#2024-200
4202 Three Oaks Road Comprehensive Land Use Plan Amendment, Rezoning, Preliminary PUD Project Review for Planning and Zoning Commission

Meeting Date: December 4, 2024

Request:

1. Comprehensive Land Use Map Amendment from Office to High Density Residential.
2. Rezoning upon Annexation to R-3B PUD Multi-Family Residential.
3. Preliminary Planned Unit Development and Special Use Permit for a 69-unit expansion of a Manufactured Housing Park.
4. Variations from
   a. Article 3-200 Front yard setback from the required 30 feet to allow 10 feet.
   b. Article 3-200 Side yard setbacks from the required minimum 10 feet to allow 5 feet and the combined total of 30 feet to allow 16 feet.
   c. Article 3-200 Rear yard setback from the required 20 feet to allow 10 feet.
   d. Article 3-200 Yard abutting residential zoning districts from the 50-foot minimum to allow 10 feet.
   e. Article 4-100 from the 70-foot minimum right-of-way for a local street to allow 40 feet and the minimum pavement width of 24 feet to allow 23 feet.
   f. Article 4-100 D1c. Horizontal curve radius from the required 150 feet to allow 42.5 feet.
   g. Article 4-400 from the requirement of street trees every 40 feet.

Location: 4202 Three Oaks Road

Acreage: Approximately 9.5 acres

Zoning: E-1 McHenry County

Proposed Zoning: R-3B PUD Multi Family Residential

Surrounding Properties:
North: R-3B PUD Multi-Family Residential
South: County Zoning District "E1" Estate
East: R-3B PUD Multi-Family Residential (Oakbrook Estates)
West: R-3B PUD Multi-Family Residential

Staff Contact: Elizabeth Maxwell (815.356.3615)

Background:

- In 1999, Oakbrook Estates was annexed and rezoned to R-3B PUD Attached Residence Planned Unit Development. The PUD permitted the existing 179 manufactured home units and 236 additional manufactured home units.
- In 2022, Oakbrook Estates began the process of the completing the 236 already platted manufactured home lots that remained vacant for years.
- The proposed development would consist of 69 manufactured home units on approximately nine (9) acres.
- Oakbrook Estates is a 55+ age community. Residents can purchase their home and pay a site rent fee per month, or they can rent new homes.

Development Analysis:

General

- Requests: Annexation, Comprehensive Land Use Plan Amendment, Rezoning, Preliminary Planned Unit Development and Special Use Permit with Variations.
- Zoning: The site is currently zoned E-1 Estate in McHenry County. The site is annexed as E Estate into the City and the request would be to rezone the property to R-3B Multi-Family Residential.
- Land Use: The land use map is Office. The petitioner is requesting an amendment to High Density Residential.

Site Plan:

- The site would be an extension of the existing manufactured home neighborhood. To keep in character of the neighborhood, the roadways would remain private drives. The home sites are not platted lots but designed lots within the property since the land is not subdivided or sold.
- The site is accessed from the existing development via Ravinia Way. There is an emergency access at Three Oaks Road.
- There are 69 new home lots that are broken out into 21 single-wide unit lots and 48 double-wide unit lots. Each lot has a two-car driveway.
- There are two detention areas planned, one at the northwest and one at the southwest corners of the new site.
- Additional calculations are required to be provided for the Final Planned Unit Development.

Landscape Plan:

- The plan illustrates street trees, plantings around the detention areas and a buffer landscape area along Three Oaks Road.
- Based on the original tree inventory 1,709 inches or 684 trees must be replaced. A final tree removal list is required as some trees along the perimeter are being saved.

- A final landscape plan is required that shows the replacement trees, final species, size and planting standards for landscape on the site with the Final PUD.

Findings of Fact:

Preliminary Planned Unit Development/Special Use Permit

The petitioner is requesting approval of a Preliminary Planned Unit Development and Special Use Permit for Manufactured Home Park. A Planned Unit Development is a Special Use and Special Uses require separate review because of their potential to impact surrounding properties and the orderly development of the City.

Section 2-400 B General Standards for all special uses in the Unified Ordinance establishes standards for all special uses in Crystal Lake. Briefly, the criteria are as follows:

1. The use is necessary or desirable, at the proposed location, to provide a service or facility which will further the public convenience and general welfare.
   ☐ *Meets* ☐ *Does not meet*

2. The use will not be detrimental to area property values.
   ☐ *Meets* ☐ *Does not meet*

3. The use will comply with the zoning districts regulations.
   ☐ *Meets* ☐ *Does not meet*

4. The use will not negatively impact traffic circulation.
   ☐ *Meets* ☐ *Does not meet*

5. The use will not negatively impact public utilities or municipal service delivery systems. If required, the use will contribute financially to the upgrading of public utilities and municipal service delivery systems.
   ☐ *Meets* ☐ *Does not meet*

6. The use will not negatively impact the environment or be unsightly.
   ☐ *Meets* ☐ *Does not meet*

7. The use, where possible will preserve existing mature vegetation, and provide landscaping and architecture, which is aesthetically pleasing, compatible or complementary to surrounding properties and acceptable by community standards.
   ☐ *Meets* ☐ *Does not meet*

8. The use will meet requirements of all regulating governmental agencies.
   ☐ *Meets* ☐ *Does not meet*

9. The use will conform to any conditions approved as part of the issued Special Use Permit.
   ☐ *Meets* ☐ *Does not meet*

10. The use will conform to the regulations established for specific special uses, where applicable.
    ☐ *Meets* ☐ *Does not meet*

Manufactured Home Park. Manufactured Home Park uses must comply with the following standards:

1. Site area: The mobile home park must be sited on properties or assemblies of properties that are at least four acres in size. ***Site is 9.5 acres.***

   ☐ *Meets* ☐ *Does not meet*

2. Maximum residential density: The maximum net residential density of a mobile home park shall not exceed nine units per acre. ***Density is approximately 7.3 du/ac.***

   ☐ *Meets* ☐ *Does not meet*

3. Removal of transportation equipment: Removal of transportation equipment is required after delivery of the dwelling unit. ***They will be removed.***

   ☐ *Meets* ☐ *Does not meet*

4. Utility service: All dwelling units and other habitable structures in the park are required to be served by buried electric lines. ***The utilities will be buried.***

   ☐ *Meets* ☐ *Does not meet*

5. Setback: All development is required to meet the setback requirements for 'All other uses' in accordance with the provisions of Article 3, Density, Intensity and Dimensional Standards. ***Variations are requested for the setbacks.***

   ☐ *Meets* ☐ *Does not meet*

6. Spacing between dwelling units: A minimum 15-foot setback from any other dwelling unit, park driveway, or common building (e.g., laundry facilities) is required. ***The buildings will be 16 feet apart.***

   ☐ *Meets* ☐ *Does not meet*

7. Park roadways: Construct all park roadways using generally accepted engineering practices to provide a minimum pavement width of 24 feet to allow safe and adequate access to each dwelling unit space not served by a public street abutting the park. Park roadways not connecting to public streets shall include a minimum fifty-foot radius cul-de-sac. ***The minimum right-of-way is illustrated at 25 feet back of curb. The curb is typically 1 foot wide, leaving 23 feet of pavement.***

   ☐ *Meets* ☐ *Does not meet*

8. Perimeter landscaping: A perimeter buffer around the park in accordance with the standards specified in Section 4-400, Landscaping and screening standards shall be provided. ***There are existing trees along Three Oaks Road that will remain and will be supplemented with additional trees and bushes.***

   ☐ *Meets* ☐ *Does not meet*

9. Complete construction prior to occupancy: All required park roadways, required utilities, common buildings, and active recreation area for at least 15% of the dwelling units before any part of the park is occupied is required. ***The petitioner will comply with this.***

   ☐ *Meets* ☐ *Does not meet*

In addition PUDs must also meet the standards in Section 4-500 C. Development Standards and 4-500 D. 1 Additional standards for Planned Unit Developments Residential PUDs.

a. Location: A residential PUD can be located anywhere in the City, including any land proposed for annexation.
   ☐ *Meets* ☐ *Does not meet*

b. Permissible uses: A mix of different residential dwelling types in proximity to each other is encouraged. Neighborhood commercial uses serving the development may be approved as part of a residential PUD where appropriate.
   ☐ *Meets* ☐ *Does not meet*

c. Nonresidential uses: Any nonresidential use permitted in a residential PUD shall be compatible with the residential nature of the development. Parking areas which are intended to serve nonresidential uses shall be separated from those designed to serve residential areas. Unless commercial and residential uses are combined within a single structure, commercial uses shall be separated from dwelling units by a heavily landscaped buffer zone that meets the requirements of Section 4-400, Landscaping and screening standards.
   ☐ *Meets* ☐ *Does not meet*

d. Pedestrian paths: Pedestrian paths shall connect residential uses and nonresidential uses within a residential PUD.
   ☐ *Meets* ☐ *Does not meet*

e. Growth management: A growth management schedule shall be provided to and approved by the City Council, which indicates the number and type of residential units to be constructed in each calendar year. The maximum number of units to be constructed shall be 25 residential units or 15% of the total number of residential units (including all phases of the proposal), whichever is greater, in any calendar year. The City Council with recommendations from the Planning and Zoning Commission, at final PUD approval can approve, deny or adjust the percentage of an increase in the number of units that can be built in one calendar year. The City Council and the Planning and Zoning Commission shall consider the following criteria in approving an increase in the number of units that can be built annually:

   i. Advance dedication of school and park sites and advance payment of school, park and other impact fees;
      ☐ *Meets* ☐ *Does not meet*

   ii. Payment for installation of road impact improvements or fees applicable by law;
      ☐ *Meets* ☐ *Does not meet*

   iii. Smaller subdivisions which encourage in-filling within an established part of the community;
      ☐ *Meets* ☐ *Does not meet*

iv. Completion of major and collector road networks and critical linkages in the street systems;
☐ *Meets* ☐ *Does not meet*

v. Fulfill a need for various unit types and income levels such as low and moderate-income housing;
☐ *Meets* ☐ *Does not meet*

vi. Provisions which satisfy needed public facilities;
☐ *Meets* ☐ *Does not meet*

vii. Innovative architectural design, quality of exterior materials and creative use of landscaping;
☐ *Meets* ☐ *Does not meet*

viii. Other criteria or extraordinary amenities, not listed above, which may meet the development goals of the City.
☐ *Meets* ☐ *Does not meet*

PLANNED UNIT DEVELOPMENT VARIATION
The purpose of Planned Unit Developments is to encourage and allow more creative and imaginative design of land developments than is possible under district zoning regulations. Planned Unit Developments are, therefore, intended to allow substantial flexibility in planning and designing a proposal. The proposed amendment enhances the character of the center and allows for a new and unique design for these tenants.

