

Celebrate the History, Plan for Progress.

### 2014 COMPREHENSIVE PLAN CITY OF WATSEKA, IL

FINAL DRAFT APRIL 22, 2014

The First Comprehensive Plan for Watseka, IL

Prepared by GINKGO Planning & Design, Inc. with Robinson Engineering Ltd.

Welcome



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## Introduction

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### Introduction

### The First Comprehensive Plan for a Historic Midwest City

Incorporated in 1865, the City of Watseka grew along the banks of the Iroquois River and Sugar Creek. Much of the original settlement is in the floodplain, and was significantly affected in the 2008 Flood.

Watseka received a CDBG IKE Planning Grant in 2013 to develop the first Comprehensive Plan for the City. As the first Long Term Plan for this small Midwest City of over 5,000 people, this is an opportunity to create a strategy to minimize the flood impacts in the future, and also to serve as a guide in land use planning, zoning changes, economic development, transportation, housing and community development, disaster mitigation and recovery as well the conservation of natural areas and the preservation of farmland.

Ginkgo Planning & Design, Inc. with Robinson Engineering Ltd. were selected as the consultants to develop the plan in Summer of 2013. This plan has received significant community participation and support to date.

### A User Friendly Concise Book with more maps, less text

This document aims to capture the rich historic heritage of Watseka, the challenges of today, and the opportunities of the future in a graphic, concise and user friendly book that can be easily used by City Officials as well as the citizens of Watseka to showcase opportunities, and attract new employers and residents to the area.

### Crafting the Plan with the citizens of Watseka

Two public forums were held in November 2013 and January 2014, where local leaders, stakeholders, residents and other community members provided feedback and input into the draft plan elements.

A series of small focus group meetings were also held since the project started, including meetings with representatives from:

- Chamber of Commerce
- Iroquois County Board
- Iroquois Hospital
- School Districts
- Local business owners
- City Council and Commissioners
- Downtown Businesses
- Iroquois County Historical Society
- Watseka Park District



### **Comprehensive Plan Goals**

- 1 Preserve and Strengthen Downtown as the vibrant center of Watseka
- **2** Direct future growth away from flood prone areas
- **3** Address stormwater management and flooding issues
- **4** Address the needs of existing neighborhoods
- **5** Protect natural assets, including waterways, tree groves and farmland
- **6** Position Watseka as a great place to live to attract new residents
- 7 Attract and retain jobs, especially in manufacturing
- 8 Strengthen Watseka's position as an agricultural & local food production hub
- **9** Market Watseka more strongly to visitors and tourists in Illinois and Indiana
- **10** Strengthen Watseka's civic role as the seat of Iroquois County

Ten Clear Goals to guide the future growth of the City of Watseka



2014 WATSEKA COMPREHENSIVE PLAN 6

### A City at the heart of Iroquois County

The City of Watseka is located within two hours of Downtown Chicago and other destinations in Illinois and Indiana.

- Located about 95 miles south of Chicago Loop, less than a 2 hour drive
- Only 10 miles from the Indiana Border
- Less than an hour away from Kankakee
- About 1 hour from Urbana Champaign and Danville, Lafayette, Indiana
- At the heart of Iroquois County, and the County Seat
- Great interstate access, only 10-12 miles from I-57, about 20 minutes away



### **Existing Municipal Boundary**

Existing Municipal Boundary

The 2014 Comprehensive Plan looked at a 1.5 mile area around the municipal boundary, a total of about 22 square miles, to conserve farmland and natural areas and to direct new growth away from flood prone areas. 24 1 V FARM PO

---- Existing Municipal Boundary

### **Planning Area Boundary Map**

 1.5 mile area around existing Municipal Boundary



Source: Geological Survey of Illinois-Indiana Watseka Quadrangle, US Dept. of Interior, 1939

Historic Map of Watseka from 1939

### Historic Legacy

#### WALNUT STREET EAST FROM SECOND STREET, WATSEKA, ILI

Watseka (1810-) also Watchekee; Gordon S. Hubbard's first wife, niece of Tamin, chief of the Kankakee Potawatomi; compare Algonquin wajekân `hem` or less likely washkâ `crooked`; married in 1824 at age 15, two children were born but died early; after Hubbard divorced her and left the area, she married Hubbard`s friend and fellow trader Noel Le Vasseur, bearing him three children.





**Gordon S. Hubbard** who was born at Winsor, VT in 1802, opened the well-known Hubbard Trail. This trail extended south to the Wabash Country and passed through Watseka and Danville. He made Danville his main inland post for supplies and married an Indian girl named Watseka, the niece of Pottawattamie Chief Tamin, who was born around 1810. In the early history of Chicago, there was no man better known than Gordon S. Hubbard.

Mr. Hubbard, seeing that the Indian trading was doomed on this trail, took up civilian life in Chicago and by mutual agreement abandoned the marriage. Hubbard was elected to the Legislature in 1832 and was appointed by Gov. Duncan as a Commissioner of the Illinois and Michigan Canal in 1835. He was a Republican and a strong supported of Abraham Lincoln. He was commissioned a Captain in the 88th Regiment of the Illinois Volunteers. Mr. Hubbard died at Chicago on September 14, 1886.

### Historic Legacy

#### **Excerpts from**

#### "CHICAGO'S HIGHWAYS, OLD AND NEW", Quaife, 1923

"Alone of the fur-traders of Illinois Gordon S. Hubbard successfully made the transition from the trade of the wilderness to the commerce of civilization, and won prestige and wealth as a leader of modern business. Hubbard was a man of indomitable will, and he possessed a constitution of iron.

A character whose memory is forever bound up with those of Hubbard and the Vincennes Trace is the gentle Indian maid, Watseka (native pronunciation "Watch ekee"), who was born at the Indian village on the site of old Bunkum (now Iroquois) about the year 1810. Competition was fierce in the Indian trade, and the trader who could win the friendship of a chief enjoyed an advantage over his competitors which was not to be ignored. In savage, as in civilized life, the favor of royalty is best secured and cemented through marriage alliances. In accordance with the custom of the forest, therefore, Hubbard entered upon a marriage of convenience by taking to wife a relative of Tamin, chief of the Kankakee band of Potawatomi. It was Tamin's first desire that Hubbard should wed his own grown daughter, but for reasons which may easily be imagined the latter declined this alliance. Instead he indicated his willingness to marry Tamin's niece, Watseka, then a child of ten years of age. A pledge to do so was aiven, and when the airl had arrived at the age of fourteen or fifteen years she was brought to Hubbard by her mother and the marriage was consummated.

Over this union, as over the career of Watseka, hovers much of pathos and tragedy. Watseka was a beautiful and intelligent girl, and Hubbard in after years testified to the ideal character of his union with her. It lasted about two years, during which a daughter was born and died. The advancing tide of white settlement spelled the doom of the Indian trade, however, and Hubbard, who possessed abundant foresight and shrewdness, laid his plans for abandoning his calling. This would involve severing his connection with Watseka's tribe and taking up life anew in a civilized community. Under these circumstances the couple separated by mutual agreement, "in perfect friendship," according to Hubbard. His account of the transaction is entitled to entire credit, yet one can readily imagine that it was dictated more by the strong-willed husband, member of the dominant race and sex, than by the submissive wife. Viewed from any angle it was a hard situation, and Watseka doubtless had the sense to perceive that acquiescence in her husband's wishes was the only course open to her.

The "Hubbard trail," over which Hubbard carried on his fur trade during these years was, of course, but another name for the Vincennes Trace. (The Vincennes Trace was a areat thoroughfare leading into Chicago from the south. An extension of the road west of the line joined the Vincennes-Chicago State Road at Bunkum, the site of Hubbard's old trading post.) From Chicago it ran southward a few miles west of the state line, passing through the towns of Blue Island, Crete, Grant, Momence, Beaverville, Iroquois, Hoopeston, Myersville, and Danville. From Bunkum (or Iroquois) to Chicago it was identical with the Potawatomi trail. During the pioneer period it became a great highway of travel and traffic between the Wabash country and Chicago. In 1834 the legislature caused a state road to be laid out between Vincennes and Chicago. The commissioners who located it tried hard to get a straighter line and better ground than the Hubbard Trail, but were forced to follow the old track with but little deviation. It was marked with milestones, and was commonly known as the State Road. With the coming of the railroads the old state road was superseded and abandoned, but within the city of Chicago its name still survives in that of modern State Street."

#### From Hubbard's autobiography:

"During the year 1822, I had established a direct path or track from Iroquois post to Danville, and I now extended it south from Danville and north to Chicago, thus fully opening Hubbard's Trail from Chicago to a point about 150 miles south of Danville.Along this trail I established trading posts 4- 50 miles apart. This trail became the regularly traveled route between Chicago and Danville and points beyond, and was designated on the old maps as "Hubbard's Trail."



Hubbard's Trail - The Illinois Historical Society has placed the commemorative marker shown here. It marks the trail used many times by the Chicago trader Gordon S. Hubbard from 1822 to 1824 to reach various trading posts, several of which were owned by him. The marker is located on the S. side of the Illinois Highway No. I along the S. bank of the Kankakee River immediately W. of the city of Momence. Additional markers identifying the trail are located in Crete, Iroquois, Watseka, Milford and Rossville.

### PROSPECTUS OF WATSEKA, ILLINOIS ISSUED AS A SUPPLEMENT TO THE **IROQUOIS COUNTY TIMES=DEMOCRAT**

#### WATSEKA, ILL., FRIDAY, JAN 20, 1905

#### With 49 Original Half-Tone Illustratio

#### WATSEKA, ILLINOIS.

One of the Leading Cities of Eastern Illinois-Has a Bright Future in Store on Account of its Many Advantages.

Watseka is located seventy-seven miles south of Chicago at the crossing point of the Chicago and Eastern Illinois and Toledo, Peoria and Western Railways. Watseka is one of the oldest community centers of the state of Illinois, rich in the traditions of Indian history, treasured still in verse and song; but with the growth of the city in recent years the central idea in the city in recent years the contra note in the minds of the people has been municipal and industrial improvement and Wateske today with its population of some 3,500 souls presents the appearance of solidity of one of the most strenuous of trade centers in the state.

Perhaps one of the chief advantages Watseka has, and one which will count a good deal in its development, is the fact that the city has never been "boomed" either from an industrial or any other standpoint. Yet Watseka is just such a city as should be next the heart of the manufacturer.

Its advantages as a shipping point are manifest. It has practically 3 lines of railroad within its corporate limits, for in a ddition to the Toledo, Peoria and Eastern which gives an outlet to the east and west, and the Chicago and Eastern Illinois, running north and south, there is the new line of the latter road to St. Louis. A few niles to the east and west of Watseka also are two other great trunk railways, the Illinois Central and the Big Four.

Being right on the lines of the coal fields, south and west, Watseka has an inexhaustible supply of fuel at its very

Watseka has long been known for its artesian wells, so that water is in abundance, being obtained at a depth of 110 feet.

The nature of the soil foundation is also another advantage to be considered in erecting large buldings, a solid bed of rock being reached 10 feet below the surface. Not the least, however, of the Watseka has to offer the



manufacturer is the promise of free sites. Thus with unexcelled transportation facilities, Chicago freight rates, proximity to the coal fields, free sites and free water Watseka is able to make a strong bid for outside capital and is better prepared to receive and welcome outside capital than many other cities double its population. But the advantages above enumerated are but a few of the facts which ought to

be laid before the prospective manufactur-er. There are special features in regard to Watseka's emoluments that point to a special line of industry that is bound to develop sooner or later and to grow into considerable magnitude --reference is made to the pickle and canning industry. Owing to the nature of the soil, a rich sandy loam, tomatoes and pickles are the natural products and would well repay extensive culture. Manufactureres in these lines would do well to look to Watseka as a field for operation-a fortune awaits a small army of market gardeners, who can come to Watseka, buy

land at a low figure and be as near the South Water street markets as if they were ten miles from Chicago. Iroquois county is proverbially fertile, and the land close to Watseka is better

any other form of agriculture Further afield are rich pasture lands, uitable for the dairy industry, and this

only needs to be known to make of

#### VIEW OF WALNUT STREET (Noble Photo.

With these arguments Watseka as a city courts the limelight of publicity, and her citizens are united in backing up the claims of the town. Justly proud of their claims of the town. Justy proud of their advantages, they are looking towards development and expansion and are more than willing to help promote this development with all the capital at their



WATSEKA PUBLIC LIBRARY (Noble Photo.)

adapted for market gardening than for command. They can point to their public buildings

ed as a result of the public spirit Watseka owns one of the best public library buildings in Illinois, erected by the city itself without outside assistance. Watseka has substantial churches and schools, handsome residences, well built streets, miles of cement sidewalks, and such is the spirit of the people that wooden sidewalk is not allowed in the city limits

In a word there is a movement in Watseka in the direction of an ideal city. This movement is progressing in many channels, and while some of the problems now being solved are in an experimental stage, Watseka is not afraid to wrestle with each problem as it comes up.

As the county seat of Iroquois county, Watseka is one of the important cities of Eastern Illinos, tapping the richest



Compiled by J. Manz Engraving Co., Chicago-New York.

Woman's club played a completence party originating and carrying out the plan. As a city of fine homes Watseka can make proud boast, Natural scenery has aided architecture in this, and street after street can be seen flanked on either side with handsome residences standing in the center of well shaded lawns. Social and fraternal life may be seen at

its best in Watseka, and many are the outward signs which make this a marked feature. The leading societies are well represented. The Masonic Hall is probably the most handsome and elaborate in this section of the state.

A high grade lecture course is an established part of Watseka's intellectual entertainment, it being ahead of most cities of its size in this repsect. The complexion of Watseka's institu-

tions and leading business men may be gleaned by the pen sketches and illustrations which follow.

#### WATSEKA PUBLIC LIBRARY

public library, and the fruits of the enterprise are seen today in the handsome enterprise are seen today in the halocont building just completed at a total cost of \$16,000. The library was built by Watseka's citizens without any outside aid. It contains 4,000 volumes. The building is a credit to the city. The following are the members of the

library board: F. P. Morris, chairman; Miss Kay, secretary; Major Harrington, Judge Harry, L.F. Watson, Martha Butzow, J.G. Williams, E.C. Hamilton, J.H. Carey.

### Historic Legacy

The 1905 Prospectus of Watseka showcases the great optimism of the times for a town at the crossroads of two rail lines, with a great supply of water, fuel from nearby coal fields, rich soils for farming produce, and much more.

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Source: Iroquois County Historical Society

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Being right on the lines of the coal fields, south and west. Watseka has an inexhaustible supply of fuel at its very doors.

adapted for market gardening than for any other form of agriculture.

Further afield are rich pasture lands, suitable for the dairy industry, and this only needs to be known to make of Watseka another Elgin.

**1905** Prospectus An Bold Comprehensive Plan<sup>2</sup>for<sup>v</sup>the Future of Watseka

Seven years ago Watseka established a



### Watseka Assets

### **Community Feedback on the Assets of the City of Watseka**

### The "People" of Watseka

- Great Community, Great Values
- Most residents born and raised here
- Everyone knows everyone

#### The "Small Town" feel

- Safe neighborhoods
- Small town feel, laid back atmosphere
- Safe, quiet lifestyle
- Kids can bike everywhere

#### The area offers its residents year-round Fairs, Events & Activities with a small town local flair.

#### **Favorite Watseka Amenities**

- Downtown Watseka
- Post Office
- Local Banks
- New Mexican Restaurant
- Community Theater
- Park District is very active, especially with youth programs
- New Restaurant
- The RAB family restaurant
- Skate Park is heavily used
- Local Theater hosts many shows
- Local fairs and festivals and more.

PROJECT	YEAR	COST	NOTES
Lakeview Park	2007	\$494 000	50% IDNP Grant
Locust Street	2007	\$1,265,000	2007 Bond
2nd St. Sewer Lining - Oak to Sheridan	2007	\$197,000	2007 Bolid
6th St. Improvements - Lincoln to Locust	2007	\$479,000	nartial MET funded project
	2001	\$470,000	partial Min 1 Turided project
Improvements to Public Works Facility	2008	\$51,000	
Brown Street Headwall	2008	\$15,000	
Miscellaneous Street Resurfacing	2008	\$482,000	MFT funded project
Well #10	2008	\$534,000	
Park Avenue Water Main Extension	2008	\$52,000	
Municipal Center	2000	£1 200 000	2007 Dand
Cherry Street Curb Penlacement	2009	\$1,200,000	2007 Bond
Newell Street Water Main Ronlacomont	2009	\$102,000	
Newell Street Asphalt Overlay	2009	\$17,000	
Legion Park Asphalt Overlay	2009	\$40,000	
Legion Fan Asphan Ovenay	2003	\$22,000	
Downtown Sidewalk Project	2010	\$222,000	
5th St., 8th St. & Elm St. Overlay Project	2010	\$223,000	American Recovery & Reinvestment Act (ARRA) project
Miscellaneous Street Resurfacing	2010	\$387,000	Emergency Road Repair Program (ERRP) & MFT project
Sewer Lining Project - Walmart to LCI	2010	\$185,000	
Sewer Lining Project - Grant to Ash	2010	\$221,000	
Swimming Pool ADA Compliance (Building)	2010	\$28,000	
and St. & Ook St. Barking Lat	2011	#05 000	
Main Ditch Improvements	2011	\$35,000	
South Side Storm Source Project	2011	\$3,477,000	
Wolmart Storm Source	2011	\$896,000	
Masonic Lodge Storm Sower Breiget	2011	\$750,000	
lefferson Ave, Water Main, 2nd to 3rd	2011	\$190,000	
Senerson Ave. Water Main - 2nd to 3nd	2011	\$42,000	
ADA Sidewalk Compliance	2012	\$140,000	2007 Bond
Jefferson Ave. Water Main - 3rd to 4th	2012	\$55,000	DCEO Grant Project
N. 7th Street Water Main Replacement	2012	\$27,000	
CSO Project	2012	\$2,698,000	
Swimming Pool ADA Compliance (Lift)	2012	\$6,000	
Swimming Pool VGB Drain Compliance	2012	\$26,000	
Tornado Siren	2012	\$34,000	
Sewer Lining Project - 2nd to Belmont	2012	\$220,000	
Relocation of Iron Removal System	2012	\$300,000	
South Side Storm Sewer Extension	2012	\$657,000	IKE Grant Project
Jookson Augnus Course Lining	0010	050.000	
Jackson Avenue Sewer Lining	2013	\$58,000	
Jackson Avenue Water Main	2013	\$190,000	A APPERT A LOUGH A LOUGH A
Jackson Avenue Improvements	2013	\$//1,000	MEI funded project
Dell Road Construction	2013	\$4/7,000	
Downtown Sewer Project - Phase 1	2013	\$1,033,000	
Downtown Sewer Project - Phase 2	. 2014	\$1,649.000	Estimated costs - project is currently in design
Midtown Sewer Project	2014	\$2,426,000	Estimated costs - project is currently in design
	TOTAL =	\$23 047 000	





The New Village Hall and Lake View Park at the east part of town have created a lovely civic campus that is outside flood





### Major Recent Public Projects 2014 WATSEKA COMPREHENSIVE PLAN 14

### Major Economic Anchors Today

#### Iroquois Memorial Hospital and Resident Home

Established in 1916, Iroquois Memorial Hospital is a comprehensive regional medical facility that serves 50,000 residents in a five-county, bi-state area in east-central Illinois and west-central Indiana. The hospital employs about 385 people today.

### The hospital is the major and largest employer, and is critical to Watseka's economy.

Iroquois Memorial Hospital and Resident Home is a general medical and surgical hospital in Watseka, IL, with 84 beds. Survey data for the latest year available shows that 10,425 patients visited the hospital's emergency room, and a total of 1,654 admissions.

Chicago-based Presence Health, the largest Catholic health system in Illinois, formed an affiliation in summer of 2013 with Iroquois Memorial Hospital.

#### Challenges

- Recruitment of skilled professionals to Watseka is a major issue
- Higher salaries need to be offered to attract people to this location
- Spouses have limited job opportunities
- Major selling point: Chicago Loop is only 1.5 hours away
- Already growing demand for free outpatient services that will probably grow with health care reform. Less demand projected for inpatient services.

### **Big R: A Major Local Anchor For Almost 50 Years**

The first Big R store opened in Watseka, Illinois in 1964. To date 16 stores have been opened in central Illinois and northern Indiana; 9 stores in Illinois including Watseka, Gibson City, Danville, Tilton, Pontiac, Morris, Washington, Rochelle, and Pekin, and 7 Indiana stores include Warsaw, Wabash, Crawfordsville, Michigan City, Elkhart, Marion and Rochester. The offices and warehouses for Big R remain in Watseka, IL. Farm and Ranch store owners in the western states started the Big R brand name; they chose the name "Big R" to convey the "Ranch" identity. The Big R group is now comprised of 12 independent owners with a growing 75 + stores throughout the U.S. They all are members of Mid-States Distributing Company of St. Paul, MN. The Mid-States Coop has over 600 stores throughout the United States and Canada.

#### **Local Banks**

Two local banks, Iroquois Federal and First Trust Savings Bank have remained strong as community anchors for over 100 years. There are no out of town banks in the City.

Other major local employers include T & D Pride Metal, ARC of Iroquois County, an the Public Agencies, including Schools, Iroquois County and Local Government.



### Major Recent Commercial Development





Walmart locations near Watseka

#### **NEW SUPER WALMART**

The new 120,774 square-foot Super Walmart on Walnut Street (IL 24) opened in January 2012. The store has created about 200 jobs.

Since the nearest other Walmart stores are about an forty minutes to an hour away, the Watseka Walmart is a significant draw for surrounding Illinois communities, as well as bordering communities in Indiana.

#### **NEW BERKOTS SUPER FOODS**

Berkot's Super Foods is planning to return to Watseka after leaving two years earlier. Berkot's will be moving into the Big R complex in the 1100 block of East Walnut Street and will be relocating into its former location at 1152 E. Walnut St. Berkot's plans to spend \$4.8 million to rehab the 32,000 square-foot property, and will employ about 80 workers. Officials estimate annual sales of \$8 million. In addition to the store, Berkot's will also open a 6,000 squarefoot site where the store's own brand of fresh and flash frozen products will be prepared.

#### **New Restaurant Boom**

New restaurants are drawing increased visitors from Indiana. The restaurant boom appears to have started before the flood of 2008, with the Watseka Family Table Restaurant, on the west side, rebuilding a fine facility after it burned. Since the 2008 flood, while some restaurants have closed, other restaurants have rebuilt and expanded, and more have opened, including the following:

- Steak 'n Shake on Walnut Street
- Hoosier diners
- Taco Bell
- The Full Bull Smokehouse Saloon
- Donna's Dogs
- Francis Pizza
- Niro's Gyros
- La Potosina Mexican Restaurant



		Iroquois	
People QuickFacts	Watseka	County	Illinois
POPULATION			
Population, 2012 estimate	5.199	29.240	12.875.255
Population, 2010 (April 1) estimates base	5,297	29.718	12.830.632
Population, percent change, April 1, 2010 to July 1, 2012	-1.9%	-1.6%	0.3%
Population, 2010	5.255	29.718	12.830.632
AGE	10,200	1-0,000	,
Persons under 5 vears percent 2010	6.0%	54%	6.5%
Persons under 18 years, percent, 2010	22.7%	22.8%	24.4%
Persons 65 years and over percent 2010	22.7%	19.7%	12.5%
GENDER AND RACE	122.170	10.170	12.070
Female persons, percent 2010	53.2%	51.2%	51.0%
White alone, percent, 2010 (a)	95.1%	97.0%	71.5%
Black or African American alone, percent, 2010 (a)	0.8%	1.0%	14.5%
American Indian and Alaska Native alone, percent, 2010 (a)	0.0%	0.3%	0.3%
Asian alone, percent, 2010 (a)	0.2%	0.5%	4.6%
Native Hawaiian and Other Pacific Islander alone percent 2010 (a)	0.0%	7	0.0%
Two or More Paces percent 2010	1.5%	1.2%	2.3%
Hispanic or Latino, percent, 2010 (b)	3.6%	6.1%	15.8%
White alone not Hispanic or Latino, percent 2010	93.6%	91 3%	63.7%
iving in same house 1 year & over percent, 2010	82.7%	89.2%	86.7%
Eoraign born persons, percent, 2007-2011	3.7%	2.9%	13.7%
anguage other than English snoken at home, percent age 5+, 2007, 2011	7.2%	6.1%	22.0%
	1.2/0	0.170	22.070
Ligh school graduate or higher percent of percent age 25 L 2007 2011	70.6%	07 70/	96.69/
Right school graduate of higher, percent of persons age 25+, 2007-2011	79.0%	07.7%	00.0%
Bachelor's degree of higher, percent of persons age 25+, 2007-2011	9.7%	13.7%	30.7%
Veterans, 2007-2011	498	2,494	770,388
weah traver time to work (minutes), workers age 16+, 2007-2011	23.8	25.1	28.1
HOUSING	0.507	40.405	5 000 745
Housing units, 2010	2,537	13,425	5,296,715
Homeownersnip rate, 2007-2011	63.2%	10.5%	68.7%
Housing units in multi-unit structures, percent, 2007-2011	18.0%	10.5%	32.9%
Median value of owner-occupied housing units, 2007-2011	\$82,900	\$99,400	\$198,500
	0.500	44.004	4 770 000
Households, 2007-2011	2,506	11,884	4,773,002
Persons per nousenoid, 2007-2011	2.16	2.45	2.62
Per capita money income in the past 12 months (2011 dollars), 2007-2011	\$19,755	\$24,563	\$29,376
Median nousehold income, 2007-2011	\$33,265	\$48,248	\$56,576
Persons below poverty level, percent, 2007-2011	17.9%	11.5%	13.1%
BUSINESS QUICK FACTS	Watseka	1	Illinois
I otal number of firms, 2007	585	2,722	1,123,817
Black-owned firms, percent, 2007	F	F	9.5%
American Indian- and Alaska Native-owned firms, percent, 2007	F	F	0.5%
Asian-owned firms, percent, 2007	F	F	5.3%
Native Hawaiian and Other Pacific Islander-owned firms, percent, 2007	F	F	0.1%
Hispanic-owned firms, percent, 2007	F	F	5.0%
Women-owned tirms, percent, 2007	27.9%	23.7%	30.5%
Manufacturers shipments, 2007 (\$1000)	D	338,655	257,760,713
werchant wholesaler sales, 2007 (\$1000)	5,859	614,888	231,082,768
Retail sales, 2007 (\$1000)	163,734	265,444	165,450,520
Retail sales per capita, 2007	\$30,087	\$8,843	\$12,947
Accommodation and food services sales, 2007 (\$1000)	9,003	20,770	25,469,026
Building permits, 2012		27	13,797
GEOGRAPHY QUICK FACTS	1	1	
Land area in square miles, 2010	3.05	1,117.32	55,518.93
Persons per square mile, 2010	1,722.4	26.6	231.1

#### 2014 WATSEKA COMPREHENSIVE PLAN 17

### Demographics

According to the US Census Bureau, the 2012 population of Watseka was about 5,199, indicating a 1.9% population decrease since the 2010 census. This is less than the 7.3% population decrease that occurred between the 2000 and 2010 census.



#### Population of Watseka, 1970-2010

Source: citydata.com

- (a) Includes persons reporting only one race.
  (b) Hispanics may be of any race, so also are included in applicable race categories.
  FN: Footnote on this item for this area in place of data
- NA: Not available
- D: Suppressed to avoid disclosure of confidential information

- *X*: Not applicable *S*: Suppressed; does not meet publication standards *Z*: Value greater than zero but less than half unit of measure shown *F*: Fewer than 100 firms

Source: US Census Bureau State & County QuickFacts at http://quickfacts.census. gov/qfd/states/17/1779228.html

### Schools and Changing Demographics

#### Iroquois County CUSD 9 Watseka, ILLINOIS

Woodland Elem School Iroquois County CUSD 9 Woodland, ILLINOIS

Watseka Comm High School Iroquois County CUSD 9 Watseka, ILLINOIS

GRADES : PK 9 10 11 12

Nettie Davis Elem School Iroquois County CUSD 9 Watseka, ILLINOIS

GRADES : K 1

Glenn Raymond Middle School Iroquois County CUSD 9 Watseka, ILLINOIS

GRADES: 678

Wanda Kendall Elem School Iroquois County CUSD 9 Watseka, ILLINOIS

GRADES: PK 2 3

#### STUDENTS

RACIAL/E	CIAL/ETHNIC BACKGROUND AND OTHER INFORMATION														
	White	Black	Hispanic	Asian	Native Hawaiian /Pacific Islander	Americar Indian	Two or More Races	Percent Low- Income	Percent Limited- English- Proficient	Percent IEP	High Sch. Dropout Rate	Chronic Truancy Rate	Mobility Rate	Attendance Rate	Total Enrollment
District	85.8	1.5	6.0	0.8	0.0	0.4	5.5	57.1	1.8	12.6	4.4	6.9	13.6	93.8	1,200
State	51.0	18.0	23.6	4.2	0.1	0.3	2.8	49.0	9.4	13.6	2.5	8.6	13.1	94.4	2,066,692

#### STUDENTS

RACIAL/	ETHNIC E	BACKGR	OUND AND	OTHER	INFORMA	TION									
	White	Black	Hispanic	Asian	Native Hawaiian /Pacific Islander	American Indian	Two or More Races	Percent Low- Income	Percent Limited- English- Proficient	Percent IEP	High Sch. Dropout Rate	Chronic Truancy Rate	Mobility Rate	Attendance Rate	Total Enrollment
School District State	82.1 85.8 51.0	1.1 1.5 18.0	8.9 6.0 23.6	0.0 0.8 4.2	0.0 0.0 0.1	0.0 0.4 0.3	7.8 5.5 2.8	64.2 57.1 49.0	1.7 1.8 9.4	14.0 12.6 13.6		5.0 6.9 8.6	11.2 13.6 13.1	94.6 93.8 94.4	179 1,200 2,066,692

#### STUDENTS

RACIAL/E	THNIC E	BACKGRO	OUND AND	OTHER	INFORMA	TION									
	White	Black	Hispanic	Asian	Native Hawaiian /Pacific Islander	American Indian	Two or More Races	Percent Low- Income	Percent Limited- English- Proficient	Percent IEP	High Sch. Dropout Rate	Chronic Truancy Rate	Mobility Rate	Attendance Rate	Total Enrollment
School District State	87.5 85.8 51.0	1.7 1.5 18.0	5.7 6.0 23.6	1.5 0.8 4.2	0.0 0.0 0.1	0.7 0.4 0.3	2.9 5.5 2.8	54.5 57.1 49.0	0.0 1.8 9.4	10.8 12.6 13.6	4.4 4.4 2.5	10.4 6.9 8.6	15.1 13.6 13.1	92.4 93.8 94.4	407 1,200 2,066,692

#### STUDENTS

RACIAL/E	THNIC E	BACKGR	OUND AND	OTHER	INFORMA	TION									
	White	Black	Hispanic	Asian	Native Hawaiian /Pacific Islander	American Indian	Two or More Races	Percent Low- Income	Percent Limited- English- Proficient	Percent IEP	High Sch. Dropout Rate	Chronic Truancy Rate	Mobility Rate	Attendance Rate	Total Enrollment
School District State	86.8 85.8 51.0	1.3 1.5 18.0	5.0 6.0 23.6	0.0 0.8 4.2	0.0 0.0 0.1	0.0 0.4 0.3	6.9 5.5 2.8	61.6 57.1 49.0	3.8 1.8 9.4	6.9 12.6 13.6		1.3 6.9 8.6	18.3 13.6 13.1	93.8 93.8 94.4	159 1,200 2,066,692

#### STUDENTS

RACIAL/E	THNIC E	ACKGRO	OUND AND	OTHER	INFORMA	TION									
	White	Black	Hispanic	Asian	Native Hawaiian /Pacific Islander	American Indian	Two or More Races	Percent Low- Income	Percent Limited- English- Proficient	Percent IEP	High Sch. Dropout Rate	Chronic Truancy Rate	Mobility Rate	Attendance Rate	Total Enroliment
School	85.1	2.2	4.4	1.1	0.0	0.4	6.9	57.1	1.5	11.3		9.9	12.9	94.2	275
District	85.8	1.5	6.0	0.8	0.0	0.4	5.5	57.1	1.8	12.6		6.9	13.6	93.8	1,200
State	51.0	18.0	23.6	4.2	0.1	0.3	2.8	49.0	9.4	13.6		8.6	13.1	94.4	2,066,692

#### STUDENTS

RACIAL/E	THNIC E	BACKGRO	DUND AND	OTHER	INFORMA	TION									
	White	Black	Hispanic	Asian	Native Hawaiian /Pacific Islander	American Indian	Two or More Races	Percent Low- Income	Percent Limited- English- Proficient	Percent IEP	High Sch. Dropout Rate	Chronic Truancy Rate	Mobility Rate	Attendance Rate	Total Enrollment
School	85.6	0.6	7.2	0.6	0.0	0.6	5.6	51.7	5.0	22.2		1.8	9.6	95.5	180
District	85.8	1.5	6.0	0.8	0.0	0.4	5.5	57.1	1.8	12.6		6.9	13.6	93.8	1,200
State	51.0	18.0	23.6	4.2	0.1	0.3	2.8	49.0	9.4	13.6		8.6	13.1	94.4	2,066,692

Low-income students come from families receiving public aid; live in institutions for neglected or delinquent children; are supported in foster homes with public funds; or are eligible to receive free or reduced-price lunches. IEP Students are those students eligible to receive special education services. Limited-English-proficient students are those students eligible for transitional bilingual programs. Mobility rate is based on the number of times students enrol in or leave a school during the school year. Chronic truants are students who are absent from school without valid cause for 9 or more of the last 180 school days. Total Enrolment is based on <u>Home School</u>.

#### A MAJOR CHALLENGE FACING WATSEKA IS THE GROWING PERCENTAGE OF STUDENTS WHO ARE NOW IN THE LOW INCOME CATEGORY.

"Low-income students come from families receiving public aid; live in institutions for neglected or delinquent children; are supported in foster homes with public funds; or are eligible to receive free or reduced-price lunches"

The percentage of low-income students in the State in 2012 was 49%. All schools in Watseka showed higher percentages than the State, ranging from 51.7% to 64.2%.

Iroquois County School District 9 1,200 students, 57% Low Income

Woodland Elementary School 179 students, 64.2% Low Income

Watseka Community High School 407 students, 54.5% Low Income

Nettie Davis Elementary School 159 students, 61.6% Low Income

Glenn Raymond Middle School 275 students, 57.1% Low Income

Wanda Kendall Elementary School 180 students, 51.7% Low Income

Source: Iroquois County CUSD 9: 2012 Unit Report Cards

### **Rising Unemployment**

#### Unemployment in August 2012:

Here:	8.4%
Illinois:	8.9%





#### Source: citydata.com

#### HOUSEHOLD SIZE EXTREMELY LOW (30% MEDIAN INCOME) VERY LOW (50% MEDIAN INCOME) LOW (80% MEDIAN INCOME) 1 Person \$10,050 \$16,700 \$26,700 2 Persons \$11,450 \$19,050 \$30,500 3 Persons \$12,900 \$21,450 \$34,300 4 Persons \$14,300 \$23,800 \$38,100 5 Persons \$15,450 \$25,750 \$41,150 6 Persons \$16,600 \$27.650 \$44,200 \$17,750 \$29,550 7 Persons \$47,250 8 Persons \$18,900 \$31,450 \$50,300

HUD Income Limits are established by family size for the area in which the public housing agency (PHA) is located. A family's gross annual income is compared to the applicable income limits to determine eligibility for housing assistance and must be within the income limits for the PHA's jurisdiction.

Eligibility for a housing voucher is determined by the PHA based on the total annual gross income and family size and is limited to US citizens and specified categories of non-citizens who have eligible immigration status. In general, the family's income may not exceed 50% of the median income for the county or metropolitan area in which the family chooses to live. By law, a PHA must provide 75 percent of its voucher to applicants whose incomes do not exceed 30 percent of the area median income.

Source: section-8-housing.findthebest.com

#### MAJOR CHALLENGE FACING THE CITY IS LOSS OF MANUFACTURING JOBS, RISING UNEMPLOYMENT, AND THE GROWING NUMBER OF LOW INCOME RESIDENTS LIVING ON SUBSIDIES

#### Low Income Housing

Low income apartments are where the government gives funds directly to the apartment owner and a lower rent is charged for low income persons. Some apartments accept HUD subsidies. For HUD subsidized apartments, rent is typically based on 30% of the Adjusted Gross Income.

Villa Ridge I at 551 Clarence Ave has a total of 18 low-income units

Lakeview Senior Apartments has a total of 36 low-income units, with 17 units set aside with rent lower than the rent/income ceiling.

#### Rental

Most rental is in apartments, some rental is in single family houses.

#### WATSEKA INCOME LIMITS (HUD)

### Summary of Major Issues & Opportunities

#### MAJOR ISSUES FACING WATSEKA TODAY

- Rising unemployment
- Loss of manufacturing jobs, and lack of new job creation
- Lack of skilled labor for manufacturing jobs
- Median age of population is rising, young people are leaving and not returning to Watseka
- Attracting and retaining skilled professionals to Watseka is difficult
- Growing numbers of low income residents living on aid, who are unemployed, with limited skills and education. Dependency on aid through multiple generations.
- Lack of high quality meeting place / banquet hall
- Lack of a central "square" in Downtown as a community gathering place
- Farming is focused primarily on production of corn, soy and wheat. Products go elsewhere for processing.
- Lack of more venues for active recreation: bowling alley, pool, gym etc.
- No movie theater
- Both the river and the creek are unnavigable today, with only limited fishing opportunities, no boating, pontoons, or other water trails possible.
- Flood related issues and cost of retrofitting homes

#### POTENTIAL NEW OPPORTUNITIES

FIND WAYS TO ENCOURAGE TRAVELERS DRIVING THROUGH WATSEKA TO STOP AND SPEND TIME IN THE CITY

- How can we capture the significant number of travelers who just drive through town on IL 24 and do not stop?
- Capture people driving from Indiana and areas to the east and the significant through traffic going to Kankakee
- Walmart is a draw, but out of town shoppers coming to the store do not go to Downtown Watseka or other local places

#### CAN WATSEKA BE A WEEKEND GETAWAY OR RETIREMENT OPTION ONLY 1.5 HOURS AWAY FROM CHICAGO? NEW DEVELOPMENT CAN INCLUDE:

- Senior Housing, retirement communities, cottages
- New Lake / detention pond with river dam
- There is one small family owned Bed and Breakfast in town, offering 4 rooms. Is there the market for more inns and B & Bs?
- Need for fine dining, better restaurants, quality large facilities for large parties, meetings etc.

#### CAN WATSEKA BE A "FOOD HUB", OFFERING NOT JUST THE PRODUCTION OF CROPS, BUT PROCESSING, RETAIL AND AGRITOURISM?

- Agri-based manufacturing
- Local Food, more edible food
- Processing plants for local agricultural products
- Possible Ethanol Plant was a controversial issue because of impact on water supply. Note that Watseka has an abundance of water supply.
- Promote Agritourism, "A Dairy in the Farms in the Prairie"
- Warehousing that can take advantage of location and proximity to highways and rail

#### CAN WATSEKA'S WATERWAYS AND NATURAL AREAS BECOME REGIONAL HIKING, FISHING AND CAMPING ATTRACTIONS?

- Identify places to create better access to the River and the Creek for recreational activities
- Create canoe and kayak routes along the navigable sections of the waterways
- Identify areas near the River and Creek that can become Camping areas
- Look into Venders who belong to national networks to develop or manage a campground in Watseka.

### Public Involvement & Community Feedback

The public process included 2 Public Forums and several meetings with many community groups including; the Chamber of Commerce, School District, Park District and local business and civic leaders.

#### **Public Forums**

Two public forums were held in November 2013 and January 2014, where local leaders, stakeholders, residents and other community members provided feedback and input into the draft plan elements.

#### **Stakeholder meetings**

A series of small focus group meetings were also held since the project started, including meetings with representatives from:

- Chamber of Commerce
- Iroquois County Board
- Iroquois Hospital
- School Districts
- Local business owners
- City Council and Commissioners
- Downtown Businesses
- Iroquois County Historical Society
- Watseka Park District

At the First Public Forum the community was asked to give input to the help establish the Vision and Goals of the Plan. Other questions discussed included:

- What Land Use Strategies are needed in the areas that are in or near the floodplain?
- Where should future new growth be directed to avoid flooding impacts?
- How can Watseka attract and retain new employers and residents?
- What is the community's vision for the future of Watseka?

At the Second Public Forum the community had the opportunity to review and provide feedback for the larger planning concepts and see the preliminary first draft of the Comprehensive Plan.









### Public Involvement & Community Feedback

ity but it also

ubject: Watseka

Regards Perry Pericles J. Georgopo Senior Associate Senior Associate GINKGO Planning & Design Inc. 10640 Penfield Drive, Orland Park, IL 60462

12 759 2909

Watseka Comprehensive Pilan 2013 Compiled Community Feedback after First Public Forum on Nov 4, 2013 iter or something. 2nd street could be blocked off for major events, connecting those two spaces as well as g together the depot, old hall, etc. ing space and visibility of events. Are Owner / Videograph









# 2 Land Use



6,000 SQ.FT.

\_

6,500 SQ.FT.

8,500 SQ.FT.

35'

35'

35'

35'

B-1

в-2

M-1

M-2

NEIGHBORHOOD BUSINESS

CENTRAL BUSINESS

MANUFACTURING

MANUFACTURING ONLY

\_ \_ \_

6' 10'

6' 10'

\_

\_ \_ \_

\_

\_

\_

\_

20% OF LOT

50 SQ.FT.

50% OF LOT

20% OF LOT

50'

\_

65'

65'

### **Existing Zoning Map**

### Land Use and Future Growth

### Guide Future Growth away from Flood Prone Areas

The Future Land Use Plan establishes a potential direction for future development for the city that keeps the city compact, preserves farmland, and avoids developing in the flood prone zones.

The land on the west side of town, on both sides of Sugar Creek and along the Iroquois River, is at a low elevation and prone to flooding. The 2014 plan recommends that new development be directed to the east on land that is higher than the typical flood elevation.

#### **RECOMMENDATIONS**

- 1. Encourage new development to locate in the higher elevations contiguous to the east end of town.
- Development should be limited to an area close to the existing City limits. The Plan establishes a development boundary of N 1840 Rd to the north and County Farm Road to the south. The east boundary for development would be a quarter mile east of IL 1/2280 E Rd.
- 3. New development is discouraged west of Sugar Creek due to the low elevation and risk of flooding.
- 4. Land outside the development boundary but within the mile and a half planning

boundary would remain primarily farm land except were determined to be Conservation areas, (see Conservation Diagram on page 31).

- 5. Reserve Land along Walnut Street and along IL 1/2280 E Rd for non residential uses. This would include retail, office, industrial, and other job producing uses.
- 6. New residential Neighborhoods adjacent to existing neighborhoods would maintain a similar density. Areas further away, shown in light yellow on the Land Use map (following page) could have a significantly lower density.

The City of Watseka is already steering new development eastward away from the flood prone areas near the river. The new Municipal Center, WalMart Superstore, and retail centers along Walnut Street, have created anchors for new growth to the east.

The 2104 Land Use recommendations builds on this strategy, while ensuring that the needs of the historic areas and Downtown are also addressed.





Existing Roadway Framework
 Potential New Roads
 Railway

Potential Rail Crossing

### **COMPREHENSIVE LAND USE PLAN**



**Existing Park** 

### **Existing Parks & Open Space**

10 Minute Walk Area from Park

### A System of Parks, Open Spaces & Detention Areas

A Future Parks & Open Space System can meet the needs of recreation and conservation, and can also be part of a larger detention strategy.

The Parks & Open Space Plan shows the recommended locations for future parks and open space as growth occurs. There are three main types of parks recommended:

- Small pocket parks and play lots
- Neighborhood parks
- Larger open spaces that can also serve as centralized detention areas.

#### **RECOMMENDATIONS**

- 1. Establish new parks and open spaces that are within a 10 minute walk from new residential development areas.
- 2. Preserve any existing groves of trees as part of the parks and open space system.
- New parks and open spaces should have significant public street frontage to make sure that parks feel safe and are easily accessible.
- Establish Centralized Detention for new development areas with larger consolidated ponds, instead of many small ponds. With landscaping, seating, lighting, signage and other amenities, a large pond in a park can become a

community gathering and recreation space. The new Lakeview Park is a great example of a successful combination of a park and a large detention pond.

- 5. Establish new parks on the west side of town along Sugar Creek and the Iroquois River to serve as recreational amenities and potential areas for stormwater management.
- 6. Clean up and drain the area behind Hickory Street and create a new regional park with some detention capacity for the neighborhood north of Walnut Street.
- 7. Establish better connections to the riverfronts to provide better access for fishing, hiking and biking for residents and visitors.





Existing Park

Potential New Parks and Open Space

### Parks, Open Space and Detention Plan

10 Minute Walk Area from Park

#### 2014 WATSEKA COMPREHENSIVE PLAN 30

### Connecting to the Iroquois River

Watseka grew up along the banks of the Iroquois River and Sugar Creek, yet this riverfront City has very limited access to the water.

Legion Park is the only riverfront park today, with the Iroquois River winding through shaded groves of trees, park areas and other community facilities.

The 2014 Plan recommends reconnecting the City with the river with large conservation parks with possible detention ponds in the following areas:

- **1.** A new North River Conservation Area at the end of a future extended Brianna Drive
- 2. A new West River Conservation Area to the west of existing older neighborhoods with access from an extended Fleming Street.
- 3. A new Northwest River Conservation Area with potential access from West Main Street and Highway 1.

Each of these areas can play also play a role in positioning Watseka as a well known regional destination for riverfront campgrounds.



Establish conservation areas that prohibit development along the Iroquois river, Sugar Creek, and other creekways, including the low lands and wooded areas surrounding waterways.

Potential new Riverfront Conservation Areas
1. North River Conservation Area

- 1. West River Conservation Area
- **1. Northwest River Conservation Area**

Conservation of Natural Areas within the 1.5 mile Planning Boundary

Preservation of Farmland within the 1.5 mile Planning Boundary

1 decountration

24 1

### **Conservation Plan**

### Preservation of Farmland

The Land in Watseka and in most of Iroquois County is High Quality Prime Farmland.

Watseka is surrounded by large areas of contiguous woodlands and natural areas as well as hundreds of acres of rich farmland.

To protect these farm lands and natural areas from new sprawling development, the Comprehensive Plan identifies areas where land should be preserved for farming for future generations.



#### **RECOMMENDATIONS**

- 1. Preserve the farmland by keeping new development in areas continuous to the current city limits and within the proposed development boundary.
- Position Watseka as a regional hub for AGRITOURISM. Allow non-farming uses such as lodging, restaurants and small shops as auxiliary uses with local farms.

AGRITOURISM is a business venture on a working farm, ranch or agricultural enterprise. It blends entertainment, education, and tourism together to provide a fun, exciting, and memorable get-away for school trips and family outings.

Agritourism is becoming very popular across the country, attracting visitors to a farm or ranch where they can choose from a wide range of activities that include picking fruits and vegetables, riding horses, tasting honey, learning about wine and cheesemaking, or shopping in farm gift shops and farm stands for local hand-crafted goods.

Agritourism gives farmers the opportunity to educate visitors about their way of life, share their agricultural heritage with others, and earn extra income. Other terms for similar forms of tourism include geo-tourism, sustainable tourism, and nature-tourism -- all of which are growing exponentially in popularity and importance.



### Examples of Unique Local Farms

#### **Moore Family Farm**

The Moore Family Farm has been in the Moore family for nearly 100 years. With a strong desire to farm and support their family on less than 100 acres, the family converted their farming operation from conventional methods to a system more resembling permaculture, where the farm produces its own needs and does not rely on pesticides and synthetic fertilizers. The Moores believe in the importance of farming on a small scale with practices that are animal-, people-, and environmentally-friendly, so that they can produce natural, healthy, safe, and great-tasting food for generations to come. *Source: http://www.moorefamilyfarm.com/* 

#### Han-Du Farm

Han-Du-Farm's goal is to breed buckers and offers "a small cow/calf herd, and is devoted to finding the best bucking bull genetics that are available."

Source: www.handufarm.com







### A Potential Regional "Food Hub"



Figure 1: U.S. Food System Value Chain



Figure 2: Food Hub Customers



WATSEKA CAN BE A "FOOD HUB", OFFERING NOT JUST THE PRODUCTION OF CROPS, BUT PROCESSING, RETAIL AND AGRITOURISM

- Agri based manufacturing
- Local Food
- Processing plants for local agricultural products
- Possible Ethanol Plant
- Promote Agritourism
- Warehousing that can take advantage of location and proximity to highways and rail

Demand for local food is strong and increasing among end consumers as well as wholesale buyers



# Transportation

3

### **Existing Transportation Network**

#### **TWO RAIL LINES**

**12 MILES FROM THE INTERSTATE** 

#### US ROUTE 24 RUNS THROUGH THE CENTER OF THE CITY

#### ROADWAYS

The transportation system within the City of Watseka consists mainly of a very connected system of main arterials and connector and local streets.

IL 1 enters town from the north along Jefferson Street and turns east at Walnut Street before heading south again, aligned with Oak Hill Road, on the east end of town.

US 24 runs right through the middle of the city along Walnut Street. Together these two highways help to bring an estimated almost 11,000 cars through downtown daily.

#### **REGIONAL ACCESS**

Watseka is approximately 12 miles from I-57 which can be accessed by traveling east on US 24 or north on IL 1 to US 52/US 45.

I-65 in Indiana is approximately 30 miles to the east and also be accessed by US 24 East.

US 45, US 52 and IL 49 are also within 10 miles of Watseka.

#### **RAIL AND FREIGHT**

Two railroad main lines run through the City at the west end of downtown. The TP&W is a short line railroad that runs east west from Mapleton, IL to Logansport, IN. This line also links with a Norfolk Southern line that out of Chicago. An estimated 4 trains come through town on this line daily

The CSX main line runs north and south through town with an estimated 50-60 trains daily. Just south of the city is a siding and spur that could be beneficial to industries requiring rail access.

US 24 is a major truck route running eastwest through center of the city.



#### 2014 WATSEKA COMPREHENSIVE PLAN • DRAFT JANUARY 31, 2014 36




### TRANSPORTATION Existing Roadway Framework





Existing Roadway Framework
Potential New Roads
Railway
Potential Rail Crossing

### **Roadway Framework Plan**

Note: New roadways as shown are primarily in a grid pattern. Actual alignment of new roads can follow topography and other land features.

### A Connected Roadway Framework

A Future Roadway Network that Links Watseka's Existing Assets and Neighborhoods with Future Development

Today Watseka has a good roadway system which creates small walkable blocks and a compact city that feels connected. As new areas develop to the east, there is the possibility that the city becomes divided into two - the older established part of town to the west, and the new growth areas to the east.

A good roadway plan is key in keeping older parts of the city and new developments connected, and in allowing the city to develop in a manner where new areas are an extension of the current city, and not isolated areas with limited access.

The Future Roadway Framework Plan builds on the existing road system, establishing a framework and hierarchy for new roads to create a unified and connected city

#### RECOMMENDATIONS

- 1. Extend the existing grid of roads into new development areas. Prohibit new development from blocking the grid and creating dead ends, cul-de-sacs and disconnected streets.
- 2. Establish Courthouse Road and County Farm Road as future main east-west collector streets.
- 3. Use new roads as a way to connect to parks, open space, schools and other natural areas and community assets.
- 4. Extend Brianna Drive, as a Boulevard, north to 1840 N Rd. and south to County Farm Road creating a main arterial connecting the north and south development areas and linking them to Walnut Street.
- 5. Establish a new railroad grade crossing for extended Brianna Drive.
- Establish Veterans Parkway as a possible additional north-south Collector street with a possible rail road grade crossing.
- Add missing roadway connections as shown in the plan for existing neighborhoods to increase connectivity.





Typical Residential Street Plan and Section

### A Connected Roadway Framework



**Potential Boulevard Plan and Section** 



### **Typical Collector Street**



# 4 Flooding



The City of Watseka is in the Iroquois River Watershed. The Iroquois watershed in northeastern Illinois and northwestern Indiana is part of the Kankakee River basin.

With drainage from four Illinois counties, the Illinois portion of the watershed has a total area of approximately 1,290 square miles.

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The Iroquois River is a 103-mile-long tributary of the Kankakee River in northwestern Indiana and northeastern Illinois in the United States. Via the Kankakee and Illinois rivers, it is part of the watershed of the Mississippi River.

The Iroquois River has a drainage area in Illinois of approximately 1,290 square miles. Its major tributaries include Spring Creek and Sugar Creek. The Iroquois River flows southwest from Indiana to City of Watseka where it turns and flows in a northerly direction until it drains to the Kankakee River near the town of Aroma Park.

**Watershed Map** 2014 WATSEKA COMPREHENSIVE PLAN 42

### Flooding Events



Photo of 1913 Flood in Watseka

### The January 2008 Flood

Days of heavy rainfall and melting snow caused one of the worst floods in recent times in Watseka. About 235 homes were evacuated because of flooding from Sugar Creek and the Iroquois River. The Iroquois River just upstream of Watseka was reported to have crested at 25.7 feet, nearly 8 feet past flood stage.

While impacts of past floods have been significant, most of the City is not within the floodway, but is mostly only in the 100 or 500 year flood plain. Following key points need to be discussed further:

- Most of the flooding is from Backwater, not Floodwater.
- Some acquisition of flood impacted properties has been undertaken already.
- Downtown and Walnut Street do not flood.
- Major issue: Homes with over 50% of structural damage have to be elevated.
- Swamp behind the Ford Dealership floods and is an issue. Many ownerships make it difficult to assemble. Could this be a detention pond and have a stormwater management role?



Photos of 2008 Flood in Watseka





### **Existing Flood Map**

2014 WATSEKA COMPREHENSIVE PLAN 44

### Stormwater Management & Flooding

#### **MAJOR ISSUES AND IMPACTS**

Flood mitigation involves two broadly connected components that are often lumped together under the same heading of flood mitigation or flood management: 1) stormwater management and 2) floodplain management. Both of these components involve both management and mitigation. While all flood mitigation strategies are part of flood management in some form, not all management is mitigation. The best flood mitigation is the mitigation that never needs to take place because of previously applied good flood management practices. Flood management is forward looking planning and practice, while mitigation tends to be hindsight driven. Homes flood, so an attempt is made to prevent it or lessen it. That is flood mitigation. Floods have always occurred adjacent to creeks and rivers. Therefore, knowing this necessitates flood management. Admittedly, there is a fine line of distinction.

A slight distinction can be drawn by looking at a hypothetical situation concerning the City of Watseka. Watseka was incorporated in 1865. Let's say that you lived at that time and had the privilege of being part of

the "City Location Committee." From the 1865 perspective, there were very good reasons for locating Watseka next to the Iroquois River and Sugar Creek. However, from a 2014 perspective, there could be second thoughts about locating Watseka as it is today. If one knew in 1865 the future of Iroquois River flood events, good flood management would probably have played a role in City planning and Watseka would look different today. That would be flood management. But, of course, hindsight is clearer vision and the future is not knownthat is, for the most part. It bears repeating that floods have always occurred adjacent to creeks and rivers. Watseka will flood againsometime.

#### Watercourses And Flood Zones

The City of Watseka has two major watercourses which have associated mapped floodplain or flood zones within its corporate boundaries. These are the Iroquois River and Sugar Creek. By mapped floodplain, it is meant that maps published by the Federal Emergency Management Agency (FEMA) as part of the National Flood Insurance Program (NFIP) have identified various flood zones associated with these watercourses, and these boundaries are

shown on maps known as Flood Insurance Rate Maps (FIRMs). FEMA uses the terminology Special Flood Hazard Area (SFHA) to refer to these flood zones and the terms are often interchangeable. SFHAs are those areas that are subject to inundation (flooding) by what has been commonly called the 100-year flood. A 100-year flood should more appropriately be referred to as the "1% Annual Chance Flood," which is how FEMA refers to it. This means that in any given year there is a 1% chance of equaling or exceeding a flood event of this magnitude. As was noticed with the January 2008 flood event and others, "100-year flood events" can occur more frequently than the misleading phrase "once every 100 years" implies. For this reason, the more appropriate reference is the 1% annual chance flood.

The 1% annual chance flood is also known as the "base flood" or "base flood event." When speaking of 100-year flood elevations or 1% flood elevations, these are also interchangeable with and commonly called "base flood elevations" or BFEs. A BFE is simply the 1% annual chance event flood (water-surface) elevation at a particular location along a watercourse or adjacent to a lake or ponding area. BFEs are used for regulation and insurance purposes. For example, when a new building is to be constructed near or adjacent to a mapped (or unmapped) floodplain within the City, the building must be constructed at least one (1) foot higher than the BFE. This is referred to as the Flood Protection Elevation (FPE). Many municipalities have FPEs that are one or two feet above the BFE. This is for the protection of all concerned.

