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AN ORDINANCE AMENDING THE LAND DEVELOPMENT CODE OF THE VILLAGE OF ORLAND PARK, AS AMENDED (Sections 2-102, 5-101, 5-106, 5-112, 6-205.1, 6-212, 6-302, 6-305, 6-307, 6-308, 6-310, 6-314, 6-315, 6-406, 6-407.1 and scriveners errors)

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WHEREAS, the Corporate Authorities of the Village of Orland Park, an Illinois home rule municipality, have on February 8, 1991, adopted a Land Development Code ("the Code") and zoning map; and

WHEREAS, amendments to the Code are adopted from time to time to ensure that the Code is up to date and responsive to community needs; and

WHEREAS, amendments have been proposed regarding definitions, LSPD setbacks, fence height regulations, geothermal and solar reviews, landscape and tree preservation, landscape plan review and approvals, drive-through accessories, collection box regulations, exterior lighting, and the correction of several scrivener's errors; and

WHEREAS, the Plan Commission of the Village held a public hearing on June 27, 2017 on whether the proposed amendments should be approved, at which time all persons present were afforded an opportunity to be heard; and

WHEREAS, a public notice in the form required by law was given of said public hearing by publication not more than thirty (30) days nor less than fifteen (15) days prior to said hearing in the Orland Park Prairie, a newspaper of general circulation in this Village; and

WHEREAS, the Plan Commission of this Village has filed its report of findings and recommendation that the proposed amendments to Sections 2-102, 5-101, 5-106, 5-112, 6-205.1, 6-212, 6-302, 6-305, 6-307, 6-308, 6-310, 6-314, 6-315, 6-406, 6-407.1 of the Land Development Code of the Village be made, and this Board of Trustees has duly considered said report and findings and recommendations; and

NOW, THEREFORE, Be It Ordained by the President and Board of Trustees of the Village of Orland Park, Cook and Will Counties, Illinois, as follows:

SECTION 1

This Board finds and determines that the adoption of the following amendments to the Land Development Code of the Village of Orland Park is in the best interests of the Village and its residents, is in the public interest, constitutes an improvement to the Land Development Code of the Village of Orland Park, and is in keeping with the spirit and in furtherance of the purpose of the Land Development Code of the Village of Orland Park, as set forth in Section 1-102 thereof.

SECTION 2

Section 2-102 of the Land Development Code of the Village of Orland Park, is hereby amended to delete the definitions of "Restaurant" and "Tattoo/Body Piercing Establishment" and to substitute the following as a new definitions of those terms in Section 2-102 and to add the following new definitions:

Collection Boxes mean a metal container, receptacle, or similar object that is located on any parcel or lot of record within the Village that is used for the collecting of clothing, household items or other personal property. This term applies to all such containers regardless of ownership or intent. This term does not include recycle bins for the collection of recyclable material, any rubbish or garbage receptacle or any collection box located within an enclosed building.

Drive-Through Accessories are Menu Boards, Drive-Through Structure, Preview Board and Order Confirmation Points.

Drive-Through Structure means any accessory structure that exists in a drive-through area.
Menu Board means any screen, panel, or surface that is adherent to a drive through structure or preview board.

Order Confirmation Point means an audio speaker, screen, or other device that is used to convey information to a drive-through patron.

Preview Board means any subordinate structure that contains a smaller secondary menu board and exists in a drive through area.

Restaurant means an establishment, including banquet halls, that is open to the public where food and/or beverages are regularly prepared, consumed and sold. This could include:

1. At a table or counter within the premises;
2. For consumption at a table or counter outdoors, but located on the premises;
3. For consumption in automobiles or other motor vehicles located in parking areas on the premises; and
4. For consumption off premises.

Restaurants include sit down and take out establishments. They do not include caterers, wholesale bakeries, packaged tea and coffee shops, butcheries, or grocers.

Food establishments that brew beer (also known as brewpubs) or distill wine for consumption primarily on the premises are considered restaurants provided that revenue from food sales shall constitute at least fifty percent (50%) of the total business revenues.

Tattoo/ Body Piercing Establishment means a business establishment where tattooing or body piercing is performed. A special use permit is required for tattoo establishments when the tattoo activity constitutes the principal activity of that business at a given location. The intent of providing permanent make-up services and other cosmetically related uses of tattoo technology at a location is to do so as one of several services offered at a beauty salon, and not as a principal use. If other services like cutting hair, manicures, waxing are offered, permanent make-up does not require a special use permit.

SECTION 3

The Land Development Code of the Village of Orland Park is hereby amended to delete in its entirety the text of Subsection 1 "Building Setbacks from Street Right of Way" of Paragraph E "Setbacks" of Section 6-205.1 "LSPD Large Scale Planned Development District" and to substitute the following as new text for Subsection 1 of Paragraph E of Section 6-205.1:

1. Building Setbacks from Street Right-Of-Ways

The following setback standards shall apply in the LSPD District:

a. Single-family attached and detached dwellings including duplexes and townhomes, and condominium and cooperative buildings. For residential developments with square corner lots, the "front" setback shall be considered to be the yard where the main door is located; the other yard shall therefore be considered to be the "side" setback.

1. Front.

i. Major or Minor Arterial: Forty-five (45) feet from the property line.

ii. Major Collector: Forty (40) feet from the property line.

iii. All other streets: Twenty-five (25) feet from the property line.

2. Side. All streets: Not less than fifteen (15) percent of the width of the lot on each side of the principal multi-family building to the side lot line, with a minimum setback width of fifteen (15) feet on each side; or no less than ten (10%) percent of the width of the lot on each side of a principal single family detached building to the side lot line, with a minimum setback width of seven and one half (7.5) feet on each side. Where the width of a lot varies, the average of the lot width at the front setback line and the rear setback line shall be used to make the calculation.

3. Rear. All streets: Twenty-five (25) feet from the property line.

b. Non-residential and mixed use buildings (commercial and residential uses), and multifamily dwellings, including condominium and cooperative buildings (if the block on which they are located includes commercial uses). Setbacks between the street right-of-way and the building facade facing the street shall follow the minimum requirements set in Table 6-205.1.E.1.ii (A) (below). The setback width is related to the width and character of the street.

TABLE 6-205.1.E.1.ii(A)

SECTION 4

The Land Development Code of the Village of Orland Park is hereby amended to delete in its entirety the text of Paragraph E "Design, Location and Height Requirements of Fences in Residential Districts" of Section 6-310 "Fences" and to substitute the following as new text for Paragraph E of Section 6-310:

Section 6-310.E. Design, Location and Height Requirements of Fences in Residential Districts.

E. Design, Location and Height Requirements of Fences in Residential Districts.

1. Except as provided in subsections (2) or (3), below, no fence shall be constructed in a front yard past the front building line.

2. In all residential districts, an ornamental fence may be erected on a premise anywhere, as long as it is entirely within the property where the permit is issued, including the front yard past the building line and the front and side yard past the building lines in the case of corner lots. The height of such fences shall not exceed four (4) feet and such fences shall be an open-style fence

consisting of wrought iron, galvanized steel, aluminum, powder coated, vinyl, wood or similar materials that does not block vision to an extent greater than 40% per lineal foot (60% open), and shall not include chain-link or wire fences or fences of similar construction.

3. Intermittent ornamental components such as decorative metal posts, masonry bases, columns, and caps are allowed as part of ornamental fences, but must comply with the open/closed ratio prescribed in Section 6-310.E.2 above for each 10 feet length of fence. These intermittent elements are permitted to exceed the allowable fence height by up to 12".

4. Open fences that do not block vision to an extent greater than 40% per lineal foot (60% open) shall be permitted past the front setback line if there is a patio in the front setback. Such fences shall not exceed 5 feet in height, and shall extend only to the perimeter of the patio. Patio location shall comply with accessory structures regulations listed in Section 6-302.

5. Fences located in the rear or side yards in single family residential districts shall be regulated as follows:

a. All perimeter fences shall be located behind the front building line.

b. Perimeter fences located in the side or rear yards not facing a public right of way shall be of any material and design allowed in section 6-310 (B) and (C), shall not exceed six (6) feet in height, and may be located all the way up to the property line.

c. Perimeter fences located in the side yard facing a public right of way (corner side yard, rear corner side yard) shall be of any material and design allowed in section 6-310 (B) and (C), but shall not exceed six (6) feet in height and must be setback a minimum of five (5) feet from the corner side property line.

d. Ornamental open-style perimeter fences located in the side yard facing a public right of way (corner side yard, rear corner side yard) consisting of wrought iron, galvanized steel, aluminum, powder coated, vinyl, wood or similar materials that does not block vision to an extent greater than 40% per lineal foot (60% open), shall be allowed as close as 12" from corner side property line as long as maximum height does not exceed five (5) feet. Such fences shall not include chain-link or wire fences or fences of similar construction.

e. Perimeter fences may be required to be setback further from the property line if after review by the Development Services Inspector, if it is determined that the sight lines will be blocked by the fence.

f. Perimeter fences are permitted to be installed back to back. If a fence is installed so that an area exists between the property line and the fence, it is the responsibility of the property owner on whose property the fence is located to maintain said area.

6. The following table summarizes the fence regulations listed in sections 1 through 4 above:

7. All fences in the Old Orland Historic District shall be white picket fences and shall not exceed a height of five (5) feet.

8. Private fences and entry features must be located wholly on private property.

9. Subdivision entryway features may not exceed nine (9) feet in height.

10. Perimeter fences may be erected in side and rear setbacks behind the front building line around multi-family residential uses. Perimeter fences may be allowed in front yards when the front setback abuts arterial and major collector streets. Perimeter fences around a single multi-family development must be uniform in design, type, color and height.

SECTION 5

The Land Development Code of the Village of Orland Park is hereby amended to delete in its entirety the text of Paragraph C "Environmental Clean Technology Review and Notification Process" of Section 6-314 "Environmental Technology Standards" and to substitute the following as new text for Paragraph C of Section 6-314:

C. Environmental Clean Technology Review and Notification Process.

The following outlines the development review process required for installing an environmental clean technology (ECT). ECTs include but are not limited to renewable energy systems such as wind energy conversion systems (WECS), solar energy systems (SES) and geothermal energy systems (GES). See Section 2-102 Definitions for more information. Unless otherwise noted in these regulations, the following shall apply:

1. Petition. Petitioners seeking to construct or install an ECT must submit a complete appearance review application to the Development Services Department and apply for building permits.
2. Review. The application shall be reviewed in accordance with these regulations and, if necessary, shall be deliberated at the next available meeting of the Plan Commission.
3. ECT Review. An ECT Review is a review at Plan Commission that requires notification of neighboring properties. There are two categories of ECT Review: Residential and Commercial. For Residential ECT projects, all residential uses within three hundred thirty (330) feet of an ECT development shall be notified. For Non-Residential ECT projects, all residential uses within five hundred (500) feet of an ECT development shall be notified. Notification shall be issued via certified mail, with return receipt requested, at least fifteen (15) to thirty (30) days in advance of the Plan Commission meeting. If no residential uses are within the stated buffers, notices are not necessary for the review at Plan Commission.
 - a. The notice shall be titled "Environmental Clean Technology Review Notice". The notice shall include the date, time and place of the Plan Commission meeting and the contact information of the Development Services Department. The notice shall describe the type of ECT system that is proposed for the property and that the intent is to, for example, generate renewable energy in the case of WECS etc.
 - b. A contributing structure in the Old Orland Historic District or an Orland Park Landmark shall require a Certificate of Appropriateness (COA) review at the Plan Commission for an ECT. The same notification requirements shall be undertaken for a COA.
4. Exemption. Subject to Development Services Department approval, the ECT projects listed below are exempt from the public notification, Plan Commission/Committee review and Board approval requirements detailed in Section 6-314.C.3. An appearance review and compliance with all other ECT and Building Code requirements are still required for projects which are granted such an exemption:
 - a. All geothermal energy system (GES) projects, both residential and non-residential;
 - b. Small scale solar projects, which are defined as solar energy system (SES) projects comprised of a solar collector panel or panels with a combined area of less than or equal to twenty (20) square feet. Only one (1) exempt solar energy system shall be permitted per parcel without requiring a full ECT review, as detailed in Section 6-314.C.3.

SECTION 6

The Land Development Code of the Village of Orland Park is hereby amended to delete in its entirety the text of Subsection 1 "General" of Paragraph D "Landscape Zones" of Section 6-305 "Landscape and Tree Preservation" and to substitute the following as new text for Subsection 1 of Paragraph D of Section 6-305:

1. General. Landscape zones refer to distinct areas within a particular site and the specific landscape requirements that apply therein. A project site may have up to seven (7) different landscape zones, as described in this Section, although not all sites will contain every landscape zone (e.g. some developments will not have stormwater basin landscaping). Plant material quantities shall meet or exceed the requirements detailed in this Section.

a. Landscape Zones.

1. Landscape Parkways
2. Landscape Corridors
3. Landscape Bufferyards
4. Foundation and Interior Landscape
5. Parking Lot Area Landscape
6. Signage Landscape
7. Stormwater Management Area Landscape

Figure 6-305.D.1.a (A) - Landscape Zones Overview (Figure for Illustrative Purposes Only)

b. Conflicts.

1. Where landscape zone requirements overlap or conflict, the more stringent requirements shall apply, as determined by the Development Services Department.

SECTION 7

The Land Development Code of the Village of Orland Park is hereby amended to delete in its entirety Table 6-305.D.4.b (B) - Bufferyard Types and to substitute the following as new Table 6-305.D.4.b (B) - Bufferyard Types:

Table 6-305.D.4.b (B) - Bufferyard Types

	Type 1	Type 2	Type 3
Bufferyard Width (min.)	10'	15'	10'
Planting Bed Width (min)	7'	7'	7'
Shade Trees per 100'	3	4	3
Evergreen or Ornamental Trees per 100'	1	2	1
Shrubs* per 100'	16	18	16
Fencing	Permitted	Permitted	Minimum 6' required
Site Amenities	Permitted	Not permitted	Not permitted

* Includes shrubs, perennials and ornamental grasses.

SECTION 8

The Land Development Code of the Village of Orland Park is hereby amended to delete in its entirety Table 6-305.D.3.b (A) – Corridor Types and to substitute the following as new Table 6-305.D.3.b (A) – Corridor Types:

Table 6-305.D.3.b (A) - Corridor Types

	Typical	Arterial	Auto-Row
Landscape Corridor Width	Varies	Varies	Varies
Shade Trees per 100'	1	2	0**
Ornamental or Evergreen Trees per 100'	1	2	3
Shrubs* per 100'	0	0	Minimum of 20

* Includes shrubs, perennials and ornamental grasses.

** If trees in an adjacent parkway are not present or feasible, then 2 canopy trees and 0 ornamental trees are required per 100' within the Corridor.

