35
<i>Cladrastis kentukea</i>	American Yellowwood	H 30-50 S 40-55
<i>Cornus alternifolia</i>	Pagoda Dogwood	H 10-15 S 15-20
* <i>Crataegus</i>	Hawthorn	H 20-30 S 20-30
<i>Ginkgo biloba</i>	Ginkgo	H 40-80 S 30-40
* <i>Gleditsia tricanthos</i>	Honeylocust	H 30-60 S 30-45
<i>Gymnocladus dioica</i>	Kentucky Coffeetree	H 50-60 S 50-60
* <i>Magnolia</i>	Magnolia	H 20-30 S 15-35
* <i>Malus</i>	Crabapple	H 15-30 S 15-30
<i>Ostrya virginiana</i>	Ironwood	H 30 S 20
<i>Prunus maackii</i>	Amur Chokecherry	H 20-30 S 20-30
<i>Pyrus calleryana</i>	Callery Pear	H 30-50 S 20-35
<i>Quercus bicolor</i>	Swamp White Oak	H 50-60 S 50-60
<i>Quercus bicolor x macrocarpa</i>	Swamp White x Bur Oak	H 75 S 70
<i>Quercus macrocarpa</i>	Bur Oak	H 70-90 S 60-80
<i>Quercus muehlenbergii</i>	Chinkapin Oak	H 45-80 S 50-80
<i>Quercus robur</i>	English Oak	H 40-60 S 40-60
<i>Quercus alba</i>	White Oak	H 50-80 S 40-70
<i>Syringa reticulata</i>	Japanese Tree Lilac	H 20 S 15
* <i>Tilia</i>	Linden	H 50-70 S 35-50
* <i>Ulmus</i>	Elm Hybrid	H 50-70 S 45-60

Shrubs

Botanical Name	Common Name	Height / Spread
* <i>Amelanchier</i>	Serviceberry	
* <i>Aronia</i>	Chokeberry	
* <i>Berberis</i>	Barberry	
* <i>Buddleia</i>	Butterfly Bush	
* <i>Cornus</i>	Dogwood	
* <i>Corylus</i>	Hazelnut	
* <i>Cotinus</i>	Smokebush	
* <i>Cotoneaster</i>	Cotoneaster	
* <i>Euonymus alatus</i>	Burning Bush	

* <i>Forsythia</i>	Forsythia
* <i>Hydrangea</i>	Hydrangea
* <i>Hypericum</i>	St. Johnswort
* <i>Philadelphus</i>	Mockorange
* <i>Physocarpus</i>	Ninebark
* <i>Potentilla</i>	Potentilla
* <i>Rhus</i>	Sumac
* <i>Ribes</i>	Alpine Current
* <i>Rosa</i>	Rose
* <i>Salix</i>	Willow
* <i>Sambucus</i>	Elderberry
* <i>Spirea</i>	Spirea
* <i>Syringa</i>	Lilac
* <i>Viburnum</i>	Viburnum
* <i>Weigelia</i>	Weigelia
* <i>Yucca</i>	Yucca

Evergreens

Botanical Name	Common Name	Height / Spread
<i>Abies concolor</i>	Concolor Fir	H 30-50 S 15-30
<i>Abies balsamea</i>	Balsam Fir	H 45-75 S 20-25
<i>Abies fraseri</i>	Fraser Fir	H 30-40 S 20-25
* <i>Picea</i>	Spruce	H 40-60 S 15-40
* <i>Pinus</i>	Pine	H 50-80 S 20-40
* <i>Thuja</i>	Arborvitae	H 10-60 S 6-30
<i>Tsuga canadensis</i>	Canadain Hemlock	H 40-70 S 25-35
<i>Larix decidua</i>	Common Larch	H 70-75 S 25-30
<i>Larix laricina</i>	Tamarack	H 40-80 S 15-30

Evergreen Shrubs

Botanical Name	Common Name	Height / Spread
* <i>Juniperus</i>	Juniper	
* <i>Taxus</i>	Yew	
<i>Microbiota</i>	Russian Cypress	
* <i>Thuja</i>	Arborvitae (Globe & Compact)	