For the two major watercourses within Watseka where the floodplains have been mapped, there are two types of flood zones that are predominant: 1) Zone AE and 2) Shaded (or dotted) Zone X. A Zone AE is a SFHA where the BFEs have been determined and the stream has been studied. BFEs are usually determined through a modeling process that is not described here. However, it should be noted that some computer models are calibrated or measured against actual flood events such as the 2008 event to improve the accuracy of the BFEs. A shaded (or dotted) Zone X flood zone is associated with the 0.2% annual chance flood (500-year flood) or areas where the 1% annual chance flood has average depths less than one foot or with drainage areas less than one (1) square mile. Areas outside the 0.2% annual chance floodplain are shown as Zone X with

#### no shading.

A common flood zone in other areas but which is not present within Watseka is the Zone A floodplain. This is a flood zone for which the watercourse is not studied and no BFEs have been determined.

Another component of floodplains is the floodway. The floodway is an artificial boundary that is determined by a computer model and includes the channel of a stream and any adjacent floodplain areas that must be kept free of encroachment (blockages or earthen fill) so that the 1% annual chance flood can be carried without "substantial" increases in flood heights. Within the State of Illinois, the allowed increase is only one tenth (0.1) of a foot. The Illinois Department of Natural Resources – Office of Water Resources (IDNR-OWR) has jurisdiction over and regulates all activities within the floodway portions of floodplains. A permit process has been long-established for proposed activities within floodways. While many floodways are shown on FEMAs maps, not all floodways are shown. Zone A flood zones do not show floodways. For Zone A flood zones associated with streams, a floodway is considered present even though it is not shown on the map when the

tributary drainage area of the stream is one (1) square mile or greater. For such cases, the permit process with the IDNR-OWR must be followed.

For all proposed activities in or near the mapped (and in some cases unmapped) floodplain areas within Watseka, the City has a responsibility and obligation under its codified ordinances to review and approve these activities. This is for the benefit of all concerned and is meant to prevent adverse impacts to adjacent property owners.



IAFSM Website www.illinoisfloods.org

#### **Floodplain Management**

The phrase "Floodplain Management" brings to mind flooding situations that are more regional and comprehensive in scope. With Watseka located adjacent to two major watercourses, this is an apt understanding. A project such as the Main Drainage Ditch corridor improvement could easily be described under the heading of floodplain management since it involved floodplain aspects. However, Watseka's floodplain issues are bigger, so the ditch project was categorized more as a localized project.

So, what can be done about the Iroquois River and Sugar Creek floodplains within Watseka? In a nutshell—nothing that is economically feasible. A major (and very expensive) levee project could be investigated, planned and constructed to protect various areas of the City from flooding by these watercourses. Current cost estimates for such a project are not available, but it would be a multi-million dollar improvement. A common cheaper alternative is to buyout existing buildings in the floodplain and raze them. This is often more effective at reducing flood damages than a much more expensive levee project. However, as one can imagine, this is not

typically a route that a community wants to go down.

Buildings can also be elevated to such an extent that they are above the floodplain. Raised buildings or buildings "on stilts" may not be eye-pleasing, but they can be kept high and dry. Again these alternatives can be extremely expensive and not generally well-received by residents.

The question of some sort of regional detention basin has also been expressed in the past, and while this approach has worked for smaller watercourses (or watercourses with much smaller tributary drainage areas), a 200 or 300 acre-feet regional detention basin would hardly cause a dent in the Iroquois River and Sugar Creek floodplains. At Watseka, the Iroquois River has an upstream basin area of approximately 600 square miles and Sugar Creek has a basin area of approximately 533 square miles. This makes for a combined basin area of over 1,100 square miles for these two watercourses at Watseka.

In summary, the only cost-effective and municipal-friendly floodplain management solution would be to require all new construction to be located outside and above the floodplain.

#### Stormwater Management

The phrase "Stormwater Management" tends to bring to mind localized drainage situations involving storm sewers, detention ponds and the like; and justifiably so since it is often applied in that sense. It can be rightly applied in a larger regional sense, but for the purpose of this document it will be understood in the localized sense. With significant areas of Watseka currently mapped as Zone AE flood zones attributable to major watercourses, mitigation concepts involving storm sewers and detention ponds will have little to no affect on alleviating such major flooding conditions. However, in a localized application, storm sewer projects constructed in areas that currently have no storm sewers or undersized storm sewer systems can provide flood mitigation for the more frequent storm events that are experienced in a typical year. Commonly, storm sewer systems provide a 10-year storm capacity; in some cases this is not possible but at least the improvements provide a better level of drainage than what exists (often times no drainage at all).

#### 2014 WATSEKA COMPREHENSIVE PLAN 48

### Stormwater & Detention Strategies

While it would be difficult to eliminate the possibility of a catastrophic flood event, there are strategies that can provide flood mitigation for the more frequent storm events that are experienced in a typical year.

The City has just completed construction of storm sewer upgrades within the downtown area along Second Street north of Walnut Street, and will be constructing storm sewer upgrades this year in the residential area that includes Mulberry, Locust and Cherry Streets between Second and Fifth Streets. Projects such as these should improve local drainage within these areas for the more frequent storm events. Similarly, other areas within Watseka can be evaluated for storm sewer upgrades in the future.

Another significant project constructed by the City a few years back was the Main Drainage Ditch and culvert upgrade project through the east center of town from the railroad north to the Iroquois River. This one mile long ditch/culvert corridor essentially follows the existing mapped floodplain through the City that is caused by overflow from Sugar Creek south of the City and local runoff along the corridor. This project will not eliminate the floodplain, but it significantly improved the capacity of this ditch/culvert corridor. An added feature of this project was the construction of flapgates at the downstream end of the ditch near the outfall at the Iroquois River. When the ditch is not flowing, the flapgates provide some added protection from the Iroquois River floodwaters up to a specified elevation. Again, it does not remove the threat from the Iroquois River, but it does provide an added level of protection that did not exist before the project was constructed.

#### ADDITIONAL RECOMMENDATIONS

- Continue to identify and construct stormwater management projects, in existing neighborhoods, to mitigate localized flooding occurring in typical events including:
  - New Storm Sewers
  - Back flow preventors
- 2. Add detention areas, where appropriate, in flood prone neighborhoods to aid in the quick removal of stormwater for typical year events.
- 3. Create centralized detention ponds for new areas as they develop. These should also serve as open space and recreational amenities, similar to Lake View Park and detention area across from the New City Hall.







Lake View Park serves as regional detention and an Open Space & Recreational Amenity



Existing Roadway Framework Potential New Roads Railway

Centralized Detention Ponds

### Potential Stormwater Detention Strategies and Stormwater Utility Upgrades

### A Regional Approach to Storm Water Management

Can there be a large man made lake near the city to help with water management and be an economic boost to Watseka

Conventional wisdom about water management and stormwater detention tells us that the Iroquois River Watershed is so large that small detention ponds would do very little to alleviate the major flooding events when the River cannot convey the volume of water that has inundated the water shed. In addition to the issue of capacity is the fact that the land between the City of Watseka and the Kankakee River, which is the outlet of the Iroquois, is very flat with a change in elevation of less than two feet.

This makes it very difficult to imagine a method for preventing flood waters from overtaking the lower elevations of the City. With a water shed of over 1,100 Square miles, it is a daunting task to control the large volume of water that can end up at the confluence of the Iroquois and Sugar Creek.

A larger and bolder idea that can be

considered is large man-made lake that could help divert water away during large flood events. This large regional lake could also serve as an economic engine for the city, attracting boaters, hikers, campers, fishing and nature enthusiasts as well as people looking to get out of Chicago for a day or a weekend.

An example of such a recreation area is Lake Shelbyville. This lake, although primarily created as a nuclear plant cooling pond, has become a regional open space and recreation destination. The Lake Shelbyville area offers biking, hiking, camping, horseback riding, boating, fishing and even golf.



Map of Lake Shelbyvillle Attractions



#### POTENTIAL LOCATIONS FOR A REGIONAL LAKE

The figures to the right shoe three main potential areas where a large regional lake could be considered:

1. Along the Iroquois River upstream from the confluence with Sugar Creek

2. Along Sugar Creek upstream of the confluence

3. Along the Iroquois River downstream of the confluence.

The size and location would have to be researched and a significant amount of engineering study would be required to determine the feasibility of this recommendation. The size of the watershed, the land elevation and the large volume of flood water means that any such solution would need to be consider a very large lake, potentially covering several square miles.

#### NEED FOR A REGIONAL INITIATIVE TO ADDRESS LOCAL FLOODING

However, the flooding issues faced by Watseka are part of a much larger regional problem. Land continues to be developed in areas around Iroquois County, both in Illinois and Indiana. As more land is developed in neighboring Indiana, more water runoff will be added west to the Kankakee and the Iroquois watersheds.

More land development in Illinois north of Iroquois County, that are tributary to the Kankakee River, could also increase the volume of water entering the Kankakee River. Added volume in the Kankakee means slower conveyance of water in the Iroquois, which in turn means more flooding potential for the whole county.

If the idea of a man-made lake or flood area was tied to a much larger water management strategy that serves the larger region, it may have a greater potential for being realized.









### **Possible Regional Stormwater Detention Area**

2014 WATSEKA COMPREHENSIVE PLAN 52



## 5 Downtown Watseka



Source: Geological Survey of Illinois-Indiana Watseka Quadrangle, US Dept. of Interior, 1939

A small historic Downtown at the heart of Watseka

2014 WATSEKA COMPREHENSIVE PLAN 54

### Major Challenges for Downtown Watseka

Downtown Watseka is anchored by Walnut Street, the Main Street of the city, with about a four block historic core from Second Street to Fifth Street. Downtown has retained its compact small town character, and most blocks have not been impacted greatly by new suburban style development with large parking lots. However, there are significant physical and economic challenges facing Downtown Watseka today that need to be addressed to ensure that it continues to be a vibrant core of the city.

#### **Challenges facing Downtown today**

1. Existing historic buildings on Walnut Street are over 100 years old, and most are in great need of assistance for maintenance, upgrades and reuse. Buildings share common walls and do not meet current fire and building codes. Significant number of historic buildings have been lost to fire events.

- Upper levels of the 2 to 3 story historic buildings are mostly vacant. These do not meet current codes making reuse difficult and cost prohibitive.
- 3. The City owns a number of vacant buildings on Walnut Street with no plans or funds for adaptive reuse. One example is the two story historic Opera House building at Walnut and Third Street that could be reused to attract a new anchor for Downtown. However, there are no funding sources to bring the building up to code for any kind of adaptive reuse.
- 4. Existing storefronts at street level are generally occupied with a variety of small local tenants, including resale shops, small offices, hairstylists, banks etc. There are no major retail anchors to generate significant customer traffic to Downtown. There is a need for more restaurants and cafes, and dining options to bring people to Downtown in the evenings.

- There is ample parking to meet Downtown needs today. Street parking is provided on Walnut Street and on the side streets, and there are small parking lots dispersed through the Downtown blocks within easy walking distance.
- The Downtown TIF expired in 2009, and there is currently not enough local or county support for creating a new TIF district to help revitalize Downtown. Without a new TIF, there are very limited options for funding any Downtown improvements.
- 7. Walnut Street was improved with new decorative lighting in 2005, with funds from the former TIF. The street lights and banners have added great value to the historic character of Downtown. With no new TIF funds available, any new streetscape projects will be very difficult to undertake without outside grants.
- 8. There is no public square or central gathering place on Walnut Street today.



### Recommendations for Downtown Watseka

Given the many physical and economic challenges facing Downtown Watseka today, the 2014 Comprehensive Plan focuses on four major recommendations that can have a positive catalytic impact. These include the following:

- 1. ESTABLISH A DESIGNATED DOWNTOWN HISTORIC DISTRICT
- 2. PARTICIPATE IN THE ILLINOIS MAIN STREET PROGRAM
- 3. CREATE A CENTRAL SQUARE ON WALNUT STREET
- 4. MARKET DOWNTOWN WATSEKA MORE AGGRESSIVELY AS A TOURIST STOP

#### 1. ESTABLISH A DESIGNATED DOWNTOWN HISTORIC DISTRICT

A historic district is a group of buildings, properties, or sites that have been designated by one of several entities on different levels as historically or architecturally significant. Buildings, structures, objects and sites within a historic district are normally divided into two categories, contributing and non-contributing.

Historic districts are designated through the United States Department of Interior under the auspices of the National Park Service. Federally designated historic districts are listed on the National Register of Historic Places, but listing imposes no restrictions on what property owners may do with a designated property. State-level historic districts may follow similar criteria of no restrictions or may require adherence to certain historic rehabilitation standards. Local historic district designation offers, by far, the most legal protection for historic properties because most land use decisions are made at the local level. Local districts are generally administered by the county or municipal government. Local historic districts are identified through a process of surveying historic resources, delineating appropriate boundaries, and enacted with all aspects of due process. Depending on the local ordinance, property owners permission may or may not be required, however all owners will be notified and have a chance to share their opinion. Most local historic districts are accompanied by design guidelines controlling changes to the properties included in the district.

#### Why pursue a Local or State Designation?

- Protect historically significant buildings
- Qualify for financial assistance including tax freeze, tax credits, USDA loans etc.
- Create a clear set of local guidelines that apply to the district









Watseka was home to many beautiful old buildings, many of which have been demolished. The remaining few historic buildings need protection and assistance to survive and be reused. 2014 WATSEKA COMPREHENSIVE PLAN 57



**POTENTIAL CONTRIBUTING STRUCTURE** 

### **Potential Historic District Boundary**

2014 WATSEKA COMPREHENSIVE PLAN 58



### MAJOR HISTORIC BUILDINGS

### OLD IROQUOIS COUNTY COURTHOUSE

The Old Iroquois County Courthouse was constructed in 1866, with two additions built in 1881 and 1927. In the early 1960s an Iroquois County resident, Mrs. Katherine Clifton, bequeathed to the county in her will a large sum of money and a site upon which to build a new courthouse. The old courthouse was advertised for sale and fell into disuse. In 1967 during the Centennial Celebration of Watseka, the Iroquois County Historical Society was organized, and circulated petitions throughout the county not to sell the Old Courthouse. The petitions were approved by the County Board of Supervisors, and the Old Courthouse re-opened as a museum that same year.

It is the only courthouse in the United States built entirely with private funds. In 1975, the Old Courthouse was listed on the National Register of Historic Places.

Today, a visit to the Old Courthouse is a step back in time where you can visit the old County Jail, see recreations of an old-time back porch, a Victorian parlor, old time general store, post office, one-room schoolhouse and much more.

Source: Iroquois County Historical Society



### MAJOR HISTORIC BUILDINGS

### THE CHICAGO & EASTERN ILLINOIS RAILROAD HISTORICAL SOCIETY Museum - Watseka, Illinois

The Chicago and Eastern Illinois Railroad Historical Society has opened a museum in two rooms of the Watseka Union Station in Watseka, Illinois. In the late 1980's the Watseka Union Depot was acquired by the Watseka Historical Society and moved about 300 feet east of the original location. The historical group restored the station to its original appearance. The facility now provides a location for various Watseka area functions such as dinners, charity events and even wedding receptions.

The depot is a great train watching location. The Union Pacific operates some 50 trains per day, along with CSX Transportation and the Canadian Pacific, just west of the building. On the north side RailAmerica operates one train each way per day on the TP&W.



Source: www.ceihs.org



The Art Deco style was popular in movie theater design and decoration in the 1920 and into the 30s. This style was characterized by applied decoration featuring sunbursts, crescents, geometric forms, dripping fountains, tropical leaves and flowers, brilliant colors, skyscraper/ pyramid designs, luscious materials and textures coupled with exotic motives and decorative themes like Egyptian, Mayan, American Indian, Persian or Chinese. Fine examples of this style are the facades of the Missouri Theatre in St. Joseph, and the Watseka Theatre in Watseka, IL.



### MAJOR HISTORIC BUILDINGS

### WATSEKA THEATRE

This beautifully classic 1931 Art Deco building was designed by the famous Louis Skidmore of "Skidmore, Owings and Merrill." The Watseka Theatre is believed to be the only theatre he ever designed. He went on to become the "Chief Architect" of the 1933 Century of Progress Chicago Worlds Fair. Some of his most renowned buildings include the New York United Nations Building, Chicago Sears Tower and the John Hancock Center.

Today, the theater is a major anchor for Downtown Watseka, and offers a variety of entertainment arts; from concerts, live music & professional dance troupes to dinner theatre, local talent shows, private events such as weddings, and special holiday productions.

Source: www.watsekatheatre.com



### Walnut Street for "Illinois Main Street Program"

The 2014 Plan recommends that Walnut Street, Downtown Watseka's Historic Main Street, pursue qualifying for the Illinois Main Street Program.

STREET EAST FROM SECOND STHEET, WATEER



Participating communities provide the funds for their local programs, each of which has a paid manager. The Main Street approach, which is tailored to meet local needs and opportunities, establishes four interdependent committees comprised of local volunteers that work in the following four key areas:

- Design: enhancing the design and appearance of downtown through historic preservation
- 2. Organization: building an effective, volunteer-driven, managed, downtown organization, guided by professional staff
- Promotion: establishing promotion strategies that bring people to downtown
- 4. Economic Restructuring: revitalizing downtown businesses through restructuring local economies

There is a range of available Architectural Services, with special emphasis on improving building facades. Services are broken into two categories: Building Services, which deal with specific buildings, and Community Services that include training, workshops, and committee consultation.

Walnut Street, before and now: Possible candidate for the Illinois Main Street Program





#### ANATOMY OF A MAIN STREET BUILDING

FINIAL BRACKET A decorative terminal A support for a form at the top of a feature. projection, typically shaped like an inverted CORNICE The projecting member at the top of the exterior wall. UPPER FLOOR The usually non-retail

volume above the retail ground floor; multistory Main Street buildings are typically between 2 and 4 floors.

STOREFRONT The front exterior wall of commercial space,

typically with large areas of glass.

#### BULKHEAD

The area between the A vertical structural sidewalk and the display member. windows; can be of wood, tile, or metal, or can be glazed.

COLUMN The main areas of clear glass on a storefront

#### WINDOW HOOD

S.

DISPLAY

WINDOW

behind which goods are

arranged. Usually of polished plate glass.

A projecting member above a window that is both structural and decorative; on Main Street typically of stone, or cast iron.

> SASH Operable frame filled with glass.

> SILL Horizontal member immediately below the window assembly.

LINTEL Structural member above a storefront that supports the parapet or upper wall.

ROSETTE

A typically circular motif that secures two cast iron lintels together.

#### TRANSOM

Upper windows in a storefront; can be operable or fixed, clear or patterned.





Many of the remaining historic buildings have retained the elements of a Main Street Building

2014 WATSEKA COMPREHENSIVE PLAN 63

### ILLINOIS HISTORIC PRESERVATION AGENCY

#### Property Tax Assessment Freeze

**Rehabilitating your older home** is rewarding in many ways, and with the Property Tax Assessment Freeze homeowners may be eligible for a financial incentive that can make the work even more attractive. The program can freeze the assessed value of historic owner-occupied, principal residences for a period of 8 years, followed by a four-year period during which the property's assessed value steps up to an amount based upon its current market value. This results in 12 years of reduced property taxes. This program is administered free of charge as a benefit to Illinois property owners interested in rehabilitating their historic homes.

### 2014 WATSEKA COMPREHENSIVE PLAN 64 TOOLS TO HELP DOWNTOWN: TAX FREEZE

#### **Benefits**

The Property Tax Assessment Freeze Program benefits both the owner-occupant and the community by:

- Rewarding owner-occupants for sensitively reinvesting in their homes
- Increasing the value of the rehabilitated property;
- Strengthening neighborhoods and housing within a community
- Encouraging landmark protection through the promotion, recognition, and designation of historic structures;

#### **Provisions**

If a rehabilitation meets all four provisions described below, the Illinois Historic Preservation Agency (IHPA) will issue a Certificate of Rehabilitation for the property. This Certificate allows your assessor to implement the assessment freeze for your property. To qualify for the Property Tax Assessment Freeze, a property must:

### Be owner-occupied housing and the principal residence of the owner:

- Single-family houses
- Residential buildings with up to six units as long as the building owner resides in one of the units
- condominium buildings
- cooperatives

Be a registered historic building. For this program, a historic building is:

- individually listed on the National Register of Historic Places in any community in Illinois, or
- a contributing property within a National Register Historic District in any community in Illinois, or
- individually listed on the Illinois Register of Historic Places in any community in Illinois, or
- designated as an individual local landmark in a community that has an approved preservation ordinance, or
- a contributing property within a local historic district in a community that has an approved preservation ordinance

### **Opt Out Provision**

Any taxing district may "opt out" of the Property Tax Assessment Freeze Program by notifying the assessor and the county clerk at the beginning of each calendar year. The Property Tax Assessment Freeze will not apply then to taxes levied by that taxing district. To determine whether any taxing districts in your area have opted out, contact your assessor or county clerk. Properties that have already received Certificates, or where rehabilitation has already begun, will not be affected by a taxing district's "opt out."

### 2014 WATSEKA COMPREHENSIVE PLAN 65 TOOLS TO HELP DOWNTOWN: TAX CREDITS

### The Federal Historic Preservation Tax Credit Program

The Federal Historic Preservation Tax Credit Program provides federal income-tax incentives for the rehabilitation of historic incomeproducing properties. The Illinois Historic Preservation Agency, Preservation Services division, administers it for Illinois properties.

Under the provisions of the Tax Reform Act of 1986, a 20% tax credit is available for the substantial rehabilitation of commercial, agricultural, industrial, or rental residential buildings that are certified as historic. The credit may be subtracted directly from federal income taxes owed by the owner. (Note: The U.S. Internal **Revenue Service is the final judge** of economic matters relative to certified rehabilitations. Therefore, it is advisable that you consult with a tax accountant or lawyer before completing your tax return.)

#### **Benefits**

The Historic Preservation Tax Credit Program benefits the owner, the occupants, and the community by:

- Encouraging protection of landmarks through the promotion, recognition, and designation of historic structures
- Increasing the value of the rehabilitated property and returning under utilized structures to the tax rolls
- Upgrading downtowns and neighborhoods and often increasing the amount of available housing within the community.

#### **Provisions**

To quality for the Investment Tax Credit, a property owner must:

- Have a certified historic structure. To be certified, the building must be listed individually on the National Register of Historic Places or be a contributing part of a historic district that is either listed on the National Register or certified as eligible for the National Register
- Use the building for an income-producing purpose such as rental-residential, commercial, agricultural, or industrial
- Rehabilitate the building in accordance with the Secretary of the Interior's "Standards

for Rehabilitation" and "Guidelines for Rehabilitating Historic Buildings." The National Park Service (NPS), with advice from our office (State Historic Preservation Office), determines whether a project meets the standards.

- Spend an amount greater than the building's adjusted basis (roughly the current depreciated value of the building not including land value) on the approved rehabilitation project
- Complete the work in a timely manner. Projects must meet the minimum expenditure test within a two-year measuring period, but applicants may take up to five years to complete a phased project if the plans and specs are approved in advance of construction. Pay a fee to the NPS; the fee shall be no less than \$250 and no greater than \$2,500 and shall be based upon the qualifying rehabilitation expenditures.

### UNITED STATES DEPARTMENT OF AGRICULTURE USDA Rural Development Program

The USDA Rural Development Program is aimed to help economic and community development in rural areas, as well as improve economic conditions and the quality of life in rural America. The USDA Rural Development Program is a government run program that provides individuals and families in rural areas assistance with loans for housing, business, community development and public utility projects.

Program assistance is provided in many ways including direct or guaranteed mortgage loans, government grants, technical assistance and research and educational materials.

### 2014 WATSEKA COMPREHENSIVE PLAN 66 TOOLS TO HELP DOWNTOWN: USDA LOANS

#### **Rural Home Financing**

The USDA Rural Development plan was designed to give moderate to low income families an opportunity to secure a low interest mortgage in **rural communities with populations of 20,000 or less.** This program provides a home loan guarantee for eligible individuals and families that meet all necessary eligibility guidelines. The home loan guarantee is made by the government to third party lenders, who then loan the money to individuals and families looking to purchase a home in a rural community.

Under the USDA loan program, families can borrow up to 100% of the value of the home, including closing costs, with no mortgage insurance and absolutely no money down. Also, with the help of the USDA rural development program, rural home seekers have the opportunity of building a brand new home from scratch, or make repairs or renovations to their existing rural property.

### Rural Business and Community Development

The USDA rural development program also provides much needed loans and grants to businesses and community programs in rural areas. Under this program, the USDA provides financial assistance for business loans and grants that are **aimed to stimulate rural economies by creating businesses, jobs, community facilities and partnerships.** 

Loans can be obtained for the development of hospitals, libraries, schools, fire and police stations, and community centers. The USDA also offers much needed assistance to rural public utility programs helping companies provide rural areas with essential utilities, such as water, electricity, waste management, and telecommunications. The USDA is committed to the development and economic prosperity of rural areas across the United States, and assuring that rural communities receive the same financial assistance as larger towns and cities across the United States.

### Preservation of Historic Homes



### A New Square on Walnut Street

There is no central square or gathering place on Walnut Street today. There is a need for a central space where visitors can gather and events can be held. A central park can also be an asset to attract cafes and restaurants facing the park, and be an added amenity for people living in Downtown.

#### The Old Historic Square

There was a classic Main Street Square at the heart of Downtown at the southwest corner of Walnut and Third Street right across from the old Opera House. This lovely corner square is gone and is home to the relocated old post office building and parking.

#### The Iroquois County Courthouse Park

The major open space serving Downtown today is the park in front of the historic courthouse. While this is a beautiful park, it is not directly visible from Walnut Street. New industrial buildings, parking and a gas station block the view of the park and the beautiful old building from Walnut Street. Various locations were considered to bring back a small square to Walnut Street, and open up the view to the Old Courthouse.

Based on the community's feedback, the 2014 Plan recommends pursuing the southeast corner of Walnut and Second Street, currently occupied by a Gas Station, as a new Downtown Square.





### Options for a New Downtown Square

#### Preferred Option: Option 1 Southeast Corner of Walnut and Second Street

- Existing Gas Station is considering relocating further west on Walnut Street
- Site may have remediation issues that may make redevelopment cost prohibitive
- Has potential to become a gateway park into Downtown, and be close to Walnut Street as well as the Railroad Museum and the Old Courthouse.

### Option 2 Northeast Corner of Walnut and Cherry Street

 Existing parking lot serving bank and main street businesses

### **OPTIONS FOR A DOWNTOWN SQUARE**

### A Long-Term Strategy for Downtown Parking

Historic Walnut Street, until early nineteenth century, had ample angled parking for cars on both sides of the street, allowing customers easy access to the stores.

Today, Walnut Street is also US 24 and IL 1, and a major east-west regional arterial with significant truck and through traffic. Balancing the needs of a car-oriented arterial and a pedestrian oriented Main Street are major challenges for Downtown. To meet these challenges, Watseka has already implemented the following strategies with success:

- Streetscaping of Walnut Street, with decorative lighting, banners and flower baskets to maintain a pedestrian ambience
- On-street parallel parking is provided along both sides of Walnut Street
- Angled and parallel parking are provided along the side streets and adjacent streets
- Small parking lots are located to the rear of buildings.
- Parking is dispersed through the Downtown blocks within walking distance of businesses and shops.
- Large suburban style parking lots placed along the street in front of buildings have not been allowed in the Downtown core.



The 2014 Comprehensive Plan strongly recommends continuing these good planning strategies that provide ample Downtown parking in a variety of options: on-street parallel or angled, and in small lots behind buildings. Two new locations to add significant more parking are discussed in the following pages.





### **Downtown Watseka Parking Options**

2014 WATSEKA COMPREHENSIVE PLAN 71



Two long-term possibilities to add significant amount of new parking to the heart of Downtown and near the new square are recommended:

### Option 1: Underutlilized Land west of the History Museum

The site, owned by the railway, is currently used for some outside storage. A new parking lot here could add up to **125** parking spaces to serve Downtown, as well as the History Museum, the Courthouse, and the New Square.

#### Option 2: Underutilized Land along rail tracks on NE block at Cherry and Third street

This narrow stretch of privately owned vacant land runs along the south edge of the rail tracks. A new parking lot here could add up to **74** parking spaces close to Walnut Street and the heart of Downtown.

Together, the two options can provide about **200** new spaces, serving Downtown businesses and visitors. The lots can be made attractive, safe and well connected by adding ample lighting, landscaping and signage.

### **Long Term Downtown Parking Options**

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## Reusing Existing Historic Buildings

Reusing the lovely old buildings in Downtown Watseka is key to preserving this unique historic legacy. However, there are significant issues facing the old Downtown buildings today that make adaptive reuse more challenging, including the following:

#### Narrow and Deep Buildings

Existing historic buildings are typically very narrow and deep, with narrow street frontages ranging from 25' to 50' and footprints that can be over 100' feet deep. Attracting new users to these narrow and deep spaces can pose a challenge.

#### **Vacant Upper Floors**

Most of the upper floors of the existing old buildings are vacant or significantly underutilized. The City's current zoning code only allows residential uses on the upper floors.

#### **Threat of Fire Damage**

Significant number of old buildings have already been lost to fire events. Since most buildings share a common party wall, entire blocks are vulnerable to rapid fire damage and destruction.

#### Recommendations

- The 2014 Plan strongly recommends changing the current codes to allow a variety of uses in all floors of downtown buildings, at street level and upper floors, including business, retail, residential, lodging, cafes, restaurants, galleries etc.
- Consider allowing owners to combine two adjacent narrow buildings in the interior by eliminating the common unrated wall and creating a wider interior space. Ensure that the historic facades are not significantly impacted.
- Encourage property owners to pursue cost saving energy efficient measures, as listed in the following page, that are uniquely suited to old main street buildings.



## Greening Existing Historic Buildings

Information extracted from "Greening Main Street Buildings" by K. Smith, 2009, from the National Main Street Center, a subsidiary of the National Trust for Historic Preservation. For more information, see http:// www.preservationnation.org/main-street/main-streetnews/2009/04/greening-MS-buildings.html

Following World War II, the energy efficiency of commercial buildings in the United States decreased dramatically. They are now responsible for 40 percent of all carbon emissions nationally, a figure that is significantly lower in Europe. Energyconserving features are inherent in the design of older main street buildings and communities are now looking to these structures as models for energy efficiency. More environmentally responsible and financially viable, rehabilitation of these historic structures can now be seen on main streets across the nation. Many older main street commercial buildings already feature environmentally friendly characteristics. These include:

- Thick masonry walls that help regulate temperature.
- Operable shutters and awnings that keep rooms cool.
- Windows that open to help circulate air.
- Light-colored ceilings that reduce the need for artificial lighting.
- Skylights and atriums that increase the amount of natural light .
- Tall ceilings and fans that help circulate air.
- Water tanks that collect rain water for building use.
- Recessed entryways that help regulate temperature.
- Use of locally-sourced materials.
- Greater lifespan than modern commercial buildings.

To maintain and increase an older main street building's energy efficiency, owners can consider the following:

- Repair original windows rather than replace them. Newer double-glazed windows do not reduce heat loss.
- Preserve original ceiling height. Suspended ceilings reduce air circulation and natural light.
- Maintain large storefront windows.
- Preserve operable awnings and shutters.
- Keep rooftop water tanks.
- Seal air leaks, which can waste 20 to 50 percent of energy for heating and cooling.
- Repair or replace inefficient heating and cooling systems.
- Obtain new materials locally or regionally.
- Install a green roof to improve air quality and absorb rainwater.



1 24 WALNUT ST.

CHERRY ST

OCUST ST

FUTURE

While there are opportunities for infill and redevelopment within the larger downtown area, this Comprehensive Plan has focused primarily on the opportunities to attract new development to Walnut Street, the heart of Downtown Watseka. Four sites on the south side of Walnut Street were identified based on the following criteria:

- These are very close to the two potential new parking lots, therefore reducing the need for providing much parking on site.
- New infill buildings can fill the gaps in the street wall

FUTURE PARKING

POST

- New mixed use buildings can bring more residents to the heart of Downtown
- Users of the buildings can take advantage of being close to the future square

## **Redevelopment Opportunity Sites**

2014 WATSEKA COMPREHENSIVE PLAN 75

201 10 10 10 11 1

HEATRE



New buildings are typically shallow, approx. 60'-70' deep, unlike historic buildings that are narrow and deep.

#### A typical 60'-70' deep footprint can accommodate a variety of building types, including the following:

- single story commercial
- 2-3 story mixed use, with retail below, and residential or commercial above
- 2-3 story residential, including apartments, condos, rowhouses and overnight lodging

New potential development on these sites could generate building footprints ranging from 3,000 sf to 10,000 sf, with buildings along the street and parking to the rear.

### Long Term Downtown Infill Opportunities

2014 WATSEKA COMPREHENSIVE PLAN 76







## **Downtown Recommendations at Full Buildout**

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# Implementation

Summary of Recommendations Subdivision Ordinance Stormwater Management Ordinance

## Implementation: Summary of Recommendations

This 2014 Plan is the first Comprehensive Plan for the City of Watseka. This was an opportunity to create a plan that provides guideance in land use planning, economic development, transportation, neighborhhods, disaster mitigation and recovery as well the conservation of natural areas and the preservation of farmland.

A significant part of the effort was to develop two ordinances that would help implement the plan: the first Subdivision Ordinance, and the first Stormwater Management Ordinance for Watseka.

Following pages show a summary of the major recommendations of the plan, and the two ordinances that will be critical tools in realizing the plan.

#### DOWNTOWN WATSEKA

- Create a Downtown Square on Walnut Street. Investigate the potential of the gas station site at the southeast corner of Walnut and Second Street.
- Design the square to accommodate large community gatherings and events, as well for a place to serve Downtown visitors, residents and employees.
- Develop the two recommended parking lots to add significant new parking to Downtown, and free up sites along Walnut Street for new development.
- Encourage new development on the four sites identified to bring new residents and commercial uses to Downtown.



- Pursue the establishment of a designated Downtown Historic District, and participate in the Illinois Main Street Program.
- Establish a Main Street Commission to market downtown to the larger region, and to implement plan recommendations.



#### Implementation: Summary of Recommendations (contd.)

#### TOURISM



- Watseka is already listed on the Illinois Bureau of Tourism site as a place to visit. The City should find additional ways to have the Bureau promote Watseka and the surrounding area more strongly.
- Support the creation of an Iroquois County Tourism / Marketing position
- Better coordinate local events and festivals to offer visitors and tourists more activities and make them stay longer in Watseka
- Identify places to create better access to the ٠ River and the Creek for recreational activities
- Create canoe and kayak routes along the ٠ navigable sections of the waterways.
- Identify areas near the River and Creek that can become Camping areas.
- Look into Vendors who belong to national networks to develop or manage a campground in Watseka.

#### TRANSPORTATION

- Extend the existing grid of roads into new development areas. Prohibit new development from blocking the grid and creating dead ends, cul-de-sacs and disconnected streets.
- Add missing roadway connections as shown • in the plan for existing neighborhoods to increase connectivity.
- Establish Courthouse Road and County Farm Road as future main east-west collector streets.
- Extend Brianna Drive, as a Boulevard, north • to 1840 N Rd. and south to County Farm Road creating a main arterial connecting the north and south development areas and linking them to Walnut Street.
- Establish a new railroad grade crossing for • extended Brianna Drive.
- Establish Veterans Parkway as a possible • additional north-south Collector street with a possible rail road grade crossing.

#### PARKS AND OPEN SPACE

- Confirm the location for a new indoor pool.
- Preserve any existing groves of trees as part • of the parks and open space system.
- Clean up and drain the area behind Hickory • Street and create a new regional park with some detention capacity for the neighborhood north of Walnut Street.
- Establish new parks on the west side of town along Sugar Creek and the Iroquois River to serve as recreational amenities and potential areas for stormwater management.

#### CONSERVATION

- A new North River Conservation Area at the end of a future extended Brianna Drive
- A new West River Conservation Area to the west of existing older neighborhoods with access from an extended Fleming Street.
- A new Northwest River Conservation Area with potential access from West Main Street and Highway 1.

#### FLOODING

- Continue to identify and construct stormwater management projects in existing neighborhoods to mitigate localized flooding occurring in typical events, including New Storm Sewers and Back flow preventors
- Add detention areas, where appropriate, in flood prone neighborhoods to aid in the guick removal of stormwater for typical year events.
- Create centralized detention ponds for new areas as they develop.
- ٠ Establish a Task Force with neighboring counties and communities to develop a larger regional approach to flood management

#### ECONOMY

- Investigate how to establish Watseka as a regional Food Hub, creating jobs in food production, processing and distribution.
- Invest in Downtown as an economic asset to attract and retain residents and workforce.
- Establish a strong identity for Watseka as a small town destination close to Chicago to capture tourism revenue.

Celebrate the History, Plan for Progress.

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# 2014 COMPREHENSIVE PLAN CITY OF WATSEKA, IL



SUBDIVISION ORDINANCE
STORMWATER ORDINANCE

man From

Celebrate the History, Plan for Progress.

## 2014 COMPREHENSIVE PLAN CITY OF WATSEKA, IL

## SUBDIVISION ORDINANCE

Prepared by Robinson Engineering Ltd. with GINKGO Planning & Design, Inc.

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#### **GENERAL PROVISIONS**

#### § 5.01 TITLE.

The title of this chapter shall be "Subdivision and Development Regulations for the City of Watseka, Iroquois County, Illinois."

#### § 5.02 INTENT AND PURPOSE.

This Title is adopted for the following purposes; to:

- (A) Insure sound, harmonious subdivision development and community growth which will become a permanent community asset by establishing minimum standards for subdivision design and construction.
- (B) Assure the development of land for the highest and best use with all the necessary protection against deterioration and obsolescence which would adversely affect the living environment or tax base.
- (C) Provide common grounds of understanding and a sound working relationship between the City and the developer and to safeguard the interests of the home owner, the subdivider, the investor and the City.
- (D) Control the scattered and premature platting of lots beyond the effective operating range of existing public utilities and improvements.
- (E) Cause the cost of design and installation of improvements in new, platted subdivisions to be borne by the persons purchasing the lots rather than be any direct or indirect burden upon existing property owners beyond the limits of the subdivision who have already paid for the improvements servicing their property.
- (F) Bring about compact development of both homes and public improvements without the delay often experienced through future use of special assessment methods.
- (G) Coordinate new subdivision design with the design of the City as a whole to allow for the proper capacity of all types of improvements on the basis of an orderly sequence of subdivisions as a part of neighborhoods and neighborhoods as a part of the community.
- (H) Secure the rights of the public with respect to public lands and waters.
- (I) Improve land records by establishing standards for surveys and plats.
- (J) Otherwise provide for the health, safety, comfort, and convenience of the residents of the City and surrounding territory.

#### § 5.03 JURISDICTION.

These regulations shall be applicable to all subdivisions, resubdivision, and development of residential or non-residential territory within the corporate limits of the City and unincorporated territory not more than one and one-half miles beyond the corporate limits and not included in any other

municipality. In the event of overlapping jurisdiction with other municipalities within one and one-half miles of the corporate limits of the City, the extent of jurisdiction of the City shall be as determined and agreed upon between the municipalities or as provided by statute.

#### § 5.04 INTERPRETATION.

- (A) In interpretation and application, the provisions of this chapter shall be held to be the minimum requirements.
- (B) Where the conditions imposed by any provisions of this chapter with respect to the use of land are either more restrictive or less restrictive than comparable conditions imposed by any provisions of any other ordinance or any law, resolution, rule or regulation of any kind, the regulations which are more restrictive or which impose higher standards or requirements shall govern.
- (C) This chapter is not intended to abrogate the provisions of any easement, covenant, or any other private agreement with respect to the use of land but no such provision shall operate to lessen the restrictions or lower the standards as provided in this chapter.
- (D) If any subchapter, section, division, sentence, clause, phrase or portion of this chapter is, for any reason, held invalid or unconstitutional by any court of competent jurisdiction, such portion shall be deemed a separate, distinct and independent provision and such holding shall not affect the validity of the remaining portions hereof.
- (E) Any proposed plat of subdivision or site plan otherwise in conformity with the provisions of this chapter may be disapproved where the Planning and Zoning Commission, after full examination and review, makes a definite determination that such proposed subdivision or development would be in conflict with the Comprehensive Plan or detrimental to the best interest of the public health, safety, or welfare.
- (F) Any subdivision or development of land which was not lawfully existing at the time of the adoption of this chapter shall not be made lawful solely by reason of the adoption of this chapter, and to the extent that subdivision of land is in conflict in any manner with the requirements of this chapter, said subdivision of land remains unlawful hereunder.

#### § 5.05 DEFINITIONS.

For the purpose of this chapter the following definitions shall apply unless the context clearly indicates or requires a different meaning.

**ALLEY.** A public or private right-of-way primarily designed to serve as secondary access to the side or rear of those properties whose principal frontage is on some other street.

**APPLICANT.** The person, firm, corporation, partnership or other legal entity seeking approval to subdivide or develop a parcel, including the owner of record, contract purchasers, subdividers, developers and other persons having a proprietary interest in the parcel and their successors.

**BLOCK.** A tract of land bounded by streets or by a combination of streets and public parks, cemeteries, railroad right-of ways, bulkhead lines or shore lines of waterways or the corporate limits of the City.

**BUILDING.** Any structure built for the support, shelter, or enclosure of persons, animals, chattels or moveable property of any kind, and which is permanently affixed to the land.

**BUILDING SETBACK LINE.** The line indicating the minimum horizontal distance between the property line and building, either at the front or side of the lot.

**COLLECTOR THOROUGHFARE.** A street which carries traffic from minor streets to the thoroughfare system, or between secondary thoroughfares, and is so designated as a collector thoroughfare on the Comprehensive Plan.

**COMPREHENSIVE PLAN.** The general comprehensive plan of the City, including the Official Comprehensive Plan Map and the provisions of this chapter.

**CONCEPT PLAN.** Plan filed with the Planning and Zoning Commission prior to the filing of a preliminary plat or preliminary site plan and which shall contain such information as set forth in Section 5.20.

**CORPORATE AUTHORITIES.** The Mayor and Council of the City.

**CUL-DE-SAC.** Local street with only one outlet and having an appropriate terminal for the convenient reversal of traffic movement.

**DEVELOPMENT.** Any construction, building or improvement on a parcel of land or substantial change in any existing structures, including planned unit developments.

**EASEMENT.** A right or privilege in the real property of another.

**FINAL PLAT.** A plat of subdivision meeting the requirements of § 5.22 in the form proposed or approved for recording.

**FRONTAGE.** Length of the property line of the lot, lots or tract of land abutting a public street, road, highway or rural right-of-way.

**GRADE.** The slope of a road, street or other public way as specified by percentage.

**LOT.** A portion of a subdivision or other parcel of land intended for transfer of ownership or for building development.

**LOT LINE.** A property boundary line of any subdivision lot or any parcel of land held in separate ownership, except that where any portion of the lot extends into the abutting street or alley, such portion of the lot line thereof shall be deemed to be the street or alley line.

MAJOR THOROUGHFARE. A street of considerable continuity which serves or is intended to

serve as the principal traffic artery and is so designated as a major thoroughfare on the Official Comprehensive Plan Map, generally having limited access. Owners or occupants of abutting property or lands and other persons have no legal right of access to or from these thoroughfares, except at such points and in such manner as may be determined by the public authority having jurisdiction over such trafficway.

**MARGINAL ACCESS STREET.** A street which is parallel and adjacent to a major or collector thoroughfare which provides access to abutting properties and protection from through traffic, and is generally referred to as a frontage road.

*MINOR STREET.* A street of limited continuity used primarily for access to abutting properties and serving local needs of a neighborhood.

**OFFICIAL MAP.** The Official Comprehensive Plan Map of the City as designated by this chapter.

**OWNER.** Any person, firm, corporation, partnership or other legal entity vested with the legal incidents of ownership with respect to the land sought to be subdivided or developed under this chapter.

**PARCEL.** The tract of land which is the subject of an application under this chapter.

**PARKWAY.** An unpaved area along or within a public right-of-way reserved for planting of grass, trees, shrubbery or otherwise ornamented to provide a park-like character.

**PEDESTRIANWAY** or **CROSSWALK.** A right-of-way across or within a block for use by pedestrian traffic, whether designated as a pedestrianway, crosswalk, or however otherwise designated and may include utilities where necessary.

PLANNING AND ZONING COMMISSION. The Planning and Zoning Commission of the City.

**PLAT.** A plan, map, drawing or chart representing a plan for subdivision of land and depicting the information required by this chapter.

**PRELIMINARY PLAT.** The plat representing the plan of development of a subdivision and containing the information required under § 5.21, intended to provide the applicant with preliminary approvals on which he can rely for planning purposes.

**PRIVATE STREET.** Any street not dedicated or not to be dedicated for public use.

**PUBLIC IMPROVEMENTS.** Any sanitary sewer, storm sewer, drainage ditch, water main, roadway, parkway, sidewalk, pedestrianway, planting strip, off-street parking area, or other facility for which the City may ultimately assume the ownership or responsibility for maintenance and operation.

**PUBLIC STREET.** Any street which is dedicated or is to be dedicated for public use.

**RESUBDIVISION.** A change in a map of an approved or recorded subdivision plat if such change affects any street layout on such map or area reserved thereon for public use, or any lot line, or if it affects any map or plan legally recorded prior to the adoption of any regulation controlling subdivisions.

**RIGHT-OF-WAY.** A strip of land occupied or intended to be occupied by a street, crosswalk, railroad line, electric transmission line, oil or gas pipeline, water main, sanitary or storm sewer main, or for another special use. The usage of the term **RIGHT-OF-WAY** for land platting purposes in the City shall mean that every **RIGHT-OF-WAY** hereafter established and shown on a final plat is to be separate and distinct from the lots or parcels adjoining such **RIGHT-OF-WAY**, and not included within the dimensions of areas of such lots or parcels.

**ROADWAY.** A paved portion of a street available for vehicular traffic.

**SECONDARY THOROUGHFARE.** A street of considerable continuity which serves or is intended to serve as a principal traffic artery between the various sections of the City and is so designated as a secondary thoroughfare on the Comprehensive Plan.

**SIDEWALK.** That portion of a street or crosswalkway right-of-way paved or otherwise surfaced and intended for pedestrian use only.

*SITE PLAN.* A plan, map, drawing or chart on which the applicant's plan for the development of land is presented and which he submits for approval in accordance with the provisions of this chapter.

**STREET.** A public or private right-of-way which affords a primary means of vehicular access to abutting properties, whether designed as a street, avenue, highway, road, boulevard, thoroughfare, or however otherwise designed, but excepting driveways to buildings and alleys.

SUBDIVIDE. The division of land into two or more parcels or lots, and includes resubdivision.

#### SUBDIVISION.

- 1. Any parcel of land, vacant or improved, which is divided or is proposed to be divided into two or more lots, parcels, sites, units, plots or interest by any method, including planned unit developments; or
- 2. Any construction, building or improvement on a parcel of land or substantial change in any existing structures, including planned unit developments.

The following shall not be considered a subdivision and shall be exempt from the requirements of this Title:

- A. The resubdivision of land not involving more than three (3) lots none of which is substandard and not requiring new streets to be dedicated;
- B. The sale or exchange of parcels of land between owners of adjoining and contiguous land providing no substandard lot evolves from the transaction;
- C. The conveyance of parcels of land or interests therein for use as rights of way for railroads or other public utility facilities which does not involve any new streets or easements of access;

- D. The conveyance of land owned by a railroad or other public utility which does not involve any new streets or easements of access;
- E. The conveyance of land for highway or other public purposes or grants or conveyances relating to the dedication of land for public use or instruments relating to the vacation of land impressed with a public use;
- F. Conveyances made to correct descriptions in prior conveyances.

**SUBDIVISION ADMINISTRATOR.** This person is responsible for enforcing these subdivision regulations. He/she shall bring any violation or lack of compliance herewith to the attention of the corporate authorities. Section 5.11 (A) provides additional clarification.

**THOROUGHFARE.** A street with a high degree of continuity, including major, secondary and collector streets.

CITY ATTORNEY. The City Attorney of the City.

*CITY COUNCIL.* The Council of the City.

CITY CLERK. The City Clerk of the City.

**ZONING ORDINANCE.** The Zoning Ordinance of the City as amended from time to time.

#### § 5.06 EFFECT ON EXISTING PLATS AND SITE PLANS.

Nothing in this chapter shall be deemed to require any change in the plats, site plans, construction or designated use of any land or structure in the event that all of the following apply:

- (A) Final plat or site plan approval for such subdivision or development was lawfully issued prior to the effective date of this chapter, or the effective date of any amendment thereof: and,
- (B) Such approval has not by its own terms expired prior to such effective date; and,
- (C) Such approval was issued on the basis of an application showing complete plans for proposed construction.

#### § 5.07 PROHIBITION OF SUBDIVISION.

- (A) No person shall subdivide or resubdivide any parcel of land to which this chapter applies within the planning jurisdiction of the City until a subdivision plat, after review and recommendation by the Planning and Zoning Commission, has received final plat approval by the corporate authorities as required by this chapter.
- (B) No sale of any parcel of land creating a subdivision to which this chapter applies shall be consummated until a subdivision plat, after review and recommendation by the Planning and

Zoning Commission, has received final plat approval by the corporate authorities as required by this chapter.

- (C) No building permit shall be issued for the construction of any building, structure or improvement on any subdivided lot within the City to which this chapter applies until a plat of subdivision has been recorded following review and recommendation by the Planning and Zoning Commission and after having received final plat approval by the corporate authorities as required by this chapter. In any such subdivision the building permits shall not be issued prior to the time the street name and traffic control signs have been installed; the bituminous binder course for all roadways have been constructed; and any cash contribution in lieu of land dedications provided in the final plat approval have been received; and any other conditions specified for final approval have been satisfied. No certificate of occupancy shall be granted for the use of any building or structure on a parcel within the City and subject to this chapter until sidewalks and street lights have been installed; and the required sanitary sewer and water facilities have been installed and made ready for servicing the parcel.
- (D) No person shall offer for recording any plat of subdivision to which this chapter applies until such plat, after review and recommendation by the Planning and Zoning Commission, has received final plat approval by the corporate authorities as required by this chapter.

#### § 5.08 PROHIBITION OF DEVELOPMENT.

- (A) No person shall commence or cause to be commenced any development within the corporate limits or within the planning jurisdiction of the City until a site plan, after review and recommendation by the Planning and Zoning Commission, has received final site plan approval by the corporate authorities as required by this chapter. This requirement of site plan approval does not extend to any of the following:
  - (1) Any development involving the construction of one (1) single-family dwelling or one (1) multiple-family dwelling unit.
  - (2) Any non-residential development under single ownership or control involving the construction of any new buildings or structures of a total floor area less than five hundred square feet (500 SF).
- (B) No building permit shall be issued for the construction of any building, structure or improvement on any parcel within the City to which this chapter applies until a site plan, after review and recommendation by the Planning and Zoning Commission, has received final site plan approval by the corporate authorities as required by this chapter. No certificate of occupancy shall be granted for the use of any building or structure on any parcel of land within the City until all conditions specified for site plan approval have been satisfied.
- (C) No person, firm, business entity or corporation, proposing to develop a subdivision within the jurisdiction of these regulations shall proceed with any construction or development work on the site of proposed subdivision until the City has approved and recorded the final plat for the proposed subdivision, and engineering plans, all fees, charges and contributions have been paid by the developer and letters of credit for public improvements have been posted, all other required governmental permits have been issued and otherwise fully complied with all requisite

City ordinances and regulations.

#### § 5.09 OFFERINGS OR DEDICATIONS; PLAN OF FUTURE DEVELOPMENT.

- (A) All offerings or dedications of land to the City for use as streets, highways, alleys, schools, parks, playgrounds or other public uses shall be referred to the Planning and Zoning Commission for review and recommendation prior to acceptance by the corporate authorities or by another municipal body. Title with respect to all such offerings or dedications of land shall be conveyed in fee simple to the City or as the corporate authorities may direct.
- (B) Where a tract or parcel of land proposed for subdivision is a part of a larger parcel of land to be subdivided at a later date, the applicant shall submit to the Planning and Zoning Commission, in addition to the preliminary plat, a plan of future development for the remaining land.

#### § 5.10 VARIATIONS.

- (A) Where the Planning and Zoning Commission finds that extraordinary hardship or practical difficulties may result from the strict compliance with these regulations, it may recommend variances to these regulations so that substantial justice may be done and the public interest secured, provided that such variances shall have not have the effect of nullifying the intent and purpose of these regulations and further provided that the Planning and Zoning Commission shall not recommend variances unless it shall make findings based upon the evidence presented to it in each specific case that:
  - (1) The granting of the variance will not be detrimental to the public safety, health or welfare or injurious to other property;
  - (2) The conditions upon which the request for a variance is based are unique to property for which the variance is sought and are not applicable generally to other property;
  - (3) Because of the particular physical surroundings, shape or topographical conditions of the specific property involved, a particular hardship to the owner would result as distinguished from a mere inconvenience, if the strict letter of these regulations are carried out;
  - (4) The variances will not in any manner vary the provisions of the Zoning Ordinance, Comprehensive Plan, Official Map or any other City ordinance.
- (B) In recommending variances, the Planning and Zoning Commission shall require such conditions as will, in its judgment, secure substantially the objectives of the standards or requirements of these regulations.
- (C) A written request for any such variance shall be submitted by the applicant at the time when the preliminary plat or site plan application is filed for the consideration of the Planning and Zoning Commission. The request shall state fully the grounds and all of the facts relied upon by the applicant.

(D) The applicant shall pay any and all fees, costs and expenses of the City and its duly authorized agent that are incurred by the City in the processing of any and all applications pursuant to this chapter.

#### § 5.11 ENFORCEMENT.

(A) The Public Works Director is hereby appointed as the Subdivision Administrator and shall be responsible for enforcing these subdivision regulations. He/she shall bring any violation or lack of compliance herewith to the attention of the corporate authorities.

#### § 5.12 AMENDMENTS.

(A) Any amendments to this chapter shall be made by the corporate authorities but only after receipt of recommendations from the Planning and Zoning Commission.

#### § 5.13 RESUBDIVISION OF LAND.

- (A) Procedure for resubdivision. For any change in a map of an approved or recorded subdivision plat, if such change affects any street layout shown on such map, or area reserved thereon for public use, or any lot line, or if it affects any map or plan legally reached prior to the adoption of any regulations controlling subdivisions, such resubdivision shall be approved by the Plan Commission and corporate authorities by the same procedure, rules and regulations for a subdivision.
- (B) Procedure for subdivision where future resubdivision is indicated. Whenever a parcel of land is subdivided and the subdivision plat shows one or more lots containing more than one acre of land and there are indications that such lots will eventually be resubdivided into smaller building sites, the Plan Commission or corporate authorities may require that such parcel of land allow for the future opening of streets and the ultimate extension of adjacent streets. Easements provided for the future opening and extension of such streets may be made by requirement of the plat.

#### § 5.14 VACATION OF PLATS.

- (A) Any plat or any part of any plat may be vacated by the owner of the premises, at any time before the sale of any lot therein, by a written instrument, to which a copy of such plat shall be attached, declaring the same to be vacated.
- (B) Such an instrument shall be approved by the Planning and Zoning Commission and corporate authorities in like manner as plats of subdivisions. The corporate authorities may reject any such instrument which abridges or destroys any public rights in any of its public uses, improvements, streets or alleys.
- (C) Such an instrument shall be executed, acknowledged or approved, and recorded or filed, in like

manner as plats of subdivisions; and being duly recorded or filed shall operate to destroy the force and effect of the recording of the plat so vacated, and to divest all public rights in the streets, alleys, and public grounds, and all dedications laid out or described in such plat.

(D) When lots have been sold, the plat may be vacated in the manner herein provided by all the owners in such plat joining in the execution of such writing.

#### § 5.15 PUBLICATION.

(A) This chapter is hereby published in pamphlet form as provided by law. The City Clerk is ordered to make copies of this chapter available to all interested parties upon payment of such sums as the corporate authorities shall determine to be adequate to reimburse the general fund of the City for the cost of printing and distributing the same.

#### PROCEDURE FOR APPROVAL

#### § 5.20 PRE-APPLICATION PROCEDURE.

(A) In order to discuss the general purpose of the subdivision site plan or development in the context of established planning policies and practices of the City and to insure that required data is properly prepared and presented before expending the time and money in preparation and review of a preliminary plat or site plan, any person desiring to subdivide or develop land subject to this chapter, before filing a preliminary plat or site plan, may file a concept plan of the subdivision site plan or development with the City Clerk. The concept plan shall contain such information as suggested by the Subdivision Administrator, the Planning and Zoning Commission and the City Council in order to delineate the concept of the subdivision site plan or development adequately, including but not limited to a plat of survey, a topographical map, soil information, current aerial photographs and a sketch of the proposed development showing a road system and general land use categories. It shall also include information describing the subdivision site plan proposal, such as the number of residential lots, typical lot width and depth, lot sizes, business areas, school playground and park areas, other public areas, proposed restrictive covenants and proposed street and utilities improvements. After preparation of a concept plan, the applicant may also request that he be placed on the agenda of a regular Planning and Zoning Committee meeting and City Council Meeting, at which time he shall submit the information specified above and gather additional comments, but such request shall be made not less than one week prior to the next regularly scheduled meeting.