SECTION 9

The Land Development Code of the Village of Orland Park is hereby amended to delete in its entirety the text of Subparagraph g of Subsection 2 “Landscape Plan Requirements” of Paragraph E “Landscape Plan” of Section 6-305 “Landscape and Tree Preservation” and to substitute the following as new text for Subparagraph g of Subsection 2 of Paragraph E of Section 6-305:

g. Data Box - A landscape data box which includes the required and proposed calculations for the following: total area in square feet of the lot to be developed, the total square feet and percentage of landscape area, the total number of and square footage of landscape islands as compared to parking stalls, and a list comparing all required and proposed landscape materials;

SECTION 10

The Land Development Code of the Village of Orland Park is hereby amended to delete in its entirety the text of Subparagraph c of Subsection 6 “Landscape Material Requirements” of Paragraph E “Landscape Plan” of Section 6-305 “Landscape and Tree Preservation” and to substitute the following as new text for Subparagraph c of Subsection 6 of Paragraph E of Section 6-305:

c. All other specifications shall conform to the American Nursery & Landscape Association, and “American Standard for Nursery Stock (ANSIZ60.1–2014)”, as amended, published by the American Association of Nurserymen at the time of installation, and the recommended practices of the International Society of Arboriculture.

SECTION 11

The Land Development Code of the Village of Orland Park is hereby amended to delete in its entirety the text of Subparagraph h of Subsection 6 “Landscape Material Requirements” of Paragraph E “Landscape Plan” of Section 6-305 “Landscape and Tree Preservation” and to substitute the following as new text for Subparagraph h of Subsection 6 of Paragraph E of Section 6-305:

h. Organic mulch shall be installed under trees, shrubs, and throughout planting beds to a recommended depth of three (3) inches, in accordance with the recommended practices of the International Society of Arboriculture. Mulch should be pulled away at least four (4) inches away from the bases of trees and shrubs. Mulch should not be piled up against the trunk of a tree (i.e. “volcano mulching”) and should extend to the drip line of the tree’s branches. Colorized mulch is not permitted.

SECTION 12

The Land Development Code of the Village of Orland Park is hereby amended to delete in its entirety the text of Subparagraph e “Tree Protection” of Subsection 3 “Tree Preservation Standards” of Paragraph F “Maintenance and Preservation” of Section 6-305 “Landscape and Tree Preservation” and to substitute the following as new text for Subparagraph e of Subsection 3 of Paragraph F of Section 6-305:

- e. Tree Protection.
 1. During the development of a property, or the relocation/removal of permitted trees, the owner of the property shall be responsible for the erection of any and all barriers or protective guards necessary to protect any existing or installed vegetation from damage both during and after construction, as per the recommended practices of the International Society of Arboriculture and ANSI A300 Standards.
 2. Trees to be preserved during the development of the property shall be protected during construction by a fence around the drip line of each tree to prevent compaction of soil and other damage to the tree by equipment or materials. No excess topsoil, construction materials, debris, or chemicals are allowed within the protected drip line of each tree. In addition, no parking of vehicles, on-site offices, or machinery is allowed inside the protected dripline. All refueling, maintenance, lunch, break and burning areas are to be located away from all protected trees.
 3. Wherever a change of ground grading is planned, the trees to be preserved shall be protected by a retaining wall, placed at the drip-line so as to preserve the existing grade for the roots.
 4. Wherever a change of grading is planned, the topsoil shall be preserved for the new landscaping to be installed.
 5. When trenching alongside existing trees is unavoidable, the trench must be one (1) foot for every one (1) inch tree caliper, as measured four (4) feet above grade, away from the base of the existing tree to be preserved, as per the recommended practices of the International Society of Arboriculture and ANSI A300 Standards.

6. Construction pruning and root pruning of trees directly impacted by construction may be required for preservation of existing trees. These measures must be indicated on the tree preservation plan or the submitted application for permit.

SECTION 13

The Land Development Code of the Village of Orland Park is hereby amended to delete in its entirety Table 6-305.F.3.f.1 (A) – Tree Replacement Standards and to substitute the following as new Table 6-305.F.3.f.1 (A) – Tree Replacement Standards

Table 6-305.F.3.f.1 (A) – Tree Replacement Standards

Table 6-305.F.3.f.1 (A): Tree Replacement Standards	
CANOPY TREES	
Diameter of Tree(s) Removed	Number of Replacement Trees Required per Every (1) Tree Removed
4" to 12"	3 trees at 1.5", 2 trees at 2.5" or 1 tree at 4"
13" to 23"	6 trees at 1.5", 4 trees at 2.5" or 2 trees at 4"
24" or greater	8 trees at 1.5", 6 trees at 2.5" or 3 trees at 4"
EVERGREEN TREES	
Height of Removed Trees	Number of Replacement Trees Required
6' to 10'	2 trees at 6' or 1 tree at 10'
10' to 14'	4 trees at 6' or 2 trees at 10'
14' or taller	6 trees at 6' or 3 trees at 10'

SECTION 14

The Land Development Code of the Village of Orland Park is hereby amended to delete in its entirety the text of Subsubsection 5 of Subparagraph f “Tree Replacement Standards” of Subsection 3 “Tree Preservation Standards” of Paragraph F “Maintenance and Preservation” of Section 6-305 “Landscape and Tree Preservation” and to substitute the following as new text for Subsubsection 5 of Subparagraph f of Subsection 3 of Paragraph F of Section 6-305:

5. If the required mitigation trees, or any other tree required by Code, cannot be provided on the site, the petitioner shall pay cash in lieu of tree replacement, in the amount of \$400 for each two and one-half (2.5) inch caliper tree, to the Village's Tree Preservation and Green Infrastructure Account. This account shall be used only for tree preservation and green infrastructure projects approved by the Village Board. Such a fee in lieu of mitigation must be approved by the Development Services Department and can only be used when replacement on site is not possible. Trees requiring mitigation do not count towards a reduction in the quantity of trees or landscaping required by this Section.

SECTION 15

The Land Development Code of the Village of Orland Park is hereby amended to delete in its entirety the text of Subparagraph j "Final Inspection" of Subsection 3 "Tree Preservation Standards" of Paragraph F "Maintenance and Preservation" of Section 6-305 "Landscape and Tree Preservation" and to substitute the following as new text for Subparagraph j of Subsection 3 of Paragraph F of Section 6-305:

1. No final certificate of occupancy or letter of credit release shall be issued until the relocation or replacement of trees, or payment of any outstanding tree mitigation fees, as required by the approved mitigation plan or tree removal permit, has been completed and the final landscape inspection approval has been given by the Development Services Department. Trees relocated from one portion of the site to another which do not survive transplanting shall be replaced with a suitable replacement tree as specified by the Development Services Department. Should the Department determine that, due to the time of the year that the certificate of compliance and occupancy is requested, the relocation or replacement of trees should be deferred until a more suitable time, a certificate of compliance and occupancy may be issued provided that:
 - i. The letter of credit is renewed in an amount to cover the remaining landscaping to be installed.
 - ii. If a project does not have a letter of credit with the Village, the applicant(s) provides the Development Services Department with a cash deposit or bond in the amount equal to the cost of the relocation or replacement of trees.
 - iii. The applicant completes all required tree relocation or replacement within the time frame specified by the Development Services Department. The cash deposit or bond will be returned to the applicant provided that all work is completed within the established time frame.
2. Should the applicant fail to comply with the above item, the Development Services Department may elect to use the cash bond or letter of credit to hire a landscaper to complete the required tree relocation or replacement. Excess cash deposit, letter of credit or bond funds, if any, will then be returned to the applicant.

SECTION 16

The Land Development Code of the Village of Orland Park is hereby amended to delete in its entirety the text of Paragraph G "List of Recommended Plant Species" of Section 6-305 "Landscape and Tree Preservation" and to substitute the following as new text for Paragraph G of Section 6-305:

LIST OF RECOMMENDED PLANT SPECIES		
Common Name	Botanical	Cultivar(s)
CANOPY (SHADE) TREES		
Bald cypress	Taxodium distichum	
Beech, American	Fagus grandifolia	
Beech, European	Fagus sylvatica	
Buckeye, Ohio	Aesculus glabra	
Cherry, black	Prunus serotina	
Coffeetree, Kentucky	Gymnocladus dioica	
Elm	Ulmus spp.	

Filbert, Turkish <i>Corylus colurna</i>		
Ginkgo (male only)	<i>Ginkgo biloba</i>	Autumn gold
		Fairmount
		Lakeview
		Princeton sentry
Hackberry, common	<i>Celtis occidentalis</i>	
Hickory, bitternut	<i>Carya cordiformis</i>	
Hickory, shagbark	<i>Carya ovata</i>	
Honey locust (thornless)	<i>Gleditsia triacanthos</i> var. <i>inermis</i>	Green glory
		Imperial
		Majestic
		Shademaster
		Skyline
Hornbeam, European	<i>Carpinus betulus</i>	
Horse chestnut, common	<i>Aesculus hippocastanum</i>	
Larch, common	<i>Larix decidua</i>	
Linden, littleleaf	<i>Tilia cordata</i>	Chancellor
		Glenleven
		Greenspire
		Olympic
Linden, Redmond	<i>Tilia euchlora</i>	Redmond
Linden, silver	<i>Tilia tomentosa</i>	
London Plane Tree	<i>Platanus × acerifolia</i>	
Maple, black	<i>Acer nigrum</i>	Greencolumn
Maple, Freeman	<i>Acer x freemanii</i>	Autumn blaze
		Morgan
Maple, red	<i>Acer rubrum</i>	Armstrong
		Autumn flame
		Columnare
		Red sunset
		October glory
Maple, sugar	<i>Acer saccharum</i>	Green mountain
		Wright Brothers
Oak, bur	<i>Quercus macrocarpa</i>	
Oak, English	<i>Quercus robur</i>	
Oak, pin	<i>Quercus palustris</i>	
Oak, red	<i>Quercus rubra</i>	
Oak, swamp white	<i>Quercus bicolor</i>	

Oak, white	Quercus alba	
Tulip tree	Liriodendron tulipifera	
Yellowwood	Cladrastis kentukea	
Zelkova, Japanese	Zelkova serrata	
EVERGREEN TREES		
Douglas fir	Pseudotsuga menziensis	
Pine, eastern white	Pinus strobes	
Pine, Limber	Pinus flexilis	
Pine, Japanese white	Pinus parviflora	
Pine, Scotch	Pinus sylvestris	
Spruce, Colorado	Picea pungens	
Spruce, Norway	Picea abies	
Spruce, Serbian	Picea omorika	
Spruce, Black Hills	Picea glauca	
ORNAMENTAL/SMALL TREES		
Birch, river	Betula nigra	
Birch, white	Betula platyphylla	Whitespire
Buckeye, red	Aesculus pavia	
Chokecherry, common	Prunus virginiana	
Crabapple, flowering	Malus spp.	
Dogwood, Kousa	Cornus kousa	
Fringetree, white	Chionanthus virginicus	
Hawthorn, cockspur	Crataegus crusgalli var. inermis	
Hawthorn, Washington	Crataegus phaenopyrum	
Hophornbeam, American	Ostrya virginiana	
Hornbeam, American	Carpinus caroliniana	
Magnolia, saucer	Magnolia x soulangiana	
Magnolia, star	Magnolia stellata	
Maple, hedge	Acer campestre	Marmo
Maple, miyabi	Acer miyabe	
Maple, tartarian	Acer tataricum	
Pagoda tree, Japanese	Sophora japonica	Regent
Plum, wild	Prunus americana	
Redbud, eastern	Cercis canadensis	
Serviceberry, Allegheny	Amalanchier laevis	
Serviceberry, apple	Amelanchier x grandiflora	
Serviceberry, downy	Amelanchier arborea	
Serviceberry, Saskatoon	Amelanchier alnifolia	
Tree lilac, Japanese	Syringa reticulata	Morton

		Zhang Zhiming
		Ivory Silk
LARGE DECIDUOUS SHRUBS		
Amorpha, indigobush	Amorpha fruticosa	
Buttonbush, common	Cephalanthus occidentalis	
Clethra, summersweet	Clethra alnifolia	
Cotoneaster, hedge	Cotoneaster	
Cotoneaster, Peking	Cotoneaster acutifolius	
Cotoneaster, spreading	Cotoneaster divaricatus	
Dogwood, cornelian cherry	Cornus mas	
Dogwood, gray	Cornus racemosa	
Dogwood, pagoda	Cornus alternifolia	
Dogwood, Redosier	Cornus sericea	Baileyi
		Isanti
Dogwood, tatarian	Cornus alba	
Elderberry	Sambucus canadensis	
Filbert, American	Corylus americana	
Filbert, Turkish	Corylus colurna	
Forsythia, border	Forsythia x intermedia	
Forsythia, greenstem	Forsythia viridissima	Meadowlark
		Northern sun
		Sunrise
Hydrangea	Hydrangea spp.	
Lilac	Syringa spp.	
Ninebark, common	Physocarpus opulifolius	
Sumac, smooth	Rhus glabra	
Sumac, staghorn	Rhus typhina	
Viburnum, American cranberry	Viburnum trilobum	
Viburnum, arrowwood	Viburnum dentatum	Autumn jazz
		Chicago lustre
Viburnum, blackhaw	Viburnum prunifolium	
Viburnum, burkwood	Viburnum x burkwoodii	
Viburnum, European cranberry	Viburnum opulus	
Viburnum, lantanaphyllum	Viburnum x rhytidophyllumoides	
Viburnum, nannyberry	Viburnum lentago	
Viburnum, wayfaringtree	Viburnum lantana	
Weigela, old fashioned	Weigela florida	
Winterberry, common	Ilex verticillata	
Witchhazel, common	Hamamelis virginiana	
Witchhazel, vernal	Hamamelis vernalis	

SMALL EVERGREEN TREES		
Arborvitae	<i>Thuja occidentalis</i>	Techny
Hemlock, Canadian	<i>Tsuga canadensis</i>	
Juniper, upright	<i>Juniperus</i> spp.	
SMALL DECIDUOUS SHRUBS		
Alpine currant	<i>Ribes alpinum</i>	Green mound
False Indigo	<i>Baptisia x bicolor</i>	
Bayberry	<i>Myrica pensylvanica</i>	
Chokeberry, black	<i>Aronia melanocarpa</i>	
Chokeberry, red	<i>Aronia arbutifolia</i>	Brilliantissima
Cotoneaster, cranberry	<i>Cotoneaster apiculata</i>	
Cotoneaster, creeping	<i>Cotoneaster adpressus</i>	
Cotoneaster, rockspray	<i>Cotoneaster horizontalis</i>	
Forsythia, greenstem	<i>Forsythia viridissima</i>	Bronxensis
Kerria, Japanese	<i>Kerria japonica</i>	
New Jersey tea	<i>Ceanothus americanus</i>	
Rose	<i>Rosa</i> spp.	
Spiraea spp.	<i>Spiraea</i> spp.	
St. Johnswort	<i>Hypericum kalmianum</i>	
St. Johnswort, shrubby	<i>Hypericum prolificum</i>	
Stephanandra, cutleaf	<i>Stephanandra incisa</i>	Crispa
Sumac, gro low	<i>Rhus aromatica</i>	Gro low
Viburnum, dwarf cranberry	<i>Viburnum trilobum</i>	Compactum
Viburnum, dwarf Korean	<i>Viburnum carlesii</i>	Compactum
Viburnum, judd	<i>Viburnum x juddii</i>	
Viburnum, sargent	<i>Viburnum sargentii</i>	
SMALL EVERGREEN SHRUBS		
Boxwood	<i>Buxus koreana x sempervirens</i>	Glencoe
		Green gem
		Green mountain
		Green mound
		Green velvet
		Winter gem
Boxwood, common	<i>Buxus sempervirens</i>	
Boxwood, littleleaf	<i>Buxus microphylla</i>	
Juniper, Chinese	<i>Juniperus chinensis</i>	Kallays compacta
		var. <i>sargentii</i>

		Glauca
		var. sargentii
		Viridis
		Sea green
Juniper, creeping	Juniperus horizontalis	Bar Harbor
		Blue chip
		Blue rug
		Hughes
		P.C.
		Youngstown
Pine, mugo	Pinus mugo var. mugo	
Rhododendron	Rhododendron spp.	Northern lights
		P.J.M.
Yew, dense	Taxus x media	Densiformis
		Tauntonii
		Hicksii
GROUNDCOVERS AND VINES		
Ajuga	Ajuga reptans	
Barren strawberry	Waldsteinia ternata	
Boston ivy	Parthenocissus tricuspidata	
Clematis	Clematis spp.	
Common periwinkle	Vinca minor	
Fleeceflower	Polygonum reynoutria	
Ginger, wild	Asarum canadense	
Hydrangea, climbing	Hydrangea anomala ssp. petiolaris	
Pachysandra, Japanese	Pachysandra terminalis	
Purpleleaf wintercreeper	Euonymous fortunei	Coloratus
Sedum	Sedum spp.	
Virginia creeper	Parthenocissus quinquefolia	
UNACCEPTABLE TREES		
All Ash (green, white, blue and all their varieties)	Fraxinus spp.	
Austrian pine	Pinus nigra	
Black locust	Robinia spp.	
Boxelder	Acer negundo	
Buckthorn	Rhamnus frangula	
Mulberry	Morus spp.	
Osage orange	Maclura pomifera	
Poplar	Populus spp.	