This flexibility is often in the form of relief from compliance with conventional zoning ordinance site and design requirements which may otherwise require individual requests and applications for zoning variations.

Ideally, this flexibility results in a development that is better planned, contains more amenities, and is ultimately more desirable than one that would have been produced through compliance with typical zoning ordinance and subdivision controls.

Therefore more lenient site requirements may be granted where the Planned Unit Development contains features not normally required of traditional developments. Although a formal variation request is not required to be made in conjunction with a Planned Unit Development, Staff identifies those aspects of the Planned Unit Development which effectively result in variations from UDO requirements. If the evidence is not found to justify these variations from the UDO that fact shall be reported to the City Council with a recommendation that the variations from the UDO which are proposed as part of the Planned Development be lessened or denied.

VARIATION
The petitioner is requesting a variation as part of the Planned Unit Development:

- Article 3-200 Front yard setback from the required 30 feet to allow 10 feet.
  The property as a whole meets this requirement. The individual home lots require the relief.

- Article 3-200 Side yard setbacks from the required minimum 10 feet to allow 5 feet and the combined total of 30 feet to allow 16 feet.
  The property as a whole meets this requirement. The individual home lots require the relief.

- Article 3-200 Rear yard setback from the required 20 feet to allow 10 feet.

- Article 3-200 Yard abutting residential zoning districts from the 50-foot minimum to allow 10 feet.

- Article 4-100 from the 70-foot minimum right-of-way for a local street to allow 40 feet and the minimum pavement width of 24 feet to allow 23 feet.

- Article 4-100 D1c. Horizontal curve radius from the required 150 feet to allow 42.5 feet.

- Article 4-400 from the requirement of street trees every 40 feet.

The setbacks outlined in Article 3 are designed for single-family subdivisions. The proposed home lots require the variations between home lots.

Comprehensive Land Use Plan 2030 Vision Summary Review:
The Comprehensive Plan designates the subject property as Office. A Comprehensive Land Use Plan Amendment has been requested to Multi-Family Residential. Multi-Family Residential allows for existing and future higher density residential developments. The following goals are applicable to this request:

Land Use – Residential

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

Supporting Actions – Encourage a diversity of housing types throughout the City, which satisfy wide-range needs for all persons regardless of age, race, religion, national origin, physical ability and economic level for existing and future City residents.

Success Indicators – Approval of senior living developments.

Supporting Actions – Provide for a reasonable rate of residential growth especially infill growth and mixed-use development which take advantage of existing City services.

Success Indicators – Approval of minor subdivision to increase infill lot potential.

Housing – Affordable Housing

Goal: Provide an appropriate mix of housing needs for all persons regardless of income level, age, physical ability, race or other characteristic.

Supporting Actions – Support a variety of affordable housing projects that provide housing options for seniors, young couples, and people making 80% or less of the area median income.

Success Indicators – The number of single family affordable housing units.

Recommended Conditions:

If a motion to recommend approval of the petitioner's request is made, it should be with the following conditions:

1. Approved plans, reflecting staff and advisory board recommendations, as approved by the City Council:
   A. Application (Ravinia, received 10/28/24)
   B. Site Plan (Rynear & Sons, Inc, undated, received 10/28/24)
   C. Landscape Plan (Rynear & Sons, Inc,. dated 10/14/24, received 10/07/03/24)
   D. Engineering Plans (Rynear & Son, Inc., dated 10/14/24, received 10/28/24)
   E. Engineering Report (Rynear & Son, Inc., dated 10/15/24, received 10/28/24)

2. Engineering
   A. Provide final engineering calculations and plans for the Final PUD.
   B. Provide a sidewalk along Three Oaks Road.

3. Landscape
   A. Provide a final landscape plan with size, species and planting condition for all plant species. Work with staff on the final tree replacement either on site, paying into the tree bank or other site amenities to take the place of trees.
   B. Provide a tree survey map and where possible, save and protect existing class A trees.
   C. Work with staff to explore extending the new sidewalk along Three Oaks Road to the current entrance of Oakbrook Estates. If the sidewalk were to be extended, the estimated cost of the extension could be deducted from the tree replacement requirement.

4. The petitioner shall address all of the review comments and requirements of the City Departments of Public Works and Engineering, Fire Rescue, Community Development, and the City's Stormwater Consultant.

PIQ Map
4202 Three Oaks Road



City of Crystal Lake
Development Application

Office Use Only

File # _____

Project Title: The Reserve at Oakbrook

Action Requested

- X Annexation
- X Comprehensive Plan Amendment
- ___ Conceptual PUD Review
- ___ Final PUD
- ___ Final PUD Amendment
- ___ Final Plat of Subdivision
- X Preliminary PUD
- ___ Preliminary Plat of Subdivision
- X Rezoning upon annexation
- ___ Special Use Permit
- ___ Variation
- ___ Other

Petitioner Information

Name: Ravinia Communities LLC

Address: 900 Skokie Blvd., Suite 285

Northbrook, IL 60062

Phone: 847-881-2007

Fax: _____

E-mail: dw@raviniacommunities.com

Owner Information (if different)

Name: Vistas Crysal Lakes Fund LLC

Address: 6009 N. Louise

Chicago, IL 60646

Phone: _____

Fax: _____

E-mail: _____

Property Information

Project Description: Additional phase to Oakbrook Estates manufactured home park. Zoning upon annexation to "R3B PUD" Multi Family Residential to allow 69 units on approximately 10 acres Comprehensive Plan Map Amendment to High Density Residential

Project Address/Location: Three Oaks Road, east of Sands Road and west of Ravinia Way.

PIN Number(s): 19-10-200-021; 19-10-200-022; and 19-10-200-023

Property Use Description: Manufactured home park. New phase for the existing Oakbrook Estates.

Re-zone Request: County "E1" Estate to City "R3B PUD" Multi-Family Residential

Zoning Variation Request:

Please include address, phone, fax and e-mail

Development Team

Developer: Ravinia Communities LLC c/o David Worth, 900 Skokie Blvd, #285, Northbrook, IL 60062
Phone: 847-881-2007; email: dw@raviniacommunities.com

Architect:

Attorney: Mark Saladin, Zanck, Coen, Wright & Saladin, 40 Brink St., Crystal Lake, IL 60014;
Phone: 815-459-8800; email msaladin@zcwlaw.com

Engineer: Tony Rynearson, Rynear & Son. Inc.; 630-355-9889; trynear@astound.net
John Talbot; Rynear & Son, Inc.; 630-355-9889; jjtpe1@gmail.com

Landscape Architect:

Surveyor: William M. Wingstedt; 630-554-8209;

Other:

Signatures

Ravinia Communities LLC
By: _____ 10-28-24
PETITIONER: Print and Sign name (*if different from owner*) / Its: Manager **Date**

As owner of the property in question, I hereby authorize the seeking of the above requested action.
Vistas Crystal Lake Funds LLC
By: _____, Maribel Zepeda 10/28/24
OWNER: Print and Sign name / Its: Treasurer / secretary **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.

PETITION

TO THE MAYOR AND CITY COUNCIL OF THE CITY OF CRYSTAL LAKE,
MCHENRY COUNTY, ILLINOIS

The undersigned Petitioners hereby respectfully petition to annex to the City of Crystal Lake, McHenry County, Illinois, the territory described in Exhibit "A" which is attached hereto and made a part hereof, and states as follows:

1. That the undersigned are all of the owners and contract purchasers of record of the territory herein described in Exhibit "A".
2. The territory herein described in Exhibit "A" is contiguous to the City of Crystal Lake; is located in McHenry County, Illinois; and is not within the corporate limits of any other municipality.
3. That there are no electors of record residing in the territory herein described in Exhibit "A".
4. That the undersigned represents one hundred percent (100%) of all of the owners of record of this property.
5. That the terms of the proposed annexation agreement set forth in Exhibit "B", attached hereto and made a part hereof, be entered into by the parties.

WHEREFORE, Petitioners respectfully request the corporate authorities of the City of Crystal Lake, McHenry County, Illinois, to annex the territory herein described in Exhibit "A" to said City in accordance with the provisions of this Petition and pursuant to the terms of a proposed Annexation Agreement, and in accordance with the law in such case made and provided.

DATED this 28th of October, 2024.

Name of Owner — Address
Vistas Crystal Lakes Fund LLC — 6009 N. Louise, Chicago, IL 60646
By: [signature]
Its: Treasurer-Secretary

Name of Contract Purchaser — Address
Ravinia Communities LLC — 900 Skokie Blvd., Suite 285, Northbrook, IL 60062
By: [signature]
Its: Manager

STATE OF ILLINOIS)
) SS
COUNTY OF MCHENRY)

I, Maribel Zepeda, being sworn on oath depose and say that I have the authority to sign this attestation, that I am familiar with the matters therein and that the matters stated therein are true in substance and in fact.

Signed [signature]

Subscribed and sworn to before me
this 28th day of October 2024.

[signature]
Notary
My Commission expires: 3/1/2027

NANCY L KRUEGER
OFFICIAL SEAL
Notary Public, State of Illinois
My Commission Expires
March 01, 2027

STATE OF ILLINOIS)
) SS
COUNTY OF MCHENRY)

I, David Worth, being sworn on oath depose and say that I have the authority to sign this attestation, that I am familiar with the matters therein and that the matters stated therein are true in substance and in fact.

Signed

Subscribed and sworn to before me this 29th day of October 2024.

OFFICIAL SEAL
MARK S SALADIN
NOTARY PUBLIC, STATE OF ILLINOIS
MY COMMISSION EXPIRES: 11/02/2026

Notary

My Commission expires: 11-2-26

PUBLIC NOTICE BEFORE THE PLANNING AND ZONING COMMISSION OF THE CITY OF CRYSTAL LAKE, MCHENRY COUNTY, ILLINOIS

IN THE MATTER OF THE APPLICATION OF
RAVINIA COMMUNITIES LLC

LEGAL NOTICE

Notice is hereby given in compliance with the Unified Development Ordinance (UDO) of the City of Crystal Lake, Illinois, that a public hearing will be held before the Planning and Zoning Commission upon the application by Ravinia Communities LLC for approval of a Map Amendment and Special Use Permit upon annexation for the following real estate commonly known as vacant land, Three Oaks Road, East of Sands Road and West of Ravinia Way, Crystal Lake, Illinois. PIN: 19-10-200-021; 19-10-200-022; and 19-10-200-023.