#### § 5.21 PRELIMINARY PLAT OR PRELIMINARY SITE PLAN.

(A) Any applicant shall first file with the City Clerk an application and fifteen (15) copies of a preliminary plan or preliminary site plan not to exceed 24" by 36" in size. Additional copies may be required as deemed necessary by the subdivision administrator. At the time of concept plan review the Planning and Zoning Commission may authorize the simultaneous filing of an application for preliminary and final plat or site plan approvals without compliance with separate procedures in particular cases where the nature and scope of the subdivision site plan or

development proposed does not require separate review procedures. Preliminary plats containing three (3) lots or less and which do not involve the opening of any new streets may be exempted from the requirement of the filing of a preliminary plat and may be submitted as a final plat.

- (B) Any applications for preliminary plat or preliminary site plan approval shall be filed at least thirty (30) days prior to the regular monthly meeting of the Planning and Zoning Commission at which presentation will be made. The Planning and Zoning Commission shall determine whether the application and plat or plan are in proper form and shall not consider the application as filed until all documents are in accordance with the requirements as set forth in the Subdivision Ordinance, and the Planning and Zoning Commission has been furnished with a statement by the City Clerk that the filing fee has been paid.
- (C) The following general information, where applicable, shall be shown on the preliminary plat or preliminary site plan unless waived by the Planning and Zoning Commission:
  - (1) The proposed name of the subdivision site plan (which shall not duplicate or resemble the name of any existing subdivision site plan within a radius of five (5) miles).
  - (2) Date of preparation, north point and scale of drawing which shall be one inch (1") = 100 feet (100').
  - (3) An identification clearly stating that the map is a preliminary subdivision site plan plat or a preliminary site plan.
  - (4) Legal description of the parcel.
  - (5) The name and address of the record owner or owners, the applicant, and the Illinois registered land surveyor or the licensed professional engineer who prepared the plat with the appropriate seal affixed.
  - (6) A vicinity map showing the general location of the parcel within the City and environs.
- (D) The following conditions, if found to exist on the parcel, shall be shown on any preliminary plat or site plan unless waived by the Planning and Zoning Commission:
  - (1) The location, width and names of all streets within or adjacent to the parcel together with easements, public utility and railroad rights-of-way, and other important features such as municipal boundary lines, section lines, corners and monuments.
  - (2) Contour lines of the parcel and all adjacent land within 100 feet (100') of the boundaries of the parcel showing intervals no greater than:
    - (a) One foot (1') contour intervals for ground slopes less than one-half percent (0.5%).
  - (3) The location and direction of all watercourses and the location of all areas subject to flooding, including:
    - (a) The flowlines of streams and channels showing their normal shorelines and

floodway and one hundred year (100-yr) floodplain limits.

- (b) Lakes, ponds, swamps, marshes, known wetlands and any detention basins showing their normal shorelines, floodway and one hundred year (100-yr) floodplain limits and lines of inflow and outflow, if any.
- (c) Seeps, springs, flowings and wells.
- (4) Natural features such as rock outcroppings, wooded areas, wetlands, and isolated preservable trees one foot (1') or more in diameter.
- (5) Present uses of the parcel including the location of all existing structures, showing those that will be removed and those that will remain on the parcel after the final plat is recorded or development completed.
- (6) The location and size of existing sanitary, storm and combined sewers, water mains, culverts, drain tiles, drain pipes, catch basins, manholes, hydrants and electric and gas lines within the parcel and in adjacent streets or rights-of-way. If water mains, sewers or electric or gas lines are not on or adjacent to the parcel, indicate the direction and distance to, and size of, the nearest usable facilities.
- (7) Zoning classifications of the parcel and of lands adjacent.
- (8) Houses, barns, shacks and other significant improvements.
- (E) The following improvements, if proposed or required, shall be shown on the preliminary plat or site plan, or in supporting documents, unless waived by the Planning and Zoning Commission:
  - (1) Streets and rights-of-way, showing the location, widths, number, names and approximate grades thereof. The preliminary plat shall show the relationship between existing and proposed streets and also show proposed walks, curbs and gutters and street lights.
  - (2) Easements showing width and purpose.
  - (3) Lots showing approximate dimensions, minimum lot sizes and proposed lot and block numbers.
  - (4) Preliminary engineering plan showing size and location of sanitary and storm sewers, water mains, culverts and electric and gas lines.
  - (5) Sites to be dedicated for school, park, playground or other public purposes, together with appropriate acreage of each.
  - (6) Proposed building setback lines.
  - (7) Proposed grading plan of the parcel at intervals of not more than one foot (1') if the overall plan requires changes in the general topography.
  - (8) The floor area and lot coverage of each building or structure and the floor area ratio for

each parcel which is the ratio of the square footage of a building or structure to the square footage of the lot.

- (9) Legally established centerline elevations.
- (10) Proposed public improvements such as highways or other major improvements as planned by public authorities for future construction on or near the parcel.
- (F) The following supporting data shall be submitted in separate statements or maps accompanying the preliminary plat or site plan, or, if practical, such data may be shown on the preliminary plat or preliminary site plan, unless waived by the Plan Commissions:
  - (1) Proof of ownership of the parcel and applicant's interest therein.
  - (2) A topographic map extending for a minimum distance of one hundred feet (100') on all sides of the parcel showing existing use and ownership of adjacent lands, showing streets, rights-of-way and dedicated easements, locations of existing structures and elevation of their foundations, approximate direction and gradient of ground slope, including any embankments or retaining walls, railroads, power lines, towers and other nearby residential land uses or adverse influences.
  - (3) An aerial map showing the parcel to be subdivided or developed. The map shall include a scale and show a year in which the photograph was taken.
  - (4) Existing or proposed annexation agreement which pertains to the parcel.
  - (5) Estimated cost of the development.
  - (6) Estimated construction and development schedule.
  - (7) Generalized landscaping plan.
  - (8) Proposed building types.
  - (9) Sites, if any, for multiple family dwellings, shopping centers, churches, industry or other nonpublic uses exclusive of single-family dwellings.
  - (10) Reserved.
  - (11) (a) Profile drawings of each stream, channel, pond and basin on the parcel and on any adjoining land which may affect the layout or drainage of the parcel for a minimum of five hundred feet (500') in each direction, up and downstream, showing elevations of the following:
    - 1. The bed.
    - 2. Channel banks, if any.

- 3. Size and elevation of sewer and drain outlets and culverts into the stream, channel or basin.
- 4. Flood of record elevation.
- (b) The Applicant's engineer shall, in drawing his profiles, extend or project the established flood of record elevation upstream or downstream for a distance of five hundred feet (500').
- (12) A preliminary drainage plan, designed to handle safely the stormwater runoff, accompanied by maps or other descriptive material showing the following:
  - (a) The extent and area of each watershed tributary to the drainage channels of the parcel.
  - (b) Existing storm sewers and other storm drains to be built and sizes.
  - (c) Existing streams and floodwater runoff channels to be maintained, enlarged, altered, or eliminated, and new channels to be constructed, their locations, cross-sections, and profiles.
  - (d) Existing culverts and bridges, drainage areas, elevations and adequacy of waterway openings and new culverts and bridges to be built.
  - (e) Existing detention ponds and basins to be maintained, enlarged, altered and new ponds or basins to be built with or without dams or flow retention devices.
  - (f) Parking lots shall be so designed so as to not store more than six inches (6") of rain water for detention purposes.
- (G) Upon the determination that the application and preliminary plat or preliminary site plan are in proper form, the Planning and Zoning Commission shall place the matter on its agenda and shall serve notice upon the applicant of the time and place of the meeting at which the matter will be discussed. The Subdivision Administrator shall also be notified and supplied with copies of the application, preliminary plat or preliminary site plan and other documents.
- (H) The Planning and Zoning Commission shall forward its written report to the corporate authorities recommending approval or disapproval of the preliminary plat or preliminary site plan within ninety (90) days from the date of the application or the filing by the applicant of the last item of required supporting data, whichever date is later, unless such time shall be extended by the mutual consent of the applicant and the Planning and Zoning Commission. If the recommendation is to disapprove, the report shall set forth the reasons for its disapproval and specify with particularity the aspects in which the proposed plat or site plan fails to meet the standards of § 5.23. A copy of the report shall also be forwarded to the applicant.
- (I) The corporate authorities by resolution shall approve or reject the preliminary plat or preliminary site plan within thirty (30) days after its next regularly scheduled meeting following the date of action of the Planning and Zoning Commission, unless such time is extended by the mutual

consent of the applicant and the corporate authorities. If it rejects the plat or site plan, the resolution shall set forth the reasons for its disapproval and specify with particularity the aspects in which the proposed plat or site plan fails to meet the standards of § 5.23. A copy of the resolution shall be furnished to the applicant.

- (J) Approval of the preliminary plat or plan by the corporate authorities shall not qualify the plat or plan for recording, but shall be considered permission to prepare the final plat or plan with detailed plans and specifications for the proposed subdivision site plan or development. Such preliminary approval shall be effective for no more than one (1) year from the date of approval unless, upon application by the applicant, the corporate authorities grant an extension of time for an additional one (1) year. Such application shall not require an additional filing fee or the submission of additional copies of the plat or site plan. The applicant may rely for planning purposes on any aspect which has received preliminary plat approval during the effective period.
- (K) An applicant shall simultaneously file with the state Department of Transportation, relevant local highway authority or the County Health Department, as appropriate, a copy of the application for preliminary approval of any proposed plat filed with the City. The department or authority receiving the application shall review the application based solely upon safety or access control standards and provide written approval or disapproval to the Planning and Zoning Commission and to the corporate authorities not later than ninety (90) days from the date the application is received. The ninety (90) day period may be changed by mutual agreement. If disapproved, the department or authority shall provide reasons for the disapproval related to safety or access control standards and identify improvements that will remove the disapproval. The corporate authorities may approve the plat once the improvements have been incorporated into the application or in the event that the department or authority fails to respond in writing to the City within the ninety (90) day period or other period established by mutual agreement.

#### § 5.22 FINAL PLAT OR FINAL SITE PLAN.

- (A) Within one (1) year after receiving preliminary subdivision site plan plat or site plan approval by the corporate authorities, the applicant shall file with the City Clerk an application for the initial unit of development, fifteen (15) copies of a final plat or final site plan not to exceed 24" by 36" in size, an electronic copy in a format acceptable to the subdivision administrator, and one (1) 11" by 17" size copy, in a quantity and form as required by the Planning and Zoning Commission and in accordance with the Subdivision Ordinance. Any application for final plat or final site plan approval shall be filed at least fifteen (15) days prior to the regular monthly meeting of the Planning and Zoning Commission in order to receive action at such meeting.
- (B) The following general information, where applicable, shall be shown on the final plat or final site plan, unless waived by the Planning and Zoning Commission:
  - (1) The date of preparation, north point and scale of drawing, which shall be one inch (1") = one hundred feet (100'), or other scale as approved by the subdivision administrator.
  - (2) Legal description of the parcel.

- (3) The names and addresses of the record land owner, the applicant and the Illinois registered surveyor or licensed professional engineer who prepared the plat with the appropriate seal affixed.
- (4) Reference points of existing surveys identified, related to the plat by distances and bearing, and reference to a field book or map as follows:
  - (a) All stakes, monuments or other evidence found on the ground and used to determine the boundaries of the parcel.
  - (b) Adjoining corners of all adjoining parcels.
  - (c) When the City has established the center line of the street adjacent to or within the proposed parcel, the location of such center line and monument found or reset shall be shown.
  - (d) All other monuments found or established in making the survey of the parcel or required to be installed by the provisions of this chapter or by an Act revising the law of plats adopted March 21, 1874, as amended, ILCS Ch. 765.
- (5) Lot and block lines with dimensions, bearings or deflection angles, and radii, arcs, points of curvature and tangent bearings. Parcel boundaries and street bearings shall be shown to the nearest ten seconds with the basis of the bearings. All distances shall be shown to the nearest one hundredth of a foot (0.01'). Lot area in square feet for each lot shall be designated.
- (6) The width of the portion of any streets being dedicated and the width of any existing rightsof-way, all shown each side of the center line. For streets on a curvature, all curve data shall be based on the street center line, and in addition to the center line dimensions, the radii and central angles shall be indicated.
- (7) All easements shall be denoted by fine dotted lines, clearly identified; and if already of record, the recorder's references to such easement. The width of the easement, its length and bearing, and sufficient ties to locate it definitely with respect to the plat must be shown. If an easement is not precisely located of record, a description of such easement shall be included. If the easement is being dedicated by the map, it shall be properly referenced in the owner's certificate of identification.
- (8) Lot numbers beginning with the number one (1) and numbered consecutively within each block.
- (9) Block numbers or letters beginning with the number one (1) or letter "A" and continuing consecutively without omission or duplication throughout the subdivision site plan. The figures shall be solid, of sufficient size and thickness to stand out, and so placed as not to obliterate any figure. Block figures of an addition to a subdivision site plan of the same name shall be a continuation of the numbering in the original subdivision site plan.
- (10) Accurate outlines and legal descriptions of any areas to be dedicated or reserved for public

use, with the purpose indicated thereon, and of any area to be reserved by deed covenant for common use of all property owners.

- (11) Building setback lines, accurately shown in dimensions.
- (12) The name of each street shown on the plat.
- (13) Street numbers shall be obtained from the City and shown on final plat.
- (14) The name of the subdivision plan.
- (15) Existing and proposed Grading plan of development at the intervals specified in Section 5.21(D)(2) if the overall plan requires changes in the general topography and the regulatory limits of the one hundred (100) year flood frequency event, when applicable.
- (16) Location of adjoining roads, water courses and bodies of water, marshes, rock outcroppings, wooded areas, known wetlands and railroads within one hundred feet (100') of the property.
- (17) Location and dimensions of on-site pedestrian and vehicular access ways, design of ingress and egress of vehicles to and from the site onto public streets, and curb and sidewalk lines, including sidewalk ramps for the handicapped where applicable.
- (18) Location of buildings and other structures.
- (19) Location and intensity of outdoor lighting system.
- (20) Use of property within one hundred feet (100') of the boundaries of the site.
- (21) All off-street parking, loading spaces and walkways, indicating type of surfacing, size, angle of stalls, width of aisles and a specific schedule showing the number of parking spaces provided.
- (22) Forms of certification as provided for in Appendix A.
- (23) The plat shall have specific language that dedicates all public improvements to the City with the language "Dedicated to the Public."
- (24) The name and mailing address of the City for return of the plat by the County Recorder.
- (C) The following supporting data, where applicable, shall be supplied in separate statements or maps, or, if practical, may be shown on the final plat or site plan, unless waived by the Planning and Zoning Commission:
  - (1) A copy of any restrictions or covenants to be created by record and any charter or by-laws of any property owners' association to be created.
  - (2) The following certificates, which may be combined where appropriate:

- (a) A certificate signed and acknowledged by all parties having any legal or beneficial interest in the parcel consenting to the preparation and recording of the said plat.
- (b) A certificate signed and acknowledged by all parties having any interest in the land, dedicating all parcels of land intended for any public use.
- (c) Certification by the County Clerk showing that all taxes and special assessments due on the parcel have been paid in full.
- (3) Plans and specifications for the required public improvements, together with the written report of the Subdivision Administrator required by § 5.23(C)(3).
- (4) Existing soil conditions based upon soil borings prescribed by the Subdivision Administrator in light of the proposed use of the parcel.
- (5) Landscape plan showing location, type and approximate size of plantings.
- (6) Architectural elevations for building types.
- (7) Development data showing number of floors, floor area, height and location of each building and proposed general use for each building and the floor area ratio for the entire development. If a multifamily residential building, show the number, size and type of dwelling units.
- (8) A final drainage plan providing for the adequate disposition of natural and storm water in accordance with the design criteria and standards of this chapter, indicating location, sizes, types and grades of ditches, catch basins and pipe and connections to existing drainage system. The drainage plan shall depict the existing and proposed one hundred (100) year flood frequency boundaries, when applicable.
- (9) An existing drain tile survey must be submitted to the City for review and must be incorporated into the development plans.
- (10) A soil erosion control plan providing for the adequate control of erosion and sedimentation, indicating the proposed temporary and permanent control practices and measures which will be implemented during all phases of clearing, grading and construction.
- (11) In all cases where private central sanitary sewer systems are to be used, the applicant shall secure the necessary permits for installation and operation of the system from the Environmental Protection Agency of the state, the County Health Department and the City. In all cases where private septic systems are to be used, percolation tests shall also be made on each building lot and a copy of the data and a recommendation of minimum lot sizes by the County Health Department shall be submitted to the Planning and Zoning Commission and the Subdivision Administrator.
- (12) A schedule showing phasing of other proposed improvements.

- (D) The applicant shall supply the following forms of guarantee to the City:
  - (1) An improvement completion guarantee under which the applicant agrees to install any required improvements at his own expense in accordance with the plans and specifications within the time required as a condition of approval. However, for property outside the corporate limits of the City, no such agreement shall be required where the applicant has entered into a similar agreement covering the parcel with the county authorities.
    - (a) Acceptable Improvement Completion Guarantees:
      - 1. Letter of Credit. An irrevocable commercial letter of credit with any financial institution which must be approved by the City Attorney and Subdivision Administrator and which provides for administration of such credit. The letter of credit shall be in an acceptable form as prescribed by the corporate authorities. This is the City-preferred method.
      - 2. Completion bond. A completion bond to insure the construction of the improvements in a satisfactory manner and within the period specified by the corporate authorities. The bond shall be payable to the City and be in a form with surety and conditions as approved by the City Attorney and Subdivision Administrator.
    - (b) Amount of guarantee. The amount of the completion guarantee shall be based on the following:
      - 1. Total cost of the estimated construction, engineering, surveying and fees for the required improvements plus fifteen percent (15%) of such total for contingencies, and maintenance of improvements and the abatement of construction nuisance and erosion control during the period prior to acceptance of improvements, all as approved by the Subdivision Administrator.
    - (c) That each improvement completion guarantee shall at least contain the relevant sections from the following list:
      - 1. Mass Grading Improvements: mass grading for public right-of-way and detention ponds, detention pond stabilization, erosion control, and detention pond "As-Built" drawings and storage volume calculations;
      - 2. Underground Improvements: storm sewers, sanitary sewers, water mains, and "As-Built" drawings of same;
      - 3. Basic Roadway Improvements: curb and gutter, roadway base course, roadway binder course, bike trails, street name and traffic control signs, and street lights;
      - 4. Finished Roadway Improvements: final surface course;
      - 5. Parkway Improvements: sidewalks, parkway trees, and parkway restoration;

- 6. Miscellaneous Offsite Improvements: offsite roadway improvements, offsite storm sewer improvements, offsite sanitary sewer improvements, offsite water main improvements, etc. A separate completion guarantee will be required for each offsite improvement.
- (2) For time to time, at the applicant's request, the Subdivision Administrator may approve reductions in the guarantee to an amount equal to twenty percent (20%) of the original amount of the completion guarantee. The City shall not formally accept any portion of the improvements until one hundred percent (100%) of the project is completed. The City shall approve one hundred percent (100%) reductions in the guarantee only after all of the improvements outlined above, as itemized, have been completed and demonstrated by "as-built" engineering plans provided by the developer and signed and stamped by a professional engineer registered in the State of Illinois (See § 5.80). The reduction shall be by written resolution or letter of the corporate authorities. The resolution/letter completely eliminating the guarantee shall also include acceptance of the public improvements of the specific phase simultaneously upon reduction of a guarantee for the specific phase of the improvements. A maintenance guarantee as then provided by this chapter shall be submitted to the City (including all offsite improvements individually).
  - 3. All guarantees shall be for two and one-half years (30 months) from the date of issuance of said guarantee.
  - 4. Mass grading improvements will not be accepted by the City (i.e., release of Completion Guarantee) until the City has approved that the individual lots have been graded within substantial compliance with the approved development plans.
- (2) A maintenance guarantee to be furnished upon final completion of improvements as prescribed under the § 5.22(D)(1)(c) and prior to acceptance in a form as prescribed under the § 5.22(D)(1)(a) effective for a period of two years (24 months) after the final acceptance of said improvements for the purpose of:
  - (a) Guaranteeing against and securing the correction of any defect in material or workmanship furnished for such improvements, latent in character, and not discernible at the time of final inspection or acceptance by the City.
  - (b) Guaranteeing against and securing the correction of any damage to improvements by reason of settling of the ground, base or foundation thereof. Such maintenance guarantee shall also provide that as such defects develop, the amount held thereunder may be applied by the City for any amounts incurred to correct such defects, and that the balance of such deposit, if any, held at the end of such two (2) year period shall be released by the City to the depositor without interest. The amount of the maintenance guarantee shall be not less than fifteen percent (15%) of the total initial amount of the completion guarantee.
- (E) Upon the determination that the application and final plat or final site plan are in proper form, the Planning and Zoning Commission shall place the matter on its agenda and shall serve

notice upon the applicant of the time and place of the meeting at which the matter will be discussed. The Subdivision Administrator shall also be notified and supplied with copies of the application, final plat or final site plan and other documents.

- (F) The applicant may elect to have final approval of a geographic part or parts of the plat that received preliminary approval, and may delay application for approval of other parts until a later date or dates beyond one (1) year with the approval of the corporate authorities; provided, all facilities required to serve the part or parts for which final approval is sought have been provided. In such case only such part or parts of the plat as have received final approval shall be recorded.
- (G) If the applicant so elects, he may delay furnishing the guarantees required by division (D) of this section until notified that the final plat has been approved by the corporate authorities in all other respects; provided that the signature of the Mayor and the Clerk and the seal of the City not be affixed to the plat until the required guarantees are furnished and approved.
- (H) The Planning and Zoning Commission shall forward its written report to the corporate authorities recommending approval or disapproval of the final plat or final site plan within fifteen (15) days from the date of its regular or special meeting next following the filing of the last required document or other paper which shall be considered the date of filing the application for final approval of the plat or site plan. The signatures of the chairman and secretary of the Planning and Zoning Commission shall be affixed to the final plat or final site plan after approval by the corporate authorities. If the recommendation is to disapprove, the report shall set forth the reasons for its disapproval and specify with particularity the aspects in which the proposed plat or site plan fails to meet the standards of § 5.23. A copy of the report shall also be forwarded to the applicant.
- (I) After receiving the final recommendation of the Planning and Zoning Commission, the corporate authorities, by resolution, shall approve or disapprove the final plat or site plan within sixty (60) days from the date of filing application for final approval of the plat or site plan unless the applicant and the corporate authorities mutually agree to extend this sixty (60) day period. If the final plat or final site plan is disapproved, the resolution shall state the reasons for the disapproval, specifying with particularity the aspects in which the final plat or final site plan fails to meet the standards of § 5.23. A copy of the resolution shall be furnished to the applicant.
- (J) A certified copy of the resolution approving or disapproving the final plat or final site plan shall be filed in the office of the City Clerk attached to said final plat or final site plan. The final subdivision site plan plat together with all covenants and restrictions shall be recorded by the City Clerk or City designee in the Office of the Recorder of Deeds for the county in which the property is located and returned to the City Clerk or City designee. All recording fees shall be prepaid by the applicant. The City Clerk shall notify the Building Commissioner of the recording of the final plat or final site plan.

#### § 5.23 STANDARDS FOR REVIEW OF PLATS AND SITE PLANS.

(A) The Planning and Zoning Commission shall recommend approval and the corporate authorities shall approve a preliminary or final plat or a preliminary or final site plan unless it makes written

findings specifying the manner in which:

- (1) The design and layout of the subdivision site plan or development does not conform to the provisions of this chapter.
- (2) The applicant has not made adequate provision to install improvements required by the Planning and Zoning Commission or corporate authorities under authority of this chapter.
- (3) The final plat of subdivision or final site plan fails to comply with an approved preliminary plat of subdivision site plan or preliminary site plan.
- (4) The plat or site plan does not conform to this chapter, the Comprehensive Plan, the Official Map, the Flood Control Ordinance of the City, City ordinances, or established planning policies of the City.
- (5) The provisions for vehicular loading, unloading, parking or circulation on the parcel or onto adjacent public rights-of-way will create hazards to safety or will cause significant burdens on transportation facilities that could be avoided by modification of the plan.
- (6) The vehicular and pedestrian traffic circulation system creates hazards to safety which could be avoided by modification of the plan.
- (7) The proposed plan unnecessarily and in specified particulars destroys, damages, or detrimentally alters significant natural, topographic or physical features of the site and development.
- (8) The proposed landscaping, screening or lighting fails to provide adequate acoustical or visual privacy to incompatible adjacent uses which could be avoided by modification of the plan.
- (9) The bulk and location of proposed buildings and structures will have significant adverse impact on adjacent property and development of the parcel is not feasible in a manner that will avoid these consequences.
- (10) The proposed plat or site plan makes inadequate provision for the use and maintenance of open space and this failure may result in a burden on the public or on the adjacent properties.
- (11) The proposed development will impose an undue burden upon off-site public services, including sanitary sewer, water and storm drainage, which conclusion shall be based upon a written report of the Subdivision Administrator provided that there is no provision in the capital works program of the City to correct the specific burden and that the applicant has not agreed to alleviate that portion of the burden attributable to the proposed development.
- (12) The subdivision site plan or development is subject to periodic flooding or contains poor drainage facilities and would make adequate drainage of the lots and streets impossible.
- (B) If any of the foregoing standards are cited as justification for disapproving a plat or site plan,

the Planning and Zoning Commission and the corporate authorities shall specify the manner in which the final plat or final site plan could be modified to avoid the specified deficiency or shall state the reasons why the specified deficiency cannot be avoided consistent with applicant's objectives.

- (C) Before submitting the final plat or final site plan for review, the applicant shall submit engineering plans, details or specifications for all proposed improvements regulated by §§ 5.30 through 5.68 hereof for approval of the Subdivision Administrator.
  - (1) Upon the approval of preliminary plat or site plan, the applicant shall have prepared and certified by a licensed professional engineer, drawings for said improvements which shall be submitted in triplicate to the Subdivision Administrator at least fifteen (15) days prior to the presentation of final plat for approval.
  - (2) Engineering drawings for required improvements shall contain the following data and information:
    - (a) Plans, details, specifications and cost estimates for street construction, including centerline profile and a grade line for each street with a typical cross-section of the roadway. The profiles of grade lines shall be shown to a scale of one inch (1") equals fifty feet (50') horizontal, and one inch (1") equals five feet (5') vertical. This information shall be shown on standard plan and profile sheets.
    - (b) Plans, details, specifications and cost estimates of proposed storm drainage improvements, including surface drainage, storm sewers and appurtenances and detention or retention basins.
    - (c) Plans, details, specifications and cost estimates of proposed water distribution systems and proposed water supply facilities, if any.
    - (d) Plans, details, specifications and cost estimates of sewage systems and of sewage treatment plants, if any.
    - (e) Plans, details, specifications and cost estimates for proposed sidewalks, or bikeways, if any.
    - (f) Plans, details and specifications and cost estimates of the proposed street lighting system.
    - (g) When unusual conditions exist, the Planning and Zoning Commission may require additional specifications, plans and drawings as may be necessary for an adequate review of the improvements to be installed.
  - (3) The Subdivision Administrator shall cause to be reviewed all engineering drawings in order to determine whether such drawings are consistent with the approved preliminary plat or plan and comply with §§ 5.30 through 5.68. Such drawings shall be distributed to such other persons as may be necessary. If they are in compliance with this chapter, and with the most recent Design Standards adopted by the City, the Subdivision Administrator shall

forward a report to the Planning and Zoning Commission that they so conform and comply. If the plans, details or specifications do not conform or comply, the Subdivision Administrator shall notify the applicant and the Planning and Zoning Commission of the specific manner in which they do not so conform or comply.

- (4) The Planning and Zoning Commission shall not act upon the final plat or final site plan until the engineering drawings have been reviewed by the Subdivision Administrator and a report of compliance or non-compliance has been received by the Planning and Zoning Commission.
- (5) All costs incurred by the City for the review of plans and specifications by the Subdivision Administrator or his/her designee shall be paid by the subdivider/developer/applicant. Additional services required for complex projects including but not limited to outside legal consultants, special inspectors, or specialists in the stormwater, building, construction, ecology, planning, or related fields shall be paid for by the developer.

#### § 5.24 FINAL SITE PLAN APPROVAL FOR COMMERCIAL AND INDUSTRIAL LOTS.

- A. The intent of this section is to establish procedures and standards for the review and approval of site plans to ensure full compliance with all local, state and federal ordinances and regulations and to ensure that a proposed land use or activity is compatible with the character of the surrounding area, the adjacent uses of land, the natural environment, the capacities of public services and will protect the public health, safety and welfare.
- (a) This section shall apply to the following:
  - 1. The construction of any new, nonresidential building or structure;
  - 2. The expansion of any nonresidential building or structure;
  - 3. The conversion, in whole or in part, of an existing building from residential to nonresidential use;
  - 4. The construction of any new residential structure containing three (3) or more dwelling units;
  - 5. The modification or expansion of an existing residential structure which results in an increase in the number of dwelling units in the structure to three (3) or more;
  - 6. Any development in any district for which a special use permit is required;
  - 7. The construction or expansion of paved areas, including access drives and parking lots, involving an area of more than one thousand square feet (1,000 SF); or
  - 8. The establishment of a new nonresidential use even if no buildings or structures are proposed.
- (b) This Chapter does not apply to the construction or modification of single-family detached homes, two-family homes, agricultural buildings or structures, or existing buildings or premises legally established prior to the adoption of this Chapter unless one or more of the factors described in subsection A of this Section is present.
- (c) No land, building, or structure shall be erected or used and no building permit or sign permit shall be issued for a development within the scope of this Chapter unless and until a site
plan has been approved in accordance with this Chapter. No land, building or structure shall be occupied or used and no certificate of occupancy shall be issued until all requirements and conditions of the site plan approval have been implemented and all improvements completed in accordance with an approved site plan.

## B. CLASSIFICATION OF PROJECTS:

Any development or construction which is subject to the scope of this Chapter under subsection of this Chapter shall be classified as either a minor or major site plan. The determination of this classification shall be made by the Zoning Officer or City Administrator according to the following criteria:

- (a) Minor Site Plan Review: A project requiring minor site plan review shall be any of the following:
  - 1. An expansion of any nonresidential building or structure not exceeding one thousand square feet (1,000 SF) or ten percent (10%) of the existing floor area, whichever is less.
  - 2. A change in use of an existing building that does not comply with current site design standards such as, but not limited to, landscaping, lighting, parking, signs or drainage.
  - 3. The construction or expansion of paved areas, including access drives and parking lots, involving an area of more than one thousand square feet (1,000 SF) but not more than five thousand square feet (5,000 SF).
- (b) Major Site Plan Review: A project requiring major site plan review shall be any project which is not classified as a minor site plan review.

## C. APPLICATION AND REVIEW PROCEDURES:

- (a) Application: Application for site plan approval may be made separate from or in conjunction with an application for land subdivision. The City Council may approve a site plan prior to the platting, division, or consolidation of land conditioned upon such platting, division or consolidation. Site plans for which the proposed use requires a zoning map amendment shall only be acted upon by the City after a map amendment has been approved according to the procedures set forth in the Zoning Ordinance.
- (b) Pre-application Conference: Prior to submitting a site plan application, the applicants or agent may schedule a pre-application conference with the Subdivision Administrator. The purpose of this meeting is to familiarize the applicant with the review procedures and submission requirements and to familiarize the Subdivision Administrator with the nature of the project. No decisions relative to the acceptability of the plan may be made at this meeting. At this time the determination will be made, based on the presented information, as to whether the project shall be considered a minor or major site plan. The applicant should bring to this meeting any working drawings, plans, sketches, surveys, reports or other such information that will aid the Subdivision Administrator in assessing the project.

- 1. The applicant will contact the Subdivision Administrator, to schedule a meeting two (2) weeks prior to the requested meeting date. The applicant shall also provide to the City four (4) copies of a three dimensional color rendering of the proposed building or structure two (2) weeks prior to the meeting. This drawing shall depict all four (4) sides of the proposed building or structure, including proposed screening of mechanical equipment and dumpsters. Samples of building materials are strongly encouraged to be submitted at this time as well.
- 2. The applicant and applicant's architect will then present the building elevations of the proposed project for review and comment. The Subdivision Administrator may advise the applicant of any suggested changes or additions to the proposed elevations at this time.
- D. PLANNING AND ZONING COMMISSION:

After receiving a recommendation from Subdivision Administrator, the City will schedule a workshop session with the Planning and Zoning Commission and the City Council (in no particular order) for review of the proposed building elevations and conceptual site layout. Fifteen (15) copies of the conceptual site layout and color rendering of the building shall be provided to Subdivision Administrator one week prior to each scheduled meeting.

- E. APPLICATION PROCEDURE:
- 1. Minor Site Plan: The applicant shall submit a formal application for review and approval of a site plan to the City. The application shall consist of the following:

The applicant shall submit all information requested by the City staff that is deemed necessary to review the minor site plan:

- a. A fully executed and signed copy of the application for site plan review and application fee;
- b. A fully executed professional fee agreement and deposit;
- c. All information requested by the City staff that is deemed necessary to review the minor site plan including drawings, sketches, and calculations.
- 2. Major Site Plan: The applicant shall submit a formal application for review and approval of a site plan to the City. The application shall consist of the following:
  - a. A fully executed and signed copy of the application for site plan review and application fee;
  - b. Five (5) copies of the site plan and supporting documents as described in subsection D2 of this Section.
  - c. A fully executed professional fee agreement and deposit.
  - d. Upon receipt of the application the Subdivision Administrator shall review the completeness of the application and upon determination that the application is complete, forward a copy of the application to City departments or agencies deemed necessary. If the application is incomplete, the Subdivision

Administrator shall notify the applicant in writing of this determination and specify what materials or information are required to complete the application. No action will be taken on the application until the application has been determined to be complete.

F. SUBMISSION REQUIREMENTS:

The site plan application shall include at a minimum the following:

- 1. Minor Site Plan: As determined and requested by the Subdivision Administrator.
- Major Site Plan: A drawing or drawings prepared at a scale of not less than one inch (1") = one hundred feet (100') which shall include:
  - a. General Information:
    - (1) Name, address and phone number of the developer.
    - (2) Name, address and phone number of the record owner if different from developer.
    - (3) Name, address and phone number of the architect, engineer, landscape architect, land planner, surveyor or consulting firm responsible for preparing the plan(s).
    - (4) Seal and registration of any architect, engineer, landscape architect or similar professional involved in the preparation of the plan(s).
    - (5) Date of plan preparation/revision.
    - (6) North arrow and scale.
    - (7) Legal description of the property.
    - (8) If applicable, a site data table indicating the gross acreage, net acreage, site coverage percentage, building area(s), floor to area ratio.
  - b. Existing Conditions:
    - (1) Zoning and use of the property.
    - (2) Zoning and use of all adjacent properties.
    - (3) The bearings and distance of all property lines and the source of this information.
    - (4) Existing topography of the site shown at two foot (2') intervals and extending a minimum of twenty five feet (25') beyond the property lines of the site.
    - (5) Building setback lines.
    - (6) Location and extent of any water bodies, wetlands, streams and flood plains on or adjacent to the site.
    - (7) Location and size of existing trees.
    - (8) Location of other notable natural features.
    - (9) Location and dimension of any existing easements.
    - (10) Copies of any applicable covenants or deed restrictions.
    - (11) Location, size, and ground floor elevation of all existing buildings on the site.

- (12) The location and dimension of any other structures or improvements on the site.
- (13) Location, names, and widths of existing streets and rights of way within or adjacent to the site.
- (14) Location and size of any existing storm sewer, water main, sanitary sewer, culverts, drains, field tiles, on-site disposal systems, wells, power or telephone poles, electrical lines, telephone lines, and gas lines on the subject site or of any such entities off-site that will serve the subject site.
- (15) The location, front view and dimension of existing signs.
- c. Proposed Development:
  - (1) Proposed use and zoning.
  - (2) A grading plan showing the proposed changes in the topography of the site at one foot (1') intervals with spot grades provided at significant points.
  - (3) The location and dimensions of all provisions for water supply and sanitary sewer.
  - (4) A storm water detention/retention plan including storm water runoff and detention calculation. The methods for computing such requirements shall be those specified in the City's Stormwater Management Ordinance.
  - (5) The location, elevation, and size of all catch basins, ditches, swales, detention basins and storm sewers.
  - (6) An erosion control plan. The requirements for which shall be consistent with the City's Stormwater Management Ordinance.
  - (7) The location, dimensions, and foundation/floor elevations of all proposed buildings or expansions on the site.
  - (8) The location and dimensions of proposed driveways, parking areas, loading areas, and sidewalks.
  - (9) The location, dimensions, front view and materials of proposed signs.
  - (10) The location and type of exterior lighting, including a point by point photometric plan if required by the City.
  - (11) The location and nature of electrical, telephone, gas, cable or other utility services to be installed at the site.
  - (12) Building plans showing at a minimum the floor plans and elevations of all proposed principal and accessory buildings and a schedule of the type and color exterior surface materials. A three dimensional color rendering of the proposed building or structure must be provided.
  - (13) Landscape plans including a schedule of all plantings by type and size as well as any berming, fencing, screening, or other hardscape features proposed.
- d. Other: Supporting reports, documents, exhibits, etc.
- G. REVIEW PROCEDURES:
- 1. Minor Site Plan:

- a. The City staff shall review the information requested and either approve the minor site plan or prepare a report to the applicant indicating any deficiencies in the site plan in meeting all applicable requirements of this Code. The applicant shall modify the site plan to correct any deficiencies or apply for formal relief or variance for the deficiency if such application is available.
- b. Upon completion of revisions to the minor site plan that correct the deficiencies identified by the City staff, the minor site plan shall be placed on the next available City Council agenda for consideration. The City Council will approve or deny the site plan application based on the approval criteria and standards. The City Council may impose conditions upon the site plan provided they relate to the approval criteria and standards and are necessary to meet the intent of this Chapter. If any formal relief or variance is sought by the applicant it shall follow the adopted procedures for such relief or variance.
- 2. Major Site Plan:
  - a. Written Review: Within twenty (20) days of the application being determined to be complete, any notified city departments or outside consultants shall provide the Subdivision Administrator a written review of the application. These reviews shall evaluate the application's conformance with the approval criteria and standards of this Chapter and identify any areas in which there are deficiencies in meeting the criteria and standards.
  - b. Staff Report: The Subdivision Administrator shall prepare a report to the applicant indicating or enclosing the review comments and the applicants' conformance with the review criteria. This report shall be provided to the applicant within thirty five (35) days of the application being determined to be complete. If the staff report does not identify any issues or deficiencies with the plans, an agenda date will be assigned for the application to be reviewed by the City Planning and Zoning Commission. If, however, the staff report identifies concerns or deficiencies, a staff workshop shall be scheduled prior to scheduling a Planning and Zoning Commission agenda date.
  - c. Subdivision Administrator Meeting: If the report identifies any concerns, issues, or deficiencies with the site plan or any areas in which the staff does not believe that the approval criteria are met, the Subdivision Administrator shall schedule a meeting with the applicant. This meeting is intended to provide the applicant with guidance on how the application could be modified to comply with the review criteria and standards or address concerns raised in the review process.
  - d. Pending Application Intentions: Within ten (10) days of the staff workshop, the applicant shall advise the Subdivision Administrator of his/her intention with regard to the pending application. If the applicant desires to proceed without revisions to the application, the Subdivision Administrator shall schedule a Planning and Zoning Commission agenda date for the application. If after the staff workshop the applicant chooses to revise the site plan and/or submit additional materials, fifteen (15) copies of these materials shall be submitted.

- e. Review of Revised Plan: Within five (5) days of receiving the revised plans/materials, the Subdivision Administrator shall distribute copies to the City departments for review. Each department shall provide a revised written review to the Subdivision Administrator within ten (10) days of receiving the revised plans/materials. Within ten (10) days of receipt of the revised reports, the Subdivision Administrator shall provide the applicant with a revised staff report indicating that all issues or deficiencies previously identified have been addressed or indicating any remaining concerns or deficiencies in the plans.
- f. Notice of Intention: Within ten (10) days of receiving the revised staff report the applicant shall notify the Subdivision Administrator in writing of his/her intention with regard to the pending application. The applicant may elect to: 1) proceed to have the application set for a Planning and Zoning Commission agenda, 2) request another staff workshop or 3) provide revised plans or materials to address the remaining concerns/deficiencies. If the applicant chooses to conduct another staff workshop or submit additional revisions/information, the procedures shall be the same as before.
- g. Consideration by The Planning and Zoning Commission: The application shall be placed on the agenda of the Planning and Zoning Commission for its review and recommendation. The Plan Commission shall be provided a copy of the staff reports regarding the application. After review of the application, the Planning and Zoning Commission shall, within sixty (60) days, by majority vote of the members present, make a recommendation to the City Council regarding action on the application based on its conformance with the approval criteria and standards. Such recommendation shall be provided to the City Council in writing within thirty (30) days of the Planning and Zoning Commission's decision.
- h. Consideration by the City Council:
  - (1) Following receipt of the recommendation of the Planning and Zoning Commission, the City Council shall consider the application and its conformance with the approval criteria and standards and take action on the application within sixty (60) days of the Plan Commission's review.
  - (2) If the applicant submits a revised application or supplemental submissions while the application is under consideration by the Planning and Zoning Commission or the City Council, the Planning and Zoning Commission or the City Council shall table the application to allow for review of the new information. The application may be tabled by the Planning and Zoning Commission or the City Council for a period of time not exceeding the maximum original review periods established in this Chapter.
- i. Conditions of Approval: The City Council may impose conditions on the site plan. Any condition imposed must relate directly to the approval criteria and standards and be necessary to meet the intent of this Chapter.

### H. APPROVAL CRITERIA AND STANDARDS:

Criteria and Standards: The Subdivision Administrator, the Planning and Zoning Commission and City Council shall review the site plan application to ensure that it complies with all of the criteria and standards below:

- 1. Site Configuration: Buildings and structures will meet or exceed setback standards, height and other dimensional standards and be appropriately placed in relation to natural features of the site.
- 2. Buildings: Buildings shall be designed, situated and constructed so as to conform to any applicable design criteria of the City. All buildings shall have a strong visual relationship and design compatibility between the building, the site, and adjacent development. The exterior appearances and mass of the building(s) shall complement the existing development and character within the surrounding area.
- 3. Impact on Surrounding Land Uses and Zoning: The proposed site plan will be harmonious with and not harmful or injurious to existing and planned uses in the immediate area. The proposed improvements will be coordinated with improvements serving the site and other properties in the area. The site plan shall meet the intent of this Chapter and the intent of the City Zoning Ordinance.
- 4. Preservation of Natural Features: The site plan shall demonstrate judicious effort to preserve the integrity of the land, natural topography, drainage, wetlands, watercourses, flood plains, and existing vegetation.
- 5. Public Services and Utilities: The site plans shall be served adequately with sanitary sewer, public water, and storm sewer and such utilities shall be provided in accordance with the recommendations of the Subdivision Administrator.
- 6. Signs: Proposed signs shall meet the requirements of all applicable City regulations and shall be generally complementary with surrounding properties and traffic operations. The size, location, design and lighting of the signs shall be considered in relation to adjacent sites, glare, traffic safety, and compatibility with adjoining properties.
- 7. Exterior Lighting: The site plan shall provide for exterior lighting that meets the following standards:
  - a. At the expense of the developer, all roads, driveways, sidewalks, parking lots and other common areas and facilities in unsubdivided and other developments shall be sufficiently illuminated to ensure the security of property and the safety of persons using such roads, driveways, sidewalks, parking lots and other common areas and facilities. Without limiting the generality of the foregoing standards, the following minimum standards shall apply:

- (1) For residential uses, lights shall be installed in parking areas containing five (5) or more parking spaces and shall be illuminated between dusk and dawn. For nonresidential uses, lights shall be installed in all parking areas containing five (5) or more parking spaces and shall be illuminated between dusk and dawn, whenever said premises are open for operation. "Open for operation" shall be construed to mean any time that a retail business is open for the sale of goods or services or a retail, office or industrial facility actually has employees working within or upon said premises, other than guards or watchmen. Lights shall not be more than fifteen feet (15') in height in residential zoning districts, and not more than thirty feet (30') in height in other zoning districts.
- (2) Where lighted areas are required, lighting shall be provided as follows:

	Minimum *	Maximum *
Residential zoning districts	1.0	2.0
Commercial zoning districts	1.0	3.0
Industrial zoning districts	2.5	5.0

\*Average ground level foot-candles

Average foot-candles at property line shall not exceed .5 foot-candles as measured at the property line.

- b. All lighting shall be constructed, positioned and maintained in such a way so as not to reflect light either directly or indirectly onto adjacent properties.
- 8. Parking and Loading: The number, location and dimensions of all parking and loading spaces and the design of parking and loading areas shall meet the requirements of all applicable City regulations. All parking lots/areas are to have curb and gutter (B6.12). All commercial parking lots shall be constructed with a minimum of ten inches (10") of aggregate base course type b, two inches (2") of hot-mix asphalt binder course, and one and one-half inches (1 <sup>1</sup>/<sub>2</sub>") of hot-mix asphalt surface course. It will be at the Subdivision Administrator's discretion as to whether "heavy-duty" pavement will be necessary for any truck traffic, and what that pavement cross-section will consist of.
- 9. Landscaping and Screening: Landscaping and screening on the site shall be provided in accordance with the following requirements:
  - a. Landscaping and screening shall be provided along property lines between nonresidential uses and residential uses.
  - b. All yards and open spaces surrounding buildings, parking lots, access drives and streets shall be landscaped with trees and shrubs, and shall be maintained by the property owner.

- c. Trees in front yards shall be planted at a ratio of at least one (1) two and one-half inch (2 <sup>1</sup>/<sub>2</sub>") caliper shade tree (as measured twelve inches (12") above grade) for every thirty feet (30') of street frontage. Strategic grouping of trees is encouraged, as opposed to even spacing of trees.
- d. Yard areas shall be landscaped at a ratio of at least one (1) shrub or tree for every ten feet (10') of the principal building's nearest exterior wall. Strategic grouping is also encouraged.
- e. For parking areas greater than thirty (30) spaces, a minimum of twenty (20) square feet of interior landscaped area per space shall be provided. In order to qualify as an interior landscaped area, said area shall be located wholly within or projecting inward from the boundaries of the parking area.
- f. All trash enclosure areas and containers shall be fully screened from streets and adjacent properties with a six foot (6') high sight-obscuring fence, wall or landscaped area placed around said facility. All trash enclosures must be placed on a concrete pad sufficient to support said enclosure to the satisfaction of the Zoning Administrator.
- g. All permanent outdoor storage areas of goods, products, materials, supplies, machinery equipment or overnight parking of commercial vehicles shall not be allowed in the front yard. Where permitted, permanent outdoor storage areas of goods, products, materials, supplies, machinery equipment or overnight parking of commercial vehicles shall be enclosed to a height of eight feet (8') above grade and screened to an opacity of not less than seventy five percent (75%). These requirements can be achieved by using any one or a combination of the following methods:
  - (1) The storage area can be screened with trees having a leafy structure or with fences having structural components through which only twenty five percent (25%) of the image is visible.
  - (2) Fences, berms and/or landscaping can be installed to a height where only twenty five percent (25%) of the image is visible.
  - (3) Fences, berms and/or landscaping can be installed having a width or design where only twenty five percent (25%) of the remaining horizontal image is visible.
- 10. Vehicular Access and Circulation: The site plan shall provide for the safe, convenient, un-congested and well defined access and circulation of vehicles (B-40 vehicles with a turning radius of sixty feet (60')). Access to the site shall be designed to minimize traffic conflicts. All curb returns shall be a minimum twenty five foot (25') radius (measured from back of curb). All streets and driveways shall be designed to meet all applicable City regulations. All vehicular aisle widths shall be a minimum of twenty-six feet (26'), and shall encompass the entire perimeter of all buildings. Parking stalls shall be a minimum 18' deep by 9' wide. Furthermore, all gates (powered or manual) to a site shall have padlocks or bypass opening devices approved and used by the Fire Department. The clear opening through the gate shall be a minimum of two feet (2') wider than the traveled way and shall open inward.

- 11. Non-motorized Transportation Access and Circulation: Safe, convenient, and aesthetically pleasing pedestrian and bicycle circulation routes shall be provided within and accessing the site. There shall not be any utility structures built within the limits of any pedestrian or bicycle paths, and there shall be a minimum two foot (2') clearance from any pedestrian or bicycle paths to utility structures.
- 12. Drainage and Storm Water Management: The site plan shall provide for site surface drainage and storm water management facilities that meet or exceed the applicable standards of the City.
- 13. Driveways: Driveways in commercial areas shall be a minimum of one hundred feet (100') from another driveway or intersection. Depending on the intended use of the property, a traffic analysis may be required in order to verify the placement of driveways, as well as the need for additional off-site roadway improvements (turning lanes/acceleration lanes, etc.). All commercial driveways within the City right-of-way shall be constructed of Portland cement concrete (Class SI) per the City Driveway Ordinance. Concrete for such sidewalks shall conform to the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction.
- 14. Fire Department Connection: A five inch (5") Storz Fire Department Connection (FDC) with a twenty-two and one-half degree (22.5°) elbow toward the ground shall be provided for the sprinkler/standpipe system for all buildings. The FDC shall be capable of supplying the entire system, and shall be located and visible on a street front or location approved by the Watseka Fire Department. The FDC shall be located between two feet (2') and three and one-half feet (3 ½') from the ground to the centerline on the FDC inlet. There shall be a minimum clearance of five feet (5') on either side with no obstructions to the front of the FDC. A remote FDC shall be required if the distance from the apparatus to the FDC is greater than seventy-five feet (75').
- I. AMENDMENTS TO APPROVED PLANS:
- (A) Amendments: An applicant may request a change in an approved site plan. A change in an approved site plan which results in a major change shall require approval of the amendment by the City Council upon after recommendation on the matter by the Planning and Zoning Commission. All amendments shall follow the procedures and conditions herein required for original application submittal and review. A change considered only a minor change shall require only the submission of a revised plan to the Subdivision Administrator.
- (B) Determination of Major and Minor Changes: A determination of whether a change in an approved site plan is a major or minor change shall be made by the Subdivision Administrator according to the guidelines below. The applicant may appeal the determination of a major change to the Planning and Zoning Commission in writing at least seven (7) days prior to the next regular scheduled Planning Commission meeting. The Planning and Zoning Commission will vote to either uphold or reverse the

determination. If the determination is upheld then the amendment shall proceed only according to the procedures set forth herein.

- 1. Guidelines for Major Change:
  - a. A change in the original concept of the development;
  - b. A change in the original use or character of the development;
  - c. A change in the type of dwelling unit as identified on the approved site plan;
  - d. An increase in the number of dwelling units planned;
  - e. Rearrangement of lots, blocks, or building tracts;
  - f. A change in the character or function of any street;
  - g. A reduction in the amount of land set aside for common open space;
  - h. An increase or decrease in any building area over five percent (5%);
  - i. An increase or decrease over five percent (5%) in any building height;
  - j. Significant variations in the design layout of the site plan, such as, but not limited to, the deletion, relocation or addition of on-site improvements such as drives, parking lots, structures, berms, curbs, landscaping, utilities.
- 2. Guidelines for Minor Changes:
  - a. Any minor variations in layout that do not constitute a major change;
  - b. An increase or decrease in any building area less than five percent (5%);
  - c. An increase or decrease less than five percent (5%) in any building height;
  - d. Changes in the species of required trees, shrubs or ground cover designated on the site plan.

### § 5.25 LAND DEVELOPMENT REVIEW AND CONSTRUCTION OBSERVATION FEES.

### A. LAND DEVELOPMENT REVIEW AND CONSTRUCTION OBSERVATION FEES

All costs incurred by the City for the review of plans and specifications by the Subdivision Administrator or his/her designee shall be paid by the subdivider/developer/applicant. Additional services required for complex projects including but not limited to outside legal consultants, special inspectors, or specialists in the stormwater, building, construction, ecology, planning, or related fields shall be paid for by the developer.

### B. <u>PLAT FEES</u>

A fee shall be paid to the City Clerk at the time of submission of the Preliminary and Final Plat. No Plat shall be reviewed by the Planning and Zoning Commission without a receipt from the City Clerk being exhibited by the owner, subdivider or developer showing full payment of the fee. Payment of the fee is in no way contingent on whether or not the Plat of Subdivision or Development submitted is approved or disapproved. The fee shall be as follows:

**Preliminary Plat** - One Hundred Dollars (\$100.00) plus one dollar (\$1.00) for each lot within each Preliminary Subdivision or Development Plat submitted.

**Final Plat** - One Dollar (\$1.00) for each lot within each Subdivision or Development Plat submitted with a minimum fee of Fifty Dollars (\$50.00).

In the event that a Plat calls for development of Residential property, either as Two-Family or Multiple-Family, or as Business or Industrial property, then the fee shall be determined as Two Dollars (\$2.00) per each dwelling unit or Ten Dollars (\$10.00) per acre for Businesses or Industrial Property.

# **DESIGN STANDARDS**

## § 5.30 CONFORMANCE TO APPLICABLE RULES AND REGULATIONS.

- (A) In addition to the design standards established herein, all subdivision site plan plats shall comply with the laws, ordinances, rules and regulations set forth by this section.
- (B) The provisions of ILCS Ch. 65, as amended from time to time.
- (C) The Zoning Ordinance and all other applicable ordinances of the appropriate jurisdiction, including but not limited to, the Stormwater Management Ordinance, Flood Hazard Prevention, and Sediment and Erosion Control Regulations, all as amended from time to time.
- (D) The Comprehensive Plan and Official Map of the City or any portions thereof.
- (E) The special requirements of this chapter and any rules of the City, the Environmental Protection Agency of the state and the County Public Health Department relating to lot size and lot elevation if the subdivision site plan is not served by public water or by a public sewer and provision for one or both of these services has not been made.
- (F) The rules of the State Division of Highways relating to safety of access and the preservation of the public interest and investment in the streets if the subdivision site plan or any lot contained therein abuts a state truck highway or connecting street.
- (G) All design, dimensions, materials and methods of construction of improvements not specifically established in this chapter shall conform to applicable federal, state and City regulations which are located in the office of the City Clerk.

## § 5.31 STREETS AND ALLEYS.

(A) Streets shall be designed and located in relation to existing and planned streets, to topographical conditions and natural terrain features such as streams and existing tree growth, to public convenience and safety, and in appropriate relation to the proposed uses of land to be served by such streets. It is the intent that the street system, whether public or private, encourage safe and efficient traffic flow (B-40 vehicle with a turning radius of sixty feet (60')), as well as provide safe vehicular storage space for stopping and turning movements so as to not

conflict at intersecting streets or driveway entrances.

- (B) (1) All streets shall be properly integrated with the existing and proposed system of thoroughfares and dedicated rights-of-way as established on the Official Map.
  - (2) All thoroughfares shall be properly related to special traffic generators such as industries, business districts, schools, churches and shopping centers, to population densities and to the pattern of existing and proposed land uses.
  - (3) Minor streets shall be laid out to conform as much as possible to the topography, to discourage use by through traffic, to permit efficient drainage and utility systems, and to require the minimum number of streets necessary to provide convenient, safe access to property.
  - (4) The rigid rectangular gridiron street pattern need not necessarily be adhered to and the use of curvilinear streets shall be encouraged where such use will result in a more desirable layout. The use of cul-de-sacs and u-shaped streets is not encouraged.
  - (5) Proposed streets shall be extended to the boundary lines of the parcel to be subdivided, unless prevented by topography or other physical conditions, or unless in the opinion of the Planning and Zoning Commission, extension is not necessary or desirable for the coordination of the layout of the subdivision site plan with the existing layout or the most advantageous future development of adjacent parcels.
  - (6) In business and industrial developments, the streets and other accessways shall be planned in connection with the grouping of buildings, location of rail facilities, and the provision of alleys, truck loading and maneuvering areas so as to minimize conflict of movement between the various types of traffic.
  - (7) Dual access shall be provided in any subdivision site plan beginning with the initial construction and shall be maintained in suitable condition for passage of private and emergency vehicles.
- (C) Where a subdivision site plan borders on or contains a railroad or highway, the Planning and Zoning Commission may require a street approximately parallel to and on each side of such railroad or highway, at a distance suitable for the appropriate use of the intervening land, for park purposes in residential districts or for commercial or industrial purposes in appropriate districts. Such distances shall also be determined with due regard for the requirements of approach grades and future grade separations.
- (D) Where a subdivision site plan abuts or contains an existing or proposed highway or major thoroughfare, as shown on the Comprehensive Plan or Official Map, the Planning and Zoning Commission may require marginal access streets, reverse-frontage with screen planting contained in a nuances reservation, at least ten feet wide, along the rear property line; deep lots with rear service alleys; or such other treatment as may be necessary for adequate protection of residential properties and to afford separation of through and local traffic.
- (E) (1) Street right-of-way widths shall be as specified in Appendix B: Street Design Guidelines.