Evergreen Broad Leaf

Botanical Name	Common Name	Height / Spread
* <i>Azalea</i>	Azalea	
* <i>Buxus</i>	Boxwood	
* <i>Euonymus</i>	Euonymus	
<i>Ilex crenata</i>	Holly	
<i>Ilex verticillata</i>	Winterberry	
* <i>Rhododendron</i>	Rhododendron	

* Indicates many cultivars in each specie

SECTION 19.05.0314 MITIGATION OF MINIMUM REQUIRED LANDSCAPE SURFACE RATIO (LSR) IN NONRESIDENTIAL DISTRICTS

The Village of Grafton recognizes that the use of the landscape surface ratio (LSR) standards for the provision of adequately landscaped open space in nonresidential areas as set forth in this Ordinance may not always lead to good design and, under some circumstances, may be difficult to achieve. This Section addresses landscape mitigation measures that may be allowed by the Plan Commission.

- A. **Mitigation of Required Bufferyards and Off-Street Parking Landscaping Not Permitted.** The mitigation of the dimensional requirements, structural requirements, and/or landscape plant unit and/or material requirements of required peripheral or street bufferyards shall not be allowed. Landscape surface ratio (LSR) mitigation shall only be allowed for required on-site landscaping as required in Table 19.05.0311(C).

- B. **Maximum Allowable Reduction of the Landscape Surface Ratio (LSR) Through Mitigation Measures.** The maximum allowable reduction of the landscape surface ratio (LSR) through mitigation measures shall not fall below those landscape surface ratios (LSRs) set forth in Table 19.05.0314. *In no case shall reductions in landscape surface ratios (LSRs) supersede the natural resource protection standards set forth in Division 19.04.0100 or allow for increases in either the maximum gross floor area ratio (GFAR) or net floor area ratio (NFAR) set forth in the various zoning district requirements of this Ordinance.*

Table 19.05.0314

MAXIMUM ALLOWABLE MITIGATION OF LANDSCAPE SURFACE RATIO (LSR) REQUIREMENTS IN NONRESIDENTIAL ZONING DISTRICTS

Nonresidential Zoning District	Required Landscape Surface Ratio (LSR)	Alternative Landscape Surface Ratio (LSR) with Mitigation	Minimum Number of Plant Units (see Table 19.05.0302) Required to be Planted On-Site Under LSR Mitigation Requirements
CBD Central Business	None	None	None
C-1 Neighborhood Business	0.45	0.35	7 per acre
C-2 Community Business	0.25	0.20	7 per acre
C-3 Commercial Service Business	0.25	0.20	7 per acre
C-4 Freeway Interchange Business	0.35	0.30	7.5 per acre
O Office	0.30	0.25	9 per acre
BP Business Park	0.45	0.40	9 per acre
M-1 Industrial	0.25	0.20	5 per acre
PID Planned Industrial	0.30	0.25	7 per acre
I Institutional	0.40	0.30	7.5 per acre
PR Park and Recreation	0.50	0.45	5 per acre

DIVISION 19.05.0400 LIGHTING STANDARDS

SECTION 19.05.0401 EXTERIOR LIGHTING STANDARDS

Exterior lighting shall meet one (1) of the following standards. In addition, when lighting is measured at a property line which is the dividing line between two zoning districts, the lighting levels measured at the property line shall not exceed the maximum allowable illumination of the more restrictive of the two abutting zoning districts.

- A. **Requirements for the Use of No Cut-Off Type Luminaires.** When a light source or luminaire has a no cut-off type luminaire (see Figure 19.05.0401(A)), the maximum permitted illumination and the maximum permitted luminaire height shall be as set forth in Table 19.05.0401(A).

