#PLN-2022-00039
551 Congress Parkway – Final PUD
Project Review for Planning and Zoning Commission

Meeting Date:	April 20, 2022
Request:	Final Planned Unit Development review for a multi-family residential 93-unit apartment development
Location:	551 Congress Pkwy
Acreage:	Approximately 6.62 acres
Zoning:	M Manufacturing
Surrounding Properties:	North: M Manufacturing South: M Manufacturing & B-2 General Commercial East: M Manufacturing West: B-2 PUD General Commercial & O PUD Office
Staff Contact:	Katie Rivard (815.356.3612)

Background:

- Existing Use: The site is a vacant parcel located near the southeast intersection of Congress Parkway and Exchange Drive.
- Previous Approvals:
    - The subject property was annexed in 1987.
    - The three 3-story apartment buildings with 31 units each for a total of 93 units received a Comprehensive Land Use Plan Map Amendment from Office to High-Density Residential, Rezoning from M Manufacturing to R-3B PUD Multi-Family Residential, and Preliminary Planned Unit Development with Variations approval in January 2022.
- The Final PUD is in substantial conformance with the approved Preliminary PUD.
- Variations were approved with the Preliminary PUD for density, lot area and lot width.

Development Analysis:

LAND USE/ZONING

- The site was rezoned to R-3B PUD Multi-Family Residential.
- The current Comprehensive Plan land use designation is High Density Residential.
- The Petitioner requested the following variations with the Preliminary PUD.
    - Density: The proposed density is 14.06 units to the acre. R-3B allows a maximum of 9 units to the acre. This is a variation of 5.06 units to the acre.
    - Lot area: The lot is an existing vacant parcel at 288,048 square feet. Lot area for multi-family is calculated based on the total number of units, and the number of units proposed requires a lot area of 373,400 square feet. This is a variation of 85,352 square feet. Since this is an existing lot surrounded by development, there is not an opportunity to acquire additional property to increase the lot size. At 9 units to the acre (60 units), a variation would not be required, as the lot area would be 241,400 square feet.
    - Lot width: The existing lot width is 567.23 feet measured along both frontages. Lot width for multi-family is calculated based on the total number of units, and the number of units proposed requires a minimum lot width of 980 feet. This is a variation of 412.77 feet. In order to meet the lot width requirements, the development would need to be reduced to 40 units.

SITE

- The proposed development would consist of three 3-story apartment buildings with 31 units each for a total of 93 units. It would feature 21 one-bedroom units and 72 two-bedroom units.
- The proposed development complies with the setback requirements of the R-3B zoning district.

	R-3B requirement	Lot – Proposal
Front Yard Setback	30 feet	>100 feet
Side Yard Setbacks	8 feet	~83 feet
Combined Side Yard Setbacks	30 feet	>100 feet
Rear Yard Setback	20 feet	~98 feet

- The proposed impervious surface coverage is 50%, which meets the UDO requirements of 65%. There has been no changes to the proposed impervious surface coverage.
- The site layout provides green space throughout the development most predominately between the two center (horizontal) buildings, as well as, on the northeastern and southeastern portions of the development. The amenities include a grassy community area with gazebo and benches, and a dog park (northeast corner) and recreation area (southeast corner).

- The adjacent detention area, while not included in the subject property, provides a buffer between the eastern building and Congress Parkway.

PARKING

- Surface parking and 16 garage spaces would be utilized for the multi-family apartment buildings.
    - The petitioner has revised the site plan to include two parking garages with 8 spaces each per the Planning and Zoning Commission's request.
    - The garages will include a combination of smooth Hardi board and brick on the front elevations, brick and smooth Hardi board on the side elevations, and horizontal and smooth Hardi board on the rear elevations.
- Based on the submitted plans, 199 parking spaces would be required for the residential units (1.5 space per 1-bedroom unit, 2 spaces per 2-bedroom unit, 0.25 guest stalls per unit), and 199 spaces are provided.

SITE LAYOUT - ACCESS

- Access into the site would be provided off Exchange Drive. Developments that have sprinkler systems and are less than 200 dwelling units may proceed with one access, subject to the requirements of the 2018 International Fire Code (IFC).
- The internal drive aisles shall be posted with "NO PARKING – FIRE LANE" signs on one side of the road.
- Sidewalks and parkway trees are required along all roadway frontages. Sidewalk connections are provided between buildings and throughout the development. The sidewalks will connect to the existing sidewalk along Exchange Drive, as well as, the proposed sidewalk across the property's frontage along Congress Parkway.

TRAFFIC STUDY

- A traffic study was completed by Sam Schwartz. With implementation of the recommendations below, the area traffic operation would be generally acceptable after completion. The recommendations are as follows:
    - Restripe the median on Exchange Drive between Station Drive and the proposed site driveway to provide a two-way left-turn lane.
    - Relocate the existing curb ramps on Exchange Drive at the proposed site driveway south of the driveway. Stripe a high-visibility crosswalk between the ramps and post "Stope Here for Pedestrians" signage on both legs of Exchange Drive.
    - Provide a continuous sidewalk across the site driveway and stripe a stop bar behind the sidewalk.
    - Construct sidewalks between the site parking lot and the existing sidewalk on Exchange Drive near the north and south ends of the site.
    - The proposed use will increase the average volume of traffic at the Exchange Drive

and Congress Parkway intersection by 0.7%. Similar to other projects in the City, it is recommended that the petitioner contribute 0.7% of the cost of the scheduled intersection improvement (roundabout installation).

BUILDING ELEVATIONS

- The buildings are 3-stories with brick on the first level and a combination of smooth Hardie board siding and horizontal Hardie board siding on the second and third floor elevations.
- The proposed elevations meet the design criteria for multi-family residential, and include the following architectural accents:
    - A recessed entry;
    - Pillars, posts or pilasters;
    - Eaves with a minimum six-inch projection from the façade plane; and
    - Varying styles of Hardie board siding (horizontal and smooth siding).
- Each first floor unit will be provided a patio, and each second and third story units will be provided a balcony.
- The petitioner must also include building colors and materials that are compatible with the surrounding area.
    - The petitioner has enhanced the side/end elevations with an increase in smooth Hardi board siding and additional gable peaks.
    - The petitioner has also added brackets to all balcony supports on all four elevations.

LANDSCAPING

- The landscaping must meet the UDO requirements of Section 4-400, including but not limited to, parkway trees, parking lot landscaping, foundation landscaping and landscape buffers.
    - Additional deciduous and evergreen plantings shall be added to the foundation landscaping.

STORMWATER

- Currently, the stormwater detention is shown off-site as part of the Crystal Lake Business Center detention area.

Findings of Fact:

PRELIMINARY PLANNED UNIT DEVELOPMENT

The following is a synopsis of the conditions of approval from the Preliminary PUD and the status of their completion.

1. Approved plans, reflecting staff and advisory board recommendations, as approved by the City Council:
   A. Application (Equity Trust Co., dated 11/06/2021, received 11/10/2021)
   B. Revised Preliminary Site Plan (Paul Swanson, received 12/21/2021)
   C. Floor Plans (Arthur Swanson & Associates, LTD, dated 11/08/2021, last revised 12/19/2021, received 11/10/2021)
   D. Revised Colored Elevations (Paul Swanson, dated 12/19/2021, received 12/21/2021)
   E. Revised Front Colored Rendering (Paul Swanson, received 12/30/2021)
   F. Revised Preliminary Engineering Plans (Haeger Engineering, dated 11/09/2021, last revised 12/16/2021, received 12/20/2021)
   G. Executive Summary of Preliminary Engineering Report (Haeger Engineering, dated 11/09/2021, received 11/10/2021)
   H. Existing Conditions Pond Trib. Area Coverage Exhibit (Haeger Engineering, dated 12/16/2021, received 12/20/2021)
   I. Development Concept Memo (Paul Swanson, dated 11/09/2021, received 11/10/2021)
   J. Traffic Impact Study (Sam Schwartz Engineering, dated 12/06/2021, received 12/06/2021)

No comment necessary. This is just the notation of the approved plans.

2. The internal drive aisles shall be posted with "NO PARKING – FIRE LANE" signs on one side of the road. **This will remain a condition of Final PUD.**

3. Final Engineering Plans must be submitted with Final Planned Unit Development in compliance with the City's Code and Stormwater ordinance. **Provided.**

4. Landscape Plan/Tree Survey
   A. A Final Landscape Plan must be submitted with Final Planned Unit Development that complies with the landscape requirements of the UDO of Section 4-400. **Provided. Additional deciduous and evergreen trees shall be planted in the foundation landscape area.**
   B. Provide a list of quantities and species for the final landscape plan that comply with the minimum sizing requirements of the UDO. **Provided.**
   C. Provide quantities of trees on the Tree Survey. Based on the quantities of trees and the Tree Preservation Section of the UDO, additional trees may be required. **Provided.**
   D. Parkway trees must be planted along the frontage of Exchange Drive and Congress Parkway that comply with the requirements of the UDO. **Provided.**

5. A Final Photometric and Lighting Plan must be submitted with Final Planned Unit Development that complies with the lighting requirements of the UDO. **Provided.**

6. Elevations:
   A. Work with staff on ways to further enhance the side/end and rear elevations, including but not limited to, variation to the roof line and gable peaks. **The petitioner revised the side/end elevations to increase the amount of smooth Hardi board siding, which will break-up the horizontal Hardi board siding. The petitioner also added additional gable peaks on the side/end elevations.**
   B. Work with staff on ways to incorporate additional design elements, including but not limited to, brick on the bases of the balcony posts and entryway posts. **The petitioner added brackets to all balcony supports on all elevations.**
   C. Work with staff to determine the final building and balcony colors and materials, which should include varying Hardi board colors. **This will remain a condition of Final PUD.**

7. Traffic Study:
   A. Restripe the median on Exchange Drive between Station Drive and the proposed site driveway to provide a two-way left-turn lane, bookended by dedicated left-turn lanes into Station Drive and the proposed site access driveway, each with a 50-foot storage bay and 50-foot taper transition. **Provided. This will remain a condition of Final PUD.**
   B. Relocate the existing curb ramps on Exchange Drive at the proposed site driveway south of the driveway. Stripe a high-visibility crosswalk between the ramps and post "Stop Here for Pedestrians" signage on both legs of Exchange Drive. **Provided. This will remain a condition of Final PUD.**
   C. Provide a continuous sidewalk across the site driveway and stripe a stop bar behind the sidewalk. **Provided. This will remain a condition of Final PUD.**
   D. Construct sidewalks between the site parking lot and the existing sidewalk on Exchange Drive near the north and south ends of the site. **Provided. This will remain a condition of Final PUD.**
   E. The petitioner must contribute their proportionate fair share of the construction costs for the improvements to Congress Parkway and Exchange Drive traffic circle (0.7% estimated at $4,480) based on the projected traffic volume increase for the proposed development as determined by the traffic impact study dated December 6, 2021 by Sam Schwartz. **This will remain a condition of Final PUD.**

8. The petitioner shall address all of the review comments and requirements of the Community Development, Public Works, Police and Fire Rescue Departments, as well as the City's traffic consultant, Sam Schwartz Engineering and storm water consultant, Christopher B. Burke Engineering, Ltd. **This will remain a condition of Final PUD.**

FINAL PLANNED UNIT DEVELOPMENT

The petitioner is requesting approval of a Final Planned Unit Development to allow a multi-family residential 93-unit apartment development. A Planned Unit Development is a Special Use and Special Uses require separate review because of their potential to impact surrounding properties and the orderly development of the City.

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

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

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

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

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

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

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

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

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

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

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

Comprehensive Land Use Plan 2030 Vision Summary Review:

Land Use: Residential
The Comprehensive Plan designates the subject property as Office, which required an amendment to the Comprehensive Plan from an Office designation to Residential. The goal of a Residential designation is as follows:

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

The Comprehensive Plan indicates this can be accomplished with the following supporting action:

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

Recommended Conditions:

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

1. Approved plans, reflecting staff and advisory board recommendations, as approved by the City Council:
   A. Application (Equity Trust Co., dated 11/06/2021, received 11/10/2021)
   B. Final Site Plan (Paul Swanson, dated 02/13/2022, received 02/25/2022)
   C. Final Landscape Plan (Gary R. Weber Associates, Inc, dated 03/16/2022, last revised 03/16/2022, received 02/25/2022)
   D. Floor Plans (Arthur Swanson & Associates, LTD, dated 11/08/2021, last revised 12/19/2021, received 11/10/2021)
   E. Final Color Renderings (Paul Swanson, received 02/25/2022)
   F. Garage Building Renderings (Paul Swanson, dated 02/15/2022, received 03/10/2022)
   G. Trash Enclosure Renderings (Paul Swanson, dated 03/16/2022, received 03/16/2022)
   H. Final Engineering Plans (Haeger Engineering, dated 02/22/2022, received 02/25/2022)
   I. Engineering Report (Haeger Engineering, dated 02/22/2022, received 02/25/2022)
   J. Existing Conditions Pond Trib. Area Coverage Exhibit (Haeger Engineering, dated 12/16/2021, received 12/20/2021)
   K. Development Concept Memo (Paul Swanson, dated 11/09/2021, received 11/10/2021)
   L. Traffic Impact Study (Sam Schwartz Engineering, dated 12/06/2021, received 12/06/2021)
   M. Site Lighting and Photometric Plan (Haeger Engineering, dated 03/09/2022, received 02/25/2022)

2. All conditions from Ordinance #7772 remain valid, as applicable.

3. The internal drive aisles shall be posted with "NO PARKING – FIRE LANE" signs on one side of the road.

4. Landscape Plan/Tree Survey
   A. Additional deciduous and evergreen trees shall be planted in the foundation landscape area.

5. Work with staff to determine the final building and balcony colors and materials, which should include varying Hardi board colors.

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7. The petitioner shall address all of the review comments and requirements of the Community Development, Public Works, Police and Fire Rescue Departments, as well as the City's traffic consultant, Sam Schwartz Engineering and stormwater consultant, Christopher B. Burke Engineering, Ltd.

PIQ Map

551 Congress Parkway



City of Crystal Lake
Development Application

Office Use Only
File # _____

Project Title: THE COURT YARD @ CONGRESS STATION

Action Requested

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

Petitioner Information

Name: EQUITY TRUST CO. CUSTODIAN FBO PAUL SWANSON IRA
Address: 401 E. PROSPECT AVE
MT. PROSPECT, IL 60056
Phone: 847-670-6710
Fax: 847-670-6713
E-mail: PAUL@PSA-INC.BIZ

Owner Information (if different)

Name: WALK IN THE WORD, INC
JAMES MAC DONALD, PRES
Address: C/O TIMOTHY BILLIMACK
101 N. MAIN ST SUITE 15
CRYSTAL LAKE, IL 60014
Phone: 815-355-0196
Fax: —
E-mail: BILLIMACKT@GMAIL.COM

Property Information

Project Description: 3 - 3 STORY 31 UNIT APT. BUILDINGS W/ 199 CAR# PARKING

Project Address/Location: 551 CONGRESS PWKY

PIN Number(s): 19044270009

Please include address, phone, fax and e-mail

Development Team

Developer: EQUITY TRUST CO. CUSTODIAN FBO PAUL SWANSON IRA
401 E PROSPECT AVE MT. PROSPECT IL 60056 847-670-6710
PAUL@PSA-INC.BIZ

Architect: PAUL SWANSON ASSOC. INC 401 E. PROSPECT AVE MT. PROSPECT, IL 60056
847-670-6710 PAUL@PSA-INC.BIZ

Attorney: NOT LET

Engineer: HAEGER ENGINEERING 1000 E. STATE PKWY SCHAUMBURG, IL 60173
DAN VANEK 847-230-3177 DANIEL-V@HAEGERENGINEERING.COM

Landscape Architect: GARY R. WEBER ASSOC. INC 402 W. LIBERTY DR. WHEATON, IL
RICH OLSON ROLSON@GRWAINC.COM 630-774-9055 60187

Planner: NONE

Surveyor: VANDERSTAPPEN LAND SURVEYING, INC. 1316 N. MADISON ST WOODSTOCK, IL 60098
815-337-8310 KATHY@VANDER-SINC.COM

Other:

Signatures

EQUITY TRUST CO. CUSTODIAN FBO PAUL SWANSON IRA
PAUL SWANSON AUTHORIZED AGENT 11/4/21

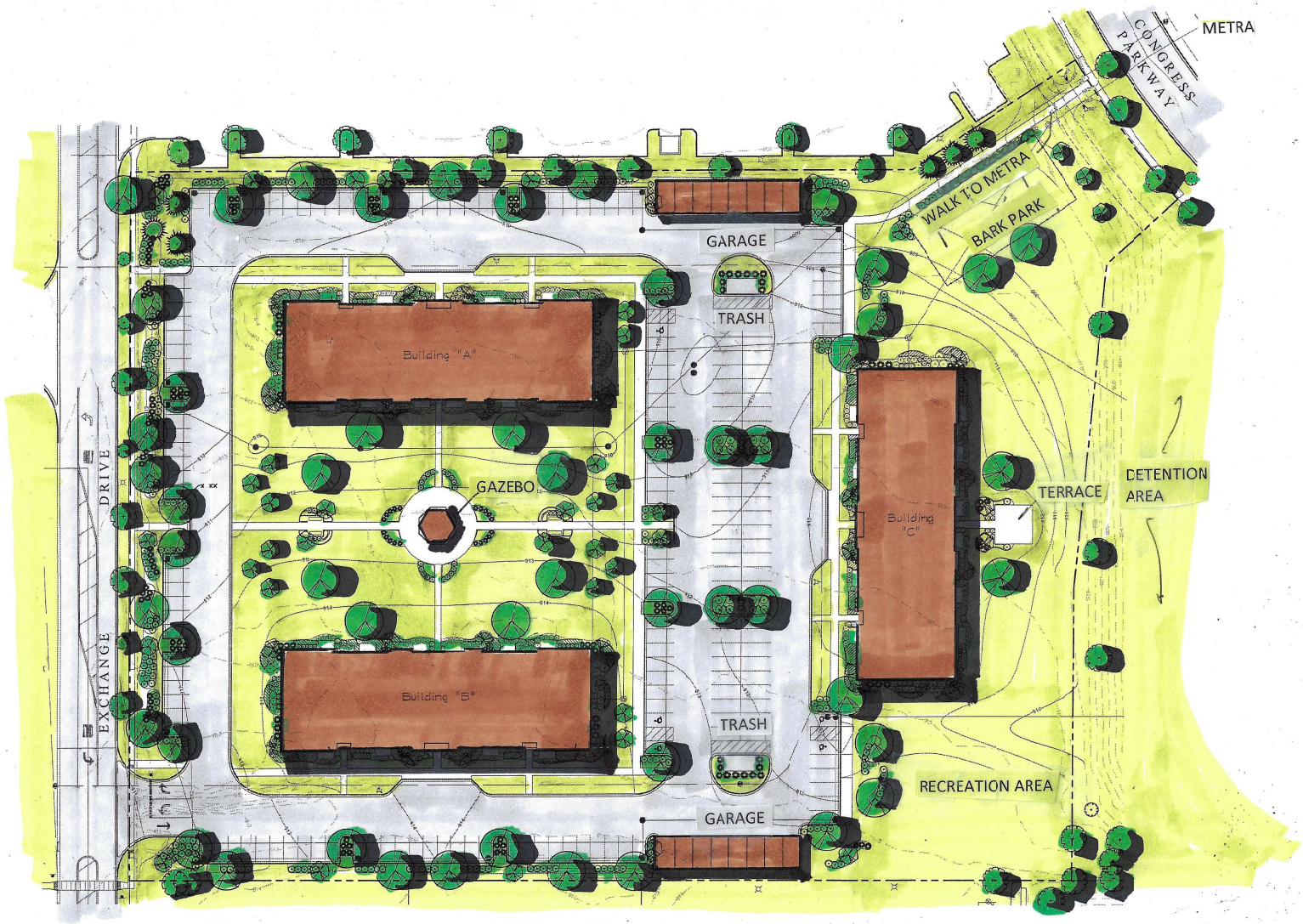
PETITIONER: Print and Sign name (*if different from owner*) Date