This application is filed for the purpose of seeking a Map Amendment to R3B PUD Multi Family Residential upon annexation and a Special Use Permit to allow an additional phase of Oakbrook Estates manufactured home park with a special use for a planned unit development to allow 69 units, and any other variations as presented at the public hearing pursuant to Unified Development Ordinance Article 2, Article 3, Article 4, Article 5, and Article 9. Plans for this project can be viewed at the City of Crystal Lake Planning and Economic Development Department at City Hall. The request includes Comprehensive Plan Amendment to High Density Residential upon annexation. The Petitioner further requests (1) a variation from required abutting setback for homesites 64 - 69 to 16 feet; and (2) a variation from Code requirements for right of way tree requirements and foundation landscaping requirements.

A public hearing before the Planning and Zoning Commission on the request will be held at 7:00 p.m. on Wednesday, December 4, 2024, at the Crystal Lake City Hall, 100 West Woodstock Street, at which time and place any person determining to be heard may be present.

Jeff Greenman, Chairperson
Planning and Zoning Commission
City of Crystal Lake

(Published in Northwest Herald November 16, 2024) 2207569

North

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

RUBY MAY CT

BENJAMIN LANE

RAVINIA WAY

CARO

926 926A 927 929 932 934 936 938 940 942 944 946 948 950 952 954 956 958 930

N89°45'50"E 325.00'

N89°45'50"E 326.00'

N89°45'50"E 335.00'

N89°45'50"E 66.00'

N89°45'50"E 400.00'

120.00' 80.00' 80.00' 120.00'

16 15 14 13

51.43' 48.00' 51.43'

117.56' 117.56'

88.00' 88.00'

L=26.79' L=20.38' L=20.39' L=26.73'

L=26.74' L=20.34' L=20.39' L=26.73'

N89°45'50"E 120.00'

83.43' 83.43'

17 18 19 20 12 11 10 9

32.00' 80.00' 40.00' 80.00' 20.00' 12.00'

S00°14'10"E 72.00'

60.00' L=31.42'

N89°45'50"E 120.00'

60.00' 60.00' L=31.42'

23 24 22 25 21 26

40.00' 32.00' 20.00'

80.00' 80.00'

S00°14'10"E 72.00'

L=31.42' 60.00' 60.00'

N89°45'50"E 120.00'

N89°45'50"E 60.00'

8 7 6 5 4 3

80.00' 40.00' 32.00' 20.00'

S00°14'10"E 228.00'

East Line of Parcel 2

West Line of Parcel 3

East Line of Parcel 3

Stormwater Management/Park

Parcel 1

West Line of Parcel 1

S00°14'10"E 200.00'

East Line of Parcel 1

S00°14'10"E 72.00'

N89°45'50"E 326.00'

146.00'

L=73.99'

69 68 67 66 65 64

89.43' 86.00' 89.43'

40.00' 20.00'

S00°14'10"E 240.00'

S00°14'10"E 120.00'

L=20.36'

L=73.94'

N89°45'50"E 190.00'

Parcel 3

N89°45'50"E 440.00'

L=31.42'

20.00' 32.00' 40.00' 80.00' 60.00'

3 39 38 37 36 35 34 33 32 31 30 29 28 27

S00°14'10"E 120.00'

40 41 42 43 44 45 46 47 48 49 50 51 52

N89°45'50"E 440.00'

N89°45'50"E 440.00'

Parcel 2

Rynear & Son, Inc.
Consulting Engineers
Professional Design Firm
Licenses No. 184-004637

595 BUTTONWOOD CIRCLE
NAPERVILLE, ILLINOIS 60540

(630) 355-9889 PHONE
(630) 355-5362 FAX

ISSUE:

#	Date	Description

PROJECT:
Ravinia Communities
OAKBROOK ESTATES
Expansion
Crystall Lake, Illinois

OWNER:

Date:

Design/Drawn:

Approved:

Book No.:

File No.: -

SHEET TITLE:

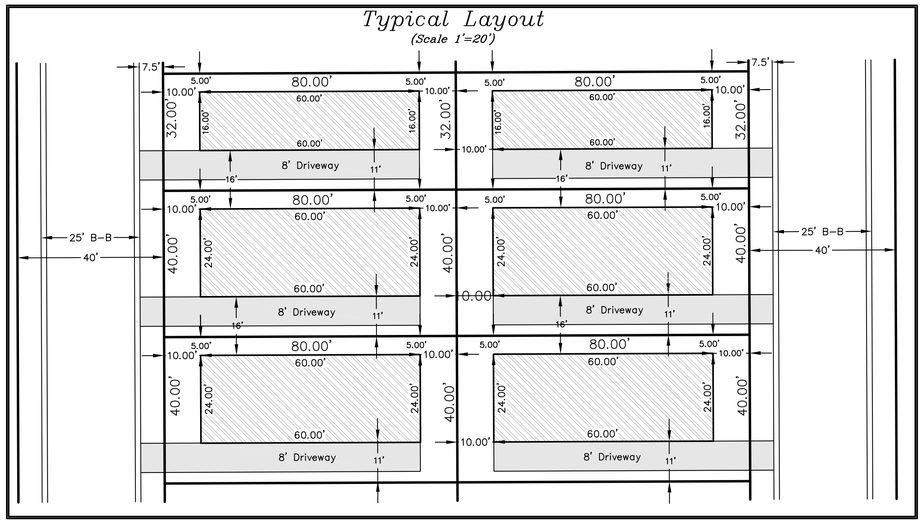
Preliminary Site Plan Oakbrook Estates Expansion

SHEET NUMBER:

SP-1

SHEET 1 OF 2

Project No.: 23-8242



Legal Description

PARCEL 1:
THAT PART OF THE SOUTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 10, DESCRIBED AS FOLLOWS:
COMMENCING AT A POINT IN THE SOUTH LINE OF SAID QUARTER QUARTER SECTION, WHICH IS 735.0 FEET WEST OF THE SOUTHEAST CORNER OF SAID QUARTER QUARTER SECTION; THENCE NORTH ON A LINE BEING 90 DEGREES ANC, NO MINUTES OFF OF THE SOUTH LINE OF SAID QUARTER QUARTER SECTION, A DISTANCE OF 600.0 FEET; THENCE WEST ALONG A LINE PARALLEL WITH THE SOUTH UNE OF SAID QUARTER QUARTER SECTION, A DISTANCE OF 325.0 FEET; THENCE SOUTH 600.0 FEET TO A POINT IN THE SOUTH LINE OF SAID QUARTER QUAFIIER SECTION WHICH IS 325.0 FEET WEST OF THE POINT OF BEGINNING; AND THENCE EAST ALONG THE SOUTH LINE OF SAID QUARTER QUARTER SECTION, 325,0 FEET TO THE POINT OF BEGINNING, IN TOWNSHIP 43 NORTH, RANGE 8 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN MCHENRY COUNTY, ILLINOIS.

PARCEL 2:
THAT PART OF THE SOUTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 10, DESCRIBED AS FOLLOWS:
COMMENCING AT A POINT IN THE SOUTH LINE OF SAID QUARTER QUARTER SECTION WHICH IS 334.0 FEET WEST OF THE SOUTHEAST CORNER OF SAID QUARTER QUARTER SECTION; THENCE NORTH ON A LINE BEING 90 DEGREES AND NO MINUTES OFF OF THE SOUTH LINE OF SAO QUARTER QUARTER SECTION, A DISTANCE OF 600.0 FEET; THENCE WEST ALONG A LINE PARALLEL WITH THE SOUTH UNE OF SAID QUARTER QUARTER SECTION, A DISTANCE OF 66.0 FEET; THENCE SOUTH 600.0 FEET TO A POINT IN THE SOUTH LINE OF SAID QUARTER QUARTER SECTION, WHICH IS aco FEET WEST OF THE POINT OF BEGINNING, *AND* THENCE EAST ALONG THE SOUTH LINE OF SAID QUARTER QUARTER SECTION, 66.0 FEET TO THE PLACE OF BEGINNING, IN TOWNSHIP 43 NORTH, RANGE 8, EAST OF THE THIRD PRINCIPAL MERIDIAN, IN MCHENRY COUNTY, ILLINOIS.

PARCEL 3:
ALL THAT PART OF THE SOUTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 10, TOWNSHIP 43 NORTH, RANGE 8, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS:
COMMENCING AT A POINT IN THE SOUTH LINE OF SAID QUARTER QUARTER SECTION, WHICH IS 400.0 FEET WEST OF THE SOUTHEAST CORNER OF SAID QUARTER QUARTER SECTION; THENCE NORTH ON A LINE BEING 90 DEGREES AND NO MINUTES OFF OF THE SOUTH LINE OF SAID QUARTER QUARTER SECTION, A DISTANCE OF 600 FEET; THENCE WEST ALONG A UNE PARALLEL. WITH THE SOUTH LINE OF SAID QUARTER QUARTER SECTION, A DISTANCE OF 335 I-EET; THENCE SOUTH 600 FEET TO A POINT IN THE SOUTH LINE OF SAID QUARTER QUARTER SECTION WHICH IS 335 FEET WEST OF THE PLACE OF BEGINNING AND THENCE EAST ALONG THE SOUTH UNE OF SAID QUARTER QUARTER SECTION 335 FEET TO THE POINT OF BEGINNING, IN MCHENRY COUNTY, ILLINOIS.