- (2) Reserve strips controlling access to public utilities or streets shall be prohibited.
- (3) When connecting street lines deflect from each other at any one point by more than ten degrees, they shall be connected by a curve with a radius adequate to insure clear sight distances.
- (F) Street grades shall provide proper relation between the street and the first floor elevation of the houses or buildings to permit convenient and economical access to and drainage of the lots. Driveway slopes shall be between two percent and eight percent (2%-8%).
- (G) Street gradients shall be as specified in Appendix B: Street Design Guidelines.
- (H) Tangents (minimum length one hundred feet (100')) shall be introduced between horizontal reverse curves on all streets. Tangents (minimum length fifty feet (50') measured from the right-of-way of the intersecting road) shall be introduced at the end of all curvilinear roads at intersections.
- (I) (1) Streets shall be laid out so as to intersect as nearly as possible at right angles and no new street shall intersect any existing street at less than sixty (60) degrees. A proposed intersection of two (2) new streets at an angle of less than seventy-five (75) degrees shall not be acceptable. Not more than two (2) streets shall intersect at any one (1) point unless specifically approved by the City.
  - (2) Street jogs with centerline offsets of less than one hundred fifty feet (150') shall be avoided.
  - (3) All street intersections should encourage safe traffic flow.
- (J) No street names shall be used which will duplicate or be confused with the names of existing streets. Existing street names shall be projected whenever possible. Street names shall be subject to the approval of the City.
- (K) (1) Alleys shall be provided in commercial, business and industrial districts, except that the City may waive this requirement where other definite and assured provisions are made for service access, such as off-street loading, unloading and parking, consistent with and adequate for the uses proposed and in accordance with the provisions of the Zoning Ordinance.
  - (2) The width of alleys shall be as specified in Appendix B: Street Design Guidelines.
  - (3) Alleys in residential areas shall not be permitted, except where deemed necessary by the City.
  - (4) Alley intersections and sharp changes in alley alignment shall be avoided, but where necessary, corners may be cut off sufficiently to permit safe vehicular movement.
  - (5) Dead-end alleys shall be avoided where possible, but if unavoidable they shall be provided with adequate turnaround facilities at the dead-end, as determined by the Planning and

Zoning Commission.

## § 5.32 EASEMENTS.

- (A) Easements shall be provided for drainage and utilities on all side–yard and rear-yard lot lines. These drainage and utility easements shall be at least 5 feet (5') wide on all side-yard lot lines and ten feet (10') on all rear-yard lot lines.
- (B) Easements shall be designed to provide continuity from block to block. No building shall be constructed upon any easement.
- (C) All one hundred (100) year overflow routes shall be contained within an easement referred to as "surface overland flow easements" on the plat of subdivision. Overland drainage easements shall be wider than twenty feet (20') if needed to convey the one hundred (100) year overland drainage flow during emergency conditions while maintaining a minimum one foot (1') of freeboard from all structures.
- (D) Where a subdivision site plan is traversed by a water course, drainage way, channel or stream, there shall be provided a storm water easement or drainage right-of-way conforming substantially with the line of such water course and shall include such further width or construction, or both, as will be adequate for the purpose and as determined by the City. Parallel streets or parkways may be required in connection therewith.

## § 5.33 BLOCKS.

- (A) The lengths, widths, and shapes of blocks shall be determined with due regard to:
  - (1) Provision of adequate building sites suitable to the special needs of the types of uses contemplated.
  - (2) Zoning requirements as to lot sizes and dimensions within the corporate limits of the City.
  - (3) Needs for convenient access, circulation, control and safety of street traffic.
  - (4) Limitations and opportunities of topography.
- (B) Block lengths shall not exceed twelve hundred feet (1200'), or be less than six hundred feet (600'). Cul-de-sacs shall not exceed six hundred feet (600') in length.
- (C) Pedestrian crosswalk easements not less than ten feet (10') wide shall be required by the Planning and Zoning Commission to provide for pedestrian circulation or access to schools, playgrounds, shopping centers, transportation and other community facilities.
- (D) Blocks or portions thereof intended for commercial or industrial use shall be designed as such, and the plan shall show adequate off-street areas to provide parking, loading docks and other such facilities as may be required by the Zoning Ordinance.

# § 5.34 LOTS.

- (A) The lot size, width, depth, shape and orientation shall be appropriate for the location of the subdivision site plan and for the type of development and use contemplated. Lot dimensions shall conform to the requirements of the Zoning Ordinance.
- (B) (1) Residential lot sizes, regardless of jurisdictional boundary, shall meet the minimum requirements herein established and shall comply with the rules and regulations of the State Department of Public Health and the County Health Department.
  - (2) Lots abutting a water course, drainage way, channel or stream shall have a minimum width or depth as required to provide an adequate building site and to afford the minimum usable area required in this ordinance or the Zoning Ordinance for front, rear and side yards.
  - (3) Depths and widths of lots or properties reserved or laid out for commercial, business or industrial purposes shall be adequate to provide for the off-street service and parking facilities required in the Zoning Ordinance.
- (C) All lots shall abut on a publicly dedicated street.
- (D) Double frontage and reverse frontage lots shall be avoided except where essential to provide separation of residential development from highways or thoroughfares or to overcome specific disadvantages of topography and orientation. A planting screen easement of at least ten feet (10'), and across which there shall be no right of vehicular access, shall be provided along the rear lot lines of lots abutting such highways and major thoroughfares.
- (E) Side lot lines shall be substantially at right angles or radial to street lines.
- (F) Where residential lots fronting on thoroughfares are permitted by the Planning and Zoning Commission, they should be platted with extra depth to permit generous distances between the buildings and such traffic ways. Where lots front on thoroughfares, the normal building setback line shall be increased by an additional twenty feet (20'). Business, commercial, or industrial buildings in residential blocks shall be provided with setbacks at least equal to the setback of the residential properties in that block and shall comply with all applicable zoning requirements.
- (G) Lots shall be laid out so as to provide positive drainage away from all buildings, and individual lot drainage shall be coordinated with the general storm drainage pattern for the area. Drainage shall be designed so as to avoid concentration of storm drainage water from each lot to adjacent lots.
- (H) Lots at right angles to each other shall be avoided wherever possible, especially in residential areas.
- (I) Corner lots for residential use shall have extra width to permit appropriate building setback from and orientation to both streets.
- (J) Lot lines shall follow municipal boundary lines whenever practicable, rather than cross them.

### § 5.35 BUILDING SETBACK LINES.

Building setback lines in residential areas of new subdivisions shall conform to the front, side and rear yard provisions of the Zoning Ordinance.

## § 5.36 CONSTRUCTION ENTRANCES.

- (A) All developments of property which are subject to this chapter shall, whenever practicable, provide a construction entrance (per the Illinois Urban Drainage Manual) over the private property being developed for the use of all vehicles and equipment used in connection with such development and the making or delivery of materials and supplies thereto. The construction entrance shall be continuously maintained by the developer in a dust free manner.
- (B) Every construction entrance herein required shall be depicted on the final development plans.

## **REQUIRED LAND IMPROVEMENTS**

### § 5.45 INDEMNIFICATION AND INSURANCE REQUIREMENTS.

No subdivision development plan shall be approved by the Planning and Zoning Commission unless the applicant has included the following indemnification and insurance requirements on the plan:

- INDEMNIFICATION AND INSURANCE REQUIREMENTS The Applicant and the Contractor shall indemnify the City of Watseka ("Municipality") and the Municipal Engineer, their officials, officers, employees, and agents acting in the scope and course of their employment and shall protect them from claims arising out of or in connection with any operation of the Applicant or Contractor including personal injury, death; or, for destruction of or damage to property to the full extent allowed by the laws of the State of Illinois and not beyond any extent which would render these provisions void or unenforceable.
- 2. The Applicant and Contractor shall also protect the Municipality and the Municipal Engineer by including them as additional insured on their Comprehensive General Liability Insurance Policy. The minimum level of insurance shall be as specified in Section 100 GENERAL REQUIREMENTS AND COVENANTS of the Standard Specifications for Road and Bridge Construction by the Illinois Department of Transportation. "Claims Made" type policies are unacceptable. Certificates of Insurance shall be filed and approved by the Municipality and the Municipal Engineer, a minimum of five (5) days before starting construction. Failure of the Municipality and Municipal Engineer to request said Certificate of Insurance shall in no way be considered a waiver of this requirement.
- 3. PERSONAL LIABILITY In carrying out any of their duties or in exercising any power or authority granted to the Municipal Engineer by the Municipality, there shall be no personal liability upon the Municipal Engineer or their authorized representative, it being understood that in such matters they act as agents and representatives of the Municipality. By beginning work, the Applicant and Contractor covenant and agree that they each shall neither

commence nor prosecute any action or suit whatsoever against the Municipal Engineer or Municipality, their officials, officers, employees or agents in any action or omission done or not done in the course of their duties. Further, by beginning work, the Applicant and Contractor agree to pay all attorney fees and all costs incurred by the Municipality or Municipal Engineer, its officials, officers, employees or agents because of any action or suit in violation of this Article.

- 4. HOLD HARMLESS The Applicant and Contractor doing work, shall hereby defend, indemnify, keep, and save harmless the Municipality and the Municipal Engineer, and their respective legislative and council members, representatives, agents, and employees in both individual and official capabilities against all suits, claims, damages, losses, and expenses, including attorney's fees, caused by or growing out of, or incidental to, the performance of the work by the Applicant or the Contractor to the full extent allowed by the laws of the State of Illinois and not beyond any extent which would render these provisions void or unenforceable.
- 5. CONSTRUCTION OBSERVATION All materials and each part of detail of the work portrayed on these Plans may be subject at any time to observation by the Municipal Engineer. Observation may be made at the site, or at the source of material supply, whether that is at a mill, plant, ship, etc. The Municipal Engineer shall be allowed access to all parts of the Work and shall be furnished with such information and assistance by the Applicant and Contractor as needed to perform these observations. The Contractor shall be held strictly to the true intent of the Plans in regard to quality of materials and workmanship.

The Municipal Engineer is not responsible for safety on the work site nor does the Municipal Engineer have any duty to review in any manner the adequacy of the Contractor's safety measures incident to the work portrayed on these Plans.

The Municipal Engineer is not responsible for any construction means, methods, techniques, sequences or procedures for the work portrayed on these Plans.

The Municipal Engineer has no charge of the construction and has no right, duty, or responsibility to stop work because of any Contractor's failure to follow proper safety precautions. The Municipal Engineer is not responsible for the acts, errors or omissions of any Applicant, Engineer or Contractor, or any of their agents or employees or any other person performing any of the Work portrayed on these Plans.

The Contractor shall, upon written notice from the Municipality, remove or uncover such portions of the finished Work, as it may direct, before the final acceptance of the same. After examination, the Contractor shall restore said portion of the Work to the standard required by these Plans. The expense of uncovering, removing and replacement shall be borne by the Applicant and/or the Contractor; and, not the Municipality nor the Municipal Engineer.

Any reference to "supervision" by the Engineer in the Illinois Department of Transportation, Standard Specifications for Road and Bridge Construction, or any other referenced documents shall be changed to "observation".

### § 5.46 MONUMENTS AND MARKERS.

- (A) Iron rods nine-sixteenths inches (9/16") in diameter and not less than thirty inches (30") long shall be placed at all corners and angle points of the outside boundary but no further than onequarter (1/4) mile apart. Iron rods nine-sixteenths inches (9/16") in diameter and not less than thirty inches (30") long shall also be set at all corners of lots.
- (B) Each lot shall have a marker board with the lot # on it (built on a 4"x4" post) placed in the center of the lot at the front property line, and shall extend four feet (4') above finished grade.

## § 5.47 STREET IMPROVEMENTS.

- (A) Street improvements shall be provided in each new subdivision site plan in accordance with the regulations set forth in this section and the tables of minimum standards and typical section as set forth as Appendices B and C respectively. The regulations for street improvements are as follows:
  - (1) All streets in single-family residential zoning areas shall be constructed in accordance with this chapter.
  - (2) All streets in multi-family and commercial zoning areas shall be constructed in accordance with collector thoroughfare standards.
  - (3) For industrial and other special use areas as determined by the Planning and Zoning Commission and the Subdivision Administrator.
  - (4) All street construction, including those listed above, shall conform to the requirements of the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, latest edition.
- (B) It should be noted that all curb returns shall have a minimum radius of twenty-five feet (25') (measured from the back of curb).
- (C) It should be noted that no building permit will be issued until such time that the roadway bituminous binder course has been installed.

### § 5.48 UTILITIES.

- (A) Sanitary sewer systems shall be designed in accordance with the requirements of the City and the State Environmental Protection Agency. No oxidation ponds, seepage lagoons or holding lagoons will be constructed except upon specific approval of the Subdivision Administrator. Sewers may be placed only in public rights-of-way or in easements.
- (B) The drainage system within the development shall be designed to anticipate and provide capacity for drainage from naturally tributary land. Such design shall provide adequate capacity for transmitting such drainage from the other tributary areas on the basis of the

ultimate development of such other tributary areas, but such drainage system need not make provision for the retention of drainage from other tributary areas. Drainage, storm water detention and compensatory storage calculations shall be submitted with the plans as required by the Subdivision Administrator. Where storm sewer discharges into an open ditch or natural water course, a concrete headwall may be required according to standards from the Subdivision Administrator.

(C) All residential, commercial, industrial and community facility buildings or structures shall be served by an adequate water supply and distribution system. The design of the system shall be in accordance with the requirements of the State Department of Public Health.

# § 5.49 PUBLIC UTILITIES.

(A) All utility lines for telephone, cable television and electric service shall be placed entirely underground (minimum depth of twenty-four inches (24") from finished grade). Said conduits or cables shall be placed within easements or dedicated public ways, in a manner which will not conflict with other underground services. Further, all transformer boxes shall be located so as not to be unsightly or hazardous to the public. The utility lines shall be parallel to and not less than twelve inches (12") from the property lines. An "x" shall be scribed into the curb at all road crossing locations. Corner markers as required in § 5.46 of this chapter shall not be disturbed by the installation of utility lines.

## § 5.50 SIDEWALKS.

- (A) Concrete sidewalks shall be provided throughout the subdivision site plan to serve the anticipated needs of its residents. Sidewalks shall be located in accordance with proper land planning procedures and with due regard for public safety and anticipated concentration of pedestrian traffic.
- (B) All sidewalks shall be five feet (5') wide and typically be installed one foot (1') from the property line (within the right-of-way). Where practicable, all sidewalks shall be located so that a parkway separates the curbs from the sidewalk.
- (C) Notwithstanding the fact that installation of sidewalks is required to be completed within two (2) years of final plat approval, the corporate authorities may, upon application, grant extensions for up to six (6) months for such sidewalk completion. No more than four (4) such extensions may be granted. No extension shall be granted unless or until the applicant's (developer's) subdivision security bond or letter of credit has been extended to remain valid during the term of any such extension. Nothing herein contained shall be deemed a waiver of the applicant's (developer's) responsibility to complete the sidewalks, and provided further that if the applicant (developer) transfers ownership of any lot the sidewalk of which has not been accepted by the City, the applicant (developer) and the owner of the lot shall be jointly and severally responsible for the completion and maintenance of the sidewalk.

- (D) There shall not be any utility structures built within the limits of any pedestrian or bicycle paths, and there shall be a minimum two foot (2') clearance from any pedestrian or bicycle paths to utility structures.
- (E) All sidewalks must be in conformance with the latest ADA requirements.

### § 5.51 LANDSCAPING.

- (A) In the event that topsoil is removed, prior to, during or after construction, it shall be replaced to a depth not less than four inches (4") in all lawns and planting areas. Said topsoil shall be provided and spread by the general contractor or subcontractor.
- (B) All unpaved areas within the street right-of-way shall be seeded or restored with natural plantings approved by the City. Before the release of the two (2) year maintenance bond can be recommended by the Subdivision Administrator, all unpaved areas between the edge of the road pavement and the right-of-way line must support an adequate mat of grass. Provisions shall be made to assure the growth of all landscaping.
- (C) Notwithstanding any other provision specified herein, parkway trees are to be planted in the parkway in accordance with the City tree code with at least two (2) street trees per lot and four (4) street trees on a corner lot.
- (D) Protective screen planting may be required to secure a reasonably effective physical barrier between residential properties and adjoining uses to minimize adverse conditions of sight and sound. The screen planting plan shall be prepared by a landscape architect and shall meet the approval of the Planning and Zoning Commission.
- (E) All stormwater basins shall be designed to enhance water quality, control erosion and sedimentation, and discourage nuisance waterfowl. All storm water basins shall be landscaped as designated in the City Stormwater Management Ordinance.

### § 5.52 DRIVEWAYS.

Except where improved alleys are existing, prior to the issuance of an occupancy permit, every subdivided lot shall have a driveway paved with an asphalt and/or concrete surface minimally extending from an adjacent public street to the front set back line of the principal structure located on the lot. Driveway slopes shall be between two percent and eight percent (2%-8%).

### § 5.53 TRAFFIC-CALMING DEVICES.

The City may, at its discretion, require the use of traffic-calming devices in the design of roadways within a subdivision.

## § 5.54 FINAL PLAN APPROVAL REQUIREMENTS.

(A) Upon receiving approval of the development plans by the Subdivision Administrator, the developer's engineer shall submit to the Subdivision Administrator five (5) signed and sealed full-size (24"x36") sets and four (4) signed and sealed reduced-size (11"x17") sets of the final plans, as well as one (1) copy of the final plans and one (1) copy of the plat of subdivision in electronic format as described below:

## Media Type

Files may be submitted on the following media types, which are IBM and Microsoft compatible:

CD-ROM DVD Flash or "Jump" drive

## File Types

All submissions must be in a drawing file format compatible with AutoCAD (current version). If the drawing file is in a micro station format (\*.dgn) then a text file must accompany the drawing. This text file must reference the micro station layer number and give a corresponding definition for that layer. ESRI shape files or personal geodatabases are also acceptable.

### General Drawing Requirements

The drawing must be drafted at full scale and will contain all existing and proposed objects that are contained in the construction plans.

All files shall be included for submittals. Check that x-referenced or attached files are also submitted.

All utility structures will be drawn as a block with an insertion point. All utility structures shall have a unique block name for the different types of structures.

Layers will be descriptive and numerous enough as to separate utility types as well as determining proposed from existing.

All utilities, which include a direction of flow, will be drafted in the direction of that flow.

All pipes will be drafted such that a single line is drawn and snapped from the center of structure to the center of next structure. Break pipes at structures.

All pipes connected to other pipes without a structure shall also be snapped.

All pipe sizes are to be included as text labels or in a schedule somewhere on the drawing.

## Specific Utility Requirements

## Storm Sewer

Include the following structures as blocks in addition to the storm pipe: Manhole Inlet Catch Basin Cleanout Flared End Section

### Sanitary Sewer

Include the following structures as blocks in addition to the sanitary pipe: Manhole Grease Trap Air Release Valve Lift Stations

Include and differentiate gravity and forced sewer pipes.

### Water System

Include the following structures as blocks in addition to the water pipe: Valve Reducer Hydrant Meter Vaults Wells

Include and differentiate distribution, service and private pipes.

### Parcels

Include any Plat of survey or Plat of Subdivision in one of the accepted drawing file formats.

## Lights

Include the following structures as blocks in addition to the electrical wire runs: Light Pole Control Box

## **ENGINEERING SPECIFICATIONS**

### § 5.60 STANDARDS.

- (A) The applicant shall install storm and sanitary sewers, a water supply system, detention basins, street grading and pavement, alleys, pedestrian-ways, public utilities, and street lighting in accordance with applicable ordinances and standards of construction of the City.
- (B) No subdivision of land shall be approved by the corporate authorities without receiving a statement signed by the Subdivision Administrator certifying that the improvements described

in the applicant's plans and specifications, together with any agreements, are in substantial compliance with ordinances of the City and that they comply with the following standards in this subchapter.

# § 5.61 SEWERS.

- (A) Sanitary sewers and sanitary sewer services shall be installed to serve all properties in the subdivision. Sanitary sewerage facilities shall connect with public sanitary sewerage systems. Such improvements shall be installed in accordance with the minimum standards and specifications as contained in Appendix D or as approved by the City Council after recommendation by the Planning and Zoning Commission.
- (B) Storm sewers shall be installed to serve all properties in the subdivision. Sump pump discharge conveyance pipes, either separate or in combination with storm sewers, shall be installed unless it can be empirically demonstrated that site specific soils exhibit an infiltration rate greater than or equal to  $3.2 \times 10^{-3}$  cubic feet per second per square foot. Generally within rear yard drainage easements, sump pump discharge conveyance systems shall consist of an inlet provided at alternating lot corners with capped service tees for each adjacent lot and installed so as not to interfere with other public utilities. Such improvements shall be installed in accordance with the minimum standards and specifications as contained in Appendix E or as approved by the City Council after recommendation by the Planning and Zoning Commission.

## § 5.62 WATER SUPPLY.

(A) Water distribution facilities, including piping, fittings, hydrants, valves, valve vaults, water services and all other appurtenances adequate for fire and domestic needs shall be installed to serve all properties within the subdivision. Such improvements shall be installed in accordance with the minimum standards and specifications as contained in Appendix F or as approved by the City Council after recommendation by the Planning and Zoning Commission. At no time shall anyone other than City authorized personnel operate valves or hydrants.

## § 5.63 TRENCH BACKFILL.

- (A) All trenches caused by the construction of sewers, sewer services, water mains, water services, and in excavation around catch basins, manholes, inlets and other appurtenances which occur within two feet (2') of the limits of existing or proposed pavements, sidewalks and curb and gutters shall be backfilled and properly compacted with trench backfill material. When in the opinion of the Subdivision Administrator proper compaction of the trench cannot be obtained, a controlled low strength material (flowable fill) shall be utilized.
- (B) Trench backfill shall be compacted in place to ninety-five percent (95%) of maximum density at optimum moisture as determined by the Standard Proctor Test, and as specified in the Appendices to this chapter, for the specific type of improvement.

### § 5.64 STREET IMPROVEMENTS.

- (A) The full width of the right-of-way shall be graded to the required section.
- (B) All unsuitable sub-base material shall be removed and shall be replaced with stable, compacted material in conformance with generally accepted engineering practices. Soil test reports are to be submitted to the Subdivision Administrator at the time of plan submittal. Sub-grade stability improvements may be required for soils with an IBR less than six (6) and at the discretion of the Subdivision Administrator. Lime stabilization may be utilized upon receipt of approval by the Subdivision Administrator, and must be in accordance with IDOT Sections 302 and 310.
- (C) Vertical curves shall be used whenever a change in centerline gradient occurs, except where the algebraic difference in gradients is one and one-half percent (1-1/2%) or less. The length of vertical curves shall be established on the basis of design, speed and stopping distance in accordance with standards obtainable from the Subdivision Administrator.
- (D) All pavement thicknesses, including surface, base courses and sub-base courses, shall be designed in accordance with the Illinois Department of Transportation standards. The minimum thicknesses for Class IV streets (as designated in IDOT's Bureau of Design and Environmental Manual) shall be as specified in Appendix C. Proof roll of the sub-base and base course shall be conducted and densities of the sub-base, base course, binder course and surface course of all streets shall be field verified during construction with nuclear methods by a Developer-employed testing service.
- (E) Class III streets (as designated in IDOT's Bureau of Design and Environmental Manual) require design data to be submitted to the Subdivision Administrator at the time of plan submittal and shall always meet or exceed the minimum requirements in Appendix C. However, alternate materials may be considered by the Planning and Zoning Commission, if recommended by the Subdivision Administrator, if structurally equal.
- (F) Curbs and gutters shall be constructed on all streets and shall be combination (integral) concrete. Curbs may be constructed integrally with the Portland cement concrete pavement. All curbs and gutters shall be installed in accordance with the minimum standards and specifications as contained in Appendix G or as approved by the City Council after recommendation by the Planning and Zoning Commission.

## § 5.65 ALLEYS.

(A) Alley pavement shall conform to the specifications of § 5.64.

## § 5.66 SIDEWALKS.

(A) Sidewalks shall be constructed of Portland cement concrete (Class SI) to a minimum thickness of five inches (5"), except at driveway locations where the thickness shall be a minimum thickness of six inches (6"). An aggregate base with a minimum thickness of four inches (4")

shall be provided under all sidewalks and shall be compacted as approved by the Subdivision Administrator. Concrete for such sidewalks shall conform to the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction.

(B) All sidewalk is to be constructed with 2"x6" forms.

## § 5.67 STREET LIGHTING IMPROVEMENTS.

(A) Street lighting improvements shall be installed to serve all properties within the subdivision. Such improvements shall be installed in accordance with the minimum standards as approved by the City Council after recommendation by the Planning and Zoning Commission.

### § 5.68 STREET SIGNS.

- (A) The Developer will pay for all street name and regulatory signs and install same in accordance with the Manual on Uniform Traffic Control Devices (latest edition) and consistent with the Traffic Control Plan. The cost of all signage is to be included in the Letter of Credit posted for the improvements. <u>All signs are to be installed within one (1) week of the construction of the roadway bituminous binder</u>. The signs shall meet the following requirements:
  - 1) Signs supports shall be UNISTRUT TELESPAR perforated sign posts 2"x 2", 14 gauge 13' long upright and 2 1/4" x 2 1/4" gauge 3' long or approved equal.
  - 2) A sign map is required for the development to be approved by the City Council & Police Department before signs are to be installed.
  - 3) Stop sign 30" diamond grade V.I.P. stop sign-local streets (reflective).
  - 4) Stop sign 36" diamond grade V.I.P. stop sign-collector/arterial streets (reflective).
  - 5) Stop sign 36" diamond grade V.I.P. stop sign-collector/arterial streets (reflective).
  - 6) Speed limit sign 24" x 30" diamond grade V.I.P. 25MPH on local streets (see attached).
  - 7) Speed limit sign 24" x 36" diamond grade V.I.P. collector/arterial (see attached).
  - 8) Residential street name signs green with 4" white letters 6" Double Extruded Blade (letters to be reflective) high intensity sheeting (18" Minimum Blade).
  - 9) Collector Streets and greater 6" white letters 8" Double Extruded Blade (letters to be reflective) high intensity sheeting (18" Minimum Blade).

## **INFRASTRUCTURE IMPROVEMENTS**

### § 5.75 CONSTRUCTION OBSERVATION.

- (A) All infrastructure improvements required for the development shall be observed during the course of construction by the Subdivision Administrator. All reasonable fees (including reasonable attorney's fees, engineering fees and/or staff cost) associated with such activity, including the reviewing of the plans and specifications for such improvements shall be paid for by the applicant. The applicant may be required to post a deposit with the City to cover the anticipated costs of such services before they are undertaken. In the event that these fees are not paid in a timely manner, the City may, at its sole discretion, draw down on any subdivision improvement/maintenance security which may be available.
- (B) The applicant shall give at least forty-eight (48) hour written notification to the Subdivision Administrator prior to the performance of any of the following:
  - (1) The construction of any roadway or street.
  - (2) The surfacing of any roadway or street.
  - (3) The installation of any curbing or gutters.
  - (4) The grading or backfilling of any open trench or excavation in which any utility facilities, including but not limited to, water lines, sewer lines, and electrical cables have been installed.
  - (5) The construction of any sidewalk.
  - (6) The filling, pressure testing, chlorination, or water sampling of any water main.
- (C) Within the forty-eight (48) hour notice period, the Subdivision Administrator may conduct onsite observation to determine that the proposed work complies with the engineering drawing. If, in the opinion of the Subdivision Administrator, the proposed work does not comply with such final drawings, the Subdivision Administrator shall have the authority to order that all such proposed work be terminated until such time as necessary steps are taken to correct any defects or deficiencies. Upon the correction of such deficiencies, the applicant shall again notify the Subdivision Administrator.
- (D) There shall be no development work on Sundays. Development work is allowed on Saturdays, but any necessary City inspections/testing observation must be pre-approved and coordinated with the Subdivision Administrator. Development work hours shall be 7:00 a.m. through dusk for Mondays through Fridays, and 8:00 a.m. through dusk for Saturdays.

## § 5.80 RECORD DRAWING ("AS-BUILTS") REQUIREMENTS.

### PART I GENERAL

Record drawings ("as-builts") are required to provide a means of schematic verification that the

intent of the approved engineering design has been met, thereby substantiating that the health, safety, and welfare aspects of the engineering design have been adequately provided by the construction of the project. Secondly, record drawings serve as a reference tool for future location and maintenance operations. The following requirements will be applied to each set of Record Drawings developed for the City of Watseka.

## 1.1 GENERAL RECORD DRAWING REQUIREMENTS

- A. The first sheet of the set will have a vicinity map in the upper right hand corner.
- B. Record drawings shall be submitted as revisions shown on the original Engineering Plans and as AutoCAD (current version) files. Record drawings will have the original data lined through and the Record data added to the drawing. At no time will the original data be accepted as the Record data.
- C. All record drawings for major projects are required to be 24" x 36" and shall bear the name, address, and telephone number of the firm preparing the drawings and the date the record data is added to the original drawings via the revision block.
- D. Surveyor's/Engineer's statement (with embossed or wet seal and with original signature on each sheet) shall verify that the record drawings reflect the true conditions in the field.
- E. "Record Drawing" shall be labeled on each sheet in 1-inch (1") high letters.
- F. Street names shall be shown on all streets.
- G. If the utility system is to be private (not to be dedicated to local authority), then indicate such on each sheet.
- H. The location and elevation of the benchmarks referenced will be shown on the drawing (and should be the same bench mark datum as the original approved design plans). If the referenced benchmarks are not within the project limits, then complete descriptions of locations must be provided.
- I. Show all easements within the project limits on the record drawings.

### 1.2 DETENTION POND RECORD DRAWING REQUIREMENTS

- A. Topographic map of the detention area.
- B. Spot elevations on top of bank to confirm minimum design bank elevations as well as spot elevations on any overflow weir.
- C. Observed water elevation at date of the record drawing for wet bottom basins.
- D. Location of top of bank and existing water edges at time and date of taking elevations.
- E. Spot elevations on the bottom of dry bottom basins, or, if requested by the Subdivision Administrator, for wet bottom basins.
- F. A stage/storage table showing the design and as-constructed pond volumes and

release rates.

G. A signed/sealed statement by a Profession Engineer that the detention pond(s) provides the required detention storage and does not exceed the allowable outflow rate(s) per the approved construction plans and hydrology study. If significantly different than the approved drawings (as determined by the Subdivision Administrator), the engineer must submit a revised hydrology study using the as-constructed conditions in order to document this statement.

## 1.3 WATER SYSTEM RECORD DRAWING REQUIREMENTS

- A. Locate all valves, services (b-boxes), and fire hydrants in two directions (station and offset).
  - 1. Locations shall be perpendicular to the right-of-way and parallel to the water main.
    - a. Lot lines may be used to locate water services.
    - b. Permanent structures that are properly located may also be used.
    - c. Radial ties are not acceptable.
  - 2. All horizontal distances shall be shown to the nearest foot. All vertical distances shall be shown to the nearest tenth of a foot.
- B. Show all materials, sizes, and types of valves, pipes, and special fittings (crosses, tees, reducers, etc. not elbows).
- C. Elevations shall be given for the top of all structure frames/lids and for the top of all pipes entering/exiting each structure.
- D. Special detail drawings will be required where installations are not shown on approved engineering drawings for whatever reason or where required for clarity.
- E. Show location and elevation for pipes where bury depths are greater than six feet (6').
- F. Details for water services deviating from typical installation details of the approved engineering plans shall be noted on the record drawings (i.e., instances where the corp stop location is not evident).

### 1.4 SANITARY SEWER SYSTEM RECORD DRAWING REQUIREMENTS

- A. Locate all wyes, cleanouts and manholes in two directions in the same manner as 1.2 above.
- B. Horizontal dimensions shall be to the nearest foot. Vertical elevations shall be to the nearest hundredth of a foot.
- C. Identify the length, size, material, and slope of all pipe (i.e., 300 feet of 8" PVC SDR 35 at 0.4%).
- D. Elevations shall be given for the top of all manhole covers and for the inverts of all pipes entering/exiting each manhole.

- E. Service laterals are to be identified with location of end of service/plug (station and offset measured upstream).
- F. Details for drop manholes deviating from the details on the approved engineering plans shall be indicated on the record drawings.

# 1.5 FORCE MAINS RECORD DRAWING REQUIREMENTS

- A. Locate all valves and manholes in two directions in the same manner as 1.2 above.
- B. Show all materials, sizes, and types of valves, pipes, and special fittings (crosses, tees, etc. not elbows).
- C. Elevations shall be given for the top of all structure frames/lids and for the top of all pipes entering/exiting each structure.
- D. Special detail drawings will be required where installations are not shown on approved engineering drawings for whatever reason or where required for clarity.

# 1.6 LIFT STATION RECORD DRAWING REQUIREMENTS

- A. Wet well and valve vault size and location shall be indicated along with wet well high and low water levels.
- B. Elevations for top, bottom, inverts, adjacent ground and type and size of lines and fittings for all lines entering or leaving the wet well and valve vault shall be indicated.
- C. Any amended schedules which show pump, motor and electrical data shall be indicated.

## 1.7 STORM SEWER SYSTEM RECORD DRAWING REQUIREMENTS

- A. Elevations shall be given for the top of all storm sewer structure frames/lids and for the inverts of all pipes entering/exiting each structure.
- B. Any on-site field tiles which remain on-site must be identified on record drawings.
- C. Identify the length, size, material, and slope of all pipe (i.e., 300 feet of 12" RCCP at 1.0%).
- D. Horizontal dimensions shall be to the nearest foot. Vertical elevations shall be to the nearest hundredth of a foot.
- E. Provide elevations and cross sectional information, as well as slope, on all ditches, canals, etc.

## 1.8 STREET LIGHTING RECORD DRAWING REQUIREMENTS

A. Provide horizontal ties for light foundations and control cabinets as referenced to the approved plan stationing or coordinates.

B. Service cables and service transformers shall be depicted in schematic form.

## 1.9 ELECTRONIC FILE RECORD DRAWING REQUIREMENTS

A. Include AutoCAD compatible version of all record information as described in Section 5.54.

## **DEDICATION OF LANDS**

### § 5.90 VIOLATIONS.

- (A) The owner or occupant of any land, building, structure or any part thereof, or any architect, builder, contractor, agent or other person who commits, participates in, assists in or maintains any violation of this chapter, may each be found guilty of a separate offense and suffer the penalties herein provided.
- (B) Nothing herein contained shall be construed to prevent the City from taking such lawful action as is necessary or appropriate to prevent any violation.

## § 5.91 PENALTY.

Any person, firm, corporation, partnership or other legal entity who violates, disobeys, omits, neglects or refuses to comply with or resists the enforcement of this chapter shall be guilty of a misdemeanor and shall upon conviction be fined not less than \$50 nor more than \$500 for each offense. Each day a violation is permitted to exist shall constitute a separate offense.

## APPENDIX A: CERTIFICATION FORMS FOR FINAL PLAT

1. Survey Certification:

State of Illinois ) ) SS County of \_\_\_\_\_ )

I,\_\_\_\_\_, a professional land surveyor in the State of Illinois, do hereby certify that under the direction of the owner thereof, I have surveyed, subdivided and platted said property into lots and streets all of which is represented on the plat hereon drawn, that part of the <u>(quarter section, section, township, range)</u> of the \_\_\_\_\_ Principal Meridian described as follows:

(Legal Description)

I do further certify that:

- 1. The accompanying plat is a true and correct representation of said survey and subdivision as made by me.
- 2. (Flood Hazard Statement)
- 3. The property or plat is situated within the corporate limits of the City of Watseka.
- 4. To the best of our knowledge, all regulations enacted by the subdivision and plat ordinance of the City of Watseka have been complied with in the preparation of this plat.
- 5. All dimensions are given in feet and decimal.
- 6. Exterior corners have been monumented with concrete, not less than six inches (6") in diameter and thirty-six inches (36") deep, with a center copper dowel three inches (3") long cast in place, and all interior corners are to be set with 9/16" x 30" iron rods within one year from date of recordation.

Dated at \_\_\_\_\_, Illinois this \_\_\_\_\_ day of \_\_\_\_\_, 20\_, A.D.

Illinois Registered Land Surveyor No.

\_\_\_\_\_ (SEAL)

2. Certificate of Ownership:

State of Illinois ) ) SS County of \_\_\_ )

This is to certify that \_\_\_\_\_\_ (and \_\_\_\_\_,) is (are) the owner(s) of the land described in the foregoing certificate and have caused the same to be surveyed and subdivided, as indicated on the plat, for the uses and purposes therein set forth, and that the save above described property is located in school district(s) \_\_\_\_\_\_, and that I (we) hereby acknowledge and adopt the same under the style and title thereon indicated, as my (our) own free and voluntary act and deed.

	(Owner)		(Owner)
State of Illinois County of	) ) SS )		
I, (and subscribed to the (they) signed the purposes therein s 20	, A Notary P ), persona above certificate appe above certificate as his set forth. Given under r	ublic in and for said Co ally known to me to be th ared before me this day (their) own free and vo my hand and notarial sea	unty and State, do hereby certify that is same person(s) whose name(s) are in person and acknowledged that he luntary act and deed for the uses and al this day of A.D.
		(Seal)	
(Certification if pro	perty under trusteeship	))	
State of Illinois County of	) ) SS )		
This is to certify known as trust no caused the same forth as allowed b hereby acknowle	that is the hole to be surveyed and s y the statute, and that s dge that the same and adopt the sa	as trustee on provisio der of record title to the ubdivided as shown on aid above described prop ame under the style and	n dated and property described in the plat and has the plat, for the purposes therein set , not personally but as trustee, does erty is located in school district(s) title hereon shown.
Dated this	day of	, 20, A.D.	
	Attest:	Ву:	
State of Illinois County of	) ) SS )		
I, (and Trust officer(s) pe foregoing instrum delivered the fore trustee aforesaid, day of	, A Notary P ), rsonally known to me to ent, appeared before m going instrument as the for the uses and purp A.D. 20	ublic in and for said Co o be the same person(s) ne this day in person an eir own free and voluntar poses set forth. Given t	unty and State, do hereby certify that whose name(s) are subscribed to the d acknowledged that they signed and y act of the as under my hand and Notarial seal this
		(Seal)	

(Certification if property under mortgage)

## "MORTGAGEE:

BY:

Its duly authorized officer

## ATTEST:

Its duly authorized officer

I, the undersigned, a Notary Public, in and for said County, in the State aforesaid, do hereby certify that \_\_\_\_\_\_, personally known to me to be the \_\_\_\_\_\_\_ of \_\_\_\_\_\_ who is the mortgagee, and personally known to me to be the same persons whose names are subscribed to the foregoing instrument, appeared before me this day in person and severally acknowledged that as such and \_\_\_\_\_\_\_, they signed and delivered the said instrument as \_\_\_\_\_\_\_ and \_\_\_\_\_\_ to be affixed thereto, pursuant to authority given by the Board of Directors of said \_\_\_\_\_\_\_ as their free and voluntary act, and as the free and voluntary act and deed of said \_\_\_\_\_\_\_ for the uses and purposes therein set forth. Given under my hand and Notarial seal this \_\_\_\_\_\_ day of \_\_\_\_\_\_, 20\_\_\_.

\_\_\_\_\_ (Seal)

3. Design Engineer Drainage Certification:

To the best of our knowledge and belief the drainage of surface waters will not be changed by the construction of such subdivision or any part thereof or that is such surface water drainage will change, adequate provision has been made for the collection and diversion of such surface waters into public areas or drains which the subdivider has a right to use, and that such surface waters will not be deposited on the property of adjoining land owners in such concentrations as may cause damage to the adjoining property because of the construction of the subdivision.

Dated at	, this	day of	, A.D. 20
----------	--------	--------	-----------

\_\_\_\_\_ (Seal) Design Engineer

4. School Certificate:

STATE OF ILLINOIS ) ) SS COUNTY OF \_\_\_\_\_ )

This is to certify that the undersigned is the owner of the land described in the attached plat and they have caused the same to be surveyed, subdivided and platted as shown by the plat for uses and purposes as indicated therein, and does hereby acknowledge and adopt the same under the style and title thereon indicated.

We do also acknowledge that the subject property lies within the City of Watseka Unit 9 School District.

Dated at	, this	day of	, A.D. 20	
	(Owner's	Signature)		
5. Planning and Zoning	Commission App	roval:		
STATE OF ILLINOIS	-			
COUNTY OF) S	5			
I, d certify that on this d Planning and Zoning Commi	_, Chairman of the ay of, 20_ ssion of the City of	e City of Watsel , A.D. this plat Watseka.	ka Planning and Zo of subdivision was	oning Commission, do s duly approved by the
Attest:		By:		
Cnairman				
6. Corporate Authoritie	s Approval:			
STATE OF ILLINOIS	)			
COUNTY OF	) SS )			
Approved by the Mayor and day of	the City Council c	of the City of Wa A.D.	atseka,	_ County, Illinois, this
Attest:		By:		
City Clerk		City May	or	(SEAL)
7. County Clerk Certific	ation:			
STATE OF ILLINOIS				
) St COUNTY OF )	<b>D</b>			
I,, Co there are no delinquent ge described in the foregoing ce	unty Clerk of neral taxes, or ur rtificates.	npaid current g	County, Illinois, eneral taxes agaiı	do hereby certify that nst any of the estate
Given under my hand and s A.D.	eal at	, Illinois, this _	day of	, 20,

(SEAL)

County Clerk

8. County Recorder Certification:

STATE OF ILLINOIS ) ) SS COUNTY OF \_\_\_\_ )

This instrument No. \_\_\_\_\_ was filed for record in the recorder's office of \_\_\_\_\_ County, Illinois, aforesaid on the \_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_, A.D. at \_\_\_\_\_o'clock \_\_.M.

County Recorder

## 9. Detention and Drainage Easements

All easements indicated as detention or drainage easements on this plat are reserved for and granted to the City of Watseka and to their successors and assigns. No buildings shall be placed on said easement, but the same may be used for other purposes that do not adversely affect the storage/free flow of stormwater. Each owner or subsequent purchaser shall be equally responsible for maintaining the easement and shall not destroy or modify grades or slopes without having first received written approval of the City of Watseka.

In the event any owner or subsequent purchaser fails to properly maintain the easement, the City of Watseka shall upon ten days prior written notice, reserve the right to perform, or have performed on its behalf, any maintenance work to or upon the easement reasonably necessary to ensure adequate stormwater storage and free flow of stormwater through the easement area.

In the event the City of Watseka shall be required to perform, or have performed on its behalf, any maintenance work to or upon the easement, the cost together with an additional sum of ten percent of said cost of completion of the work constitutes a lien against any lot or lots created by this plan which may require maintenance. The lien may be foreclosed by any action brought by or on behalf of the City of Watseka.

10. Surface Overland Flow Easement:

All easements indicated as "SURFACE OVERLAND FLOW EASEMENT" on this plat are reserved for and granted to the City of Watseka. No buildings or other structures shall be erected or maintained in the SURFACE OVERLAND FLOW EASEMENT areas that would adversely affect the free flow of storm water. Each owner or subsequent purchaser shall be equally responsible for maintaining the SURFACE OVERLAND FLOW EASEMENT areas and shall not destroy or modify grades or slopes without having first received prior written approval of the City of Watseka. In the event any owner or subsequent purchaser fails to properly maintain the SURFACE OVERLAND FLOW EASEMENT areas, the City of Watseka or any other unit of local government having jurisdiction over drainage, shall have the right to perform, or have performed on its behalf, any maintenance work to or upon the SURFACE OVERLAND
FLOW EASEMENT area reasonably necessary to insure proper flow of storm water and charge the owner or subsequent purchaser for the maintenance work performed.

# **APPENDIX B: STREET DESIGN GUIDELINES**

Street Classification	Right-of-Way Width	Pavement Width	Design Speed	Number of Lanes	Curb Type	Parking Allowed
Major Arterial	120-150 ft.	State Standards	55 mph	4-6	B-6.24	no
Secondary Arterial	120 ft.	(2) 24' E-E plus 30' median	45 mph	4-5	B-6.24	no
Major Collector	100 ft.	40' E-E	45 mph	3	B-6.12	no
Minor Collector	80 ft.	36' E-E	40 mph	2-3	B-6.12	yes
Commercial Districts	100 ft.	36' E-E	35 mph	3	B-6.12	yes
Industrial Districts	80 ft.	36' E-E	35 mph	2	B-6.12	no
Local Residential	66 ft.	30' E-E	30 mph	2	M-3.12/B-6.12	yes
Subdivision Boulevard	100 ft.	(2) 16' E-E plus 30' median	30 mph	2	B-6.12	no
Cul-de-sac	130 ft.	100' E-E res. 110' E-E comm/ir	N/A nd. N/A	N/A N/A	M-3.12/B-6.12	yes yes
Alleys	20 ft.	16' E-E	10 mph	1	N/A	no
Bike Trails	20 ft.	10' E-E	20 mph	2	N/A	N/A

Note: The table above to be used as guidelines for various roadway classifications. Actual designs shall be subject to review and approval by Subdivision Administrator.

Street	Minimum Pavement Requirements					
Classification	<u>Bituminous</u>	<u>Alternate</u>				
Major Arterial*	6" CA-6 Crushed stone Sub-base 9" Bituminous Base Course 2.5" Bituminous Binder Course 2" Bituminous Surface Course	6" CA-6 Crushed stone Sub-base 10" PC Concrete w/ Wire Fabric				
Secondary Arterial*	4" CA-6 Crushed stone Sub-base 8" Bituminous Base Course 2.5" Bituminous Binder Course 1.5" Bituminous Surface Course	4" CA-6 Crushed stone Sub-base 8" PC Concrete w/ Wire Fabric				
Major Collector	4" CA-6 Crushed stone Sub-base 7" Bituminous Base Course 2.5" Bituminous Binder Course 1.5" Bituminous Surface Course	4" CA-6 Crushed stone Sub-base 7" PC Concrete w/ Wire Fabric				
Minor Collector & Commercial Districts	4" CA-6 Crushed stone Sub-base 6" Bituminous Base Course 2.5" Bituminous Binder Course 1.5" Bituminous Surface Course	4" CA-6 Crushed stone Sub-base 8" CA-6 Crushed stone Base 2.5" Bituminous Binder Course 2" Bituminous Surface Course				
Industrial Districts (incl. cul-de-sacs)	6" CA-6 Crushed stone Sub-base 8" Bituminous Base Course 2.5" Bituminous Binder Course 1.5" Bituminous Surface Course	6" CA-6 Crushed stone Sub-base 8" PC Concrete w/ Wire Fabric				
Local Residential (incl. entrance, cul-de-sacs)	4" CA-6 Crushed stone Sub-base 6" Bituminous Base Course 2.5" Bituminous Binder Course 1.5" Bituminous Surface Course	<ul><li>10" CA-6 Crushed stone Base</li><li>2.5" Bituminous Binder Course</li><li>2" Bituminous Surface Course</li></ul>				
Alleys	10" CA-6 Crushed stone Base 2.5" Bituminous Binder Course 1.5" Bituminous Surface Course	4" CA-6 Crushed stone Sub-base 7" PC Concrete				
Bike Trails	6" CA-6 Crushed stone Base 2" Bituminous Surface Course	2" CA-6 Crushed stone sub-base 5" PC Concrete				

Note: The table above to be used as guidelines for various roadway classifications. Actual designs shall be subject to review and approval by Subdivision Administrator.

Туре	Maximum Gradient	Minimum Gradient	Clear Sight Distance
Arterials Major collector	6% 's	0.50%	As approved by the Subdivision Administrator (minimum 500' horizontal curve radius - centerline)
Minor Collecto	rs 6%	0.50%	As approved by the Subdivision Administrator (minimum 300' horizontal curve radius - centerline)
Residential Streets	8%	0.50%	As approved by the Subdivision Administrator (minimum 175' horizontal curve radius - centerline)
Commercial, Industrial	5%	0.50%	As approved by the Subdivision Administrator
Alley- Business*			As approved by the Subdivision Administrator
Alley- Resident*			As approved by the Subdivision Administrator

\*Standards for these streets shall be as indicated or as determined by the Planning and Zoning Commission and the Subdivision Administrator. See Appendix C.

# APPENDIX C: ROADWAY SPECIFICATIONS

# (A) General.

- (1) All developments shall be provided with street pavements and appurtenances designed in accordance with this appendix.
- (2) All roadway improvements shall be installed in accordance with the material, installation and testing requirements of the latest edition of the "Standard Specifications for Road and Bridge Construction in Illinois," and the latest edition of the "Supplemental Specifications and Recurring Special Provisions", unless otherwise modified in this section.
- (3) Specification references made herein for manufactured items, such as pipe, cement, aggregates, etc. refer to designations of the American Society for Testing and Materials (ASTM). Design references made herein refer to the American Association of State Highway and Transportation Officials (AASHTO).
- (4) All contractors constructing public roads in the City of Watseka shall be pre-qualified with the Illinois Department of Transportation. Bituminous and concrete plants supplying materials shall be IDOT-certified.
- (5) A permit is required prior to the start of any construction on Public Easement or Right of Ways that would cut, alter, grade or excavate the surface or support for the surface of any street, road, highway, parkway, curb, sidewalk or way within the City of Watseka. A permit may be obtained at the City Hall, 201 Brianna Drive, Watseka, IL 60970.
- (B) Basic Design Standards.
  - (1) The design of roadways in the City of Watseka shall be in accordance with the general guidelines and typical cross sections found in Appendix B. Variations from these guidelines are required to be approved by the City in advance.
- (C) Material specifications. All pavement elements shall conform to the following specifications:
  - (1) Bituminous concrete binder courses shall meet HOT-MIX ASPHALT BINDER COURSE IL-19, N-50. Up to 25% RAP will be allowed in binder course.
  - (2) Bituminous concrete surface courses shall meet HOT-MIX ASPHALT SURFACE COURSE IL-19, Mix D N-50 unless approved in advance by the Subdivision Administrator. Up to 15% RAP will be allowed in surface course.
  - (3) Mix designs and material suppliers shall be submitted to the City thirty (30) days prior to work.
  - (4) Bituminous pavers shall have a minimum closed screed width of ten feet (10') and shall be equipped with electronic grade control.
  - (5) All concrete roadway construction materials for curb and gutter, concrete pavement, lighting base foundations, etc. shall meet IDOT material requirements for Class SI concrete as

applicable.

- (6) Paint and thermoplastic materials used for pavement markings and roadway striping shall meet applicable articles of IDOT Standard Specifications. This work shall be undertaken in accordance with IDOT allowable calendar dates and weather conditions unless approved in advance by City of Watseka.
- (D) Testing and Acceptance.
  - (1) Contractor shall notify the Subdivision Administrator and the materials testing firm fortyeight (48) hours prior to work or test being performed. If an existing street is to be partially or totally closed, the developer is to notify the City of Watseka Public Works Department, Fire Department, Police Department, and all School Districts forty-eight (48) hours in advance prior to closing.
  - (2) Pavement Observation Procedures (including bike paths) shall be as follows:
  - Proof roll Sub-grade (Acceptable proof roll vehicle-14 ton (50,000 gross) Semi-truck 21 ton (73, 000 gross)).
    - A. Before curb and gutter is installed.
    - B. One inch (1") rut and one inch (1") roll maximum.
    - C. Repair sub-grade until an acceptable proof roll is obtained.
  - String-line Sub-grade.
    - A. Plus one-half inch (+1/2") maximum.
  - Proof roll Sub-base (if applicable).
    - A. No movement-rutting or rolling-allowed.
    - B. Repair Sub-base and other underlying layers if necessary until an acceptable proof roll is obtained.
  - String-line Sub-base (if applicable).
    - A. Plus one-forth inch (+1/4") maximum.
  - > Proof roll Aggregate base course (if applicable).
    - A. No movement-rutting or rolling allowed.
    - B. Repair aggregate base course and other underlying layer if necessary until an acceptable proof roll is obtained.
  - String-line Aggregate base course (if applicable).
    - A. Plus one-forth inch (+1/4") maximum.
  - > Proof roll Bituminous base course (if applicable).
    - A. No movement rutting or rolling allowed.

- B. Repair bituminous base course and other underlying layer if necessary until an acceptable proof roll is obtained.
- > Density Test Bituminous base course (if applicable).
  - A. On-site density testing is performed by an independent testing firm acceptable to the Subdivision Administrator and cores taken to check thickness per the Subdivision Administrator.
- String-line Bituminous base course (if applicable).
  - A. Plus one-forth inch (+1/4") maximum.
- > Check Condition of Pavement/Aggregate Prior to base course.
  - A. Bituminous material (prime coat) must be cured prior to placement of binder.
  - B. Priming immediately in front of paver is NOT ALLOWED.
- Density test binder course.
  - A. On-site density testing performed by an independent testing firm acceptable to the Subdivision Administrator and if needed cores taken to check thickness.
  - B. Repair bituminous binder course by removal and replacement for failed areas or a method acceptable to the Subdivision Administrator.
- Check Conditions of Pavement binder course prior to surface course. The Developer is responsible for pavement maintenance including filling potholes when requested by the City.
  - A. Only after one winter season and seventy-five percent (75%) of occupancy permits issued.
  - B. Surfacing shall be completed within three years of installation of the binder.
  - (1) Clean pavement and curbs prior to proof roll.
    - C. Proof roll bituminous binder course. No movement-rutting or rolling allowed. Repair binder course be removal and replacement.
    - D. If cracks are greater than one-half inch (1/2") wide and occur over twenty-five percent (25%) of the pavement, then repair bituminous binder course and other underlying layers until an acceptable proof roll is obtained.
    - E. If cracks are less than one-half inch (1/2") wide and occur over twenty-five percent (25%) of the pavement, then repair bituminous

binder course by HEATER SCARIFY, overlay method, or a method acceptable to the Subdivision Administrator.

- If cracks are less than one-half inch (½") and less than twenty-five percent (25%) of the area, then repair binder and base course as necessary.
- (2) If longitudinal and transverse cracking are less than ten percent (10%) of the length, then repair with mix for cracks.
- (3) If longitudinal and transverse cracks are greater than ten percent (10%) of the length, then repair with crack fill acceptable to the Subdivision Administrator.
- F. Remove and replace damaged curb and gutter. The minimum length of removal and replacement is ten feet (10').
- (1) Two (2) Rebar dowels are required in replacement sections.
  - (2) Replacement curb requires two (2) dowel bars at each end. Maximum diameter three-quarter inch (3/4").
  - (3) Any pavement disturbed by curb replacement shall be saw cut a minimum of eighteen inches (18") wide. Length to be determined by Subdivision Administrator.
  - (4) Bituminous driveway aprons disturbed by curb removal shall be saw cut a minimum twenty-four inches (24") wide and replaced full width.
  - (5) Any concrete driveway aprons disturbed by curb removal shall be saw cut at the closest joint and replaced full width.
  - G. Remove cold patch and replace with hot mix. Place level binder in binder irregularities, trench settlement, etc.
  - H. Bituminous material (tack coat) will be placed only if the Subdivision Administrator accepts the conditions of the pavement.
  - I. Bituminous surface course placed on pavement not accepted by the Subdivision Administrator will be removed and replaced.
  - J. Bituminous material (tack coat) must be cured prior to placement of surface. Priming immediately in front of the paver is not allowed.
- > Density test bituminous surface course (if applicable).
  - A. On-site density testing performed by an independent testing firm acceptable to the Subdivision Administrator and cores taken to check thickness.
  - B. Repair bituminous surface course by removal and replacement areas or a method acceptable to the City.

## MATERIAL TESTING:

## **City Will Observe All Testing Performed**

Test Items	Test	Who Performs	Number of	Test Paid By	Test Ordered By	
		TEST	Tests			
Sub-grade	Proof Roll	Contractor	Entire Project	Developer	Developer	
	String-Line	Contractor	Entire Project	Developer	Developer	
Aggregate	Proof Roll	Contractor	Entire Project	Developer	Developer	
	String-Line	Contractor	Entire Project	Developer	Developer	
Structural	Concrete	Testing Firm	Concrete	Developer	Developer	
	See IDOT Stand.		See IDOT Stand.			
Bituminous	Rolling Pattern	Testing Firm	Bit. Concrete	Developer	Developer	
Concrete	C C		See IDOT Stand.			
	Asphalt	Testing Firm	Bit. Concrete	Developer	Developer	
	Temperature		See IDOT Stand.			
	Nuclear Density	Testing Firm	Bit. Concrete	Developer	Developer	
	Test	C C	See IDOT Stand.			