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

11-06-2021

OWNER: Print and Sign name **Date**

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



551 CONGRESS PARKWAY

SITE PLAN

2/18/22

0 15' 30' 60' 90'
SCALE: 1"=30'

NORTH

FINAL LANDSCAPE PLAN

551 CONGRESS PARKWAY

Crystal Lake, IL

March 16, 2022

CONSULTANTS:

LANDSCAPE ARCHITECT:

GARY R. WEBER ASSOCIATES, INC
402 W. LIBERTY DRIVE
WHEATON, ILLINOIS 60187

ENGINEER:

HAEGER ENGINEERING
100 EAST STATE PARKWAY
SCHAUMBURG, IL 60173



LOCATION MAP

SCALE: 1"=300'

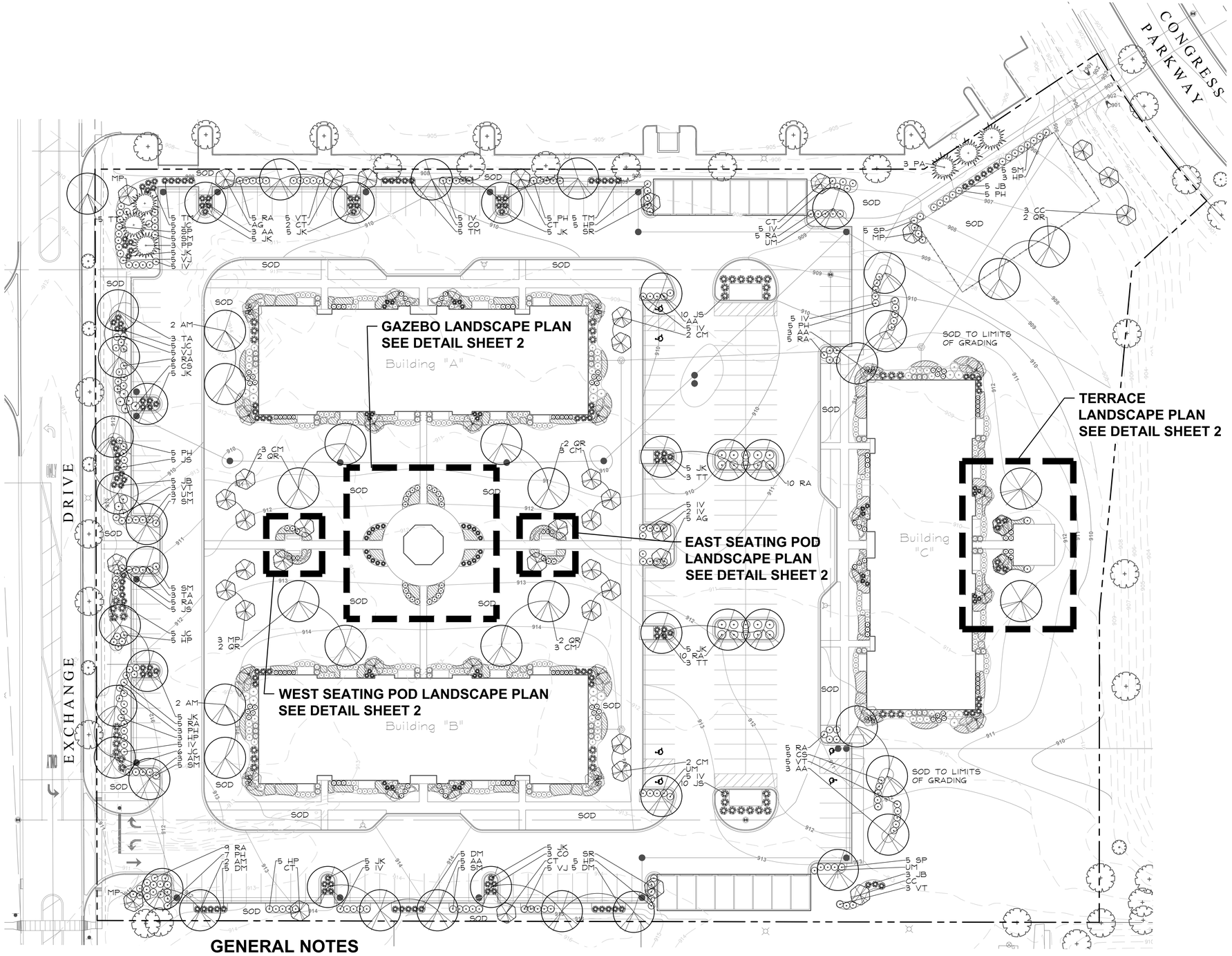
INDEX OF SHEETS

SHEET NO.	DESCRIPTION
0	COVER SHEET
1	OVERALL LANDSCAPE PLAN
2	LANDSCAPE PLANS & DETAILS
3	FOUNDATION LANDSCAPE PLAN
4	TREE PRESERVATION PLAN
5	LANDSCAPE SPECIFICATIONS

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PLANT LIST

Key	Qty	Botanical/Common Name	Size	Remarks
		SHADE TREES		
AA	13	Acer x freemanii 'Jeffer's Red' AUTUMN BLAZE MAPLE	2 1/2" Cal.	
AM	9	Acer miyabei 'Morton' STATE STREET MAPLE	2 1/2" Cal.	
CO	6	Celtis occidentalis COMMON HACKBERRY	2 1/2" Cal.	
QR	12	Quercus rubra RED OAK	2 1/2" Cal.	
TA	6	Tilia americana 'Redmond' REDMOND AMERICAN LINDEN	2 1/2" Cal.	
TT	7	Tilia tomentosa 'Sterling' STERLING SILVER LINDEN	2 1/2" Cal.	
UM	6	Ulmus 'Morton Glossy' TRIUMPH ELM	2 1/2" Cal.	
		ORNAMENTAL TREES		
AG	3	Amelanchier x grandiflora APPLE SERVICEBERRY	8' Ht.	Multi-Stem
CC	6	Cercis canadensis EASTERN REDBUD	8' Ht.	Multi-Stem
CM	13	Cornus mas CORNELIANCHERRY DOGWOOD	8' Ht.	Multi-Stem
CT	6	Crataegus crusgalli var. inermis THORNLESS COCKSPUR HAWTHORN	8' Ht.	Multi-Stem
MP	9	Malus 'Prairifire' PRAIRIFIRE CRABAPPLE	8' Ht.	Multi-Stem
SR	4	Syringa reticulata 'Ivory Silk' IVORY SILK JAPANESE TREE LILAC	8' Ht.	Multi-Stem
		EVERGREEN TREES		
PA	3	Picea abies NORWAY SPRUCE	8' Ht.	
PP	3	Picea pungens COLORADO SPRUCE	8' Ht.	
		DECIDUOUS SHRUBS		
CS	12	Cornus sericea 'Baileyi' BAILEY'S REDTWIG DOGWOOD	36" Tall	5' O.C.
HP	46	Hydrangea paniculata 'SMHPLGF' LITTLE QUICK FIRE HYDRANGEA	24" Tall	3' O.C.
IV	50	Itea virginica 'Little Henry' LITTLE HENRY VIRGINIA SWEETSPIRE	24" Tall	3' O.C.
PH	30	Physocarpus opulifolius 'Seward' SUMMER WINE NINEBARK	30" Tall	4' O.C.
RA	65	Rhus aromatica 'Gro-low' GRO-LOW SUMAC	24" Wide	3' O.C.
SM	35	Syringa meyeri 'Palabin' DWARF KOREAN LILAC	24" Tall	4' O.C.
SP	18	Syringa patula 'Miss Kim' MISS KIM LILAC	24" Tall	4' O.C.
VT	16	Viburnum trilobum 'Redwing' JN SELECT CRANBERRYBUSH VIBURNUM	36" Tall	5' O.C.
VJ	15	Viburnum x juddii JUDD VIBURNUM	36" Tall	4' O.C.
		EVERGREEN SHRUBS		
JK	56	Juniperus chinensis 'Kallays Compact' KALLAYS COMPACT PFITZER JUNIPER	24" Wide	4' O.C.
JC	21	Juniperus chinensis 'Sea Green' SEA GREEN JUNIPER	30" Wide	5' O.C.
JS	30	Juniperus chinensis var. sargentii 'Viridis' GREEN SARGENT JUNIPER	24" Wide	5' O.C.
JB	34	Juniperus conferta 'Blue Pacific' BLUE PACIFIC JUNIPER	24" Wide	4' O.C.
TM	30	Taxus x media 'Densiformis' DENSE YEW	24" Wide	4' O.C.
		ORNAMENTAL GRASSES		
CK	12	Calamagrostis x acutiflora 'Karl Foerster' FEATHER REED GRASS	#1	30" O.C.
PE	26	Pennisetum alopecuroides 'Burgundy Bunny' BURGUNDY BUNNY FOUNTAIN GRASS	#1	24" O.C.
		PERENNIALS		
AB	46	Allium 'Summer Beauty' SUMMER BEAUTY ONION	#1	18" O.C.
EC	18	Echinacea 'CBG Cone 2' PIXIE MEADOWBRITE CONEFLOWER	#1	18" O.C.
GB	80	Geranium 'Brookside' BROOKSIDE GERANIUM	#1	18" O.C.
HH	104	Hemerocallis 'Happy Returns' HAPPY RETURNS DAYLILY	#1	18" O.C.
HL	20	Hemerocallis 'Little Wine Cup' LITTLE WINE CUP DAYLILY	#1	18" O.C.
RG	12	Rudbeckia fulgida 'Goldsturm' GOLDSTRUM BLACK-EYED SUSAN	#1	18" O.C.
SE	18	Sedum 'Autumn Joy' AUTUMN JOY SEDUM	#1	18" O.C.
		MISC. MATERIALS		
	100	SHREDDED HARDWOOD MULCH	C.Y.	
	11,543	SOD	S.Y.	



GENERAL NOTES

1. Contractor shall verify underground utility lines and is responsible for any damage.
2. Contractor shall verify all existing conditions in the field prior to construction and shall notify landscape architect of any variance.
3. Material quantities shown are for contractors convenience only. The Contractor must verify all material and supply sufficient materials to complete the job per plan.
4. The landscape architect reserves the right to inspect trees and shrubs either at place of growth or at site before planting, for compliance with requirements of variety, size and quality.
5. Work shall conform to American Standard for Nursery Stock, State of Illinois Horticultural Standards, and Local Municipal requirements.
6. Contractor shall secure and pay for all permits, fees, and inspections necessary for the proper execution of this work and comply with all codes applicable to this work.
7. See General Conditions and Specifications for landscape work for additional requirements.

0 15' 30' 60' 90'
SCALE: 1"=30'

NORTH

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

GRWA
GARY R. WEBER ASSOCIATES, INC.
LAND PLANNING
ECOLOGICAL CONSULTING
LANDSCAPE ARCHITECTURE
402 W. LIBERTY DRIVE
WHEATON, ILLINOIS 60187
PHONE: 630-668-7197
www.grwainc.com

CLIENT
EQUITY TRUST COMPANY
F/B/O PAUL SWANSON IRA
401 E. PROSPECT AVE., SUITE 201
MT. PROSPECT, IL 60056

ENGINEER
HAEGER ENGINEERING
100 EAST STATE PARKWAY
SCHAUMBURG, IL 60173

551 CONGRESS PARKWAY

551 E. CONGRESS PARKWAY
CRYSTAL LAKE, IL 60014

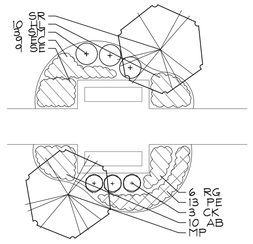
OVERALL LANDSCAPE PLAN

1	03.16.2022	
REVISIONS		

DATE	2022.02.21
PROJECT NO.	PSW2205
DRAWN	DHS
CHECKED	MGM
SHEET NO.	

1 OF 5

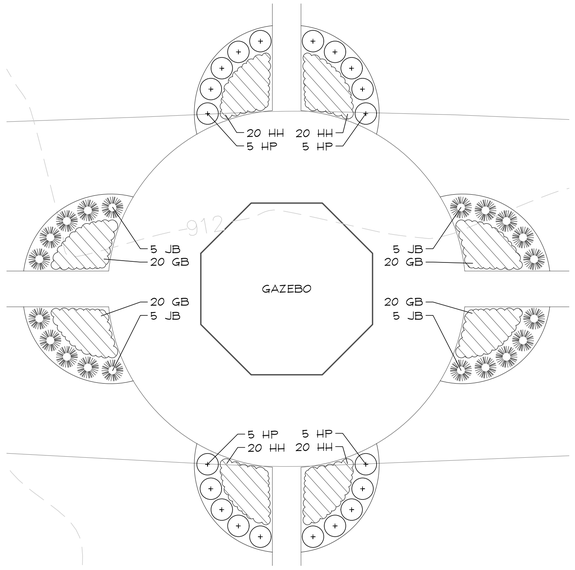
XREFS:
PLOT CONFIG:



WEST SEATING POD LANDSCAPE PLAN

0 5' 10' 20' 30'
SCALE: 1"=10'

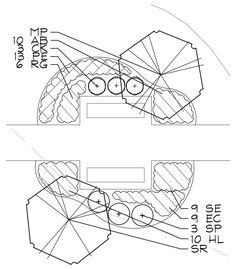
NORTH



GAZEBO LANDSCAPE PLAN

0 5' 10' 20' 30'
SCALE: 1"=10'

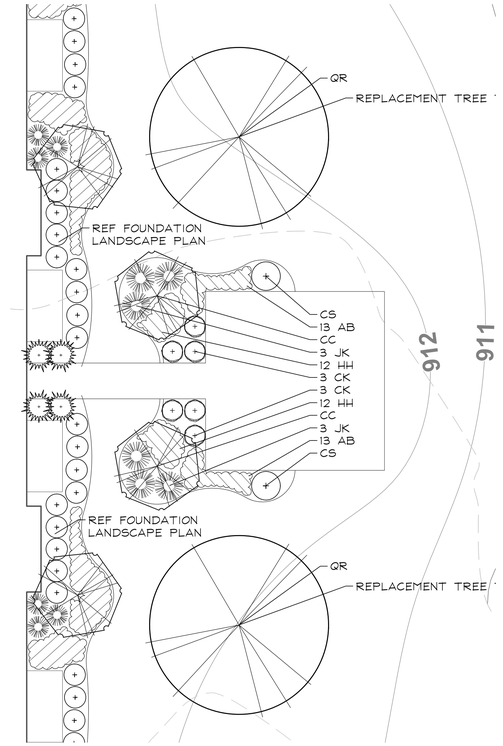
NORTH



EAST SEATING POD LANDSCAPE PLAN

0 5' 10' 20' 30'
SCALE: 1"=10'

NORTH

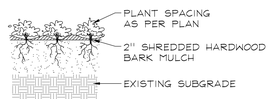


TERRACE LANDSCAPE PLAN

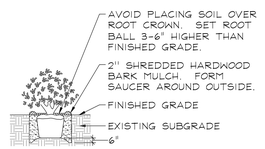
0 5' 10' 20' 30'
SCALE: 1"=10'

NORTH

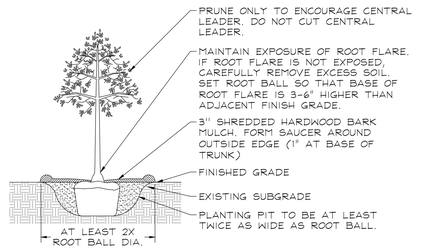
PLANTING DETAILS



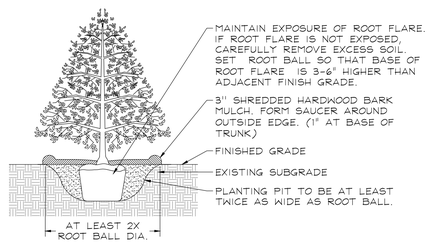
PERENNIALS AND GROUNDCOVERS
NOT TO SCALE



DECIDUOUS AND EVERGREEN SHRUBS
NOT TO SCALE



DECIDUOUS TREES
NOT TO SCALE



EVERGREEN TREES
NOT TO SCALE

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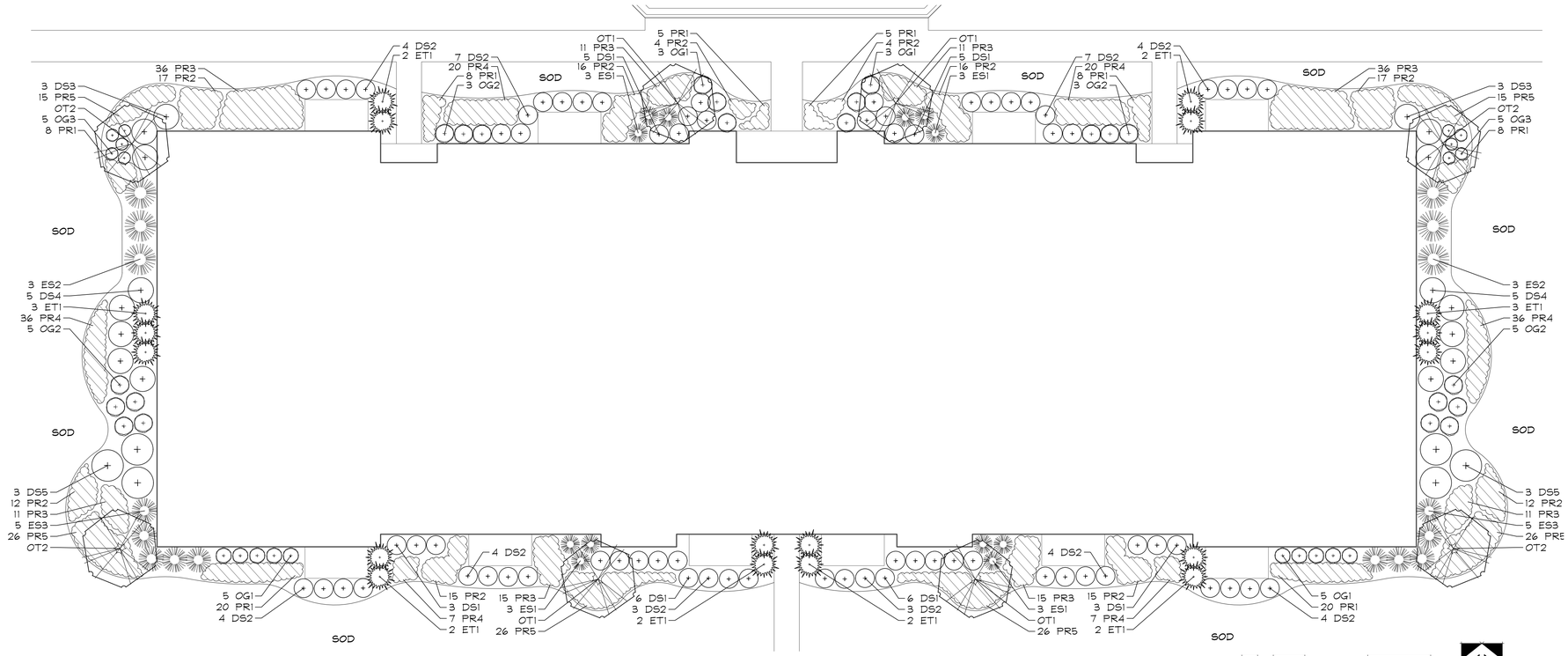
551 E. CONGRESS PARKWAY
CRYSTAL LAKE, IL 60014