Russian olive	Elaeagnus angustifolia	
Siberian Elm	Ulmis pumila	
Silver maple	Acer saccharinum	
Tree of Heaven	Ailanthus altissima	
Willow	Salix spp.	

SECTION 17

The Land Development Code of the Village of Orland Park is hereby amended to delete in its entirety the text of Subparagraph b "Public Meeting" of Subsection 2 "Applicability" of Paragraph B "Petitions, Applicability and Plan Review" of Section 5-101 "Development Review Procedures" and to substitute the following as new text for Subparagraph b of Subsection 2 of Paragraph B of Section 5-101:

- b. Public Meeting. A published public notice is not required in order to hold a public meeting, although the requirements of the Illinois Open Meetings Act must be met. Public meetings are held at Plan Commission, at the Development Services and Planning Committee of Trustees, and at the Board of Trustees. The public can attend public meetings but are not guaranteed the opportunity to provide testimony regarding development review.
 - 1. A public meeting at Plan Commission is required for applications regarding:
 - Site Plan Review;
 - Building Elevations; and
 - Appeals of Administrative Decisions.
 - 2. A public meeting by the Board of Trustees is required for:
 - Plats of Subdivision (including consolidations);
 - Development Agreements; and
 - Related Ordinances.
 - 3. All meetings of the Development Services and Planning Committee of Trustees and the Board of Trustees are public meetings. For annexation agreements at the Board of Trustees, a public meeting with a public hearing is required.

SECTION 18

The Land Development Code of the Village of Orland Park is hereby amended to delete in its entirety the text of Subparagraph c "Board Action" of Subsection 1 "Public Meeting at Plan Commission with Public Hearing" of Paragraph C "Public Meeting Sequence with a Public Hearing" of Section 5-101 "Development Review Procedures" and to substitute the following as new text for Subparagraph c of Subsection 1 of Paragraph C of Section 5-101:

- c. Board Action. Upon receipt and review of the Plan Commission's and the Development Services and Planning Committee's recommendations, and the Development Services Department's report and recommendation, the Board of Trustees shall consider the special use, special use amendment, variance, rezoning and/or subdivision along with the petition's final plans, elevations and preliminary landscape plan or the landmark designation, the Certificate of Appropriateness for major changes to contributing structures or landmarks, and/or Certificates of Appropriateness for Demolition along with the petition's final plan and/or the historic/

architectural significance of the petition's subject and shall grant, grant with conditions, or deny the petition/ application.

SECTION 19

The Land Development Code of the Village of Orland Park is hereby amended to delete in its entirety the text of Subparagraph c "Board Action" of Subsection 1 "Public Meeting at Plan Commission with Public Hearing" of Paragraph D "Public Meeting Sequence without a Public Hearing" of Section 5-101 "Development Review Procedures" and to substitute the following as new text for Subparagraph c of Subsection 1 of Paragraph D of Section 5-101:

c. Board Action. Upon receipt and review of the Plan Commission's and the Development Services and Planning Committee's recommendations, and the Development Services Department's report and recommendation, the Board of Trustees shall consider the final plan, elevations and preliminary landscape plan or the Certificate of Appropriateness for minor changes to landmarks and shall grant, grant with conditions, or deny the petition/ application.

SECTION 20

The Land Development Code of the Village of Orland Park is hereby amended to delete in its entirety the text of Subsection 2 "Public Meeting at Board of Trustees" of Paragraph D "Public Meeting Sequence without a Public Hearing" of Section 5-101 "Development Review Procedures" and to substitute the following as new text for Subparagraph c of Subsection 2 of Paragraph D of Section 5-101:

2. Public Meeting at Board of Trustees.

- a. Board of Trustees. The Board of Trustees shall review, at a regular or special meeting, preliminary landscape plans, plats of subdivision (including consolidations), development agreements, and other related ordinances.
- b. Board Action. Upon receipt and review of the report and recommendation of the Development Services Department, the Board of Trustees shall consider the preliminary landscape plan, plats of subdivision, development agreement and/or other related ordinances and shall grant, grant with conditions, or deny these items.

SECTION 21

The Land Development Code of the Village of Orland Park is hereby amended to delete in its entirety the text of Subsubsection 3 "Landscape Plan Review and Inspections" of Subparagraph e "Engineering Plan Review and Inspection Fee" of Subsection 9 "Inspection and Certification of Improvements" of Paragraph E "Guarantees for Improvement Completion" of Section 5-112 "Development and Subdivision Requirements" and to substitute the following as new text for Subsubsection 3 of Subparagraph e of Subsection 9 of Paragraph E of Section 5-112:

3. Landscape Plan Review and Inspections. All preliminary landscape plans submitted to the Village in conjunction with single family and multifamily developments over two (2) units and with all non-residential developments, or for any other required landscape plans as detailed in

Section 6-305 Landscape and Tree Preservation, shall be reviewed by the Plan Commission, Committee and Board of Trustees before Village approval. All final landscape plans shall incorporate conditions of approval of the Board approved preliminary landscape plan, and shall be reviewed and receive final approval from the Development Services Department upon recommendation of approval by the Village landscape consultant, if applicable.

Upon installation of required landscaping, the developer or property owner shall contact the Development Services Department to schedule a landscape inspection, which will initiate the landscape inspection process. All landscaping shall be inspected for proper installation and compliance with the approved landscape plan and any associated documentation, including hydro-period analyses or M&M Plans. Multi-year landscape inspections may be required, in particular when stormwater management landscaping is required. No letter of credit release shall be issued until a final landscape inspection approval has been granted by the Development Services Department. The fees charged to the Village by its landscaping consultant for landscape plan review shall be paid by the applicant to the Village before issuance of a building permit. Fees charged to the Village by its landscaping consultant for inspection of installed landscaping shall be paid to the Village by the applicant at the time of petition.

a. Compensation for landscape plan review/ inspection by Village staff shall be set by ordinance of the Village Board, and shall be paid by the applicant to the Village at the time of petition. The compensation levels may be amended from time to time. For an updated schedule contact the Development Services Department.

SECTION 22

The Land Development Code of the Village of Orland Park is hereby amended to delete in its entirety the text of Subsection 1 "Alternative Landscape Plans" of Paragraph C "Special Conditions" of Section 6-305 "Landscape and Tree Preservation" and to substitute the following as new text for Subsection 1 of Paragraph C of Section 6-305:

1. Alternative Landscape Plans. The Board of Trustees may approve preliminary landscape plans whose makeup may not meet the specified quantities stated herein, if such plans are clearly superior to what could be achieved by using those minimum standards and are consistent with the purposes of this Section, as determined by the Development Services Department.

SECTION 23

The Land Development Code of the Village of Orland Park is hereby amended to delete in its entirety the text of Subsection 3 "Changes to Approved Landscape Plan" of Paragraph C "Special Conditions" of Section 6-305 "Landscape and Tree Preservation" and to substitute the following as new text for Subsection 3 of Paragraph C of Section 6-305:

2. Changes to Approved Landscape Plan. Minor changes to an approved landscape plan shall require approval by the Development Services Department by way of an administrative Appearance Review. Minor changes are acceptable where such revisions do not diminish the overall intent of the approved landscape plan. Substantial changes to an approved landscape plan shall require the re-initiation of the preliminary / final landscape plan process outlined in Section 6-305.E.4.

SECTION 24

The Land Development Code of the Village of Orland Park is hereby amended to delete in its entirety the text of Subsubsection 4 of Subparagraph b "Requirements" of Subsection 8 "Stormwater Management Area Landscape" of Paragraph D "Landscape Zones" of Section 6-305 "Landscape and Tree Preservation" and to substitute the following as new text for Subsubsection 4 of Subparagraph b of Subsection 8 of Paragraph D of Section 6-305:

4. Monitoring and Management Plan (M&M Plan) shall be submitted along with a the required landscape plan for all applicable projects, as determined by the Development Services Department M&M Plans shall coincide with the project Watershed Management Ordinance (WMO) Permit, if applicable. For further details see Section 6-305.F.2 Naturalized Landscaping Area Management Standards. Monitoring and Management Plans shall be recorded with the county recorder of deeds in which the projects is located. For projects with stormwater management features, an Annual Monitoring Report must be submitted to the Village before annual acceptance may be granted.

SECTION 25

The Land Development Code of the Village of Orland Park is hereby amended to delete in its entirety the text of Subsection 4 "Review and Approval of Landscape Plan" of Paragraph E "Landscape Plan" of Section 6-305 "Landscape and Tree Preservation" and to substitute the following as new text for Subsection 4 of Paragraph E of Section 6-305:

4. Review and Approval of Landscape Plan.

- a. All development petitions shall provide a preliminary landscape plan as a part of the initial petition submission. The Development Services Department shall review, or have reviewed, all preliminary landscape plans. All preliminary and final landscape plans shall comply with the requirements outlined in Section 6-305 Landscape and Tree Preservation.
- b. The Development Services Department shall review preliminary landscape plans and other required documents and work with the petitioner until the plans satisfy the criteria set forth in this Section and/or any conditions of approval.
- c. The Development Services Department shall issue a recommendation to the Village Board of Trustees regarding whether the proposed preliminary landscape plan satisfies the Village's landscape criteria.
- d. The Board of Trustees shall review the preliminary landscape plan and the recommendation of the Development Services Department and shall then approve or deny the preliminary landscape plan.
- e. The Village Board of Trustees may also impose conditions on the issuance of the preliminary landscape plan approval. These conditions shall pertain to the external appearance of the development, and may include additional landscaping, buffering, fencing or other exterior treatment. These conditions shall be reflected on the approved final landscape plan.
- f. Approval of a preliminary landscape plan by the Village Board, a final landscape plan shall be submitted to the Development Services Department for review and final approval. The final landscape plan shall reference and be in accord with a project's approved final engineering plans, site plan and Village Board conditions, if applicable.

g. The Development Services Department shall review, or have reviewed, all final landscape plans. The Development Services Department shall approve or deny all final landscape plans.

SECTION 26

The Land Development Code of the Village of Orland Park is hereby amended to delete in its entirety the text of Subsubsection 5 of Subparagraph b "Responsibility for Compliance" of Subsection 3 "Tree Preservation Standards" of Paragraph F "Maintenance and Preservation" of Section 6-305 "Landscape and Tree Preservation" and to substitute the following as new text for Subsubsection 5 of Subparagraph b of Subsection 3 of Paragraph F of Section 6-305:

5. The removal of any tree from any property, commercial, institutional, office, industrial or multifamily residential, with an approved landscape plan.

SECTION 27

The Land Development Code of the Village of Orland Park is hereby amended to delete in its entirety the text of Subsubsection 1 "Tree Mitigation Plan" of Subparagraph h "Procedures to Obtain a Tree Removal Permit For New Development" of Subsection 3 "Tree Preservation Standards" of Paragraph F "Maintenance and Preservation" of Section 6-305 "Landscape and Tree Preservation" and to substitute the following as new text for Subsubsection 1 of Subparagraph h of Subsection 3 of Paragraph F of Section 6-305:

1. Tree Mitigation Plan. Developers of any site for any use other than a single family home seeking a site plan or landscape plan approval shall submit a Tree Mitigation Plan with the petition for development. A tree mitigation plan shall include:
 - i. A tree survey showing the location, edge of dripline, species, diameter at breast height (DBH) and condition of every tree four (4) inches or larger, measured from four and a half (4.5') feet from the ground, on the property. The survey shall distinguish existing trees which are proposed to be destroyed, relocated, replaced, preserved at their present location. The Development Services Department may require that the tree survey exclude those portions of the site which it determines will not be affected by the development activity.
 - ii. A tree mitigation report that highlights the quantity, diameter at breast height (DBH) and condition of trees to be removed and the quantity and caliper size of the required replacement trees pursuant to the replacement standards set forth in Section 6-305.F.3.f Tree Replacement Standards.
2. A tree survey and tree mitigation report, collectively known as a Tree Mitigation Plan, will be reviewed and approved by the Development Services Department through the landscape plan review process. Approval of a Tree Mitigation Plan shall be granted only if the Development Services Department finds that all reasonable efforts have been undertaken in the architectural layout and design of the proposed development to preserve existing trees and to otherwise enhance the aesthetic appearance of the development by the incorporation of trees in the design process. Relocation or replacement of trees may be required as a condition of approval in accordance with the criteria set forth in this Section. No tree removal shall take place until a Tree Mitigation Plan has been approved by the Development Services Department.

SECTION 28

The Land Development Code of the Village of Orland Park is hereby amended to delete in its entirety the text of Subparagraph c "Required" of Subsection 2 "Non-Residential" of Paragraph C "Applicability" of Section 5-106 "Appearance Review" and to substitute the following as new text for Subparagraph c of Subsection 2 of Paragraph C of Section 5-106:

- c. Required.
 - i. Alterations or expansions to the exterior of a building;
 - ii. Changes in materials, either primary or accent;
 - iii. Changes in colors, either primary or accent;
 - iv. Painting of existing brick. See standards in Section 6-308;
 - v. Additions or modifications to building appendages, such as awnings, rooftop screening, fencing and dumpster enclosures;
 - vi. Modifications to the existing signage format, such as moving the established sign band location or changing its background color;
 - vii. Addition or modification of outdoor congregation areas, including any ancillary improvements such as fencing, barriers, lighting and overhead features either freestanding or attached to a structure.
 - viii. Addition or modification to onsite lighting, including freestanding, string (excluding holiday decorations) and affixed to a structure;
 - ix. An increase in a parcel's lot coverage;
 - x. Any changes to a parking lot and its associated landscape zones;
 - xi. Any modifications to a previously approved landscape plan, including the relocation of existing landscape materials;
 - xii. Modifications to a previously approved stormwater management area, provided that engineering approval is granted;
 - xiii. Addition or modification to off-site improvements, such as sidewalks and multi-use paths, provided that engineering approval is granted;
 - xiv. Restaurants, not requiring a special use, occupying an existing or vacant former restaurant space and proposing exterior changes; and
 - xv. The expansion of lawfully existing restaurants operating pursuant to a special use where the expansion will occur in an adjoining space, regardless of its proximity to a residential parcel, provided that the expansion does not exceed 100% of the area initially approved for the special use for the restaurant.
 - xvi. Addition or modification to drive-through accessories. See standards in Section 6-302.K.