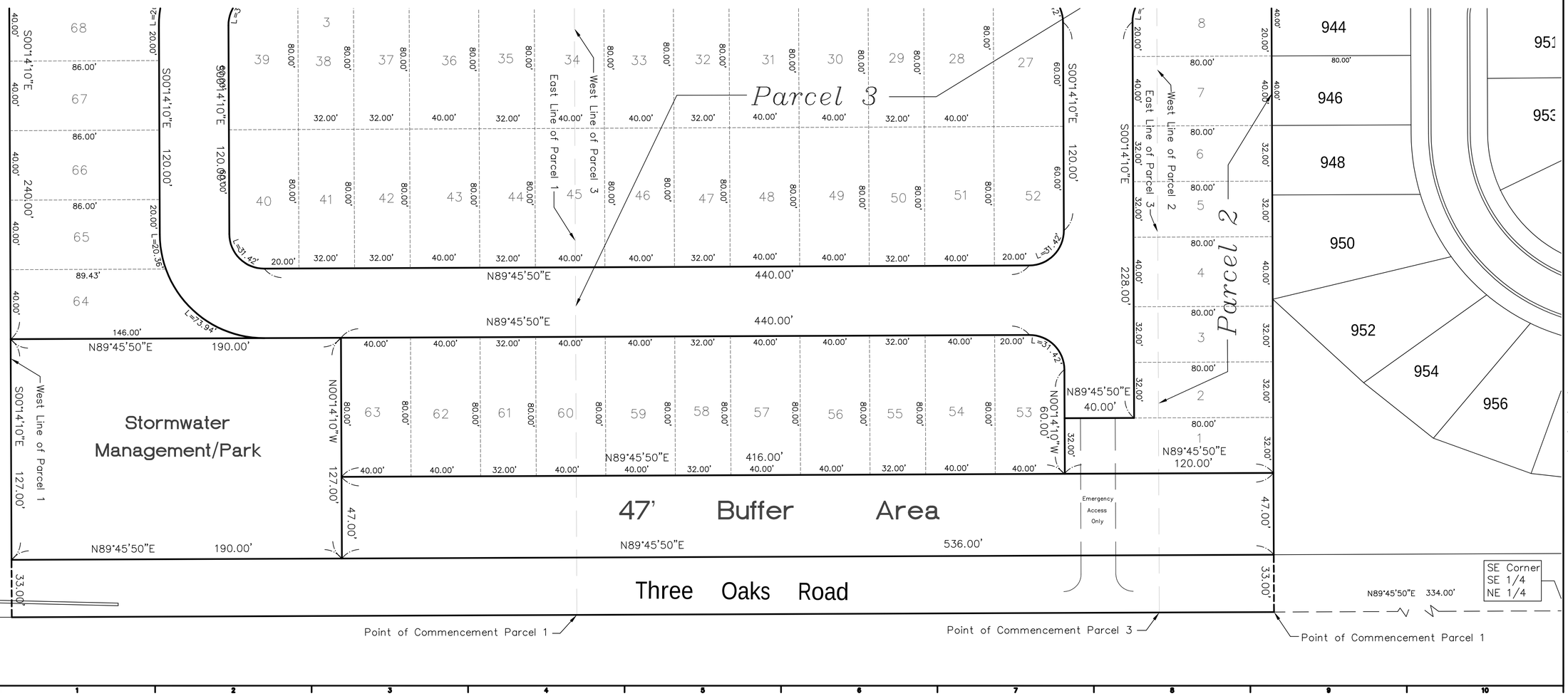
GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

ROW	103,177 sq.ft.	= 2.37 acres
Site	435,600 sq.ft.	= 10.00 acres
Units & Open Space	332,423 sq.ft.	= 7.63 acres

(9 units/acre) (7.63 acres) = 68.68 = 69 units



Rynear & Son, Inc.
Consulting Engineers
Professional Design Firm
Licenses No. 184-004637

595 BUTTONWOOD CIRCLE
NAPERVILLE, ILLINOIS 60540

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ISSUE:

#	Date	Description

PROJECT: Ravinia Communities
OAKBROOK ESTATES
Expansion
Crystall Lake, Illinois

OWNER:

Date:
Design/Drawn:
Approved:
Book No.:
File No.: -

SHEET TITLE:

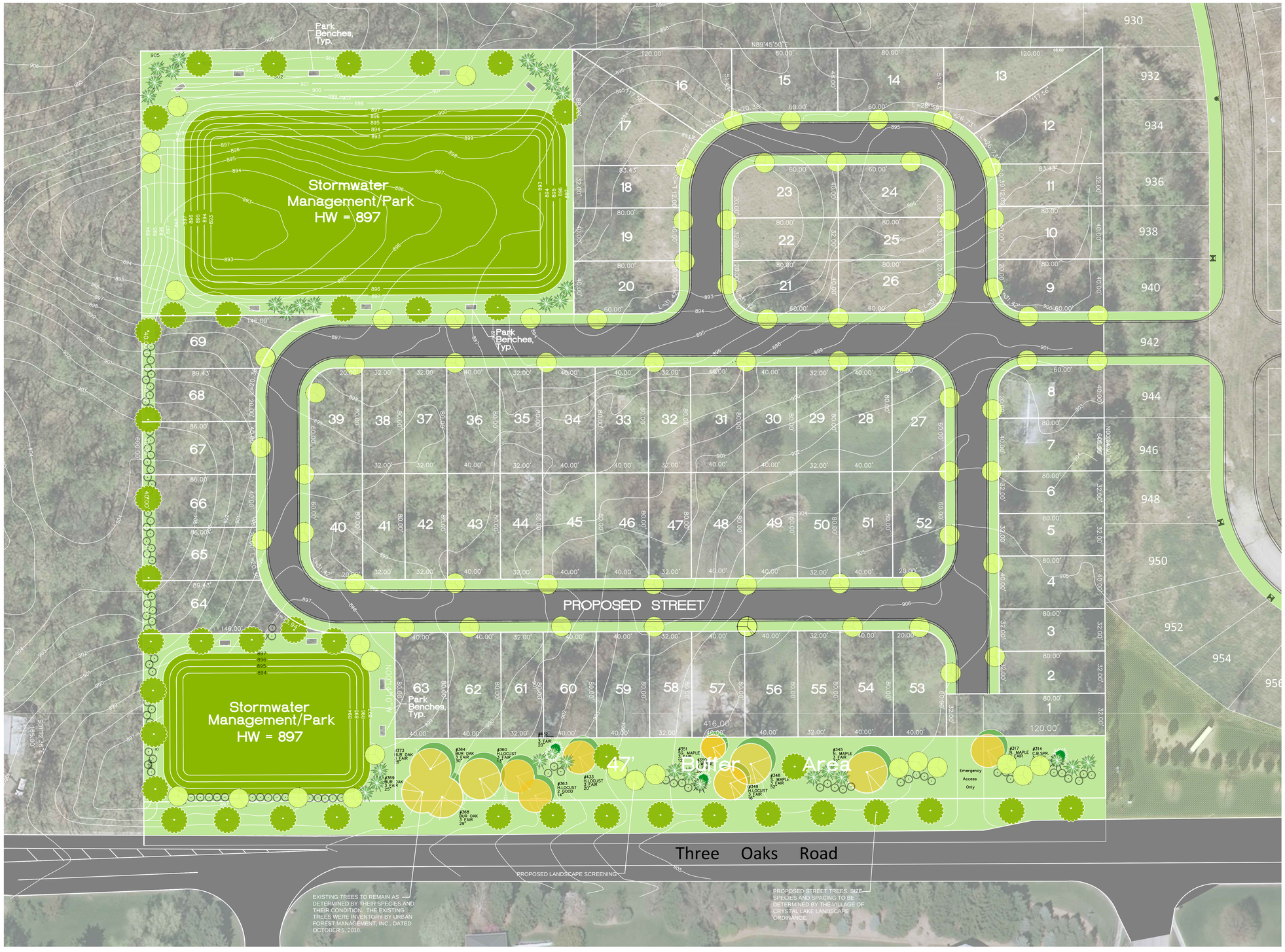
Preliminary Site Plan Oakbrook Estates Expansion

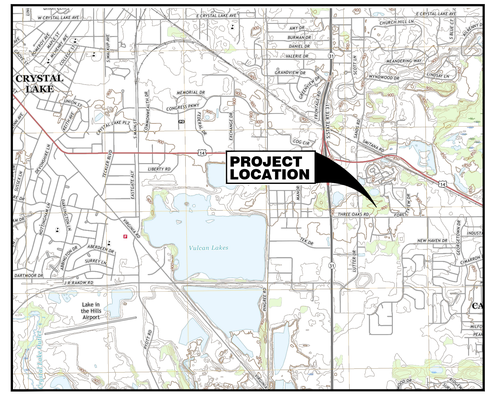
SHEET NUMBER:

SP-2

SHEET 2 OF 2

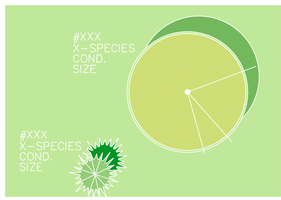
Project No.: 23-8242





LOCATION MAP

NO SCALE



EXISTING TREES LEGEND

EXISTING TREES TO REMAIN AS DETERMINED BY THEIR SPECIES AND THEIR CONDITION. THE EXISTING TREES WERE INVENTORY BY URBAN FOREST MANAGEMENT, INC., DATED OCTOBER 5, 2018.

EXISTING TREES IDENTIFICATION

NO.	COMMON NAME	CONDITION	DIA. SIZE (IN.)
314	COLORADO BLUE SPRUCE	3-FAIR	19
317	NORWAY MAPLE	3-FAIR	24
345	NORWAY MAPLE	3-FAIR	32
348	SILVER MAPLE	3-FAIR	52
349	HONEYLOCUST	3-FAIR	16
350	EASTERN WHITE PINE	3-FAIR	26
351	SUGAR MAPLE	3-FAIR	12
360	HONEYLOCUST	3-FAIR	13
363	HONEYLOCUST	2-GOOD	14
364	BUR OAK	3-FAIR	30
368	BUR OAK	3-FAIR	29
369	BUR OAK	3-FAIR	25
373	BUR OAK	3-FAIR	28
432	EASTERN WHITE PINE	3-FAIR	20
433	HONEYLOCUST	3-FAIR	20

PLANT MATERIAL LISTING

DECIDUOUS TREES

RED OAK
LITTLELEAF LINDEN
HONEYLOCUST
KENTUCKY COFFEETREE
RED MAPLE

EVERGREEN TREES

WHITE PINE
COLORADO BLUE SPRUCE
ARBOR VITAE
EASTERN RED CEDAR
CONCOLOR FIR

ORNAMENTAL TREES

AMERICAN REDBUD
SERVICEBERRY
DOGWOOD – SPP
CRABAPPLE

SHRUBS

RED TWIG DOGWOOD
HONEYSUCKLE
SPIREA
VIBURNUM

Rynear & Son, Inc.
Consulting Engineers
595 BUTTONWOOD CIRCLE
NAPERVILLE, ILLINOIS 60540
(630) 355-9889 / (630) 355-5362 Fax

NO.	DATE	DESCRIPTION	BY:
2.	10/14/24	PER REVIEW	DSB
1.	07/30/24	PER REVIEW	DSB

Ravina Communities
Oakbrook Estates Expansion
Crystal Lake, Illinois

Conceptual Landscaping Plan Along Three Oaks Road

Original Scale: 1 inch = 30 ft.

