VILLAGE OF Lake Villa

The Village of Lake Villa

Plan Commission – Special Meeting Agenda
Thursday, February 8, 2024
Village Hall, 65 Cedar Avenue

7:00 pm

1. Call to Order & Roll Call
2. Pledge of Allegiance
3. **Approval**: Minutes of November 11, 2023 Plan Commission Meeting
4. **Approval**: Final Planned Development Approval for the Starling Senior Loft Apartments (0 Deep Lake Road)
5. **Conceptual Review**: Proposed Development at 801 Tower Drive
6. Public Comment
7. Adjournment

Individuals with disabilities who require certain accommodations in order to allow them to observe and/or participate in this meeting, or who have questions regarding the accessibility of the meeting or the facilities, are required to contact Village Hall at (847) 356-6100 promptly to allow the Village to make reasonable accommodations for those persons.

The Village of Lake Villa
Plan Commission Meeting
DRAFT Proceedings of the November 14, 2023
Plan Commission Meeting – Village Hall
65 Cedar Avenue, Lake Villa, IL 60046

1. CALL TO ORDER AND ROLL CALL

A Meeting of the Plan Commission of the Village of Lake Villa was held on November 14, 2023, at the Village Hall, 65 Cedar Ave., and was called to order by Plan Commission Chairman Craig Kressner at 7:00 pm.

Present:	Commissioners: Craig Kressner, Jerry Coia, Dan Lincoln, Jake Cramond, Tracy Lucas, Steve Smart
Absent:	Commissioners: Mary Meyer
Also Present:	Village Administrator Michael Strong; Village Attorney Rebecca Bateman; Scott Goldstein, Teska; Assistant to the Village Administrator Jacob Litz

2. PLEDGE OF ALLEGIENCE

3. APPROVAL OF MINUTES

Commissioner Coia made a motion to approve the minutes of the October 19, 2023 Plan Commission meeting. The motion was seconded by Commissioner Smart and approved unanimously by voice vote.

4. DISCUSSION: Mixed-Use and Downtown Development

Village Administrator Michael Strong introduced the Mixed-Use Downtown Development presentation for the evening and introduced Scott Goldstein from Teska. He overviewed several mixed-use examples, he then overviewed the downtown site within the Village that would fit some of the concepts he presented. The Plan Commission discussed several of the concepts presented.

5. DISCUSSION: Zoning Approaches to Mixed-Use Development

Village Planner Scott Goldstein continued the previous discussion and turned the conversation towards various zoning approaches. He detailed several possible options and opportunities to look at. The group came to a consensus that within the CBD, a Conditional Use Permit should be applied to use, setback, and height. Within the SB and CB, the group came to a consensus that residential be allowed on the second floor and above as a Conditional Use. In the SB, the group came to a consensus to bring the parking minimums to a lower capacity. The group came to a consensus to allow limited retail in UR4. Additionally, the group came to a consensus to change townhomes to 40 feet or 3 stories and apartment to 50 feet or 4 stories.

6. DISCUSSION: Bulk Standards Relative to Commercial/Industrial Zones

Village Administrator Mike Strong presented an overview relative to bulk standards in commercial/industrial zones. He stated current setbacks for LI and LI-2 and stated it may make sense to allow for furthering buffering and allow for a 50 feet setback. The group agreed with the suggested change to the buffering in this area.

7. DISCUSSION: Modified Shipping Containers

Village Administrator Mike Strong presented an overview regarding modified shipping containers. He presented several other communities with definitions for the modified shipping containers. Industrial Uses were considered as an appropriate location for modified shipping containers. There was discussion regarding these modified shipping containers being used a inhabited spaces. Mr. Strong stated that he would bring back some draft language to the group based on the discussion.

8. PUBLIC COMMENT

There was no public comment.

9. ADJOURNMENT

With there being no further business Chairman Kressner asked for a motion to adjourn. Commissioner Smart made a motion to adjourn, seconded by Commissioner Coia. The motion was approved unanimously by voice vote at 9:22 p.m.

Respectfully submitted,
Jacob Litz, Assistant to the Village Administrator

DATE: February 1, 2024

TO: Chairman Craig Kressner and Members of the Plan Commission

FROM: Michael Strong, Village Administrator

RE: 0 Deep Lake Road – Starling Senior Apartments Development

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Property Owner	**Property Location**	**Zoning District**
Home State Bank N.A. 40 Grant Street Crystal Lake, IL 60014	0 Deep Lake Road – Vacant Lot south of Tower Crossing (the "Subject Property")	Suburban Business SB

Applicant: Lincoln Avenue Capital, LLC
c/o Hume An, Vice President and Regional Project Partner
3048 Mary Kay Lane
Glenview, IL 60026

Representatives: Hume An, Vice President and Regional Project Partner (Developer)

Requested Action(s)

1. Final Approval for Rezoning to UR4 and Conditional Use Permit for Elderly Housing
2. Final Plat Approval for Phase 3 of the Lake Tower Crossing Planned Development

Project Background and Summary

The Subject Property, located in the Tower Crossing Development at the southwest corner of the Deep Lake Road and Grass Lake Road, is comprised of a 5-acre undeveloped site with no current access to Tower Drive (north) or Deep Lake Road (east). The property is currently zoned Suburban Business (SB).

The Applicant is proposing a three-story, 40-unit senior apartment building on the Subject Property. The Preliminary PUD for the Property was approved on March 20, 2023 as 2023-03-03.

The final plans have not changed and the PC/ZBA's recommendations were incorporated into the site documents. The PCZBA's review of the Final PUD is to verify conformance with the Preliminary PUD as provided in the Attachments.

Map source: Lake County GIS

Staff Analysis – Final Plat and PUD for 0 Deep Lake Road – *Please reference to the attached documents as reference.*

The request for rezoning and amendment to existing conditional use permit was preliminary approved by the Village Board on March 20, 2023 via Ordinance 2023-03-03. As stated in the Village's Zoning Code, within one year of approval of the Preliminary Plan/Plat, the applicant shall file for approval of a PUD Final Plan/Plat covering all or part of the approved PUD Preliminary Plan/Plat. The Final Plan shall be in substantial compliance with the Preliminary PUD (i.e. the number of units has not increased, the height of the buildings has not been increased, building materials are the same or of equal quality and the general quantities and quality of the landscaping material is the same, and any changes tot eh final engineering do not alter the general design characteristics of the Preliminary Plan/PUD). The review of the Final Plat/PUD for the PCZBA shall stay within the parameters of the above intentions of the Village's Zoning Code.

The Preliminary Plat/PUD approval for 0 Deep Lake Road indicated the following conditions for Final PUD approval.

1. Recording of permanent access easement to provide Development access for ingress and egress to and from Tower Road. ✓
2. Inclusion of all necessary stormwater management facilities and all sanitary sewer and water system improvements required for the Development. ✓
3. Necessary permits from the Village, CLCJAWA, Lake County Public Works, for water and sewer service to the Development shall be secured. ***Permits have been submitted to LCDOT, IEPA for review. Approvals will be conditioned up review and permit approvals from necessary agencies.***

On November 28, 2023 the Applicant filed plans for Final PUD Final Plan/Plat approval as the developer of the subject property. Revisions, pursuant to comments provided by Village Consultants, were received by the Village on January 16, 2024. The final submittal provided the items required and outlined in the Preliminary PUD for the Final PUD, along with substantially addressing revision comments by Village Consultants. Generally, there are no major changes that are proposed from the approved Preliminary PUD to the submitted Final PUD. Below represent current open comments relative to the Developer's submitted Final Plan/Plat:

Planning and Plat Comments:

- No open and/or major comments that need to be addressed.

Engineering Comments:

- The Village Engineer noted that adjustments are still needed on the final plans to address the water main location, material details and specifications, and utility connections. The Village Engineer will be meeting with Manhard to go over the deficiencies and ensure that open issues are addressed on final plans prior to permit issuance.

Fire District Comments:

- No open and/or major comments that need to be addressed.

Landscaping/Signage Comments:

- The Village Planner noted that there are additional tree replacements needed for trees that will be removed along the access drive west of the water tower. The Developer's final landscape plan should include those required replacements, which shall be located east of the new sidewalk to provide screening to the Water Tower.
- The Developer has not submitted any plans for their proposed monument sign, elevations and details relative to signage shall be submitted to the Village Planner for review and approval prior to permits being issued for any signage.

Stormwater Comments:

- No open and/or major comments that need to be addressed.

Action Requested

As the Final PUD and Plat Application, and associated documents are substantially conforming to the Preliminary PUD, staff is recommending approval of the Final PUD for 0 Deep Lake Road with the following conditions:

1. The Developer provide and/or apply for all necessary permits/approvals from the Village, CLCJAWA, Lake County Public Works, for utilities, sidewalks/pedestrian paths located in Lake County right-of-way.
2. Address any additional outstanding issues as noted in final review comment letters issued by the Village Planner, Village Engineer, and Village Stormwater Engineer. The remaining comments must be addressed prior to the issuance of Site Development or Building permits for the project.

A draft motion has been included in your packet for consideration during the February 8, 2024 meeting.

Attachments

Exhibit 1 – Complete Plan Submittal Set (Recent Rev. 1/16/2024)
Exhibit 2 – Draft Motion Including Findings of Fact

STARLING SENIOR APARTMENTS

0 DEEP LAKE ROAD, LAKE VILLA, IL 60046

VICINITY MAP

DRAWING INDEX

APPLICABLE BUILDING CODES

THE VILLAGE OF LAKE VILLA ZONING ORDINANCE
2012 INTERNATIONAL BUILDING CODE
2011 NATIONAL ELECTRICAL CODE – NFPA 70
STATE OF ILLINOIS PLUMBING CODE W/ AMENDMENTS
2012 INTERNATIONAL MECHANICAL CODE
2012 INTERNATIONAL FIRE CODE
2012 ICC INTERNATIONAL RESIDENTIAL CODE
2018 INTERNATIONAL ENERGY CONSERVATION CODE
ILLINOIS ACCESSIBILITY CODE – CURRENT EDITION
FEDERAL FAIR HOUSING AMENDMENTS ACT
UNIFORM FEDERAL ACCESSIBILITY STANDARDS ACT
2010 AMERICANS WITH DISABILITIES ACT ARCHITECTURAL GUIDELINES
ICC / ANSI STANDARD A117.1 – CURRENT EDITION
IHDA: QAP & STANDARDS FOR ARCHITECTURAL PLANNING & CONSTRUCTION – LATEST VERSION

CERTIFICATIONS

ENTERPRISE GREEN COMMUNITIES 2020 PLUS

PROJECT DATA

ADDRESS:	0 DEEP LAKE ROAD, LAKE VILLA, IL 60046
ZONING DISTRICT:	SB SUBURBAN BUSINESS
PROPOSED ZONING:	UR4 W/ CONDITIONAL USE OF ELDERLY HOUSING
LOT SIZE:	+/– 226,947 SF (5.21 ACRES)
GROSS FLOOR AREA:	± 42,651 SF
PROPOSED BUILDING HEIGHT:	3 STORY
FIRST FLOOR USE:	APARTMENTS & COMMON AREAS FOR RESIDENTS
SECOND & THIRD FLOOR USE:	APARTMENTS & COMMON AREAS FOR RESIDENTS
TOTAL DWELLING UNITS PROPOSED:	40 INCLUDES: (6) ACCESSIBLE & (1) SENSORY UNITS
	(8) ADAPTABLE UNITS PER ILLINOIS ACCESSIBILITY CODE &
	(40) ADAPTABLE UNITS PER FAIR HOUSING
ONE BEDROOM UNITS:	30 INCLUDES: (4) ACCESSIBLE & (1) SENSORY UNITS
TWO BEDROOM UNITS:	10 INCLUDES: (2) ACCESSIBLE UNITS
PARKING:	70 SPACES (INCLUDES: 4 ADA, 2 ADA VAN & 5 GUESTS
	PARKING SPACES).
BIKE PARKING:	16 SLOTS
CONSTRUCTION TYPE:	5A FULLY SPRINKLERED PER NFPA 13R

OWNER	ARCHITECT	GENERAL CONTRACTOR
STARLING SENIOR APARTMENTS LIMITED PARTNERSHIP 401 WILSHIRE BLVD. STE. 1070 SANTA MONICA, CA 90401	**NORTH ARROW ARCHITECTURE** 524 W. ST. CHARLES RD. VILLA PARK, IL 60181 PHONE: 630.279.9990	**SKENDER** 1330 W. FULTON ST. SUITE 200 CHICAGO, IL 60607 PHONE: 312.781.0265

1 SITE PLAN
SCALE: 1/64" = 1' - 0"

PROJECT DATA:

ADDRESS: 0 DEEP LAKE RD, LAKE VILLA, IL 60046

ZONING DISTRICT: GB SUBURBAN BUSINESS AREA

PROPOSED ZONING: UR4 ZONING W/ CONDITIONAL USE ELDERLY HOUSING

LOT SIZE: +/- 226,947 SF (5.21 ACRES)

MAX D.U. PER ACRE: 1,000 S.F GROSS / 1 DWELLING UNIT

LOT AREA / D.U. PROVIDED: 5,673.7 S.F. /D.U.

MAXIMUM LOT COVERAGE: 30%
PROPOSED: 7.2% (14,850 SF FOOTPRINT)

MAXIMUM BUILDING HEIGHT: 50'

PROPOSED BUILDING HEIGHT: 3 STORY (40 FT.)

TOTAL DWELLING UNITS PROPOSED: 40
INCLUDES: (6) ACCESSIBLE & (1) SENSORY UNITS
(8) ADAPTABLE UNITS PER ILLINOIS ACC. CODE
(40) ADAPTABLE UNITS PER FAIR HOUSING

ONE BEDROOM UNITS: 30
INCLUDES: (4) ACCESSIBLE & (1) SENSORY UNITS

TWO BEDROOM UNITS: 10
INCLUDES: (2) ACCESSIBLE UNITS

GROSS FLOOR AREA: 42,051 SF

MINIMUM SETBACKS (BASED ON UR4 ZONING):
*FRONT YARD = 30 FT.
*SIDE YARD = 40 FT. MIN.
*TOTAL SIDE YARD = 15 FT. (FIRST UNIT) + 8 FT. (SECOND UNIT) + 2 FT. (EACH ADDITIONAL UNIT) = TOTAL 99 FT. MIN. REQUIRED FOR SIDE YARD (40 UNITS)
*REAR YARD = 0 FT. (FIRST UNIT) + 4 FT. (SECOND UNIT) + 1 FT. (EACH ADDITIONAL UNIT) = TOTAL 40 FT MIN. REQUIRED FOR REAR YARD (40 UNITS)

PARKING REQUIRED: 1 BEDRM = 1.5 STALLS/UNIT, 2 BEDRM = 2.0 STALLS/UNIT = 85 STALLS MIN

PARKING: 70 SPACES
(INCLUDES: 5 ADA, 1 ADA VAN, & 5 GUESTS PARKING SPACES)

BIKE PARKING: 10 SLOTS

PROJECT AMENITIES:

- DISHWASHER IN EVERY UNIT
- INTERIOR SECURITY CAMERAS AT ALL ENTRANCES, EXITS AND STAIRS
- DEDICATED COMMUNITY ROOM MEETING AUTHORITY STANDARDS
- SECURED BICYCLE PARKING (5 SLOTS PER 25 UNITS)
- GARDEN PLOTS / DESIGNATED COMMUNITY GARDEN AREA WITH A MINIMUM OF 15 SQ. FT. PER UNIT (600 SF MIN.)

NORTH ARROW ARCHITECTURE
524 WEST ST. CHARLES ROAD
VILLA PARK, ILLINOIS 60181

STARLING SENIOR APARTMENTS

0 DEEP LAKE ROAD
LAKE VILLA, IL 60046

PD #
DATE: 11/27/2023

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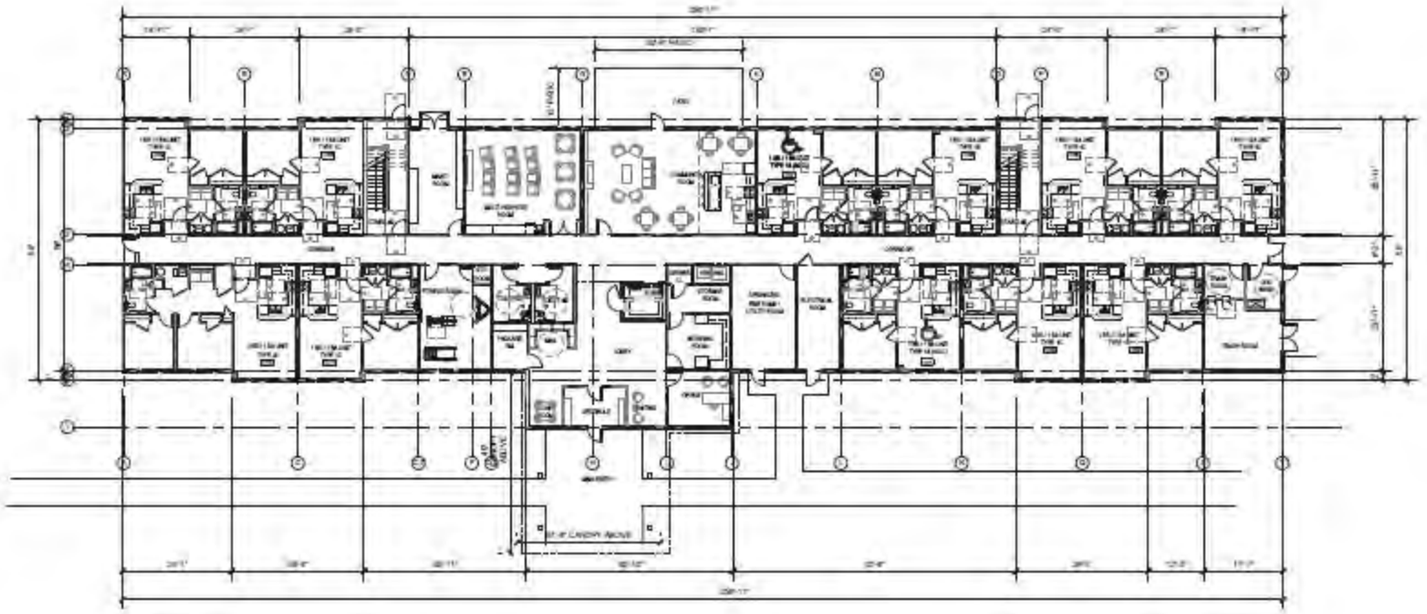
BUILDING GROSS FLOOR AREA
FIRST FLOOR = 14,830 S.F.
SECOND FLOOR = 13,905 S.F.
THIRD FLOOR = 14,218 S.F.
TOTAL SIZE, GROSS FLOOR AREA = 42,953 S.F.

PROPOSED FINISHES:

- WEATHER SHELTERED BUILDING MAIN ENTRY AREA
- MIN. 32" CLEAR SECONDARY ENTRY DOORWAY. SECONDARY ENTRY ACCESSIBLE: INTERNAL/EXTERNAL STRIKE AND HINGE CLEARANCES, HARDWARE, NO THRESHOLDS
- 60" WIDE HALLWAYS AND MANEUVERING CLEARANCES WITH 32" CLEAR DOORWAYS WITH COMMON AREAS AND UNITS.
- "PEEPHOLES AT ALL UNIT ENTRY DOORS DUAL PEEPHOLES FOR ACCESSIBLE UNITS AT REQUIRED ACCESSIBLE HEIGHT. AUDIO/VISUAL DOORBELL AT ENTRY UNIT ONLY"
- ALL FLOOR FINISHES TO BE CARPET & VINYL FLOORING WITH VINYL BASE
- ALL WALLS AND CEILINGS ARE TO BE PAINTED DRYWALL IN COMPLIANCE WITH GREEN SEAL STANDARDS FOR LOW VOC LIMITS
- LEVER STYLE DOOR HARDWARE ON ALL INTERIOR DOORS (COMMON AREA AND WITHIN UNITS)
- ELECTRIC BASEBOARD HVAC CONTROLS AND ALARM CONTROLS AT ACCESSIBLE HEIGHTS IN COMMON AREAS AND UNITS.
- ROCKER LIGHT SWITCHES / CONTROLS AT ACCESSIBLE HEIGHTS (IN COMMON AREAS AND UNITS)
- INTERIOR APARTMENT KITCHEN INCLUDES: ENERGY STAR CERTIFIED APPLIANCES STOVE & REFRIGERATOR (ADA COMPLIANT IN ALL UNITS & COMMON AREAS), TWO BOWL KITCHEN SINK IN KITCHEN TO HAVE HOODS VENTED TO THE EXTERIOR. ACCESSIBLE EXHAUST HOOD/LIGHT WALL SWITCH IN ADA UNITS KITCHEN & COMMUNITY ROOM
- UNDERCABINET LIGHTING UNDER ALL WALL CABINETS.
- ADEQUATE WORK/TURNING SPACE IN FRONT OF ALL APPLIANCES (30"X48" MIN. PARALLEL WHERE ALLOWED BY CODE) IN ALL UNIT KITCHENS.
- KITCHENS TO HAVE WOOD FACED CABINETS WITH PLASTIC LAMINATE COUNTERTOP.
- 30" MIN. CLEAR WORK SURFACE ADJACENT TO RANGED OVEN AT ACCESSIBLE UNITS KITCHEN AND COMMUNITY ROOM
- ACCESSIBLE HANDLE/TOUCH LATCHES FOR DOORS/FAUCETS AT COMMON AREA TOILET ROOMS & KITCHENS, UNIT KITCHENS AND BATHROOMS.
- SINKS IN ALL COMMON AREA TOILET ROOMS & KITCHENS, UNIT KITCHENS AND BATHROOMS WITH SINGLE-HANDLE LEVER "HI-LOT" AND ANTI-SCALD DEVICE.
- LOWER TOWEL RACKS AT ALL BATHROOMS & TOILET ROOM.
- GRAB BARS TO BE INSTALLED IN ALL A.D.A. WATER CLOSETS, ALL BATH TUBS AND/OR SHOWER UNIT BATHROOMS AND TOILET ROOMS FROM COMMON AREAS. PROVIDE BUILT IN REINFORCEMENT.
- ALL BATHTUB / SHOWER WITH GRAB BAR REINFORCEMENT, OFFSET CONTROLS FOR DI-TERROR USE AND ROUND ESCUTCHEONS AND SINGLE-HANDLE LEVER FAUCETS.
- REMOVABLE SEATS AT ACCESSIBLE BATHTUB / SHOWER UNITS.
- WINDOW COVERINGS AT ALL UNITS ALL WINDOWS TO HAVE 1" HIGH HORIZONTAL MINI BLINDS.
- ADJUSTABLE (58"-80") RODS AND SHELVES WITHIN CLOSETS IN COMMON AREAS AND UNITS.
- ALL CLOSETS HAVE MINIMUM 32" CLEAR OPENING.
- 1W/1ST (WASHER/DRYER) HOOK-UPS FOR FUTURE USE AT LAUNDRY CLOSET, ON SITE COMMON LAUNDRY FACILITY IS PROVIDED AT EACH FLOOR.
- ACCESSIBLE SINK WITH ADJACENT 30"X60" MIN. WORKSPACE AT COMMON LAUNDRY ROOM
- COMMON LAUNDRY ROOM WITH WASHER AND DRYER VENTED TO THE EXTERIOR OF THE BUILDING.

SEE ENLARGED UNIT FLOOR PLANS



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1 1ST FLOOR PLAN
SCALE: 1/32" = 1'-0"

DWELLING UNIT MATRIX

UNIT NUMBERS	UNITS TYPES	ACCESSIBLE UNITS	ADAPTABLE PER FAIR HOUSING	ADAPTABLE PER 2018 IAC	SENSORY UNITS	UNIVERSAL DESIGN	FLOOR AREA (S.F.)
	FIRST FLOOR:						
U101	1-BEDROOM "A", 1 BATH	X	X	X		X	582 S.F.
U102	1-BEDROOM "C", 1 BATH		X			X	815 S.F.
U103	1-BEDROOM "C", 1 BATH		X			X	815 S.F.
U104	1-BEDROOM "C", 1 BATH		X	X		X	815 S.F.
U105	1-BEDROOM "C", 1 BATH		X			X	815 S.F.
U106	1-BEDROOM "B", 1 BATH		X			X	582 S.F.
U107	1-BEDROOM "A", 1 BATH	X	X	X		X	582 S.F.
U108	1-BEDROOM "C", 1 BATH		X			X	815 S.F.
U109	1-BEDROOM "C", 1 BATH		X			X	815 S.F.
U110	2-BEDROOM "C", 1 BATH		X			X	885 S.F.
U111	1-BEDROOM "C", 1 BATH		X			X	815 S.F.
	SECOND FLOOR:						
U201	1-BEDROOM "C", 1 BATH		X			X	815 S.F.
U202	2-BEDROOM "A", 1 BATH	X	X	X		X	647 S.F.
U203	1-BEDROOM "C", 1 BATH		X			X	815 S.F.
U204	1-BEDROOM "C", 1 BATH		X			X	815 S.F.
U205	1-BEDROOM "C", 1 BATH	X	X	X		X	815 S.F.
U206	1-BEDROOM "C", 1 BATH		X			X	815 S.F.
U207	1-BEDROOM "B", 1 BATH		X	X	X	X	582 S.F.
U208	1-BEDROOM "A", 1 BATH	X	X	X		X	582 S.F.
U209	2-BEDROOM "B", 1 BATH		X			X	647 S.F.
U210	1-BEDROOM "C", 1 BATH		X			X	815 S.F.
U211	1-BEDROOM "C", 1 BATH		X			X	815 S.F.
U212	2-BEDROOM "C", 1 BATH		X			X	885 S.F.
U213	2-BEDROOM "C", 1 BATH		X			X	885 S.F.
U214	1-BEDROOM "C", 1 BATH		X			X	815 S.F.
	THIRD FLOOR:						
U301	1-BEDROOM "C", 1 BATH		X			X	815 S.F.
U302	2-BEDROOM "B", 1 BATH		X			X	647 S.F.
U303	1-BEDROOM "C", 1 BATH		X			X	815 S.F.
U304	1-BEDROOM "C", 1 BATH		X			X	815 S.F.
U305	1-BEDROOM "C", 1 BATH		X			X	815 S.F.
U306	1-BEDROOM "C", 1 BATH		X			X	815 S.F.
U307	1-BEDROOM "B", 1 BATH		X	X		X	582 S.F.
U308	1-BEDROOM "C", 1 BATH		X			X	815 S.F.
U309	2-BEDROOM "B", 1 BATH		X			X	647 S.F.
U310	2-BEDROOM "A", 1 BATH	X	X	X		X	647 S.F.
U311	1-BEDROOM "C", 1 BATH		X			X	815 S.F.
U312	1-BEDROOM "C", 1 BATH		X			X	815 S.F.
U313	2-BEDROOM "C", 1 BATH		X			X	885 S.F.
U314	2-BEDROOM "C", 1 BATH		X			X	885 S.F.
U315	1-BEDROOM "C", 1 BATH		X			X	815 S.F.
		3	40	0	1	40	

TOTAL = 40 UNITS: (30) 1-BEDROOM & (10) 2-BEDROOM

NOTES:
* SENSORY UNITS WILL ALSO BE ADAPTABLE UNITS PER FAIR HOUSING
* ADAPTABLE UNITS PER 2015 ILLINOIS ACCESSIBILITY CODE INCLUDE ACCESSIBLE UNITS.
* ALL UNITS ARE REQUIRED TO MEET THE ADAPTABILITY REQUIREMENTS OF FHA.

NORTH ARROW
ARCHITECTURE
524 WEST ST. CHARLES ROAD
VILLA PARK, ILLINOIS 60181

STARLING SENIOR APARTMENTS

0 DEEP LAKE ROAD
LAKE VILLA, IL 60046

PD #

DATE:
11/27/2023

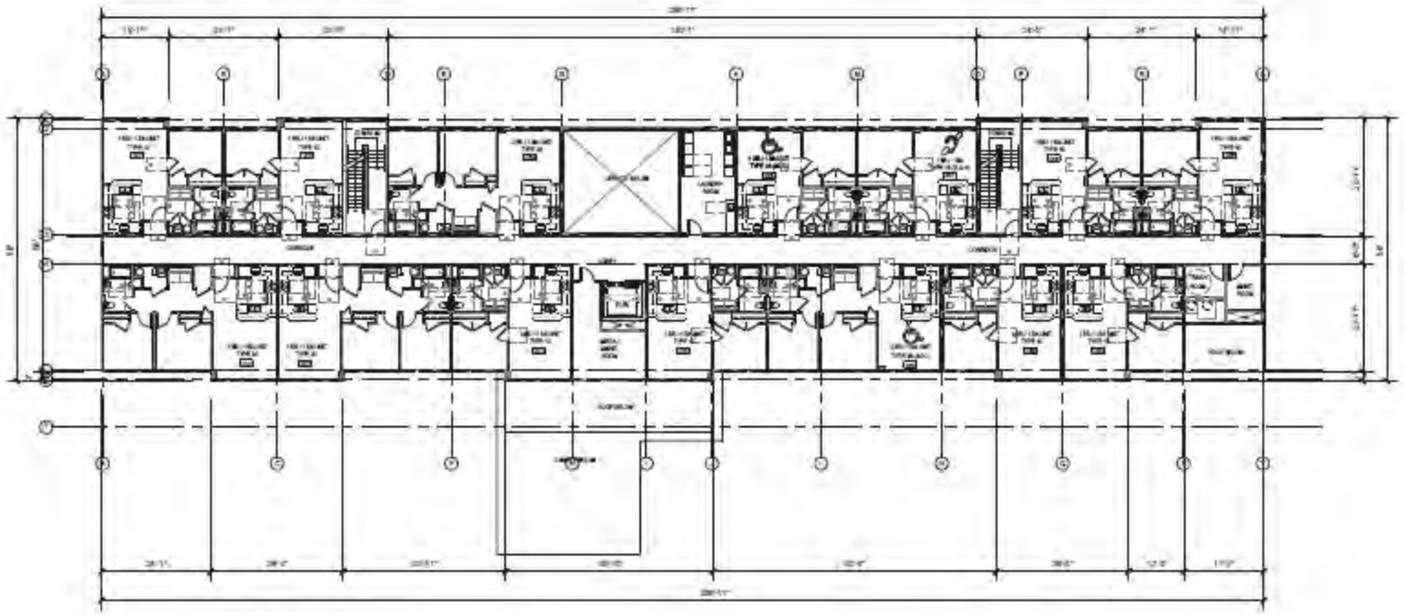
A1.0

BUILDING GROSS FLOOR AREA
FIRST FLOOR = 14,836 S.F.
SECOND FLOOR = 13,805 S.F.
THIRD FLOOR = 14,216 S.F.
TOTAL BLDG GROSS FLOOR AREA = 42,857 S.F.

PROPOSED FINISHES:

- WEATHER/SHELTERED BUILDING MAIN ENTRY AREA.
- MIN. 32" CLEAR SECONDARY ENTRY DOORWAY. SECONDARY ENTRY ACCESSIBLE INTERNAL/EXTERNAL STRIKE AND HINGE CLEARANCES, HARDWARE AND THRESHOLDS.
- 60" WIDE HALLWAYS AND MANEUVERING CLEARANCES WITH 32" CLEAR DOORWAYS WITHIN COMMON AREAS AND UNITS.
- PEEPHOLE AT ALL UNIT ENTRY DOORS. DUAL PEEPHOLES FOR ACCESSIBLE UNITS AT REQUIRED ACCESSIBLE HEIGHT. AUDIO/VISUAL DOORBELL AT SENSORY UNIT ONLY.
- ALL FLOOR FINISHES TO BE CARPET & VINYL FLOORING WITH VINYL BASE.
- ALL WALLS AND CEILINGS ARE TO BE PAINTED. DRYWALL IS COMPLIANCE WITH GREEN SEAL STANDARDS FOR LOW VOC LIMITS.
- LEVER STYLE DOOR HARDWARE ON ALL INTERIOR DOORS (COMMON AREAS AND WITHIN UNITS)
- ELECTRIC DIMMERS, HVAC CONTROLS AND ALARM CONTROLS AT ACCESSIBLE HEIGHTS IN COMMON AREAS AND UNITS.
- ROCKER LIGHT SWITCHES / CONTROLS AT ACCESSIBLE HEIGHTS IN COMMON AREAS AND UNITS.
- INTERIOR APARTMENT KITCHEN INCLUDES: ENERGY STAR CERTIFIED APPLIANCES: STOVE & REFRIGERATOR (ADA COMPLIANT IN ALL UNITS & COMMON AREAS), TWO BOWL KITCHEN SINK & KITCHEN EXHAUST HOOD (VENTED TO THE EXTERIOR ACCESSIBLE EXHAUST HOOD LIGHT WALL SWITCH IN ADA UNITS) KITCHEN & COMMUNITY ROOM.
- UNDERCABINET LIGHTING UNDER ALL WALL CABINETS.
- ADEQUATE MANEUVER SPACE IN FRONT OF ALL APPLIANCES (30"x48" MIN TARGET EL WHERE ALLOWED BY CODE) IN ALL UNIT KITCHENS.
- KITCHENS TO HAVE WOOD FACED CABINETS WITH PLASTIC LAMINATE COUNTERTOP.
- 30" MIN. CLEAR WORK SURFACE ADJACENT TO RANGE/OVEN AT ACCESSIBLE UNITS KITCHEN AND COMMUNITY ROOM.
- ACCESSIBLE HANDLES/TOUCH LATCHES FOR DOORS/DRAWERS AT COMMON AREA TOILET ROOMS & KITCHENS, UNIT KITCHENS AND BATHROOMS.
- SPAS IN ALL COMMON AREA TOILET ROOMS & KITCHENS, UNIT KITCHENS AND BATHROOMS WITH SINGLE-HANDLE LEVER FAUCET AND ANTI-SCALD DEVICE.
- DISPENSER TOWEL RACKS AT ALL BATHROOMS & TOILET ROOM.
- GRAB BARS TO BE INSTALLED IN ALL A.D.A. WATER CLOSETS, ALL BATH TUBS AND/OR SHOWER UNIT BATHROOMS AND TOILET ROOMS FROM COMMON AREAS. PROVIDE BUILT IN REINFORCEMENT.
- ALL BATHTUB / SHOWER WITH GRAB BAR REINFORCEMENT. OFFSET CONTROLS FOR EXTERIOR USE. ANTI-SCALD DEVICES AND SINGLE-HANDLE LEVER FAUCETS.
- REMOVABLE SEATS AT ACCESSIBLE BATHTUB / SHOWER UNITS.
- WINDOW COVERINGS AT ALL UNITS. ALL WINDOWS TO HAVE 1" FAUX HORIZONTAL MINI BLINDS.
- ADJUSTABLE (54"-60") RODS AND SHELVES WITHIN CLOSETS IN COMMON AREAS AND UNITS.
- ALL CLOSETS HAVE MINIMUM 32" CLEAR OPENING.
- VALANT WASH/DRY/FOLD MODEL (PS) FOR FUTURE USE AT LAUNDRY CLOSET ON SITE COMMON LAUNDRY FACILITIES. (PROVIDED AT EACH FLOOR).
- ACCESSIBLE SINK WITH ADJACENT SENSE MIN. WORKSPACE AT COMMON LAUNDRY ROOM.
- COMMON LAUNDRY ROOM WITH WASHER AND DRYER VENTED TO THE EXTERIOR OF THE BUILDING.

*SEE ENLARGED UNIT FLOOR PLANS.



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1 2ND FLOOR PLAN
SCALE: 1/32" = 1'-0"

DWELLING UNIT MATRIX

UNIT NUMBERS	UNIT TYPES	ACCESSIBLE UNITS	ADAPTABLE PER FAIR HOUSING	ADAPTABLE PER 2018 IAC	SENSORY UNITS	UNIVERSAL DESIGN	FLOOR AREA (S.F.)
	FIRST FLOOR:						
U101	1-BEDROOM "A", 1 BATH	X	X	X		X	582 S.F.
U102	1-BEDROOM "C", 1 BATH		X			X	815 S.F.
U103	1-BEDROOM "C", 1 BATH		X			X	815 S.F.
U104	1-BEDROOM "C", 1 BATH		X	X		X	815 S.F.
U105	1-BEDROOM "C", 1 BATH		X			X	815 S.F.
U106	1-BEDROOM "B", 1 BATH		X			X	582 S.F.
U107	1-BEDROOM "A", 1 BATH	X	X	X		X	582 S.F.
U108	1-BEDROOM "C", 1 BATH		X			X	815 S.F.
U109	1-BEDROOM "C", 1 BATH		X			X	815 S.F.
U110	2-BEDROOM "C", 1 BATH		X			X	885 S.F.
U111	1-BEDROOM "C", 1 BATH		X			X	815 S.F.
	SECOND FLOOR:						
U201	1-BEDROOM "C", 1 BATH		X			X	815 S.F.
U202	2-BEDROOM "A", 1 BATH	X	X	X		X	847 S.F.
U203	1-BEDROOM "C", 1 BATH		X			X	815 S.F.
U204	1-BEDROOM "C", 1 BATH		X			X	815 S.F.
U205	1-BEDROOM "C", 1 BATH	X	X	X		X	815 S.F.
U206	1-BEDROOM "C", 1 BATH		X			X	815 S.F.
U207	1-BEDROOM "B", 1 BATH		X	X	X	X	582 S.F.
U208	1-BEDROOM "A", 1 BATH	X	X	X		X	582 S.F.
U209	2-BEDROOM "B", 1 BATH		X			X	847 S.F.
U210	1-BEDROOM "C", 1 BATH		X			X	815 S.F.
U211	1-BEDROOM "C", 1 BATH		X			X	815 S.F.
U212	2-BEDROOM "C", 1 BATH		X			X	885 S.F.
U213	2-BEDROOM "C", 1 BATH		X			X	885 S.F.
U214	1-BEDROOM "C", 1 BATH		X			X	815 S.F.
	THIRD FLOOR:						
U301	1-BEDROOM "C", 1 BATH		X			X	815 S.F.
U302	2-BEDROOM "B", 1 BATH		X			X	847 S.F.
U303	1-BEDROOM "C", 1 BATH		X			X	815 S.F.
U304	1-BEDROOM "C", 1 BATH		X			X	815 S.F.
U305	1-BEDROOM "C", 1 BATH		X			X	815 S.F.
U306	1-BEDROOM "C", 1 BATH		X			X	815 S.F.
U307	1-BEDROOM "B", 1 BATH		X	X		X	582 S.F.
U308	1-BEDROOM "C", 1 BATH		X			X	815 S.F.
U309	2-BEDROOM "B", 1 BATH		X			X	847 S.F.
U310	2-BEDROOM "A", 1 BATH	X	X	X		X	847 S.F.
U311	1-BEDROOM "C", 1 BATH		X			X	815 S.F.
U312	1-BEDROOM "C", 1 BATH		X			X	815 S.F.
U313	2-BEDROOM "C", 1 BATH		X			X	885 S.F.
U314	2-BEDROOM "C", 1 BATH		X			X	885 S.F.
U315	1-BEDROOM "C", 1 BATH		X			X	815 S.F.
		8	40	8	1	40	

TOTAL = 40 UNITS: (8) #1-BEDROOM & (19) #2-BEDROOM

NOTES:
* SENSORY UNITS WILL ALSO BE ADAPTABLE UNITS PER FAIR HOUSING.
* ADAPTABLE UNITS PER 2018 ILLINOIS ACCESSIBILITY CODE INCLUDE ACCESSIBLE UNITS.
* ALL UNITS ARE REQUIRED TO MEET THE ADAPTABILITY REQUIREMENTS OF FFHA.

NORTH ARROW
ARCHITECTURE
524 WEST ST. CHARLES ROAD
VILLA PARK, ILLINOIS 60181

STARLING SENIOR APARTMENTS

0 DEEP LAKE ROAD
LAKE VILLA, IL 60046

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DATE
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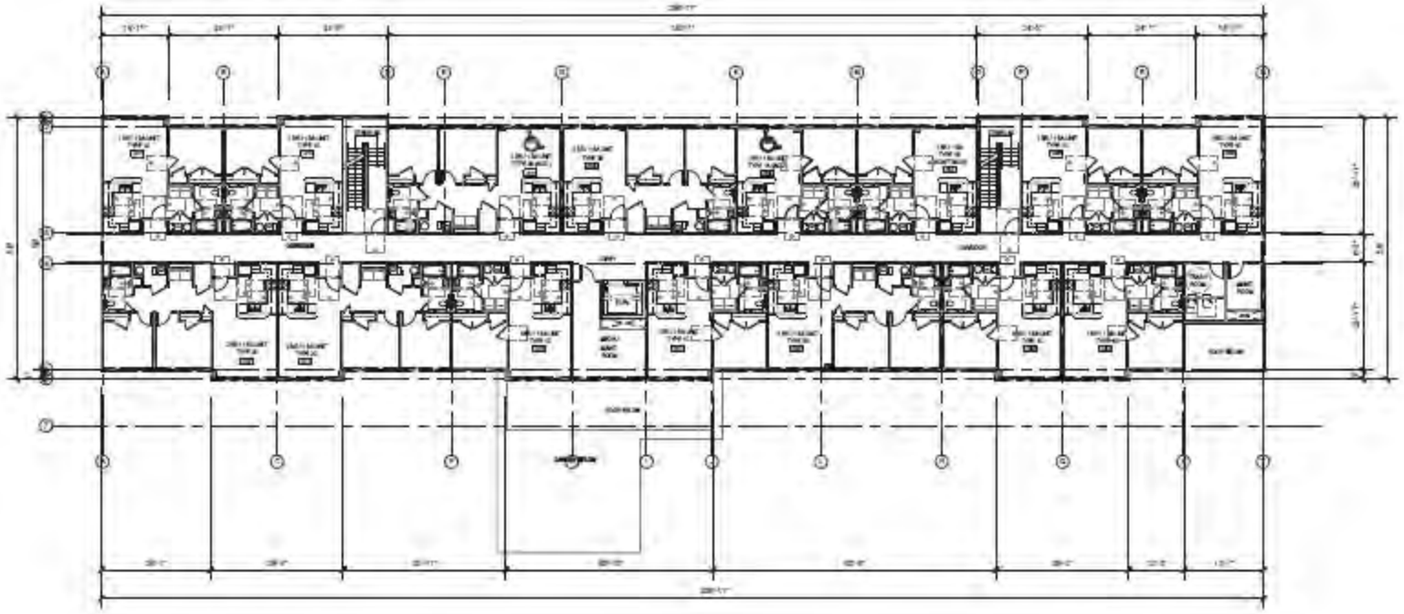
A1.1

BUILDING GROSS FLOOR AREA
FIRST FLOOR = 14,838 S.F.
SECOND FLOOR = 13,806 S.F.
THIRD FLOOR = 14,218 S.F.
TOTAL BLDG. GROSS FLOOR AREA = 42,851 S.F.

PROPOSED FINISHES:

- HEAT-SEALED VINYL FLOORING IN ENTRY AREA.
- MIN. 32" CLEAR SECONDARY ENTRY DOORWAY. SECONDARY ENTRY ACCESSIBLE WITH MANUFACTURER'S STRIKE AND HINGE CLEARANCES, HARDWARE AND THRESHOLDS.
- 60" WIDE HALLWAYS AND MANEUVERING CLEARANCES WITH 32" CLEAR DOORWAYS WITHIN COMMON AREAS AND UNITS.
- PEEPHOLE AT ALL UNIT ENTRY DOORS DUAL PEEPHOLES FOR ACCESSIBLE UNITS AT REQUIRED ACCESSIBLE HEIGHT. AUDIO/VISUAL DOORBELL AT SENSORY UNIT ONLY.
- ALL FLOOR FINISHES TO BE CARPET & VINYL FLOORING WITH VINYL BASE.
- ALL WALLS AND CEILINGS ARE TO BE PAINTED DRYWALL IN COMPLIANCE WITH GREEN SEAL STANDARDS FOR LOW VOC LIMITS.
- LEVER STYLE DOOR HARDWARE ON ALL INTERIOR DOORS (COMMON AREA AND WITHIN UNITS).
- ELECTRIC DEVICES (HVAC CONTROLS AND ALARM CONTROLS AT ACCESSIBLE HEIGHTS IN COMMON AREAS AND UNITS.
- ROCKER LIGHT SWITCHES / CONTROLS AT ACCESSIBLE HEIGHTS IN COMMON AREAS AND UNITS.
- INTERIOR APARTMENT KITCHEN INCLUDES: ENERGY STAR CERTIFIED APPLIANCES, STOVE & REFRIGERATOR (ADA COMPLIANT IN ALL UNITS & COMMON AREAS), TWO BOWL KITCHEN SINK & KITCHEN EXHAUST HOODS (VENTED TO THE EXTERIOR. ACCESSIBLE EXHAUST HOODS LIGHT WALL SWITCH IN ACA UNITS KITCHEN & COMMUNITY ROOM.
- UNDER CABINET LIGHTING UNDER ALL WALL CABINETS.
- ADEQUATE BOX AT FLOOR STAGE IN FRONT OF ALL APPLIANCES (30"X48" MIN. PARALLEL WHERE ALLOWED BY CODE) IN ALL UNIT KITCHENS.
- KITCHENS TO HAVE WOOD FACED CABINETS WITH PLASTIC LAMINATE COUNTERTOP.
- 30" MIN. CLEAR WORK SURFACE ADJACENT TO RANGE / OVEN AT ACCESSIBLE UNITS KITCHEN AND COMMUNITY ROOM.
- ACCESSIBLE HANDLES / TOUCH LATCHES FOR DOORS / DRAWERS AT COMMON AREA TOILET ROOMS & KITCHENS, UNIT KITCHENS AND BATHROOMS.
- SINKS IN ALL COMMON AREA TOILET ROOMS & KITCHENS, UNIT KITCHENS AND BATHROOMS WITH SINGLE-HANDLE LEVER FAUCET AND ANTI-SCALD DEVICE.
- LOWER TOWEL RACKS AT ALL BATHROOMS & TOILET ROOM.
- GRAB BARS TO BE INSTALLED IN ALL ACA BATH CLOSETS, ALL BATH TUBS AND/OR SHOWER UNIT BATHROOMS AND TOILET ROOMS FROM COMMON AREAS. PROVIDE BLOCKING IN REINFORCEMENT.
- ALL BATH TUB / SHOWER WITH GRAB BAR REINFORCEMENT. (ETHIC CONTROLS FOR EXTERIOR USE ANTI-SCALD DEVICES AND SINGLE-HANDLE LEVER FAUCETS).
- REMOVABLE SEATS AT ACCESSIBLE BATHTUB / SHOWER UNITS.
- WINDOW COVERINGS AT ALL UNITS ALL WINDOWS TO HAVE 1" MESC HORIZONTAL MINI BLINDS.
- ADJUSTABLE (36"-48") RODS AND SHELVES WITHIN CLOSETS IN COMMON AREAS AND UNITS.
- ALL CLOSETS HAVE MINIMUM 32" CLEAR OPENING.
- 1/4 UNIT WASHER/DRYER HOOK-UPS FOR CLOTHES USE AT LAUNDRY CLOSET. ON SITE COMMON LAUNDRY FACILITY IS PROVIDED AT EACH FLOOR.
- ACCESSIBLE SINK WITH ADJACENT 29"X30" MIN. WORK SPACE AT COMMON LAUNDRY ROOM.
- COMMON LAUNDRY ROOM WITH WASHER AND DRYER VENTED TO THE EXTERIOR OF THE BUILDING.

*SEE ENLARGED UNIT FLOOR PLANS.



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1 3RD FLOOR PLAN
SCALE: 1/32" = 1'-0"

DWELLING UNIT MATRIX

UNIT NUMBERS	UNITS TYPES	ACCESSIBLE UNITS	ADAPTABLE PER FAIR HOUSING	ADAPTABLE PER 2018 IAC	SENSORY UNITS	UNIVERSAL DESIGN	FLOOR AREA (S.F.)
	FIRST FLOOR:						
U101	1-BEDROOM "A", 1 BATH	X	X	X		X	582 S.F.
U102	1-BEDROOM "C", 1 BATH		X			X	615 S.F.
U103	1-BEDROOM "C", 1 BATH		X			X	615 S.F.
U104	1-BEDROOM "C", 1 BATH		X	X		X	615 S.F.
U105	1-BEDROOM "C", 1 BATH		X			X	615 S.F.
U106	1-BEDROOM "B", 1 BATH		X			X	582 S.F.
U107	1-BEDROOM "A", 1 BATH	X	X	X		X	582 S.F.
U108	1-BEDROOM "C", 1 BATH		X			X	615 S.F.
U109	1-BEDROOM "C", 1 BATH		X			X	615 S.F.
U110	2-BEDROOM "C", 1 BATH		X			X	885 S.F.
U111	1-BEDROOM "C", 1 BATH		X			X	615 S.F.
	SECOND FLOOR:						
U201	1-BEDROOM "C", 1 BATH		X			X	615 S.F.
U202	2-BEDROOM "A", 1 BATH	X	X	X		X	847 S.F.
U203	1-BEDROOM "C", 1 BATH		X			X	615 S.F.
U204	1-BEDROOM "C", 1 BATH		X			X	615 S.F.
U205	1-BEDROOM "C", 1 BATH	X	X	X		X	615 S.F.
U206	1-BEDROOM "C", 1 BATH		X			X	615 S.F.
U207	1-BEDROOM "B", 1 BATH		X	X	X	X	582 S.F.
U208	1-BEDROOM "A", 1 BATH	X	X	X		X	582 S.F.
U209	2-BEDROOM "B", 1 BATH		X			C	847 S.F.
U210	1-BEDROOM "C", 1 BATH		X			X	615 S.F.
U211	1-BEDROOM "C", 1 BATH		X			X	615 S.F.
U212	2-BEDROOM "C", 1 BATH		X			X	885 S.F.
U213	2-BEDROOM "C", 1 BATH		X			X	885 S.F.
U214	1-BEDROOM "C", 1 BATH		X			X	615 S.F.
	THIRD FLOOR:						
U301	1-BEDROOM "C", 1 BATH		X			X	615 S.F.
U302	2-BEDROOM "B", 1 BATH		X			X	847 S.F.
U303	1-BEDROOM "C", 1 BATH		X			X	615 S.F.
U304	1-BEDROOM "C", 1 BATH		X			X	615 S.F.
U305	1-BEDROOM "C", 1 BATH		X			X	615 S.F.
U306	1-BEDROOM "C", 1 BATH		X			X	615 S.F.
U307	1-BEDROOM "B", 1 BATH		X	X		X	582 S.F.
U308	1-BEDROOM "C", 1 BATH		X			X	615 S.F.
U309	2-BEDROOM "B", 1 BATH		X			X	847 S.F.
U310	2-BEDROOM "A", 1 BATH	X	X	X		X	847 S.F.
U311	1-BEDROOM "C", 1 BATH		X			X	615 S.F.
U312	1-BEDROOM "C", 1 BATH		X			X	615 S.F.
U313	2-BEDROOM "C", 1 BATH		X			X	885 S.F.
U314	2-BEDROOM "C", 1 BATH		X			X	885 S.F.
U315	1-BEDROOM "C", 1 BATH		X			X	615 S.F.
		8	60	8	1	60	

TOTAL = 60 UNITS (30)=1-BEDROOM & (10)=2-BEDROOM

NOTES:
* SENSORY UNITS WILL ALSO BE ADAPTABLE UNITS PER FAIR HOUSING
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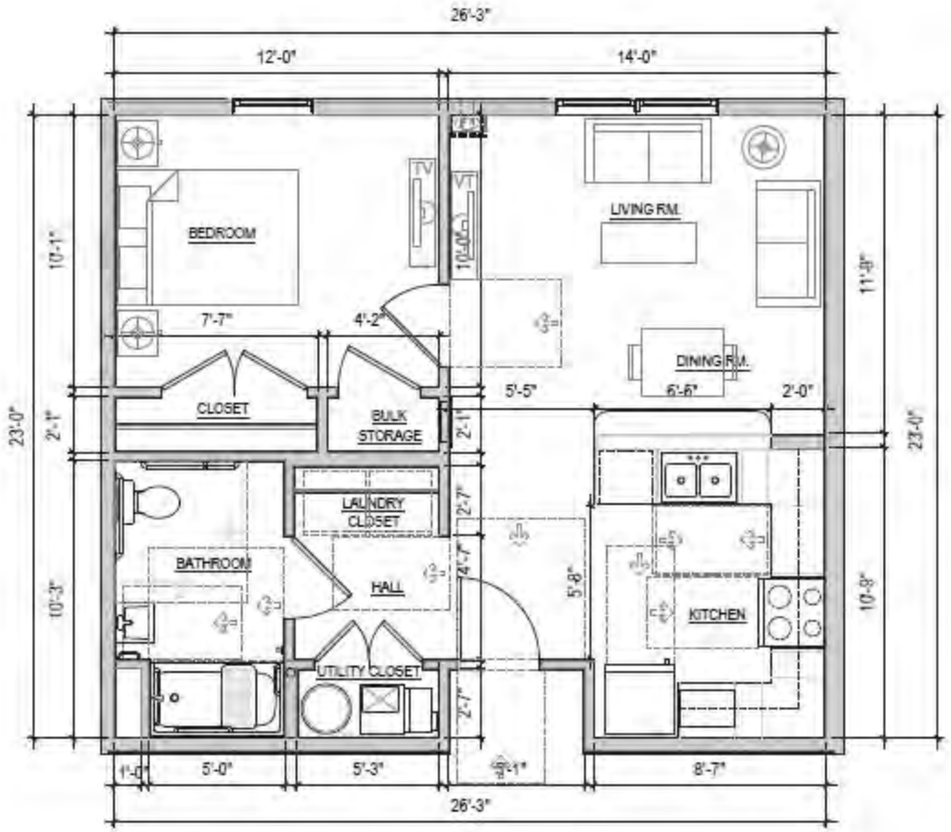
A1.2



ONE BEDROOM UNIT TYPE A = 562 S.F.
(FLOOR TO CEILING HEIGHT = 9 FT.)

BULK STORAGE REQUIRED: 72 CUBIC FEET
BULK STORAGE PROVIDED: 73 CUBIC FEET

1 ENLARGED FLOOR PLAN - 1 BEDROOM TYPE "A" (ACCESSIBLE)

SCALE: 3/16" = 1'-0"

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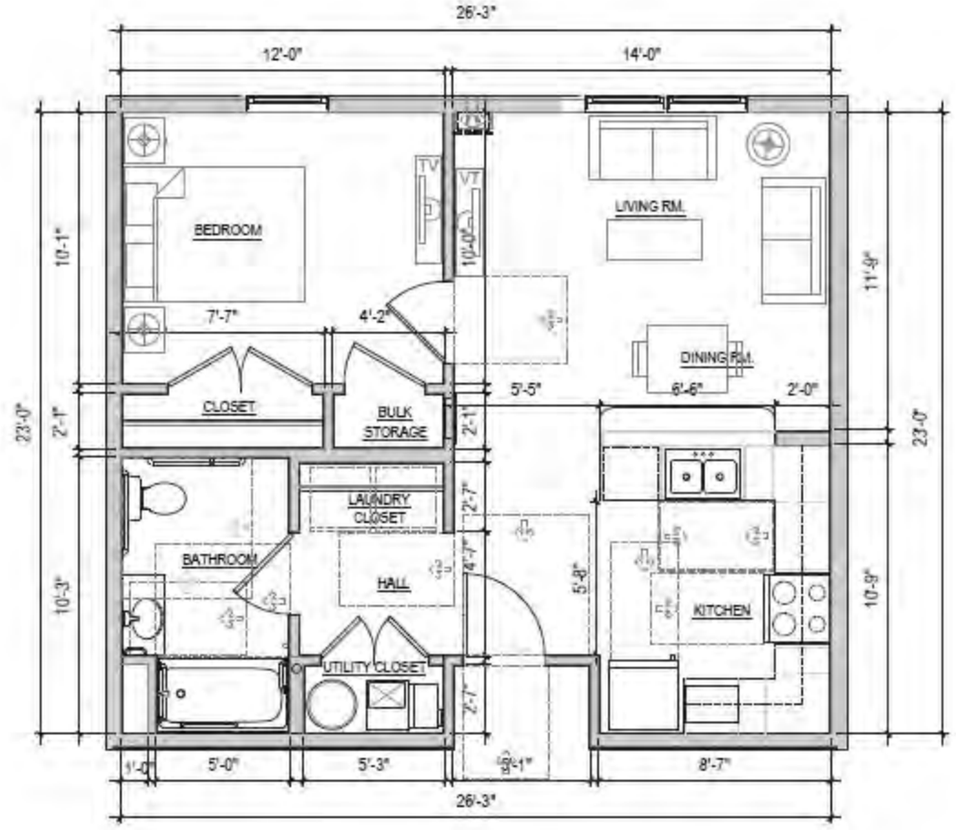
A2.0



ONE BEDROOM UNIT TYPE B = 582 S.F.
(FLOOR TO CEILING HEIGHT = 9 FT.)

BULK STORAGE REQUIRED: 72 CUBIC FEET
BULK STORAGE PROVIDED: 73 CUBIC FEET

1 ENLARGED FLOOR PLAN - 1 BEDROOM TYPE "B" (ADAPTABLE/SENSORY/STANDARD)

SCALE: 3/16" = 1'-0"

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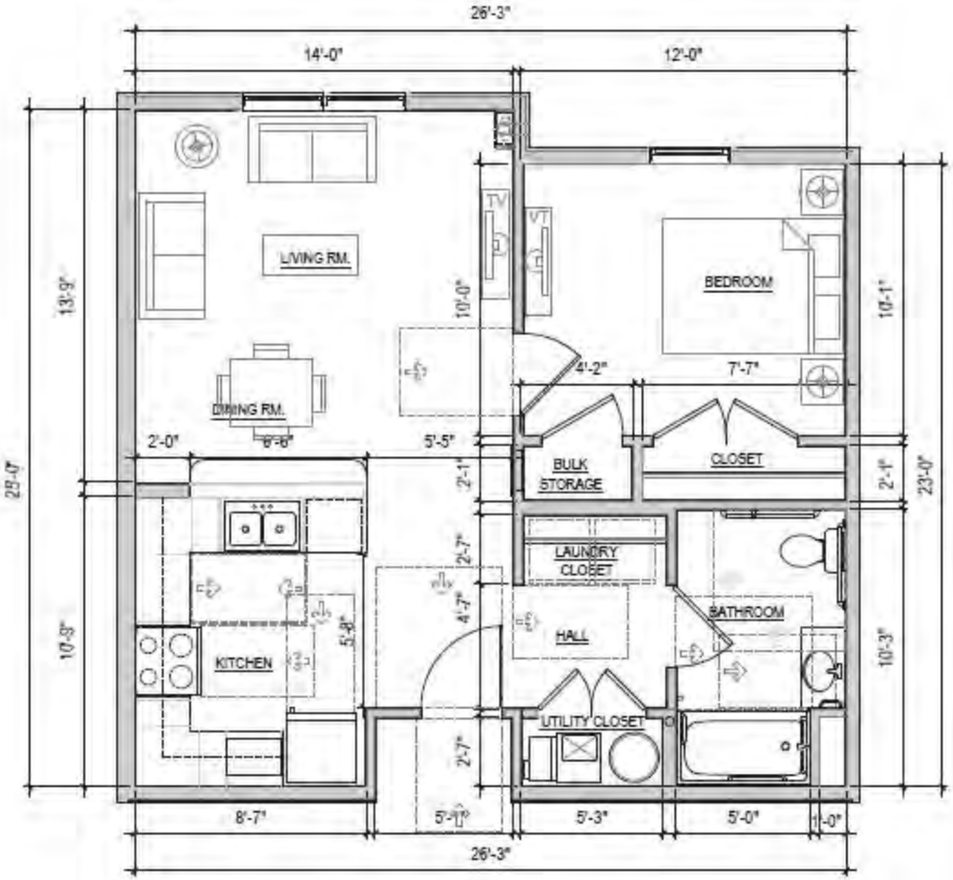
A2.1



ONE BEDROOM UNIT TYPE C = 615 S.F.
(FLOOR TO CEILING HEIGHT = 9 FT.)