\* The thickness of the completed pavement will be verified by the cores. A minimum of four (4) core specimens per day are required.

All firms used for bituminous and concrete testing shall be approved or chosen by the Subdivision Administrator at the Developer's cost. The testing firms shall be agreed upon at the pre-construction conference meeting. The developer shall notify the Subdivision Administrator a minimum of 48 hours prior to any bituminous paving or concrete placement.

## ASPHALT TESTING REQUIREMENTS:

Testing shall consist of all applicable site testing. Site testing shall include establishing a rolling pattern, asphalt temperature, nuclear density test, (see the IDOT Non-QC/QA Testing Requirements), and any other testing deemed necessary by the Subdivision Administrator. The testing company's technician shall provide verbal test results while paving, and written results within 48 hours to the Subdivision Administrator.

If any individual street has an average density per IDOT requirements of less than minimum requirements, that street shall be deemed as having failed and further testing and/or replacement shall be required.

The developer will supply the Subdivision Administrator with a list of plants that will be used for work on site. The plant list will include a list of plant codes as they correlate to IDOT approved mixes. This list must be delivered to the Subdivision Administrator 10 working day prior to asphalt being placed. The testing firm's inspector shall fill out the City form, and return it to the Subdivision Administrator, along with a copy of field and lab reports. The testing firm is responsible for all field and lab tests, and reports.

## CONCRETE TESTING REQUIREMENTS:

Structural concrete to be tested per the IDOT Non-QC/QA Testing Requirements shall include, but not be limited to, bridges, box culverts, beams, retaining walls, and items noted by the Subdivision Administrator. Nonstructural items, such as curbs and sidewalks will be visually inspected by the City and will also be subject to additional testing as described in the IDOT Non-QC/QA Testing Requirements. The developer must notify the City 48 hours prior to all Concrete placement.

The developer will supply the Subdivision Administrator with a list of batch plants that will be used for

work on the site. The batch plant list will also include a list of plant codes as they correlate to IDOT approved mixes. The list must be delivered to the Subdivision Administrator prior to any concrete being placed.

The testing firm's inspector shall fill out the City form, and return it to the Subdivision Administrator, along with a copy of field and lab reports. The testing firm is responsible for all field and lab tests, making, picking up, and breaking of cylinders, and reports.

(E) Striping.

- Raised reflective pavement markers will be required for major collectors, minor and major arterials on centerline skip dash, double yellow centerline turn lanes.
- Stop bars shall be twenty-four inches (24") wide and required at all sop sign locations.
- Crosswalks shall have six inch (6") wide lines at intersections, twelve inch (12") wide bars at school crossings.
- > All permanent striping shall be thermoplastic.
- Temporary paint striping shall be required after binder placement on all collector or greater streets.

# APPENDIX D: SANITARY SEWER SYSTEM STANDARDS AND SPECIFICATIONS

- (A) General.
  - (1) All developments shall be provided with sanitary sewers and appurtenances designed in accordance with this appendix.
  - (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," latest edition, unless otherwise modified in this section.
  - (3) Specification references made herein for manufactured items, such as pipe, fittings, and manholes refer to designations of the American Society for Testing and Materials (ASTM), American Water Works Association (AWWA), or of the American National Standards Institute (ANSI).
- (B) Basic Design Standards.
  - (1) The design of the sanitary sewer system shall be in accordance with the requirements of the City and of the Illinois Environmental Protection Agency's latest edition of Title 35 of the Illinois Administrative Code, Subtitle C, Chapter 11, Part 370.
  - (2) All sewers shall be designed to accommodate an ultimate service area as defined by the Subdivision Administrator.
  - (3) Sewers shall be placed only in public rights of way or in easements. The location of proposed extensions to the existing sanitary sewer system shall be approved by the Subdivision Administrator.
  - (4) Sewer Design Hydraulics.
    - (a) Sanitary gravity sewers shall be designed to provide design flow capacity, without surcharging, using the formula specified in the latest edition of the Illinois Administrative Code.
    - (b) Design mean velocity, flowing full, shall not be less than two feet per second. If velocity exceeds 15 feet per second, erosion and shock protection measures shall be provided.
  - (5) Minimum Sewer Size.
    - (a) Minimum sanitary sewer size shall be eight inch (8") diameter.
    - (b) Minimum building sanitary service sewer size shall be six inch (6") diameter.
  - (6) Alignment. Sewers shall be laid straight in both horizontal and vertical planes between manholes. Service connections to sewer mains shall be made by factory wye or tee connection only.

- (7) Sewer Size Changes. Sanitary sewer 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.
- (8) Sanitary Sewer Manholes.
  - (a) At a minimum, 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 sanitary sewers
    - 5. Access spacing shall be:

SEWER PIPE SIZE (in inches)	MAXIMUM INTERVAL (in feet)
8 – 15	400
18 – 54	500
60 or larger	1,000

- (b) An external drop manhole shall be provided for manholes with any pipe having a difference in invert elevation more than twenty-four inches (24") above the invert of the sewers leaving such manholes. Internal drop manholes are not allowed.
- (c) Where flows, pipe size, or other conditions dictate, special manholes or junction chambers shall be designed and constructed.
- (d) Minimum Manhole Diameter.

SEWER PIPE SIZE (in inches)	MANHOLE DIAMETER (in inches)				
8 – 18	48				
21 – 36	60				
For sewers greater than thirty-six inch (36") diameter, manhole shall have offset riser of forty-eight inch (48") inside diameter.					

(e) Adjustment. No more than three precast concrete adjusting rings, nor more than six inches (6") maximum height adjustment shall be allowed.

- (9) Sewer Depth. Sanitary sewers shall be constructed with a minimum cover over top of the pipe of four feet (4'), and shall be deep enough to provide an outfall for all sanitary sewage within the ultimate service area, both existing and future.
- (C) Material specifications. All sanitary sewer system elements shall conform to the following specifications:
  - (1) Sewer and service connection pipe.

Gravity sanitary sewer main material shall be in accordance with the following guidelines unless otherwise approved by the City:

24" diameter or under	PVC SDR 26 (less than 20' deep) PVC SDR 21 (20' – 25' deep) PVC DR 18 (over 25' deep) or DISP ANSI 21.51
Over 24" diameter	PVC Profile Pipe DISP 21.51 Interior Lined RCP

- (a) Polyvinyl chloride (PVC) pipe and fittings ASTM D-3034, SDR 26 minimum strength.
- (b) Reinforced concrete pipe circular reinforcement, minimum Class 3, Wall B, ASTM C -76, interior lined.
- (c) Ductile iron pipe ANSI A21.51 (AWWA C-151), minimum thickness Class 52 per ANSI A21.51 (AWWA C-150), cement lined. Fittings meeting ANSI 21.10 (AWWA C-110).
- (d) All Force main material shall be Ductile Iron Pipe CL 52 unless otherwise approved by the Subdivision Administrator.
- (2) Sewer and service connection pipe joints.
  - (a) PVC pipe flexible elastomeric seal joints, ASTM D-3212.
  - (b) Reinforced concrete pipe continuous O-ring gaskets, ASTM C-361.
  - (c) Ductile iron pipe rubber gasket joints, ANSI A21.11 (AWWA C-111).
- (3) Jacking and Boring.
  - (a) Casing installation under railroad tracks, pipelines, County and State highways, Township roads, etc. shall be approved by the appropriate agency which has jurisdiction.

(b) Steel casing pipe shall be in accordance with American National Standards Institute (ANSI) B36.10 with yield strength of 35,000 psi minimum and minimum wall thickness per the following table:

Nominal Inside Diameter (in)	Nominal Wall Thickness (in.)
24 and under	0.375
24 – 36	0.500
36	0.625
> 36	as approved by Subdivision Administrator

- (c) Welds shall be in accordance with the American welding Society (AWS) D1.1 and be continuous circumferential welds. The casing pipe shall have a bituminous coat on the inside and outside surface in accordance with American Association of State Highway and Transportation Officials (AASHTO) M190.
- (d) The void between the casing and conduit shall be filled with pea gravel, flowable fill or other approved method, and ends sealed. Properly installed casing spacers may be used as an accepted alternate.
- (e) Casing chocks shall be stainless steel, restrained chocks manufactured by the Ford Meter Box Co. or approved equal.
- (f) Casing end seals shall be synthetic rubber with stainless steel bonding as manufactured by Pipeline Seal and Insulator, Inc. (PSI), Cascade Waterworks Mfg. Co.-Model CCES, or approved equal.
- (4) Manholes.
  - (a) Concrete. Precast reinforced concrete ASTM C-478 with tongue and groove joints sealed with gaskets conforming to ASTM C-443 or bituminous jointing material. Bitumastic material shall be placed between precast reinforced concrete sections and between frame.
  - (b) Pipe seals. All pipe connection openings shall be precast with resilient rubber water-tight pipe to manhole sleeves or seals, per ASTM C-923. Flexible rubber gasketed manhole coupling shall be Kor-N-Seal, A-Lok, or approved equal.
  - (c) Chimney seals. External flexible water-tight rubber sleeves conforming to the applicable requirements of ASTM C-923, with stainless steel bands, shall extend from the manhole cone to the manhole frame and shall be provided on all sanitary manholes. Where conditions prohibit the use of an external seal, an internal seal shall be used. Acceptable products shall be the following: Infi-Shield, Canusa Wrapid Seal, Cretex Chimney Seal and Mac Wrap. Manholes shall not be backfilled until inspected by the City.

- (d) Top section. Top cone shall be offset type designed to accept an external chimney seal. Flat slabs shall be provided where sufficient height is not available for a cone.
- (e) Bottom sections. All bottom sections shall be monolithically precast, including bases and invert flowlines. All manhole bases shall be set on a minimum six inch (6") CA-7 cushion. No structures will be placed in driveways or sidewalks unless approved in advance by City. Unsuitable materials beneath manhole bedding area shall be excavated and replaced with additional CA-7 if so determined by City.
- (f) Manhole bottoms. Bottom fillets shall conform to bottom half of pipe. Where pipes enter manhole at an angle, curved flow lines shall be formed from inlet pipe(s) to outlet pipe.
- (g) Steps. Cast in place, fiberglass or steel reinforced plastic conforming to ASTM C478 and 0.S.H.A. standards, sixteen inches (16") on center.
- (6) Castings. Manhole frame and cover Heavy Duty E.J.I.W. No. 1020A with machined bearing surfaces and self sealing Type A heavy duty lid.
- (7) Pipe bedding and cover material and trench backfill. I.D.O.T. gradation CA-7 crushed stone or crushed gravel. meeting the following gradation requirements:

SIEVE SIZE Percent Passing												
Grad No.	3"	21⁄2"	2"	1½"	1"	<sup>3</sup> ⁄4"	1⁄2"	3/8"	No. 4	No. 16	No. 50	No. 200
CA7				100	95±5		45±15		5±5			

- (D) Installation requirements.
  - (1) Sewer system design and construction shall in all respects be in accordance with the regulations of the Environmental Protection Agency of the State of Illinois. No construction shall commence until a copy of a permit from this agency is filed with the City.
  - (2) Notification. Prior to beginning the sanitary sewer installation, the contractor shall give the Subdivision Administrator 48 hour's notice of his intended time of starting work.
  - (3) Excavation.
    - (a) The width of trench, at and below the top of pipe, shall not exceed the widths given in Section 20-2.03 of the Standard Specifications.
    - (b) The trench shall be excavated so that a minimum of six inches (6") of CA-7 can be placed as bedding material below the pipe.

- (c) Where a firm foundation is not found to exist for the bottom of the trench at the required depth due to soft, spongy, or other unsuitable soil, such unsuitable soil shall be removed for the full width of the trench and replaced with well compacted CA-7 material or an equal substitute if such compacted material proves unsatisfactory. Where rock in either ledge or boulder formation is encountered, it shall be removed below grade and replaced with a well compacted cushion of CA-7 material having a thickness under the pipe of not less than eight inches (8").
- (4) The contractor shall be responsible for providing a competent individual on site during all trenching operations to insure that all O.S.H.A. and other applicable safety standards are met by construction means and methods.
- (5) Pipe bedding. A minimum of four inches (4") of CA-7 material shall be used as bedding under the pipe. The bedding stone shall be graded along the entire length of pipe to provide full bearing. The bedding stone shall extend to the spring line of the pipe.
- (6) Pipe cover. CA-7 shall be used as cover material for the pipe. The cover material shall extend from the spring line to twelve inches (12") above the top of all flexible pipe.
- (7) Backfilling. Backfilling of the trench shall be accomplished by careful replacement of the excavated material after the bedding, pipe and cover material have been installed. Any pipe installed under an existing or proposed street pavement, or within two feet (2') of an existing or proposed pavement edge, curb and gutter, bike trail or sidewalk, shall be backfilled to the top of the trench with CA-7 material compacted in lifts not exceeding twelve inches (12") and the final twelve inches (12") with compacted CA-6 material. Jetting of trenches shall be performed as may be required by Subdivision Administrator.
- (8) Laying. The pipe shall be laid accurately to the line and grade as designated. The lubricant, mastic, or other joint material shall be used and installed as recommended by the pipe or joint manufacturers' specifications.
- (9) Separation from water main. The sanitary sewer pipe shall be laid at least ten feet (10') horizontally from any existing or proposed water main. If the sanitary sewer must cross a water main, the top of the sewer pipe must be laid at least eighteen inches (18") below the bottom of the water main pipe. If neither of these conditions can be met, other protective methods as described in the "Standard Specifications for Water and Sewer Main Construction in Illinois" shall be followed.

(10) Service laterals.

- (a) Each single family lot shall have one six inch (6") service. Each duplex lot shall have two six inch (6") service lines (one for each unit). Multi family attached/detached and commercial/industrial buildings shall have a minimum of one six inch (6") service line for each unit.
- (b) Service laterals shall consist of a wye or tee fitting at the sewer main and extension of the specified service pipe to the property line of the lot being served. The service lateral shall slope toward the main at the minimum rate of 1.0%.

- (c) Where the depth of the sewer main is greater than twelve feet (12') below the surface of the ground, a service riser shall be constructed to an elevation of eight feet (8') below the ground elevation, or as shown on the plans.
- (d) The service lateral shall be terminated at the lot line five feet left of the center of the lot as viewed from the street and plugged with a water-tight factory plug. The plug shall be backfilled to withstand air test pressure to 5 psi. The plugged lateral shall be marked by a 4"x4" stake extending four feet (4') above finished grade, and Lot Number painted green on stake.
- (e) Curb shall be stamped with an "s" at all sewer service stub locations.
- (E) Testing and acceptance.
  - (1) General. All the required testing of the sanitary sewer system shall be performed before curb/gutter, pavement or other permanent type surface improvement work begins. All testing shall take place in the presence of the Subdivision Administrator.
  - (2) Cleaning. Any pipe containing debris or sediment shall be cleaned prior to testing and televising.
  - (3) Air test. All sanitary sewer pipes shall be low pressure air tested in accordance with the Standard Specifications. All sanitary sewer manholes shall be vacuum tested per IEPA regulations.
  - (4) Deflection testing. All flexible thermoplastic sewer main pipe shall be deflection tested by pulling a mandrel through the pipe from manhole to manhole. Deflection testing shall be performed a minimum of 30 days after sewer construction for sewer less than 12" in diameter and a minimum of 45 days after sewer construction for sewer 12" and greater in diameter and shall be performed in accordance with the Standard Specifications.
  - (5) Televising. All sanitary sewer mains shall be televised a minimum of 180 calendar days after deflection testing is completed. Written report detailing manhole locations, footages of lateral connections, etc. and DVD copy of the televised main shall be provided to the City prior to final LOC reduction.
  - (6) Defects. Any piping with dips, cracks, improperly sealed joints, or variations from the approved grades and alignment shall be repaired by removing and replacing the involved sections of pipe. The repaired section of pipe shall then be re-tested. The City may also request other types of testing on the sanitary sewer installation as a condition of initial acceptance.
  - (7) Record drawings.
    - (a) Prior to final acceptance of work, "as-built" drawings shall be submitted to the City for review.
    - (b) Upon City approval of "as-built" drawings, two (2) full-size (36"x48") copies (signed and sealed by a Registered Illinois Professional Engineer) shall be submitted to the

City, along with an electronic copy in accordance with current City requirements (see Section 5.54).

## APPENDIX E: STORM SEWER SYSTEM STANDARDS AND SPECIFICATIONS

- (A) General.
  - (1) All developments shall include provisions for the construction of storm sewers and appurtenances designed in accordance with this appendix.
  - (2) Storm sewer systems shall be installed in accordance with the "Standard Specifications for Road and Bridge Construction in Illinois," and the "Standard Specifications for Water and Sewer Main Construction in Illinois," latest edition, unless otherwise modified in this appendix.
  - (3) Specification references made herein for manufactured items, such as pipe, fittings, and manholes refer to designations of the American Society for Testing and Materials (ASTM), American Water Works Association (AWWA), or of the American National Standards Institute (ANSI).
- (B) Basic design standards.
  - (1) All storm sewers, streams, or channels shall be designed to accommodate all areas which naturally flow to the area of the development and also any additional areas which are planned to contribute to the drainage area as identified by the Subdivision Administrator.

Storm water system design and detention shall be in accordance with the City of Watseka Storm Water Detention Ordinance, and subsequent amendments. A minimum velocity of three feet per second shall be maintained in pipes flowing full, in accordance with the guidelines contained in the Illinois Department of Transportation's Drainage Manual. Drainage calculations shall be submitted with the development plans.

- (2) The storm water drainage system shall be separate and independent of the sanitary sewer system.
- (3) Minimum sewer size. Public storm sewers shall not be less than twelve inches (12") in diameter.
- (4) Alignment. Sewer shall be laid straight in both horizontal and vertical planes between manholes.
- (5) Sewer size changes. Storm sewers of different diameters shall join only at structures. The invert elevations shall be adjusted to maintain a uniform energy gradient by matching the 0.8 depth points of the different diameter.
- (6) Storm water inlets.
  - (a) Surface drainage inlets shall be provided so that surface water is not carried across any street intersections or parking lot drives. Surface runoff shall not extend a distance of more than four hundred feet (400') along the surface of the ground and shall not build up a flow of more than two cubic feet per second in a ten year storm

before being intercepted by drainage inlets. Inlets shall discharge into storm sewers, which shall not discharge into side lot or rear lot drainage ditches. Inlets shall be provided at all low points.

- (b) Size Inlets shall have twenty four inch (24") minimum inside diameter.
- Adjustment At least one two inch (2") precast concrete adjusting ring shall be used on each inlet barrel to provide a base for the frame and grate. No more than three (3) precast concrete adjusting rings, totaling six inch (6") maximum height adjustment, will be allowed. Offsetting or corbelling of adjusting rings is not allowed.
- (7) Lot drainage. Positive drainage shall be established for each lot, whether or not it is the intention to construct a building on that lot.
- (8) Catch basins.
  - (a) Catch basins shall generally be provided every other lot corner, such that each structure will collect runoff from no more than four (4) adjoining lots. Additional structures shall be provided as determined to be necessary by the Subdivision Administrator.
  - (b) Type C catch basins are allowable for catch basins no deeper than four feet (4') only.
  - (c) Type A catch basins shall be used for all catch basins over four feet (4') deep or if pipe size and configuration prohibits the use of a Type C basin.
- (9) Storm sewer manholes.
  - (a) Manholes shall be located as follows:
    - 1. At the termination of all sewers which do not terminate at a catch basin or inlet.
    - 2. Changes in direction, horizontal or vertical.
    - 3. Changes in shape or pipe size.
    - 4. Junctions with other storm sewers.
    - 5. Access spacing shall be:

STORM SEWER PIPE SIZE (in inches)	MAXIMUM MANHOLE INTERVAL (in feet)
12 - 24	300
27 - 36	350
42 - 54	400
60 and greater	500

- (b) Where flows, pipe size, or other conditions dictate, special manholes or junction chambers shall be designed and constructed.
- (c) Manhole size. Manhole size shall be as required to accommodate the intersecting sewer pipes. The following table contains the minimum design sizes:

SEWER PIPE IN SIZE (in inches)	MANHOLE DIAMETER (in inches)					
18 or less	48					
21 – 36	60					
42-48	72					
T-Manholes with risers or other appropriate structure approved by Subdivision Administrator shall be used with pipes larger than 48".						

- (10) Sewer depth. Storm sewers shall be constructed sufficiently deep so as to prevent freezing and to provide an outfall for all storm water within the ultimate service area, both existing and future.
- (11) Sewer pipe class. Sewer pipe class shall be determined based upon the "Standard Specifications for Road and Bridge Construction," latest edition.
- (12) All pipes shall be terminated with precast reinforced flared end sections.
- (C) Material specifications. All storm sewer system elements shall conform to the following specifications:
  - (1) Sewer pipe.
    - (a) Reinforced concrete pipe (twelve inch (12") diameter and larger), circular reinforcement, minimum Class 3, wall B, ASTM C-76.
    - (b) Non-reinforced concrete sewer pipe minimum Class 3, ASTM C-14.

- (c) Reinforced concrete elliptical culvert pipe minimum Class HE-III or VE-III, ASTM C-507.
- (d) Galvanized corrugated steel culvert pipe AASHTO M246, Type B, minimum wall thickness 14 gauge. (Shall only be used for culverts upon City approval).
- (e) Reinforced concrete arch culvert pipe double line reinforcement minimum Class 3, ASTM C-507.
- (f) High Density Polyethylene (HDPE) pipe may be utilized for sump pump discharge conveyance systems when in conformance with all applicable ASTM and AASHTO standards.
- (2) Sewer pipe joints.
  - (a) Reinforced concrete pipe ASTM C-443 or ASTM C-361 ("O" ring).
  - (b) Reinforced arch or elliptical pipe ASTM C-877.
- (3) Casing pipes. Steel pipe ASTM A-120, 3/8 inch minimum thickness.
- (4) Manholes and catch basins.
  - (a) Precast reinforced concrete ASTM C-478.
  - (b) Manhole bases shall be Type A, Precast Concrete.
  - (c) Joints. Storm sewer manhole joints shall be sealed with O-ring gaskets or mastic material. Storm sewer pipe connections to manholes shall be mortared.
  - (d) Steps. Sixteen inches on center, fiberglass or steel reinforced plastic conforming to O.S.H.A. Standards.
- (5) Inlets. Precast reinforced concrete ASTM C-478.
- (6) Castings. All castings shall be set in bituminous mastic material. External frame shields (Infi-Shield, Cretex, or approved equal) shall be required for all storm structures located in paved areas.
  - (a) Manhole frame and cover Heavy Duty E.J.I.W. No. 1020-Z Frame with 1020 A heavy duty cover.
  - (b) Six inch curb and gutter inlet Heavy Duty E.J.I.W. No. 7205 with Type M1 grate.
  - (c) Rolled curb and gutter inlet Heavy Duty E.J.I.W. No. 7525.
  - (d) Depressed curb and gutter Heavy Duty E.J.I.W. No. 7210 with Type M3 grate.
  - (e) Yard inlet E.J.I.W. No. 6527 with Type 8 beehive or Type M2 flat grate.

(7) Bedding stone and trench backfill. I.D.0.T. gradation CA-7, crushed stone or crushed gravel, meeting the following gradation requirements:

	SIEVE SIZE Percent Passing											
Grad No.	3"	21⁄2"	2"	1½"	1"	3⁄4"	1⁄2"	3/8"	No. 4	No. 16	No. 50	No. 200
CA7				100	95±5		45±15		5±5			

- (D) Installation.
  - (1) Notification. Prior to beginning the storm sewer installation, the contractor shall give the Subdivision Administrator 48 hour's notice of his intended time of starting work.
  - (2) Erosion control. All soil erosion control measures are to be in place prior to and during the installation of the storm water piping and detention system. The soil erosion measures shall be in accordance with the "Procedures and Standards for Urban Soil Erosion Control in Illinois," the General National Pollution Discharge Elimination (NPDES) Permit, the project plans and specifications, or as directed by the Subdivision Administrator.
  - (3) Excavation.
    - (a) The width of trench, at and below the top of pipe, shall not exceed the widths given in Section 20-2.03 of the Standard Specifications.
    - (b) The trench shall be excavated so that a minimum of six inches of CA-7 can be placed as bedding material.
    - (c) Where a firm foundation is not found to exist for the bottom of the trench at the required depth due to soft, spongy, or other unsuitable soil, such unsuitable soil shall be removed for the full width of the trench and replaced with well-compacted CA-7 material or an equal substitute if such compacted material proves unsatisfactory. Where rock in either ledge or boulder formation is encountered, it shall be removed below grade and replaced with a well-compacted cushion of CA-7 material having a thickness under the pipe of not less than eight inches (8").
  - (4) The contractor shall be responsible for providing a competent individual on site during all trenching operations to insure that all O.S.H.A. and other applicable safety standards are met by construction means and methods.
  - (5) Pipe bedding. A minimum of six inches of CA-7 material shall be used as bedding under the pipe for pipe diameters up to twenty four inches (24"). For larger pipes, a bedding thickness of ¼ the pipe diameter shall be used. The bedding stone shall be graded along the entire length of pipe to provide full bearing. The bedding stone shall extend to the springline of the pipe.

- (6) Backfilling. Backfilling of the trench shall be accomplished by careful replacement of the excavated material after the pipe and the bedding material have been installed. Any pipe installed under an existing or proposed street pavement, or within two feet (2') of an existing or proposed pavement edge, curb and gutter, bike trail or sidewalk shall be backfilled to the top of the trench with CA-7 material compacted in lifts not exceeding twelve inches (12") and the final twelve inches (12") with compacted CA-6 material.
- (7) Laying. The pipe shall be laid accurately to the line and grade as designated. The lubricant, mastic, or other joint material shall be used and installed as recommended by the pipe or joint manufacturers' specifications.
- (8) Separation from water main. The storm sewer pipe shall be laid at least ten feet horizontally from any existing or proposed water main. If the storm sewer must cross a water main, the top of the storm sewer pipe must be laid at least 18 inches below the bottom of the water main pipe. If neither of these conditions can be met, other methods as illustrated in the "Standard Specifications for Water and Sewer Main Construction in Illinois" shall be followed.
- (9) A four inch (4") diameter stub for sump pump connection, having minimum length of six feet (6') outside the structure, shall be provided for each lot adjacent to a rear yard inlet or catch basin. Stub shall be PVC SDR 26 or approved equal. Stubs shall be identified by a four-by-four (4" x 4") stake placed at the end of the PVC stub which extends four feet (4') above grade and painted red with lot number.
- (E) Testing and acceptance.
  - (1) General. All the required testing and correction of defects of the storm sewer system shall be performed before curb and gutter or other permanent type surface improvement work begins.
  - (2) Cleaning. Any pipes or manholes containing debris or sediment shall be cleaned prior to acceptance.
  - (3) Defects.
    - (a) Any piping with cracks, improperly sealed joints, or variations from the approved grades and alignment shall be repaired by removing and replacing the involved sections of pipe.
    - (b) The Subdivision Administrator may require compaction, leakage, or other types of testing as a condition of the storm sewer system initial acceptance.
  - (4) Record drawings.
    - (a) Prior to final acceptance of work, "as-built" drawings shall be submitted to the City for review.
    - (b) Upon City approval of "as-built" drawings, two (2) full-size (36"x48") copies (signed

and sealed by a Registered Illinois Professional Engineer) shall be submitted to the City, along with an electronic copy in accordance with current City requirements (see Section 5.54).

# APPENDIX F: WATER SUPPLY SYSTEM STANDARDS AND SPECIFICATIONS

- (A) General.
  - (1) All development shall include provisions for the construction of water distribution facilities complete with valves, fire hydrants, and other such appurtenances designed in accordance with this appendix. As a minimum, the water distribution system shall provide a service connection(s) near the front property line of each individual lot or parcel within the development. Where more than one building is located or planned on one lot or parcel of property for fire protection, the proposed construction shall also include all water main construction and appurtenances within the lot or parcel except service lines.
  - (2) Water distribution systems shall be constructed in accordance with the "Standard Specifications for Water and Sewer Main Construction in Illinois" latest edition, and the "Standard Specifications for Road and Bridge Construction in Illinois," latest edition, unless otherwise modified in this appendix.
  - (3) Specification references made herein for manufactured materials, such as pipe, hydrants, valves, and fittings refer to designations of the American Society for Testing and Materials (ASTM), the American Water Works Association (AWWA), or the American National Standards Institute (ANSI).
  - (4) Contractor shall coordinate all water system work with City of Watseka. Only an authorized representative of the City of Watseka can open, close, or operate a water system valve, unless otherwise approved in advance by Watseka Water Operator.
  - (5) Construction shall be staged such that service is maintained to adjacent properties at all times unless otherwise approved in advance by City. Temporary system shutdowns shall not be allowed unless approved in advance by City.
- (B) Basic design standards.
  - (1) System extension.
    - (a) Extension to the water distribution system shall form a complete network extension or part of a complete network extension that includes all primary mains, secondary mains, and gridiron mains, complimenting the existing distribution system network.
    - (b) Primary mains are those that form the arterial portion of the system. Primary mains under construction within a development are further defined as mains that are twelve inches (12") or larger. Secondary mains shall be sized, looped, and spaced as required for fire flows and shall have a minimum diameter of eight inches (8").
    - (c) Gridiron mains shall form a grid to supply water to the local fire hydrants and service lines. Gridiron mains shall have a minimum diameter of eight inches. Dead ends shall be avoided whenever possible and shall not exceed six hundred feet (600') in any case.

- (d) The maximum number of valves to be operated for a shut down shall be three; four may be allowed in unique cases with the approval of the City.
- (2) Minimum day consumption. For purposes of water main design, minimum day consumption for water main design shall be based on the following table:

TYPE OF ESTABLISHMENT	UNIT	MINIMUM DAY CONSUMPTION* Gal/Day/Unit					
Retail	Employee (one shift)	15					
Office	Person (one shift)	15					
Industrial	Person (one shift)	35					
Restaurant	Per seat	10					
Theater	Per seat	5					
Hotel	Per guest	75					
* Quantities are exclusive of process water requirements which must be estimated and added.							

For other than residential developments, when the details of the development are not known, the maximum day consumption and fire flow may be estimated by the Subdivision Administrator. Such estimates shall not relieve the owner or developer of the responsibility of providing adequate main capacity for any and all future needs within the development.

- (3) Head losses. Head losses due to friction shall be computed using the Hazen-Williams formula with a "C" factor no greater than 100. Head loss calculations shall be submitted to the City for approval.
- (4) Main capacity. Primary mains, secondary mains, and gridiron mains shall be sized to provide sufficient capacity to deliver the required fire flow plus the consumption at the maximum daily rate to all areas served by the proposed construction.
- (5) Required fire flow and pressure. A separate fire flow report shall be prepared that indicates that at selected locations, and at any other locations that may be selected by the Subdivision Administrator, the fire flows required, in excess of maximum daily consumptive demands, will be supplied using a "C" factor of 100, ignoring fittings, and with a minimum residual hydrant pressure of 20 psi. Required fire flow shall be computed as detailed in the "Guide for Determination of Required Fire Flow" latest edition, published by the Insurance Service Office. The developer's engineer shall furnish any necessary design calculations to ensure that all water mains are sized to provide ISO fire protection flow rates or the rates shown in the following table, whichever is higher:

Single-Family Residential	2000 GPM @25 psi
Multi-Family Residential	2500 GPM @25 psi
Commercial-Industrial	3500 GPM @25 psi

- (6) Fire hydrant spacing.
  - (a) The maximum distance between fire hydrants shall be three hundred and fifty feet (350'). In addition to this requirement, fire hydrants in commercial/industrial areas shall be located so that the near corner of all construction on the site that could burn will not be further than one hundred and fifty feet (150') from a fire hydrant. Fire hydrants shall be provided so as to provide the required fire flows to structures as described in the "Fire Suppressions Rating Schedule" latest edition, published by the Insurance Service Office. Where water transmission lines or offsite water lines are installed in existing easements, hydrants must be installed at five hundred foot (500') intervals.
  - (b) Fire hydrants shall be placed on private property when the Fire Chief of the Watseka Fire Department determines that fire hydrants are at too great a distance to provide proper protection for multi-family, commercial, or industrial properties. Easements shall be provided for all hydrants on private property.
  - (c) Fire hydrants shall be placed within one hundred feet (100') of all sprinkler and standpipe siamese connections provided on buildings, unless otherwise directed by the Fire Department because of existing or proposed circumstances.
  - (d) Fire hydrants shall be placed at the end of all cul-de-sacs and dead end watermains.
- (7) Valve spacing. A sufficient number of valves shall be provided so that a break or other failure will not affect more than 25 residential units or one thousand feet (1000') of main in non-residential areas.
- (8) Valve vaults. All water main valves 10" and greater must be installed in valve vaults. All water main valves, regardless of size, that are underneath pavement must also be installed in valve vaults.
- (C) Material specifications and details. All water distribution system elements shall conform to the following specifications:
  - (1) Ductile iron pipe.
    - (a) Pipe class thickness, Class 52, minimum thickness per AWWA C-151, or as required by AWWA C-150 for various depths, with bituminous coated cement lining.
    - (b) Joints Push-on and mechanical, AWWA C-111, with neoprene gaskets.

- (c) Polyvinyl wrap AWWA C-105. (Only to be used if warranted by soil conditions.)
- (d) Fittings Cast or ductile iron, AWWA C-110 and AWWA C-111. Duranton Sac Nut or equal is required on every other bolt on all fittings. All fittings rated to minimum 350 psi.
- (2) Valves.
  - (a) Ten inch (10") and smaller Mechanical joint, epoxy coated cast iron resilient wedge with bronze non-rising stem gate valves, counter-clockwise to open, with O-ring seal conforming to AWWA C-509.
  - (b) Twelve inch (12") and larger Mechanical joint, epoxy coated iron body, rubber seat, butterfly valve, counter-clockwise to open, AWWA C-504.
  - (c) Valves shall have stainless steel bolts and nuts on the bonnet and stuffing box.
  - (d) Valve boxes shall be adjustable, two piece cast iron, roadway type with 5-1/4" throat and a no-tilt drop cover lid with "WATER" cast into it in raised letters (Mueller or Tyler). Valve box must have additional upward and downward travel when adjusting to grade.
  - (e) PVC or Rubber Valve box stabilizers provided by Valve Box Adapter II for six inch (6") and eight inch (8") valves shall be provided.
- (3) Fire hydrants.
  - (a) Mueller Super Centurion 250, painted red, with five and one-half foot (5-1/2') bury.
  - (b) Valve size, 5<sup>1</sup>/<sub>4</sub>-inch, counter-clockwise to open.
  - (c) Nozzles, two at 2<sup>1</sup>/<sub>2</sub>-inch, one at 4<sup>1</sup>/<sub>2</sub>-inch, with threads conforming to National Standard Specifications.
  - (d) Breakaway type with the break line flanges located one inch above finished grade.
  - (e) Hydrant to be installed with MJ swivel Tee with swivel MJ Gland. Retainer lock flanges (Mega-Lug) should be used on all MJ joints. No spool pieces allowed.
  - (f) Auxiliary valve to be flanged attachment to the fire hydrant and to be the same manufacture as the fire hydrant. Auxiliary valves to be keyable and adjusted to final grade.
  - (g) Fire hydrants shall be thrust blocked behind and under the hydrant shoe. Hydrant drain fields are required.
- (4) Hydrant valve box.
  - (a) Tyler 664-S or Mueller H-10360

- (b) Lid embossed "WATER".
- (c) Stabilizer for box shall be used.
- (5) Corporation stops Mueller H-15000, one inch (1") minimum.
- (6) Service pipe.
  - (a) Copper tube, two inch (2") and smaller; Type K (1 inch minimum). Continuous from corporation stop to curb stop, and curb stop to inside building. Maximum length shall be one hundred and twenty feet (120'). Exceptions only as may be approved by the Subdivision Administrator. Any approved exception for length greater than one hundred and twenty feet (120') will require a minimum one and one-half inch (1  $\frac{1}{2}$ ") service size (final size as approved by the Subdivision Administrator).
  - (b) Ductile iron, larger than two inch (2").
  - (c) Mueller flair fittings or equal.
- (7) Curb stop.
  - (a) Copper service, Mueller B-25154.
  - (b) Ductile iron service, conform to subdivisions (C)(2)(a) and (C)(2)(c) above.
- (8) Curb box.
  - (a) Copper service, Mueller H-10302 or H-10304.
  - (b) B-box shall be Tyler 95E with Stabilizer.
  - (c) Ductile iron service, four inch (4") and smaller, conform to subdivision (C)(4) above.
  - (d) Ductile iron service, six inch (6") and larger, conform to subdivision (C)(11) below.
- (9) Thrust restraints.
  - (a) Horizontal reactions Thrust restraints at all tees, plugged ends, hydrants, and bends between 11<sup>1</sup>/<sub>4</sub> degrees and 90 degrees.
  - (b) Vertical reactions Individual designs for each location shall be submitted with the development plans.
  - (c) Material Precast concrete.
  - (d) Where undisturbed earth is not available or not likely to be available to back up pressure type concrete thrust blocks, the development plans shall specify Megalug retainer glands or tie rods with or without anchor type thrust blocks. Design data shall be submitted for such specifications. Care shall be taken when pouring concrete so that the mix will not interfere with access to joints or with hydrant drainage.
- (10) Casing pipes.

- (a) Casing installation under railroad tracks, pipelines, County and State highways, Township roads, etc. shall be approved by the appropriate agency which has jurisdiction.
- (b) Steel casing pipe shall be in accordance with American National Standards Institute (ANSI) B36.10 with yield strength of 35,000 psi minimum and minimum wall thickness per the following table:

## MINIMUM WALL THICKNESS FOR STEEL CASING PIPE

Nominal Inside Diameter (in)	Nominal Wall Thickness (in.)
24 and under	0.375
24 – 36	0.500
36	0.625
> 36	as approved by Subdivision Administrator

(11) Valve vaults.

- (a) Precast reinforced concrete, ASTM C-478.
- (b) Size: For valves twelve inch (12") diameter or less, valve vaults shall have a forty eight inch (48") inside diameter; for pressure connections and valves sixteen inch (16") and larger, valve vaults shall have a sixty inch (60") inside diameter.
- (c) Adjustment: No more than three (3) precast concrete adjusting rings with six inch (6") maximum total height adjustment shall be allowed.
- (d) Bitumastic material shall be placed between all precast concrete sections and adjusting rings and to set castings.
- (d) Valve vaults requiring offset cones shall be positioned so that neither the inside of the cone nor the manhole steps will interfere with the operation of the valve. Valve operating nut shall be accessible through the frame opening.

(12) Castings.

- (a) Manhole frame and cover Heavy Duty East Jordan Iron Works, Inc. (E.J.I.W.) 1060, with heavy duty gasketed, self-sealing lid cast with "WATER".
- (b) Manhole steps Fiberglas or steel reinforced plastic conforming to O.S.H.A. standards, sixteen inches (16") on center.
- (13) Pipe bedding cover and trench backfill. IDOT gradation CA-7, crushed stone or crushed gravel meeting the following gradation requirements:

SIEVE SIZE Percent Passing												
Grad No.	3"	21⁄2"	2"	11⁄2"	1"	<sup>3</sup> ⁄4"	1/2"	3/8"	No. 4	No. 16	No. 50	No. 200
CA7				100	95±5		45±15		5±5			

(D) Installation requirements.

- (1) Environmental Protection Agency permit. Water system design and construction shall, in all respects, be in accordance with the regulations of the Illinois Environmental Protection Agency. No construction shall commence until a copy of a permit from this agency is filed with the Subdivision Administrator.
- (2) Installation. The installation of water mains and appurtenances, including services, shall conform to the requirements of this appendix and shall conform to AWWA C-600.
- (3) Notification. Prior to beginning the water main installation, the contractor shall give the Subdivision Administrator 48 hour's notice of his intended time of starting work.
- (E) Water service line installation and location. A water service line is a water pipe connected at the water main by a brass corporation stop or a ductile iron fitting. Such pipe is extended horizontally at right angles with the water main to the front line of the lot or single building which it is to serve and shall have a minimum burial depth of 60". For all service taps larger than one inch, a service saddle designed for the size and type of water main pipe shall be used. A cast iron curb box shall be installed over curb stops for four inch and smaller gate valves. A valve vault shall be provided for gate valves larger than four inches. The water service line shall be terminated with a brass curb stop or gate valve seven and one-half feet (7.5') from the lot line and five feet (5') right of the center of the lot as viewed from the street. The end of the service line shall be marked with a wooden 4"x4" stake painted blue with lot number, extended four feet (4') above finished grade. Curb shall be stamped "w" at water service location.
- (F) Fire service line. All fire sprinklers shall be connected to the water system through a separate fire service line constructed in accordance with the requirements of this appendix.
- (G) Separation from sewers. The water main pipe shall be laid at least ten feet horizontally distant from any existing or proposed sewer pipe. If the water main must cross a sewer pipe, the bottom of the water main pipe must be laid at least eighteen inches (18") above the top of the sewer pipe. If neither of these conditions can be met, other protective methods, as described and illustrated in the "Standard Specifications for Water and Sewer Main Construction in Illinois," shall be followed.
- (H) Construction requirements.
  - (1) Excavation.
    - (a) The trench shall be excavated so that the water main shall have a minimum of five

feet of cover.

- (b) The trench shall be excavated so that a minimum of six inches (6") of CA-7 stone be placed as bedding material. The pipe shall then be covered with a minimum of six inches of the same stone.
- (c) Where a firm foundation is not found to exist for the bottom of the trench at the required depth due to soft, spongy, or other unsuitable soil, such unsuitable soil shall be removed for the full width of the trench and replaced with well-compacted CA-7 material or an equal substitute if such compacted material proves unsatisfactory. Where rock in either ledge or boulder formation is encountered, it shall be removed below grade and replaced with a well-compacted cushion of CA-7 material having a thickness under the pipe of not less than eight inches (8").
- (2) The contractor shall be responsible for providing a competent individual on site during all trenching operations to insure that all O.S.H.A. and other applicable safety standards are met by construction means and methods.
- (3) Laying water main.
  - (a) The contractor shall keep the trench free from water while the water main is being placed and the pipe joint has been sealed to the satisfaction of the Subdivision Administrator.
  - (b) Adequate provision shall be made for the safety, storage, and protection of all water pipe prior to actual installation in the trench. Care shall be taken to prevent damage to the pipe castings, both inside and out. Provisions shall be made to keep the inside of the pipe clean throughout its storage period and to keep mud and other debris from being deposited therein. All pipe shall be thoroughly cleaned on the inside before laying of the pipe. Proper equipment shall be used for the safe handling, conveying, and laying of the pipe. All pipe shall be carefully lowered into the trench, piece by piece, in such manner as to prevent damage to water main materials and protective coatings and linings. Under no circumstances shall water main materials be dropped or dumped into the trench.
  - (c) In making joints, all portions of the joining materials and the socket and spigot ends of the joining pipe shall be wiped clean of all foreign materials. The actual assembly of the jointing shall be in accordance with the manufacturer's installation instructions and as directed by the Subdivision Administrator. During construction, until jointing operations are complete, the open ends of all pipes shall be at all times protected and sealed with temporary watertight plugs.
  - (d) Polyurethane wrapping of water main will be required only in areas where unsuitable soils are found to exist as determined by the Subdivision Administrator.
- (4) Pipe cutting.
  - (a) The cutting of pipe for inserting valves, fittings, or closure pieces shall be done in a neat and workmanlike manner without damage to the cement lining and so as to

leave a smooth end at right angles to the axis of the pipe.

- (b) Flame cutting of pipe by means of an oxyacetylene torch shall not be allowed.
- (c) All cut in connections for greater than a two inch (2") connection shall be made by cast iron sleeve or City-approved equal.
- (5) Trench.
  - (a) The trench bottom shall be flat and shall provide full bearing of the length of the pipe.
  - (b) Thrust blocks shall be used to prevent movement at all tees, caps, valves, and hydrants.
  - (c) Backfilling of the trench shall be accomplished by careful replacement of the excavated material after the pipe and the bedding material (if applicable) have been installed. Any pipe installed under an existing or proposed street pavement, or within two feet (2') of an existing or proposed pavement edge, curb and gutter, bike trail or sidewalk shall be backfilled to the top of the trench with CA-7 material compacted in lifts not exceeding twelve inches (12") and the final twelve inches (12") with compacted CA-6 material.
- (6) Fire hydrant.
  - (a) Fire hydrants shall be placed as specified herein. There shall be no obstructions within four feet of the fire hydrant. All nozzles shall stand plumb, their steamer nozzle pointing normal to the road. They shall conform to the established grade, with nozzles at eighteen inches (18") above the finished grade.
  - (b) A drainage pit two feet (2') in diameter shall be excavated around each hydrant and filled completely with 3/4-inch washed gravel under and around the bowl of the drain opening. No hydrant drainage pit shall be connected to a sewer.
- (7) Water main installation. During water main installation, to make a closure between two pipe ends, or between pipe end fittings, or between pipe end and valve, short lengths shall be used with proper connections or couplings. Repair sleeves shall not be used to make closures during new construction.
- (8) Dewatering. Where water is encountered in the trench, it shall be removed during pipe-laying and jointing operations. Trench water shall not be allowed to enter the pipe at any time.
- (9) Connections to existing mains. All connections to the City water distribution system shall be made under full water service pressure, unless otherwise approved by the Subdivision Administrator at locations approved by the Subdivision Administrator.
- (I) Pressure test.

- (1) As part of the construction, the water mains shall be pressure tested in accordance with this appendix. All testing shall be performed before curb and gutter or other permanent type surface improvement work begins. The Subdivision Administrator shall be notified at least 24 hours before the test. The filling of the water main shall be at a rate set by the City with all hydrants and whips in the open position and slowly closed in the order in which water appears. A form documenting the test procedure and results shall be signed by the contractor and the representative for the City witnessing the test.
- (2) All newly laid pipe shall be subjected to a hydrostatic pressure of one hundred and fifty pounds per square inch (150 psi), in accordance with AWWA Standard C-600-93 latest edition, Section 4: Hydrostatic Testing. Allowable leakage, measured in gph (gallons per hour) per one thousand feet (1000') of pipeline, as specified in Table 6A of the AWWA Standard C-600-93 shall apply. Duration of each pressure test shall be for a period of not less than two hours. Each valved section of pipe shall be filled with water and the specified test pressure shall be applied by means of a pump connected to the pipe. Before applying the specified test pressure, all air shall be expelled from the pipe. All leaks shall be repaired until tight. Any cracked or defective pipes, fittings, valves or hydrants discovered in consequence of this pressure test shall be removed and replaced and the test repeated until satisfactory results are obtained.
- (3) All testing shall be performed before the installation of service lines.
- (J) Preliminary flushing. Prior to chlorination, the main shall be flushed as thoroughly as possible with the water pressure and outlets available. The Subdivision Administrator shall be notified before any water is drawn from City mains. Flushing shall be done after the pressure test is made. Because such flushing removes only the lighter solids, it cannot be relied upon to remove heavy material allowed to get into the main during laying. If no hydrant is installed at the end of the main, a tap should be provided large enough to affect a velocity in the main of at least 2<sup>1</sup>/<sub>2</sub> feet per second.
- (K) Disinfection.
  - (1) The preferred point of application of the chlorinating agent shall be at the beginning of the pipeline extension (or any valved section of it) and through a corporation stop in the top of the newly laid pipe. The injector for delivering the chlorine gas into the pipe should be supplied from a tap on the pressure side of the gate valve controlling the flow into the pipeline extension.
  - (2) Water from the existing distribution system or any other source of supply shall be controlled so as to flow slowly into the newly laid pipeline during the application of chlorine gas. The rate of chlorine mixture flow shall be in such proportion to the rate of water entering the pipe that the chlorine dose applied to the water entering the newly laid pipe shall be at least 50 ppm, or enough to meet the requirements during the retention period. This may require as much as 100 ppm of chlorine in the water left in the line after chlorination.
  - (3) Valves shall be manipulated so that the strong chlorine solution in the line being treated shall not flow back into the line supplying the water. The pipe section being chlorinated

shall be kept at a lower pressure than the water system pressure.

- (4) Treated water shall be retained in the pipe long enough to destroy all spore-forming bacteria. This retention period shall be at least 24 hours. After the chlorine-treated water has been retained for the required time, the chlorine residual at the pipe extremities and at other representative points shall be at least 10 ppm.
- (5) In the process of chlorinating newly laid pipe, all valves or other appurtenances shall be operated while the pipeline is filled with the chlorinating agent.
- (6) Water mains shall be disinfected and tested according to the requirements of the "Standards for Disinfecting Water Mains", AWWA C-601 as amended from time to time, and as required by this appendix. All disinfection, as required by this appendix, shall be performed by an independent firm exhibiting experience in the methods and techniques of this operation, and shall be approved by the Subdivision Administrator. The firm shall be bonded and insured and have proof of both in his vehicle (as well as on file with the City). Their insurance shall include the City of Watseka as additionally insured and must include coverage for the handling and transporting of chlorine gas. Furthermore, the firm must comply with all State and Federal regulations regarding the handling and transporting of chlorine gas. City of Watseka personnel must be present during any chlorination work (including the collection of samples). The Subdivision Administrator is to receive 48-hour notification prior to any disinfection work.
- (7) Disinfecting shall be done by the continuous feed method.
- (8) Only authorized City of Watseka employees shall operate water system valves.
- (9) A minimum of two people are required for chlorinating procedures; one to monitor the chlorine at the cylinder and one to monitor the chlorine at the sample (whip) locations.
- (10) Samples shall only be taken from copper "whips" (not hydrants).
- (11) All chlorine cylinders shall be secured to the vehicle in a vertical position.
- (12) Under no circumstances shall any heat be applied directly to the chlorine cylinder.
- (13) A yoke adaptor for connection to the chlorine cylinder shall be used.
- (14) Clear neoprene tubing shall be used for the dissemination of the chlorine.
- (15) A needle valve shall be used for the accurate control of the chlorine.
- (16) A back-pressure gauge and plastic check valve shall be used.
- (17) The chlorine assembly shall not use any "quick-connects" or clamps; only threaded fittings.
- (18) The firm performing the chlorinating shall have an up-to-date certified air pack in their vehicle.
#### City of Watseka Subdivision and Development Regulations

- (19) All building service lines (four inches in diameter or larger) shall be chlorinated/disinfected only after permanent fittings have been installed. Removal of any such fitting may require the service line to be re-sampled or re-chlorinated at the discretion of the City of Watseka.
- (L) Final flushing and testing.
  - (1) No disconnection from existing or connection to new water main are to be performed until the new water main is tested and placed into service. For replacement water mains, all work shall be performed prior to abandoning the existing water main. In the event that an interruption of service is required, the Contractor shall notify all affected users, in writing, at least 24-48 hours in advance.
  - (2) Following chlorination, all treated water shall be thoroughly flushed from the newly laid pipeline at its extremities until the replacement water, throughout its length shall, upon test, be approved as safe water by the Subdivision Administrator. This quality of water delivered by the new main should continue for a period of at least two full days, as demonstrated by laboratory examination of samples taken from a tap located and installed in such a way as to prevent outside contamination. Samples should never be taken from an unsterilized hose or from a fire hydrant because such samples seldom meet current bacteriological standards.
  - (3) After disinfecting and flushing, a minimum of two water samples shall be collected by the contractor on two successive days, with notice given, so that the collection may be witnessed by the City. Bacteriological sampling and analysis of the samples shall be performed by a laboratory approved by the Illinois Department of Public Health and the City. Should the initial treatment result in an unsatisfactory bacteriological test, the procedure shall be repeated until satisfactory results are obtained. The contractor or developer shall pay for the sampling and analysis. Results shall be transmitted by the laboratory directly to the Subdivision Administrator. Test results shall indicate the date the sample was made, the exact locations at which sample were taken, the firm submitting the sample, and the project at which the samples were collected. Sufficient samples shall be collected in order to insure that the system is bacteriologically safe.
  - (4) The City shall operate the valves, hydrants, and any other appurtenances to flush the water main after the receipt of satisfactory water samples. Any operation difficulties or deficiencies shall be noted and submitted to the developer or contractor for repair.
  - (5) All corporation stops used for testing and chlorination purposes shall be removed and plugged with a tapered brass plug.
  - (6) Fire flow testing will be performed by the Superintendent of Utilities.
  - (7) Record drawings.
    - (a) Prior to final acceptance of work, "as-built" drawings shall be submitted to the City for review.
    - (b) Upon City approval of "as-built" drawings, two (2) full-size (36"x48") copies (signed

#### City of Watseka Subdivision and Development Regulations

and sealed by a Registered Illinois Professional Engineer) shall be submitted to the City, along with an electronic copy in accordance with current City requirements (see Section 5.54).

#### City of Watseka Subdivision and Development Regulations

		WATE	R MAIN	TESTING						
SUBDIVISION:					TEST START TIME:					
CONTRACTOR:					TEST END TIME:					
TEST DATE:		TEST DURATION:								
TEST PRESSURE:					S	STATIC PRESSURE:				
Allowable Water Loss										
Pipe Size		ii	n.		_in.			_in.		
Total Lengths	5	f	t.		_ ft.			_ft.		
<u>Allowable Calculations</u> FORMULA: L= $SD\sqrt{P}$										
Where:			133,200							
L = allowable leakage, in gallons per hour   S = length of pipe tested, in feet   D = nominal diameter of the pipe, in inches   P = average test pressure in pounds per square inch (gauge)										
Calculations		Total Allo	owable L	oss Per H	our (Ga	allons)				

Test Number Date Allowable Actual Loss Pass Fail Loss

Remarks:

Signatures: City Representative \_\_\_\_\_

Contractor

#### APPENDIX G: CURB AND GUTTER MATERIAL STANDARDS AND SPECIFICATIONS

- (A) General.
  - (1) All curb and gutter shall be installed in accordance with the material installation and testing requirements of the "Standard Specifications for Road and Bridge Construction in Illinois," latest edition, unless otherwise modified in this appendix.
  - (2) Specification references made herein for manufactured items, such as reinforcement, refer to designations of the American Society for Testing and Materials (ASTM).
- (B) Curb standards.
  - (1) Residential.
    - (a) Rolled type or barrier combination curb and gutter as approved by the Subdivision Administrator shall be used. See Appendix B for type of curb and gutter. Furthermore, two No. 4 reinforcing bars with a minimum lap of fifteen inches (15") shall be placed continuously in all curb and gutter.
    - (b) The back of curb shall be depressed at all sidewalk handicapped ramp locations.
    - (c) The top of curb shall be stamped with the letter "W" for water, and "S" for sanitary sewer at the location where the respective service to each lot crosses under the curb.
  - (2) Commercial/Industrial.
    - (a) Vertical face barrier type combination curb and gutter conforming to the dimensions shown in the vertical faced curb and gutter detail shall be used. See Appendix B for type of curb and gutter. Furthermore, two No. 4 reinforcing bars with a minimum lap of fifteen inches (15") shall be placed continuously in all curb and gutter.
    - (b) Depressed curb shall be provided at all sidewalk handicapped ramp locations and at all driveways whose locations are known at the time of curb installation. If the driveway location is not known at the time of curb and gutter installation, vertical face barrier curb shall be installed, and the driveway opening will be provided later by the lot owner.
    - (c) The top of curb shall be stamped with the letter "W" for water, and "S" for sanitary sewer at the location where the respective service to each lot crosses under the curb.
- (C) Material.
  - (1) Concrete. Portland Cement concrete (Class SI) having a minimum compressive strength of four thousand pounds per square inch (4,000 psi) in 28 days shall be used. Air entrainment shall be in the 3% to 6% range and slump shall be 2 to 4 inches, except if a slipform paver is used the slump shall be adjusted to meet the requirements of the slip

forming process.

- (2) Expansion joint filler. Bituminous preformed expansion joint filler, <sup>3</sup>/<sub>4</sub>-inch thick, and pre-shaped to the profile of the curb shall be used.
- (3) Expansion joint dowels. Smooth steel dowels, <sup>3</sup>/<sub>4</sub>-inch diameter and 18 inches long with pinched stop caps on one end shall be used.
- (4) Reinforcement bars. Reinforcement bars shall be ASTM A-615, minimum grade 40 steel.
- (5) Joint sealant. A cold poured joint compound shall be used.
- (6) Curing compound. Curing compound shall be Type II or III, as specified in Section 722 of the Standard Specification for Road and Bridge Construction.
- (7) Curb base course. Curb base course shall be IDOT gradation CA-7 crushed stone or crushed gravel meeting the following gradation requirements:

SIEVE SIZE Percent Passing												
Grad No.	3"	21⁄2"	2"	1½"	1"	<sup>3</sup> ⁄4"	1⁄2"	3/8"	No. 4	No. 16	No. 50	No. 200
CA 7				100	95±5		45±15		5±5			

(D) Installation.