LANDSCAPE PLANS & DETAILS

1 03.16.2022
REVISIONS

DATE 2022.02.21
PROJECT NO. PSW2205
DRAWN DHS
CHECKED MGM
SHEET NO.
2 OF 5

XREFS:
PLOT CONFIG:



PLANT LISTS

TYPICAL APARTMENT BUILDING FOUNDATION PLANT LIST A (BUILDINGS A& C)

Key	Qty	Botanical/Common Name	Size	Remarks
		ORNAMENTAL TREES		
OT1	4	Syringa pekinensis 'Morton' CHINA SNOW PEKING LILAC	6' Ht.	Multi-Stem
OT2	4	Betula nigra 'Cully' HERITAGE RIVER BIRCH	6' Ht.	Multi-Stem
		EVERGREEN TREES		
ET1	9	Thuja occidentalis 'Nigra' DARK GREEN ARBORVITAE	8' Ht.	
		DECIDUOUS SHRUBS		
DS1	28	Fothergilla gardenii DWARF FOTHERGILLA	24" Tall	3' O.C.
DS2	44	Hydrangea arborescens 'Abetwo' INCREDIBALL HYDRANGEA	24" Tall	3' O.C.
DS3	6	Syringa patula 'Miss Kim' MISS KIM LILAC	24" Tall	4' O.C.
DS4	10	Viburnum trilobum 'Redwing' JN SELECT CRANBERRYBUSH VIBURNUM	36" Tall	5' O.C.
DS5	6	Weigela florida 'Alexandra' WINE & ROSES WEIGELA	36" Tall	4' O.C.
		EVERGREEN SHRUBS		
ES1	12	Juniperus chinensis 'Kallays Compact' KALLAYS COMPACT PFITZER JUNIPER	24" Wide	4' O.C.
ES2	6	Juniperus chinensis var. sargentii 'Viridis' GREEN SARGENT JUNIPER	24" Wide	5' O.C.
ES3	10	Taxus x media 'Densiformis' DENSE YEW	24" Wide	4' O.C.
		ORNAMENTAL GRASSES		
OG1	16	Sporobolus heterolepis PRAIRIE DROPSEED	#1	24" O.C.
OG2	16	Panicum virgatum 'Heavy Metal' HEAVY METAL SWITCHGRASS	#1	24" O.C.
OG3	10	Pennisetum alopecuroides 'Hameln' DWARF FOUNTAIN GRASS	#1	24" O.C.
		PERENNIALS		
PR1	82	Hemerocallis 'Happy Returns' HAPPY RETURNS DAYLILY	#1	18" O.C.
PR2	128	Echinacea 'CBG Cone 2' PIXIE MEADOWBRITE CONEFLOWER	#1	18" O.C.
PR3	146	Nepeta racemosa 'Walker's Low' WALKER'S LOW CATMINT	#1	18" O.C.
PR4	126	Iris sibirica 'Caesars Brother' CAESAR'S BROTHER SIBERIAN IRIS	#1	24" O.C.
PR5	134	Geranium 'Brookside' BROOKSIDE GERANIUM	#1	18" O.C.
		MISC. MATERIALS		
	26	SHREDDED HARDWOOD MULCH	C.Y.	

TYPICAL APARTMENT BUILDING FOUNDATION PLANT LIST B (BUILDING B)

Key	Qty	Botanical/Common Name	Size	Remarks
		ORNAMENTAL TREES		
OT1	4	Malus 'Prairifire' PRAIRIFIRE CRABAPPLE	6' Ht.	Multi-Stem
OT2	4	Cornus mas CORNELIANCHERRY DOGWOOD	6' Ht.	Multi-Stem
		EVERGREEN TREES		
ET1	9	Thuja occidentalis 'Nigra' DARK GREEN ARBORVITAE	8' Ht.	
		DECIDUOUS SHRUBS		
DS1	28	Cornus sericea 'Farrow' ARCTIC FIRE REDTWIG DOGWOOD	24" Tall	3' O.C.
DS2	44	Itea virginica 'Little Henry' LITTLE HENRY VIRGINIA SWEETSPIRE	24" Tall	3' O.C.
DS3	6	Rhus aromatica 'Gro-low' GRO-LOW SUMAC	24" Wide	3' O.C.
DS4	10	Syringa meyeri 'Palabin' DWARF KOREAN LILAC	24" Tall	4' O.C.
DS5	6	Weigela florida 'Bramwell' FINE WINE WEIGELA	24" Tall	3' O.C.
		EVERGREEN SHRUBS		
ES1	12	Juniperus chinensis 'Kallays Compact' KALLAYS COMPACT PFITZER JUNIPER	24" Wide	4' O.C.
ES2	6	Juniperus chinensis 'Sea Green' SEA GREEN JUNIPER	30" Wide	5' O.C.
ES3	10	Taxus x media 'Densiformis' DENSE YEW	24" Wide	4' O.C.
		ORNAMENTAL GRASSES		
OG1	16	Schizachyrium scoparium 'Twilight Zone' TWILIGHT LITTLE BLUESTEM	#1	24" O.C.
OG2	16	Panicum virgatum 'Northwind' NORTHWIND SWITCHGRASS	#1	30" O.C.
OG3	10	Pennisetum alopecuroides 'Burgundy Bunny' BURGUNDY BUNNY FOUNTAIN GRASS	#1	24" O.C.
		PERENNIALS		
PR1	82	Hemerocallis 'Rosy Returns' ROSY RETURNS DAYLILY	#1	18" O.C.
PR2	128	Allium 'Summer Beauty' SUMMER BEAUTY ONION	#1	18" O.C.
PR3	146	Perovskia atriplicifolia RUSSIAN SAGE	#1	24" O.C.
PR4	126	Rudbeckia fulgida 'Goldsturm' GOLDSTRUM BLACK-EYED SUSAN	#1	18" O.C.
PR5	134	Hosta 'Patriot PATRIOT HOSTA	#1	24" O.C.
		MISC. MATERIALS		
	26	SHREDDED HARDWOOD MULCH	C.Y.	

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FOUNDATION LANDSCAPE PLAN

1	03.16.2022
REVISIONS	

DATE	2022.02.21
PROJECT NO.	PSW2205
DRAWN	DHS
CHECKED	MGM
SHEET NO.	

3 OF 5

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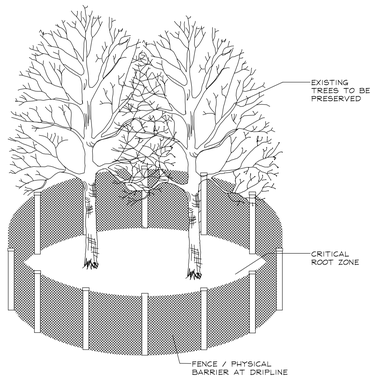
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LEGEND

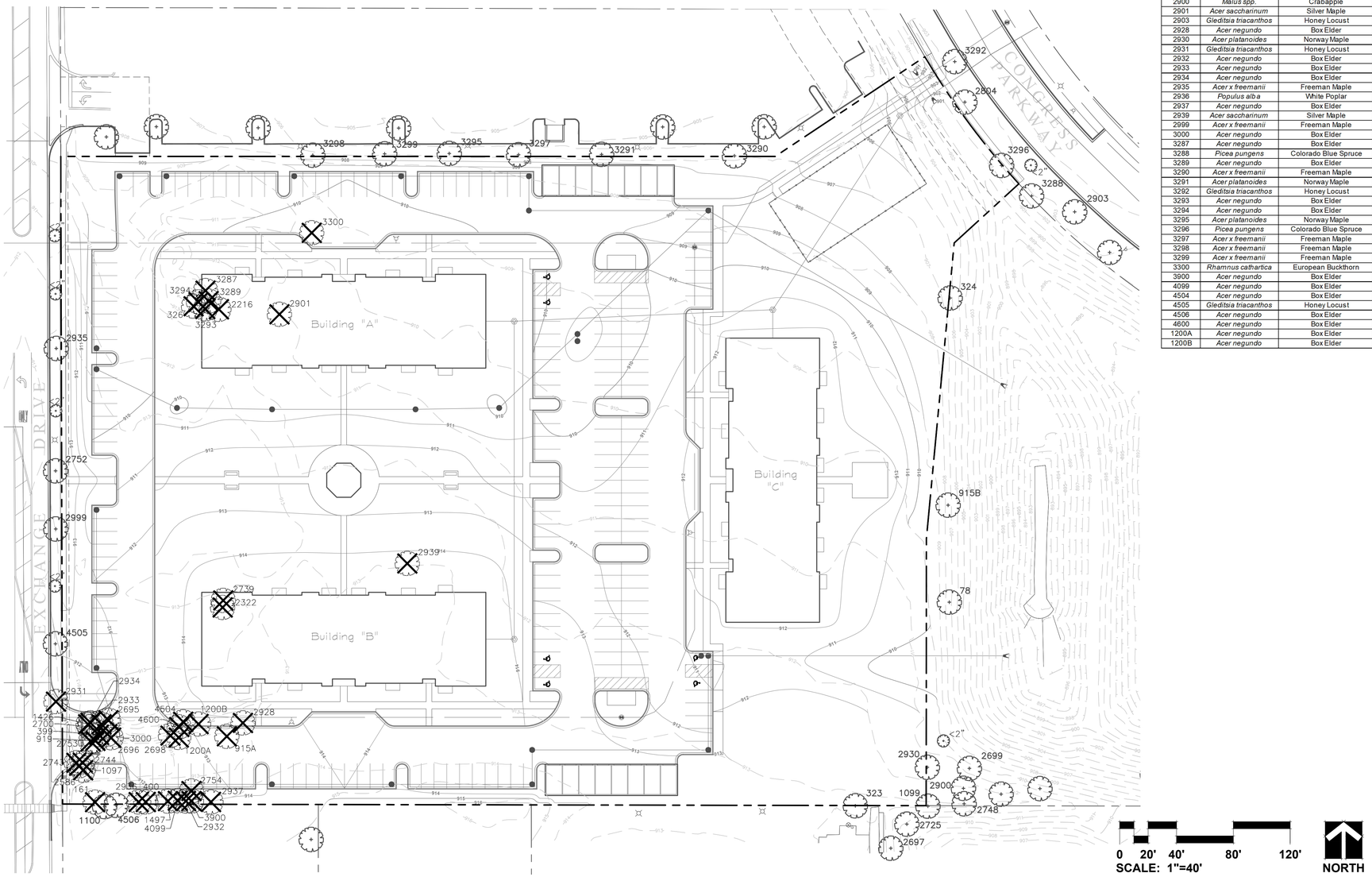
1234 — **TREE TO BE PRESERVED**

<2" — **TREE LESS THAN 2" DBH TO BE PRESERVED**

1234 — **TREE TO BE REMOVED**



TREE PRESERVATION DETAIL
(NOT TO SCALE)
SEE NOTES



0 20' 40' 80' 120'
SCALE: 1"=40'

NORTH

TREE INVENTORY

TAG NO.	SCIENTIFIC NAME	COMMON NAME	DBH (inches)	RATING	No. Rating	HEALTH/STRUCTURE	REMOVE/ PRESERVE	REPLACEMENT VALUE (CAL. IN.)
78	*Acer x freemanii*	Freeman Maple	7	Poor	5	Trunk scar, dead branches	Preserve	
161	*Acer negundo*	Box Elder	7	Poor	4	Strong lean	Remove	
323	*Acer platanoides*	Norway Maple	13	Good	2		Preserve	
324	*Acer platanoides*	Norway Maple	10	Good	2		Preserve	
326	*Acer negundo*	Box Elder	7,5,4	Poor	5	Strong crown lean	Remove	
399	*Acer negundo*	Box Elder	5	Fair	4	Lean	Remove	
400	*Populus alba*	White Poplar	9	Good	2		Replace	0.45
915A	*Acer negundo*	Box Elder	9,5	Poor	5	Strong lean	Remove	
915B	*Acer x freemanii*	Freeman Maple	6	Poor	5	Trunk scar, dead branches	Preserve	
919	*Acer negundo*	Box Elder	6,4	Fair	4	Lean	Remove	
1097	*Populus deltoides*	Eastern Cottonwood	10	Fair	3	Lean	Replace	1
1099	*Acer platanoides*	Norway Maple	14	Good	2		Preserve	
1100	*Acer negundo*	Box Elder	5	Poor	5	Strong crown lean	Preserve	
1426	*Acer negundo*	Box Elder	7	Poor	5	Strong crown lean	Remove	
1497	*Acer negundo*	Box Elder	4,2	Poor	5	Strong lean	Remove	
2216	*Acer negundo*	Box Elder	5	Poor	5	Strong lean	Remove	
2322	*Rhamnus cathartica*	European Buckthorn	2,2,2	Poor	5	Crowded	Remove	
2586	*Populus deltoides*	Eastern Cottonwood	7	Fair	3	Lean	Replace	0.7
2695	*Acer negundo*	Box Elder	9,6,5	Fair	4	Lean	Remove	
2696	*Acer negundo*	Box Elder	6,6	Poor	5	Split risk	Remove	
2697	*Acer platanoides*	Norway Maple	12	Good	2		Preserve	
2698	*Acer negundo*	Box Elder	10,8,8,6	Poor	5	Split risk	Remove	
2699	*Acer platanoides*	Norway Maple	12	Good	2		Preserve	
2700	*Acer negundo*	Box Elder	8,7	Poor	5	Strong lean	Remove	
2725	*Acer platanoides*	Norway Maple	12	Good	2		Preserve	
2739	*Rhamnus cathartica*	European Buckthorn	2,2	Poor	5	Crowded	Remove	
2743	*Populus deltoides*	Eastern Cottonwood	9	Fair	3	Lean	Replace	0.9
2744	*Salix nigra*	Black Willow	8	Poor	5	Strong lean	Remove	
2748	*Acer platanoides*	Norway Maple	11	Good	2		Preserve	
2752	*Gleditsia triacanthos*	Honey Locust	2.5	Good	3	Trunk scar (from mower)	Preserve	
2753	*Acer negundo*	Box Elder	4,4	Poor	5	Strong lean	Remove	
2754	*Acer negundo*	Box Elder	7	Poor	5	Strong lean	Remove	
2804	*Gleditsia triacanthos*	Honey Locust	14	Good	2		Preserve	
2900	*Malus spp.*	Crabapple	3,2	Fair	3		Preserve	
2901	*Acer saccharinum*	Silver Maple	8,7	Poor	5	Split risk	Remove	
2903	*Gleditsia triacanthos*	Honey Locust	12	Good	2		Preserve	
2928	*Acer negundo*	Box Elder	12,10,7,7	Poor	5	Strong lean	Remove	
2930	*Acer platanoides*	Norway Maple	11	Good	2		Preserve	
2931	*Gleditsia triacanthos*	Honey Locust	2.5	Good	2		Replace	1.25
2932	*Acer negundo*	Box Elder	7	Poor	5	Strong lean	Remove	
2933	*Acer negundo*	Box Elder	8	Poor	5	Strong lean	Remove	
2934	*Acer negundo*	Box Elder	8	Poor	5	Strong lean	Remove	
2935	*Acer x freemanii*	Freeman Maple	4	Good	2		Preserve	
2936	*Populus alba*	White Poplar	10	Fair	3	Vines	Replace	0.5
2937	*Acer negundo*	Box Elder	7	Poor	5	Strong lean, dead limbs, trunk scar	Remove	
2939	*Acer saccharinum*	Silver Maple	7,7	Poor	5	Split risk	Remove	
2999	*Acer x freemanii*	Freeman Maple	6	Good	2		Preserve	
3000	*Acer negundo*	Box Elder	5,4	Poor	5	Strong lean	Remove	
3287	*Acer negundo*	Box Elder	9,7	Poor	5	Strong lean	Remove	
3288	*Picea pungens*	Colorado Blue Spruce	12	Good	1		Preserve	
3289	*Acer negundo*	Box Elder	7	Poor	5	Strong lean	Remove	
3290	*Acer x freemanii*	Freeman Maple	7	Good	2		Preserve	
3291	*Acer platanoides*	Norway Maple	10	Good	2		Preserve	
3292	*Gleditsia triacanthos*	Honey Locust	12	Good	2		Preserve	
3293	*Acer negundo*	Box Elder	5	Poor	5	Strong lean	Remove	
3294	*Acer negundo*	Box Elder	5,3,3	Poor	5	Strong lean	Remove	
3295	*Acer platanoides*	Norway Maple	9	Good	2		Preserve	
3296	*Picea pungens*	Colorado Blue Spruce	14	Good	1		Preserve	
3297	*Acer x freemanii*	Freeman Maple	10	Good	2		Preserve	
3298	*Acer x freemanii*	Freeman Maple	6	Good	2		Preserve	
3299	*Acer x freemanii*	Freeman Maple	8	Good	2		Preserve	
3300	*Rhamnus cathartica*	European Buckthorn	3,2,2,2	Poor	5		Remove	
3900	*Acer negundo*	Box Elder	7	Poor	5	Strong lean	Remove	
4099	*Acer negundo*	Box Elder	7	Poor	5	Strong lean	Remove	
4504	*Acer negundo*	Box Elder	8	Poor	5	Strong lean	Remove	
4505	*Gleditsia triacanthos*	Honey Locust	2.5	Good	2		Preserve	
4506	*Acer negundo*	Box Elder	6	Poor	5	Strong crown lean	Preserve	
4600	*Acer negundo*	Box Elder	12,10,9	Poor	5	Split risk	Remove	
1200A	*Acer negundo*	Box Elder	10,8,8,6	Poor	5	Split risk	Remove	
1200B	*Acer negundo*	Box Elder	8,6,5,5	Poor	5	Strong lean	Remove	

REQUIRED TREE REPLACEMENTS

4.8 CALIPER INCHES OF REPLACEMENT

LOCATION OF REQUIRED REPLACEMENT TREES TO BE SHOWN ON FINAL LANDSCAPE PLAN

TREE PRESERVATION NOTES

1. 48'' high snow fence or wood barriers shall extend to the dripline of the tree or tree mass whenever possible, shall be installed before construction begins, and should not be removed until the completion of construction.
2. All accidental damage to existing trees that are to be preserved shall be promptly treated as required in accordance with recognized horticultural practices and the instructions of the professional Arborist, Landscape Architect or Horticulturist.
3. Broken or badly bruised branches shall be removed with a clean cut. If recommended by the professional Arborist, Landscape Architect or Horticulturist.
4. Care shall be exercised by the contractors to protect all overhead limbs and branches from damage by contact with material, machinery or equipment and by damage from engine exhaust.
5. Contractors shall protect trees and vegetation against spills or discharge of fuels,lubricating oils, hydraulic fluids, anti-freeze and coolants, calcium chloride, lime and all other similar hydrocarbons, organic chemicals, and other materials which can be harmful.
6. When underground utilities are proposed within 5' of a preserved tree trunk, they must be augered if possible.