Table 19.05.0401(A)

REQUIREMENTS FOR THE USE OF NO CUT-OFF TYPE LUMINAIRES (a)

Zoning District	Maximum Permitted Illumination (a) (footcandles)	Maximum Permitted Luminaire Height (feet)
R-RE, R-E, R-1, R-S, R-2, R-3, R-4, R-5, and R-6 Districts	0.20	10
MFR-1, MRF-2, and Residential PUD Districts	0.30	15
C-1 District	0.30	20
PR and I Districts	As determined by the Plan Commission during Site Plan Review on a case-by-case basis.	As determined by the Plan Commission during Site Plan Review on a case-by-case basis.
All Other Districts	0.30 (b)	25 (b)
Village Required Street Lights in All Districts	Per Village of Grafton Requirements and Specifications (Section 19.05.0404 of this Ordinance)	Per Village of Grafton Requirements and Specifications (Section 19.05.0404 of this Ordinance)

- (a) These standards do not address illumination levels or fixture height that may be required by the Village of Grafton for the adequate lighting of public street rights-of-way. These represent maximum illumination levels on private property.
- (b) See Section 19.05.0403 for lighting standards for outdoor recreational facilities in the PR District and I District.

See Figure 19.05.0401 (A) at the end of Part 5.

B. **Requirements for Total Cut-Off Type Luminaires (with Angle Greater than 90 Degrees).** When a luminaire has total cutoff of light at an angle greater than ninety (90) degrees (see Figure 19.05.0401(B)), the maximum illumination and the maximum permitted luminaire height shall be as set forth in Table 19.05.0401(B).

Table 19.05.0401(B)

REQUIREMENTS FOR THE USE OF CUT-OFF TYPE LUMINAIRES WITH ANGLE GREATER THAN 90 DEGREES (a)

Zoning District	Maximum Permitted Illumination (a) (footcandles)	Maximum Permitted Luminaire Height (feet)
R-RE, R-E, R-1, R-S, R-2, R-3, R-4, R-5, and R-6 Districts	0.5	12
MFR-1, MRF-2, and Residential PUD Districts	0.8	20
C-1 District	1.0	25
PR and I Districts	As determined by the Plan Commission during Site Plan Review on a case-by-case basis.	As determined by the Plan Commission during Site Plan Review on a case-by-case basis.
All Other Districts	2.0 (b)	30 (b)
Village Required Street Lights in All Districts	Per Village of Grafton Requirements and Specifications (Section 19.05.0404 of this Ordinance)	Per Village of Grafton Requirements and Specifications (Section 19.05.0404 of this Ordinance)

- (a) These standards do not address illumination levels or fixture height that may be required by the Village of Grafton for the adequate lighting of public street rights-of-way. These represent maximum illumination levels on private property.
- (b) See Section 19.05.0403 for lighting standards for outdoor recreational facilities in the PR District and the I District.

C. **Requirements for Total Cut-Off Type Luminaires (with Angle Less than 90 Degrees).** When a luminaire has total cut-off of light at an angle less than ninety (90) degrees and is located so that the bare light bulb, lamp, or light source is completely shielded from the direct view of an observer five (5) feet above the ground at the point where the cut-off angle intersects the ground (see Figure 19.05.0401(C)), then the maximum permitted illumination and the maximum permitted height of the luminaire shall be as set forth in Table 19.05.0401(C).

See Figure 19.05.0401 (B) at the end of Part 5.

Table 19.05.0401(C)

**REQUIREMENTS FOR THE USE OF CUT-OFF TYPE LUMINAIRES
WITH ANGLE LESS THAN 90 DEGREES (a)**

Zoning District	Maximum Permitted Illumination (a) (footcandles)	Maximum Permitted Luminaire Height (feet)
R-RE, R-E, R-1, R-S, R-2, R-3, R-4, R-5, and R-6 Districts	0.8	15
MFR-1, MRF-2, and Residential PUD Districts	1.0	20
C-1 District	2.0	25
PR and I Districts	As determined by the Plan Commission during Site Plan Review on a case-by-case-by-case basis.	As determined by the Plan Commission during Site Plan Review on a case-by-case-by-case basis.
All Other Districts	4.0 (b)	40 (b)
Village Required Street Lights in All Districts	Per Village of Grafton Requirements and Specifications (Section 19.05.0404 of this Ordinance)	Per Village of Grafton Requirements and Specifications (Section 19.05.0404 of this Ordinance)

- (a) These standards do not address illumination levels or fixture height that may be required by the Village of Grafton for the adequate lighting of public street rights-of-way. These represent maximum illumination levels on private property.
- (b) See Section 19.05.0403 for lighting standards for outdoor recreational facilities in the PR District and I District.