SECTION 29

The Land Development Code of the Village of Orland Park is hereby amended to add a new Paragraph K titled "Drive-Through Accessories" of Section 6-302 "Accessory Structures and Uses":

SECTION 6-302.K – DRIVE-THROUGH ACCESSORIES:

1. Drive-Through Accessories shall be screened from all public right of ways and adjacent residential properties in accordance with the Screening Requirements set forth in Section 6-308.J. No Drive-Through Accessories shall be located within the building setback.
2. Drive-Through Accessory Standards.
 - A. Drive Through Structures are subject to the following conditions:
 1. Drive-Through Structures shall not exceed fourteen (14) feet in height.
 2. Drive-Through Structures shall not extend beyond 20% of the size of the menu board in surface area.
 - B. Menu Boards are subject to the following conditions:
 1. One (1) Menu Board shall be allowed per Order Confirmation Point.
 2. Menu Boards shall not be more than fifty (50) square feet in surface area.
 3. The highest point of a Menu Board shall not exceed a height of seven (7) feet from grade.
 4. Menu Boards shall not exceed two (2) feet in dimensional depth.
 5. A minimum five (5) foot wide on average landscape planting bed shall be installed around the entire base of all new permanent menu boards. A minimum of fifty percent (50%) of the area of the landscape bed around a menu board shall be occupied by vegetation. Vegetation should have year-round interest and should include shrubs, ornamental grasses and perennials; turf grass is not permitted. Plantings should be large enough to cover or soften the base of the menu board without blocking the displayed information.
 - C. Preview Boards are subject to the following conditions:
 1. One (1) Preview Board shall be allowed per Order Confirmation Point.
 2. Preview Boards shall not exceed 50% of the surface area of the primary Menu Board.
 3. Preview Boards shall not exceed a height of six (6) feet.

INSERT EXHIBIT A HERE – Figure 6-302.K.2

3. Digital Menu Board Brightness Size.
 - A. The maximum permitted brightness for a Digital Menu Board shall be determined by the total area that emits light. The regulations for Digital Menu Board size and brightness are set forth in Table 6-302.K.3.A. Digital Menu Board size shall be rounded to the closest correlated size listed in Table 6-302.K.3.A when defining maximum permitted brightness.

Table 6-302.K.3.A

Menu Board Screen Size (Square Feet)	Menu Board Brightness (Nits)
0-25	3500
30	3200
35	2900
40	2600
45	2300
50	2000

SECTION 30

The Land Development Code of the Village of Orland Park is hereby amended to add a new Paragraph J “Collections Boxes” to Section 6-302 “Accessory Structures and Uses.”

J. Collection Boxes.

1. A permittee shall operate and maintain all collection boxes for which the permittee has been granted a permit as follows:
 - a. Collection boxes shall be metal and be maintained in good condition and appearance with no structural damage, holes or visible rust and shall be free of graffiti.
 - b. Collection boxes shall be locked or otherwise secured in such a manner that the contents cannot be accessed by anyone other than those responsible for the retrieval of the contents.
 - c. Collection boxes shall have in, at minimum, one-half-inch lettering visible from the front of each collection box the name, address, email, website, and phone number of the operator.
 - d. Collection boxes shall be serviced and emptied as needed, but at least every thirty (30) days.
 - e. The permittee and property owner shall maintain, or cause to be maintained, the area immediately surrounding the collection boxes, free from any junk, debris, overflow items or other material.
2. Shall not be permitted on any undeveloped parcel, nor where the principal use of the land has been closed or unoccupied for more than thirty (30) days;
3. Shall not be less than 1,000 feet from another collection box as measured along a straight line from one box to the other;
4. Shall not exceed seven (7) feet in height, six (6) feet in width and six (6) feet in depth;
5. Shall not be placed closer than ten (10) feet from:
 - a. A public or private sidewalk except that this provision does not apply to a private sidewalk as long as the private sidewalk maintains a five foot clearance;
 - b. A public right-of-way;
 - c. A driveway; or
 - d. A side or rear property line of adjacent property used for residential purposes;
6. Shall not exist in the front setback of any property;
7. Shall not interfere with an access drive, off-street parking lot maneuvering lane and/or required off-street parking space; and
8. Shall be screened from view on all sides from public streets and any abutting properties.

SECTION 31

The Land Development Code of the Village of Orland Park is hereby amended to delete in its entirety the text of Section 6-407.1 “Commercial Lighting.”

SECTION 32

The Land Development Code of the Village of Orland Park is hereby amended to add a new of Section 6-315 “Exterior Lighting.”

SECTION 6-315. EXTERIOR LIGHTING

Exterior Lighting

A. Purpose

1. Exterior lighting is used to illuminate residential, commercial, industrial and public uses; parking lots, sidewalks, signs, and other elements within the Village. When well designed and properly installed, exterior lighting is very useful in improving visibility and safety, providing a sense of security, and complementing the character of the Village. If exterior lighting is not well designed and properly installed it can be inefficient, cause glare, and create light trespass and sky glow. Light trespass falling over property lines can illuminate adjacent grounds or buildings in an objectionable manner.

In order to insure that exterior lighting is well designed with limited impacts on adjacent properties, the following requirements are set forth to control exterior lighting in both residential and non-residential zoning districts.

2. Standards and Requirements

a. Lighting Classes. The standards and requirements set forth in the following tables shall regulate and govern the use of, design of, construction or modification of any lighting system for the purpose of illuminating exterior areas including, but not limited to, signs, parking areas, buildings, landscaping, porches, and driveways. Each Lighting Zone is comprised of and defined by the correlated Land Uses listed in Table 6-315.2.a (A).

Table 6-315.2.a (A)

Lighting Class 1	Auto-Dealerships and Large Retail Centers $\geq 500,000$ sf
Lighting Class 2	Manufacturing and Storage, Commercial, and Mixed Use
Lighting Class 3	Civic and Institutional, Multi-Family Residential, and Office
Lighting Class 4	Single-Family Residential

1. Lighting Class 1. Land uses for Lighting Zone 1 include Auto-Dealerships and Large Retail Centers (over 500,000 sf).

Table 6-315.A.2.a.1 (A)

Lighting Class 1		
Foot Candles at lot line	Non-Residential to Non-Residential	5.0
	Non-Residential to Residential	0
Lumens Per Square Foot	Maximum lm/sf	7.0
Internal Footcandles	Maximum fc level permitted	40 fc

2. Lighting Class 2. Land uses for Lighting Zone 2 include Manufacturing and Storage, Commercial, and Mixed Use.

Table 6-315.A.2.a.2 (A)

Lighting Class 2		
Foot Candles at lot line	Non-Residential to Non-Residential	5.0
	Residential to Residential	2.0
	Non-Residential to Residential	0
Lumens Per Square Foot	Maximum lm/sf	3.0
Internal Footcandles	Maximum fc level permitted	15 fc

3. Lighting Class 3. Land uses for Lighting Zone 3 include Civic and Institutional, Multi-Family Residential, and Office.

Table 6-315.A.2.a.3 (A)

Lighting Class 3		
Foot Candles at lot line	Non-Residential to Non-Residential	2.0
	Residential to Residential	1.0
	Non-Residential to Residential	0
Lumens Per Square Foot	Maximum lm/sf	2.5
Internal Footcandles	Maximum fc level permitted	10 fc

4. Lighting Class 4. Land use for Lighting Zone 4 is Single-Family Residential.

Table 6-315.A.2.a.4 (A)

Lighting Class 4		
Foot Candles at lot line	Non-Residential to Non-Residential	2.0
	Residential to Residential	0.5
	Non-Residential to Residential	0
Lumens Per Square Foot	Maximum lm/sf	1.0
Internal Footcandles	Maximum fc level permitted	10 fc

a. Total Height and Height of Luminaire (See definition in 6-315.A.3.m).

Table 6-315.1.2.b (A) below determines the required setback of a fixture based on the height of the luminaire and extent of its cutoff shielding. Any minor deviation from the regulations listed in Table 6-315.1.2.b (A) may be approved at the discretion of the Development Services Department. Luminaire height shall be rounded to the closest correlated height listed in Table 6-315.1.2.b (A) when determining required luminaire setback.

Table 6-407.1.A.2.b (A) – Required Luminaire Setbacks

		Luminaire Cutoff Degree			
		Full Cutoff	Cutoff	Semi-Cutoff	No Cutoff
Luminaire Height (in feet)	25	10ft	20ft	40ft	Not Permitted
	20	8ft	16ft	32ft	Not Permitted
	15	6ft	12ft	24ft	30ft
	10	4ft	8ft	16ft	20ft
	5	2ft	4ft	8ft	10ft
		Setback Required (in feet)			

(Table data displays required setback in feet based on luminaire cutoff and height)

b. Standards for Luminaires under a Canopy (for non-residential uses).

Luminaires mounted to the underside of a canopy, which provide overhead illumination, shall be recessed such that no part of the luminaire or the lamp shall extend below the exterior edge of the canopy.

c. Standards for Patio Lighting (for non-residential uses)

1. Permitted Lighting. Permitted patio lighting shall include, but not be limited to lanterns, sconces, lighting posts, flameless torches, festoon or string lights, and pendant lighting.
2. Prohibited Lighting. All attention-seeking, blinking, flashing and color changing lights shall not be permitted.
3. Light Trespass. All patio lighting shall be contained to the extent of the property on which the patio is located.
3. Definitions
 - a. Canopy: Any overhanging shelter or shade or other protective structure constructed in such a manner as to allow pedestrians or vehicles to pass underneath.
 - b. Cutoff: Intensity at or above 90° (horizontal) no more than 2.5% of lamp lumens, and no more than 10% of lamp lumens at or above 80°. (See Figure 6-315.A.3 (A))
 - c. Cutoff Angle: The angle formed by a line drawn from the direction of light rays at the light source and a line perpendicular to the ground from the light source, above which no light is emitted.
 - d. Entrance Drive Lighting: Lighting produced solely for illumination of a drive entering into an establishment.
 - e. Exterior Lighting: The illumination of an outside area or object by any man-made device that produces light by any means.
 - f. Fixture: The assembly that houses the lamp or lamps and can include all or some of the following parts: a housing, a mounting bracket or pole socket, a lamp holder, a ballast, a reflector or mirror, and/or a refractor or lens.
 - g. Flood or Spot Light: Any light fixture or lamp that incorporates a reflector or a refractor to concentrate the light output into a directed beam in a particular direction.
 - h. Footcandle (FC): A unit of illumination produced on a surface, all points of which are one (1) foot from a uniform point source of one (1) standard candle.
 - i. Footcandle - Horizontal Measurement (HFC): The measurement of footcandles utilizing a direct reading, portable light meter mounted in the horizontal position.

- j. Footcandle - Vertical Measurement (VFC): The measurement of footcandles utilizing a direct reading, portable light meter mounted in the vertical position.
- k. Full Cutoff: Zero intensity at or above horizontal (90° above nadir) and limited to a value not exceeding 10% of lamp lumens at or above 80°. (See Figure 6-315.A.3 (A))
- l. Glare: Light emitting from a luminaire with an intensity great enough to reduce a viewers' ability to see, cause discomfort and, in extreme cases, cause momentary blindness.
- m. Height of Luminaire Including Total Height: The height of a luminaire shall be the vertical distance from the ground directly below the centerline of the luminaire to the lowest direct-light-emitting part of the luminaire. The total height shall be the height of the pole, including the base and any mounting arms or other attachments to which the luminaire is attached, as measured from the ground directly below the highest part of the pole or any of its attachments, to the top of the pole or luminaire, whichever the case may be.
- n. Illumination System: The totality of the equipment installed to provide exterior lighting on a developed property. The illumination system shall include all building, canopy, pole and ground mounted luminaires including all wiring, circuitry, and other devices installed to create exterior lighting.
- o. Lamp: The component of a luminaire that produces the actual light.
- p. Light, Direct: Light emitted directly from the lamp, off a reflector or reflector diffuser, or through the refractor or diffuser lens of a luminaire.
- q. Light, Indirect: Direct light that has been reflected or has scattered off of other surfaces.
- r. Light Loss Factor: A factor applied to lamps, which estimates the lumen output of a lamp sometime after installation. (For example, a lamp with an initial lumen rating of 10,000, which has a light loss factor of 0.7, is estimated to put out 7,000 lumens. A lamp with an initial lumen rating of 10,000, which has a light loss factor of 1.0, is estimated to put out 10,000 lumens.)
- s. Light Trespass: Any light that exists beyond the boundaries of the property on which its source is located.
- t. Lumen: A unit of luminous flux. One footcandle is one lumen per square foot. For the purpose of this Section, the lumen value shall be the initial lumen output rating of a lamp.
- u. Luminaire: A complete lighting unit consisting of a light source and all necessary mechanical, electrical, and decorative parts.
- v. Luminaire, Cutoff Type: A luminaire containing elements such as shields, reflectors, or refractor panels that direct and cutoff a direct view of the light source at a cutoff angle.
- w. Non-Cutoff: No limitations on light distribution at any angle. (See Figure 6-315.A.3 (A))
- x. Patio Lighting: Any form of permanently installed lighting that is used for the sole purpose of patio illumination or decoration.
- y. Semi-Cutoff: Intensity at or above 90° (horizontal) no more than 5% of lamp lumens and no more than 20% at or above 80°. (See Figure 6-315.A.3 (A))
- z. Temporary Exterior Lighting: The specific illumination of an outside area or object by any man-made device that produces light by any means, consistent with the requirement for Temporary Uses in Subsection 6-304.
- aa. Wall or Building Mounted Fixture: A fixture attached to an exterior wall, roof, or other exterior surface of a building. No wall mounted fixture shall be allowed to produce light trespass and shall be included in the calculation on photometric plans.

Figure 6-315.A.3 (A) – Luminaire Cutoff Overview (Figure for Illustrative Purposes Only)

INSERT EXHIBIT B HERE

B. Regulations & Procedures

1. Regulations

- a. All public and private exterior lighting installed in the Village of Orland Park shall be in conformance with the requirements established by this Section.
- b. The installation of, or the additional installation of, exterior lighting for aesthetic, safety or general purposes, may be required, as determined by the Development Services Department.
- c. All exterior lighting must be maintained and kept in proper working order.