- (1) Base preparation. The base course shall be CA-7 and a minimum of four inches (4") thick, trimmed or filled as necessary to provide a full depth of curb and gutter as shown in the curb detail. Prior to concrete placement, the base course shall be compacted and proof rolled in accordance with the testing and acceptance requirements below.
- (2) Reinforcement.
  - (a) Two (2) No. 4 reinforcing bars with a minimum lap of fifteen inches (15") shall be placed continuously in all curb and gutter.
- (3) Placing and finishing concrete.
  - (a) Concrete shall be thoroughly tamped to remove all voids. The curb and gutter surface shall be broom finished at right angles to the flow line of the curb and gutter. Any honeycombed areas along the sides of the curb shall be pointed with mortar. The City shall be notified at least 24 hours before pouring the curb.
  - (b) The curb shall be depressed for handicapped ramps at all sidewalk locations.
- (4) Curing and protection. The curb shall be sealed with curing compound as the finishing work proceeds. Protection shall be in accordance with the standard specifications.

- (5) Joints.
  - (a) Expansion joints shall be placed, as a minimum, at all curb radius points and all construction joints in the curb, and shall consist of expansion joint filler and dowels with end caps.
  - (b) Contraction joints shall be saw-cut at twenty foot (20') maximum intervals to a depth of two inches (2"). Sawing shall be done as soon as practical before any random shrinkage cracking occurs and no later than 24 hours after the concrete has been placed. The clean joint space shall be sealed with a cold poured joint compound.
- (E) Testing and acceptance.
  - (1) Proof roll. The curb and gutter base course shall be proof rolled with a fully loaded dump truck before the curb and gutter is poured. The Subdivision Administrator shall be notified at least 24 hours before proof rolling. Additional proof rolls shall be provided to verify that any unstable areas have been repaired.
  - (2) Concrete.
    - (a) The contractor shall make at least two (2) test cylinders from each concrete pour less than 25 cubic yards, and at least four (4) cylinders for each pour of 25 yards and above, in accordance with ASTM C-31. The contractor shall have the cylinders tested in accordance with ASTM C-39 at 28 days by an independent IDOT-certified testing firm, and the test results mailed directly to the Subdivision Administrator. If the materials tested fail to meet any of the requirements of the tests, the portions of the job for which the particular test was made may be rejected.
    - (b) The City may require that the slump and air content of the concrete also be tested. All costs of testing shall be borne by the contractor. Any concrete not conforming to the Standard Specifications will be rejected.
- (F) Defects. Any curb that has been installed at the improper line and grade that is damaged or badly cracked, or that has been installed with improper material shall be removed and replaced as a condition of acceptance.

Celebrate the History, Plan for Progress.

# 2014 COMPREHENSIVE PLAN CITY OF WATSEKA, IL

## STORMWATER ORDINANCE

Prepared by Robinson Engineering Ltd. with GINKGO Planning & Design, Inc.

#### **ARTICLE 1: AUTHORITY, PURPOSE, AND DEFINITIONS**

#### Sec. 100 –101 (RESERVED)

#### Sec. 102 Purposes of this Ordinance

The principal purpose of this Ordinance is to promote effective, equitable, acceptable, and legal Stormwater Management measures by establishing reasonable rules and regulations for development within the City of Watseka.

Other purposes of this Ordinance include:

- a. Managing and mitigating the effects of urbanization on stormwater drainage throughout the City through planning, appropriate engineering practices and proper maintenance;
- b. Protecting from, and reducing the existing potential for, loss of human life, health, safety and property from the hazards of flooding damages on a watershed basis;
- c. Preserving and enhancing the natural hydrologic and hydraulic functions and natural characteristics of watercourses and floodplains to protect water quality, protect aquatic habitats, reduce flood damages, reduce soil erosion, provide recreational and aesthetic benefits and enhance community and economic development;
- d. Controlling sediment and erosion in and from stormwater facilities, developments, agricultural fields, and construction sites and reducing and repairing stream bank erosion;
- e. Requiring that planning for development provide for water resource management, taking into account natural features such as vegetation, wildlife, waterways, wetlands, and topography in order to reduce the probability that new development will create unstable conditions susceptible to erosion;
- f. Protecting environmentally sensitive areas from deterioration or destruction by private or public actions;
- g. Requiring appropriate and adequate provision for site runoff control, especially when the land is developed with a large amount of impervious surface;
- h. Requiring the design and evaluation of each site Stormwater Management plan consistent with watershed capacities;
- i. Encouraging the use of stormwater storage and infiltration of stormwater in preference to stormwater conveyance;
- j. Lessening the taxpayers' burden for flood-related disasters, repairs to flood-damaged public facilities and utilities, and flood rescue and relief operations;
- k. Meeting the Illinois Department of Natural Resources-Office of Water Resources floodway permitting requirements delineated in 615 ILCS 5/18g (1992) ("An Act in Relation to the Regulation of the Rivers, Lakes, and Streams of the State of Illinois"), as amended from time to time;
- 1. Making federally subsidized flood insurance available in the City by fulfilling the requirements of the National Flood Insurance Program;
- m. Complying with the rules and regulations of the National Flood Insurance Program codified in Title 44 of the Code of Federal Regulations;
- n. Restricting future development in the floodplain to facilities that will not adversely affect the potential for flood damage;
- o. Requiring regular, planned maintenance of Stormwater Management facilities;

p. Allowing the use of simple technologies whenever appropriate and realistic, but requiring the use of more sophisticated techniques when necessary to ensure the adequacy of stormwater controls;

#### Sec. 103 (RESERVED)

#### Sec. 104 <u>Definitions</u>

Within the context of this Ordinance, the following words and terms shall have the meanings set forth except where otherwise specifically indicated. Words and terms not defined shall have the meanings indicated by common dictionary definition.

Administrator. The person designated by the City of Watseka to administer and enforce this Ordinance. By ordinance this person is the Public Works Director.

Administrative Violation. An administrative violation of the ordinance occurs when rules and procedures regarding permit applications and Stormwater Management permits are not followed.

**Agricultural Subsurface Drainage.** A water management technique driven by economic and safety concerns, where the rate at which surplus groundwater should be removed is determined primarily by the moisture/air requirements of the vegetation (commonly called "Tiles, "Field Tiles", etc.)

**Applicable Engineering Practice.** Procedures, methods, or materials recommended in standard engineering textbooks or references as suitable for the intended purpose.

**Applicant.** Any Person, Firm or Governmental Agency who executes the necessary forms to procure official approval of a development or permit to carry out construction of a development from the City.

**Appropriate Use.** Only uses of the designated floodway that are permissible and will be considered for permit issuance. The list of permissible uses is contained in Article 4.

**Armoring.** A form of channel modification which involves the placement of materials (concrete, riprap, bulkheads, etc.) within a stream channel or along a shore line to protect property above streams, lakes and ponds from erosion and wave damage caused by wave action and stream flow.

**Base Flood.** The flood having a one percent probability of being equaled or exceeded in a given year.

Base Flood Elevation (BFE). The highest water surface elevation that can be expected during the base flood.

**Best Management Practices (BMP).** A measure used to control the adverse stormwater-related effects of development. BMPs include structural devices (e.g., swales, filter strips, infiltration trenches, and detention basins) designed to remove pollutants, reduce runoff rates and volumes, and protect aquatic habitats. BMPs also include nonstructural approaches, such as public education efforts to prevent the dumping of household chemicals into storm drains.

**Bounce**. The difference between the Normal Water Level and the design High Water Level in a wet bottom pond, and the invert of the outlet control and the design High Water Level for a dry bottom pond.

**Building.** A structure that is principally above ground and is enclosed by walls and a roof. The term includes a gas or liquid storage tank, a manufactured home, mobile home or a prefabricated building. This term also includes recreational vehicles and travel trailers to be installed on a site for more than 180 days, unless fully licensed and ready for highway use.

Building Permit. A permit issued by the City for the construction, erection or alteration of a structure or building.

**Buffer.** An area of predominantly vegetated land located adjacent to channels, wetlands, lakes or ponds for the purpose of reducing contaminants in stormwater that flows to such areas.

Bulkhead. A retaining wall that protects property along water.

**Bulletin 70.** "Frequency Distributions and Hydroclimatic Characteristics of Heavy Rainstorms in Illinois" by Floyd Huff and James Angel of the Illinois State Water Survey (1989).

**Bypass Flows.** Stormwater runoff or groundwater from upstream properties tributary to a property's drainage system but not under its control.

**Channel.** Any river, stream, creek, brook, branch, natural or artificial depression, ponded area, flowage, slough, ditch, conduit, culvert, gully, ravine, wash, or natural or manmade drainage way, which has a definite bed and bank or shoreline, in or into which surface, groundwater, effluent, or industrial discharges flow either perennially or intermittently.

**Channel Modification.** Alteration of a channel by changing the physical dimensions or materials of its bed or banks. Channel modification includes damming, rip rapping (or other armoring), widening, deepening, straightening, relocating, lining, and significant removal of bottom or woody rooted vegetation but does not include the clearing of debris or removal of trash or dredging to previously documented thalwag elevations and side slopes.

**Channelization.** Channelization is a severe form of channel modification involving a significant change in the channel cross-section and typically involving relocation of the existing channel (e.g. straightening).

City. The City of Watseka, Iroquois County, Illinois.

Clearing. Any activity which removes vegetative ground cover.

**Commercial.** Sale of goods to the public at large where the traffic generated warrants construction of site improvements.

**Commercial Redevelopment.** Development on a parcel upon which the existing condition is buildings, parking lots and infrastructure associated with commercial activities. Additions to existing buildings and new impervious surfaces added after the effective date of the Ordinance are specifically excluded from this definition.

**Community.** The City of Watseka.

**Compensatory Storage.** An excavated, hydrologically and hydraulically equivalent volume of storage created to offset the loss of existing flood storage.

**Conditional Letter of Map Amendment (CLOMA).** A FEMA comment letter conditionally removing a development proposed to be located in, and affecting only that portion of, the area of floodplain outside the regulatory floodway and having no impact on the existing regulatory floodway or base flood elevations.

**Conditional Letter of Map Revision (CLOMR).** A letter that indicates that FEMA will revise base flood elevations, flood insurance rate zones, flood boundaries, or floodways as shown on an effective FIRM or FBFM after the record drawings are submitted and approved.

COE. The United States Army Corps of Engineers.

**Conservation Planning.** The practices and procedures associated with the management of soil, water, plants, plant nutrients and other elements of agricultural production. Documentation of the management system shall only be as required by the NRCS or in cases of a complaint, as requested by the Administrator in response to a notification of a complaint.

**Control Structure.** A structure designed to limit the rate of flow that passes through the structure to a specific rate, given a specific upstream and downstream water surface elevation.

County. Iroquois County, Illinois.

**Culvert**. A structure designed to carry drainage water or small streams below barriers such as roads, driveways, or railway embankments.

Critical Duration. The duration of a storm event that results in the greatest peak runoff.

**Dam.** Any obstruction, wall embankment, or barrier, together with any abutments and appurtenant works, constructed to store or divert water or to create a pool (not including underground water storage tanks).

**Depressional Area.** Any area which is lower in elevation on all sides than surrounding properties (i.e. does not drain freely), or whose drainage is severely limited such as by a restrictive culvert. A depressional area will fill with water on occasion when runoff into it exceeds the rate of infiltration into underlying soil or exceeds the discharge through its controlled outlet. Large depressional areas may provide significant stormwater or floodplain storage.

**Depressional Storage.** The volume contained below a closed contour on a 1-foot contour interval topographic map, the upper elevation which is determined by the invert of a surface gravity outlet.

**Detention Basin.** (Site Runoff Storage Facility) A constructed structure for the temporary storage of stormwater runoff with a controlled release rate.

**Developer.** A person who creates or causes a development.

**Development.** Any constructed change to real estate including: a) construction, reconstruction, repair, or replacement of a building or an addition to a building; b) installing a manufactured home on a site, preparing a site for a Manufactured Home, or installing a travel trailer or recreational vehicle on a site for more than 180 days. If the travel trailer or recreational vehicle is on-site for less than 180 days, it must be fully licensed and ready for highway use; c) drilling, mining, installing utilities, construction of roads, bridges or similar projects; d) construction or erection of levees, walls, fences, dams, or culverts, channel modifications, filling, dredging, grading, excavating, paving, or other non-agricultural alterations of the ground surface, storage materials, deposit of solids or liquid waste; e) any other activity of man that might change the direction, height, or velocity of flood or surface water, including extensive vegetation removal; f) plowing and cultivation and other similar agricultural practices that do not involve filling, grading or construction of levees as regulated in Section 204. The following are not considered development: maintenance of existing buildings and facilities such as reroofing or resurfacing of roads with an impervious surface when there is no increase in elevation.

Drainage Area. The land area upstream of a given point that may contribute runoff flow at that point from rainfall.

Effective Date. The effective date of this City of Watseka Stormwater Management ordinance.

**Elevation Certificates.** A form published by FEMA, or its equivalent, that is used to certify the base flood elevation and the lowest elevation of usable space to which a building has been constructed.

**Ephemeral Stream.** A stream whose bed elevation does not intersect the groundwater table, it carries flow only during and immediately after a runoff producing rainfall event.

**Emergency Overland Flow Route.** The flow path of stormwater runoff calculated assuming all enclosed storm sewers are inoperable.

Erosion. The process whereby soil is detached by the action of water or wind.

**Excavation.** Any act by which organic matter, earth, sand, gravel, rock or any other similar material is cut into, dug, quarried, uncovered, removed, displaced, relocated or bulldozed and shall include the conditions resulting therefrom.

Existing Grade. The vertical location of the existing ground surface prior to excavation or filling.

**Existing Manufactured Home Park or Subdivision.** A Manufactured Home Park or subdivision for which the construction of facilities for servicing the lots on which the Manufactured Homes are to be affixed (including at a minimum the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) has been completed before April 1, 1990.

Expansion to an Existing Manufactured Home Park or Subdivision. The preparation of additional sites by the

construction of facilities for servicing the lots on which the Manufactured Homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).

**Extended Detention.** A volume of runoff temporarily detained and released over a long period of time as specified in Section 203.5.

**Fee-in-Lieu of Detention.** A fee paid by a developer to the City of Watseka, commensurate with the costs and fee schedules adopted by the City based on the detention volume required for the development to meet the ordinance release rates. Rules and procedures for fee in lieu of detention are contained in Section 1300 of this Ordinance.

**Fill.** Any act, by which earth, sand, gravel, rock or any other material is deposited, placed, replaced, pushed, dumped, pulled, transported or moved by man to a new location and shall include the conditions resulting therefrom.

Federal Emergency Management Agency (FEMA). The Federal Agency and its regulations, at 44 CFR 59-79, effective as of September 29, 1989 or as amended.

**Filtered View.** Filtered view means the maintenance or establishment of woody vegetation of sufficient density to screen developments from a stream or wet land, to provide for streambank stabilization and erosion control, to serve as an aid to infiltration of surface runoff, and to provide cover to shade the water. The vegetation need not be so dense as to completely block the view. Filtered view means no clear cutting.

**Final Grade.** The vertical location of the ground or pavement surface after the grading work is completed in accordance with the site development plan.

**Flood.** A general and temporary condition of partial or complete inundation of normally dry land areas from overflow of inland or tidal ways or the unusual and rapid accumulation of runoff of surface waters from any source.

**Flood Boundary and Floodway Map (FBFM).** A floodplain management map issued by FEMA that depicts, based on detailed analysis, the boundaries of the base flood, the two tenth percent (0.2%) probability flood, and the floodway.

**Flood Frequency.** Normally expressed as a period of years, based on a percent chance of occurrence in any given year from statistical analysis, during which a flood of a stated magnitude may be expected to be equaled or exceeded. For example, the 2-year flood frequency has a fifty percent (50%) chance of occurrence in any given year. Similarly, the 100-year flood frequency has a one percent (1%) chance of occurrence in any given year.

Flood Fringe. That portion of the floodplain outside of the designated floodway.

**Flood Hazard Boundary Map (FHBM).** A map issued by FEMA that is an official Community map, which depicts generalized areas of floodplains, replaced by a detailed Flood Insurance Study.

**Flood Insurance Rate Map (FIRM).** A map issued by FEMA that is an official Community map, on which map FEMA has delineated both the special flood hazard areas and the risk premium zones applicable to the Community. This map may or may not depict floodways.

**Flood Insurance Study (FIS).** A study of flood discharges and flood profiles for a Community, adopted and published by FEMA.

**Floodplain.** That land typically adjacent to a body of water with ground surface elevations at or below the base flood or the 100-year frequency flood elevation including detached special flood hazard areas, ponding areas, etc. The floodplain is also known as the special flood hazard areas (SFHA).

**Flood Protection Elevation (FPE).** The elevation of the BFE plus 1 (one) foot of freeboard for structures within the plane limits of the base flood elevation. Outside the plane limits, the water table or 100-year design water surface elevation of any adjacent stormwater facility, including emergency overland flow routes, whichever is higher, plus 1 (one) foot of freeboard.

Floodproof. Any combination of structural and non-structural additions, changes or adjustments to structures or

property which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.

**Floodproofing Certificate.** A form published by FEMA that is used to certify that a building has been designed and constructed to be structurally dry flood proofed to the FPE.

**Floodway or Designated Floodway.** The floodway includes the channel, on-stream lakes, and that portion of the floodplain adjacent to a stream or channel which is needed to store and convey the critical duration 100-year frequency flood discharge with no more than a 0.1 foot increase in flood stage due to the loss of flood conveyance or storage, and no more than a 10% increase in velocities.

**Floodway Conveyance.** The measure of the flow carrying capacity of the floodway section and is defined using Manning's equation as,  $K = 1.4863 \text{ AR}^{2/3}$ 

#### n

where "n" is Manning's roughness factor, "A" is the effective area of the cross-section, and "R" is ratio of the wetted area to the wetted perimeter.

**Freeboard.** An increment of height added to the BFE or 100-year design water surface elevation to provide a factor of safety for uncertainties in calculations, unknown local conditions, wave actions and unpredictable effects such as those caused by ice or debris jams.

**Functional.** In the context of the usage in this Ordinance, functional refers to stormwater facilities, which serve their primary purpose of meeting developed release rate requirements but do not meet all of the final design conditions. For example, a detention basin, which has been excavated but has not had the side slopes graded, nor the final landscaping placed, may be considered "functional" as a site runoff storage facility.

Good Husbandry. Generally accepted agricultural practices found in good farm management.

**Grading.** Excavation or fill or any combination thereof and shall include the conditions resulting from any excavation or fill.

Groundwater. Water that is located within soil or rock below the surface of the earth. Also known as subsurface water.

**Groundwater Control System.** A designed system which may consist of tiles, under drains, French drains, or other appropriate stormwater facilities whose purpose is to lower the groundwater table to a predictable elevation throughout the year.

**Historic Structure.** Any structure that is a) listed individually in the National Register of Historic Places, or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register; b) certified or preliminarily determined by the Secretary of the Interior as contributing to the historic district or a district preliminary determined by the Secretary to qualify as a registered historic district; c) individually listed on the State Inventory of Historic Places by the Illinois Historic Preservation Agency; d) individually listed on a local inventory of historic places that has been certified by the Illinois Historic Preservation Agency.

Hydraulics. The science and study of the mechanical behavior of water in physical systems and processes.

**Hydraulic Characteristics.** The features of a watercourse that determine its water conveyance capacity. These features include but are not limited to: size and configuration of the cross-section of the watercourse and floodway; texture and roughness of materials along the watercourse; alignment of watercourse; gradient of watercourse; amount and type of vegetation within the watercourse; and size, configuration, and other characteristics of structures within the watercourse. In low-lying areas, the characteristics of the overbank area also determine water conveyance capacity.

**Hydraulically Connected Impervious Area.** Hydraulically connected impervious area shall consist of those areas of concrete, asphalt and gravel surfaces along with roof tops which convey flows directly to an improved drainage system consisting of storm sewers or paved channels. Rooftops whose downspouts discharge to unpaved surfaces which are designed for the absorption and filtration of stormwater runoff shall not be considered as hydraulically connected impervious surfaces. Roadways whose primary conveyance is through open ditches and swales shall not be considered as

hydraulically connected impervious surface. Roadways drained by curb and gutter and storm sewer, and driveways hydraulically connected to those roadways shall be considered as directly connected impervious surface.

**Hydraulically Equivalent Compensatory Storage.** Compensatory storage either adjacent to the floodplain fill or not located adjacent to the development but can be shown by hydrologic and hydraulic analysis to be equivalent to compensatory storage located adjacent to the development.

**Hydrologically Disturbed.** An area where the land surface has been cleared, grubbed, compacted, or otherwise modified that changes runoff, volumes, rates, or direction.

**Hydrology.** The science of the behavior of water, including its dynamics, composition, and distribution in the atmosphere, on the surface of the earth, and underground.

**IDNR-OWR.** The Illinois Department of Natural Resources, Office of Water Resources.

**Impervious.** Surfaces that cause the majority of rainfall to be converted to direct runoff. Asphalt, concrete and roofing systems are to be considered impervious.

**Industrial Redevelopment.** Development on a parcel upon which the existing condition is buildings, parking lots and infrastructure associated with industrial activities. Additions to existing buildings and new impervious surfaces added after the effective date of the Ordinance are specifically excluded from consideration as Industrial Redevelopment.

**Intermittent Stream.** A stream whose bed intersects the groundwater table for only a portion of the year on the average or any stream which flows continuously for at least one month out of the year but not the entire year.

Lake. A natural or artificial body of water encompassing an area of two or more acres, which retains water throughout the year.

**Letter of Map Amendment (LOMA).** The official determination by FEMA that a specific structure is not in a regulatory floodplain. A LOMA amends the effective FHBM, FBFM, or FIRM.

**Letter of Map Revision (LOMR).** A letter from FEMA that revises base flood elevations, flood insurance rate zones, flood boundaries, or floodway as shown on an effective FHBM, FBFM, or FIRM.

Lot. Lot means an area of land, with defined boundaries, that is designated in official assessor's records as being one parcel.

**Major Stormwater System.** That portion of a stormwater facility needed to store and convey flows beyond the capacity of the minor stormwater system.

**Manufactured Home.** A structure transportable in one or more sections, which is built on a permanent chassis and is designated for use with or without a permanent foundation when attached to the required utilities. The term Manufactured Home also includes park trailers, travel trailers, and other similar vehicles placed on site for more than 180 consecutive days. The term Manufactured Home does not include a recreational vehicle.

Manufactured Home Park or Subdivision. A parcel (or contiguous parcels) of land divided into two or more Manufactured Home lots for rent or sale.

**Mass Grading.** Development in which the primary activity is a change in topography affected by the movement of earth materials.

**Minor Stormwater System.** Shall consist of all infrastructure including curb, gutter, culverts, roadside ditches and swales, storm sewers, and sub-surface drainage systems intended to convey stormwater runoff at less than a 100-year flood frequency. The design frequency for minor stormwater systems shall be in accordance with the applicable ordinances of the local Community, or Highway Department jurisdiction.

Mitigation. Measures taken to offset negative impacts from development in wetlands or the floodplain.

**National Flood Insurance Program (NFIP).** A Federal program whose requirements are codified in Title 44 of the Code of Federal Regulations.

**Natural.** Natural in reference to watercourses means those stream channels, grassed waterways and swales formed by the existing surface topography of the earth prior to changes made by unnatural causes. A natural stream tends to follow a meandering path; its floodplain is not constrained by levees; the area near the bank has not been cleared, mowed or cultivated; the stream flows over soil and geologic materials typical of the area with no alteration of the course or cross-section of the stream caused by filling or excavating.

Natural Drainage. Channels formed in the existing surface topography of the earth prior to changes caused by unnatural causes.

**Net Benefit in Water Quality.** The institution of best management practices as part of a development that when compared to the pre-development condition can be judged to reduce downstream sediment loading or pollutant loadings.

**Net Watershed Benefit.** A finding that, when compared to the existing condition, the developed project will do one of the following: substantially reduce (more than 10%) downstream peak discharges; reduce downstream flood stages (more than 0.1 ft.); or reduce downstream damages to structures occurring in the pre-development condition. The demonstration of one of these conditions must be through detailed hydrologic and hydraulic analysis of watersheds on a regional scale as approved by the Administrator.

**New Manufactured Home Park or Subdivision.** Manufactured Home Park or Subdivision for which the construction of facilities for servicing the lots on which the Manufactured Homes are to be affixed (including at a minimum the installation of utilities, the construction of streets and either final site grading or the pouring of concrete pads) has been completed on or after April 1, 1990.

Non-riverine. Areas not associated with a stream or river such as isolated depressional storage areas, ponds and lakes.

NRCS. The United States Department of Agriculture, Natural Resources Conservation Service.

**Observation Structures.** Structures built on a field tile where the pipe inflow and outflow is visible upon removal of a lid.

**Open Channel.** A conveyance system with a definable bed and banks carrying the discharge from field tiles and surface drainage. Open channels do not include grassed swales within farm fields under agricultural production, which are ephemeral in nature.

**Ordinary High Water Mark (OHWM).** The point on the bank or shore up to which the presence and action of surface water is so continuous so as to leave a distinctive mark, such as by erosion, destruction or prevention of terrestrial vegetation, predominance of aquatic vegetation, or other easily recognized characteristic.

**Overland Flow Path.** A design feature of the major stormwater system which carries flows in excess of the minor stormwater system design capacity in an open channel or swale, or as sheet flow or weir flow over a feature designed to withstand the particular erosive forces involved.

**Parcel.** All contiguous land under common ownership or control including right(s)-of-way to be dedicated in conjunction with the proposed development.

**Perennial Streams.** Riverine watercourses whose thalwag generally intersects the groundwater table elevation and flows throughout the year.

Permitting Authority. The City of Watseka.

Pond. Pond means any inland water body, fed by spring or surface water flow that is not a lake.

Primary Gravity Outlet. The outlet structure designed to meet the release rate requirements of this Ordinance.

**Professional Land Surveyor.** A land surveyor registered in the State of Illinois, under The Illinois Land Surveyors Act. (225 ILCS 330/1, et seq.), as amended.

**Professional Engineer.** An engineer registered in the State of Illinois, under The Illinois Professional Engineering Practice Act. (225 ILCS 325/1 et seq.), as amended.

Property. Contiguous land under single ownership or control.

**Public Bodies of Water.** All open public streams and lakes capable of being navigated by watercraft in whole or in part for commercial uses and purposes and all lakes, rivers and streams, which in their natural conditions were capable of being improved and made navigable, or that are connected with or discharge their waters into navigable lakes or rivers within, or upon the borders of the State of Illinois, together with all bayous, sloughs, backwaters, and submerged lands that are open to the main channel or body of water directly accessible thereto.

**Public Flood Control Project.** A flood control project, which will be operated and maintained by a public agency to reduce flood damages to existing buildings and structures, which includes a hydrologic and hydraulic study of the existing and proposed conditions of the watershed. Nothing in this definition shall preclude the design, engineering, construction or financing in whole or in part of a flood control project by persons or parties who are not public agencies.

**Public Flood Easement.** An easement acceptable to the appropriate jurisdictional body that meets the regulations of the IDNR - OWR, and the Community, and that provides legal assurances that all areas subject to flooding in the created backwater of the development will remain open to allow flooding.

**Qualified Professional.** Qualified professional means a person trained in one or more of the disciplines of biology, geology, soil science, engineering, or hydrology whose training and experience ensure a competent analysis and assessment of stream, lake, pond and wetland conditions and impacts.

**Record Drawings.** Drawings prepared, signed, and sealed by a registered professional engineer or registered land surveyor representing the final "as-built" record of the actual in-place elevations, location of structures, and topography.

**Recreational Vehicle or Travel Trailer.** A vehicle which is: a) built on a singe chassis; b) 400 square feet or less when measured at the largest horizontal projection; c) designed to be self propelled or permanently towable by a light duty truck; and d) designed primarily not for use as a permanent dwelling, but as a temporary living quarters for recreational camping travel or seasonal use.

Registered Structural Engineer. A person licensed under the laws of the State of Illinois as a structural engineer.

**Regulatory Floodway.** Regulatory floodways are those portions of the floodplain depicted on maps as floodway and recognized by the IDNR-OWR for regulatory purposes.

Regulatory Floodplain. The floodplain as depicted on maps recognized by FEMA as defining the limits of the SFHA.

**Removal.** Cutting vegetation to the ground or stumps, complete extraction, or killing by spraying.

Retention Facility. A retention facility stores stormwater runoff without a gravity release.

Riverine. Related to, formed by, or resembling a channel (including creeks and rivers).

**Runoff.** The waters derived from melting snow or rain falling within a tributary drainage basin that exceeds the infiltration capacity of the soils of that basin.

**Seasonal High Groundwater Table.** The upper limits of the soil temporarily saturated with water, being usually associated with spring wetness conditions. This may be indicated by soil mottles with a Munsell color of 2 chroma or less.

**Sedimentation.** The process that deposits hydraulically moved soils, debris, and other materials either on other ground surfaces or in bodies of water or stormwater drainage systems.

**Sediment Trap.** A structure or area that allows for the temporary deposit and removal or disposal of sediment materials from stormwater runoff.

Seepage. The movement of drainable water through soil and rock.

**Setback.** Setback means the horizontal distance between any portion of a structure or any development activity and the ordinary high water mark of a perennial or intermittent stream, the ordinary high water mark of a lake or pond, or the edge of a wetland, measured from the structure's or development's closest point to the ordinary high water mark, or edge.

**Site.** A parcel on which development is proposed or has occurred. The area of the site shall include right-of-way to be dedicated in conjunction with the development.

**Site Development Permit.** A permit issued by the City which permits development, or limited development, of a site in accordance with approved plans and in accordance with this Ordinance.

(SFHA) Special Flood Hazard Area. An area having special flood, mudslide or mudflow, or flood-related erosion hazards, and which area is shown on an FHBM or FIRM as Zone A, AO, A1-30, AE, A99, AH, VO, V1-30, VE, V, M, or E.

**Stormwater Facility.** All ditches, channels, conduits, bridges, culverts, levees, ponds, natural and man-made impoundments, wetlands, riparian environment, tile, swales, sewers, or other natural or artificial structures or measures which serve as a means of draining surface and subsurface water from land.

Stormwater Management Permit. The permit issued under Article 5.

**Structure.** The results of a built change to the land constructed on or below the ground, including the construction, reconstruction or placement of a building or any addition to a building; installing a Manufactured Home on a site; preparing a site for a Manufactured Home or installing a travel trailer on a site for more than 180 days unless they are fully licensed and ready for highway use.

**Substantial Improvement.** If any one of the following three conditions applies when work is performed on an existing building then the work will be classified as a substantial improvement: 1) an improvement made to a building whose cost is equal to or exceeds 50% of the buildings' market value before the improvement; 2) reconstruction or repair of a building, the cost of which equals or exceeds 50% of the market value of the building before reconstruction or repair; or 3) additions to an existing building whose cost equals or exceeds 50% of the market value of a structure, or increases the floor area by more than 20%. Note that if a building is substantially improved, then the entire building must comply with the building protection standards.

**Subsurface Drainage.** The removal of excess soil water to control water table levels at predetermined elevations for structural, environmental or other reasons in areas already developed or being developed for agricultural, residential, industrial, commercial, or recreational uses.

Subsurface Water. Water beneath the ground or pavement surface. Sometimes referred to as ground water or soil water.

**T Factor.** The T factor is the soil loss tolerance. It is defined as the maximum amount of erosion at which the quality of a soil as a medium for plant growth can be maintained. Erosion losses are estimated by Universal Soil Loss Equation (USLE) and Revised Universal Soil Loss Equation (RUSLE).

Thalwag. A line along the lowest point in a channel.

**Transition Section.** Reaches of the stream or floodway where water flows from a narrow cross-section to a wide cross-section, or vice versa.

Usable Space. Space used for dwelling, storage, utilities, or other beneficial purposes, including without limitation basements.

Vegetation. Vegetation means all plant growth, especially trees, shrubs, mosses, and grasses.

Water Table. The upper limit of a free water surface in a saturated soil or underlying material.

**Waters of the U.S.** As defined by the United States Army Corps of Engineers in their Federal Methodology for the Regulation of Wetlands. For purposes of this Ordinance, waters of the U.S. include wetlands, lakes, rivers, streams, creeks, bogs, fens, and ponds. Waters of the U.S. do not include maintained stormwater facilities.

**Watercourse.** Watercourse means any river, stream, creek, brook, branch, natural or artificial depression, ponded area, slough, gulch, draw, ditch, channel, conduit, culvert, swale, grass waterway, gully, ravine, wash, or natural or man-made drainageway, which has a definite channel, bed and banks, in or into which stormwater runoff and floodwater flow either regularly or intermittently.

**Watershed.** All land area drained by, or contributing water to, the same stream, lake, stormwater facility, or draining to a point.

Watershed Benefit. (See Net Watershed Benefit).

**Watershed Characteristics.** Watershed characteristics include land use, physiology, habitat, climate, drainage system and community profile.

**Watershed Plan.** A study and evaluation of an individual drainage basin's stormwater management, floodplain management, water quality and flood control needs and capabilities.

**Wetland.** An area of land, which meets the criteria as defined in current Federal methodology recognized by the U.S. Army Corps of Engineers whether or not the area of land is subject to the regulatory authority of U.S. Army Corps of Engineers or any other regulatory authority.

#### ARTICLE 2 – REQUIREMENTS FOR STORMWATER MANAGEMENT

#### Sec. 200 General Information

#### 200.1 Other Applicable Articles

All developments shall meet the requirements specified for general stormwater development (Section 201), site runoff (Section 202), sediment and erosion control (Article 3), performance security and maintenance (Article 6).

#### 200.2 Applicability of Site Runoff Storage Requirements (Detention)

All developments shall comply with the site runoff storage requirements provided in Section 203 of this Ordinance in which:

- a. More than two single family structures or one multi-family structure are to be constructed on a parcel or site more than one acre in size;
- b. Non-residential land use is to be constructed on a parcel or site more than one acre in size;
- c. Existing multi-family or non-residential land uses on a site one acre or more in size, on which new development after the effective date of this ordinance in the aggregate exceeds 25,000 s.f.;
- d. Roadway developments in rights-of-way under the ownership or control of a unit of local governments when the contiguous area of new roadway construction (excluding previously paved areas) exceeds two acres;
- e. The developer of a Commercial or Industrial Redevelopment may request that a fee-in-lieu of detention be approved provided that all of the following are demonstrated to the sole satisfaction of the Administrator:
  - i. The drainage plan will not increase existing flood damages, and
  - ii. The drainage plan provides a net benefit in water quality compared to the existing development.

The Administrator shall determine the appropriate fee to be collected as defined in Article 13, and his or her decision in the matter shall be considered final.

#### 200.3 (RESERVED)

#### Sec. 201 General Stormwater Requirements

#### 201.1 <u>Requirements Applicable to All Development</u>

No development shall:

- a. Result in any new or additional expense to any person other than the developer for flood protection; nor
- b. Increase flood elevations or decrease flood conveyance capacity upstream or downstream of the area under the ownership or control of the developer. This requirement shall not prohibit the removal or reduction of built obstructions to flow, such as increasing culvert capacity or lowering roadway elevations.
- c. Increase runoff rates (from the 10-year event up to the 100-year event) to any downstream properties unless the developer can demonstrate that the increased runoff rates can be safely conveyed via storm sewers, ditches (if allowed), or overland flow paths to the next downstream receiving stream, lake or

pond. If the developer is significantly raising runoff rates to downstream properties and cannot demonstrate downstream conveyance capacity, some amount of on-site stormwater management may be required in order to reduce the proposed runoff rate down to existing runoff rates.

#### 201.2 <u>Requirements Applicable to All Subdivisions and Commercial Developments</u>

#### All developments shall

- a. Extend the storm sewer system through the proposed development to serve upstream properties in the natural drainage area. The storm sewer system should reflect the ultimate development of the drainage area.
- b. Provide a stormwater drainage system that consists of a minor drainage system, a major drainage system and an emergency overland flow route.
- c. The storm sewer drainage system is assumed to consist of such components as sewers, channels, swales, natural drainageways, inlets, catch basins, manholes, streets, detention/retention basins, and other necessary facilities.
- d. The engineering plans shall have a certification by a registered professional engineer as follows:

"To the best of our knowledge and belief, the drainage of surface waters will not be changed by the construction of such subdivision or any part thereof or that is such surface water drainage will change, adequate provision has been made for the collection and diversion of such surface waters into public areas or drains which the subdivider has a right to use, and that such surface waters will not be deposited on the property of adjoining land owners in such concentrations as may cause damage to the adjoining property because of the construction of the subdivision."

Dated at \_\_\_\_\_, this \_\_\_\_\_ day of \_\_\_\_\_, A.D. 20\_.

Design Engineer

\_\_\_\_ (Seal)

Design Engineer

- e. The storm sewer system shall be entirely separate from the sanitary sewer system.
- f. Storm sewers shall be designed to convey the peak flow from a ten-year rainfall event with a hydraulic grade line that is entirely within the pipe. Rainfall frequency data shall be obtained from the attached Table. Storm sewers and outfalls shall be designed to function at their design capacity during flooding conditions on the receiving stream or other body of water.
- g. The storm sewers shall be a minimum of twelve inches in diameter and shall be constructed of reinforced concrete pipe only unless authorized by the Administrator.
- h. No ditch system shall be permitted on any new site developments. The minor drainage system shall be constructed so that the drainage from each lot or parcel is conveyed entirely through storm sewer pipe.
- i. The major drainage system may be permitted to flow over roadways, rear yard and side yard swales, and other open conveyances as long as the maximum depth of ponding or flow is no more than nine (9) inches on pavement and one foot at any other location and the maximum water surface elevation is a least one foot below the lowest opening of any nearby structure. The design of the major drainage system may account for the minor drainage system (storm sewers) to be fully functional. No flow is allowed over the road, perpendicular to the roadway.
- j. Rear yard and side yard swales shall meet the following conditions
  - 1. The maximum side slopes shall be a four to one (4:1) ratio.

- 2. The appropriate easements are provided, a minimum of 20 feet wide.
- k. Inlets/Catch Basins on roadways shall be located as necessary to collect surface water, but spacing shall not exceed a maximum of 400 feet. Inlets shall only be used for the first "run" and catch basins shall be placed before a storm sewer enters a manhole. Manholes shall be located at the junction of two or more storm sewer pipes or at any change in grade alignment or size of pipe. Maximum spacing of manholes shall be per the City Subdivision and Development Regulations.
- 1. All storm sewers shall use materials, and be installed in the manner meeting or exceeding the requirements, standards, and specifications contained in the "Standard Specifications for Water and Sewer Main Construction in Illinois," the most current edition as amended, supplemented and amended by the City or its Engineer.
- m. Where applicable, the developer shall install storm systems sufficient in size and depth to carry the storm runoff from upstream properties naturally tributary to the proposed subdivision. The City shall make special provisions for that developer to recapture those additional costs incurred as a result of oversizing and/or over-excavating the storm sewer system.

#### 201.3 <u>Building Permits</u>

Stormwater facilities shall be functional before building permits are issued for residential and non-residential subdivision.

#### 201.4 <u>Single Parcel Developments</u>

Stormwater facilities shall be functional where practicable for single parcel developments before building construction begins.

#### 201.5 <u>Overland Flow Paths</u>

The development shall have an overland flow path at the downstream limit of the property that will pass the base flood flow without increasing damage to structures or property. Overland flow paths internal to the site shall be considered as part of the major stormwater system and shall be designed for conveyance of the base flood (critical duration) and shall be a minimum of one (1) cfs per tributary acre without damage to structures. If the storm sewer pipe and inlet sized for the base flood can be constructed in lieu of providing an overland flow path as a part of the major drainage system, then the overland flow path shall be considered an emergency overland flow path and it shall not be considered a part of the major stormwater system but must still meet the protection of buildings criteria in Section 201.6

For all overland flow routes, whether a part of the major drainage system or an emergency overland flow route, the water surface elevation for determining the FPE (flood protection elevation) shall be calculated assuming that the storm sewers are inoperable.

Structures of any kind, including fences, shall not be permitted in overland flow paths draining more than 20 acres, unless the structures are otherwise permissible and certified by a Professional Engineer or Professional Landscape Architect that the proposed structure will not cause any adverse upstream impacts as a result of blocking or impeding the flow of stormwater. A fence, if permitted, shall conform to the City's fence ordinance provisions for fences located in drainage easements as applicable.

#### 201.6 Protection of Buildings

All usable space in new buildings or added to existing buildings hydraulically connected to a major stormwater system, site runoff storage facility, or overland flow path shall be elevated, flood proofed, or otherwise protected to at least the FPE.

#### 201.7 Depressional Storage

The function of existing on-site depressional storage shall be preserved for both on-site and off-site tributary

flows in addition to required detention. When depressional storage is removed it must be compensated for in the site runoff storage facility at a 1 to 1 ratio provided that offsite areas tributary to the existing depressional storage are routed through the site runoff storage facility. This requirement is in addition to the site runoff storage required in Section 203. The Administrator may allow the function of depressional storage to be preserved if the applicant performs detailed pre- and post-project hydrologic and hydraulic modeling to identify the effect of the depressional storage on discharges over a range of rainfall frequencies.

#### Sec. 202 Site Runoff Requirements

#### 202.1 Stormwater Facility Discharges

Stormwater facilities shall be required and designed so that runoff exits the site at a point where it exited prior to the subject development and in a manner such that flows will not increase flood damage to adjacent property except when otherwise approved by the Administrator. Concentrated discharges from new developments must enter conveyance systems capable of carrying the design flow rate without increasing flood damages or maintenance costs downstream.

#### 202.2 Minor Stormwater System Criteria

Minor stormwater systems shall be sized to convey runoff from the tributary watershed under fully developed conditions for the 10-year storm event. Minor stormwater systems shall be enclosed systems (e.g. storm sewers) unless otherwise approved by the Administrator. Storm sewers shall be designed to convey the peak flow from a ten-year rainfall event with a hydraulic grade line that is entirely within the pipe.

#### 202.3 Major Stormwater System Criteria

Major stormwater systems shall be sized to carry the base flood without causing additional flood damage. Maximum flow depths shall be nine (9) inches in streets, parking lots and driveways, except that parking lots and driveways intended for access only by commercial trucks may permit maximum flow depths of twelve (12) inches. The maximum depth of flow in non-paved drainage easements shall be twelve (12) inches. The tail water used for the major drainage system shall be the 10-year water surface elevation in the receiving system or, in the case of stormwater detention facilities the 2-year design water surface elevation plus one (1) foot.

#### 202.4 Existing Sub-Surface and Surface Drainage Systems

Stormwater systems shall properly incorporate and be compatible with existing subsurface and surface drainage systems including agricultural systems. Designs shall not cause damage to the existing drainage system(s) or the existing adjacent or tributary land including those with agricultural uses.

The following principles and requirements shall be observed in the design:

- a. Off-Site Outfall: Agricultural subsurface and surface drainage systems shall be evaluated with regard to their capacity and capability to properly convey low flow groundwater and site runoff storage facility release without damage to downstream structure and land use on the adjacent property. If the outfall drain tile and surface drainage systems prove to be inadequate it will be necessary to modify the existing systems or construct new systems which will not conflict with the existing systems and will not impact the existing agricultural land use. Existing subsurface systems shall only be used with extended detention design and at the discretion of the Administrator.
- b. On-Site: Agricultural drainage systems shall be located and evaluated on-site. All existing on-site agricultural drain tile not serving a beneficial use shall be abandoned by trench removal prior to other development and recorded on record plans. If any existing drain tiles continue to upland watersheds the developer must maintain drainage service during construction until new sewers can be installed for a permanent connection.
- c. Off-Site Tributary: Existing drainage systems shall be evaluated with regard to existing capabilities and reasonable future expansion capacities. All existing tributary drain tiles shall be incorporated into

the new conduits including observation structures located at the property limits, shall provide a free flow discharge and shall not allow surface runoff to enter the system.

d. New roadway construction shall preserve existing sub-surface systems within the right-of-way. Inspection wells shall be placed at the right-of-way (ROW) and tiles found to not be flowing between inspection wells at the end of the construction shall be replaced.

#### 202.5 Design Runoff Rate

Design runoff rates for conveyance (i.e., pipe design) may be calculated using the Rational Method for drainage areas of less than twenty (20) acres. For drainage areas greater than twenty acres the administrator may require the use of hydrograph routing.

#### 202.6 Design Rainfall

Any design runoff rate calculation method for conveyance shall use the data presented in Table 1: Watseka Rainfall Depths and Intensities.

#### 202.7 <u>Stormwater System Easements</u>

For subdivision projects, the minor, major and emergency stormwater systems shall be located within easements or rights-of-way explicitly providing for public access for maintenance of such facilities. For all other projects requiring a permit, easements are required for public access for maintenance of stormwater facilities only for new construction or modifications involving components of a drainage system that conveys runoff from off-site properties.

Easements and rights-of-way shall be of sufficient width. Storm sewers shall be installed at such locations therein as to permit open cut installation, maintenance and repair within the confines of the easement or right-of-way without relocation or other unreasonable interference with other public utilities located therein, and so as to meet the following minimum standards: 15 feet in width, plus for storm sewers in excess of 24 inches in diameter, two additional feet for each 12 inches or portion thereof of additional storm sewer diameter rounded up to the next multiple of five feet. Sewers with depths of greater than 15 feet may require additional width as determined by the administrator.

#### 202.8 Flow Depths

Maximum flow depths for new transverse stream crossings shall not exceed the crown of the road during the base flood condition. The maximum flow depth on a roadway shall not exceed 9 inches at the curb line for flow parallel to the roadway. For flow parallel to a new roadway the product of the flow depth (in feet) and velocity (in feet per second) shall not exceed four for the base flood condition.

#### 202.9 Diversion of Flow to Another Watershed

Transfers of waters between watersheds (diversions) shall be prohibited except when such transfers will not violate the provisions of Section 201.1 and are otherwise lawful. Watersheds for purpose of regulation under this section shall be the major watershed divides as determined by the Administrator.

#### 202.10 Best Management Practices Requirements

The City of Watseka strongly encourages stormwater quality management within the City of Watseka. The developments are encouraged to incorporate the following:

- All best management practices as may be required pursuant to the United States Clean Water Act, 33 U.S.C. "1251 et seq., as amended.
- Manage parcels as unified sites by incorporating watershed-based planning.
- Create designs that promote a healthy aquatic ecology, provide for sustainability, minimize maintenance, and human intervention.
- Treat stormwater as a multiple-use resource.

The City of Watseka does reserve the right to require stormwater quality best management practices at a particular site if the Administrator deems that the discharge is to a sensitive ecological area or that the intended use of the property produces a particularly detrimental water quality of the discharge.

#### Sec. 203 Site Runoff Storage Requirements (Detention/Extended Detention)

#### 203.1 Release Rate

Sufficient flood storage shall be provided so that the site will not discharge at a rate greater than 0.15 cfs/acre of development during and after a rainfall event with a 100-year frequency except for sites exempted in 200.3. Unless exempted in 200.3, sites shall not discharge at a rate greater than 0.04 cfs/acre of development during and after a rainfall event with a 2-year frequency.

This area of hydrologic disturbance on the site shall be used to calculate the required site runoff storage volume. The on-site watershed area tributary to the point of discharge shall be used to calculate the allowable release rate for the site runoff storage facility, which shall be the maximum release rate allowed considering only the on-site watershed area runoff.

#### 203.2 Design Methods

Event hydrograph routing methods shall be used to calculate design runoff volumes for site runoff facilities. The Methods must be HEC-1, (SCS methodology), HEC-HMS, TR-20, or TR-55 tabular method as appropriate based upon the rounding limitations of the model used. Proprietary models that use the approved methods may be accepted at the sole discretion of the Administrator. Digital copies of the model input files shall be provided. For sites of forty acres or more, the methods used must be acceptable to FEMA. Event methods shall incorporate the following assumptions:

- a. Antecedent moisture condition = 2; and
- b. Appropriate Huff rainfall distribution; and
- c. 24-hour duration storm with a 1% probability (100-year frequency) of occurrence in any one year as specified by Illinois State Water Survey Bulletin 70 Northeast Sectional rainfall statistics.

Figure 1, based upon generic hydrograph curves developed by the Northeastern Illinois Planning Commission, may be used for sites of 20 acres or less when acceptable to the Administrator. The Rational Method is not acceptable.

#### 203.3 Existing Release Rate Less Than Allowable

For sites where the undeveloped release rate is less than the maximum release rate in Section 203.1, the developed release rate and corresponding site runoff storage volume shall be based on the existing undeveloped release rate for the development.

#### 203.4 Downstream Water Surface Elevations

All hydrologic and hydraulic computations must utilize appropriate assumptions for downstream water surface elevations, from low flow through the base flood elevation, considering the likelihood of concurrent flood events.

#### 203.5 <u>Extended Detention Requirement</u>

The requirements of this section will apply only when an existing agricultural land use is downstream of and adjacent to a site runoff storage facility outlet. The runoff from a 0.75-inch rainfall event over the hydraulically connected impervious area of the new development shall be stored below the elevation of the primary gravity outlet (extended detention) of the site runoff storage facility. The facility may be designed to allow for evapotransporation or infiltration of this volume into a subsurface drainage system and shall not be conveyed

through a direct positive connection to downstream areas.

The hydraulically connected impervious area used in the calculation of required extended detention volume may be reduced by the Administrator if the soils are prepared to maximize infiltration and deep rooted grasses or other plants selected for their ability to promote infiltration or water absorption are planted in areas appropriately dedicated. The reduction in hydraulically connected impervious area used in the calculation shall be equal to the area of the development meeting the above soils/native planting requirement.

Subsurface drainage systems may be designed as a component of the extended detention portion of the detention basin to assist in infiltration in accordance with the following criteria:

- a. The extended detention volume shall be discharged at a rate no greater than that required to empty the calculated extended detention volume within 5 days of the storm event.
- b. No subsurface drainage pipe shall be located within 10 feet of drainage pipes directly connected to the detention basin.
- c. For purposes of meeting the maximum subsurface drainage discharge requirements, flow control orifices and weirs may be used.
- d. All design extended detention volume shall be provided above the seasonal high ground water table or the invert elevation of the groundwater control system.
- e. Farm field tile shall not be considered a subsurface drainage system.

#### 203.6 Site Runoff Storage Facility Design Requirements

Storage facilities shall be designed and constructed with the following characteristics:

- a. The site runoff storage facility shall provide 1 (one) foot of freeboard above the design high water elevation.
- b. The storage facilities shall be accessible and easily maintained. Side slopes above the NWL shall not exceed 4:1 (horizontal to vertical) under any circumstances. For storage facilities with a bounce of greater than four feet the maximum side slope shall not exceed 5:1 (horizontal to vertical). For industrial or commercial areas that do not adjoin schools, residential, or planned residential areas the administrator may approve 4:1 side slopes for bounces up to six feet. The Administrator may require that access roads or paths on the top of berms shall be provided with an H10 design load rating and meeting other City design criteria.
- c. Storage facilities shall facilitate sedimentation and catchment of floating material. Unless specifically approved by the Administrator, concrete lined low-flow ditches shall not be used in detention basins.
- d. Storage facilities shall minimize impacts of stormwater runoff on water quality by incorporating best management practices.
- e. Storage facilities shall maximize the normal flow distance between detention inlets and outlets, to the extent possible.
- f. Storage facilities shall be designed such that the existing conditions pre-development peak runoff rate from the 100-year, critical duration rainfall will not be exceeded assuming the primary restrictor is blocked.
- g. Storage facilities with single pipe outlets shall have a minimum inside diameter of 12 inches. If design release rates necessitate a smaller outlet, structures such as perforated risers, or flow control orifices shall be used.

- h. Special rules applying to the Iroquois River and Sugar Creek.
  - 1. The creeks shall be maintained, or restored, to its natural condition. This shall include the restoration of the stream bed and banks where it has been channelized or tiled.
  - 2. Surface or buried creeks existing in the development property or adjacent rights-of-way shall be restored. This shall include, but not necessarily be limited to, daylighting piped creeks and historic creek corridors, removing fish barriers, establishing buffers and planting native vegetation including native trees. The restoration shall emphasize water quality, fish habitat, aquatic biodiversity, vegetation, and appropriate land use. The extent practicable natural drainage patterns shall be restored based on historical research; examination of soils; and identification of channel, floodplain, and vegetation characteristics both upstream and downstream for current and projected land uses.
  - 3. Proposed detention ponds discharging directly to the creek shall be required to be
    - a. A naturalized detention pond, or
    - b. A wet bottom pond with an average depth of no less than 10 feet over 25% of the surface area during normal pool conditions and discharge pipes no less than 6 feet the below normal water surface of the pond.
  - 4. The stream may not be modified except in accordance with a restoration project designed by and supervised by a qualified stream channel restoration specialist under the following circumstances:
    - i. Water quality, habitat and other natural functions must be significantly improved by the modification; no significant habitat area may be destroyed;
    - ii. A natural meander patter, pools, riffles, and substrate shall be created;
    - iii. Gentle side slopes (no steeper than 4 feet horizontally to 1 foot vertically), including the installation of erosion control features shall be constructed;
    - iv. Natural materials shall be used wherever possible; and
    - v. The planting and maintenance of vegetation normally associated with streams, including primarily native riparian vegetation, and upland prairie plants shall be required.
  - 5. Individual ownership of the floodplain, detention ponds and within 35 feet of the stream banks shall be prohibited unless otherwise approved by the administrator.
  - 6. A minimum of 35 feet of appropriate native vegetation shall be planted and maintained along the banks of the stream.
  - 7. Provisions shall be made for passive public use of the area through the construction of trails outside of the native vegetation area whenever practicable.
- i. The following criteria are proposed as moderately conservative standards for design of stormwater basins within the City of Watseka. If a developer wishes to exceed the standards, we recommend that they (via their landscape contractor/designer) bear the burden of proof that the landscape will be successful. The following limits of acceptable fluctuation and drawdown times are based on best professional judgment for landscape treatments typical to wet and dry stormwater basin designs.

#### 1. Wet Bottom Pond

	Minimum Area:	1.0 acre at NWL
	Maximum Area:	No maximum
	Depth:	Over 25 percent of the bottom area at least 10.0 ft. deep
	Maximum Bounce:	<ul><li>100-year: 5.0 ft. – Residential (Industrial/Commercial may be greater based on approval by Administrator)</li><li>2-year: 1.0 ft.</li></ul>
	Maximum Drawdowr	a Time: 100-year: above NWL by 0.5 ft. for $\leq$ 72 hrs 2-yr: above NWL by 0.5 ft. for $\leq$ 36 hrs
	Maximum Slopes:	Freeboard elevation to 2-yr water level: 4:1 2-yr water level to NWL: 8:1 NWL to 1.5 ft. below NWL: 20:1 (safety shelf) >1.5 ft. below NWL: 2:1 Freeboard to 1.5 ft. below NWL: 5:1 avg. max.
	Safety Shelf:	0.5 to 1.5 ft. inundation at NWL, 10.0 ft. avg. width (variable 8.0 to 12.0 ft.), with 25 percent of the shoreline 2.0 ft. shorter than maximum width
	Shoreline Protection:	Natural vegetation (shall be used unless otherwise approved); armoring (conditioned upon City review and approval); biotechnical stabilization (depending on site-specific conditions); erosion control measures
	Water Quality Enhand	cements: Maximize distance between inlets and outlets; no low-flow channel to be provided; energy dissipation measures at outlets; measures such as aerators, cascading streams, water falls, etc. are recommended for aesthetic appeal and to promote water circulation and aeration
	Landscape Options:	Natural, ornamental hybrid, low maintenance turf, and turfgrass (depending on site conditions and adjacent/adjoining land uses); public access via stone outcroppings, groomed areas, etc. are recommended
2.	Naturalized Detention	on Basin
	Minimum Area:	8,000 s.f. at NWL
	Maximum Area:	No maximum
	Depth:	Ranging from 0.5 to 5.0 ft. (average 3.0 ft.); at least 5 percent of the area below NWL having pockets up to 5.0 ft. deep
	Maximum Bounce:	<ul><li>100-year: 5.0 ft. Residential (Industrial/Commercial may be greater based on approval by Administrator)</li><li>2-year: 1.0 ft.</li></ul>
	Maximum Drawdowr	Time: 100-year: above NWL by 0.5 ft. for $\leq$ 72 hrs 2-yr: above NWL by 0.5 ft. for $\leq$ 36 hours

Maximum Slopes:	Freeboard elevation to 2-yr water level: 4:1
-	2-yr water level to 0.5 ft. below NWL: 8:1
	0.5 to 1.5 ft. below NWL: variable 8:1 to 12:1 (safety ledge)
	>1.5 ft. below NWL: 2:1
	Freeboard to 1.5 ft. below NWL: 5:1 avg. max.

- Shoreline Protection: Natural vegetation; biotechnical stabilization (depending on site-specific conditions); erosion control measures
- Water Quality Enhancements: Maximize distance between inlets and outlets; no low-flow channel to be provided; energy dissipation measures at outlets; measures such as aerators, cascading streams, water falls, etc. are strongly recommended to maintain cooler water temperatures, promote water circulation and aeration, and provide aesthetic appeal
- Landscape Options: Natural, ornamental hybrid, and low maintenance turf; public access via stone outcroppings, groomed areas, etc. are recommended. A planting and maintenance report, provided by a recognized wetlands firm, must be submitted and approved.