BULK STORAGE REQUIRED: 72 CUBIC FEET
BULK STORAGE PROVIDED: 73 CUBIC FEET

1 ENLARGED FLOOR PLAN - 1 BEDROOM TYPE "C" (STANDARD)

SCALE: 3/16" = 1'-0"

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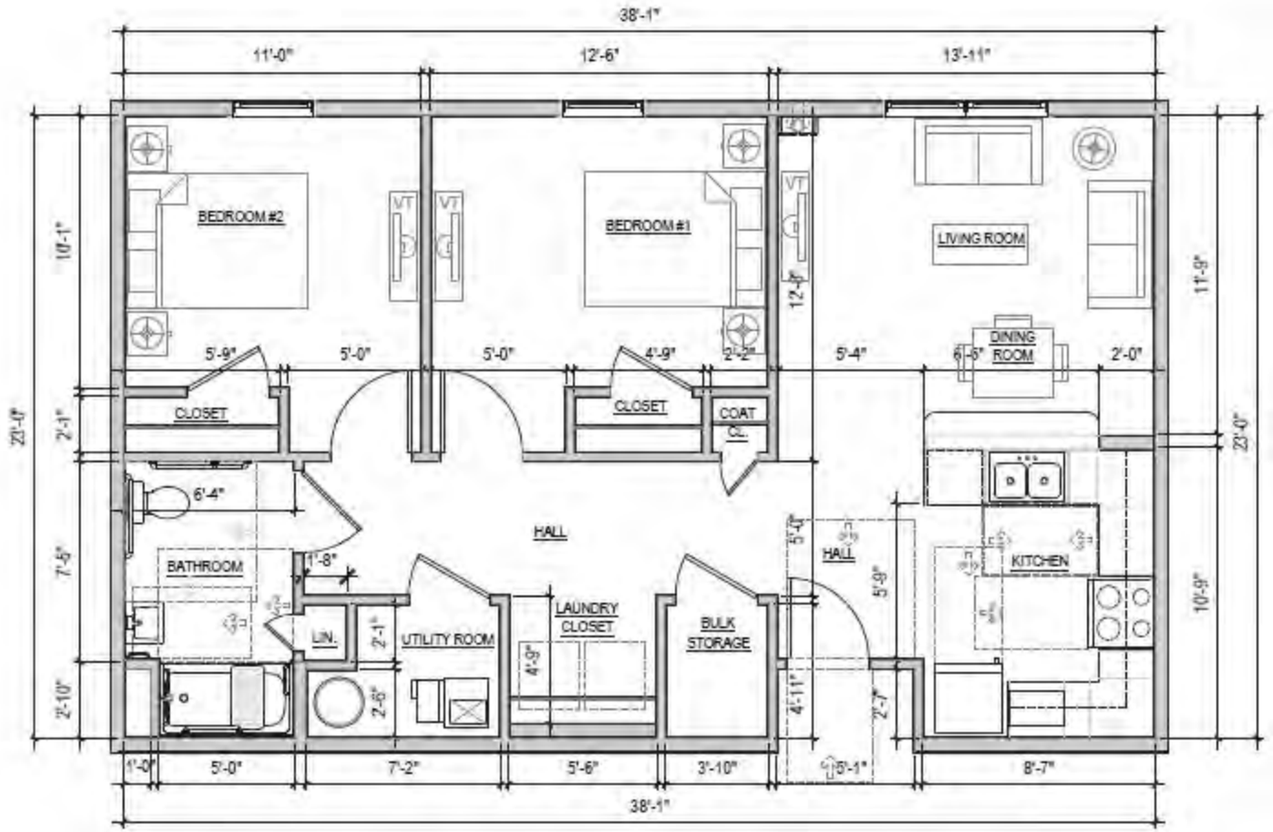
A2.2



TWO BEDROOM UNIT TYPE A = 647 S.F.
(FLOOR TO CEILING HEIGHT = 9 FT.)

BULK STORAGE REQUIRED: 128 CUBIC FEET
BULK STORAGE PROVIDED: 144 CUBIC FEET

1 ENLARGED FLOOR PLAN - 2 BEDROOM TYPE "A" (ACCESSIBLE)

SCALE: 3/16" = 1'-0"

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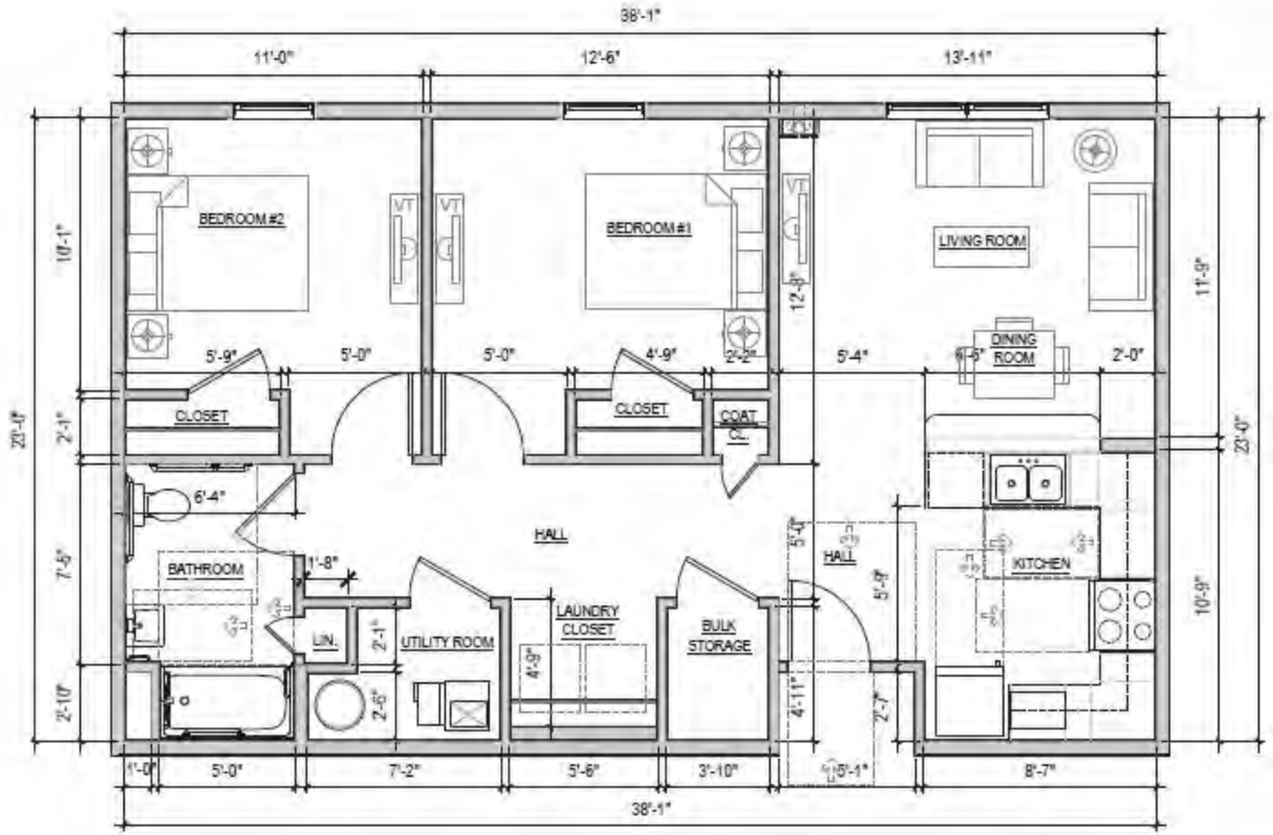

TWO BEDROOM UNIT TYPE B = 647 S.F.
(FLOOR TO CEILING HEIGHT = 9 FT.)

BULK STORAGE REQUIRED: 128 CUBIC FEET
BULK STORAGE PROVIDED: 144 CUBIC FEET

1 ENLARGED FLOOR PLAN - 2 BEDROOM TYPE "B" (STANDARD)

SCALE: 3/16" = 1'-0"

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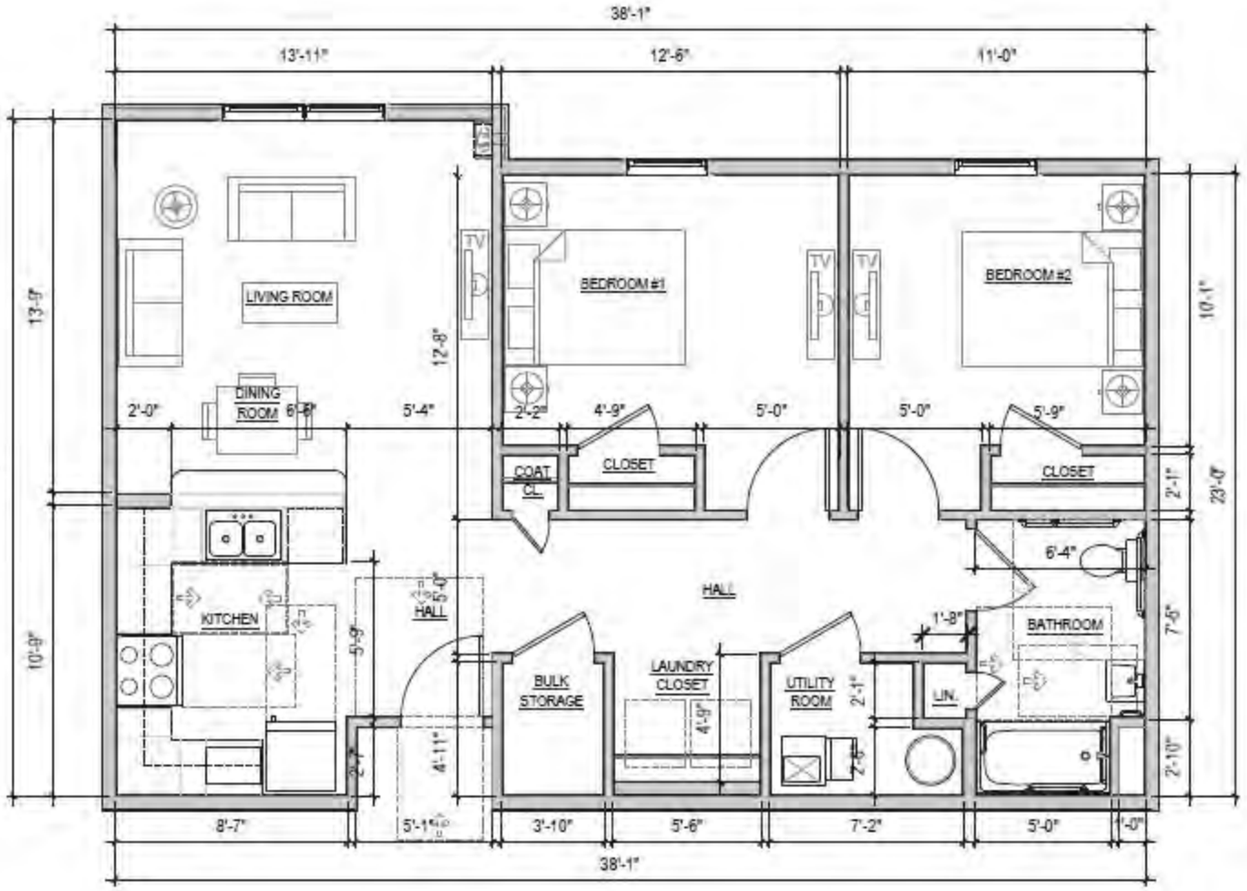
A2.4



TWO BEDROOM UNIT TYPE C = 685 S.F. (FLOOR TO CEILING HEIGHT = 9 FT.)
BULK STORAGE REQUIRED: 128 CUBIC FEET BULK STORAGE PROVIDED: 144 CUBIC FEET

1 ENLARGED FLOOR PLAN - 2 BEDROOM TYPE "C" (STANDARD)

SCALE: 3/16" = 1'-0"

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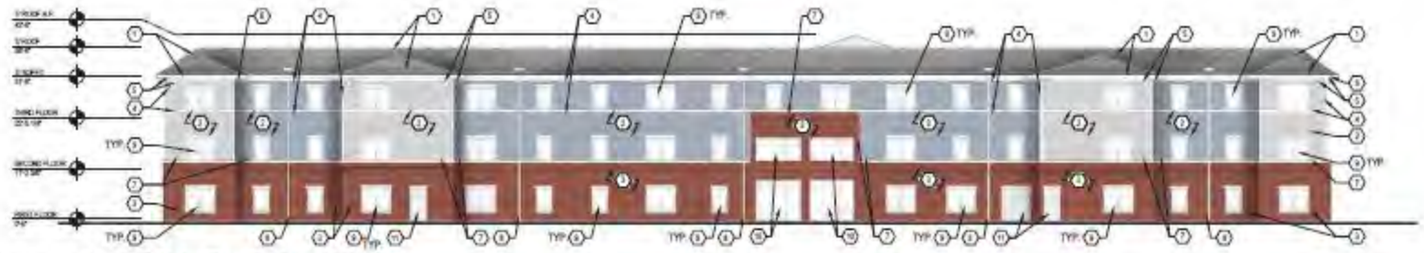
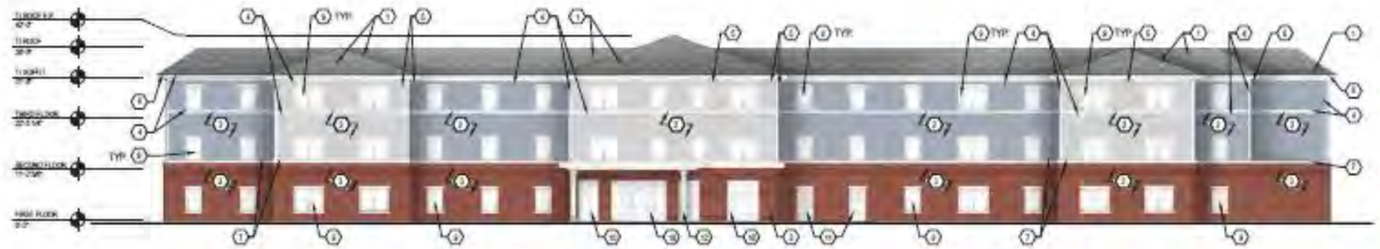
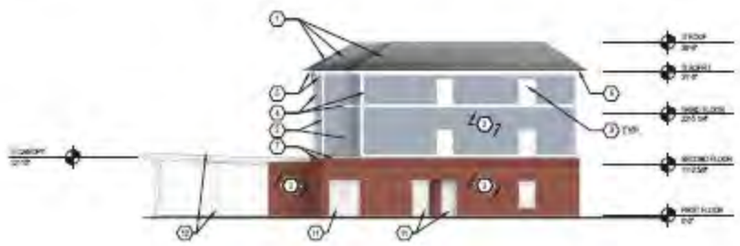
A2.5



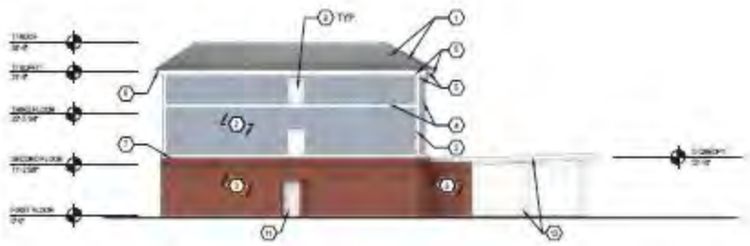
1 NORTH ELEVATION
SCALE: 1" = 30'-0"



2 SOUTH ELEVATION
SCALE: 1" = 30'-0"



3 EAST ELEVATION
SCALE: 1" = 30'-0"



4 WEST ELEVATION
SCALE: 1" = 30'-0"

ELEVATION CODED NOTES:

NOTED THUS: 1

1. ARCHITECTURAL ASPHALT SHINGLE MANSARD ROOF.
2. PRE-FINISHED HORIZONTAL FIBER CEMENT SIDING.
3. UTILITY SIZE FULL BRICK.
4. PRE-FINISHED FIBER CEMENT TRIM.
5. PRE-FINISHED DECORATIVE ROOF SOFFIT BRACKET.
6. PRE-FINISHED ALUMINUM SOFFIT & FASCIA.
7. PRE-FINISHED METAL FLASHING.
8. ROOF SCUPPER, GUTTER & DOWNSPOUT.
9. LOW "E" VINYL WINDOWS, TYP.
10. ANODIZED THERMAL BREAK ALUMINUM STOREFRONT WITH INSULATED GLASS.
11. INSULATED HOLLOW METAL DOOR.
12. PRE-FINISHED CANOPY & WOOD COLUMNS.

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A3.0

1 FRONT BUILDING VIEWS
NTS

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A3.1

Engineering Plans
for

STARLING SENIOR APARTMENTS

0 DEEP LAKE ROAD
VILLAGE OF LAKE VILLA, ILLINOIS

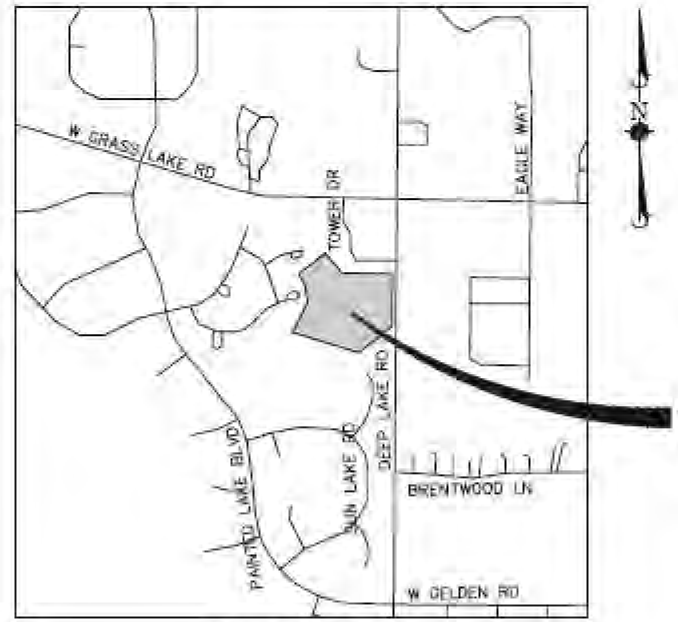
STANDARD SYMBOLS

EXISTING | PROPOSED

- STORM SEWER
- SANITARY SEWER
- COMBINED SEWER
- FORCEMAIN
- DRAIN TILE
- WATER MAIN
- ELECTRIC
- GAS
- TELEPHONE
- OVERHEAD WIRES
- SANITARY MANHOLE
- STORM MANHOLE
- CATCH BASIN
- STORM INLET
- CLEANOUT
- HAY BALES
- RIP RAP
- VALVE IN VAULT
- VALVE IN BOX
- FIRE HYDRANT
- BUFFALO BOX
- FLARED END SECTION
- STREET LIGHT
- SUMMIT / LOW POINT
- RIM ELEVATION / INVERT ELEVATION
- DITCH OR SWALE
- DIRECTION OF FLOW
- OVERFLOW RELIEF SWALE
- 1 FOOT CONTOURS
- CURB AND GUTTER
- DEPRESSED CURB AND GUTTER
- REVERSE CURB AND GUTTER
- SIDEWALK
- DETECTABLE WARNINGS
- PROPERTY LINE
- EASEMENT LINE
- SETBACK LINE
- MAIL BOX
- SIGN
- TRAFFIC SIGNAL
- POWER POLE
- GUY WIRE
- GAS VALVE
- HANDHOLE
- ELECTRICAL EQUIPMENT
- TELEPHONE EQUIPMENT
- CHAIN-LINK FENCE
- SPOT ELEVATION
- BRUSH/TREE LINE
- DECIDUOUS TREE WITH TRUNK DIA. IN INCHES (TYP)
- CONIFEROUS TREE WITH HEIGHT IN FEET (TYP)
- SILT FENCE
- RETAINING WALL
- WETLAND

ABBREVIATIONS

ADJ	ADJUST	F/L	FLOW LINE	R.O.W.	RIGHT-OF-WAY
AGG.	AGGREGATE	FM	FORCE MAIN	RCP	REINFORCED CONCRETE PIPE
ARCH	ARCHITECT	G	GROUND	REM	REMOVAL
B.A.M.	BITUMINOUS AGGREGATE MIXTURE	G/F	GRADE AT FOUNDATION	REV.	REVERSE
B-B	BACK TO BACK	GW	GUY WIRE	RR	RAILROAD
B/C	BACK OF CURB	HDWL	HEADWALL	RT	RIGHT
B/P	BOTTOM OF PIPE	HH	HANDHOLE	SAN	SANITARY
B/W	BACK OF WALK	HWL	HIGH WATER LEVEL	SF	SQUARE FOOT
B-BOX	BUFFALO BOX	HYD	HYDRANT	SHLD.	SHOULDER
BIT.	BITUMINOUS	INL	INLET	SL	STREET LIGHT
BM	BENCHMARK	INV	INVERT	SMH	SANITARY MANHOLE
B.O.	BY OTHERS	IP	IRON PIPE	ST	STORM
C.E.	COMMERCIAL ENTRANCE	LT	LEFT	STA.	STATION
CB	CATCH BASIN	MAX.	MAXIMUM	STD	STANDARD
℄	CENTERLINE	MB	MAILBOX	SW	SIDEWALK
CMP	CORRUGATED METAL PIPE	M/E	MEET EXISTING	SY	SQUARE YARDS
CNTRL	CONTROL	MH	MANHOLE	TBR	TO BE REMOVED
CO	CLEANOUT	MIN.	MINIMUM	T	TELEPHONE
CONC.	CONCRETE	NWL	NORMAL WATER LEVEL	T-A	TYPE A
CY	CUBIC YARD	P.E.	PRIVATE ENTRANCE	T/C	TOP OF CURB
D	DITCH	PC	POINT OF CURVATURE	T/F	TOP OF FOUNDATION
DIA	DIAMETER	PCC	POINT OF COMPOUND CURVE	T/P	TOP OF PIPE
DIP	DUCTILE IRON PIPE	PGL	PROFILE GRADE LINE	T/W	TOP OF WALK
DIWM	DUCTILE IRON WATER MAIN	PI	POINT OF INTERSECTION	T/WALL	TOP OF WALL
DS	DOWNSPOUT	ℙ	PROPERTY LINE	TEMP	TEMPORARY
DT	DRAIN TILE	PP	POWER POLE	TRANS	TRANSFORMER
E	ELECTRIC	PROP.	PROPOSED	V.B.	VALVE BOX
E-E	EDGE TO EDGE	PT	POINT OF TANGENCY	VCP	VITRIFIED CLAY PIPE
ELEV.	ELEVATION	PVC	POLYVINYL CHLORIDE PIPE	V.V.	VALVE VAULT
E/P	EDGE OF PAVEMENT	PVC	POINT OF VERTICAL CURVATURE	WL	WATER LEVEL
EX.	EXISTING	PVI	POINT OF VERTICAL INTERSECTION	WM	WATER MAIN
F.E.	FIELD ENTRANCE	PVT	POINT OF VERTICAL TANGENCY		
F-F	FACE TO FACE	P	PAVEMENT		
F.F.	FINISHED FLOOR	P.U.D.E.	PUBLIC UTILITY & DRAINAGE EASEMENT		
FES	FLARED END SECTION	R	RADIUS		



LOCATION MAP
N.T.S.

LINCOLN AVENUE COMMUNITIES
401 WILSHIRE BLVD SUITE 1070
SANTA MONICA, CA 90401
PH: 424-222-8253

INDEX OF SHEETS

NOTE:
THE BOUNDARY LINES AND TOPOGRAPHY FOR THIS PROJECT ARE BASED ON A SURVEY PREPARED BY MANHARD CONSULTING DATED OCTOBER 20, 2023. THE CONTRACTOR SHALL VERIFY THE EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND SHALL IMMEDIATELY NOTIFY MANHARD CONSULTING AND THE CLIENT IN WRITING OF ANY DIFFERING CONDITIONS. MANHARD CONSULTING HAS NOT VERIFIED THIS SURVEY AND IS NOT RESPONSIBLE FOR THE ACCURACY OF THE SURVEY BOUNDARY AND/OR TOPOGRAPHY.

BENCHMARKS:

SITE BENCHMARK #1 – SET IRON ROD ON EAST SIDE OF DEEP LAKE ROAD, LOCATED APPROXIMATELY 42 FEET EAST AND 30 FEET NORTH OF CENTERLINE OF DEEP LAKE ROAD AND TOWER ROAD. ELEVATION=820.98' DATUM =NAVD88 (GEOID 18)

SITE BENCHMARK #2 – SET CHISLED "X" ON TOP OF CURB ON SOUTH SIDE OF TOWER DRIVE. LOCATED APPROXIMATELY 351 FEET WEST AND 38 FT SOUTH OF CENTERLINE OF TOWER ROAD AND DEEP LAKE ROAD. ELEVATION=807.93' DATUM=NAVD88 (GEOID 18)

TOPOGRAPHIC FIELD WORK COMPLETED ON 10/20/2023

Manhard CONSULTING

UTILITY CONTACTS

ELECTRIC: COMED (630) 576-7094	WATER: VILLAGE OF LAKE VILLA (847) 356-6100 CONTACT: JIM BOWLES
GAS: NICOR GAS (630) 388-2382	TELEPHONE: AT&T DISTRIBUTION (800) 288-2020
SEWER: VILLAGE OF LAKE VILLA (847) 356-6100 CONTACT: JIM BOWELS	

MANHARD CONSULTING, LTD. IS NOT RESPONSIBLE FOR THE SAFETY OF ANY PARTY AT OR ON THE CONSTRUCTION SITE. SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND ANY OTHER PERSON OR ENTITY PERFORMING WORK OR SERVICES. NEITHER THE OWNER NOR ENGINEER ASSUMES ANY RESPONSIBILITY FOR THE JOB SITE SAFETY OF PERSONS ENGAGED IN THE WORK OR THE MEANS OR METHODS OF CONSTRUCTION.

MATTHEW D. EAGLE
062-070177
REGISTERED PROFESSIONAL ENGINEER OF STATE OF ILLINOIS

STARLING SENIOR APARTMENTS
LAKE VILLA, ILLINOIS
TITLE SHEET

SHEET 1 OF 14
LACLVIL01

NOT FOR CONSTRUCTION

TOWER DRIVE

DEEP LAKE ROAD

UNITS OF CONSTRUCTION (TYP.)

CONTRACTOR TO NOTIFY VILLAGE PRIOR TO START OF WATERMAIN WORK TO COORDINATE EXISTING MAIN SHUTOFFS

EX. UTILITY EASEMENT PER DOC. #0000000

EX. WATERMAIN EASEMENT PER DOC. #0000000

EX. 6" METAL FENCE (TR)

EX. BUILDING (TR)

EX. GENERATOR (TR)

EX. BUSHES (TBR)

EX. TREE (TBR)

EX. TREE (TR)

EX. CURB (TBR)

EX. CURB (TR)

EX. PAVEMENT

EX. GRASS

EX. WETLAND BOUNDARY

50' LAKE COUNTY WETLAND BUFFER

ESTIMATED LIMIT OF CONSTRUCTION BY CONTRACTOR PER DOC. #0000000

A QUALIFIED NATIVE CONTRACTOR IS REQUIRED TO APPLY AQUAMID AQUATIC HERBICIDE OR SIMILAR HERBICIDE APPROVED BY THE EPA FOR USE AROUND AQUATIC SITES TO ALL PORTIONS OF THE SITES USING APPROPRIATE APPLICATION METHODS TO PREVENT DAMAGE TO THE EXISTING HIGHER VEGETATION AND ENSURE THE AMOUNT OF PRODUCT ENTERING WETLANDS

CONTRACTOR SHALL CLEAR PLANTINGS AS NEEDED FOR UTILITY INSTALLATION

EX. UTILITY STRUCTURE (TBR)

EX. UTILITY STRUCTURE (TR)

EX. TREES (TBR)

EX. TREE (TR)

EX. WETLAND BOUNDARY

50' LAKE COUNTY WETLAND BUFFER

0 35 80 160

SCALE: 1"=80'

DEMOLITION LEGEND

- BITUMINOUS PAVEMENT AND BASE TO BE REMOVED
- SAWCUT LINE
- FENCE, RETAINING WALL, RAILROAD TIES, POLES, CURB AND GUTTER, ETC. TO BE REMOVED
- TREE TO BE REMOVED
- UTILITY STRUCTURE TO BE REMOVED
- UTILITY LINE REMOVAL, FILL OR ABANDONMENT (REFER TO SPECIFICATIONS)
- (TBR) TO BE REMOVED
- (TR) TO REMAIN

ENDANGERED AND ENDANGERED SPECIES NOTES:

- THE CONTRACTOR SHALL FOLLOW ALL RECOMMENDATIONS IN THE ILLINOIS DEPARTMENT OF NATURAL RESOURCES EcoCAT REVIEW CONDUCTED ON 11-10-2022 (NRR PROJECT NUMBER 2303358 AS PUBLISHED IN THE "WETLAND DELINEATION REPORT" PUBLISHED BY GARY R. WEBER AND ASSOCIATES DATED 11-22-2022 AND REVISED 02-03-2023. THESE RECOMMENDATIONS INCLUDE BUT ARE NOT LIMITED TO:
- BLANDINGS TURTLE: CONSTRUCTION SHOULD BE COMPLETED IN INACTIVE SEASON FROM NOVEMBER 1–MARCH 1. EXCLUSIONARY FENCING AROUND THE CONSTRUCTION AREA AND DAILY CHECKS FOR TURTLES SHOULD BE INITIATED IF TIME FRAME CANNOT BE MET.
- KING RAIL AND LEAST BITTERN: 50-FT BUFFER SHOULD BE MAINTAINED ON ALL WETLANDS, AND IF POSSIBLE ALL WORK NEAR WETLANDS SHOULD BE COMPLETED BETWEEN SEPTEMBER 30–APRIL 1 TO AVOID THE PRIME NESTING AND FLEDGING SEASON.

EXISTING CONDITIONS AND DEMOLITION NOTES:

1. EXISTING CONDITIONS AND DEMOLITION PLAN REPRESENT SITE CONDITIONS AS OF OCTOBER 20, 2023. CONTRACTOR SHALL INSPECT SITE PRIOR TO BIDDING WORK TO VERIFY ACTUAL FIELD CONDITIONS AS PORTIONS OF THE DEMOLITION WORK MAY HAVE SINCE BEEN COMPLETED. CONTRACTOR SHALL BE RESPONSIBLE TO COMPLETE ALL DEMOLITION WORK AS PER PLANS TO PREPARE THE SITE FOR CONSTRUCTION OF PROPOSED IMPROVEMENTS.
2. THE UNDERGROUND UTILITY INFORMATION AS SHOWN HEREON IS BASED, IN PART, UPON INFORMATION FURNISHED BY UTILITY COMPANIES AND THE LOCAL MUNICIPALITY. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, ITS ACCURACY AND COMPLETENESS CANNOT BE GUARANTEED NOR CERTIFIED TO.
3. THE CONTRACTOR IS RESPONSIBLE FOR DEMOLITION, REMOVAL AND DISPOSAL ON A LOCATION APPROVED BY ALL JURISDICTIONAL GOVERNING ENTITIES OF ALL STRUCTURES, PADS, WALLS, PLUMES, FOUNDATIONS, ROAD, PARKING LOTS, DRIVES, DRAINAGE STRUCTURES, UTILITIES, ETC., SUCH THAT THE IMPROVEMENTS SHOWN ON THESE PLANS CAN BE CONSTRUCTED. ALL DEMOLITION WORK SHALL BE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL REQUIREMENTS. ALL FACILITIES TO BE REMOVED SHALL BE UNDERCUT TO SUITABLE MATERIAL AND BROUGHT TO GRADE WITH SUITABLE COMPACTED FILL MATERIAL PER THE SPECIFICATIONS.
4. REFER TO SPECIFICATIONS SHEET FOR DEMOLITION NOTES.

Manhard CONSULTING

STARLING SENIOR APARTMENTS

LAKE VILLA, ILLINOIS

EXISTING CONDITIONS AND DEMOLITION PLAN

SHEET 2 OF 14

LAC1_V1.dgn

NOT FOR CONSTRUCTION

PROPOSED 3 STORY 40 UNIT
SENIOR RESIDENCE BUILDING
14,850 S.F.
F.F.=808.85
G/F=808.85

TOWER DRIVE

SCALE: 1"=30'

SITE DIMENSIONAL AND PAVING NOTES:

1. ALL DIMENSIONS ARE FACE OF CURB TO FACE OF CURB OR BUILDING FOUNDATION UNLESS NOTED OTHERWISE.
2. ALL PROPOSED CURB AND GUTTER SHALL BE B6.12 UNLESS OTHERWISE NOTED.
3. ALL CURB RADII SHALL BE 5' MEASURED TO FACE OF CURB UNLESS NOTED OTHERWISE.
4. TIE ALL PROPOSED CURB AND GUTTER TO EXISTING CURB AND GUTTER WITH 2-#5 BARS x 18" LONG DOWELED INTO EXISTING CURB.
5. BUILDING DIMENSIONS AND ADJACENT PARKING HAVE BEEN PREPARED BASED UPON ARCHITECTURAL INFORMATION CURRENT AT THE DATE OF THIS DRAWING. SHOULD ARCHITECTURAL CHANGES MAY EXIST, THE CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR PRECISE BUILDING DIMENSIONS AND NOTIFY THE ARCHITECT AND ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. BUILDING DIMENSIONS SHOWN SHOULD NOT BE USED FOR CONSTRUCTION LAYOUT OF BUILDING.
6. IMPROVEMENTS ADJACENT TO BUILDING, IF SHOWN, SUCH AS: TRUCK DOCK, RETAINING WALLS, SIDEWALKS, CURBING, FENCES, CANOPIES, RAMPS, HANDICAP ACCESS, PLANTERS, DUMPSTER, AND TRANSFORMERS ETC., HAVE BEEN SHOWN FOR APPROXIMATE LOCATION ONLY. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS, SPECIFICATIONS AND DETAILS.
7. LOCATION OF PRIVATE SIDEWALKS SHALL BE COORDINATED WITH PROPOSED DOORWAY. CONTRACTOR TO VERIFY ACTUAL BUILDING PLAN LOCATIONS WITH ARCHITECT/DEVELOPER PRIOR TO CONSTRUCTING THE SIDEWALKS.
8. ALL ROADWAY AND PARKING LOT SIGNAGE, STRIPING, SYMBOLS, ETC., SHALL BE IN ACCORDANCE WITH LATEST JURISDICTIONAL GOVERNMENTAL AUTHORITY DETAILS.
9. SOME EXISTING ITEMS TO BE REMOVED HAVE BEEN DELETED FROM THIS PLAN FOR CLARITY. SEE DEMOLITION PLAN FOR ITEMS DELETED.
10. PROVIDE DEPRESSED CURB AND RAMP AT ALL HANDICAP ACCESSIBLE SIDEWALK AND PATH LOCATIONS PER FEDERAL AND STATE STANDARDS.
11. THE CONTRACTOR SHALL CONTACT J.U.L.I.E. (1-800-892-0123) PRIOR TO ANY WORK TO LOCATE UTILITIES AND SHALL CONTACT THE OWNER SHOULD UTILITIES APPEAR TO BE IN CONFLICT WITH THE PROPOSED IMPROVEMENT.

SITE DATA

SITE AREA	327,088 S.F. (5.21 ACRES)
TOTAL PARKING PROVIDED	70 SPACES
PARKING REQUIRED	65 SPACES
STANDARD PARKING PROVIDED	64 SPACES
HANDICAP PROVIDED	6 SPACES
BUILDING AREA	14,850 S.F.
EXISTING ZONING	(SR) SUBURBAN RESIDENCE

PAVEMENT LEGEND

STANDARD DUTY PAVEMENT
1 1/2" BITUMINOUS SURFACE COURSE, HOT-MIX ASPHALT, MIX D, N50
3 1/4" BITUMINOUS BINDER COURSE, HOT-MIX ASPHALT, IL-19, N50
8" AGGREGATE BASE COURSE, TYPE B

HEAVY DUTY PAVEMENT
2" BITUMINOUS SURFACE COURSE, HOT-MIX ASPHALT, MIX D, N50
6.5" BITUMINOUS BINDER COURSE, HOT-MIX ASPHALT, IL-19, N50
10" AGGREGATE BASE COURSE, TYPE B

CONCRETE SIDEWALK
5" PORTLAND CEMENT CONCRETE
4" COMPACTED AGGREGATE BASE COURSE, TYPE B

CONCRETE PAVEMENT
10" PORTLAND CEMENT CONCRETE PAVEMENT W/ 6 X 6 W1.4 WWF
4" COMPACTED AGGREGATE BASE, TYPE B

PLANTING
ALTERNATE: GRASS/SEED

CONCRETE CURBS (SEE ARCH PLANS)

NOTE: CONTRACTOR TO ADHERE TO RECOMMENDATIONS IN THE GEOTECHNICAL REPORT BY HAEGER DATED 11-6-23 INCLUDING SUBGRADE PREPARATION.

PAVEMENT MARKING LEGEND

1. 24" WHITE STOP BAR
2. 4" YELLOW LINE
3. LETTERS AND SYMBOLS PAVEMENT MARKINGS
4. 4" YELLOW DIAGONAL AT 45° SPACED 2' O.C. W/ 4" YELLOW BORDER

SIGN LEGEND

1. R1-1 STOP SIGN
2. R7-8 HANDICAP PARKING SIGN (W/ BOLLARD)

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STARLING SENIOR APARTMENTS
LAKE VILLA, ILLINOIS
SITE PLAN

SHEET
3 OF 14

NOT FOR CONSTRUCTION

SCALE: 1"=50'

DETENTION BASIN	
HWL	799.25
NWL	795.25
BOTTOM	789.25
DET. VOLUME PROVIDED	2.63 ACRE-FEET

GRADING NOTES:

1. PAVEMENT SLOPES THROUGH HANDICAP ACCESSIBLE PARKING AREAS SHALL BE 2.00% MAXIMUM IN ANY DIRECTION.
2. ALL HANDICAP RAMPS SHALL BE CONSTRUCTED WITH A MAXIMUM CROSS SLOPE OF 2.00% OR LESS.
3. MEET EXISTING GRADE AT PROPERTY LIMITS UNLESS NOTED OTHERWISE.
4. CONTRACTOR SHALL REFER TO THE SOIL EROSION AND SEDIMENT CONTROL PLAN AND DETAILS FOR CONSTRUCTION SEQUENCING AND EROSION CONTROL MEASURES TO BE INSTALLED PRIOR TO BEGINNING GRADING OPERATIONS.
5. THE CONTRACTOR SHALL CONTACT J.U.L.I.E. (1-800-892-0123) PRIOR TO ANY WORK TO LOCATE UTILITIES AND SHALL CONTACT THE OWNER SHOULD UTILITIES APPEAR TO BE IN CONFLICT WITH THE PROPOSED IMPROVEMENT.
6. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
7. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITION OR BETTER.
8. ALL UNPAVED AREAS DISTURBED BY GRADING OPERATIONS SHALL RECEIVE 6 INCHES OF TOPSOIL. CONTRACTOR SHALL APPLY STABILIZATION FABRIC TO ALL SLOPES 3:1 OR STEEPER. CONTRACTOR SHALL WATER SEEDED AREAS IN ACCORDANCE WITH GOVERNING SPECIFICATIONS UNTIL A HEALTHY STAND OF VEGETATION IS OBTAINED.
9. EXISTING TOPOGRAPHY SHOWN REPRESENTS SITE CONDITIONS AS PREPARED BY MANHARD CONSULTING LTD. IN OCTOBER, 2013. CONTRACTOR SHALL FIELD CHECK EXISTING ELEVATIONS AND CONDITIONS PRIOR TO CONSTRUCTION AND NOTIFY ARCHITECT AND ENGINEER OF ANY DISCREPANCIES PRIOR TO STARTING CONSTRUCTION. IF THE CONTRACTOR DOES NOT ACCEPT EXISTING TOPOGRAPHY AS SHOWN ON THE PLANS, WITHOUT EXCEPTION, THEN THE CONTRACTOR SHALL SUPPLY, AT HIS EXPENSE, A TOPOGRAPHIC SURVEY BY A REGISTERED LAND SURVEYOR TO THE OWNER FOR REVIEW.
10. TRANSITIONS FROM DEPRESSED CURB TO FULL HEIGHT CURB SHALL BE TAPERED AT 25 FT. UNLESS OTHERWISE NOTED.

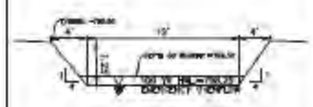
GRADING PLAN LEGEND:

803	PROPOSED 1 FOOT CONTOURS
803.5	PROPOSED SPOT ELEVATION
F.F.	PROPOSED FINISHED FLOOR ELEVATION
G/F	PROPOSED GRADE AT FOUNDATION
P	PROPOSED PAVEMENT ELEVATION
T/C	PROPOSED TOP OF CURB
T/W	PROPOSED TOP OF WALK
T/WALL	PROPOSED TOP OF WALL
E/E	MEET EXISTING
G	PROPOSED GROUND GRADE OR ELEVATION AT BASE OF RETAINING WALL
	PROPOSED PITCH OR SWALE
	PROPOSED DIRECTION OF FLOW
	OVERFLOW RELIEF SWALE
HWL	PROPOSED HIGH WATER LINE
W.D.	PROPOSED DEPTH OF PONDING
	RETAINING WALL
(L)	PROPOSED SWALE LOW POINT
(H)	PROPOSED SWALE SUMMIT

TYPICAL NATURALIZED DETENTION BASIN

CROSS SECTION A-A
N.T.S.

OVERFLOW WEIR



CROSS SECTION B-B
N.T.S.

PROPOSED 2 STORY 40 UNIT SENIOR RESIDENCE BUILDING
14,850 S.F.
F.F.=806.85
G/F=806.85

GRADING DETAIL (SEE SHEET 5)

LIMITS OF CONSTRUCTION (TYP.)

WETLAND BOTTOM DETENTION BASIN
HWL=799.25
NWL=795.25
VOL PROVIDED=2.63 AC-FT

BOTTOM = 789.25

HWL = 799.25

EX. DET. POND
100-YR HWL=799.61

PROPOSED 12 FT. OVERFLOW WEIR (SEE SECTION B-B)

SANITARY SEWER EXTENSION SEE SHEET 7

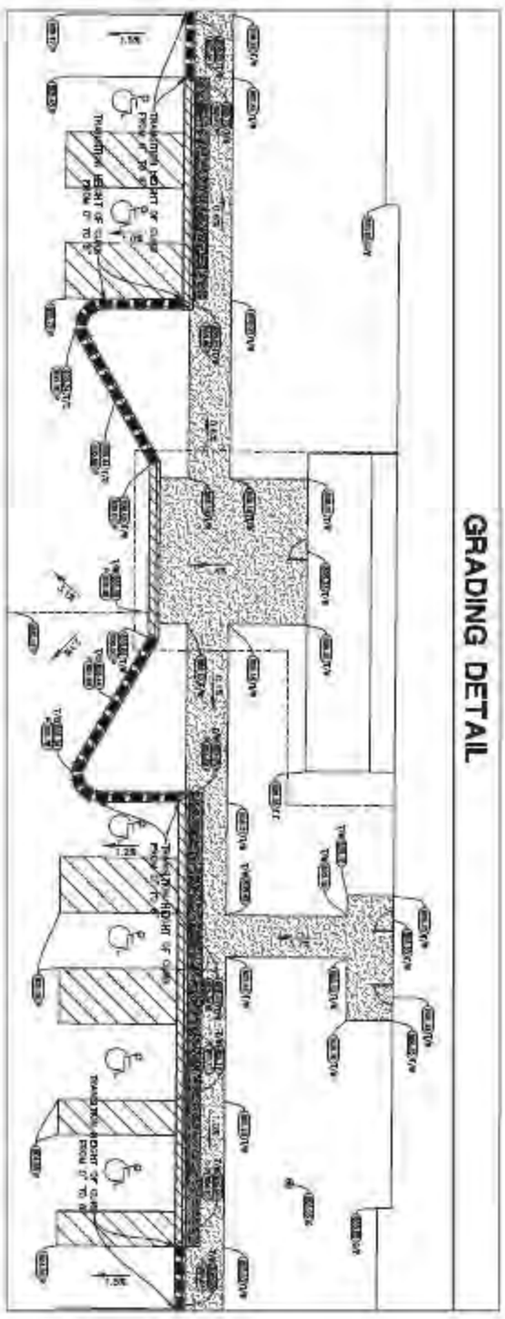
Manhard CONSULTING

STARLING SENIOR APARTMENTS
LAKE VILLA, ILLINOIS
GRADING PLAN

SHEET 4 OF 14

LAC.LVIL01

NOT FOR CONSTRUCTION



STARLING SENIOR APARTMENTS

LAKE VILLA, ILLINOIS

GRADING DETAILS

Manhard CONSULTING

5 OF 14

NOT FOR CONSTRUCTION

SCALE: 1"=30'

ENTERPRISE GREEN COMMUNITY 3.4 SURFACE STORMWATER MANAGEMENT RETENTION REQUIREMENT

HISTORICAL DATA
LOCATION: LAKE VILLA, IL
MONITORING STATIONS (VILLA GROVE, LITTLE FOOT)
DATA SOURCE: CLIMATE DATA ONLINE
DATA TYPE: DAILY PRECIPITATION (INCHES)
DATA RANGE: 11/11/2013-11/10/2023

RESULTS
90TH PERCENTILE RAINFALL: 0.65 INCHES
TOTAL SITE AREA: 5.21 ACRES
REQUIRED VOLUME TO BE RETAINED: 8,791 CUFT
ACTUAL VOLUME RETAINED: 8,822 CUFT

UTILITY NOTES:

1. ALL UTILITY DIMENSIONS ARE TO CENTER OF PIPE OR CENTER OF STRUCTURE UNLESS OTHERWISE NOTED.
2. BUILDING DIMENSIONS AND ADJACENT UTILITY LAYOUT HAVE BEEN PREPARED BASED UPON ARCHITECTURAL INFORMATION CURRENT AT THE DATE OF THIS DRAWING. SUBSEQUENT ARCHITECTURAL CHANGES MAY COST. THEREFORE, CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR PRECISE BUILDING DIMENSIONS AND EXACT UTILITY ENTRANCE LOCATIONS AND NOTIFY THE ARCHITECT AND ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
3. THE CONTRACTOR SHALL CONTACT J.U.L.I.E. (1-800-892-0123) PRIOR TO ANY WORK TO LOCATE UTILITIES AND SHALL CONTACT THE OWNER SHOULD UTILITIES APPEAR TO BE IN CONFLICT WITH THE PROPOSED IMPROVEMENT.
4. ROUTING OF GAS, ELECTRIC AND TELEPHONE SERVICES IF SHOWN ARE APPROXIMATE ONLY AND SUBJECT TO CHANGE BASED UPON FINAL REVIEW AND APPROVAL BY RESPECTIVE UTILITY COMPANIES. AND OWNER. CONTRACTOR SHALL CONTACT EACH UTILITY COMPANY AND COORDINATE FINAL LOCATIONS FOR ALL UTILITY SERVICES PRIOR TO START OF CONSTRUCTION.
5. CONTRACTOR SHALL EXCAVATE AND VERIFY ALL EXISTING SEWER, WATER MAIN AND DRY UTILITY LOCATIONS, SIZES, CONDITIONS & ELEVATIONS AT PROPOSED POINTS OF CONNECTION AND CROSSINGS PRIOR TO ANY UNDERGROUND CONSTRUCTION AND NOTIFY THE OWNER OF ANY DISCREPANCIES OR CONFLICTS.
6. LIGHTING AND UNDERGROUND CABLE IF SHOWN ON PLANS ARE FOR APPROXIMATE LOCATION ONLY. REFER TO ARCHITECTURAL PLANS FOR SPECIFICATIONS AND DETAILS.
7. THE CONTRACTOR SHALL ADJUST RIM ELEVATIONS OF ALL EXISTING STRUCTURES TO PROPOSED FINISH GRADES.
8. CONTRACTOR TO VERIFY LOCATION, SIZES, AND ELEVATION OF ALL BUILDING SERVICE LOCATIONS WITH ARCHITECTURAL PLANS.
9. AT LOCATIONS WHERE WATER MAIN CROSSES BENEATH OR LESS THAN 18" ABOVE A SEWER, PROVIDE WATER MAIN PROTECTION PER STANDARD SPECIFICATIONS FOR SEWER AND WATER MAIN CONSTRUCTION IN ILLINOIS, LATEST EDITION.
10. ELEVATIONS GIVEN FOR STORM SEWER STRUCTURES LOCATED IN CURB LINE ARE PAVEMENT ELEVATIONS.
11. ALL WATER MAIN SHALL BE 5'-6" BELOW FINISHED GRADE TO TOP OF MAINS UNLESS NOTED OTHERWISE.
12. ALL EXISTING UTILITIES SHOWN ARE NOT TO BE INTERPRETED AS THE EXACT ELEVATION OR LOCATION, OR AS THE ONLY OBSTACLES THAT MAY OCCUR ON THE SITE. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND PROCEED WITH CAUTION AROUND ANY ANTICIPATED FEATURES.
13. THE UNDERGROUND UTILITY INFORMATION AS SHOWN HERE ON IS BASED, IN PART, UPON INFORMATION FURNISHED BY UTILITY COMPANIES AND THE LOCAL MUNICIPALITY. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, ITS ACCURACY AND COMPLETENESS CANNOT BE GUARANTEED NOR CERTIFIED.
14. ALL SANITARY AND STORM SEWER LENGTHS SHOWN ARE CENTER OF MANHOLE TO CENTER OF MANHOLE OR STORM MANHOLE TO END.
15. CONTRACTOR SHALL CORE AND BOOT ALL PIPE ENTRANCES TO EXISTING SANITARY MANHOLES.
16. EXTERNAL CHIMNEY SEALS ARE REQUIRED ON PROPOSED AND ADJUSTED EXISTING SANITARY MANHOLES.
17. SOME EXISTING ITEMS TO BE REMOVED HAVE BEEN DELETED FROM THIS PLAN FOR CLARITY. SEE DEMOLITION PLAN FOR ITEMS DELETED.
18. ALL D.I. WATERMAIN PIPE AND D.I. WATERMAIN FITTINGS SHALL BE WRAPPED.
19. ALL PIPE RESTRAINT SHALL BE ACCOMPLISHED WITH MEGA-LUG JOINTS. JOINT RESTRAINT SHALL BE PROVIDED AT ALL BENDS AND ALL JOINTS WITHIN 20' FEET OF ANY FITTING, 40 FEET OF ANY 90 FITTING OR VALVE.

UTILITY CROSSINGS

① 6" WM OVER 18" ST
B/P 6" WM = 795.08
T/P 18" ST = 793.08

② 12" ST OVER 8" WM
B/P 12" ST = 788.72
T/P 8" WM = 786.72

③ 12" ST OVER 8" WM
B/P 12" ST = 788.81
T/P 8" WM = 786.44
FLOWER WM

④ 12" ST OVER 8" WM
B/P 12" ST = 788.40
T/P 8" WM = 786.40
FLOWER WM

⑤ 8" SAN OVER 8" WM
B/P 8" SAN = 787.40
T/P 8" WM = 785.90
FLOWER WM

⑥ 12" ST OVER 8" SAN
B/P 12" ST = 788.40
T/P 8" SAN = 786.43

⑦ 24" ST OVER 8" SAN
B/P 24" ST = 808.73
T/P 8" SAN = 787.38

⑧ 15" ST OVER 8" SAN
B/P 15" ST = 793.88
T/P 8" SAN = 792.38

⑨ 8" WM OVER 8" SAN
B/P 8" WM = 803.80
T/P 8" SAN = 787.73

⑩ 8" WM OVER 12" ST
B/P 8" WM = 788.62
T/P 8" SAN = 784.85

NOTE: WATER AND SEWER CROSSINGS SHALL MEET STATE DPA SEPARATION AND PIPE MATERIAL REQUIREMENTS. (SEE DETAIL SHEET)

REFER TO: ILLINOIS ADMINISTRATIVE TITLE 35, SUBTITLE F, CHAPTER I, PART 653, SECTION 653.144(c) - SANITARY SEPARATION FOR RINSHED WATER MAINS

PROPOSED 2 STORY 40 UNIT SENIOR RESIDENCE BUILDING
14,630 S.F.
F.F.=805.25
B/F=805.85

EX. DET. POND
100-YR HWL=788.61

WETLAND BOTTOM ELEVATION SHOWN
WB1=788.28
WB2=788.28
VOL PROVIDED=8,249 CU.FT.

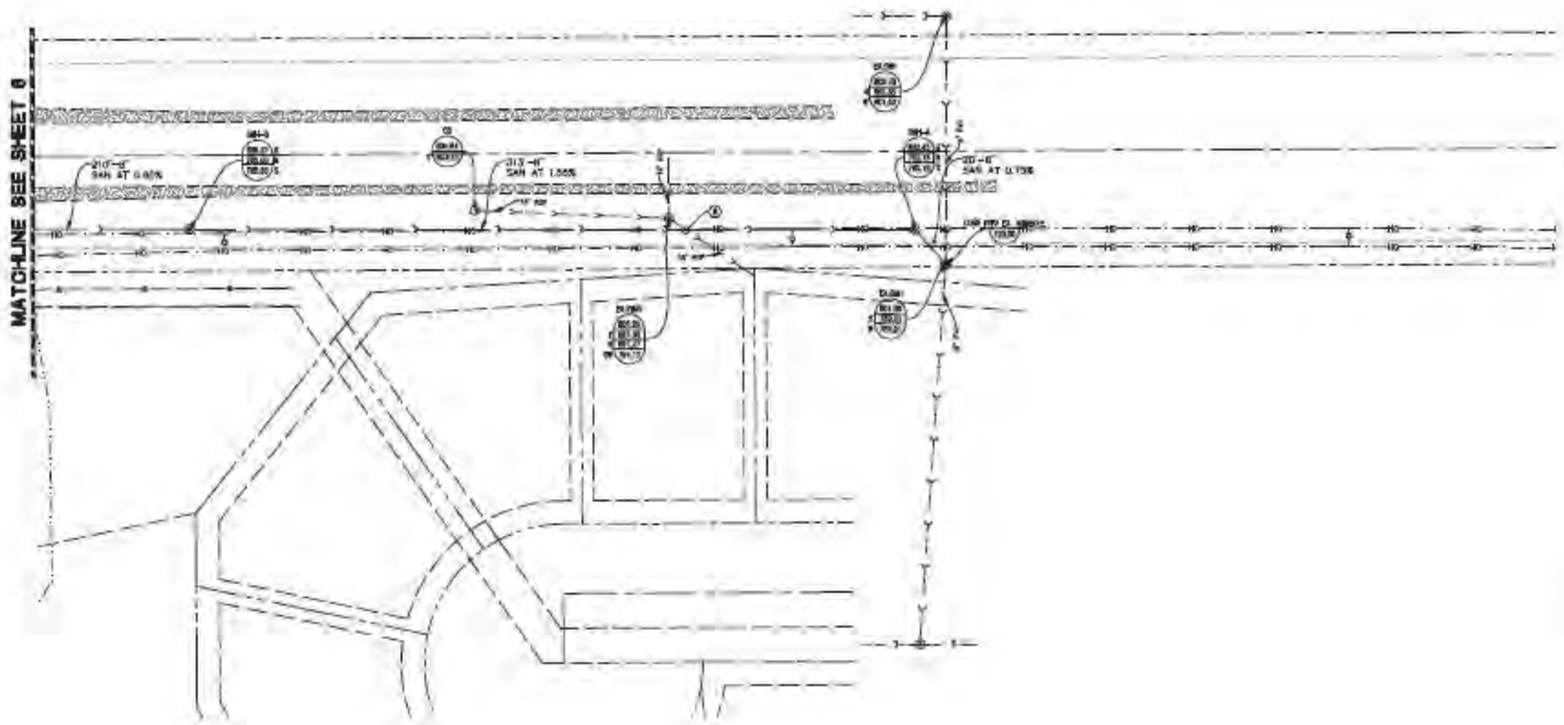
MATCHLINE SEE SHEET 7

Manhard CONSULTING

STARLING SENIOR APARTMENTS
LAKE VILLA, ILLINOIS
UTILITY PLAN- NORTH

6 OF 14

NOT FOR CONSTRUCTION



ENTERPRISE GREEN COMMUNITY 3.4 SURFACE STORMWATER MANAGEMENT RETENTION REQUIREMENT

HISTORICAL DATA
LOCATION: LAKE VILLA, IL
MONITORING STATION(S):USW00094088, USW00094081
DATA SOURCE: CLIMATE DATA ONLINE
DATA TYPE: DAILY PRECIPITATION (INCHES)
DATA RANGE: 11/17/2013–11/9/2023

RESULTS
80TH PERCENTILE RAINFALL DAY (INCHES)
TOTAL SITE AREA: 5.31 ACRES
REQUIRED VOLUME TO BE RETAINED: 8,511 CUFT
ACTUAL VOLUME RETAINED: 8,623 CUFT

0 15 30 60
SCALE: 1"=30'

UTILITY NOTES:

1. ALL UTILITY DIMENSIONS ARE TO CENTER OF PIPE OR CENTER OF STRUCTURE UNLESS OTHERWISE NOTED.
2. BUILDING DIMENSIONS AND ADJACENT UTILITY LAYOUT HAVE BEEN PREPARED BASED UPON ARCHITECTURAL INFORMATION CURRENT AT THE DATE OF THIS DRAWING. SUBSEQUENT ARCHITECTURAL CHANGES MAY EXIST. THEREFORE CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR PRECISE BUILDING DIMENSIONS AND EXACT UTILITY ENTRANCE LOCATIONS AND NOTIFY THE ARCHITECT AND ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
3. THE CONTRACTOR SHALL CONTACT J.U.L.I.E. (1-800-892-0123) PRIOR TO ANY WORK TO LOCATE UTILITIES AND SHALL CONTACT THE OWNER SHOULD UTILITIES APPEAR TO BE IN CONFLICT WITH THE PROPOSED IMPROVEMENT.
4. ROUTING OF GAS, ELECTRIC AND TELEPHONE SERVICES IS SHOWN ARE APPROXIMATE ONLY AND SUBJECT TO CHANGE BASED UPON FINAL REVIEW AND APPROVAL BY RESPECTIVE UTILITY COMPANIES AND OWNER. CONTRACTOR SHALL CONTACT EACH UTILITY COMPANY AND COORDINATE FINAL LOCATIONS FOR ALL UTILITY SERVICES PRIOR TO START OF CONSTRUCTION.
5. CONTRACTOR SHALL EXCAVATE AND VERIFY ALL EXISTING SEWER, WATER MAIN AND DRY UTILITY LOCATIONS, SIZES, CONDITIONS & ELEVATIONS AT PROPOSED POINTS OF CONNECTION AND CROSSINGS PRIOR TO ANY UNDERGROUND CONSTRUCTION AND NOTIFY THE OWNER OF ANY DISCREPANCIES OR CONFLICTS.
6. LIGHTING AND UNDERGROUND CABLE IF SHOWN ON PLANS ARE FOR APPROXIMATE LOCATION ONLY. REFER TO ARCHITECTURAL PLANS FOR SPECIFICATIONS AND DETAILS.
7. THE CONTRACTOR SHALL ADJUST RIM ELEVATIONS OF ALL EXISTING STRUCTURES TO PROPOSED FINISH GRADES.
8. CONTRACTOR TO VERIFY LOCATION, SIZES, AND ELEVATION OF ALL BUILDING SERVICE LOCATIONS WITH ARCHITECTURAL PLANS.
9. AT LOCATIONS WHERE WATER MAIN CROSSES BENEATH OR LESS THAN 18" ABOVE A SEWER, PROVIDE WATER MAIN PROTECTION PER STANDARD SPECIFICATIONS FOR SEWER AND WATER MAIN CONSTRUCTION IN ILLINOIS, LATEST EDITION.
10. ELEVATIONS GIVEN FOR STORM SEWER STRUCTURES LOCATED IN CURB LINE ARE PAVEMENT ELEVATIONS.
11. ALL WATER MAIN SHALL BE 5'-6" BELOW FINISHED GRADE TO TOP OF MAINS UNLESS NOTED OTHERWISE.
12. ALL EXISTING UTILITIES SHOWN ARE NOT TO BE INTERPRETED AS THE EXACT ELEVATION OR LOCATION, OR AS THE ONLY OBSTACLES THAT MAY OCCUR ON THE SITE. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND PROCEED WITH CAUTION AROUND ANY ANTICIPATED FEATURES.
13. THE UNDERGROUND UTILITY INFORMATION AS SHOWN HERE ON IS BASED, IN PART, UPON INFORMATION FURNISHED BY UTILITY COMPANIES AND THE LOCAL MUNICIPALITY. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, ITS ACCURACY AND COMPLETENESS CANNOT BE GUARANTEED NOR CERTIFIED.
14. ALL SANITARY AND STORM SEWER LENGTHS SHOWN ARE CENTER OF MANHOLE TO CENTER OF MANHOLE OR STORM MANHOLE TO END.
15. CONTRACTOR SHALL CORE AND BOOT ALL PIPE ENTRANCES TO EXISTING SANITARY MANHOLES.
16. EXTERNAL CHIMNEY SEALS ARE REQUIRED ON PROPOSED AND ADJUSTED EXISTING SANITARY MANHOLES.
17. SOME EXISTING ITEMS TO BE REMOVED HAVE BEEN DELETED FROM THIS PLAN FOR CLARITY. SEE DEMOLITION PLAN FOR ITEMS DELETED.
18. ALL D.I. WATERMAIN PIPE AND D.I. WATERMAIN FITTINGS SHALL BE WRAPPED.
19. ALL PIPE RESTRAINT SHALL BE ACCOMPLISHED WITH MEGA-LUG JOINT. JOINT RESTRAINT SHALL BE PROVIDED AT ALL ELBOWS AND ALL JOINTS WITHIN 20 FEET OF ANY FITTING, 40 FEET OF ANY 90° FITTING OR VALVE.

