#2026-110
4202 Three Oaks Road Final PUD
Project Review for Planning and Zoning Commission

Meeting Date:	July 1, 2026
Request:	Final Planned Unit Development and Special Use Permit for a 69-unit expansion of a Manufactured Housing Park.
Location:	4202 Three Oaks Road
Acreage:	Approximately 9.5 acres
Zoning:	R-3B Multi-Family Residential
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.
- In December 2024, Oakbrook Estates received approval for the Annexation and Comprehensive Land Use Plan Amendment, Rezoning and Preliminary PUD and variations. The variations were granted for setbacks, right-of-way width, the horizontal curve radius, and street tree planting. This is the expansion for 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

- Request: Final Planned Unit Development and Special Use Permit.
- Zoning: The site is currently zoned R-3B Multi-Family Residential.
- Land Use: The land use map is High Density Residential.

Site Plan:

- The site would be an extension of the existing manufactured home neighborhood. To keep in character with 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.

Landscape Plan:

- The plan illustrates street trees, plantings around the detention areas and a buffer landscape area along Three Oaks Road. There are several trees noted by one symbol an no minimum size is indicated.
- 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. In addition, if any Class A species like Bur Oak or Shagbark Hickory trees can be saved this should be reflected in revised plans.
- 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 preliminary PUD was approved with several conditions. Some of these conditions have not been met. The following is an analysis of the preliminary PUD conditions and staff suggestions on how to meet them.

Engineering

A. Provide final engineering calculations and plans for the Final PUD.

B. Provide a sidewalk along Three Oaks Road.

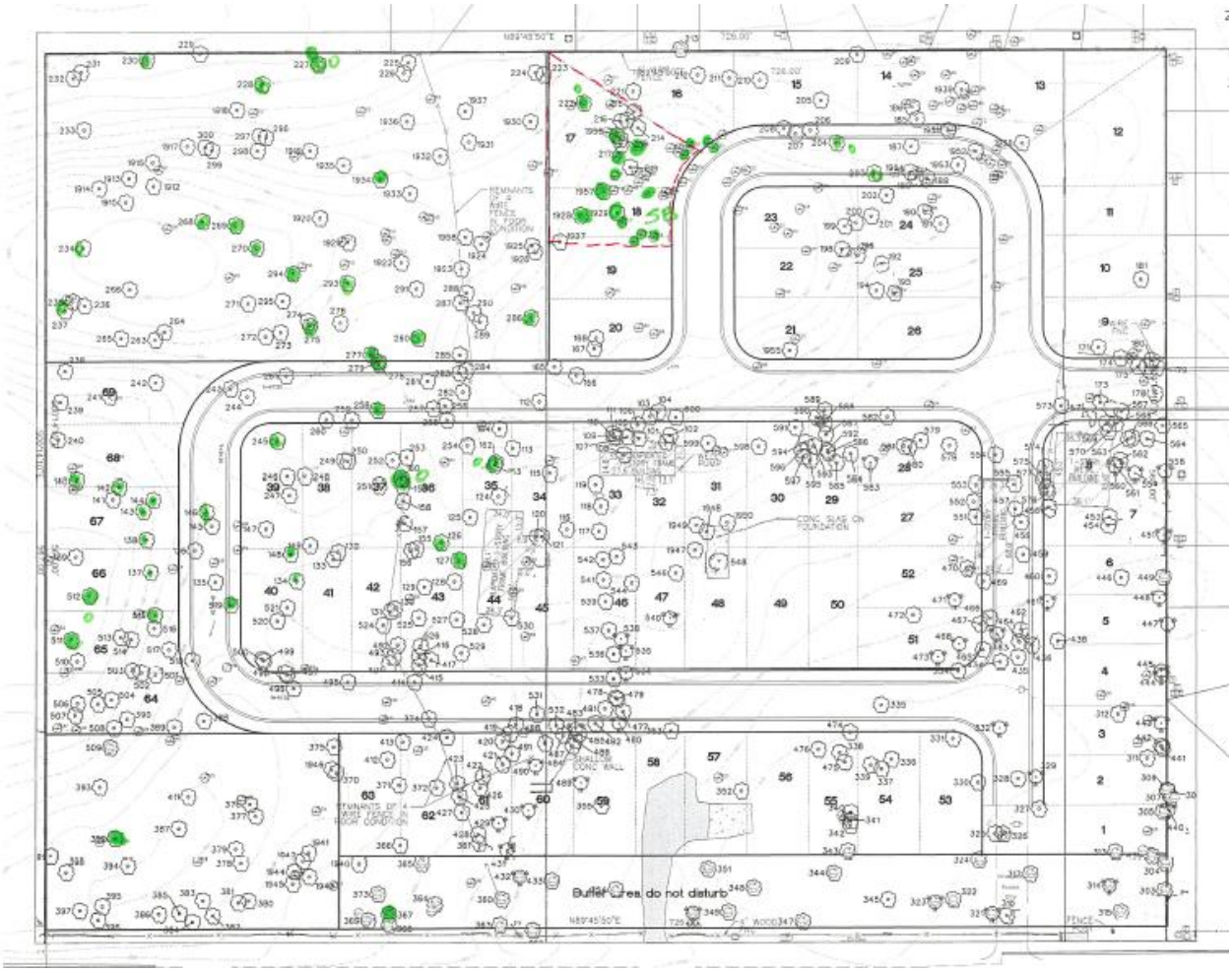
The developer is working with staff to meet these conditions.

3. Landscape

A. Provide a final landscape plan with size. species and planting conditions 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.

This comment has not been addressed. The size, specific species for each symbol and quantity have not been identified.

B. Provide a tree survey map and where possible, save and protect existing class A trees.
This comment has not been addressed. The tree Survey map was provided last week for review. No trees have been identified to be saved. There is a cluster of Shagbark Hickory trees located on lots 17 and 18. There are a number of Bur Oak trees on the western side of the development.



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.
Sidewalk will be provided, revised engineering plans will be required at Permitting.

4. The petitioner shall address al 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.
The developer is continuing to revise the plans to be ready for permits.

5. Work with staff to identify a **minimum of 2** of the 69 approved lots for outdoor recreation spaces for residents with areas for gathering some of which must be covered.

Lots 9 and 10 have been designated for outdoor recreation areas. They have selected these to be closer to the existing neighborhood to provide access for those residents as well.
Staff is suggesting Lots 17 and 18 shall be protected from mass grading and the lot line from lot 19 shall be shifted to preserve additional trees.
These two lots can be converted to a natural gathering space and covered gazebo can be added.
The ability to save some Bur Oak trees on lots 66, 67, and 68 should also be explored.

Final Planned Unit Development
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* ☐ *NA*

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*

Comprehensive Land Use Plan 2030 Vision Summary Review:
The Comprehensive Plan designates the subject property as 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 05/01/26)
   B. Site Plan (Rynear & Sons, Inc, dated 06/19/26)
   C. Landscape Plan (Rynear & Sons, Inc,. undated, received 06/22/26)
   D. Tree Preservation Plan (Rynear & Son, Inc. dated 06/26/26)
   E. Engineering Report (Rynear & Son, Inc., dated 06/03/26)

2. Engineering
   A. Provide final engineering calculations and plans prior to permitting.
   B. Provide a sidewalk along Three Oaks Road.
   C. Apply for a grading permit after identifying any class A trees to be saved.

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. The developer to show where and how they plan to 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: Oakbrook Estates Expansion

Action Requested

- ___ Annexation
- ___ Comprehensive Plan Amendment
- ___ Conceptual PUD Review
- X Final PUD
- ___ Final PUD Amendment
- ___ Final Plat of Subdivision
- ___ Preliminary PUD
- ___ Preliminary Plat of Subdivision
- ___ Rezoning
- ___ 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: _____

Owner Information (if different)

Name: Vistas Crystal Lake Funds LLC
Address: 6009 N Louise
Chicago, IL 60646
Phone: _____
Fax: _____
E-mail: _____

Property Information

Project Description: Additional Phase to Oakbrook Estates manufactured home park. Net 67 units on approximately 10 Acre site.

Project Address/Location: 4202 Three Oaks Rd.

PIN Number(s): 1910-200-21, 19-10-200-022, 19-10-200-023

Development Team

Please include address, phone, fax and e-mail

Developer: Ravinia Communities LLC c/o David Worth, 980 Skokie Blvd #CBS, Northbrook, IL 60062 847-881-2007 dw@raviniacommunities.com

Architect: _____

Attorney: _____

Engineer: John Talbot, Ryner & Son, Inc. 847-624-7400 jjtpe1@gmail.com
595 Buttonwood Circle, Naperville, IL 60540

Landscape Architect: _____

Planner: _____

Surveyor: William M. Wingstedt 630-554-8209

Other: _____

Signatures

David Worth, 5/1/26

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.

David Worth, 5/1/26

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.

Final PUD Oakbrook Estates Expansion

North

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

RUBY MAY CT

BENJAMIN LANE

RAVINIA WAY

926 926A 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'

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'

AZELEA WAY

N89°45'50"E 120.00'

Parcel 2

Community Gathering Area

14' x 14' Roofed Shelter

West Line of Parcel 2
East Line of Parcel 2
S00°14'10"E 228.00'

MAGNOLIA CIRCLE

N89°45'50"E 440.00'
N89°45'50"E 190.00'
N89°45'50"E 146.00'

Parcel 3

West Line of Parcel 3
East Line of Parcel 3
S00°14'10"E 120.00'

Match Line
Match Line

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
	04-15-26	Submittal
1	06-12-26	Revised per 6-11-26 review
2	06-19-26	Sidewalk/Shelter/Park Lots

PROJECT: Ravinia Communities OAKBROOK ESTATES Expansion — Crystall Lake, Illinois

OWNER: Ravinia Communities 900 N. Skokie Blvd. Suite 285 — Northbrook, Illinois 60062

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

SHEET TITLE:

Final PUD Oakbrook Estates Expansion

SHEET NUMBER:

SP-1

SHEET 1 OF 2

Project No.: 23-8242

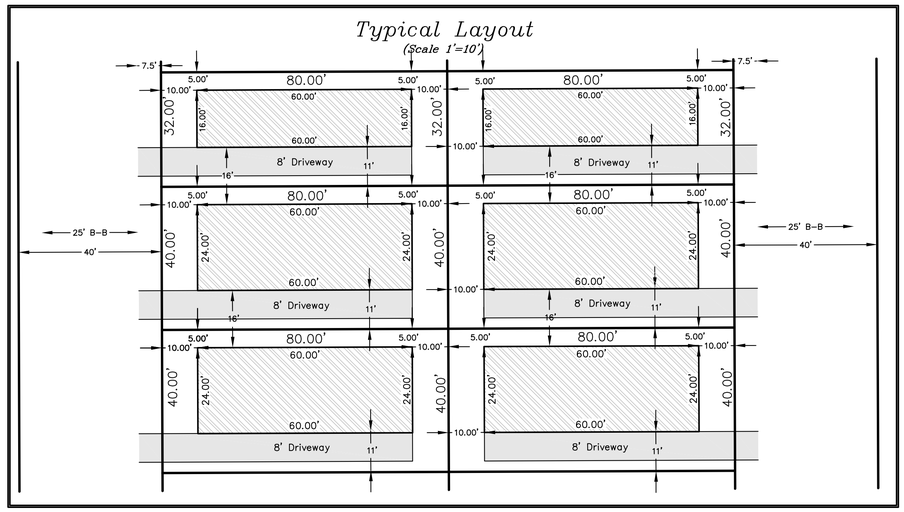
Final PUD Oakbrook Estates Expansion

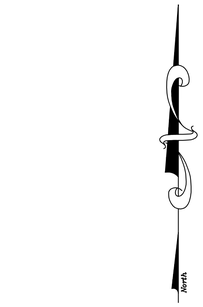
Legal Description

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.

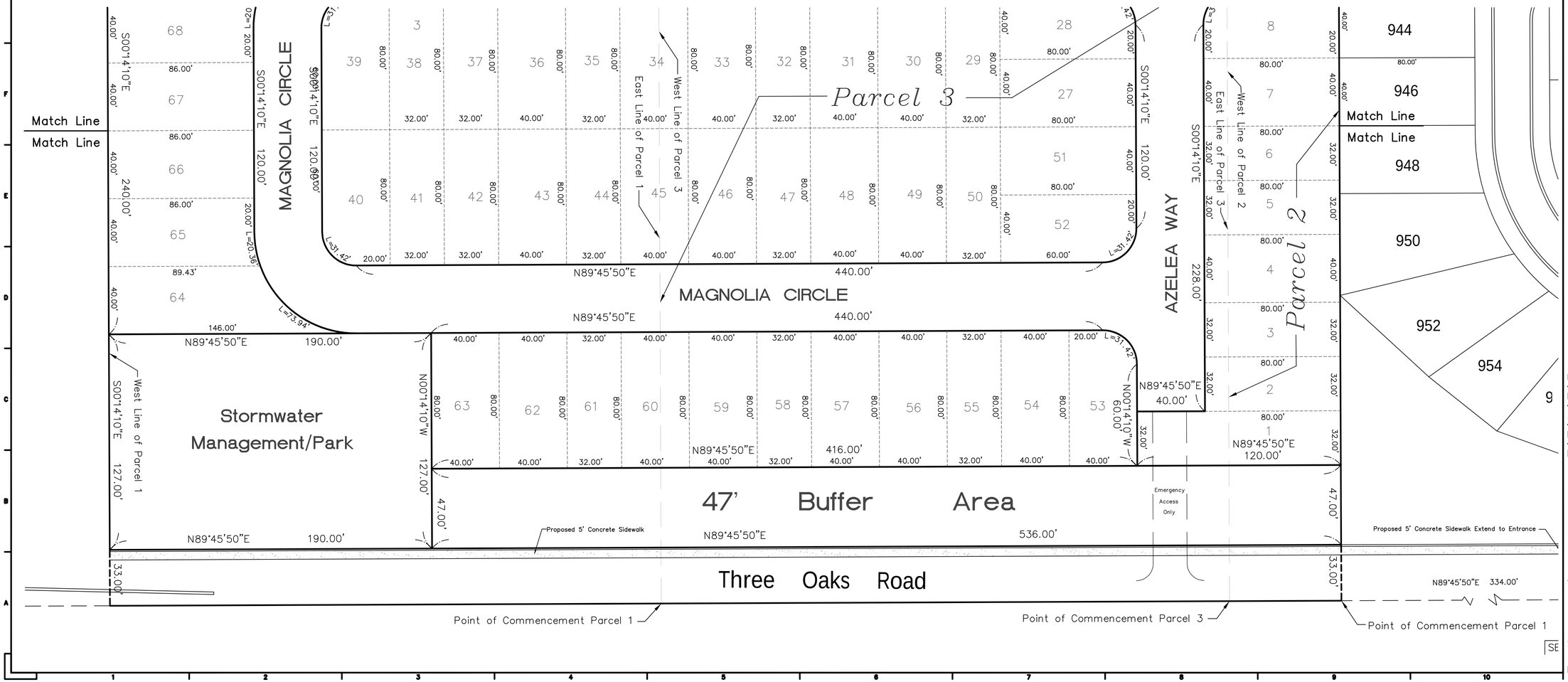




GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
1 inch = 30 ft.