See Figure 19.05.0401 (C) at the end of Part 5.

SECTION 19.05.0402 EXTERIOR LIGHTING PLAN REQUIRED

- A. **General.** Except in the R-RE, R-E, R-1, R-S, R-2, R-3, R-4, R-5, R-6, A-1, A-2, and A-3 Districts, at the time any exterior light is installed or substantially modified, whenever a Site Plan Review application is made, and whenever a Zoning Permit application is made, an exterior lighting plan shall be submitted to the Village of Grafton to determine whether the requirements of this Section have been met and that adjoining property will not be adversely impacted by the proposed lighting. In addition, the maximum average lighting levels within paved areas are: 4.0 footcandles for shopping centers and fast-food restaurants, 2.5 footcandles for all other uses in commercial and industrial zoning districts, and 1.0 footcandle levels for all uses in residential zoning districts.
- B. **Lighting Plan Elements.** A Lighting Plan submitted pursuant to this Ordinance shall have, at a minimum, the following elements:
1. A catalog page, cut sheet, or photograph of the luminaire including the mounting method.
 2. A photometric data test report of the proposed luminaire graphically showing the lighting distribution at all angles vertically and horizontally around the luminaire.
 3. A plot plan, drawn to a recognized engineering or architectural scale, indicating the location of the luminaire(s) proposed, mounting, and/or installation height in feet, the overall illumination levels (in footcandles) and uniformities on the site, and the illumination levels (in footcandles) at the property boundary lines. This may be accomplished by means of an isolux curve or computer printout projecting the illumination levels.
 4. A graphic depiction of the luminaire lamp (or bulb) concealment and light cut-off angles.
 5. In addition to the full-size drawings required above, one (1) copy of each such drawing submitted shall also be submitted in 11" x 17" black and white reduction.

SECTION 19.05.0403 EXTERIOR LIGHTING FOR SPECIFIED OUTDOOR RECREATIONAL USES

Ball diamonds, playing fields, golf driving ranges, tennis courts, and similar outdoor recreational facilities have unique requirements for nighttime visibility and generally have limited hours of operation. These uses may be exempted from the exterior lighting standards of the Division if the applicant can satisfy the Plan Commission, upon Site Plan Review, that the following requirements are met:

- A. **Site Plan.** The Site Plan must meet all other requirements of this Division and Ordinance.
- B. **Exterior Light Sources.** Any exterior light sources shall not exceed the maximum permitted post height of seventy (70) feet.
- C. **Shielded Luminaires.** If the luminaire is shielded in either its orientation or by a landscaped bufferyard to prevent light and glare spillover to adjacent residential property(s) or residential zoning districts, then the luminaire may exceed a total cut-off angle of ninety (90) degrees. The maximum permitted illumination at the interior bufferyard line of all required bufferyards shall not exceed two (2) footcandles.
- D. **Lighting Plan Required.** A "Lighting Plan" meeting the requirements of Section 19.05.0402 of this Division shall be submitted to the Plan Commission for review and approval.

SECTION 19.05.0404 STREET LIGHTING

Street lighting shall conform to the standards set forth by the State of Wisconsin for State Trunk Highways, Ozaukee County for County Trunk Highways, and the Village of Grafton for Village streets and highways.

SECTION 19.05.0405 ADDITIONAL REGULATIONS

Despite any other provision of this Section to the contrary, the following provisions shall also be applicable.

- A. **Flickering and Flashing Lights.** No flickering or flashing lights shall be permitted excluding seasonal lighting between November 1 and January 31.
- B. **Light Sources and/or Luminaires Not to be Located Within Required Bufferyards.** Light sources or luminaires shall not be located within required bufferyard areas except on pedestrian walkways.
- C. **Requirements of Other Applicable Codes and Ordinances to be Met.** The provisions of this Division are designed to supplement other applicable ordinances and codes and not as a substitute. All outdoor electrically powered illuminating devices shall be installed in conformance with the provisions of this Ordinance, applicable building codes and ordinances, electrical codes and ordinances, and all other codes and ordinances as applicable and under appropriate permit and inspection. Illuminating devices shall not interfere with the provision of fire apparatus access, as provided under the Wisconsin Enrolled Commercial Building Code, as amended. (Ord. 025, Series 2002, Part 5).