#### 3. Dry Basin Design

Minimum Area:	No minimum
Maximum Area:	8,000 s.f., unless approved by the Administrator
Safety Shelf:	Not applicable
Maximum Bounce:	5.0 ft. Residential (Industrial/Commercial may be greater based on approval by Administrator)

#### 203.7 Site Runoff Storage Facility Requirements Within the Regulatory Floodplain

Storage facilities located within the regulatory floodplain shall:

- a. Conform to all applicable requirements specified in Article 4 of this Ordinance; and
- b. Store the required amount of site runoff to meet the release rate requirement under all stream flow and backwater conditions in the receiving stream up to the 10-year flood elevation; and
- c. Detention volume provided by enlarging existing regulatory floodplain storage without providing a structure controlling discharge (on-stream detention) will be allowed only as a variance. The applicant must demonstrate that flood damages are not increased and the development will not increase flood flows for both the 2-year and 100-year floods on the stream with developed conditions on the site; and
- d. The Administrator may approve designs which can be shown by detailed hydrologic and hydraulic analysis to provide a net watershed benefit not otherwise realized by strict application of the requirements in a through c above.

#### 203.8 Site Runoff Storage Facility Requirements Within the Regulatory Floodway

Storage facilities located within the regulatory floodway shall:

- a. Meet the requirements for locating storage facilities in the regulatory floodplain; and
- b. Be evaluated by performing hydrologic and hydraulic analysis consistent with the standards and

requirements for any adopted watershed plans; and

c. Provide a net watershed benefit.

#### 203.9 (RESERVED)

#### 203.10 Off-Site Facilities

Site runoff storage facilities may be located off-site if the following conditions are met:

- a. The off-site storage facility meets all of the requirements of this Article 2; and
- b. Adequate storage capacity in the off-site facility is dedicated to the development; and
- c. The development includes means to convey stormwater to the off-site storage facility.

#### 203.11 (RESERVED)

#### 203.12 Cross-Stream Structures for Site Runoff Storage Facilities

Structures constructed across the channel to impound water to meet detention requirements shall be prohibited on any perennial stream unless part of a public flood control project with a net watershed benefit. Those streams appearing as blue on a USGS Quadrangle map shall be assumed perennial unless better data is obtained. All cross-stream structures for the purpose of impounding water to provide detention in all cases on perennial and intermittent streams must demonstrate that they will not cause short term or long-term stream channel instability.

### Sec. 204 Stormwater Requirements for Agricultural Land Use Including Croplands, Pasture Lands and Farmsteads

<u>Applicability</u>: Regulations under this section apply only to croplands, pasturelands, farmsteads and outbuildings associated with those agricultural practices. Compliance with the requirements of this Section 204 shall be construed as compliance with the Stormwater Ordinance for the above land uses and no further regulation under the Ordinance will apply. Any other land use, including greenhouses, nurseries, container grown plants, equestrian facilities, the sale of agricultural products to the public or where commercial activities involving the new construction of gravel or paved parking facilities or buildings whose aggregate area is 25,000 square feet or more are required to comply with all applicable sections of this Ordinance.

#### 204.1 <u>Conservation Planning and Performance Standards</u>

To comply with this Section, Landowners shall practice conservation planning whose product shall be a management system, which addresses site runoff, soil erosion and sediment control, surface and subsurface drainage. Any acreage with a signed and approved NRCS Conservation Plan is exempt from the requirements of this section and the ordinance.

Applicable approved practices include:

- a. Vegetated grass waterways
- b. Contour Buffer strips
- c. Critical area planting and cover crops
- d. Terrace ridges and diversions
- e. Contour strip cropping
- f. Contour farming
- g. Crop rotation
- h. Conservation tillage and crop residue management

i. Other standard practices for conservation planning in accordance with the N.R.C.S. Field Office Technical Guide (current edition) or as otherwise approved by the Iroquois County N.R.C.S. District Conservationist or the Iroquois County Agricultural Administrator.

The performance standard for conservation planning shall be a management system which will develop a set of field practices which will reduce the calculated actual soil loss to the "tolerable soil loss" (T) as calculated by the revised Universal Soil Loss Equation for the actual site conditions. Cropland tillage and resource management methods shall be consistent with the Technical Guide Notice IL-108 and shall be considered evidence of compliance with the "T" performance standard.

#### 204.2 Drainage Practices, Requirements and Design Criteria

Drainage for agricultural purposes shall be consistent with those practices identified as appropriate for "good husbandry" given the soil types, slopes and crops. An agricultural drainage system may consist of both subsurface drainage systems and surface drainage systems. Where active Drainage Districts maintain drainage systems, they shall be consulted on surface and subsurface drainage within the District boundaries. Requirements applying to subsurface and surface drainage system shall be as follows:

- a. Subsurface Drainage Systems: Drain tile systems shall be maintained and constructed in accordance with subsurface drainage recommendations for the appropriate soil drainage group as specified by The Illinois Drainage Guide, University of Illinois Extension Service Circular no. 1226. Surface inlets into the subsurface drainage system shall be allowed only to maintain good husbandry. Where their use cannot be practicably avoided due to topography, they shall be installed using flow controls such as orifices and perforated risers with gravel filters and /or vegetative filters.
- b. Surface Drainage Systems: Surface drainage systems shall be maintained and constructed in accordance with surface drainage recommendations for the appropriate soil drainage group as specified by the Illinois Drainage Guide, University of Illinois Extension Service No. 1226. Surface drainage systems shall be built with geotechnically stable slopes and the surface when applicable shall be further stabilized utilizing the establishment of cool and warm season grass mixes as identified in Field Office Technical Guide (Illinois 108).
- c. Buffer Strips: Open channels with a definable bed and banks shall use buffer strips in order to reduce the amount of erosion occurring from the conveyed flows as well as to help filter the runoff from the site into the waterway. Buffer strips shall be a minimum of 15 feet wide from the top of bank except where smaller widths are necessary due to site limitations and when approved by the Administrator.
- d. Agricultural drainage systems shall also comply with all regulations regarding wetlands as enforced by Federal, State, and Local agencies.

#### 204.3 <u>Sediment Control for Open Channels</u>

All open channel drainage systems shall maintain practices adjacent to the open outlet channel that will reduce the transportation of sediment off-site. Runoff from agricultural fields must pass through a sediment control system prior to discharge into the open channel conveyance system. Approved sediment control systems may consist of the following:

- a. Vegetated buffer zones planted with permanent grasses appropriate for soil stabilization and filtering;
- b. Grade control structures for over fall stabilization;
- c. Sediment traps adjacent to the stream channel;
- d. Other standard practices for conservation planning in accordance with the N.R.C.S. Field Office Technical Guide (current edition) or as otherwise approved by the Iroquois County N.R.C.S. District Conservationist or the Administrator.

#### 204.4 <u>Maintenance and Construction of Drainage Systems</u>

Agricultural drainage systems shall be maintained so as to convey the expected flows for good drainage practices. The existing agricultural surface drainage systems shall not be enlarged unless such enlargement is consistent with all other sections of this Section 204. Maintenance and construction of subsurface drainage systems will not be subject to the requirements of other sections of this Ordinance except as they are regulated by other agencies. Maintenance projects by legally functioning drainage districts on existing agricultural drainage systems will not be subject to further permitting requirements under this Ordinance except as they relate to the jurisdiction of other agencies.

#### **ARTICLE 3 - SEDIMENT AND EROSION CONTROL**

#### Sec. 300 Sediment and Erosion Control

#### 300.1 <u>Site Planning</u>

Sediment and erosion control planning shall be part of the initial site planning process. In planning the development of the site, the applicant shall consider the susceptibility of existing soils to erosion and topographic features such as steep slopes and stream corridors which must be protected to reduce the amount of sediment and erosion which occurs. Where appropriate, existing vegetation shall be protected from disturbance during construction by fencing or other means. In the planning process the applicant shall also address the following:

- a. For projects that involve phased construction, existing land cover for those areas not under current development shall be addressed. If existing land cover does not consist of an appropriate ground cover then these phases shall be planted temporarily to reduce erosion from idle land.
- b. In planning the sediment and erosion control strategy, preference shall be given to reducing erosion rather than controlling sediment. In order to accomplish this the plan must carefully consider the construction sequence of the phases so that the amount of land area exposed to erosive forces is the minimum consistent with completing construction. In no case shall more than 20 acres of ground cover be disturbed at one time without permanent or temporary stabilization at one time without unless authorized by the Administrator.
- c. Stormwater detention basins shall be constructed as early in the construction process as practicable.

#### 300.2 <u>Standards and Specifications</u>

- a. Specifications for erosion control measures shall be in accordance with the "Illinois Urban Manual" (1995) or latest edition. Sediment and erosion control planning shall be in accordance with "Procedures and Standards for Urban Soil Erosion and Sedimentation Control in Illinois" (revised July, 1988) by the Urban Committee of the Association of Illinois Soil and Water Conservation Districts (The "Green Book") Chapters 1-5. Where the Illinois Urban Manual supercedes sections of The Green Book, the Illinois Urban Manual shall prevail.
- b. All projects that will result in the development of one acre or more, except for agricultural projects regulated solely under Section 204, shall be required to obtain coverage under an appropriate NPDES permit. The permittee shall certify to the City that all required permits, plans and inspections have been prepared and maintained in accordance with the NPDES permit. Specifically the permittee shall prepare, and adhere to, a Stormwater Pollution Prevention Plan (SWPPP) prepared for the development project that shall meet of the conditions in the permit for SWPPPs. A copy of such plan shall be maintained on the construction site at all times that workers are present, and a copy of the permit, SWPPP and/or inspection logs, shall be provided to the City upon request. Failure to obtain an NPDES permit or to comply with the conditions of an NPDES permit for the construction activity shall constitute a violation of this ordinance.

#### 300.3 General Requirements

- a. The runoff from disturbed areas shall not leave the development site without first passing through sediment control facilities. This requirement shall apply to all phases of construction and shall include an ongoing process of implementation of measures and maintenance of those measures during both the construction season and any construction shut down periods.
- b. The smallest practical area shall be exposed for the shortest practical time during development. However in no case shall more than 20 acres be exposed at one time on a development unless a larger area is approved by the Administrator.
- c. Natural vegetation should be retained and protected whenever possible. Areas within twenty-five (25) feet

of natural watercourses, lakes, ponds and wetlands should be left undisturbed whenever possible.

d. All applicants for developments of one acre or more shall submit an application for an NPDES permit or a Notice of Intent (NOI) to be covered under a general NPDES permit. A copy of any Stormwater Pollution Prevention Plan (SWPPP) required by such permit shall be provided to the City prior to commencement of development activities and a copy shall be kept on the development site at all times.

#### 300.4 Extended Construction Shutdown Periods

The condition of the construction site for the winter shut down period shall address proper sediment and erosion control early in the fall growing season so that slopes and other bare earth areas may be stabilized with temporary and/or permanent vegetative cover. All open areas that are to remain idle throughout the winter shall receive temporary erosion control measures including temporary seeding, mulching and/or erosion control blanketing prior to the end of the fall growing season. The areas to be worked beyond the end of the growing season must incorporate soil stabilization measures that do not rely on vegetative cover such as erosion control blankets and heavy mulching. In no case shall requirements less than those required by IEPA NPDES Permit ILR10 apply to projects disturbing more than one acre.

#### 300.5 <u>Hydraulic and Hydrologic Design Requirements</u>

In the hydraulic and hydrologic design of major erosion control measures (those whose tributary drainage area is greater than 3 acres) such as sediment basins and traps, diversions, and the like, the design frequency shall be commensurate with the risk of the design event being exceeded. The following design frequencies shall be regarded as minimum design frequencies for the construction period:

- 1 For those projects whose construction period is less than 6 months then the storm event having a 50% chance (2-year event) of being exceeded in any year shall be used for design purposes;
- 2 For those projects whose construction period is greater than 6 months but less than 1 year, the design frequency for major sediment basins shall be a rainfall event with a 20% (5-year event) chance of being exceeded in any one year; and
- 3 For those construction projects expected to last more than 1 year major sediment basins shall be designed for a rainfall event with a 10% (10-year event) chance of being exceeded in any one year.

#### 300.6 <u>"As-Needed" Practices on the Plans</u>

The sediment and erosion control plan shall designate a series of practices which shall be implemented either at the direction of the permittee or the permittee's representative on-site or at the direction of the Administrator should an inspection of the site indicate a deficiency in soil and sediment erosion control measures. As a minimum, these measures shall include the following:

- a. Sedimentation basins;
- b. Sediment traps;
- c. Diversion swales;
- d. Silt fences;
- e. Temporary seeding;
- f. Mulching;
- g. Dust Control;
- h. Erosion control blankets.

#### 300.7 <u>Sediment and Erosion Control Plan Requirements</u>

Sediment and erosion control plans shall be in accordance with Article 5 Submittal Requirements but shall include the following;

a. Detailed construction phasing plan identifying sediment and erosion control measures to be in place for

each phase shall be submitted prior to stripping the site of existing vegetation or cover.

- b. Sediment and erosion control measures to be installed initially prior to stripping existing vegetation or mass grading shall be indicated on the plans.
- c. Permanent stabilization measures shall be indicated on a separate plan.
- d. The expected 2-year and 10-year runoff rates from all off-site areas draining into the site shall be identified on the plan.
- e. Methods for conveying flows through the site during construction shall be indicated. These methods must include the temporary and permanent stabilization measures to be used to reduce velocity and erosion from flow through the construction zone.
- f. A maintenance schedule of each measure used shall be indicated on the plan. As a minimum, all sediment and erosion control measures on-site shall be inspected weekly and also by the applicant's designee or after a one-half inch or greater rainfall event and any required repairs shall be made to keep these measures functional as designed. All repairs and modifications shall be reviewed by the Administrator or his/her designee.

#### 300.8 <u>Conveyance of Off-Site Flow</u>

To the extent practicable, proposed ditches and waterways which are to convey off-site flows through the site shall be stabilized upon construction. Where new waterways are constructed they shall be stabilized to the extent practicable prior to their use to convey flood flows.

#### 300.9 Stockpiles

Stockpiles of soil and other erodable or floatable building materials (sand, limestone, etc.) shall not be located in floodplains, overflow routes or areas subject to frequent inundation. If a stockpile is to remain in place for more than three days, then sediment and erosion control shall be provided for the stockpile.

#### 300.10 Storm Sewer Inlets

Storm sewer inlets, catch basins, and manholes with open lid grates shall be protected with manufactured filtration devices developed to prevent sediments from entering the drainage system. Silt screens, hay bales, and filter fabrics under storm grates are not allowed.

#### 300.11 Construction Dewatering

Water pumped or which is otherwise discharge<u>d</u> from the site during construction dewatering shall be filtered and a means provided to reduce erosion.

#### 300.12 <u>Protection of Public/Private Roadways</u>

Graveled roads, access drives, parking areas of sufficient width and length, and vehicle wash down facilities, if necessary, shall be provided to prevent soils from being tracked onto public or private roadways. Any soil tracked onto a public or private roadway shall be removed before the end of each workday or sooner as directed by the Authority maintaining the roadway.

#### 300.13 <u>Temporary Stream Crossings</u>

Temporary stream crossings of intermittent and perennial streams used only for and during construction shall be designed to convey a 2-year flood (minimum) or other flood event approved by the Administrator without overtopping unless a more frequent design event is allowed by the Administrator. The entire crossing shall be designed to withstand hydrodynamic forces and erosive forces up to the base flood event without washing out. Ephemeral streams may be crossed at temporary at-grade crossings provided that the crossing point is stabilized with materials resistive to the erosive forces produced by runoff from the upstream drainage area, and the

design is approved by the Administrator. Temporary stream crossings shall be removed upon completion of construction activities. All temporary stream crossing shall be completely removed and the stream restored to its preconstruction condition upon completion of construction. Restoration shall incorporate appropriate vegetation consistent with the adjacent existing vegetation prior to construction or in accordance with a restoration plan approved by the Administrator.

#### 300.14 Inspections

The Administrator or persons designated by the Administrator shall be permitted on the site to inspect the erosion and sediment control measures and records related to the NPDES permit at any time.

#### ARTICLE 4 – PROTECTION OF SPECIAL MANAGEMENT AREAS

#### Sec. 400 Floodplains and Floodways

This article sets forth requirements for developments within floodplains and floodways. In addition, developments in the SFHA draining more than one square mile with no designated floodway must meet IDNR-OWR III Admin Code Part 3700 Rules. Projects which meet all the requirements and conditions to be considered permitted under IDNR-OWR Statewide, Regional and General permits, and are not in designated floodways, shall be considered to have met the technical requirements of this Section 400. References to IDNR/OWR permits or approvals in this Section shall be construed as "their designee" where a portion or all of their authority has been delegated.

All development shall meet the requirements set forth in Table 2 – Summary of Applicable Ordinance Section for Development in Floodplains. The table is intended only as a guide to indicate the applicable ordinance sections for development in floodplains.

#### Sec. 401 Floodplain, Regulatory Floodplain, Base Flood Elevation (BFE) and Regulatory Floodway Locations

The BFE shall be delineated onto the site topography to establish the Regulatory Floodplain area limits for regulation under this Ordinance. Regulatory floodplains shall be delineated onto the site map from the current FEMA FIRM, FBFM or LOMR and include those areas of the SFHA which are not Regulatory Floodplains. Each Community remains responsible for maintaining the effective FIS and a list of FIRM panels for their respective Communities.

The BFE shall be:

- 1. The elevation of the 100-year profile corresponding to the location of the development as indicated in the flood profiles in the FEMA Flood Insurance Studies listed in Appendix B (which may be updated from time to time) or
- 2. In the case of FEMA delineated "AH Zones" the elevation noted on the map shall be the BFE. In the case of FEMA delineated "AO Zones" the BFE shall be the depth number shown on the map added to the highest adjacent grade, or at least two feet above the highest adjacent grade if no depth number is provided; or
- 3. a. When no BFE information exists and the upstream tributary drainage area is 640 acres or greater, the BFE shall be determined using a site specific floodplain study by a Professional Engineer using appropriate hydrologic and hydraulic models as follows acceptable to FEMA and IDNR/OWR.
  - b. Where a channel has a tributary drainage area of 640 acres or more, the above analyses shall be submitted to the IDNR/OWR for concurrent approval.
  - c. For a non-riverine Regulatory Floodplain, the historic flood of record plus three feet may be used for the BFE instead of performing a detailed hydrologic and hydraulic study for developments of less than 40 acres, at the discretion of the Administrator.
- 4. For floodplains that are not regulatory, are not draining more than 640 acres, and with no BFE determined, the Administrator may require a site-specific floodplain study for the purpose of establishing an FPE for the development. A site-specific study is required for all developments of 40 acres or more that have regulatory floodplain on any portion of the site.

The location of the Regulatory Floodway shall be as delineated on the current effective regulatory maps maintained by the City. The location of the Regulatory Floodway boundary shall be scaled onto the site plan using references common to both the map and the plan (typically the centerlines of adjacent roadways). Where an interpretation is needed to determine the exact location of the Regulatory Floodway boundary, IDNR/OWR should be contacted.
Note: If an area of the site is located in the Regulatory Floodway that is higher than the BFE, that area is subject to the Floodway Standards of Section 404, including the appropriate use criteria, until such time as a LOMR is received from the IDNR/OWR and FEMA.

General criteria for analysis of flood elevations in the regulatory floodway are as follows.

- 1. The flood profiles, flows, and data in the current effective FIS must be used for analysis of the base conditions. If the study data appears to be in error or conditions have changed, FEMA and IDNR/OWR shall be contacted for approval and concurrence on the appropriate base conditions data to use. The Administrator shall be copied on all related correspondence.
- 2. If the BFE at the site of the proposed development is affected by backwater from a downstream receiving stream with a larger drainage area, the proposed development shall be shown to meet the requirements of this section with the receiving stream at both the normal water and BFEs.
- 3. If the applicant is informed by IDNR/OWR, local governments, or a private owner that a downstream or upstream restrictive bridge or culvert is scheduled to be removed, reconstructed, modified, or a regional flood control project is scheduled to be built, removed, constructed or modified within the next five years, the proposed development shall be analyzed and shown to meet the requirements of this section for both the existing conditions and the expected flood profile conditions when the bridge, culvert or flood control project is built, removed or modified as applicable.
- 4. If the appropriate use will result in a change in the Regulatory Floodway location or a change in the BFE, the applicant shall submit the information required to be issued a Conditional Letter of Map Revision (CLOMR) to IDNR/OWR and FEMA. A public notice inviting public comment on the proposed change in the BFE or location of the Regulatory Floodway will be issued by IDNR/OWR or its designee before a CLOMR is issued. Filling, grading, dredging or excavating may take place upon issuance of a conditional approval from IDNR/OWR and the Administrator. No further development activities shall take place in the existing or proposed floodplain until a Letter of Map Revision (LOMR) is issued by FEMA unless such activities meet all the requirements of the Section 402 of this Ordinance. The Administrator shall be copied on all related correspondence.
- 5. For those circumstances listed below and located in a Regulatory Floodway, the following information shall be submitted to IDNR/OWR for their review and concurrence.
  - a. Analysis of the flood profile due to a proposed bridge, culvert crossings and roadway approaches.
  - b. An engineer's determination that an existing bridge, culvert crossing or approach road is not a source of flood damage and the analysis indicating the proposed flood profile.
  - c. Alternative transition sections and hydraulically equivalent compensatory storage.
  - d. Stormwater Management Permits to local units of government for Regulatory Floodway and Floodplain development.
  - e. IDNR/OWR will issue permits for any IDNR/OWR projects, dams, etc. all other state, federal or community projects.

#### Sec. 402 General Performance Standards

The following general performance standards are applicable to all development in a Regulatory Floodplain. The standards of this section apply except when superseded by more stringent requirements in the subsequent sections.

a. No development except as allowed in Section 406 shall be allowed in the Regulatory Floodplain that

singularly or cumulatively creates an increase in flood stage or velocity off-site, or a damaging or potentially damaging increase in flood heights or velocity on-site or threat to public health, safety and welfare.

- b. For all projects involving a channel modification, fill, stream maintenance or a levee, the flood conveyance and storage capacity of the regulatory floodplain shall not be reduced.
- c. If the proposed development would result in a change in the Regulatory Floodplain or BFE, the applicant shall obtain a LOMA/LOMR from FEMA. If the development will result in an increase in the BFE of more than one (1) foot at any location a CLOMR must be obtained before any work is performed in the Regulatory Floodplain. No buildings may be built in the existing or proposed Regulatory Floodplain until the LOMA/LOMR receives concurrence from IDNR/OWR and is issued by FEMA unless the building meets all the Building Protection Standards (Section 402.2). Proposed changes to the Regulatory Floodway delineation and the BFE must be submitted to IDNR/OWR for concurrence.
- d. If the development is located in a public body of water, as defined by IDNR/OWR, a permit must also be received from IDNR/OWR.
- e. Prior to the commencement of any construction, modification or removal of a dam the developer shall obtain an IDNR/OWR Dam Safety Permit or letter indicating a permit is not required.
- f. For public flood control projects, the Floodplain Management standards will be considered met if the applicant can demonstrate to IDNR/OWR that each of the following conditions are met:
  - 1. Demonstrate by hydraulic and hydrologic modeling that the proposed project will not singularly or cumulatively result in increased flood heights outside the project site or demonstrate that any increases will be contained in easements for all flood events up to and including the base flood event.
  - 2. Demonstrate that the project will be operated and maintained by a public agency.
  - 3. Demonstrate that the project will reduce flood damage to an existing building or structure.

These standards do not preclude the design, engineering, construction or financing, in whole or in part of a public flood control project by persons who are not public agencies.

g. Proposals for new Subdivisions, Manufactured Home Parks, Planned Unit Developments (PUDs) and additions to Manufactured Home Park and additions to subdivisions shall include base flood or 100-year frequency flood elevation data and floodway delineations.

#### 402.1 Public Health and Safety Protection Standards

- a. New and replacement water supply systems, wells and sanitary sewer lines may be permitted if all manholes or other aboveground openings located below the FPE are watertight.
- b. New or replacement on-site waste disposal systems are not allowed in the Regulatory Floodplain within City limits.
- c. New, substantially improved or replacement wastewater treatment plants shall have watertight openings for those openings located below the FPE. Such facilities should be located to avoid impairment to the facility or contamination of floodwaters during the base flood.
- d. No developments in the SFHA shall include the locating or storing of hazardous materials, buoyant materials, solid wastes, fertilizers, pesticides or other toxic materials or potential pollutants.

#### 402.2 <u>Building Protection Standards</u>

a.

The Building Protection Standards apply to all buildings located in the Regulatory Floodplain; however, it should be noted that most new and replacement buildings are not appropriate uses of the Regulatory Floodway.

- The lowest floor including basements of all new residential structures, substantially improved structures and additions shall be elevated up to at least the FPE. An attached garage for a structure must be elevated up to at least 0.1 feet above the BFE.
  - 1. If placed on fill, the top of the fill for the residential structure shall be above the FPE. The top of fill for an attached garage shall be at least 0.1 foot above the BFE. The fill shall be placed at that elevation for a distance of twenty feet out from the building unless the building design is certified by a registered structural engineer to be protected from damages due to hydrostatic pressures. Additionally, the fill shall not settle below the FPE for the residential structure and not below 0.1 feet above the base flood for an attached garage, and shall be adequately protected against erosion, scour and differential settlement. The building shall meet all of the requirements of FEMA Technical Bulletin 10-01.
  - 2. If elevated by means of walls, pilings, or other foundation, the building's supporting structure must be permanently open to flood waters and not subject to damage by hydrostatic pressures of the base flood. The permanent openings shall be no more than 1 foot above existing grade, and consist of a minimum of two openings. The openings must have a total net area of not less than 1 square inch for every 1 square foot of enclosed area subject to flooding below the BFE. The lowest inside grade must match the lowest existing outside grade adjacent to the structure. The foundation and supporting members shall be anchored and aligned in relation to flood flows and adjoining structures so as to minimize exposure to known hydrodynamic forces such as current, waves, ice and floating debris. All areas below the FPE shall be constructed of materials resistant to flood damage. The lowest floor (including basement) for the residential structure and all electrical, heating, ventilating, plumbing, and air conditioning equipment and utility meters shall be located at or above the FPE. An attached garage must be elevated to at least 0.1 feet above the BFE. Water and sewer pipes, electrical and telephone lines, submersible pumps and other waterproofed service facilities may be located below the FPE. No area below the FPE shall be used for storage.
- b. The lowest floor including the basement of all new or substantially improved non-residential buildings shall be elevated at least to the FPE as described above or be structurally dry flood proofed to at least the FPE. A non-residential building may be structurally dry flood proofed (in lieu of elevation) provided that a Professional Engineer or Registered Structural Engineer shall certify that the building has been structurally dry flood proofed below the FPE and the structure and attendant utility facilities are watertight and capable of resisting the effects of the base flood. The building design shall take into account flood velocities, duration, rate of rise, hydrostatic and hydrodynamic forces, the effects of buoyancy and impacts from debris or ice. Flood proofing measures shall be operable without human intervention and without an outside source of electricity. (Levees, berms, floodwalls and similar works are not considered flood proofing for the purpose of this subsection).
- c. Manufactured Homes and recreational vehicles to be installed on a site for more than 180 days shall be at or above the FPE and shall be anchored to resist flotation, collapse, or lateral movement in accordance with the Illinois Manufactured Home Tie-Down code [(77 Ill. Adm. Code 870 1999)] as amended.
- d. Accessory structures, such as tool sheds and detached garages which are not substantial improvements on an existing single-family lot, may be constructed with the lowest floor below the FPE in accordance with the following criteria:
  - 1. The building shall not be used for human habitation.
  - 2. All areas below the FPE shall be constructed with waterproof material. Structures located in a Regulatory Floodway shall meet the Floodway Standards in Section 404.
  - 3. The structure shall be anchored to prevent flotation and movement.

- 4. Service facilities such as electrical and heating equipment shall be elevated or flood proofed to the FPE.
- 5. The building shall be no greater than 600 square feet in floor size, and be valued at less than \$7,500. The building shall meet the permanent opening criteria of Article 4, Section 402.2(a) 2.
- 6. The building shall be used only for the storage of vehicles or tools and may not contain basements or other rooms, workshops, greenhouses or similar uses.

Accessory structures that do not meet all of the above criteria may be constructed if they are dry flood proofed or elevated at least ½ of one foot above the BFE.

## 402.3 <u>Non-Conforming Structures</u>

A non-conforming structure damaged by flood, fire, wind or other disaster may be restored unless the damage meets or exceeds fifty percent (50%) of its market value before it was damaged, in which case it shall conform to the Building Protection Standards of this Ordinance.

#### Sec. 403 Compensatory Storage Volume Standards

The following standards apply within the Regulatory Floodplain or, for sites draining more than 640 acres, the limits of the delineated floodplain as accepted by the Administrator.

- a. Hydraulically equivalent compensatory storage volume will be required for development in a riverine regulatory floodplain and shall be at least equal to the regulatory floodplain flood storage volume displaced. The storage volume displaced below the existing 10-year frequency flood elevation must be replaced below the proposed 10-year frequency flood elevation. The storage volume displaced above the 10-year existing frequency flood elevation must be replaced above the proposed 10-year frequency flood elevation. Additional storage of not less than 50% of the net volume displaced shall be provided based upon the total volume filled below the BFE. The additional 50% need not be hydraulically equivalent. The volume of storage lost shall be calculated based on the existing BFE and the volume of compensatory storage shall be calculated based upon the final with project BFE.
- b. Compensatory storage volume for development in a non-riverine regulatory floodplain area that is also adjacent to a lake shall be equal to the storage volume displaced. Additional storage of not less than 50% of the net volume displaced shall be provided. The volume of storage lost shall be calculated based on the existing BFE and the volume of compensatory shall be calculated based upon the final with project BFE.
- c. Compensatory storage volume requirements for development in a non-riverine Regulatory Floodplain that is not adjacent to a lake shall be replaced in accordance with the requirements for the loss of depressional storage in Section 201.7.
- d. The hydraulically equivalent compensatory storage areas shall be designed to drain freely and openly to the channel and shall be located adjacent to the development. This standard does not apply to non-riverine Regulatory Floodplain.
- d. A recorded covenant running with the land is required to maintain the compensatory storage volume in areas modified to provide compensatory storage volume.

#### Sec. 404 Floodway Standards

The only development in a Regulatory Floodway which will be allowed are appropriate uses which will not cause an increase in flood heights or velocities for all flood events up to and including the base flood. Only those appropriate uses listed below will be allowed in the regulatory floodway.

Appropriate uses do not include the construction or placement of any new structures, fill, building additions,

buildings on stilts, fencing (including landscaping or planting designed to act as a fence) and storage of materials except as specifically defined below as an appropriate use. If the development is proposed for the Regulatory Floodway portion of the Regulatory Floodplain, the following standards apply in addition to the standards for the Regulatory Floodplain:

- a. Only the construction, modification, repair or replacement of the following appropriate uses will be allowed in the Regulatory Floodway:
  - 1. Public flood control structures and private improvements relating to the control of drainage and flooding of existing buildings, erosion, water quality or habitat for fish and wildlife;
  - 2. Structures or facilities relating to functionally water dependent uses such as additions, modifications, and improvements to existing wastewater treatment plants (except for additions to habitable structures on the site) and facilities and improvements relating to recreational boating (this does not include new wastewater treatment plants);
  - 3. Storm and sanitary sewer outfalls;
  - 4. Underground and overhead utilities;
  - 5. Recreational facilities such as playing fields, open pavilions, gazebos and trail systems including any related fencing (at least 50% open when viewed from any one direction) built parallel to the direction of flood flows;
  - 6. Boat houses or other non-habitable structures without sanitary facilities that are accessory to existing buildings and will not block flood flows nor reduce regulatory floodway storage;
  - 7. Bridges, culverts and associated roadways, sidewalks and railways, required for crossing the regulatory floodway or for access to other appropriate uses in the regulatory floodway and any modification thereto;
  - 8. Reserved.
  - 9. Regulatory floodway grading, without fill, to create a positive non-erosive slope toward a channel;
  - 10. Flood proofing activities to protect previously existing lawful structures including the construction of water-tight window wells, elevating structures, or the construction of flood walls or berms around residential, commercial or industrial principal structures where the outside toe of the floodwall or berm shall be no more than 10 feet away from the exterior wall of the existing structure, and, which are not considered to be substantial improvements to the structure;
  - 11. The repair, replacement or reconstruction of a damaged building, provided that none of the outside dimensions of the building are increased and provided that the cost of repair is less than 50% of the building's value before it was damaged. When damage is 50% or more (a substantial improvement), the activity shall conform to Section 402.2 of this Ordinance;
  - 12. Modifications to an existing building that would not increase the enclosed floor area of the building below the BFE and which will not block flood flows. These modifications include fireplaces, bay windows, decks, patios and second story addition. No enclosed floor areas may be built on stilts. The modifications may not singularly or cumulatively equal 50% or more of the building's market value.
- b. Additions or changes to the above list of appropriate uses must be approved by the Administrator prior to the adoption by IDNR/OWR.
- c. All development in the Regulatory Floodway shall require a Permit from IDNR-OWR and must be in

accordance with all provisions of this Ordinance.

- d. Construction of an Appropriate Use will be considered permissible provided that the proposed project meets the following engineering and mitigation criteria and is so stated in writing with supporting plans, calculations and data prepared and signed by a Professional Engineer.
  - 1. All effective Regulatory Floodway conveyance lost due to the development of Appropriate Uses, other than bridge or culvert crossings or on-stream structures or dams, shall be replaced for all flood events up to and including the base flood.
  - 2. The following expansion and contraction ratios shall be used to determine transition sections in calculations of effective Regulatory Floodway conveyance:
    - a. Flowing water will expand no faster than at a rate of one foot horizontal for every four feet of the flooded stream's length.
    - b. Flowing water will contract no faster than at a rate of one foot horizontal for every one foot of the flooded stream's length.
    - c. Flowing water will not expand or contract faster than one foot vertical for every ten feet of flooded stream length.
    - d. All cross-sections used in the calculations shall be located perpendicular to flood flows.
    - e. Transition Sections must be used to determine the effective conveyance areas on adjacent properties.
  - 3. Development of an appropriate use will not result in an increase in the average channel or Regulatory Floodway velocities or stage. However, in the case of bridges or culverts or on stream structures built for the purpose of backing up water in the stream during normal or flood flows, velocities may be increased at the structure site if scour, erosion and sedimentation will be avoided by the use of rip-rap or other design measures.
- e. In the case of on-stream structures built for the purpose of backing up water during normal or flood flows, the increase in flood stage when compared to existing conditions for all storm events up to and including the base flood event shall be contained within recorded easements or the channel banks. A Dam Safety Permit or letter indicating a Dam Safety Permit is not required must be obtained from IDNR/OWR for such structures.
- f. IDNR/OWR will issue permits for all floodway projects including IDNR/OWR projects, dams, etc. and for all other state or community projects.
- g. If the proposed activity involves a channel modification, it shall be demonstrated that:
  - 1. There are no practicable alternatives to the activity which would accomplish its purpose with less impact to the natural conditions of the body of water affected. Possible alternatives include levees, bank stabilization, flood proofing of existing structures, removal of structures from the flood plain, clearing the channel, high flow channel, or the establishment of a stream side buffer strip of green belt. Channel modification is acceptable if the purpose is to restore natural conditions and improve water quality and fish and wildlife habitat;
  - 2. Water quality, habitat, and other natural functions would be significantly improved by the modification and no significant habitat area may be destroyed, or the impacts are offset by the replacement of an equivalent degree of natural resource values;

- 3. The activity has been planned and designed and will be constructed in a way which will minimize its adverse impacts on the natural conditions of the body of water affected, consistent with the following criteria;
  - a. The physical characteristics of the modified channel shall match as closely as possible those of the existing channel in length, cross-section, slope and sinuosity. If the existing channel has been previously modified, restoration of more natural physical conditions should be incorporated into channel modification design, where practical.
  - b. Hydraulically effective transitions shall be provided at both the upstream and downstream ends of the project, designed such that they will prevent erosion.
  - c. One-sided construction of a channel shall be used when feasible. Removal of streamside (riparian) vegetation should be limited to one side of the channel, where possible, to preserve the shading and stabilization effects of the vegetation.
  - d. Clearing of vegetation shall be limited to that which is essential for construction of the channel.
  - e. Channel banks shall be constructed with a side slope no steeper than three to one (3:1) horizontal to vertical, wherever practical. Natural vegetation and gradual side slopes are the preferred methods for bank stabilization. Where high velocities or sharp bends necessitate the use of alternative stabilization measures, natural rock or rip-rap are preferred materials. Artificial materials such as concrete, gabions, or construction rubble should be avoided unless there are no practicable alternatives.
  - f. All disturbed areas associated with the modification shall be seeded or otherwise stabilized as soon as possible upon completion of construction. Erosion blanket or an equivalent material shall be required to stabilize disturbed channel banks prior to establishment of the vegetative cover.
  - g. If the existing channel contains considerable bottom diversity such as deep pools, riffles, and other similar features, such features shall be provided in the new channel. Spawning and nesting areas and flow characteristics compatible with fish habitat shall also be established where appropriate.
  - h. A sediment basin shall be installed at the downstream end of the modification to reduce sedimentation and degradation of downstream water quality.
  - i. New or relocated channels should be built in the dry and all items of construction, including vegetation, should be completed prior to diversion of water into the new channel.
  - j. There shall be no increases in stage or velocity as the channel enters or leaves the project site for any frequency flood unless necessitated by a public flood control project or unless such an increase if justified as part of a habitat improvement or erosion control project.
  - h. Unless the modification is for a public flood control project, there shall be no reduction in the volume of floodwater storage outside the floodway as a result of the modification; and
- 4. The project otherwise complies with the requirements of this Section.

#### Sec. 405 Riverine Floodplain

These standards apply to Riverine Regulatory Floodplains without a Regulatory Floodway.

The Applicant shall obtain approval from IDNR/OWR for all development any portion of which is located partially or completely within the Regulatory Floodplain (without a delineated Regulatory Floodway) with a tributary drainage area of 640 acres or more.

- a. The development shall not singularly or cumulatively result in an obstruction of flood flows or potential flood damages outside the site due to an increase in flood heights, velocities, or loss of floodplain area storage.
- b. A Professional Engineer shall submit a study that demonstrates one of the following:
  - 1. Determine a floodway which meets the definition of a Regulatory Floodway and demonstrate that the proposed development meets the Floodway Standards in Section 404, or
  - 2. Determine a BFE and demonstrate that the proposed development will maintain the existing conditions conveyance, will not increase flood velocities, will not increase flood profiles and will compensate for any lost floodplain storage.

## Sec. 406 Bridge and Culvert Standards

These standards are for the reconstruction, modification or new construction of bridges, culvert crossings and roadway approaches located in the regulatory floodplain.

- a. A proposed new structure shall not result in an increase of upstream flood stages greater than 0.1 foot when compared to the existing conditions for all flood events up to and including the base flood event unless contained within the channel banks or recorded easements. The evaluation must be submitted to the IDNR-OWR for review and a permit obtained.
- b. If the proposed new structure will increase upstream flood stages greater than 0.1 foot, the applicant must contact IDNR/OWR for a Dam Safety permit or waiver. The Administrator shall be copied on all related correspondence.
- c. Lost regulatory floodplain storage must be replaced as required in Section 403 Compensatory Storage Volume Standards except that artificially created storage lost due to a reduction in head loss behind an existing bridge or culvert crossing shall not be required to be replaced, provided no flood damage will be incurred downstream.
- d. Velocity increases must be mitigated by use of appropriate measures to avoid scour, erosion and sedimentation at the structure.
- e. For modification or replacement of existing structures, the existing structure must first be evaluated in accordance with IDNR/OWR Rules (17 III. Adm. Code Part 3708) to determine if the existing structure is a source of flood damage. If the structure is a source of flood damage, the applicant's engineer shall submit justification to allow the damage to continue and evaluate the feasibility of relieving the structure's impact. Modifications or replacement structures shall not increase flood stages (0.0 feet) compared to the existing condition for all flood events up to and including the base flood event. The evaluation must be submitted to IDNR/OWR, for review and concurrence before a permit is issued. The Administrator shall be copied on all related correspondence.
- f. If any work is proposed in, near or over a public body of water, a permit or letter indicating a permit is not required must be obtained from IDNR/OWR.
- g. The hydraulic analysis for the backwater caused by the bridge showing the existing condition and proposed regulatory profile must be submitted to IDNR/OWR for concurrence that a CLOMR is not

required.

- h. Construction vehicles shall cross-streams by the means of existing bridges or culverts. Where an existing crossing is not available, a temporary crossing that has been issued a permit or waiver by IDNR/OWR shall be constructed in which:
  - 1. The approach roads will be 0.5 feet or less above existing grade.
  - 2. The crossing will allow stream flow to pass without backing up the water above the stream bank vegetation line or above any drainage tile or outfall.
  - 3. The top of the roadway fill in the channel will be at least 2 feet below the top of the lowest bank. Any fill in the channel shall be non-erosive material, such as rip-rap or gravel.
  - 4. The access road and temporary crossings will be removed within one year after installation, unless an extension of time is granted by the Administrator.

#### Sec. 407 Stream and Wetlands Protection

#### 407.1 <u>Authority</u>

The Conservation Plan is adopted by the Mayor and City Council of the City of Watseka, Illinois, under the authority of the Illinois Revised Statutes, Chapter 34, Paragraphs 3151 et seq. of the Illinois Revised Statutes, Chapter 24, Paragraphs 11-13-1 et seq. The City of Watseka, Illinois also asserts its jurisdiction over all isolated wetlands within the City corporate limits and facilities planning areas that were formerly under the jurisdiction of the U.S. Army Corps of Engineers prior to January 9, 2000.

## 407.2 <u>Title</u>

This ordinance shall be known and may be cited as the City of Watseka Conservation Plan Ordinance.

#### 407.3 <u>Purpose and Intent</u>

It is the purpose and intent of this ordinance to promote the health, safety and general welfare of the present and future residents of City of Watseka and downstream drainage areas by providing for the protection, preservation, proper maintenance, and use of City of Watseka watercourses, lakes, ponds, floodplain and wetland areas. All work to be done in a Conservation Area will require a permit from the Army Corps of Engineers. The responsibility for obtaining the permit is by the applicant. If requested by the City, a sign-off from the Army Corps of Engineers will be required if the site appears to be near a wetland area. Absolutely no work shall be undertaken until the Administrator has received an approved permit by the Army Corps of Engineers.

The ordinance is more specifically adopted:

- 1. To prevent flood damage by preserving storm and floodwater storage capacity (including depressional storage);
- 2. To maintain the normal hydrologic balance of streams, floodplains, ponds, lakes, wetlands, and groundwater by storing and providing for infiltration of wet-period runoff in floodplains and wetlands, and releasing it slowly to the stream to maintain in-stream flow;
- 3. To manage stormwater runoff and maintain natural runoff conveyance systems, and minimize the need for major storm sewer construction and drainage way modification;
- 4. To improve water quality, both by filtering and storing sediments and attached pollutants, nutrients, and organic compounds before they drain into streams or wetlands, and by maintaining the natural pollutant-assimilating capabilities of streams, floodplains and wetlands;

- 5. To protect shorelines and stream banks from soil erosion, using natural means and materials wherever possible;
- 6. To protect fish spawning, breeding, nursery and feeding grounds;
- 7. To protect wildlife habitat;
- 8. To preserve areas of special recreational, scenic, or scientific interest, including natural areas and habitats of endangered species;
- 9. To maintain and enhance the aesthetic qualities of developing areas; and
- 10. To encourage the continued economic growth and high quality of life of the City of Watseka which depends in part on an adequate quality of water, a pleasing natural environment, and recreational opportunities in proximity to the City of Watseka.

In order to achieve the purpose and intent of this ordinance, City of Watseka hereby designates the Conservation Plan that shall be considered as an overlay to the zoning districts created by City of Watseka zoning ordinances as amended. Any proposed development activity within the District must obtain a Site Development Permit as approved by the governing body of City of Watseka. See Section 407.4.

#### 407.4 Site Development Permit

To ensure that proposed development activity can be carried out in a manner which is compatible and harmonious with the natural amenities of the Conservation Plan and with surrounding land uses, a request for a Site Development Permit for such development activity must be submitted for approval by the Administrator.

- A. No Site Development Permit shall be issued unless the City of Watseka finds that:
  - 1. The development will not detrimentally affect or destroy natural features such as ponds, streams, wetlands, and forested areas, nor impair their natural functions, but will preserve and incorporate such features into the development's site;
  - 2. The location of natural features and the site's topography have been considered in the designing and siting of all physical improvements;
  - 3. Adequate assurances have been received that the clearing of the site of topsoil, trees, and other natural features will not occur before the commencement of building operations; only those areas approved for the placement of physical improvements may be cleared;
  - 4. The development will not reduce the natural retention storage capacity of any watercourse, nor increase the magnitude and volume of flooding at other locations; and that in addition, the development will not increase stream velocities; and
  - 5. The soil and subsoil conditions are suitable for excavation and site preparation, and the drainage is designed to prevent erosion and environmentally deleterious surface runoff.

There shall be no development, including the immediate or future clearing or removal of natural ground cover and/or trees, within the Conservation Areas for any purpose, unless a Site Development Permit is granted subject to the provisions of this ordinance or the provisions of the City of Watseka zoning ordinance.

Dumping, filling, mining, excavating, dredging, or transferring of any earth material within the district is prohibited unless a Site Development Permit is granted.

No ponds or impoundments shall be created nor other alterations or improvements shall be allowed in the district for recreational uses, stormwater management, flood control, agricultural uses or as scenic features unless a Site Development Permit is granted.

- B. <u>Application for Permit</u> Application for a Site Development Permit, shall be made by the owner of the property, or his/her authorized agent, to the City of Watseka, on a form furnished for that purpose. Each application shall bear the name(s) and address(es) of the owner or developer of the site and of any consulting firm retained by the applicant together with the name of the applicant's principal contact at such firm, and shall be accompanied by a filing fee of \$200 unless the application is part of a subdivision review where other fees take priority. The applicant further agrees to reimburse the City for any outside review engineering fees, incurred by the City, in addition to the filing fees. Each application shall include certification that any land clearing, construction, or development involving the movement of earth shall be in accordance with the plans approved upon issuance of the permit.
- C. <u>Submissions</u> Each application for a Site Development Permit shall be accompanied by the following information: General Provisions, Site Development Plan, Geologic and Soil Report, Drainage Control Plan, Site Grading & Excavation Plan, Landscape Plan, Justification for Watercourse Relocation and Minor Modifications, Stream Modification/Relocation Plan, Channel and Bank Armoring, Culverts, On-Stream Impoundments, and an Impact Assessment.
- D. <u>Review and Approval</u> Each application for a Site Development Permit shall be reviewed and acted upon according to the following procedures:
  - (1) The City of Watseka will review each application for a Site Development Permit to determine its conformance with the provisions of this ordinance. The City of Watseka may also refer any application to any other local government or public agency within whose jurisdiction the site is located for review and comments. Within thirty (30) days after receiving an application, the City of Watseka shall in writing, (a) approve the permit application, if it is found to be in conformance with the provisions of this ordinance, and issue the permit; (b) approve the Permit application subject to such reasonable conditions as may be necessary to secure substantially the objectives of this ordinance, and issue the permit subject to these conditions; or (c) disapprove the permit application, indicating the deficiencies and the procedure for submitting a revised application and/or submission.
  - (2) No Site Development Permit shall be issued for an intended development site unless:
    - (a.) The development, including but not limited to subdivisions and planned unit developments, has been approved by the City of Watseka where applicable; or
    - (b.) Such Permit is accompanied by or combined with a valid building permit issued by the City of Watseka; or
    - (c.) The proposed development is coordinated with any overall development program previously approved by the City of Watseka for the area in which the site is situated.
- E. <u>Permit Exceptions</u>: The provisions of this ordinance shall not apply to:
  - (1) Emergency work necessary to preserve life or property; when emergency work is performed under this section, the person performing it shall report the pertinent facts relating to the work to the Administrator within ten (10) days after commencement of the work and shall thereafter obtain a Site Development Permit and shall perform such work as may be determined by the agency to be reasonably necessary to correct any impairment to the watercourse, lake, pond, floodplain or wetland;
  - (2.) Work consisting of the operation, repair, or maintenance of any lawful use of land existing on the date of adoption of this ordinance;

- (3.) Lands adjacent to farm ditches if:
  - (a.) Such lands are not adjacent to a natural stream or river; or
  - (b.) Those parts of such drainage ditches adjacent to such lands were not streams before ditching; or
  - (c.) Such lands are maintained in agricultural uses without buildings and structures.

Where farm ditches are found to contribute to adverse environmental impacts or hazards to persons or property, the City of Watseka may include designated farm ditches in the District. The City of Watseka may also require that linings, bulkheads, dikes and culverts be removed to mitigate hazards, or that other mitigative measures be taken, such as the maintenance of a natural vegetation buffer strip.

F. <u>Effect on Other Permits:</u> The granting of a Site Development Permit under the provisions herein shall in no way affect the owner's responsibility to obtain the approval required by any other statute, ordinance, or regulation of any state agency or subdivision thereof, or to meet other City of Watseka ordinances and regulations. Where state and/or federal permits are required, a Site Development Permit will not be issued until they are obtained.

#### 407.5 <u>General Provisions: Area Affected</u>

This ordinance applies to development in or near streams, lakes, ponds and wetlands within City of Watseka. Streams, lakes, and ponds (including intermittent streams) are those which are shown on the United States Department of the Interior Geological Survey (USGS) 7.5 minute quadrangle National Wetlands Inventory Maps and those additional streams, lakes, and ponds as identified by the Administrator. Those are hereby made a part of this ordinance, and two copies thereof shall remain on file at the City of Watseka administrative building for public inspection. Wetlands are those designated by the most recent version of the US Army Corps of Engineers Manual of Wetland Delineation.

If new drainage courses, lakes, ponds or wetlands are created as part of a development, the requirements for setbacks and uses within setbacks, and the criteria for watercourse relocation and minor modification shall apply. The District shall be amended as appropriate to include these areas.

- 1. <u>Conservation Areas</u> The Conservation Areas shall be considered as an overlay to the zoning districts created by the City of Watseka zoning ordinance as amended in addition to the requirements of this ordinance, applicants for a Site Development Permit within the District shall meet all requirements of the underlying zoning districts. In the event of a conflict between the overlay district requirements and the underlying zoning district requirements, the most restrictive requirements prevail.
- 2. <u>District Boundary</u> The procedures, standards and requirements contained in this ordinance shall apply to all lots within wetlands and streams, and all lots lying wholly or in part:
  - a. Within the Special Flood Hazard Area (SFHA) designated by the Federal Emergency Management Agency (FEMA); or
  - b. Within 100 feet of the ordinary high water mark (OHWM) of a perennial stream or intermittent stream, the ordinary high water mark of a lake or pond, or the edge of a wetland; or
  - c. Within depressional areas serving as floodplain or stormwater storage areas, as designated on the Conservation Areas.
- Minimum Setback of Development Activity from Streams, Lakes, Depressional Storage, Ponds, and Wetlands - Absolutely no development activity (except as provided below) may occur within the minimum setback. The minimum setback, should be a vegetated buffer strip, preferable planted with

native plant species, shall be maintained or restored around the periphery of the area in question. The width of the buffer strip shall be as follows:

- a. 25 feet for a tributary length of 250 feet or less.
- b. 50 feet for a tributary length greater than 250 feet and less than 500 feet.
- c. 75 feet for a tributary length over 500 feet.

Note: the tributary length is the maximum length of the project limits to the sensitive area or the length from a drainage divide to the sensitive area.

The minimum setback shall be measured between the ordinary high water mark of streams, lakes and ponds, or the edge of wetlands, or within a designated depressional areas. In no case shall the setback be less than the boundary of the 100-year floodway as defined by FEMA. These setback requirements do not apply to a stream in a culvert unless the stream is taken out of the culvert as part of development activity. If a culvert functions as a low-flow culvert, where water is intended to periodically flow over it, the setback requirements apply.

The following development activities may be permitted, subject to issuance of a Site Development Permit, within the minimum setback areas only if, as a practical matter, they cannot be located outside the setback area. Such development activities will only be approved based upon a report, prepared by a qualified professional, which demonstrates that they will not adversely affect water quality; destroy, damage or disrupt significant habitat area; adversely affect drainage and/or stormwater retention capabilities; adversely affect flood conveyance and storage; 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 City of Watseka as a whole, including the loss of open space or scenic vistas:

- a. Minor improvements such as walkways, benches, comfort stations, informational displays, directional signs, footbridges, observation decks, and docks;
  - b. The maintenance, repair, replacement, and reconstruction of existing utilities, 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 improvement projects, game bird and animal farms, wildlife preserves and public boat launching ramps.

Review of proposed development activity within the minimum setback area will consider the following:

- a. Only limited filling and excavating necessary for the development of public boat launching ramps, swimming beaches, or the development of park shelters or similar structures is allowed. The development and maintenance of roads, parking lots and other impervious surfaces necessary for permitted uses are allowed only on a very limited basis, and where no alternate location outside of the setback area is available.
- b. Land surface modification within the minimum setback shall be permitted for the development of stormwater drainage swales between the developed area of the site (including a stormwater detention facility on the site) and a stream, lake or pond, or wetland. Detention basins within the setback are generally discouraged, unless it can be shown that resultant modifications will not impair water quality, habitat, or flood storage functions.
- c. No filling or excavating within wetlands is permitted except to install piers for the limited development of walkways and observation decks. Walkways and observation decks should avoid high quality wetland

areas, and should not adversely affect natural areas designated in the Illinois Natural Areas Inventory or the habitat of rare or endangered species.

- d. Wetland area occupied by the development of decks and walkways must be mitigated by an equal area of wetland habitat improvement.
- e. Modification of degraded wetlands for purposes of stormwater management is permitted where the quality of the wetland is improved and total wetland acreage is preserved. Where such modification is permitted, wetlands shall be protected from the effects of increased stormwater runoff by measures such as detention or sedimentation basins, vegetated swales and buffer strips, and sediment and erosion control measures on adjacent developments. The direct entry of storm sewers into wetlands shall be avoided. Environmental impact analysis of wetland modification may be required in accordance with Section 407.7 of this ordinance.

An applicant for a Site Development Permit (See Section 407.4) must stabilize areas left exposed after land surface modification with vegetation normally associated with that stream or wetland. The planting of native riparian vegetation is recommended as the preferred stabilization measure. Other techniques should be used only when and where vegetation fails to control erosion. The preferred alternative is riprap, using natural rock materials where practicable, installed on eroding bank areas in a manner that provides interstitial space for vegetative growth and habitat for macro invertebrates and other stream organisms. Lining of the stream channel bottom is not permitted.

The applicant shall minimize access to the applicant's proposed development activity within all or part of the Conservation Areas where such access could adversely affect the stream, lake, pond, wetland, or related environmentally sensitive areas.

- 4. <u>Site Development Plan</u> A site development plan must be prepared for any proposed development within, or partly within, the Conservation Areas and must indicate:
  - a. Dimension and area of parcel, showing also the vicinity of the site in sufficient detail to enable easy location, in the field, of the site for which the Site Development Permit is sought, and including the boundary line, underlying zoning, a legend, a scale, and a north arrow. This requirement may be satisfied by the submission of a separate vicinity map;
  - b. Location of any existing and proposed structures;
  - c. Location of existing or proposed on-site sewage systems or private water supply systems;
  - d. Location of any perennial or intermittent stream, lake or pond, and its ordinary high water mark;
  - e. Location and landward limit of all wetlands;
  - f. Location of setback lines as defined in this ordinance;
  - g. Location of the 100-year floodway and floodplain limits;
  - h. Location of existing or future access roads;

- i. Specifications and dimensions of stream, wetland or other water areas proposed for alterations;
- j. Cross-sections and calculations indicating any changes in flood storage volumes; and
- k. Such other information as reasonably requested by City of Watseka.

The applicant shall present evidence, prepared by a qualified professional engineer, that demonstrates that the proposed development activity will not endanger health and safety, including danger from the obstruction or diversion of flood flow. The developer shall also show, by submitting appropriate calculations and resource inventories, that the proposed development activity will not substantially reduce natural floodwater storage capacity, destroy valuable habitat for aquatic or other flora and fauna, adversely affect water quality or ground water resources, increase stormwater runoff velocity so that water levels on other lands are substantially raised or the danger from flooding increased, or adversely impact any other natural stream, floodplain, or wetland functions, and is otherwise consistent with the intent of this ordinance.

