#2017-35
Habitat for Humanity – Preliminary and Final Plat
Project Review for Planning and Zoning Commission

Meeting Date:	January 17, 2018
Request:	Preliminary and Final Plat of Subdivision for a 9-lot subdivision.
Location:	431 McHenry Avenue
Acreage:	Approximately 3 acres
Existing Zoning:	R-2 Single Family Residential
Surrounding Properties:	North: R-2 Single-Family Residential South: R-2 Single-Family Residential East: R-2 Single-Family Residential West: R-2 Single-Family Residential
Staff Contact:	Elizabeth Maxwell (815.356.3615)

Background:

- The property currently has 1 single family residence with several garage/storage buildings on the site. A double driveway exists off McHenry Avenue.
- The character of the area is smaller residences with detached garages. The petitioner plans to emulate this character with the housing selected for this site.
- Habitat homes are built primarily with volunteer labor which is supervised by professional builders while the electrical, plumbing, and HVAC are done by licensed trades people. The volunteer days for these projects will primarily be Wednesdays, Fridays and Saturdays. The entire community will be invited to participate in this project to welcome your new neighbors.
- Habitat is not a giveaway program the houses are not free. They are sold to partner families at fair market value, financed with zero-interest loans. In addition to a modest down payment and their monthly mortgage payments, the future homeowners invest 250 of hours of their own labor, "sweat equity," into building their houses

Development Analysis:

Land Use/Zoning

- The site is currently zoned R-2 Single Family Residential. This is the appropriate zoning district to allow the proposed subdivision.

- The land use map shows the area as Urban Residential. Urban Residential allows for a variety of medium density residential development.

Subdivision

- The Final Plat of Subdivision would divide the lot into 9 new single family lots. Each lot would meet the minimum lot width and they greatly exceed the minimum lot area.
- Since the property is within the Crystal Lake Watershed, the impervious surface is being limited far below the allowable 50% per lot to ensure each lot retains and infiltrates 95% of its water.
- A "Watershed Easement" has been illustrated on the plat. This easement will contain the rain gardens for the water quality and infiltration requirements. The City's consultant will maintain the rain gardens and fence in this easement.
- Tree removal and replacement will be handled during the permit process either through mass grading or individual lot improvements. These lots would not be exempt from the tree removal and replacement requirements.

Findings of fact:

FINAL PLAT OF SUBDIVISION

The petitioner is requesting Final Plat approval for 9 lots. Each lot meets the standards set in the R-2 single-family zoning district. Final Plats are required to meet the following requirements:

A. Promote the health, safety, morals, convenience, order, prosperity and welfare of the present and future inhabitants of the City by providing for the orderly growth and development of the City;
☐ *Meets* ☐ *Does not meet*

B. Coordinating streets and roads within proposed subdivisions with the City's planned street system, and with other public facilities;
☐ *Meets* ☐ *Does not meet*

C. Providing right-of-way easements for streets and utilities;
☐ *Meets* ☐ *Does not meet*

D. Avoiding congestion and overcrowding, and encouraging the proper arrangement of streets in relation to existing or planned streets;
☐ *Meets* ☐ *Does not meet*

E. Ensuring there is adequate open space and recreation facilities to serve development;
☐ *Meets* ☐ *Does not meet*

F. Ensuring there is proper recordation of landownership records;
☐ *Meets* ☐ *Does not meet*

G. Installation of any public improvements including water, sewer, storm sewer or detention, parkway trees, and sidewalks;
☐ *Meets* ☐ *Does not meet*

H. Burial of overhead utility lines and all new lines and services in appropriate easements; and
☐ *Meets* ☐ *Does not meet*

I. Ensuring the provision of such other matters as the City Council may deem necessary in order to protect the general health, safety, and welfare of the City
☐ *Meets* ☐ *Does not meet*

Comprehensive Land Use Plan 2020 Vision Summary Review:

The Comprehensive Plan designates the subject property as Urban Residential, which allows for existing and future medium density residential uses. The following goal is applicable to this request:

Land Use - Commerce

Goal: Encourage a diversity of high quality housing in appropriate locations throughout the city that supports a variety of lifestyles and invigorates community character.

Supporting Action: Provide for a reasonable rate of residential growth especially infill growth and mixed-use development which take advantage of existing city services.

Recommended Conditions:

If a motion to recommend approval of the petitioner's request is made, the following conditions are recommended:

1. Approved plans, reflecting staff and advisory board recommendations, as approved by the City Council:
   A. Application (Habitat for Humanity, received 10/16/17)
   B. Final Plat of Subdivision (Vanderstappen dated 12/18/17, received 12/18/17)
   C. Engineering Plans (J. Condon & Assoc., dated 12/18/17, received 12/18/17)

2. Final Plat of Subdivision:
   a. Work with staff to finalize the watershed easement.
   b. If CC&Rs or deed restrictions are established for the lots, provide a copy for review by staff.
   c. Any new ComEd utility service must be buried, no new service poles are permitted on these lots.
   d. Amend the "Plan and Zoning Commission" certificate heading to read "Planning and Zoning."

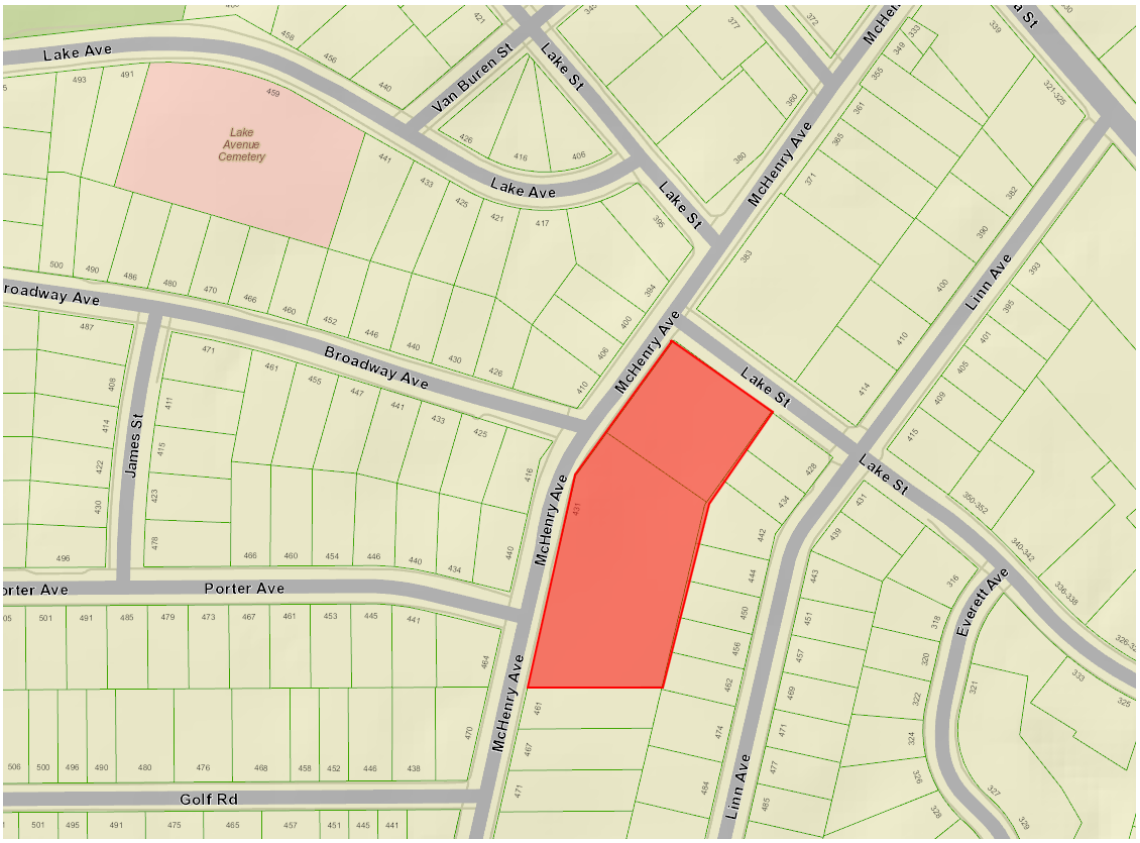
3. An SSA shall be established by the property owner prior to the sale of the individual lots, which will allow for the perpetual maintenance of the watershed easement.

4. The single-family lots will not be exempt from the tree preservation ordinance and the total tree removal inches are required to be replaced. Any trees removed during mass grading shall be documented and any trees removed during specific lot improvements shall be documented.

5. Provide a Letter of Credit for all public improvements including the parkway trees, public utilities and the sidewalk installation.

6. The petitioner shall address all of the review comments and requirements of the Community Development, Fire Rescue, Police, and Public Works Departments.

2017-35 Fox Valley Farms – 431 McHenry Ave.





What is a Minor Subdivision?

A minor subdivision is an expedited procedure that is specifically intended for projects which do not require any public improvements such as the construction of new roads (installation of sidewalks and street trees and burial of aerial utilities are not considered public improvements).

This application is intended for the processing of "minor subdivisions". To determine if you have this type of subdivision, follow the decision matrix below…

	QUESTION	CIRCLE ANSWER	
1.	Is the proposed development a subdivision of land into 10-lots or less?	YES	NO
2.	Is the development comprised of only one phase?	YES	NO
3.	The subdivision will not require any public improvements such as installation of a roadway (not including installation of sidewalks and street trees and burial of aerial utilities)	YES	NO

If you answered **YES** to all three questions above, continue to use this application. If you answered **NO** to any of the questions, your application cannot be processed as a minor subdivision. Please obtain the application for a major subdivision or contact the Planning and Economic Development Department at 815.356.3615 for further information.

Received 10-16-17
2017-0035

Application for Minor Subdivision Approval

Application Number: _____ FOR OFFICE USE ONLY

Development Name: _____

Date of Submission: _____

Date of Resubmission: _____

I. Applicant

Habitat for Humanity of Northern Fox Valley
Name — Corporation

56 South Grove Street
Street

Elgin	IL	60120
City	State	Zip Code
Jerry Pietryla	Same	847-836-1432 ext. 107
Contact Person	Relationship to Owner	Telephone Number
	jerry.pietryla@habitatnfv.org	
Fax Number	E-mail address	

II. Owner of Property

Habitat for Humanity of Northern Fox Valley
Name

56 South Grove Street, Elgin IL 60120	847-836-1432
Address	Telephone Number

III. Development Team (if applicable)

Attorney	Telephone Number	Fax Number
Address		E-mail address
Andrea Korte, Korte Architecture	815-444-9150 ext. 14	andreak@kortearchitecture.com
Architect	Telephone Number	Fax Number
Same as Owner		
Developer	Telephone Number	Fax Number
Meghan Michel, J. Condon & Associates, Inc.	815-728-0068	mmichel@jcondoninc.com
Engineer	Telephone Number	Fax Number
Bill Vanderstappen, Vanderstappen Surveying	815-337-8310	billv@vandersinc.com
Surveyor	Telephone Number	Fax Number

IV. Project Data

1. a. Location/Address: 431 S. McHenry Avenue

   a. PIN #: 19-06-481-001 and -002

2. General description of site conditions (including existing site improvement, i.e., buildings, parking, landscaping, etc.): The existing site is comprised of a farmstand and surrounding open space. The residence, garage, 2 out buildings and paved areas will be removed.

3. Existing Zoning: R-2

4. Existing Land Use: Farmstand/Vacant

   a. Is there an existing home on the property? ☑ YES, Go to 4b. ☐ NO

   b. Do you plan to demolish the home prior to plat approval? ☑ YES ☐ NO

5. Site acreage: 128,111 sf, 2.94 ac

6. Are you requesting a waiver from the requirement to:

   a. Install sidewalk ☐ YES ☑ NO

   b. Burial of Aerial Utilities ☑ YES ☐ NO

7. List any controlling Ordinances and agreements for this property (annexation ordinances, variations, special use, administrative/preliminary/final plats, PUD, etc.):

8. Reason for request/Description of proposal (including proposed land use, building addition, type of use, hours of operation, number of parking spaces, as applicable): The proposed development includes 9 single family residential lots.

V. Signatures

Jerome Pietrylla 10/9/2017

PETITIONER: Print and Sign name (if different from owner) Date

As owner of the property in question, I hereby authorize the seeking of the above requested action.

W G Klaves William G Klaves 10/9/2017

OWNER: Print and Sign name Date

NOTE: If the property is held in trust, the trust officer must sign this petition as owner. In addition, the trust officer must provide a letter that names all beneficiaries of the trust (see page 9).

DISCLOSURE OF BENEFICIARIES

1. Applicant: Habitat for Humanity of Northern Fox Valley
   Address: 56 S. Grove
   Elgin, Illinois 60120

2. Nature of Benefit sought: Minor Subdivision

3. Nature of Applicant (Please check one):

a. Natural Person	☐	d. Trust/Trustee	☐
b. Corporation	☑	e. Partnership	☐
c. Land Trust/ Trustee	☐	f. Joint Venture	☐

4. If applicant is an entity other than described in Section3, briefly state the nature and characteristics of applicant:

5. If in your answer to Section 3 you checked box b, c, d, e or f, identify by name and address each person or entity which is a 5% shareholder in the case of a corporation, a beneficiary in the case of a trust or land trust, a joint venture in the case of case of a joint venture, or who otherwise has a proprietary interest, interest in profits and losses or right to control such entity:

   a. NON-PROFIT
   b.
   c.
   d.
   e.

6. Name, address and capacity of person making this disclosure on behalf of the applicant:

IMPORTANT NOTE: In the event your answer to Section 5 identifies entities other than a natural person, additional disclosures are required for each entity.

VERIFICATION

I, Jerome Pietrzla, being first duly sworn under oath, depose and state that I am the person making this disclosure on behalf of the applicant, that I am duly authorized to make this disclosure, that I have read the above and foregoing Disclosure of Beneficiaries, and that the statements contained therein are true in both substance and fact.

Signature: Jerome Pietrzla

Subscribed and Sworn to before me this 12 day of October, 2017

K Wilbourn
Notary Public

OFFICIAL SEAL
K WILBOURN
Notary Public - State of Illinois
My Commission Expires Dec 15, 2018

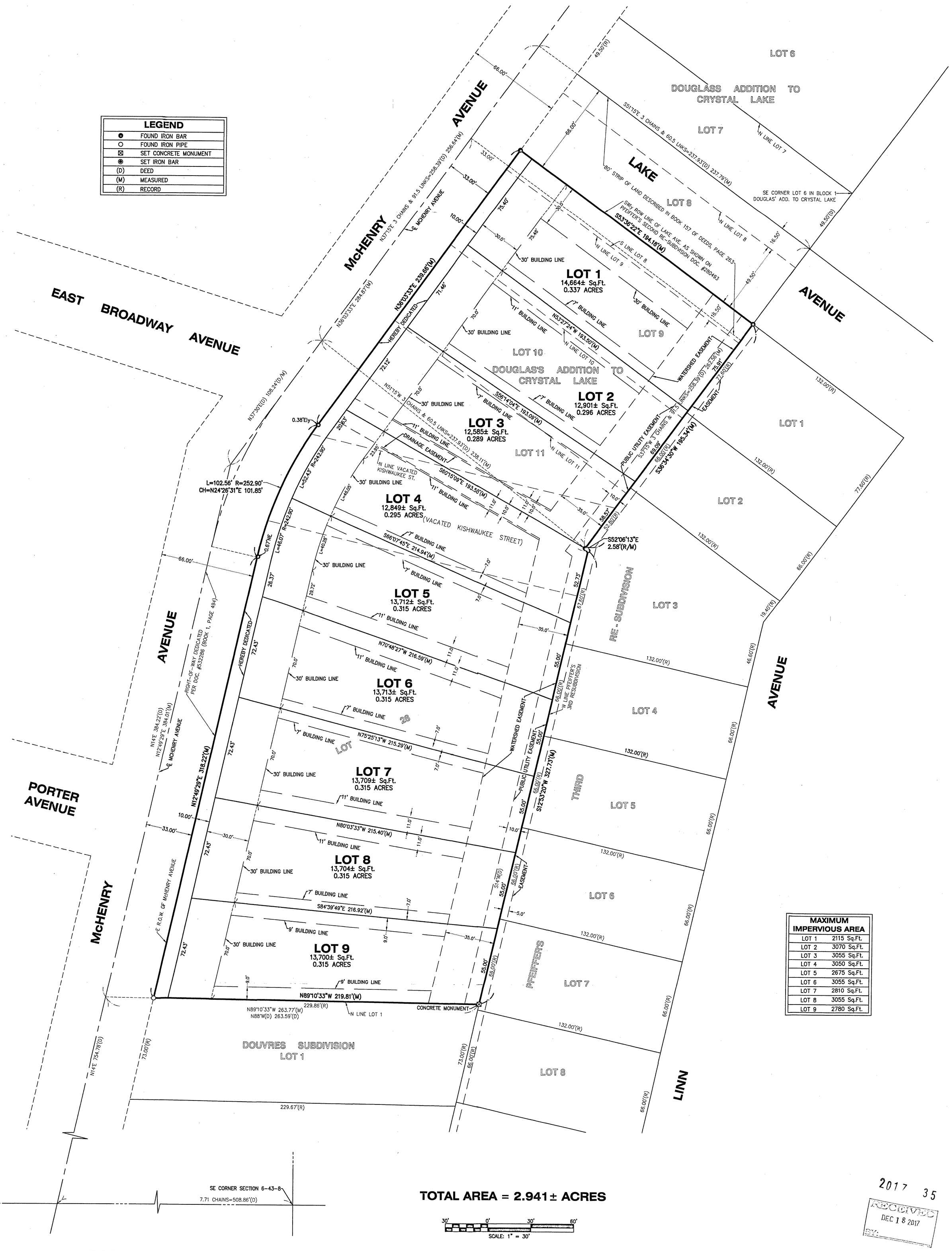
Vanderstappen
Land Surveying, Inc.
www.vandersinc.com
1316 N. Madison St.
Woodstock, Illinois 60098
ph. 815-337-8310 fax 815-337-8314
"Always faithful to the property line"

FINAL PLAT OF FOX VALLEY FARMS SUBDIVISION

Part of Lot 28 in A Plat of the Farms at Crystal Lake, being a subdivision of part of Sections 5, 6, 7 & 8 in Township 43 North, Range 8 East of the Third Principal Meridian and part of Lots 8, 9, 10, 11 and Vacated Kishwaukee Street in Benjamin Douglas's Addition to Crystal Lake, being a subdivision of part of the Southeast Quarter of said Section 6, in McHenry County, Illinois.

City of Crystal Lake
Algonquin Township

LEGEND	
⊙	FOUND IRON BAR
○	FOUND IRON PIPE
⊠	SET CONCRETE MONUMENT
◉	SET IRON BAR
(D)	DEED
(M)	MEASURED
(R)	RECORD



MAXIMUM IMPERVIOUS AREA	
LOT 1	2115 Sq.Ft.
LOT 2	3070 Sq.Ft.
LOT 3	3055 Sq.Ft.
LOT 4	3050 Sq.Ft.
LOT 5	2675 Sq.Ft.
LOT 6	3055 Sq.Ft.
LOT 7	2810 Sq.Ft.
LOT 8	3055 Sq.Ft.
LOT 9	2780 Sq.Ft.

TOTAL AREA = 2.941± ACRES

30' 0' 30' 60'
SCALE: 1" = 30'

2017 35
RECEIVED
DEC 18 2017
BY:

CLIENT: HABITAT FOR HUMANITY OF NORTHERN FOX VALLEY
DRAWN BY: DAM CHECKED BY: WJV
SCALE: 1"=30' SEC. 06 T. 43 R. 08 E.
BASIS OF BEARING: ASSUMED
P.I.N.: 19-06-481-001; -002
JOB NO.: 170404-A I.D. FPS
FIELDWORK COMP.: _____ BK. ____ PG. ____
ALL DISTANCES SHOWN IN FEET AND DECIMAL PARTS THEREOF CORRECTED TO 68° F. REF: 150120

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	12/14/17	REVISED LOT LINES PER CLIENT	DAM
2	12/18/17	REVISED PER CLIENT	DAM

FOX VALLEY FARMS SHEET NO. 1 OF 2

Y:\PLATS\2017\0400-0599\170404_V-170404\170404-A-FPS.dwg-Layout1-12/18/2017 1:57 PM

Vanderstappen
Land Surveying, Inc.
www.vandersinc.com
1316 N. Madison St.
Woodstock, Illinois 60098
ph. 815-337-8310 fax 815-337-8314
"Always faithful to the property line"

FINAL PLAT OF FOX VALLEY FARMS SUBDIVISION

Part of Lot 28 in A Plat of the Farms at Crystal Lake, being a subdivision of part of Sections 5, 6, 7 & 8 in Township 43 North, Range 8 East of the Third Principal Meridian and part of Lots 8, 9, 10, 11 and Vacated Kishwaukee Street in Benjamin Douglas's Addition to Crystal Lake, being a subdivision of part of the Southeast Quarter of said Section 6, in McHenry County, Illinois.