2. Procedures

- a. Lighting Plan Required. A lighting plan is required for all non-residential uses in or adjacent to residential zoning districts, multiple family developments other than duplexes, commercial/retail, industrial, institutional, and public uses including uses developed by other units of local government.

At the time any exterior lighting is installed or substantially modified, a lighting plan shall be submitted to the Development Services Department in order to determine whether the requirements of this Section have been met. A lighting plan shall be required for all special uses, planned unit developments, and requests for variations from the standards imposed in this Section.

Where a lighting plan is required, said plan shall include the following:

1. A site plan showing pole locations, building mounted lights (e.g. wall-packs), bollard lights with schematic wiring layout and power source connection;
2. Specifications for luminaires and lamp types, poles, wiring, conduit and appurtenant construction including photographs or drawings of proposed luminaires. Manufacturer catalog sheets shall be provided in order to demonstrate specific style/type and dimensions of equipment;
3. Site-specific pole, luminaire, and foundation details including pole height, height of building mounted lights, mounting height and height of the luminaire;
4. Overall site plan inclusive of a fifty-foot perimeter which shall include buildings, luminaires and other structures sufficient to determine the total cutoff angle of all luminaires and their relationship to abutting parcels;
5. Initial Luminaire Lumens of all light sources proposed;
6. Photometric plans that shows the footcandle - horizontal measurement internal to the site and at the property lines. (Footcandle - horizontal measurements shall be taken along a horizontal plane at a height of three and one-half (3.5) feet above the ground. Photometric plans shall be based on a light loss factor of 1.0.
7. Other information and data reasonably necessary to evaluate the required lighting plan pursuant to the request of the Development Services Department.

3. Measuring Light Levels

- a. Metering Equipment. Light levels of both direct and indirect light shall be measured in footcandles with a direct reading, portable light meter. Readings shall be taken only after the cell has been exposed long enough to provide a constant reading.
- b. Method of Measurement. Footcandle - horizontal measurements shall be taken along a horizontal plane at a height of three and one-half (3.5) feet above the ground. If lighting metering levels are inconclusive on conformance to the above methods, the measurement

will be taken by focusing the metering equipment directly at the light source.

4. Exceptions

- a. Public Roadway Lighting. Luminaires used for public roadway illumination by a public transportation agency are exempt from the requirements of this Section but may be subject to the regulations of Federal, State or County agencies, or by other intergovernmental agreements.
- b. Entrance Drive Lighting. Luminaires used for the sole purpose of illuminating an access drive and other similar uses may be determined by the Director of Development Services to be exempted from certain illumination and other standards of the requirements of this Section.
- c. Emergency Lighting. All temporary emergency lighting needed by the Police or Fire Departments or other emergency services, as well as all vehicular luminaires, shall be exempt from the requirements of this Section.
- d. Recreational Facilities. Because of their unique requirements for nighttime visibility and their limited hours of operation, outdoor recreational facilities (public or private) such as, but not limited to, football fields, soccer fields, baseball fields, softball fields, tennis courts, golf driving ranges, auditorium areas and other similar uses as may be determined by the Director of Development Services are exempted from certain illumination and other standards as follows:
 1. The uses set forth herein are specifically exempted from the maximum footcandle requirements - internal to the site. These uses are required to submit a lighting plan and shall be processed as special uses under the applicable procedures. These uses shall seek to meet the requirements for maximum footcandles at the property line or apply for a special use modification if they are unable to meet those requirements.
 2. The uses set forth herein shall be exempt from the height requirements as set forth in this Section. The Plan Commission and Village Board shall review the proposed pole heights during the special use permit review process.
 - e. Temporary Uses. Non-residential temporary uses shall install temporary lighting using these standards as guides and obtain an electrical permit subject to Section 6-304.B of these regulations.

C. Prohibited Lighting

1. Flickering or Flashing Lights. The Village Board of Trustees shall permit no flickering or flashing lights unless authorized in a lighting plan approved as a special use or planned unit development.
2. Searchlight and Laser Source Lights. No searchlights, laser source lights, or any similar high intensity light shall be permitted.
3. High Intensity Discharge Lamps. No lamps that are classified as high intensity discharge are permitted, other than Metal Halide Lamps which shall be permitted.
4. High Color Temperature Lamp. The correlated color temperature (CCT) of any exterior light shall not exceed 4100 K.

D. Non-Conforming Uses

1. Luminaires lawfully in place prior to the date of this Section but which do not conform to the requirements and standards of this Section shall be considered legal non-conforming uses.

2. Legal non-conforming luminaires that meet the performance standards for footcandle levels and screening requirements of this Section but exceed the physical standards such as height or setbacks herein may continue and are not subject to amortization requirements unless they are part of an illumination system that is to be changed as follows:
 - a. Illumination systems developed as part of a Planned Unit Development, Special Use, Annexation Agreement, Variation or other specific Village approval which, as of the date of these regulations, have an approved lighting plan and meet the performance criteria of their specific agreements but do not meet the requirements of this Section shall be considered legal non-conforming uses and shall be brought into conformity with the criteria and standards set forth herein when the illumination system is to be completely replaced.
 - b. Legal non-conforming illumination systems which were not part of a specific Village-approved lighting plan shall be brought into conformity with the criteria and standards set forth herein when the illumination system is to be replaced or modified by greater than 50 percent of its number of light fixtures, based on the total number of fixtures within the project limits.
 - c. Legal non-conforming luminaires that exceed the footcandle standards and/or direct light or glare towards streets, parking lots, residences or property lines and result in a problematic or dangerous condition shall be shielded, redirected or otherwise modified to meet the requirements of this Section.

E. Special Uses and Variations

1. Special Use Permits. Lighting improvements that are part of a planned unit development or special use permit shall conform to these regulations or to any modifications determined via the public hearing process outlined in Section 5-101 of these regulations.
2. Variations. Lighting improvements that are part of by-right/permited development shall conform to these regulations or to any variations determined via the public hearing process outlined in Section 5-101 of these regulations.

Figure 6-315.E (A)

INSERT EXHIBIT C HERE

SECTION 33

The Land Development Code of the Village of Orland Park is hereby to delete the text of Subsection 7 “amended to delete in its entirety the text of Paragraph C “Administration” of Section 6-308 “Design Standards” and to substitute the following as new text for Paragraph C of Section 6-308:

C. Administration.

1. An applicant for development approval shall submit a site plan, exterior elevations, and such other data deemed necessary by the Department of Development Services to evaluate a proposed architectural design, along with an application for development approval, as required by Sections 5-101 (General Procedures) and 5-106 (Appearance/Site Plan Review).
2. Final plans and elevations shall be drawn to scale and shall indicate the nature and extent of the work proposed.

3. The Department of Development Services shall develop graphic illustrations of the standards set forth in this Section. The Department shall also ensure that development within the district complies with the guidelines established in the Old Orland Historic District Guidelines, as amended from time to time, copies of which shall be kept on file in the Department's offices.
4. The review of architecture and site plans provided for in this Section is intended to be only a part of the whole review procedure laid out in these regulations. Approval of architectural design does not in any way signify final approval of any portion of any project.

SECTION 34

The Land Development Code of the Village of Orland Park, as amended, is hereby further amended to delete in its entirety the text of Paragraph D “Pre-Application Conference” of Section 6-308 “Design Standards” and to substitute the following as new text for Paragraph D of Section 6-308:

D. Pre-Application Conference. An applicant for architectural design approval may request in writing that the Department of Development Services hold an informal pre-application conference to review the preliminary architectural design of a proposed development. This pre-application conference may be conducted concurrently with the pre-application conference provided for in Section 5-101(A) and shall be conducted pursuant to the same terms and conditions set forth in that Section.

SECTION 35

The Land Development Code of the Village of Orland Park, as amended, is hereby further amended to delete in its entirety the text of Paragraph E “Review” of Section 6-308 “Design Standards” and to substitute the following as new text for Paragraph E of Section 6-308:

E. Review. The Development Services Department shall review the complete application for appearance review in conjunction with site plan review provided for in Section 5-106. Recommendations of the Department shall be based upon the criteria set forth in Subsections F through O, below.

SECTION 36

The Land Development Code of the Village of Orland Park, as amended, is hereby further amended to delete in its entirety the text of Subsection 8 of Paragraph F “Building and Structure Design” of Section 6-308 “Design Standards” and to substitute the following as new text for Subsection 8 of Paragraph F of Section 6-308:

8. While it is recognized that color is a very subjective matter and that creativity should not be stifled, colors should nonetheless be used harmoniously and with some restraint. Color schemes should consider and respect the character and quality of structures in the area. Excessively bright or brilliant colors should be used only for accent. Materials and colors should withstand the weather well over a twenty-five (25) year period.

SECTION 37

The Land Development Code of the Village of Orland Park, as amended, is hereby further amended to delete in its entirety the text of Paragraph M “Miscellaneous Structures” of Section 6-308 “Design Standards” and to substitute the following as new text for Paragraph M of Section 6-308:

M. Miscellaneous Structures. Miscellaneous structures located on private property, public ways, and other public property, including light standards, utility poles, newspaper stands, bus shelters, plants, traffic signs and signals, benches, guardrails, rockeries, retaining walls, mailboxes, awnings, tensile canopies and fire hydrants shall be designed to be part of the architectural concept of design and landscape. Materials shall be compatible with buildings, scale should be appropriate, and colors should be in harmony with nearby buildings and surroundings, and proportions shall be attractive.

SECTION 38

The Land Development Code of the Village of Orland Park, as amended, is hereby further amended to delete in its entirety the text of Paragraph C “Pedestrian/Bikepath Easement” of Section 6-404 “Easements” and to substitute the following as new text for Paragraph C of Section 6-404:

C. Pedestrian/Bikepath Easements. Easements containing pedestrian ways or bikepaths must be a minimum of twelve (12) feet in width, in accordance with Section 6-415, unless otherwise approved by the Director of Development Services.

SECTION 39

The Land Development Code of the Village of Orland Park, as amended, is hereby further amended to delete in its entirety the text of Subsection 4 “Development Plan” of Paragraph D “Scenic Corridor Easements” of Section 6-404 “Easements” and to substitute the following as new text for Subsection 4 of Paragraph D of Section 6-404:

4. Development Plan. As a condition of approval of a final plat, a subdivider or developer shall submit a development plan of all scenic corridor easements, showing the dimensions thereof, the extent and nature of all significant natural vegetation, both forest and prairie, all berms sought to be constructed, the amount and size and type of all planting sought to be installed. Such plan shall be reviewed by the Director of Development Services with written comments being forwarded for consideration by the Plan Commission. The Plan Commission shall approve, disapprove or suggest whatever modifications are necessary in keeping with this subsection.

SECTION 40

The Land Development Code of the Village of Orland Park, as amended, is hereby further amended to add a new Subsection 15 “Driveway Side Setback Requirements for All Properties”

to Paragraph B "Driveways and Driveway Aprons" of Section 6-406 "Sidewalks, Driveways, and Parking Lots," which shall read in its entirety as follows:

15. Driveway Side Setback Requirements for All Properties. Driveways shall be located at least one (1) foot from the nearest side property line and shall not obstruct storm water flow. Shared driveways or driveways providing vehicular cross-access between adjacent parcels that are approved by the Village and/or established by agreement between the subject property owners shall be exempt from this one (1) foot side setbacks requirement. Driveways in a side yards associated with side loading garages shall comply with setback requirements of the applicable zoning district.

SECTION 41

The Land Development Code of the Village of Orland Park, as amended, is hereby further amended to delete in its entirety the text of Section 6-408 "Sanitary Sewer System" and to substitute the following as new text for Section 6-408:

Section 6-408. Sanitary Sewer System.

A. General.

1. All development, whether public or private, shall include provisions for the construction of sanitary sewers and appurtenances designed in accordance with this Section. Developers shall use either the public sewer system or an alternative sewer system, certified by the agency or municipality with jurisdictional authority, provided that the development is proximate to a transmission line that has adequate capacity to handle such proposed development.
2. All sanitary sewer improvements shall be installed in accordance with the material installation and testing requirements of the "Standard Specifications for Water and Sewer Main Construction in Illinois," Sixth Edition July 2009 latest edition, unless otherwise modified in this Section. Sanitary sewer improvements shall conform to all applicable requirements of the current Metropolitan Water Reclamation District of Greater Chicago ("MWRDGC") Watershed Management Ordinance ("WMO").

B. Service Areas. All sewers shall be designed to accommodate an ultimate service area as defined by the Village Board of Trustees.

C. System Extension. The size and location of proposed extensions to the existing sanitary sewer system shall be as approved by the Village Engineer.

D. Basic Design Standards.

1. Design Flows.

a. Design flows for single and multiple residential developments shall be based upon full development of the service area with the population served, estimated as follows:

Type of Dwelling	Unit Number of Persons
Studio	1
1 Bedroom	2
2 Bedroom	3

3 Bedroom	4
4 Bedroom	5

The maximum daily per capita design flow shall be calculated using the formula:

$$Q = 500$$

$$P^{1/5}$$

$$Q = 500(P)^{1/5}$$

Where Q^* = maximum design flow, in gallons per capita per day ("gpcpd") gpcpd

P = population served, in thousands

*Not to exceed four hundred (400) 400 gpcpd or be less than two hundred fifty (250) 250 gpcpd.

For undeveloped residential areas where the details of future developments are not known, design population (P) per acre may be estimated by the Village Engineer.

b. Design flows for non-residential developments shall be based on full development of service area with the maximum daily per capita design flow calculated as follows:

Type of Establishment	Unit	Average Flow in Gals/day/unit*
Shopping Center (without food service or laundries)	Employee	0.10 gal/sq. ft.
Store	Employee (1 shift)	25
Office	Person (1 shift)	25
Industrial		
- with showers	Person	35
- without showers	Person	25
Restaurant	Meal Served	7
Theater	Per Seat	5
Hotel	Per Guest	100

* Quantities are exclusive of process water requirements which must be estimated and added.

For non-residential developments where the details of the development are not established, domestic design flows may be estimated by the Village Engineer. Such flow estimate shall not relieve the owner or developer of the responsibility to provide adequate sanitary sewer capacity in order to meet any and all future requirements within the development.

2. Sewer Design Hydraulics.

a. Sanitary gravity sewer mains shall be designed to provide design flow capacity, without surcharging, using typical Manning's formula:

$$Q = (A)^{1.486} (R)^{2/3} (S)^{1/2}$$

n

Where Q = design flow in units of cubic feet per second ("cfs")

A = area in units of square feet

R = hydraulic radius in units of feet

S = slope in units of feet per foot (dimensionless)

n = roughness coefficient, independent on conduit material

b. Roughness coefficient utilized shall be as follows:

1. Concrete pipe - 0.013
2. A.B.S. Truss pipe - 0.012
2. Ductile iron - 0.014
3. Polyvinyl Chloride (PVC) - 0.009

c. Design mean velocity, flowing full, shall not be less than two (2) feet per second or greater than fifteen (15) feet per second.

d. Design flow shall include total allowable infiltration at any point based on two hundred (200) one hundred (100) gallons per inch of diameter of sewer per mile per twenty-four (24) day at any time for any section of the system.

e. Minimum and maximum design slopes are found in Part F.3 and are per the MWRDGC WMO.