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TREE PRESERVATION PLAN

1 03.16.2022
REVISIONS

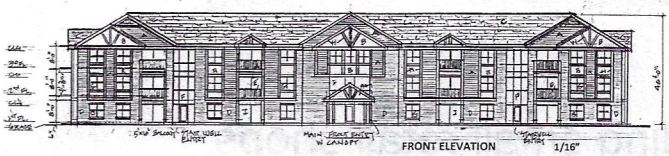
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PROJECT NO.	PSW2205
DRAWN	DHS
CHECKED	MGM
SHEET NO.	

4 OF 5

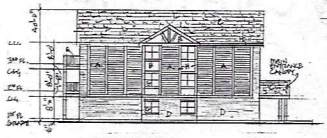
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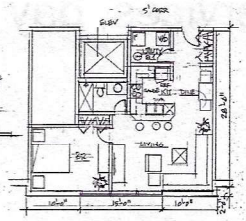
COURTYARD ELEVATION 1/16"



FRONT ELEVATION 1/16"



SIDE ELEVATION 1/16"



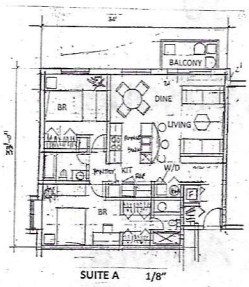
SUITE D 1/8"
766 SF

BUILDING EXTERIOR FINISH SCHEDULE

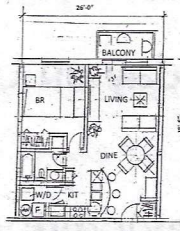
A. SIDING – HORIZONTAL BOARDS HARDI BOARD SIDING
B. SIDING – SMOOTH HARDI BOARD SIDING
C. ROOF – ARCHITECTURAL DIMENSIONAL ASPHALT SHINGLES
D. FACEBRICK –
E. BALCONY RAILINGS – BRONZE ANONIZED ALUMINUM
F. CURTAIN WALL – BRONZE ANODIZED ALUMINUM FRAMES WITH CLEAR INSULATED GLASS
G. WINDOWS – BRONZE FIBERGLASS FRAMES WITH CLEAR INSULATED GLASS
H. TRIM BOARDS – 1 X 6 TRIM 1 X 12 FASCIA
I. SLIDING GLASS DOORS – BRONZE ANODIZED ALUMINUM WITH CLEAR INSULATED GLASS

RENTAL UNITS

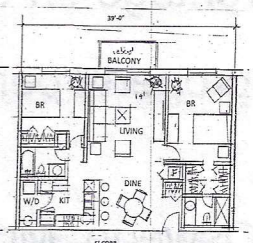
UNITS/BUILDINGS		
	1 BR	7
	2 BR	24
TOTAL UNITS (3 BUILDINGS)	1 BR	21 (23%)
	2 BR	72
TOTAL		93 UNITS



SUITE A 1/8"
1,102 SF

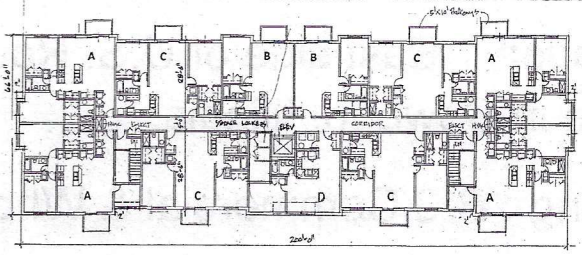


SUITE B 1/8"
741 SF

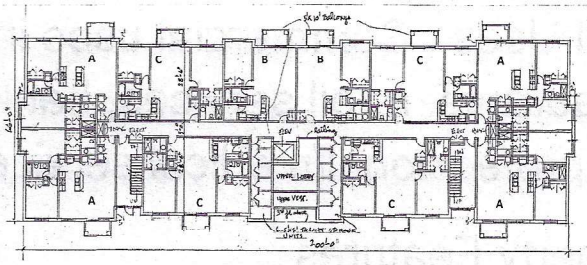


SUITE C 1/8"
1,112 SF

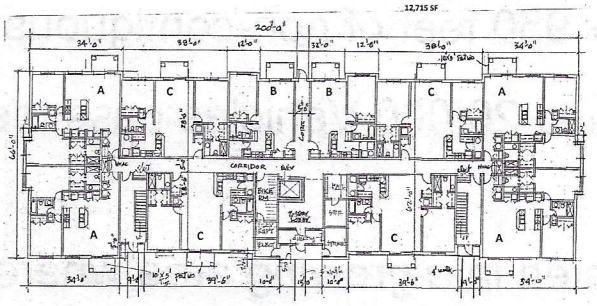
INDIVIDUAL UNIT FLOOR PLANS 1/8"



THIRD FLOOR PLAN 1/16" = 1' – 0"
12,790 SF



SECOND FLOOR PLAN 1/16" = 1' – 0"
12,715 SF



TOTAL BUILDING SF 38,220 SF

FIRST FLOOR PLAN 1/16" = 1' – 0"
12,715 SF

DESIGN PARTNERSHIP
ARCHITECTURE
OTHER BUILDINGS & BUILDINGS, INC.
6500 WEST LAKE AVENUE • PEORIA, ILLINOIS 61614
PHONE (309) 693-9111 • FAX (309) 693-9026

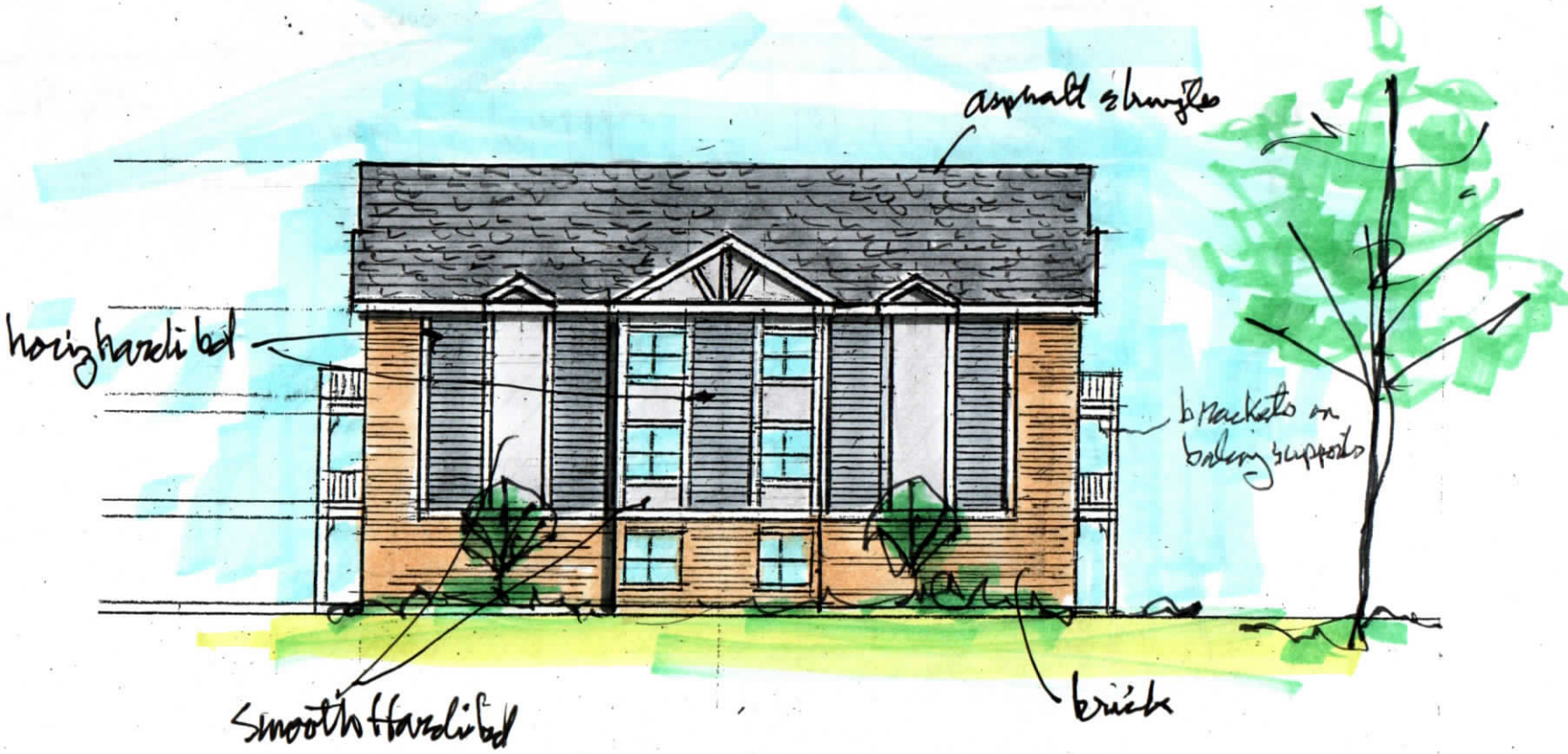
THE COURTYARD AT CONGRESS STATION
551 CONGRESS PARKWAY
CRYSTAL LAKE, ILLINOIS

DATE 11/5/21
REVISED 12/17/21

A1

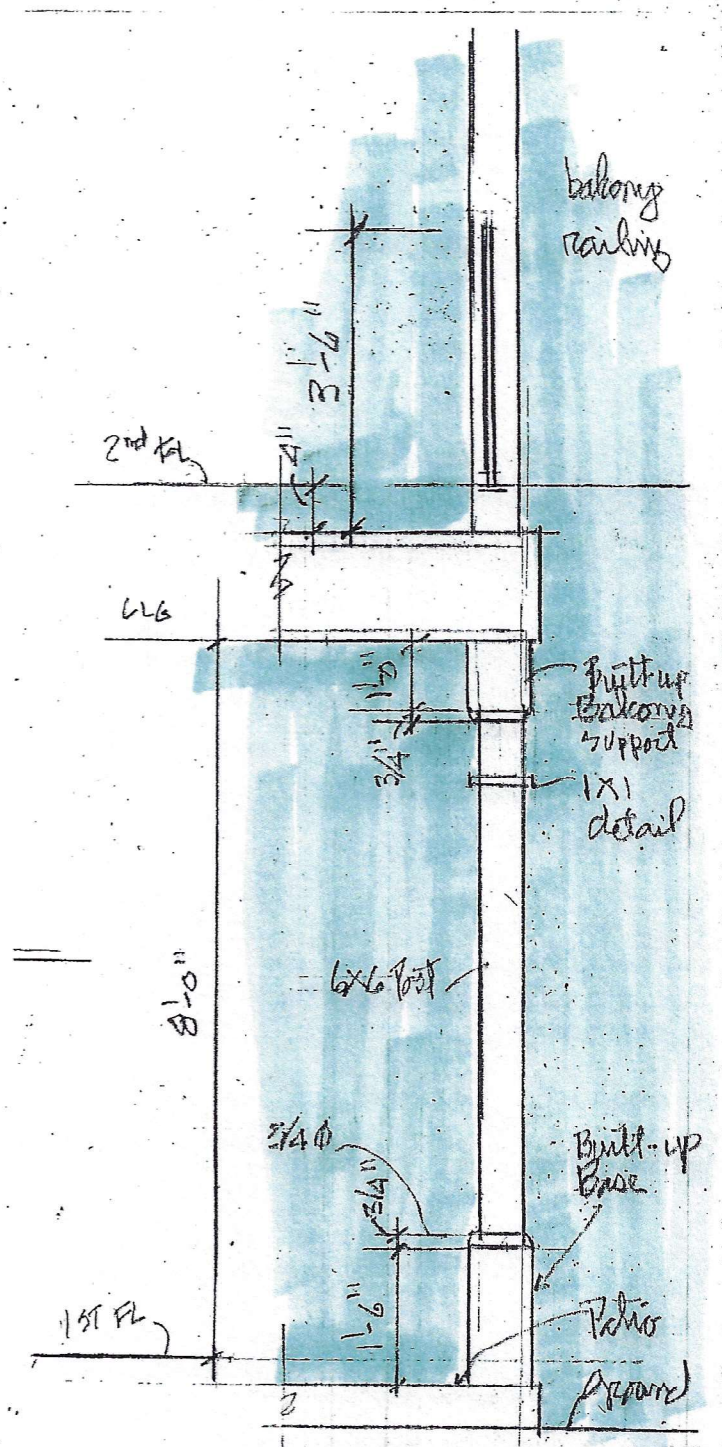




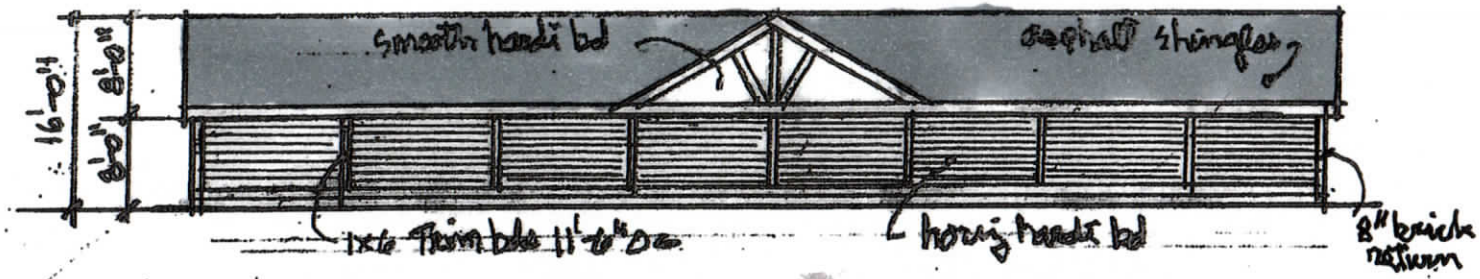


end elevation

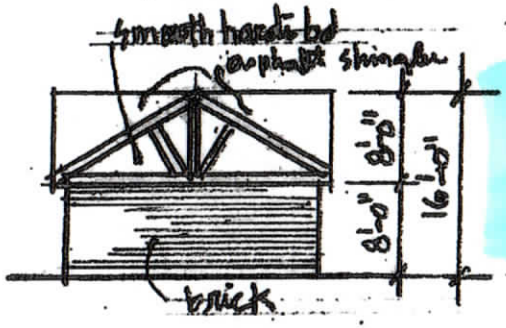
revised 3/10/22



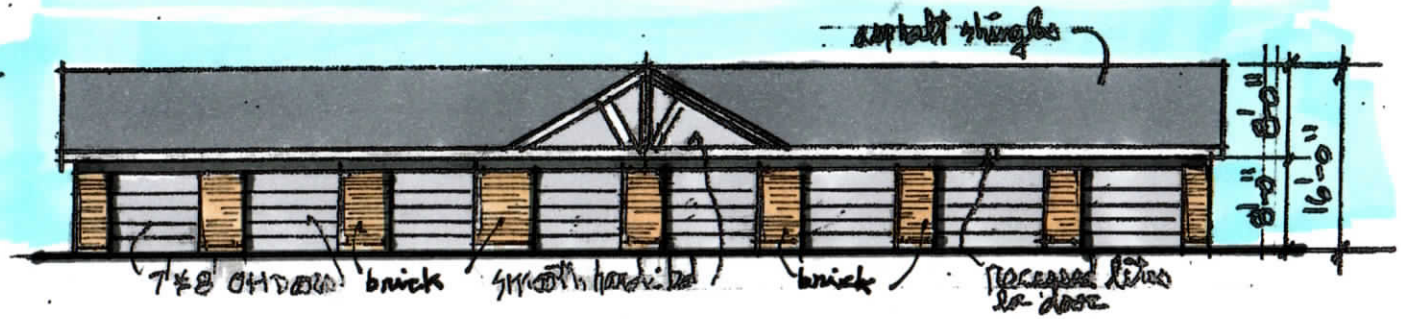
BALCONY SUPPORT DETAIL 1/2"=1'-0"



BACK ELEVATION 1/16"

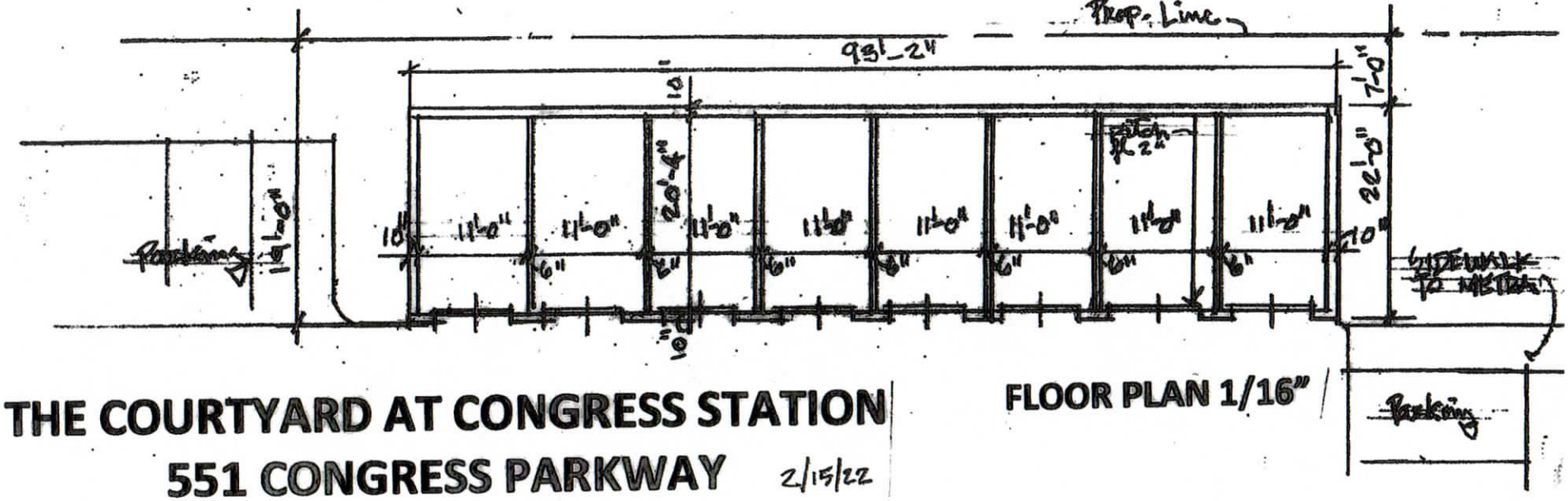


SIDE ELEVATION 1/16"



FRONT ELEVATION 1/16"