City of Crystal Lake

Algonquin Township

OWNER'S CERTIFICATE

STATE OF ILLINOIS)
) S.S.
COUNTY OF McHENRY)

This is to certify that the undersigned, _____ is/are the legal owners of a portion of land described on the plat hereon drawn and shown hereof as subdivided; that they have caused said land to be surveyed, subdivided, staked and platted as shown hereon, for the purpose of having this play recorded provided be law, and as the Owners, do hereby state that to the best of our knowledge, all of the lots in this Subdivision lie within:
Crystal Lake Community Consolidated School District _____
Crystal Lake High School District _____

Seal (s) this _____ day of _____, 2018.

_____ (Seal)

_____ (Seal)

NOTARY CERTIFICATE

STATE OF ILLINOIS)
) S.S.
COUNTY OF McHENRY)

I, the undersigned, a Notary Public in and for the county and state aforesaid, do hereby certify that, _____ of _____ is personally known to me to be the same person or persons whose name or names are subscribed to the foregoing instrument as, _____ respectively appeared before me this day in person and acknowledged that they signed and delivered the said instrument as their own free and voluntary act for the uses and purposes set forth. Given under my hand and notarial seal, this _____ day of _____, 2018.

_____
Notary Public

SURFACE WATER DRAINAGE STATEMENT

STATE OF ILLINOIS)
) S.S.
COUNTY OF MCHENRY)

I, _____, Owner(s) and I, _____, Professional Engineer of the State of Illinois, do hereby certify that to the best of our knowledge and belief that the drainage of surface waters will not be changed by the construction of this subdivision of any part thereof, or, if such changes occur, adequate provisions have been made for the collection and diversion of such waters into public areas or drains which the subdivider has a right to use, and that such surface waters will not be deposited on adjoining land owners in such concentration as may cause damage to the adjoining property because of the construction of this subdivision.

_____
Owner(s)

_____
Registered Professional Engineer of Illinois

COUNTY CLERK'S CERTIFICATE

STATE OF ILLINOIS)
) S.S.
COUNTY OF McHENRY)

I, _____, County Clerk of McHenry County, Illinois do hereby certify that there are no delinquent general taxes, no unpaid forfeited taxes, and no redeemable tax sales against any of the land included in the attached plat. I further certify that I have received all statutory fees in connection with the plat.

Given under my hand and seal of the County at Woodstock, Illinois, this _____ day of _____, 2018.

_____
McHenry County Clerk

CITY COUNCIL CERTIFICATE

STATE OF ILLINOIS)
) S.S
COUNTY OF McHENRY)

Approved by the City Council of Crystal Lake, Illinois this _____ day of _____, 2018.

_____
Mayor

_____
Attest: City Clerk

PLAN AND ZONING COMMISSION CERTIFICATE

STATE OF ILLINOIS)
) S.S
COUNTY OF McHENRY)

I, _____, Chairman of the Crystal Lake Planning and Zoning Commission, do hereby certify that on this _____ day of _____, 2018, this plat of subdivision was duly approved by the Planning and Zoning Commission of the City of Crystal Lake.

_____
Chairperson

WATERSHED EASEMENT PROVISIONS

No titleholder of any part or portion of the Watershed Easement (or any party acting on behalf of the titleholder) shall install, construct, erect, place or plant any buildings, structures, improvements or vegetation upon the Watershed Easements, including, but not limited to walls, patios, sheds, posts, trees, plants, grass or shrubbery. Nor will they be allowed to alter, modify, obstruct or change the topography, elevations or drainage pattern from or over the Watershed Easements.

All maintenance will be provided from the City of Crystal Lake, except as otherwise expressly permitted by written notice.

PUBLIC UTILITY EASEMENT PROVISIONS

An easement for serving the subdivision and other property with electric and communications services is hereby reserved for and granted to

Commonwealth Edison Company,
Cable Television Company or Franchises
and
AT&T, Grantees

their respective successors and assigns, jointly and severally, to install, operate, maintain, and remove, from time to time, facilities used in connection with overhead and underground transmission and distribution of electricity and sounds and signals in, over, under, across, along and upon the surface of the property shown within the dotted or dashed lines on the plat and marked "Easement" or "PUE", the property designated in the Declaration of Condominium and/or on this plat as "Common Elements", and the property designated on the plat as a "Common area or areas", and the property designated on the plat for streets and alleys, whether public or private, together with the right to install required service connections over or under the surface of each lot and common area or areas to serve improvements thereon, or on adjacent lots, and common area or areas, the right to cut, trim or remove trees, bushes and roots as may be reasonably required incident to the rights herein given, and the right to enter upon the subdivided property for all such purposes. Obstructions shall not be placed over grantees' facilities or in, upon or over the property within the dotted lines marked "Easement" or "PUE" without the prior written consent of grantees. After installation of any such facilities, the grade of the subdivided property shall not be altered in a manner so as to interfere with the proper operation and maintenance thereof. The term "Common Elements" shall have that meaning set forth for such term in Section 2(e) of "An act in relation to condominiums" (Illinois Revised Statutes, Ch. 30, par. 302(e)), as amended from time to time.

SURVEYOR'S CERTIFICATE

STATE OF ILLINOIS)
) S.S.
COUNTY OF McHENRY)

This is to certify that I, William J. Vanderstappen, have surveyed and subdivided the property as described and shown by the plat, which is a correct representation of said survey and subdivision. All distances are shown in feet and decimals thereof. Dimensions shown along curves are arc distances unless otherwise noted.

Part of Lot 28 in a Plat of the Farms at Crystal Lake, being part of Sections: 5, 6, 7 & 8 in Township 43 North, Range 8 East of the Third Principal Meridian, according to the plat thereof recorded October 6, 1858 in Book 22 of Deeds, Page 1, and part of Lots 8, 9, 10, 11 and Vacated Kishwaukee Street in Benjamin Douglas's Addition to Crystal Lake, being a subdivision of part of Southeast Quarter of said Section 6, according to the plat thereof recorded December 14, 1846 in Book G of Deeds, page 292, being described as follows: Beginning at the Northeast corner of Lot 1 in Douvres Subdivision, being a subdivision of part of the Southeast Quarter of the Southeast Quarter of said Section 6; thence North 89 degrees 10 minutes 33 seconds West along the North line thereof, 230.03 feet to the Easterly right-of-way line of McHenry Avenue per Plat of Dedication recorded as Document No. 532286; thence North 12 degrees 49 minutes 29 seconds East along said Easterly right-of-way line 318.22 feet; thence Northeasterly 102.56 feet along said Easterly right-of-way line, being along a curve to the right having a radius of 252.90 feet, the chord of which bears North 24 degrees 26 minutes 31 seconds East, for a length of 101.85 feet; thence North 36 degrees 03 minutes 33 seconds East along said Easterly right-of-way line, 239.66 feet to the Southwesterly right-of-way line of Lake Avenue; thence South 53 degrees 36 minutes 22 seconds along said Southwesterly right-of-way line 204.18 feet to the Northwesterly corner of Lot 1 in Pfeiffer's Third Re-Subdivision, being a subdivision of part of the Southeast Quarter of said Section 6, according to the plat thereof recorded June 8, 1955 as Document No. 293627; thence South 36 degrees 34 minutes 55 seconds West along the Northwesterly line of said Lot 1 and the Northwesterly line of Lots 2 & 3 in said subdivision 195.34 feet; thence South 52 degrees 06 minutes 13 seconds East along a jog in said Northwesterly line of Lot 3, a distance of 2.58 feet; thence South 12 degrees 53 minutes 20 seconds West along the Westerly line of Lots 3 through 7 in said Pfeiffer's Third Re-subdivision, 327.73 feet to the Place of Beginning, in McHenry County, Illinois.

Containing 2.941 acres more of less.

I further certify that this professional service conforms to the current Illinois minimum standards for a boundary survey, and that concrete monuments at opposing subdivision corners and 5/8" iron bars at all lot corners and points of change in alignment will be set as required by the Plat Act (Illinois Revised Statutes 2005, 765ILCS 205/1)

I further certify that the above described property is located in Zone "X" areas determined to be outside the 500-year floodplain, as identified by the Federal Emergency Management Agency, Flood Insurance Rate Map Community Panel 17111C0327J, dated 11/16/2006

I further certify that this Subdivision lies within the corporate limits of the City of Crystal Lake, Illinois.

Given under my hand and seal this 4th day of October, 2017.

VANDERSTAPPEN LAND SURVEYING, INC.
1316 N. Madison Street
Woodstock, Illinois 60098
(815) 337-8310

William J. Vanderstappen, No. 035-002709

RECORDER'S CERTIFICATE

STATE OF ILLINOIS)
) S.S.
COUNTY OF McHENRY)

This instrument filed for record in the Recorder's Office of McHenry County, Illinois, on this _____ day of _____, 2018, at _____ o'clock_____.M. and recorded as document number _____.

_____
County Recorder

This Plat presented for recording by:_____

CLIENT: HABITAT FOR HUMANITY OF NORTHERN FOX VALLEY
DRAWN BY: DAM CHECKED BY: WJV
SCALE: 1"=30' SEC. 06 T. 43 R. 08 E.
BASIS OF BEARING: ASSUMED
P.I.N.: 19-06-481-001; -002
JOB NO.: 170404-A I.D. FPS
FIELDWORK COMP.: _____ BK. ____ PG. ____
ALL DISTANCES SHOWN IN FEET AND DECIMAL PARTS THEREOF CORRECTED TO 68° F. REF: 150120

Tax Districts:
Algonquin Township Road and Bridge
Crystal Lake Park
Crystal Lake Library
Crystal Lake Fire City
Algonquin Township
McHenry County Conservation
McHenry County
College District 528 MCC
School District 155
Crystal Lake City
School District 47

THIS PLAT PRESENTED FOR RECORDING BY:

_____
_____
_____

FOX VALLEY FARMS | SHEET NO. 2 OF 2

Y:\PLATS\2017\0400-0599\170404_V-170404\170404-A-FPS.dwg-Layout1-12/18/2017 1:57 PM

FINAL ENGINEERING PLANS
FOR
FOX VALLEY FARMS

CRYSTAL LAKE, ILLINOIS

PLANS PREPARED FOR:

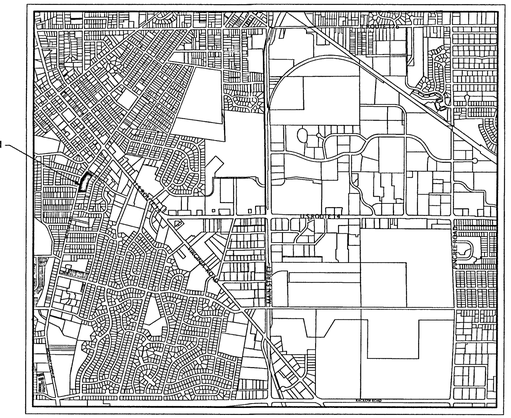
HABITAT FOR HUMANITY OF NORTHERN FOX VALLEY
MR. JERRY PIETRYLA
56 SOUTH GROVE AVENUE
ELGIN, IL 60120

LEGEND

	PROPOSED	EXISTING
STORM MANHOLE	◉	◎
STORM DRYWELL	◉	◎
STORM CATCH BASIN/INLET	◘/■	○/□
FLARED END SECTION	▶	▷
STORM SEWER	——)——	——)——
STORM SEWER UNDERDRAIN	- - - - - -	
SAN SEWER	——▶——	——▷——
SAN MH	◉	◎
WATERMAIN	——W——	- - - - -
WATERMAIN SERVICE	——W——	——W——
FIRE HYDRANT	Y	Y
VALVE/VALULT	⊗	⊗
CONTOURS	———	———
SPOT ELEV.	100.00	×893
MAILBOX		⊓
UTILITY POLE		○
DOWN GUY		◐
FENCE/GATE	-o-o-o-o-	—X—
BENCHMARK		⊕
SIGN POST	—▫—	

= EX CONCRETE

= EX. GRAVEL



LOCATION MAP

SHEET INDEX:

C.0 COVER SHEET
C.1 SPECIFICATIONS AND DETAILS
C.2 EX CONDITIONS AND DEMOLITION PLAN
C.3 OVERALL & UTILITY PLAN
C.4 GRADING PLAN
C.5 SEDIMENT/EROS CONTROL PLAN
C.6 SEDIMENT/EROS CONTROL SPECIFICATIONS
C.7 STANDARD DETAILS
C.8 STANDARD DETAILS

811 Know what's **below.** **Call** before you dig.

OPERATES 24 Hours 365 Days

CALL JULIE 1-800-892-0123
WITH THE FOLLOWING:
COUNTY MCHENRY COUNTY
CITY-TOWNSHIP CITY OF CRYSTAL LAKE
SEC. & ¼SEC. NO.# NE 1/4 SEC 8, T43N, R8E
48 Hours Before You Dig.
EXCLUDING SAT., SUN., & HOLIDAYS

BENCHMARK

PROJECT BENCHMARK:

ARROW BOLT ON FIRE HYDRANT APPROXIMATELY 50' SOUTH OF THE INTERSECTION OF BROADWAY AVE. AND MCHENRY AVE.
ELEVATION = 899.07 (NAVD88)

2017 35

RECEIVED
DEC 18 2017
BY:

I HEREBY CERTIFY THAT THE PLANS WITH THE FIRM'S NAME LISTED BELOW WERE PREPARED UNDER MY DIRECT SUPERVISION.

DATED AT RINGWOOD, ILLINOIS THIS 18th DAY OF DECEMBER, 2017

Meghan A. Michel

MEGHAN A. MICHEL, P. E. , J. CONDON & ASSOCIATES, INC.
ILLINOIS REG. PROF. ENGINEER No. 062-057170 EXPIRATION DATE 11-30-2017
ILLINOIS DEPARTMENT OF PROFESSIONAL REGULATION FIRM NUMBER: 184-006759

J. CONDON & ASSOCIATES, INC
CONSULTING ENGINEERS
5415 BUSINESS PARKWAY
RINGWOOD, ILLINOIS 60072
815.728.0068
IL DESIGN FIRM # 184-006759

HABITAT FOR HUMANITY
ELGIN, ILLINOIS

NO.	DATE	DESCRIPTION
1	12/18/17	PER CITY REVIEW

SCALE: NTS
ISSUE DATE: 10/10/2017
PROJECT MANAGER: MAM
DESIGNER: MAM
QUALITY CONTROL: JEC

FOX VALLEY FARMS
CRYSTAL LAKE, ILLINOIS

LIMITATION OF WARRANTY OF ENGINEER'S INSTRUMENTS OF SERVICE

THE ENGINEER AND HIS CONSULTANTS DO NOT WARRANT OR GUARANTEE THE ACCURACY AND COMPLETENESS OF THE DELIVERABLES HEREIN BEYOND A REASONABLE DILIGENCE. IF ANY MISTAKES, OMISSIONS, OR DISCREPANCIES ARE FOUND TO EXIST WITHIN THE DELIVERABLES, THE ENGINEER SHALL BE PROMPTLY NOTIFIED SO THAT HE MAY HAVE THE OPPORTUNITY TO TAKE WHATEVER STEPS NECESSARY TO RESOLVE THEM. FAILURE TO PROMPTLY NOTIFY THE ENGINEER OF SUCH CONDITIONS SHALL ABSOLVE THE ENGINEER FROM ANY RESPONSIBILITY FOR THE CONSEQUENCES OF SUCH FAILURE. ACTIONS TAKEN WITHOUT THE KNOWLEDGE AND CONSENT TO THE ENGINEER, OR IN CONTRADICTION TO THE ENGINEER'S DELIVERABLES FOR RECOMMENDATIONS, SHALL BECOME THE RESPONSIBILITY NOT OF THE ENGINEER BUT OF THE PARTIES RESPONSIBLE FOR TAKING SUCH ACTION.

PROJECT NUMBER: HABI-17038-3

MEGHAN A. MICHEL 062-057170 LICENSED PROFESSIONAL ENGINEER OF ILLINOIS

Design Special Provisions

The Standard Specifications for Road and Bridge Construction prepared by the Department of Transportation of the State of Illinois (latest addition), Supplemental Specifications, the Standard Specifications for Water and Sewer Main Construction in Illinois (latest addition), the American Water Works Association, and the Illinois Urban Manual (blue book) as published by the IEPA shall govern the construction of this project.

In addition, the following special provisions supplement the said specifications, and in case of conflict with any part or parts of said specifications, these special provisions shall take precedence and shall govern.

In case of conflict with the General Conditions, Standard Specifications, Special Provisions and/or contract drawings, the City Code of Crystal Lake will govern.

1. Scope of Work

The proposed improvement consists of supplying all the necessary labor, material and equipment to satisfactorily construct and install all improvements according to the plans designated "FOX VALLEY FARMS."

2. Construction Of Underground Utilities

A. Excavation: Where working conditions and right-of-way permit, pipe line trenches with sloping sides may be used.

The slopes shall not extend below the top of the pipe, and the trench excavations below this point shall be made with vertical sides with widths not exceeding those specified herein for the various sizes of pipe.

Open-cut trenches shall be sheeted and braced as required by the governing state, federal laws and municipal ordinances, and as may be necessary to protect life, property or the work.

Where firm foundation is not encountered at the grade established, due to unsuitable soil, all such unsuitable material shall be removed and replaced with approved compacted granular material.

B. Width of Trenches: The maximum width of the trench at the top of the pipe shall be as follows:

Nominal Pipe Sizes (inches)	Trench Widths (inches)
12 or smaller	30
14-18	36
20-24	42
27-30	48
33 and larger	1-1/3 times pipe O.D.

C. Removal of Water: Contractors shall, at all times during construction, provide and maintain ample means and devices with which to remove and properly dispose of all water entering the excavations. No sanitary sewer shall be used for disposal of trench water, unless specifically approved by the City Engineer and then only if the trench water does not ultimately arrive at existing pumping or sewage treatment facilities.

D. Bedding of Pipe: All pipe shall be installed on a bedding of approved, compacted granular material unless otherwise approved by the City Engineer. The bedding material shall be installed as per the typical trench backfill detail.

E. Trench Backfill: Whenever the excavation is in or within 2 feet of existing or proposed streets, parking areas, driveways, sidewalks or other paved areas, the trench shall be backfilled with approved selected granular material compacted in place. Any reuse of aggregate must be approved by the engineering inspector. See detail for further information.

F. Restoration of Drainage: As soon as possible after backfilling the trench, all ditching, grading and shaping necessary to restore the original drainage in the area of work shall be performed.

G. Utilities: The contractor shall notify all utilities prior to the installation of any pipelines. Where conflicts exists between underground utilities and the proposed underground pipeline requiring a revision to the plans, such construction shall not be undertaken until such changes are approved by the City Engineer in writing.

3. Inspection

All improvements shall be subject to inspection by a duly authorized and qualified City inspector both during the course of construction and after construction is complete. The inspector shall have authority over materials of construction, methods of construction and workmanship to ensure compliance with working drawings and specifications. The contractor shall provide for reasonable tests and proof of quality of materials as requested by the inspector. Upon due cause, which shall include weather conditions, workmanship or non-adherence to the approved plans and specifications, the inspector shall have the authority to stop construction.

4. Storm Sewers

Storm sewers shall be of reinforced concrete pipe meeting the requirements of ASTM C-76. Pipe shall be Class III for depths less than or equal to 14 feet and Class IV for depths exceeding 14 feet or less than 3 feet under paved surfaces. All joints shall be completed with mastic joint materials.