3. Minimum Sewer Size.

a. Minimum sanitary sewer main size shall be eight (8) inch diameter.

b. Minimum building sanitary service sewer size shall be six (6) inch diameter.

4. Alignment. Sewers shall be laid straight in both horizontal and vertical planes between manholes, unless otherwise approved by the Village Engineer.

5. Sewer Size Changes. Sanitary sewers of different diameters shall join only at manholes. The invert elevations shall be adjusted to maintain a uniform energy gradient by matching the 0.8 depth points of different diameters.

6. Sanitary Sewer Manholes.

a. Manholes shall be provided at the following locations:

1. Termination of existing and future lines

2. Changes in direction, horizontal or vertical

3. Changes in shape or pipe size

4. Junctions with other sewers

5. Access spacing shall be:

Maximum manhole spacing shall be 400 feet.

Sewer Pipe Size (in inches)	Maximum Interval (in feet)
8 - 30	400
33 - 54	500
60 or larger	1000

b. Where possible, sanitary sewer facilities shall be designed to avoid the use of a drop manhole. A drop manhole shall be provided for manholes with any pipe having a difference in invert elevation more than twenty-four (24) seventy-two (72) inches above the invert of the sewers leaving such manholes. Small drops may be used in the event of utility conflicts, where approved by the Village Engineer. The invert of the outlet pipe from a drop pipe must match the springline elevation of the precast manhole bench. All drop manholes must be precast with monolithic drop pipe assemblies.

c. Where flows and other conditions dictate, special manholes or junction chambers shall be designed and constructed.

d. The invert of the outlet pipe from a drop pipe must match the springline elevation of the precast manhole bench. All drop manholes must be precast with monolithic drop pipe assemblies.

e. All manholes shall have a precast base.

7. Sewer Depth. Sanitary sewers shall be constructed at a minimum depth of six (6) eight (8) feet and shall provide an outfall for all sanitary sewage within the existing and future ultimate service area, unless approved by the Village Engineer. The eight (8) foot depth is intended to eliminate the service line separation deficiencies which commonly occur between sanitary sewer placed at six (6) feet deep and water mains at five (5) feet deep.

8. Lift Stations.

- a. Whenever possible, sanitary sewerage facilities shall be appropriately designed per this Code section so as to avoid the necessity of providing lift stations.
- b. Lift station and force main designs shall be submitted for review and approval to the Director of Engineering Village Engineer, the Illinois Environmental Protection Agency, and the Metropolitan Water Reclamation District of Greater Chicago.
- c. Lift stations shall be of the single wet well type utilizing submersible pumps and shall be comparable to other recently constructed lift stations within the service area of the Village.
- d. A stand-by internal combustion power source shall be provided for lift stations. The power source shall be natural gas-fueled for output rating less than 100 kW and shall be diesel-fueled for 100kW and above. As an alternate, the Village Engineer may require or approve allow a dual connection to the power system as a method of providing stand-by power in cases where such an alternate would provide an equal degree of reliability, and also would provide an economy to the Village over the useful service life of the alternate stand-by power system. All stand-by power sources must be installed within a weatherproof building structure suitable to accommodate the power source, controls, alarm system, and all other required appurtenances. The structure must be large enough to allow for servicing of all equipment and must meet all Village building codes.
- e. Force mains shall be designed and constructed of cement epoxylined ductile iron pipe or PVC pressure pipe ASTM 2241-SDR 21. A tracer wire shall accompany all force main piping installations for the purpose of future locating with an electronic locating device. A pipeline marker shall be installed above the force main every 400 feet and at horizontal bends in the pipe. The tracer wire shall terminate in an enclosure (typically a pipeline marker) with sufficient wire slack for connecting to an electronic locating device.
- f. A compatible telemetered alarm system shall be installed and connected to the Village's existing computerized reporting and alarm panel.
- g. The force main wet well shall be epoxy-lined after installation of the well structure itself and associated piping.

9. Sewer Pipe Class. Sewer pipe class shall be determined by using ASTM rigid and flexible pipe design strength formulas.

10. Sewer Pipe Bedding.

- a. Sewer pipe bedding shall, as a minimum, conform to the requirements established in Construction Standards Governing Public Improvements Standard Specifications for Water and Sewer Construction in Illinois, July 2009, and/or latest revision as adopted by the Village Engineer and as amended from time to time.

- b. Sewer pipe concrete cradle, arch, or full encasement shall be constructed whenever dictated by trench or embankment conditions as directed by the Village Engineer.

E. Material Specifications. All sanitary sewer system elements shall conform to the following specifications:

1. Sewer and Service Connection Pipe.

- a. Reinforced concrete pipe - circular reinforcement, minimum Class 3, ASTM C76, with epoxy lining, 18" diameter and larger.
- b. ABS Truss - ASTM D2680 for 8" to 15" and ASTM D2751 for 6", solid wall SDR23.5.
- b. Ductile iron pipe - ANSI A21.51 (AWWA C151), minimum thickness, Class 52 per ANSI A21.50 (AWWA C150), cement calcium aluminate cement-lined.

c. Polyvinyl Chloride (PVC) – ASTM D-3034, SDR 26 less than 20 foot depth at final grade for sizes 6" through 12" inside diameter and AWWA C905, DR 25 for sizes 14" through 36" inside diameter.

d. Polyvinyl Chloride Molecularly Oriented Pressure Pipe (PVCO) –ASTM F1483, AWWA C909 Class 150 for sizes 6" through 12" I.D. at 20 feet or greater depth.

e. High Density Polyethylene Pipe (HDPE) for force main only – AWWA C906.

2. Sewer and Service Connection Pipe Joints.

a. Reinforced concrete pipe - ASTM C443.

b. ABS Truss pipe - Type OR, ASTM D2680.

b. Ductile iron pipe - ANSI A21.11 (AWWA C111).

c. Polyvinyl Chloride (PVC) – ASTM D-3212

d. Polyvinyl Chloride Molecularly Oriented Pressure Pipe (PVCO) –Gaskets meeting ASTM F477, Joints meeting ASTM D-3139

3. Sewer and Service Connection Pipe Fittings.

a. ABS Truss - ASTM D2680, for 8" and larger and ASTM D2751 for 6".

a. Ductile iron - ANSI A21.10 (AWWA C110).

b. Polyvinyl Chloride (PVC) – ASTM D-3034

c. Polyvinyl Chloride Molecularly Oriented Pressure Pipe (PVCO) requires ductile iron fittings meeting the specifications above.

d. Materials

1. ABS TRUSS pipe (ASTM D-2680)

Joints

ASTM D2680

2. Reinforced Concrete Sewer Pipe

A.S.T.M. C-361

(A.S.T.M. C-76)

3. Ductile Iron Pipe ANSI A 21.51

ANSI 21.11

(AWWA 151-75)

(AWWA C111)

4. 6" diameter Sanitary Sewer Pipe

ASTM D-2751

ABS SDR 23.5 (services only)

(ASTM-2751)

5. Polyvinyl Chloride (PVC)

ASTM D-3212

(ASTM D-3034)

(SDR 26)

Nothing herein shall constitute or imply an endorsement by the Village of any one material over another, or an opinion by the Village regarding equality or superiority of the performance qualities of any of the above materials.

4. Casing Pipes (Exhibit PC-01). Bituminous coated steel pipe - ASTM A120, 0.375" minimum thickness. All casing pipes shall utilize appropriate stainless steel spacers, per manufacturer's specifications, to support the sewer pipe as directed by the Village Engineer.

5. Manholes (Exhibit Sanitary Manhole Standard Details No. SS-01, SS-02, SS-03).

a. Precast Reinforced Concrete. ASTM C478 and ASTM C443 conforming to the Standard Specifications for Water and Sewer Main Construction in Illinois, Sixth Edition July 2009 and/or latest revision.

b. Sizes:

1. For sewer eighteen (18) inch diameter or less, manhole shall have a forty-eight (48) inch inside diameter.

2. For sewer twenty-one (21) inch to thirty-six (36) inch diameter, manhole shall have a sixty (60) inch inside diameter.

3. For sewer greater than thirty-six (36) inch diameter, manhole shall be a minimum of seventy-two (72) inches inside diameter and have an offset riser pipe cone section of forty-eight (48) inch inside diameter.

c. Adjustment. No more than two (2) precast concrete adjusting rings with six (6) inch maximum height adjustment shall be allowed.

1. Any frame adjustment shall use at least one rubber adjustment riser (Infra-Riser brand or approved equal) to establish the final seating surface of the structure frame. Any structure located within the paved roadway shall require the use of at least of one (1) rubber riser, and, if necessary, said riser shall be of the tapered wedge-type in order to match the proposed cross-slope of the pavement surface.

2. No more than two (2) rubber adjustment risers, with six (6) inches total maximum adjusted height, shall be allowed per structure.

3. A frame adjustment less than three (3) inches in height shall consist of only rubber riser(s). The minimum thickness of a rubber riser shall be one (1) inch

4. A frame adjustment greater than three (3) inches in height shall use a minimum three (3) inch precast concrete riser for the lower riser, and the final riser shall be rubber.

d. Sealing. All mating surfaces of concrete adjustment riser(s), structure sections, and frames shall be sealed with a mastic sealant. No concrete mortar or epoxy mortar shall be allowed as a sealant for adjustment risers, structure sections or frames. If multiple adjustment risers are required, a continuous application of sealant shall be applied between each unit. Rubber adjustment risers must be sealed with an approved sealant such as XSeal brand hydrophobic non-shrinking polyurethane sealant, or approved equal.

e. Pipe and Frame Seals. All pipe connection openings shall be precast with resilient rubber water tight pipe to manhole sleeves or rubber boot seals. External flexible water tight sleeves shall also extend from the manhole cone to the manhole frame.

f. Connections. All sewer connections to existing manholes shall be "core-drilled" and rubber boot seals installed.

g. Bottom Sections. All manhole bottom sections shall be monolithically precast, including bases and invert flow lines.

h. Drop Manholes. Drop manhole assemblies shall be monolithically precast with manhole barrel section. Refer to Drop Manhole Standard Details. SS-02, SS-03.

6. Castings.

a. Manhole Frame & Cover Manhole frame and cover – 7" East Jordan Iron Works, Inc. #1022Z3 #1022Z1 with embossed 1020A HD GS lid embossed with "SANITARY SEWER" and "VILLAGE OF ORLAND PARK", with a lid design as shown on Exhibit Sanitary Manhole Frame and Cover- Standard Detail No. SS-04.

b. Manhole steps - East Jordan Iron Works, Inc. #8518.

c. Pick Hole. All lids shall be cast with a concealed pick hole.

d. Water Tightness: Where necessary to prevent entry of overland flow, a water tight frame and self-sealing lid shall be used: 7" East Jordan Iron Works, Inc. 1058ZPT and shall be embossed 1058APT SANITARY SEWER and VILLAGE OF ORLAND PARK with a lid design as shown on Exhibit #1022Z1 PT4 (4 bolt lock down) frame and 1020A HD GS lid embossed with "SANITARY SEWER" and "VILLAGE OF ORLAND PARK", Sanitary Manhole Frame and Cover- Standard Detail No. SS-04 or as required by the Director of Engineering Village Engineer.

7. Crushed Granular Bedding (Exhibit No. SS-07). Crushed gravel or crushed stone - ASTM C33. The only gradation allowed shall be 100% retained on a 3/8" sieve and 100% passing 3/4" sieve.

F. Design Flows.

1. Average Daily Flow for Sanitary Sewer. Average daily flow for sanitary sewer shall be 100 GPCPD. Maximum design flow for sanitary sewer lines shall be determined by one of the following equations indicated below; provided, however, that the maximum design flow for sewer laterals need not exceed 400 GPCPD and the maximum design flow for sewer mains and trunks shall not be less than 250 GPCPD.

Equation No. 1: $Q = 500$

P 1/5

Equation No. 2: $Q = 100(1+14)$
(4+P)

Where: Q = Maximum design flow in GPCPD

P = Population in thousands

2. Minimum Size. No public sewer conveying raw sewage shall be less than 8 inches in diameter.

3. Design Slopes. Minimum and maximum slopes are tabulated below. The slopes are those that produce minimum and maximum velocities of 2.0 ft/sec. and 15.0 ft/sec. respectively, based on Kutter's formula, with $n = 0.013$ and the pipe flowing full, unless approved by the Village Engineer.

Sewer Size (Inches)	Minimum Slope (Percent)	Maximum Slope (Percent)
8	0.40	22.0
10	0.28	15.0
12	0.22	11.0
14	0.17	9.0
15	0.15	8.3
16	0.14	7.8
18	0.12	6.5
21	0.10	5.1
24	0.08	4.2

G. Protection of Water Mains.

Water mains shall be protected in accordance with the applicable Illinois Pollution Control Board Regulations and the Illinois Environmental Protection Agency, Division of Public Water Supplies, Technical Policy Statements. Wherever the sanitary sewer main, building service sewer, or any storm drain crosses a water main, a minimum eighteen (18) inches vertical separation shall be provided between the top of the lower pipe and the bottom of the upper pipe. If an eighteen (18) inch vertical separation cannot be maintained, the sanitary or storm sewer shall be constructed of watermain quality pipe, for a minimum distance of ten (10) feet on each side of the water main. If storm or sanitary sewer crosses above a watermain and an 18" clearance cannot be maintained, both sewer and water pipes must be of the same pipe material as the watermain.

H. Survey Lines and Grades.

1. Depth of Pipe Cover. All pipe shall be laid to a minimum depth of six (6) feet measured from the existing or proposed ground surface to the top of the pipe barrel unless specifically allowed otherwise in special circumstances by the Village Engineer.
2. Pipe Bedding. Granular pipe bedding material or granular cradle shall be required on all sanitary sewers installed in the Village. Granular pipe bedding shall be a minimum of four (4) inches in earth excavation and a minimum of six (6) inches in rock excavation. At depths greater than 10' below finished grade, the trench is backfilled with granular material to six (6) inches over the top of the pipe. At depths less than ten (10) feet, the granular material shall be placed up to the "spring line" prior to final backfilling of trench. The granular material shall conform in gradation to Type B, listed in Section 20, paragraph 20-2.20A of the Standard Specifications for Water and Sewer Main Construction in Illinois, as amended, Division 1 –Second Edition and/or latest revision.
3. Selection Granular Backfill. All trenches for sanitary sewers falling under and within two feet of a proposed or existing paved surface shall be backfilled with select granular material conforming to gradation Types A or B only as listed in Section 20, paragraph 20-2 21c (2) of the Standard Specifications for Water and Sewer Main Construction in Illinois. Selected granular backfill shall be placed in uniform layers not exceeding six (6) inches (loose measure) and compacted with mechanical equipment to 90% of maximum density in accordance with AASHOT-99.