- 5. <u>Geologic and Soil Report</u> The site proposed for development shall be investigated to determine the soil and geologic characteristics, including soil erosion potential. A report, prepared by a licensed professional engineer, geoscientist, or soil scientist experienced in the practice of geologic and soil mechanics, shall be submitted with every application for land development within the Conservation Areas. This report shall include a description of soil type and stability of surface and subsurface conditions. Any area that the investigation indicates as being subject to geologic or soil hazards shall not be subjected to development, unless the engineer or soil scientist can demonstrate conclusively that these hazards can be overcome.
- 6. <u>Hydrologic Controls/Drainage Control Plan</u> A drainage control plan that describes the hydraulic characteristics of on-site and nearby watercourses as well as the proposed drainage plan, prepared by a registered Professional engineer experienced in hydrology and hydraulics, shall be submitted with each application for land development within the Conservation Areas. Unless otherwise noted, the following restrictions, requirements and standards shall apply to all development within the Conservation Areas:
  - 1. Natural open-channel drainageways shall be preserved; and
  - 2. Runoff from areas of concentrated impervious cover (e.g., roofs, driveways, streets, patios, etc. shall be collected and transported to a drainageway (preferably a natural drainageway) with sufficient capacity to accept the discharge without undue erosion or detrimental impact. Vegetated drainage swales are preferred over conveyances constructed of concrete or other manufactured materials.

The drainage control Plan shall identify appropriate measures, such as recharge basins and detention/retention basins, which will limit the quantitative and qualitative effects of stormwater runoff to pre-development conditions.

7. <u>Site Grading and Excavation Plan</u> - Section 7 applies to the extent that grading and excavation and erosion control plans, which satisfy the following requirements, are not already required by a jurisdiction.

A site grading and excavation Plan, prepared by a registered professional engineer, trained and experienced in civil engineering, shall be submitted with each application for a Site Development Permit and shall include the following:

- a. Details of the existing terrain and drainage pattern with one-foot contours;
- b. Proposed site contours at one-foot intervals;
- c. Dimensions, elevation and contours of grading, excavation and fill; slopes of all drainage swales shall be a minimum of 2% through the side and rear yard drainage easements;
- d. A description of methods to be employed in disposing of soil and other material that is removed from allowable grading and excavation sites, including location of the disposal site if on the property;
- e. A schedule showing when each stage of the project will be completed, including the total area of soil surface to be disturbed during each stage, and estimated starting and completion dates. The schedule shall be prepared so as to limit, to the shortest possible period, the time soil is exposed and unprotected. In no case shall the existing natural vegetation be destroyed, removed or disturbed more than fifteen (15) days prior to initiation of the improvements; and
- f. A detailed description of the revegetation and stabilization methods to be employed, to be prepared in conjunction with the landscape plan per Section 4.05F(8). This description should include locations of erosion control measures such as sedimentation basins, straw bales, diversion swales, etc.

The grading and excavation plan must be consistent with all the provisions of this ordinance.

Unless otherwise provided in this ordinance, the following restrictions, requirements and standards shall apply to all development within the District:

- a. Every effort shall be made to develop the site in such a manner so as to minimize the alteration of the natural topography;
- b. No grading, filling, cleaning, clearing, terracing or excavation of any kind shall be initiated until final engineering plans are approved and the Site Development Permit is granted by the City of Watseka; and
- c. The depositing of any excavation, grading or clearing material within a stream, lake, pond or wetland area shall be prohibited.

In addition to locating all site improvements on the subject property to minimize adverse impacts on the stream, lake, pond, or wetland, the applicant shall install a berm, curb, or other physical barrier during construction, and following completion of the project, where necessary, to prevent direct runoff and erosion from any modified land surface into a stream, lake, pond, or wetland. All parking and vehicle circulation areas should be located as far as possible from a stream, lake, pond, or wetland.

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

<u>Natural Vegetation Buffer Strip Required: Vegetation and Revegetation/Landscape Plan</u>
To minimize erosion, stabilize the streambank, protect water quality, maintain water

temperature at natural levels, preserve fish and wildlife habitat, to screen man-made structures, and also to preserve aesthetic values of the natural water course and wetland areas, a natural vegetation strip shall be maintained along the edge of the stream, lake, pond or wetland. The natural vegetation strip shall be as described in 407.5(3) and shall be measured from the ordinary high water mark of a perennial or intermittent stream, lake or pond and the edge of wetland.

Within the natural vegetation strip, trees and shrubs may be selectively pruned or removed for harvest of merchantable timber, to achieve a filtered view of the water body from the principal structure and for reasonable private access to the stream, lake, pond, or wetland. Said pruning and removal activities shall ensure that a live root system stays intact to provide for streambank stabilization and erosion control.

A landscape plan, prepared by a professional shall be submitted with each Site Development Permit application for development activity within the Conservation Areas and contain the following:

- a. A plan describing the existing vegetative cover of the property and showing those areas where the vegetation will be removed as part of the proposed construction; and
- b. A plan describing the proposed revegetation of disturbed areas specifying the materials to be used.

The vegetation must be planned in such a way that access for stream maintenance purposes shall not be prevented.

# 407.6 <u>Watercourse Relocation and Minor Modifications (Including Channelization and Relocation)</u>

Watercourse relocation or modification is generally not permitted because these activities are not usually consistent with the purposes of this ordinance. Under certain circumstances, relocation and minor modification may be permitted through a Site Development Permit where certain problems can be mitigated by relocation and/or minor modification, specifically when:

- 1. Off-site hydrologic conditions are causing erosion, flooding and related problems; or
- 2. On-site soil and geologic conditions are resulting in unstable conditions that pose hazards to life, health, and existing structures or property; or
- 3. The quality of previously modified or relocated streams can be improved through restoration; or
- 4. Officially adopted stormwater management plans call for placement of detention or retention facilities in a stream; or
- 5. Public utilities, including sanitary sewers, pipelines, and roadways require stream crossing or relocation where there are not practical alternatives.

Modification of watercourses as a convenience for site design purposes is not permitted.

1. <u>Conditions and Restrictions for Permitting Stream Modification</u>

Stream modification, when permitted, is subject to the following conditions and restrictions:

- a. Water quality, habitat and other natural functions must be significantly improved by the modification; no significant habitat area may be destroyed;
- b. The amount of flow and velocity of a stream is not to be increased or decreased as the stream enters or leaves a subject property, unless this reflects an improvement over previous conditions in terms of reduced flooding, reduced erosion, or enhanced low flow conditions;
- c. Prior to diverting water into a new channel, a qualified professional approved by the Administrator shall inspect the stream modification, and issue a written report to the City of Watseka that the modified stream complies with the requirements in Section 4.05G(2.); and
- d. Stream channel enlargement, or other modifications that would increase conveyance, shall not be permitted if the intended purpose is to accommodate development activities in the floodplain.

## 2. <u>Required Content of Stream Modification, Relocation Plan</u>

Stream relocation may be permitted in accordance with a stream relocation plan that provides for:

- a. The creation of a natural meander pattern, pools, riffles, and substrate;
- b. The formation of gentle side slopes (at least three feet horizontally per one foot vertically), including installation of erosion control features;
- c. The utilization of natural materials wherever possible;
- d. The planting of vegetation normally associated with streams, including primarily native riparian vegetation;
- e. The creation of spawning and nesting areas wherever appropriate;
- f. The re-establishment of the fish population wherever appropriate;
- g. The restoration of water flow characteristics compatible with fish habitat areas, wherever appropriate;
- h. The filling and revegetation of the prior channel;
- i. A proposed phasing plan, specifying time of year for all project phases;
- j. Plans for sediment and erosion control; and
- k. Establishment of a low-flow channel that reflects the conditions of a natural stream.
- 3. <u>Criteria for Permitting Armoring of Channels and Banks</u>

Armoring in the form of bulkheads, riprap or other materials or devices is not permitted except in accordance with the following:

a. Significant erosion cannot be prevented in any other way and the use of vegetation and gradual bank slopes has not sufficiently stabilized the shoreline or bank;

- b. The bulkhead or other device is not placed within a wetland, or between a wetland and a lake or pond;
- c. The bulkhead, riprap or other device will minimize the transmittal of wave energy or currents to other properties; and
- d. The change in the horizontal or vertical, configuration of the land must be kept to a minimum. Where permission to install bulkheads or other armoring devices is requested as part of the Site Development Permit application documentation and certification pertaining to the items above must be submitted.

## 4. <u>Criteria for Permitting the Use of Culverts</u>

Culverts are not permitted in streams except in accordance with the following:

- a. Where a culvert is necessary for creating access to a property; use of culverts as a convenience, in order to facilitate general site design, is not to be considered;
- b. The culvert must allow passage of fish inhabiting the stream, and accommodate the 100-year flood event without increasing upstream flooding, except where a restricting culvert is desirable as part of an overall storm and floodwater management plan;
- c. The culvert must be maintained free of debris and sediment to allow free passage of water, and if applicable, fish; and
- d. The stream bottom should not be significantly widened for the placement of a culvert as this increases siltation; if multiple culverts must be installed, one culvert should be at the level of the bottom of the stream and the others at or above normal water elevation.

#### 5. <u>Criteria for Permitting On-Stream Impoundments</u>

Impoundment of streams is not permitted except in accordance with the following:

- a. The impoundment is determined to be in the public interest by providing regional stormwater detention, flood control, or public recreation;
- b. The impoundment will not prevent the upstream migration of indigenous fish species;
- c. A non-point source control plan has been implemented in the upstream watershed to control the effects of sediment runoff as well as minimize the input of nutrients, oil and grease, metals, and other pollutants;
- d. Impoundments without permanent low-flow pools are preferred except where a permanent pool is necessary to achieve the intended benefits of the impoundment (e.g. recreation or water quality mitigation); and
- e. Impoundment design shall include gradual bank slopes, appropriate bank stabilization measures, and a pre-sedimentation basin.

## 407.7 Impact Assessment

The City of Watseka may ask an applicant to submit a report prepared by a qualified professional, and approved by the Administrator, in order to assess the potential impact of proposed development on a lake, stream or wetland and associated environmentally sensitive areas,

including loss of flood storage potential, loss of habitat, changes in species diversity and quantity, impacts on water quality, increases in human intrusion, and impacts on associated streams, lakes, ponds, wetlands or downstream areas.

#### 407.8 <u>Stream Maintenance Easement</u>

The applicant shall grant an access easement for stream maintenance purposes to the City of Watseka, over twenty-five feet parallel to the stream bank.

## 407.9 <u>Threatened and Endangered Species</u>

All developments shall conform to the requirements set forth in 520 ILCS 10/11, which states that a consultation with the Department shall be undertaken to evaluate whether actions proposed by the development are likely to jeopardize the continued existence of listed endangered or threatened species or are likely to results in the destruction or adverse modification of the designated essential habitat of such species. Final disposition of any disagreement not resolved by non-local laws, ordinance, etc will be made by the City Council.

#### 407.10 Security

The applicant may be required to file with the City of Watseka a letter of credit, or other improvement security satisfactory to the City and in an amount deemed sufficient by the Administrator to ensure compliance with any aspect of this ordinance; to cover all costs of improvements, landscaping, or maintenance of improvements and landscaping, for such period as specified by the City of Watseka, and engineering and inspection costs; and to cover the cost of failure or repair of improvements installed on the site.

#### 407.11 Liability

Prior to issuance of a construction permit, the applicant shall enter into an agreement with the City of Watseka which runs with the property, in a form acceptable to the City of Watseka attorney, indemnifying the City of Watseka for any damage resulting from development activity on the subject property which is related to the physical condition of the stream or wetland.

#### 407.12 Separability

Every section, provision, or part of this ordinance is declared separable from every other section, provision, or part; and if any section, provision, or part thereof shall be held invalid, it shall not affect any other section, provision, or part.

#### 407.13 <u>Retroactivity</u>

The requirements of this ordinance apply to all platted and unplatted lands within the jurisdiction of the City of Watseka.

#### 407.14 (RESERVED)

## ARTICLE 5 – STORMWATER MANAGEMENT PERMIT SUBMITTAL REQUIREMENTS

#### Sec. 500 General Requirements

#### 500.1 Stormwater Management and Other Permits Required

A Stormwater Management Permit shall be required if:

- a. The development or a substantial improvement is located in the regulatory floodplain or there is regulatory floodplain within the property boundary; or
- b. The development disturbs more than 5,000 square feet of ground cover, or 500 square feet if within 25 feet of a lake, pond stream or wetland; unless the development solely involves one or more of the following:
  - 1. Installation, renovation, or replacement of a septic system, potable water service line, or other utility to serve an existing structure; or
  - 2. Excavation or removal of vegetation in rights-of-way or public utility easements for the purpose of installing or maintaining utilities not including storm sewers; or
  - 3. Maintenance, repair, or at grade replacement of existing lawn areas not otherwise requiring a stormwater permit under this Ordinance; or
  - 4. Maintenance of an existing stormwater facility, not requiring other state or federal permits or approvals.

All development shall secure all appropriate Stormwater Management related approvals, including, without limitation, an IDNR-OWR Floodway/Floodplain Construction permit, a USACOE 404 permit and an IDNR-OWR Dam Safety permit if required, from all Federal, State and Regional authorities and other appropriate Federal, State, and Regional approvals prior to the issuance of a Stormwater Management Permit for areas of a site requiring such other approvals.

## 500.2 Permit Review Fees

All permit fees, as established by separate ordinance by the City Council, shall be paid at the time of application. Fees may include, but are not limited to, the cost of permit administration, review and inspections prior to construction, during construction and within the permanent cover establishment period following construction.

#### 500.3 Professional Seals and Certifications Required

- a. The design of stormwater facilities, calculations for the determination of the regulatory floodplain, or calculations of the impacts of development shall meet the standards of this Ordinance and shall be prepared, signed, and sealed by a professional engineer. The professional engineer shall provide an opinion that the technical submittal meets the criteria required by this Ordinance; and
- b. For structures (not including earth embankments) that are subject to a differential water pressure greater than 3 feet the submittal shall include evidence that the subject design has been reviewed by a qualified professional who shall, as a minimum, have registration as a Professional Engineer. Such reviews shall include stability of the structure under design conditions considering the protection of downstream life and property in the event of a failure. When directed by the Administrator the calculations submitted for such structures shall be reviewed, signed and sealed by a Registered Structural Engineer.

For projects which include earth embankments which are subjected to differential water pressure the submittal shall include evidence that the embankment design and construction specifications are adequate for the design conditions. This review shall include consideration of the existing foundation soils for the embankment, the materials from which the embankment is to be constructed, compaction requirements for the embankment and protection of the embankment from failure due to overtopping. Construction and materials specifications for all such embankments shall be included with the plan set submittal. When directed by the Administrator, or when the impounded water pressure differential exceeds three feet, or when appropriate considering the volume impounded and water surface elevation differential to which the embankment is subjected, these calculations may be required to be reviewed, signed and sealed by a qualified Geotechnical or Structural Engineer;

c. A topographical map of the site, record drawings, and other required drawings shall be prepared, signed, and sealed by a Professional Land Surveyor or Professional Engineer and tied to National Geodetic Vertical Datum, 1929 adjustment and any FEMA benchmarks.

#### Sec. 501 Duration and Revision to Permits

#### 501.1 <u>Permit Expiration</u>

Permits expire December 31 of the third year following the date of permit issuance or upon expiration of state or federal permits required for Stormwater Management.

#### 501.2 Permit Extension

If the permitted activity has been started but is not completed by the expiration date of the permit, and the permittee intends to pursue the permitted activity, then the permittee may submit a written request that the expiration date be extended. Upon receipt of such request, the Administrator may extend the expiration date in one-year increments a maximum of 3 times for permitted activities outside regulatory floodplains and floodways. Expiration dates for permitted activities in regulatory floodplains and floodways may be extended in one-year increments a maximum of 3 times provided the activity is in compliance with the then current requirements of this Ordinance.

#### 501.3 <u>Permit Revision</u>

If, after permit issuance, the permittee decides to revise the approved plans, the permittee shall submit revised plans to the Administrator, along with a written request for approval. If the Administrator determines that the revised plans are in compliance with the then current requirements of this Ordinance, an approval of the revised plans may be issued.

#### Sec. 502 Required Submittals

All permit submittals shall include the material listed in the Sections noted in Table 3. Permit Submittal Requirements for the applicable type of development, unless the submittal requirements are specifically modified by the procedure in Section 502.1.

#### 502.1 Modification of Submittal Requirements

The Administrator may, at his discretion, modify the submittal requirements on a case-by-case basis considering the size, complexity and likelihood that a development will affect the discharge of stormwater. Such modifications shall be requested and answered in writing. The Administrator's response shall note the relevant findings, and be specific as to what submittal requirements are changed. The Administrator may not modify submittal requirements for any aspect of the development requiring state or federal permits or approvals is requested.

#### 502.2 Applications and Project Overview

The Applicant shall provide the following information as a minimum, on forms or in a format approved by the Administrator:

- a. The name and legal address of the owner(s) of the site and the permit applicant; and,
- b. The common address, legal description, property identification number (PIN) of the site; and,
- c. The name of the project, area of the site in acres, type of development; and,
- d. A general narrative description of the development, existing and proposed conditions, and project planning principles considered, including Best Management Practices used; and,
- e. Affidavits signed by the owner or the applicant's authorized representative attesting to their understanding of the requirements of this Ordinance and their intent to comply therewith; and,
- f. A statement of opinion by a qualified person either denying or acknowledging the presence of floodplain on the development site; and,
- g. Copies of other stormwater related permits or permit applications as required; and,
- h. A subsurface drainage investigation report; and,
- i. An engineer's estimate of probable construction cost of the stormwater facilities.

#### 502.3 Plan Set Submittal

All applicants for a stormwater permit shall provide the following basic plan exhibits: Site Topographic Map, General Plan View Drawing, Sediment/Erosion Control Plan, and a Vicinity Topographic Map. Each exhibit may be on more than one drawing for clarity. The specific information to be included on each exhibit shall be as noted below.

- a. Site Topographic Map meeting the following requirements shall be submitted:
  - 1. Map scales as 1 inch = 100 feet (or less) and accurate to +/-0.5 feet; and
  - 2. Existing and proposed contours on-site and within 100 feet of site; and
  - 3. Existing and proposed drainage patterns and watershed boundaries; and
  - 4. Delineation of pre-development regulatory floodplain/floodway limits; and
  - 5. Delineation of post-development regulatory floodplain/floodway limits; and
  - 6. Location of cross-sections and any other hydrologic/hydraulic computer modeled features; and
  - 7. Location of all on-site drain tiles; and
  - 8. Boundary of all wetlands, lakes, ponds, etc. with normal water elevation noted; and
  - 9. Location of all existing buildings and those to remain on the site noted; and

- 10. Nearest base flood elevations; and
- 11. FEMA and any site-specific benchmarks used; and
- 12. Highlight all contours used in the calculation of depressional storage.
- b. General Plan View Drawing meeting the following requirements shall be submitted:
  - 1. Drawing at the same scale as the Site Topographic Map; and
  - 2. Existing major and minor stormwater systems; and
  - 3. Proposed major and minor stormwater systems; and
  - 4. Design details for stormwater facilities (i.e. structure and outlet work detail drawings, etc.); and
  - 5. Scheduled maintenance program for permanent stormwater facilities including BMP measures; and
  - 6. Planned maintenance tasks and schedule; and
  - 7. Identification of entities responsible for maintenance; and
  - 8. Permanent public access maintenance easements granted or dedicated to, and accepted by, a government entity; and
  - 9. Proposed regulatory floodplain and floodway location (with the base flood and flood protection elevations noted); and
  - 10. Highlight all plan areas at elevations below the 100-year high water elevation of site runoff storage facilities.
  - 11. For work in the floodplain, cross-section views of the project and engineering study reach showing existing and proposed conditions including principal dimensions of the work as shown in plan view, existing and proposed elevations, normal water elevation, existing and proposed 10-year and 100-year flood elevation, and graphical or numerical scales (horizontal and vertical).
- c. Sediment and Erosion Control Plan meeting the following requirements shall be submitted:
  - 1. Drawings at the same scale as the Site Topographic Map; and
  - 2. Sediment/erosion control installation measures, including standard details, and schedule; and
  - 3. Existing and proposed roadways, structures, parking lots, driveways, sidewalks and other impervious surfaces; and
  - 4. Limits of clearing and grading; and
  - 5. Floodplain/floodway locations; and
  - 6. Proposed buffer location, existing soil types, vegetation and land cover conditions; and

- 7. List of maintenance tasks and schedule for sediment/erosion control measures; and
- 8. Location and description of methods to prevent tracking of sediment or soil offsite, including construction entrance details as appropriate; and
- 9. Description of dust and traffic control measures; and
- 10. Locations of stock-piles to be in place more than 180 days.
- d. Vicinity Topographic Map meeting the following requirements shall be submitted.
  - Vicinity topographic map identifying all off-site areas draining to the development and downstream to the receiving intermittent or perennial stream. (A 2' contour map is preferred at a scale readable by the reviewer but a USGS Quadrangle map is acceptable); and
  - 2. Watershed boundaries for areas draining through or from the development; and
  - 3. Soil types related to hydrologic soils group, vegetation and land cover affecting runoff upstream of the site for any area draining through the site; and
  - 4. Location of development site within the major watershed(s); and
  - 5. Show the overland flow path from the downstream end of the development to the receiving intermittent or perennial stream.
- e. The submittal shall not be considered complete until the preliminary plat and final engineering drawings have been determined to be complete by the City.

## 502.4 <u>Stormwater Submittal</u>

The stormwater submittal shall include narrative discussion and calculations to support a finding that the proposed development complies with the technical requirements of the permitting authorities ordinance. The submittal shall consist of, at a minimum, the following material.

- a. A narrative description of the existing and proposed site drainage patterns and conditions. Include description of off-site conditions, which help to identify stormwater issues considered in the design.
- b. A schedule for implementation of the site stormwater plan.
- c. On-site and off-site runoff calculations which address the following:
  - 1. Documentation of the procedures/assumptions used to calculate hydrologic and hydraulic conditions for sizing major and minor systems; and
  - 2. Cross-section data for open channels; and
  - 3. Hydraulic grade line and water surface elevations under design flow conditions; and
  - 4. Hydraulic grade line and water surface elevations under base flood flow conditions.
- d. Site Runoff Storage Calculations, which address the following:
  - 1. Calculation of hydraulically connected impervious area and corresponding retention

volume.

- 2. Documentation of the procedures/assumptions used to calculate hydrologic and hydraulic conditions for determining the allowable release rate.
- 3. Documentation of the procedures/assumptions used to calculate on-site depressional storage.
- 4. Documentation of the procedures/assumptions used to calculate hydrologic and hydraulic conditions for determining the storage volume.
- 5. Elevation-area-storage data and calculations for site runoff storage.
- 6. Elevation-discharge data, and calculations specifically related to the outlet control structure depicted in the plan Exhibits.
- 7. The General Plan View Drawing of Section 502.3(b) shall indicate the areas of directly connected impervious areas and any offsetting landscaped areas as defined in Section 203.5.

#### 502.5 Floodplain Submittal

The applicant shall obtain approval from IDNR-OWR and FEMA for all new base flood and floodway determinations for those cases in which their permitting authority applies or as noted in Section 401 of this Ordinance. The Stormwater Management Permit will not be issued until such approval is received. Documentation supporting a finding that the proposed development is in compliance with Sections 400 and 401 shall be submitted with the application. At a minimum, the following material shall be submitted for approval with the application.

- a. Regulatory floodplain boundary determination:
  - 1. Provide source of flood profile information.
  - 2. Provide all hydrologic and hydraulic study information for site-specific floodplain studies, unnumbered Zone A area elevation determinations, and floodplain map revisions.
- b. Floodway hydrologic and hydraulic analyses for the following conditions:
  - 1. Existing conditions (land used and stream systems).
  - 2. Proposed conditions (land used and stream systems).
  - 3. Tabular summary of 100-year flood elevations and discharges for existing and proposed conditions.
  - 4. Calculations used for model development.
  - 5. Hydraulic/hydrologic computer model input/output.
- c. Floodplain fill and compensatory storage calculations for below and above 10-year flood elevation up to the base flood elevation:
  - 1. Tabular summary for below and above 10-year flood elevation of fill, compensatory storage, and compensatory storage ratios provided in proposed plan.

- 2. Cross-sections used for the above calculations.
- d. Flood proofing Measures:
  - 1. Narrative discussion of flood proofing measures including material specifications, calculations, and design details, operation summary.
- e. Flood Easements when required by this Ordinance.

#### Sec. 503 Submittals Prior to Permit Issuance

The following additional submittals as noted in Section 503.1 and 503.2 are required prior to issuance of the Stormwater Permit.

## 503.1 <u>Performance Security</u>

Performance security in accordance with Article 12 shall be required prior to permit issuance.

#### 503.2 Maintenance Schedule and Funding

A completed maintenance schedule for the Stormwater Management Facilities and Special Management Areas, in accordance with Article 6 shall be submitted along with identification of the entity responsible for maintenance and funding and back-up funding sources for maintenance in Accordance with Section 605.

#### Sec. 504 Record Drawings

The developer is required to submit record drawings of all permitted stormwater facilities. The record drawings shall be signed and sealed by a Professional Engineer or Professional Land Surveyor who shall state that the project as constructed is substantially in conformance with the project as permitted. The record drawings shall include calculations verifying that the volumes of detention and compensatory storage required in the permit have been provided.

#### Sec. 505 Issuance or Denial of Permit and Appeal of Permit Denial

The Administrator shall either issue or deny a Stormwater permit within 30 days of receiving a complete Permit application and all required submittals and fees, unless additional time is granted by both the Administrator and the Applicant. When a permit is denied, the applicant may appeal the Administrator's decision to the City Council provided such appeal is made in writing within 15 days of the date of the notification of denial. The City Council shall render a decision to issue the Stormwater permit, issue the permit with conditions, or uphold the Administrator's denial of the permit. The City Council shall render its decision within 30 days of the appeal. Failure to take action shall be deemed action to uphold the permit denial by the Administrator.

## **ARTICLE 6 – LONG TERM MAINTENANCE**

#### Sec. 600 Long-Term Maintenance

Unless maintenance responsibility has been delegated to and accepted by another qualified entity under this section, the owner shall maintain that portion of a stormwater drainage system located upon his land. With the approval of the Administrator the stormwater drainage system, or specified portions thereof, may be:

- a. Dedicated or otherwise transferred to and accepted by the permitting community or other public entity; or
- b. Conveyed or otherwise transferred to and accepted by a homeowner's association, or similar entity, the members of which are to be the owners of all of the lots or parcels comprising the development; or
- c. Conveyed to one or more persons or in one or more undivided interests to one or more persons.

Except for those portions of a stormwater drainage system to be dedicated or otherwise transferred to the permitting authority or other public entity, included in the application for a stormwater permit shall be a plan for the long-term management, operation and maintenance of the stormwater drainage system and a description of the sources of funding therefore. Amendments to the plan must be approved by the Administrator.

#### Sec. 601 Transfer to Permitting Authority or Other Public Entity

If any portion of the stormwater drainage system is to be dedicated or otherwise transferred to the permitting authority or other public entity under Section 600(a), appropriate easements for ingress and egress to and maintenance of such portions shall be reserved for the benefit of such entity on the final plat.

#### Sec. 602 Transfer to Homeowner's or Similar Association

If any portion of the stormwater drainage system is to be conveyed or otherwise transferred to a homeowner's or similar association under Section 600(b) then:

- a. Appropriate easements for ingress and egress to and maintenance of such portions shall be reserved for the benefit of such association and the permitting authority on the final plat;
- b. The association shall be duly incorporated and a copy of the Certificate of Incorporation, duly recorded, and bylaws, and any amendment to either of them, shall be delivered to the Administrator;
- c. The bylaws of the association shall, at a minimum, contain:
  - 1. A provision acknowledging and accepting the association's obligation to maintain certain portions of the stormwater drainage system as required by this ordinance;
  - 2. A mechanism for imposing an assessment upon the owners of all of the lots or parcels comprising the development sufficient, at a minimum, to provide for the maintenance of those portions of the stormwater drainage system as required by this Ordinance and the payment of all taxes levied thereon;
  - 3. A provision adopting the plan of long term maintenance set forth in the application for a Stormwater Management Permit, with approved amendments;

- 4. A provision identifying the officer of the association responsible for carrying out the obligations imposed upon the association under this ordinance, and an obligation to inform the Administrator of the name, address and phone number of this officer and any changes thereto;
- 5. A provision requiring the consent of the permitting authority to any amendment of the bylaws changing any of the provisions of the bylaws required by this ordinance; and
- 6. A provision requiring the consent of the permitting authority to the dissolution of the association
- d. Any conveyance or other instrument of transfer delivered under Section 600(b) shall include a covenant affirmatively imposing upon the association the obligations set forth in this section and the association's affirmative acceptance thereof.

#### Sec. 603 Conveyance to One or More Persons

If any portion of the stormwater drainage system is to be conveyed to one or more persons under Section 600(c), then:

- a. Appropriate easements for ingress and egress to and maintenance of such portions shall be reserved for the benefit of the permitting authority on the final plat;
- b. The final plat shall contain a legend imposing the maintenance obligations of this section upon the grantee and his successors in interest as a covenant running with the land and incorporating by reference the plan of long term maintenance set forth in the application for a Stormwater Management Permit, with approved amendments;
- c. The final plat shall contain a legend reserving the right of the permitting authority to enter upon the land to perform the maintenance required in this section if the owner does not do so and to place a lien against the land for the cost thereof;
- d. Any conveyance delivered under Section 600(c), and any subsequent conveyance, shall include a covenant affirmatively imposing upon the grantee the obligations, restrictions and provisions set forth in this section and the grantee's affirmative acceptance thereof.

## Sec. 604 Incorporation of Maintenance Obligations in Stormwater Management Permit

The provisions of this Article shall be incorporated by reference in the Stormwater Management Permit and the applicant's acceptance of the permit shall be deemed to be the applicant's acceptance and assumption of the obligations imposed under this section. At the option of the Administrator, the Stormwater Management Permit may be recorded.

#### Sec. 605 Funding of Long Term Maintenance of Stormwater Facilities

As a condition of approval of any application for a Stormwater Management Permit, unless the maintenance responsibility for the stormwater drainage system to be constructed or installed in connection therewith has been accepted by a public entity, the Administrator will require assurance of long-term funding in a form found acceptable to the permitting authority. A corporation with a bond rating of "A" or higher from a major investment firm (i.e. Standard and Poor, Moody or equivalent) will be considered to have met the long-term maintenance funding requirement. Absent some other form of agreement, then the Administrator shall require the establishment of a special service area pursuant to 35 ILCS 200/27-5, et seq, either as the primary means of providing for the long term maintenance of the facilities, or as a backup vehicle in the event the entity designated by the applicant as having primary maintenance responsibility

fails to adequately carry out its duties.

If the establishment of a special service area is required, the Administrator shall consider and approve a good faith estimate by the applicant of the tax rate required to produce a tax to be levied upon all taxable property within the area, sufficient for the long term maintenance of the facilities and submit the same to the permitting authority which shall incorporate such rate into its enactment of the ordinances necessary for the establishment of the area.

On or before August 1 of each year thereafter, the Administrator shall submit to the permitting authority a good faith estimate of the amount of tax required to be levied upon all taxable property within the area for the next fiscal year for the continued maintenance of the stormwater drainage system.

## **ARTICLE 7 – ENFORCEMENT AND PENALTIES**

#### Sec. 700 Inspection and Maintenance Authority

Pursuant to the authority granted by 55 ILCS 5/5-1104 and 5-1062, the City may, after 30 days notice to the owner or occupant, enter upon any lands or waters within the City for the purpose of inspecting and/or maintaining stormwater facilities or causing the removal of any obstruction to an affected watercourse. Such requirement of notice shall not infringe upon any rights of the City to take immediate actions to protect the public health and safety.

#### Sec. 701 Required Inspections

Any development constructed pursuant to a Stormwater Management Permit shall be subject to periodic inspections by the Administrator or his designee to ensure conformity with permit provisions and conditions. Such inspections may be conducted without notice at any time during while the permit is effective.

## Sec. 702 Offenses

Any person who violates, disobeys, omits, neglects, refuses to comply with, or resists the enforcement of any provision of this ordinance ("ordinance violation") or any requirement or condition in any permit issued pursuant to this ordinance ("permit violation"), and, in the case of a permit violation, fails to correct such violation, omission or neglect, or cease such disobedience, refusal or resistance after notice and reinspection as provided in Sec. 702.1 below, shall be guilty of an offense under this ordinance.

#### 702.1 <u>Permit Violation – Notice</u>

Whenever the Administrator determines that a permit violation exists, he shall give notice of the violation in the manner prescribed in Section 1006 to the permittee. Such notice shall state the nature of the violation and fix a date not less than 10 days after the date of the notice when the site will be reinspected.

## Sec. 703 Offenses – Penalties: Remedies

- 1. Any person found guilty of an offense under this ordinance shall pay a civil fine in an amount not less than \$50 and not more than \$750. Each calendar day during which such violation continues to exist shall constitute a separate offense. Where monetary penalties are imposed for violations of Section 204 by regional, state or federal agencies, the amount of these other agency fines will be offset against the monetary penalties for violation of this ordinance.
- 2. In addition to any fine imposed under 703.1, the Administrator may revoke any Stormwater Management Permit issued to such person.
- 3. In addition to any fine imposed under Subsection 703.1 or action taken under Subsection 703.2, the Administrator may issue an order requiring the suspension of any further work on the site. Such stop-work order shall be in writing, shall indicate the reason for its issuance, and shall specify the action, if any, required to be taken in order to resume work. One copy of the stop-work order shall be posted on the site in a conspicuous place and one copy shall be delivered in the manner prescribed in Section 1006 to the permittee, if any, or if none, to the person in whose name the site was last assessed for taxes as disclosed by the records of the Supervisor of Assessments.
- 4. In the enforcement of this ordinance, the Administrator may bring any action, legal or equitable, including an action for injunctive relief that may be necessary.

# Sec. 704 (RESERVED)

## **ARTICLE 8 – GENERAL PROVISIONS**

#### Sec. 800 Scope of Regulation

This ordinance applies to all development within the City, including that under the control of any governmental entity, agency, or authority. When the City shall undertake development in the regulatory floodway, or regulatory floodplain where no regulatory floodway has been designated, shall obtain a permit from IDNR-OWR prior to issuance of a stormwater management permit. All units of local government shall obtain stormwater management permits from the City for all development projects within corporate limits of the City.

## Sec. 801 Exemptions

- a. This ordinance does not apply to:
  - 1. Development which has been substantially completed before the effective date of the Ordinance; and
  - 2. Development, which has been determined to be exempt by the City.
- b. Nonconforming structures shall not be replaced or enlarged in any manner unless such replacement or enlargement conforms to the requirements of this ordinance.

#### Sec. 802 (RESERVED)

#### Sec. 803 Interpretation

- a. This ordinance shall be liberally construed to protect the health, welfare, safety, and the environment of the residents of the City and to effectuate the purposes of this ordinance and the enabling legislation.
- b. Nothing in this ordinance shall be deemed to consent to, license, permit to locate, construct, or maintain any structure, site, facility or operation, or to carry on any trade, industry, occupation, or activity.
- c. When provisions of this ordinance differ from any other applicable law, statute, ordinance, rule or regulation, the more stringent provision shall apply.
- d. The provisions of this ordinance are cumulative of all other laws, statutes, ordinances, rules and regulations which relate to the subject matter hereof and, except as otherwise expressly provided herein, nothing in this ordinance shall be construed as a limitation upon the application or enforcement of any such law, statute, ordinance, rule or regulation. To the greatest extent possible, the provisions of this ordinance shall be construed to be consistent with the provisions of such other laws, statutes, ordinances, rules or regulations, and with each other, to the end that all such provisions may be given their fullest application.

## Sec. 804 Warning and disclaimer of liability

- a. The degree of flood protection provided by this ordinance is considered reasonable for regulatory purposes and is based upon engineering experience and scientific methods of study. Increased flooding may result from causes beyond the control of any governmental authority. This ordinance does not, therefore, guarantee that areas outside the floodplain or permitted land uses within the floodplain will be free from flooding and associated damages.
- b. Nothing in this ordinance shall be construed or applied in any manner to create liability on the part of or a cause of action against the County, any municipality or other governmental authority, or any elected official, or any officer, agent, or employee of any of the foregoing, or any certified review specialist for any flood damage resulting from reliance on the provisions of this ordinance.

#### Sec. 805 (RESERVED)

#### Sec. 806 Violations

- a. It shall be unlawful for any person to undertake any development without first securing a stormwater management permit as required by this ordinance.
- b. It shall be unlawful for any person to violate, disobey, omit, neglect and refuse to comply with, or resist enforcement of any provision of this ordinance or any condition of a stormwater management permit.

#### Sec. 807 Severability

- a. The several provisions of this ordinance shall be severable in accordance with the following rules:
  - 1. If any court of competent jurisdiction shall adjudge any provision of this ordinance to be invalid, such judgment shall not affect any other provision of this ordinance.
  - 2. In any court of competent jurisdiction shall adjudge to be invalid the application of any provision of this ordinance, to a particular parcel of land, a particular structure, or a particular development, such judgment shall not affect the application of said provision to any other land, structure or development.

#### Sec. 808 Repealer

This ordinance repeals the original ordinance or resolution, which was adopted to meet the National Flood Insurance Program regulations, but is not intended to replace any ordinance or resolution passed in order to establish initial eligibility for the National Flood Insurance Program.

#### Sec. 809 <u>Amendments (RESERVED)</u>

#### Sec. 810 Effective Date

This Ordinance shall take effect for all purposes, and its effective date shall be April 22, 2014.

#### **ARTICLE 9 – VARIANCES**

#### Sec. 900 Purpose

In order to provide a narrowly circumscribed means by which relief may be granted when strict compliance with the requirements of this ordinance is impossible or impracticable, variances from the specific provisions of this ordinance may be granted according to the standards set forth in this Article.

## Sec. 901 Application for Variance

It is the responsibility of the owner or developer and/or their engineer to review this ordinance and identify any and all variance. An application for a variance, prepared by the owner or developer's licensed Professional Engineer and signed by the owner or developer of the development to which it relates, shall be filed with the Administrator. No application for a variance will be accepted for filing unless it relates to a previously or contemporaneously filed application for a stormwater management permit. Applications for a variance shall be filed in such number of duplicate copies as the Administrator may designate by administrative order. No action will be taken on an application for a variance unless it and the corresponding application for a stormwater management permit to which it relates are complete as determined by the Administrator. Applications for a variance need not be made upon any specific form, but shall contain the information set forth in section 901.1.

#### 901.1 – Application for Variance

#### An application for variance shall set forth:

- 1. The common addresses and legal descriptions of all lands comprising the development;
- 2. The names and addresses of all owners of record of the legal title of all lands comprising the development;
- 3. If title to any of the land comprising the development is held in trust, the names and addresses of all beneficiaries of the trust;
- 4. The names and addresses of the developers of the land, if different from the owner;
- 5. The names and addresses of all consultants retained by the developer in connection with the application for a variance;
- 6. The names and addresses of all property owners within 250 feet of the development;
- 7. The specific feature or features of the development that require a variance;
- 8. The specific provision of this ordinance from which a variance is sought and the precise extent of the variance there from;
- 9. A statement of the characteristics of the development that prevent compliance with the provisions of this ordinance;
- 10. A statement that the variance requested is the minimum variance necessary to permit the development;
- 11. A statement as to how the variance requested satisfies the standards set forth in Section 904 of this ordinance;

#### Sec. 902 Application Fee

With the filing of the application for a variance, the applicant shall pay the fee prescribed by the City.

#### Sec. 903 Public Hearing

When the application is complete, the Administrator will so notify the applicant and will schedule a public hearing on the application before the City Council. Not more than 30 nor less than 15 days before the hearing, notice of the hearing shall be sent by first class mail, postage prepaid, to the applicant and to all property owners within 250 feet of the development as disclosed in the application. Within the same time period, notice of the hearing shall be published at least once in a newspaper published within the City. The notices given under the section shall set forth the common name, address and legal description of the development and a brief description of the variance is requested.

#### Sec. 904 Granting of Variances

The City Council shall not grant a variance for a project from the provisions of this ordinance unless the variance is consistent with the purpose of this Ordinance (Section 102) and meets the following standards based upon substantial evidence submitted at the hearing:

- a. The variance will not increase measurably the probability of flood damage to insurable structures.
- b. The variance requested is the minimum required considering each of the following statements of underlying intent of this ordinance and there are no means other than the requested variance by which the alleged hardships can be avoided or remedied to a degree sufficient to permit the reasonable continuation of the development:
  - 1. Detention of stormwater shall also contribute to the improvement of the quality of stormwater runoff.
  - 2. The volume of detention storage provided in open air vegetated facilities is maximized consistent with other land use site constraints including zoning requirements essential for the proposed development.
  - 3. Conveyance of stormwater from the project shall not increase peak discharges from existing offsite conveyance facilities beyond design capacity for any storm event from the 2-year to the 100-year flood frequency.
  - 4. High quality natural areas shall be preserved on the site, including without limiting the generality of the foregoing, stands of native trees, existing wetlands, natural floodplain storage or other valuable environmental and biological resources.
- c. The variance is not requested solely for the purpose of increasing the density of the development nor impervious areas on the site.
- d. The variance is not requested solely as a result of economic hardship.
- e. If applicable, the variance is required due to unique, natural topographical features of the site.
- f. The applicant's circumstances are not self-imposed.
## Sec. 905 Recommendations

The Administrator or his designee shall review the application for a variance and present his written recommendations to the City Council at the public hearing. The written recommendations shall be accompanied by written findings of fact with respect to each of the considerations set forth in Section 904 with citations to the evidence taken at the public hearing.

## Sec. 906 Decision

The City Council shall grant the variation, grant the variation with modifications or conditions, or deny the variation in writing within 45 days of the Public Hearing but in the event the City Council does not act as a foresaid then the application is denied.

# Sec. 907 Conditions

A variance less than or different from that requested may be granted when the record supports the applicant's right to some relief, but not to the relief requested.

In granting a variance, the City Council may impose such specific conditions and limitations concerning any matter relating to the purposes and objectives of this ordinance on the applicant as may be necessary or appropriate.

Whenever any variance is granted subject to any condition or limitation to be met by the applicant, upon meeting such conditions, the applicant shall file evidence to that effect with the Administrator.

# **ARTICLE 10 – ADMINISTRATION**

### Sec. 1000 Responsibility for Administration

- a. The City Council shall determine policy related to this ordinance.
- b. The Administrator shall administer this ordinance. In performing his duties, the Administrator may delegate and oversee enforcement of responsibilities to any named designee.
- c. The City of Watseka shall remain solely responsible for its standing in the National Flood Insurance Program, including:
  - 1. The maintenance of all records and the submission of all reports required for eligibility in the program, including elevation certificates, flood proofing certificates, and lowest floor elevations; and
  - 2. The notification of FEMA and IDNR-OWR of any proposed amendment to this ordinance.

#### Sec. 1001 (RESERVED)

## Sec. 1002 Duties of Administrator

The Administrator shall:

- a. Receive a listing of all required federal, state, regional and County permit applications filed for the project prior to issuing a permit under this ordinance for areas covered by other stormwater related jurisdictions. The Administrator may request copies of the stormwater related permit applications;
- b. Ascertain whether any floodplains/floodways exist on any site that is the subject of an application for a permit under this ordinance and whether or not any new development is within the SFHA;
- c. Review permit applications and determine whether to issue or deny permits;
- d. Ensure that the required notice of an application for a variance has been given in accordance with Section 1006 and 1007;
- e. Notify an applicant for a variance that such variance may result in increased rates for flood insurance;
- f. Provide for inspections of developments as required by this ordinance;
- g. Investigate complaints of violations of this ordinance within the City;
- h. Notify violators within regulatory floodplains that failure to comply with the provisions of the National Flood Insurance Program could make them ineligible to receive flood insurance;
- i. Initiate any proceeding necessary to enforce this ordinance within the City;
- j. Advise, consult and cooperate with other governmental agencies to promote the purposes of this ordinance;
- k. Maintain copies of all applications and submittals, federal and state permits,

variances, CLOMR, LOMR, CLOMA, LOMA and all documentation associated with any of the foregoing for public inspection;

1. Maintain documentation and data on the cost of any improvement to a structure in the floodplain in order to enforce the provisions of this ordinance pertaining to substantial improvements to such structures;

### Sec. 1003 Representative Capacity

In all cases when any action is taken by the Administrator, or his duly appointed designee, to enforce the provisions of this ordinance, such action shall be taken in the name of the City of Watseka and the Administrator, nor his designee, in so acting shall be rendered personally liable.

### Sec. 1004 (RESERVED)

## Sec. 1005 (RESERVED)

#### Sec. 1006 Service

Unless otherwise provided herein, service of any notice or instrument under this ordinance may be made upon any person in one of the following manners:

- a. By Certified Mail/Return Receipt Requested, Postage prepaid & addressed to the address then on file for such person, if any, or if none, to such person's last known address; or
- b. By any method prescribed under the Illinois Code of Civil Procedure.

## Sec. 1007 Publication

Unless otherwise provided herein, publication of any notice or other instrument under this ordinance shall be made by publishing such notice or other instrument once in a newspaper published within the City (or, if no newspapers published within the Community then a newspaper published in the County and having a general circulation within the City), such publication being not less than fifteen or more than thirty days before the hearing or other event to which the publication relates.

# **ARTICLE 11 – RESERVED**

Sec. 1100 -1109 Authority (RESERVED)

# **ARTICLE 12 – PERFORMANCE SECURITY**

### Sec. 1200 General Security Requirements

Should the City of Watseka Subdivision and Development Regulations Ordinance not be applicable to the said development/improvement, then it shall be required as security to the City for the performance by the developer of the developer's obligations to complete the construction of any stormwater facilities required by the Stormwater Management Permit, to pay all costs, fees and charges due from the developer pursuant to the permitting authorities of this Ordinance and to otherwise faithfully perform the developer's undertakings pursuant to this Ordinance, the developer shall, prior to issuance of a Stormwater Management Permit:

- a. Post a development security as provided in Section 1201 of this Ordinance; and
- b. Post a sediment and erosion control security as provided in Section 1202 of this Ordinance, if a sediment and erosion control plan is required pursuant to Section 502 of this Ordinance.

The developer shall bear the full cost and responsibility of securing and maintaining the securities required by this Section.

## Sec. 1201 Development Security

A development security shall be posted and shall include:

- a. A schedule, agreed upon by the developer and the Administrator, for the completion of the construction of any stormwater facilities required by the permit; and
- b. An irrevocable letter of credit, or such other adequate security as the Administrator may approve, in an amount equal to not less than one hundred Twenty-five percent (125%) of the estimated probable cost to complete the construction of any stormwater facilities required by the Stormwater Management Permit, which estimated probable cost shall be prepared by a Registered Professional Engineer and shall be approved by the Administrator; and
- c. A statement signed by the applicant granting the Administrator the right to draw on the security and the right to enter the development site to complete required work in the event that work is not completed according to the work schedule; and
- d. A statement signed by the applicant that the applicant shall indemnify the City for any additional costs incurred attributable to the concurrent activities of or conflicts between the applicant's contractor and the City's remedial contractor at the site.

The security required by this Section shall be maintained and renewed by the applicant, and shall be held in escrow by the Administrator until the conditions set forth in this Section or other applicable provisions are satisfied.

The Administrator may approve periodic reductions in the letter of credit based on progress of construction. However, not more than 90% of the security provided for in this section may be released prior to approval of record drawings and final inspection. A minimum of ten percent (10%) of the security shall be retained for a period of time not

less than one year after completion of construction of all stormwater facilities required by the permit.

### Sec. 1202 Sediment and Erosion Control Security

If a sediment and erosion control plan is required pursuant to Section 502 of this Ordinance, then a sediment and erosion control security shall be required. Such a security shall include:

- a. An irrevocable letter of credit, or such other adequate security as the Administrator shall approve, in an amount equal to not less than one hundred twenty-five percent (125%) of the estimated probable cost to install and maintain the sediment and erosion control measures, which estimated probable cost shall be approved by the Administrator; and
- b. A statement signed by the applicant granting the Administrator, as applicable, the right to draw on the security and the right to enter the development site to complete sediment and erosion control measures in the event that such measures are not installed and/or maintained according to the established schedule.

The security required by this Section shall be maintained and renewed by the applicant, and shall be held in escrow by the Administrator, as applicable, until the conditions set forth in this Section are satisfied.

After completion of construction, establishment of vegetation, removal of all sediment from stormwater facilities, and final inspection and approval by the Administrator, as applicable, one hundred percent (100%) of the sediment and erosion control security shall be released.

## Sec. 1203 Letters of Credit

Letters of credit posted pursuant to Sections 1200, 1201 and 1202 of this Ordinance shall be in a form satisfactory to the Administrator.

Each letter of credit shall be from a lending institution: (a) acceptable to the Administrator, as applicable; (b) having capital resources of at least ten million dollars (\$10,000,000), or such other amount acceptable to the Administrator; and (c) insured by the Federal Deposit Insurance Corporation.

Each letter of credit shall, at a minimum, provide that:

- a. It shall not be canceled without the prior written consent of the Administrator; and shall not expire without written notification of the Administrator at least 45 days prior to expiration, and
- b. It shall not require the consent of the developer prior to any draw on it by the Administrator; and
- c. If at any time it will expire within 45 or any lesser number of days, and if it has not been renewed and the renewal submitted to the Administrator, and if any applicable obligation of the developer for which its security remains uncompleted or is unsatisfactory, then the Administrator may, without notice and without being required to take any further action of any nature whatsoever, call and draw down the letter of credit and thereafter either hold all proceeds as security for the satisfactory completion of all such obligations or employ the proceeds to complete all such obligations and reimburse the City for any and all

costs and expenses, including legal fees and administrative costs, incurred by the City, as the Administrator shall determine.

If at any time the Administrator determines that the funds remaining in the letter of credit are not, or may not be, sufficient to pay in full the remaining unpaid cost of all stormwater facility construction or sediment and erosion control measures, then, within ten (10) days following a demand by the Administrator, the developer shall increase the amount of the letter of credit to an amount determined by the Administrator to be sufficient to pay such unpaid costs. Failure to so increase the amount of the security shall be grounds for the Administrator to draw down the entire remaining balance of the letter of credit.

If at any time the Administrator determines that the bank issuing the letter of credit is without capital resources of at least ten million dollars (\$10,000,000), is unable to meet any federal or state requirement for reserves, is insolvent, is in danger of becoming any of the foregoing, or is otherwise in danger of being unable to honor such letter of credit at any time during its term, or if the Administrator otherwise reasonably deems the bank to be insecure, then the Administrator shall have the right to demand that the developer provide a replacement letter of credit from a bank satisfactory to the Administrator. Such replacement letter of credit shall be deposited with the Administrator not later than ten (10) days following such demand. Upon such deposit, the Administrator shall surrender the original letter of credit to the developer.

If the developer fails or refuses to meet fully any of its obligations under this Ordinance, then the Administrator may, in his or her discretion, draw on and retain all or any of the funds remaining in the letter of credit. The Administrator thereafter shall have the right to take any action he or she deems reasonable and appropriate to mitigate the effects of such failure or refusal, and to reimburse the Community from the proceeds of the letter of credit for all of its costs and expenses, including legal fees and administrative expenses, resulting from or incurred as a result of the developer's failure or refusal to fully meet its obligations under this Ordinance. If the funds remaining in the letter of credit are insufficient to repay fully the Community for all such costs and expenses, and to maintain a cash reserve equal to the required letter of credit during the entire time such letter of credit should have been maintained by the developer, then the developer shall, upon demand of the Administrator therefore, immediately deposit with the Administrator such additional funds as the Administrator determines are necessary to fully repay such costs and expenses and to establish such cash reserve.

# **ARTICLE 13 – FEE-IN-LIEU OF ON-SITE DETENTION**

### Sec. 1300 Fee-in-Lieu of On-Site Detention

- a. All single-family residential developments under 5 acres in size and all other development under 1 acre in size may pay a fee of \$100,000.00 for each acre-foot of detention which would be required under this ordinance rather than installing detention facilities on the property, unless specifically directed to do otherwise by the Administrator or his designee. The City of Watseka also shall have the option for larger properties of requiring a fee of \$100,000 for each acre-foot of detention needed in lieu of the applicant building a basin on-site provided the property will discharge stormwater to the City's storm sewer system and the applicant can demonstrate that the redevelopment will not increase the risk to downstream properties of flooding. Fee in-lieu of solely due to financial constraints is not allowed. In addition, a redevelopment project requesting fee-in-lieu of detention must demonstrate a net benefit in water quality will be realized. The \$100,000 fee may be adjusted yearly by the Construction Cost Index (CCI).
- b. The applicant may provide the City of Watseka with a detailed, verifiable cost estimate for actually providing the required storage. If the Administrator or his designee concurs with the cost estimate, the fee set for fee in-lieu of detention will be determined by the lessor of the \$100,000 per acre foot or part thereof or the verifiable cost of providing the required storage.
- c. To encourage redevelopment of properties that have been within the City limits for a minimum of 15 years, the City Council may allow a discount of up to 90% for projects if there is no increase in impervious area between the existing development and the proposed redevelopment.
- d. In instances where regional benefits and economics of scale can be achieved, it is encouraged for adjacent property owners to utilize a common regional detention basin. Special fee districts may be established for areas where a regional stormwater management plan has been approved by the City Council. Fee-in-lieu of detention for the detention volume required for the 2 year 24-hour storm shall require a variance for sites with aggregate development or re-development greater than 20 acres subsequent to the effective date of this ordinance unless tributary to a regional stormwater management system approved by the City Council.

# 1300.1 Procedures

The following fee-in-lieu of detention procedures:

- a. The Administrator may require, or the applicant may submit, a written request for the payment of a fee-in-lieu of on-site detention to fulfill all of part of the onsite detention requirement in accordance with Section 200.2 a request for fee-inlieu of on-site detention shall be either rejected or approved within forty five (45) days of the written request unless additional engineering studies are required.
- b. Approval of a request for fee-in-lieu of on-site detention on a development site shall be determined by the Administrator.
- c. A fund will be maintained by the City for each of the major watersheds for the purpose of identifying and controlling all revenues and expenses related to stormwater drainage services resulting from fee-in-lieu of on-site detention approvals. All monies collected for fee-in-lieu of on-site detention shall be

deposited in these funds and may only be used for purposes related to stormwater management as noted in Section 1300.2(d).

d. Fee-in-lieu of on-site detention revenues from development site may be used to plan, design or construct an upgrade to existing or future stormwater management systems if the upgrade is consistent with a basin plan, floodplain study or stormwater system improvement that has been approved by the City Council.

	Frequency											
Duration	2-year		5-year		10-year		25-year		50-year		100-year	
	(in)	(in/hr)	(in)	(in/hr)	(in)	(in/hr)	(in)	(in/hr)	(in)	(in/hr)	(in)	(in/hr)
5 min	0.34	4.08	0.42	5.04	0.50	6.00	0.61	7.32	0.73	8.76	0.86	10.32
10 min	0.62	3.72	0.77	4.62	0.92	5.52	1.12	6.72	1.35	8.10	1.57	9.42
15 min	0.77	3.08	0.95	3.80	1.13	4.52	1.37	5.48	1.65	6.60	1.93	7.72
30 min	1.05	2.10	1.30	2.60	1.54	3.08	1.88	3.76	2.26	4.52	2.64	5.28
1 hour	1.33	1.33	1.65	1.65	1.96	1.96	2.38	2.38	2.88	2.88	3.35	3.35
2 hour	1.68	0.84	2.08	1.04	2.49	1.25	2.99	1.50	3.61	1.81	4.21	2.11
3 hour	1.82	0.61	2.25	0.75	2.71	0.90	3.24	1.08	3.92	1.31	4.56	1.52
6 hour	2.13	0.36	2.64	0.44	3.19	0.53	3.80	0.63	4.59	0.77	5.35	0.89
12 hour	2.47	0.21	3.06	0.26	3.67	0.31	4.41	0.37	5.32	0.44	6.20	0.52
18 hour	2.61	0.15	3.24	0.18	3.90	0.22	4.66	0.26	5.63	0.31	6.56	0.36
24 hour	2.84	0.12	3.52	0.15	4.22	0.18	5.07	0.21	6.12	0.26	7.13	0.30
48 hour	3.21	0.07	3.91	0.08	4.55	0.09	5.70	0.12	6.83	0.14	7.90	0.16
72 hour	3.51	0.05	4.25	0.06	4.95	0.07	6.20	0.09	7.40	0.10	8.80	0.12
120 hour	3.93	0.03	4.67	0.04	5.38	0.04	6.70	0.06	8.00	0.07	9.56	0.08
240 hour	4.94	0.02	5.94	0.02	6.64	0.03	7.72	0.03	8.75	0.04	10.61	0.04

Table 1. Watseka Rainfall Depths and Intensities(Based on Bulletin 70 - Roberts, Illinois Station)