UTILITY CROSSINGS

① 8" WM OVER 10" ST
B/P 8" WM = 796.08
T/P 10" ST = 785.58

② 12" ST OVER 8" WM
B/P 12" ST = 793.72
T/P 8" WM = 782.22
LOWER WM

③ 12" ST OVER 8" WM
B/P 12" ST = 788.04
T/P 8" WM = 786.54
LOWER WM

④ 12" ST OVER 8" SW
B/P 12" ST = 788.40
T/P 8" SW = 786.90
LOWER WM

⑤ 8" SAN OVER 8" WM
B/P 8" SAN = 797.42
T/P 8" WM = 795.92
LOWER WM

⑥ 12" ST OVER 8" SAN
B/P 12" ST =800.42
T/P 8" SAN = 798.42

⑦ 24" ST OVER 8" SAN
B/P 24" ST = 800.11
T/P 8" SAN = 797.36

⑧ 15" ST OVER 8" SAN
B/P 15" ST =793.86
T/P 8" SAN = 792.36

⑨ 8" WM OVER 8" SAN
B/P 8" WM =800.82
T/P 8" SAN = 797.72

⑩ 8" WM OVER 12" ST
B/P 8" WM = 798.82
T/P 8" SAN = 795.82

NOTE: WATER AND SEWER CROSSINGS SHALL MEET STATE EPA SEPARATION AND PIPE MATERIAL REQUIREMENTS. (SEE DETAIL SHEET)

REFER TO: ILLINOIS ADMINISTRATIVE TITLE 35, SUBTITLE F, CHAPTER I, PART 604, SECTION 604.1445– SANITARY SEPARATION FOR FINISHED WATER MAINS

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STARLING SENIOR APARTMENTS
LAKE VILLA, ILLINOIS
UTILITY PLAN- SOUTH

SHEET 7 OF 14
LAKE VILLA

NOT FOR CONSTRUCTION

SCALE: 1"=30'

DEER LAKE ROAD

CONNECTION TO BE MADE WITH RESISTANT VALVE

EXISTING 12" WATER MAIN TO REMAIN AT CROSSING WITH CROSSING PIPE TO BE CUT AND REMOVED WITH CHANGES

LIMITS OF CONSTRUCTION (TYP.)

SANITARY SEWER EASEMENT SEE SHEET 7

20' LAKE COUNTY STORMWATER EASEMENT

110'-12" ST AT 3.40% WATER MAIN QUALITY

185'-8" SAN AT 0.44% WATER MAIN QUALITY

12" ST AT 1.00%

111'-15" ST AT 1.00%

210'-8" SAN AT 0.60%

21'-8" SAN AT 1.60%

20'-8" SAN AT 0.75%

107'-8" SAN AT 0.60%

17'-8" SAN AT 0.63%

185'-8" SAN AT 0.44%

EXISTING GRADE ABOVE SEWER

PROPOSED GRADE ABOVE SEWER

11'-8" SAN AT 0.44%

12" ST

15" SAN STUB INV. = 793.87

EX. 8" MH

EX. 24" ST

EX. 12" SAN CONNECT TO EX. 12" PVC SAN AT INV. = ± 790.0

EX. 15" ST

20'-8" SAN AT -0.75%

SMH-F RIM: 805.75 G INV: 799.82 N INV: 797.80 E

SMH-E RIM: 810.94 G INV: 796.97

SMH-D RIM: 808.43 G INV: 795.37

SMH-C RIM: 808.62 G INV: 795.28

SMH-B RIM: 806.43 G INV: 795.03 E

SMH-A RIM: 802.37 G INV: 792.15

EXISTING GROUND ALONG 'L'

PROPOSED GRADE ALONG 'L'

820
815
810
805
800
795
790
785
780

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STARLING SENIOR APARTMENTS

LAKE VILLA, ILLINOIS

SANITARY SEWER PLAN AND PROFILE

SHEET 8 OF 14

LAC LVILSI

NOT FOR CONSTRUCTION

PROPOSED 3 STORY 40 UNIT
SENIOR RESIDENCE BUILDING
14,850 S.F.
F.F.=808.25
G.E.=808.25

UNITS OF DISTURBANCE (TYP.)

TEMPORARY CONSTRUCTION ENTRANCE/EXIT (CONTRACTOR MAY USE EXISTING PAVEMENT AS A CONSTRUCTION ACCESS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PREVENT SEDIMENT TRACKOUT INTO THE PUBLIC RIGHT-OF-WAY IF THE EXISTING PAVEMENT IS UTILIZED)

TEMPORARY INLET PROTECTION (TYP.)

GRADING DETAIL (SEE SHEET 7)

TEMPORARY DOUBLE ROW SILT FENCE (TYP.)

PROPOSED DETENTION/WETLAND TO BE USED AS SEDIMENT TRAP

WETLAND BOTTOM DETENTION BASIN
END=808.0
VOL. PROVIDED=6.09 AC-FT

EROSION CONTROL BLANKET (TYP.)

TEMPORARY CULVERT PROTECTION (TYP.)

PROPOSED 12 FT OVERFLOW WEIR (SEE SECTION B-B)

A

B

B

EROSION AND SEDIMENTATION CONTROL GENERAL NOTES

1. ALL EROSION AND STRUCTURAL EROSION CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE ILLINOIS URBAN MANUAL.
2. MAINTENANCE AND REPLACEMENT OF EROSION CONTROL ITEMS NOTED SHOWN ON THE PLANS SHALL BE CONSIDERED AS INCIDENTAL TO THE CONTRACT.
3. THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 0.5 INCHES OR GREATER OR EQUIVALENT SNOWFALL AND NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF SAID MEASURES SHALL BE MADE IMMEDIATELY.
4. INSTALL ALL INDICATED SILT FENCING PRIOR TO ANY CLEARING OR GRADING. ADDITIONAL SEDIMENT CONTROL MEASURES AS NOTED AND SPECIFIED BY THE ENGINEER AND/OR EROSION CONTROL INSPECTOR SHALL BE CONSTRUCTED AS NECESSARY TO PREVENT SEDIMENT FROM LEAVING THE SITE. ALL SEDIMENT REMOVED FROM TRAPS SHALL BE DISPOSED OF IN LOCATIONS APPROVED BY THE ENGINEER.
5. WITHIN TWENTY-FOUR (24) HOURS ON THE DATES SITE SHALL BE GRADED INTO THE DETENTION BASIN, PRIOR TO BEGINNING SAME EXCAVATION, THE CONTRACTOR SHALL CONSTRUCT DETENTION CONTROL MEASURES AS REQUIRED TO PREVENT SEDIMENT FROM ENTERING THE FUTURE BASIN. SEDIMENT REMOVED FROM THE BASIN SHALL BE DISPOSED OF AS DIRECTED BY THE ENGINEER.
6. STABILIZATION OF DISTURBED AREAS MUST BE INITIATED IMMEDIATELY WHENEVER ANY CLEARING, GRUBBING, EXCAVATING OR GRADING ACTIVITIES CEASE (OR WILL CEASE) ON ANY PORTION OF THE SITE FOR MORE THAN 14 DAYS OR WILL NOT RESUME FOR A PERIOD OF 14 CALENDAR DAYS. STABILIZATION OF DISTURBED AREAS MUST BE INITIATED WITHIN 1 WORKING DAY OF PERMANENT OR TEMPORARY CESSATION OF EARTH DISTURBING ACTIVITIES, AND SHALL BE COMPLETED AS SOON AS POSSIBLE BUT NOT LATER THAN 14 DAYS FROM THE INITIATION OF STABILIZATION MEASURES.
7. TEMPORARY SEED MIXTURE SHALL BE APPLIED AT AN EQUIVALENT.
8. INLET PROTECTION SHALL BE INSTALLED UNDER THE GRATING OF EACH DRAINAGE STRUCTURE.
9. STABILIZATION OF TOPSOIL STOCKPILES SHALL BE INITIATED IMMEDIATELY UPON CONSTRUCTION UNLESS THEY WILL BE DISTURBED WITHIN TWO (2) DAYS. AFTER INITIAL SEED, STABILIZATION OF STOCKPILES MUST BE INITIATED WITHIN 1 WORKING DAY OF PERMANENT OR TEMPORARY CESSATION OF EARTH DISTURBING ACTIVITIES, AND SHALL BE COMPLETED AS SOON AS POSSIBLE BUT NOT LATER THAN 14 DAYS FROM THE INITIATION OF STABILIZATION OF SAME. ALL SOIL STOCKPILE PILES SHALL BE PROTECTED FROM EROSION BY SILT FENCING ON THE DOWN SLOPE SIDE OF THE PILE.
10. DURING DEWATERING OPERATIONS, WATER SHALL BE PUMPED INTO SEDIMENT BASINS OR SILT TRAPS. DEWATERING DIRECTLY INTO FIELD TILES OR STORMWATER STRUCTURES IS PROHIBITED.
11. WHEN PLANTED, DURING CONSTRUCTION OPERATION SHALL BE PROVIDED.
12. DUST CONTROL SHALL BE PERFORMED ON A DAILY BASIS, WATER SHALL BE APPLIED FROM A WATER TRUCK AT A RATE THAT WILL PREVENT RUNOFF AND EVENLY COVER A UNIFORM RATE OF APPLICATION.
13. TEMPORARY GRAVEL CONSTRUCTION ENTRANCES SHALL BE MAINTAINED. ADJUSTED AND/OR EXTENDED AS NECESSARY TO PREVENT SEDIMENT FROM BEING TRACKED ONTO PUBLIC ROADWAYS. ANY SEDIMENT REACHING A PUBLIC ROAD SHALL BE REMOVED BY SHOVELING OR STREET CLEANING BEFORE THE END OF EACH WORKING DAY.
14. ANY LARGER MATERIAL THAT IS DEPOSITED ON THE PAVEMENT SHALL BE PICKED UP, SHOVELED, AND/OR SWEPT UP IMMEDIATELY AND DISPOSED OF PROPERLY. SHALL BE DONE AT THE CLOSE OF EACH WORKING DAY.
15. CONTRACTOR PLAN SHALL BE DIRECTED TO THE DETENTION BASIN PRIOR TO LEAVING THE SITE.
16. THE EROSION CONTROL MEASURES INDICATED ON THE PLANS AND THE MINIMUM REQUIREMENTS OUTLINED ABOVE SHALL BE IMPLEMENTED AS DIRECTED BY THE OWNER'S STORMWATER MANAGEMENT CONSULTANT.
17. ALL DISTURBED AND REMAINING TOPSOIL STOCKPILE AREAS SHALL BE SEEDED AND MULCHED WITHIN SEVEN (7) CALENDAR DAYS OF THE LAST DISTURBANCE, NON-ESSENTIAL ACTIVITY WITHIN THAT AREA.

SEQUENCE OF CONSTRUCTION

1. INSTALL SILT FENCE AT LOCATIONS AS INDICATED ON THE PLANS.
2. PERFORM STAKING CONSTRUCTION ENTRANCE.
3. CONSTRUCT TEMPORARY SEDIMENT TRAPS AND/OR BASINS.
4. CLEAR AND ROUGH GRADE PORTION OF SITE NECESSARY TO CONSTRUCT DETENTION FACILITIES AND STABILIZE WITH SEED AND MULCH.
5. INSTALL SILT FENCE ALONG THE BASE OF THE STOCKPILES.
6. CONSTRUCT STORMWATER MANAGEMENT FACILITIES TO SUBGRADE AS SHOWN ON THE PLANS.
7. CONSTRUCT UTILITIES, PAVEMENT AND PERMANENT SEEDING AND EROSION & SEDIMENTATION MANAGEMENT FACILITIES.
8. CUT AND FILL SITE TO FINISH GRADE.
9. CONSTRUCT REMAINING IMPROVEMENTS (i.e. SIDEWALKS, BUILDING AND SITE LIGHTING, ETC.)
10. CONSTRUCT PAVEMENT IMPROVEMENTS AS PLANS.
11. COMPLETE CONSTRUCTION OF SITE WITH PERMANENT STABILIZATION.
12. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES.
13. INSTALL INLET PROTECTION AROUND DRAINAGE STRUCTURES AS CONSTRUCTED.

LEGEND

- TEMPORARY SILT FENCE (PERIMETER EROSION BARRIER)
- EROSION CONTROL BLANKET (WATTLES AND/OR MESH AS PER THE NATIVE SEED LANDSCAPE PLAN)
- TEMPORARY DIVERSION CONSTRUCTION ENTRANCE
- TEMPORARY STORM EROSION PROTECTION
- TEMPORARY GRAVEL INLET PROTECTION
- TEMPORARY REINFORCED SILT FENCE
- PROPOSED DRAINAGE FLOW
- LIMITS OF DISTURBANCE/CONSTRUCTION

DEMONSTRATION WETLAND

BLANDING'S TURTLE

- BLANDING'S TURTLES LEAVE WATERBODIES TO ROST IN ADJACENT UPLAND AREAS TO AVOID POTENTIAL IMPACTS TO BLANDING'S TURTLES AND OTHER PESTS. THE DEPARTMENT RECOMMENDS NO GROUND DISTURBANCE ACTIVITIES BE INITIATED BETWEEN MAY 15TH AND SEPTEMBER 15TH TO AVOID TURTLE AND NESTS THAT MAY OCCUR IN THE PROJECT AREA.
- THE DEPARTMENT RECOMMENDS EXCLUSIONARY SILT FENCING BE INSTALLED AROUND THE WORK AREA DURING CONSTRUCTION (THEREAFTER) WITH THE GROUND AND INSPECTED DAILY FOR BLANDING'S TURTLES AND OTHER WILDLIFE. SILT FENCE SHOULD BE STRICTLY MAINTAINED ALL YEAR DURING CONSTRUCTION TO PREVENT TURTLES FROM ENTERING CONSTRUCTION AREAS AS WINTERING HABITAT FOR BLANDING'S TURTLES AND OTHER TURTLES. CONSTRUCTION SHALL BE SCHEDULED DURING THE PERIOD OF NOVEMBER 15TH TO MARCH 15TH WHENEVER POSSIBLE, WHEN TURTLES ARE HIBERNATING. SILT FENCING SHOULD NOT BE INSTALLED UNTIL AFTER THE EMERGENCE OF TURTLES IN THE SPRING. ALL SOIL STOCKPILE PILES SHALL BE PROTECTED FROM EROSION BY SILT FENCING ON THE DOWN SLOPE SIDE OF THE PILE.
- THE DEPARTMENT RECOMMENDS ALL ON-SITE PERSONNEL BE INFORMED ABOUT THE SPECIES AND BE INSTRUCTED TO CONTACT THE DEPARTMENT IMMEDIATELY IF THEY ARE ENCOUNTERED IN THE PROJECT AREA. PERSONNEL WITH PHOTOS OF ADULT AND JUVENILE BLANDING'S TURTLES, AND LIFE-HISTORY INFORMATION, SHOULD BE DISTRIBUTED TO PERSONNEL. THE FIELD SHOULD ALSO CONTAIN CONTACT INFORMATION FOR THE DEPARTMENT (SPRINGFIELD OFFICE: 217-785-5500). BE ADVISED, SNAKE-LIKELY SPECIES MAY NOT BE ENCOUNTERED BECAUSE APPROPRIATE HABITAT PURSUANT TO THE ILLINOIS ENDANGERED SPECIES PROTECTION ACT.
- AFTER CONSTRUCTION, THE DEPARTMENT RECOMMENDS PERSONNEL BE INSTRUCTED TO DRIVE A VEHICLE AS IT FOLLOWS TURTLES DURING ACTIVITIES TO ENSURE THAT NONE HAVE BURIED THEMSELVES UNDER THE GRAVEL AND CAUSE DAMAGE TO VEHICLES. THIS CAN BE ACCOMPLISHED BY DRIVING PERIODS A MINIMUM OF 5 MINUTES IN THE MORNING AND EVENING. SEE TURTLES ON ROADWAYS AND/OR PARKING LOTS, PERSONNEL SHOULD MOVE THEM OFF THE ROAD IN THE DIRECTION THEY WERE HEADING. IF TURTLES ARE OBSERVED TO HAVE BURIED THEMSELVES IN THE GRAVEL, THEY SHOULD BE ALLOWED TO EMERGE NATURALLY OR THE SITE MAY BE WATERED DOWN IN THE MORNING BEFORE ACTIVITY BEGINS.

STATE-LISTED ENDANGERED WETLAND AND SPECIES

BEFORE THE EXACT NATURE AND TYPE AND PROXIMITY OF THE PROJECT TO THE WETLAND, IT IS POSSIBLE THAT STATE-LISTED WETLAND BIRDS AND OTHER ENDANGERED AND SPECIES OR THE HABITAT MAY BE PRESENT. TO AVOID HARM TO THESE SPECIES AND POTENTIAL VIOLATIONS OF THE ILLINOIS ENDANGERED SPECIES PROTECTION ACT, THE DEPARTMENT RECOMMENDS:

- ALL INITIAL CONSTRUCTION ACTIVITIES AND GROUND DISTURBANCE ACTIVITIES SHOULD AVOID WITHIN THE NESTING PERIOD OF STATE-LISTED ENDANGERED WETLAND BIRD SPECIES, WHICH MAY RANGE THROUGHOUT JUNE. THIS ALSO APPLIES TO DISTURBED TURTLE NESTING SHORES.
- ALL DETENTION NESTING SHOULD BE DESIGNED—POTENTIAL TO AVOID IMPACTS TO THE ADDITIONAL HABITAT AND AVAILABILITY OF STATE-LISTED ENDANGERED WETLAND BIRD SPECIES.

NATURAL AREAS

TO AVOID AND MINIMIZE IMPACTS TO THE ADJACENT WETLAND AND NATURAL AREAS IN THE VICINITY, THE DEPARTMENT RECOMMENDS:

- STRICTLY FOLLOW BMPS FOR SEDIMENT AND EROSION CONTROL AND STORMWATER MANAGEMENT IN THE INITIAL PROPERTY. THE DEVELOPER SHOULD CONSIDER INSTALLING TEMPORARY SEDIMENTATION BASINS DURING CONSTRUCTION, WHEN NECESSARY, IN ADDITION TO SILT FENCE TO MANAGE STORMWATER AND IMPROVE WATER QUALITY AND AVOID IMPACTS TO THE ADJACENT WETLANDS.
- THE DEVELOPER SHOULD CONSIDER INSTALLING TEMPORARY SEDIMENTATION BASINS DURING CONSTRUCTION, WHEN NECESSARY, IN ADDITION TO SILT FENCE TO MANAGE STORMWATER AND IMPROVE WATER QUALITY AND AVOID IMPACTS TO THE ADJACENT WETLANDS.
- THE DEVELOPER SHOULD CONSIDER INSTALLING TEMPORARY SEDIMENTATION BASINS DURING CONSTRUCTION, WHEN NECESSARY, IN ADDITION TO SILT FENCE TO MANAGE STORMWATER AND IMPROVE WATER QUALITY AND AVOID IMPACTS TO THE ADJACENT WETLANDS.

THESE EROSION CONTROL PLANS ARE A PORTION OF THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY (IEPA) TOTAL REQUIREMENTS FOR A COMPLETE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) AS REQUIRED BY THE GENERAL NPDES PERMIT NO. ILR10. CLIENT AND/OR CONTRACTOR WILL BE RESPONSIBLE FOR COMPLIANCE WITH ALL REQUIREMENTS OF THE GENERAL NPDES PERMIT AND COMPILATION OF THE COMPLETE SWPPP.

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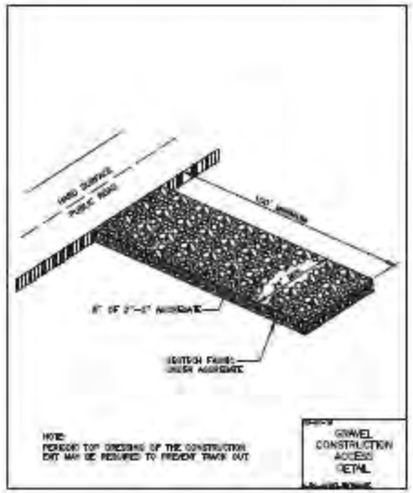
STARLING SENIOR APARTMENTS
LAKE VILLA, ILLINOIS
SOIL EROSION AND SEDIMENT CONTROL PLAN

HORIZ. SCALE:	NONE
VERT. SCALE:	NONE
DESIGNED BY:	JB
DRAWN BY:	JB
DATE:	07-19-21
PROJECT:	17.0150

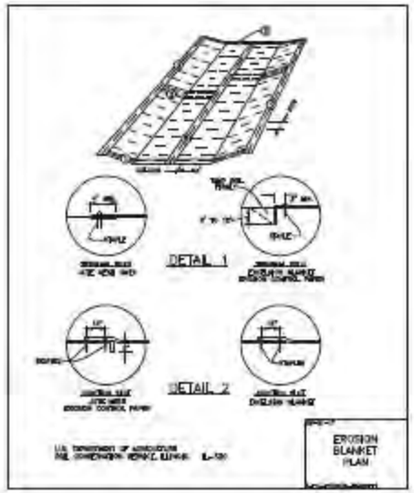
SHEET 9 OF 14

LAC/LVE/21

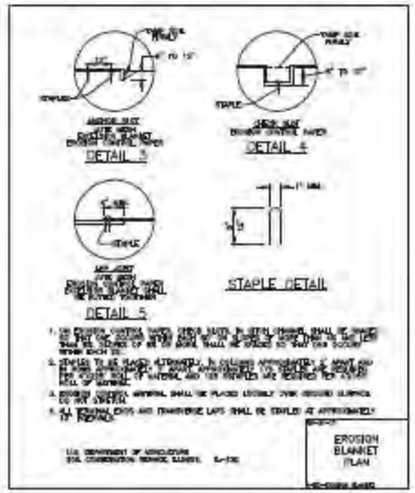
NOT FOR CONSTRUCTION



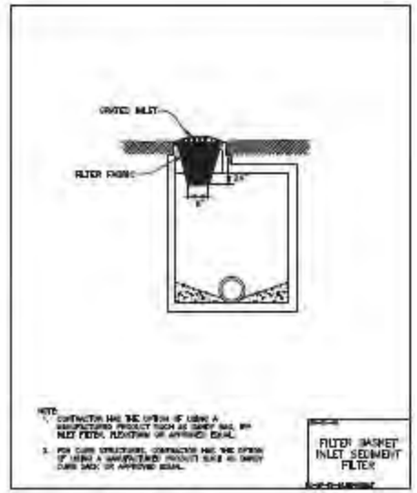
GRAVEL CONSTRUCTION ACCESS DETAIL



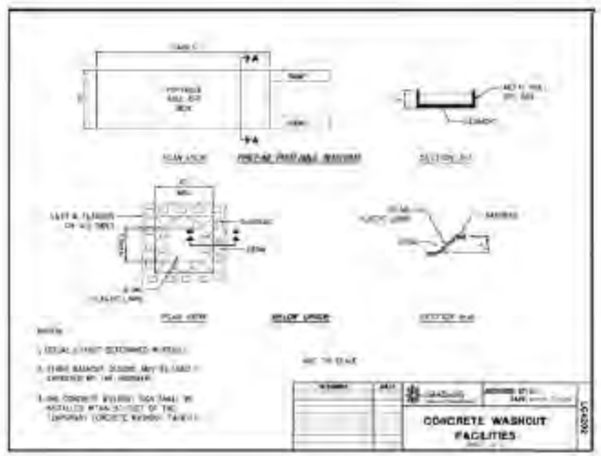
EROSION BLANKET PLAN



EROSION BLANKET PLAN



FILTER BASKET INLET SEDIMENT FILTER



CONCRETE WASHOUT FACILITIES

SILT FENCE DETAIL

DATE: 4/21/08 BY: RAW
REVISED: BY:

STORMWATER MANAGEMENT COMMISSION

LAKE COUNTY STORMWATER MANAGEMENT COMMISSION
SOIL EROSION AND SEDIMENT CONTROL CONSTRUCTION NOTES
(SMC - STILL revision)

LAKE COUNTY DIVISION OF TRANSPORTATION
SOIL EROSION AND SEDIMENT CONTROL GENERAL NOTES
(DOT/DOT - SLM DTS revision)

SITE EROSION AND SEDIMENT CONTROL PROJECT SPECIFIC NOTES

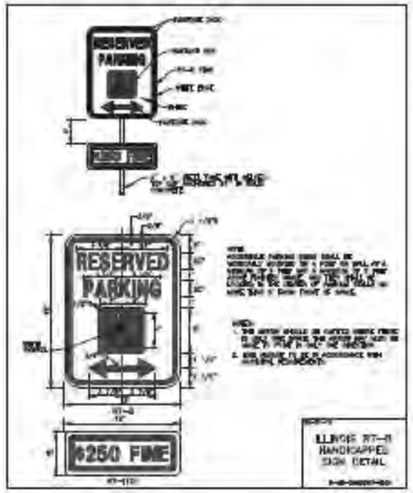
SHOULD A CONFLICT ARISE BETWEEN MANHARD DETAILS AND THE VILLAGE DETAILS, THE VILLAGE DETAILS SHALL TAKE PRECEDENCE.

Manhard CONSULTING

STARLING SENIOR APARTMENTS
LAKE VILLA, ILLINOIS
SOIL EROSION AND SEDIMENT CONTROL DETAILS

SHEET 10 OF 14
LAKE VILLA

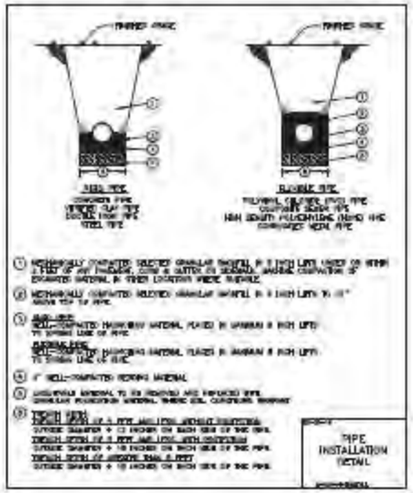
NOT FOR CONSTRUCTION



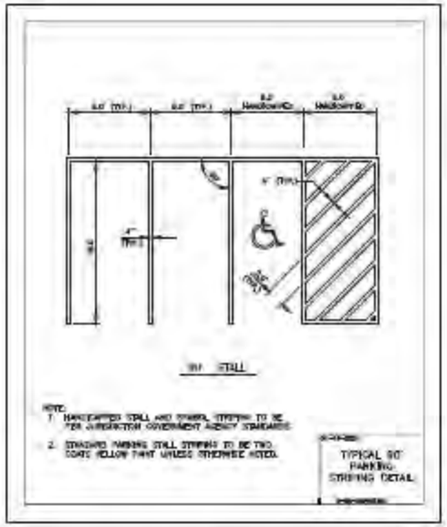
ILLINOIS 97-11 HANDICAPPED SIGN DETAIL

MATERIAL STANDARDS

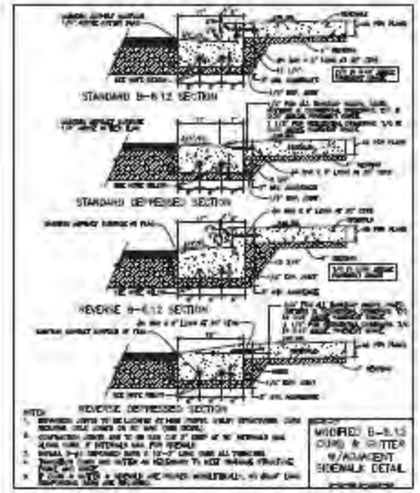
MATERIAL STANDARDS



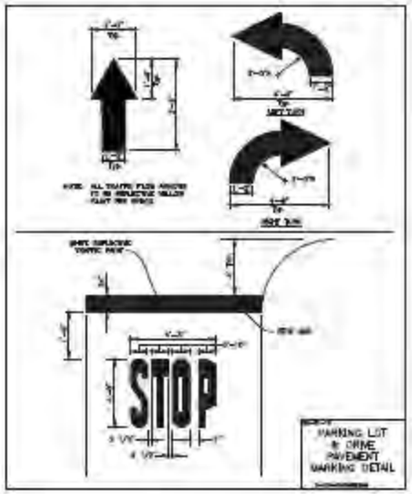
PIPE INSTALLATION DETAIL



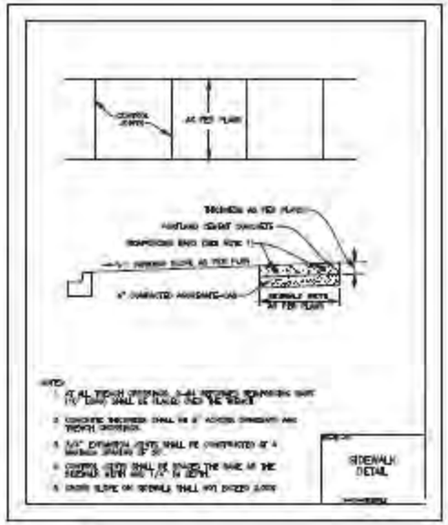
TYPICAL 90° PARKING STRIPING DETAIL



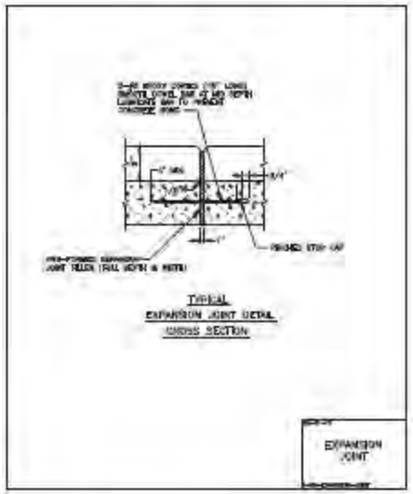
MODIFIED B-6.12 CURB & GUTTER W/ADJACENT SIDEWALK DETAIL



PARKING LOT & DRIVE PAVEMENT MARKING DETAIL

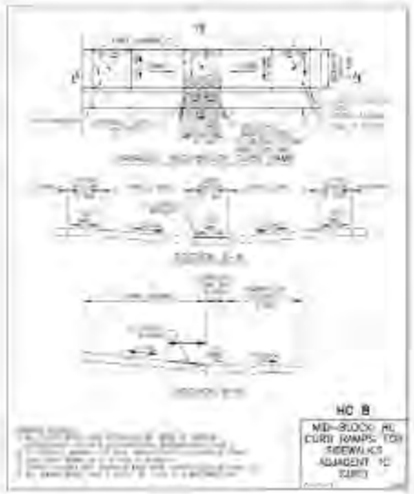


SIDEWALK DETAIL

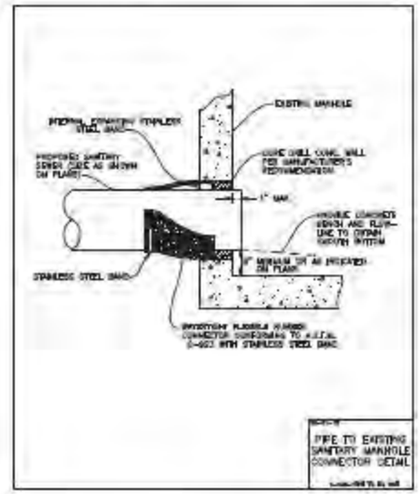


TYPICAL EXPANSION JOINT DETAIL CROSS SECTION

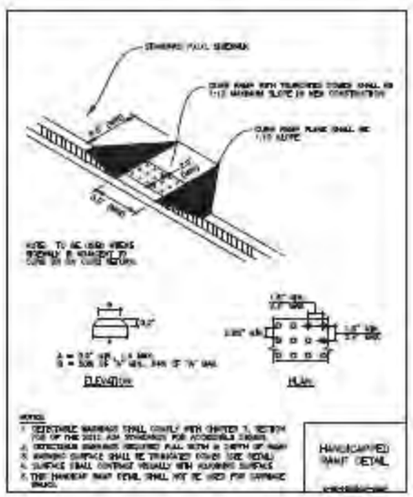
EXPANSION JOINT DETAIL



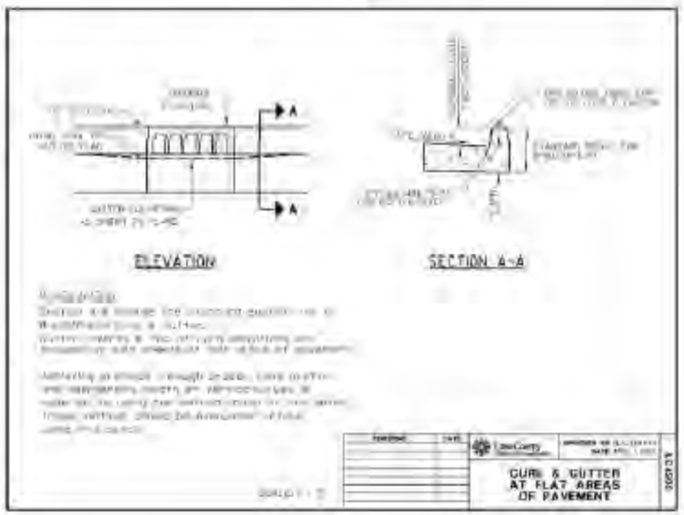
HC 8 MID-BLOCK RAMP CURB RAMPS FOR SIDEWALKS ADJACENT TO CURB



PIPE TO EXISTING SANITARY MANHOLE CONNECTOR DETAIL



HANDICAPPED RAMP DETAIL



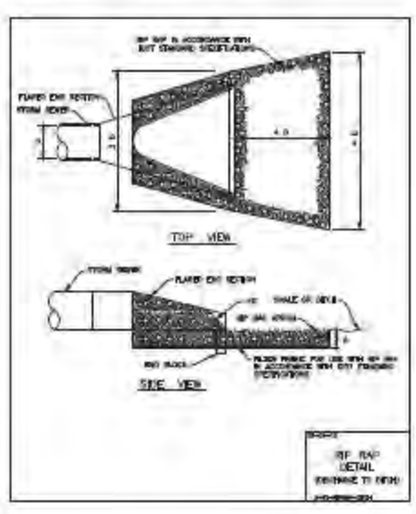
CURB & GUTTER AT FLAT AREAS OF PAVEMENT

RIP-RAP

PIPE DIAMETER (IN)	STONE RIP-RAP							BEDDING
	CLASS OF STONE	MINIMUM WIDTH (W)	MINIMUM THICKNESS (T)	MAXIMUM STONE DIAMETER (D)	WEIGHT RANGE (LB)	MINIMUM WEIGHT (LB)	SIZE MEDIAN DIAMETER (D50)	MINIMUM THICKNESS (IN)
12"	B	3	8"	4"	1-60	10	4.5"	N/A
15"	B	3	8"	5	1-60	10	4.5"	N/A
18"	B	4	16"	6"	1-150	40	7"	6"
21"	B	4	16"	7"	1-150	40	7"	6"
24"	B	4	16"	8"	1-150	40	7"	6"
27"	B	4	16"	9"	1-150	40	7"	6"
30"	B	4	16"	10"	1-150	40	7"	6"
36"	B	5	22"	12"	5-400	90	10"	8"
42"	B	5	22"	14"	5-400	90	10"	8"
48"	B	6	28"	16"	5-900	170	12"	10"
54"	B	6	28"	18"	5-900	170	12"	10"
60"	B	6	28"	20"	5-900	170	12"	10"
72"	B	6	28"	24"	5-900	170	12"	10"

NOTE:
1. FOR PIPE LARGER THAN 72" A SPECIAL DESIGN OF RIP-RAP OR APRON IS REQUIRED.
2. REFER TO IDOT SPECIFICATIONS AND STANDARDS FOR BEDDING GRADATION.

STONE RIP RAP DETAIL



RIP RAP DETAIL

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STARLING SENIOR APARTMENTS
LAKE VILLA, ILLINOIS
CONSTRUCTION DETAILS

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STANDARD SPECIFICATIONS FOR WATER AND SEWER CONSTRUCTION IN ILLINOIS, LATEST EDITION.

41-2.01 PROTECTION OF WATER MAIN AND WATER SERVICE LINES

41-2.01A GENERAL

Water mains and water service lines shall be protected from sanitary sewers, storm sewers, combined sewers, house sewer service connections and drains as follows:

41-3.01B HORIZONTAL SEPARATION — WATER MAINS AND SEWERS

(1.) Water mains shall be located at least ten (10) feet (3.1 m) horizontally from any existing or proposed drain, storm sewer, sanitary sewer, combined sewer or sewer service construction.

(2.) Water mains may be located closer than ten (10) feet (3.1 m) to a sewer line when:

(a) local conditions prevent a lateral separation of ten (10) feet (3.1 m), and

(b) the water main invert is at least eighteen (18) inches (460 mm) above the crown of the sewer, and

(c) the water main is within in a separate trench or in the same trench on an undisturbed earth shelf located to one side of the sewer.

(3.) When it is impossible to meet (1) or (2) above, both the water main and drain or sewer shall be constructed of approved mechanical joint cast or ductile iron pipe, pressmastic concrete pipe, or PVC pipe equivalent to water main standards of construction. The drain or sewer shall be pressure tested to the maximum expected surcharge head before backfilling. See Standard Drawing No. 16.

WATER AND SEWER SEPARATION REQUIREMENTS (HORIZONTAL SEPARATION)

STANDARD SPECIFICATIONS FOR WATER AND SEWER CONSTRUCTION IN ILLINOIS, LATEST EDITION.

41-2.01C VERTICAL SEPARATION — WATER MAINS AND SEWERS

(1.) A water main shall be separated from a sewer so that its invert is a minimum of eighteen (18) inches (460mm) above the crown of the drain or sewer whenever water mains cross storm sewers, sanitary sewers or sewers service connections. The vertical separation shall be maintained for that portion of the water main located within ten (10) feet (3.1m) horizontally of any sewer or drain crossed. A length of water main pipe shall be centered over the sewer to be crossed with joints equidistant from the sewer or drain.

(2.) Both the water main and sewer shall be constructed of slip-on or mechanical joint cast or ductile iron pipe, pressmassed concrete pipe, or PVC pipe equivalent to water main standards of construction when:

(a) It is impossible to obtain the proper vertical separation as described in (1) above; or

(b) the water main passes under a sewer or drain.

(3.) A vertical separation of eighteen (18) inches (460 mm) between the invert of the sewer or drain and the crown of the water main shall be maintained where a water main crosses under a sewer. Support the sewer or drain line to prevent settling and possible breaking the main, as shown on the Plans or as approved by the Engineer.

(4.) Construction of water main quality pipe shall extend on each side of the crossing until the perpendicular distance from the water main to the sewer or drain line is at least ten (10) feet (3.1 m). See Standard Drawings No. 19-23.

WATER AND SEWER SEPARATION REQUIREMENTS (VERTICAL SEPARATION)

CATCH BASIN DETAIL (4'-0" DIA.)

CONCRETE FLARED END SECTION DETAIL

INLET DETAIL

STORM MANHOLE DETAIL

TYPICAL HYDRANT INSTALLATION (02570)

VALVE VAULT DETAIL

WATER AND SEWER SEPARATION REQUIREMENTS (VERTICAL SEPARATION)

SANITARY MANHOLE DETAIL

WATER MAIN CONCRETE DETAIL

RESTRICTED MANHOLE DETAIL #1

WATER AND SEWER SEPARATION REQUIREMENTS (VERTICAL SEPARATION)

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CONSTRUCTION DETAILS

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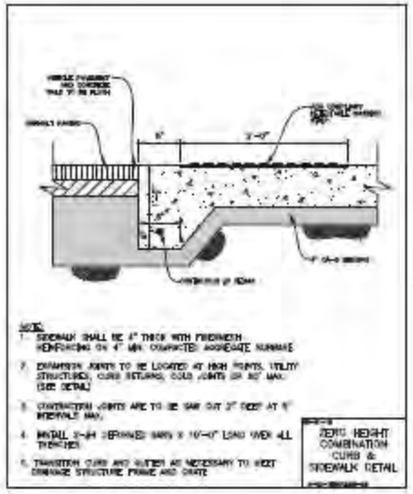

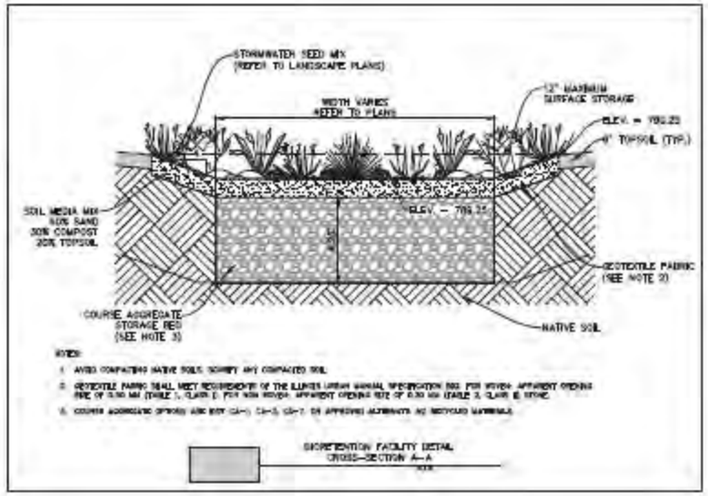

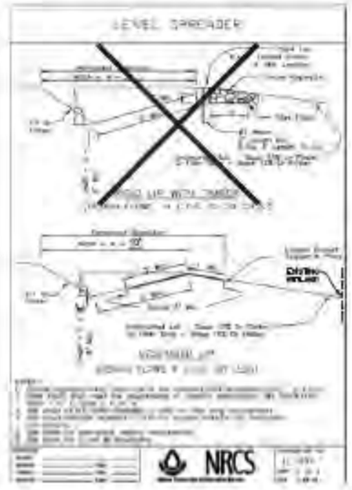

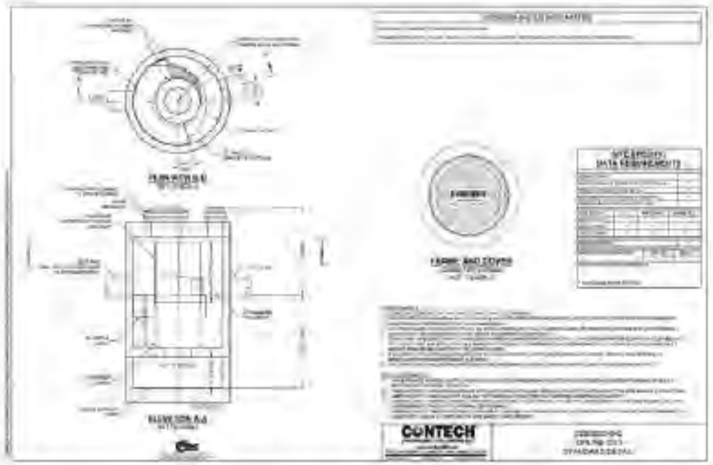

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CONSTRUCTION DETAILS

SHEET
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STANDARD SPECIFICATIONS

GENERAL CONDITIONS

[illegible]

DEFINITION OF TERMS

[illegible]

EXTENT OF THE PLANS AND SPECIFICATIONS

[illegible]

INTERPRETATION OF PLANS AND SPECIFICATIONS

[illegible]

GOVERNING BODIES

[illegible]

LOCATION OF UNDERGROUND FACILITIES AND UTILITIES

[illegible]

UNSUITABLE SOILS

[illegible]

PROTECTION OF TREES

[illegible]

NOTIFICATION OF OWNERS OF FACILITIES AND UTILITIES

[illegible]

TRAFFIC CONTROL

[illegible]

WORK AREA

[illegible]

UTILITY POLES

[illegible]

RESTORATION

[illegible]

CLEANING UP

[illegible]

ROAD CLEANING

[illegible]

SAFETY AND PROTECTION

[illegible]

HOLD HARMLESS

[illegible]

INSURANCE

[illegible]

THIRD PARTY BENEFICIARY

[illegible]

DETAILED SPECIFICATIONS

I. DEMOLITION

[illegible]

II. EARTHWORK

STANDARDS

[illegible]

SOIL BORING DATA

[illegible]

EARTHWORK CALCULATIONS AND CROSS SECTIONS

[illegible]

CLEARING, GRUBBING AND TREE REMOVAL

[illegible]

TOPSOIL STRIPPING

[illegible]

TOPSOIL RESPREAD

[illegible]

SEEDING

[illegible]

SODDING

[illegible]

EXCAVATION AND EMBANKMENT

[illegible]

EROSION CONTROL

[illegible]

MISCELLANEOUS CONTRACT ITEMS

[illegible]

III. UNDERGROUND IMPROVEMENTS

A. GENERAL

STANDARDS

[illegible]

SELECTED GRANULAR BACKFILL

[illegible]

MANHOLES, CATCH BASINS, INLETS & VALVE VAULTS

[illegible]

HORIZONTAL AND VERTICAL SEPARATION OF WATER AND SEWER MAINS

[illegible]

STRUCTURE ADJUSTMENTS

[illegible]

B. SANITARY SEWERS AND APPURTENANCES

SANITARY SEWER PIPE

[illegible]

MANHOLES

[illegible]

FOUNDATION, BEDDING AND HAUNCHING

[illegible]

TESTING

[illegible]

SERVICES

[illegible]

C. WATER MAINS AND APPURTENANCES

[illegible]

WATER VALVES

[illegible]

VALVE VAULTS

[illegible]

FIRE HYDRANTS

[illegible]

DISINFECTION

[illegible]

PRESSURE TEST

[illegible]

D. STORM SEWERS AND APPURTENANCES

[illegible]

FLARED END SECTION

[illegible]

RIP RAP

[illegible]

IV. ROADWAY AND PARKING LOT IMPROVEMENTS

STANDARDS

[illegible]

SUBGRADE PREPARATION

[illegible]

PROOF ROLL

[illegible]

HOT-MIX ASPHALT BASE COURSE

[illegible]

CONCRETE PAVEMENTS

[illegible]

SIDEWALKS

[illegible]

CURB AND GUTTER

[illegible]

FRAME ADJUSTMENTS

[illegible]

PAVEMENT MARKING - PAINT

[illegible]

QUALITY CONTROL

[illegible]

SHOULD A CONFLICT ARISE BETWEEN THE MANHARD SPECIFICATIONS AND THE VILLAGE SPECIFICATIONS, THE VILLAGE SPECIFICATIONS TAKE PRECEDENCE.

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CONSTRUCTION SPECIFICATIONS

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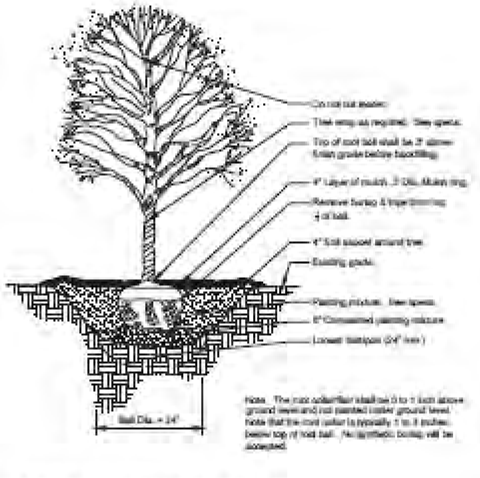
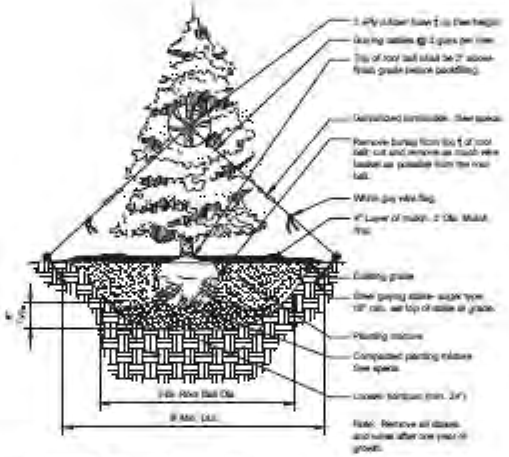
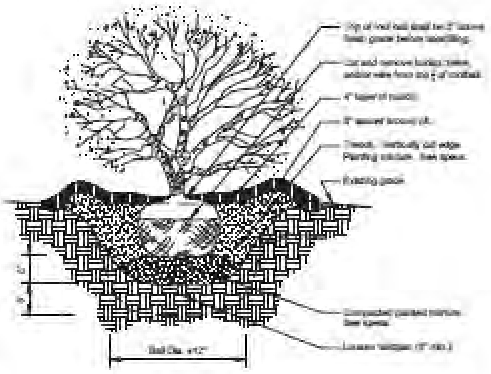


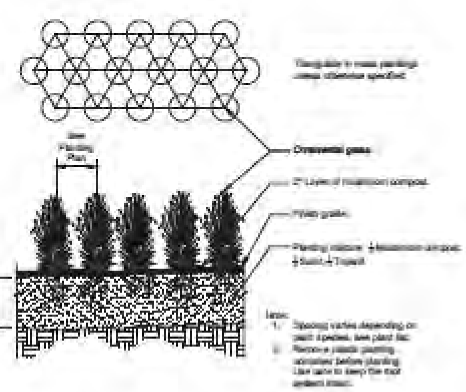
1 DECIDUOUS TREE PLANTING



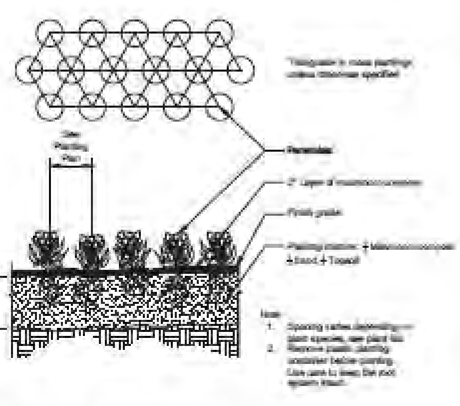
2 CONIFER TREE PLANTING



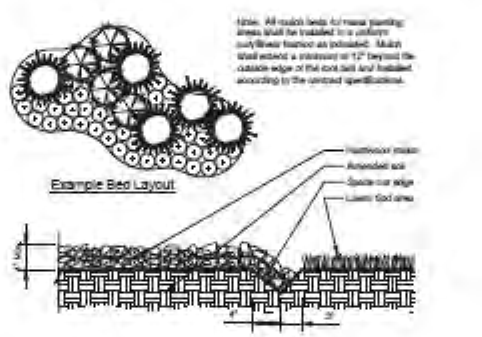
3 SHRUB PLANTING DETAIL



4 ORNAMENTAL GRASS PLANTING



5 PERENNIAL / ANNUAL PLANTING



6 CONTINUOUS MULCH EDGING

Village of Lake Villa Required Landscaping

PLANTING AREA REQUIREMENTS

Requirement: Canopy trees must be 2.5" Cal min., Understory trees must be 1.5" Cal min. and Shrubs must be 2' Height min.

STREET TREE REQUIREMENT -Arterial Road

Requirement: 1 Canopy Tree and 2 Understory Trees per 50 linear feet located 15' from the Right-of-Way

Deep Lake Road - 196.78 linear feet

196.78 / 50 = 3.93 x 1 = 4 Canopy Trees

3.93 x 2 = 8 Understory Trees

Required- 4 Canopy Trees and 8 Understory Trees

On Plan - 4 Canopy Trees and 8 Understory Trees

INTERIOR LANDSCAPING FOR PARKING LOTS

Requirement: For every 10 Parking Spaces 160 square feet of landscape area. 1 Canopy Tree and 3 shrubs per 160 square feet.

Parking Lot Spaces: 70 Spaces
70 / 10 = 7 x 160 = 1,120 Square Feet of Landscape Area
7 x 1 = 7 Canopy Trees
7 x 3 = 21 Shrubs

Required- 7 Canopy Trees and 21 Shrubs, 1,120 square feet of green space

On Plan - 8 Canopy Trees and 28 Shrubs, 2,897 square feet of green space

PERIMETER LANDSCAPE FOR PARKING LOTS AND VEHICULAR USE AREAS

Requirement: 1 Canopy Tree or Understory Tree per 25 linear feet. Solid deciduous shrub screen 24" in height with a decorative fencing at least 3' in height.

Deep Lake Road - 196.78
196.78 / 25 = 8 Trees

Required- 8 Canopy or Understory Trees with solid deciduous shrub buffer and decorative fencing at least 3' in height.

On Plan - 8 Canopy or Understory Trees with solid deciduous shrub buffer and decorative fencing at least 3' in height.

WEST BUFFER YARD - SB adjacent to SR3

Requirement: (C Buffer Required)
30 width buffer area with 1 Canopy Tree, 1 Understory Tree, and 2 Shrubs per 100 linear feet

West property line - 523.62 / 100 = 5.24
5.24 x 1 = 5 Canopy Trees
5.24 x 1 = 5 Understory Tree
5.24 x 2 = 10 Shrubs

Required- 5 Canopy Trees, 5 Understory Trees and 10 Shrubs
On Plan - 6 Canopy Trees, 6 Understory Trees and 16 Shrubs

116% of Requirements for Buffer Yard

SOUTH BUFFER YARD - SB adjacent to SR3

Requirement: (C Buffer Required)
30 width buffer area with 1 Canopy Tree, 1 Understory Tree, and 2 Shrubs per 100 linear feet

South property line - 427.5 / 100 = 4.28
4.28 x 1 = 4 Canopy Trees
4.28 x 1 = 4 Understory Tree
4.28 x 2 = 9 Shrubs

Required- 4 Canopy Trees, 4 Understory Trees and 9 Shrubs
On Plan - 4 Canopy Trees, 4 Understory Trees and 9 Shrubs

EAST BUFFER YARD - SB adjacent to SR2

Requirement: (C Buffer Required)
30 width buffer area with 1 Canopy Tree, 1 Understory Tree, and 2 Shrubs per 100 linear feet

East property line - 344.91 / 100 = 3.45
3.45 x 1 = 3 Canopy Trees
3.45 x 1 = 3 Understory Tree
3.45 x 2 = 7 Shrubs

Required- 3 Canopy Trees, 3 Understory Trees and 7 Shrubs
On Plan - 3 Canopy Trees, 3 Understory Trees and 7 Shrubs

NORTH BUFFER YARD - SB adjacent to SB

No Buffer Yard Required

FOUNDATION LANDSCAPING

Requirement: The developer shall provide adequate foundation landscaping for all multi-family residential buildings in keeping with the overall landscape concept for the project.

Meets Requirement

TREE REPLACEMENT TREES REQUIRED

See Sheet L2 for Replacement Trees

PLANT SCHEDULE

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	REMARKS
CONIFEROUS TREES						
TD	10	Taxodium distichum	Bald Cypress	3" Cal.	B&B	
DECIDUOUS TREES						
AS	5	Acer saccharum	Sugar Maple	2.5" Cal.	B&B	
AS2	8	Acer saccharum	Sugar Maple	3" Cal.	B&B	
AA	6	Acer x freemanii 'Jeffersred' TM	Autumn Blaze Freeman Maple	2.5" Cal.	B&B	
CO	6	Celtis occidentalis	Common Hackberry	2.5" Cal.	B&B	
CO2	15	Celtis occidentalis	Common Hackberry	3" Cal.	B&B	
GI	6	Gleditsia triacanthos inermis	Thornless Honey Locust	2.5" Cal.	B&B	
GI2	7	Gleditsia triacanthos inermis	Thornless Honey Locust	3" Cal.	B&B	
GD	4	Gymnocladus dioica 'Espresso'	Kentucky Coffeetree	2.5" Cal.	B&B	
GD2	11	Gymnocladus dioica 'Espresso'	Kentucky Coffeetree	3" Cal.	B&B	
QB	7	Quercus bicolor	Swamp White Oak	3" Cal.	B&B	
QM2	3	Quercus macrocarpa	Burr Oak	2.5" Cal.	B&B	
QM	8	Quercus macrocarpa	Burr Oak	3" Cal.	B&B	
TR	4	Tilia americana 'Redmond'	Redmond American Linden	2.5" Cal.	B&B	
TR2	13	Tilia americana 'Redmond'	Redmond American Linden	3" Cal.	B&B	
ORNAMENTAL TREES						
AP	7	Aesculus pavia	Red Buckeye	6' Ht.	B&B	
AG	14	Amelanchier x grandiflora 'Autumn Brilliance'	Autumn Brilliance Apple Serviceberry	6' Ht.	B&B	
CI	10	Crataegus crus-galli inermis	Thornless Cockspur Hawthorn	6' Ht.	B&B	
DECIDUOUS SHRUBS						
AP2	38	Aesculus parviflora	Bottlebrush Buckeye	3' Ht.	Pot	
AM	25	Aronia melanocarpa elata	Glossy Black Chokeberry	3' Ht.	Pot	
CI3	35	Cornus sericea 'Isanti'	Isanti Red Twig Dogwood	3' Ht.	Pot	
CA3	33	Corylus americana	American Hazelnut	3' Ht.	Pot	
PX	28	Diervilla x 'G2X885411' TM	Kodiak Red Diervilla	2' Ht.	Pot	
FG	21	Fothergilla gardenii	Dwarf Fothergilla	2' Ht.	Pot	
HW	21	Hydrangea quercifolia 'Pee Wee'	Pee Wee Oakleaf Hydrangea	2' Ht.	Pot	
PO	16	Physocarpus opulifolius 'SMNPOBLR' TM	Ginger Wine Ninebark	3' Ht.	Pot	
RL	17	Rosa rugosa 'Purple Pavement'	Purple Pavement Rose	2' Ht.	Pot	
VA	34	Viburnum dentatum	Viburnum	3' Ht.	Pot	
FERNS						
OC	24	Osmunda cinnamomea	Cinnamon Fern	1 gal.	Pot	
ORNAMENTAL GRASSES						
CK	8	Calamagrostis x acutiflora 'Karl Foerster'	Karl Foerster Feather Reed Grass	1 gal.	Pot	
PS	12	Panicum virgatum 'Shenandoah'	Shenandoah Switch Grass	1 gal.	Pot	
SL	9	Schizachyrium scoparium	Little Bluestem	1 gal.	Pot	
SH	43	Sporobolus heterolepis	Prairie Dropseed	1 gal.	Pot	
PERENNIALS						
BA	11	Baptisia australis	Blue Wild Indigo	1 gal.	Pot	
CI2	21	Callirhoe involucrata	Purple Poppymallow	1 gal.	Pot	
PB	64	Phlox bifida	Sand Phlox	1 gal.	Pot	

NOTE: Proposed Plant Material on the Landscape Plan to be a native species that is native to Illinois

Landscape Notes:

1. Seed/ Sod limit line is approximate. Seed/ Sod to limits of grading and disturbance. Contractor responsible for restoration of any unauthorized disruption outside of designated construction area.
2. Contractor responsible for erosion control in all seeded/ sodded areas. Tree mulch rings in turf areas are 5' diameter. Contractor shall provide a mulch ring around all existing trees within the limits of work. Remove all existing grass from area to be mulched and provide a typical spade cut edge. Landscape Fabric shall not be installed under mulch. Root flares shall be at or above grade, per specifications, and all rope/cord shall be removed from the base of tree trunks.
3. Bedlines are to be spade cut to a minimum depth of 3". Curved bedlines are to be smooth and not segmented.
4. All planting, beds shall receive top dressing of mulch. Landscape fabric shall not be installed under mulch.
5. Do not locate plants within 10' of utility structures or within 5' horizontally of underground utility lines unless otherwise shown on plans. Consult with Landscape Architect if these conditions exist.
6. For Lump Sum Contracts, 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 and specified. No additional payments will be made for materials required to complete the work as drawn and specified.
7. For Unit Price Contracts, payments will be made based on actual quantities installed as measured in place by the Owner's Representative.
8. It is the responsibility of the contractor to locate and provide plant material as specified on this plan. The contractor may submit a request to provide substitutions for the specified plant material under the following conditions:
   a. Any substitutions proposed shall be submitted to the project owner's representative within two weeks of the award of contract. Substitutions must meet equivalent design and functional goals of the original materials as determined by the owner's representative. Any changes must have the approval of the owner's representative.
   b. The request will be accompanied by at least three notices from plant material suppliers that the plant material specified is not available and will not be available prior to construction.
10. Verify site conditions and information on drawings. Promptly report any concealed conditions, mistakes, discrepancies or deviations from the information shown in the Contract Documents. The Owner is not responsible for unauthorized changes or extra work required to correct unreported discrepancies. Commencement of work shall constitute acceptance of conditions and responsibility for corrections.
11. A minimum of two working days before performing any digging, call underground service alert for information on the location of natural gas lines, electric cables, telephone cables, etc. The contractor shall be responsible for location and protection of all utilities, and repair of any damage resulting from his work at no additional cost to the owner.
12. Contractor shall promptly repair all damages to existing site at no cost to owner.
13. Refer to landscape specifications for additional conditions, standards, and notes.