PROJECT NORTH

FILE NO.: CONCEPT_LANDSCAPING PLAN.DWG

PROJECT NO. 23-8242
DESIGN/DRAWN: DSB
DATE: JULY 12, 2024

PRELIMINARY ENGINEERING FOR:
OAKBROOK ESTATES
EXPANSION

GENERAL NOTES:

A. EARTH WORK

1. REMOVE ANY UNSUITABLE MATERIAL FROM PROPOSED PAVING AREA.

2. EXCAVATE PROPOSED PAVING AREAS TO REQUIRED SUBGRADE ELEVATION.
3. PREPARE SUBGRADE TO + 0.1 FEET OR – 0.2 FEET OF REQUIRED SUBGRADE ELEVATION, COMPACT TO 95% STANDARD PROCTOR.

4. DISPOSE OF ALL UNSUITABLE AND EXCESS MATERIAL LEGALLY OFFSITE.

5. EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO START OF CONSTRUCTION.

B. PAVING

1. THE AREA SHOWN ON THE DRAWINGS SHALL BE PAVED TO THE LINES AND GRADES SHOWN IN ACCORDANCE WITH THE TYPICAL SECTION SHOWN ON THE DRAWINGS.

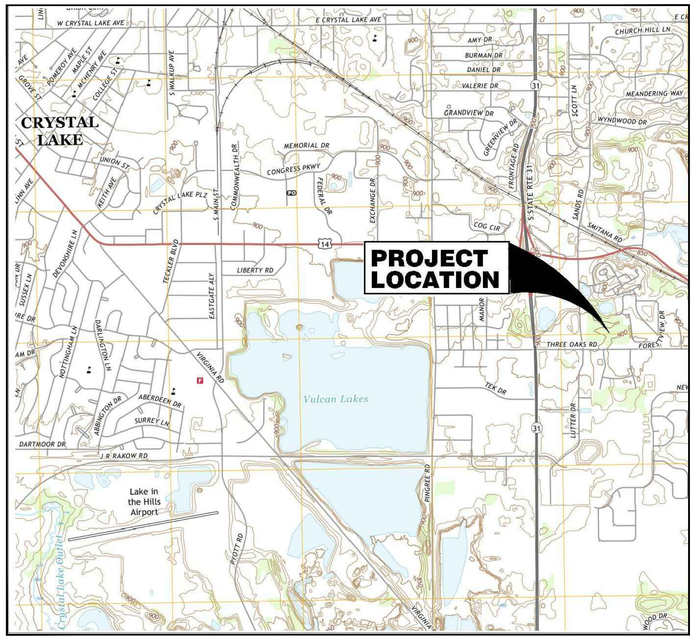
2. PAVING MATERIALS SHALL COMPY WITH APPLICABLE SECTIONS OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGES IN ILLINOIS CURRENT ADDITION.

THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, EQUIPMENT, INCIDENTALS AND PERIPHERAL WORK NECESSARY TO PROVIDE THE IMPROVEMENTS SHOWN ON THE DRAWINGS. THE DRAWINGS SHOW THE GENERAL SCOPE OF THE WORK. THE CONTRACTOR SHALL PROVIDE ALL WORK & MATERIALS NOT SPECIFICALLY SHOWN BUT NECESSARY TO COMPLETE THE PROJECT.

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR MEANS, METHODS, PROCEDURES AND SITE SAFETY.

C. UTILITIES

1. STORM SEWER, SANITARY SEWER AND WATER MAIN SHALL COMPLY WITH APPLICABLE SECTIONS OF THE STANDARD SPECIFICATIONS FOR WATER AND SEWER CONSTRUCTION IN ILLINOIS, LATEST EDITION.



LOCATION MAP
NO SCALE

INDEX OF DRAWINGS

DEVELOPMENT NOTES:

THE LOCATIONS OF UNDERGROUND UTILITIES AS SHOWN HEREON ARE BASED ON ABOVE–GROUND STRUCTURES AND RECORD DRAWINGS PROVIDED TO THE SURVEYOR. LOCATIONS OF UNDERGROUND UTILITIES OR STRUCTURES MAY VARY FROM LOCATIONS SHOWN HEREON. ADDITIONAL BURIED UTILITIES OR STRUCTURES MAY BE ENCOUNTERED. NO EXCAVATIONS WERE MADE DURING THE PROGRESS OF THE SURVEY TO LOCATE BURIED UTILITIES OR STRUCTURES. NO WARRANTY, EITHER EXPRESSED OR IMPLIED IS MADE AS TO THE COMPLETENESS AND CORRECT LOCATION OF UNDERGROUND UTILITIES OR STRUCTURES. HOWEVER, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL EXISTING STRUCTURES AND UTILITIES AS WELL OTHER EXISTING FEATURES. ANY DISCREPANCIES BETWEEN THESE CONTRACT DOCUMENTS AND ACTUAL CONDITIONS SHALL BE REPORTED TO THE OWNER A MINIMUM OF 48 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR SHALL VERIFY ALL PROPOSED GRADES, ELEVATIONS, UTILITY LOCATIONS, ETC. ANY DISCREPANCIES SHALL BE REPORTED TO THE OWNER A MINIMUM OF 48 HOURS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

Client

RAVINA COMMUNITIES

J.U.L.I.E.
Joint Utility Locating Information for Excavators
CALL 811
811
Know what's below.
Call before you dig.

NOT FOR CONSTRUCTION

Rynear & Son, Inc.
Consulting Engineers
Professional Design Firm
Licenses No. 184–004637

595 BUTTONWOOD CIRCLE
NAPERVILLE, ILLINOIS 60540

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(630) 355–5362 FAX

ISSUE:

#	Date	Description

PROJECT: PRELIMINARY ENGINEERING FOR: OAKBROOK ESTATES EXPANSION

OWNER: RAVINA COMMUNITIES

Date: 10/14/24
Design/Drawn: WAR
Approved: CWR
Book No.: –
File No.: 23–8242

SHEET TITLE:
COVER SHEET

SHEET NUMBER:
C-1
SHEET 1 OF x

Project No.: 23–8242

| Admin | C:\projects\rynhen\12–7400.DWG | DATE: 02/21/2012 | Time: 16:22 |

GRAPHIC SCALE
(IN FEET)
1 inch = 30 ft.

RUBY MAY CT

BENJAMIN

RAVINIA WAY

4' Storm MH TY A
Outlet Structure
TY 1 Fr & CL Lid
Rim = 902.00
Inv In = 895.00
Inv Out=897.76

Inv=896.50

Inv=895.00

5:1 Slope Typical

SWM-3 ℄897.63

Stormwater Management
H.W. 897.76

Inv=893.00

5:1 Slope Typical

SWM-4

Top of wall = 903.75
Bottom of wall = 900.75

Inv=894.00

Stormwater

6+67.50 6+50 898.75
2.00% 6+00 PVI 899.75
0.60% 5+50 899.45
5+00 PVI 899.15
⇐ 0.60% 4+50 899.45
4+00 3+90 PVI 899.75
0.60% 3+50 899.81
3+00 PVI 899.57
⇐ 1.75% 2+50 899.27
2+00 900.15
1.00% 1+90 PVI 901.02
⇐ 1.00% 1+50 901.20
1+00 PVI 900.80
3.60% 0+50 901.30
0+00 899.50

2+00 897.75
7+34.26 7+50 898.25
1.00% 8+00 PVI 898.75
1.00% 8+49.26 8+50 898.25
8+92.84 PVI 897.92
9+00 9+16.02 9+50 898.73
1.20% 10+00 899.33
10+50 PVI 899.93
⇐ 3.00% 11+00 901.43
11+50 PVI 902.93
2.00% 12+00 903.93
12+50 PVI 904.93
1.00% 13+00 905.43
13+50 905.93
13+93.52

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595 BUTTONWOOD CIRCLE
NAPERVILLE, ILLINOIS 60540

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(630) 355-5362 FAX

ISSUE:

#	Date	Description
	10-25-24	Initial Submittal

PROJECT:
Ravinia Communities
OAKBROOK ESTATES
Expansion
Crystall Lake, Illinois

OWNER:

Date:
Design/Drawn:
Approved:
Book No.:
File No.: -

SHEET TITLE:

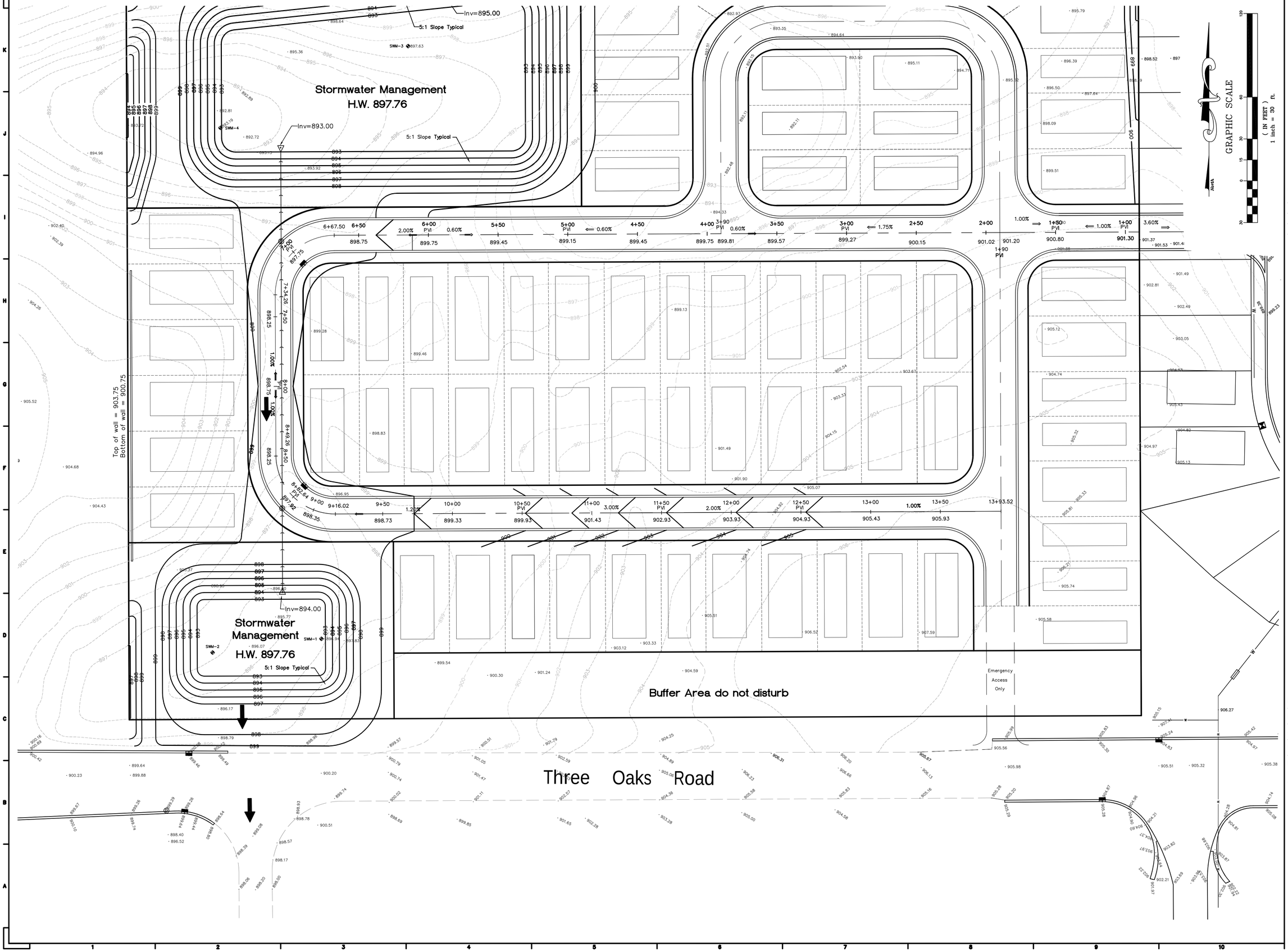
Preliminary Grading Plan Oakbrook Estates Expansion