5. Storm Sewer Frames And Grates

All open lid frames and grates in grassed areas shall be Neenah R-4340-B or approved equal. All open lid frames and grates in paved areas shall be Neenah R-1713 or approved equal.

6. Earth Excavation

This item shall include stripping and stockpiling of all topsoil in areas designated by the Owner. All material deposited in embankment areas shall be compacted under the direction of the municipal inspector. Topsoil shall be stripped in all fill areas before placement of material. All material shall remain on-site and deposited in fill areas and other locations as directed by the Owner.

7. Topsoil Placement

The contractor shall place topsoil to a minimum depth of 6 inches over all unpaved disturbed areas ready for landscaping. Excess topsoil shall be stockpiled in designated areas.

8. Bituminous Materials (Prime Coat)

Prime shall be MC-30 applied at a rate of 0.35 GAL/SY of pavement for all aggregate areas. Prime shall be SS-1 applied at a rate of 0.1 GAL/SY of pavement on all bituminous surfaces.

9. Traffic Control

The contractor shall obtain, erect, maintain and remove all signs, barricades, flagman, and other traffic control devices as may be necessary for the purpose of regulating, warning or guiding traffic. Placement and maintenance of all traffic control devices shall be as directed by the municipal inspector and in accordance with the applicable parts of Article 701 of the Standard Specifications for Road and Bridge Construction. All traffic protection will be considered incidental to the contract.

10. Engineer's Responsibility

The engineer shall be responsible for the following:

A: To visit the construction site in order to better carry out the duties and responsibilities assigned by the Owner and undertaken by the engineer;

B: The engineer shall not, during such visits or as a result of such observations of the contractor's work in progress, supervise, direct, have control over the contractor's work, nor shall the engineer have the authority over the responsibility for the means, methods, techniques, sequences, or procedures of construction selected by the contractor for safety precautions and programs incidental to the work of the contractor, or for any failure of the contractor to comply with the laws, rules, regulations, ordinances, codes or orders applicable to the contractor furnishing and performing his work. Accordingly, the engineer can neither guarantee the performance of the construction contracts by the contractor nor assume responsibility for the contractor's failure to furnish and perform his work in accordance with the contract documents.

11. Construction Drawings/Contractor's Responsibility

No construction plans shall be used for construction unless specifically marked "For Construction." Prior to commencement of construction, the contractor shall verify all dimensions and conditions affecting their work with the actual conditions at the job site. In addition, the contractor must verify the engineer's line and grade If there are any discrepancies from what is shown on the construction plans, he must immediately report same to the engineer before doing any work, otherwise, the contractor assumes full responsibility, In the event of disagreement between the construction plans, Standard Specifications and/or special details, the contractor shall secure written instructions from the engineer prior to proceeding with any part of the work effected by omissions or discrepancies.

Failing to secure such instructions, the contractor will be considered to have proceeded at his own risk and expense. In the event of any doubt or question arising with respect to specifications, the decision of the engineer shall be final and conclusive.

12. Indemnification

The contractor shall indemnify and hold harmless the City, Owner, Burke Engineering and J. Condon & Associates from and against all claims, damages, losses and expenses, including attorney's fees arising out of or resulting from the performance of the contractor's work. In any and all claims against the owner or Trotter and Associates, by any employee of the contractor, or anyone directly or indirectly employed by the contractor, or anyone for whose acts the contractor may be liable, the indemnification obligation shall not be limited in any way by any limitation on the amount of damages, compensation or benefits payable by or for the contractor under Worker's Compensation acts, disability benefit acts or other employee benefit acts.

13. Erosion Control

It shall be the contractor's responsibility to properly control erosion on the job site through the use of siltation ponds, filter fabrics, etc. Any siltation of conduits, structures, or ditches shall be cleaned and maintained by the contractor until the seeding has taken All washouts, gullies, etc. will be regraded and reseeded by the contractor.

The contractor's responsibility for erosion control shall extend throughout the construction process. The contractor shall be responsible for clean-up of paved surfaces within and outside of the project.

All erosion control practices shall comply with the latest revision of the Illinois Urban Manual (Blue Book) as published by the IEPA.

14. Designated Erosion Control Inspector

The developer shall supply a duly authorized and qualified inspector per IEPA NPDES permit.

15. Seeding

All seeded areas shall be covered with the specified erosion control matting. All seeded areas shall have an adequate growth of grass before work is accepted. All seeded areas shall be stabilized within 24 hours after seeding operations have been completed.

(A) Grass Seed

Prior to starting seed work, contractor shall submit the name of seed supplier for the project and labels from the bags.

The turf grass seed mixture shall be watered thoroughly and immediately with a fine mist until the soil is soaked to a depth of 1 inch, puddling of water is unacceptable. The soil shall be maintained in a moist condition until the seed has sprouted and reached a height of 1 inch. Water thereafter a minimum of once every 7 days unless natural rainfall has provided equivalent watering.

Adequate growth will be defined as root depth into topsoil a minimum of 2" and dense, green, consistent turf void of any bare or patchy areas of more than 9 square inches.

The contractor shall maintain the turf grass until final acceptance. Maintenance to include grade repair, watering, reseeding, mowing, insect & weed control, trimming & edging. Each mowing shall occur when the grass has reached a height of 4 inches. Mow to a height of 3 inches, turf shall be mowed so as not to remove more than 1/3 of the total height. The cost of such maintenance shall be included the turf grass installation cost.

(B) Native Seed Mixes

During the first 6-8 weeks seed shall be watered 2-3 times a week. The amount of water required shall be just enough to keep the soil moist, do not overwater to avoid drowning seedlings, water early in the morning. After eight weeks, the native seed shall be watered once a week if necessary to supplement natural rainfall as instructed by owner's agent. Contractor responsible for furnishing all irrigation equipment needed for watering and for securing an adequate supply of water.

The contractor shall be responsible for the satisfactory growth of the native seed mix under the contract until final acceptance of the work. Performance standards will follow the City's standards. No invasive, weedy species shall be among the five most dominant species. Mowing and spot treatments for weeds and woody invasive species may be required to meet performance standards. Any treatments shall be approved by owner's agent prior to implementation. The contractor is responsible for furnishing maintenance activities (mowing, treatment, irrigation, overseeding, repair, etc) in order to meet the performance standards at no additional cost to the owner.

16. Project Quantities

The quantities given by the engineer are intended as a guide for the contractor in determining the scope of the completed project. It is the contractor's responsibility to determine all material quantities and appraise himself of all site conditions. The contract price submitted by the contractor shall be considered as lump sum for the completed project. No claims for extra work will be recognized unless ordered in writing by the Owner.

17. Insurance Requirements

The contractor shall purchase and maintain Comprehensive General Liability and other insurance set forth below which will provide protection from claims which may arise out of or resulting from the performance of work by anyone directly or indirectly employed by the contractor or by anyone for whose acts the contractor may be liable.

A. Worker's Compensation and Employer's Liability insurance in any amount not less than statutory limits required by law.

B. Comprehensive General Liability insurance including coverage in the amount of $500,000 per accident for property damage and $1,000,000 per person and $3,000,000 aggregate per accident for bodily injury, sickness or disease, or death of any person.

C. Comprehensive Automobile Liability insurance covering all automobiles, trucks, trailers and any other motorized equipment owned or leased by the contractor.

18. Certificate Of Insurance

The contractor shall not commence work until he has filed with the municipality and its inspector a certificate of insurance showing complete coverage of all insurance required, signed by the insurance companies or their authorized agents. Each certificate shall provide that coverage shall not be terminated or reduced without 30 days advance written notice to the municipality and its inspector. The contractor shall name J. Condon & Associates, Inc. and the City of Crystal Lake as additional insureds on the Comprehensive General Liability and Automobile Liability policies.

GE-02d

WATER MAIN:

1. Water main shall be Ductile Iron or Molecularly Oriented Polyvinyl Chloride (PVCO).
   a) Ductile Iron water main shall be Class 52 conforming to ANSI/AWWA C151/A21.51-09.
   b) Gaskets and cast iron fittings shall conform to ANSI/AWWA C111/A21.11 and ANSI/AWWA C110/A21.10 respectively.
   c) PVCO - See City Detail UW-12 and UW-13.
2. Thrust blocking or Mega-Lug or pre-approved equal shall be installed on water mains at all bends, tees, elbows, etc. except as noted below.
3. Thrust blocks not permitted with 45 degree vertical bends in water main (these shall be restrained with Mega-Lug or pre-approved equal.
4. When specified, ductile iron pipe shall be encased in polyethylene and shall conform with ANSI/AWWA C105/A21.10 - 10 and ASTM A674-10.
5. Minimum cover from finished grade to top of water main shall be six (6) feet; Maximum cover shall be eight (8) feet.
6. Water Main Taps: An Illinois licensed plumber is required for any water main tap.
7. All water mains shall be subjected to a pressure test and a separate leakage test at system pressure for 24 hours by the Contractor. Hydrostatic pressure test and leakage test shall be based on 125 PSI for two (2) hours. Water mains shall be chlorinated in accordance with the Standard Specifications.
8. The Underground Contractor shall consider incidental to the contract any chlorination and testing of existing water main where connections to and conclusion of such mains is indicated on the drawing.

PAVING:

1. All subgrades and bases shall be proof-rolled and approved by the Engineering Division prior to base or binder installation.
2. Subgrade and proposed pavements shall be finished by the Excavation Contractor to within 0.1 foot plus or minus, of plan elevation.
3. The Paving Contractor shall ensure that the subgrade has been properly prepared and that the finished top of subgrade elevation has been graded within the tolerances allowed in these specifications. Unless the Paving Contractor advises the owner and engineer in writing prior to fine grading for base course construction, it is understood that the Contractor has approved and accepts responsibility for the subgrade.
4. For the purpose of providing handicap accessibility and complying with the American Disability Act and City Standards, curbs shall be depressed at locations where public walks or pedestrian paths intersect curb lines at street intersections and other locations as directed.
5. ½ inch thick premolded fiber expansion joints with two (2) No. 4 plain round steel dowel bars shall be installed at designated intervals and at all P.C., P.T., curb returns and at the end of each pour. Alternate ends of the dowel bars shall be greased and fitted with metal expansion tubes.
6. ¼ inch thick fiber expansion joints shall be used in every case where the sidewalk coincides with the curb and gutter. Contraction joints shall be saw cut at designated intervals in the curb. The cost of these joints shall be considered as incidental to the cost of the contract.
7. All poured in place concrete curb and gutter shall incorporate two (2) No. 4 reinforcing bars installed wherever the curb and gutter crosses utility service lines, the cost of which shall be considered incidental to the cost of concrete curb and gutter.
8. Sidewalks (where required) shall be 5" of the thickness and dimensions as shown in the construction plans. All sidewalk concrete shall be a minimum of 6.1 bag mix (or IDOT class SI concrete) and shall develop a minimum of 3,500 psi compressive strength at fourteen (14) days. Contraction joints shall be set at five (5) foot centers, and one-half inch (½ inch) premolded fiber expansion joints at fifty (50) foot centers and where the sidewalk meets the curb or another sidewalk, or at the end of each pour. All sidewalks constructed over utility trenches and/or abutting driveway aprons shall be reinforced with three (3) No. 4 reinforcing bars (10 foot minimum length).

Revised:	Drawing Name	Drawing Number	
1. 06/12/2015	STANDARD NOTES AND SPECIFICATIONS	GE-02d	City of Crystal Lake Illinois
2.		Date: 01/30/15	
3.		Drawn DD / Checked AW	
4.			

LAND DEVELOPMENT AND BUILDING ENGINEERING DETAILS AND STANDARDS

GE-02b

TOPSOIL STOCKPILING:

1. Location of any on-site topsoil stockpiles shall be identified on the approved plans with silt fence installed around the perimeter of the stockpile.
2. Topsoil stockpiled for future use shall be relatively free from large roots, sticks, weeds, brush, stones larger than one (1) inch diameter, or other litter and waste products including other extraneous materials not conducive to plant growth.
3. Topsoil shall be stockpiled in sequence to eliminate any re-handling or double movements by the Contractor. Failure to properly sequence the stockpiling operations shall not constitute a claim for additional compensation. No material shall be stockpiled in front yards, in utility easements, or in the right-of-way lines.
4. If a stockpile is to remain in place for more than (14) calendar days, it is required that the stockpile meet the requirements as outlined in section 595 of the City Code.

UNDERGROUND UTILITY:

1. The Contractor shall coordinate water main, water service, sanitary and storm sewer inspections and testing with the Community Development at least 24 hours in advance.
2. All main line sanitary shall be cleaned and televised (provide DVD to the City's Engineering Division).
3. All manhole or valve covers shall be imprinted "City of Crystal Lake Sanitary", or "City of Crystal Lake Storm", or "City of Crystal Lake Water" as directed by the City.
4. Reference the latest edition of the Standard Specifications for Water and Sewer Main Construction in Illinois.
5. Existing manholes to be circular cored and booted.

EROSION CONTROL:

1. All specified erosion control measures shall be installed and maintained per the requirements of the Crystal Lake Stormwater Ordinance in accordance with the active NPDES permit.
2. All slopes 4:1 or steeper shall be sodded or blanketed immediately after mass earthwork.
3. All overland flow routes to be stabilized by sod or blanket.
4. Erosion control measures to be inspected and approved by City Engineering Division prior to additional work on site.
5. Continuous monitoring of erosion control measures is required. Maintain records of weekly reports per the City of Crystal Lake Stormwater Ordinance.
6. The Contractor shall implement any additional erosion control measures deemed necessary by the City per the standards of the City Of Crystal Lake Stormwater Ordinance.
7. All storm sewer catch basins, sumps and/or retention basins provided are to be cleaned at the end of construction of the project prior to final acceptance. Cleaning may also be required during the course of the construction of the project if it is determined that the silt and debris traps are not properly functioning and their performance is impaired.
8. Rip-rap material RR 2 (6") - RR4 (16") shall be in accordance with Article 281 and grouted in place according to Article 601 of the IDOT Standard Specifications.
9. Projects of 1 Acre or greater must obtain an NPDES permit prior to commencement of any construction activity.

Revised:	Drawing Name	Drawing Number	
1. 06/12/2015	STANDARD NOTES AND SPECIFICATIONS	GE-02b	City of Crystal Lake Illinois
2.		Date: 01/30/15	
3.		Drawn DD / Checked AW	
4.			

LAND DEVELOPMENT AND BUILDING ENGINEERING DETAILS AND STANDARDS

GE-02b

TOPSOIL STOCKPILING:

1. Location of any on-site topsoil stockpiles shall be identified on the approved plans with silt fence installed around the perimeter of the stockpile.
2. Topsoil stockpiled for future use shall be relatively free from large roots, sticks, weeds, brush, stones larger than one (1) inch diameter, or other litter and waste products including other extraneous materials not conducive to plant growth.
3. Topsoil shall be stockpiled in sequence to eliminate any re-handling or double movements by the Contractor. Failure to properly sequence the stockpiling operations shall not constitute a claim for additional compensation. No material shall be stockpiled in front yards, in utility easements, or in the right-of-way lines.
4. If a stockpile is to remain in place for more than (14) calendar days, it is required that the stockpile meet the requirements as outlined in section 595 of the City Code.

UNDERGROUND UTILITY:

1. The Contractor shall coordinate water main, water service, sanitary and storm sewer inspections and testing with the Community Development at least 24 hours in advance.
2. All main line sanitary shall be cleaned and televised (provide DVD to the City's Engineering Division).
3. All manhole or valve covers shall be imprinted "City of Crystal Lake Sanitary", or "City of Crystal Lake Storm", or "City of Crystal Lake Water" as directed by the City.
4. Reference the latest edition of the Standard Specifications for Water and Sewer Main Construction in Illinois.
5. Existing manholes to be circular cored and booted.

EROSION CONTROL:

1. All specified erosion control measures shall be installed and maintained per the requirements of the Crystal Lake Stormwater Ordinance in accordance with the active NPDES permit.
2. All slopes 4:1 or steeper shall be sodded or blanketed immediately after mass earthwork.
3. All overland flow routes to be stabilized by sod or blanket.
4. Erosion control measures to be inspected and approved by City Engineering Division prior to additional work on site.
5. Continuous monitoring of erosion control measures is required. Maintain records of weekly reports per the City of Crystal Lake Stormwater Ordinance.
6. The Contractor shall implement any additional erosion control measures deemed necessary by the City per the standards of the City Of Crystal Lake Stormwater Ordinance.
7. All storm sewer catch basins, sumps and/or retention basins provided are to be cleaned at the end of construction of the project prior to final acceptance. Cleaning may also be required during the course of the construction of the project if it is determined that the silt and debris traps are not properly functioning and their performance is impaired.
8. Rip-rap material RR 2 (6") - RR4 (16") shall be in accordance with Article 281 and grouted in place according to Article 601 of the IDOT Standard Specifications.
9. Projects of 1 Acre or greater must obtain an NPDES permit prior to commencement of any construction activity.

Revised:	Drawing Name	Drawing Number	
1. 06/12/2015	STANDARD NOTES AND SPECIFICATIONS	GE-02b	City of Crystal Lake Illinois
2.		Date: 01/30/15	
3.		Drawn DD / Checked AW	
4.			

LAND DEVELOPMENT AND BUILDING ENGINEERING DETAILS AND STANDARDS

J. CONDON & ASSOCIATES, INC.
CONSULTING ENGINEERS
5415 BUSINESS PARKWAY
RINGWOOD, ILLINOIS 60072
815.728.0068

IL DESIGN FIRM # 184-006759

HABITAT FOR HUMANITY

ELGIN, ILLINOIS

NO.	DATE	DESCRIPTION
1	12/18/17	PER CITY REVIEW

SCALE: N/A

ISSUE DATE: 10/10/2017

PROJECT MANAGER: MAM

DESIGNER: MAM

QUALITY CONTROL: JEC

FOX VALLEY FARMS

CRYSTAL LAKE, ILLINOIS

PROJECT NUMBER: HABI-17038-3

SHEET TITLE: SPECIFICATIONS AND DETAILS

SHEET NUMBER: C.1

Tag #	Size DBH (in) (trees)	Species Group	Tree Scientific Name	Tree Common Name	Condition Rating
310	37	C	Juglans nigra	Black Walnut	excellent
311	6.5,5,5,4,4	C	Morus alba	White Mulberry	fair
312	4,2,2.5	B	Acer platanoides	Norway maple	good to fair
313	2	B	Acer platanoides	Norway maple	fair to poor
314	3	B	Acer platanoides	Norway maple	fair
315	2	B	Acer platanoides	Norway maple	fair
316	2	B	Acer platanoides	Norway maple	fair
317	3	B	Acer platanoides	Norway maple	fair
318	7, 3	B	Acer platanoides	Norway maple	good to fair
319	2.5	B	Acer platanoides	Norway maple	fair
320	2	B	Acer platanoides	Norway maple	fair
321	6	B	Acer platanoides	Norway maple	fair
322	9	B	Acer platanoides	Norway maple	good to fair
323	10.5, 12	C	Prunus serotina	Black Cherry	good to fair
324	25	C	Juglans nigra	Black Walnut	excellent
325	37	D	Ulmus pumila	Siberian elm	fair
326	34	D	Ulmus americana	American elm	good to fair
327	50	D	Ulmus pumila	Siberian elm	fair
328	49	C	Morus alba	White Mulberry	fair to poor
329	13.5	C	Juglans nigra	Black Walnut	good to fair
330	27.5	D	Fraxinus pennsyvanica	Green ash	dead
331	34	D	Ulmus pumila	Siberian elm	fair to poor
332	12.5, 7	D	Ulmus pumila	Siberian elm	fair to poor
333	3.5	B	Acer platanoides	Norway maple	good to fair
334	7	D	Fraxinus pennsyvanica	Green ash	dead
335	28.5	D	Ulmus pumila	Siberian elm	poor
336	18	B	Picea abies	Norway spruce	good to fair
337	16.5	B	Picea pungens	Colorado blue spruce	fair to poor
338	15	B	Picea pungens	Colorado blue spruce	good to fair
339	7,4.5,7.5.5,6.5	B	Malus spp	Crabapple	fair
340	25	B	Tilia cordata	Littleleaf linden	good to fair
341	22	B	Tilia cordata	Littleleaf linden	excellent
342	18	B	Picea pungens	Colorado blue spruce	fair
343	20	B	Picea pungens	Colorado blue spruce	fair to poor
344	15	B	Picea pungens	Colorado blue spruce	fair to poor
345	12, 12	C	Juglans nigra	Black Walnut	good to fair
346	10	B	Picea pungens	Colorado blue spruce	poor
347	15	B	Picea pungens	Colorado blue spruce	poor
348	3	A	Celtis occidentalis	Hackberry	excellent
349	6.5,5,6	C	Morus alba	White Mulberry	good to fair
350	21.5	D	Ulmus pumila	Siberian elm	fair to poor
351	35.5	D	Ulmus pumila	Siberian elm	dead
352	25	n/a	Abies concolor	White fir	fair to poor
353	13.5	n/a	Abies concolor	White fir	fair to poor
354	15	n/a	Abies concolor	White fir	fair to poor
355	18	n/a	Abies concolor	White fir	fair
356	29.5	n/a	Abies concolor	White fir	fair
357	6	B	Juniperus virginiana	Eastern red cedar	fair
358	8.5	D	Acer negundo	Boxelder	fair
359	4	B	Acer platanoides	Norway maple	fair
360	6.5, 8	D	Acer negundo	Boxelder	good to fair
361	4	B	Acer platanoides	Norway maple	fair to poor
362	10.5	A	Celtis occidentalis	Hackberry	good to fair
363	7, 2	A	Celtis occidentalis	Hackberry	good to fair
364	8	B	Juniperus virginiana	Eastern red cedar	good to fair

TREE SURVEY NOTES:

1. TREE SURVEY WAS PREPARED BY HEY & ASSOCIATES, INC.
2. EXISTING TREES THAT ARE REMOVED SHALL BE REPLACED AT THE RATE REQUIRED BY THE CRYSTAL LAKE UNIFIED DEVELOPMENT ORDINANCE.
3. TREE REMOVAL AND REPLACEMENT WILL BE DETERMINED AS EACH LOT IS DEVELOPED.