JULIE
ONE-CALL SYSTEM
Simply Call 811

JON BRADLEY DETHLOFF 157-001632
SEAL
Date: 03/18/24
Jon Bradley Dethloff, ASLA, PLA
Illinois Registered Landscape Architect # 157-001632
Expires 08/31/2026

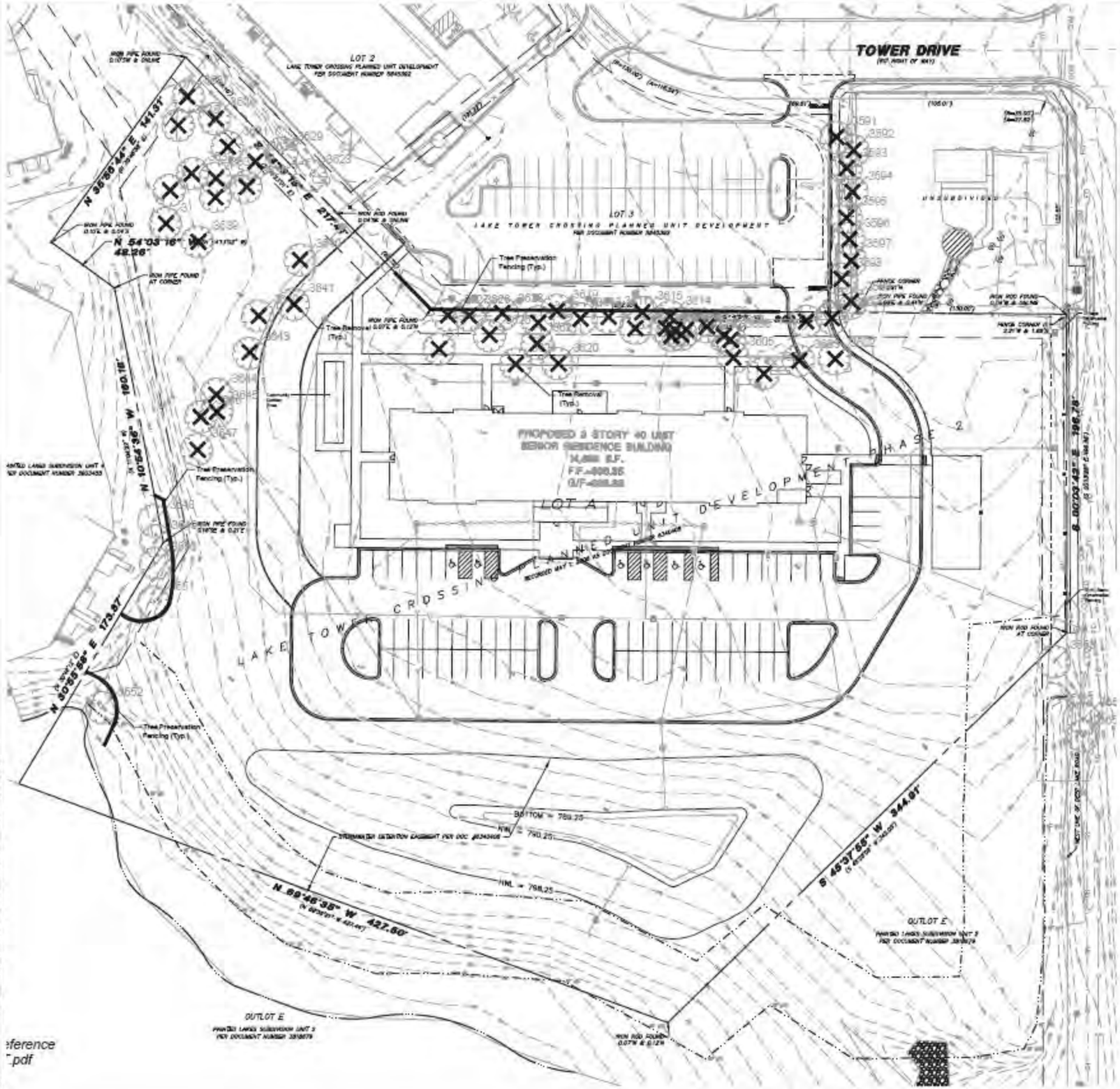
Manhard CONSULTING

LAKE VILLA SENIOR LOFTS

VILLAGE OF LAKE VILLA, ILLINOIS

TITLE SHEET AND LANDSCAPE SUMMARY

SHEET
L1 OF L7
LAC.LVIL01



TREE AND WOODLAND
COMPENSATION/REPLACEMENT

Requirement: The developer or owner(s) shall replace any trees six inches (6") in diameter or greater dbh and/or a significant number of less caliper trees that are to be removed. The developer or owner(s) shall replace these trees including planting, according to the following size schedule:

Note:
See Sheet L3 for Tree Survey and Removal List

Standards for Replacement of Woodlands:

Trunk size of removed Tree (In DBH)	Number of Replacement Trees	
3"-8"	1 - 3" Caliper Tree	33 - Total number of Removed 3"-8" Trees = 33 Replacement Trees
9"-15"	2 - 3" Caliper Trees	17 - Total number of Removed 9"-15" Trees = 34 Replacement Trees
16"-23"	3 - 3" Caliper Trees	5 - Total number of Removed 16"-23" Trees = 15 Replacement Trees
24"-35"	3 - 4" Caliper Trees	
36" or greater	5 - 4" Caliper Trees	

Total Number of Replacement Trees Required: 82 Trees

Legend

21" — Tree to be Removed

21" — Protective Fencing for Tree to be Preserved

Vulnerable Area

Root Pruning

Existing tree roots greater than one (1) inch in diameter, measured at the edge of excavation, shall be pruned within 24 hours of the time they have been damaged by construction activity. The severed root shall be pruned at the edge of excavation, or one (1) inch beyond the entire damaged portion of the tree root, if damaged root extends beyond the edge of excavation into undisturbed soil.

All cuts shall be cleanly made with sharp tools.

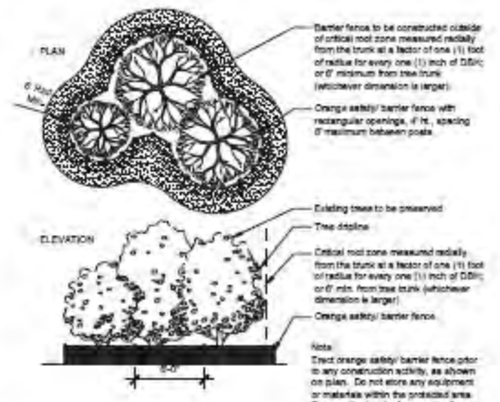
The excavated area around the existing tree roots shall be backfilled as soon as construction activities permit.

Amended existing soil shall be used as backfill material within the disturbed root zone areas not receiving drainage or subbase stone items. Amended existing soil shall be amended with peat or compost in the ratio of one part organic to seven parts existing soil.

Vulnerable Area Protection Methods

All tree root zones designated as "Vulnerable" shall receive special care and attention during construction. These areas contain roots for large trees that are within the construction area. Since these trees have high value to the project, efforts shall be made to preserve these trees, however the property owner will not be held liable if the trees do not survive.

An arborist should be consulted prior to construction to provide advice on preservation techniques. Each tree and construction condition is unique so an arborist is best qualified to provide a recommendation for each tree. Preservations may include root pruning, crown pruning, hormone treatment, fertilizers, soil amendments, excavation techniques, etc.



1 TREE PROTECTION PLAN
N.T.S.

GRAPHIC SCALE
(IN FEET)
1 inch = 50 ft.

NORTH

Manhard CONSULTING

LAKE VILLA SENIOR LOFTS
VILLAGE OF LAKE VILLA, ILLINOIS
TREE PRESERVATION PLAN

SHEET
L2 OF L7
LAC LVIL01

RATING AND SURVEY CRITERIA

1) Trees measured at 4.5 ft. above the ground - DBH (diameter breast height).

2) All trees, 6" DBH and above tagged. Dead trees were tagged for removal. Invasive shrubs were not tagged.

3) Health Rating:

Rating	Description	Criteria
1	Excellent:	Less than 10% dead wood, typical growth for species, no observed defects
2	Good to Fair:	Less than 20% dead wood, minor defects, sound structure, no decay
3	Fair:	Less than 30% dead wood, minor crown die-back, minor trunk damage or cavities
4	Fair to Poor:	Approximately 30-50% dead wood, lacking full crown, minor disease evidence, trunk damage
5	Poor:	Over 50% dead wood, lacking full crown, disease or decay evident, structural damage/cavities
6	Dead:	Less than 10% living wood, greater than 50% missing bark, adventitious growth only, decay

TAG NO.	SCIENTIFIC NAME	COMMON NAME	DBH (inches)	DESCRIPTION	RATING	STRUCTURE	HEALTH	REMOVED	3" CALIPER TREE REPLACEMENT
1581	Cercis canadensis	Redbud	Multi	Good	2			Removed	1
1582	Cercis canadensis	Redbud	Multi	Good	2			Removed	1
1583	Cercis canadensis	Redbud	Multi	Good	2			Removed	1
1584	Malus sp.	Crabapple	5	Good	2			Removed	1
1585	Malus sp.	Crabapple	5	Good	2			Removed	1
1586	Malus sp.	Crabapple	5	Good	2			Removed	1
1587	Cercis canadensis	Redbud	Multi	Good	2			Removed	1
1588	Cercis canadensis	Redbud	Multi	Good	2			Removed	1
1589	Cercis canadensis	Redbud	Multi	Good	2			Removed	1
1590	Malus sp.	Crabapple	8	Good	2			Removed	1
1591	Gleditsia triacanthos	Honey Locust	9	Good	2			Removed	1
1592	Pinus nigra	Red Pine	14	Good	2			Removed	2
1593	Pinus resinosa	Red Pine	14	Good	2			Removed	2
1594	Pinus nigra	Red Pine	14	Good	2			Removed	2
1595	Pinus resinosa	Red Pine	10	Fair/Poor	4		Blight	Removed	2
1596	Populus deltoides	Eastern Cottonwood	18	Fair	3		40% dead wood	Removed	3
1597	Populus deltoides	Eastern Cottonwood	14	Good	2		20% dead wood	Removed	2
1598	Populus deltoides	Eastern Cottonwood	14, 14	Fair/Poor	4	V-shaped trunk, split #14		Removed	3
1599	Populus deltoides	Eastern Cottonwood	14	Fair	3	Crowded		Removed	3
1600	Populus deltoides	Eastern Cottonwood	16	Fair	3	Crowded		Removed	3
1611	Populus deltoides	Eastern Cottonwood	9	Fair	3	Lean		Removed	3
1612	Populus deltoides	Eastern Cottonwood	5	Fair	3	Unbalanced		Removed	3
1613	Populus deltoides	Eastern Cottonwood	5	Fair	3	Crowded	40% dead wood	Removed	3
1614	Acer sp.	Maple Cultivar	5	Good	2			Removed	1
1615	Cercis canadensis	Redbud	Multi	Good	2			Removed	1
1616	Populus deltoides	Eastern Cottonwood	10, 11	Good	2			Removed	3
1617	Celtis occidentalis	Hackberry	5	Good	2			Removed	3
1618	Malus sp.	Crabapple	Multi	Good	3			Removed	3
1619	Malus sp.	Crabapple	3	Good	3			Removed	3
1620	Pinus resinosa	Red Pine	15	Good	2			Removed	2
1621	Pinus nigra	Red Pine	13	Good	2			Removed	2
1622	Malus sp.	Crabapple	3	Good	2			Removed	1
1623	Gleditsia triacanthos	Honey Locust	9	Good	2			Removed	1
1624	Pinus resinosa	Red Pine	14	Good	2			Removed	2
1625	Pinus resinosa	Red Pine	10	Fair	3		Blight	Removed	2
1626	Gleditsia triacanthos	Honey Locust	Multi	Good	2			Removed	2
1627	Acer sp.	Maple Cultivar	9	Good	2			Removed	1
1628	Malus sp.	Crabapple	7	Good	2				
1629	Malus sp.	Crabapple	7	Good	2				
1630	Picea abies	Norway Spruce	8	Good	2			Removed	1
1631	Picea abies	Norway Spruce	8	Good	2			Removed	1
1632	Picea abies	Norway Spruce	10	Good	2			Removed	2
1633	Picea pungens	Colorado Spruce	8	Fair	3		Brown needles (winter)	Removed	1
1634	Picea pungens	Colorado Spruce	8	Fair	3		Brown needles (winter)	Removed	1
1635	Acer sp.	Maple Cultivar	10	Good	2			Removed	2
1636	Picea abies	Norway Spruce	8	Fair	3		Blight	Removed	1
1637	Gleditsia triacanthos	Honey Locust	7	Good	2			Removed	1
1638	Gleditsia triacanthos	Honey Locust	7	Good	2			Removed	1
1639	Acer sp.	Maple Cultivar	10	Good	2			Removed	2
1640	Acer sp.	Maple Cultivar	5	Good	2			Removed	1
1641	Pyrus calleryana	Pear	8	Fair/Poor	4			Removed	1
1642	Acer sp.	Maple Cultivar	12	Good	2			Removed	2
1643	Acer sp.	Maple Cultivar	9	Good	2			Removed	2
1644	Picea pungens	Colorado Spruce	8	Fair/Poor	4		40% dead wood	Removed	1
1645	Picea pungens	Colorado Spruce	9	Fair/Poor	4		40% dead wood	Removed	1
1646	Picea pungens	Colorado Spruce	8	Fair/Poor	4		40% dead wood	Removed	1
1647	Acer sp.	Maple Cultivar	11	Good	2			Removed	2
1648	Picea abies	Norway Spruce	16	Good	2				
1649	Picea abies	Norway Spruce	12	Good	2				
1650	Picea abies	Norway Spruce	14	Good	2				
1651	Juglans nigra	Black Walnut	9	Good	2				
1652	Juglans nigra	Black Walnut	8	Good	2				
1653	Acer sp.	Maple Cultivar	8	Good	2				
1654	Ginkgo biloba	Ginkgo Species	6	Poor	5		50% dead wood		
1655	Abies nepodis	Box Elder	44	Poor	5		50% dead wood, Dead Limbs, Adventitious Growth, primers		
1	Fraxinus pennsylvanica	Green Ash	12	Poor	5	Not tagged in the field	<20% dead wood, Adventitious Growth	Removed	0
2	Fraxinus pennsylvanica	Green Ash	8	Poor	5	Not tagged in the field	<20% dead wood, Adventitious Growth	Removed	0
3	Fraxinus pennsylvanica	Green Ash	10	Poor	5	Not tagged in the field	<20% dead wood, Adventitious Growth	Removed	0

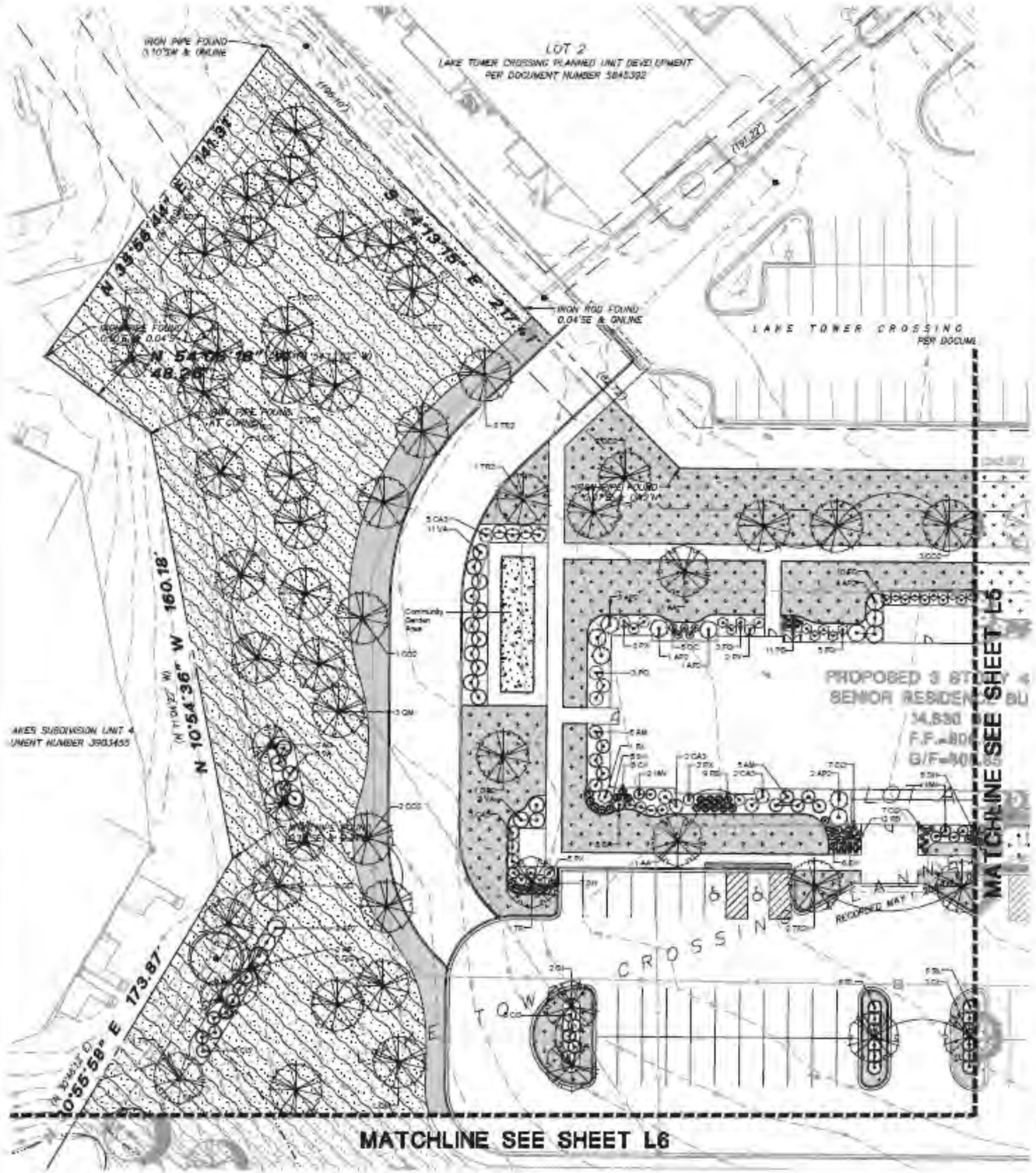
TOTAL AMOUNT OF 3" CALIPER REPLACEMENT TREES NEEDED TO MEET CODE:	63

Tree Survey by Gary R. Weber and Associates
Performed on 11/1/24

Manhard CONSULTING

LAKE VILLA SENIOR LOFTS
VILLAGE OF LAKE VILLA, ILLINOIS
TREE SURVEY AND REMOVAL LIST

SHEET
L3 OF L7
LAC LVIL01



PLANT SCHEDULE

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	REMARKS
COMPERIOUS TREES						
TD	19	Taxodium distichum	Bald Cypress	3" Cal.	B&B	
DECIDUOUS TREES						
AS	6	Acer saccharum	Sugar Maple	2.5" Cal.	B&B	
AS2	6	Acer saccharum	Sugar Maple	3" Cal.	B&B	
AA	6	Acer x freemanii 'JeffersRed' TM	Autumn Blaze Freeman Maple	2.5" Cal.	B&B	
CC	6	Celtis occidentalis	Common Hackberry	2.5" Cal.	B&B	
CC2	15	Celtis occidentalis	Common Hackberry	3" Cal.	B&B	
GI	6	Gleditsia triacanthos inermis	Thornless Honey Locust	2.5" Cal.	B&B	
GI2	7	Gleditsia triacanthos inermis	Thornless Honey Locust	3" Cal.	B&B	
GD	4	Gymnocladus dioica 'Espresso'	Kentucky Coffeetree	2.5" Cal.	B&B	
GD2	11	Gymnocladus dioica 'Espresso'	Kentucky Coffeetree	3" Cal.	B&B	
QB	7	Quercus bicolor	Swamp White Oak	3" Cal.	B&B	
QMC	3	Quercus macrocarpa	Burr Oak	2.5" Cal.	B&B	
QM	6	Quercus macrocarpa	Burr Oak	3" Cal.	B&B	
TR	4	Tilia americana 'Redmond'	Redmond American Linden	2.5" Cal.	B&B	
TR2	13	Tilia americana 'Redmond'	Redmond American Linden	3" Cal.	B&B	
ORNAMENTAL TREES						
AP	7	Aesculus pavia	Red Buckeye	6' Ht.	B&B	
AC	14	Amelanchier x grandiflora 'Autumn Brilliance'	Autumn Brilliance Apple Serviceberry	6' Ht.	B&B	
CI	10	Crataegus crus-galli inermis	Thornless Cockspur Hawthorn	6' Ht.	B&B	
EVERGREEN SHRUBS						
APG	36	Aesculus parviflora	Bottlebrush Buckeye	3' Ht.	Pot	
AM	25	Aronia melanocarpa elata	Glossy Black Chokeberry	3' Ht.	Pot	
CS	35	Cornus sericea 'Isanti'	Isanti Red Twig Dogwood	3' Ht.	Pot	
CAS	30	Corylus americana	American Hazelnut	3' Ht.	Pot	
KA	26	Diervilla x 'CODIERVI1' TM	Kodiak Red Diervilla	2' Ht.	Pot	
FG	21	Fothergilla gardenii	Dwarf Fothergilla	2' Ht.	Pot	
HW	21	Hydrangea quercifolia 'Pee Wee'	Pee Wee Oakleaf Hydrangea	2' Ht.	Pot	
PO	16	Physocarpus opulifolius 'SMPHOGLAY' TM	Ginger Wine Ninebark	3' Ht.	Pot	
RL	17	Rosa rugosa 'Purple Pavement'	Purple Pavement Rose	2' Ht.	Pot	
VK	34	Viburnum dentatum	Viburnum	3' Ht.	Pot	
FERNS						
OC	24	Osmunda cinnamomea	Cinnamon Fern	1 gal.	Pot	
ORNAMENTAL GRASSES						
CK	58	Calamagrostis x acutiflora 'Karl Foerster'	Karl Foerster Feather Reed Grass	1 gal.	Pot	
PS	12	Panicum virgatum 'Shenandoah'	Shenandoah Switch Grass	1 gal.	Pot	
SL	9	Schizachyrium scoparium	Little Bluestem	1 gal.	Pot	
SH	43	Sporobolus heterolepis	Prairie Dropseed	1 gal.	Pot	
PERENNIALS						
BA	11	Baptisia australis	Blue Wild Indigo	1 gal.	Pot	
GV2	21	Gaillardia x grandiflora	Purple Coneflower	1 gal.	Pot	
PS	64	Phlox subula	Creeping Phlox	1 gal.	Pot	

CONCEPT PLANT SCHEDULE

EXISTING DECIDUOUS TREES TO REMAIN 11

EXISTING EVERGREEN TREES TO REMAIN 10

ECONOMY HEATHE SEED MIX 74,750 sf

STORMWATER SEED MIX 25,015 sf

EMERGENT STORMWATER SEED MIX 1,567 sf

TURF AREA - SEEDING 15,312 sf

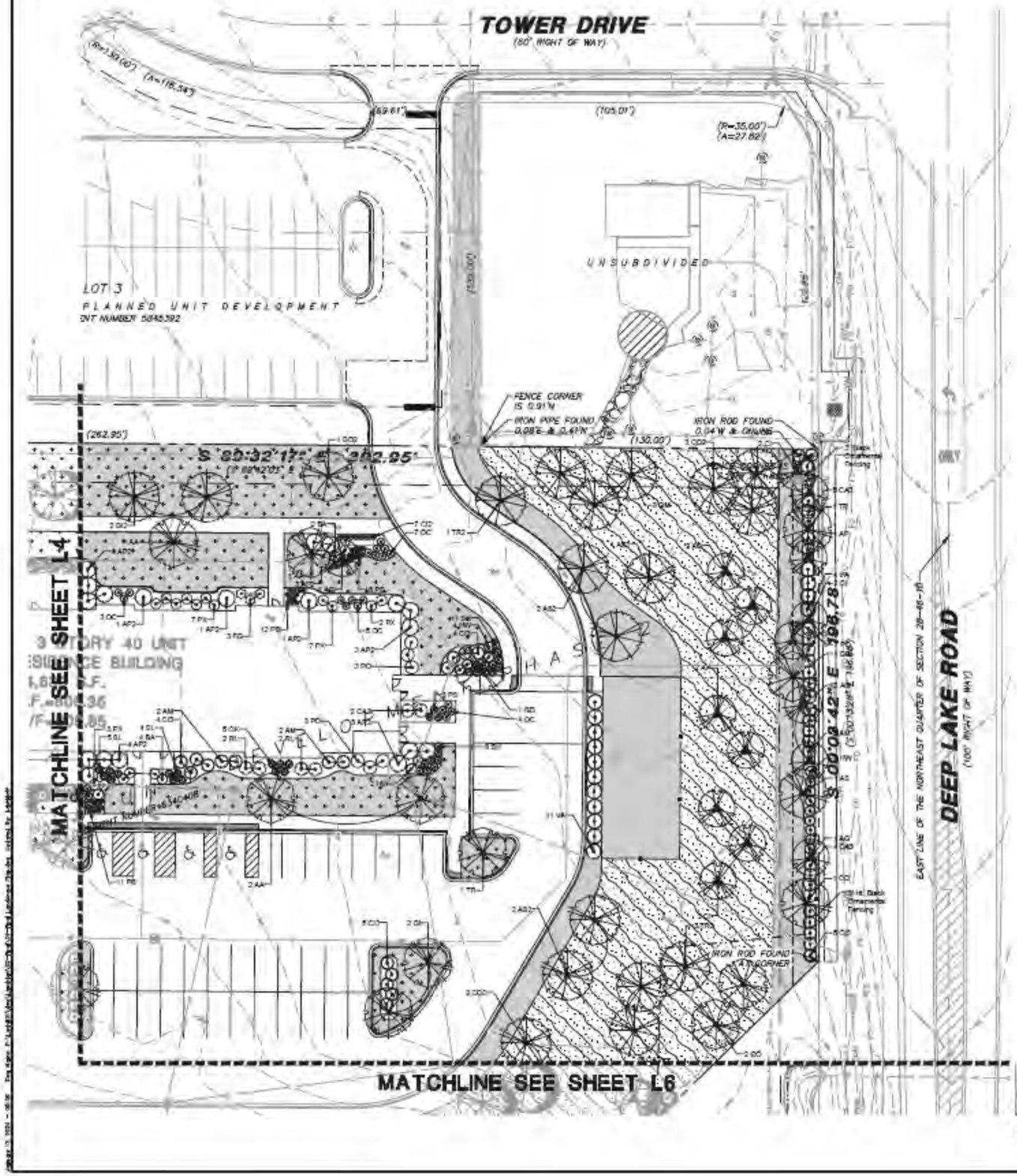
TURF AREA - SOD 23,132 sf

GRAPHIC SCALE

Manhard CONSULTING

LAKE VILLA SENIOR LOFTS
VILLAGE OF LAKE VILLA, ILLINOIS
LANDSCAPE PLAN - NORTHWEST

SHEET
L4 of L7
LAC LVL01

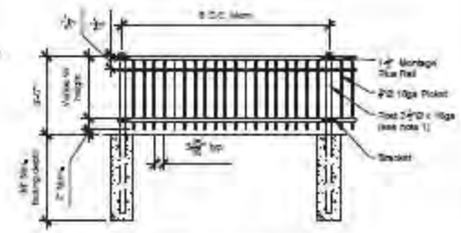


PLANT SCHEDULE

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	REMARKS
CONIFEROUS TREES						
TD	10	Taxodium distichum	Bald Cypress	2" Cal.	B&B	
DECIDUOUS TREES						
AS	5	Acer saccharum	Sugar Maple	2.5" Cal.	B&B	
AS2	6	Acer saccharum	Sugar Maple	3" Cal.	B&B	
AA	6	Acer x freemanii 'Jeffersred' TM	Autumn Blaze Freeman Maple	2.5" Cal.	B&B	
CO	6	Celtis occidentalis	Common Hackberry	2.5" Cal.	B&B	
CO2	15	Celtis occidentalis	Common Hackberry	3" Cal.	B&B	
GI	6	Gleditsia triacanthos inermis	Thornless Honey Locust	2.5" Cal.	B&B	
GI2	7	Gleditsia triacanthos inermis	Thornless Honey Locust	3" Cal.	B&B	
KD	4	Gymnocladus dioica 'Espresso'	Kentucky Coffeetree	2.5" Cal.	B&B	
GD2	11	Gymnocladus dioica 'Espresso'	Kentucky Coffeetree	3" Cal.	B&B	
QB	7	Quercus bicolor	Swamp White Oak	3" Cal.	B&B	
QM2	3	Quercus macrocarpa	Burr Oak	2.5" Cal.	B&B	
QM	8	Quercus macrocarpa	Burr Oak	3" Cal.	B&B	
TR	4	Tilia americana 'Redmond'	Redmond American Linden	2.5" Cal.	B&B	
TR2	13	Tilia americana 'Redmond'	Redmond American Linden	3" Cal.	B&B	
ORNAMENTAL TREES						
AF	7	Aesculus pavia	Red Buckeye	6' Ht.	B&B	
AG	14	Amelanchier x grandiflora 'Autumn Brilliance'	Autumn Brilliance Apple Serviceberry	6' Ht.	B&B	
CJ	10	Cladrastis oroi-gelli inermis	Thornless Cooksupur Hawthorn	6' Ht.	B&B	
DECIDUOUS SHRUBS						
AP2	28	Aesculus parviflora	Bottlebrush Buckeye	3' Ht.	Pot	
AM	25	Aronia melanocarpa elata	Glossy Black Chokeberry	3' Ht.	Pot	
CO	35	Cornus sericea 'Isanti'	Isanti Red Twig Dogwood	3' Ht.	Pot	
CAJ	33	Corylus americana	American Hazelnut	3' Ht.	Pot	
FX	35	Diervilla x 'G2X86421' TM	Kodiak Red Diervilla	3' Ht.	Pot	
FG	21	Fothergilla gardenii	Dwarf Fothergilla	3' Ht.	Pot	
HW	21	Hydrangea quercifolia 'Flee Wee'	Flee Wee Oakleaf Hydrangea	3' Ht.	Pot	
PO	15	Physocarpus opulifolius 'SMNPOSLR' TM	Ginger Wine Ninebark	3' Ht.	Pot	
RL	17	Rosa rugosa 'Purple Pavement'	Purple Pavement Rose	3' Ht.	Pot	
VA	34	Viburnum dentatum	Viburnum	3' Ht.	Pot	
FERNS						
OC	24	Osmunda cinnamomea	Cinnamon Fern	1 gal.	Pot	
ORNAMENTAL GRASSES						
CK	3	Calamagrostis x acutiflora 'Karl Foerster'	Karl Foerster Feather Reed Grass	1 gal.	Pot	
PA	12	Panicum virgatum 'Shenandoah'	Shenandoah Switch Grass	1 gal.	Pot	
SL	9	Schizachyrium scoparium	Little Bluestem	1 gal.	Pot	
SH	45	Sporobolus heterolepis	Prairie Dropseed	1 gal.	Pot	
PERENNIALS						
BA	11	Baptisia australis	Blue Wild Indigo	1 gal.	Pot	
CU	21	Callirhoe involucrata	Purple Poppymallow	1 gal.	Pot	
PC	64	Phlox paniculata	Garden Phlox	1 gal.	Pot	

CONCEPT PLANT SCHEDULE

EXISTING DECIDUOUS TREES TO REMAIN	11
EXISTING EVERGREEN TREES TO REMAIN	10
ECONOMY PRAIRIE SEED MIX	14,205 sf
STORMWATER SEED MIX	26,015 sf
EMERGENT STORMWATER SEED MIX	1,587 sf
TURF AREA - REFERENCE	13,513 sf
TURF AREA - SOD	23,153 sf



1 3' MONTAGE PLUS ORNAMENTAL FENCE- MAJESTIC

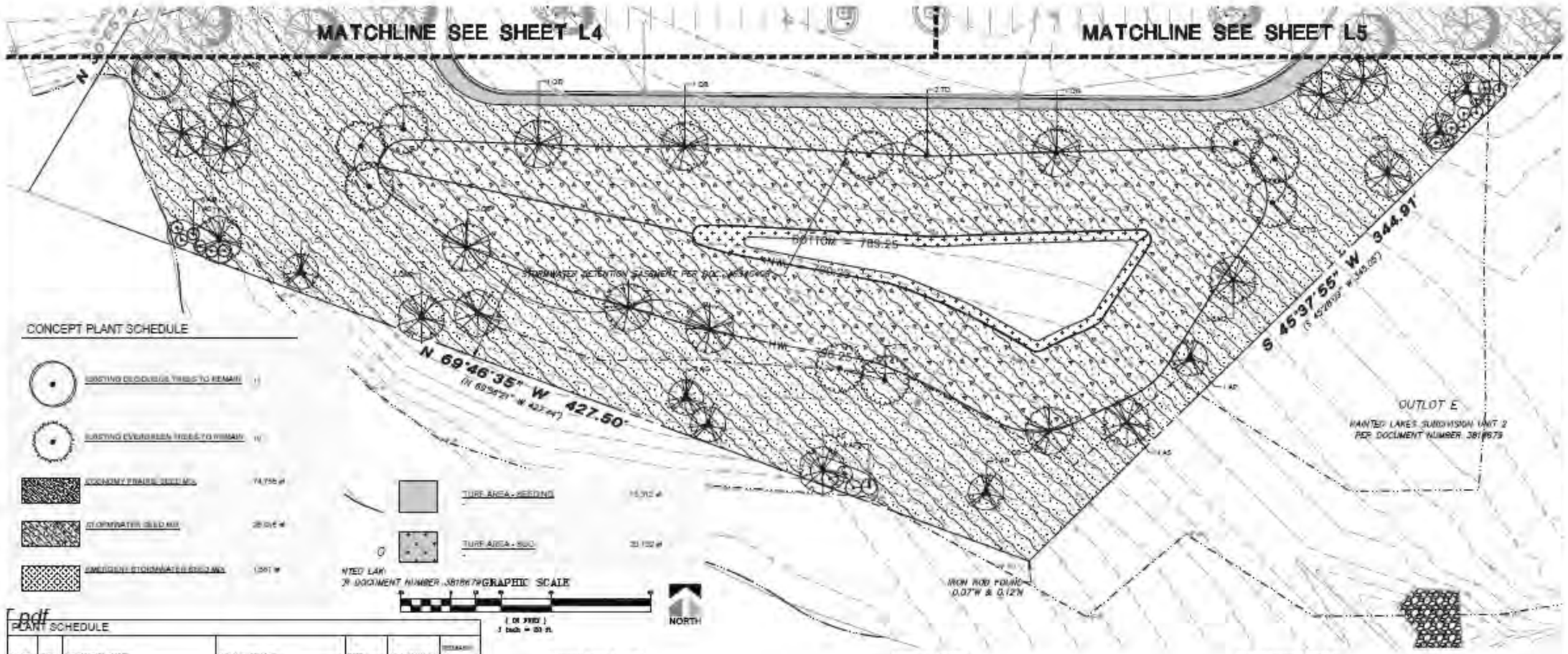
LAKE VILLA SENIOR LOFTS
VILLAGE OF LAKE VILLA, ILLINOIS
LANDSCAPE PLAN - NORTHEAST

Manhard CONSULTING

SHEET
L5 OF L7
LAC LVIL01

MATCHLINE SEE SHEET L4

MATCHLINE SEE SHEET L5



CONCEPT PLANT SCHEDULE

EXISTING DECIDUOUS TREES TO REMAIN (-)

EXISTING EVERGREEN TREES TO REMAIN (-)

ECONOMY PRAIRIE SEED MIX 74,755 sf

STORMWATER SEED MIX 28,924 sf

EMERGENT STORMWATER SEED MIX 1,561 sf

TURF AREA - SEEDING 16,312 sf

TURF AREA - SOD 33,152 sf

PLANT SCHEDULE

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	REMARKS
CONIFEROUS TREES						
TD	10	Taxodium distichum	Bald Cypress	3" Cal.	B&B	
DECIDUOUS TREES						
AE	5	Acer saccharum	Sugar Maple	2.5" Cal.	B&B	
AC2	8	Acer saccharum	Sugar Maple	3" Cal.	B&B	
AA	5	Acer x freemanii 'Jeffersred' TM	Autumn Blaze Freeman Maple	2.5" Cal.	B&B	
CC	8	Celtis occidentalis	Common Hackberry	2.5" Cal.	B&B	
CC2	15	Celtis occidentalis	Common Hackberry	3" Cal.	B&B	
GI	8	Gleditsia triacanthos inermis	Thornless Honey Locust	2.5" Cal.	B&B	
GI2	7	Gleditsia triacanthos inermis	Thornless Honey Locust	3" Cal.	B&B	
GC	4	Gymnocladus dioica 'Espresso'	Kentucky Coffeetree	2.5" Cal.	B&B	
GC2	11	Gymnocladus dioica 'Espresso'	Kentucky Coffeetree	3" Cal.	B&B	
QB	7	Quercus bicolor	Swamp White Oak	3" Cal.	B&B	
QM2	5	Quercus macrocarpa	Burr Oak	2.5" Cal.	B&B	
QM	6	Quercus macrocarpa	Burr Oak	3" Cal.	B&B	
TR	4	Tilia americana 'Redmond'	Redmond American Linden	2.5" Cal.	B&B	
TR2	13	Tilia americana 'Redmond'	Redmond American Linden	3" Cal.	B&B	
ORNAMENTAL TREES						
AP	7	Aesculus pavia	Red Buckeye	6' Ht.	B&B	
AG1	14	Amelanchier x grandiflora 'Autumn Brilliance'	Autumn Brilliance Apple Serviceberry	8' Ht.	B&B	
CI	65	Crataegus crus-galli inermis	Thornless Cockspur Hawthorn	6' Ht.	B&B	
DECIDUOUS SHRUBS						
AP2	38	Aesculus parviflora	Bottlebrush Buckeye	5' Ht.	Pot	
AR	25	Aronia melanocarpa elata	Stosey Black Chokeberry	3' Ht.	Pot	
CD	35	Cornus sericea 'Isanti'	Isanti Red Twig Dogwood	3' Ht.	Pot	
CA2	30	Corylus americana	American Hazelnut	3' Ht.	Pot	
DX	26	Diervilla x 'GDXDS011' TM	Kodiak Red Diervilla	2' Ht.	Pot	
FG	29	Fothergilla gardenii	Dwarf Fothergilla	2' Ht.	Pot	
HW	21	Hydrangea paniculata 'Pee Wee'	'Pee Wee' Oakleaf Hydrangea	2' Ht.	Pot	
PO	16	Physocarpus opulifolius 'SMNPOMJR' TM	Jefgold Wine Ninebark	3' Ht.	Pot	
RC	17	Rosa rugosa 'Purple Pavement'	Purple Pavement Rose	2' Ht.	Pot	
VA	24	Viburnum dentatum	Viburnum	3' Ht.	Pot	
FERNS						
OC	24	Osmunda cinnamomea	Cinnamon Fern	1 gal	Pot	
ORNAMENTAL GRASSES						
CK	16	Calamagrostis acutiflora 'Karl Foerster'	Karl Foerster Feather Reed Grass	1 gal	Pot	
PC	12	Panicum virgatum 'Shenandoah'	Shenandoah Switch Grass	1 gal	Pot	
SL	9	Schizachyrium scoparium	Little Bluestem	1 gal	Pot	
SH	43	Sporobolus heterolepis	Prairie Dropseed	1 gal	Pot	
PERENNIALS						
BA	11	Baptisia australis	Blue Wild Indigo	1 gal	Pot	
CC	21	Callirhoe involucrata	Purple Poppymallow	1 gal	Pot	
PM	84	Phlox divisa	Sand Phlox	1 gal	Pot	

Economy Prairie Seed Mix
Provided by Stantec or Equal

Note: Double installation rates shown below
Application Rate (including cover crop) 47.16 PLS Lbs/AC

Botanical Name	Common Name	Ounces/Acre (PLS)
Permanent Grasses:		
Andropogon gerardii	Big Bluestem	12.00
Bouteloua curtipendula	Side Oats Grama	16.00
Carex frisa	Prairie Sedge Mix	8.00
Elymus canadensis	Canada Wild Rye	64.00
Panicum virgatum	Switch Grass	2.00
Schizachyrium scoparium	Little Bluestem	2.00
Sorghastrum nutans	Indian Grass	12.00
	Total	161.00
Forbs:		
Asclepias tuberosa	Common Milkweed	3.00
Asclepias viridiflora	Butterfly Weed	1.00
Chamaecrista fasciculata	Partridge Pea	16.00
Coreopsis lanceolata	Sand Coreopsis	8.00
Echinacea purpurea	Broad-leaved Purple Coneflower	8.00
Helianthus helianthoides	Thin Leaf Sunflower	8.00
Monarda fistulosa	Wild Bergamot	8.00
Penstemon digitalis	Fingerpod Beard Tongue	2.00
Ratibida pinnata	Yellow Coneflower	4.00
Rudbeckia hirta	Black-Eyed Susan	8.00
Solidago speciosa	Showy Goldenrod	0.50
Oenothera villosa fraseri	Stiktoh Blue Aster	1.00
Symphyotrichum novae-angliae	New England Aster	0.50
	Total	65.00
Temporary Cover:		
Avena sativa	Common Oat	512.00
	Total	512.00

Notes:
1) For best results install Micro Seed Treat inoculum to above seed mix at 4 oz per 100 lbs of seed, or equal.
2) Install proper erosion control measures (if needed) to reduce sediment transport immediately after installation.

Stormwater Seed Mix
Provided by Stantec or Equal

Note: Double installation rates shown below (do not double cover crop)
Application Rate (including cover crop) 42.03 PLS Lbs/AC

Botanical Name	Common Name	Ounces/Acre (PLS)
Permanent Grasses:		
Bouteloua curtipendula	Side Oats Grama	4.00
Carex lacustris	Common Lake Sedge	0.50
Carex lupulina	Bottlebrush Sedge	2.00
Carex vulpinoidea	Brown Fox Sedge	2.00
Eleocharis obtusa	Blunt Spike Rush	0.50
Elymus virginicus	Virginia Wild Rye	24.00
Glyceria striata	Fowl Manna Grass	1.00
Juncus effusus	Common Rush	1.00
Leersia oryzoides	Rice Cut Grass	1.00
Panicum virgatum	Switch Grass	2.00
Schizachyrium scoparium	Little Bluestem	2.00
Scirpus atrovirens	Dark Green Bulrush	2.00
Scirpus cyperinus	Wool Grass	1.00
	Total	44.00
Forbs:		
Alisma subcordatum	Common Water Plantain	2.00
Asclepias incarnata	Swamp Milkweed	2.00
Bidens sp.	Bidens (Various) Mix	2.00
Eupatorium perfoliatum	Common Boneset	1.00
Helenium autumnale	Sneezeweed	2.00
Iris spp.	Blue Flag Species	2.00
Lycopus americanus	Common Water Horehound	0.50
Mimulus ringens	Monkey Flower	1.00
Pycnanthemum virginianum	Mint Mountain	0.50
Polygonum spp.	Knotweed Species	2.00
Rudbeckia subtomentosa	Sweet Bay Coneflower	1.00
Rudbeckia triloba	Brown-Eyed Susan	1.50
Sagittaria latifolia	Common Arrowhead	1.00
Stachys palustris	Hedge Nettle	2.00
Symphyotrichum lanceolatum	Panicled Aster	0.50
Symphyotrichum novae-angliae	New England Aster	0.50
Oenothera rosea	Pink Evening Primrose	5.00
	Total	95.00
Temporary Cover:		
Avena sativa	Common Oat	512.00
Juncus tenuis	Path Rush	128.00
	Total	640.00

Notes:
1) For best results install Micro Seed Treat inoculum to above seed mix at 4 oz per 100 lbs of seed, or equal.
2) Install proper erosion control measures (if needed) to reduce sediment transport immediately after installation.

Wetland Emergent Seed Mix
Provided by Stantec or Equal

Note: Double installation rates shown below (do not double cover crop)
Application Rate 33.89 PLS Lbs/AC

Botanical Name	Common Name	Ounces/Acre (PLS)
Permanent Grasses:		
Bolboschoenus fluviatilis	River Bulrush	4.00
Carex comosa	Bristly Sedge	2.00
Carex lacustris	Common Lake Sedge	0.50
Carex lurida	Bottlebrush Sedge	2.00
Carex stricta	Common Tussock Sedge	1.00
Carex vulpinoidea	Brown Fox Sedge	2.00
Eleocharis palustris	Great Spike Rush	1.00
Juncus effusus	Common Rush	1.00
Leersia oryzoides	Rice Cut Grass	3.00
Scirpus acutus	Hard-stemmed Bulrush	1.50
Schoenoplectus pungens	Chairmaker's Rush	1.50
Schoenoplectus tabernaemontani	Great Bulrush	8.00
	Total	28.00
Forbs:		
Acorus americanus	Sweet Flag	1.00
Alisma subcordatum	Common Water Plantain	2.00
Asclepias incarnata	Swamp Milkweed	1.00
Boltonia asteroides	False Aster	2.00
Chelone glabra	Turtlehead	1.00
Lycopus americanus	Swamp Loosestrife	0.50
Eupatorium maculatum	Spotted Joe-Pye Weed	0.50
Mimulus ringens	Wasserlilien (Various Mix)	4.00
Nymphaea x shiloe	Blue Flag	8.00
Lobelia cardinalis	Cardinal Flower	0.25
Lobelia siphilitica	Great Blue Lobelia	0.25
Lycopus americanus	Common Water Horehound	1.00
Mimulus ringens	Monkey Flower	1.00
Pontederia cordata	Pickerel Weed	12.00
Penthorum sedoides	Ditch Stonecrop	0.50
Pontederia cordata	Pickerel Weed	8.00
Sagittaria latifolia	Common Arrowhead	2.00
Sparganium eurycarpum	Common Bur Reed	3.00
Verbena hastata	Blue Vervain	1.00
	Total	52.00
Temporary Cover (do not double):		
Avena sativa	Common Oat	512.00
	Total	512.00

Manhard CONSULTING

LAKE VILLA SENIOR LOFTS
VILLAGE OF LAKE VILLA, ILLINOIS
LANDSCAPE PLAN - SOUTH

SHEET
L6 OF L7
LAC LVIL01

GENERAL PLANTING SPECIFICATIONS:

PART 1 - GENERAL

1-01 DESCRIPTION:

A. Provide trees, shrubs, perennials and groundcovers as shown and specified. This work includes:
   1. Spreading of topsoil or soil preparation
   2. Trees, shrubs, perennials and groundcovers
   3. Planting mixes
   4. Mulch and planting accessories
   5. Fertilizer and herbicide
   6. Maintenance
   7. Warranty of plant material

B. The Contractor shall verify all existing conditions and dimensions in the field prior to bidding and report any discrepancies to the Owner or his/her representative.

1-02 QUALITY ASSURANCE:

A. Comply with site work requirements

B. Plant names indicated must comply with 'Standardized Plant Names' as adopted by the latest edition of the American Joint Committee of Horticultural Nomenclature. Names of varieties which are not listed should conform with those generally accepted by the nursery trade. Stock should be legibly tagged.

C. All plant materials shall conform to the 'American Standards for Nursery Stock' (ASNS), latest edition, published by the American Association of Nurserymen, Washington, D.C.

D. All plant material shall be grown and supplied within a 50 mile radius of the project for a minimum of two full growing seasons.

E. Adhere to sizing requirements as listed in the plant list and/or bid form for the project. A plant shall be measured in its natural standing position.

F. Stock that is furnished shall be at least the minimum size shown. With permission of the landscape architect, substitution from the specified plant list will be accepted only when satisfactory evidence in writing is submitted to the landscape architect, showing that the plant specified is not available. Requests for approval of substitute plant material shall include common and botanical names and size of substitute material. Only those substitutions of at least equivalent size and character to that of the specified material will be approved. Stock which is larger than that which is specified is acceptable with permission of the landscape architect, providing there is no additional cost and that the larger plant material will not be cut down in order to conform to the size indicated.

G. All shrubs shall be dense in form. Shrub lines do not meet these specifications. Shrubs specified by height shall have a spread that is equal to the height measurement. Shrubs which are specified by spread shall exhibit the natural growth habit of the plant by having a greater spread than height.

H. All plant materials are subject to inspection and approval. The landscape architect and Owner reserve the right to select and tag all plant material at the nursery prior to planting. The landscape architect and Owner reserve the right to inspect plant material for size and condition of root systems, the presence of insects and diseases, injuries and latent defects (due to Contractor negligence or otherwise), and to reject unacceptable plant material at any time during progress of the project.

I. Container grown deciduous and/or evergreen shrubs will be acceptable in lieu of balled and burlapped shrubs subject to specified limitations for container grown stock. Size of container grown material must conform to size/height requirements of plant list.

1-03 DELIVERY, STORAGE & HANDLING:

A. Fertilizer shall be delivered in original, unopened and undamaged packaging. Containers shall display weight, analysis and manufacturer's name. Store fertilizer in a manner that will prevent wetting and deterioration.

B. Take all precautions customary concerning proper trade practice in preparing plants for transport. Plants shall be dug, packed and transported with care to ensure protection against injury. Inspection certificates required by law shall accompany each shipment invoice or order to stock and on arrival, the certificate shall be filed with the landscape architect. All plants must be protected from drying out. If plant material cannot be planted immediately upon delivery, said material should be properly protected in a manner that is acceptable to the landscape architect. Heeled-in plants must be watered daily. No plant shall be bound with rope or wire in a manner that could strip bark or break or shear branches.

C. Plant material transported on open vehicles should be covered with a protective covering to prevent wind burn.

D. Dry, loose topsoil shall be provided for planting bed mixes. Muddy or frozen topsoil is unacceptable as working with medium in this condition will destroy its structure, making root development more difficult.

1-04 PROJECT CONDITIONS:

A. Notify landscape architect at least seven (7) working days prior to installation of plant material.

B. It shall be the Contractor's responsibility to locate and protect all existing above and below ground utilities. Utilities can be located and marked (in Illinois) by calling J.U.L.I.E. at (800)892-0123.

C. The Contractor shall provide, at his/her own expense, protection against trespassing and damage to seeded areas, planted areas, and other construction areas until the preliminary acceptance. The Contractor shall provide barricades, temporary fencing, signs, and written warning or policing as may be required to protect such areas. The Contractor shall not be responsible for any damage caused by the Owner after such warning has been issued.

D. The Contractor shall be responsible for the protection of crowns, trunks and roots of existing trees, plus shrubs, lawns, paved areas and other landscaped areas that are to remain intact. Existing trees, which may be subject to construction damage, shall be boxed, fenced or otherwise protected before any work is started. The Owner desires to preserve those trees within and adjacent to the limits of construction except those specifically indicated to be removed on the Drawings. The contractor shall erect protective tree fencing and tree armor at locations indicated on the drawings and around all trees on site which are to be preserved. Protective fencing shall be erected between the limits of construction and any tree preservation areas shown on the Drawings.

E. A complete list of plants including a schedule of sizes, quantities and other requirements is shown on the Drawings and on the bid form. In the event that quantity discrepancies or material omissions occur in the plant materials list, the planting plans shall govern.

1-05 PRELIMINARY ACCEPTANCE:

A. All plantings shall be maintained by the Contractor for a period of 90 days after preliminary acceptance by the Owner or his/her representative. Maintenance shall include, but is not limited to: mowing and edging turf, pulling weeds, watering turf and plant material and annual flower maintenance.

1-06 WARRANTY:

A. All plant material (excluding annual color), shall be warrantied for one (1) year after the end of the 90 day maintenance period. The end of the maintenance period is marked by the final acceptance of the Contractor's work by the Owner or his/her representative. Plant materials will be warrantied against defects including death and unsatisfactory growth, except for defects resulting from abuse or damage by others, or unusual phenomena or incidents which are beyond the control of the Contractor. The warranty covers a maximum of one replacement per item.

PART 2 - PRODUCTS

2-01 PLANT MATERIALS:

A. Plants: Provide typical of their species or variety, with normal, densely developed branches and vigorous, fibrous root systems. Only sound, healthy, vigorous plants which are free from sunscald injuries, disfiguring knots, frost cracks, abrasions of the bark, plant diseases, insect eggs, borers, and all forms of infestation shall be provided. All plants shall have a fully developed form without voids and open patches.
   1. Balled and burlapped plants shall have a firm natural ball of earth of sufficient diameter and depth to encompass a root system necessary for a full recovery of the plant. Root ball sizes shall comply with the latest edition of the 'American Standards for Nursery Stock' (ASNS). Root balls that are cracked or mushroomed are unacceptable.
   2. Container grown stock should be grown for an amount of time that is of sufficient length for the root system to have developed enough to hold its soil together, firm and whole. Plants will not be loose in their containers, nor shall they be pot-bound and all container grown stock will comply with the sizes stated on the plant list.
   3. No evidence of wounds or pruning cuts shall be allowed unless approved by the Landscape Architect.
   4. Evergreen trees shall be branched to the ground. The height of evergreen trees are determined by measuring from the ground to the first lateral branch closest to the top. Height and/or width of other trees are measured by the mass of the plant not the very tip of the branches.
   5. Shrubs and small plants shall meet the requirements for spread and/or height indicated in the plant list. The height measurement shall be taken from ground level to the average height of the top of the plant, not the longest branch. Single stem or thin plants will not be accepted. Side branches shall be flushed with growth and have good form to the ground. Plants shall be in a moist, vigorous condition, free from dead wood, bruises or other root or branch injuries.

2-02 ACCESSORIES:

A. Topsoil:
   1. Topsoil shall be fertile, natural topsoil of a loamy character, without admixture of subsoil material. Topsoil shall be reasonably free from clay, lumps, coarse sand, stones, plants, roots, sticks and other foreign materials with a pH between 6.5 to 7.0.

B. Topsoil for seed areas shall be a minimum of 6".

C. Soil amendments shall be as follows:
   1. For trees and shrubs the plant pit will be backfilled with pulverized black dirt.
   2. For perennials and ornamental grasses the soil mixture will be as follows: CM-63 General Purpose Peat Based Mix as supplied by Midwest Trading. Top beds with 5" of CM-63 and till into existing beds to a depth of 8". Soil mixtures are available from Midwest Trading. Midwest Trading, St. Charles, IL 60174 (630) 365-1990

D. Fertilizer:
   1. For trees and shrubs use: 14-4-8 briquettes 17 g or equivalent available from Arthur Clesen, Inc. Follow manufacturer's recommendation for application. Arthur Clesen, Inc. 543 Diana Drive, Wheeling, IL 60090 (847)537-2177
   2. For turf areas use 0-24-16 Classen Fairway with micronutrients with minor elements 3.0 % S, .02% B, .05% Cu, 1.0% Fe, .0006% Mo, .10% Mn available from Arthur Clesen or approved equal.

E. Herbicide:
   1. Round-Up or approved equal

F. Mulch:
   1. Bark mulch shall be finely shredded hardwood bark which has been screened and is free of any green foliage, twigs, rocks, sawdust, wood shavings, growth or germination inhibiting ingredients, or other foreign materials. Bark mulch is available from Midwest Trading.
   2. Mushroom compost as available from Midwest Trading.

G. Water:
   1. Water service will be available on the site, with the cost of water being paid by the Owner. Transporting of the water from the source to the work areas shall be the responsibility of the Landscape Contractor. All necessary hose, piping, tank truck, etc. shall be supplied by the Landscape Contractor.

H. Guying:
   1. Stakes: 5/8" x 40" steel eye anchor with 4" helix
   2. Cable:
      a. Trees under 5": flexible 1/8" galvanized aircraft cable, 7x7 strand or approved equal
      b. Trees 5" and over: flexible 3/16" galvanized aircraft cable, 7x7 strand or approved equal
   3. Turnbuckles: 5/16", eye and eye, with 4" takeup.
   4. Hose: new two-ply reinforced rubber hose, minimum 1/2" I.D.

I. Tree wrap: Burlap tree wrap 4" wide.

J. Twine: Soft nursery jute.

PART 3 - INSTALLATION OF PLANT MATERIAL

3-01 FIELD VERIFICATION:

A. Examine proposed planting areas and conditions of installation. Do not start planting work until unsatisfactory conditions are corrected.

3-02 PREPARATION:

A. All planting techniques and methods shall be consistent with the latest edition of 'Horticulture Standards of Nurserymen, Inc.' and as detailed on these Drawings.

B. Planting shall be performed by experienced workmen familiar with planting procedures under the supervision of a qualified supervisor.

C. All underground utilities must be located and marked clearly.

D. Apply Round-Up or approved equivalent to kill any existing vegetation in all areas to be planted. Confirm length of waiting period between chemical application and plant installation with manufacturer. Do not begin planting operations until prescribed post-application waiting period has elapsed. Take extreme care to avoid chemical drift to adjoining properties of landscape plantings.

E. Prior to all planting, rototill all areas to be landscaped to prepare for plant installation to a minimum depth of 12". Eliminate uneven areas and low spots. Maintain lines, levels, profiles and contour. Changes in grade are to be gradual. Blend slopes into level areas. Remove all debris, weeds and undesirable plants and their roots from areas to be planted. Remove all concrete slag larger than 2" in diameter.

F. Topsoil shall be spread over the site at a minimum depth of 6". For those areas which are indicated as prairie or natural areas on the Drawings, a topsoil depth of 18" is recommended where possible.

G. It shall be the responsibility of the landscape contractor to prepare all seeded areas by disking and raking prior to planting seed. Soil shall be loosened and scarified to a minimum depth of 6". Fine grading of all seeded areas is required. Maximum size of stone or topsoil lump is 1".

H. Locate all plant material as indicated or as approved in the field by the Landscape Architect. If obstructions are encountered which are not shown on the drawings, then do not proceed with planting operations until alternate plant locations have been selected.

I. Planting holes shall be constructed as shown on the planting details. Holes shall be hand dug or machine dug. Great care will be taken to not excavate the hole deeper than the root ball and the diameter shall be a minimum of two times the root ball width. Remove any materials encountered in excavation that may be injurious to plant growth, including stones larger than 2" in diameter or other debris. Soil to be used as backfill should be pulverized.

J. Provide pre-mixed planting mixture for use around root systems and root balls of the plants. The mixtures are outlined in section B of part 2-02.

K. Prior to planting, provide additional topsoil to all planting beds to bring the finish grade of the bed to .2" above lawn grade and to finish grade of adjacent hard surface grades.

L. Add 2" thickness of mushroom compost to all annual, perennial and groundcover beds. Finish grade bed and install plants.

3-03 PLANTING PROCEDURES:

A. Set plant material in the planting hole to proper grade and alignment. Set plants upright and plumb. Set plant material 2" above the adjacent finish grade. Remove burlap from top 1/3 of root ball. Remove treated burlap (green). Cut and remove or cut and fold down upper half of wire basket, dependent upon tree size. Backfill hole by firmly tamping soil to avoid any air pockets or voids.

B. Set balled and burlapped plants in the planting hole and compact 6" of soil around the base of the ball. Backfill remaining space with planting mixture. Water plants immediately after planting to eliminate all voids and thoroughly soak the plant root ball.

C. Space groundcover plants according to dimensions given on the plans. Adjust spacing as necessary to evenly fill planting bed with indicated number of plants. Plant to within 1/2" of the trunks of trees and shrubs or at the edge of the plant ball, whichever is closest. Plant to within 12" of edge of bed.

D. Mulching:
   1. Install 4" depth of mulch around all tree and shrub beds as indicated on drawings or planting details. Mulch shrub planting areas as continuous beds. Do not place mulch directly against tree trunk; form mulch to create an inverted cone around trunk.
   2. Mulch perennial, groundcover and annual planting beds with 2" mushroom compost. Water mulched areas thoroughly after placing mulch.

E. Tree wrapping is not required, unless the Contractor feels it is necessary due to characteristics of a particular species or past experience with the species. The landscape architect will be notified as to which trees are to be wrapped and shall inspect the trunks(s) before wrapping. Tree wrap will not be used to cover damage or defects. When wrapping is done, trunks will be wrapped spirally with approved tree wrapping tape that is not less than 4" wide, and securely tied with suitable cord at the top, bottom and 2" intervals along the trunk. Wrap from ground to the height of the first branch.

F. Staking and guying of trees is optional. If the Contractor chooses to stake all or part of the trees, he/she shall use the method specified in the planting details. One (1) stake is to be used on trees of 1" caliper and under, or 4' height and under. Two (2) stakes are to be used on trees of 1" to 2 3/4" caliper. Guy trees of 3" caliper or larger at three (3) per tree. The root ball will not be planted with a stake. Stakes are to be driven at least eighteen (18) inches into subsoil below the planting hole. Stakes and wire attachments shall be removed after three months for spring planted material and by the following May for fall planted stock by the Contractor. Staking and guying should be done immediately after lawn seeding or sodding operations.