SHEET NUMBER:

C-2

SHEET OF

Project No.: **23-8242**



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Consulting Engineers
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NAPERVILLE, ILLINOIS 60540

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ISSUE:

#	Date	Description
	10-25-24	Initial Submittal

PROJECT:
Ravinia Communities
OAKBROOK ESTATES
Expansion
Crystall Lake, Illinois

OWNER:

Date:

Design/Drawn:

Approved:

Book No.:

File No.: -

SHEET TITLE:

Preliminary Grading Plan Oakbrook Estates Expansion

SHEET NUMBER:

C-3

SHEET OF

Project No.: **23-8242**

GRAPHIC SCALE
(IN FEET)
1 inch = 30 ft.
North

RUBY MAY CT

BENJAMIN LANE

RAVINIA WAY

Stormwater Management
H.W. 897.87

8" DIP CL 52 Watermain

Proposed Fire Hydrant with aux. valve

4' Sanitary MH TY A Ty 1 Fr & Closed Lid Rim = Inv =892.83

4' Sanitary MH TY A Ty 1 Fr & Closed Lid Rim = 899.00 Inv =888.54

114'–8" PVC SDR 26 Sanitary Sewer @ 1.40%

4' Sanitary MH TY A Ty 1 Fr & Closed Lid Rim = Inv =891.23

192'–8" PVC SDR 26 Sanitary Sewer @ 1.40%

81'–8" PVC SDR 26 Sanitary Sewer @ 1.40%

81'–8" PVC SDR 26 Sanitary Sewer @ 2.00%

4' Sanitary MH TY A Ty 1 Fr & Closed Lid Rim = Inv =893.96

4' Sanitary MH TY A Ty 1 Fr & Closed Lid Rim = Inv =892.85

136'–8" PVC SDR 26 Sanitary Sewer @ 1.40%

Existing Sanitary M.H. Rim = 897.84 Inv = 884.10+/– Core Drill & Install Rubber boot Inv=884.50

Proposed Fire Hydrant with aux. valve

710'–6" DIP CL 52 Watermain

107'–8" PVC SDR 26 Sanitary Sewer @ 2.00%

Inv =891.80

8" DIP CL 52 Watermain

Pressure Tap

80'–8" PVC SDR 26 Sanitary Sewer @ 0.50%

4' Sanitary MH TY A Ty 1 Fr & Closed Lid Rim = 901.30 Inv =886.64

316'–8" PVC SDR 26 Sanitary Sewer @ 0.60%

4' Sanitary MH TY A Ty 1 Fr & Closed Lid Rim = Inv =889.50

315'–8" PVC SDR 26 Sanitary Sewer @ 0.60%

97'–8" PVC SDR 26 Sanitary Sewer @ 1.00%

4' Sanitary MH TY A Ty 1 Fr & Closed Lid Rim = Inv =891.40

4' Sanitary MH TY A Ty 1 Fr & Closed Lid Rim = Inv =887.61

85'–8" PVC SDR 26 Sanitary Sewer @ 0.50%

Proposed Fire Hydrant with aux. valve

8" DIP CL 52 Watermain

Proposed Fire Hydrant with aux. valve

197'–8" PVC SDR 26 Sanitary Sewer @2.50%

Inv =891.82

Existing Sanitary Sewer

Existing Watermain

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595 BUTTONWOOD CIRCLE
NAPERVILLE, ILLINOIS 60540

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(630) 355–5362 FAX

ISSUE:

#	Date	Description
	10–25–24	Initial Submittal

PROJECT:
Ravinia Community
OAKBROOK ESTATES
Expansion
Crystall Lake, Illinois

OWNER:

Date:
Design/Drawn:
Approved:
Book No.:
File No.: -

SHEET TITLE:

Preliminary Utility Plan Oakbrook Estates Expansion

SHEET NUMBER:

C-4

SHEET OF

Project No.: **23-8242**

GRAPHIC SCALE
(IN FEET)
1 inch = 30 ft.

Stormwater Management
H.W. 897.87

4' Sanitary MH TY A Ty 1 Fr & Closed Lid Rim = Inv =892.83
81'-8" PVC SDR 26 Sanitary Sewer @ 1.40%
4' Sanitary MH TY A Ty 1 Fr & Closed Lid Rim = Inv =893.96
114'-8" PVC SDR 26 Sanitary Sewer @ 1.40%
4' Sanitary MH TY A Ty 1 Fr & Closed Lid Rim = Inv =891.23
81'-8" PVC SDR 26 Sanitary Sewer @ 2.00%
4' Sanitary MH TY A Ty 1 Fr & Closed Lid Rim = Inv =892.85
710'-6" DIP CL 52 Watermain
Proposed Fire Hydrant with aux. valve
4' Sanitary MH TY A Ty 1 Fr & Closed Lid Rim = Inv =899.00 Inv =888.54
192'-8" PVC SDR 26 Sanitary Sewer @ 1.40%
136'-8" PVC SDR 26 Sanitary Sewer @ 1.40%
Existing Sanitary M.H. Rim = 897.84 Inv = 884.10+/- Core Drill & install Rubber boot Inv=884.50
107'-8" PVC SDR 26 Sanitary Sewer @ 2.00%
Inv =891.80
80'-8" PVC SDR 26 Sanitary Sewer @ 0.50%
8" DIP CL 52 Watermain
4' Sanitary MH TY A Ty 1 Fr & Closed Lid Rim = Inv =891.40
316'-8" PVC SDR 26 Sanitary Sewer @ 0.60%
4' Sanitary MH TY A Ty 1 Fr & Closed Lid Rim = Inv =889.50
315'-8" PVC SDR 26 Sanitary Sewer @ 0.60%
8" DIP CL 52 Watermain
Proposed Fire Hydrant with aux. valve
85'-8" PVC SDR 26 Sanitary Sewer @ 0.50%
Inv =891.82
8" DIP CL 52 Watermain
Proposed Fire Hydrant with aux. valve
4' Sanitary MH TY A Ty 1 Fr & Closed Lid Rim = Inv =901.30 Inv =886.64
Pressure Tap
Existing Sanitary Sewer
Existing Watermain
97'-8" PVC SDR 26 Sanitary Sewer @ 1.00%
4' Sanitary MH TY A Ty 1 Fr & Closed Lid Rim = Inv =887.61
197'-8" PVC SDR 26 Sanitary Sewer @2.50%
8" DIP CL 52 Watermain
Existing Meter
Existing Watermain
Existing Fire Hydrant

Stormwater Management
H.W. 897.87

4' Sanitary MH TY A Ty 1 Fr & Closed Lid Rim = Inv =895.02
234'-8" PVC SDR 26 Sanitary Sewer @ 0.50%
4' Sanitary MH TY A Ty 1 Fr & Closed Lid Rim = Inv =893.85
262'-8" PVC SDR 26 Sanitary Sewer @ 0.50%
4' Sanitary MH TY A Ty 1 Fr & Closed Lid Rim = Inv =892.54

Buffer Area do not disturb

Three Oaks Road

Rynear & Son, Inc.
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ISSUE:

#	Date	Description
	10-25-24	Initial Submittal

PROJECT:
Ravinia Communities
OAKBROOK ESTATES
Expansion
Crystall Lake, Illinois

OWNER:

Date:
Design/Drawn:
Approved:
Book No.:
File No.: -

SHEET TITLE:
Preliminary Utility Plan Oakbrook Estates Expansion

SHEET NUMBER:
C-5
SHEET OF

Project No.: **23-8242**

RYNEAR & SON, INC.

CONSULTING ENGINEERS

Professional Design Firm Licenses #184-004637

595 BUTTONWOOD CIRCLE • NAPERVILLE • 60540 • (630) 355-9889

Fax: (630) 355-5362 EMAIL: TRYNEAR@WOWWAY.COM

Oakbrook Estates Preliminary Stormwater Management Report
October 15, 2024

Project Background

The Oakbrook Estates Expansion is a proposed Planned Unit Development (PUD) located on the north side of Three Oaks Road on approximately 10 acres of property adjacent to the existing Ravinia Communities MHC site. The proposed PUD consists of 69 home sites with required stormwater detention and open space areas. The gross site area is 10 acres. Of this area, 6.65 acres are proposed for impervious paved roads, homes and driveways. The remaining 3.35 acres will be parkway, open space, dry detention and other green space. The proposed PUD shows the proposed right-of-way, which is used in the calculation of net developable area. A map of the overall development is included as Figure 1.

Existing Conditions

The proposed PUD area is wooded, undeveloped land that has no wetland areas on the property. The land generally slopes to the north and west. The previous homestead and barn structures have all been removed but slabs and foundations remain. A tree survey has been performed and is included with this submittal.

Depressional Storage

The issue of depressional storage has been raised by the Village engineering consultant.

> DEPRESSIONAL STORAGE AREA: A non-riverine depression where stormwater collects; only regulated when total storage of an individual depressional storage area exceeds 0.75 acre-foot. Any area within a closed contour and drained by a sewer or culvert with a full-flow capacity greater than 0.10 cubic foot per second per acre (cfs/ac) capacity shall not be considered a depressional storage area.