SECTION 19.05.0406 LIGHT MEASUREMENT

- A. **Metering Equipment.** Lighting levels shall be measured in footcandles with a direct-reading, portable light meter. The meter shall be read within an accuracy of plus or minus five (5) percent.
- B. **Method of Measurement.** The meter sensor shall be mounted not more than six (6) inches above ground level in a horizontal position at the interior line of the bufferyard or at the property line, as required herein. Readings shall be taken only after the cell has been exposed long enough to provide a constant reading. To eliminate the effects of moonlight and other ambient light, measurements shall be made after dark with the light source in question on, then with the same sources off. The average of the two (2) readings shall be compared with the maximum permitted illumination allowed under this Division.

Figure 19.05.0401(A)

NO CUT-OFF TYPE LUMINAIRE

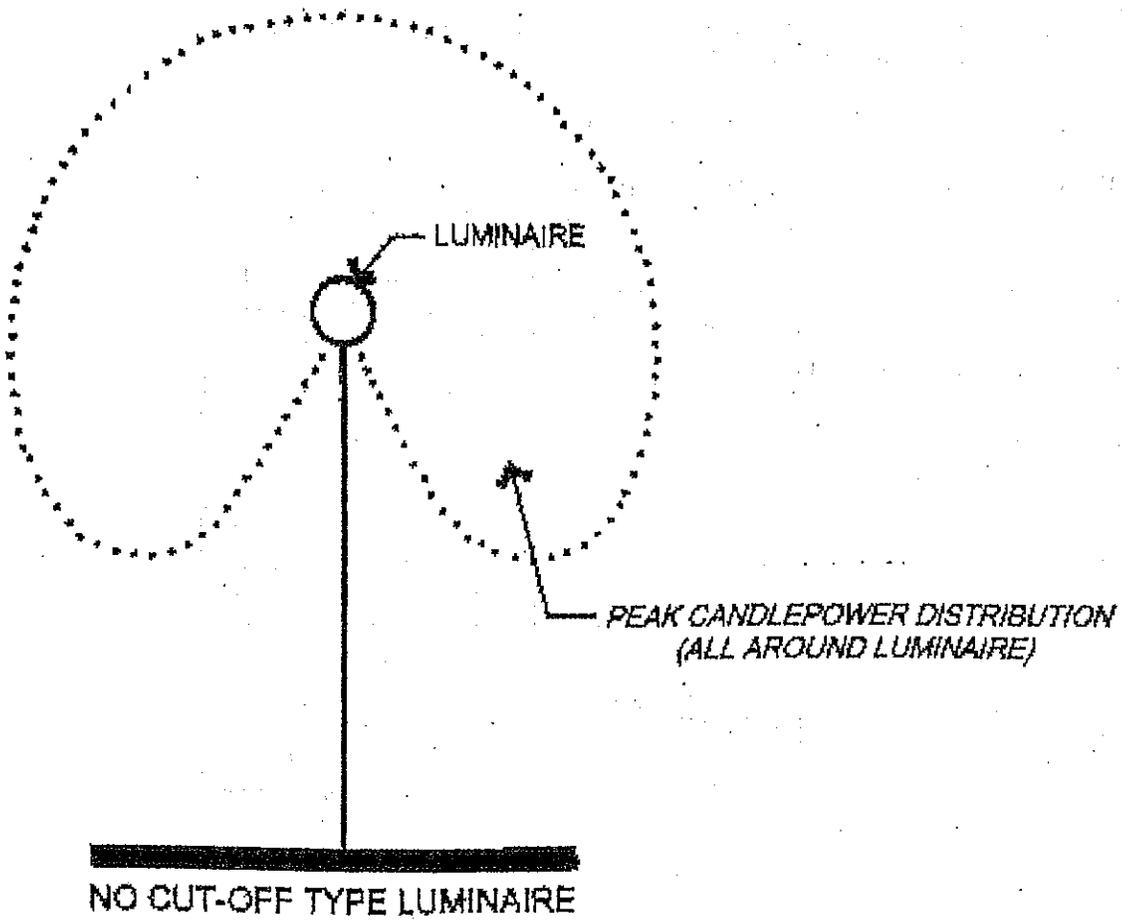
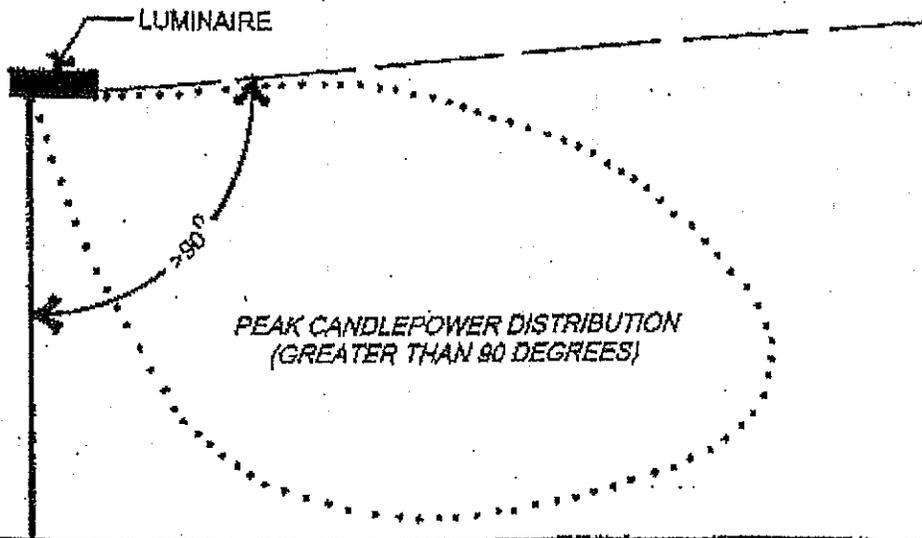