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
2 Units to be Community gathering areas



Rynear & Son, Inc.
Consulting Engineers
Professional Design Firm
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PROJECT: Ravinia Communities
OAKBROOK ESTATES
Expansion
Crystall Lake, Illinois

OWNER: Ravinia Communities
900 N. Skokie Blvd.
Suite 285
Northbrook, Illinois 60062

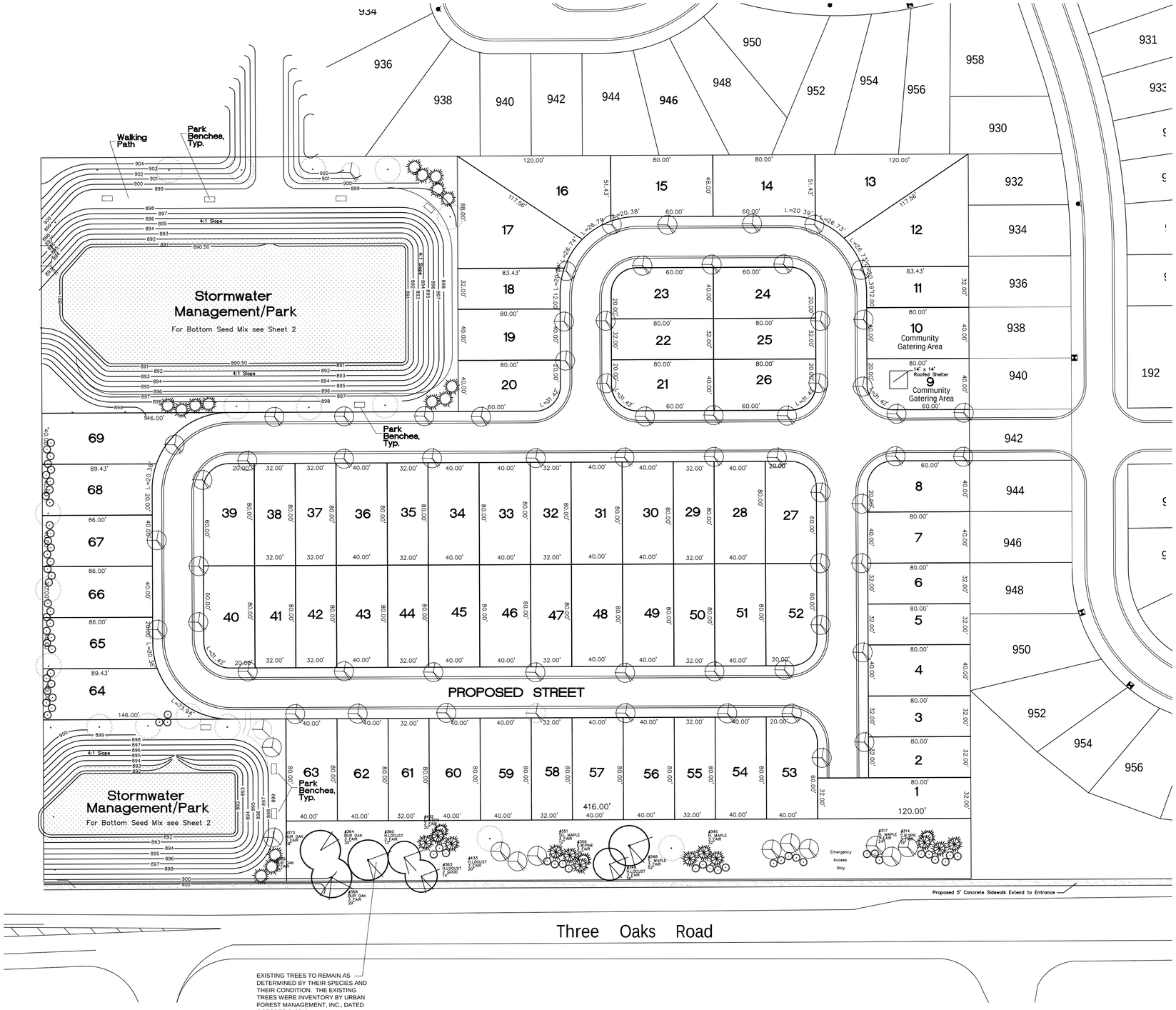
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Design/Drawn:
Approved:
Book No.:
File No.: -

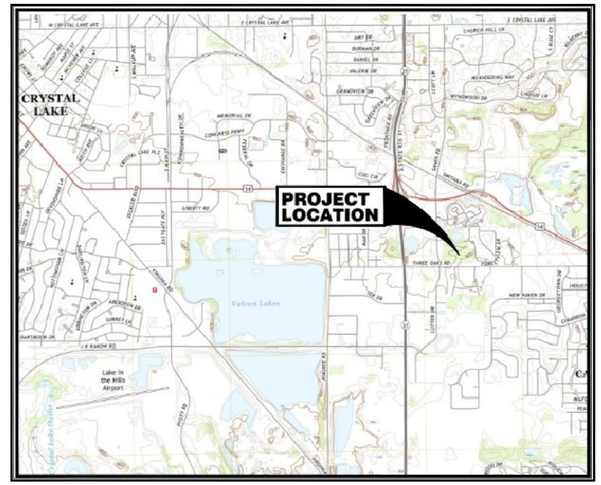
SHEET TITLE:
Final Puc Oakbrook Estates Expansion

SHEET NUMBER:
SP-2

SHEET 2 OF 2

Project No.: 23-8242





LOCATION MAP

NO SCALE

PLANTING LEGEND

EMERGENT PLANT MIX

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:

Ravina Communities
Oakbrook Estates Expansion
Crystal Lake, Illinois

Landscaping Plan

PROJECT NO. 23-8242
DESIGN/DRAWN: DSB
SCALE: 1" = 40'
PROJECT NORTH

L-1

LANDSCAPE NOTES

1. In general, contractor should become familiar with the site and with scope of work prior to the submission of bid proposal and should notify Landscape Architect (LA) and/or owner of any discrepancies between the drawings and existing site conditions.

2. Bid Proposal shall show unit prices and quantities for all items shown on this drawing.

3. Contractor shall follow and conform to the Village of Bensenville, IL building codes.

4. Job site safety and means and methods of construction are the responsibility of the Contractor.

5. Contractor shall excavate and dispose of excavated materials off site.

6. Contractor shall be responsible for any damage to buildings or site as a result of executing the work which is part of this contract or additional work which may be added to this contract at a later date.

7. Site shall be kept clean at all times and shall be thoroughly cleaned at the end of each working day.

8. Driveways shall be unobstructed at all times and consideration for the neighboring properties maintained.

9. Determine and verify exact locations of all underground utilities in the field before work begins. Call JULIE 1-800-892-0123 (48 hours) before you dig, excluding Saturdays, Sundays, and holidays.

10. Plants and other materials are quantified and summarized for the convenience of the owner and jurisdictional agencies only. Confirm and install sufficient quantities to complete the work as drawn.

11. Landscape Architect not responsible for installation permits unless otherwise noted.

12. Determine subsoil conditions and subsurface drainage requirements of all plant material.

13. Removals. Contractor shall clear existing plant material and weeds as needed where new planting is provided per plan. New topsoil shall be provided and/or amended as needed to fine grade planting areas.

14. Topsoil. Any new topsoil shall be fertile, pulverized, friable, natural loam, surface soil, free of subsoil, clay lumps, brush, weeds, stones larger than 1" in any dimension and other extraneous or toxic matter harmful to plant growth. Soil shall have acidity range of pH 5-7, not less than 3% humus as determined by loss on ignition of moisture fee samples dried at 100 degrees centigrade, less than 60% of material passing VSS #100 sieve consists of clay by dried weights of material.

15. Topsoil Depth. Topsoil shall be furnished and placed at a minimum depth of six inches (6") for all lawn areas, twelve inches (12") for all native seeding areas, and sixteen inches (16") for all planting areas.

16. Amend Existing Soil. Amend existing soil in all planting beds. Amended soil shall be 25% soil conditioner, 25% clean sand and 50% existing soil. Rototill amendments into planting beds.

17. Plant Material. The Landscape Architect reserves the right to personally select any or all nursery stock prior to digging. All plant material shall bear the same relationship to the new grade as they bore to the previous (nursery) grade. Comply with sizing and grading standards of the latest edition 'American Standard for Nursery Stock'. All plants are subject to inspection by the Landscape Architect at the job site or nursery.

18. Plant Installation. Set plant material in the planting pit to proper grade and alignment. Set plants upright, plumb, and face to give the best appearance or relationship to each other or adjacent structure. Do not fill around trunks or stems. Do not use frozen or muddy mixture for backfilling. Supply a minimum of 12" of soil mix on all sides of rootballs for trees and shrubs unless otherwise noted. Plant groundcover and perennials and tamp down soil around pot so pot does not heave in frost. Water in before applying mulch. Do not cover foliage with mulch. Balled roots shall be protected from drying out and care taken to prevent the ball from freezing.

19. Mulch. Provide 3" loose measure of mulch throughout all planting areas excluding groundcover beds. Mulch to be 6 month old, well rotted, shredded, hardwood bark mulch, not larger than 4" in length and 1/2" in width, free of wood chips and sawdust.

20. Watering. Landscape Contractor to water installed plant materials for the entire first season. The domestic water source provided by the school district is acceptable for hand watering and use in an irrigation system. An irrigation and watering schedule will be noted by owner/owner's agent, shared with the Village of Bensenville for review/acceptance, and managed accordingly. For irrigation systems, plants which require different amounts of water shall be irrigated by separate valves. A rain sensing overriding device shall be utilized so the irrigation system will automatically turn off in the event of rain. The irrigation system shall be designed to prevent overspray and water run-off onto adjacent-properties, non-irrigated areas, walks, roadways or structures.

21. Sod. Supply and install new bluegrass blend sod as shown on plan. Place sod on min. 4" depth rolled, fine graded, pulverized topsoil. Guarantee new sod for 30 days. Time delivery of sod so that sod will be placed within 24 hours after shipping. Protect sod against drying and breaking of rolled strips. If new sod is laid late in the Fall, the guarantee shall be extended into the Spring of the next growing season.

22. Seed. Supply and install new seed, Kentucky Bluegrass Blend on minimum 4" depth rolled, fine graded, pulverized, topsoil as needed. NAG S150BN (biodegradable) erosion control blanket to cover seed.

23. Repair Disturbed Areas. All disturbed areas shall be repaired and fine graded and topdressed with a minimum 4" depth, rolled, pulverized topsoil. All excess soil not used in repair of disturbed areas shall be removed from site. Sod all repaired areas.

24. Bed Edge. Spade edge where bed meets lawn if no edging is installed.

25. Upon completion of all landscape work, the LC shall notify the LA and owner for approval and acceptance. Landscape Contractor shall guarantee all work and plant material for a minimum of one year, after acceptance by the LA and owner, of completed landscape work.

NATIVE PLANTINGS
PART 1 - GENERAL
1.01 SECTION INCLUDES - Native Plantings.
1.02 SUBMITTALS
A. Qualifications Statements: Indicating background and capabilities of firm and relevant educational and professional experience of key personnel. Installer shall list at least five references for native landscaping projects completed by the firm in the past five years similar in type and size as this Project. Each reference will include the name of the firm for which the installation was performed, address of project site, and name and current telephone number of contact person.

B. Planting Schedule: Indicating anticipated seeding dates for each area of site, fully coordinated with all landscape, construction and earthwork activities.

C. Materials: Prior to delivery of any materials to the site, submit to the Owner's Representative and Architect/Engineer of Record a complete list of all seed to be used during this portion of the work. Include complete data on source, quantity and quality. This submittal shall in no way be construed as permitting substitution for specific items described on the plans or in these specifications unless approved in writing by the Owner's Representative.

D. Equipment: Prior to commencement of any work, submit to Owner's Representative and Architect/Engineer of Record a written description of all mechanical equipment and intended uses during execution of the work.

E. As-built Plans: After the work is complete submit to the Owner's Representative as-built plans including a listing of all species installed, and quantities installed. Mark in red ink on original planting plan any field changes or deviations from original plans.

F. Prairie Establishment and Management Program: Describing maintenance and management practices to be performed during first four years following installation to ensure proper establishment.

1.03 QUALITY ASSURANCE
A. Installer Qualifications: The work shall be performed by a single firm specializing in native mesic prairie and fescue seeding work, with a minimum of five years of experience in seeding native grasses, wildflowers and fescue. Firm shall have a verifiable record of successful installations similar in type and size to that indicated for this Project.

B. Installer's Field Supervisor: Installer shall assign one full-time supervisor, thoroughly familiar with the types and operation of equipment being used, who shall be present at all times during execution of this portion of the work. Said supervisor shall direct all work performed under this Section.

C. Standards: All materials used during this portion of the work shall meet or exceed applicable federal, state, county and local laws and regulations. All seed shall be free from insects and disease. Species shall be true to their scientific name as specified.

D. Observations: Owner will retain qualified Prairie Specialist to observe the prairie areas at end of first, second and fourth growing seasons after provisional acceptance to determine if seeding and planting work meets or exceeds stated performance criteria. Installer shall pay for Prairie Specialist fee and expenses.

PART 2 - PRODUCTS
2.01 PLANT MATERIALS
A. All mesic prairie and fescue seed shall have a biologic origin within 300 miles of the Project site.

B. Seed Mixes: Shall be provided according to the Plant Lists provided on this sheet, proportioned by weight and planted at the per-acre rates indicated. All grass species shall be supplied as pure live seed. Submit lab germination test results to Owner's Representative. Species shall be true to their scientific name as specified.

C. Seeding Rates: seed shall be applied at rates per acre in associated chart.

2.02 EROSION CONTROL BLANKET
A. Western Green BioNet - S150BN:
4609 E. Boonville - New Harmony Rd.
Evansville, IN 47725
800-772-2040

PART 3 - EXECUTION
3.01 SOIL PREPARATION
A. Topsoil: Loamy soil from the A horizon of soil profiles of local soils. It shall be relatively free from large roots, sticks, weeds, brush, or stones larger than 25 mm (1 inch) in diameter, or other litter and waste products. At least 90 percent must pass the 2.00 mm (No. 10) sieve and the pH must be between 5.0 and 8.0.

1. Topsoil shall be placed in lifts uniformly over all native vegetation areas to provide a minimum topsoil thickness of 12 inches.

2. Composition: 45-77 percent silt, 0-25 percent clay, 25-33 percent sand.

3. Acidity: pH 6.0 to 7.0; amend soil as indicated by tests to achieve this pH range.
4. Organic content: Three to five percent.

5. Import topsoil conforming to above requirements from off-site sources as required to complete the work. Do not obtain from bogs or marshes.

6. Perform test analysis on each source of topsoil to demonstrate compliance with the above and submit reports as specified.

A. Soil Amendment Materials and Fertilizer: Commercial type, uniform in composition, free flowing, conforming to state and federal laws, and suitable for application with equipment designed for that purpose.

1. Nitrogen: 6%, 1/4 of nitrogen shall be in form of nitrates, 1/4 in form of ammonia salts, and 1/2 in form of organic nitrogen.

2. Phosphorus: 24%, available phosphoric acid shall be derived from super phosphate having minimum analysis of 20% available phosphate.