I. Sewers in Relation to Streams.

1. Location of Sewers on Streams.
 - a. Cover Depth. The top of all sewers entering or crossing streams shall be at a sufficient depth below the natural bottom of the stream bed to protect the sewer line. In general, the following cover requirements shall be met:
 1. One (1) foot of cover is required where the sewer is located in rock.
 2. Three (3) feet of cover is required in other material. In major streams, more than three feet of cover may be required.
 3. In paved stream channels, the top of the sewer line should be placed one (1) foot below the bottom of the channel pavement. Concrete encasement may be required.
 - Note: Less cover will be approved only if the proposed sewer crossing will not interfere with the future improvements to the channel stream.
 - b. Horizontal Location. Sewers located along streams shall be located outside of the stream bed and sufficiently removed there separated from the stream bank to provide for future possible stream widening remediation and to prevent siltation pollution by siltation during construction.
 - c. Structures. The sewer outfalls, headwalls, manholes, gate boxes, or other structures shall be located so they do not interfere with the free discharge of flood flows of the stream. Watertight covers per Section 6-408.E.6.c shall be required for manholes set at elevations below flood hazard elevations.
 - d. Alignment. Sewers crossing streams should be designed to cross the stream as nearly perpendicular to the stream flow as possible and shall be designed without change in grade. Sewer systems shall be designed to minimize the number of stream crossings.
2. Construction Requirements.
 - a. Materials and Backfill. Sewers entering or crossing streams shall be constructed of calcium aluminate cement lined ductile cast iron pipe with mechanical joints; otherwise they shall be

constructed so they will remain watertight and free from changes in alignment and grade. The backfill used in the trench shall be coarse aggregate, gravel, or other materials which will not cause siltation, pipe damage during placement, or chemical corrosion in place.

b. Siltation and Erosion. Construction methods that will minimize siltation and erosion shall be employed as stated in Land Development Code article 6-411 Soil Erosion and Sedimentation Control. The design engineer shall include in the project specifications the methods to be employed in the construction of sewers in or near streams to provide adequate control of siltation and erosion.

3. Aerial Crossings.

a. Structural Support. Support for all joints shall be provided in pipes utilized in aerial crossings. The supports shall be designed to prevent frost heave, overturning and settlement.

b. Freeze and Expansion Protection. Protection against freezing shall be provided. This may be accomplished through the use of insulation, and increased slope expansion jointing shall be provided between the aerial and buried sections of the sewer line.

c. Flood Clearance. For aerial stream crossings the impact of flood waters and debris shall be considered. The bottom of the pipe should be placed no lower than the elevation of the 100 fifty year (1% annual chance of occurrence) flood.

4. Inverted Siphons. Inverted siphons shall have not less than two (2) barrels with a minimum pipe size of six (6) inches and shall be provided with the necessary appurtenances for convenient flushing and maintenance. The inlet and outlet structures shall have adequate clearances for cleaning, and sufficient head shall be provided and pipe sizes shall be selected to secure ensure velocities of at least three (3) ft./sec. for average flows. The inlet and outlet structures shall be designed so that normal flow is diverted to one (1) barrel so such that either barrel may be taken out of service for cleaning.

J. Handling of Pipe.

Sanitary sewer pipe shall be handled in a manner that will prevent damage prior to installation. Damaged or defective material on the job site shall be rejected and replaced to the satisfaction of the Village Engineer. Methods of construction conducive to the damage of sewer pipe shall be corrected when called to the attention of the contractor. All pipe and fittings shall be examined by the contractor above grade before placement in the trench.

K. Laying of Pipe.

1. Sanitary Sewer Pipe. Sanitary sewer pipe shall be laid true to line and grade as set forth in Section 31, paragraph 31-1.02 of the Standard Specifications for Water and Sewer Main Construction in Illinois, Sixth Edition (July 2009), and/or latest revision. Dirt or other foreign material shall be prevented from entering the pipe or pipe joint during handling or laying operations and any pipe or fitting that has been installed with dirt or foreign material in it shall be removed, cleaned, and re-laid. At times when pipe laying is not in progress, the open end of the installed pipe shall be closed with a water tight plug or by other means approved by the Village Engineer to ensure absolute cleanliness and avoidance of extraneous flows inside the pipe.

2. Laying of Pipe on Curves. The curvature of sanitary sewers is not allowed unless, in the opinion of the Village Engineer, special circumstances dictate otherwise. Pipe required to be laid on curved alignment shall be joined in straight alignment and then deflected, joint by joint. Special care shall be taken in blocking the pipe, and in no case shall the degree of deflection

exceed the manufacturer's recommendations for the respective pipe size, material and barrel length.

3. Sanitary Sewer Services. (Sanitary Service Riser SS-05 and SS-05-20): Sanitary sewer services shall be a minimum of six (6) inches in diameter and connected to the sewer main with a manufactured wye at a minimum angle of thirty (30) degrees and a maximum angle of forty-five (45) degrees. Sanitary sewer services shall be extended to the property line or building at a minimum gradient of one (1) percent. Sanitary sewer service connections to sewer mains twelve (12) feet or more in depth shall be constructed with a six (6) inch tee and riser and backfilled with select granular material or encased in concrete at the option of the Village Engineer. On a temporary basis, sanitary services may be terminated with a manufactured plug in which case the location shall be staked and an accurate record kept of the stub distance from the nearest downstream manhole along the sewer main. Sanitary sewer service connections to existing sewer mains shall be made with a dedicated tapping machine and the saddle shall be tightly secured to the existing sanitary sewer.

4. Depth of Pipe Cover. All pipe shall be laid to a minimum depth of eight (8) feet measured from the proposed ground surface to the top of the pipe barrel unless specifically allowed otherwise under special circumstances by the Village Engineer.

5. Pipe Bedding. (Trench Section Sanitary Sewer Detail No. SS-06). Crushed gravel or crushed stone - ASTM C33. The only gradation allowed shall be 100% retained on a 3/8" sieve and 100% passing 3/4" sieve. Granular pipe bedding material or granular cradle shall be required on all sanitary sewers installed in the Village. Granular pipe bedding shall be a minimum of four (4) inches in earth excavation and a minimum of six (6) inches in rock excavation. The trench shall be backfilled with granular material to six (6) inches over the top of the pipe. The granular material shall conform in gradation to Type B, of the Standard Specifications for Water and Sewer Main Construction in Illinois, Sixth Edition (July 2009) and/or latest revision.

6. Selection of Granular Backfill. All trenches for sanitary sewers falling under and within two feet of a proposed or existing paved surface shall be backfilled with select granular material conforming to only gradation Types A or B as listed in the Standard Specifications for Water and Sewer Main Construction in Illinois, Sixth Edition (July 2009) and/or latest revision. Selected granular backfill shall be placed in uniform layers not exceeding six (6) inches (loose measure) and compacted with mechanical equipment to 90% of maximum density in accordance with AASHTO-99.

L. Sanitary Sewer Manholes.

1. Manholes for Sanitary Sewers. Manholes for sanitary sewers shall have a minimum inside diameter of forty-eight (48) inches and shall be constructed of precast concrete units in accordance with Section 32 of Standard Specifications for Water and Sewer Main Construction in Illinois, and shall follow the Village's standards.

2. Manhole Location. Manholes shall be located at the junction of two sanitary sewer pipes or at any change in grade, alignment, or pipe size in accordance with Subsection D(6) of this Section.

3. Construction. Sanitary manholes shall have precast inverts made to conform accurately to the sewer grades with smooth, well rounded junctions and transitions satisfactory to the Village Engineer. It is preferred that the sewer pipe to manhole joint be a flexible gasket or mechanical seal to insure a leak-proof joint. The completed manhole shall be rigid, true to dimensions, and water tight.

4. Manhole Appurtenances. Manholes shall be furnished with a water tight frame and solid cover as specified in section 6-408.E.6 with the words, "Sanitary Sewer" imprinted on the cover in raised letters.

M. Installation Requirements.

1. The No connection of any section of new sanitary sewer to an existing Village sanitary sewer must be plugged and remained plugged is allowed until the Village approves the new sewer(s) for service.

2. Sewer system design and construction shall in all respects be in accordance with the regulations of the M.S.D. MWRDGC and the Illinois Environmental Protection Agency of the State of Illinois. No construction shall commence until a copy evidence of the approved permits from these agencies is filed with the Village Engineer.

3. The installation of sanitary sewer and appurtenances shall conform to the requirements of this Section and the following:

a. Reinforced concrete pipe - Section 603, SSR & BC Standard Specifications for Water and Sewer Main Construction in Illinois, Sixth Edition (July 2009) and/or latest revision.

b. ABS composite pipe and fittings - ASTM D-2321

c. Ductile iron pipe and fittings - AWWA C600

d. PVC pipe and fittings- ASTM D-2321

4. The installation of sewer service connections shall conform to the requirements of this Section.

5. Where the installation of a grease separator is required, the basin shall be exterior to the building where possible. However, should the establishment prefer to have an internal grease basin, it will be allowed if ample basin capacity can be provided. Basin capacity shall be dictated by applicable plumbing code(s).

6. The contractor shall keep a record of the location of all sewer services by measurement to the nearest downstream manhole. Such records shall be delivered to the Village Engineer at the completion of the work.

N. Inspection and Test.

1. Cleaning. All sewers and appurtenances shall be high pressure cleaned prior to inspection and testing required by this Section.

2. Visual Inspection.

a. All sewer and appurtenances shall be visually inspected by representatives of the developer during and following construction.

b. Sewers designed to be straight between manholes will be tested for straightness by flashing a light from manhole to manhole, lamping or by other suitable means.

3. T.V. Inspections.

a. Upon completion of construction and prior to initiation of the maintenance guarantee period, and if determined to be necessary by the Village during the construction of the sanitary sewer, a T.V. inspection shall be performed on the sections or portions of the sewer as directed by the Village Engineer. Video tapes and a written report of all television inspections shall be provided to the Village prior to the initial acceptance provided for by this Section. The form of the report and type and format of the video tape format shall be approved by the Village Engineer.

b. Fees and costs connected with T.V. inspections shall be paid for by the developer or owner.

- c. All dips, cracks, leaks, improperly sealed joints, and departures from approved grades and alignment shall be repaired by removing and replacing the involved sections of pipe and manholes.
- d. All defects and corrective work required as the result of T.V. inspection shall be performed by the developer without delay. Upon completion thereof, the sewer shall be retested and such further inspection made as may appear warranted.

4. Infiltration Testing.

- a. It is the intent of this Section to secure a sewer system with a minimum amount of infiltration. The maximum allowable infiltration shall not exceed two hundred (200) one hundred (100) gallons per inch of diameter of sewer per mile per twenty-four (24) hour day at any time for any section of the system. The joints shall be tight and any joint with visible leakage or leakage in excess of that specified above, shall be repaired at the developer's expense.
- b. The repair must be of a permanent nature and of a quality equal to initial work which is constructed new construction in conformance with the applicable specifications.
- c. Immediately after backfilling, the entire length of the sewer trench, including stubs, shall be inundated to normal ground water level or eighteen (18) inches above the top of sewer pipe, whichever is higher. At that time, infiltration tests shall be made to determine compliance with the allowable infiltration criteria. To measure the amount of infiltration, the contractor shall furnish, install, and maintain a V-notch shape crested weir in a metal frame tightly secured at the lower end of each sewer test section as directed by the Village Engineer. The Village Engineer shall check the infiltration by measuring the flow over such weirs. When infiltration is demonstrated to be within the allowable limits, the contractors shall remove such weirs.

5. Exfiltration Testing. If during the construction of the sewer system, the Village Engineer shall determine that it is impractical to obtain a proper infiltration test, then a test for watertightness shall be made by bulkheading the sewer at the manhole at the lower end of the section under test and filling the sewer with water to eighteen (18) inches above the tip top of the sewer in the manhole at the upper end of the section. Leakage will then be calculated as the measured amount of water added to maintain the above described level at a maximum allowable exfiltration rate of two hundred (200) one hundred (100) gallons per inch of diameter of sewer per mile per twenty-four (24) hour day at any time for any section of the system.

6. Air Testing. In lieu of infiltration or exfiltration testing, All Polyvinyl Chloride (PVC) and Polyvinyl Chloride Molecularly Oriented Pressure Pipe (PVCO) will require low pressure air testing meeting ASTM F1417. The Village Engineer may permit require air testing for other pipe materials in accordance with ASTM C828.

7. Deflection Testing.

- a. All Polyvinyl Chloride (PVC) and Polyvinyl Chloride Molecularly Oriented Pressure Pipe (PVCO) require deflection testing. The 5% deflection test for pipe sizes six (6) to fifteen (15) inches in diameter is to be run using a nine-arm mandrel having a diameter equal to 95% of the base diameter of the pipe as established in ASTM D-3034. For pipe sizes eighteen (18) to twenty-seven (27) inches diameter, the nine-arm mandrel size shall be 95% of the inside diameter and wall thickness dimensions shown in Table 1 of ASTM F-679, latest issue. The test shall be performed without mechanical pulling devices.
- b. The individual lines to be tested shall be so tested no sooner than thirty (30) days after they have been installed.
- c. Wherever possible and practical, the testing shall initiate at the downstream lines and proceed towards the upstream lines.
- d. No pipe shall exceed a deflection of 5%. Where deflection is

found to be in excess of 5% of the original pipe diameter, the contractor shall excavate to the point of excess deflection and carefully compact around the point where excess deflection was found. The line shall then be retested for deflection. If the deflected pipe fails to return to the original size (inside diameter) after the second test, the line shall be replaced accordingly to the standards set forth in this Section.

O. Exhibits.

Standard Detail Exhibits labeled SS-01 through SS-07, SS-02, SS-03, SS-04, SS-05, SS-05-20, SS-06 and PC-01 are typical specifications of Village sanitary sewer standards that shall be applied to any improvements required by these regulations.

P. Acceptance of Sanitary Sewer System.

1. Once the sanitary sewer system has been completed according to the specifications set forth in this Section, the Director of Engineering Development Services Department shall, upon the request of the developer, inspect the system and prepare a list of items for repair (punch list). The list shall be given or sent to the developer and when repairs have been made, the Director of Engineering Village shall accept the system for operational use only. During the time after the acceptance by the Village for maintenance, the developer shall be responsible for any delinquencies deficiencies identified incurred within the system, including but not limited to sewer blockages, adjustment to manhole frames and leaking joints. Upon reaching approximately eighty (80) percent development of building construction, the Director of Engineering Development Services Department will re-inspect the sanitary sewer system for any existing delinquencies which may have been incurred deficiencies and prepare a list of items for repair. The list shall be given or sent to the developer and when the repairs have been made to the satisfaction of the Director of Engineering Village, the Director shall accept the system shall be formally accepted by the Village in letter form sent to the developer for the Village.
2. All construction shall meet the requirements and acceptance procedures by of the Metropolitan Water Reclamation District of Greater Chicago prior to the acceptance by the Director of Engineering Village.
3. T.V. Inspections and reports shall be completed for all storm systems and sanitary systems installed in the Village of Orland Park.