NOTES:

1. EXISTING BUILDINGS, PAVEMENT AND CONCRETE TO BE REMOVED.
2. EXISTING SEPTIC SYSTEM TO BE ABANDONED PER COUNTY REQUIREMENTS.
3. EXISTING WATER SERVICE TO BE DISCONNECTED AT THE MAIN AND REPLACED.
4. THE EXISTING DEPRESSIONAL STORAGE VOLUME IS 0.32 AC-FT AND IS NON-REGULATED.

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)

1 inch = 30 ft.

J. CONDON & ASSOCIATES, INC.
CONSULTING ENGINEERS
5415 BUSINESS PARKWAY
RINGWOOD, ILLINOIS 60072
815.728.0068

IL DESIGN FIRM # 184-006759

HABITAT FOR HUMANITY

ELGIN, ILLINOIS

SCALE: 1" = 30'

ISSUE DATE: 10/10/2017

PROJECT MANAGER: MAM

DESIGNER: MAM

QUALITY CONTROL: JEC

FOX VALLEY FARMS

CRYSTAL LAKE, ILLINOIS

NO.	DATE	DESCRIPTION
1	12/18/17	PER CITY REVIEW

PROJECT NUMBER: HABI-17038-3

SHEET TITLE: EX. CONDITIONS & DEMOLITION PLAN

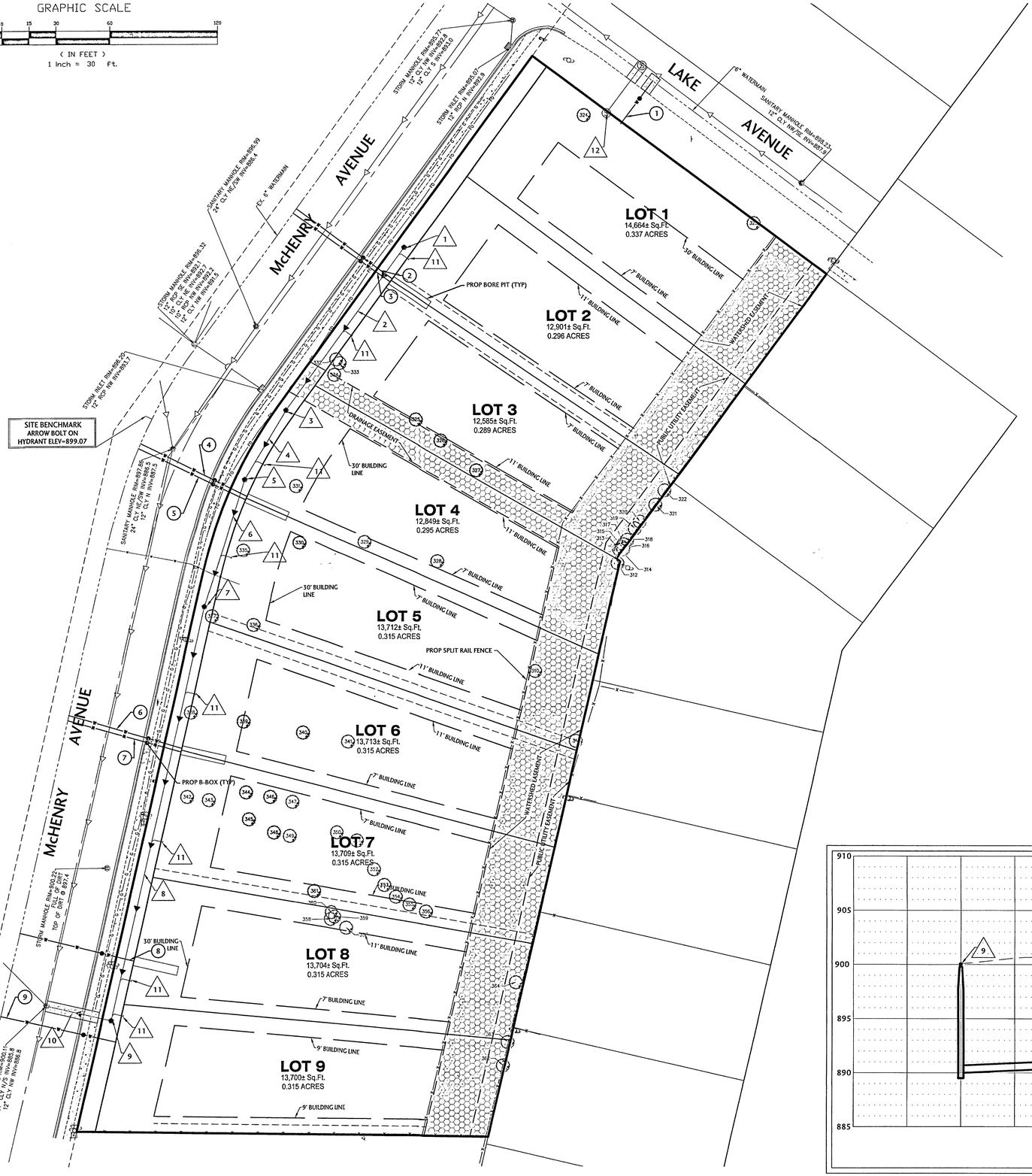
SHEET NUMBER: C.2

X:\2017\17038\wd\17038.P.dwg, 12/18/2017 2:57:14 PM, 1:1

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.



SITE DATA:

SITE ACREAGE = 2.94 ACRES
TOTAL LOTS = 9
MAXIMUM LOT SIZE = 0.358 ACRES
MINIMUM LOT SIZE = 0.292 ACRES
AVG LOT WIDTH = 74.49'

NOTES:

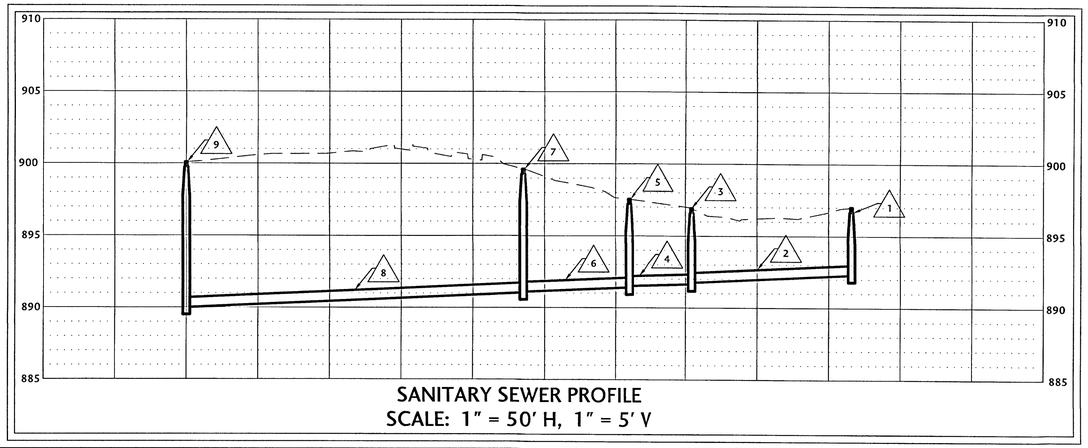
1. SEE FINAL PLAT FOR ALL DIMENSIONS AND EASEMENT INFORMATION.
2. NO ROADWAY IMPROVEMENTS ARE PROPOSED.
3. EX. CURB AND GUTTER TO BE SAWCUT FOR DRIVEWAY ACCESS ON EACH LOT.
4. EACH LOT WILL BE SERVICED BY AN INDIVIDUAL WATER SERVICE.
5. EACH LOT WILL BE SERVICED BY AN INDIVIDUAL SANITARY SEWER SERVICE.
6. ALL SIDEWALK ALONG MCHENRY AVE. SHALL BE REPLACED AT THE TIME OF INDIVIDUAL LOT CONSTRUCTION.

SANITARY SEWER IMPROVEMENTS (X)

1. PROP 4' SAN MH
   RIM = 897.00
   INV = 892.30
2. PROP 110 LF 8" SAN SEWER @ 0.59%
3. PROP 4' SAN MH
   RIM = 896.90
   INV = 891.65
4. PROP 45 LF 8" SAN SEWER @ 0.56%
5. PROP 4' SAN MH
   RIM = 897.50
   INV = 891.40
6. PROP 75 LF 8" SAN SEWER @ 0.47%
7. PROP 4' SAN MH
   RIM = 899.60
   INV = 891.05
8. PROP 235 LF 8" SAN SEWER @ 0.45%
9. PROP 4' SAN MH
   RIM = 900.10
   INV = 890.00 (N)
   INV = 888.25 (W)
10. PROP 35 LF 8" SAN SEWER @ 4.14%
11. PROP 6 LF 6" SAN SERVICE @ 1.10% MINIMUM (TYPICAL 8 LOCATIONS)
    NOTE: OVERHEAD SEWERS ARE REQUIRED FOR EACH RESIDENCE
12. PROP 33 LF 6" SAN SERVICE @ 1.10% MINIMUM

WATERMAIN IMPROVEMENTS (X)

1. PROP 30 LF 3/4" TYPE K COPPER WATER SERVICE WITH SERVICE BOX
2. PROP 65 LF 3/4" TYPE K COPPER WATER SERVICE WITH SERVICE BOX
3. PROP 65 LF 3/4" TYPE K COPPER WATER SERVICE WITH SERVICE BOX
4. PROP 65 LF 3/4" TYPE K COPPER WATER SERVICE WITH SERVICE BOX
5. PROP 65 LF 3/4" TYPE K COPPER WATER SERVICE WITH SERVICE BOX
6. PROP 65 LF 3/4" TYPE K COPPER WATER SERVICE WITH SERVICE BOX
7. PROP 65 LF 3/4" TYPE K COPPER WATER SERVICE WITH SERVICE BOX
8. PROP 65 LF 3/4" TYPE K COPPER WATER SERVICE WITH SERVICE BOX
9. PROP 65 LF 3/4" TYPE K COPPER WATER SERVICE WITH SERVICE BOX



SANITARY SEWER PROFILE
SCALE: 1" = 50' H, 1" = 5' V

ENGINEERING YOUR SUCCESS
J. CONDON & ASSOCIATES, INC.
CONSULTING ENGINEERS
5415 BUSINESS PARKWAY
RINCWOOD, ILLINOIS 60072
815.728.0068
IL DESIGN FIRM # 184-006759

HABITAT FOR HUMANITY

ELGIN, ILLINOIS

N W E S

SCALE: VARIES
ISSUE DATE: 10/10/2017
PROJECT MANAGER: MAM
DESIGNER: MAM
QUALITY CONTROL: JEC

FOX VALLEY FARMS

CRYSTAL LAKE, ILLINOIS

NO.	DATE	DESCRIPTION
1	12/18/17	PER CITY REVIEW

PROJECT NUMBER: HABI-17038-3

SHEET TITLE: OVERALL & UTILITY PLAN

SHEET NUMBER: C.3

X:\2017\17038\staff\17038-3.dwg, 12/19/2017 2:19:49 PM, 1:1

SANITARY SEWER IMPROVEMENTS (X)

1. PROP 4' SAN MH
   RIM = 897.00
   INV = 892.30
2. PROP 110 LF 8" SAN SEWER @ 0.59%
3. PROP 4' SAN MH
   RIM = 896.90
   INV = 891.65
4. PROP 45 LF 8" SAN SEWER @ 0.56%
5. PROP 4' SAN MH
   RIM = 897.50
   INV = 891.40
6. PROP 75 LF 8" SAN SEWER @ 0.47%
7. PROP 4' SAN MH
   RIM = 899.60
   INV = 891.05
8. PROP 235 LF 8" SAN SEWER @ 0.45%
9. PROP 4' SAN MH
   RIM = 900.10
   INV = 890.00 (N)
   INV = 888.25 (W)
10. PROP 35 LF 8" SAN SEWER @ 4.14%
11. PROP 6 LF 6" SAN SERVICE @ 1.10%
    MINIMUM (TYPICAL 8 LOCATIONS)
    NOTE: OVERHEAD SEWERS ARE REQUIRED FOR EACH RESIDENCE
12. PROP 33 LF 6" SAN SERVICE @ 1.10%
    MINIMUM

WATERMAIN IMPROVEMENTS (X)

1. PROP 30 LF 3/4" TYPE K COPPER WATER SERVICE WITH SERVICE BOX
2. PROP 65 LF 3/4" TYPE K COPPER WATER SERVICE WITH SERVICE BOX
3. PROP 65 LF 3/4" TYPE K COPPER WATER SERVICE WITH SERVICE BOX
4. PROP 65 LF 3/4" TYPE K COPPER WATER SERVICE WITH SERVICE BOX
5. PROP 65 LF 3/4" TYPE K COPPER WATER SERVICE WITH SERVICE BOX
6. PROP 65 LF 3/4" TYPE K COPPER WATER SERVICE WITH SERVICE BOX
7. PROP 65 LF 3/4" TYPE K COPPER WATER SERVICE WITH SERVICE BOX
8. PROP 65 LF 3/4" TYPE K COPPER WATER SERVICE WITH SERVICE BOX
9. PROP 65 LF 3/4" TYPE K COPPER WATER SERVICE WITH SERVICE BOX

RAIN GARDEN CONSTRUCTION GUIDELINES:

1. THE RAIN GARDEN FACILITIES SHOULD NOT BE USED FOR EROSION CONTROL DURING CONSTRUCTION.
2. CONSTRUCTION TRAFFIC SHOULD BE DIVERTED AWAY FROM THE RAIN GARDEN FOOTPRINTS TO THE MAXIMUM EXTENT POSSIBLE.
3. EXCAVATE THE RAIN GARDEN DURING DRY PERIODS USING A BACKHOE OR OTHER EQUIPMENT THAT CAN BE STAGED OUTSIDE THE RAIN GARDEN DURING EXCAVATION OPERATIONS. THE RAIN GARDEN SHOULD BE DEEP TILLED AND LEVELED AFTER EXCAVATION.
4. STABILIZE THE SIDE SLOPES IMMEDIATELY AFTER CONSTRUCTION WITH SPECIFIED BLANKET AND SEEDING.
5. THE FINAL SOIL LAYER CONSTRUCTION FOR THE RAIN GARDEN SHOULD NOT BEGIN UNTIL THE UPLAND SLOPES ARE STABILIZED.
6. FOLLOWING THE UPLAND STABILIZATION, EXCAVATE THE LAST 2 FEET OF THE RAIN GARDEN USING A BACKHOE OR OTHER EQUIPMENT THAT CAN BE STAGED OUTSIDE THE RAIN GARDEN TO PREVENT COMPACTION. DO NOT USE BULLDOZERS OR FRONT END LOADERS.
7. AFTER THE RAIN GARDEN BOTTOM IS GRADED, ROUGHEN OR SCARIFY THE BOTTOMS AND SIDES TO RESTORE INFILTRATION CAPACITY THAT MAY HAVE BEEN COMPROMISED BY RAINFALL OR SMEARING OF THE SOIL SURFACE DURING DIGGING.
8. PERFORM THE INFILTROMETER TESTS TO DOCUMENT THE INFILTRATION IS WORKING.
9. PLACE THE GEOTEXTILE FILTER FABRIC ON THE BOTTOM OVERLAPPING IT AT THE SEAMS TO PREVENT SOIL FINES FROM ENTERING THE STONE AGGREGATE SAND LAYER. THE FABRIC SHOULD BE FLUSH WITH THE WALLS.
10. PLACE THE SAND LAYER IN THE RAIN GARDEN. USING THE UNWASHED SAND MAY RESULT IN PREMATURE CLOGGING FROM THE ATTACHED SEDIMENT.
11. PLACE ENGINEERED SOIL AFTER CITY APPROVAL.

Engineered Soil Specifications

Particle Size	98% passing 0.75 inch screw
Physical Contaminants	No glass, metal or plastic
Mixture	50% Compost 40% Sand (ASTM-C033) 10% Topsoil
pH	6-8
Moisture Content	No more than 40% by weight
Compost	Resistant to further degradation
Fecal Coliform	<1000 Most Probable number/gram of total solids
Metals	As < 40ppm Cd < 40 ppm Pb < 1000ppm Hg <300ppm Zn < 2800ppm Fe < 20,000-40,000ppm

TABLE 3.8 – FILTER FABRIC MATERIAL REQUIREMENTS

Geotextile Property	Value	Test Method
Grab Tensile Strength, N	800 min.	ASTM D4632
Puncture Strength, N	300 min.	ASTM D4833
Apparent Breaking Elongation, Percent	30 min.	ASTM D4632
Apparent Opening Size, µm	300 max.	ASTM D4751
Permitivity, S-1	1.35 min.	ASTM D4491

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.