3. Potash: 24%, potash shall be in form of sulphate of potash.

4. Balance of fertilizer shall be materials usually present in such products, free from dust, sticks, sand, stone, and other debris.

B. Soil Preparation: Following topsoil placement, till or perform other operations necessary to ensure a proper growing medium for specified native grasses, wildflowers and fescue. Prior to seeding and planting, check compaction of topsoil (0-12" depth) and subsoil (12-18" depth).

1. Soils shall not have a measured compaction greater than five pounds per square inch, as measured by Lang or Cone penetrometer, at time of seeding or planting unless otherwise stated on plans or in specifications. If penetrometer readings are greater than five pounds per square inch, disc, rotovate, and/or chisel plow said areas as necessary to reduce compaction.

2. Re-check soil compaction as described above after tillage. Repeat treatment until penetrometer readings are less than five pounds per square inch.

3.01 SOIL PREPARATION CONTINUED

3. The Contractor shall submit a written report including test locations and penetrometer readings at Owner's Representative's request.

4. Remove all foreign matter larger than one inch in any dimension from areas to be seeded and/or planted.

5. After soil preparation is complete, clean up any remaining materials, debris, trash, etc. Repair any damages caused during soil preparation work. Avoid driving over prepared areas to minimize additional compaction.

C. After completion of soil preparation work, Installer shall schedule with the Owner's Representative an observation of soil preparation for final acceptance.

D. Soil preparation work shall be considered complete after Owner's Representative has observed the work and Installer has performed all remedial clean-up and repair work as may be required as a result of observation.

3.02 NATIVE SEEDING
A. Seeds shall have proper stratification and/or scarification to break seed dormancy for spring planting. All legumes shall be inoculated with proper rhizobia at appropriate time prior to planting.

B. Seeding shall be conducted in early spring as soon as the soil is free of frost and in a workable condition, but no later than July 1. Fall dormant seeding will not be permitted without prior written approval of Owner's Representative.

C. All seed shall be preferentially installed with a rangeland-type grain drill or no-till planter, such as by Truax, or equivalent approved in writing by Owner's Representative. If soil is too wet or other conditions prohibit use of preferred planters, a mechanical broadcast seeder, such as by Cyclone, shall be used. Hand broadcasting of seed may also be employed. Immediately following broadcast seeding, said areas shall be rolled or dragged perpendicular to the slope.

D. Within 24 hours of seeding, install Erosion Control Blanket "NAG - S150BN" per manufacturer's instructions.

E. If area to be seeded was treated with herbicide, seeding shall occur no less than 14 days after herbicide application.

F. Keep site free of debris. After seed installation is complete, clean up any remaining materials, debris, trash, etc.; remove any tools, equipment, and all debris generated by Installer; and repair any damages caused during completion of seeding work. Avoid driving over seeded areas to minimize disturbance.

3.03 ACCEPTANCE OF NATIVE PLANTINGS
A. After completion of seeding, Installer shall schedule with Owner's Representative an observation of seeding work for provisional acceptance.

B. Seeding work shall be considered 90% complete (provisional acceptance) after all seed and mulch has been installed, Owner's Representative has observed the work, and Installer has performed all remedial clean-up, removal and repair work as may be required as a result of observation.

C. Seeding work shall be considered 100% complete after Installer has met or exceeded performance criteria below, and completed all clean-up, removal, and repair work as may be required.

1. Seeded areas will meet or exceed the following performance criteria, as determined by Prairie Specialist, by end of first growing season after provisional acceptance:

a. Seventy-five percent (75%) overall plant cover,
b. No area of 10 square feet or larger with less than 50% plant cover,

3.04 MAINTENANCE
A. Maintain prairie areas as required until Final Acceptance.

B. Water plantings as required to maintain an adequate supply of moisture within root zone without over-watering. During the first growing season, mow weeds on a regular basis to keep weeds in check. Use flail-type mowers that deposit mowed material uniformly over mowed area. Sickle bar and rotary-type mowers are unacceptable. All stubble from first-year mowings shall be left in place at end of season as an insulating blanket during the winter.

C. Do not mow prairie level to the ground at end of first season.

D. Perform other maintenance as required.

3.05 GUARANTEE
A. Installer shall guarantee seeded areas will meet or exceed the following performance criteria, as determined by Prairie Specialist, by end of second growing season after provisional acceptance:
1. Eighty percent (80%) overall plant cover,
2. No area of 10 square feet or larger with less than 50% plant cover,
3. Five percent (5%) cover by planted native grass/sedge species,
4. Ten percent (10%) cover by planted forb species, and
5. Representative individual live plants of 25% of species observed.

B. Installer shall guarantee seeded areas will meet or exceed the following performance criteria, as determined by Prairie Specialist, by end of fourth growing season after provisional acceptance:
1. Ninety-five (95%) overall plant cover,
2. No area of 10 square feet or larger with less than 50% plant cover,
3. Twenty percent (20%) cover by planted native grass/sedge species,
4. Forty percent (40%) cover by planted forb species, and
5. Representative individual live plants of 50% of species observe

LANDSCAPE MAINTENANCE

The owners of the property shall be responsible for the installation, preservation, and maintenance of all planting and physical features shown on this plan. The owners shall be responsible for maintenance of the vegetation, including but not limited to:

1. Fertilization and pH: To be applied on an as needed basis based on the soil sample.

2. Pruning: Safety pruning should occur in all areas of the site. All ornamental and shade trees shall be pruned up and away from pedestrian and vehicle use areas as required. All shrubs shall be kept from growing into pathways.

3. Pest Control: To be done on an as needed basis based on inspection by Town's Horticultural staff.

4. Mulching: To be completed on an annual basis in all developed areas that the plans show mulching.

5. Mowing: To occur in all areas at a minimum interval of 2 weeks during the growing season.

6. Protection of the root zones from equipment, construction and related materials, etc.

7. Watering schedule: To be done by hand as needed during establishment and during periods of drought to ensure plant material lives.

PLANTING NOTES

1. all plants and beds to be flagged in the field and approved by owner prior to installation. Adjustments to plant location may be made by owner at no additional cost to owner. Plants installed without owner's approval may be required to be relocated.

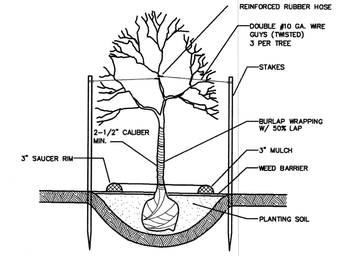
2. all shade trees are to receive a 20 gallon gator bag.

3. all plant areas shall be planted, mulched or grass. There shall be no bare areas.

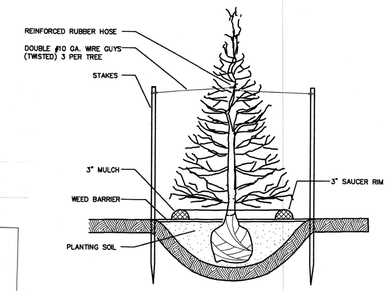
WETLAND DETENTION BOTTOM SEED PLANTING

9.41 Lbs/ac

GRASSES, SEDGES & RUSHES	% by wt.
Botanical Name (Common Name)	
Andropogon gerardii (Big Bluestem)	6.64
Bromus ciliatus (Fringed Brome)	2.65
Calamagrostis canadensis (Blue Joint Grass)	0.35
Carex bicknellii (Copper-shouldered Oval Sedge)	1.33
Carex brevior (Plains Oval Sedge)	1.06
Carex crus-corvi (Crowfoot Fox Sedge)	1.06
Carex frankii (Bristly Cattail Sedge)	1.33
Carex hystericina (Porcupine Sedge)	1.33
Carex vulpinoidea (Brown Fox Sedge)	3.32
Elymus canadensis (Canada Wild Rye)	10.62
Elymus virginicus (Virginia Wild Rye)	10.62
Glyceria grandis (Reed Manna Grass)	3.79
Juncus effusus (Common Rush)	0.33
Juncus torreyi (Torey's Rush)	0.29
Panicum virgatum (Switch Grass)	1.33
Schoenoplectus tabernaemontani (Great Bulrush)	0.73
Scirpus atrovirens (Dark-green Bulrush)	0.73
Scirpus cyperinus (Wool Grass)	0.38
Sorghastrum nutans (Indian Grass)	6.64
Spartina pectinata (Cord Grass)	1.33
Totals of GRASSES, SEDGES & RUSHES:	**55.84 %**



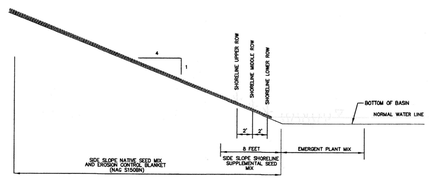
A **DECIDUOUS TREE PLANTING**



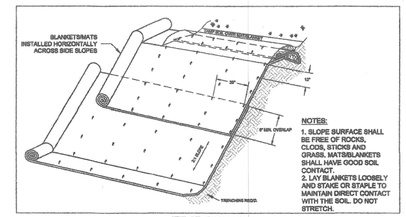
B **EVERGREEN TREE PLANTING**



C **SHRUB PLANTING DETAIL**



BASIN PLANTING DETAIL
NO SCALE



TYPICAL
NAG S150 BN BLANKET INSTALLATION
NO SCALE

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

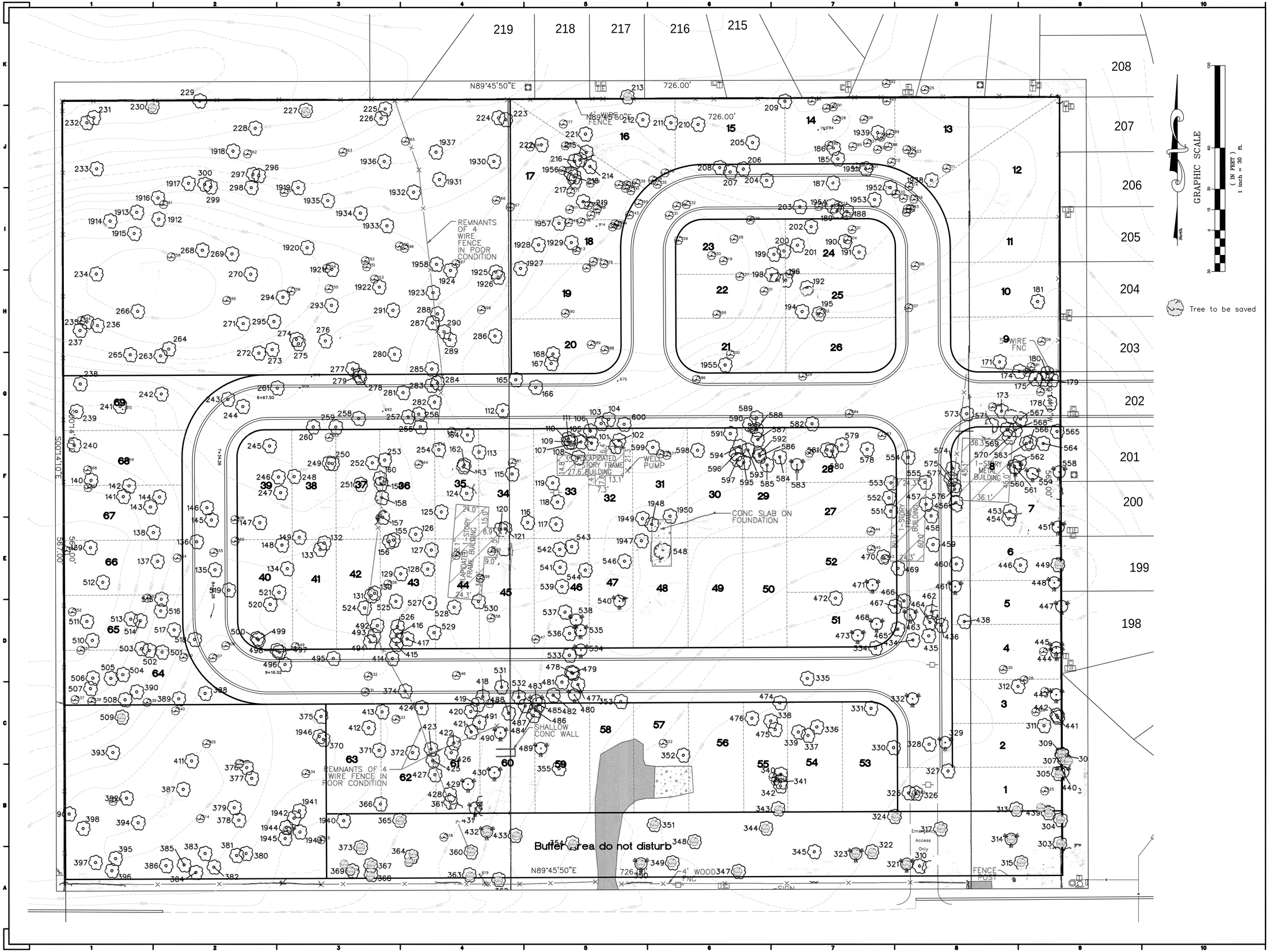
NO.	DATE	DESCRIPTION	BY:

Ravina Communities
Oakbrook Estates Expansion
Crystal Lake, Illinois

LANDSCAPING GENERAL NOTES AND DETAILS

PROJECT NO. 23-8242
DESIGN/DRAWN: DSB

L-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
	06/26	

PROJECT:
Ravinia Communities
OAKBROOK ESTATES
Expansion
Crystall Lake, Illinois

OWNER:
Ravinia Communities
900 N. Skokie Blvd.
Suite 285
Northbrook, Illinois 60062

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

SHEET TITLE:

Tree Preservation
Oakbrook Estates
Expansion

SHEET NUMBER:

T-1

SHEET 1 OF 1

Project No.: 23-8242

GRAPHIC SCALE
(IN FEET)
1 inch = 30 ft.
North
120
60
30
15
0
30

RUBY MAY CT
BENJAMIN LANE
RAVINIA WAY

221
220
219
218
217
216
215
214
213
212
211
210
209
208
207
206
205
204
203
202
201
200
199
198

899.0
898.6
898.0
897.5
Adjust Rim=897.00
898.3
897.8 Ex
895.4
895.6
896.9
897.4
898.5
899.3
900.5
901.5
902.4
903.4

N89°45'50"E 726.00'

S00°14'10"E 567.00'

N00°14'10"W 567.00'

SWM-3
SWM-4

Depressional Area HW = 896.12

Depressional Area HW = 894.47

Low Quality Wetland
699 sq. ft.
0.02 acres

Rynear & Son, Inc.
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595 BUTTONWOOD CIRCLE
NAPERVILLE, ILLINOIS 60540

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

ISSUE:

#	Date	Description
2	02/26	per review
3	04/26	per review 3-18-26
4	06-03-26	per review 5-29-26

PROJECT:
Ravinia Communities
OAKBROOK ESTATES
Expansion
Crystall Lake, Illinois

OWNER:
Ravinia Communities
900 N. Skokie Blvd.
Suite 285
Northbrook, Illinois 60062

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

SHEET TITLE:

Existing Conditions
Oakbrook Estates
Expansion

SHEET NUMBER:

C-1

SHEET 1 OF 24

Project No.: 23-8242

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

SWM-3
SWM-4
SWM-2
SWM-1

Depressional Area HW = 896.12

Depressional Area HW = 894.47

Low Quality Wetland
699 sq. ft.
0.02 acres

Depressional Area HW = 898.68

N89°45'50"E 726.00'

N00°14'10"W 967.00'

E 967.00'

Three Oaks Road

205
204
203
202
201
200
199
198

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
2	02/26	per review
3	04/26	per review 3-18-26
4	06-03-26	per review 5-29-26

PROJECT: Ravinia Communities
OAKBROOK ESTATES
Expansion
Crystall Lake, Illinois

OWNER: Ravinia Communities
900 N. Skokie Blvd.
Suite 285
Northbrook, Illinois 60062

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

SHEET TITLE:

Existing Conditions
Oakbrook Estates
Expansion

SHEET NUMBER:

C-2

SHEET **2** OF 24

Project No.: **23-8242**

GRAPHIC SCALE
(IN FEET)
1 inch = 20 ft.