8 CAR GARAGE BUILDING

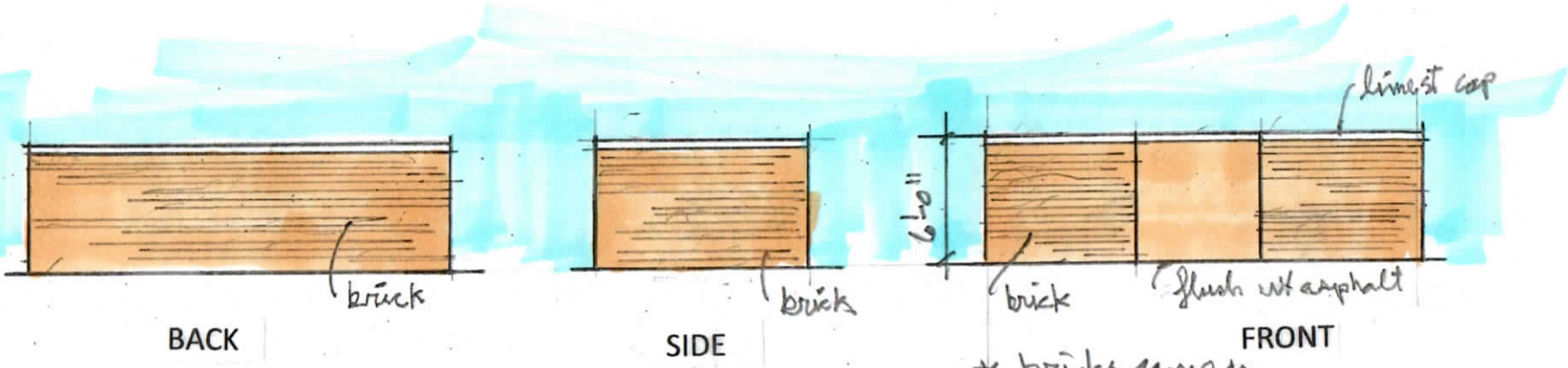


FLOOR PLAN 1/16"

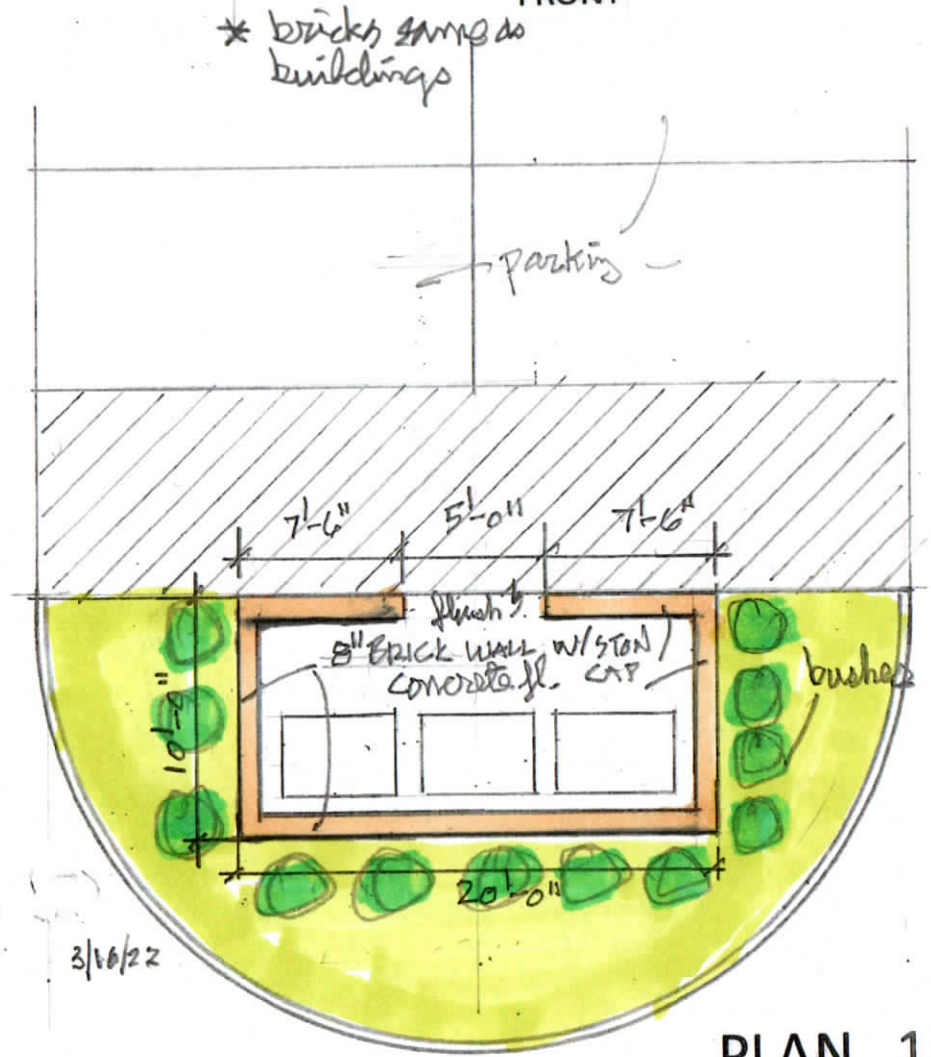
THE COURTYARD AT CONGRESS STATION

551 CONGRESS PARKWAY

2/15/22



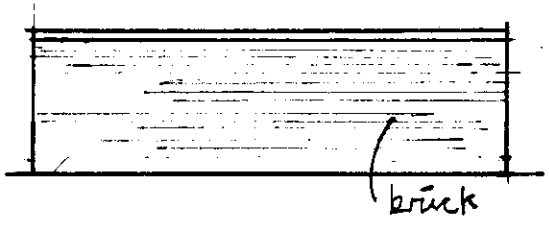
ELEVATIONS 1/8



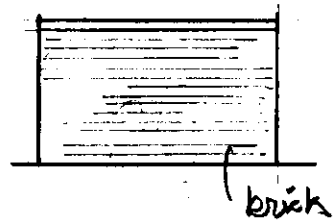
TRASH ENCLOSURES

551 CONGRESS PKWY

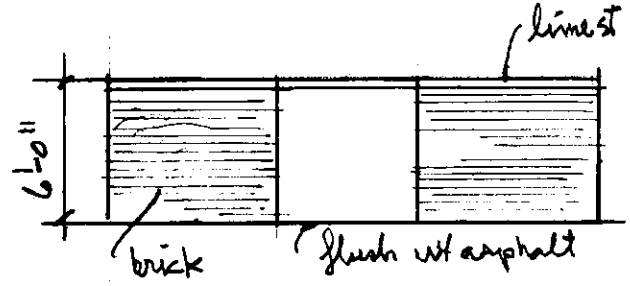
PLAN 1/8



BACK

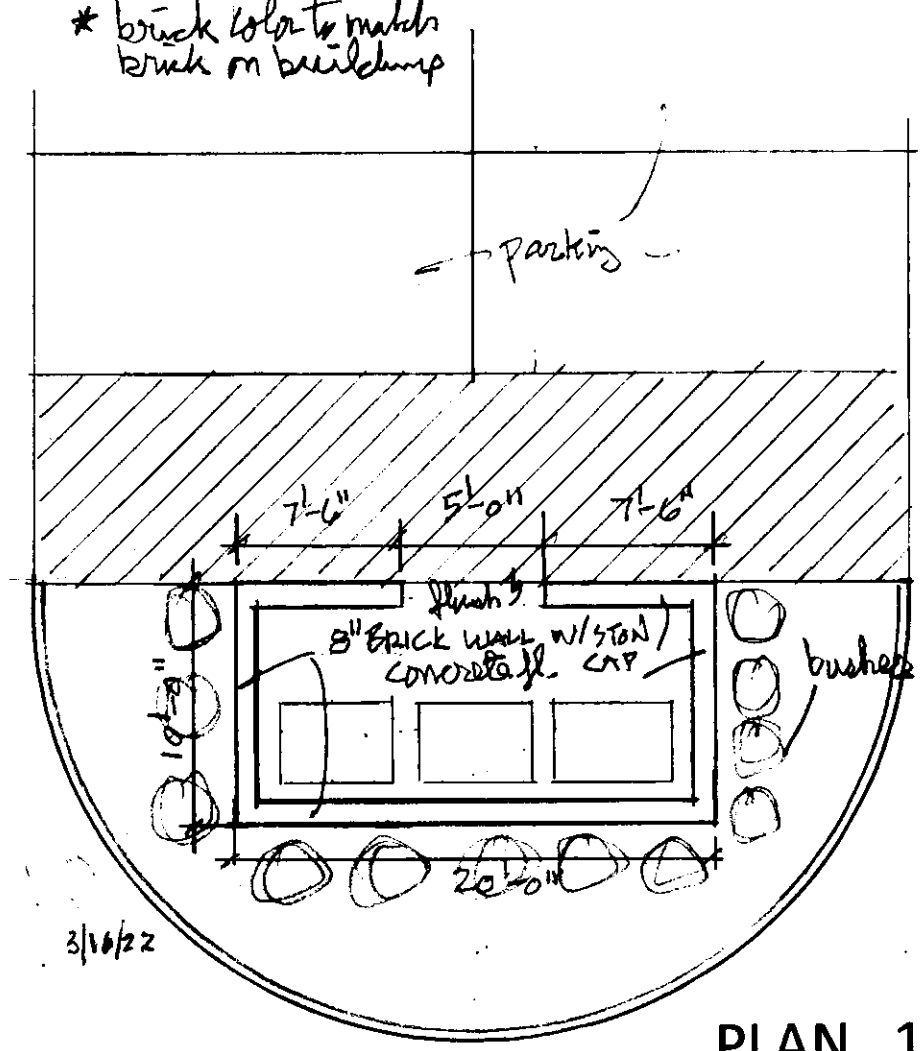


SIDE



FRONT

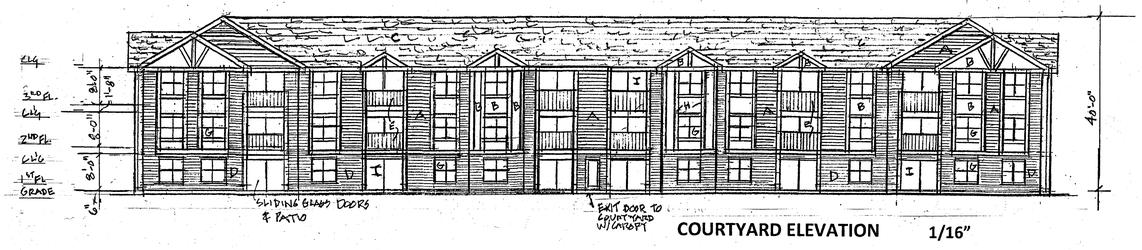
ELEVATIONS 1/8



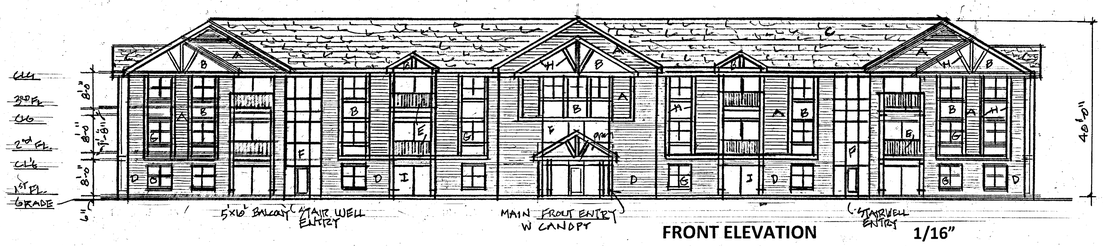
PLAN 1/8

TRASH ENCLOSURES

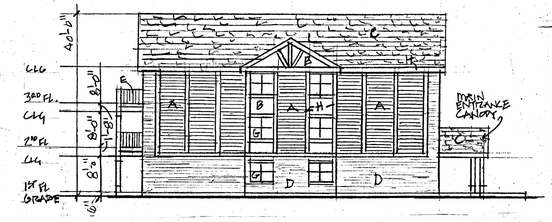
551 CONGRESS PKWY



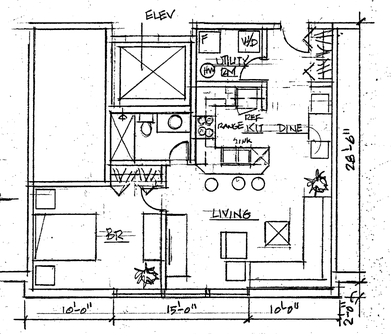
COURTYARD ELEVATION 1/16"



FRONT ELEVATION 1/16"



SIDE ELEVATION 1/16"



SUITE D 1/8"

766 SF

BUILDING EXTERIOR FINISH SCHEDULE

A. **SIDING –** HORIZONTAL BOARDS HARDI BOARD SIDING

B. **SIDING –** SMOOTH HARDI BOARD SIDING

C. **ROOF –** ARCHITECTURAL DIMENSIONAL ASPHALT SHINGLES

D. **FACEBRICK –**

E. **BALCONY RAILINGS –** BRONZE ANONDIZED ALUMINUM

F. **CURTAIN WALL –** BRONZE ANODIZED ALUMINUM FRAMES WITH CLEAR INSULATED GLASS

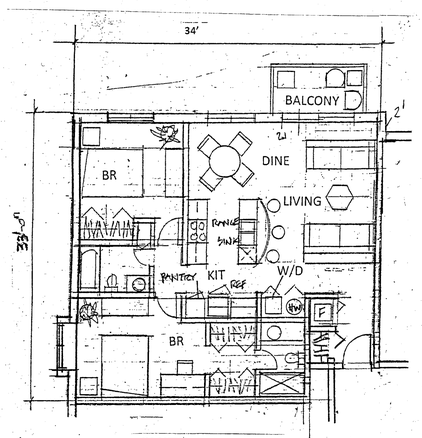
G. **WINDOWS –** BRONZE FIBERGLASS FRAMES WITH CLEAR INSULATED GLASS

H. **TRIM BOARDS –** 1 X 6 TRIM 1 X 12 FASCIA

I. **SLIDING GLASS DOORS –** BRONZE ANODIZED ALUMINUM WITH CLEAR INSULATED GLASS

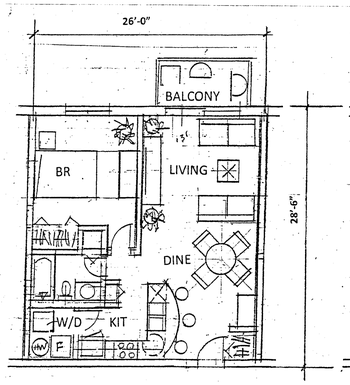
RENTAL UNITS

UNITS/BUILDINGS	1 BR	7
	2 BR	24
TOTAL UNITS (3 BUILDINGS)	1 BR	21 (23%)
	2 BR	72
TOTAL		93 UNITS



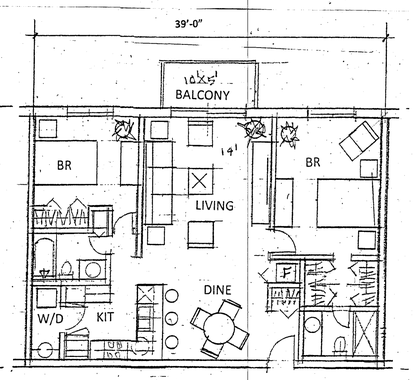
SUITE A 1/8"

1,102 SF



SUITE B 1/8"

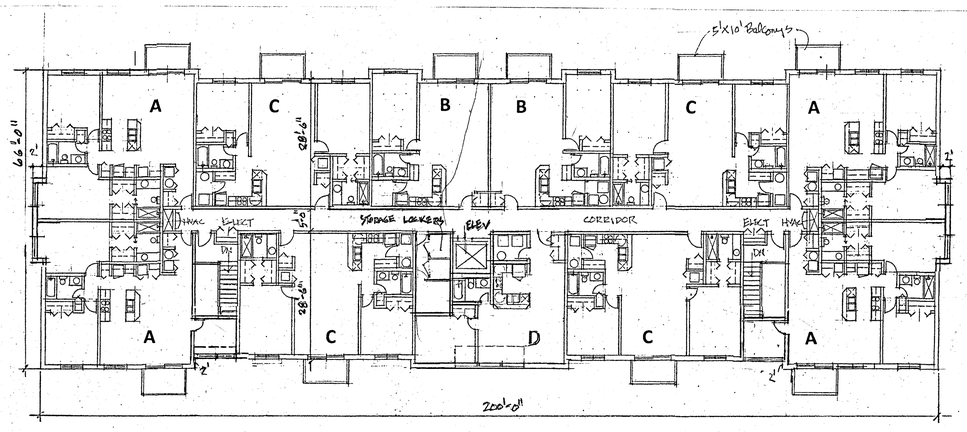
741 SF



SUITE C 1/8"

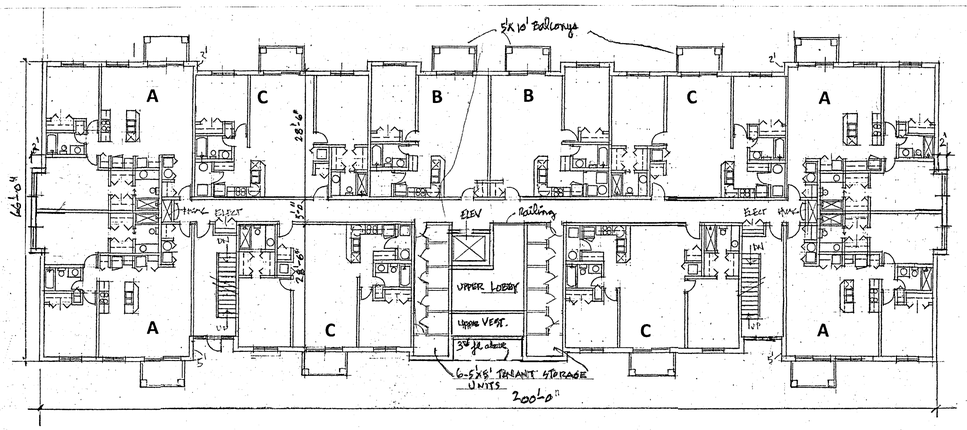
1,112 SF

INDIVIDUAL UNIT FLOOR PLANS 1/8"



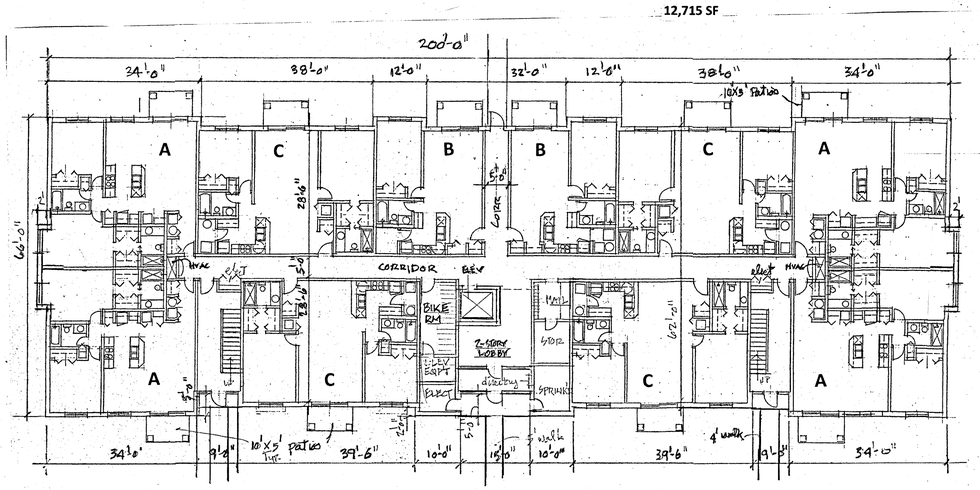
THIRD FLOOR PLAN 1/16" = 1' – 0"