Moist Meadow Mix (10 LBS/AC)

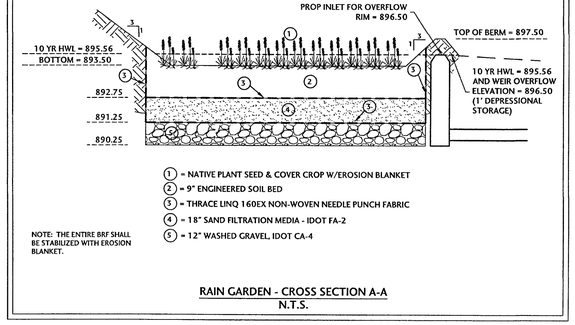
Grasses	Sedges	Cover Crop (25 LBS/AC)
Big Bluestem	Bedd's Sedge	Canada Wild Rye
Rattlesnake Grass	Porcupine Sedge	Common Oats
Reed Mana Grass	Awl-fruited Sedge	Vermiculite
Switch Grass	Fox Sedge	
Prairie Cord Grass	Dark-green Bulrush	
	Wool Grass	

Wildflowers		
Great Angelica	Winged Loostrife	Culver's Root
Red Milkweed	Glade Mallow	Golden Alexander
Pink Milkweed	Ditch Stonecrop	Prairie Loostrife
New England Aster	Obedient Plant	Blue Vervain
Wild Senna	Mountain Mint	Purple Meadow Rue
Bicolor Thistle	Wild Golden Glow	
Boneset	Sweet Black-eyed Susan	
Joe-pye Weed	Cupplant	
Sneezeweed	Prairie Dock	
Tall St. John's Wort	Grass-leaved Goldenrod	
Prairie Blazing Star	Ohio Goldenrod	
Cardinal Flower	Riddellii's Goldenrod	
Water Horehound	Ironweed	

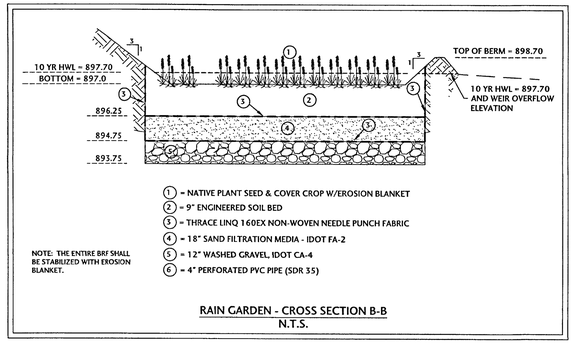
DRY PRAIRIE SEED MIX

Scientific Name	Common Name	Amount/Acre
Graminoides:		
Andropogon scoparius	Little Bluestem Grass	2 lbs 4 oz
Bouteloua curtipendula	Side-Oats Grama	5 lbs 11 oz
Sporobolus heterolepis	Prairie Dropseed	2 lbs 1 oz
3 Total Graminoides		10 lbs
Forbs:		
Amorpha canesens	Lead Plant	1 oz
Anemone clindrica	Thimbleweed	2 oz
Ascelpias verticillata	Whorled Milkweed	4 oz
Aster azureus	Sky Blue Aster	1 oz
Aster ptarmicoides	Stiff Aster	1 oz
Baptista leucantha	White Wild Indigo	13 oz
Coreopsis palmata	Prairie Coreopsis	4 oz
Desmodium illinoense	Illinois Tick Trefoil	10 oz
Echinacea pallida	Pale Purple Coneflower	8 oz
Eryngium yuccifolium	Rattlesnake Master	6 oz
Helianthus occidentalis	Western Sunflower	3 oz
Liatris aspera	Rough Blazing Star	3 oz
Petalostemum candidum	White Prairie Clover	6 oz
Petalostemum purpureum	Purple Prairie Clover	8 oz
Potentilla arguta	Prairie Cinquefoil	1 oz
Rudbeckia hirta	Black-Eyed Susan	1 oz
Silphium laciniatum	Compass Plant	1lb 1 oz
Solidago speciosa	Showy Goldenrod	1 oz
18 Total Forbs		3 lbs 10 oz
Cover Crops:		
Avena sativa	Oats	65 lbs*
Lolium multiforum	Annual Ryegrass	25 lbs

*The Oats shall be applied at 130 lbs/ac for fall seeding



RAIN GARDEN - CROSS SECTION A-A
N.T.S.



RAIN GARDEN - CROSS SECTION B-B
N.T.S.

J. CONDON & ASSOCIATES, INC.
CONSULTING ENGINEERS
5415 BUSINESS PARKWAY
RINGWOOD, ILLINOIS 60072
815.728.0068
IL DESIGN FIRM # 184-006759

HABITAT FOR HUMANITY
ELGIN, ILLINOIS

SCALE: 1" = 30'
ISSUE DATE: 10/10/2017
PROJECT MANAGER: MAM
DESIGNER: MAM
QUALITY CONTROL: JEC

FOX VALLEY FARMS
CRYSTAL LAKE, ILLINOIS

NO.	DATE	DESCRIPTION
1	12/18/17	PER CITY REVIEW

PROJECT NUMBER: HABI-17038-3

SHEET TITLE: GRADING PLAN

SHEET NUMBER: C.4

X:\2017\17038\cad\17038-4.dwg, 12/18/2017 2:53:54 PM, 1:1

E-30

NOTES:

1. ALL DISTURBED AREAS SHALL BE STABILIZED WITH NA GREEN S75BN EROSION BLANKET OR APPROVED EQUAL UNLESS OTHERWISE NOTED WITHIN THE PLAN SET.
2. CONTRACTOR RESPONSIBLE FOR MAINTENANCE/REPAIR OF EROSION CONTROL MEASURES UNTIL ADEQUATE VEGETATION GROWTH HAS OCCURRED. MAINTENANCE/REPAIR WORK SHALL BE INCIDENTAL TO THE INSTALLATION COSTS.
3. CONTRACTOR RESPONSIBLE FOR ADDITIONAL EROSION CONTROL MEASURES AS RECOMMENDED BY THE ENFORCEMENT OFFICER OR THE DESIGNATED EROSION INSPECTOR AS SITE CONDITIONS WARRANT.
4. ALL TRAPPED SEDIMENT IS TO BE PROPERLY STABILIZED OR DISPOSED.
5. IF CONTRACTOR NEEDS TO DEWATER WHEN EXCAVATING, THEY MUST PUMP TO A "DIRT BAG" OR APPROVED EQUAL.
6. WHERE THE USE OF TREE PROTECTION FENCING DOES NOT PROVIDE AMPLE ROOM FOR CONSTRUCTION, TREE TRUNK PROTECTION SHALL BE USED.
7. TEMPORARY SEEDING SHALL BE REQUIRED TO TEMPORARILY STABILIZE DISTURBED AREAS THAT WILL NOT BE BROUGHT TO FINAL GRADE OR ON WHICH CONSTRUCTION WILL BE STOPPED FOR A PERIOD OF MORE THAN 14 DAYS. THE COVER CROP SEED MIX SHALL BE UTILIZED FOR TEMPORARY SEEDING.
8. CONTRACTOR IS RESPONSIBLE TO EMPLOY DUST CONTROL METHODS TO REDUCE & PREVENT THE SURFACE AND AIR TRANSPORT OF DUST DURING CONSTRUCTION. IN ADDITION TO MINIMIZATION OF SOIL DISTURBANCE, CONTRACTOR SHALL UTILIZE MULCHING METHODS (IDOT 251.03 OR 251.04), IRRIGATION AND BARRIERS.

- (IP) – OPEN-LID INLET PROTECTION
- (RR) – RIP RAP PROTECTION
- (SL) – SEDIMENT LOG (CURLEX SEDIMENT LOG 6")
- (CE) – STABILIZED CONSTRUCTION ENTRANCE W = 20.0', L = 70.0'
- (DB) – PERMIT DISPLAY BOARD
- (CW) – PORTABLE CONCRETE WASHOUT AREA
- (TD) – ONSITE TRASH DUMPSTER
- (TS) – TEMPORARY TOPSOIL STOCKPILE
- (TP) – TREE PROTECTION

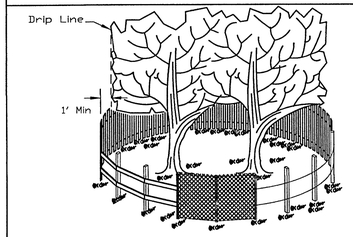
E-26

COVER CROP MIX (TEMP. SEEDING)

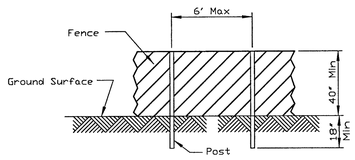
Scientific Name	Common Name	Amount/Ac
Avena sativa	Oats	65 lbs
Lolium multiforum	Annual Ryegrass	25 lbs

Notes:
1. The cover crop rate listed above is for spring and summer, in the event the seed is sown for the fall the Oats shall be sown at 130 lbs/ac.
2. Seedbed shall be prepared of loose soil to a depth of 3-4 inches prior to temporary seeding occurring.
3. Temporary seed shall be evenly applied with a cyclone seeder, drill, cultipacker seeder or hydroseeder. Small grains shall be planted no more than 1 inch deep, grasses no deeper than 1/2 inch. Cover broadcast seed by cultipacking, dragging a harrow or raking.
4. Temporary seeding shall be mulched in accordance with IDOT specifications (Article 251.03 or 251.04).

TREE PROTECTION - FENCING



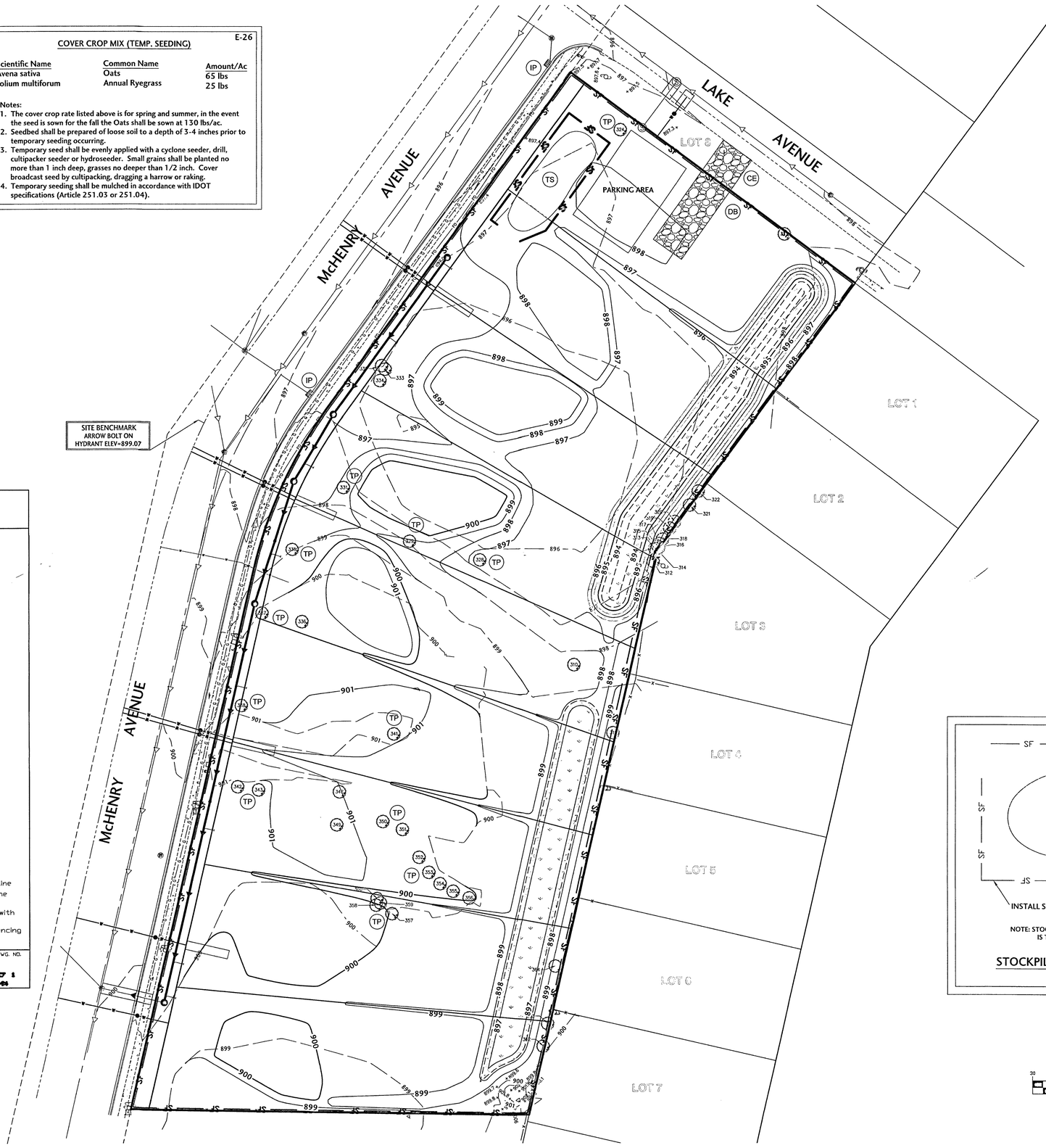
SIDE VIEW



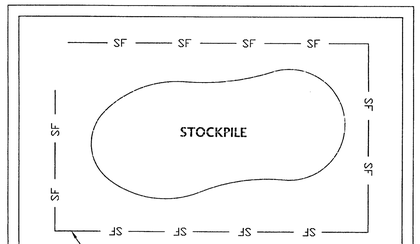
POST AND FENCE DETAIL

NOTES:
1. The fence shall be located a minimum of 1 foot outside the drip line of the tree to be saved and in no case closer than 5 feet to the trunk of any tree.
2. Fence posts shall be either standard steel posts or wood posts with a minumum cross sectional area of 3.0 sq. in.
3. The fence may be either 40" high snow fence, 40" plastic web fencing or any other material as approved by the engineer/inspector.

REFERENCE	NRCS Natural Resources Conservation Service	STANDARD DWG. NO.
Project		IL-690
Typical		Sheet 1 of 1
		4-9-96



CONSTRUCTION NOTES:
1. THE INTENDED SEQUENCE OF CONSTRUCTION IS
   - 1.1. INSTALL EROSION CONTROL MEASURES
   - 1.2. STRIP TOPSOIL AND STOCKPILE
   - 1.3. PARTIALLY EXCAVATE RAIN GARDENS
   - 1.4. GRADE SITE, PLACE TOPSOIL AND SEED WITH CROP COVER
   - 1.5. COMPLETE RAIN GARDEN EXCAVATION AND SEEDING
   - 1.6. INSTALL SPLIT RAIL FENCE
   - 1.7. BEGIN HOUSE CONSTRUCTION WITH LOT 9 AND CONTINUE TO LOT 1
2. SUBDIVISION CONSTRUCTION ACCESS SHALL BE LIMITED TO THE LAKE AVE. ACCESS SHOWN.
3. VEHICLES FOR EMPLOYEES, CONTRACTORS AND VOLUNTEERS MAY NOT PARK ALONG MCHENRY AVE. PARKING SHALL BE PROVIDED FOR ON LOT 1.
4. AT THE TIME OF INDIVIDUAL LOT CONSTRUCTION, SILT FENCE WILL BE REQUIRED ON THE UPSTREAM SIDE OF THE RAIN GARDENS.



NOTE: STOCKPILE IS TEMPORARY SEEDED IF IT IS TO REMAIN FOR MORE THAN 3 DAYS.

STOCKPILE STABILIZATION DETAIL

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

ENGINEERING WITH SUCCESS
J. CONDON & ASSOCIATES, INC.
CONSULTING ENGINEERS
541S BUSINESS PARKWAY
RINGWOOD, ILLINOIS 60072
815.728.0068
IL DESIGN FIRM # 184-006759

HABITAT FOR HUMANITY

ELGIN, ILLINOIS

N W E S

SCALE: 1" = 30'

ISSUE DATE: 10/10/2017

PROJECT MANAGER: MAM

DESIGNER: MAM

QUALITY CONTROL: JEC

FOX VALLEY FARMS

CRYSTAL LAKE, ILLINOIS

NO.	DATE	DESCRIPTION
1	12/18/17	PER CITY REVIEW

PROJECT NUMBER: HABI-17038-3

SHEET TITLE: EROSION CONTROL PLAN

SHEET NUMBER: C.5

CONTROL MEASURE GROUP	CONTROL MEASURE	URBAN MANUAL CODE	APPLIED	CONTROL MEASURE DESCRIPTION	PERM.	TEMP.
SOIL STABILIZATION	CONSTRUCTION ROAD STABILIZATION	806	X	The stabilization of temporary construction access routes, subdivision roads, on-site vehicle transportation routes, and construction parking areas with stone immediately after grading.		X
	EROSION BLANKET	830	X	A preformed protective blanket of straw or other plant residue, or plastic fibers formed into a mat, usually with a plastic mesh on one or both sides.		X
	LAND GRADING	865	X	Reshaping the ground surface to planned grades as determined by the engineering plans.	X	
	MULCHING	875		The application of plant residues and other suitable materials to the soil.		
	PERMANENT VEGETATION	880	X	Establishing permanent vegetative cover to stabilize disturbed or exposed areas.	X	
	ROCK OUTLET PROTECTION	910	X	A section of rock protection placed at the outlet end of culverts, conduits, or channels.	X	
	SODDING	925		Stabilization of fine-graded disturbed areas by laying a continuous cover of grass sod.		
	SURFACE ROUGHENING	953		A rough soil surface with horizontal grooves running across the slope on the contour, stair stepping, or tracking with construction equipment.		
	TEMPORARY SEEDING	965	X	Planting rapid-growing annual grasses or small grains, to provide initial, temporary cover for erosion control on disturbed areas.		X
	TOPSOILING	981	X	Methods of preserving and using topsoil to enhance final site stabilization with vegetation.	X	
RUNOFF CONTROL	DIVERSION	815		A channel and supporting ridge constructed across the slope to collect and divert runoff.		
	DIVERSION DIKE	820		A dike or dike and channel constructed along the perimeter of a disturbed construction area.		
	RIGHT-OF-WAY DIVERSION	900		A ridge or ridge and channel constructed diagonally across a sloping road or utility right-of-way that is subject to erosion.		
	ROCK CHECK DAM / SEDIMENT LOGS	905	X	A dam constructed across a grassed swale or road ditch.		X
	TEMPORARY DIVERSION	955		A temporary ridge or excavated channel or combination ridge and channel constructed across sloping land on a predetermined grade.		
	TEMPORARY SLOPE DRAIN	970		A flexible tubing or rigid conduit extending temporarily from the top to the bottom of a cut or fill slope.		
	TEMPORARY SLOPE DRAIN	970		A flexible tubing or rigid conduit extending temporarily from the top to the bottom of a cut or fill slope.		
	TEMPORARY SWALE	980		A temporary excavated drainageway.		
SEDIMENT CONTROL	CULVERT INLET PROTECTION	808		A temporary sediment filter located at the inlet to storm sewer culverts.		
	INLET PROTECTION - BLOCK & GRAVEL	850		A temporary sediment control barrier formed around a storm drain inlet by the use of standard concrete blocks and gravel.		
	INLET PROTECTION - EXCAVATED DRAIN	855		An excavated area in the approach to a storm drain drop inlet or curb inlet.		
	INLET PROTECTION - FABRIC DROP	860	X	A temporary fabric barrier placed around a drop inlet.		X
	INLET PROTECTION - GRAVEL &WIRE MESH	861		A temporary sediment control barrier formed around a storm drain inlet by the use of gravel and wire mesh.		
	INLET PROTECTION - SOD FILTER	862		A sediment filter formed around a storm drain drop inlet by the use of sod.		
	INLET PROTECTION - STRAW BALE BARRIER	863		A temporary sediment control barrier formed around a storm drain drop inlet consisting of a row of entrenched and anchored straw bales.		
	PORTABLE SEDIMENT TANK	895	X	A compartment container through which sediment-laden water is pumped to trap and retain the sediment.		X
	SILT FENCE	920	X	A temporary barrier of entrenched geotextile fabric (filter fabric) stretched across and attached to supporting posts used to intercept sediment laden runoff from small drainage areas of disturbed soil.		X
	STABILIZED CONSTRUCTION ENTRANCE	930		A stabilized pad of aggregate underlain with filter fabric located at any point where traffic will be entering or leaving a construction site to or from a public right-of-way, street, alley, sidewalk, or parking area.		
	STRAW BALE BARRIER	935		A temporary barrier consisting of a row of entrenched and anchored straw bales or similar material used to intercept sediment-laden runoff from small drainage areas of disturbed soil.		
	SUMP PIT	950		A temporary pit which is constructed to trap and filter water for pumping into a suitable discharge area.		
	TEMPORARY SEDIMENT TRAP	960		A small, temporary ponding basin formed by construction of an embankment or excavated basin.		
MISC.	DUST CONTROL	825		Control of dust blowing and movement on construction sites and roads.		
	TEMPORARY STREAM CROSSING (wetland consultant to provide detail)	975		A bridge, ford, or temporary structure installed across a stream or watercourse for short-term use by construction vehicles or heavy equipment.		
STORMWATER MANAGEMENT	FILTER STRIP	835	X	A created or preserved area of vegetation designed to remove sediment and other pollutants and to enhance the infiltration or surface water runoff.	X	
	GRASS-LINED CHANNEL	840	X	A natural or constructed channel that is shaped or graded to required dimensions and established with suitable vegetation for stable conveyance of runoff.	X	
	INFILTRATION TRENCH	847		An excavated trench filled with coarse granular material in which stormwater runoff is collected for temporary storage and infiltration.		
	LEVEL SPREADER	870		A device used to disperse concentrated runoff uniformly over the ground surface as sheet flow.		
	PERMEABLE PAVEMENT	890		A pavement consisting of structural materials having regularly interspersed void areas. The voids are filled with pervious materials, such as vegetated soil, gravel or sand.		
	SUBSURFACE DRAIN	945	X	A conduit installed beneath the ground surface to collect and/or convey drainage water.	X	
	URBAN STORMWATER WETLAND	800		A constructed system of shallow pools that create growing conditions suitable for emergent and riparian wetland plants explicitly designed to lessen the impacts of stormwater quality in urban areas		
	IMPOUNDMENT STRUCTURE - FULL FLOW	841		A dam or excavation which creates an impoundment to collect and store debris, sediment, or water.		
	IMPOUNDMENT STRUCTURE - ROUTED	841		A dam or excavation which creates an impoundment to collect and store debris, sediment, or water.		
SPECIAL AREA PROTECTION	STRUCTURAL STREAMBANK STABILIZATION	940		Stabilization of eroding streambanks by use of dimigned structural measures.		
	VEGETATIVE STREAMBANK STABILIZATION	995		The stabilization and protection of eroding streambanks with selected vegetation.		
	WELL DECOMMISSIONING	996		The sealing and permanent closure of a water well, boring, or monitoring well.		
	TREE & FOREST ECOSYSTEM PRESERVATION	984		The preservation of contiguous stands of trees from damaging during construction.		
	TREE & SHRUB PLANTING	985	X	Planting of selected trees and shrubs.	X	
	TREE PROTECTION	990		The protection of individual trees from damage during construction.		
	TREE PROTECTION - AUGERING	991		Underground construction such as utility work by auguring though an individual tree's Critical Root Zone.		