North

726.00'

Legend

- Proposed Watermain
- Proposed Sanitary Sewer
- Proposed Storm Sewer
- Proposed Sanitary Service Wye
- Storm Manhole Ⓓ
- Storm Catch Basin □
- Storm Inlet
- Storm End Section
- Riprap per UD-02e
- Sanitary Structure Ⓢ
- Fire Hydrant
- Valve & Vault Ⓦ
- B.Box
- Street Light
- Existing Watermain — W
- Existing Contour — 895
- Existing Spot Elevation .898.25
- Proposed Spot Elevation 900.50
- Proposed Contour — 899

16
17'-8" PVC SDR 18 Watermain
Bottom Water=892.70
Top Sanitary=892.00
San 2.3
17
4' Sanitary MH TY A
Ty 1 Fr & Closed Lid
Rim = 899.50
Inv =891.60
22'-15" RCP CL IV
@ 1.00 %
18
26+37
Ty A CB 4' Flat Slab
EJ 7525Z1/M
Rim (EOP) = 898.67
Inv = 894.56
19
120'-18" RCP
@ 2.27%
Storm CB Ty A 4'
4' Sump
Ty 1 Fr & CI Lid
Flat Slab Top
Rim = 899.00
Inv In E = 894.48
Inv Out = 894.23
24R Snout Hood
81'-8" PVC SDR 26
ASTM D3034
Sanitary Sewer @2.90%
20
San 2.4
4' Sanitary MH TY A
Ty 1 Fr & Closed Lid
Rim = 899.25
Inv =893.96
15
25+05
Ty C CB
EJ 7525Z1/M
Rim (EOP) = 899.10
Inv = 896.11
145'-8" PVC SDR 18 Watermain
94'-8" PVC SDR 26
20'(10' EW)PVC SDR 18
Sanitary Sewer @1.00%
26+37
4' MH Ty A Flat Slab
EJ 7525Z1/M
Rim (EOP) = 898.67
Inv = 894.78
48'-15" RCP
@ 1.00%
23
85' (Total)-15" RCP
@ 1.00% with
20'-15" RCP with
Rubber Gasket Joints
10' each way from
water main
22
Storm MH Ty A 4'
Ty 1 Fr & CI Lid
Flat Slab Top
Rim = 900.90
Inv = 895.63
151'-8" PVC SDR 18 Watermain
21
150' (Total)-24" RCP
@ 0.50% with
20'-24" RCP with
Rubber Gasket Joints
10' each way from
water main
Storm MH Ty A 4'
Ty 1 Fr & CI Lid
Flat Slab Top
Rim = 899.50
Inv In = 894.85
Inv Out = 894.35
14
25+05
Inlet Ty A
EJ 7525Z1/M
Rim (EOP) = 899.10
Inv = 896.60
22'-12" RCP CL IV with
Rubber Gasket Joints
@ 2.27 %
24+75 5' B/C
Gr Ring = 899.75
Proposed Fire Hydrant
with aux. valve
24
4' Sanitary MH TY A
Ty 1 Fr & Closed Lid
Rim = 899.75
Inv =890.46
25
81'-8" PVC SDR 26
ASTM D3034
Sanitary Sewer @2.95%
26
4' Sanitary MH TY A
Ty 1 Fr & Closed Lid
Rim = 900.10
Inv =892.85
137'-18" RCP
@ 0.50%
Storm MH Ty A 4'
EJ 7525Z1/M
Flat Slab Top
Rim = 900.00
Inv In N = 897.00
Inv In E = 896.30
Inv Out = 895.29
43'-12" RCP CI IV with
Rubber Gasket Joints
@ 1.00 %
13
28'-8" PVC SDR 18 Watermain
San 2.1
12
4' Sanitary MH TY A
Ty 1 Fr & Closed Lid
Rim = 901.70
Inv =888.54
Inv Water=894.00
Top Sanitary=890.23
192'-8" PVC SDR 26
ASTM D3034
Sanitary Sewer @ 1.00%
11
136'-8" PVC SDR 26
ASTM D3034
Sanitary Sewer @ 1.40%
10
San 1.1
Existing Sanitary M.H.
Rim = 897.84
Inv = 884.10+/-
Core Drill & install
Rubber boot Inv=884.50
23+10.50
Type C Catch Basin
EJ 7525Z1/M
Rim (EOP) = 900.27
Inv = 897.42
64'-12" RCP
CI IV @ 1.00%
9
1+25 3.5' B/C
Gr Ring = 901.50
Proposed Fire Hydrant
with aux. valve
107'-8" PVC SDR 26
ASTM D3034
Sanitary Sewer @ 2.00%
Inv Water=894.70
Top Sanitary=887.50
San 1.2
0+96.5
4' Sanitary MH TY A
Ty 1 Fr & Closed Lid
Rim = 900.63
Inv =886.64
188'-8" PVC SDR 18 Watermain
Pressure Tap
Valve & Vault
1+47
Inlet Ty A
EJ 7525Z1/M
Rim (EOP) = 900.56
Inv = 898.06
22'-12" RCP CL IV
Rubber Gasket Joints
@ 2.27 %
22+25.5
EJ 7525Z1/M
Ty C or O Lid
Rim (EOP) = 901.18
Inv = 898.18
8
401'-8" PVC SDR 18 Watermain
7
97'-8" PVC SDR 26
ASTM D3034
Sanitary Sewer @ 0.50%
San 1.3
6
4' Sanitary MH TY A
Ty 1 Fr & Closed Lid
Rim = 904.00
Inv =887.12
N00°14'10"W
600.00'
Existing Sanitary Sewer
Existing Watermain
Street Light
Top Water=894.00
Inv Storm=896.46
Top Water=892.5
Inv Storm=894.00
Top Water=893.00
Inv Storm=895.28
Top Water=894.65
Inv Storm=896.53
Top Water=895.20
Inv Storm=897.20
Top Water=895.50
Inv Storm=897.90
Top Water=896.20
Top Sanitary=888.90
Sanitary Clean Out
22+55
8" Valve & Vault
Rim = 900.50
Storm MH Ty A 4'
Ty 1 Fr & CI Lid
Flat Slab Top
Rim = 902.00
Inv = 896.90
27
22+25.50
Ty C CB
EJ 7525Z1/M
Rim (EOP) = 901.18
Inv = 897.68
28
29
30
31
32
33
4' Sanitary MH TY A
Ty 1 Fr & Closed Lid
Rim = 901.60
Inv =888.70
San 1.4
493'-8" PVC SDR 18 Watermain
Ty C CB
EJ 7525Z1/M
Rim (EOP) = 898.44
Inv = 894.94
22'-12" RCP CL IV with
Rubber Gasket Joints
@ 2.27 %
Inlet Ty A
EJ 7525Z1/M
Rim (EOP) = 898.44
Inv = 895.44
315'-8" PVC SDR 26
ASTM D3034
Sanitary Sewer @ 0.50%
46
47
48
49
50
51
21+50
8" Valve & Vault
Rim = 906.22
60'-15" RCP with
Rubber Gasket Joints
@ 1.00 %
6'-12" RCP
6'-15" RCP
493'-8" PVC SDR
Typical Water Service Detail
49
50
51
B.Box
3/4" Split
1" Ty K
1" Ty K
3/4" Split
B.Box
56
55
54
5+00
Ty C CB
EJ 7525Z1/M
Rim (EOP) = 899.75
Inv = 895.25

Notes:
All Fire Hydrant
Leeds are 6"

All Curb & Gutter
To be Mountable M4.12

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595 BUTTONWOOD CIRCLE
NAPERVILLE, ILLINOIS 60540

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3	04/26	per review 3-18-26
4	06-03-26	per review 5-29-26

PROJECT:
Ravinia Communities
OAKBROOK ESTATES
Expansion
Crystall Lake, Illinois

OWNER:
Ravinia Communities
900 N. Skokie Blvd.
Suite 285
Northbrook, Illinois 60062

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

SHEET TITLE:
Utility Plan
Oakbrook Estates
Utilities Plan

SHEET NUMBER:
C-4
SHEET 4 OF 24

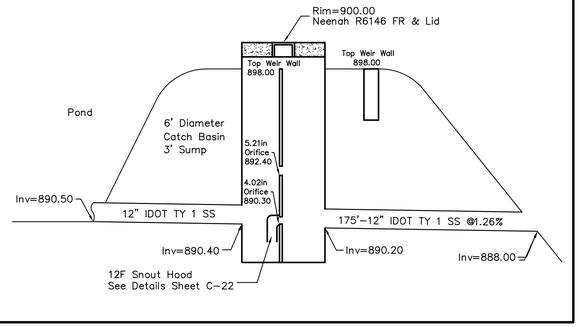
Project No.: 23-8242

GRAPHIC SCALE
(IN FEET)
1 inch = 20 ft.

Legend

- Proposed Watermain
- Proposed Sanitary Sewer
- Proposed Storm Sewer
- Proposed Sanitary Service Wye
- Storm Manhole Ⓓ
- Storm Catch Basin □
- Storm Inlet
- Storm End Section △
- Riprap per UD-02e
- Sanitary Structure Ⓢ
- Fire Hydrant
- Valve & Vault Ⓦ
- B.Box
- Street Light ☼
- Existing Watermain — W —
- Existing Contour — 895 —
- Existing Spot Elevation .898.25
- Proposed Spot Elevation 900.50
- Proposed Contour — 899 —

Outlet Structure
(No Scale)



Riprap per UD-02e Sheet C-21 6"-12"

Inv=888.00

175'-12" Storm Sewer @ 1.43%

S00°14'10"E 155.00'

S00°14'10"E 155.00'

35'

Storm Water Management
6' Catch Basin
Control Structure
Ty 1 Fr & Cl Lid
Rim = 900.00
Inv In 12" = 890.50
Inv Out 12" = 890.20
See Detail Sheet Below

24' Weir Wall See Detail sheet C-20

60' - 12" Storm Sewer

12" Concrete Flared End Section/Grate Inv = 890.50

N89°45'50"E

726.00'

16

17'-8" PVC SDR 18 Watermain

15

25+05
Ty C CB
EJ 7525Z1/M
Rim (EOP) = 899.10
Inv = 896.11

145'-8" PVC SDR 18 Watermain

Bottom Water=892.70
Top San=892.00

San 2.3

17

4' Sanitary MH TY A
Ty 1 Fr & Closed Lid
Rim = 899.50
Inv =891.60

Street Light

22'-15" RCP CL IV @ 1.00 %

25+50

25+59.26

4A

26"

18

26+37
Ty A CB 4' Flat Slab
EJ 7525Z1/M
Rim (EOP) = 898.67
Inv = 894.56

94'-8" PVC SDR 26
20'(10' EW)PVC SDR 18
Sanitary Sewer @1.00%

26+37
4' MH Ty A Flat Slab
EJ 7525Z1/M
Rim (EOP) = 898.67
Inv = 894.78

48'-15" RCP @ 1.00%

23

18" Concrete Flared End Section/Grate Inv = 891.50

120'-18" RCP @ 2.27%

Storm CB Ty A 4' 4' Sump Ty 1 Fr & Cl Lid Flat Slab Top Rim = 899.00 Inv In E = 894.48 Inv Out = 894.23 24R Snout Hood

19

6'-15" RCP

26+50

Top Water=893.35
Inv Storm=895.10

85' (Total)-15" RCP @ 1.00% with 20'-15" RCP with Rubber Gasket Joints 10' each way from water main

Storm MH Ty A 4' Ty 1 Fr & Cl Lid Flat Slab Top Rim = 900.90 Inv = 895.63

22

24" Concrete Flared End Section/Grate Inv = 891.50

52'-24" RCP @ 3.56%

81'-8" PVC SDR 26 ASTM D3034 Sanitary Sewer @2.90%

151'-8" PVC SDR 18 Watermain

Storm CB Ty A 5' 4' Sump Ty 1 Fr & Cl Lid Flat Slab Top Rim = 898.70 Inv = 893.35 30R Snout Hood

San 2.4

20

4' Sanitary MH TY A
Ty 1 Fr & Closed Lid
Rim = 899.25
Inv =893.96

PVI 27+00

21

150' (Total)-24" RCP @ 0.50% with 20'-24" RCP with Rubber Gasket Joints 10' each way from water main

Storm MH Ty A
Ty 1 Fr & Cl Lid
Flat Slab Top
Rim = 899.50
Inv In = 894.85
Inv Out = 894.3

36" Concrete Flared End Section/Grate Inv = 890.50

60'-36" RCP @ 0.40%

8'-18" RCP

7+00
Ty C Catch Basin
EJ 7525Z1/M
Rim (EOP) = 898.15
Inv = 894.65

Storm CB Ty A 5' 4' Sump Ty 1 Fr & Cl Lid Flat Slab Top Rim = 898.75 Inv In E = 894.50 Inv out = 890.74 42RTB/60 Snout Hood

Street Light

69

6+67.50

6+50

6+00

5+50

5+00

Top Water=893.00
Inv Storm=894.90

Top Water=893.95
Inv Storm=895.74

6'-12" RCP

22'

4+50

4+00

3+90

27+35.52

3+50

Top Water=892.5
Inv Storm=894.00

Top Water=893.00
Inv Storm=895.28

6'-15" RCP

Sanitary Clean Out
Rim = 898.75
Inv =893.80

7+00
Inlet Ty A
EJ 7525Z1/M

22'-12" RC
Rubber Gas
@ 2.27 %

5+00
Inlet Ty A
EJ 7525Z
Rim = 89
Inv = 89

5+00
Ty C CB
EJ 7525Z
Rim (EOP
Inv = 89

4+50 5' B/C
Gr Ring = 899.75

32

493'-8"

3+00
Ty C CB
EJ 7525Z1
Rim (EOP)
Inv = 894.