G. Seeding of specified lawn areas on plans will be treated as follows:
   1. Topsoil shall be spread over all areas to be seeded to a minimum depth of 6" when compacted (to be performed by others).
   2. Seed mixture and application rate - use Premium seed mix as supplied by Arthur Clesen, Inc. Apply at a rate of 5 lbs./1000 s.f.
   3. Apply fertilizers and conditioners at the rate specified per soil test findings. In lieu of soil test results, apply two (2) tons of ground agricultural limestone and 1000 lbs. 10-10-10 or equivalent analysis fertilizer per acre. At least 40% of the fertilizer nitrogen shall be of an organic origin.
   4. Soil preparation areas where vehicular traffic has compacted the soil shall be loosened/scarified to a minimum depth of 6" before fertilizing and seeding. Fine grading of all seeded areas is required. Maximum size of stone or topsoil lump is 1".
   5. Watering seeded areas shall be done to ensure proper germination. Once seeds have germinated, watering may be decreased but the seedings must never be allowed to dry out completely. Frequent watering should be continued approximately four (4) weeks after germination or until grass has become sufficiently established to warrant watering on an 'as needed' basis.
   6. Turf is being established on a variety of slope conditions. It shall be the Contractor's responsibility to determine and implement whatever procedures he/she deems necessary to establish the turf as part of his/her work. Seeded areas will be accepted when all areas show a uniform stand of the specified grass in healthy condition and at least 90 days have elapsed since the completion of this work. The Contractor shall submit with his/her bid a description of the methods and procedures he/she intends to use.

H. Erosion Control Blanket:
   1. Erosion Control Blanket shall be installed per manufacturer's recommendation in all areas shown on the plan.
   2. Install S-75 Erosion Control Blanket as manufactured by North American Green or approved equal.
   3. Blanket should be premarked with staple pattern.
   4. Staples should be 8" wire staples, applied at two (2) per square yard minimum.
   5. Suitable erosion control practices shall be maintained by the CONTRACTOR in accordance with Illinois Urban Manual and all applicable Soil Erosion and Sedimentation Control ordinances and the PLANS.

I. Sodding of specified lawn areas on plans will be completed as follows:
   1. Rake soil surface to receive sod to completely remove any soil crust no more than one day prior to laying sod.
   2. Moisten prepared surface immediately prior to laying sod. Water thoroughly and allow surface moisture to dry before planting lawns. Do not create a muddy soil condition.
   3. Sod shall be laid within 24 hours from the time of stripping. Do not plant dormant sod or if the ground is frozen.
   4. Lay sod to form a solid mass with tightly fitted joints. Butt ends and sides of sod strips; do not overlap. Stagger strips to offset joints in adjacent courses. Work from boards to avoid damage to subgrade or sod. Work alfted soil into minor cracks between pieces of sod; remove excess to avoid smothering of adjacent sod.
   5. Place top elevation of sod 1/2 inch below adjoining edging or paving.
   6. Water sod thoroughly with a fine spray immediately after planting.
   7. After sod and soil have dried, roll seeded areas to ensure a good bond between the sod and soil, and to remove minor depressions and irregularities.
   8. Sodded slopes 3:1 or greater shall be staked to prevent erosion and washout.
   9. Warranty sodding for a period of one (1) year from the end of the 90 day maintenance period. If sod fails or lacks vigor and full growth as determined by the Landscape Architect, the Contractor will repeat site preparation operations and re-sod affected areas at the Contractor's expense.
   10. Note: Sod shall be a premium Kentucky Bluegrass blend, and is required in all areas indicated on the plans as well as areas which have been affected by construction. Sod can be placed as long as water is available and the ground surface can be properly prepared. Sod shall not be laid on frozen or snow-covered ground. Sod shall be strongly rooted, not less than two (2) years old and free of weeds and undesirable native grasses. Sod should be machine cut to pad thickness of 3/4" (plus or minus 1/4"), excluding top growth and thatch. Provide only sod capable of vigorous growth and development when planted (viable, not dormant). Provide sod of uniform pad sizes with maximum 5% deviation in either length or width. Broken pads or pads with uneven ends will not be acceptable. Sod pads incapable of supporting their own weight when suspended vertically with a firm grasp on the upper 10% of pad will not be accepted.

J. Timing of plant material and seeding operations:
   1. Seeding of specified areas shall occur when the soil temperature is above 55° F. No seed shall be sown during periods of high winds, or when the ground is not in proper condition for seeding (see section 3-02 (G)). Seeding operations for the specified mixes shall occur in the spring time frame of April 15 through June 30 and in the summer time frame of August 15 through December 1. The mixes containing bluegrass and fescue seed must have six weeks to harden off for winter survival.
   2. Sod shall be installed when the ground is not frozen or snow covered and temperatures are less than 90° F. It shall not be placed during a period of extended drought.
   3. Herbaceous ornamental plants shall be planted between May 1 and June 15 or between August 15 and December 1.
   4. Spring planting of woody ornamental plants shall be performed from the time the soil can be easily worked until June 1, except that evergreen planting shall end on May 15. Oak, hawthorn and red maple species will only be planted during this spring planting period. Fall planting will begin August 15 and will continue until the ground cannot be worked satisfactorily, except that evergreen planting shall be performed between August 15 and December 1.

3-04 MAINTENANCE:

A. All plantings shall be maintained by the Contractor for a period of 90 days after preliminary acceptance by the Owner or his/her representative. Maintenance shall include but is not limited to: mowing and edging turf, pulling weeds, watering turf areas and plant material plus annual flower maintenance. The Contractor will reset settled plants to proper grade and position. Dead material will be removed. Stakes and guy wires will be tightened and repaired as required.

3-04 ACCEPTANCE:

A. All plant material (excluding annual color), shall be warrantied for one (1) year after the end of the 90 day maintenance period. The end of the maintenance period is marked by the final acceptance of the Contractor's work by the Owner or his/her representative.

3-06 SITE CLEAN-UP:

A. The Contractor shall protect the property of the Owner and the work of other contractors. The Contractor shall also be directly responsible for all damage caused by the activities and for the daily removal of all trash and debris from his/her work area to the satisfaction of the landscape architect.

Manhard CONSULTING

LAKE VILLA SENIOR LOFTS
VILLAGE OF LAKE VILLA, ILLINOIS
LANDSCAPE SPECIFICATIONS

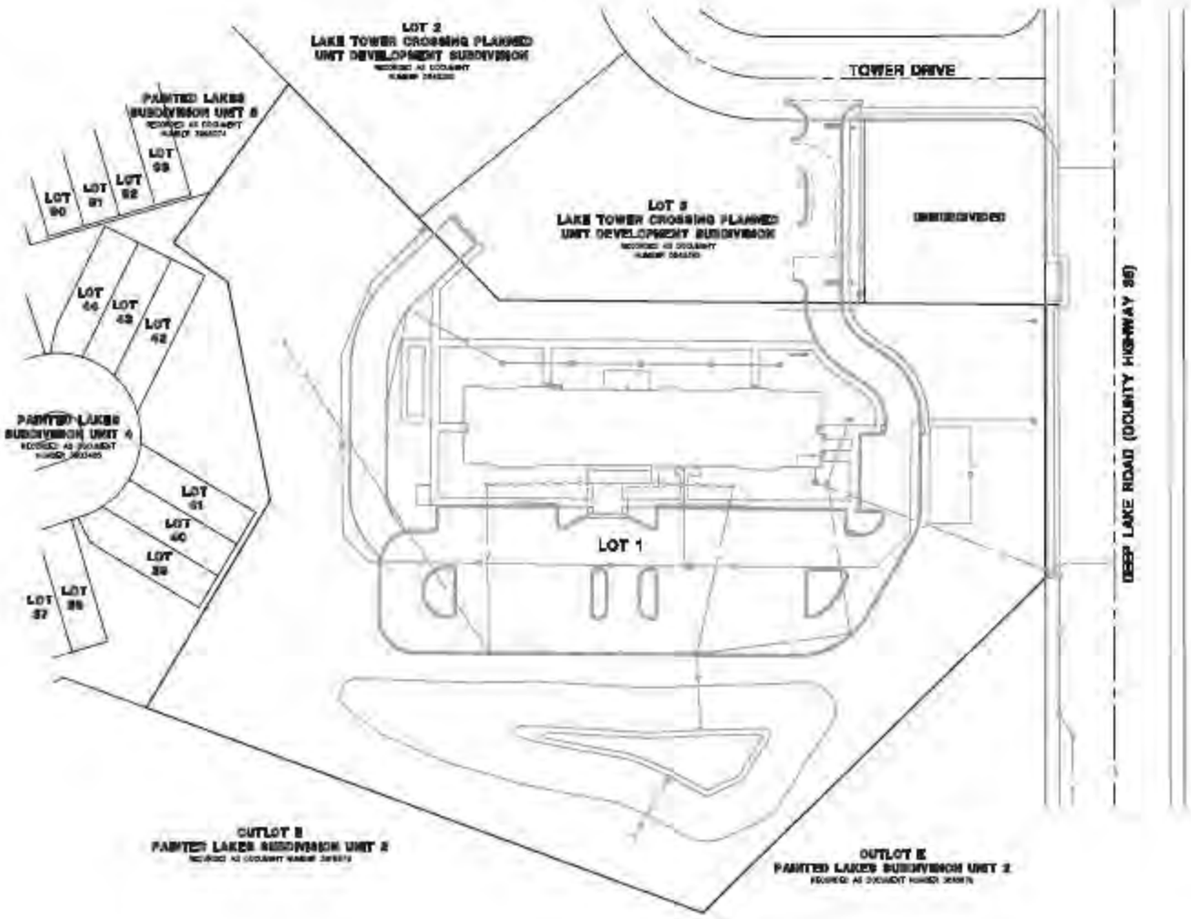
Project Mgr: MJF
Proj. Manager: JSD
Drawn by: JSD
Date: 11/26/25
Scale: N.T.S.

SHEET
L7 OF L7
LAC LVLO1

FINAL PLANNED UNIT DEVELOPMENT PLAT
OF
LAKE TOWER CROSSING PLANNED UNIT DEVELOPMENT - PHASE 3

BEING A SUBDIVISION OF THAT PART OF SECTION 28, TOWNSHIP 46 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, IN LAKE COUNTY, ILLINOIS.

LOCATION MAP
NOT TO SCALE



GRAPHIC SCALE

(IN FEET)
1 inch = 60 ft.

BASIS OF BEARINGS

COORDINATES AND BEARINGS ARE BASED UPON THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE (NAD 83), ADJUSTED TO GROUND VALUES, AS ESTABLISHED BY A REAL-TIME KINEMATIC (RTK) GLOBAL NAVIGATION SATELLITE SYSTEM (GNSS) UTILIZING THE TRIMBLE VRS NOW NETWORK.

SURVEY PREPARED FOR

LINCOLN AVENUE CAPITAL
401 WILSHIRE BOULEVARD, SUITE 1070
SANTA MONICA, CALIFORNIA 90401

SUBMITTED BY/RETURN TO:

LINCOLN AVENUE CAPITAL
401 WILSHIRE BOULEVARD, SUITE 1070
SANTA MONICA, CALIFORNIA 90401

DEVELOPER

LINCOLN AVENUE CAPITAL
401 WILSHIRE BOULEVARD, SUITE 1070
SANTA MONICA, CALIFORNIA 90401

SURVEYOR/ENGINEER

MANHARD CONSULTING
700 SPRINGER DRIVE
LOMBARD, ILLINOIS 60148

PROPERTY AREA

LOT 1 = 226,956 SQUARE FEET (5.21 ACRES)

TOTAL AREA = 226,956 SQUARE FEET (5.211 ACRES)

PIN'S

02-09-301-178

ACCESS NOTES

1. DIRECT ACCESS TO OR FROM COUNTY HIGHWAY 26 (DEEP LAKE ROAD) FROM LOT 1 SHALL BE ALLOWED PER LAKE TOWER CROSSING PLANNED UNIT DEVELOPMENT PHASE 3 RECORDED AS DOCUMENT NUMBER 6340400.

SURVEYOR'S NOTES

1) DISTANCES ARE MARKED IN FEET AND DECIMAL PLACES THEREOF. NO DIMENSION SHALL BE ASSUMED BY SCALE MEASUREMENT HEREON. DISTANCES AND/OR BEARINGS SHOWN IN PARENTHESES (M56/87) ARE RECORD OR DEED VALUES.

2) THIS SUBDIVISION MAY BE SUBJECT TO MATTERS OF TITLE, WHICH MAY BE REVEALED BY A CURRENT TITLE REPORT, PRE-EXISTING EASEMENTS, SETBACKS, AND OTHER RESTRICTIONS WHICH MAY BE FOUND IN A CURRENT TITLE REPORT. LOCAL ORDINANCES, DEEDS OR OTHER INSTRUMENTS OF RECORD MAY NOT BE SHOWN.

3) THIS SUBDIVISION MAY BE SUBJECT TO A CERTAIN DECLARATION OF PROTECTIVE COVENANTS, CONDITIONS AND RESTRICTIONS RECORDED SEPARATELY FROM THIS PLAT.

4) MONUMENTS SHALL BE SET AT ALL PROPERTY CORNERS AND POINTS OF GEOMETRIC CHANGE IN ACCORDANCE WITH 765 ILCS 205/1 UPON THE RECORDATION OF THE FINAL PLAT OF SUBDIVISION, UNLESS OTHERWISE NOTED. MONUMENTS SET ARE 5/8" DIAMETER BY 24" LONG REBARS.

5) SAID PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A SUBDIVISION SURVEY. MANHARD CONSULTING, LTD. IS A PROFESSIONAL DESIGN FIRM, REGISTRATION NUMBER 184003350, EXPIRES APRIL 30, 2020.

SHEET INDEX

Manhard CONSULTING

LAKE TOWER CROSSING PLANNED UNIT DEVELOPMENT - PHASE 3

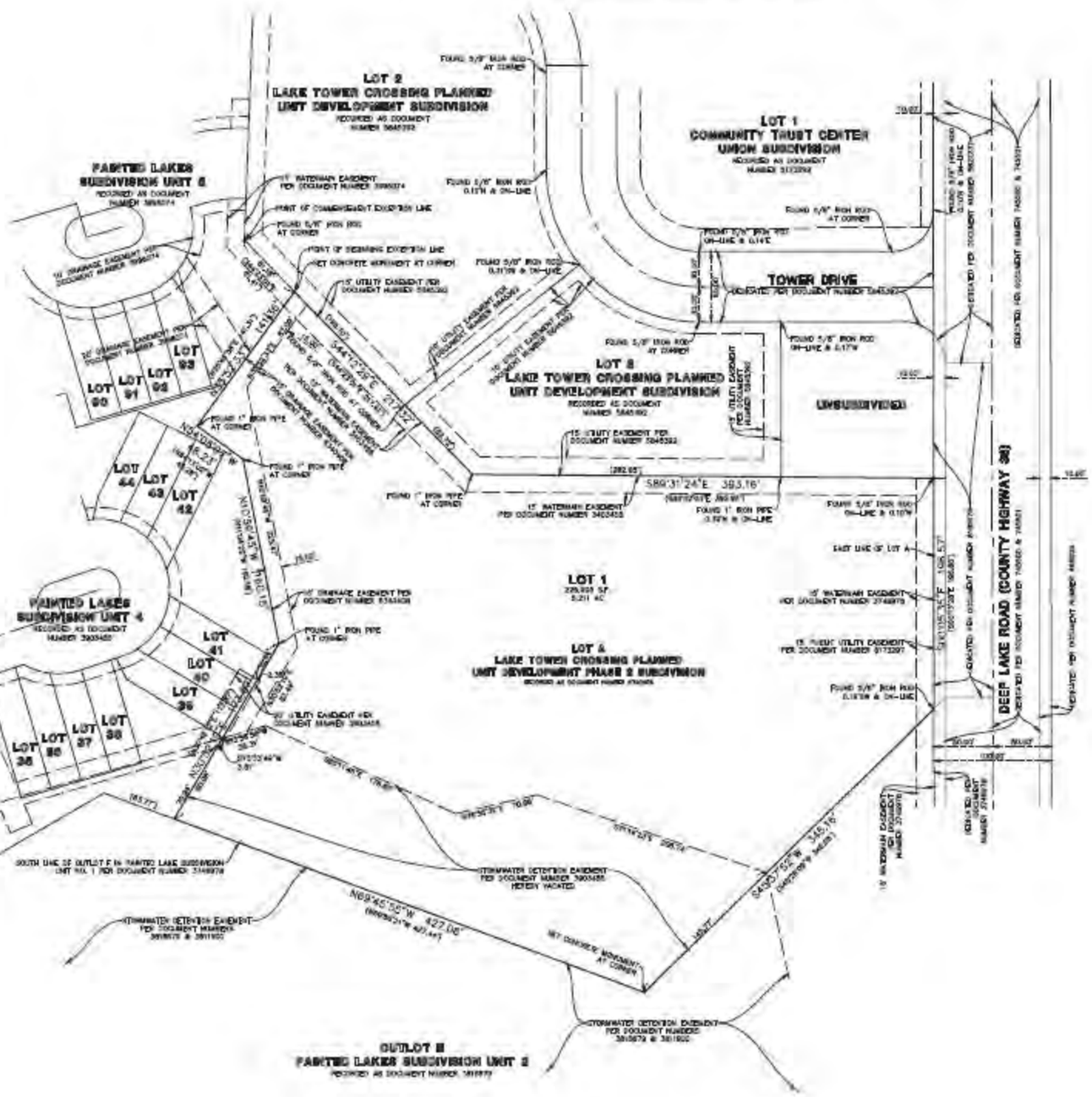
LAKE VILLA, ILLINOIS

FINAL PLANNED UNIT DEVELOPMENT SUBDIVISION

SHEET 1 OF 4

FINAL PLANNED UNIT DEVELOPMENT PLAT
OF
LAKE TOWER CROSSING PLANNED UNIT DEVELOPMENT - PHASE 3

BEING A SUBDIVISION OF THAT PART OF SECTION 28, TOWNSHIP 46 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, IN LAKE COUNTY, ILLINOIS



BASIS OF BEARINGS

COORDINATES AND BEARINGS ARE BASED UPON THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE (NAD 83), ADJUSTED TO GROUND VALUES AS ESTABLISHED BY A REAL-TIME KINEMATIC (RTK) GLOBAL NAVIGATION SATELLITE SYSTEM (GNSS) UTILIZING THE TRIMBLE VRS NOW NETWORK.

LEGEND

- EX. PROPERTY LINE
- EX. CENTERLINE
- EX. UNDERLYING LOT LINE
- EX. LOT LINE
- EX. EASEMENT LINE

ACCEPTANCE OF PUBLIC UTILITY EASEMENT VACATION CERTIFICATE

THE APPROVING AUTHORITIES ON SIGNING THIS DOCUMENT HEREBY RELEASE AND CONSENT TO THE RELEASE, VACATION AND ABROGATION OF THE STORMWATER DETENTION EASEMENT WITHIN THE DESIGNATED AREAS AS SHOWN HEREON RECORDED AS DOCUMENT NUMBER 3809458.

ACCEPTED: _____ DATE: _____
AT&T CORPORATION (F.K.A. ILLINOIS BELL TELEPHONE CO.)
_____
PRINTED NAME AND TITLE

ACCEPTED: _____ DATE: _____
COMMONWEALTH EDISON
_____
PRINTED NAME AND TITLE

ACCEPTED: _____ DATE: _____
NORTHERN ILLINOIS GAS COMPANY
_____
PRINTED NAME AND TITLE

ACCEPTED: _____ DATE: _____
CO. CLERK OF LAKE COUNTY
_____
PRINTED NAME AND TITLE

ACCEPTED: _____ DATE: _____
VILLAGE OF LAKE VILLA
_____
PRINTED NAME AND TITLE

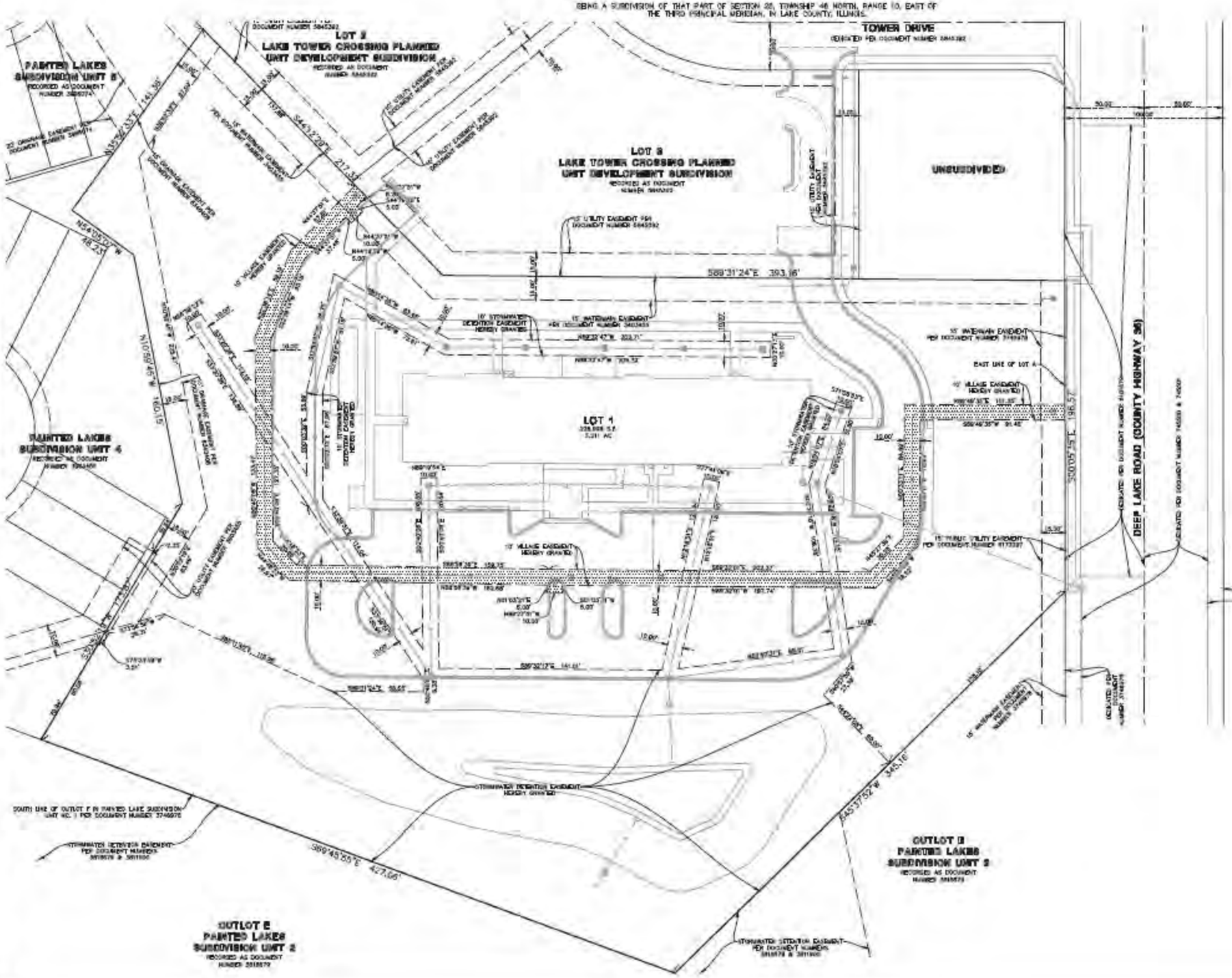
Manhard CONSULTING

LAKE TOWER CROSSING PLANNED UNIT DEVELOPMENT - PHASE 3
LAKE VILLA, ILLINOIS
FINAL PLANNED UNIT DEVELOPMENT SUBDIVISION

SHEET 2 OF 4

FINAL PLANNED UNIT DEVELOPMENT PLAT
OF
LAKE TOWER CROSSING PLANNED UNIT DEVELOPMENT - PHASE 3

BEING A SUBDIVISION OF THAT PART OF SECTION 28, TOWNSHIP 46 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, IN LAKE COUNTY, ILLINOIS.



GRAPHIC SCALE

(IN FEET)
1 inch = 60 ft.

BASIS OF BEARINGS

COORDINATES AND BEARINGS ARE BASED UPON THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE (NAD 83), ADJUSTED TO GROUND VALUES, AS ESTABLISHED BY A REAL-TIME KINEMATIC (RTK) GLOBAL NAVIGATION SATELLITE SYSTEM (GNSS) UTILIZING THE "PINNACLE VRS NOW NETWORK".

Manhard CONSULTING

LAKE TOWER CROSSING PLANNED UNIT DEVELOPMENT - PHASE 3

LAKE VILLA, ILLINOIS

FINAL PLANNED UNIT DEVELOPMENT SUBDIVISION

PROJECT MGR.	MR
FIELD WORK	AMG
DESIGNED	HJL
DATE	10/29/24
SCALE	1" = 60'

SHEET 3 OF 4

LAC.LVIL21

FINAL PLANNED UNIT DEVELOPMENT PLAT
OF
LAKE TOWER CROSSING PLANNED UNIT DEVELOPMENT - PHASE 3

BEING A SUBDIVISION OF THAT PART OF SECTION 29, TOWNSHIP 46 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, IN LAKE COUNTY, ILLINOIS.

OWNER'S CERTIFICATE

THIS IS TO CERTIFY THAT _____ IS THE LEGAL OWNER OF THE LAND DESCRIBED ON THE ATTACHED PLAT, AND HAS CAUSED THE SAME TO BE SURVEYED, SUBDIVIDED AND THE PLATTED AS SHOWN BY THE PLAT FOR THE USES AND PURPOSES INDICATED THEREON AND DOES HEREBY ACKNOWLEDGE AND ADOPT THE SAME UNDER THE STYLE AND TITLE THEREON INDICATED.

THIS IS TO ALSO CERTIFY THAT THE UNDERSIGNED, AS OWNER OF THE PROPERTY DESCRIBED AS LAKE TOWER CROSSING PLANNED UNIT DEVELOPMENT – PHASE 3 AND LEGALLY DESCRIBED ON THE PLAT OF THE SAME NAME, HAVE DETERMINED TO THE BEST OF OUR KNOWLEDGE THE SCHOOL DISTRICT IN WHICH EACH OF THE FOLLOWING LOTS LIE.

LOT NUMBERS:	SCHOOL DISTRICT
ALL	GRADE SCHOOL DISTRICT NO. 37 HIGH SCHOOL DISTRICT NO. 117 JUNIOR COLLEGE DISTRICT NO. 532

DATED THIS _____ DAY OF _____ A.D., 20__.

BY: _____

_____
PRINTED NAME AND TITLE

OWNER'S NAME AND ADDRESS

_____
_____
_____

NOTARY PUBLIC

STATE OF _____)
) SS
COUNTY OF _____)

I, _____, A NOTARY PUBLIC IN AND FOR THE COUNTY AND STATE AFORESAID, DO HEREBY CERTIFY THAT _____ PERSONALLY KNOWN TO ME TO BE THE SAME PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT, APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT THEY DID SIGN AND DELIVER THE AMEXED PLAT AS A FREE AND VOLUNTARY ACT FOR THE PURPOSES THEREIN SET FORTH.

GIVEN UNDER MY HAND AND NOTARIAL SEAL THIS _____ DAY OF _____ A.D., 20__.

_____
NOTARY PUBLIC

MORTGAGEE CONSENT

THE UNDERSIGNED, AS MORTGAGEE, UNDER THE PROVISIONS OF CERTAIN MORTGAGE DATED _____ AND RECORDED IN THE RECORDER'S OFFICE OF _____ COUNTY, ILLINOIS ON PAGE _____ DAY OF _____ A.D., _____ AS DOCUMENT NUMBER _____, HEREBY CONSENTS TO THE SUBDIVISION STATED HEREIN

DATED: _____ A.D., 20__.

BY: _____

_____
PRINTED NAME AND TITLE

MORTGAGEE'S NAME AND ADDRESS

_____
_____
_____

ATTEST: _____

_____
PRINTED NAME AND TITLE

MORTGAGEE NOTARY BLOCK

STATE OF _____)
) SS
COUNTY OF _____)

I, _____, A NOTARY PUBLIC IN AND FOR THE COUNTY AND STATE AFORESAID, DO HEREBY CERTIFY THAT _____ AND _____ OF _____, WHO ARE PERSONALLY KNOWN TO ME TO BE THE SAME PERSONS WHOSE NAMES ARE SUBSCRIBED TO THE FOREGOING CERTIFICATE, APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT THEY DID SIGN AND DELIVER THIS INSTRUMENT AS A FREE AND VOLUNTARY ACT FOR THE USES AND PURPOSES HEREIN SET FORTH.

GIVEN UNDER MY HAND AND NOTARIAL SEAL THIS _____ DAY OF _____ A.D., 20__.

_____
NOTARY PUBLIC

VILLAGE CLERK'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF LAKE)

I, _____ VILLAGE CLERK OF THE VILLAGE OF LAKE VILLA, ILLINOIS, HEREBY CERTIFY THAT THE PLAT WAS SUBMITTED TO AND BY RESOLUTION, DULY ADOPTED BY THE BOARD OF TRUSTEES OF SAID VILLAGE AT ITS MEETING HELD ON _____, 20__, AND THAT THE REQUIRED BOND OR OTHER GUARANTEE HAS BEEN POSTED FOR THE COMPLETION OF THE IMPROVEMENTS REQUIRED BY THE ORDINANCES OF SAID VILLAGE.

IN WITNESS WHEREOF I HAVE HERETO SET MY HAND AND SEAL OF THE VILLAGE OF LAKE VILLA DATED THIS _____ DAY OF _____, A.D., 20__.

_____
VILLAGE CLERK

VILLAGE CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF LAKE)

APPROVED BY THE MAYOR AND BOARD OF TRUSTEES OF THE VILLAGE OF LAKE VILLA, LAKE COUNTY, ILLINOIS.

THIS _____ DAY OF _____, A.D., 20__.

_____
BY: MAYOR

_____
ATTEST: VILLAGE CLERK

PLAN COMMISSION CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF LAKE)

APPROVED BY THE PLAN COMMISSION OF THE VILLAGE OF LAKE VILLA, LAKE COUNTY, ILLINOIS.

THIS _____ DAY OF _____, A.D., 20__.

_____
BY: CHAIRMAN

_____
ATTEST: SECRETARY

VILLAGE TREASURER'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF LAKE)

APPROVED BY THE VILLAGE TREASURER OF THE VILLAGE OF LAKE VILLA, LAKE COUNTY, ILLINOIS.

THIS _____ DAY OF _____, A.D., 20__.

_____
VILLAGE TREASURER

VILLAGE ENGINEER CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF LAKE)

APPROVED BY THE VILLAGE ENGINEER OF THE VILLAGE OF LAKE VILLA, LAKE COUNTY, ILLINOIS.

THIS _____ DAY OF _____, A.D., 20__.

_____
VILLAGE ENGINEER

COUNTY CLERK'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF LAKE)

I, _____ COUNTY CLERK OF LAKE COUNTY, ILLINOIS, DO HEREBY CERTIFY THAT THERE ARE NO DELINQUENT GENERAL TAXES, UNPAID CURRENT GENERAL TAXES, DELINQUENT SPECIAL ASSESSMENTS OR UNPAID CURRENT SPECIAL ASSESSMENTS AGAINST ANY OF THE LAND INCLUDED IN THIS DEDICATION. HOWEVER, I FURTHER CERTIFY THAT I HAVE RECEIVED ALL STATUTORY FEES IN CONNECTION WITH THE PLAT.

GIVEN UNDER MY HAND AND SEAL OF THE COUNTY CLERK OF LAKE COUNTY, ILLINOIS

DATED THIS _____ DAY OF _____, A.D., 20__.

_____
LAKE COUNTY CLERK

COUNTY HIGHWAY ENGINEER CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF LAKE)

THIS PLAT IS HEREBY APPROVED THIS ____ DAY OF _____, A.D., 20____, BY THE COUNTY ENGINEER OF LAKE COUNTY PURSUANT TO 765 ILCS 205/2 ET. SEQ. OF THE ILLINOIS COMPILED STATUTES, AS AMENDED. AS TO VOLUNTARY ACCESS TO COUNTY HIGHWAY 167 (OLD RAVINIA AS DEEP LAKE ROAD). DIRECT ACCESS EITHER TO OR FROM COUNTY HIGHWAY 167 SHALL BE RESTRICTED AS SHOWN ON THIS PLAT AND SHALL BE SUBJECT TO THE LAKE COUNTY HIGHWAY ACCESS REGULATION ORDINANCE WHICH REQUIRES IN PART, THAT APPLICATION BE MADE AND AN ACCESS PERMIT BE OBTAINED FROM THE COUNTY ENGINEER OF LAKE COUNTY PRIOR TO ANY ACCESS INSTALLATION.

_____
COUNTY ENGINEER

VILLAGE EASEMENT PROVISIONS

A PERMANENT NON-EXCLUSIVE EASEMENT (THE "VILLAGE EASEMENT(S)") IS HEREBY RESERVED FOR AND GRANTED TO THE VILLAGE OF LAKE VILLA (THE "VILLAGE") AND TO ITS SUCCESSORS AND ASSIGNS, IN, OVER, ACROSS, UNDER, UPON AND THROUGH THE VILLAGE EASEMENT SHOWN ON THE PLAT FOR THE PURPOSE OF INSTALLING, CONSTRUCTING, INSPECTING, OPERATING, REPLACING, REMOVING, ALTERING, ENLARGING, REMOVING, REPAIRING, CLEANING AND MAINTAINING WATER MAINS, SANITARY SEWERS, STORM SEWERS, STORM DRAINS, DITCHES, SWALES, AND OTHER DRAINAGE IMPROVEMENTS, AND ANY AND ALL MANHOLES, HYDRANTS, VALVES, CONNECTIONS, CATCH BASINS, BUFFALO BOXES AND, WITHOUT LIMITATION, SUCH OTHER INSTALLATIONS AS MAY BE REQUIRED TO FURNISH WATER, SANITARY SEWER, STORM SEWER SERVICES AND DRAINAGE TO THE PROPERTY WHICH IS THE SUBJECT OF THIS PLAT AND/OR TO ANY OTHER PROPERTY IN THE VICINITY, AND SUCH APPURTENANCES AND ADDITIONS THERETO AS THE VILLAGE MAY DEEM NECESSARY, TOGETHER WITH THE RIGHT OF ACCESS ACROSS SAID VILLAGE EASEMENTS FOR THE NECESSARY PERSONNEL AND EQUIPMENT OF THE VILLAGE AND ITS EMPLOYEES, CONTRACTORS, SUBCONTRACTORS AND AGENTS TO DO ANY OR ALL OF THE ABOVE WORK, AND THE RIGHT TO DO SO AT SUCH TIMES AS THE VILLAGE MAY DEEM NECESSARY FOR THE PURPOSES SET FORTH HEREIN, BUT NOT THE OBLIGATION TO DO SO. THE VILLAGE IS ALSO HEREBY GRANTED THE RIGHT TO CUT DOWN, TRIM OR REMOVE ANY TREES, SHRUBS OR OTHER PLANTS THAT INTERFERE WITH THE OPERATION OF OR ACCESS TO ANY VILLAGE FACILITIES AND/OR IMPROVEMENTS IN, ON, UPON, ACROSS, UNDER, OR THROUGH SAID VILLAGE EASEMENTS. NO PERMANENT BUILDINGS, STRUCTURES, OR IMPROVEMENTS OTHER THAN ASPHALT PAVEMENT SHALL BE PLACED ON SAID VILLAGE EASEMENTS BUT SAID PORTIONS THEREOF MAY BE USED FOR GARDENS AND SUCH LANDSCAPING AND OTHER PURPOSES THAT DO NOT THEN OR LATER INTERFERE WITH THE AFORESAID USES AND RIGHTS UNLESS OTHERWISE SPECIFICALLY DIRECTED BY THE VILLAGE. THE PROPERTY OWNER OF LOTS(S) FROM TIME TO TIME OF THE PROPERTY UNDERLYING SAID VILLAGE EASEMENT SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND RESTORATION FROM TIME TO TIME OF THE SURFACE AREA, INCLUDING LANDSCAPING AND/OR PAVED SURFACE WITHIN THOSE PORTIONS OF SAID VILLAGE EASEMENT UNDERLYING SAID VILLAGE EASEMENT. IN THE EVENT THE OWNER(S) FAIL TO FULFILL SAID RESPONSIBILITIES, THE VILLAGE MAY, BUT SHALL NOT BE OBLIGATED TO FULFILL SAID RESPONSIBILITIES. THE VILLAGE MAY BRING AN ACTION AT LAW AGAINST THE DELINQUENT OWNER OR OWNERS OF RECORD OF SAID PROPERTY TO COLLECT SUCH COSTS, INCLUDING BUT NOT LIMITED TO ATTORNEYS FEES AND OTHER COSTS OF LITIGATION. ANY CONFLICTS IN THE USE OF SUCH STORMWATER MANAGEMENT EASEMENT(S) SHALL BE RESOLVED BY A FINAL DETERMINATION BY THE VILLAGE ADMINISTRATOR, OR HIS DESIGNEE.

STORMWATER DETENTION EASEMENT PROVISIONS

A PERMANENT, NON-EXCLUSIVE EASEMENT FOR STORMWATER MANAGEMENT (THE "STORMWATER MANAGEMENT EASEMENT(S)") IS HEREBY RESERVED FOR AND GRANTED TO THE VILLAGE OF LAKE VILLA, ("THE VILLAGE") AND ITS SUCCESSORS AND ASSIGNS TO INSTALL, REPAIR, MAINTAIN, CONSTRUCT, RECONSTRUCT, ALTER AND OPERATE STORM SEWERS, STORM DRAINS, DITCHES, AND SWALES, DETENTION AND/OR RETENTION PONDS OR AREAS, OUTLET STRUCTURES OR ANY OTHER STORMWATER MANAGEMENT IMPROVEMENTS AND STRUCTURES (ALL COLLECTIVELY REFERRED TO HEREIN AS "STORMWATER IMPROVEMENTS") IN, INTO, UPON, OVER, ACROSS AND UNDER THE PROPERTY EMBRACED WITHIN THE AREA(S) SO SHOWN AND LABELED ON THE PLAT AND FOR THE PURPOSES OF THE OPERATION AND MAINTENANCE OF SUCH IMPROVEMENTS, AND ADDITIONS THERETO AS THE VILLAGE MAY DEEM NECESSARY, TOGETHER WITH THE RIGHT OF ACCESS ACROSS THE STORMWATER MANAGEMENT EASEMENT FOR THE NECESSARY PERSONNEL AND EQUIPMENT OF THE VILLAGE AND ITS EMPLOYEES, CONTRACTORS, SUBCONTRACTORS, AND AGENTS TO DO ANY OR ALL OF THE ABOVE WORK, AND THE RIGHT, BUT NOT THE OBLIGATION, IN THEREBY GRANTED TO THE VILLAGE TO DO ANY OF THE AFORE WORK. NO PERMANENT BUILDINGS, STRUCTURES, OR TREES SHALL BE PLACED UPON SAID STORMWATER MANAGEMENT EASEMENT, OTHER THAN THOSE STRUCTURES NECESSARY FOR THE MANAGEMENT OF STORMWATER AS APPROVED BY THE VILLAGE UNLESS OTHERWISE SPECIFICALLY DIRECTED BY THE VILLAGE. THE RESPECTIVE OWNERS OF RECORD FROM TIME TO TIME OF THE PROPERTY UNDERLYING SAID STORMWATER MANAGEMENT EASEMENT SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND RESTORATION FROM TIME TO TIME OF THE STORMWATER MANAGEMENT EASEMENT, WHETHER GRASS, LANDSCAPING, AND/OR PAVED SURFACE, WITHIN THOSE PORTIONS OF SAID STORMWATER MANAGEMENT EASEMENT, AND THE COSTS THEREFOR SHALL BE THE RESPONSIBILITY OF THE OWNER(S) OF THE PROPERTY. IN THE EVENT THE OWNER(S) FAIL TO FULFILL SAID RESPONSIBILITIES, THE VILLAGE MAY, BUT SHALL NOT BE OBLIGATED, TO FULFILL SAID RESPONSIBILITIES. THE VILLAGE MAY BRING AN ACTION AT LAW AGAINST THE DELINQUENT OWNER OR OWNERS OF RECORD OF SAID PROPERTY TO COLLECT SUCH COSTS, INCLUDING BUT NOT LIMITED TO ATTORNEYS FEES AND OTHER COSTS OF LITIGATION. ANY CONFLICTS IN THE USE OF SUCH STORMWATER MANAGEMENT EASEMENT(S) SHALL BE RESOLVED BY A FINAL DETERMINATION BY THE VILLAGE ADMINISTRATOR, OR HIS DESIGNEE.

SURFACE WATER STATEMENT

STATE OF ILLINOIS)
) S.S.
COUNTY OF LAKE)

TO THE BEST OF OUR KNOWLEDGE AND BELIEF, THE DRAINAGE OF SURFACE WATERS WILL NOT BE CHANGED BY THE CONSTRUCTION OF SUCH SUBDIVISION OR ANY PART THEREOF, OR, IF SUCH SURFACE WATER DRAINAGE WILL BE CHANGED, REASONABLE PROVISION HAS BEEN MADE FOR THE COLLECTION AND DIVERSION OF SUCH SURFACE WATERS INTO PUBLIC AREAS, OR DRAINS WHICH THE SUBDIVIDER HAS A RIGHT TO USE, AND THAT SUCH SURFACE WATERS WILL BE PLANNED FOR IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRACTICES SO AS TO REDUCE THE LIKELIHOOD OF DAMAGE TO THE ADJOINING PROPERTY BECAUSE OF THE CONSTRUCTION OF THE SUBDIVISION.

GIVEN UNDER _____ DAY OF _____, 20__.

_____
ILLINOIS REGISTERED PROFESSIONAL ENGINEER
ILLINOIS REGISTRATION NUMBER _____
LICENSE EXPIRES: _____

_____
OWNER OR ATTORNEY

PERMISSION TO RECORD

STATE OF ILLINOIS)
) SS
COUNTY OF KENDALL)

I, ADAM R. MERKEL, AN ILLINOIS PROFESSIONAL LAND SURVEYOR, HEREBY GRANT PERMISSION TO THE OWNERS REPRESENTATIVE TO RECORD THIS PLAT ON OR BEFORE DECEMBER 31, 2024. THE REPRESENTATIVE SHALL PROVIDE THIS SURVEYOR WITH 3 RECORDED COPY OF THIS PLAT.

DATED THIS 28TH DAY OF NOVEMBER, A.D. 2022.

FOR REVIEW ONLY

ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 4074
LICENSE EXPIRES NOVEMBER 30, 2024

ADAM R. MERKEL ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 4074 YORKVILLE, ILLINOIS

SURVEYOR'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF KENDALL)

THIS IS TO DECLARE THAT THE PROPERTY DESCRIBED HEREON WAS SURVEYED AND SUBDIVIDED BY MANHARD CONSULTING, LTD. UNDER THE SUPERVISION OF AN ILLINOIS PROFESSIONAL LAND SURVEYOR AND THAT THE PLAT HEREON DRAWN IS A CORRECT REPRESENTATION OF SAID SURVEY AND SUBDIVISION.

LOT A IN LAKE TOWER CROSSING PLANNED UNIT DEVELOPMENT PHASE 2, BEING A SUBDIVISION OF PART OF SECTION 29, TOWNSHIP 46 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, IN LAKE COUNTY, ILLINOIS (EXCEPT THAT PART OF SAID OUTLOT LYING WESTERLY OF A LINE DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHEASTERLY CORNER OF SAID OUTLOT F; THENCE SOUTH 44 DEGREES 53 MINUTES 31 SECONDS EAST, 81.91 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 01 DEGREES 58 MINUTES 28 SECONDS WEST, 140.00 FEET; THENCE SOUTH 19 DEGREES 13 MINUTES 18 SECONDS EAST, 140.00 FEET; THENCE SOUTH 01 DEGREES 58 MINUTES 28 SECONDS EAST, 100.00 FEET; THENCE SOUTH 28 DEGREES 48 MINUTES 19 SECONDS WEST, 173.80 FEET TO THE SOUTH LINE OF OUTLOT F), ALSO EXCEPT THAT PART HEREOF DESCRIBED FOR HEBER LAKE ROAD) IN LAKE COUNTY, ILLINOIS.

SUBDIVIDED PROPERTY CONTAINS 11.241 ACRES, MORE OR LESS AND ALL DISTANCES ARE SHOWN IN FEET AND DECIMAL PARTS THEREOF.

THIS IS ALSO TO DECLARE THAT THE PROPERTY AS DESCRIBED ON THE AMENDED PLAT LIES WITHIN THE CORPORATE LIMITS OF LAKE VILLA, LAKE COUNTY, ILLINOIS WHICH HAS ADOPTED A VILLAGE PLAN AND IS EXERCISING THE SPECIAL POWER AUTHORIZED BY 65 ILCS 5, SECTION 11-12-6.

5/8" MONUMENT BY 24" LONG IRON RODS WILL BE SET AT ALL SUBDIVISION CORNERS, LOT CORNERS, POINTS OF CURVATURE AND POINTS OF TANGENCY IN COMPLIANCE WITH ILLINOIS STATUTES AND APPLICABLE ORDINANCES, UNLESS OTHERWISE NOTED.

THIS IS ALSO TO DECLARE THAT THE FEDERAL EMERGENCY MANAGEMENT AGENCY FIRM (COMMUNITY PANEL NUMBER 17097C0228F, WITH A MAP REVISED DATE OF SEPTEMBER 10, 2015 INDICATES THAT THE ABOVE DESCRIBED PROPERTY LIES WITHIN ZONE X (UNSHADED), ZONE X (SHADED), AND ZONE A (SHADED). AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN PER THE FLOOD INSURANCE RATE MAPS. THIS MAP DOES NOT NECESSARILY SHOW ALL AREAS SUBJECT TO FLOODING IN THE COMMUNITY OR ALL FLOODING CHARACTERISTICS (SUCH AS SPECIAL FLOOD HAZARD AREAS). THIS DOES NOT GUARANTEE THAT THE SURVEYED PROPERTY WILL OR WILL NOT FLOOD.

GIVEN UNDER MY HAND AND SEAL THIS 28TH DAY OF NOVEMBER, A.D. 2022.

FOR REVIEW ONLY

ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 4074
LICENSE EXPIRES NOVEMBER 30, 2024

DESIGN FIRM PROFESSIONAL REGISTRATION
NO. 184005588—EXPIRES APRIL 30, 2023

ADAM R. MERKEL ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 4074 YORKVILLE, ILLINOIS

THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.

DATE OF FIELD SURVEY: OCTOBER 20, 2022

Manhard CONSULTING

LAKE TOWER CROSSING PLANNED UNIT DEVELOPMENT - PHASE 3
LAKE VILLA, ILLINOIS
FINAL PLANNED UNIT DEVELOPMENT SUBDIVISION

SHEET 4 OF 4

Manhard CONSULTING LTD

Final Stormwater Management Report
For
Starling Senior Apartments
Lake Villa, IL

Prepared For:

Lincoln Avenue Communities
401 Wilshire Boulevard, Suite 1070
Santa Monica, California 90401

Prepared By:

Manhard Consulting, LTD
1 East Wacker Drive, SUITE 2700
Chicago, Illinois 60601

January 2024

0
- Narrative
- Misc. Documents

1
- Maps
  - o USDA Hydrologic Soils Map
  - o FEMA FIRMette
  - o Wetlands Map

2
- Existing Conditions
  - o Existing Composite Runoff Curve Number Calculations
  - o Existing Drainage Exhibit
  - o Existing Imperviousness Exhibit

3
- Proposed Conditions
  - o Proposed Composite Runoff Curve Number Calculations
  - o Proposed Detention volume Calculations
  - o Proposed Orifice Calculations
  - o Proposed Weir Spillway Calculatons
  - o Proposed Detention HydraFlow Calculations
  - o Proposed Drainage Exhibit
  - o Proposed Imperviousness Exhibit
  - o Runoff Volume Reduction (RVR) Calculations

4
- Storm Sewer Calculations
  - o Tributary Area Exhibits
  - o Inlet Capacity Calculations
  - o 100-Year StormCAD Profiles and Design Tables

5
- Maintenance and Monitoring Plan

STORMWATER MANAGEMENT SUMMARY

INTRODUCTION

The proposed Starling Senior Apartments site is +/- 5.21 acres located at 0 Deep Lake Road in Lake Villa, Illinois. The proposed development includes more than one (1) acre of new impervious surface as well as more than three (3) acres of hydrologically disturbed area and is therefore a Regulated Development and subject to the Lake County Watershed Development Ordinance. These improvements will consist of the construction of a residential building with its associated car parking, grading and paving activities, installation of underground utilities, and soil erosion control measures. Stormwater Management was previously provided for the developed area north of the site, refer to WT Group Storm Management Report. Stormwater management for the proposed improvements will be provided through storm sewers and an on-site basin, providing detention per the new Bulletin 75 rainfall data. HydraFlow calculations were performed to determine release rates and stormwater facility volumes.

PROJECT DESCRIPTION

The project is located near the southwest corner of Grass Lake Road and Deep Lake Road intersection in the Village of Lake Villa, Illinois. The site is in Section 28, Township 46 North, and Range 10 East. It is bordered on the west by a neighborhood, to the north by the Lake House Restaurant and Water Tower, to the east by Deep Lake Road, and to the south by an existing detention basin. This project will be served by a proposed wetland bottom detention basin.

EXISTING CONDITIONS

The project area's existing conditions consist of an undeveloped open lot with grass, trees, and brush throughout. The existing hydrologic soil group rating for the site is Type C soil throughout the entire site. Please see the attached Hydrologic Soil Survey Exhibit from the USDA NRCS for reference. There are no existing offsite areas tributary directly to our site therefore no offsite detention will be required. The onsite drainage is through sheet flow from the northeast area of the site to the existing detention basin south of the site or to a swale along the west and east of the site that drains to the basin. The site is free of floodplain, but a wetland has been identified off-site to the south. Please see the attached National Wetlands Map for reference.

PROPOSED CONDITIONS

4.10 acres of the properties hydrologically disturbed area is tributary to the proposed onsite detention basin, while the remaining 0.47 acres of hydrologically disturbed area is undetained. The combined area's were used to determine the allowable and design release rates. The proposed 2.6 ac-ft detention pond, with a NWL of

790.25 and HWL of 798.25, is sized to accommodate the entire tributary area of 4.10 acres. The calculated curve number for the proposed disturbed area is 87 which was derived assuming Type D soils. Please see the attached curve number calculations for reference. The calculations used to size the proposed detention basins were done using a 0.15 cubic feet per second per acre release rate for the 100-year storm and 0.04 cubic feet per second per acre release rate for the 2-year storm. Hydraflow Hydrographs hydraulic modeling software and Bulletin 75 Rainfall Data for Northeast Illinois were used to calculate the required detention volume for the development for a 100-year storm.

All required detention and additional information for the project site is detailed in the stormwater calculations and exhibits provided.

PROPOSED PEAK FLOW TABLE

	2-YEAR (CFS)	100-YEAR (CFS)
Drainage Area- 1 (Detained)	0.048	0.263
Drainage Area- 2 (Undetained)	0.117	0.408
Combined Drainage Areas	**0.165**	**0.671**
Allowable Release Rate	**0.183**	**0.686**

ENTERPRISE GREEN COMMUNITIES

The Illinois Housing Development Authority, IHDA, requires that projects must meet all Enterprise Green Communities criteria. The Enterprise Green Communities criteria for surface stormwater management is to "treat or retain on-site precipitation equivalent to the 60th percentile precipitation event". This criterion was met by keeping most of the site as pervious. Calculations for the Enterprise Green Communities criteria can be found below.

Required Volume to be Retained Per EGC Criteria:

60th Percentile Rainfall = 0.45 inches

Total Site Area = 5.21 acres

5.21 acres × 0.45 inches = **8,511 cubic feet**

Actual Volume Retained:

Proposed Curve Number = 86.00

Actual Release Rate = 0.78 cfs

Total Site Area = 5.21 acres

Actual Volume Retained = **8,522 cubic feet**

RUNOFF VOLUME REDUCTION

Stormwater runoff volume and water quality impairments shall be addressed as part of this redevelopment. In the proposed condition, the detention basin provided will include volume below the NWL to provide the runoff volume reduction needed for this site.

Per the WDO Runoff Volume Reduction must be met for 0.01-inch for every 1% of impervious coverage on site. Per Appendix O and a proposed impervious coverage of 32%, 0.32 in of runoff was rounded up to 0.39 and a required RVR volume of 2,371 C.F. was determined, representing 60% of annual rainfall events.

The proposed detention basin has been oversized to hold an RVR volume of 8,522 C.F. When this volume is considered against Appendix O, it is determined that the volume will be sufficient for over 95% of annual rainfall events. Additionally, a hydrodynamic separator will be added in order to provide extra filtration of stormwater particulates.

RVR HIERARCHY IMPLEMENTATION

A. There is a wetland buffer on the south end of the site. We will preserve the nearby wetland by not encroaching on the buffer and keeping all development outside of the area.

B. Impervious areas within the development have been minimized by preserving existing natural drainage ways and including as much green space in the design as possible.

C. Due to the extra restrictive release rates required by LCSMC and the proposed storage in the detention basin compensating for 120% of the disturbed area, the infiltration and storage requirements for this site are exceeded.

D. Open channels with native vegetation are utilized to convey stormwater runoff from onsite tributary areas into the proposed detention basin.

E. A hydrodynamic separator will be added in order to provide extra filtration of stormwater particulates.

F. N/A

G. N/A

H. N/A

ANALYSIS METHOD

The procedures and assumptions used for the storm sewer and drainage design elements are listed below.

- Onsite curve numbers were calculated using 98 for impervious and 74 for pervious areas in the predeveloped condition and 80 for pervious areas in the post-developed condition.
- The CN Exhibit and calculation attached to this report show the proposed CN to be 86.
- Required detention volume was found using a B-75 nomograph and Hydraflow Hydrographs.
- RVR and water quality requirements were found using the Lake County Watershed Development Ordinance graphs and tables.

SOIL EROSION AND SEDIMENT CONTROL

Soil erosion and sediment control will be provided to comply with the Lake County Watershed Development and Village Standards, including preparation and submittal of a Stormwater Pollution Prevention Plan and SESC plans, provided under separate cover.

CONCLUSION

In our professional opinion the proposed development's stormwater management system as described in this report conforms to the requirements set forth by the Village of Lake Villa Municipal Code. Questions or comments regarding this stormwater study and report should be directed to Matt Eagle at (312)824-3819 or by email at meagle@manhard.com.

Sincerely,
MANHARD CONSULTING, LTD.

Matt Eagle, P.E.
Project Manager

TAB 1

Map Scale: 1:1,440 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 20 40 80 120

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Lake County, Illinois
Survey Area Data: Version 17, Aug 31, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 16, 2020—Jul 5, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
530D2	Ozaukee silt loam, 6 to 12 percent slopes, eroded	C	2.0	33.2%
840B	Zurich and Ozaukee silt loams, 2 to 4 percent slopes	C	0.1	1.8%
840C2	Zurich and Ozaukee silt loams, 4 to 6 percent slopes, eroded	C	3.4	57.1%
979B	Grays and Markham silt loams, 2 to 4 percent slopes	C	0.5	7.9%
Totals for Area of Interest			**5.9**	**100.0%**

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross-sections and interpolated between cross-sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

In the State of Illinois, any portion of a stream or watercourse that lies within the **floodway fringe** of a studied (AE) stream may have a state regulated floodway. This FIRM may not depict these state regulated floodways.

Floodways restricted by anthropogenic features such as bridges and culverts are drawn to reflect natural conditions and may not agree with the model computed widths listed in the Floodway Data table in the Flood Insurance Study report.

Multiple **topographic sources** may have been used in the delineation of Special Flood Hazard Areas. See Flood Insurance Study report for details on source resolution and geographic extent.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) zone 16. The **horizontal datum** was NAD 83, GRS80 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

NGS Information Services, NOAA, N/NGS12
National Geodetic Survey SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242, or visit its website at www.ngs.noaa.gov.

Base map information shown on this FIRM was provided in digital format by the Department of Information and Technology, GIS Division, Lake County, Illinois. Color digital orthophotos with a 6 inch pixel resolution were photogrammetrically compiled from aerial photography obtained during the spring of 2007.

This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The Special Flood Hazard Areas and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

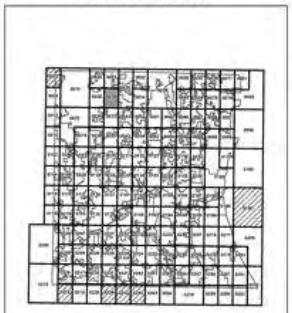
Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels, community map repository addresses, and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

For information on available products associated with this FIRM visit the Map Service Center (MSC) website at http://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the MSC website.

If you have **questions about this map**, how to order products or the National Flood Insurance Program in general, please call the **FEMA Map Information eXchange (FMIX)** at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/business/nfip.

PANEL INDEX



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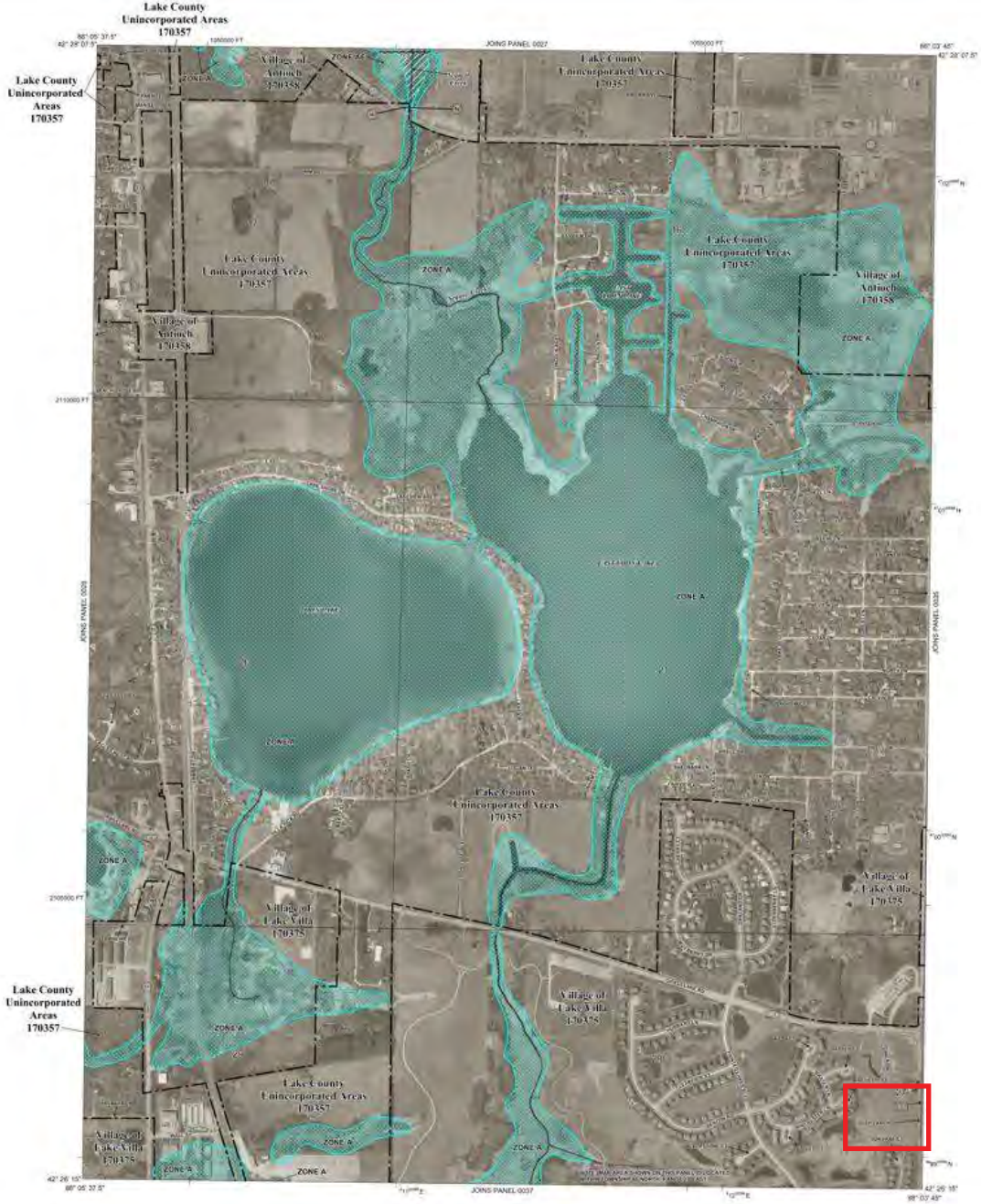


LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A — No Base Flood Elevations determined.
ZONE AE — Base Flood Elevations determined.
ZONE AH — Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO — Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR — Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99 — Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V — Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE — Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X — Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X — Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D — Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

1% annual chance floodplain boundary
0.2% annual chance floodplain boundary
*Floodway boundary
Zone D boundary
CBRS and OPA boundary
Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
Base Flood Elevation line and value; elevation in feet
(EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988

A — A — Cross-section line
23 — 23 — Transect line
97° 07' 30", 32° 22' 30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
5000m N — 1000-meter Universal Transverse Mercator grid values, zone 16
1000m E — 5000-foot grid ticks: Illinois State Plane Coordinate System, 2726 (NAD 83)(FEET) (IDOT) Transverse Mercator
DX510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
M1.5 — River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
SEPTEMBER 3, 1985

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
September 19, 2013 - to incorporate previously issued Letters of Map Revision, to add Base Flood Elevations, to change Base Flood Elevations, to add Special Flood Hazard Areas, to change Special Flood Hazard Area designations, and to reflect updated topographic information.