SOIL PROTECTION CHART

STABILIZATION TYPE	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG	SEPT.	OCT.	NOV.	DEC.
PERMANENT SEEDING			A			*	*			* A *		
DORMANT SEEDING	B										B	
TEMPORARY SEEDING			C				D					
SODDING			E									
MULCHING PLUS ANIONIC PAM	F											

A TURF GRASS MIX

A' NATIVE SEEDING

B KENTUCKY BLUEGRASS 135 LBS/AC MIXED W/ PERENNIAL RYE GRASS 45 LBS/AC PLUS 2 TONS STRAW MULCH/AC

C SPRING OATS 100 LBS/AC

D WHEAT OR CEREAL RYE 150 LBS/AC

E SOD

F STRAW MULCH 2 TONS/AC PLUS ANIONIC POLYACRYLAMIDE 18 LBS/ AC

* IRRIGATION NEEDED DURING JUNE & JULY

** IRRIGATION NEEDED FOR 2-3 WEEKS AFTER APPLYING SOD

EROSION CONTROL SPECS

NOTES:

This plan has been prepared to comply with the provisions of the NPDES Permit No. ILR10, which is issued by the Illinois Environmental Protection Agency for Stormwater Discharges from Construction Site Activities.

1. Site Description.

a. The following is a description of the construction activity which is the subject of this plan:

The proposed development consists of the installation of sanitary sewer, watermain and raingardens for a residential development.
The construction activities will include: grading, soil erosion and sedimentation control measures.

b. The following is a description of the intended sequence of major activities which will disturb soils for major portions of the construction site such as site clearing, excavation and grading.

The sequence of the construction activities may be as follows: 1) install silt barrier filter fence, 2) site clearing and 3) grading.

The soil erosion and sedimentation control items will be constructed as needed during the above construction activities.

c. The site contains approximately 2.94 acres. Approximately 0.84 acres will be disturbed by initial construction activities. Additional property will be disturbed for home construction.

d. The existing site is comprised of an existing farmstead and pavement. The site contains soils from the B hydrologic soil group. The proposed runoff curve number will be 88.

e. Refer to the grading plan for drainage patterns and slopes.

f. The nearest receiving water the site drains to is the City storm sewer system through overland flow.

2. Controls.

This plan addresses the various controls that will be implemented for each of the major construction activities described in 1.b above. For each measure discussed, the contractor will be responsible for its implementation as indicated. The contractor has signed the required certification on forms which are attached to, and are a part of, this plan.

a. Erosion and Sediment Controls.

(i) STABILIZATION PRACTICES. Provided below is a description of interim and permanent stabilization practices, including site-specific scheduling of the implementation of the practices. Site plans will ensure that existing vegetation is preserved where attainable and disturbed portions of the site will be stabilized. Except as provided in 2.a (i) (A) and 2.b. stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 10 days after the construction activity in that portions of the site where construction activity will not occur for a period of 14 or more calendar days.

(A) Where the initiation of stabilization measures by the 14th day after construction activity temporarily or permanently ceases is precluded by snow cover, stabilization measures shall be initiated as soon as practicable thereafter.

The following interim and permanent stabilization practices, as a minimum will be implemented to stabilize the disturbed area of the site:

1. Permanent/Temporary seeding
2. Erosion control blanket
3. Raingarden

(B). Erosion control structures must be inspected weekly and after every rain storm of one-half inch of rainfall or greater. Any repairs or replacement needed to ensure adequate erosion control must be made immediately. Items D-I will be repeated for each phase. Construction shall be scheduled in the following order:

A. Install silt fence
B. Tree removal where necessary (clear & grub), tree root pruning
C. Site demolition
D. Strip topsoil to stockpile
E. Grade the building pad
F. Install building foundation
G. Temporary stabilize all areas that have reached temporary grade
H. Install parking lot
I. Fine grade site topsoil/ topsoil respread
J. Permanently stabilize all areas upland areas
K. Grade and install bio-retention and bio-infiltration facilities
L. Permanently stabilize the bio-retention facilities
M. Remove all temporary soil erosion/sediment control measures after the site is stabilized with vegetation.

Any siltation of conduits, structures, or ditches shall be cleaned and maintained by the Contractor on a weekly basis, until the seeding has taken hold. All washouts, gullies, etc. will be regraded and reseeded by the Contractor, at the Contractor's expense. Sediment on public roads from the site shall not be flushed off with water. The Contractor's responsibility for erosion control shall extend throughout the construction process. The Contractor shall be responsible for cleanup of paved surfaces within and adjacent to the project. The contractor shall be responsible for any additional erosion control measures suggested by the Enforcement Officer if any erosion is found to be taking place.

All erosion control practices shall be in compliance with the latest revision of the "Standard Specifications for Road and Bridge Construction," by the Illinois Department of Transportation and with the Illinois Environmental Protection Agency's "Illinois Urban Manual."

(ii) STRUCTURAL PRACTICES. Provided below is a description of structural practices that will be implemented, to the degree attainable, to divert flows from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from exposed area of the site. The installation of these devices may be subject to Section 404 of the Clean Water Act.

1. Silt fence
2. Inlet protection

b. Stormwater Management.

(i) Provided below is a description of measures that will be installed during the construction process to control pollutants in stormwater discharges that will occur after construction operations have been completed. The installation of these devices may be subject to Section 404 of the Clean Water Act.

The practices selected for implantation were determined on the basis of the technical guidance contained in IEPA's Standard Specifications for Soil Erosion and Sedimentation Control, and other ordinances listed in the Construction Specifications. The stormwater pollutant control measures shall include:

1. Bio-retention
2. Infiltration

(ii) Velocity dissipation devices will be placed at discharge locations and along the length of any outfall channel as necessary to provide a non-erosive velocity flow from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g., maintenance of hydrologic conditions, such as the hydroperiod and hydrodynamics present prior to the initiation of construction activities).

Stormwater Management Control includes:

1. Vegetative channels
2. Outlet protection using rip-rap
3. Inlet protection using filter fabric

(iii) The stormwater pollution prevention plan shall be designed for a storm event equal to or greater than a 25-year 24-hour rainfall event.

c. Other Controls.

(i) Waste Disposal. The solid waste materials including trash, construction debris, excess construction materials, machinery, tools and other items will be collected and disposed off-site by the contractor. The contractor is responsible to acquire any permit required for such disposal. Burning on the site will not be permitted. No solid materials, including building materials, shall be discharged into Waters of the State, except as authorized by a Section 404 permit.

(ii) Concrete Waste Management. The solid materials generated from concrete truck washout shall be deposited only in the designated washout areas. The contractor shall collect and dispose the contaminants offsite. The contractor is responsible to acquire any permits required for such disposal.

(iii) The provisions of this plan shall ensure and demonstrate compliance with applicable State and/or local waste disposal, sanitary sewer or septic system regulations.

d. Approved State or Local Plans.

(i) The management practices, controls and other provisions contained in this plan are at least as protective as the requirements contained in the Illinois Environmental Protection Agency's Illinois Urban Manual 2002. Requirements specified in sediment and erosion control site plans or site permits or stormwater management site plans or site permits approved by local officials that are applicable to protecting surface water resources, upon submittal of an NOI to be authorized to discharge under this permit, incorporated by reference and are enforceable under this permit.

3. Maintenance.

The following is a description of procedures that will be used to maintain, in good and effective operating conditions, vegetation, erosion and sediment control measures and other protective measures identified in this plan and Standard Specifications.

Vegetative erosion control measures: The vegetative growth of temporary and permanent seeding, sodding, vegetative channels, vegetative filter, etc. shall be maintained periodically and supply adequate watering. The vegetative cover shall be reseeded as necessary.

Silt filter fence: The damaged silt filter fence shall be restored to meet the standards or removed and replaced as needed.

Sediment Logs: The sediment logs shall be inspected frequently and shall be repaired or removed and replaced as needed.

Rip-rap outlet protection: It shall be inspected after high flows for any scour beneath the rip-rap or for stones that have been dislodged. It shall be repaired immediately.

4. Inspections

Qualified personnel (provided by the permittee) shall inspect disturbed areas of the construction site that have not been finally stabilized, structural control measures, and locations where vehicles enter or exit the site at least once every seven calendar days and within 24 hours of the end of a storm that is 0.50 inches or greater of rain or equivalent snowfall. Qualified personnel means a person knowledgeable in the principles and practices of erosion and sediment control measures, such as a licensed Professional Engineer (P.E.),a Certified Professional in Erosion and Sediment Control (CPESC), a Certified Erosion and Sediment and Storm Water Inspector (CESSWI) or other knowledgeable person who possesses the skills to assess conditions at the construction site that could impact storm water quality and to assess the effectiveness of any sediment and erosion control measures selected to control the quality of storm water discharges from the construction activities.

a. Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. Erosion and sediment control measures shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters. Locations where vehicles enter or exit the site shall be inspected for evidence of offsite sediment tracking.

b. Based on the results of the inspection, the description of potential pollutant sources identified in the plan in accordance with the Site Description of this permit and pollution prevention measures identified in the plan shall be revised as appropriate as soon as practicable after such inspection. Such modifications shall provide for timely implementation of any changes to the plan within 7 calendar days following the inspection.

c. A report summarizing the scope of the inspection, the name(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of the storm water pollution prevention plan, and actions taken in accordance with paragraph b above shall be made and retained as part of the storm water pollution prevention plan for at least 3 years after the date of inspection. The report shall be signed in accordance with the Signatory Requirements of this permit.

d. The permittee shall notify the appropriate Agency Field Operations Section office by email at: epa.swnoncomp@illinois.com, telephone or fax within 24 hours of any incidence of noncompliance for any violation of the storm water pollution prevention plan observed during any inspection conducted, or for violations of any condition of this permit. The permittee shall complete and submit within 5 days an "Incidence of Noncompliance" (ION) report for any violation of the storm water pollution prevention plan observed during an inspection conducted, including those not required by the Plan. Submission shall be on forms provided by the Agency and include specific information on the cause of noncompliance, actions which were taken to prevent any further causes of noncompliance, and a statement detailing any environment impact which may have resulted from the noncompliance.

e. All reports of noncompliance shall be signed by a responsible authority as defined in Part VI.G (Signatory Requirements).

f. After the initial contact has been made with the appropriate Agency Field Operations Section Office, all reports of noncompliance shall be mailed to the Agency at the following address:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Compliance Assurance Section
1021 North Grand East
Post Office Box 19276
Springfield, IL 62794-9276

5. Non-Stormwater Discharges.

Except for flows from fire fighting activities, sources of non-stormwater that may be combined with stormwater discharges associated with the construction activity addressed in this plan are described below:

1. Watering for dust control
2. Irrigation drainage for vegetative growth for seeding, etc.

The pollution prevention measures, as described below, will be implemented for non-stormwater components of the discharge. The erosion due to irrigation of seeding shall be considered minor. Contractor to provide the above non-stormwater discharges control to the standard specification required by the Village or the approved equal.

6. End of construction season/winter construction:

The condition of the construction site for winter shutdown shall be addressed early in the Fall growing season so that slopes and other bare earth areas may be stabilized with temporary and/or permanent vegetative cover for proper erosion and sediment control. All open areas that are to remain idle throughout the winter shall receive temporary erosion control measures including temporary seeding, mulching or erosion blanket prior to the end of the fall growing season. The areas to be worked beyond the end of the growing season must incorporate cover such as erosion blanket and heavy mulching.

In general, unless altered by unseasonably warm or cold conditions, no seeding shall be placed between October 15 and November 15. Dormant seeding shall be placed on any unstabilized areas remaining after November 15 (where active grading has ceased). Dormant seeding shall be of the appropriate mixture for temporary or permanent seeding, but shall be placed at 150% of the normal rate. Dormant seeding shall also be covered with erosion blanket (where specified on the erosion control sheet) or with straw mulch at a rate of 2 ton/acre. If straw is placed, it shall be crimped into the soil by running over it with a tractor/bulldozer or similar tracked machine.

Underground utility work may continue at the contractor's discretion. After November 15, once a portion of a trench is backfilled, it shall immediately be treated with dormant seeding & stabilized as described above. Any grading that continues past November 15, shall be phased to minimize the amount of area being actively disturbed. Ongoing grading and stockpiles shall be surrounded with silt fence on the downhill edge and along curbs until areas are stabilized with erosion blanket.

7. Records

The permittee shall retain copies of the plan and all reports and notices required by the General Permit, and records of all data used to complete the Notice of Intent (NOI) to be covered by the General Permit, for a period of at least 3 years from the date that the site is finally stabilized. The period may be extended by the request of the IEPA at any time.

The permittee shall retain a copy of the plan required by the General Permit at the construction site from the date of the project initiation to the date of final stabilization.

Owner Certification Statement

"I certify under the penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature _____ Date _____

Title _____

Name of Firm _____

Address _____

City _____ State _____ Zip Code _____

Phone Number _____

Contractor Certification Statement

"I certify under the penalty of law that I understand the terms of the general National Pollutant Discharge Elimination System (NPDES) permit (ILR10) that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification."

Signature _____ Date _____

Title _____

Name of Firm _____

Address _____

City _____ State _____ Zip Code _____

Phone Number _____

Contractor Certification Statement

"I certify under the penalty of law that I understand the terms of the general National Pollutant Discharge Elimination System (NPDES) permit (ILR10) that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification."

Signature _____ Date _____

Title _____

Name of Firm _____

Address _____

City _____ State _____ Zip Code _____

Phone Number _____

EROSION BLANKET NOTES:

1. CONTRACTOR TO REQUEST STAPLE PATTERN TO BE SPRAYED ONTO BLANKETS WHEN ORDERING MATERIALS.
2. THE FAILURE CRITERIA FOR EACH BLANKET IS 1/2" SOIL LOSS.
3. A SUBSTITUTED BLANKET MUST MEET THE MINIMUM REQUIREMENTS OF THE PROVIDED SPECIFICATIONS.

FAILURE TO COMPLY:

IN THE EVENT A NOTICE OF VIOLATION IS ISSUED ON THIS PROJECT, ANY AND ALL FINES WILL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE OWNER, OWNER'S REPRESENTATIVE, OR OTHER OWNER'S AGENTS WILL NOT PARTICIPATE IN ANY PAYMENT OR REIMBURSEMENT FOR FINES AND WILL NOT AUTHORIZE TIME EXTENSIONS DUE TO DELAYS IN PROJECT PROGRESS FOR WORK STOPPAGE REQUIRED TO REMEDY THE VIOLATIONS.

ENGINEERING YOUR SUCCESS

J. CONDON & ASSOCIATES, INC.
CONSULTING ENGINEERS
5415 BUSINESS PARK DR.
RINGWOOD, ILLINOIS 60072
815.728.0068

IL DESIGN FIRM # 184-006759

HABITAT FOR HUMANITY
ELGIN, ILLINOIS

NO.	DATE	DESCRIPTION
1	12/18/17	PER CITY REVIEW

SCALE: N/A
ISSUE DATE: 10/10/2017
PROJECT MANAGER: MAM
DESIGNER: MAM
QUALITY CONTROL: JEC

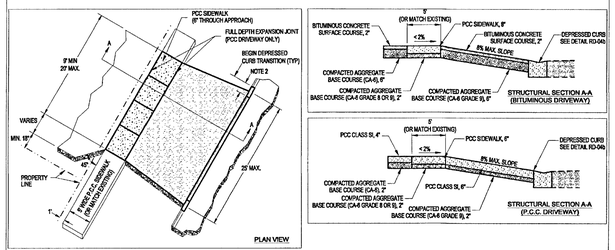
FOX VALLEY FARMS
CRYSTAL LAKE, ILLINOIS

PROJECT NUMBER: HABI-17038-3

SHEET TITLE
SEDIMENT & EROS CONTROL SPECIFICATIONS

SHEET NUMBER
C.6

RD-01b



NOTES:

1. FOR THICKNESS OF PAVEMENT "T", VERTICAL THICKNESS OF THE GUTTER FLAG SHALL BE A MINIMUM OF 8 INCHES. FOR HMA BASE COURSE PAVEMENT SECTIONS THE GUTTER FLAG SHALL BE SAME THICKNESS AS PAVEMENT STRUCTURE.
2. TRANSITION FROM FULL CURB TO DEPRESSED CURB IN 1 TO 1.5 LINEAL FEET. ALSO, THE DRIVEWAY SHALL BE NO LESS THAN 3/4 OF THE DEPRESSION.
3. DRIVEWAY APPROACH SHALL MEET CURB AND GUTTER AT A POINT BETWEEN FULL CURB AND ONE-HALF CURB HEIGHT.
4. DRIVEWAY FLARE SHALL BE SYMMETRIC ABOUT THE DRIVEWAY CENTERLINE, AS MEASURED AT THE PROPERTY LINE, UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.

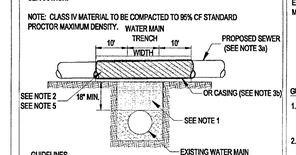
Revised:	Drawing Name	Drawing Number	
1. 06/12/2015	DRIVEWAY: RESIDENTIAL APPROACH	RD-01b	City of Crystal Lake Illinois
2.		Date: 01/30/15	
3.		Drawn DD / Checked AW	
4.			

LI:ENGINEERING AND BUILDING ENGINEERING DETAILS AND STANDARDS

UG-04a

EXISTING WATER MAIN BELOW PROPOSED SEWER LINE WITH 18" MINIMUM SEPARATION.

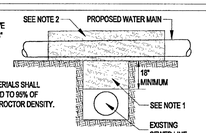
NOTE: CLASS IV MATERIAL TO BE COMPACTED TO 95% OF STANDARD PROCTOR MAXIMUM DENSITY.



GUIDELINES

1. IF THE SELECT GRANULAR BACKFILL EXISTS; REMOVE WITHIN WIDTH OF PROPOSED SEWER TRENCH AND REPLACE WITH SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT.
2. OMIT SELECT GRANULAR CRADLE AND GRANULAR BACKFILL TO ONE (1) FOOT OVER TOP 10 FEET ON EITHER SIDE OF THE WATER MAIN.
3a. CONSTRUCT 10 FEET OF PROPOSED SEWER OF WATER MAIN MATERIAL AND PRESSURE TEST, OR
3b. USE 10 FEET OF CASING FOR PROPOSED SEWER AND SEAL ENDS OF CASING.
4. POINT LOADS SHALL NOT BE ALLOWED BETWEEN SEWER OR SEWER CASING AND WATER MAIN
5. PROVIDE ADEQUATE SUPPORT FOR EXISTING WATER MAIN TO PREVENT DAMAGE DUE TO SETTLEMENT OF SEWER TRENCH.