22'-12" RC
Rubber Gas
@ 2.27 %

3+50
Inlet Ty A
EJ 7525Z
Rim = 89
Inv = 89

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OAKBROOK ESTATES
Expansion
Crystall Lake, Illinois

OWNER: Ravinia Communities
900 N. Skokie Blvd.
Suite 285
Northbrook, Illinois 60062

Date:
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SHEET TITLE:

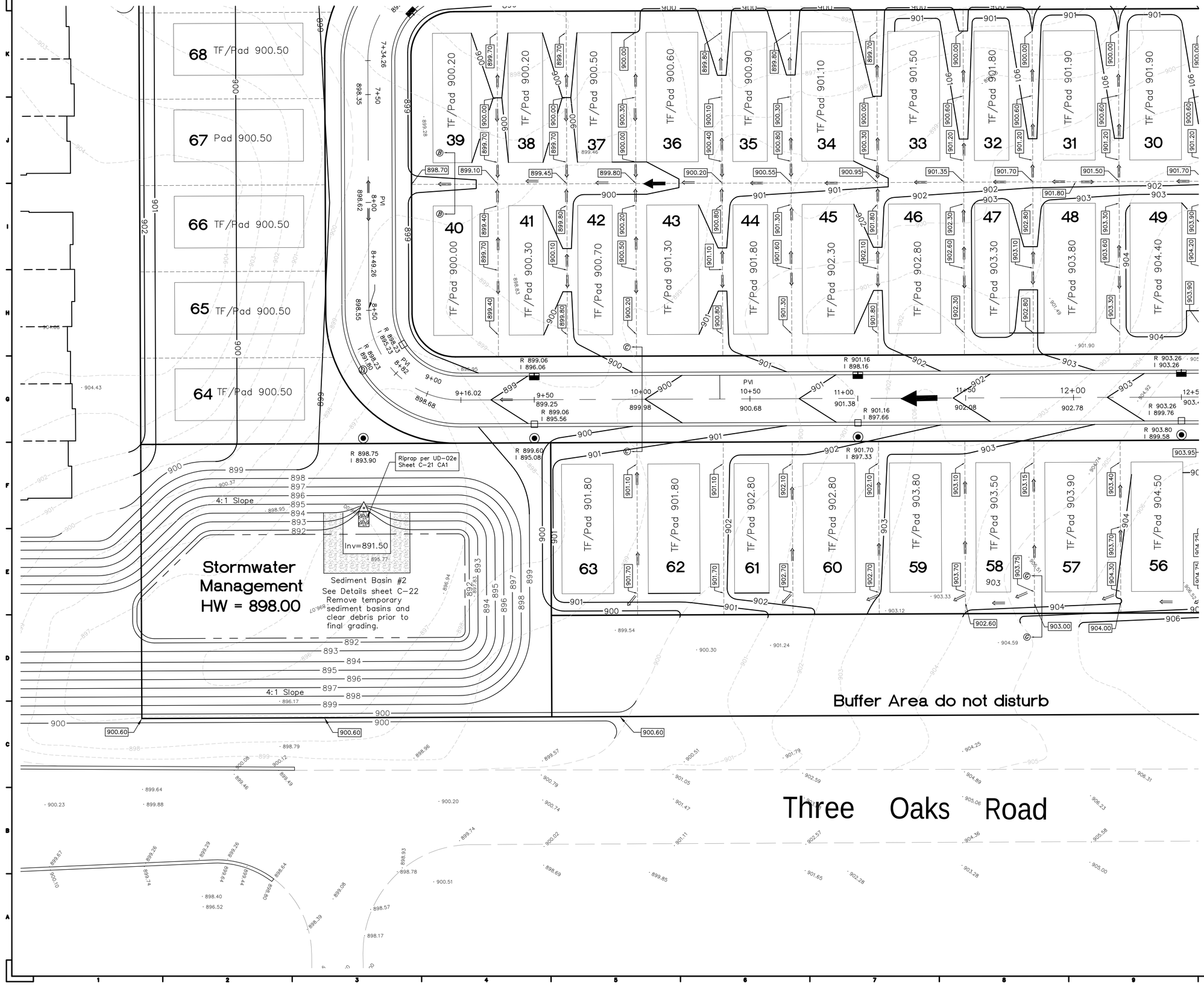
Oakbrook Estates Utilities Plan

SHEET NUMBER:

C-5

SHEET 5 OF 24

Project No.: 23-8242



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OAKBROOK ESTATES
Expansion
Crystall Lake, Illinois

OWNER:
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Suite 285
Northbrook, Illinois 60062

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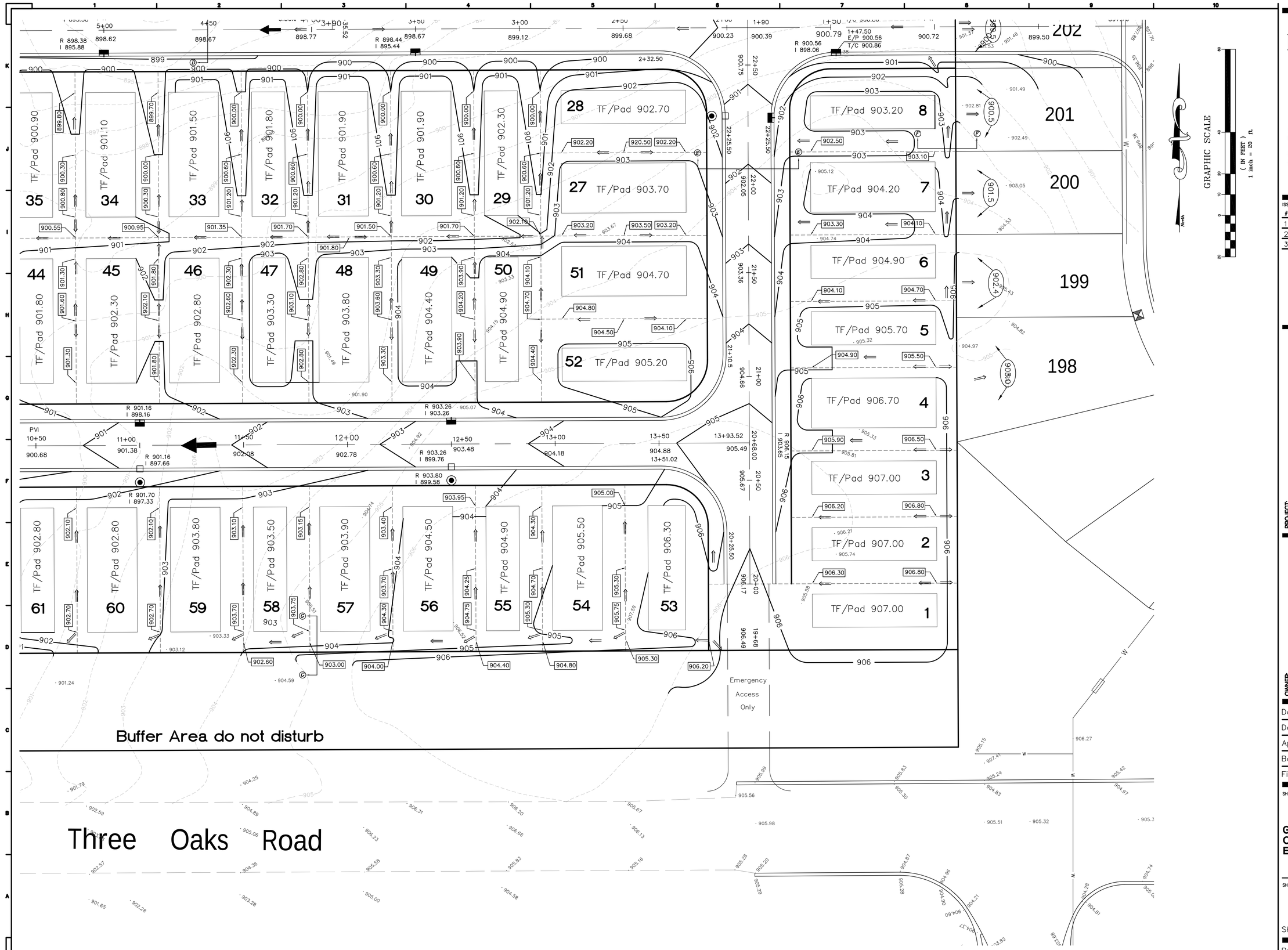
Grading Plan
Oakbrook Estates
Expansion

SHEET NUMBER:

C-10

SHEET 10 OF 24

Project No.: 23-8242



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Ravinia Communities
OAKBROOK ESTATES
Expansion
Crystall Lake, Illinois

OWNER:
Ravinia Communities
900 N. Skokie Blvd.
Suite 285
Northbrook, Illinois 60062

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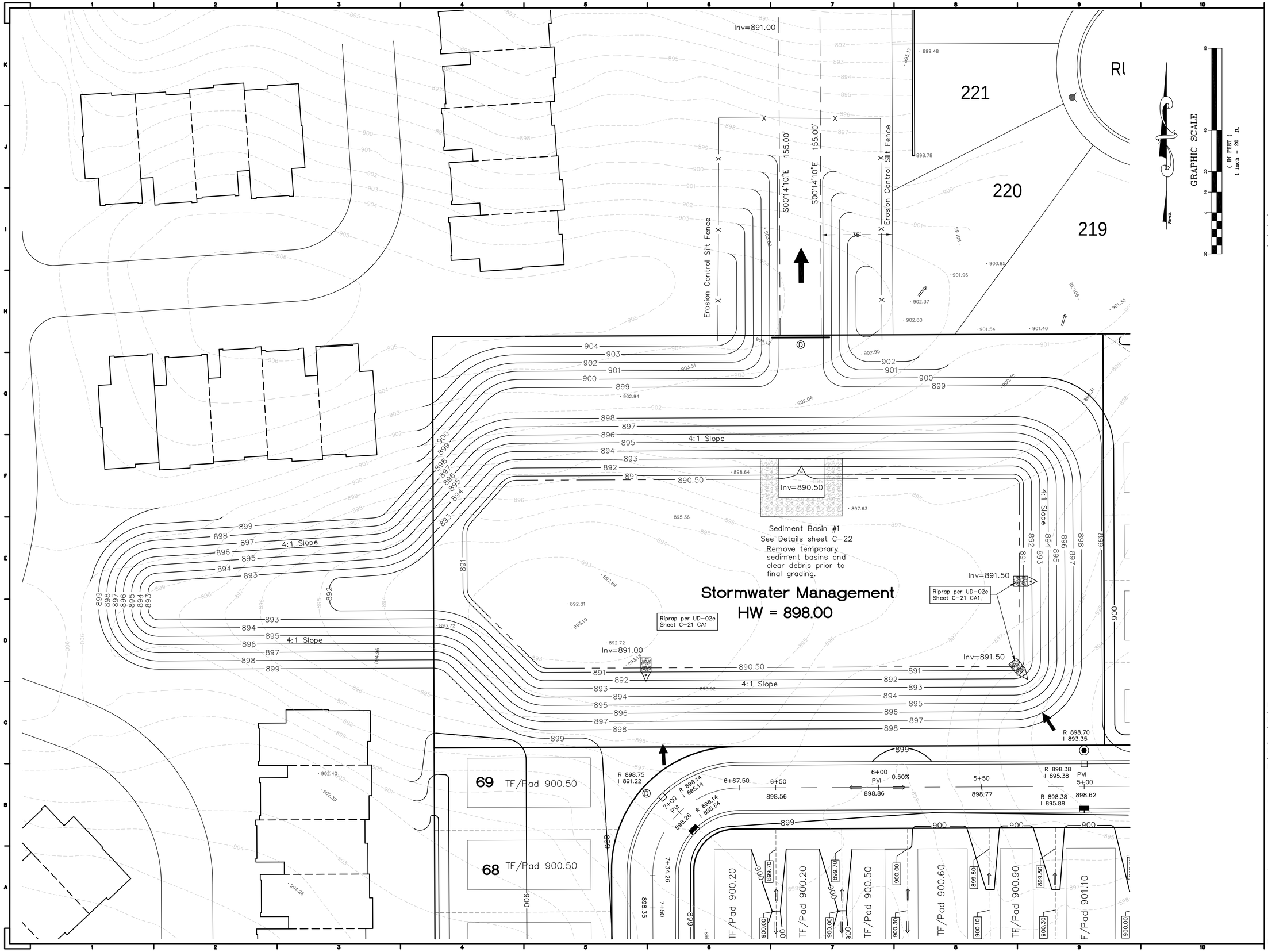
Grading Plan
Oakbrook Estates
Expansion

SHEET NUMBER:

C-11

SHEET 11 OF 24

Project No.: 23-8242



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NAPERVILLE, ILLINOIS 60540

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PROJECT:
Ravinia Communities
OAKBROOK ESTATES
Expansion
Crystall Lake, Illinois

OWNER:
Ravinia Communities
900 N. Skokie Blvd.
Suite 285
Northbrook, Illinois 60062

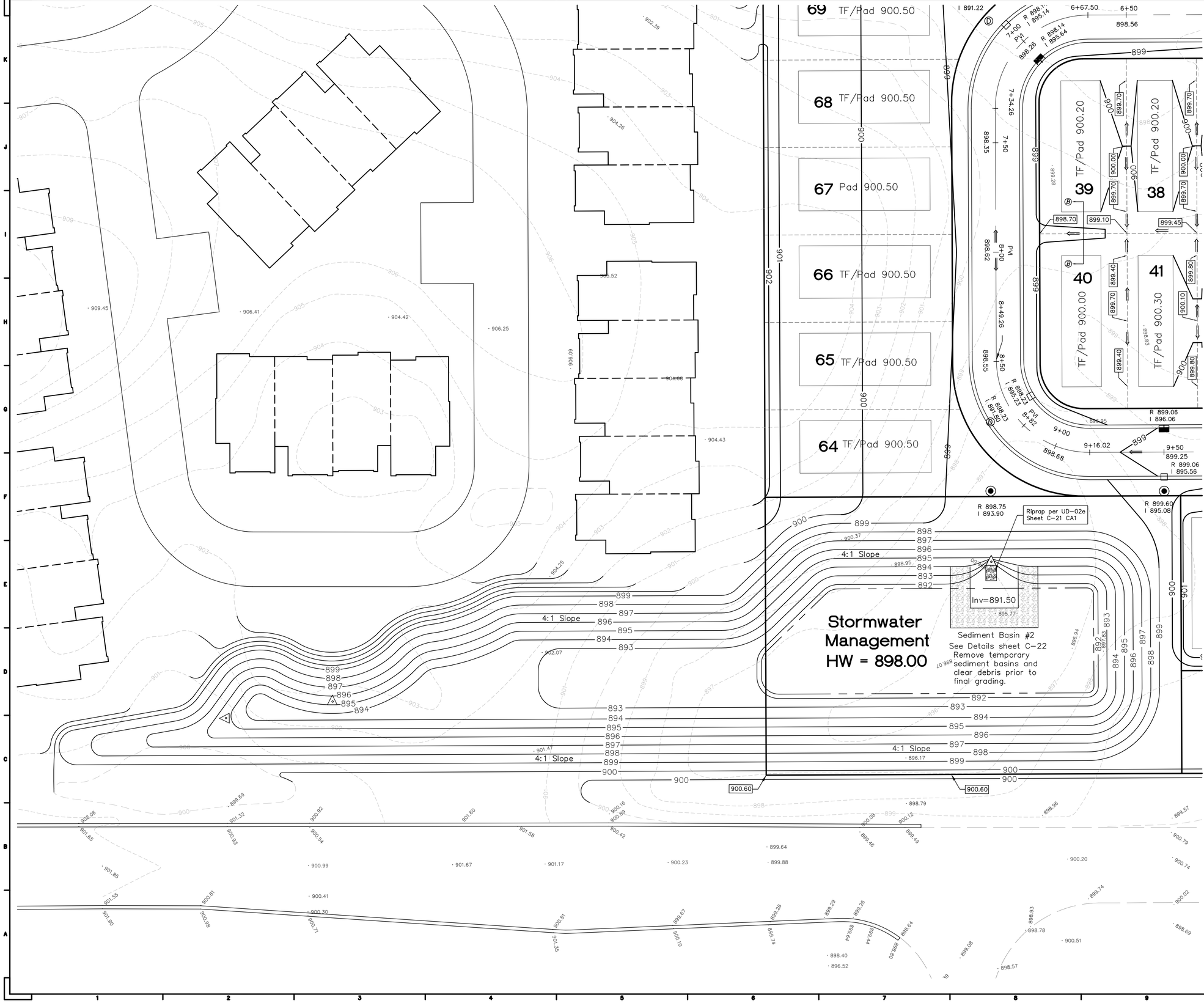
Date:
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Approved:
Book No.:
File No.: -