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'

250 0 500 1000 FEET
150 0 150 300 METERS

NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0029K

FIRM
FLOOD INSURANCE RATE MAP
LAKE COUNTY, ILLINOIS
AND INCORPORATED AREAS

PANEL 29 OF 295
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS

COMMUNITY	NUMBER	PANEL	SUFFIX
ANTIOCH, VILLAGE OF	170338	0029	K
LAKE COUNTY	170321	0029	K
LAKE VILLA, VILLAGE OF	170375	0029	K

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
17097C0029K

MAP REVISED
SEPTEMBER 18, 2013

Federal Emergency Management Agency

U.S. Fish and Wildlife Service
National Wetlands Inventory

National Wetlands Map

October 14, 2022

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

TAB 2

COMPOSITE RUNOFF CURVE NUMBER (*CN*)

PROJECT: Starling Senior Apartments **PERMIT NUMBER:**

LOCATION: Lake Villa, Illinois **DATE:** 11/17/2023

TYPE OF AREA (SELECT WITH DROP-DOWN)

X DETAINED AREA

UNRESTRICTED AREA

UPSTREAM AREA

MAJOR STORMWATER SYSTEM

OTHER:

CONDITION (SELECT WITH DROP-DOWN)

PROPOSED CONDITION

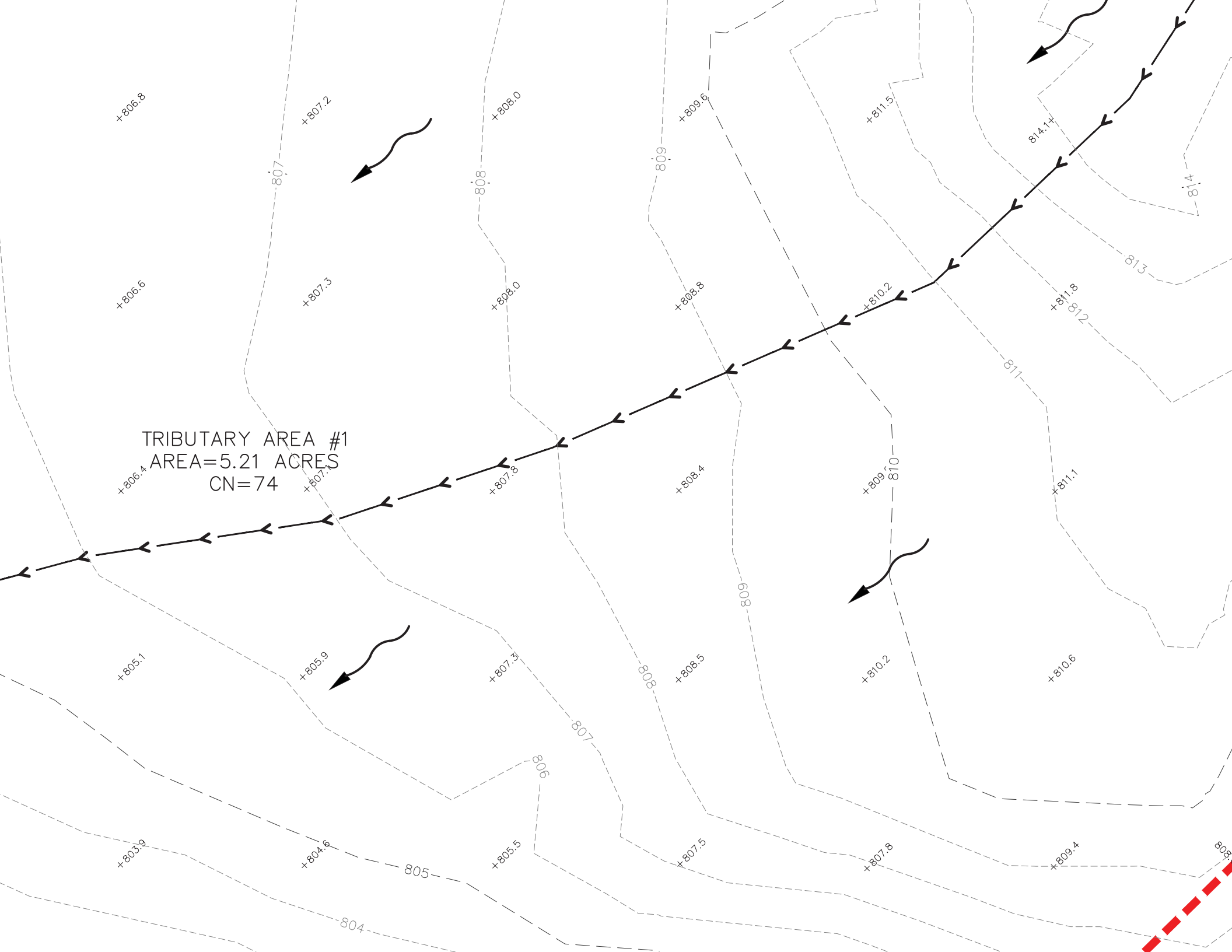
X EXISTING CONDITION

RUNOFF CURVE NUMBER

Surface Description	Hydrologic Soil Group (HSG)	CN	Area (acres)	Product (CN)(Area)
Pervious Surface	C	74	5.21	385.54
TOTALS:			5.21	385.54

COMPOSITE RUNOFF CURVE NUMBER

$$\text{Composite CN} = \frac{\text{Total Product}}{\text{Total Area}} = \frac{385.54}{5.21} \rightarrow \textbf{Composite CN} = \textbf{74}$$


TRIBUTARY AREA #1
AREA=5.21 ACRES
CN=74
+806.8
+807.2
+808.0
+809.6
+811.5
814.1+
807
808
809
814
+806.6
+807.3
+808.0
+808.8
+810.2
+811.8
813
812
811
+806.4
+807.1
+807.8
+808.4
+809.6
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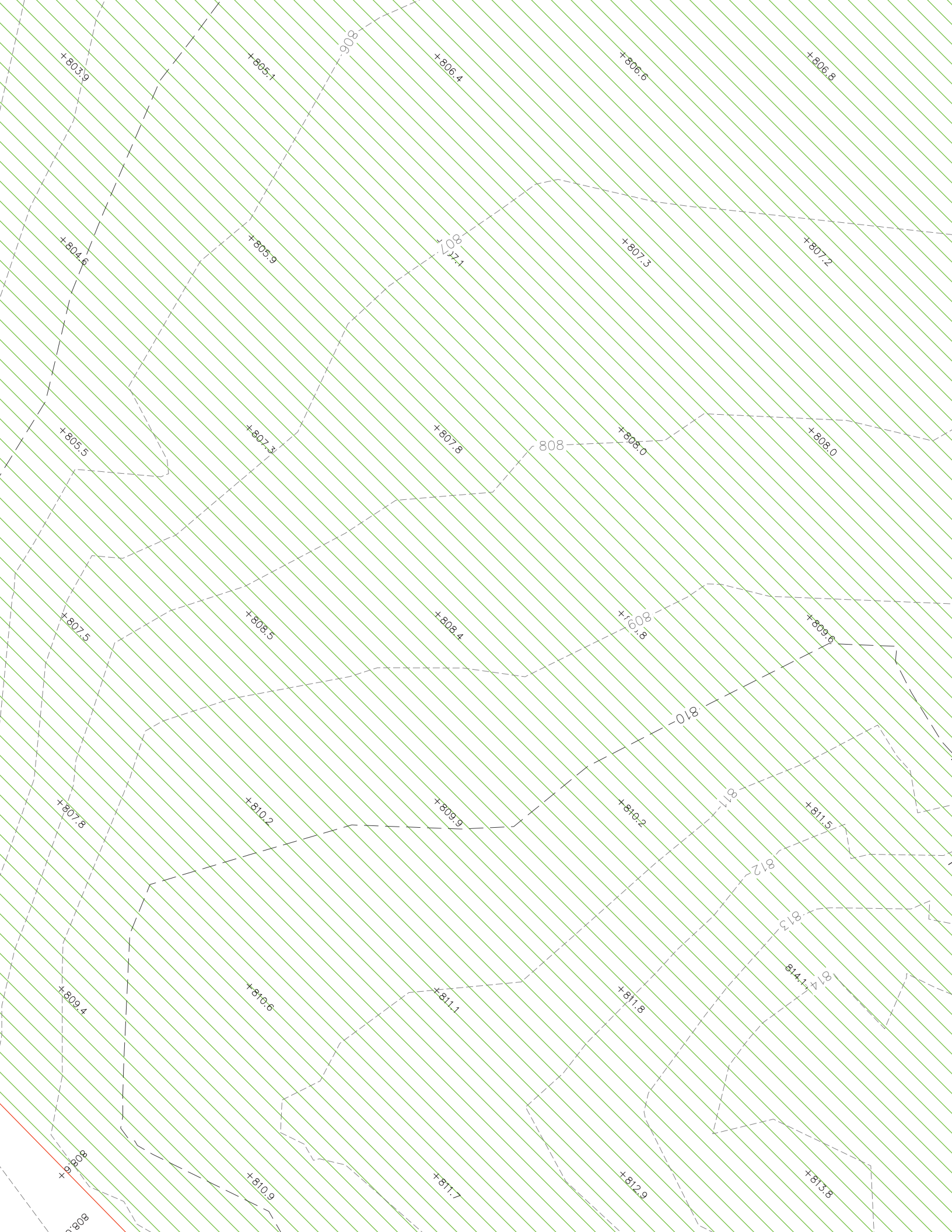
+803.9
+805.1
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+806.4
+806.6
+806.8
+804.6
+805.9
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813
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814.1
+810.9
+811.7
+812.9
+813.8

TAB 3

COMPOSITE RUNOFF CURVE NUMBER (*CN*) DA-1

PROJECT: Starling Senior Apartments **PERMIT NUMBER:**

LOCATION: Lake Villa, Illinois **DATE:** 1/16/2024

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 Surface	N/A	98	1.62	158.76
Pervious Surface	D (next higher soil group per Lake County WDO)	80	2.48	198.40
TOTALS:			4.10	357.16

COMPOSITE RUNOFF CURVE NUMBER

$$\text{Composite CN} = \frac{\text{Total Product}}{\text{Total Area}} = \frac{357.16}{4.10} \rightarrow \textbf{Composite CN} = \textbf{87}$$

COMPOSITE RUNOFF CURVE NUMBER (*CN*) DA-2

PROJECT: Starling Senior Apartments **PERMIT NUMBER:**

LOCATION: Lake Villa, Illinois **DATE:** 1/16/2024

TYPE OF AREA (SELECT WITH DROP-DOWN)

___ DETAINED AREA

X 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)
Pervious Surface	D (next higher soil group per Lake County WDO)	80	0.47	37.60
TOTALS:			0.47	37.60

COMPOSITE RUNOFF CURVE NUMBER

$$\text{Composite CN} = \frac{\text{Total Product}}{\text{Total Area}} = \frac{37.60}{0.47} \rightarrow \textbf{Composite CN} = \textbf{80}$$

DETENTION VOLUME PROVIDED

PROJECT: Starling Senior Apartments **PERMIT NUMBER:**

LOCATION: Lake Villa, Illinois **DATE:** 1/16/2024

AREA UNITS (CHOOSE WITH DROP-DOWN)

Units: ft²

POND / VAULT / SURFACE DETENTION VOLUME

Elevation (ft)	Area (ft²)	Average Area (ft²)	Increment Volume (ac-ft)	Cumulative Volume (ac-ft)
790.25	4520.00			0.00
		5139.50	0.09	
791.00	5759.00			0.09
		6964.00	0.16	
792.00	8169.00			0.25
		9281.00	0.21	
793.00	10393.00			0.46
		11801.50	0.27	
794.00	13210.00			0.73
		14587.00	0.33	
795.00	15964.00			1.07
		17481.00	0.40	
796.00	18998.00			1.47
		20519.00	0.47	
797.00	22040.00			1.94
		23611.50	0.54	
798.00	25183.00			2.48
		25584.00	0.15	
798.25	25985.00			2.63

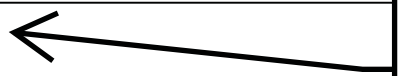
TOTAL DETENTION VOLUME

Total Detention Volume (ac-ft) **2.63**

Weir Spillway Calculatons

Project Description	
Solve For	Crest Length

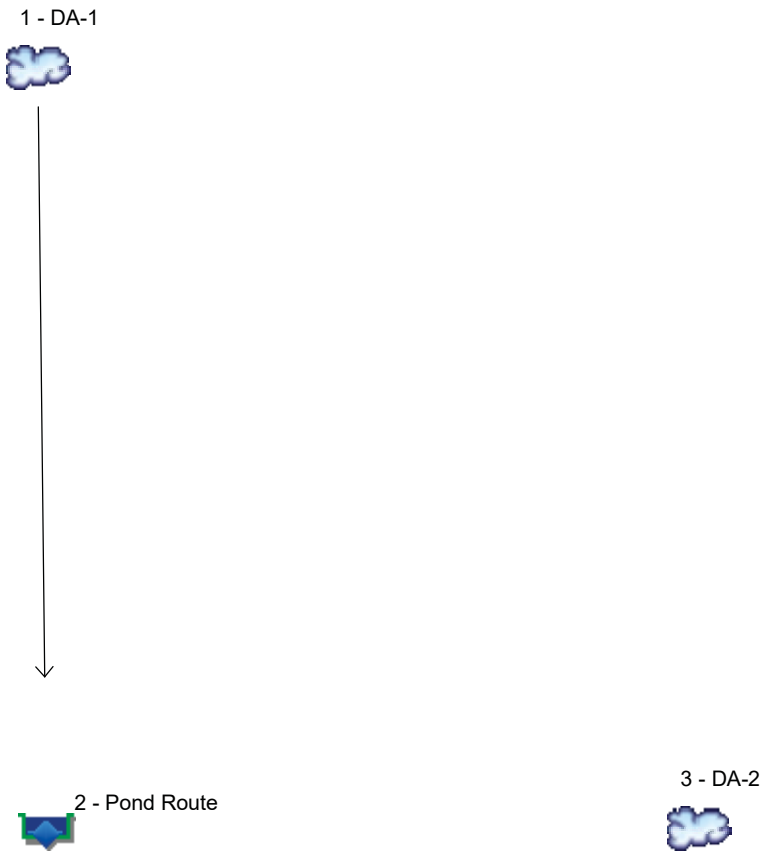
Input Data	
Discharge	3.57 cfs
Headwater Elevation	798.50 ft
Crest Elevation	798.25 ft
Tailwater Elevation	0.00 ft
Weir Coefficient	2.60 ft^(1/2)/s
Number Of Contractions	0



100-YEAR FLOW FOR DETAINED AREA TRIBUTARY TO BASIN PER HYDRAFLOW CALCULATIONS

Results	
Crest Length	11.0 ft
Headwater Height Above Crest	0.25 ft
Tailwater Height Above Crest	-798.25 ft
Flow Area	2.7 ft²
Velocity	1.30 ft/s
Wetted Perimeter	11.5 ft
Top Width	10.98 ft

Watershed Model Schematic



Legend

Hyd.	Origin	Description
1	SCS Runoff	DA-1
2	Reservoir	Pond Route
3	SCS Runoff	DA-2

Hydrograph Return Period Recap

Hyd. No.	Hydrograph type (origin)	Inflow hyd(s)	Peak Outflow (cfs)								Hydrograph Description
			1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr	
1	SCS Runoff	------	-------	1.188	-------	-------	-------	-------	-------	3.573	DA-1
2	Reservoir	1	-------	0.048	-------	-------	-------	-------	-------	0.263	Pond Route
3	SCS Runoff	------	-------	0.117	-------	-------	-------	-------	-------	0.408	DA-2

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (acft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (acft)	Hydrograph Description
1	SCS Runoff	1.188	2	936	0.679	------	------	------	DA-1
2	Reservoir	0.048	2	1456	0.307	1	793.48	0.630	Pond Route
3	SCS Runoff	0.117	2	936	0.061	------	------	------	DA-2

Hydrograph Report

Hyd. No. 1

DA-1

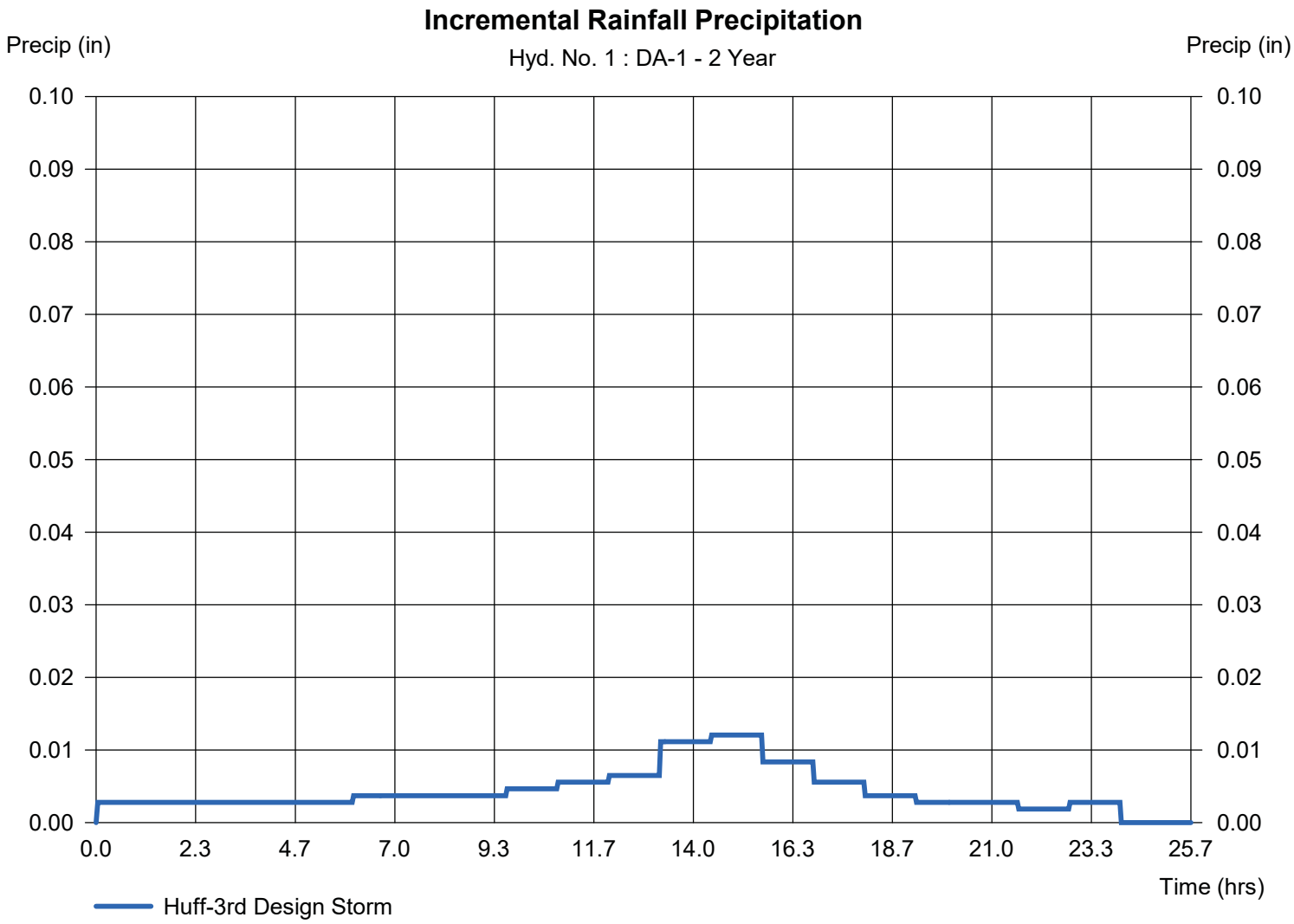
Hydrograph type	=	SCS Runoff	Peak discharge	=	1.188 cfs
Storm frequency	=	2 yrs	Time to peak	=	15.60 hrs
Time interval	=	2 min	Hyd. volume	=	0.679 acft
Drainage area	=	4.100 ac	Curve number	=	87
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	15.00 min
Total precip.	=	3.34 in	Distribution	=	Huff-3rd
Storm duration	=	24.00 hrs	Shape factor	=	484

Precipitation Report

Hyd. No. 1

DA-1

Storm Frequency	= 2 yrs	Time interval	= 2 min
Total precip.	= 3.3400 in	Distribution	= Huff-3rd
Storm duration	= 24.00 hrs		



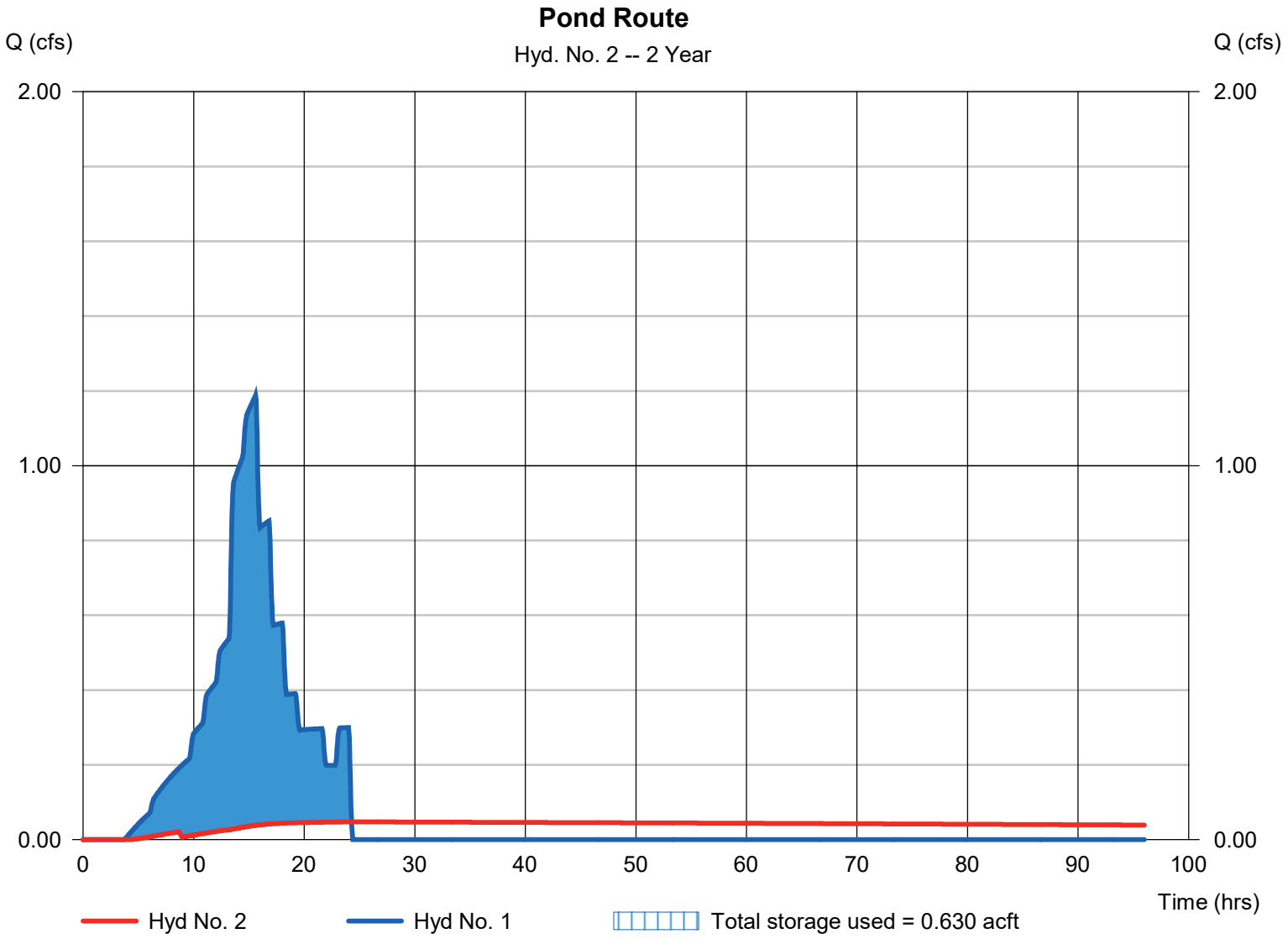
Hydrograph Report

Hyd. No. 2

Pond Route

Hydrograph type	=	Reservoir	Peak discharge	=	0.048 cfs
Storm frequency	=	2 yrs	Time to peak	=	24.27 hrs
Time interval	=	2 min	Hyd. volume	=	0.307 acft
Inflow hyd. No.	=	1 - DA-1	Max. Elevation	=	793.48 ft
Reservoir name	=	Pond	Max. Storage	=	0.630 acft

Storage Indication method used.



Pond Report

Pond No. 1 - Pond

Pond Data

Contours -User-defined contour areas. Average end area method used for volume calculation. Begining Elevation = 790.15 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (acft)	Total storage (acft)
0.00	790.15	01	0.000	0.000
0.75	790.25	4,520	0.039	0.039
1.50	791.00	5,759	0.088	0.127
2.50	792.00	8,169	0.160	0.287
3.50	793.00	10,393	0.213	0.500
4.50	794.00	13,210	0.271	0.771
5.50	795.00	15,964	0.335	1.106
6.50	796.00	18,998	0.401	1.507
7.50	797.00	22,040	0.471	1.979
8.50	798.00	25,183	0.542	2.521
8.75	798.25	25,985	0.147	2.667

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 1.00	2.00	0.00	0.00
Span (in)	= 1.00	2.00	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 790.15	793.75	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

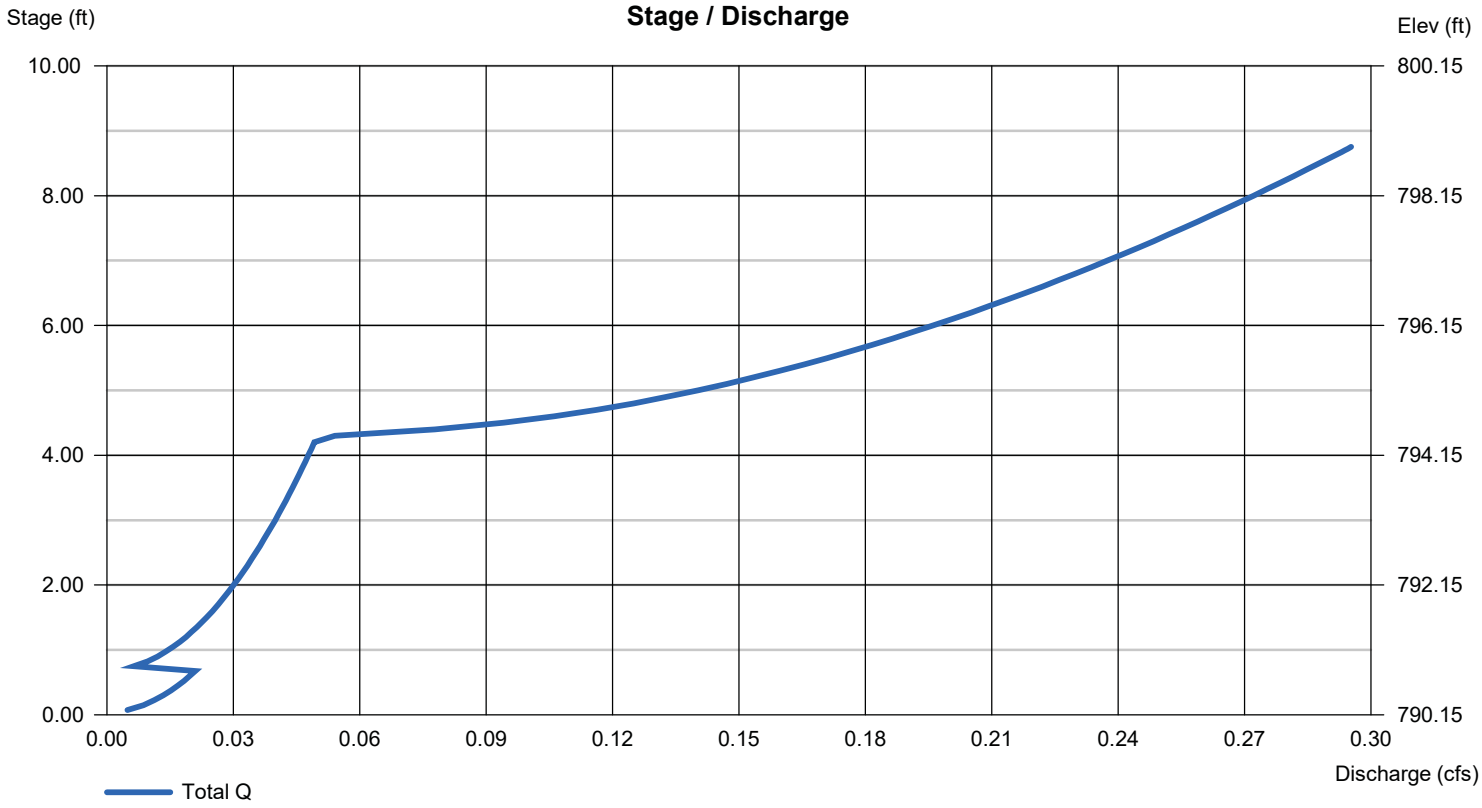
Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 0.00	0.00	0.00	0.00
Crest El. (ft)	= 0.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= ---	---	---	---
Multi-Stage	= No	No	No	No

Exfil.(in/hr) = 0.000 (by Wet area)

TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).

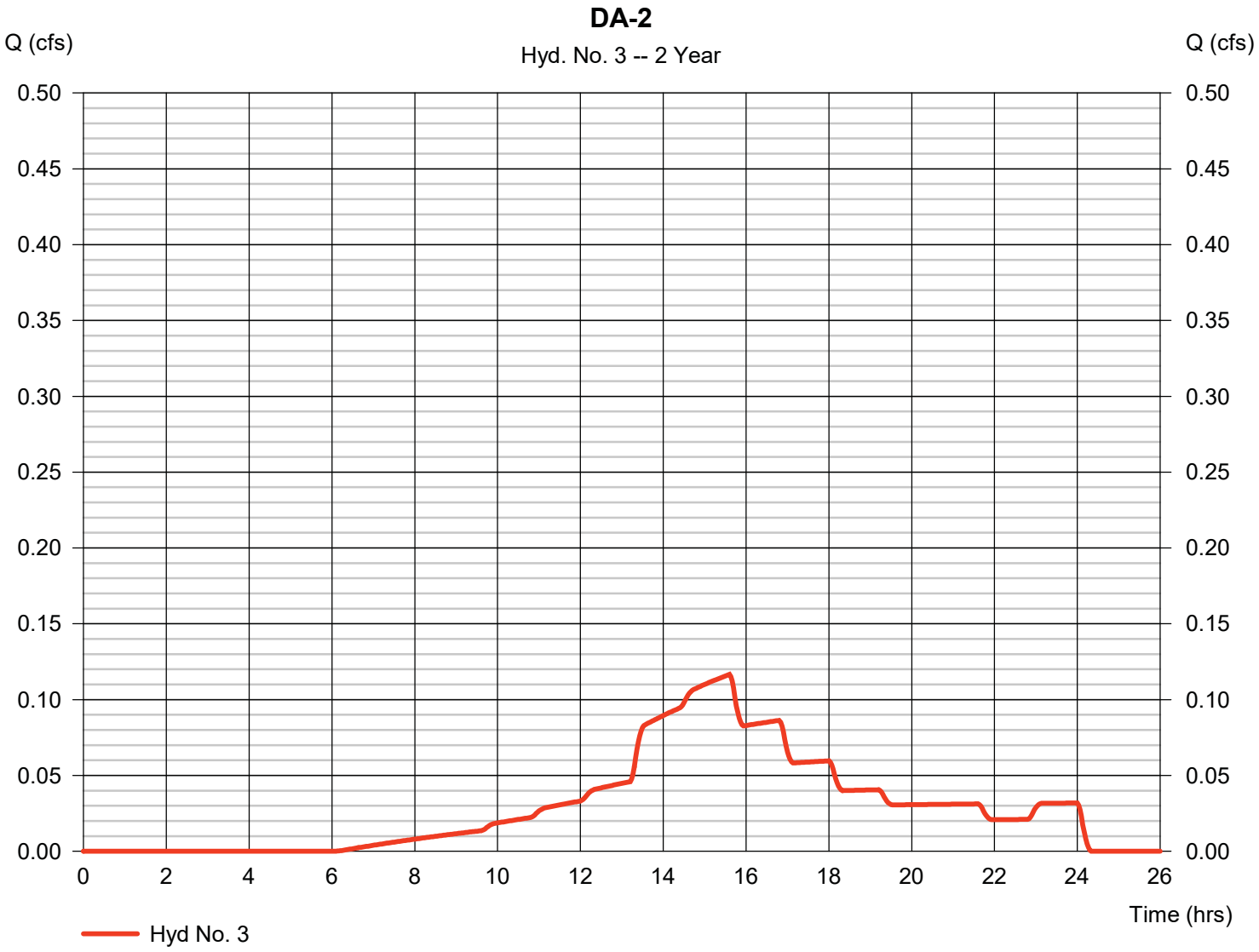


Hydrograph Report

Hyd. No. 3

DA-2

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.117 cfs
Storm frequency	=	2 yrs	Time to peak	=	15.60 hrs
Time interval	=	2 min	Hyd. volume	=	0.061 acft
Drainage area	=	0.470 ac	Curve number	=	80
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	10.00 min
Total precip.	=	3.34 in	Distribution	=	Huff-3rd
Storm duration	=	24.00 hrs	Shape factor	=	484

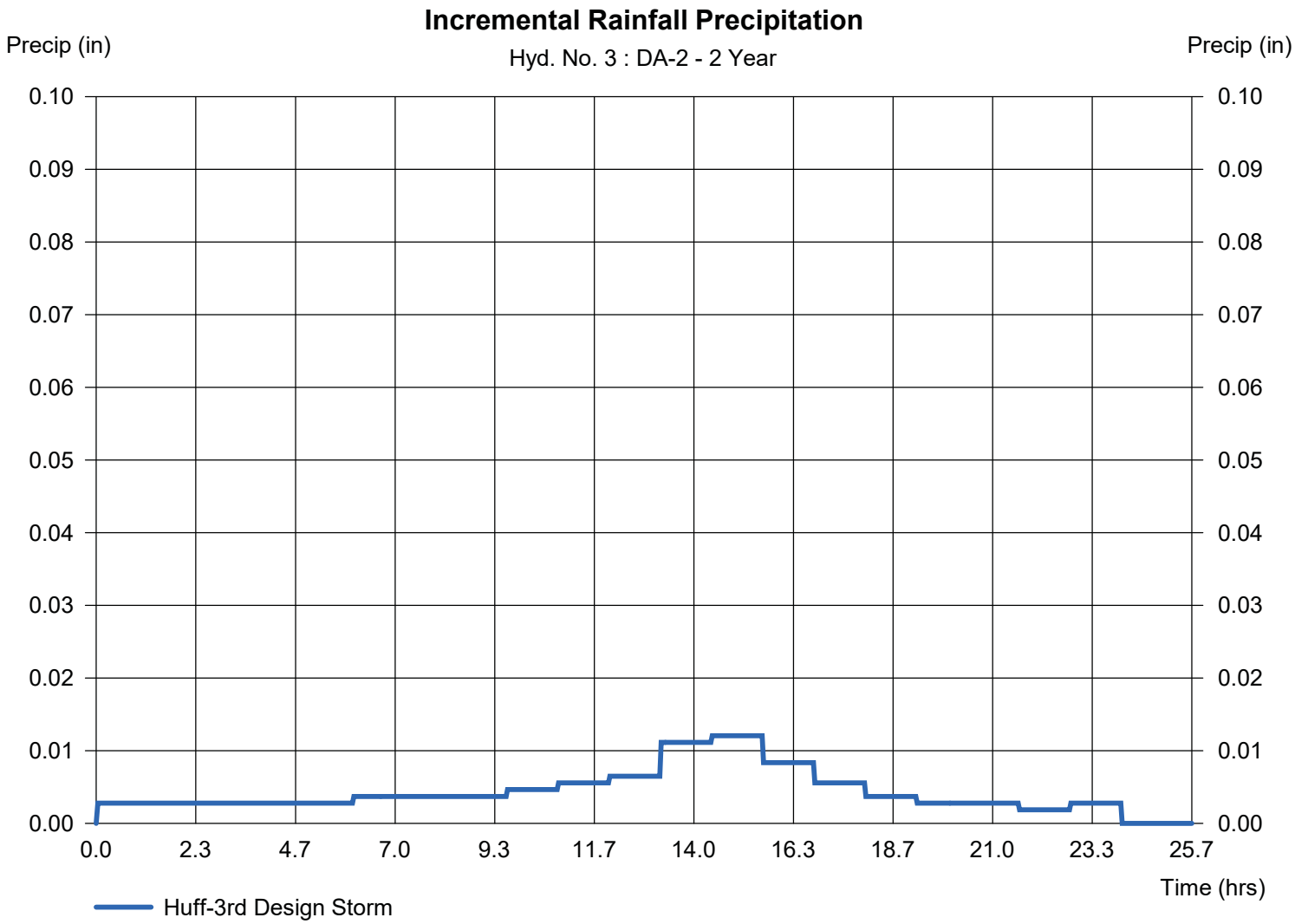


Precipitation Report

Hyd. No. 3

DA-2

Storm Frequency	= 2 yrs	Time interval	= 2 min
Total precip.	= 3.3400 in	Distribution	= Huff-3rd
Storm duration	= 24.00 hrs		



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

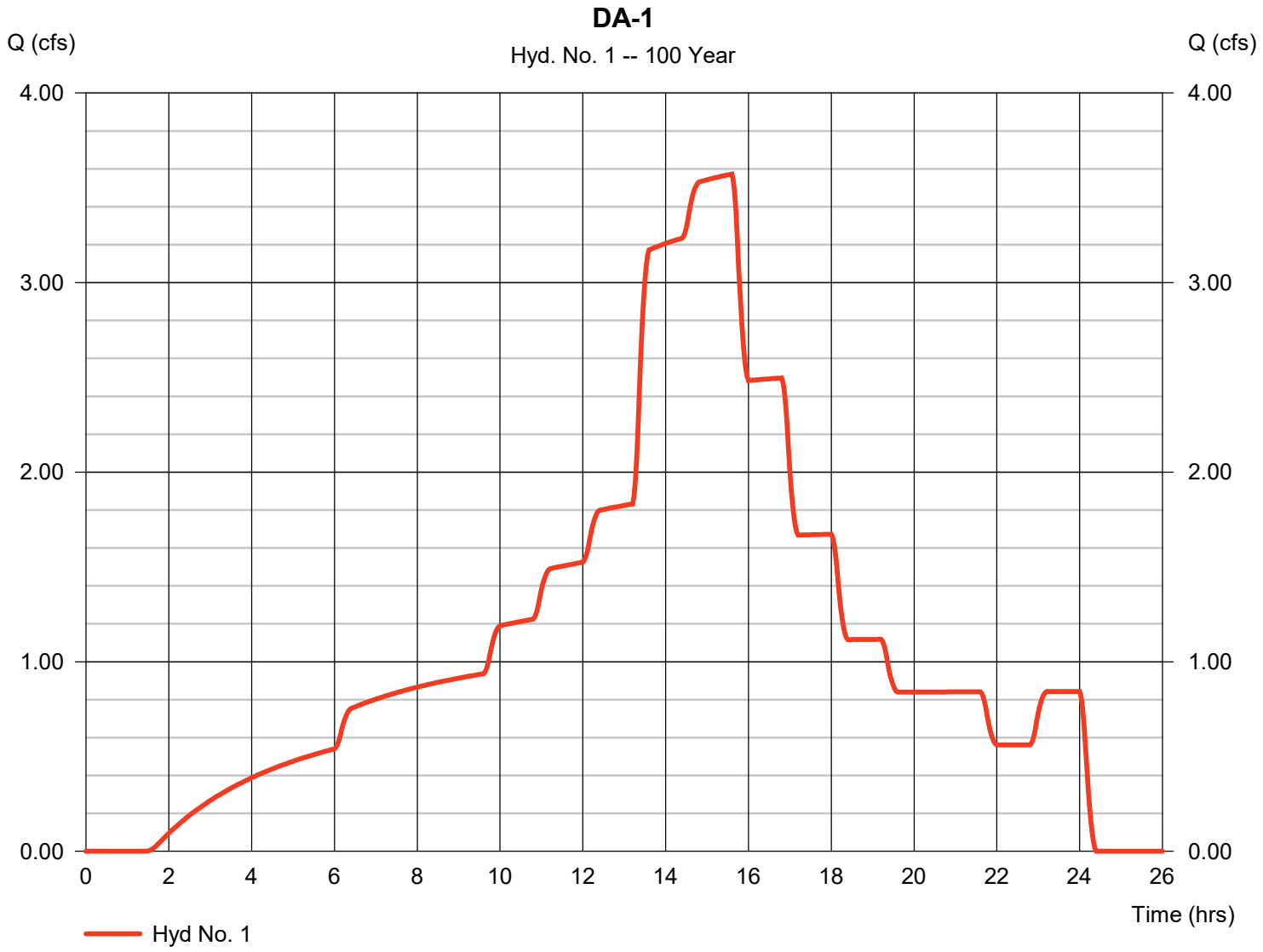
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (acft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (acft)	Hydrograph Description
1	SCS Runoff	3.573	2	936	2.334	------	------	------	DA-1
2	Reservoir	0.263	2	1454	1.442	1	797.22	2.10	Pond Route
3	SCS Runoff	0.408	2	936	0.249	------	------	------	DA-2

Hydrograph Report

Hyd. No. 1

DA-1

Hydrograph type	=	SCS Runoff	Peak discharge	=	3.573 cfs
Storm frequency	=	100 yrs	Time to peak	=	15.60 hrs
Time interval	=	2 min	Hyd. volume	=	2.334 acft
Drainage area	=	4.100 ac	Curve number	=	87
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	15.00 min
Total precip.	=	8.57 in	Distribution	=	Huff-3rd
Storm duration	=	24.00 hrs	Shape factor	=	484

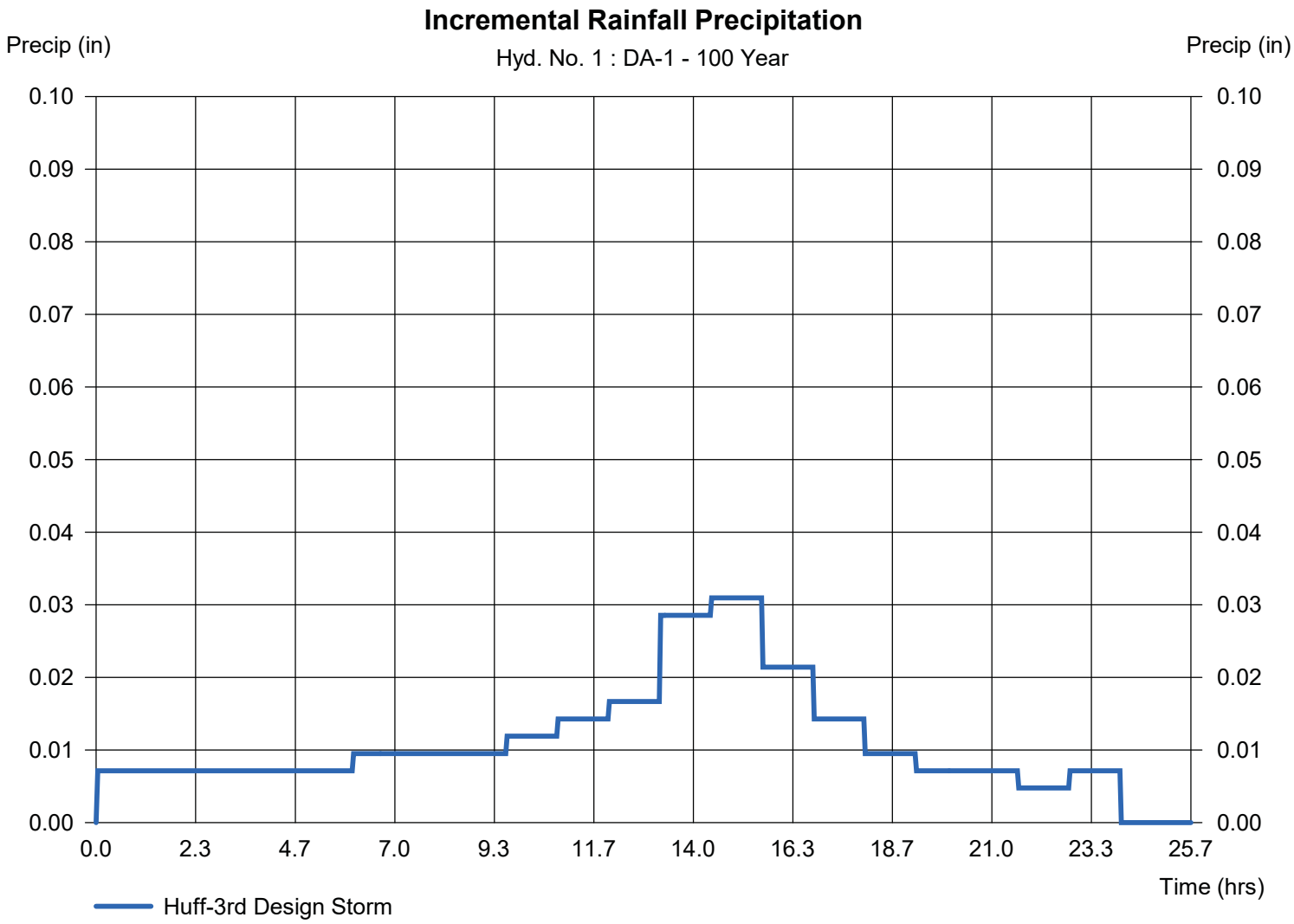


Precipitation Report

Hyd. No. 1

DA-1

Storm Frequency	= 100 yrs	Time interval	= 2 min
Total precip.	= 8.5700 in	Distribution	= Huff-3rd
Storm duration	= 24.00 hrs		



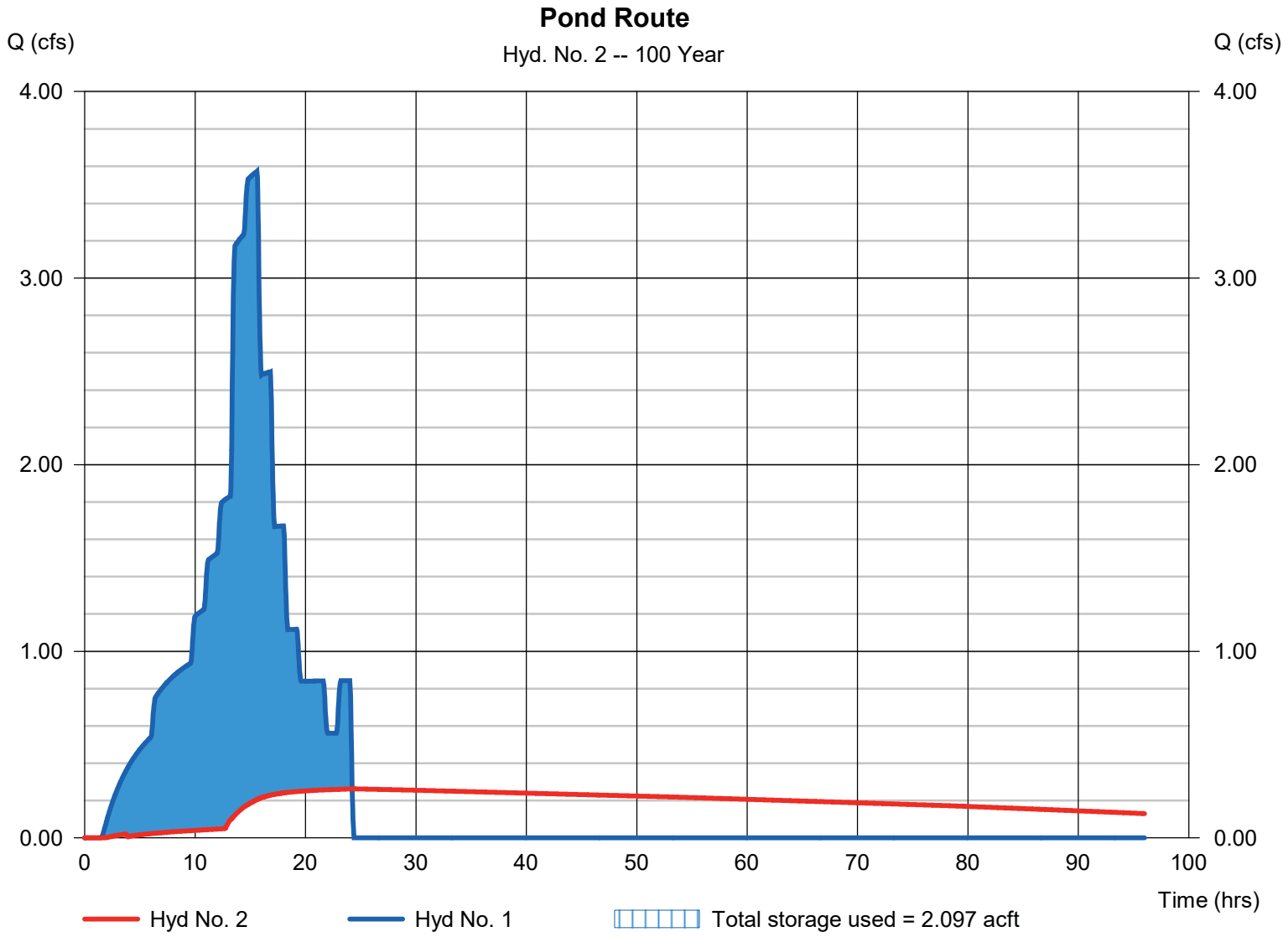
Hydrograph Report

Hyd. No. 2

Pond Route

Hydrograph type	=	Reservoir	Peak discharge	=	0.263 cfs
Storm frequency	=	100 yrs	Time to peak	=	24.23 hrs
Time interval	=	2 min	Hyd. volume	=	1.442 acft
Inflow hyd. No.	=	1 - DA-1	Max. Elevation	=	797.22 ft
Reservoir name	=	Pond	Max. Storage	=	2.097 acft

Storage Indication method used.

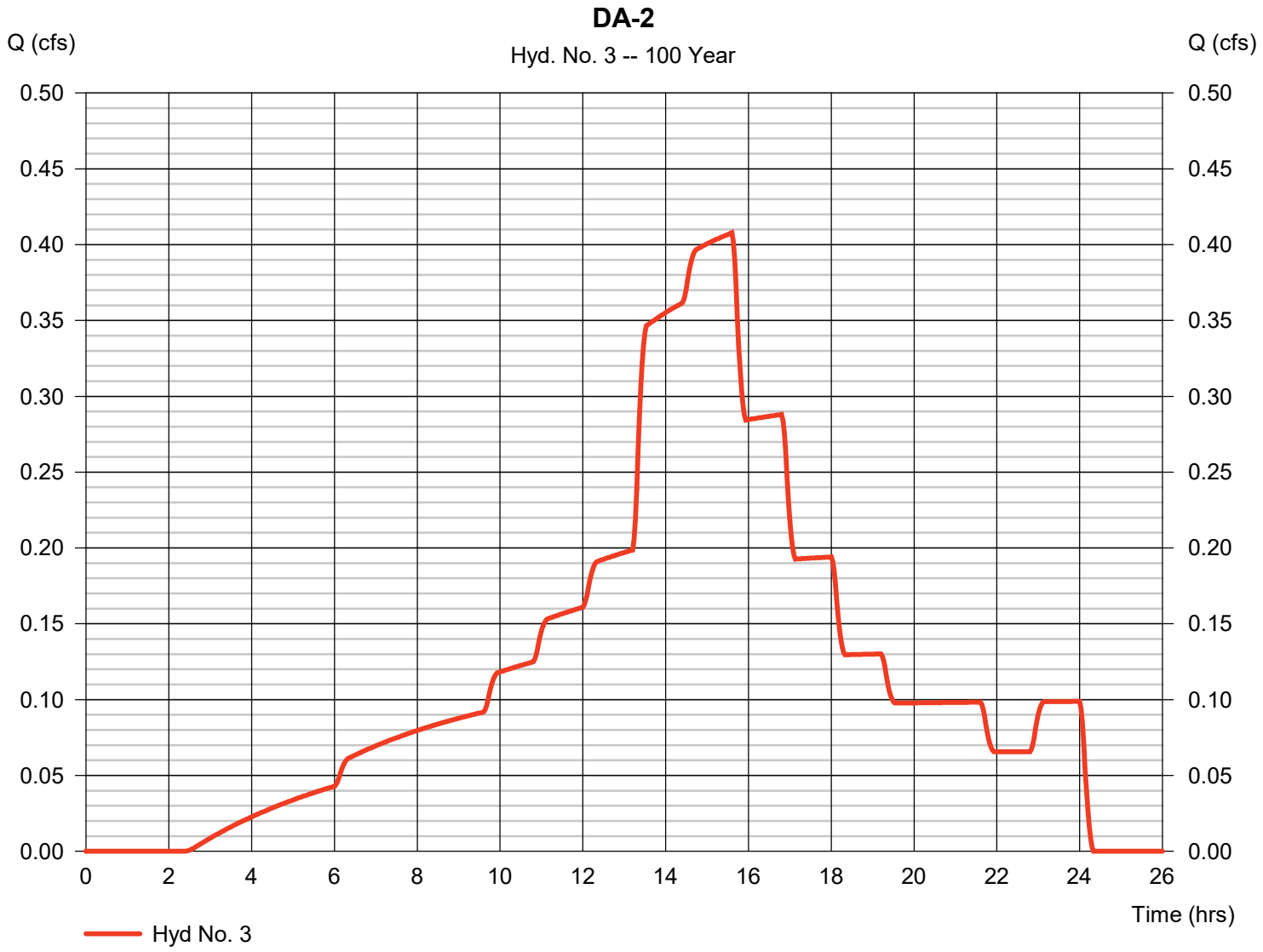


Hydrograph Report

Hyd. No. 3

DA-2

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.408 cfs
Storm frequency	=	100 yrs	Time to peak	=	15.60 hrs
Time interval	=	2 min	Hyd. volume	=	0.249 acft
Drainage area	=	0.470 ac	Curve number	=	80
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	10.00 min
Total precip.	=	8.57 in	Distribution	=	Huff-3rd
Storm duration	=	24.00 hrs	Shape factor	=	484

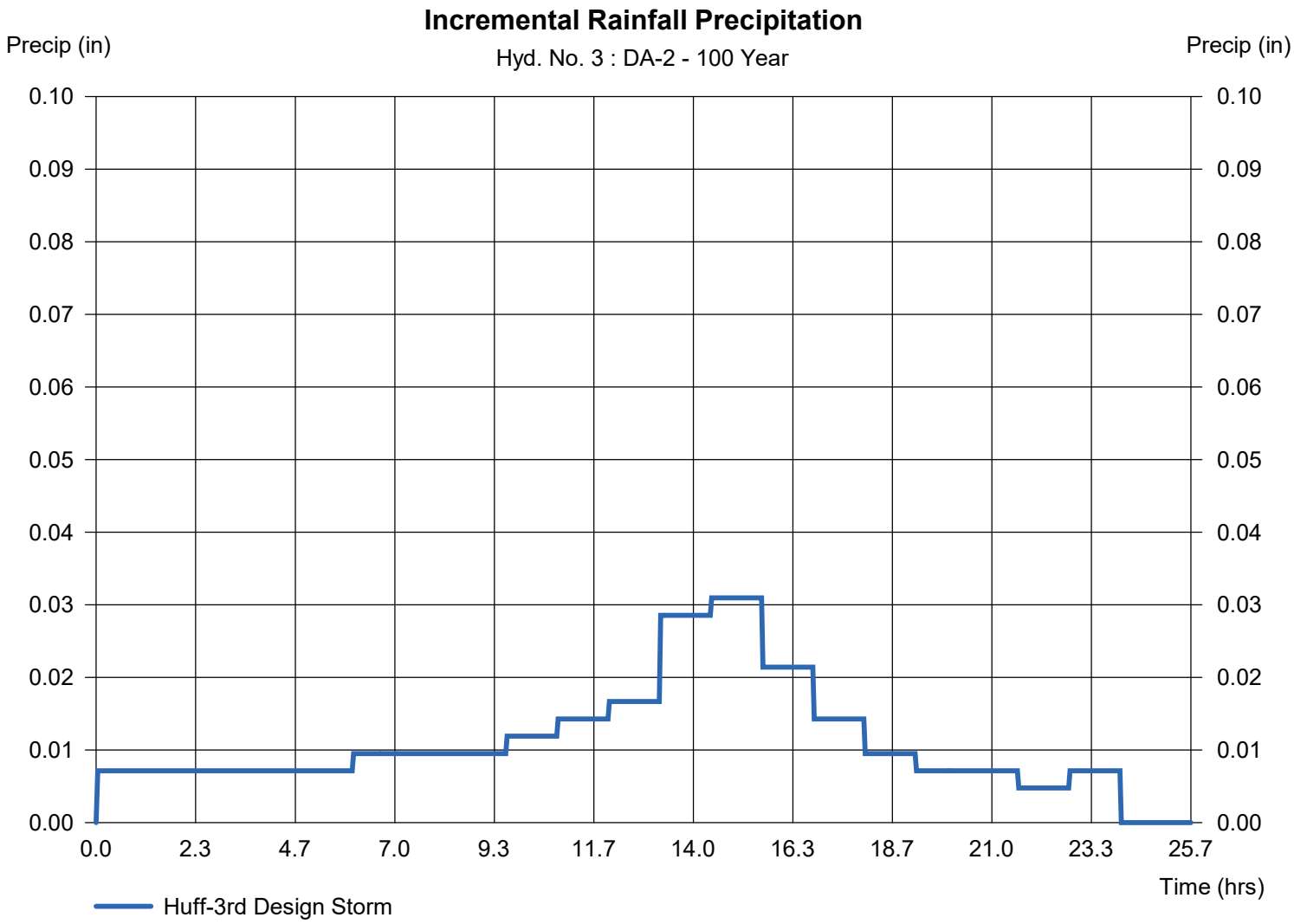


Precipitation Report

Hyd. No. 3

DA-2

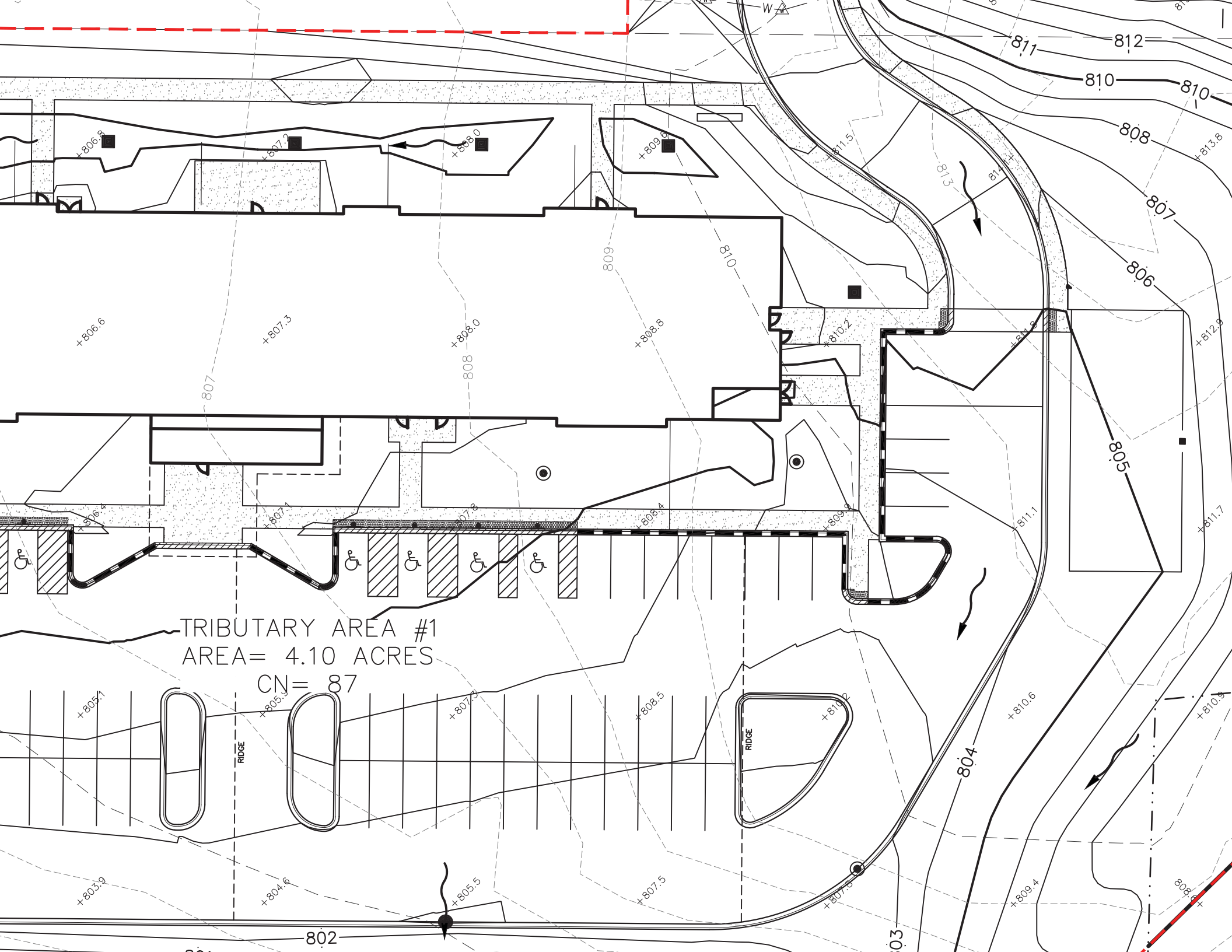
Storm Frequency	= 100 yrs	Time interval	= 2 min
Total precip.	= 8.5700 in	Distribution	= Huff-3rd
Storm duration	= 24.00 hrs		