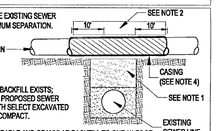
PROPOSED WATER MAIN ABOVE EXISTING SEWER LINE WITH 18" MINIMUM SEPARATION.



GUIDELINES

1. IF THE SELECT GRANULAR BACKFILL EXISTS; REMOVE WITHIN WIDTH OF PROPOSED SEWER TRENCH AND REPLACE WITH SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT.
2. OMIT SELECT GRANULAR CRADLE AND GRANULAR BACKFILL TO ONE (1) FOOT OVER TOP 10 FEET ON EITHER SIDE OF THE WATER MAIN.

PROPOSED WATER MAIN ABOVE EXISTING SEWER LINE WITH LESS THAN 18" MINIMUM SEPARATION.



GUIDELINES

1. IF THE SELECT GRANULAR BACKFILL EXISTS; REMOVE WITHIN WIDTH OF PROPOSED SEWER TRENCH AND REPLACE WITH SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT.
2. OMIT SELECT GRANULAR CRADLE AND GRANULAR BACKFILL TO ONE (1) FOOT OVER TOP 10' FEET ON EITHER SIDE OF THE WATER MAIN.
3. POINT LOADS SHALL NOT BE ALLOWED BETWEEN SEWER OR SEWER CASING AND WATER MAIN
4. USE A CASING FOR PROPOSED WATER MAIN AND SEAL ENDS OF CASING.

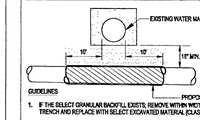
*THE REQUIREMENTS ON THIS DETAIL ARE TAKEN FROM THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS (SEE PAGES 160-173)

Revised:	Drawing Name	Drawing Number	
1. 06/12/2015	WATER AND SEWER SEPARATION REQUIREMENTS	UG-04a	City of Crystal Lake Illinois
2.		Date: 04/15/2007	
3.		Drawn EM / Checked AW	
4.			

LI:ENGINEERING AND BUILDING ENGINEERING DETAILS AND STANDARDS

UG-04b

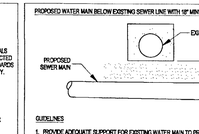
PROPOSED WATER MAIN ABOVE EXISTING SEWER LINE WITH 18" MINIMUM SEPARATION



GUIDELINES

1. IF THE SELECT GRANULAR BACKFILL EXISTS; REMOVE WITHIN WIDTH OF PROPOSED SEWER TRENCH AND REPLACE WITH SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT.
2. OMIT SELECT GRANULAR CRADLE AND GRANULAR BACKFILL TO ONE (1) FOOT OVER TOP FEET ON EITHER SIDE OF THE WATER MAIN.
3. PROVIDE ADEQUATE SUPPORT FOR EXISTING SEWER LINE TO PREVENT DAMAGE DUE TO SETTLEMENT.

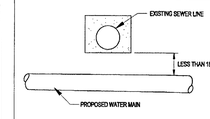
PROPOSED WATER MAIN BELOW EXISTING SEWER LINE WITH 18" MINIMUM SEPARATION



GUIDELINES

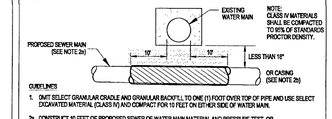
1. PROVIDE ADEQUATE SUPPORT FOR EXISTING WATER MAIN TO PREVENT DAMAGE DUE TO SETTLEMENT OF SEWER TRENCH.
2. MAINTAIN 18" MINIMUM VERTICAL SEPARATION FOR 10 FEET HORIZONTALLY.

PROPOSED WATER MAIN BELOW EXISTING SEWER LINE WITH < 18" MIN. SEPARATION



NOT ALLOWED: MUST MAINTAIN 18" VERTICAL SEPARATION

PROPOSED SEWER LINE BELOW EXISTING WATER MAIN WITH LESS THAN 18" SEPARATION



GUIDELINES

1. OMIT SELECT GRANULAR CRADLE AND GRANULAR BACKFILL TO ONE (1) FOOT OVER TOP OF PIPE AND USE SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT FOR 10 FEET ON EITHER SIDE OF WATER MAIN.
2a. CONSTRUCT 10 FEET OF PROPOSED SEWER OF WATER MAIN MATERIAL AND PRESSURE TEST, OR
2b. USE 10 FEET OF CASING FOR PROPOSED SEWER AND SEAL ENDS OF CASING.
3. POINT LOADS SHALL NOT BE ALLOWED BETWEEN SEWER OR SEWER CASING AND WATER MAIN.
4. PROVIDE ADEQUATE SUPPORT FOR EXISTING WATER MAIN TO PREVENT DAMAGE DUE TO SETTLEMENT OF SEWER TRENCH.

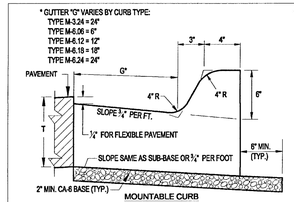
*THE REQUIREMENTS ON THIS DETAIL ARE TAKEN FROM THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS (SEE PAGES 160-173)

Revised:	Drawing Name	Drawing Number	
1. 06/12/2015	WATER AND SEWER SEPARATION REQUIREMENTS	UG-04b	City of Crystal Lake Illinois
2.		Date: 04/15/2007	
3.		Drawn EM / Checked AW	
4.			

LI:ENGINEERING AND BUILDING ENGINEERING DETAILS AND STANDARDS

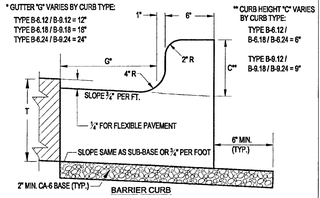
RD-05a

* GUTTER "G" VARIES BY CURB TYPE:
TYPE M-3.24 = 24"
TYPE M-6.06 = 6"
TYPE M-6.12 = 12"
TYPE M-6.18 = 18"
TYPE M-6.24 = 24"



* GUTTER "G" VARIES BY CURB TYPE:
TYPE B-6.12 / B-8.12 = 12"
TYPE B-6.18 / B-8.18 = 18"
TYPE B-6.24 / B-8.24 = 24"

** CURB HEIGHT "C" VARIES BY CURB TYPE:
TYPE B-6.12 / B-6.18 / B-6.24 = 6"
TYPE B-8.12 / B-8.18 / B-8.24 = 9"



NOTES:

THICKNESS - T - THICKNESS OF PAVEMENT WHEN CURB AND GUTTER IS CONSTRUCTED ADJACENT TO FLEXIBLE OR RIGID PAVEMENT. THE VERTICAL THICKNESS OF THE GUTTER FLAG SHALL BE 9". ALSO, THE BARS SHALL BE OMITTED.

DRAINAGE OPENINGS - AT ALL LOCATIONS WHERE METAL CASTINGS ARE TO BE INCORPORATED IN THE CURB AND GUTTER, A 1" THICK PRE FORMED EXPANSION JOINT FILLER, CONFORMING TO THE CROSS SECTIONS OF THE CURB AND GUTTER, SHALL BE INSTALLED IN THE CURB AND GUTTER A DISTANCE OF 5 FT. FROM EACH SIDE OF THE METAL CASTING. WHEN THE WIDTH OF THE METAL CASTING IS LESS THAN THE WIDTH OF THE CURB AND GUTTER, 2 - NO. 4 REBARS, 5' + 2' + CASTING LENGTH + 12", SHALL BE INCORPORATED IN THE CONTINUOUS OF CONCRETE GUTTER IN FRONT OF THE CASTING.

TRANSITIONS - THE TRANSITION FROM FULL HEIGHT CURB TO DEPRESSED CURB SHALL BE MADE AT THE RATE OF 3" PER FOOT OF LENGTH OR FLATTER.

(2) - NO. 4 STEEL REINFORCING BARS SHALL BE INCORPORATED OVER TRENCH CROSSINGS IF REQUIRED BY THE CITY ENGINEER.

JOINTS - IN ADDITION TO THE REQUIREMENTS OF ARTICLE 606.06 OF THE STANDARD SPECIFICATIONS, JOINTS SHALL BE CONSTRUCTED AS FOLLOWS:

CONTRACTION JOINTS AND EXPANSION JOINTS SHALL BE INSTALLED IN THE CURB OR CURB AND GUTTER IN PREFABRICATION WITH JOINTS IN ADJACENT P.C.C. PAVEMENT OR BASE COURSE.

WHEN CURB AND GUTTER IS CONSTRUCTED ADJACENT TO FLEXIBLE PAVEMENT, A 1" THICK PRE-FORMED EXPANSION JOINT FILLER, CONFORMING TO THE CROSS SECTION OF THE CURB AND GUTTER, SHALL BE INSTALLED AT POINTS OF CURVATURE FOR SHORT RADIUS CURVES AND AT CONSTRUCTION JOINTS. CONTRACTION JOINTS SHALL BE PLACED BETWEEN EXPANSION JOINTS AT DISTANCES NOT TO EXCEED 5 FEET.

ALL EXPANSION JOINTS SHALL BE PROVIDED WITH A 1" DIA. X 18" COATED SMOOTH DOWEL BAR CONFORMING TO AASHTO M-254, OR M-31. THE BARS SHALL BE PLACED ON 6" CENTERS (MINIMUM 2 PER JOINT).

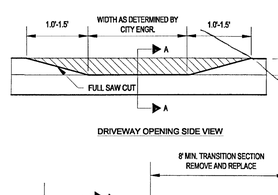
ALL CONSTRUCTION JOINTS SHALL BE PROVIDED WITH 1/2" DIA. DEFORMED STEEL TIE BARS 30" LONG CONFORMING TO AASHTO M-31, OR M-53. THE BARS SHALL BE PLACED ON 6" CENTERS (MINIMUM 2 PER JOINT).

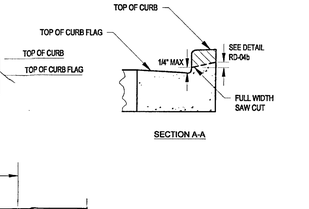
EXPANSION JOINTS SHALL BE PLACED AT INTERVALS NOT TO EXCEED 100 FEET.

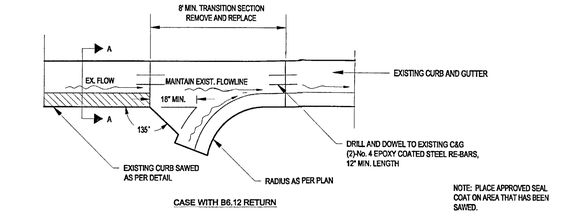
Revised:	Drawing Name	Drawing Number	
1. 06/12/2015	CURB: CONCRETE CURB AND GUTTER	RD-05a	City of Crystal Lake Illinois
2.		Date: 04/15/2015	
3.		Drawn DD / Checked AW	
4.			

LI:ENGINEERING AND BUILDING ENGINEERING DETAILS AND STANDARDS

RD-04a







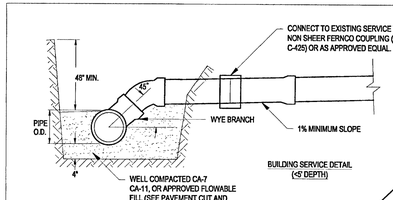
CASE WITH B6.12 RETURN

NOTE: PLACE APPROVED SEAL COAT ON AREA THAT HAS BEEN SAWED.

Revised:	Drawing Name	Drawing Number	
1. 06/12/2015	DEPRESSED CURB: ENTRANCE BY SAWING	RD-04a	City of Crystal Lake Illinois
2.		Date: 01/30/15	
3.		Drawn DD / Checked AW	
4.			

LI:ENGINEERING AND BUILDING ENGINEERING DETAILS AND STANDARDS

US-01



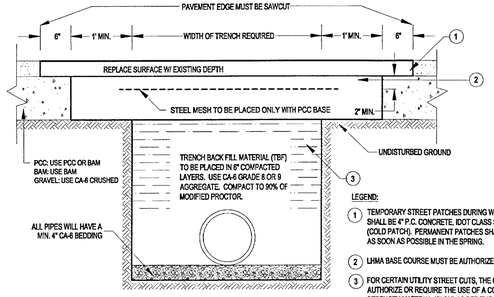
NOTES:

1. THIS DRAWING FOR PUBLIC RIGHT-OF-WAY. ALSO SEE ORDINANCE NO. 5103.
2. ON EXISTING SEWER MAIN, CONNECTIONS SHOULD BE CORED AND A NON-SHEER STAINLESS STEEL SADDLE INSTALLED. SEE DETAIL US-03.
3. NEW SERVICE MATERIALS:
   6" MIN. PVC SDR 26 OR SDR 35 PIPE
   4" MIN. CAST IRON OR DUCTILE IRON PIPE

Revised:	Drawing Name	Drawing Number	
1. 06/12/2015	SANITARY SERVICE RISER (DEPTH <10')	US-01	City of Crystal Lake Illinois
2.		Date: 06/10/2015	
3.		Drawn JH / Checked VR	
4.			

LI:ENGINEERING AND BUILDING ENGINEERING DETAILS AND STANDARDS

RD-06



LEGEND:

1. TEMPORARY STREET PATCHES DURING WINTER CONSTRUCTION SHALL BE 4" P.C. CONCRETE, IDOT CLASS SI OR A MIN. 3" OF U/M (COLD PATCH). PERMANENT PATCHES SHALL BE COMPLETED AS SOON AS POSSIBLE IN THE SPRING.
2. LHMA BASE COURSE MUST BE AUTHORIZED BY THE CITY ENGINEER.
3. FOR CERTAIN UTILITY STREET CUTS, THE CITY ENGINEER MAY AUTHORIZE OR REQUIRE THE USE OF A CONTROLLED LOW-STRENGTH MATERIAL (CLSM) AS PER THE IDOT SPECIAL PROVISIONS.

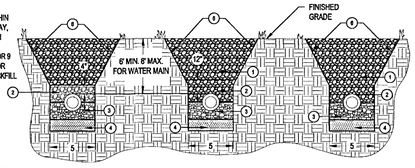
Revised:	Drawing Name	Drawing Number	
1. 06/12/2015	PAVEMENT CUT AND REPLACEMENT	RD-06	City of Crystal Lake Illinois
2.		Date: 05/19/2015	
3.		Drawn JH / Checked AW	
4.			

LI:ENGINEERING AND BUILDING ENGINEERING DETAILS AND STANDARDS

UG-03

LEGEND:

1. TRENCH BACKFILL TO SUBGRADE AND WITHIN 2 FEET OF PROPOSED PAVEMENT, DRIVEWAY, CURB AND GUTTER OR SIDEWALK. TRENCH BACKFILL MATERIALS SHALL BE IDOT APPROVED GRADATION CA-6, GRADE 7, 8, OR 9 COMPACTED TO 95% OF MODIFIED PROCTOR DENSITY. IN NON-STRUCTURAL AREAS BACKFILL WITH APPROVED EXCAVATED MATERIALS.
2. INITIAL BACKFILL TO DEPTH AS INDICATED. MATERIAL SHALL BE IDOT APPROVED GRADATION CA-6, GRADE 7, 8, OR 9.
3. PIPE BEDDING SHALL BE FRACTURED GRANULAR MATERIAL IDOT GRADATION CA-7 OR CA-11 FROM 4 INCHES BELOW BOTTOM OF PIPE TO HORIZONTAL CENTER OF PIPE.
4. UNSUITABLE MATERIAL TO BE REMOVED WHERE DIRECTED BY THE ENGINEER AND REPLACED WITH COMPACTED SUITABLE MATERIAL.
5. TRENCH WIDTH:
   PIPE O.D. + 12 INCHES MINIMUM
   PIPE I.D. + 18 INCHES MAXIMUM
6. CONTRACTORS SHALL COMPLY WITH ALL CURRENT OSHA STANDARDS.

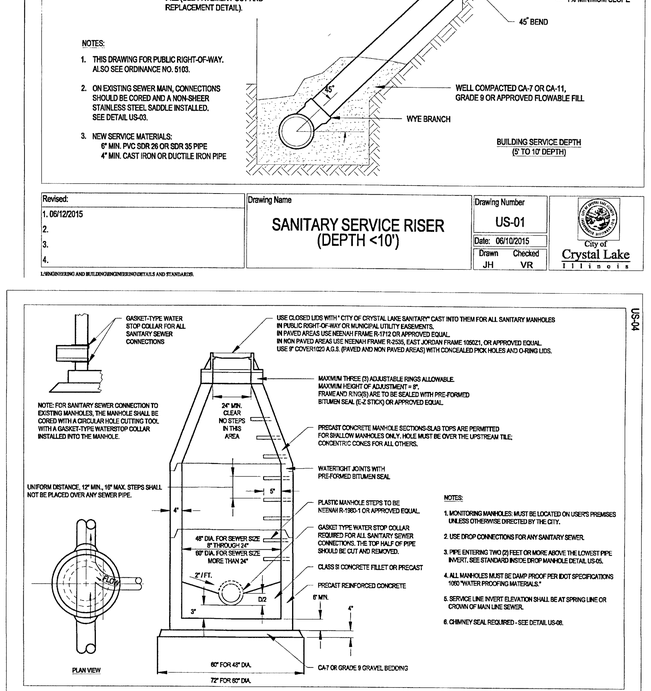


* NOTE: ALL DUCTILE IRON SHALL BE SUBJECT TO POLY WRAP PER CITY ENGINEER

Revised:	Drawing Name	Drawing Number	
1. 06/12/2015	TYPICAL TRENCH CROSS SECTION	UG-03	City of Crystal Lake Illinois
2.		Date: 05/29/2015	
3.		Drawn JH / Checked AW	
4.			

LI:ENGINEERING AND BUILDING ENGINEERING DETAILS AND STANDARDS

US-04



NOTES:

1. MONITORING MANHOLES: MUST BE LOCATED ON USER'S PREMISES UNLESS OTHERWISE DIRECTED BY THE CITY.
2. USE DROP CONNECTIONS FOR ANY SANITARY SEWER.
3. PIPE ENTERING TWO (2) FEET OR MORE ABOVE THE LOWEST PIPE INVERT, SEE STANDARD INSIDE DROP MANHOLE DETAIL US-05.
4. ALL MANHOLES MUST BE DAMP PROOF PER IDOT SPECIFICATIONS 1080 "WATER PROOFING MATERIALS."
5. SERVICE LINE INVERT ELEVATION SHALL BE AT SPRING LINE OR CROWN OF MAIN LINE SEWER.
6. CHIMNEY SEAL REQUIRED - SEE DETAIL US-08.

Revised:	Drawing Name	Drawing Number	
1. 06/12/2015	STANDARD SANITARY AND MONITORING MANHOLE	US-04	City of Crystal Lake Illinois
2.		Date: 06/12/2015	
3.		Drawn JH / Checked VR	
4.			

LI:ENGINEERING AND BUILDING ENGINEERING DETAILS AND STANDARDS

J. CONDON & ASSOCIATES, INC.
CONSULTING ENGINEERS
5415 BUSINESS PARKWAY
RINCWOOD, ILLINOIS 60072
815.728.0068
IL DESIGN FIRM # 184-006759

HABITAT FOR HUMANITY

ELGIN, ILLINOIS

SCALE: N/A

ISSUE DATE: 10/10/2017

PROJECT MANAGER: MAM

DESIGNER: MAM

QUALITY CONTROL: JEC

FOX VALLEY FARMS

CRYSTAL LAKE, ILLINOIS

NO.	DATE	DESCRIPTION
1	12/18/17	PER CITY REVIEW

PROJECT NUMBER: HABI-17038-3

SHEET TITLE: STANDARD DETAILS

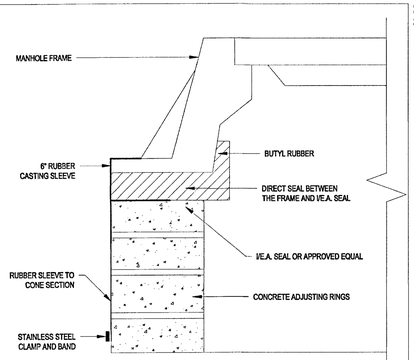
SHEET NUMBER: C.7

US-06

INTERNAL / EXTERNAL CHIMNEY SEAL I/E.A. SEAL

ALL SANITARY MANHOLES SHALL BE INSTALLED WITH AN INTERNAL / EXTERNAL CHIMNEY SEAL WITH A RUBBER SLEEVE TO SEAL THE OUTSIDE OF THE CHIMNEY FROM THE TOP OF THE CORBEL TO THE MANHOLE FRAME. THE SEAL SHALL BE INSTALLED PER THE INSTALLATION INSTRUCTIONS AND AS DIRECTED BY THE ENGINEER.