SHEET TITLE:
Conceptual Combined Storm Grading Plan Oakbrook Estates Expansion

SHEET NUMBER:
C-12

SHEET 12 OF 24

Project No.: 23-8242



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ISSUE:

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4	06-03-26	per review 5-29-26

PROJECT:
Ravinia Communities
OAKBROOK ESTATES
Expansion
Crystall Lake, Illinois

OWNER:
Ravinia Communities
900 N. Skokie Blvd.
Suite 285
Northbrook, Illinois 60062

Date:
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File No.: -

SHEET TITLE:
Conceptual Combined Storm Facility Oakbrook Estates Expansion

SHEET NUMBER:
C-13

SHEET **13** OF 24

Project No.: **23-8242**

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

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

Scale:
1" =30' Horizontal
1" = 3' Vertical

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ISSUE:

#	Date	Description
1	11/25	per review
2	02/26	per review
3	04/26	per review 3-18-

PROJECT: Ravinia Communities
OAKBROOK ESTATES
Expansion

OWNER: Ravinia Communities
900 N. Skokie Blvd.
Suite 285

Date:

Design/Drawn:

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Book No.:

File No.:

SHEET TITLE:

Plan & Profile
North & East
Oakbrook Estates
Expansion

SHEET NUMBER:

C-14

SHEET 14 OF 24

Project No.: 23

| Tony Rynearson | \\server\projects\philip andrew development\11-7305.DWG | DATE: 12/27/2011 | Time: 14:59 |

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

North

San 2.3
4' Sanitary MH TY A
Ty 1 Fr & Closed Lid
Rim = 899.50
Inv =891.60

San 2.1
4' Sanitary MH TY A
Ty 1 Fr & Closed Lid
Rim = 901.70
Inv =888.54

San 2.2
4' Sanitary MH TY A
Ty 1 Fr & Closed Lid
Rim = 899.75
Inv =890.46

San 2.4
4' Sanitary MH TY A
Ty 1 Fr & Closed Lid
Rim = 899.25
Inv =893.96

San 1.1
Existing Sanitary M.H.
Rim = 897.84
Inv = 884.10+/-
Core Drill & install
Rubber boot Inv=884.50

San 1.2
0+96.5
4' Sanitary MH TY A
Ty 1 Fr & Closed Lid
Rim = 900.63
Inv =886.64

San 1.3
4' Sanitary MH TY A
Ty 1 Fr & Closed Lid
Rim = 904.00
Inv =887.12

San 1.4
4' Sanitary MH TY A
Ty 1 Fr & Closed Lid
Rim = 901.60
Inv =888.70

Street Light

12" Concrete Flared End Section/Grate Inv = 890.50

18" Concrete Flared End Section/Grate Inv = 891.50

24" Concrete Flared End Section/Grate Inv = 891.50

94'–8" PVC SDR 26
20'(10' EW)PVC SDR 18
Sanitary Sewer @1.00%

192'–8" PVC SDR 26
ASTM D3034
Sanitary Sewer @ 1.00%

136'–8" PVC SDR 26
ASTM D3034
Sanitary Sewer @ 1.40%

107'–8" PVC SDR 26
ASTM D3034
Sanitary Sewer @ 2.00%

81'–8" PVC SDR 26
ASTM D3034
Sanitary Sewer @2.95%

81'–8" PVC SDR 26
ASTM D3034
Sanitary Sewer @2.90%

401'–8" PVC SDR 18 Watermain

151'–8" PVC SDR 18 Watermain

188'–8" PVC SDR 18 Watermain

493'–8" PVC SDR 18 Watermain

316'–8" PVC SDR 26
ASTM D3034
Sanitary Sewer @ 0.50%

315'–8" PVC SDR 26
ASTM D3034
Sanitary Sewer @ 0.50%

97'–8" PVC SDR 26
ASTM D3034
Sanitary Sewer @ 0.50%

198'–8" PVC SDR

493'–8" PVC SDR

26+37
Ty A CB 4' Flat Slab
EJ 7525Z1/M
Rim (EOP) = 898.67
Inv = 894.56

26+37
4' MH Ty A Flat Slab
EJ 7525Z1/M
Rim (EOP) = 898.67
Inv = 894.78

48'–15" RCP
@ 1.00%

120'–18" RCP
@ 2.27%

Storm CB Ty A 5'
4' Sump
Ty 1 Fr & Cl Lid
Flat Slab Top
Rim = 898.70
Inv = 893.35
30R Snout Hood

85' (Total)–15" RCP
@ 1.00% with
20'–15" RCP with
Rubber Gasket Joints
10' each way from
water main

Storm MH Ty A 4'
Ty 1 Fr & Cl Lid
Flat Slab Top
Rim = 900.90
Inv = 895.63

Storm MH Ty A 4'
Ty 1 Fr & Cl Lid
Flat Slab Top
Rim = 900.00
Inv In = 894.60
Inv Out = 894.10

Storm MH Ty A 4'
Ty 1 Fr & Cl Lid
Flat Slab Top
Rim = 900.00
Inv In N = 897.00
Inv In E = 896.30
Inv Out = 895.29

Storm MH Ty A 4'
Ty 1 Fr & Cl Lid
Flat Slab Top
Rim = 899.50
Inv In = 894.85
Inv Out = 894.35

4' Sanitary MH TY A
Ty 1 Fr & Closed Lid
Rim = 900.10
Inv =892.85

150' (Total)–24" RCP
@ 0.50% with
20'–24" RCP with
Rubber Gasket Joints
10' each way from
water main

137'–18" RCP
@ 0.50%

43'–12" RCP CI IV with
Rubber Gasket Joints
@ 1.00 %

60'–15" RCP with
Rubber Gasket Joints
@ 1.00 %

64'–12" RCP
CI IV @ 1.00%

23+10.50
Type C Catch Basin
EJ 7525Z1/M
Rim (EOP) = 900.27
Inv = 897.42

1+47
Inlet Ty A
EJ 7525Z1/M
Rim (EOP) = 900.56
Inv = 898.06

1+25 3.5' B/C
Gr Ring = 901.50
Proposed Fire Hydrant w
with aux. valve

4+50 5' B/C
Gr Ring = 899.75
Proposed Fire Hydrant
with aux. valve

22+55
8" Valve & Vault
Rim = 900.50

22+25.5
EJ 7525Z1/M
Ty 1 Fr & Cl Lid
Rim (EOP) = 901.18
Inv = 898.18

22+25.50
Ty C CB
EJ 7525Z1/M
Rim (EOP) = 901.18
Inv = 897.68

Storm MH Ty A 4'
Ty 1 Fr & Cl Lid
Flat Slab Top
Rim = 902.00
Inv = 896.90

Pressure Tap
Valve & Vault

Sanitary Clean Out

Existing Sanitary Sewer

Existing Watermain

CAROL COU

Inv Water=894.70
Top Sanitary=887.50

Inv Water=894.00
Top Storm=896.46

Inv Water=890.23

Top Water=893.95
Inv Storm=895.74

Top Water=893.00
Inv Storm=894.90

Top Water=893.00
Inv Storm=895.28

Top Water=892.5
Inv Storm=894.00

Top Water=894.65
Inv Storm=896.53

Top Water=895.50
Inv Storm=897.20

Top Sanitary=886.90

Top Water=894.65
Inv Storm=896.75

Inv Water=895.20
Top Sanitary=887.90

Inv Water=894.00
Top Storm=895.20

Inv Water=894.00
Top Storm=895.20

Inv Water=894.00
Top Storm=895.20

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

Scale:
1" = 30' Horizontal
1" = 3' Vertical

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595 BUTTONWOOD CIRCLE
NAPERVILLE, ILLINOIS 6054

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Ravinia Communities
OAKBROOK ESTATES
Expansion

OWNER:
Ravinia Communities
900 N. Skokie Blvd.
Suite 285

Date:

Design/Drawn:

Approved:

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File No.:

SHEET TITLE:

Plan & Profile
Center
Oakbrook Estates
Expansion

SHEET NUMBER:

C-16

SHEET 16 OF 24

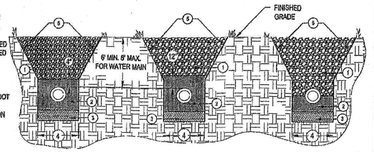
Project No.: 23

| Tony Rynearson | \\server\projects\utility andrew development\11-7395.DWG | DATE: 12/27/2011 | Time: 14:59 |

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. PIPE BEDDING SHALL BE WASHED MATERIAL IDOT GRADATION CA-7 OR CA-11 FROM 4 INCHES BELOW BOTTOM OF PIPE TO HEIGHT SHOWN ON EACH SECTION
3. UNSUITABLE MATERIAL TO BE REMOVED WHERE DIRECTED BY THE ENGINEER AND REPLACED WITH COMPACTED SUITABLE MATERIAL.
4. TRENCH WIDTH:
   PIPE O.D. + 12 INCHES MINIMUM
   PIPE I.D. + 18 INCHES MAXIMUM
5. CONTRACTORS SHALL COMPLY WITH ALL CURRENT OSHA STANDARDS.



* NOTE: ALL DUCTILE IRON SHALL BE WRAPPED WITH APPROVED POLYETHYLENE PIPE WRAP

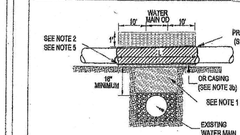
** NOTE: PVC WATERMAIN ONLY ALLOWED FOR REPAIRS TO EXISTING PVC WATERMAIN

Revised:	Drawing Name	Drawing Number
1. 06/12/2015 2. 02/04/2021 KL CA-7 WASHED STONE 3. 07/14/2023 JRG PVC ALLOWED ONLY AS STATED 4.	TYPICAL TRENCH CROSS SECTION	UG-03 Date: 05/29/2015 Drawn: JH Checked: AW

City of Crystal Lake Illinois

UG-04a

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

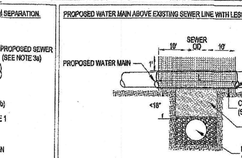


NOTES:

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 OF THE WATER MAIN AND USE SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT OVER LENGTH "L".
3a. CONSTRUCT "L" FEET OF PROPOSED SEWER OF WATER MAIN MATERIAL AND PRESSURE TEST, OR
3b. USE CASING LENGTH "L" FOR PROPOSED SEWER AND SEAL ENDS OF CASING. SEE UW-14 FOR CASING DETAILS.
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.

ADDITIONAL NOTES:
*THE REQUIREMENTS ON THIS DETAIL ARE TAKEN FROM THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS, CURRENT EDITION
CLASS IV MATERIAL TO BE COMPACTED TO 95% OF STANDARD PROCTOR MAXIMUM DENSITY
OUTER DIAMETER = OD

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



NOTES

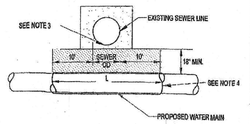
1. IF THE SELECT GRANULAR BACKFILL EXISTS, REMOVE WITHIN WIDTH OF PROPOSED SEWER TRENCH AND REPLACE WITH SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT.
2. OMIT SELECT GRANULAR CRADLE AND GRANULAR BACKFILL TO ONE (1) FOOT OVER THE TOP OF THE WATER MAIN AND USE SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT OVER LENGTH "L".
3. USE A CASING PIPE FOR PROPOSED WATER MAIN AND SEAL ENDS OF CASING. SEE UW-14 FOR CASING DETAILS.
4. POINT LOADS SHALL NOT BE ALLOWED BETWEEN SEWER OR SEWER CASING AND WATER MAIN.
5. PROVIDE ADEQUATE SUPPORT FOR EXISTING SEWER LINE TO PREVENT DAMAGE DUE TO SETTLEMENT OF WATER MAIN TRENCH.

Revised:	Drawing Name	Drawing Number
1. 05/12/2015 2. 8/19/2023 JRG - SEWER AND WATER 2014 UPDATE 3. 4.	WATER AND SEWER SEPARATION REQUIREMENTS	UG-04a Date: 04/15/2007 Drawn: EM Checked: AW

City of Crystal Lake Illinois

UG-04b

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



NOTES

1. OMIT SELECT GRANULAR CRADLE AND GRANULAR BACKFILL TO ONE (1) FOOT OVER THE TOP OF PROPOSED WATER MAIN AND USE SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT OVER LENGTH "L".
2. IF THE SELECT GRANULAR BACKFILL EXISTS; REMOVE WITHIN WIDTH OF PROPOSED SEWER TRENCH AND REPLACE WITH SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT.
3. PROVIDE ADEQUATE SUPPORT FOR EXISTING SEWER LINE TO PREVENT DAMAGE DUE TO SETTLEMENT.
4. USE A CASING PIPE LENGTH "L" FOR PROPOSED WATER MAIN AND SEAL ENDS OF CASING. SEE UW-14 FOR CASING DETAILS.

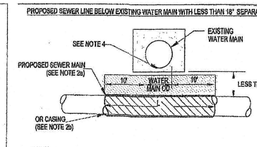
ADDITIONAL NOTES

*THE REQUIREMENTS ON THIS DETAIL ARE TAKEN FROM THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS (SEE PAGES 199-573)

CLASS IV MATERIALS SHALL BE COMPACTED TO 95% OF STANDARD PROCTOR DENSITY.

OD = OUTSIDE DIAMETER

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



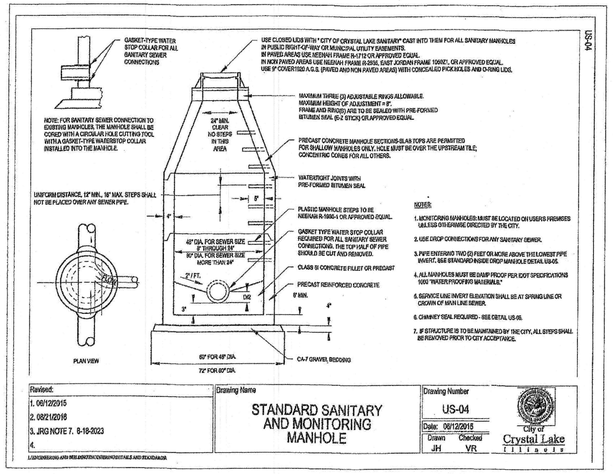
NOTES

1. OMIT SELECT GRANULAR CRADLE AND GRANULAR BACKFILL TO ONE (1) FOOT OVER TOP OF PROPOSED SEWER LINE AND USE SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT OVER LENGTH "L".
2a. CONSTRUCT "L" FEET OF PROPOSED SEWER OF WATER MAIN MATERIAL AND PRESSURE TEST, OR
2b. CONSTRUCT "L" FEET OF CASING FOR PROPOSED SEWER AND SEAL ENDS OF CASING. SEE UW-14 FOR CASING DETAILS OR
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.