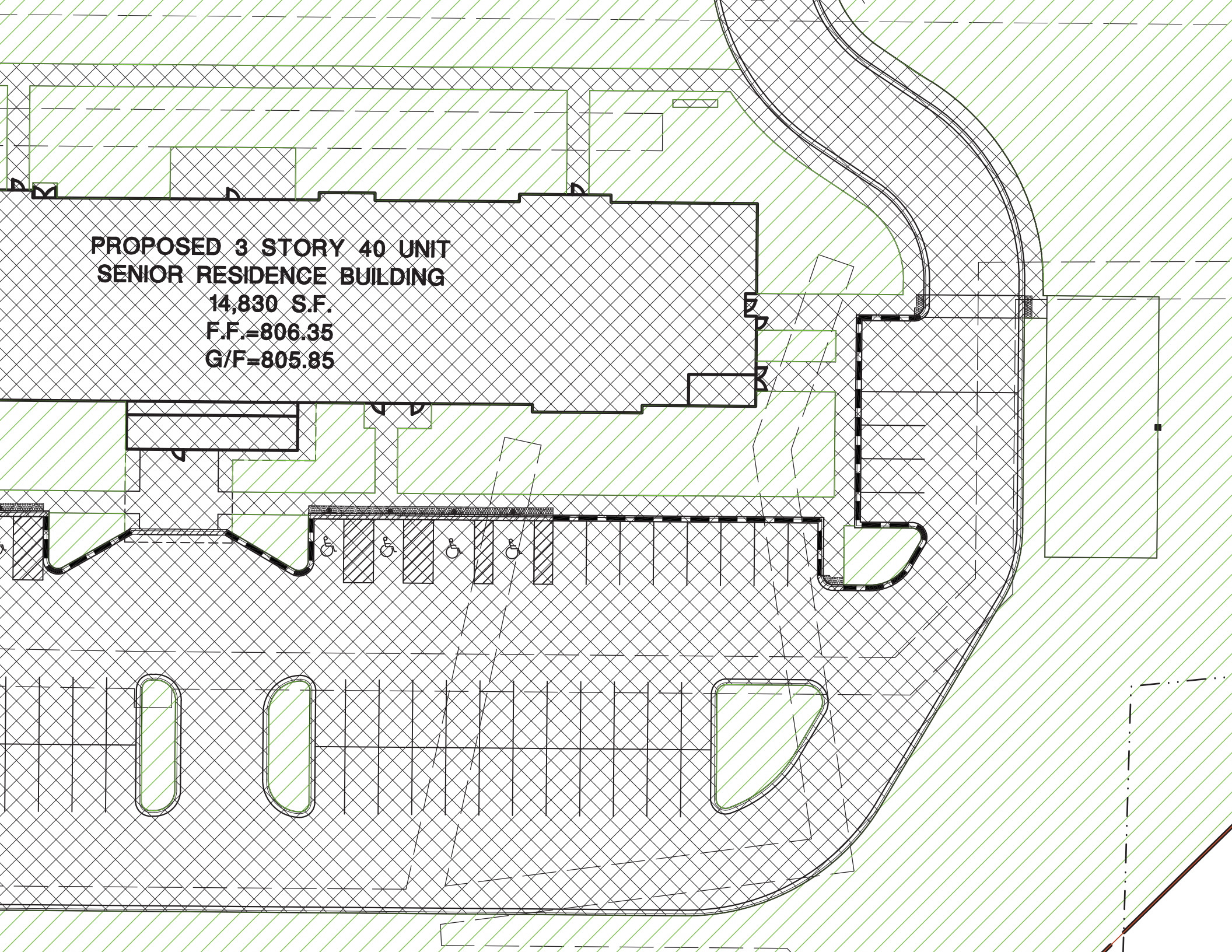


Hydraflow Table of Contents

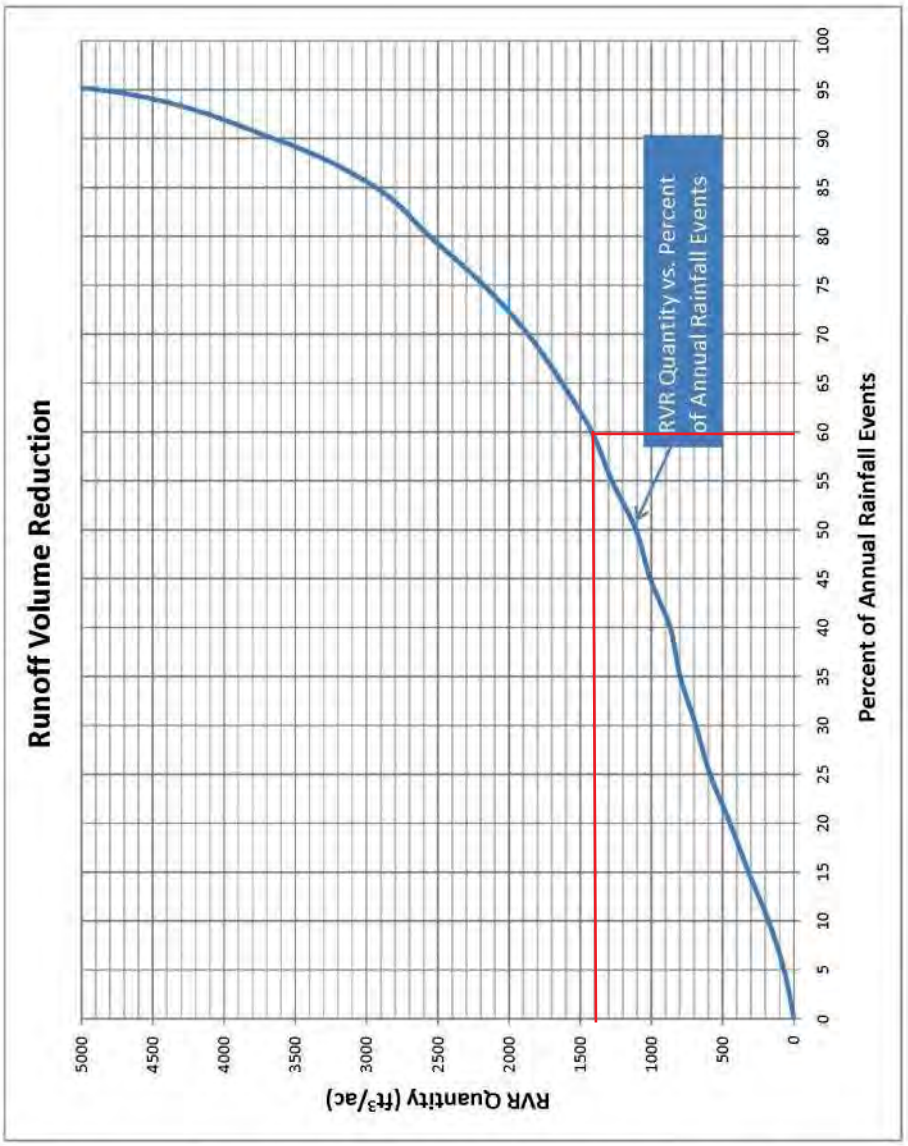
2024-01-08 Hydrographs.gpw

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Tuesday, 01 / 16 / 2024


TRIBUTARY AREA #1
AREA= 4.10 ACRES
CN= 87
RIDGE
RIDGE
802
803
804
805
806
807
808
809
810
811
812


PROPOSED 3 STORY 40 UNIT
SENIOR RESIDENCE BUILDING
14,830 S.F.
F.F.=806.35
G/F=805.85

Appendix O: Runoff Volume Reduction



Percent of Annual Rainfall Events	100% impervious values	
	Runoff Depth (in)	RVR Quantity ft^3/ac new impervious
0	0	0
5	0.02	70
10	0.05	180
15	0.09	320
20	0.12	450
25	0.16	590
30	0.19	690
35	0.22	800
40	0.24	870
45	0.28	1010
50	0.30	1110
55	0.35	1280
60	0.39	1420
65	0.45	1630
70	0.51	1870
75	0.60	2180
80	0.70	2560
85	0.81	2940
90	1.01	3660
95	1.35	4900
99	2.41	8760

Runoff Depth based on Figure 3 of the Center For Watershed Protection Report.

Runoff Depth = P*R where:

P = Rainfall Depth (inches)

R=Volumetric Runoff Coefficient = 0.95 for 100% impervious cover [0.05+.009(I), where I is 100% (impervious cover)]

RVR Quantity = Runoff Depth (in) / 12 (in/ft) * 43560 (ft^2/ac)

VOLUME CONTROL BMP STORAGE CALCULATION - BIORETENTION FACILITY

PROJECT: Starling Senior Apartments **PERMIT NUMBER:**

LOCATION: Lake Villa, Illinois **DATE:** 11/27/2023

VOLUME TYPE	POROSITY	STORAGE VOLUME
Surface Storage, V_A	1	1.00 x V_A
Soil Media Mix, V_B		0.50 x 0.25 x V_B
Coarse Aggregate (Above Invert), V_C		0.50 x 0.36 x V_C
Coarse Aggregate (Below Invert), V_D		0.36 x V_D

	Elevation	Size	
BMP Highwater Elevation, A_1	790	4,520	ft2
BMP Surface Elevation, A_2	789	2,906	ft2

Surface Storage Depth, D_A	1.00	ft
Hardwood Mulch	0.00	ft
Soil Media Mix Depth, D_B	1.00	ft
Coarse Aggregate (Above Invert) Depth, D_C	0.00	ft
Coarse Aggregate (Below Invert) Depth, D_D	4.25	ft

$$V_A = \frac{A_1 + A_2}{2} * D_A \qquad V_B = A_1 * D_B \qquad V_C = A_1 * D_C \qquad V_D = A_1 * D_D$$

$$V_{TOTAL} = (1.00 * V_A) + (0.50 * 0.25 * V_B) + (0.50 * 0.36 * V_C) + (0.36 * V_D)$$

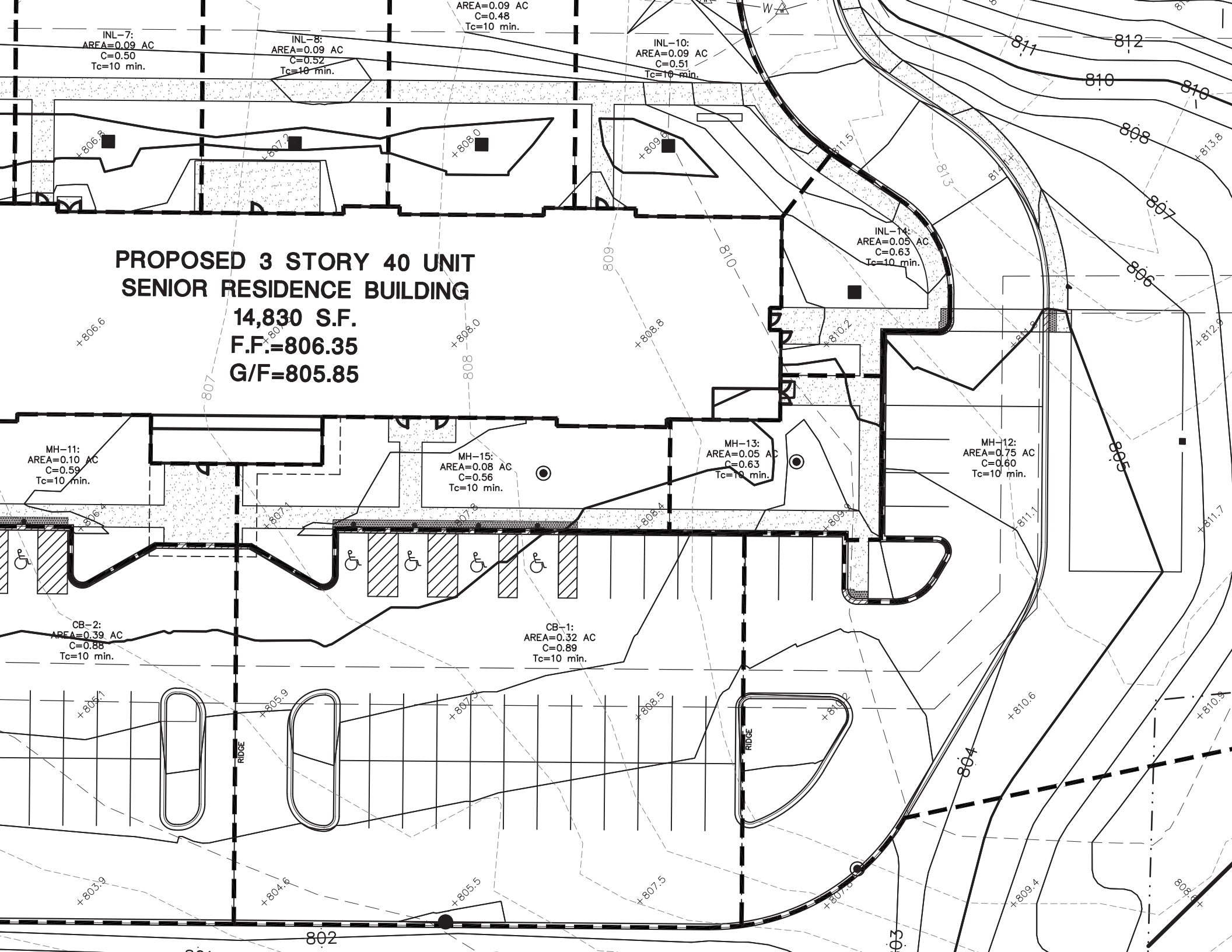
V_A	3713
V_B	2906
V_C	0
V_D	12351

V_{TOTAL}	8522	ft^3		ac Impervious
	0.20	ac-ft	0	ac-ft

Underdrain Invert	787
Bottom of BMP	783
Required Separation	
Groundwater Elevation	
Actual Separation	783.00

NONE ENCOUNTERED IN BASIN BORING

TAB 4


PROPOSED 3 STORY 40 UNIT
SENIOR RESIDENCE BUILDING
14,830 S.F.
F.F.=806.35
G/F=805.85
INL-7:
AREA=0.09 AC
C=0.50
Tc=10 min.
INL-8:
AREA=0.09 AC
C=0.52
Tc=10 min.
AREA=0.09 AC
C=0.48
Tc=10 min.
INL-10:
AREA=0.09 AC
C=0.51
Tc=10 min.
INL-14:
AREA=0.05 AC
C=0.63
Tc=10 min.
MH-11:
AREA=0.10 AC
C=0.59
Tc=10 min.
MH-15:
AREA=0.08 AC
C=0.56
Tc=10 min.
MH-13:
AREA=0.05 AC
C=0.63
Tc=10 min.
MH-12:
AREA=0.75 AC
C=0.60
Tc=10 min.
CB-2:
AREA=0.39 AC
C=0.88
Tc=10 min.
CB-1:
AREA=0.32 AC
C=0.89
Tc=10 min.
RIDGE
RIDGE
802
803
804
805
806
807
808
809
810
811
812

STRUCTURE #	DRAINAGE AREA (AC)	RUNOFF COEFFICIENT	FLOW (CFS)	HEIGHT (ft)	PERIMETER OF GRATE (FT)	OPEN AREA OF GRATE (S.F.)	WEIR FLOW CAPACITY (CFS)	ORIFICE FLOW CAPACITY (CFS)	BYPASSED FLOW TO NEXT STRUCTURE (CFS)	GRATE TYP
CB-1	0.32	0.89	3.08	0.42	4.3	1.00	3.86	3.12		
CB-2	0.39	0.88	3.71	0.42	4.3	1.00	3.86	3.12		
MH-3	0.10	0.68	0.73	0.43	4.3	1.00	4.00	3.16		
MH-4	0.11	0.82	0.97	0.23	4.3	1.00	1.57	2.31		
MH-5	0.16	0.59	1.02	0.43	4.3	4.30	4.00	13.58		
INL-6	0.13	0.48	0.67	1.00	6.0	1.10	19.80	5.30		
INL-7	0.07	0.51	0.39	0.50	6.0	1.10	7.00	3.75		
INL-8	0.07	0.58	0.44	0.50	6.0	1.10	7.00	3.75		
INL-9	0.07	0.51	0.39	0.50	6.0	1.10	7.00	3.75		
INL-10	0.08	0.51	0.44	0.95	6.0	1.10	18.33	5.16		
MH-11	0.10	0.59	0.64	0.74	6.0	1.10	12.60	4.56		
MH-12	0.75	0.60	4.86	0.30	4.3	1.00	2.33	2.64	2.22	
MH-13	0.05	0.63	0.34	0.37	6.0	1.10	4.46	3.22		
INL-14	0.05	0.63	0.34	0.17	6.0	1.10	1.39	2.18		
MH-15	0.08	0.56	0.48	0.10	6.0	1.10	0.63	1.67		
MH-16	0.27	0.45	1.31	0.75	6.0	1.10	12.86	4.59		

QUATIONS:

ow	weir flow	orifice flow
=cia	Q=3.3 P (h)^1.5	Q=CA(2gh)½

= Runoff Coefficient

= Intensity (10.80 in/hr) (Bulletin 75-NE Zone -100Yr. Recurrence Interval - 10 min ToC))

= Drainage Area

= 0.6

= Open Area of Grate

= 32.2 ft/s

= Ponding Above Rim

= Perimeter of grate in feet

OPEN AREAS S.F. :

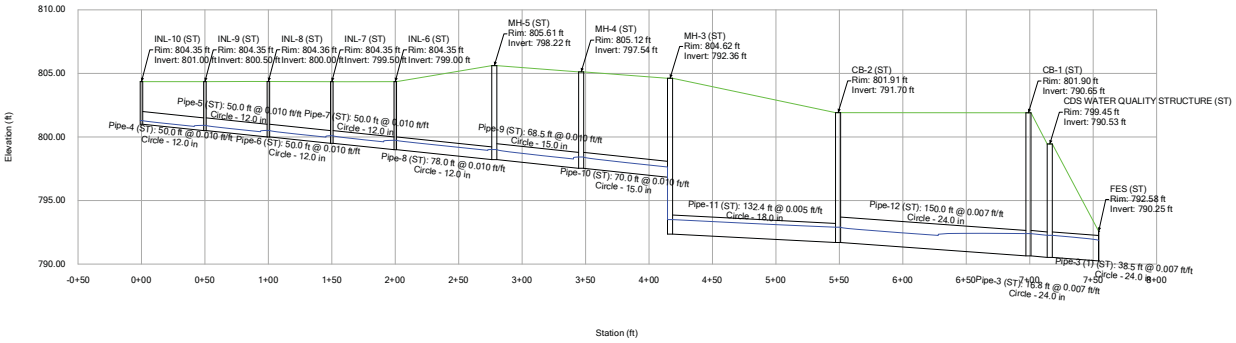
Neenah R-3281 A = 1.0-SF, P = 4.3-FT
Neenah R-2502 C = 1.2-SF, P = 6-FT
Neenah R-4340 B = 1.1-SF, P = 6-FT

- Structure providing sufficient inlet capacity
- Structure bypassing flow to downstream stucture
- Flow + upstream structure's bypassed flow

*When water depth is >4", Orifice flow should be used. <4" water depth should use weir flow per manufacturer spec.
**Conveys offsite flow and onsite flow through storm network
***Bypasses offsite flow through overland flow route

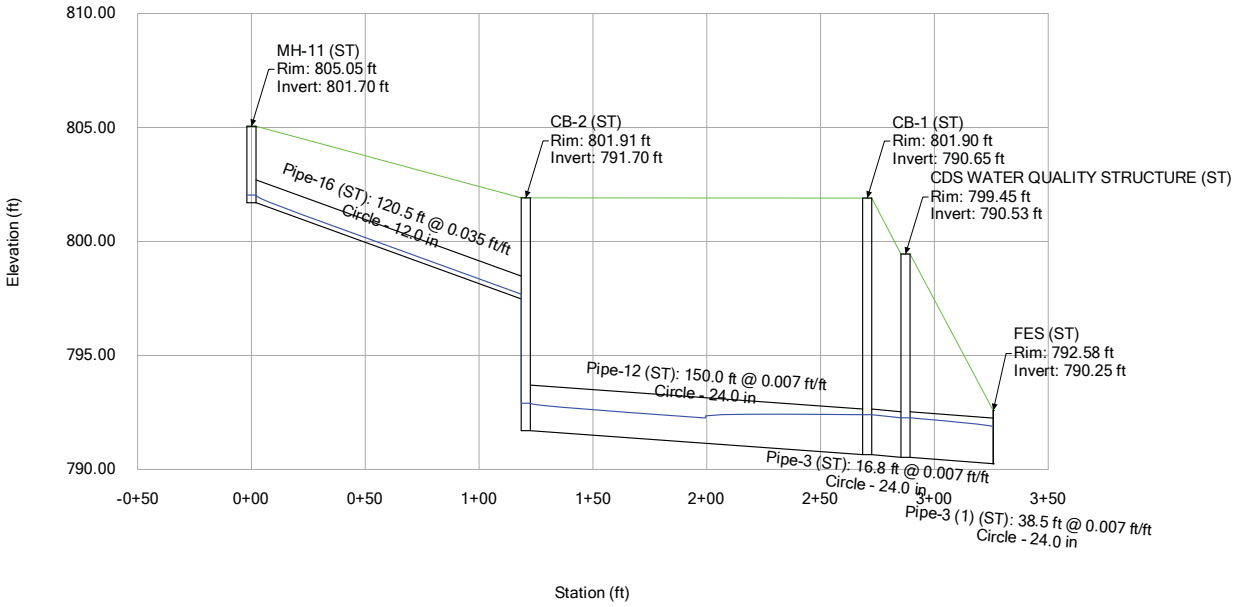
Profile Report
Engineering Profile - INL 10- FES (2023-11-09 StormCAD.stsw)

SIZED FOR 100-YEAR STORM



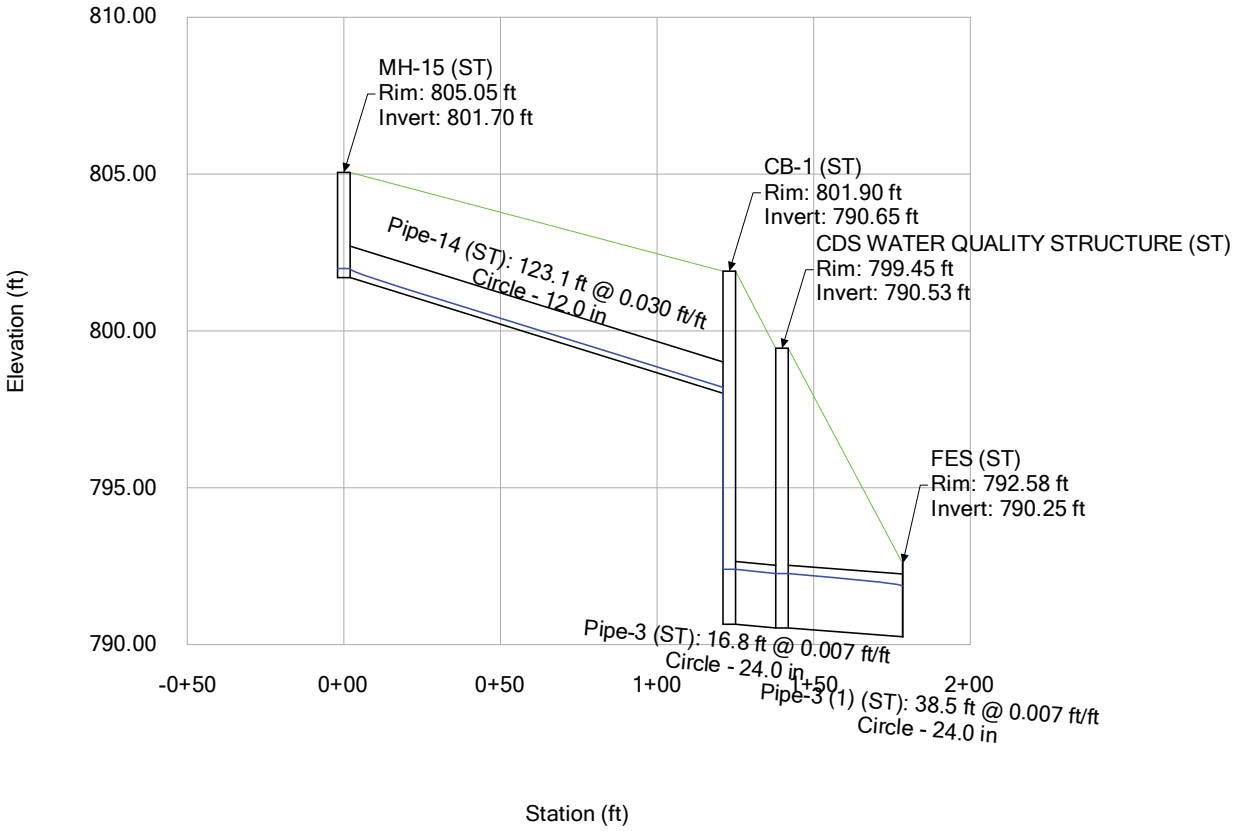
Profile Report
Engineering Profile - MH 11- FES (2023-11-09 StormCAD.stsw)

SIZED FOR 100-YEAR STORM



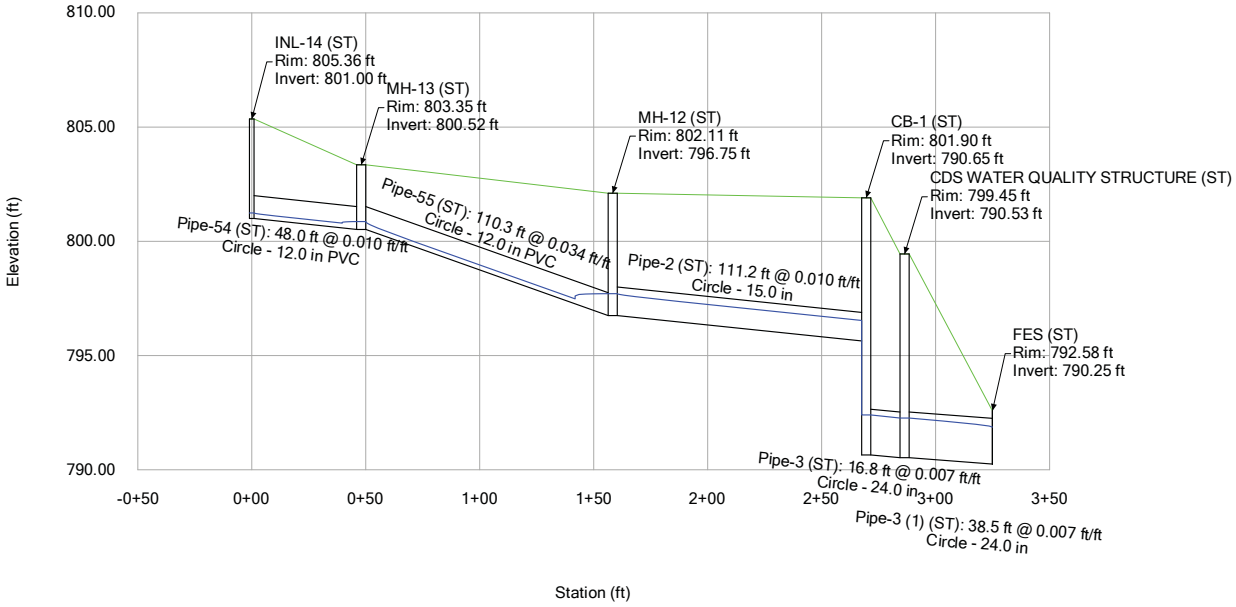
Profile Report
Engineering Profile - MH 15- FES (2023-11-09 StormCAD.stsw)

SIZED FOR 100-YEAR STORM



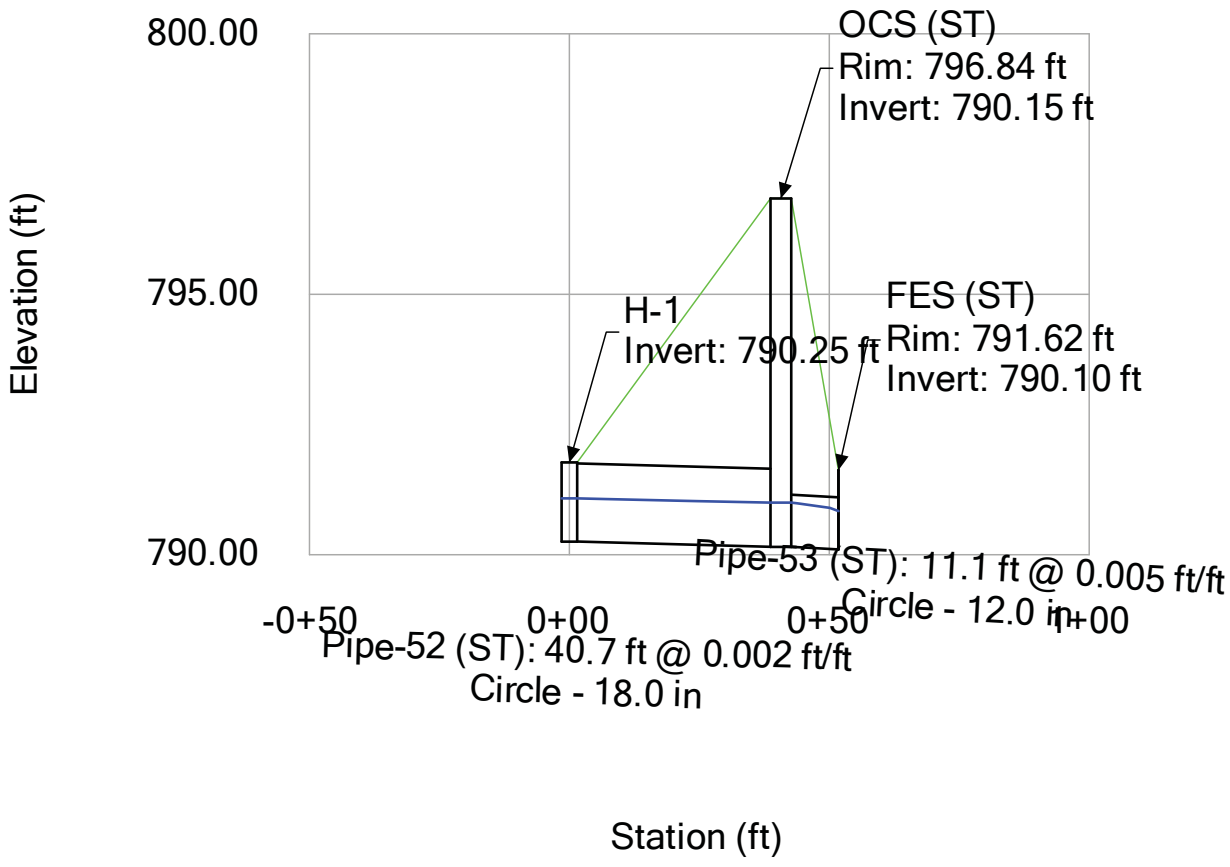
Profile Report
Engineering Profile - INL 14- FES (2023-11-09 StormCAD.stsw)

SIZED FOR 100-YEAR STORM



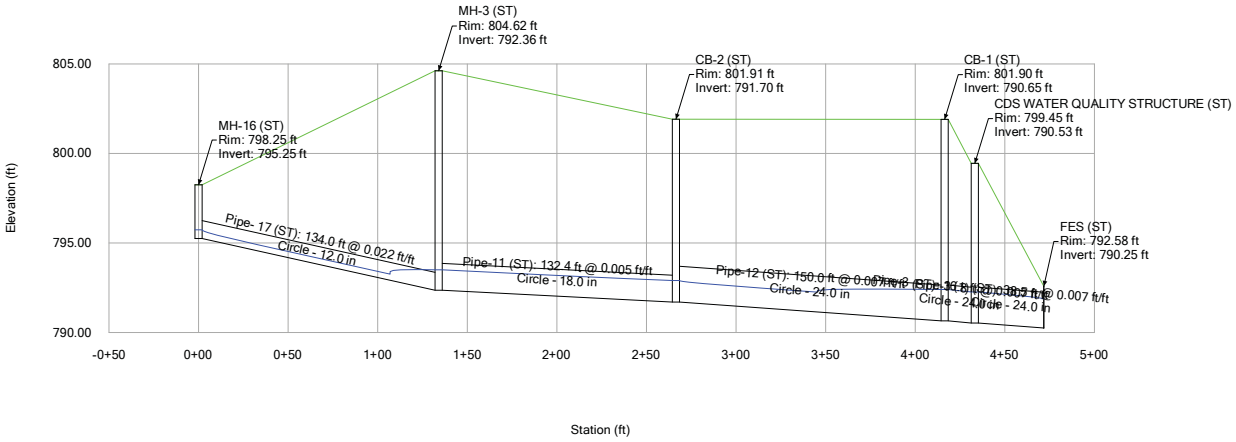
Profile Report
Engineering Profile - H 1- FES (2023-11-09 StormCAD.stsw)

SIZED FOR 100-YEAR STORM



Profile Report
Engineering Profile - MH 16- FES (2023-11-09 StormCAD.stsw)

SIZED FOR 100-YEAR STORM



Conduit Table

Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Section Type	Diameter (in)	Manning's n	Flow (cfs)	Velocity (ft/s)	Depth (Out) (ft)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth (Normal) / Rise (%)
INL-6 (ST)	799	MH-5 (ST)	798.22	78	0.01	Circle	12	0.013	2.95	5.07	0.79	3.56	82.8	69.4
MH-5 (ST)	798.22	MH-4 (ST)	797.54	68.4	0.01	Circle	15	0.013	3.82	5.48	0.89	6.46	59.1	55.3
INL-14 (ST)	801	MH-13 (ST)	800.52	48	0.01	Circle	12	0.013	0.34	2.87	0.35	3.56	9.6	21
MH-4 (ST)	797.54	MH-3 (ST)	796.84	70	0.01	Circle	15	0.013	4.8	5.76	0.8	6.46	74.3	64.2
MH-11 (ST)	801.7	CB-2 (ST)	797.48	120.4	0.035	Circle	12	0.013	0.64	5.37	0.21	6.67	9.6	21
MH-15 (ST)	801.7	CB-1 (ST)	798.01	123	0.03	Circle	12	0.013	0.49	4.68	0.19	6.17	7.9	19
MH-3 (ST)	792.36	CB-2 (ST)	791.7	132.4	0.005	Circle	18	0.013	6.86	4.76	1.2	7.42	92.6	76
INL-9 (ST)	800.5	INL-8 (ST)	800	50	0.01	Circle	12	0.013	0.97	3.86	0.52	3.56	27.2	35.7
INL-8 (ST)	800	INL-7 (ST)	799.5	50	0.01	Circle	12	0.013	1.48	4.32	0.6	3.56	41.5	44.9
INL-7 (ST)	799.5	INL-6 (ST)	799	50	0.01	Circle	12	0.013	1.97	4.65	0.74	3.56	55.3	53.1
INL-10 (ST)	801	INL-9 (ST)	800.5	50	0.01	Circle	12	0.013	0.5	3.2	0.41	3.56	14	25.3
MH-13 (ST)	800.52	MH-12 (ST)	796.75	110.3	0.034	Circle	12	0.013	0.69	5.43	0.96	6.59	10.4	21.8
MH-12 (ST)	796.75	CB-1 (ST)	795.64	111.2	0.01	Circle	15	0.013	5.58	5.92	0.9	6.46	86.5	71.8
CB-2 (ST)	791.7	CB-1 (ST)	790.65	150	0.007	Circle	24	0.013	11.24	6.28	1.75	18.93	59.4	55.5
CB-1 (ST)	790.65	CDS WATER QUALITY STRUCTURE (ST)	790.53	16.8	0.007	Circle	24	0.013	20.41	6.82	1.74	19.1	106.9	90.6
CDS WATER QUALITY STRUCTURE (ST)	790.53	FES (ST)	790.25	38.4	0.007	Circle	24	0.013	20.41	6.9	1.62	19.23	106.2	89.2
H-1	790.25	OCS (ST)	790.15	40.7	0.002	Circle	18	0.013	2.94	3.04	0.85	5.21	56.4	53.8
OCS (ST)	790.15	FES (ST)	790.1	11.1	0.005	Circle	12	0.013	2.94	3.74	0.74	2.39	122.8	(N/A)
MH-16 (ST)	795.25	MH-3 (ST)	792.36	111	0.022	Circle	12	0.013	1.32	5.55	1.14	5.23	25.3	34.3

Catchment Table

Label	Outflow Element	Area (User Defined) (acres)	Runoff Coefficient (Rational)	Time of Concentration (hours)	Flow (Total Out) (cfs)
CM-1	INL-10 (ST)	0.09	0.51	0.167	0.5
CM-2	INL-9 (ST)	0.09	0.48	0.167	0.47
CM-3	INL-8 (ST)	0.09	0.52	0.167	0.51
CM-4	INL-7 (ST)	0.09	0.5	0.167	0.49
CM-5	INL-6 (ST)	0.18	0.5	0.167	0.98
CM-6	MH-5 (ST)	0.14	0.57	0.167	0.87
CM-7	MH-4 (ST)	0.11	0.82	0.167	0.98
CM-8	MH-3 (ST)	0.1	0.68	0.167	0.74
CM-9	CB-2 (ST)	0.39	0.88	0.167	3.74
CM-10	CB-1 (ST)	0.32	0.89	0.167	3.1
CM-12	MH-11 (ST)	0.1	0.59	0.167	0.64
CM-13	MH-15 (ST)	0.08	0.56	0.167	0.49
CM-14	MH-12 (ST)	0.75	0.6	0.167	4.9
CM-15	MH-13 (ST)	0.05	0.63	0.167	0.34
CM-16	INL-14 (ST)	0.05	0.63	0.167	0.34
CM-17	H-1	0.6	0.45	0.167	2.94
CM-18	MH-16 (ST)	0.27	0.45	0.167	1.32

TAB 5

TAB 5: MAINTENANCE AND MONITORING PLAN

The project requires a monitoring and management plan as a condition for issuing a Lake County Permit. The project is subject to performance standards that measure the relative success of the stormwater management basin, and best management practices. The project is expected to meet or exceed the established goals and performance standards in order for the Village of Lake Villa to conclude that the project was successful enough to warrant a finding of compliance. If compliance is not met, corrective maintenance and subsequent monitoring is required to meet the terms and conditions of the Lake County Stormwater Permit.

The success of the project is largely dependent upon required, periodic maintenance during the first three years following construction. The following Maintenance and Monitoring Plan includes a schedule describing minimum management requirements for the buffer areas and Volume Control Facility, as well as proposed performance standards for this type of project.

Scheduled maintenance – Stormwater Facilities

An erosion control consultant will periodically visit the site to monitor the progress and the condition of the construction site. These visits determine what, if any, remedial measures are required and to recommend corrective action. In most cases, these deficiencies are related to the maintenance of the project area during construction. This includes failed silt fence, erosion control blanket, slope gradient, water quality, construction practices, and debris. Site visits will take place weekly during construction to determine if erosion control measures are functioning properly and to assess the construction practices and the development of cover vegetation. Recommendation for corrective actions will be made, if necessary. Once construction is complete, maintenance activities will be completed bi-annually during the growing season (March 1 through October 15). Site visits during all monitoring phases will include written observation and photographs of the following:

1. Storm sewer Structures: All storm sewer structures will be monitored for debris and sediment. These structures will be maintained as necessary. This will be especially important during construction.
2. Soil Erosion and Sediment Control Management: All soil erosion control devices, structures, and features will be monitored as described in Table 1. Each device, structure, or feature will be installed per the Soil Erosion and Sediment Control Plan and maintained so that they function properly at all times. Any deficiencies will be corrected immediately.

Long Term Funding and Maintenance Responsibilities

The contractor will be responsible for the short- and long-term maintenance and funding of the project.

Maintenance and Monitoring: Volume Control Facility

A meander search inventory will be conducted to determine plant species present of the project site. The inventory will also identify vegetation cover, abundance, and presence of each species found within the basin. Plant sampling will be conducted bi-annually in May or June and August or September following the seeding and planting, and be done once every subsequent year during the monitoring period. Photographs will be taken at the time of the sampling to be included in the report.

An annual monitoring report will be submitted to the Village containing the following information:

A. Cover – the amount of ground covered by plantings surrounding the basin
B. Plant Community List- A list of vegetation in each community type for each quadrant shall be provided
C. Invasive non-native weeds- Invasive, non-native weeds will be monitored and controlled mechanically by a variety of methods as applicable. These include: hand pulling and application of herbicide, or a combination of these methods.

Monitoring reports and Schedule

For the first three years, a bi-annual monitoring report based on the above sampling will be submitted to the Village by January 31 and July 1 of the following year.

SUCCESS CRITERIA/ PERFORMANCE STANDARDS

The proposed performance standards for the project are as follows:

1. Cover crop shall be established and consist of 50% aerial coverage over the entire project area within 3 months of final grading and seeding operations in Year 1. No more than 1.0 square meters in size shall be devoid of vegetation during Years 2 and 3.

2. By the end of the third growing season, at least 75% of the native-planted areas must contain native, non-invasive perennial species as measured by aerial coverage. The planted area shall exhibit at least the following native vegetation at the end of each growing season: Year 1- 10%
and Year 2- 25%.

3. None of the three most dominant species within the planted areas shall be non-native or invasive species at the end of Years 2 and 3, including but not limited to: Cattail (*Typha sp*.), Reed Canary Grass (*Phalaris arundinacea*), Purple Loosestrife (*Lythrum salicaria*), Common Reed (*Phragmites australis*), Canada Thistle (*Cirsium arvense*), Sandbar Willow (*Salix exigua*), Kentucky Blue Grass (*Poa pratensis*), Sweet Clover (*Melilotus sp*.), and Teasel (*Dipsacus sp*.).

Volume Control Facility Long Term Maintenance Plan

Management Activities
A hired landscape contractor will attempt to control weedy or invasive species within the proposed detention basin area.

Yearly maintenance including the following recommendations (native detention basin):
1.) A high mow (6-8" minimum height) to be completed in May & September over the entire prairie area to control Queen Anne's Lace (*Daucus carota*), Ragweed (*Ambrosia species*) and other weedy volunteer species.

2.) Spot herbiciding of Reed Canary Grass (*Phalaris arundinacea*), Common cattails (*Typha spp*) Garlic Mustard (*Alliaria petiolata*), Crown Vetch (*Coronilla spp*), Clover (*Trifolium* spp) and other undesirable, non-native vegetation will be completed with an approved aquatic herbicide as necessary.

3.) The site should be monitored bi-annually to verify weedy species and recommend remedial measures.

4.) Woody species removal, such as Common Buckthorn (*Rhamnus cathartica*) and Honeysuckle (*Lonicera spp*), will need to be removed and receive a wick herbicide.

Overall Site Maintenance Considerations:

Cleaning and repairing culverts, outflow pipes, and manholes is to be particularly guarded inasmuch as those elements are not visually obvious, as are the surface elements. If these subsurface elements become clogged, then water may flood the pavement surface and may cause extensive erosion damage or water flow blockage. It is therefore stated that the culvert, outlet control pipe, and manhole cleaning be made a routine maintenance activity which should be as outlined below, and may also be needed to be carried out on an as-needed basis.

Cost Considerations:

Maintenance and replacement needs and costs should be part of the economic analysis. Frequent maintenance program work execution will lead to less frequent and less costly long-term maintenance and repair, possibly requiring replacement. The attached maintenance provisions may need to be adjusted based on experience recorded over the initial period of occupancy.

Record Keeping:

The Property Owner shall maintain separate and distinct records for all tasks performed in association with this plan. The records shall include the dates of maintenance and the specific work performed.

The following table outlines routing long term maintenance tasks.

ITEM	INSPECTION FREQUENCY	CONCERNS	REPAIR WORK
1. Storm Inlets/ Manholes/Catch Basins	Fall/Spring	Clogging with leaves/ Siltation at Invert	-Remove Leaves and Debris -Remove Silt from manhole
2. Storm Lines	Fall/Spring	Cracked Pipe at Joints/ Siltation	-Remove Inlet/manhole Lids to -Visually Inspect Pipes

3. Outlet Control Structure	Quarterly	Clogged Restrictor/ Reduced Discharge	-Inspect Restrictor and remove debris clogging restrictor -Monitor discharge during High Water -Remove sediment build-up
4. Detention Pond	Fall/Spring	Erosion/ Sedimentation	-Remove siltation at outfalls -Re-seed yearly if needed -Remove floating debris and hydrocarbons. -Inspect for invasive vegetation -Remove invasive vegetation
5. Culvert/Swale Outfalls	Yearly	Siltation/Erosion	-Remove Sediment -Provide Additional Rip Rap -Re-seed/Provide Permanent Blanket
6. Overflow Weir Structures	Yearly	Erosion	-Re-Stabilize Overflow -Provide Permanent Blanket

PROPERTY OWNER RESPONSIBILITIES:

1. The items listed above are the stormwater maintenance plan responsibilities of the Property Owner.
2. Seeding, planting, plumbing repair, etc. will be subcontracted on an as needed basis.

US ARMY CORPS OF ENGINEERS (USACE)
REGULATORY PROGRAM
APPROVED JURISDICTIONAL DETERMINATION FORM (INTERIM)
2023 RULE

OMB Control Number: 0710-0024
Expiration Date: 09/30/2023

AGENCY DISCLOSURE NOTICE

The public reporting burden for this collection of information, 0710-0024, is estimated to average 4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

I. ADMINISTRATIVE INFORMATION

Completion Date of Approved Jurisdictional Determination (AJD):
ORM Project Name: Southwest Deep Lake Rd & Grass Lake Rd
ORM Identification Number: LRC-2019-00883

☐ Other sites (e.g., offsite mitigation sites, disposal sites or other review areas, etc.) are associated with this action and are recorded on a different jurisdictional determination (JD) form(s).
Associated JD Names and Numbers: N/A

Review Area Location: State/Territory: IL City: Lake Villa
County/Parish/Borough: Lake County
Center Coordinates of Review Area: Latitude: 42.43977°N, Longitude: -88.06395°W
Limits of review area: See Attached Map

II. SUMMARY[2]

Check all that apply. At least one box from the following list MUST be selected. Complete the corresponding tables in Section III., summarize data sources in Section IV., and attach completed Appendices A and/or B when specified.

☐ The review area is comprised entirely of dry land (i.e., there are no waters such as streams, rivers, wetlands, lakes, ponds, tidal waters, ditches, and the like in the entire review area). Rationale: Provide Rationale for Dry Land Determination

☐ There are "navigable waters of the United States" within Rivers and Harbors Act jurisdiction within the review area (complete the table in Section III.A.).

☒ There are "waters of the United States" within Clean Water Act jurisdiction within the review area (complete appropriate tables in Section III.B. and complete and attach appendices as appropriate).

☐ Potentially jurisdictional waters and/or features were assessed within the review area and determined to be non-jurisdictional (complete appropriate tables in Section III.C. and complete and attach appendices as appropriate).

---

[1] The final rule "Revised Definition of 'Waters of the United States'" (2023 Rule) was published in the *Federal Register* on 18 January 2023 and the effective date is 20 March 2023. See https://www.federalregister.gov/documents/2023/01/18/2022-28595/revised-definition-of-waters-of-the-united-states.
[2] Map(s)/figure(s) or descriptions of the review area and any jurisdictional waters are attached to the AJD provided to the requestor.

III. FINDINGS IN THE REVIEW AREA

A. Jurisdictional under the Rivers and Harbors Act of 1899[3] (Section 10)[4]

Section 10 Waters		
Section 10 water name	Section 10 size in review area	Type of Section 10 water
N/A	N/A	N/A
Rationale for determination: N/A		

B. Jurisdictional under the Clean Water Act

Paragraph (a)(1) waters:[5] Waters which are: (i) Currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide (Traditional Navigable Waters); (ii) The territorial seas; or (iii) Interstate waters, including interstate wetlands		
(a)(1) water name	(a)(1) size in review area	Type of paragraph (a)(1) water
N/A	N/A	N/A
Rationale for determination: N/A		

Paragraph (a)(2) waters: Impoundments of waters otherwise defined as waters of the United States under this definition, other than impoundments of waters identified under paragraph (a)(5)		
(a)(2) water name	(a)(2) size in review area	Type of paragraph (a)(2) water
N/A	N/A	N/A
Rationale for determination: N/A		

Paragraph (a)(3) waters: Tributaries of waters identified in paragraph (a)(1) or (2): (i) That are relatively permanent, standing or continuously flowing bodies of water; or (ii) That either alone or

[3] If the navigable water of the United States is not subject to the ebb and flow of the tide and not included on the district's list of Rivers and Harbors Act (RHA) Section 10 navigable waters of the United States list do NOT use this form to make a report of findings to support a determination that the water is a navigable water of the United States. The district must follow the procedure outlined in 33 CFR part 329.14 to make a determination that water is a navigable water of the United States subject to Section 10 of the Rivers and Harbors Act.
[4] USACE has authority under both Section 9 and Section 10 of the Rivers and Harbors Act of 1899 but for convenience, in this AJD form, jurisdiction under RHA will be referred to as Section 10.
[5] A stand-alone TNW determination for a water that is not subject to Section 9 or 10 of RHA is completed independently of a request for an AJD. A stand-alone TNW determination is conducted for a specific segment of river or stream or other type of waterbody, such as a lake, where upstream or downstream limits or lake borders are established. A stand-alone TNW determination should be completed following applicable guidance and should NOT be documented on the AJD Form.

in combination with similarly situated waters in the region, significantly affect the chemical, physical, or biological integrity of waters identified in paragraph (a)(1)		
(a)(3) water name	(a)(3) size in review area	Type of paragraph (a)(3) water
N/A	N/A	N/A
Rationale for determination: N/A		

Paragraph (a)(4) waters: Wetlands adjacent to the following waters: (i) Waters identified in paragraph (a)(1); or (ii) Relatively permanent, standing or continuously flowing bodies of water identified in paragraph (a)(2) or (a)(3)(i) and with a continuous surface connection to those waters; or (iii) Waters identified in paragraph (a)(2) or (3) when the wetlands either alone or in combination with similarly situated waters in the region, significantly affect the chemical, physical, or biological integrity of waters identified in paragraph (a)(1)		
(a)(4) water name	(a)(4) size in review area	Adjacency criteria
Wetland 1 (2023)	1.19 acres	Water enters the subject wetland from east under Deep Lake Road, flows into the subject wetland, continues west under Painted Lake Boulevard, and into the wetland complex bisected by Sequoit Creek, which flows into the Fox River (TNW).
Type of paragraph (a)(4) water	(a)(4)(ii) Adjacent Wetland, Meets Relatively Permanent Standard (Section 404 Only)	
Rationale for determination: Wetland 1 has a discrete surface hydrologic connection to a downstream (a)(1) water.		

Paragraph (a)(5) waters: Intrastate lakes and ponds, streams, or wetlands not identified in paragraphs (a)(1) through (4): (i) That are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to the waters identified in paragraph (a)(1) or (a)(3)(i); or (ii) That either alone or in combination with similarly situated waters in the region, significantly affect the chemical, physical, or biological integrity of waters identified in paragraph (a)(1)[6]		
(a)(5) water name	(a)(5) size in review area	Type of paragraph (a)(5) water
N/A	N/A	N/A
Rationale for determination: N/A		

[6] In implementing the significant nexus standard, the agencies generally intend to analyze waters under paragraph (a)(5) individually to determine if they significantly affect the chemical, physical, or biological integrity of a paragraph (a)(1) water.

C. Waters or features that are not jurisdictional under the Clean Water Act

Waters analyzed under paragraph (a)(3)(ii), (a)(4)(iii), or (a)(5)(ii) and determined non-jurisdictional: Tributaries of waters identified in paragraph (a)(1) or (2); and/or wetlands adjacent to waters identified in paragraph (a)(2) or (3); and/or intrastate lakes and ponds, streams, or wetlands not identified as (a)(1) through (4) waters; that either alone or in combination with similarly situated waters in the region, do not significantly affect the chemical, physical, or biological integrity of waters identified in paragraph (a)(1)		
Water name	Water size in review area	Type of water for which significant nexus was not met
N/A	N/A	N/A
Rationale for determination: N/A		

(b)(1)-(b)(8) Excluded Features[7]		
Excluded feature name	Excluded feature size in review area	Exclusion[8]
N/A	N/A	N/A
Rationale for determination: N/A		

IV. SUPPORTING INFORMATION

A. Paragraph (a)(1) water that is outside the review area:

a. Provide the name of the paragraph (a)(1) water: Fox River.
b. Type of paragraph (a)(1) water: Section 10
c. Provide the rationale for jurisdiction of the paragraph (a)(1) water: The Fox River is on the Districts List of Section 10 Waterways.

B. Significant nexus analyses

☐ Appendix A is attached and includes the significant nexus analysis for any waters in the review area that were evaluated under paragraph (a)(3)(ii) and/or paragraph (a)(4)(iii).
☐ Appendix B is attached and includes the significant nexus analyses for any waters in the review area that were evaluated under paragraph (a)(5)(ii).
☐ There are no waters in the review area that require evaluation under the significant nexus standard. Therefore, neither Appendix A nor Appendix B are included with this form

[7] Transient features on the landscape that are difficult to document due to their non-permanent nature, such as rills and gullies, may not be specifically identified on the AJD form unless a requestor specifically asks a USACE district to do so. USACE districts may, in case-by-case instances, elect to document any such feature on a case-by-case basis, such as when the feature is relevant to analysis of the jurisdictional status of another water.
[8] Note the full text of the exclusions for (b)(1)-(6) and (b)(8) are included in the dropdown list, while the text for the (b)(7) exclusion is truncated due to space limitations. The full text of the (b)(7) exclusion is as follows: (b)(7) Waterfilled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States.

C. Data, models, and other relevant methods Select/enter all resources that were used to support this determination and include data/maps and/or references/citations in the administrative record, as appropriate.

x Aquatic resources delineation submitted by, or on behalf of, the requestor: Wetland Delineation Report dated November 22, 2022, prepared by GRWA, Inc.

The aquatic resources delineation submitted by or on behalf of the requestor is sufficient for purposes of this AJD Yes

Rationale: The submitted report is partially sufficient for the purposes of this AJD, and required a field verification of jurisdiction and boundaries flagged by GRWA, Inc.

☐ Aquatic resources delineation prepared by the USACE: Title(s) and Date(s)

☐ Wetland field data sheets prepared by the USACE: Title(s) and Date(s)

☐ OHWM data sheets prepared by the USACE: Title(s) and Date(s)

x USACE site visit: Date(s) of site visit(s): March 23, 2023 site visit by USACE

x Previous Jurisdictional Determinations (AJDs or PJDs) addressing the same (or portions of the same) review area: LRC-2019-883, wetland was found to be jurisdictional under the 2019 NWPR.

☐ Photographs: Source(s), Title(s) and Date(s)

x Aerial Imagery: Historic Aerial and Topo Review. 1920-1958 Topos show intermittent tributary bisecting wetland in review.

☐ LiDAR: Source(s), Title(s) and Date(s)

☐ USDA NRCS Soil Survey: Title(s) and Date(s)

☐ USFWS NWI maps: Title(s) and Date(s)

☐ USGS topographic maps: Title(s) and Date(s)

☐ USGS NHD data/maps: Title(s) and Date(s)

☐ USGS Dynamic Surface Water Extent: Title(s) and Date(s)

☐ Section 10 navigability resource used: Title(s) and Date(s)

Other data sources or models used to aid in this determination:

Data source or model (Select)	Name, date, and other relevant information
USGS Sources	N/A
USEPA Sources	N/A
USDA Sources[9]	N/A
NOAA Sources	N/A
USACE Sources	N/A
State/Local/Tribal Sources	N/A
Other Sources	N/A

D. Additional comments to support AJD: Site visit on March 23, 2023 to document water flow into site and continuing west into Sequoit Creek.

[9] Including Certified Wetland Determination from the NRCS.

DEPARTMENT OF THE ARMY
CHICAGO DISTRICT, CORPS OF ENGINEERS
231 SOUTH LA SALLE STREET
CHICAGO, ILLINOIS 60604-1437

REPLY TO
ATTENTION OF:

March 29, 2023

Operations Division
Regulatory Branch
LRC-2019-00883

SUBJECT: Jurisdictional Determination for the Proposed Home State Bank Site, Located Southwest of Grass Lake Road & Deep Lake Road in Lake Villa, Lake County, Illinois (Latitude 42.43977, Longitude -88.06395)

David Kerth
Home State Bank N.A.
40 Grant Street
Crystal Lake, Illinois 60014

Dear Mr. Kerth:

This is in response to your request that the U.S. Army Corps of Engineers complete a jurisdictional determination for the above-referenced site submitted on your behalf by Gary R. Weber Associates, Inc. (GRWA). The subject project has been assigned number LRC-2019-00883. Please reference this number in all future correspondence concerning this project.

Following a review of the information you submitted, this office has determined that the subject property contains "waters of the United States".

Wetland 1 has been determined to be under the jurisdiction of this office and therefore, subject to Federal regulation.

This office concurs with the submitted wetland delineation and wetland boundaries at the subject site. In the event an application is submitted for work within jurisdictional areas, a survey of the wetland boundary(s) stamped by a professional surveyor shall accompany the approved wetland delineation.

For a detailed description of our determination please refer to the enclosed decision document. This determination covers only your project as depicted in the Wetland Delineation Report dated November 22, 2022, prepared by GRWA, Inc.

This determination is valid for a period of five (5) years from the date of the letter, unless new information warrants revision of the determination before the expiration date or a District Commander has identified, after public notice and comment, that specific geographic areas with rapidly changing environmental conditions merit re-verification on a more frequent basis.

This letter is considered an approved jurisdictional determination for your subject site. If you object to this determination, you may appeal, according to 33 CFR Part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and a Request for Appeal (RFA) form. If you request to appeal the above determination, you must submit a completed RFA form to the Great Lakes/Ohio River Division Office at the following address:

Regulatory Appeals Review Officer
US Army Corps of Engineers
Great Lakes and Ohio River Division
550 Main Street, Room 10-714
Cincinnati, Ohio 45202-3222
Phone: (513) 684-2699 Fax: (513) 684-2460

In order to be accepted, your RFA must be complete, meet the criteria for appeal and be received by the Division Office within sixty (60) days of the date of the NAP, which is May 27, 2023. If you concur with the determination in this letter, submittal of the RFA form to the Division office is not necessary.

This determination has been conducted to identify the limits of the Corps Clean Water Act jurisdiction for the particular site identified in this request. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985, as amended. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service prior to starting work.

It is your responsibility to obtain any required state, county, or local approvals for impacts to wetland areas not under the Department of the Army jurisdiction. For projects in unincorporated areas of Lake County, please contact Lake County Planning, Building and Development at (847) 377-2600. For projects in incorporated areas of Lake County, please contact the Lake County Stormwater Management Commission at (847) 377-7700.