This area has been historically dry, without any seasonal ponding of water or other flooding. Historical use of the land also clearly demonstrates that there is no seasonal or depressional storage. Our tree survey consultant has confirmed that the site only contains uplands species of trees that do not tolerate flood prone conditions. Based on soils data included with this report, this position is supported by both our soil scientists and geotechnical evaluation of the soil materials. It simply has never held water.

Our preliminary engineering analysis indicates that none of the site meets the definition or criteria of a depressional storage area/flood-prone area. The natural outflow is created via

infiltration as opposed to a storm sewer or culvert outlet.
Mr. Brandon M Mueller, CPSC, of William R. Kreznor & Associates conducted a series of four boring and permeability tests The borings were all in the areas of the proposed stormwater detention ponds which will be located in the low-lying areas of the site. The borings ranged from 60" to 108" in depth. In summary, he concluded that the upper layers of soil on the site are of a moderate permeability defined as 0.6 - 2.0 inches per hour and the lower depth soils are of a moderately rapid permeability defined as 2 – 6 inches per hour. The upper layers are identified as Hydrologic Soil Group B.
Illinois Drilling and Testing Co., Inc. conducted 8 borings for geotechnical purposes to a depth of 15' each. In summary, the geotechnical borings found that the lower soils in the western half of the site are of a silt, sand and gravel in nature.
It should be noted that no ground water was observed during either the soil scientist or geotechnical borings.

Proposed Work

The proposed PUD includes 10.00 acres of developable area. Site access will be through the existing manufactured home site and no new access points will be from Three Oaks Rd. An emergency access only location will be created at the request of the fire department, but will not be available for resident use.
A 47' wide buffer area will be maintained along Three Oaks Rd. Existing specimen trees will be maintained and overall landscaping enhanced in this area. Other specimen trees around the perimeter of the site and within open areas will be maintained as grading allows. A comprehensive tree replacement program and fee in lieu payments will be made as part of the final design.
Stormwater management is provided by overland flow and conveyance through underground pipes to two detention basins. These basins will be interconnected by a pipe and by overland flow over the proposed roadway between them if water ever reaches an elevation of 898.00.

Stormwater Management – Methodology, Proposed Detention

Coverage data for the development is as follows: Impervious Drainage Area 6.5 acres; Pervious Drainage Area 3.5 acres; Composite CN for the project is 85.05. Soil Group B was used to determine the CN.
As our two detention basins will be interconnected, they essentially function as a single detention basin. Because the drainage areas is 10 acres, nomographs were used to establish detention requirements and are included in this report.
We used a conservative methodology to compute the infiltration rate for the ponds. Using the lowest contour area of each pond (elevation 893.0), we have 26,263 sf of infiltration area. Using the mid-point of the infiltration rate of 1.5 inches per hour for soil type B, we compute an actual out flow infiltration rate of 0.91 inches per hour for the ponds. No increase in rate for hydrologic head or increase in ground contact area, as the water in the basins rises, is applied. The nomograph for Bulletin 75 Rainfall is applicable for a 10 acre site. It identifies a required Detention Volume of 4.154 acre-feet. If the basins fill to the overflow elevation of 899.0, they provide 6.10 acre-feet of volume. Using HEC-HMS to compute the actual provided detention based on inflow and outflow infiltration, we compute an actual detention of 4.33 acre-feet at elevation 897.87, and 4.19 acre-feet at elevation 897.76 both of which exceeds the required detention of 4.154 Ac-Ft.

COMPOSITE RUNOFF CURVE NUMBER (*CN*)

PROJECT: Oak Brook Estates Expansion **PERMIT NUMBER:**

LOCATION: Three Oaks Road, Crystal Lake **DATE:** 10/10/2024

TYPE OF AREA (SELECT WITH DROP-DOWN)

X DETAINED AREA

___ UNRESTRICTED AREA

___ UPSTREAM AREA

___ MAJOR STORMWATER SYSTEM

___ OTHER:

CONDITION (SELECT WITH DROP-DOWN)

X PROPOSED CONDITION

___ EXISTING CONDITION

RUNOFF CURVE NUMBER

Surface Description	Hydrologic Soil Group (HSG)	CN	Area (acres)	Product (CN)(Area)
Impervious Area	B	98	6.50	637.00
Pervious Area	B	61	3.50	213.50
TOTALS:			10.00	850.50

COMPOSITE RUNOFF CURVE NUMBER

$$\text{Composite CN} = \frac{\text{Total Product}}{\text{Total Area}} = \frac{850.50}{10.00} \rightarrow \textbf{Composite CN} = \textbf{85.05}$$

NOMOGRAPH: BULLETIN 75 RAINFALL DATA

PROJECT: Oak Brook Estates Expansion **PERMIT NUMBER:**

LOCATION: Three Oaks Road, Crystal Lake **DATE:** 10/10/2024

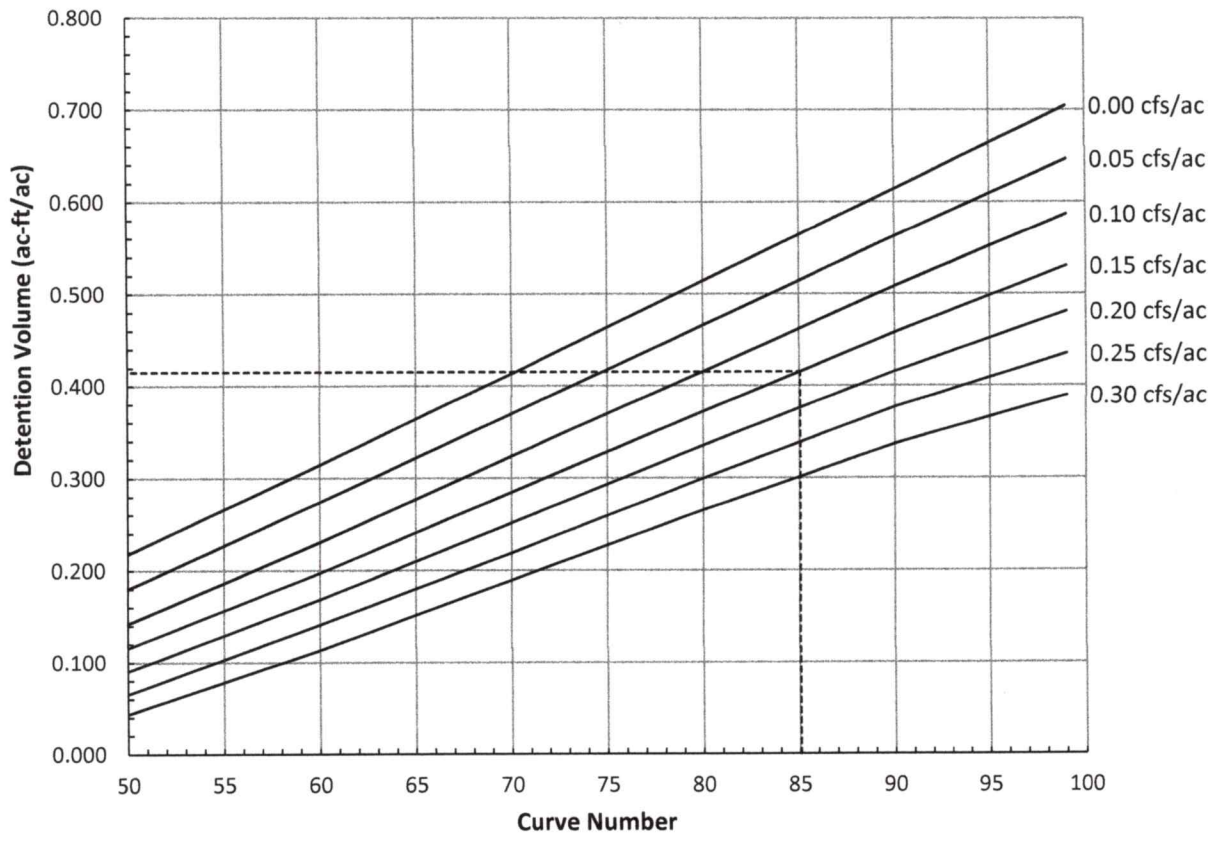
DEVELOPMENT INFORMATION

1. Detained Area	10.000	acres
2. Curve Number	85.05	
3. Actual Release Rate	1.500	cfs

REQUIRED DETENTION VOLUME

4. Required Detention Volume	4.154	ac-ft

NOMOGRAPH



DETENTION VOLUME PROVIDED

PROJECT: Oak Brook Estates Expansion Stormwater Facility **PERMIT NUMBER:**

LOCATION: Three Oaks Road, Crystal Lake **DATE:** 10/10/2024

AREA UNITS (CHOOSE WITH DROP-DOWN)

Units: ft^2

POND / VAULT / SURFACE DETENTION VOLUME

Elevation (ft)	Area (ft^2)	Average Area (ft^2)	Increment Volume (ac-ft)	Cumulative Volume (ac-ft)
893.00	26263.00			0.00
		28593.00	0.66	
894.00	30923.00			0.66
		33410.50	0.77	
895.00	35898.00			1.42
		38542.00	0.88	
896.00	41186.00			2.31
		43987.50	1.01	
897.00	46789.00			3.32
		50954.00	1.17	
898.00	55119.00			4.49
		70231.00	1.61	
899.00	85343.00			6.10

STORM SEWER DETENTION VOLUME

Diameter (in)	Length (ft)	Volume (ac-ft)

TOTAL DETENTION VOLUME

Pond / Vault / Surface Detention Volume (ac-ft)	6.10
Storm Sewer Detention Volume (ac-ft)	0.00
Total Detention Volume (ac-ft)	**6.10**

HEC-HMS

Project: Oakbrook Estates Expansion Simulation Run: 100yr24hr
Reservoir: Reservoir-1