CHIMNEY SEAL TO BE ADAPTER INC. BRAND OR APPROVED EQUAL. THEY SHALL BE INSTALLED DURING CONSTRUCTION AND SET TO FINAL GRADE. ANY STRUCTURE THAT IS IN THE ROADWAY MUST BE RAMPED UNTIL FINAL SURFACE IS PLACED.

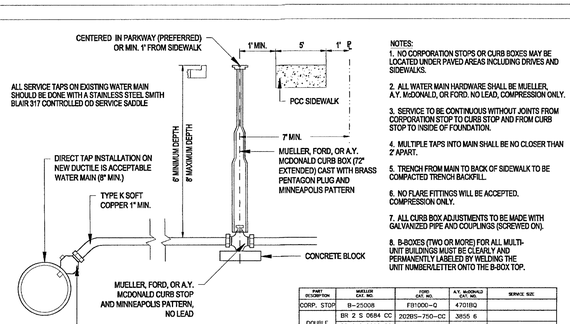


THE INTERNAL/EXTERNAL ADAPTER SEAL IS MANUFACTURED TO FIT ALL MANHOLE FRAMES TO ANY DIMENSIONS OF HEIGHT AND INSIDE OR OUTSIDE DIAMETERS.

Revised:	Drawing Name	Drawing Number	
1. 06/12/2015	INTERNAL / EXTERNAL CHIMNEY SEAL	US-06	
2.		Date: 05/29/2015	
3.		Drawn: JH	Checked: VR
4.		City of Crystal Lake Illinois	

ILENGINEERING AND BUILDINGENGINEERINGDETAILS AND STANDARDS

UW-04



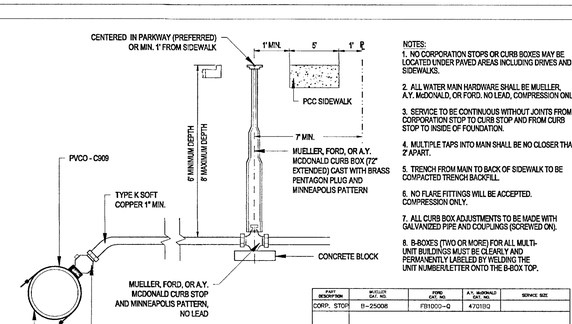
NOTES:
1. NO CORPORATION STOPS OR CURB BOXES MAY BE LOCATED UNDER PAVED AREAS INCLUDING DRIVES AND SIDEWALKS.
2. ALL WATER MAIN HARDWARE SHALL BE MUELLER, A.Y. McDONALD, OR FORD. NO LEAD, COMPRESSION ONLY.
3. SERVICE TO BE CONTINUOUS WITHOUT JOINTS FROM CORPORATION STOP TO CURB STOP AND FROM CURB STOP TO INSIDE OF FOUNDATION.
4. MULTIPLE TAPS INTO MAIN SHALL BE NO CLOSER THAN 2' APART.
5. TRENCH FROM MAIN TO BACK OF SIDEWALK TO BE COMPACTED TRENCH BACKFILL.
6. NO FLARE FITTINGS WILL BE ACCEPTED. COMPRESSION ONLY.
7. ALL CURB BOX ADJUSTMENTS TO BE MADE WITH GALVANIZED PIPE AND COUPLINGS (SCREWED ON).
8. B-BOXES (TWO OR MORE) FOR ALL MULTI-UNIT BUILDINGS MUST BE CLEARLY AND PERMANENTLY LABELED BY WELDING THE UNIT NUMBER/LETTER ONTO THE B-BOX TOP.

PART DESCRIPTION	MUELLER CAT. NO.	FORD CAT. NO.	A.Y. MCDONALD CAT. NO.	SERVICE SIZE
CORP. STOP	B-25008	FB1000-Q	4701BQ	
DOUBLE STRAP SERVICE SADDLE	BR 2 S 0684 CC	202BS-750-CC	3855 6	
	BR 2 S 0899 CC	202BS-962-CC	3855 8	
	BR 2 S 1104 CC	202BS-1212-CC	3855 10	
	BR 2 S 1394 CC	202BS-1438-CC	3855 12	
STOP CURB	B-25155	B44-M-Q	6104Q	
CURB BOX	H-10300	EM2-60-56	5614	1" & 1.25" A.Y. McD.
	H-10300-99000	EM2-60-57	5615	1.25" FORD, 1.5" & 2"

Revised:	Drawing Name	Drawing Number	
1. 06/12/2015	WATER SERVICE INSTALLATION FOR DUCTILE AND CAST IRON WATER MAIN	UW-04	
2.		Date: 03/17/2014	
3.		Drawn: DD	Checked: VR
4.		City of Crystal Lake Illinois	

ILENGINEERING AND BUILDINGENGINEERINGDETAILS AND STANDARDS

UW-04a



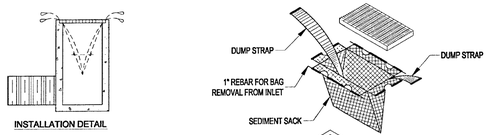
NOTES:
1. NO CORPORATION STOPS OR CURB BOXES MAY BE LOCATED UNDER PAVED AREAS INCLUDING DRIVES AND SIDEWALKS.
2. ALL WATER MAIN HARDWARE SHALL BE MUELLER, A.Y. McDONALD, OR FORD. NO LEAD, COMPRESSION ONLY.
3. SERVICE TO BE CONTINUOUS WITHOUT JOINTS FROM CORPORATION STOP TO CURB STOP AND FROM CURB STOP TO INSIDE OF FOUNDATION.
4. MULTIPLE TAPS INTO MAIN SHALL BE NO CLOSER THAN 2' APART.
5. TRENCH FROM MAIN TO BACK OF SIDEWALK TO BE COMPACTED TRENCH BACKFILL.
6. NO FLARE FITTINGS WILL BE ACCEPTED. COMPRESSION ONLY.
7. ALL CURB BOX ADJUSTMENTS TO BE MADE WITH GALVANIZED PIPE AND COUPLINGS (SCREWED ON).
8. B-BOXES (TWO OR MORE) FOR ALL MULTI-UNIT BUILDINGS MUST BE CLEARLY AND PERMANENTLY LABELED BY WELDING THE UNIT NUMBER/LETTER ONTO THE B-BOX TOP.

PART DESCRIPTION	MUELLER CAT. NO.	FORD CAT. NO.	A.Y. MCDONALD CAT. NO.	SERVICE SIZE
CORP. STOP	B-25008	FB1000-Q	4701BQ	
SERVICE SADDLE	TYPE TO BE APPROVED BY CITY ENGINEER			
STOP CURB	B-25155	B44-M-Q	6104Q	
CURB BOX	H-10300	EM2-60-56	5614	1" & 1.25" A.Y. McD.
	H-10300-99000	EM2-60-57	5615	1.25" FORD, 1.5" & 2"

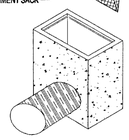
Revised:	Drawing Name	Drawing Number	
1. 06/12/2015	WATER SERVICE INSTALLATION FOR PVCO - C909 WATER MAIN	UW-04a	
2.		Date: 06/11/2015	
3.		Drawn: JH	Checked: VR
4.		City of Crystal Lake Illinois	

ILENGINEERING AND BUILDINGENGINEERINGDETAILS AND STANDARDS

EC-04



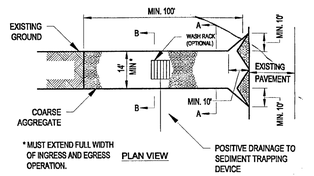


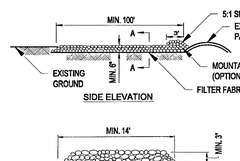


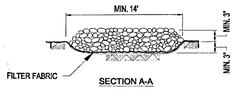
Revised:	Drawing Name	Drawing Number	
1. 06/12/2015	INLET SEDIMENT CONTROL DEVICE	EC-04	
2.		Date: 11/2/2007	
3.		Drawn: EM	Checked: AW
4.		City of Crystal Lake Illinois	

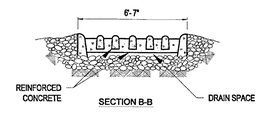
ILENGINEERING AND BUILDINGENGINEERINGDETAILS AND STANDARDS

EC-02









NOTES:
1. FILTER FABRIC SHALL MEET THE REQUIREMENTS OF SECTION 282 OF THE IDOT STANDARD SPECIFICATIONS AND SHALL BE PLACED OVER THE CLEARED AREA PRIOR TO THE PLACEMENT OF ROCK.
2. ROCK OR RECLAIMED CONCRETE SHALL MEET ONE OF THE FOLLOWING IDOT COARSE AGGREGATE GRADATIONS, CA-1, CA-2, CA-3 OR CA-4.
3. ANY DRAINAGE FACILITIES REQUIRED BECAUSE OF WASHING SHALL BE CONSTRUCTED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
4. IF WASH RACKS ARE USED, THEY SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS.

Revised:	Drawing Name	Drawing Number	
1. 06/12/2015	CONSTRUCTION ENTRANCE	EC-02	
2.		Date: 07/31/2012	
3.		Drawn: DD	Checked: AW
4.		City of Crystal Lake Illinois	

ILENGINEERING AND BUILDINGENGINEERINGDETAILS AND STANDARDS

UW-08

CITY OF CRYSTAL LAKE WATER MAIN CHLORINATION SPECIFICATIONS:

1. DISINFECTION OF WATER MAINS SHALL BE DONE IN ACCORDANCE WITH THE STATE OF ILLINOIS STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION, CURRENT EDITION
2. THE CITY ENGINEERING DIVISION AND WATER DIVISION SHALL BE NOTIFIED 48 HOURS IN ADVANCE FOR SCHEDULING OF ANY TESTING CHLORINATING, FLUSHING, OR SAMPLING.
3. ONLY CITY WATER DIVISION PERSONNEL MAY OPERATE WATER VALVES ON LIVE MAINS.
4. A WATER VALVE JUMPER IS REQUIRED TO MAINTAIN PRESSURE ON THE CHLORINATED LINES DURING THE SAMPLING PROCEDURE FOR PROPER INSTALLATION AND REQUIREMENTS SEE THE STANDARD WATER VALVE JUMPER DETAIL.
5. WATER MAINS SHALL BE FLUSHED WITH A MINIMUM VELOCITY OF 2.5 FPS.
6. THE INITIAL CHLORINE CONCENTRATION SHALL BE 50 mg/l WITH A MINIMUM 24 HOUR RESIDUAL OF 25 mg/L.
7. THE METHOD OF CHLORINE APPLICATION SHALL BE APPROVED BY THE CITY:
   a. LIQUID CHLORINE MECHLORINATING DEVICE WITH BACKFLOW PREVENTER.
   b. CHLORINE BEARING COMPOUNDS IN WATER.
   c. TABLET DISINFECTION.
8. ALL NEW VALVES AND HYDRANTS SHALL BE OPERATED WHILE LINE IS BEING CHLORINATED.
9. THE CITY ENGINEERING DIVISION SHALL DETERMINE LOCATION AND QUANTITY OF CORPORATION STOPS FOR FLUSHING AND CHLORINATING.
10. THE FINAL FLUSHING RESIDUAL IN THE NEW CHLORINATED LINES SHALL BE BETWEEN 0.2 AND 2.0 mg/L.
11. ALL WATER SAMPLES SHALL BE COLLECTED ON TWO (2) CONSECUTIVE DAYS AND PASS BACTERIOLOGICAL TEST RESULTS. IN THE EVENT THAT THE FIRST SET OF SAMPLES TAKEN TWO (2) CONSECUTIVE DAYS APART FAIL TO PASS, ANOTHER SET OF SAMPLES MAY BE TAKEN TWO (2) DAYS APART (PER STATE SPECS). IF THE SECOND SET FAILS TO PASS TESTING, THEN THE PROCEDURE MUST BE REPEATED WITH THE MAIN BEING RECHLORINATED, REFLUSHED, AND RESAMPLED.
12. STATE CERTIFIED LAB MUST BE USED FOR SAMPLES.

CHLORINE REQUIREMENTS TO PRODUCE 50 mg/L CONCENTRATION IN 100 FEET OF PIPE-BY DIAMETER

PIPE SIZE IN INCHES	100% CHLORINE, LB	1% CHLORINE SOLUTION, GALS.
4	0.027	0.33
6	0.061	0.73
8	0.108	1.30
10	0.170	2.04
12	0.248	2.80

NUMBER OF 5-GRAIN HYPOCHLORITE TABLETS REQUIRED FOR A DOSAGE OF 50mg/L PER LENGTH OF PIPE SECTION

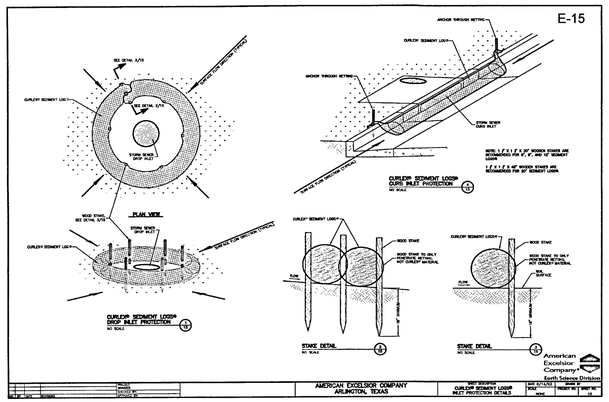
LENGTH OF PIPE SECTION IN FEET

PIPE SIZE IN INCHES	UP TO 13	18	20	30	40
2	1	1	1	1	1
4	1	1	2	2	2
6	2	2	3	3	4
8	2	3	5	5	6
10	3	5	7	7	9
12	5	6	10	10	14

Revised:	Drawing Name	Drawing Number	
1. 06/12/2015	CHLORINATION SPECIFICATIONS	UW-08	
2.		Date: 09/20/2012	
3.		Drawn: DD	Checked: VR
4.		City of Crystal Lake Illinois	

ILENGINEERING AND BUILDINGENGINEERINGDETAILS AND STANDARDS

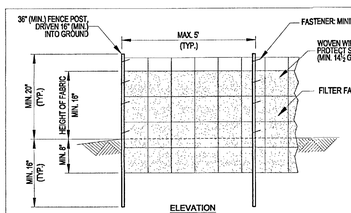
E-15



DESIGNED		AMERICAN EXCELSIOR COMPANY ARLINGTON, TEXAS	SHEET DESCRIPTION CURLOFF SEDIMENT LOGS INLET PROTECTION DETAILS
DRAWN			
CHECKED			
APPROVED			

American Excelsior Company
Earth Science Division

EC-01

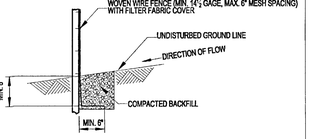


MATERIAL SPECIFICATIONS:

POSTS: STEEL (EITHER "T" OR "L" TYPE) OR HARDWOOD WITH A MINIMUM CROSS-SECTIONAL AREA OF 3.0 SQ. IN.

FENCE: WOVEN WIRE (14½ GAGE) WITH 6" MAX. MESH OPENING

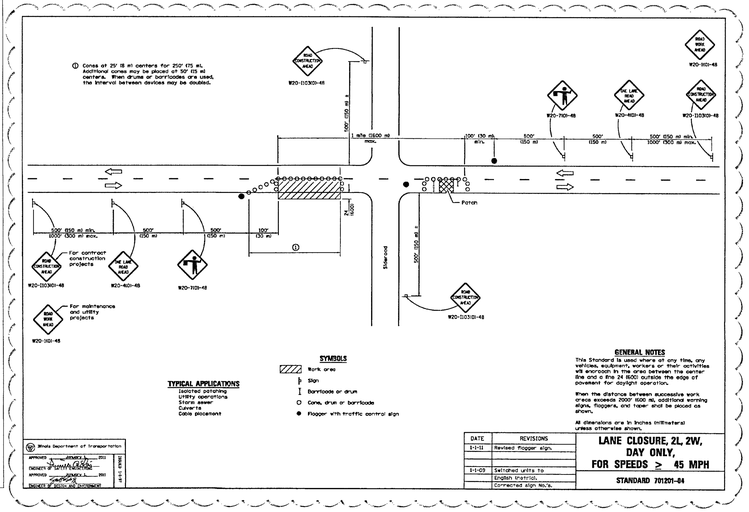
FILTER CLOTH: FILTER X, MIRAFI 100X, STABILINKA T 140N.



NOTES:
1. TEMPORARY SEDIMENT FENCE SHALL BE INSTALLED PRIOR TO ANY GRADING WORK IN THE AREA TO BE PROTECTED. THEY SHALL BE MAINTAINED AS NEEDED, THROUGHOUT THE CONSTRUCTION PERIOD AND REMOVED IN CONJUNCTION WITH THE FINAL GRADING AND SITE STABILIZATION.
2. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POST WITH TIES OR STAPLES.
3. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID-SECTION
4. WHEN TWO (2) SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX (6) INCHES AND FOLDED
5. MATERIAL SHALL BE REMOVED WHEN BULGES DEVELOP IN THE SILT FENCE
6. DOUBLE ROWS OF SILT FENCE SPACED FIVE (5) FEET APART SHALL BE PLACED AROUND EXISTING STORMWATER MANAGEMENT FACILITIES OR WETLANDS AS ADDITIONAL PROTECTION WHEN REQUIRED BY CITY ENGINEER

Revised:	Drawing Name	Drawing Number	
1. 06/12/2015	SILT FENCE	EC-01	
2.		Date: 12/4/2012	
3.		Drawn: DD	Checked: AW
4.		City of Crystal Lake Illinois	

ILENGINEERING AND BUILDINGENGINEERINGDETAILS AND STANDARDS



TYPICAL APPLICATIONS
Restricted pedestrian traffic operations
Utility operations
Curve re-alignment
Cable placement

SYMBOLS
Work area
Sign
Barricade or drum
Cone, drum or barricade
Flagger with traffic control sign

GENERAL NOTES
This Standard is used where at any time, any vehicles, equipment, workers or their activities will encroach on the area between the center line and a line 2.0 (600) outside the edge of pavement for daylight operation.

When the distance between successive work areas exceeds 2000' (600 m), additional warning signs, flaggers, and taper shall be placed as shown.

All dimensions are in inches (millimeters) unless otherwise shown.

Rhode Department of Transportation
APPROVED: [illegible] 7/1/09
DIRECTOR OF HIGHWAYS
APPROVED: [illegible] 7/1/09
CHIEF ENGINEER

DATE	REVISIONS
5-1-01	Revised flagger sign.
5-1-09	Switched units to English (metric).
	Corrected sign No.'s.

LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS ≥ 45 MPH

STANDARD 701.201-04

J. CONDON & ASSOCIATES, INC.
CONSULTING ENGINEERS
5415 BUSINESS PARKWAY
RINGWOOD, ILLINOIS 60072
815.728.0068

IL DESIGN FIRM # 184.006759

HABITAT FOR HUMANITY
ELGIN, ILLINOIS

SCALE: N/A
ISSUE DATE: 10/10/2017
PROJECT MANAGER: MAM
DESIGNER: MAM
QUALITY CONTROL: JEC

FOX VALLEY FARMS
CRYSTAL LAKE, ILLINOIS

NO.	DATE	DESCRIPTION
1	12/18/17	PER CITY REVIEW

PROJECT NUMBER: HABI-17038-3

SHEET TITLE: STANDARD DETAILS

SHEET NUMBER: C.8