Pursuant to Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers regulates the discharge of dredged or fill material into waters of the United States, including wetlands. A Department of the Army permit is required for any proposed work involving the discharge of dredged or fill material within the jurisdiction of this office. To initiate the permit process, please submit a joint permit application form along with detailed plans of the proposed work. Information concerning our program, including the application form and an application checklist, can be found at and downloaded from our website:
http://www.lrc.usace.army.mil/Missions/Regulatory.aspx

If you have any questions, please contact Mr. Michael J. Machalek of my staff by telephone at (312) 846-5534 or email at Mike.J.Machalek@usace.army.mil.

Sincerely,

Michael J Machalek

Michael J. Machalek
Senior Project Manager
Regulatory Branch

Enclosures

Copy Furnished w/out Enclosures

Lake County Stormwater Management Commission (Brian Frank)
Lake County Planning, Building and Development Department (Eric Steffen)
GRWA, Inc. (Ellen Raimondi)

Illinois Department of
Natural Resources
One Natural Resources Way Springfield, Illinois 62702-1271
www.dnr.illinois.gov
JB Pritzker, Governor
Colleen Callahan, Director

November 14, 2022

Lisa Pajon
Natural Resources Consultant
402 W. Liberty Drive
Wheaton, IL 60187

RE: Grass Lake Rd & Deep Lake Rd ment
Consultation Program
EcoCAT Review #2306326
Lake County

Dear Mrs. Pajon:

The Department has received your submission for this project for the purposes of consultation pursuant to the *Illinois Endangered Species Protection Act* [520 ILCS 10/11], the *Illinois Natural Areas Preservation Act* [525 ILCS 30/17], and Title 17 *Illinois Administrative Code* Part 1075.

The proposed action consists of the construction of a development with associated stormwater and utilities (42.440°, -88.069°).

The Illinois Natural Heritage Database shows the following protected resources may be in the vicinity of the project location:

Illinois Natural Areas Inventory (INAI) Sites
Deep Lake
Loon Lake
Sun Lake

Illinois Nature Preserves Commission Lands
Sun Lake Nature Preserve

State Threatened or Endangered Species
Blanding's Turtle (*Emydoidea blandingii*)
King Rail (*Rallus elegans*)
Least Bittern (*Ixobrychus exilis*)

Due to the project scope and proximity to protected resources the Department recommends the following actions be taken to avoid adversely impacting listed species in the vicinity of the project:

Deep Lake INAI, Loon Lake INAI, Sun Lake INAI, & Sun Lake Nature Preserve

The Department has determined adverse impacts to these protected natural areas are unlikely.

Blanding's Turtle

To avoid adverse impacts to Blanding's Turtles, the Department recommends the following:

- All on-site personnel should be educated about this species and be instructed to stop work immediately and contact the Department (Brad Semel, Natural Heritage Division, 815-675-2386 ext. 216) if they are encountered in the project area. Fliers with photos of adult and juvenile Blanding's turtles, and life-history information, should be distributed to personnel.
- Exclusionary fencing should be installed around the work area, or at a minimum, to partition off any wetland areas before the active season (March 1st - November 1st). Exclusionary fencing should be trenched into the ground (a minimum of 4 inches) and inspected daily for Blanding's turtles. Fencing should be installed with turn-arounds at open ends and at any access openings needed in the fencing, in order to redirect animals away from openings.
- Excavations should be inspected daily for trapped wildlife and safely covered overnight. Soil or other potential turtle nesting medium stockpiles should also have exclusionary fencing installed around the perimeter to discourage turtle nesting and potential harm.
- A permanent exclusionary barrier between any wetlands and the project site should be incorporated into project plans to prevent turtles from entering areas where they may be adversely impacted by daily activity. The barrier should include turn-arounds where needed and be trenched into the soil a minimum of 4 inches.
- If erosion control blanket is to be used, the Department also recommends that wildlife-friendly plastic-free blanket be used around wetlands and adjacent to natural areas, if not feasible to implement project wide, to prevent the entanglement of native wildlife.

King Rail & Least Bittern

To avoid adverse impacts to King Rail and Least Bittern, the Department recommends the following:

- A 50-foot buffer should be maintained on all wetlands.
- When feasible, work near wetlands should be avoided between April 1st and September 30th to avoid the prime nesting and fledging season for these protected bird species.
- Any required night lighting should follow International Dark-Sky Association (IDA) guidance to minimize the effect of light pollution on wildlife; including shielding fixtures so no light travels upward, using "warm-white" or filtered LEDs (CCT < 3,000 K) to minimize blue emission, and avoiding over-lighting.

Given the above recommendations are adopted the Department has determined that impacts to these protected resources are unlikely. The Department has determined impacts to other protected resources in the vicinity of the project location are also unlikely.

In accordance with 17 Ill. Adm. Code 1075.40(h), please notify the Department of your decision regarding these recommendations.

Consultation on the part of the Department is closed unless the applicant desires additional information or advice related to this proposal. Consultation for Part 1075 is valid for two years unless new information becomes available which was not previously considered; the proposed

action is modified; or additional species, essential habitat, or Natural Areas are identified in the vicinity. If the action has not been implemented within two years of the date of this letter, or any of the above listed conditions develop, a new consultation is necessary.

The natural resource review reflects the information existing in the Illinois Natural Heritage Database at the time of the project submittal and should not be regarded as a final statement on the project being considered, nor should it be a substitute for detailed site surveys or field surveys required for environmental assessments. If additional protected resources are unexpectedly encountered during the project's implementation, the applicant must comply with the applicable statutes and regulations.

This letter does not serve as permission to take any listed or endangered species. As a reminder, no take of an endangered species is permitted without an Incidental Take Authorization or the required permits. Anyone who takes a listed or endangered species without an Incidental Take Authorization or required permit may be subject to criminal and/or civil penalties pursuant to the *Illinois Endangered Species Act*, the *Fish and Aquatic Life Act*, the *Wildlife Code* and other applicable authority.

The Department also offers the following conservation measures be considered to help protect native wildlife and enhance natural areas in the project area:

- Good housekeeping practices should be implemented and maintained during and after construction to prevent trash and other debris from inadvertently blowing or washing into nearby natural areas.
- Post construction invasive species control should be considered, especially near any natural areas.

Please contact me with any questions about this review.
Sincerely,

Bradley Hayes
Manager, Impact Assessment Section
Division of Real Estate Services and Consultation
Office of Realty & Capital Planning
Illinois Department of Natural Resources
One Natural Resources Way
Springfield, IL 62702
Bradley.Hayes@Illinois.gov
Phone: (217) 782-0031

EcoCAT
Ecological Compliance Assessment Tool

ILLINOIS DEPARTMENT OF NATURAL RESOURCES

Applicant: Gary R. Weber Associates, Inc.
Contact: Lisa Pajon
Address: 402 W. Liberty Drive
Wheaton, IL 60187

IDNR Project Number: 2306326
Date: 11/10/2022

Project: Grass Lake Rd & Deep Lake Rd
Address: Deep Lake Road, Lake Villa

Description: Proposed above ground development with associated stormwater and utilities

Natural Resource Review Results

The Illinois Natural Heritage Database shows the following protected resources may be in the vicinity of the project location:

Deep Lake INAI Site
Loon Lake INAI Site
Sun Lake INAI Site
Sun Lake Nature Preserve
Blanding's Turtle *(Emydoidea blandingii)*
King Rail *(Rallus elegans)*
Least Bittern *(Ixobrychus exilis)*

An IDNR staff member will evaluate this information and contact you to request additional information or to terminate consultation if adverse effects are unlikely.

Location

The applicant is responsible for the accuracy of the location submitted for the project.

County: Lake

Township, Range, Section:
46N, 10E, 28

IL Department of Natural Resources Contact
Bradley Hayes
217-785-5500
Division of Ecosystems & Environment

Government Jurisdiction
U.S. Army Corps of Engineers

Disclaimer

The Illinois Natural Heritage Database cannot provide a conclusive statement on the presence, absence, or condition of natural resources in Illinois. This review reflects the information existing in the Database at the time of this inquiry, and should not be regarded as a final statement on the site being considered, nor should it be a substitute for detailed site surveys or field surveys required for environmental assessments. If additional protected resources are encountered during the project's implementation, compliance with applicable statutes and regulations is required.

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1. The IDNR EcoCAT website was developed so that units of local government, state agencies and the public could request information or begin natural resource consultations on-line for the Illinois Endangered Species Protection Act, Illinois Natural Areas Preservation Act, and Illinois Interagency Wetland Policy Act. EcoCAT uses databases, Geographic Information System mapping, and a set of programmed decision rules to determine if proposed actions are in the vicinity of protected natural resources. By indicating your agreement to the Terms of Use for this application, you warrant that you will not use this web site for any other purpose.

2. Unauthorized attempts to upload, download, or change information on this website are strictly prohibited and may be punishable under the Computer Fraud and Abuse Act of 1986 and/or the National Information Infrastructure Protection Act.

3. IDNR reserves the right to enhance, modify, alter, or suspend the website at any time without notice, or to terminate or restrict access.

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November 21, 2022

Matt Eagle
Manhard Consulting, Ltd.
116 W. Illinois Street.
Chicago, IL 60604

RE: USFWS Threatened and Endangered Species IPaC Review Summary
Grass Lake Rd & Deep Lake Rd, Lake Cook County, Illinois

Dear Mr. Eagle,

Gary R. Weber Associates Inc. reviewed the U.S, Fish and Wildlife Information for Planning and Consultation (IPaC) website on November 10, 2022 for federally listed threatened and endangered species. The IPaC program utilizes known or expected range of species, as well as additional areas outside of the range in which activities may indirectly affect a species. This review represents an informal consultation and further coordination with USFWS may be required for a formal consultation.

According to the IPaC consultation, seven (7) species are thought to be present in this location of Lake County (see below). Based on the 11/3/2022 site review, potential habitat for these species is not present within the project area and therefore would not negatively affect threatened or endangered species.

Site Summary:

The study area (approximately 4.97-acres) consists of a turf field with a lightly a scrub-shrub border to the north and east. The field is an elevated building pad that was constructed around 1999.

The vegetated areas are entirely maintained, with mowed turf throughout the main area, and a narrow scrub-shrub community at the north boundary. The scrub-shrub consists of a few large trees and dense dogwood around the basin.

Habitat and Requirements:

Threatened – Northern long-eared bat (*Myotis septentrionalis*): No Affect

According to the USFWS guidance, conditions suitable for the Northern long-eared bat (NLEB) includes wooded areas characterized by the presence of roosting trees and an herbaceous understory community. The bats will spend the summer foraging and roosting before overwintering in caves and mines from late October to April. Summer roosting trees required by the bats are characterized by mature trees containing potential roosting features (PRF) such as peeling and crevice forming bark, cavities, and dead snags. Foraging can occur in a variety of habitats including upland forests, edge habitats, wetlands, riparian buffers, and floodplain forests. An open, herbaceous understory is beneficial to supporting insect abundance for the bats to feed on.

The current site conditions contain few large trees that contain PRF, however no canopy is present and adjacent areas are either paved or maintained turf. These conditions are not suitable as habitat for the NLEB.

Endangered – Piping Plover (*Charadrius melodus*) No Affect

According to USFWS guidance, the piping plover is a summer resident that inhabits shoreline and coastal areas of the Great Lakes during the summer breeding season. The plover is a shorebird that prefers breeding habitat consisting of open, sparsely vegetated areas with alkali or unconsolidated substrates. Foraging habitat consist of mud flats or ephemeral pools with abundant vertebrate populations. Critical habitat has been designated for this species along the Great Lakes shoreline.

Current site conditions are not suitable for the Piping Plover.

Threatened – Red Knot (*Calidris canutus rufa*): No Affect

According to USFWS guidance, the red knot is primarily occurs in Illinois during migration in the spring and fall. Spring migrants arrive in May and fall migrants arrive in July. The red knot is a shorebird that typically uses sandy, open shoreline along Lake Michigan for foraging, but has also been observed at water reservoirs.

Current site conditions are not suitable for the Red Knot.

Endangered – Karner Blue Butterfly (*Lycaeides melissa samuelis*): No Affect

According to USFWS guidance, the karner blue butterfly require environments characterized by dry, sandy areas with open woodlands capable of supporting Wild Blue Lupine populations. The lupine is the only food source for larval butterflies as well as required for adult oviposition. Foraging adults require diverse blooming nectar resources.

Current site conditions are not suitable for the Karner Blue Butterfly due to lack of lupine presence.

Endangered – Monarch Butterfly (*Danaus plexippus*): No Affect

According to USFWS Species Status Assessment Report, Monarch Butterflies require environments containing both diverse blooming nectar resources for foraging during breeding and migration, and sufficient milkweed (*Asclepias spp.*) populations for oviposition and larval feeding.

Due to mowing activity and lack of wildflower presence, current site conditions are not suitable for the Monarch Butterfly.

Threatened – Eastern Prairie Fringed Orchid (*Platanthera leucophaea*): No Affect

According to USFWS guidance, the eastern prairie fringed orchid (EPFO) occurs in a wide variety of habitats. It requires full sun for optimum growth and can occur in tall grass silt-loam or sand prairies, sedge meadows, and fens. It is adaptive to natural patch disturbance and other dynamic disturbance regimes. It is occasionally found in successional environments.

Current site conditions are not suitable for the EPFO as there are no fens, sedge meadows, or sand prairies.

Endangered – Pitcher's Thistle (*Cirsium pitcher*): No Affect
According to USFWS guidance, the Pitcher's Thistle occurs in open sand dunes and beach ridges along Lake Michigan. This species was once extirpated in Illinois but has been reintroduced in Lake County.

Current site conditions are not suitable for the Pitcher's thistle.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chicago Ecological Service Field Office
U.s. Fish And Wildlife Service Chicago Ecological Services Office
230 South Dearborn St., Suite 2938
Chicago, IL 60604-1507
Phone: (312) 485-9337

In Reply Refer To: November 10, 2022
Project Code: 2023-0014834
Project Name: Grass Lake Rd & Deep Lake Rd

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

Additionally, please note that on March 23, 2022, the Service published a proposal to reclassify the northern long-eared bat (NLEB) as endangered under the Endangered Species Act. The U.S. District Court for the District of Columbia has ordered the Service to complete a new final listing

determination for the NLEB by November 2022 (Case 1:15-cv-00477, March 1, 2021). The bat, currently listed as threatened, faces extinction due to the range-wide impacts of white-nose syndrome (WNS), a deadly fungal disease affecting cave-dwelling bats across the continent. The proposed reclassification, if finalized, would remove the current 4(d) rule for the NLEB, as these rules may be applied only to threatened species. Depending on the type of effects a project has on NLEB, the change in the species' status may trigger the need to re-initiate consultation for any actions that are not completed and for which the Federal action agency retains discretion once the new listing determination becomes effective (anticipated to occur by December 30, 2022). If your project may result in incidental take of NLEB after the new listing goes into effect this will first need to addressed in an updated consultation that includes an Incidental Take Statement. If your project may require re-initiation of consultation, please contact our office for additional guidance.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/birds/policies-and-regulations.php.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and

recommended conservation measures see https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Chicago Ecological Service Field Office
U.s. Fish And Wildlife Service Chicago Ecological Services Office
230 South Dearborn St., Suite 2938
Chicago, IL 60604-1507
(312) 485-9337

Project Summary

Project Code: 2023-0014834
Project Name: Grass Lake Rd & Deep Lake Rd
Project Type: New Constr - Above Ground
Project Description: Proposed above ground development with associated stormwater and utilities.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@42.439811750000004,-88.06377054473049,14z

Counties: Lake County, Illinois

Endangered Species Act Species

There is a total of 7 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Birds

NAME	STATUS
Piping Plover *Charadrius melodus* Population: [Great Lakes watershed DPS] - Great Lakes, watershed in States of IL, IN, MI, MN, NY, OH, PA, and WI and Canada (Ont.) There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6039	Endangered
Red Knot *Calidris canutus rufa* There is **proposed** critical habitat for this species. Species profile: https://ecos.fws.gov/ecp/species/1864	Threatened

Insects

NAME	STATUS
Karner Blue Butterfly *Lycaeides melissa samuelis*	Endangered

There is **proposed** critical habitat for this species.
Species profile: https://ecos.fws.gov/ecp/species/6656

Monarch Butterfly *Danaus plexippus*	Candidate

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/9743

Flowering Plants

NAME	STATUS
Eastern Prairie Fringed Orchid *Platanthera leucophaea*	Threatened

No critical habitat has been designated for this species.
This species only needs to be considered under the following conditions:

- Follow the guidance provided at https://www.fws.gov/midwest/endangered/section7/s7process/plants/epfos7guide.html

Species profile: https://ecos.fws.gov/ecp/species/601

Pitcher's Thistle *Cirsium pitcheri*	Threatened

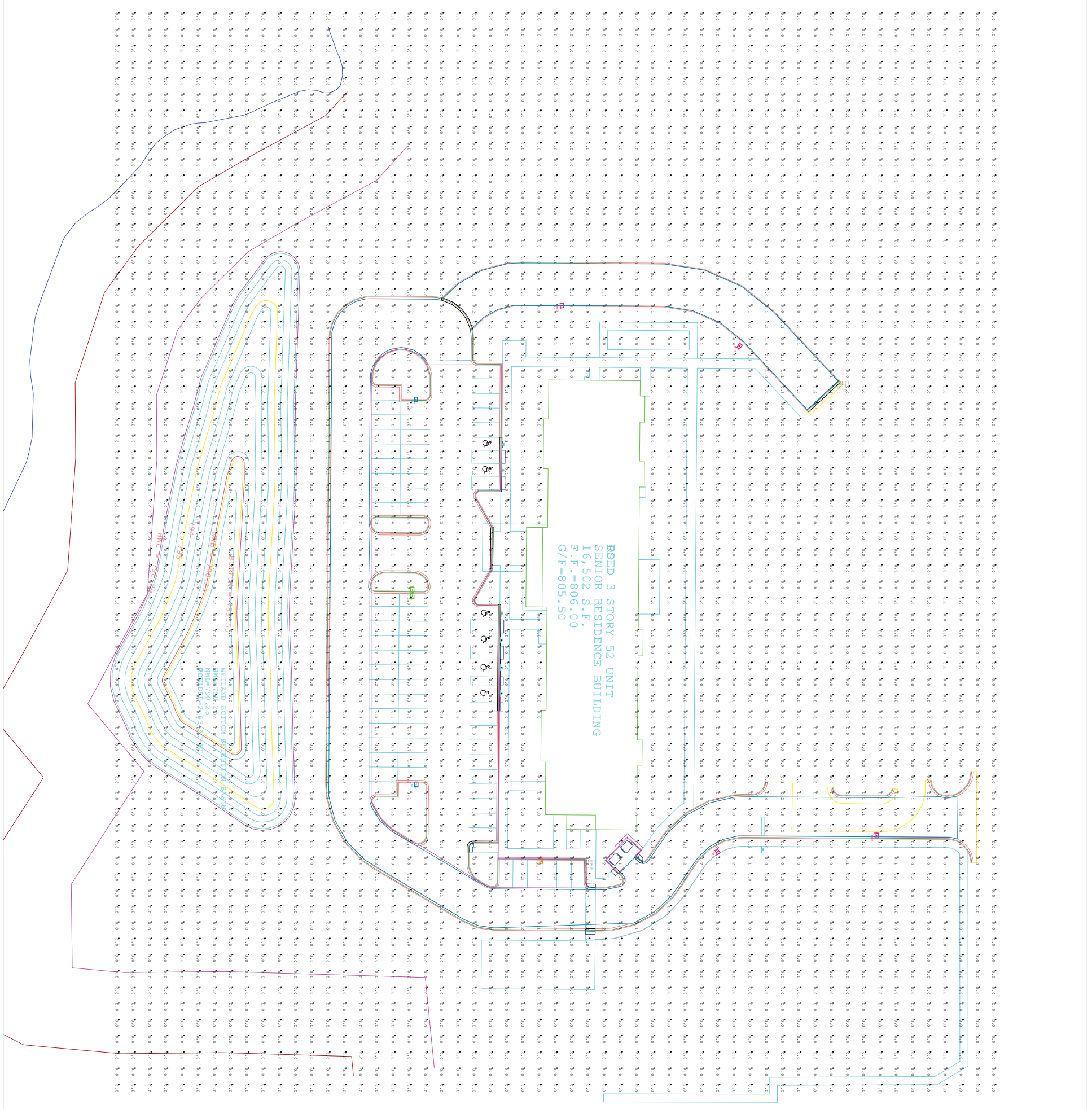
No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/8153

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

IPaC User Contact Information

Agency: Gary R Weber Associates
Name: Michael Kellenberger
Address: 402 W. Liberty Drive
City: Wheaton
State: IL
Zip: 60187
Email mkellenberger@grwainc.com
Phone: 6306687179



Project Name:	**Starling Senior Apartments Lake Villa**
	NOT TO SCALE
Date:	**2/6/2023**

Rev	Date	
-	-	3,0000 Kelvin Reduced poles
-	-	-
-	-	-
-	-	-
-	-	-

Prepared By:
M Brizzell
(630) 320-2948
MBrizzell@chicagolightworks.com

Chicago Lightworks
505 Warrenville Rd.
Suite 101
Lisle, IL 60532

Luminaire Schedule						
Symbol	Label	Qty	Description	LLF	Lum. Watts	Lum. Lumens
	F3H	1	ECF-S-32L-365-WW-G2-3-HIS	0.900	40	4292
	F4B2B	1	ECF-S-32L-365-WW-G2-4	0.900	40	5637
	F5W	2	ECF-S-32L-365-WW-G2-5W	0.900	40	5604
	F2H	4	ECF-S-32L-365-WW-G2-2-HIS	0.900	40	4219

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
CalcPts_1	Illuminance	Fc	0.11	6.3	0.0	N.A.	N.A.
Drive	Illuminance	Fc	0.62	4.9	0.0	N.A.	N.A.
Parking	Illuminance	Fc	0.71	6.3	0.1	7.10	63.00

Chicago Lightworks
505 Warrenville Rd.
Suite 101
Lisle, IL 60532

Prepared By:
M Brizzell
(630) 320-2948
MBrizzell@chicagolightworks.com

Rev	Date	Comments
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-

Project Name: **Starling Senior Apartments**
Lake Villa

NOT TO SCALE

Date: **2/6/2023**

24" x 36"

VILLAGE OF LAKE VILLA PLAN COMMISSION
MEETING OF FEBRUARY 8, 2024
RE: PETITION OF LINCOLN AVENUE CAPITAL, LLC
FINAL PLANNED DEVELOPMENT APPROVAL FOR THE
STARLING SENIOR LOFT APARTMENTS PLANNED DEVELOPMENT

Motion by Plan Commission Member _____, seconded by Plan Commission Member _____ that the Lake Villa Plan Commission recommend to the Mayor and Board of Trustees of the Village of Lake Villa the approval of: (1) rezoning of the Property commonly known as 0 Deep Lake Road (Permanent Index Number 02-28-201-178) to the UR4 Zoning District; (2) amendments to the Conditional Use Permit for the Lake Tower Crossing Phase 3 Planned Development which was previously authorized by Village of Lake Villa Ordinance No. 2020-07-07; and (3) final approval of a new Conditional Use Permit for a Planned Development for the Starling Senior Loft Apartments for the construction of age-restricted senior housing for the Property as hereinafter described.

I. FINDINGS OF FACT:

1. The Property consists of approximately 5.208 acres, more or less, is located within the corporate limits of the Village of Lake Villa, is commonly known as 0 Deep Lake Road, Lake Villa, IL (Permanent Index Number 02-28-201-178) and is generally located on the west side of Deep Lake Road and south of both Grass Lake Road and Tower Drive in the Village of Lake Villa and is legally described as follows:

   LOT A IN LAKE TOWER CROSSING PLANNED UNIT DEVELOPMENT PHASE 2, BEING A RESUBDIVISION OF PART OF SECTION 28, TOWNSHIP 46 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN LAKE COUNTY, ILLINOIS ACCORDING TO THE PLAT THEREOF RECORDED MAY 1, 2008 AS DOCUMENT NUMBER 6340408, IN THE VILLAGE OF LAKE VILLA, LAKE COUNTY, ILLINOIS. ("the Property")

2. The Property is presently zoned and classified as part of the Village's SB (Suburban Business) Zoning District, subject to the Lake Tower Crossing Phase 3 Planned Development. The Petitioner has requested rezoning to the UR-4 Zoning District and a Conditional Use for a Planned Development to permit the construction, operation and maintenance of one three (3) story building consisting of age-restricted senior housing rental apartment dwelling units, not exceeding forty (40) units, having a mix of one- or two-bedroom apartments intended for persons 55 years of age and older and related improvements, including parking, lighting, landscaping, and storm water management facilities, which was granted preliminary planned development approval by Village of Lake Villa Ordinance No. 2023-04-01 (collectively referred to as the "Development"), and which would be in lieu of the 91 apartments previously authorized by the aforesaid Ordinance No. 2020-07-07. On the condition precedent that all applicable conditions for final

Planned Development approval as established by the applicable ordinances of the Village have been complied with, the Phasing requirement of Paragraph 4(P) of Ordinance No. 2020-07-07 would not be applicable to this Development.

3. The proposed amendments to the Conditional Use Permit previously approved for the Property by Ordinance No. 2020-07-07 (the "existing Conditional Use Permit") and the New Conditional Use Permit requested by the Petitioner to authorize the Development, which received preliminary planned development approval by Ordinance No. 2023-04-01:

   (a) are consistent with the particular physical surroundings of the Property, the mixed uses on properties in the general vicinity thereof, and the present zoning of the Property, and that the granting of certain relief from the Village's Zoning Regulations will not be detrimental to the public welfare or injurious to other property owners in the vicinity of the Property;

   (b) are consistent with the general purpose and intent of the Lake Villa Zoning Regulations;

   (c) are consistent with the Village's Comprehensive Plan;

   (d) are designed, constructed, operated, and maintained so as to be harmonious and appropriate in appearance with the existing or intended character of the general vicinity;

   (e) will not significantly diminish the safety, use and enjoyment of surrounding property;

   (f) will be adequately served by essential public facilities and services such as streets, police and fire service, drainage, refuse disposal, and schools, or such services will be provided by the Petitioner at the Petitioner's sole expense;

   (g) do not create excessive additional requirements at public expense for public facilities and service and will therefore not be detrimental to the economic welfare of the community;

   (h) do not involve uses, activities, processes, materials, equipment and conditions of operation that will be detrimental to any persons, property, or the general welfare by reason of excessive production of traffic, noise, smoke, fumes, glare or odors;

   (i) will provide vehicular access to the Property designed so that such use does not create any interference with traffic on surrounding public thoroughfares;

(j) will not result in the destruction, loss, or damage of a natural, scenic, or historic feature of major importance;

(k) will comply with all additional regulations contained in the Village Ordinance specific to and granting final approval of the requested Conditional Use Permit for the Planned Development.

(l) will be consistent with the existing zoning of and with the existing uses of nearby properties;

(m) will not diminish property values by the approval of the proposed New Conditional Use;

(n) will not diminish property values and will promote the general health, safety, and welfare;

(o) will provide a gain to the public as a result of the establishment of the proposed New Conditional Use for Senior Apartments, and there will be no hardship imposed upon the Petitioner;

(p) will satisfy a community need for the uses which are the subject of the New Conditional Use Permit requested by the Petitioner;

(q) will be consistent with the intent and purpose of the Lake Villa Zoning Regulations;

(r) will be generally compatible with the character of the UR-4 Zoning District and the neighborhood in which it will be located;

(s) will preserve the value of the residential properties in the vicinity and will be compatible with surrounding land uses;

(t) The Property is suitable for the Development;

(u) The Village has undertaken its planning and land use regulations with great care;

(v) The Property contains no topographical, environmentally sensitive, or historical features which require preservation;

4. A new Conditional Use Permit for the Starling Senior Loft Apartments to authorize the establishment, operation, and maintenance of a planned development for age-restricted senior housing apartment dwelling units in the nature of one 3-story apartment building consisting of not more than forty (40) senior apartment dwelling units and a rental office on the premises, pursuant to the Village's Zoning

Regulations in the UR4 Zoning District to which classification the Property will be rezoned;

5. The Development will be consistent with the stated purpose of the planned development regulations set forth in the Village's Zoning Regulations and the proposed final plan meets the requirements and standards for planned developments.

6. The final planned development as will be approved by the New Conditional Use will produce a public benefit meeting the planning objectives and standards of the Village.

7. The design of the planned development makes adequate provision for public services, provides adequate control over vehicular traffic, provides for and protects areas for common open space and other amenities.

8. The Development will be compatible with and beneficial to the adjacent properties and to the neighborhood, and the Development is a desirable addition to the Village's available housing options, tax base and economic well being.

9. The Development will be located so that the proposed use is compatible with the existing and proposed future development in the vicinity in that the Development will be located near a major arterial with compatible commercial development to the north and residential development to the east.

10. The Development will be in compliance with minimum requirements of the UR4 Zoning District, except where the Petitioner will be granted a specific variation and/or exception by the Ordinance granting final approval for the planned development.

11. In evaluating a Planned Development, the Plan Commission has considered the degree to which that Development will vary from zoning standards of the UR4 Zoning District in which it will be located, as well as the benefits of the Development such as referenced in Section 9-1-2 of the Village of Lake Villa Zoning Regulations:

    (a) The Development will provide a number of off-site connected sidewalks for use by both residents of the Development and other residents of the Village; or
    (b) The amount of landscaping which will be included in the Development is substantially greater than the minimum required by the Village Code; or
    (c) With the new building elevation, the Development provides substantially greater architectural amenities; or
    (d) Other extraordinary site amenities, including the community garden and a dog exercise area, will be provided.

12. The Plan Commission also considered: (a) the degree to which the Development exhibits extra care and attention to details in excess of Village requirements which enhance the character of the Development, (b) the degree to which any requested increase in density reflects an investment in better design, landscaping, and other improvements, and (c) the degree to which the Development will alleviate off-site problems, and/or provided other improvements.

13. The Development will provide age-restricted senior housing that is needed in the community, as well as additional open space, in the form of a number of off-site connected sidewalks, community garden and a dog exercise area, a sidewalk along Deep Lake Road, and will also exceed Village requirements for parking and the requirements of the Illinois Accessibility Code.

14. The wet bottom detention basin shall be designed with native wetland vegetation to enhance the natural environment and the abutting wetland to the south/southwest.

II. CONDITIONS OF FINAL APPROVAL: The Plan Commission of the Village recommended that the Petitioner be granted final planned development approval subject to the following conditions:

1. Prior to commencement of construction:

   (a) The Petitioner shall post a letter of credit as a performance guarantee for all on-site and off-site improvements required for the Development, other than for the senior housing apartment building itself, and then construct or pay for the construction of all stormwater management facilities, sanitary sewer, water system improvements, sidewalks, landscaping, lighting, and parking facilities required for the Development, all in accordance with the final plans which shall be approved by the Village Administrator.
   (b) The Petitioner shall pay all required developer school and park impact fees prior to the commencement of construction and transition impact fees as required by the Lake Villa Village Code prior to the Village's issuance of any building permit for the Senior Housing Planned Development.
   (c) The Petitioner shall secure in writing all permits and approvals from the Village, from the IEPA, from CLCJAWA, from Fox Lake and Lake County Public Works, for sewer, water and storm sewer service for the Development.
   (d) The Petitioner shall provide evidence satisfactory to the Village Administrator and the Village's consultants that adequate water, sanitary sewer and stormwater storage capacity has been planned and reserved to serve this Development and the balance of the Lake Tower Crossing Planned Development.
   (e) The Petitioner shall secure in writing all permits and approvals from The Lake County Division of Transportation for all access, road improvements, or other transportation infrastructure required for the Development.
   (f) The Petitioner shall file with the Village Treasurer an irrevocable letter of credit approved by the Village Attorneys and in an amount approved by the Village Administrator as a performance guarantee for all required on-site and

off-site improvements for the Development, other than for the senior housing apartment building itself.

2. Within six (6) months of the Petitioner's acquisition of the Development site, the Village shall establish a back-up Special Service Area for the Development with a maximum SSA special tax rate not to exceed .10%. The Petitioner's maintenance obligations for the Development will be secured by the back-up Special Service Area and shall be subject to a 30-day notice and cure period for the following maintenance and other purposes:

   (a) Infrastructure, including but not limited to streets, water and sanitary sewer services, stormwater detention facilities, sidewalks, landscaping, parking areas, and lighting, provided, however, such Special Service Area shall not include the maintenance of any water mains and sanitary sewer mains which will be constructed by or at the expense of the Petitioner and which will thereafter be dedicated to and maintained by the Village.
   (b) Maintenance of common areas and amenities.
   (c) Snow removal and ice control within the Development.
   (d) Payment of any unpaid water and sewer bills.

   The Village will not levy any special taxes to fund said back-up Special Service Area so long as the Petitioner complies in a timely manner with all of its maintenance obligations for the Development.

3. Prior to the issuance of any temporary or final Certificate of Occupancy for the Development, the Petitioner shall provide to the Village "as built" final plans showing the precise location of all improvements to the Property, including all buildings, utilities, streets, sidewalks, trails, sewer and water mains, the dog run, and the community garden.

4. The Final Plat for the Planned Development shall include the dedication of a blanket easement over, under, across, and through the entire Property for the purpose of maintenance and reconstruction by the Village of any water and sewer mains which will be dedicated to the Village, at such times and in such circumstances as the Village deems expedient, but the Village shall have the right but not the obligations to perform any of such work. The Village shall also have such a blanket easement but not the obligation to perform such work as it deems necessary through such a Special Service Area.

5. During both the construction and operation of the Development, the Petitioner shall, at its expense, comply with all of the consultation recommendations of the Illinois Department of Natural Resources relative to Blanding's Turtles, King Rail and Least Bittern.

6. The following submittals are the subject of this recommendation for final planned development approval:

(a) Starling Senior Loft Apartments Final Plans (Elevations and Floor Plans) dated November 27, 2023;
(b) Engineering Plans by Manhard Consulting last revised November 28, 2023, and last revised January 16, 2024;
(c) Landscape Plans by Manhard Consulting dated November 28, 2023, and last revised January 16, 2024;
(d) Final Plat of Lake Tower Crossing Planned Unit Development – Phase 3 dated January 16, 2024;
(e) Stormwater Management Report by Manhard Consulting dated November 23, 2023, and last revised January 16, 2024;
(f) U.S. Army Corps of Engineers Wetland Report and Approved Jurisdictional Determination Form (OMB Control Number 0710-0024, Expiration Date 09/30/23;
(g) IDNR Consultation EcoCat Review No. 2306326 dated November 14, 2022; and
(h) Photometric Plan by Chicago Lightworks dated February 6, 2023.

7. At the Plan Commission hearing on the Petitioner's Application, the Petitioner submitted the following:

(a) Site Plan Changes and Modifications: The Petitioner has submitted revised plans for the Development which includes, among other things, a reduced size of the building footprint, increased setbacks from the property lines, relocation of the garbage container to the East side of the senior housing apartment building, and designation of the western access road to the parking lot as for emergency vehicular access only.

(b) Stormwater Management: The Petitioner has submitted revisions to its preliminary stormwater management report and engineering plans which include the installation of a CDS© Water Quality Structure (Hydrodynamic separator) that will be installed in the outfall pipe adjacent to the parking lot, the purpose of which structure will be to remove garbage, debris, hydrocarbons and other sediment from the stormwater runoff that flows into the on-site detention basin. This outfall pipe will now discharge into a level spreader prior to its discharge toward the Painted Lakes detention basin.

(c) Landscape/Tree Preservation: The Petitioner has proposed to preserve additional existing trees on the Property. Additionally, a greater amount of buffer yard shrubs have been proposed by the Petitioner to be planted on the west side of the Development to provide greater landscaping buffering between the Development and the adjacent residential townhome development. Lastly, the Petitioner has removed Round-Up from its specifications for plant material installation, and a more environmentally-friendly alternative will now be used for site preparation and planting preparation purposes.

(d) Architectural Elevations: The Petitioner has submitted new architectural elevation and details for the proposed building. Pursuant to direction provided by the Plan Commission, new architectural details to the building's roofline are proposed, including an asphalt shingle mansard roof, face brick along the lower level of the building, and cementitious fibre lap siding on the second and third floors.

8. An accurate elevation of the profile of the north side of the senior housing building has been presented to and reviewed by the Plan Commission as part of Final Planned Development approval.

9. The sidewalk proposed by the Petitioner to be located in the public right-of-way of Deep Lake Road shall be extended approximately 100 more feet further to the south so it extends along the entire boundary of the Property along Deep Lake Road.

10. The Plan Commission has recommended that the Conditional Use for this Development and the rezoning of the Property to the UR4 Zoning District should both automatically terminate unless the Petitioner commences construction of the Development within four (4) years after Final P.U.D. approval, but this date may be able to be extended by the Corporate Authorities by a separate ordinance at their sole discretion.

11. An exception from Section 10-2-2 (Definition of "Elderly Housing") of the Village of Lake Villa Zoning Regulations should be granted to the Petitioner to allow this senior housing to be age-restricted, but for persons of 55 years of age and older, notwithstanding the fact that the Zoning Regulations would otherwise require senior housing to be age-restricted to persons 62 years of age and older.

12. The Petitioner shall fully comply with the Applied Technologies Memorandum dated December 13, 2023, the Jon M. Tack, P.E. Memorandum dated December 19, 2023, and the Scott Goldstein of Teska Memorandum dated December 14, 2023.

DATE: January 31, 2024

TO: Chairman Craig Kressner and Members of the Plan Commission

FROM: Michael Strong, Village Administrator

RE: Preliminary Review – 801 Tower Drive (Lake Tower Crossing Development)

Property Owner	**Property Location**	**Zoning District**
C&T Fox Trot, LLC 36938 N Kimberwick Lane Wadsworth, IL 60083	Northeast Corner – Tower Drive & Grass Lake Road	Suburban Business SB

Petitioner and/or Contract Purchaser: Sam Dharni

Representatives: Eric Eriksson, Eriksson Architecture, LLC.
Sam Dharni, Proprietor

Site Location: 801 Tower Drive, Lake Tower Crossing (Vacant Lot Phase 2-A)

Requested Action Approval of Amendment to Existing PUD for Lake Tower Crossing Development

Proposal: Modify Site Plan Relative to Proposed Gas Station and Convenience Store on Phase 2-A Lot

Background

On February 8, 2024 the Plan Commission is scheduled to consider a preliminary review of a pre-application development proposal submitted by Eriksson Architecture, LLC, on behalf of Sam Dharni as potential contract purchaser (the "Applicant") for 801 Tower Drive ("Subject Property") which is currently owned by C&T Fox Trot, LLC. (the "Owner"). The Applicant intends to construct a gas station and convenience store with a car wash bay on the Subject Property located in the Lake Tower Crossing Development. Eriksson Architecture is representing the developer and request preliminary Plan Commission comments relative to their interest in modifying the previously approved plan for Phase 2-A for the Lake Tower Crossing Planned Unit Development ("PUD") that was approved by the Village Board via Ordinance 2020-07-07.

The Subject Property:

- Is approximately 75,000 square feet in area;
- Is Zoned SB Suburban Business and located in the Lake Tower Crossing PUD;
- Is located on the northeast corner of the Lake Tower Crossing Development;
- Is surrounded by:

    - North: SR Suburban Residential property that is currently developed with an elementary school (Oakland Elementary School)
    - East: R1 Single-Family Residential property that is currently developed with athletic fields for Lakes Community High School
    - South: SB Suburban Business commercial property consisting of a bank with an accessory drive-thru
    - West: SB Suburban Business commercial property that is the site that will be developed with a multi-tenant quick-serve restaurant and attached commercial space (Dunkin' Donuts parcel)
- Is designated as appropriate for suburban business retail uses in the Comprehensive Plan;
- Is not located within a special flood hazard area;

Proposed Project

The Applicant is proposing to construct a brand-new convenience store, carwash and gas pumps on the Subject Property.

- The new convenience store will be located in approximately the same location as the previously approved gas station and convenience store proposed and approved by the Village Board via Ordinance 2020-07-07;
- The store will operate 24/7 365 days a year and staffed with no more than two (2) employees at one time;
- The new building will be 6,076 square feet in area; PLUS 816 square foot for the carwash structure
- Installation of six gasoline pump stalls to service twelve vehicles on the north end of the Subject Property which is under a canopy. No semi-truck filling stalls are proposed;
- Installation of four vacuum stalls adjacent to carwash facility;
- Installation of 50 parking stalls which is greater than the number of parking stalls that were previously granted for Phase 2-A (34 parking stalls);
- Access to the Subject Property will be restricted to two (2) full access drives located on Tower Drive, and the adjacent parking lot of the Credit Union bank;
- Installation of two (2) drainage and stormwater basins will be located on the site to manage and hold stormwater for the development, along the northwest corner and southern border of the parcel;
- An additional by-pass drive-thru lane is proposed between the car wash and c-store facility;
- Installation of green space around the perimeter of the site and a new monument sign on the northeast corner of the Subject Property is proposed. The currently approved PUD requires that a five (5) foot landscape buffer be installed between the convenience store and the Credit Union property along with a five (5) foot solid board-on-board fence the length of the drive-thru lane on the bank property; and
- The proposed facility would not have vehicle service bays.

Required Zoning Relief

- Repeal the existing PUD for Phase 2-A approved via Ordinance 2020-07-07;
- Approval for Amendment to existing Lake Tower Crossing PUD and approval for modifications to the Site Plan and development proposal for Phase 2-A of the Lake Tower Crossing Development;
- New Special Use Permit to allow a Carwash; and

- Site Plan Approval and Building Elevation Approval to reflect modifications outlined above

Recommendation by Village Staff

Village Staff have reviewed the documents submitted by the Applicant and recommends that the Plan Commission hear a presentation outlining the proposal including a high-level review of the Site Plan, operating provisions, and building elevations for the proposed development. It should be noted that a formal landscape plan, lighting plan, and full sets of engineering plans and associated documents will be submitted as part of the future planned development application from the Applicant.

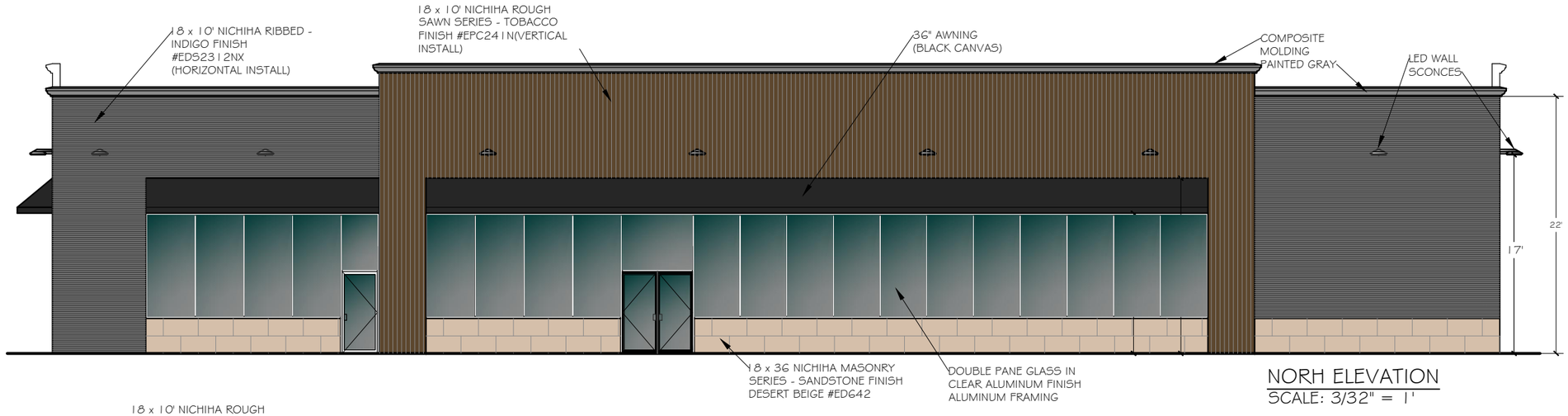
While reviewing the request, the Plan Commission will want to consider the following items:

1. Is it appropriate to allow for the redevelopment of the Subject Property with the new proposed convenience store, carwash and gas pumps? If so, should there be any operational limitations (i.e. hours of operation – particularly for the car wash and the convenience store component)?
2. Is the new proposed site design adequate as proposed, what additional considerations should the Applicant contemplate relative to landscaping and green space around the perimeter of the Subject Property?
3. The new proposed development does not propose any sidewalks along Grass Lake Road and Deep Lake Road. The current PUD required that sidewalks be installed along the interior and exterior (Grass Lake Road and Deep Lake Road) of the Lake Tower Crossing Development. With the new phasing of Development occurring on adjacent properties and lack of existing sidewalk to connect to at the bank property, is the Plan Commission amenable to no longer requiring a sidewalk along Deep Lake Road on the eastern edge of the property?
4. Are the building elevations and materials proposed consistent with the Lake Tower Crossing PUD and other developments that are taking place within the area?

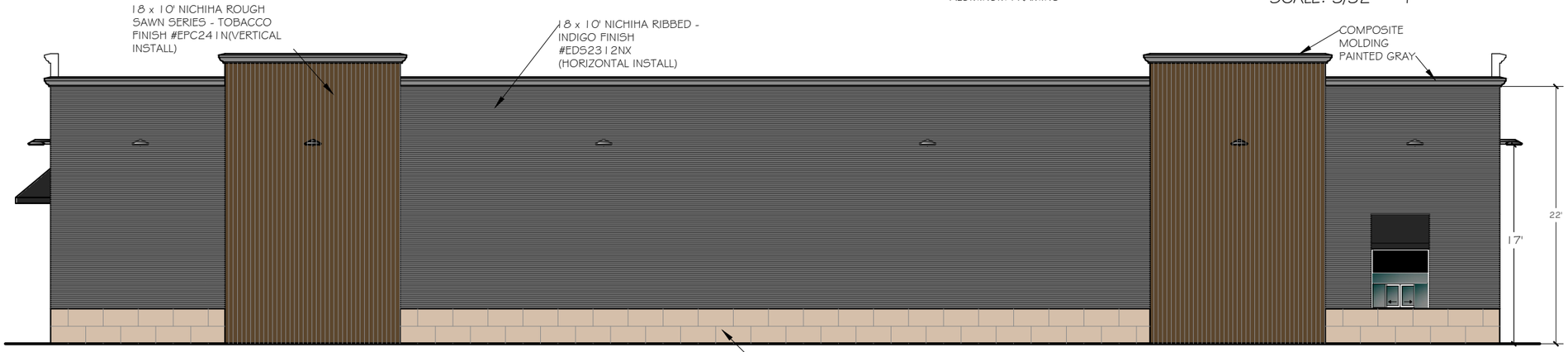
Staff and the Applicant will be present for the February 8, Plan Commission meeting to answer any questions that may arise.

Attachments

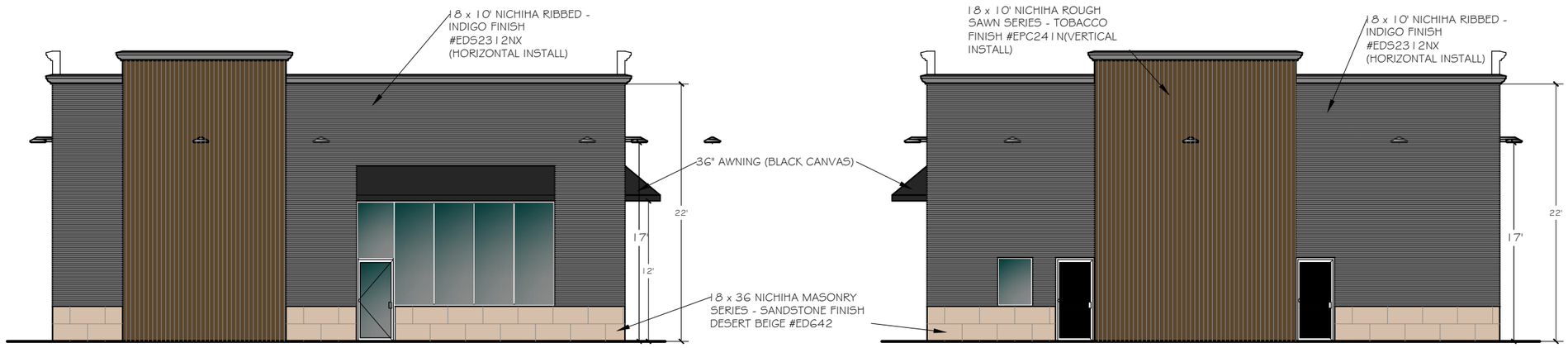
- Site Plan for the Proposed Development
- Exterior Elevations of the Building



NORH ELEVATION
SCALE: 3/32" = 1'



SOUTH ELEVATION
SCALE: 3/32" = 1'



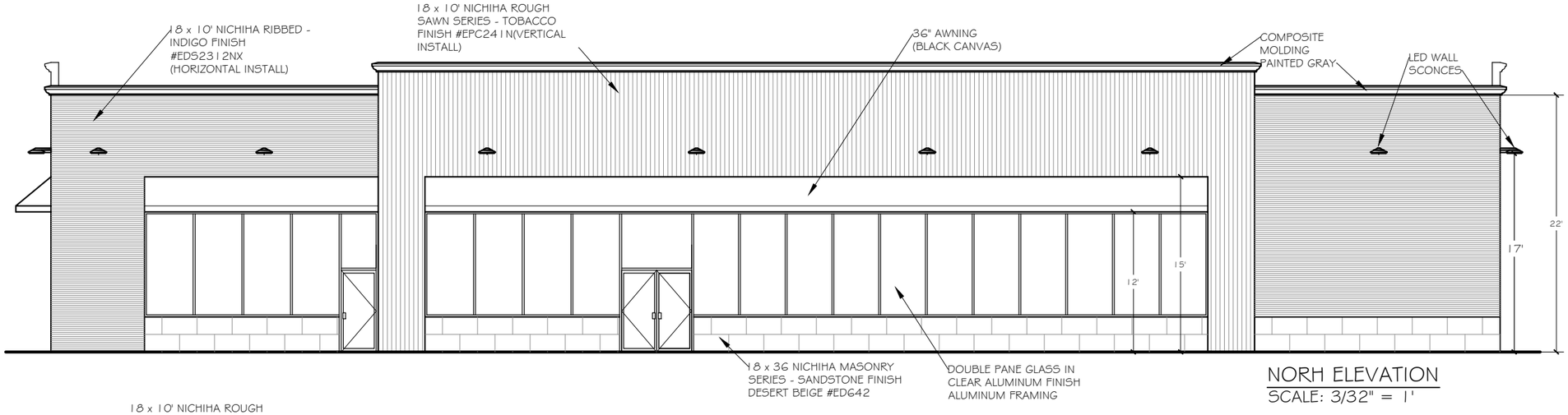
EAST ELEVATION
SCALE: 3/32" = 1'

WEST ELEVATION
SCALE: 3/32" = 1'

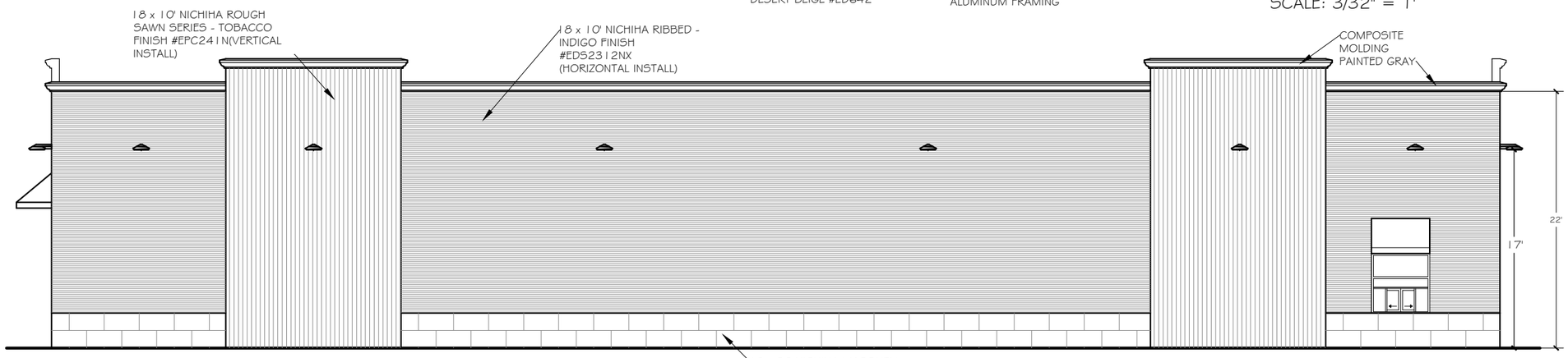
ERIKSSON ARCHITECTURE LLC
847-370-6550

GRASS LAKE RD/DEEP LAKE RD
LAKE VILLA

COLOR ELEVATIONS
1-30-2024



NORH ELEVATION
SCALE: 3/32" = 1'



SOUTH ELEVATION
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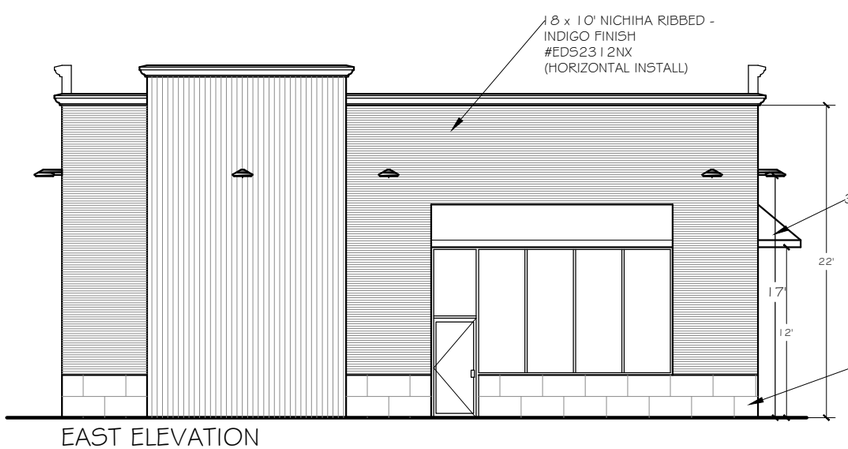
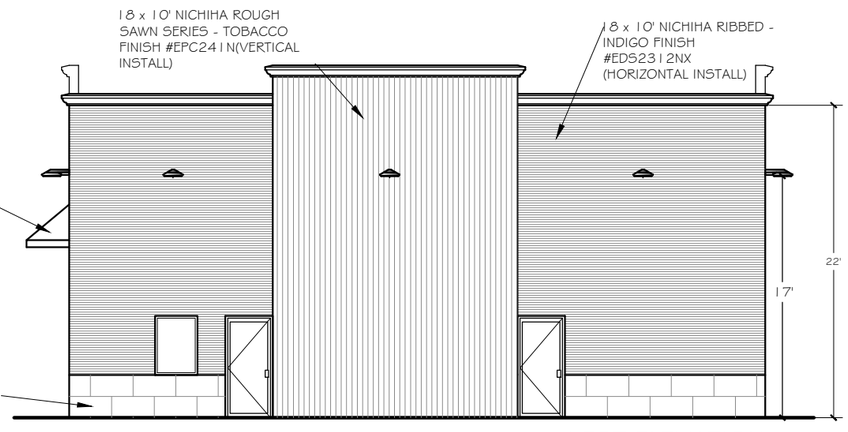


EAST ELEVATION
SCALE: 3/32" = 1'

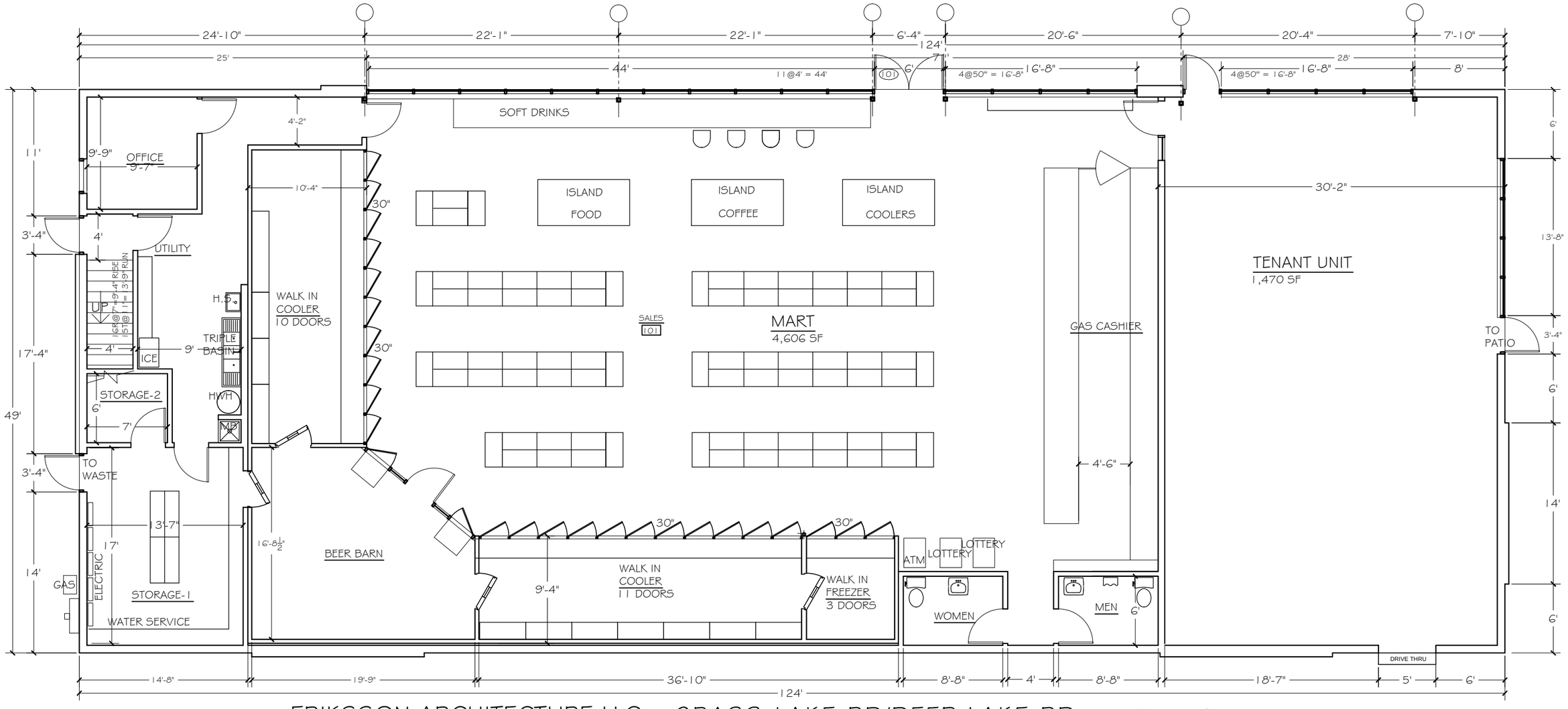


WEST ELEVATION
SCALE: 3/32" = 1'

ERIKSSON ARCHITECTURE LLC
847-370-6550

GRASS LAKE RD/DEEP LAKE RD
LAKE VILLA

ELEVATIONS
1-25-2024



ERIKSSON ARCHITECTURE LLC
847-370-6550

GRASS LAKE RD/DEEP LAKE RD
LAKE VILLA

PLAN - 8
1-25-2024

GRASS LAKE RD

ONLY

(OPTION-2: IMPROVE BASIN APPEARANCE WITH RANDOM RETAINING WALLS)

COM

UGE

Inv-798.25

BASIN-1

17,000 CF (+-)

804
803
802
801
800

802

803

804

805

800
801
802
803
804

10'

24'

10' dia 15k BUL

5k PUL

5k DIESEL

5k E85

154'

12 FUELING

24'

26'

DIESEL

1 2 3 4 5 6

67,197 SF
(1.54 AC)

24'

50 TOTAL PARKING/FUELING PROVIDED
62 TOTAL REQUIRED PARKING

16 PARKING

18'

9'

806

27'

813

814

815

816

5'

2 PARKING

24'

94'

30'

17'

20 PARKING

124'

49'

MART
4,600 SF

MART
1,470 SF

812

807

808

809

810

811

MENU BOARD

ORDER BOARD

DRIVE THRU

FENCE

10 - DRIVE THRU

BYPASS

10 CARS

48'

17'

CAR WASH
816 SF

6'

EQ RM

21'

24'

10'

4 - VACCUUM

817

818

819

DEEP LAKE RD

ONLY

ONLY

30'

HYD

WM

SAN

WASTE
8'x12'

BASIN-2 8,000 CF (+-)

20'

WM

SAN

WM

SAN

DRIVE THRU

BANK

ERIKSSON ARCHITECTURE LLC
847-370-6550

GRASS LAKE RD/DEEP LAKE RD

LAKE VILLA

SITE PLAN - 7

SCALE: 1"=30'

1-12-2024

N