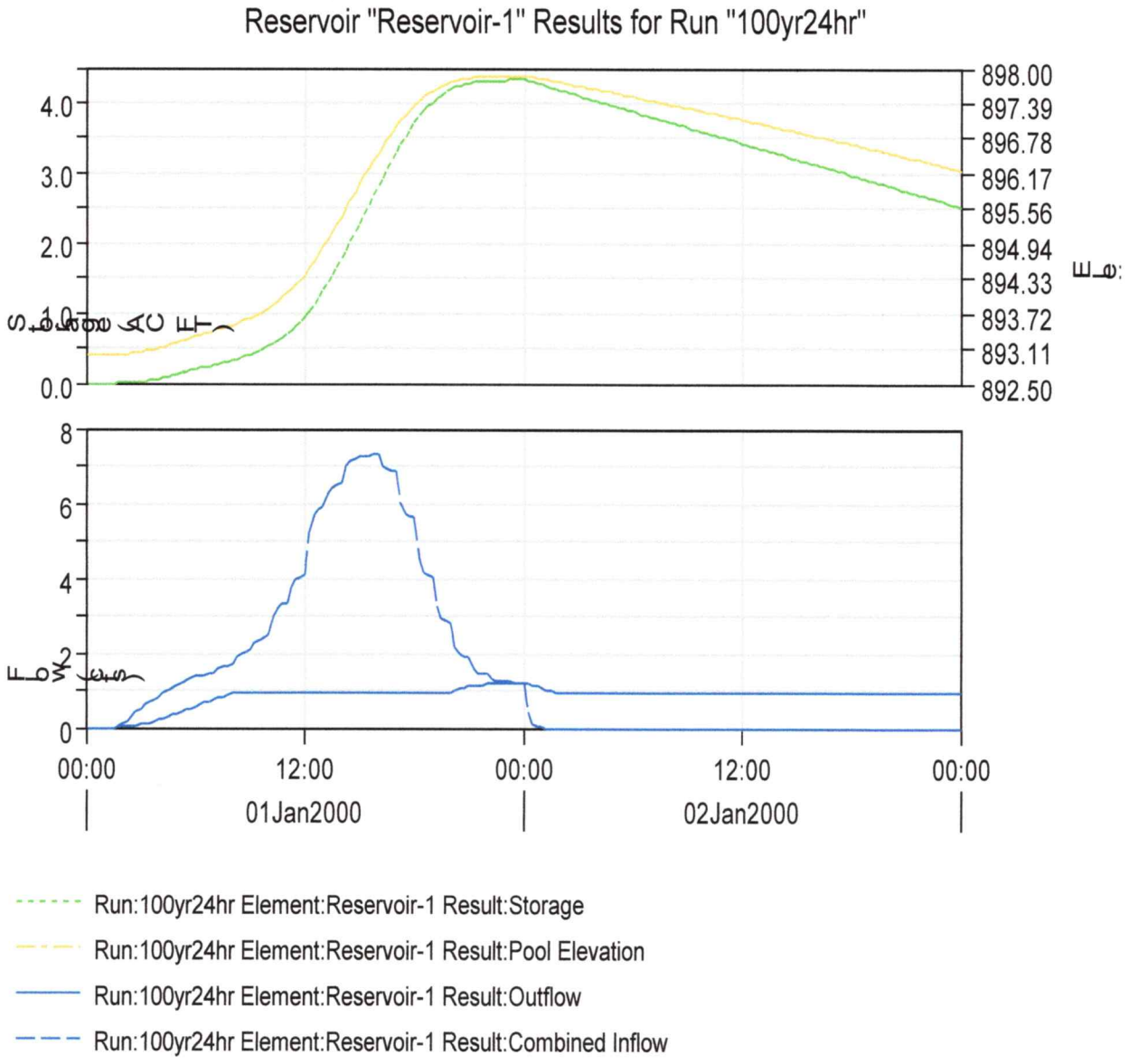
Start of Run:	01Jan2000, 00:00	Basin Model:	Basin 1
End of Run:	03Jan2000, 00:00	Meteorologic Model:	100yr24hr
Compute Time:	18Oct2024, 10:51:39	Control Specifications:	100yr24hr

Volume Units: IN

Computed Results

Peak Inflow:	7.31 (CFS)	Date/Time of Peak Inflow:	01Jan2000, 16:00
Peak Discharge:	1.19 (CFS)	Date/Time of Peak Discharge:	02Jan2000, 00:00
Inflow Volume:	6.99 (IN)	Peak Storage:	4.33 (AC-FT)
Discharge Volume:	3.97 (IN)	Peak Elevation:	897.87 (FT)

HEC- HMS


Reservoir "Reservoir-1" Results for Run "100yr24hr"
Storage (AC FT)
Elev
4.0
3.0
2.0
1.0
0.0
898.00
897.39
896.78
896.17
895.56
894.94
894.33
893.72
893.11
892.50
Flows (cfs)
8
6
4
2
0
00:00
12:00
00:00
12:00
00:00
01Jan2000
02Jan2000
Run:100yr24hr Element:Reservoir-1 Result:Storage
Run:100yr24hr Element:Reservoir-1 Result:Pool Elevation
Run:100yr24hr Element:Reservoir-1 Result:Outflow
Run:100yr24hr Element:Reservoir-1 Result:Combined Inflow

01Jan2000	06:30	1.40	0.23	893.36	0.65
01Jan2000	06:45	1.43	0.24	893.38	0.70
01Jan2000	07:00	1.47	0.26	893.41	0.74
01Jan2000	07:15	1.57	0.27	893.43	0.79
01Jan2000	07:30	1.63	0.29	893.46	0.83
01Jan2000	07:45	1.66	0.30	893.48	0.88
01Jan2000	08:00	1.69	0.32	893.51	0.91
01Jan2000	08:15	1.89	0.34	893.54	0.91
01Jan2000	08:30	1.99	0.36	893.57	0.91
01Jan2000	08:45	2.04	0.38	893.60	0.91
01Jan2000	09:00	2.07	0.41	893.64	0.91
01Jan2000	09:15	2.28	0.43	893.67	0.91
01Jan2000	09:30	2.38	0.46	893.72	0.91
01Jan2000	09:45	2.43	0.49	893.76	0.91
01Jan2000	10:00	2.46	0.53	893.81	0.91
01Jan2000	10:15	2.99	0.56	893.86	0.91
01Jan2000	10:30	3.21	0.61	893.93	0.91
01Jan2000	10:45	3.29	0.66	894.00	0.91
01Jan2000	11:00	3.33	0.71	894.07	0.91
01Jan2000	11:15	3.78	0.76	894.14	0.91
01Jan2000	11:30	3.97	0.82	894.22	0.91
01Jan2000	11:45	4.04	0.89	894.31	0.91
01Jan2000	12:00	4.08	0.95	894.40	0.91
01Jan2000	12:15	5.22	1.03	894.50	0.91
01Jan2000	12:30	5.68	1.12	894.62	0.91
01Jan2000	12:45	5.83	1.22	894.75	0.91
01Jan2000	13:00	5.90	1.32	894.88	0.91
01Jan2000	13:15	6.27	1.43	895.01	0.91
01Jan2000	13:30	6.44	1.54	895.14	0.91
01Jan2000	13:45	6.50	1.66	895.28	0.91
01Jan2000	14:00	6.55	1.77	895.41	0.91

01Jan2000	14:15	6.97	1.90	895.55	0.91
01Jan2000	14:30	7.15	2.02	895.69	0.91
01Jan2000	14:45	7.21	2.15	895.83	0.91
01Jan2000	15:00	7.25	2.28	895.97	0.91
01Jan2000	15:15	7.26	2.41	896.11	0.91
01Jan2000	15:30	7.27	2.54	896.24	0.91
01Jan2000	15:45	7.29	2.68	896.38	0.91
01Jan2000	16:00	7.31	2.81	896.51	0.91
01Jan2000	16:15	7.01	2.94	896.64	0.91
01Jan2000	16:30	6.91	3.06	896.76	0.91
01Jan2000	16:45	6.89	3.19	896.87	0.91
01Jan2000	17:00	6.90	3.31	896.99	0.91
01Jan2000	17:15	6.04	3.42	897.10	0.91
01Jan2000	17:30	5.71	3.53	897.19	0.91
01Jan2000	17:45	5.64	3.63	897.28	0.91
01Jan2000	18:00	5.63	3.72	897.36	0.91
01Jan2000	18:15	4.56	3.81	897.44	0.91
01Jan2000	18:30	4.16	3.88	897.50	0.91
01Jan2000	18:45	4.07	3.95	897.56	0.91
01Jan2000	19:00	4.05	4.01	897.61	0.91
01Jan2000	19:15	3.23	4.07	897.66	0.91
01Jan2000	19:30	2.92	4.11	897.70	0.91
01Jan2000	19:45	2.85	4.15	897.73	0.91
01Jan2000	20:00	2.84	4.19	897.76	0.94
01Jan2000	20:15	2.19	4.23	897.79	1.00
01Jan2000	20:30	1.95	4.25	897.80	1.04
01Jan2000	20:45	1.89	4.27	897.82	1.07
01Jan2000	21:00	1.88	4.28	897.83	1.10
01Jan2000	21:15	1.59	4.29	897.84	1.13
01Jan2000	21:30	1.48	4.30	897.85	1.14
01Jan2000	21:45	1.46	4.31	897.85	1.15

01Jan2000	22:00	1.45	4.32	897.85	1.16
01Jan2000	22:15	1.32	4.32	897.86	1.17
01Jan2000	22:30	1.28	4.32	897.86	1.18
01Jan2000	22:45	1.27	4.32	897.86	1.18
01Jan2000	23:00	1.26	4.33	897.86	1.18
01Jan2000	23:15	1.23	4.33	897.86	1.19
01Jan2000	23:30	1.22	4.33	897.86	1.19
01Jan2000	23:45	1.22	4.33	897.87	1.19
02Jan2000	00:00	1.21	4.33	897.87	1.19
02Jan2000	00:15	0.40	4.32	897.86	1.18
02Jan2000	00:30	0.09	4.30	897.85	1.14
02Jan2000	00:45	0.02	4.28	897.83	1.10
02Jan2000	01:00	0.00	4.26	897.81	1.06
02Jan2000	01:15	0.00	4.24	897.80	1.02
02Jan2000	01:30	0.00	4.22	897.78	0.98
02Jan2000	01:45	0.00	4.20	897.77	0.95
02Jan2000	02:00	0.00	4.18	897.75	0.91
02Jan2000	02:15	0.00	4.16	897.74	0.91
02Jan2000	02:30	0.00	4.14	897.72	0.91
02Jan2000	02:45	0.00	4.12	897.70	0.91
02Jan2000	03:00	0.00	4.10	897.69	0.91
02Jan2000	03:15	0.00	4.08	897.67	0.91
02Jan2000	03:30	0.00	4.06	897.66	0.91
02Jan2000	03:45	0.00	4.05	897.64	0.91
02Jan2000	04:00	0.00	4.03	897.63	0.91
02Jan2000	04:15	0.00	4.01	897.61	0.91
02Jan2000	04:30	0.00	3.99	897.59	0.91
02Jan2000	04:45	0.00	3.97	897.58	0.91
02Jan2000	05:00	0.00	3.95	897.56	0.91
02Jan2000	05:15	0.00	3.93	897.55	0.91
02Jan2000	05:30	0.00	3.91	897.53	0.91