Revised:	Drawing Name	Drawing Number
1. 05/12/2015 2. 8/30/2021 KL - SEWER AND WATER 2014 UPDATE 3. 4.	WATER AND SEWER SEPARATION REQUIREMENTS	UG-04b Date: 04/15/2007 Drawn: EM Checked: AW

City of Crystal Lake Illinois

US-04



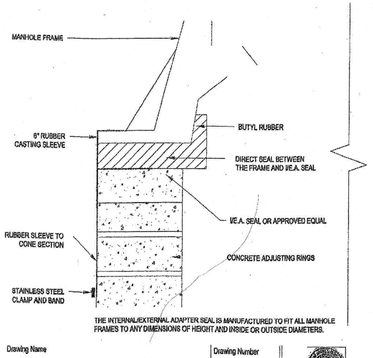
MANHOLE NOTES:

1. MONITORING MANHOLES MUST BE LOCATED ON USER'S PREMISES UNLESS OTHERWISE DIRECTED BY THE CITY.
2. USE DROP CONNECTIONS FOR ANY SANITARY DENSITY.
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 EQUIP PROOF PER IDOT SPECIFICATIONS 1000 "WATERSTOP RPR" MIN. MIN. 6".
5. SERVICE LINE INVERT ELEVATION SHALL BE AT SPRING LINE OR CROWN OF MAIN LINE SEWER.
6. CHIMNEY SEAL REQUIRED - SEE DETAIL US-05.
7. IF STRUCTURE IS TO BE MONUMENTED BY THE CITY, ALL BYPS'S SHALL BE REMOVED PRIOR TO CITY ACCEPTANCE.

Revised:	Drawing Name	Drawing Number
1. 06/12/2015 2. 08/21/2018 3. JRG NOTE 7. 8-18-2023 4.	STANDARD SANITARY AND MONITORING MANHOLE	US-04 Date: 06/12/2015 Drawn: JH Checked: VR

City of Crystal Lake Illinois

US-06



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

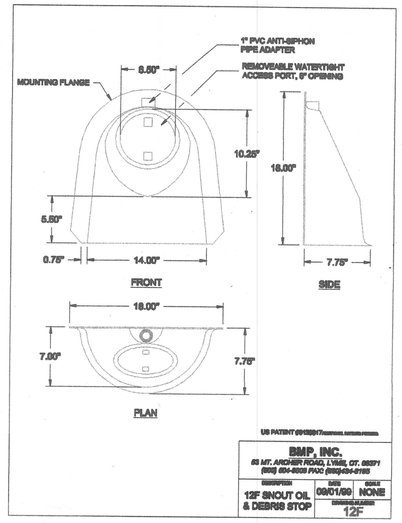
ALL SANITARY MANHOLES SHALL BE INSTALLED WITH AN INTERNAL / EXTERNAL CHIMNEY SEAL WITH A RUBBER SLEEVE TO SEAL THE OUTSIDE OF THE CHIMNEY FROM THE TOP OF THE CORBEL TO THE MANHOLE FRAME. THE SEAL SHALL BE INSTALLED PER THE INSTALLATION INSTRUCTIONS AND AS DIRECTED BY THE ENGINEER.

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. 05/12/2015 2. 3. 4.	INTERNAL / EXTERNAL CHIMNEY SEAL	US-06 Date: 05/29/2015 Drawn: JH Checked: VR

City of Crystal Lake Illinois



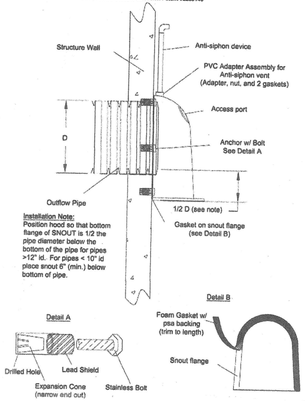
US PATENT 6126817 ADDITIONAL PATENTS PENDING

BMP, INC. 53 MT. ARCHER ROAD, LYME, CT. 06371 (800) 504-8008 FAX: (860)434-3195		
DESCRIPTION: 12F SNOUT OIL & DEBRIS STOP	DATE: 09/01/99	SCALE: NONE
	DRAWING NUMBER: 12F	

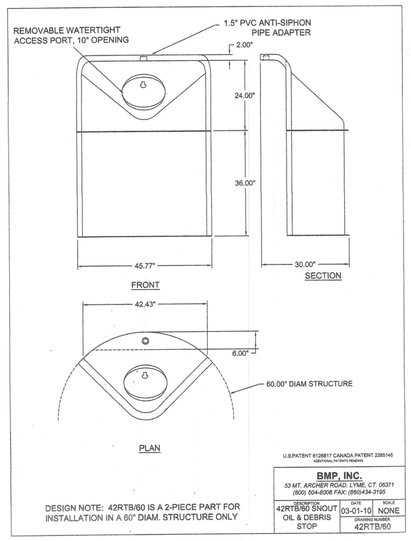
BEST MANAGEMENT PRODUCTS, INC.

The SNOUT® INSTALLATION INSTRUCTIONS

U.S. Patent # 6126817 Canadian Patent #2265148



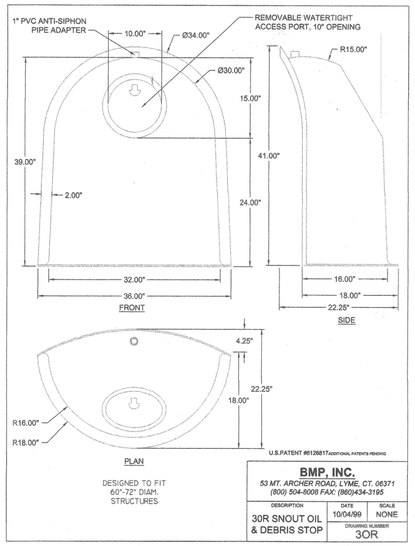
Installation Note:
Position hood so that bottom flange of SNOUT is 1/2 the pipe diameter below the bottom of the pipe for pipes >12" id. For pipes < 10" id place snout 6" (min.) below bottom of pipe.



U.S.PATENT 6126817 CANADA PATENT 2265148 ADDITIONAL PATENTS PENDING

BMP, INC. 53 MT. ARCHER ROAD, LYME, CT. 06371 (800) 504-8008 FAX: (860)434-3195		
DESCRIPTION: 42RTB/60 SNOUT OIL & DEBRIS STOP	DATE: 03-01-10	SCALE: NONE
	DRAWING NUMBER: 42RTB/60	

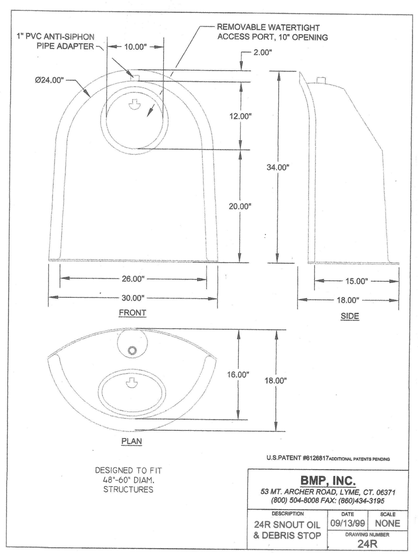
DESIGN NOTE: 42RTB/60 IS A 2-PIECE PART FOR INSTALLATION IN A 60" DIAM. STRUCTURE ONLY



U.S.PATENT #6126817 ADDITIONAL PATENTS PENDING

DESIGNED TO FIT 60"-72" DIAM. STRUCTURES

BMP, INC. 53 MT. ARCHER ROAD, LYME, CT. 06371 (800) 504-8008 FAX: (860)434-3195		
DESCRIPTION: 30R SNOUT OIL & DEBRIS STOP	DATE: 10/04/99	SCALE: NONE
	DRAWING NUMBER: 30R	

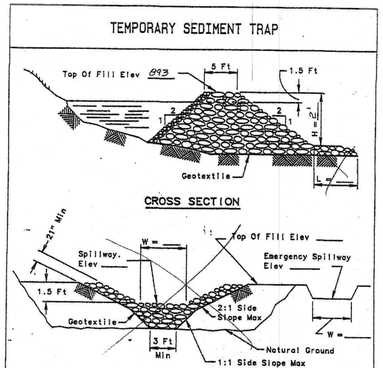


U.S.PATENT #6126817 ADDITIONAL PATENTS PENDING

DESIGNED TO FIT 48"-60" DIAM. STRUCTURES

BMP, INC. 53 MT. ARCHER ROAD, LYME, CT. 06371 (800) 504-8008 FAX: (860)434-3195		
DESCRIPTION: 24R SNOUT OIL & DEBRIS STOP	DATE: 09/13/99	SCALE: NONE
	DRAWING NUMBER: 24R	

TEMPORARY SEDIMENT TRAP

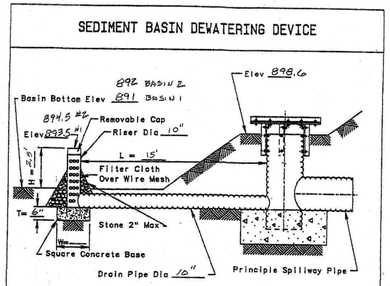


NOTES:

1. If the sediment pool is formed or enlarged the side slope will be 2:1 or flatter.
2. The fill shall be constructed using IDOT RR-4 stone size. A 1' layer of IDOT CA-2 should be placed on the inside face to reduce the flow rate.
3. The rock will be placed according to construction specification 25 ROCKFILL. Placement will be by Method 1 and compaction will be class III.
4. The geotextile shall meet the requirements in material specification 592 GEOTEXTILE table 1 or 2, class I, II or IV.

REFERENCE		
Project	U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE ILLINOIS	STANDARD DWG. NO. IL-66B SHEET 1 OF 1 DATE 9-22-83
Designed Date		
Checked Date		
Approved Date		

SEDIMENT BASIN DEWATERING DEVICE



SECTION ON CENTERLINE

NOTES:

1. Slotted inlets shall be fabricated from corrugated metal or smooth steel.
2. Slots shall be cut cleanly and deburred. Ends of slots may be round or square.
3. Gravel filter, if used, shall be pit run sand and nautral gravel with a maximum particle diameter of 2".
4. Fabricated or standard elbow; fabricated or standard tee with the pipe or plug in upstream end; or standard tee with one end embedded in concrete.
5. Thirty 1" diameter holes per foot of riser may be substituted for the 1"x 4" slots for 6" diameter risers.
6. Drain pipe shall be the same material and gauge as the principle spillway pipe.
7. Slot spacing and size shall be as shown on standard drawing IL-580.
8. Coupling bands shall be as shown on standard drawing IL-580.

REFERENCE		
Project	U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE ILLINOIS	STANDARD DWG. NO. IL-615 SHEET 1 OF 1 DATE 9-22-83
Designed Date		
Checked Date		
Approved Date		

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: RAVINA COMMUNITIES OAKBROOK ESTATES EXPANSION

OWNER: RAVINA COMMUNITIES

Date:	08/19/25
Design/Drawn:	WAR
Approved:	CWR
Book No.:	–
File No.:	23-8242

SHEET TITLE:

Standard Details
Oakbrook Estates
Expansion

SHEET NUMBER:

C-22

SHEET 22 OF 24

Project No.: 23-8242

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

GRAPHIC SCALE
1 inch = 20 ft.
(IN FEET)

Legend

- Proposed Watermain
- Proposed Sanitary Sewer
- Proposed Storm Sewer
- Proposed Sanitary Service Wye
- Storm Manhole (D)
- Storm Catch Basin
- Storm Inlet
- Storm End Section
- Riprap per UD-02e
- Sanitary Structure (S)
- Fire Hydrant
- Valve & Vault (W)
- B.Box
- Street Light
- Existing Watermain — W —
- Existing Contour 895
- Existing Spot Elevation .898.25
- Proposed Spot Elevation 900.50
- Proposed Contour 899

60'-36" RCP @ 0.40%

8'-18" RCP

7+00 Ty C Catch Basin EJ 7525Z1/M Rim (EOP) = 898.15 Inv = 894.65

Storm CB Ty A 5' 4' Sump Ty 1 Fr & Cl Lid Flat Slab Top Rim = 898.75 Inv In E = 894.50 Inv out = 890.74 42RTB/60 Snout Hood

Street Light

Sanitary Clean Out Rim = 898.75 Inv =893.80

80'-8" PVC SDR 26 ASTM D3034 Sanitary Sewer @ 4.40%

Inv Storm=891.03
Top Sanitary=890.91
San 1.5
4' Sanitary MH TY A Ty 1 Fr & Closed Lid Rim = 899.00 Inv =890.28

Sleeve Sanitary Sewer 10' each way from Watermain

85'-8" PVC SDR 26 ASTM D3034 Sanitary Sewer @ 4.10%

183'-36" RCP @ 0.31%

Sanitary Clean Out Rim = 898.75 Inv =893.78

8+73 Storm MH Ty A 4' EJ 7525Z1/M Flat Slab Top Rim = 898.23 Inv In E = 894.73 Inv out = 891.30

Storm MH Ty A 5' Ty 1 Fr & Cl Lid Flat Slab Top Rim = 898.21 Inv In E = 894.00 Inv Out = 891.40

30'-30" RCP @ 0.31%

31'-33" RCP @ 0.31%

79'-18" RCP @ 1.00%

30" Concrete Flared End Section/Grate Inv = 891.50

7+00 Inlet Ty A EJ 7525Z1/M Rim (EOP) = 898.15 Inv = 895.15

22'-15" RCP CL IV Rubber Gasket Joints @ 2.27 %

7+75 8" Valve & Vault Rim = 898.21

Inv Water=892.90
Top Sanitary=890.85

184'-37" RCP @ 0.31%

8+00 5' B/C Or Ring = 899.00 Proposed Fire Hydrant with aux. valve

198'-8" PVC SDR 18 Watermain

8+73 Ty C Catch Basin EJ 7525Z1/M Rim (EOP) = 898.23 Inv = 895.23

22'-12" RCP CL IV Rubber Gasket Joints @ 2.27 %

Top Water=892.60
Inv Storm=895.00

Storm CB Ty A 5' 4' Sump Ty 1 Fr & Cl Lid Flat Slab Top Rim = 898.70 Inv = 893.35 30R Snout Hood

4" RCP 6%

ASTM D3034 Sanitary Sewer @2.90%

San 2.4
4' Sanitary MH TY A Ty 1 Fr & Closed Lid Rim = 899.25 Inv =893.96

6'-12" RCP

Top Water=893.95
Inv Storm=895.74

Top Water=893.00
Inv Storm=894.90

5'-12" RCP

Top Water=893.25
Inv Storm=895.42

Top Water=895.30
Inv Storm=898.00

5'-12" RCP

150'-15" RCP @ 1.0%

5'-12" RCP

Top Water=892.5
Inv Storm=894.00

6'-15" RCP

Top Water=893.00
Inv Storm=895.28

150'-12" RCP @ 1.00%

5'-12" RCP

Top Water=

150' (Total)-24" RCP @ 0.50% with 20'-24" RCP with Rubber Gasket Joints 10' each way from water main