12,790 SF



SECOND FLOOR PLAN 1/16" = 1' – 0"

12,715 SF



TOTAL BUILDING SF 38,220 SF

FIRST FLOOR PLAN 1/16" = 1' – 0"

12,715 SF

Architectural Services
arthur swanson & associates, llc.
10500 WEST LUNT AVENUE • ROSEMONT, ILLINOIS 60018
Phone (708) 635-6111 • FAX: (708) 635-6926

REVISIONS

NO	DATE	REVISIONS

THE COURTYARD AT CONGRESS STATION

551 CONGRESS PARKWAY
CRYSTAL LAKE, ILLINOIS

DATE 11/8/21
JOB NO. ESV 12/19/21
SHEET NO. A1

551 CONGRESS PARKWAY
SITE IMPROVEMENT PLANS

SECTION 4 TOWNSHIP 43 NORTH RANGE 8 EAST
CRYSTAL LAKE, ILLINOIS
MCHENRY COUNTY



LOCATION MAP
Not To Scale

OWNER / DEVELOPER:
Paul Swanson Associates, Inc.
401 E Prospect Ave, Suite 201
Mount Prospect, Illinois 60056
Tel: (847) 670-6710

PREPARED BY:
Haeger Engineering LLC
Illinois Prof. Design Firm #184-003152
100 E. State Parkway, Schaumburg, IL 60173
Tel: (847) 394-6600
Fax: (847) 394-6608
www.haegerengineering.com

CITY OF CRYSTAL LAKE:
100 W. Woodstock Street
Crystal Lake, IL 60014
Tel: (815) 459-2020

BENCHMARKS:

Site Benchmarks:

Cut Cross on curb located in parking lot Northeast corner of property & Southeast of Congress Parkway.
Elevation = 906.46

Cut Cross on curb East side of Exchange Drive & South of Station Drive.
Elevation = 913.78

INDEX TO SHEETS

NO.	DESCRIPTION
C1.0	TITLE SHEET
C2.0	GENERAL NOTES & SPECIFICATIONS
C2.1	GENERAL NOTES & SPECIFICATIONS
C2.2	CITY OF CRYSTAL LAKE NOTES & SPECIFICATIONS
C3.0	EXISTING CONDITIONS & DEMOLITION PLAN
C4.0	GEOMETRY, PAVING, STRIPING, & SIGNAGE PLAN
C5.0	GRADING PLAN
C6.0	UTILITY PLAN
C7.0	CITY OF CRYSTAL LAKE STANDARD DETAILS
C7.1	CITY OF CRYSTAL LAKE STANDARD DETAILS
C7.2	CITY OF CRYSTAL LAKE STANDARD DETAILS
C7.3	CITY OF CRYSTAL LAKE STANDARD DETAILS
C7.4	IDOT STANDARD DETAILS
C7.5	IDOT STANDARD DETAILS
C7.6	TYPICAL DETAILS

INDEX TO STORM WATER POLLUTION PREVENTION PLAN SHEETS

NO.	DESCRIPTION
EC1.0	SWPPP TITLE SHEET
EC2.0	SWPPP GENERAL NOTES & SPECIFICATIONS
EC3.0	STORM WATER POLLUTION PREVENTION PLAN (SWPPP)
EC4.0	SWPPP DETAILS

LEGEND

Existing Symbol	Description	Proposed Symbol
	Storm Sewer Manhole	
	Catch Basin	
	Inlet	
	Flared End Section	
	Headwall	
	Area Drain	
	Sanitary Sewer Manhole	
C.O.	Clean Out	C.O.
	Storm Sewer	
	Storm Sewer Service	
	Perforated Underdrain	
	Sanitary Sewer	
	Sanitary Sewer Service	
	Combined Sewer	
FM	Force Main	FM
W	Water Main	W
	Water Main Service	
	Fire Hydrant	
	Valve Vault	
	Valve Box	
	B-Box	
	Well Head	
	Light Pole	
	Light Pole With Mast Arm	
	Traffic Signal	
	Traffic Signal With Mast Arm	
	Hand Hole	
	Fence	
	Guardrail	
	Pipe Bollard	
	Sign	
	Gas Valve	
G	Gas Line	G
E	Electric Line	E
OHW	Overhead Utility Line	OHW
FO	Fiber Optic Line	FO
	Electrical Pedestal	
	Electric Manhole	
	Guy Wire	
	Utility Pole	
	Telephone Pedestal	
	Telephone Manhole	
T	Telephone Line	T
CATV	Cable TV Line	CATV
	Cable TV Pedestal	
	Flagpole	
	Mailbox	
	Handicapped Parking Stall	
X	Number of Parking Stalls	X
	Curb & Gutter	
	Reverse Pitch Curb & Gutter	
	Depressed Curb	
	Retaining Wall	
C XXX.XX	Curb Elevation and	C XXX.XX
G/P XXX.XX	Gutter/Pavement Elevation	G XXX.XX
XXX.XX	Pavement Elevation	P XXX.XX
XXX.XX	Sidewalk Elevation	W XXX.XX
XXX.X +	Ground Elevation	XXX.X
T/W XXX.XX	Top of Wall Elevation	TW XXX.XX
B/W XXX.XX	Bottom of Wall Elevation	BW XXX.XX
Gr XXX.XX	Open Lid Frame & Grate	Gr XXX.XX
Rim XXX.XX	Closed Lid Frame & Lid	Rim XXX.XX
FG XXX.XX	Finish Grade	FG XXX.XX
GF XXX.XX	Garage Floor	GF XXX.XX
TF XXX.XX	Top of Foundation	TF XXX.XX
	Swale	
	Hardscape Flow	
	Softscape Flow	
XXX	Contour Line	XXX
	Wetland	
	Wetland Buffer	
	Normal Water Level	
	High Water Level	
	Flood Plain	
	Flood Way	
	Deciduous Tree	
	Coniferous Tree	
	Bush	
	Brushline	
B-1	Soil Boring	B-1
	Over Land Flow Route	

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

Note:
Call 811 at least 48 hours, excluding weekends and holidays, before you dig.

062-072037
LICENSED PROFESSIONAL ENGINEER
OF
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No.	Revision	Date

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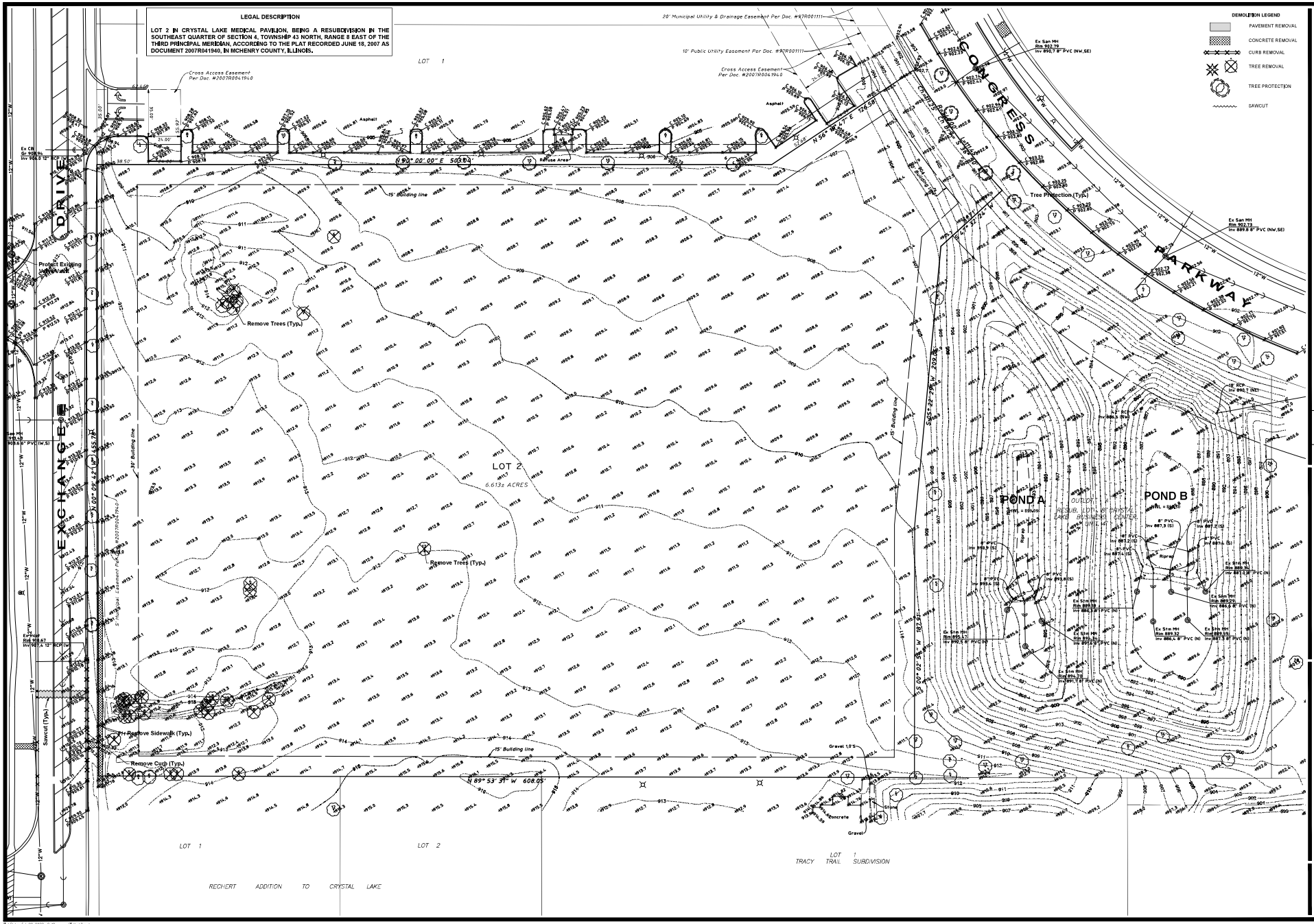
TITLE SHEET

SITE IMPROVEMENT PLANS
551 CONGRESS PARKWAY
CRYSTAL LAKE, MCHENRY COUNTY, ILLINOIS

Project Manager:	D J V
Engineer:	D J V
Date:	02/22/2022
Project No.	21-215
Sheet	C1.0 / C7

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Plot Date: Feb 22, 2022 - 8:42am Plotted By: dvore
File Name: P:\2021\215\215\Drawings\Final Engineering\215TITLE ENGINEERING.dwg



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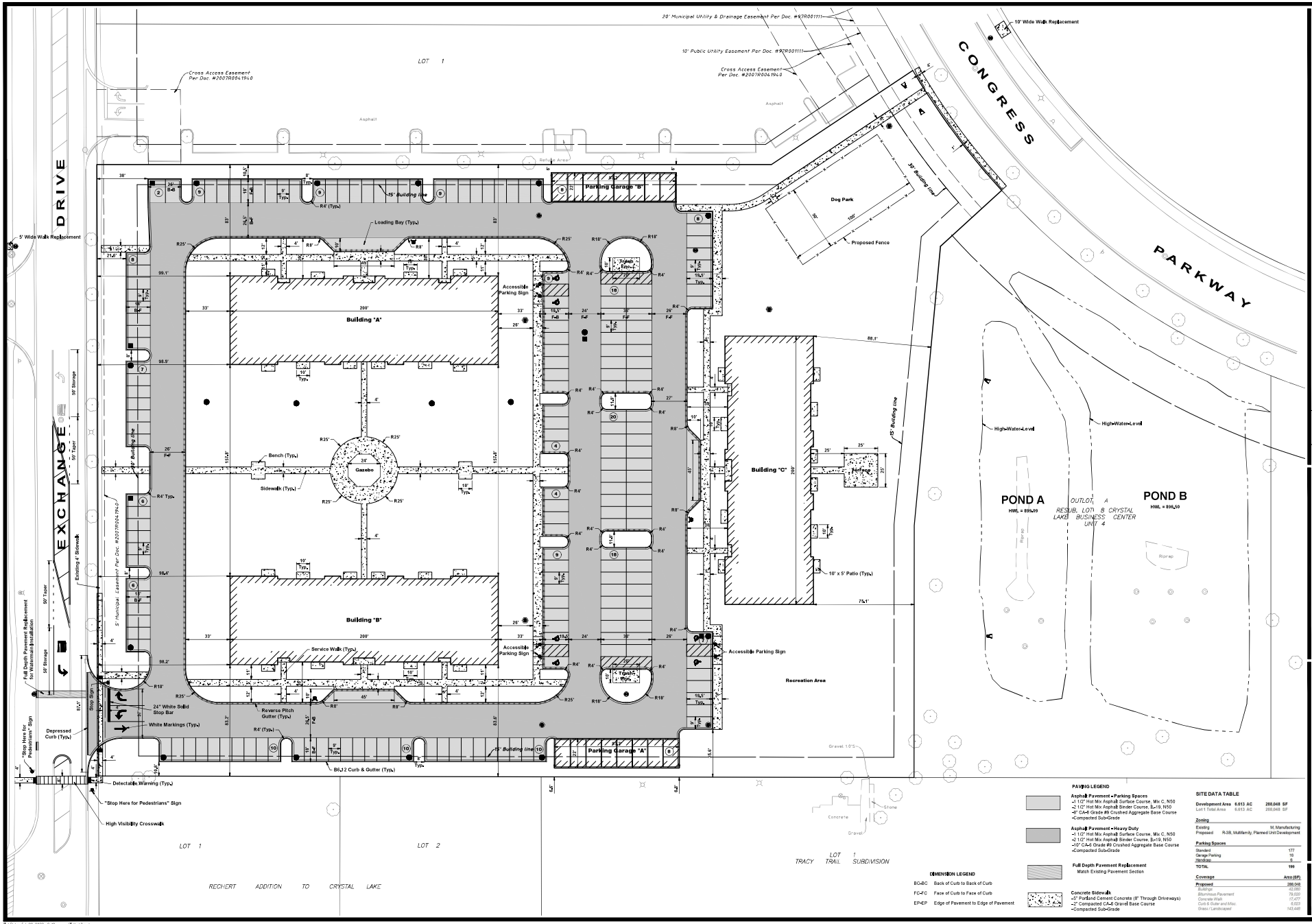
EXISTING CONDITIONS & DEMOLITION PLAN

SITE IMPROVEMENT PLANS
551 CONGRESS PARKWAY
CRYSTAL LAKE, MCHENRY COUNTY, ILLINOIS

Project Manager:	D J V
Engineer:	D J V
Date:	02/22/2022
Project No.	21-215
Sheet	C3.0 / C7

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DIMENSION LEGEND

BC-BC	Back of Curb to Back of Curb
FC-FC	Face of Curb to Face of Curb
EP-EP	Edge of Pavement to Edge of Pavement

PAVING LEGEND

Asphalt Pavement - Parking Spaces
- 1 1/2" Hot Mix Asphalt Surface Course, Mix C, N50
- 2 1/2" Hot Mix Asphalt Binder Course, IL-19, N50
- 8" CA-6 Grade #6 Crushed Aggregate Base Course
- Compacted Sub-Grade

Asphalt Pavement - Heavy Duty
- 1 1/2" Hot Mix Asphalt Surface Course, Mix C, N50
- 2 1/2" Hot Mix Asphalt Binder Course, IL-19, N50
- 10" CA-6 Grade #6 Crushed Aggregate Base Course
- Compacted Sub-Grade

Full Depth Pavement Replacement
Match Existing Pavement Section

Concrete Sidewalk
- 5" Portland Cement Concrete (6" Through Driveways)
- 2" Compacted CA-6 Gravel Base Course
- Compacted Sub-Grade

SITE DATA TABLE

Development Area	6.813 AC	288,048 SF
Lot 1 Total Area	6.813 AC	288,048 SF
Zoning		
Existing		M, Manufacturing
Proposed		R-5B, Multifamily; Planned Unit Development
Parking Spaces		
Standard		177
Garage Parking		18
Handicap		6
TOTAL		199
Coverage		**Area (SF)**
Proposed		288,048
Buildings		62,000
Bituminous Pavement		79,000
Concrete Walk		17,477
Curb & Gutter and Misc.		6,023
Grass / Landscaped		143,448

NORTH
Scale: 1" = 30'

No.	Date	Revision

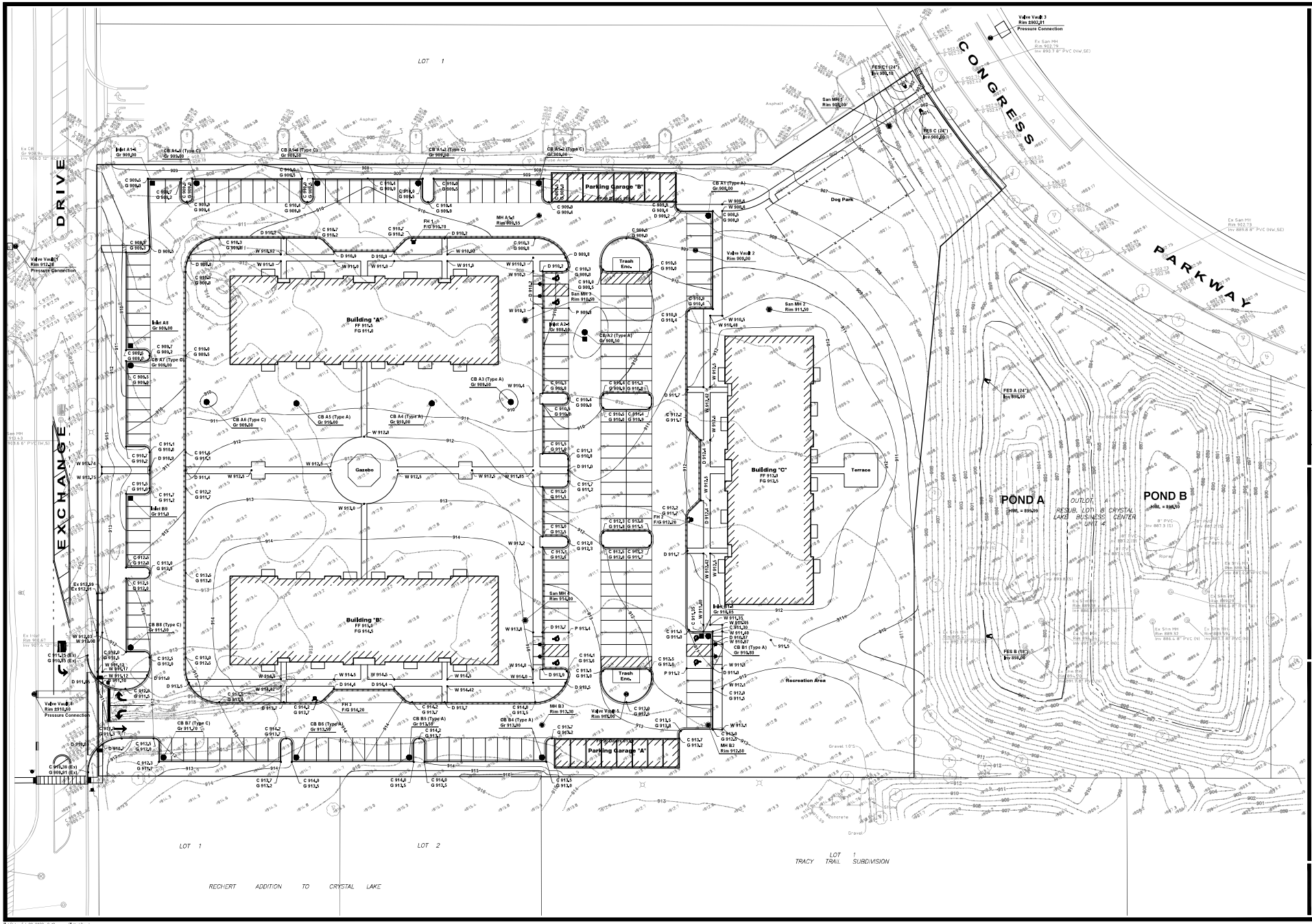
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Illinois Professional Design Firm License No. 184-003132
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GEOMETRY, PAVING STRIPING, & SIGNAGE PLAN
SITE IMPROVEMENT PLANS
551 CONGRESS PARKWAY
CRYSTAL LAKE, MCHENRY COUNTY, ILLINOIS