SECTION 42

The Land Development Code of the Village of Orland Park, as amended, is hereby further amended to delete in its entirety the text of Subparagraph d of Subsection 18 "Storm Water Detention Facilities" of Paragraph E "Basic Design Standards" of Section 6-409 "Storm Sewers and Storm Water Detention" and to substitute the following as new text for Subparagraph d of Subsection 18 of Paragraph E of Section 6-409:

- d. In order to prevent soil erosion and weed problems, "dry" detention basins must be landscaped including the establishment of a groundcover over all unpaved areas through sodding of native natural growth plant material or material as designated by the Director of Development Services. Such groundcover shall not be of a plant type which can be carried by water plow to aggressively invade other downstream lands or properties, and crown vetch shall be prohibited. Native natural plant growth may comprise of a variety of techniques that employ in concert

according to the needs of the site. Some of these include biologs, aquatic plants, wattles, natural native grasses, tri lok, and vegetated geogrids. Detention Basins shall be designed so that the portion of their bottom area which is intended to be dry shall have standing water no longer than seventy two (72) hours for all runoff events less than the 100 year frequency storm.

If detention facilities are proposed, they shall also be reviewed by the Director of Recreation and Parks for usability as active recreational areas during dry weather conditions. Additional underdraining may be required. Pipe runs and spacing shall be designed to ensure good drainage. Detention facilities shall be designed so that the cross slope is at least two (2) percent. The bottom of the facility shall be provided with an underdrain (minimum six (6) inch diameter perforated drain tile) covered on all sides with a minimum of six (6) inches of crushed stone conforming to ASTM C33, Size No. 67. The underdrain shall be installed to drain the basin below grade during periods of low flow and shall connect to a storm sewer outfall pipe. Detention facilities shall be designed with side slopes not steeper than four (4) horizontal to one (1) vertical (4:1). The inflow storm piping system shall be constructed in such a manner so as to allow for "low" flows to bypass the basin.

SECTION 43

The Land Development Code of the Village of Orland Park, as amended, is hereby further amended to delete in its entirety the text of Subparagraph c of Subsection 2 "Exceptions" of Paragraph C "Soil Erosion Control Plan Permit Requirements" of Section 6-411 "Soil Erosion and Sedimentation Control" and to substitute the following as new text for Subparagraph c of Subsection 2 of Paragraph C of Section 6-411:

- c. Single lots in established subdivisions, subject to the approval of the Director of Development Services.

SECTION 44

The Land Development Code of the Village of Orland Park, as amended, is hereby further amended to delete in its entirety the text of Paragraph F "Expiration of Permit" of Section 6-411 "Soil Erosion and Sedimentation Control" and to substitute the following as new text for Paragraph F of Section 6-411:

F. Expiration of Permit. Each permit shall expire and become null and void if the work authorized by such permit has not been commenced within six (6) months, or work is not completed by a date, which shall be specified in the permit; except that the Director of Development Services may, if the permittee presents satisfactory evidence that unusual difficulties have prevented work being commenced or completed within the specified time limits, grant a reasonable extension of time if written application is made before the expiration date of the permit.

SECTION 45

The Land Development Code of the Village of Orland Park, as amended, is hereby further amended to delete in its entirety the text of Subsection 2 of Paragraph D "Development Activity

in, and Minimum Setback from Streams, Lakes and Ponds" of Section 6-412 "Local Stream and Waterbody Protection" and to substitute the following as new text for Subsection 2 of Paragraph D of Section 6-412:

2. The following activities are permitted within the minimum setback area only if, as a practical matter, they cannot be located outside the setback area. Such modification shall be approved only after preparation of a report prepared by a qualified professional and approved by the Director of Development Services. The report shall note that the modification will not adversely affect water quality; destroy, damage, or disrupt a significant habitat area; adversely affect drainage and/or stormwater retention capabilities; lead to unstable earth conditions; create erosion hazards or be materially detrimental to any other property in the area of the subject property or to the Village as a whole, including the loss of open space or scenic vistas:
 - a. minor improvements, such as walkways, benches, footbridges, observation decks and docks;
 - b. the maintenance, repair, replacement and reconstruction of existing highways and bridges, electrical transmission and telecommunication lines, poles, and towers; and
 - c. the establishment and development of public and private parks and recreation areas, outdoor education areas, historic, natural and scientific areas, game refuges, fish and wildlife habitat improvement projects, game bird and animal farms, wildlife preserves and public boat launching ramps.

SECTION 46

The Land Development Code of the Village of Orland Park, as amended, is hereby further amended to delete in its entirety the text of Subparagraph j of Subsection 1 of Paragraph E "Local Stream and Waterbody Protection Plan" of Section 6-412 "Local Stream and Waterbody Protection" and to substitute the following as new text for Subparagraph j of Subsection 1 of Paragraph E of Section 6-412:

- j. such other information as reasonably requested by the Director of Development Services.

SECTION 47

The Land Development Code of the Village of Orland Park, as amended, is hereby further amended to delete in its entirety the text of Subsection 4 of Paragraph H "Site Grading and Excavation" of Section 6-412 "Local Stream and Waterbody Protection" and to substitute the following as new text for Subsection 4 of Paragraph H of Section 6-412:

4. The Village may limit construction activity in or near a stream, lake or pond to specific months and to a maximum number of continuous days or hours in order to minimize adverse impacts. The Director of Development Services may also require that equipment be operated from only one side of a stream, lake, or pond in order to minimize bank disruption. Other construction techniques, conditions, and restrictions may be required in order to minimize adverse impacts on streams, lakes or ponds and on any related areas not subject to development

SECTION 48

The Land Development Code of the Village of Orland Park, as amended, is hereby further amended to delete in its entirety the text of Paragraph O “Expiration of Permit” of Section 6-412 “Local Stream and Waterbody Protection” and to substitute the following as new text for Paragraph O of Section 6-412:

O. Expiration of Permit. Each permit shall expire and become null and void if the work authorized by such permit has not been commenced within six (6) months, or work is not completed by a date which shall be specified in the permit; except that the Director of Development Services may, if the permittee presents satisfactory evidence that unusual difficulties have prevented work being commenced or completed within the specified time limits, grant a reasonable extension of time if written application is made before the expiration date of the permit.

SECTION 49

The Land Development Code of the Village of Orland Park, as amended, is hereby further amended to delete in its entirety the text of Subsection 2 “Special Permit Uses in a Nontidal Wetland” of Paragraph E “Uses by Right in a Nontidal Wetland” of Section 6-413 “Wetlands Protection” and to substitute the following as new text for Subsection 2 of Paragraph E of Section 6-413:

2. Special Permit Uses in a Nontidal Wetland.

Regulated activities other than those specified in Section 6-413 E.1 may not be conducted except upon application to the Development Services Department and issuance of a special use permit.

SECTION 50

The Land Development Code of the Village of Orland Park, as amended, is hereby further amended to delete in its entirety the text of Subsection 1 “Procedures” of Paragraph F “Standards and Procedures for Special Use Permits” of Section 6-413 “Wetland Protection” and to substitute the following as new text for Subsection 1 of Paragraph F of Section 6-413:

1. Procedures. Application for a special use permit to conduct a regulated activity shall be made to the Development Services Department on forms furnished by that office. All special uses must be established in nontidal wetlands as special uses in accordance with the procedures and standards set forth in Section 5-105 (I) of this Code. Permits shall ordinarily be valid for a period of one year from the date of issue and shall expire at the end of that time unless a longer period is specified by the Director of Development Services upon issuance of the permit. The request for renewal of a permit shall follow the same form and procedure as the original application except that the Director of Development Services shall have the option to not hold a hearing if the original intent of the permit is not altered or extended in any significant way.

SECTION 51

The Land Development Code of the Village of Orland Park, as amended, is hereby further amended to delete in its entirety the text of Subsection 1 “Standards” of Paragraph G “Nontidal

Wetland Restoration and Creation" of Section 6-413 "Wetlands Protection" and to substitute the following as new text for Subsection 1 of Paragraph G of Section 6-413:

1. Standards. As a condition of a permit issued or as an enforcement action under this ordinance, the Director of Development Services may require that the applicant engage in the restoration or creation of other nontidal wetlands in order to offset, in whole or in part, the losses resulting from the action of an applicant or violator under these regulations. In making a determination of whether such a requirement will be imposed, and, if so, the degree to which it would be required, the Director of Development Services will consider the following:
 - a. Recommendations by the Army Corp of Engineers.
 - b. The long and short term effects of the action upon the nontidal wetland and associated aquatic ecosystem, and the reversible or irreversible nature of the impairment or loss;
 - c. The type and benefit of the wetland functions and associated resources lost;
 - d. The type, size, and location of the wetland altered, and the effect it may have upon the remaining system or watershed of which the wetland is a part;
 - e. Observed or predicted trends with regard to the gains or losses of this type of wetland in the watershed of which the wetland is a part;
 - f. The cost and likely success of the possible compensation measures in relation to the magnitude of the proposed project or violation; and
 - g. The degree to which an applicant has demonstrated a good-faith effort to incorporate measures to minimize and avoid wetland impacts within the proposed project.

An applicant or violator may prepare or be required by the Director of Development Services to develop a nontidal wetlands restoration or creation plan of review and approval of the Director of Development Services. The approval shall be based on the recommendation of a qualified consultant which shall be at the cost of the applicant. The creation or restoration of wetlands shall not be an alternative to the standards set forth in Section 6-413. G.1. but shall be used only to compensate for unavoidable losses.

SECTION 52

The Land Development Code of the Village of Orland Park, as amended, is hereby further amended to delete in its entirety the text of Paragraph H "Suspension, Revocation" of Section 6-413 "Wetlands Protection" and to substitute the following as new text for Paragraph H of Section 6-413:

H. Suspension, Revocation.

The Director of Development Service may suspend or revoke a permit if he or she finds that the applicant has not complied with the conditions or limitations set forth in the permit or has exceeded the scope of the work set forth in the permit. The Director of Development Services shall cause notice of his or her denial, issuance, conditional issuance, revocation, or suspension of a permit by written notice to the petitioner.

SECTION 53

The Land Development Code of the Village of Orland Park, as amended, is hereby further amended to delete in its entirety the text of Subsection 2 of Paragraph B "Requirements" of

Section 6-415 “Bikeways and Bikepaths” and to substitute the following as new text for Subsection 2 of Paragraph B of Section 6-415:

2. Developers shall be required to install bicycle parking and racks sufficient to serve all new commercial and industrial developments. Developers of other uses may be required to install bicycle parking and racks, provided that the uses generate such need, and subject to the approval of the Director of Development Services.

SECTION 54

The Land Development Code of the Village of Orland Park, as amended, is hereby further amended to delete in its entirety the text of Paragraph C “Construction Requirements” of Section 6-415 “Bikeways and Bikepaths” and to substitute the following as new text for Paragraph C of Section 6-415:

C. Construction Requirements. The construction requirements and other standards set out in the Guide For Development of New Bicycle Facilities, 1981, or as hereinafter updated, published by the American Association of State Highway and Transportation Officials (AASHTO), 444 North Capital Street, N.W., Suite 225, Washington, D.C. 20001, that pertain to the planning, operation and maintenance of roadways, bikeways and bikepaths shall be applicable to all development located within the Village. Copies of this Guide shall be kept on file at the Department of Development Services and the Building Department.

SECTION 55

The Land Development Code of the Village of Orland Park, as amended, is hereby further amended to delete in its entirety the text of Paragraph A of Section 9-101 “Enforcement Procedures” and to substitute the following as new text for Paragraph A of Section 9-101:

A. Direct the Director of Development Services not to continue any development review process for the developer until the violation has been corrected;

SECTION 56

The Land Development Code of the Village of Orland Park, as amended, is hereby further amended to delete in its entirety the text of Subsection 7 of Paragraph B “Permitted Uses” of Section 6-206 “RSB Residential and Supporting Business District” and of Section 9-101 “Enforcement Procedures” and to substitute the following as new text for Subsection 7 of Paragraph B of Section 6-206:

7. Townhouse and multi-family dwellings:

SECTION 57

The Land Development Code of the Village of Orland Park, as amended, is hereby further amended to delete in its entirety the text of Subsection 18 of Paragraph B “Permitted Uses” of

Section 6-211 “ORI Mixed Uses District” and to substitute the following as new text for Subsection 18 of Paragraph B of Section 6-211:

18. Restaurants, and outdoor seating for restaurants, greater than 300 feet of a residential parcel. Outdoor seating shall have aisle widths of thirty-six (36) inches or more, and any fence, wall, landscaping or similar barrier installed in or around the outdoor seating areas shall be not less than twenty-four (24) inches in height and not greater than forty-eight (48) inches in height. The service of liquor will require conformance with the provisions outlined in Section 6-310 Fences, as well as the requirements of the Village Code, as amended.

SECTION 58

The Land Development Code of the Village of Orland Park, as amended, is hereby further amended to delete in its entirety the text of Subsection 14 of Paragraph C “Special Uses” of Section 6-211 “ORI Mixed Uses District” and to substitute the following as new text for Subsection 18 of Paragraph B of Section 6-211:

14. Restaurants, and outdoor seating for restaurants, less than or equal to 300 feet of a residential parcel. Outdoor seating shall have aisle widths of thirty-six (36) inches or more, and any fence, wall, landscaping or similar barrier installed in or around the outdoor seating areas shall be not less than twenty-four (24) inches in height and not greater than forty-eight (48) inches in height. The service of liquor will require conformance with the provisions outlined in Section 6-310 Fences, as well as the requirements of the Village Code, as amended.

SECTION 59

The Land Development Code of the Village of Orland Park, as amended, is hereby further amended to delete in its entirety the text of Subsection 1 of Paragraph C “Size Required Parking Spaces and Aisles” of Section 6-306 “Off-Street Parking and Loading Requirements” and to substitute the following as new text for Subsection 1 of Paragraph C of Section 6-306:

1. Each required parking space shall cover a rectangle at least nine (9) feet wide and eighteen (18) feet long as measured from the back of the curb, as illustrated in Figure 6-306(C). The minimum required eighteen (18) foot length shall be greater where there is a wall or fence at the end of the parking space. The minimum required length may be up to two (2) feet less if a strip of ground at least two (2) feet wide exists of the space and a curb prevents a vehicle from driving onto the strip or hitting any fence or wall the edge of the parking area.
 - a. Parking spaces for train stations shall cover a rectangle at least eight and one-half (8 1/2) feet wide and eighteen (18) feet long.

SECTION 60

The Land Development Code of the Village of Orland Park, as amended, is hereby further amended to delete in its entirety the text of Subsection 1 of Paragraph D “Development Activity in, and Minimum Setback from Streams, Lakes and Ponds” of Section 6-412 “Local Stream and

Waterbody Protection" and to substitute the following as new text for Subsection 1 of Paragraph D of Section 6-412:

1. No development (except as provided in subsection 2) may occur within the minimum setback area identified on the Village's Natural Stream Channel and Water Body Map, as adopted by the Board of Trustees and as amended from time to time, and in no case shall be less than fifty (50) feet from a stream, lake or pond or twenty-five (25) feet for an artificial detention/retention basin.

SECTION 61

All sections of the Land Development Code not addressed in this Ordinance or another amending ordinance shall remain in full force and effect.

SECTION 62

All ordinances or parts of ordinances in conflict with the provisions of this Ordinance are hereby repealed insofar as they conflict herewith.

SECTION 63

This Ordinance shall become and be effective immediately upon its passage, approval and publication in the manner provided by law. It is ordered that publication of this Ordinance be made by the duplication thereof in pamphlet form, said pamphlets to be deposited in the office of the Village Clerk of the Village of Orland Park, for general distribution.