Storm MH Ty 1 Fr & Flat Slab Rim = 89 Inv In = 8 Inv Out =

PVI 27+00

PVI 27+35.52

22'-12" RCP CL IV with Rubber Gasket Joints @ 2.27 %

5+00 Inlet Ty A EJ 7525Z1/M Rim (EOP) = 898.38 Inv = 895.88

5+00 Ty C CB EJ 7525Z1/M Rim (EOP) = 898.38 Inv = 894.38

4+50 5' B/C Or Ring = 899.75 Proposed Fire Hydrant with aux. valve

4' Sanitary MH TY A Ty 1 Fr & Closed Lid Rim = 901.60 Inv =888.70

San 1.4

493'-8" PVC SDR 18 Watermain

3+00 Ty C CB EJ 7525Z1/M Rim (EOP) = 898.44 Inv = 894.94

22'-12" RCP CL IV with Rubber Gasket Joints @ 2.27 %

3+50 Inlet Ty A EJ 7525Z1/M Rim (EOP) = 898.44 Inv = 895.44

315'-8" PVC SDR 26 ASTM D3034 Sanitary Sewer @ 0.50%

316'-8" PVC SDR 26 ASTM D3034 Sanitary Sewer @ 0.50%

9+50 Inlet Ty A EJ 7525Z1/M Rim (EOP) = 898.06 Inv = 895.56

22'-12" RCP CL IV Rubber Gasket Joints @ 2.27 %

10+85 3.5' B/C Or Ring = 901.50 Proposed Fire Hydrant with aux. valve

11+00 Inlet Ty A EJ 7525Z1/M Rim (EOP) = 898.16 Inv = 895.16

22'-12" RCP CL IV Rubber Gasket Joints @ 2.27 %

493'-8" PVC SDR 18 Watermain

12+50 Inlet Ty A EJ 7525Z1/M Rim (EOP) = 903.26 Inv = 900.26

22'-12" RCP CL IV Rubber Gasket Joints @ 2.27 %

9+50 Storm MH Ty A 5' Ty 1 Fr & Cl Lid Flat Slab Top Rim = 898.60 Inv In = 894.90 Inv Out = 894.69

9+50 Ty C Catch Basin EJ 7525Z1/M Rim (EOP) = 899.06 Inv = 895.06

11+00 Storm MH Ty A 4' Ty 1 Fr & Cl Lid Flat Slab Top Rim = 901.70 Inv In = 896.69 Inv Out = 896.44

11+00 Ty C Catch Basin EJ 7525Z1/M Rim = 897.66 Inv = 901.16

12+50 Storm MH Ty A 4' Ty 1 Fr & Cl Lid Rim = 903.50 Inv Out = 898.19

EJ 7525Z1/M Rim (EOP) = 903.26 Inv = 899.76

234'-8" PVC SDR 26 ASTM D3034 Sanitary Sewer @ 0.50%

San 3.3
4' Sanitary MH TY A Ty 1 Fr & Closed Lid Rim = 899.60 Inv =895.02

San 3.2
4' Sanitary MH TY A
Ty 1 Fr & Closed Lid
Rim = 906.00
Inv =893.85

Sanitary Sewer @ 0.50%

493'-8" PVC SDR 18 Watermain

Sanitary Sewer @ 0.50%

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

595 BUTTONWOOD CIRCLE
NAPERVILLE, ILLINOIS 60540

(630) 355-8889 PHONE
(630) 355-5362 FAX

ISSUE:

#	Date	Description
1	11/25	per review
2	02/26	per review
3	04/26	per review 3-18-26
4	06-03-26	per review 5-29-26

PROJECT:
Ravinia Communities
OAKBROOK ESTATES
Expansion
Crystall Lake, Illinois

OWNER:
Ravinia Communities
900 N. Skokie Blvd.
Suite 285
Northbrook, Illinois 60062

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

SHEET TITLE:

Oakbrook Estates Utilities Plan

SHEET NUMBER:

C-6

SHEET 6 OF 24

Project No.: 23-8242

GRAPHIC SCALE
1 inch = 20 ft.
(1:240)

Legend

- Proposed Watermain
- Proposed Sanitary Sewer
- Proposed Storm Sewer
- Proposed Sanitary Service Wye
- Storm Manhole (D)
- Storm Catch Basin
- Storm Inlet
- Storm End Section
- Riprap per UD-02e
- Sanitary Structure (S)
- Fire Hydrant
- Valve & Vault (W)
- B.Box
- Street Light
- Existing Watermain — W —
- Existing Contour — 895 —
- Existing Spot Elevation .898.25
- Proposed Spot Elevation 900.50
- Proposed Contour — 899 —

Rim = 899.25
Inv =893.96
6'-12" RCP
4+50
Top Water=892.5
Inv Storm=894.00
27+35.52
137'-18" RCP @ 0.50%
Inv In E = 896.30
Inv Out = 895.29
3+90
4+00
3+50
6'-15" RCP
Top Water=893.00
Inv Storm=895.28
3+00
2+50
60'-15" RCP with Rubber Gasket Joints @ 1.00 %
Top Water=894.65
Inv Storm=896.53
2+00
2+32.50
Top Water=895.20
Inv Storm=897.20
22+68.00
1+90
22+50
Sanitary Sewer @ 2.00%
Street Light
1+47.50
1+50
1+00
0+50
0+00
Inv Water=894.70
Top Sanitary=887.50
Existing Sanitary Sewer
Existing Watermain
San 1.2
0+96.5
4' Sanitary MH TY A
Ty 1 Fr & Closed Lid
Rim = 900.63
Inv =886.64
188'-8" PVC SDR 18 Watermain
Pressure Tap Valve & Vault
5+00
Ty C CB
EJ 7525Z1/M
Rim (EOP) = 898.38
Inv = 894.38
4+50 5' B/C
Gr Ring = 899.75
Proposed Fire Hydrant with aux. valve
32
San 1.4
4' Sanitary MH TY A
Ty 1 Fr & Closed Lid
Rim = 901.60
Inv =888.70
493'-8" PVC SDR 18 Watermain
3+50
Inlet Ty A
EJ 7525Z1/M
Rim (EOP) = 898.44
Inv = 893.44
3+00
Ty C CB
EJ 7525Z1/M
Rim (EOP) = 898.44
Inv = 894.94
22'-12" RCP CL IV with Rubber Gasket Joints @ 2.27 %
315'-8" PVC SDR 26 ASTM D3034 Sanitary Sewer @ 0.50%
Sanitary Clean Out
22+55
8" Valve & Vault
Rim = 900.50
28
Storm MH Ty A 4'
Ty 1 Fr & CI Lid
Flat Slab Top
Rim = 902.00
Inv = 896.90
22+25.50
Ty C CB
EJ 7525Z1/M
Rim (EOP) = 901.18
Inv = 897.68
33
31
30
29
27
22'-12" RCP CL IV Rubber Gasket Joints @ 2.27 %
1+47
Inlet Ty A
EJ 7525Z1/M
Rim (EOP) = 900.56
Inv = 898.06
22+25.5
EJ 7525Z1/M
Ty 1 Fr & II Lid
Ty 1 Fr & O Lid
Rim (EOP) = 901.18
Inv = 898.18
8
401'-8" PVC SDR 18 Watermain
Pressure Tap Valve & Vault
Inv Storm=897.90
Top Water=895.50
Top Sanitary=888.90
22+00
6'
97'-8" PVC SDR 26 ASTM D3034 Sanitary Sewer @ 0.50%
7
N00°14'10"W
600.00'
San 1.3
4' Sanitary MH TY A
Ty 1 Fr & Closed Lid
Rim = 904.00
Inv =887.12
6
5
197'-8" PVC SDR 26 ASTM D3034 Sanitary Sewer @ 2.75%
4
Street Light
3
2
Inv Water=899.50
Top Sanitary=892.44
196'-8" PVC SDR 18 Watermain
1
Pressure Tap Valve & Vault
Existing Meter
Existing Watermain
Existing Fire Hydrant
46
47
48
49
50
51
52
Sanitary Clean Out
21+50
8" Valve & Vault
Rim = 906.22
493'-8" PVC SDR 18 Watermain
11+00
Inlet Ty A
EJ 7525Z1/M
Rim (EOP) = 901.16
22'-12" RCP CL IV Rubber Gasket Joints @ 2.27 %
12+50
Inlet Ty A
EJ 7525Z1/M
Rim (EOP) = 900.26
Inv = 903.26
13+15 3.5' B/C
Gr Ring = 906.25
Proposed Fire Hydrant with aux. valve
Top Water=897.40
Top Water=895.30
Inv Storm=898.00
11+50
12+00
12+50 Inv Storm=900.10
13+00
13+50
13+93.52
13+51.02
20+68.00
20+50
20+25.50
20+00
19+68
5'-12" RCP
150'-12" RCP @ 1.00%
12+50
Storm MH Ty A 4'
Ty 1 Fr & CI Lid
Rim = 903.80
Inv Out = 898.19
12+50
Ty C Catch Basin
EJ 7525Z1/M
Rim (EOP) = 903.26
Inv = 899.76
11+00
Storm MH Ty A 4'
Ty 1 Fr & CI Lid
11+00
Ty C Catch Basin
EJ 7525Z1/M
Rim (EOP) = 901.16
Inv = 897.66
59
58
57
56
55
54
53
234'-8" PVC SDR 26 ASTM D3034 Sanitary Sewer @ 0.50%
San 3.2
4' Sanitary MH TY A
Ty 1 Fr & Closed Lid
Rim = 906.00
Inv =893.85
262'-8" PVC SDR 26 ASTM D3034 Sanitary Sewer @ 0.50%
Emergency Access Only
San 3.1
4' Sanitary MH TY A
Ty 1 Fr & Closed Lid
Rim = 906.00
Inv =892.54

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595 BUTTONWOOD CIRCLE
NAPERVILLE, ILLINOIS 60540

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ISSUE:

#	Date	Description
1	11/25	per review
2	02/26	per review
3	04/26	per review 3-18-26
4	06-03-26	per review 5-29-26

PROJECT:
Ravinia Communities
OAKBROOK ESTATES
Expansion
Crystall Lake, Illinois

OWNER:
Ravinia Communities
900 N. Skokie Blvd.
Suite 285
Northbrook, Illinois 60062

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

SHEET TITLE:

Oakbrook Estates Utilities Plan

SHEET NUMBER:

C-7

SHEET 7 OF 24

Project No.: 23-8242

GRAPHIC SCALE
(IN FEET)
1 inch = 20 ft.

16 TF/Pad 900.5
15 TF/Pad 900.5
14 TF/Pad 900.50
13 TF/Pad 901.00
17 TF/Pad 900.80
18 TF/Pad 900.80
19 TF/Pad 900.80
20 TF/Pad 900.80
23 TF/Pad 901.20
24 TF/Pad 901.90
22 TF/Pad 901.30
25 TF/Pad 901.90
21 TF/Pad 901.30
26 TF/Pad 902.00
12 TF/Pad 901.50
11 TF/Pad 901.50
TF/Pad 901.50 10
9 TF/Pad 901.50
36 TF/Pad 900.60
35 TF/Pad 900.90
34 TF/Pad 901.10
33 TF/Pad 901.50
32 TF/Pad 901.80
31 TF/Pad 901.90
30 TF/Pad 901.90
29 TF/Pad 902.30
28 TF/Pad 902.70
27 TF/Pad 903.70
TF/Pad 903.20 8
TF/Pad 904.20 7
TF/Pad 904.90 6
TF/Pad 905.70 5
52 TF/Pad 905.20
43 TF/Pad 901.30
44 TF/Pad 901.80
45 TF/Pad 902.30
46 TF/Pad 902.80
47 TF/Pad 903.30
48 TF/Pad 903.80
49 TF/Pad 904.40
50 TF/Pad 904.90
51 TF/Pad 904.70

Adjust Rim=897.00
897.8 Ex
4:1 Slope
Inv=891.50
Riprap per UD-02e Sheet C-21 CA1
Inv=891.50
R 899.38 I 896.88
R 899.38 I 896.38
R 899.00 I 894.23
R 898.67 I 894.56
R 898.67 I 894.78
R 900.90 I 895.90
R 899.50 I 894.10
R 898.70 I 893.35
R 898.38 I 895.38
R 898.38 I 895.88
R 898.44 I 894.94
R 898.44 I 895.44
R 900.00 I 895.22
R 900.56 I 898.06
25+50 899.33
25+59.26
25+00 899.63
24+50 899.93
PT = 24+44.26
26+00 899.03
26+50 898.91
27+00 899.09
PVI 0.30% 4+00 898.77
PVI 5+00 898.62
PVI 3+50 898.67
PVI 2+00 900.23
PVI 1+00 900.72
PVI 23+25 I 897.42
5+50 898.77
4+50 898.67
3+00 899.12
2+50 899.68
1+50 900.79
0+50 899.50
2+32.50
22+68.00
22+50 900.75
22+25.50
22+00 902.05
21+50 903.36
21+10.5 904.66
21+00
1+90 900.39
1+47.50 E/P 900.56 T/C 900.86
1+00 900.72
1+47.50 E/P 900.56 T/C 900.86
T/C 899.20 E/P 898.85
T/C 899.20 E/P 898.85
T/C 900.57 E/P 900.27
T/C 900.57 E/P 900.27
23+77.50 900.58
23+50 900.58
23+10.5 900.50
23+00 900.50

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SHEET TITLE:
Grading Plan
Oakbrook Estates
Expansion

SHEET NUMBER:
C-8
SHEET 8 OF 24

Project No.: 23-8242

Sheet C-21 6"-12"

Inv=891.00

RUBY MAY CT

221

220

219

218

217

216

215

Erosion Control Silt Fence

S00°14'10"E 155.00'

S00°14'10"E 155.00'

35'

Erosion Control Silt Fence

4:1 Slope

Inv=890.50

Sediment Basin #1
See Details sheet C-22
Remove temporary sediment basins and clear debris prior to final grading.

Stormwater Management
HW = 898.00

Inv=891.50

Riprap per UD-02e
Sheet C-21 CA1

Riprap per UD-02e
Sheet C-21 CA1

Inv=891.00

Inv=891.50

4:1 Slope

4:1 Slope

899.0

898.6

898.0

897.5

16 TF/Pad 900.5

15 TF/Pad 900.5

14 TF/Pad 90(

17 TF/Pad 900.80

18 TF/Pad 900.80

19 TF/Pad 900.80

20 TF/Pad 900.80

23 TF/Pad 901.20

TF/Pad 901.30 22

24 TF/Pad 90(

25 TF/Pad 90(

TF/Pad 901.30 21

26 TF/Pad 902

28 TF/Pad 902

69 TF/Pad 900.50

68 TF/Pad 900.50

GRAPHIC SCALE
(IN FEET)
1 inch = 20 ft.

North

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SHEET TITLE:

Grading Plan
Oakbrook Estates
Expansion

SHEET NUMBER:

C-9

SHEET 9 OF 24

Project No.: 23-8242