Project Manager:	D J V
Engineer:	D J V
Date:	02/22/2022
Project No.	21-215
Sheet	C4.0 / C7

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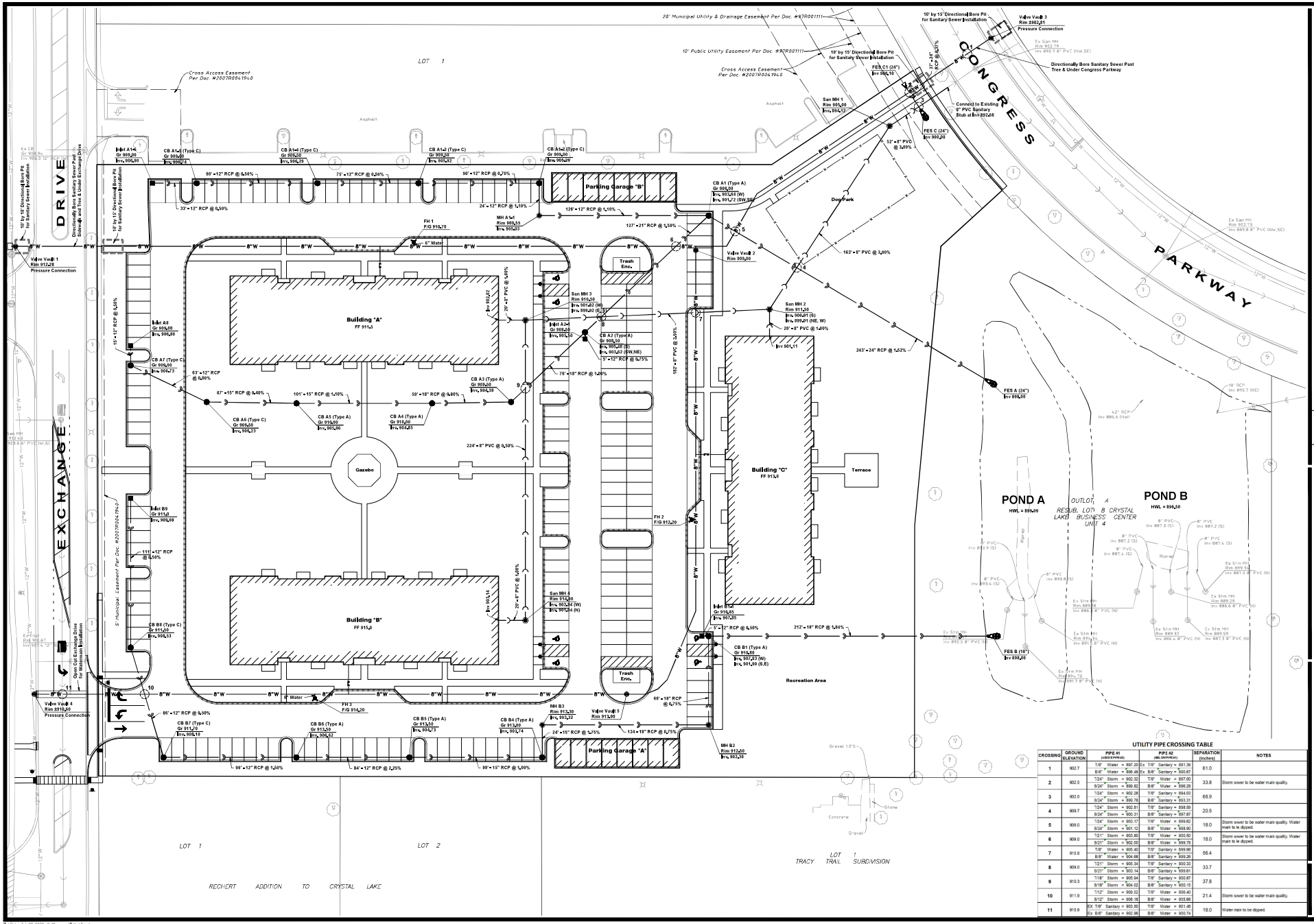
GRADING PLAN

SITE IMPROVEMENT PLANS
551 CONGRESS PARKWAY
CRYSTAL LAKE, MCHENRY COUNTY, ILLINOIS

Project Manager:	D J V
Engineer:	D J V
Date:	02/22/2022
Project No.	21-215
Sheet	C5.0 / C7

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UTILITY PIPE CROSSING TABLE

CROSSING	GROUND ELEVATION	PIPE #1 (ABOVE/PROPOSED)	PIPE #2 (BELOW/EXISTING)	SEPARATION (Inches)	NOTES
1	902.7	T/8" Water = 897.20 B/8" Water = 896.48	Ex T/8" Sanitary = 901.39 Ex B/8" Sanitary = 900.67	61.0	
2	902.5	T/24" Storm = 902.32 B/24" Storm = 899.82	T/8" Water = 897.90 B/8" Water = 897.28	33.8	Storm sewer to be water main quality.
3	902.0	T/24" Storm = 902.28 B/24" Storm = 899.78	T/8" Sanitary = 904.03 B/8" Sanitary = 903.31	68.9	
4	909.7	T/24" Storm = 902.81 B/24" Storm = 900.31	T/8" Sanitary = 908.59 B/8" Sanitary = 907.87	20.5	
5	909.0	T/24" Storm = 903.17 B/24" Storm = 901.12	T/8" Water = 899.62 B/8" Water = 898.90	18.0	Storm sewer to be water main quality. Water main to le dipped.
6	909.0	T/21" Storm = 903.80 B/21" Storm = 902.00	T/8" Water = 900.50 B/8" Water = 899.78	18.0	Storm sewer to be water main quality. Water main to le dipped.
7	910.0	T/8" Water = 905.40 B/8" Water = 904.68	T/8" Sanitary = 909.98 B/8" Sanitary = 909.26	56.4	
8	909.0	T/21" Storm = 905.34 B/21" Storm = 903.14	T/8" Sanitary = 909.33 B/8" Sanitary = 908.61	33.7	
9	910.3	T/18" Storm = 905.94 B/18" Storm = 904.02	T/8" Sanitary = 909.87 B/8" Sanitary = 909.15	37.8	
10	911.9	T/12" Storm = 909.52 B/12" Storm = 908.16	T/8" Water = 908.40 B/8" Water = 908.68	21.4	Storm sewer to be water main quality.
11	910.8	EX T/6" Sanitary = 903.50 Ex B/8" Sanitary = 902.96	T/8" Water = 901.46 B/8" Water = 900.74	18.0	Water main to be dipped.

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No.	Revision	Date

UTILITY PLAN

SITE IMPROVEMENT PLANS
551 CONGRESS PARKWAY
CRYSTAL LAKE, MCHENRY COUNTY, ILLINOIS

Project Manager: D J V
Engineer: D J V
Date: 02/22/2022
Project No. 21-215
Sheet C6.0/C7

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Plot Date: Feb 22, 2022 - 8:40am Plotted By: dvane
File Name: P:\2021\21215\Drawings\Final Engineering\21215_UTIL_ENGINEERING.dwg

551 CONGRESS PARKWAY
STORMWATER POLLUTION PREVENTION PLAN
SECTION 4 TOWNSHIP 43 NORTH RANGE 8 EAST
CRYSTAL LAKE, ILLINOIS
MCHENRY COUNTY

OWNER / DEVELOPER:
Paul Swanson Associates, Inc.
401 E Prospect Ave, Suite 201
Mount Prospect, Illinois 60056
Tel: (847) 670-6710

PREPARED BY:
Haeger Engineering LLC
Illinois Prof. Design Firm #184-003152
100 E. State Parkway, Schaumburg, IL 60173
Tel: (847) 394-6600
Fax: (847) 394-6608
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CITY OF CRYSTAL LAKE:
100 W. Woodstock Street
Crystal Lake, IL 60014
Tel: (815) 459-2020



LOCATION MAP
Not To Scale

BENCHMARKS:

Site Benchmarks:

Cut Cross on curb located in parking lot Northeast corner of property & Southeast of Congress Parkway.
Elevation = 906.46

Cut Cross on curb East side of Exchange Drive & South of Station Drive.
Elevation = 913.78

INDEX TO STORM WATER POLLUTION PREVENTION PLAN SHEETS

NO.	DESCRIPTION
EC1.0	SWPPP TITLE SHEET
EC2.0	SWPPP GENERAL NOTES & SPECIFICATIONS
EC3.0	STORM WATER POLLUTION PREVENTION PLAN (SWPPP)
EC4.0	SWPPP DETAILS

LEGEND

Existing Symbol	Description	Proposed Symbol
	Storm Sewer Manhole	
	Catch Basin	
	Inlet	
	Flared End Section	
	Headwall	
	Area Drain	
	Sanitary Sewer Manhole	
C.O.	Clean Out	C.O.
	Storm Sewer	
	Storm Sewer Service	
	Perforated Underdrain	
	Sanitary Sewer	
	Sanitary Sewer Service	
	Combined Sewer	
FM	Force Main	FM
W	Water Main	W
	Water Main Service	
	Fire Hydrant	
	Valve Vault	
	Valve Box	
	B-Box	
	Well Head	
	Light Pole	
	Light Pole With Mast Arm	
	Traffic Signal	
	Traffic Signal With Mast Arm	
	Hand Hole	
	Fence	
	Guardrail	
	Pipe Bollard	
	Sign	
	Gas Valve	
G	Gas Line	G
E	Electric Line	E
OHW	Overhead Utility Line	OHW
FO	Fiber Optic Line	FO
	Electrical Pedestal	
	Electric Manhole	
	Guy Wire	
	Utility Pole	
	Telephone Pedestal	
	Telephone Manhole	
T	Telephone Line	T
CATV	Cable TV Line	CATV
	Cable TV Pedestal	
	Flagpole	
	Mailbox	
	Handicapped Parking Stall	
X	Number of Parking Stalls	X
	Curb & Gutter	
	Reverse Pitch Curb & Gutter	
	Depressed Curb	
	Retaining Wall	
C XXX.XX	Curb Elevation and	C XXX.XX
G/P XXX.XX	Gutter/Pavement Elevation	G XXX.XX
XXX.XX	Pavement Elevation	P XXX.XX
XXX.XX	Sidewalk Elevation	W XXX.XX
XXX.X +	Ground Elevation	XXX.X
T/W XXX.XX	Top of Wall Elevation	TW XXX.XX
B/W XXX.XX	Bottom of Wall Elevation	BW XXX.XX
Gr XXX.XX	Open Lid Frame & Grate	Gr XXX.XX
Rim XXX.XX	Closed Lid Frame & Lid	Rim XXX.XX
FG XXX.XX	Finish Grade	FG XXX.XX
GF XXX.XX	Garage Floor	GF XXX.XX
TF XXX.XX	Top of Foundation	TF XXX.XX
	Swale	
	Hardscape Flow	
	Softscape Flow	
XXX	Contour Line	XXX
	Wetland	
	Wetland Buffer	
	Normal Water Level	
	High Water Level	
	Flood Plain	
	Flood Way	
	Deciduous Tree	
	Coniferous Tree	
	Bush	
	Brushline	
B-1	Soil Boring	B-1
	Over Land Flow Route	

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

Note:
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TITLE SHEET

SITE IMPROVEMENT PLANS
551 CONGRESS PARKWAY
CRYSTAL LAKE, MCHENRY COUNTY, ILLINOIS

Project Manager:	D J V
Engineer:	D J V
Date:	02/22/2022
Project No.	21-215
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STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

SITE IMPROVEMENT PLANS

551 CONGRESS PARKWAY

CRYSTAL LAKE, MCHENRY COUNTY, ILLINOIS

Project Manager: D. J. V.
Engineer: D. J. V.
Date: 02/22/2022
Project No. 21-215
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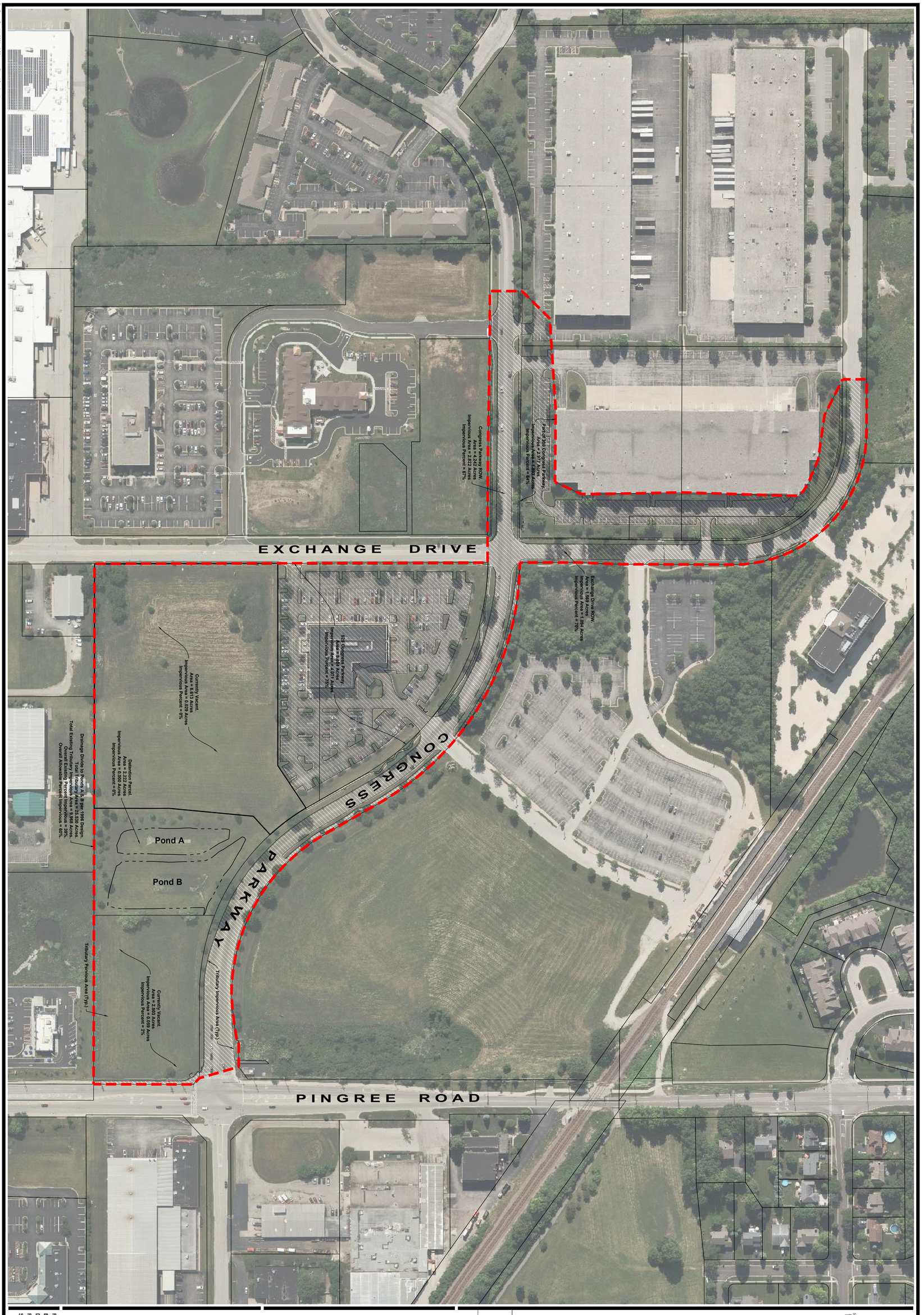
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EXISTING CONDITIONS POND TRIB. AREA COVERAGE EXHIBIT

551 CONGRESS PARKWAY SITE IMPROVEMENTS

CRYSTAL LAKE, ILLINOIS

Project Manager: D J V
Engineer: D J V
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Project No. 21-215
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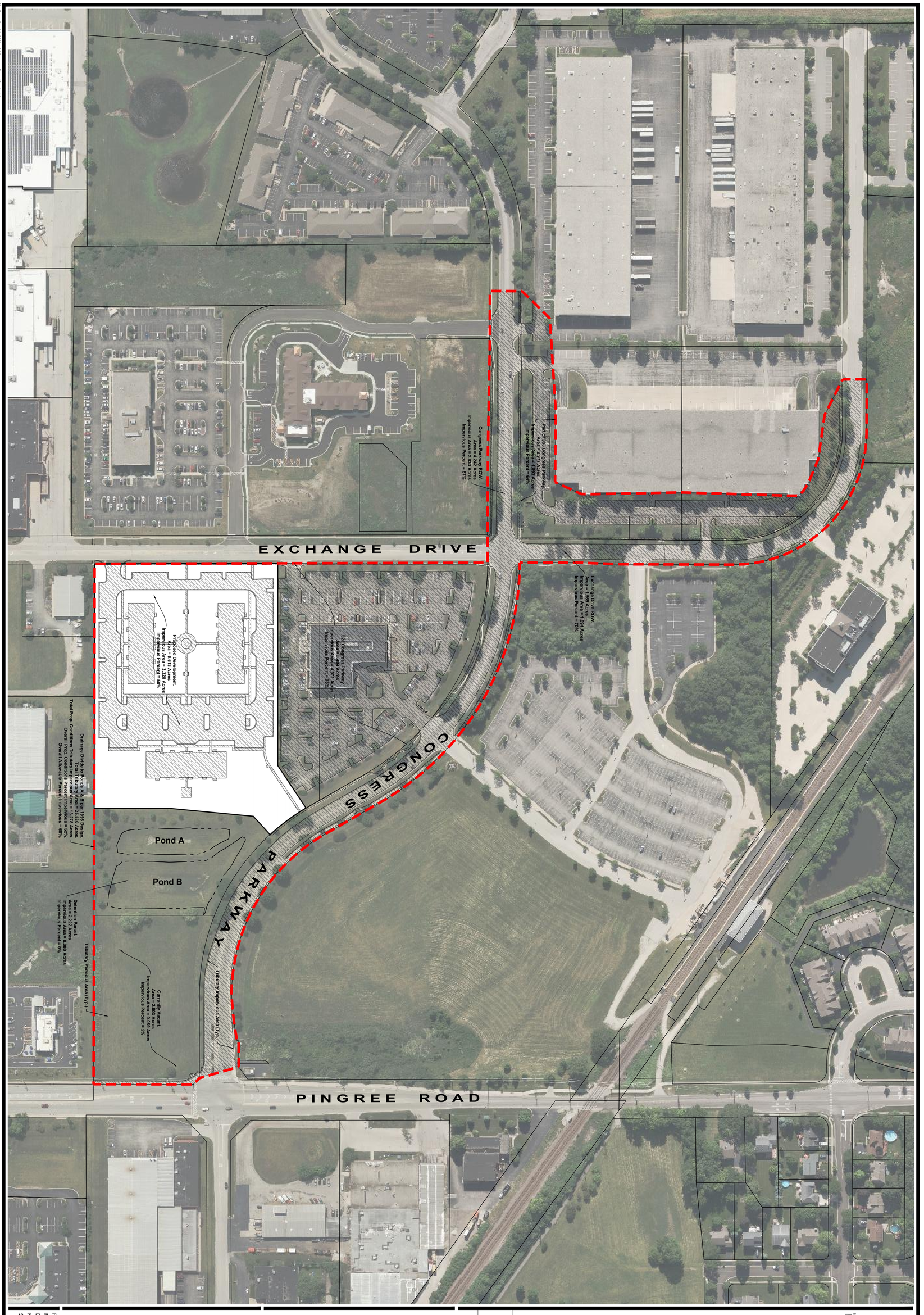
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NORTH