Figure 19.05.0401(B)

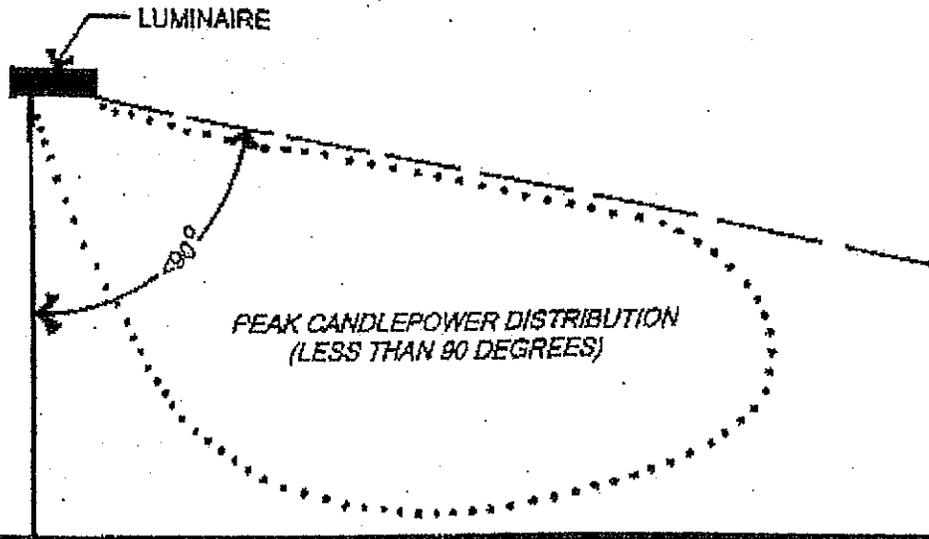
**CUT-OFF TYPE LUMINAIRE
WITH ANGLE GREATER THAN 90 DEGREES**



CUT-OFF TYPE LUMINAIRE WITH ANGLE GREATER THAN 90 DEGREES

Table 19.05.0401(C)

**CUT-OFF TYPE LUMINAIRES
WITH ANGLE LESS THAN 90 DEGREES**



TOTAL CUT-OFF TYPE LUMINAIRE WITH ANGLE LESS THAN 90 DEGREES