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PROPOSED CONDITIONS POND TRIB. AREA COVERAGE EXHIBIT

551 CONGRESS PARKWAY SITE IMPROVEMENTS
CRYSTAL LAKE, ILLINOIS

Project Manager: D J V
Engineer: D J V
Date: 12/16/2021
Project No. 21-215
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ENGINEERING REPORT

Contents:

	Drainage Narrative
Appendix A	City of Crystal Lake Flowcharts
Appendix B	Maps of the Project Area
Appendix C	Drainage Exhibits
Appendix D	Stormwater Calculations
Appendix E	2007 Final Plat of Crystal Lake Medical Pavilion
Appendix F	1996 Crystal Lake Business Center Plans & Calculations

Project:
551 Congress Parkway
Site Improvements

Location:
551 Congress Parkway
Crystal Lake, Illinois

Prepared For:
Paul Swanson Associates, Inc.
401 E Prospect Ave, Suite 201
Mount Prospect, Illinois 60056

Date:
February 22, 2022

LICENSED PROFESSIONAL ENGINEER
DANIEL J. VANEK
062-072032
OF ILLINOIS

EXP. 02-28-22

Prepared By:
Daniel Vanek, PE

Haeger Project No.:
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INTRODUCTION

The 551 Congress Parkway Site Improvements project is proposed at 551 Congress Parkway in Crystal Lake, McHenry County, Illinois. The subject site is proposed to be re-graded to construct three apartment buildings with related site improvements. The development area's Property Index Number is 19-04-427-009. The legal description is as follows:

Legal Description

LOT 2 IN CRYSTAL LAKE MEDICAL PAVILION, BEING A RESUBDIVISION IN THE SOUTHEAST QUARTER OF SECTION 4, TOWNSHIP 43 NORTH, RANGE 8 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED JUNE 18, 2007 AS DOCUMENT 2007R041940, IN MCHENRY COUNTY, ILLINOIS.

Permits

The developer has applied for or is currently applying for the following permits.

- City of Crystal Lake (CoCL)
  - See the Crystal Lake permitting flowcharts in *Appendix A*
- Illinois Environmental Protection Agency (IEPA) Notice of Intent (NOI) General Permit to Discharge Storm Water from Construction Site Activities
- Illinois Environmental Protection Agency (IEPA) Sanitary and Watermain Permits
- Illinois Department of Natural Resources (IDNR), Consultation Agency Action Report to Identify Endangered/Threatened Species or Natural Resources (EcoCAT)
- Illinois Historic Preservation Agency (IHPA) Project Review

EXISTING CONDITIONS

Surrounding Area Description

To the north is Advocate Good Shepherd Outpatient Center & Immediate Care. To the east is the subdivision stormwater management pond and Congress Parkway. To the south is NAPA Auto Parts and Harvest Bible Chapel. To the west is Exchange Drive. There are no upstream areas that drain to the site.

Maps of the Project Area

Aerial, NRCS Soils, FEMA, USGS, Hydrologic Atlas, NWI Wetland, and Zoning exhibits are included in *Appendix B*. Per the FEMA Exhibit, no floodway or floodplain areas are located on the site. Per the Wetland Exhibit, no wetlands are located on the site.

Site History

Prior to development in 1996, the site was part of a farm. In 1996, the site was part of the Crystal Lake Business Center subdivision. The subdivision created subdivision stormwater management ponds Pond A and Pond B. The subject site has detention storage provided for up to 60% impervious area coverage. The 1996 design had the site's area split with 6.06 acres tributary to Pond A and the remaining area tributary to Pond B.

Existing Drainage

The 6.613-acre site was surveyed in 2021, and the survey points and contours were analyzed to determine the current drainage patterns. The site is mostly pervious with only 0.033 acres of impervious area coming from the sidewalk along Exchange Drive.

Existing drainage patterns:

- 0.387 acres flows to the west to Exchange Drive
- 4.661 acres flows to the north to Lot 1. This stormwater is then directed to Pond B via Lot 1 storm sewer and the swale along Congress Parkway
- 1.221 acres flows to the northeast and then flows to Pond B via the swale along Congress Parkway
- 0.384 acres flows to the east to Pond A

PROPOSED CONDITIONS

Proposed Site Plan

The developer is proposing to construct three apartment buildings with related site improvements. The related improvements consist of parking features, utilities (water, storm, sanitary, etc.), and mass grading. Each building has 7 one-bedroom units and 24 two-bedroom units. For these proposed units, a total of 199 parking spaces are required with 6 spaces being accessible spaces. The spaces area located along a ring road within the site around Building A & Building B. Two parking garages are proposed, each with 8 spaces. A full entrance is proposed onto Exchange Drive in the southwest corner of the site. Work within the Exchange Drive ROW consists of removing and adding some sidewalk, constructing a new entrance, regrading, and restriping. A sidewalk connection is proposed to Congress Parkway. For further information concerning the site plan, please see the Site Improvement Plans.

Storm Sewer Design

Stormwater is transported to the ponds via sheet flow and 100-year storm sewer from throughout the site. Overland flow routes direct stormwater to the subdivision pond for large storm events or in the situation that a component has become clogged. The system only accepts stormwater from the project site. Detailed storm sewer calculations and a storm sewer tributary area exhibit are included in *Appendix D*.

Proposed Detention Storage

The site has detention storage already provided for up to 60% impervious area coverage per the 1996 Crystal Lake Business Center subdivision calculations. The proposed site plan is 50.20% impervious area, which is less than the 60% allowable.

The 1996 design had 6.06 acres of the site tributary to Pond A, with the rest tributary to Pond B. The proposed grading & utility plans has 5.696 acres tributary to Pond A, with the rest tributary to Pond B. This is within 6% of the design tributary area.

551 CONGRESS PARKWAY

ENGINEERING REPORT



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APPENDIX B

MAPS OF THE PROJECT AREA

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NORTH

0 200

Scale: 1" = 200'

AERIAL EXHIBIT

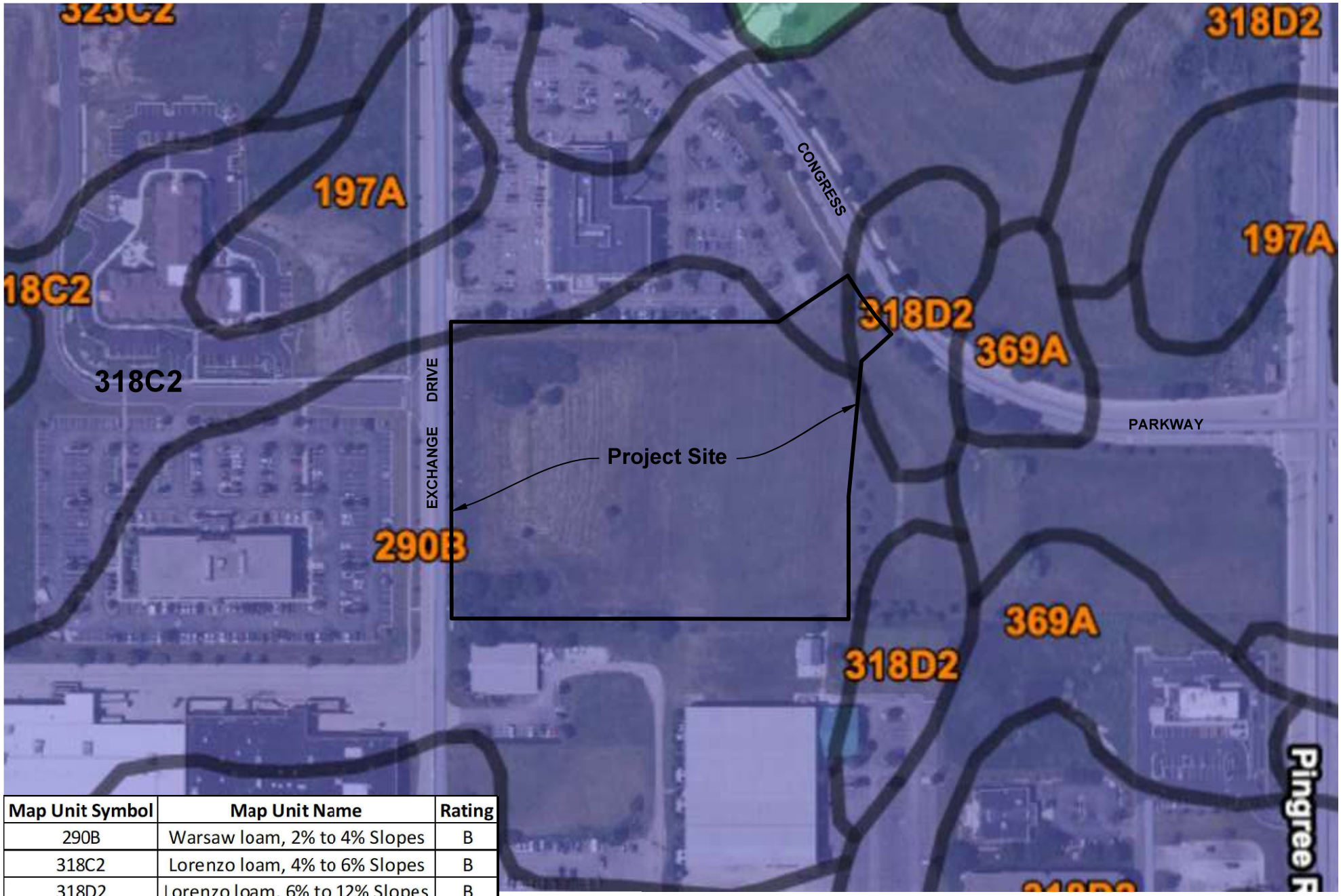
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Map Unit Symbol	Map Unit Name	Rating
290B	Warsaw loam, 2% to 4% Slopes	B
318C2	Lorenzo loam, 4% to 6% Slopes	B
318D2	Lorenzo loam, 6% to 12% Slopes	B

NORTH

0 200

Scale: 1" = 200'

NRCS EXHIBIT

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NORTH

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FEMA EXHIBIT

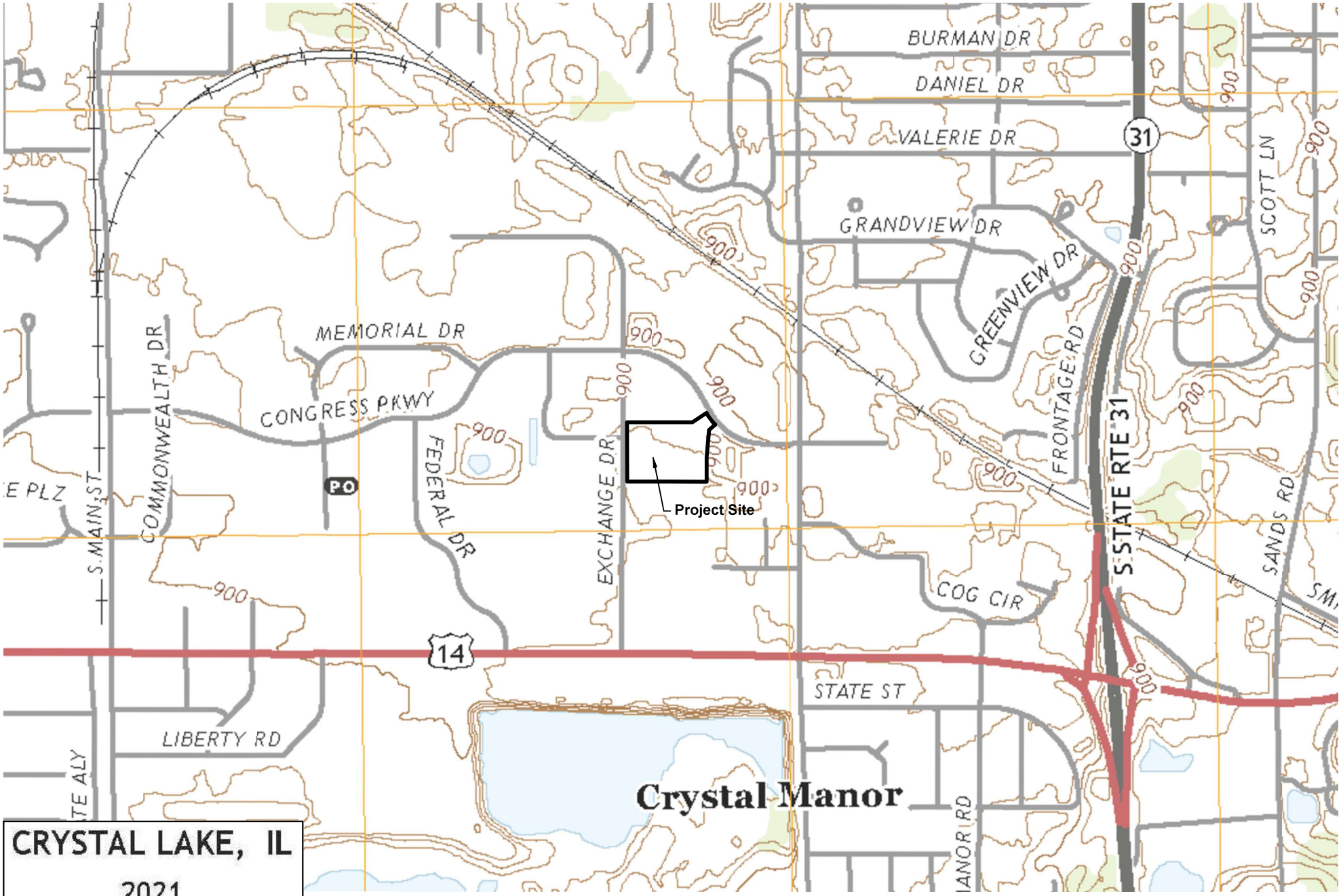
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NORTH

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USGS EXHIBIT

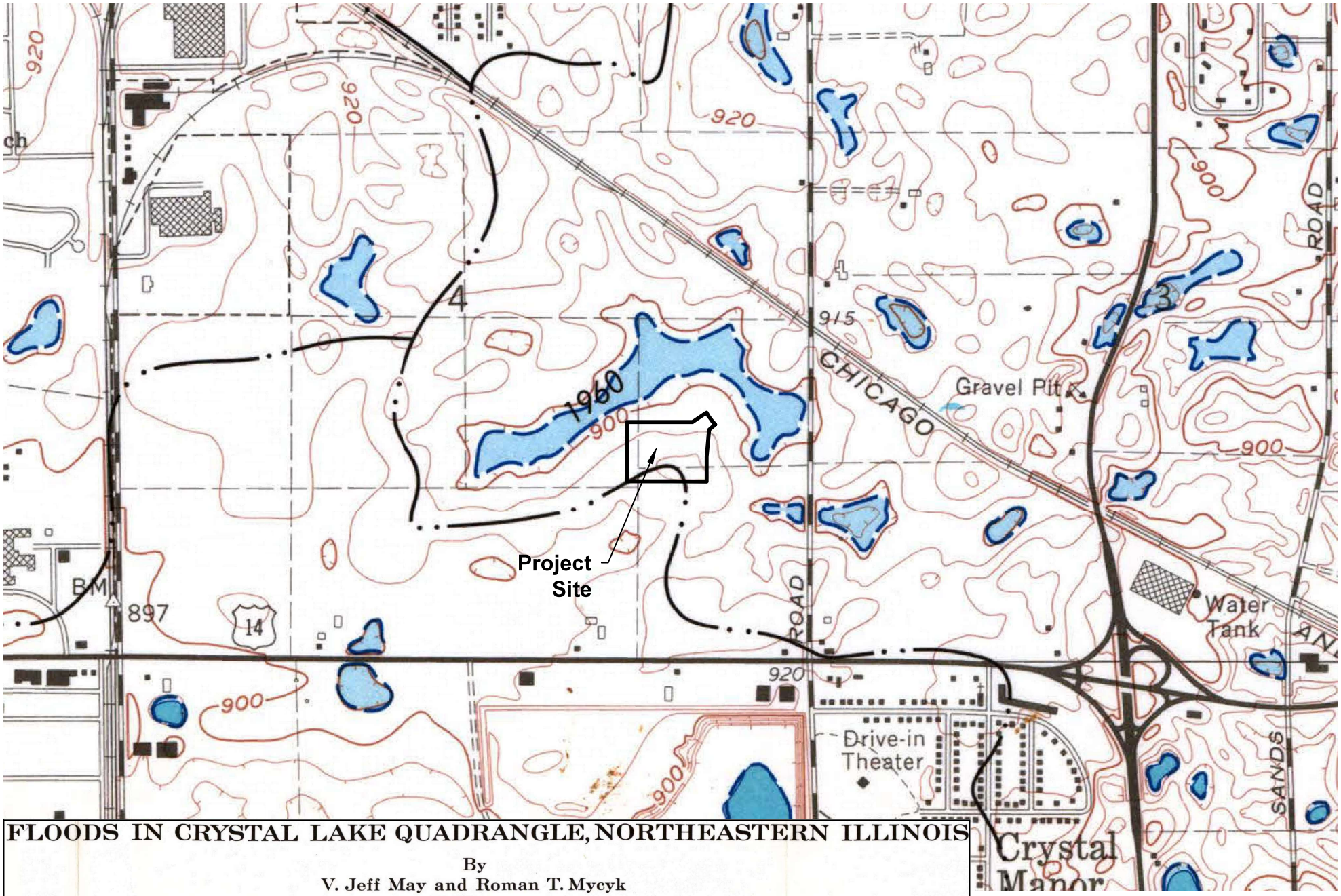
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NORTH

0 1000

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HYDROLOGIC ATLAS EXHIBIT

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NORTH

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NWI WETLAND EXHIBIT

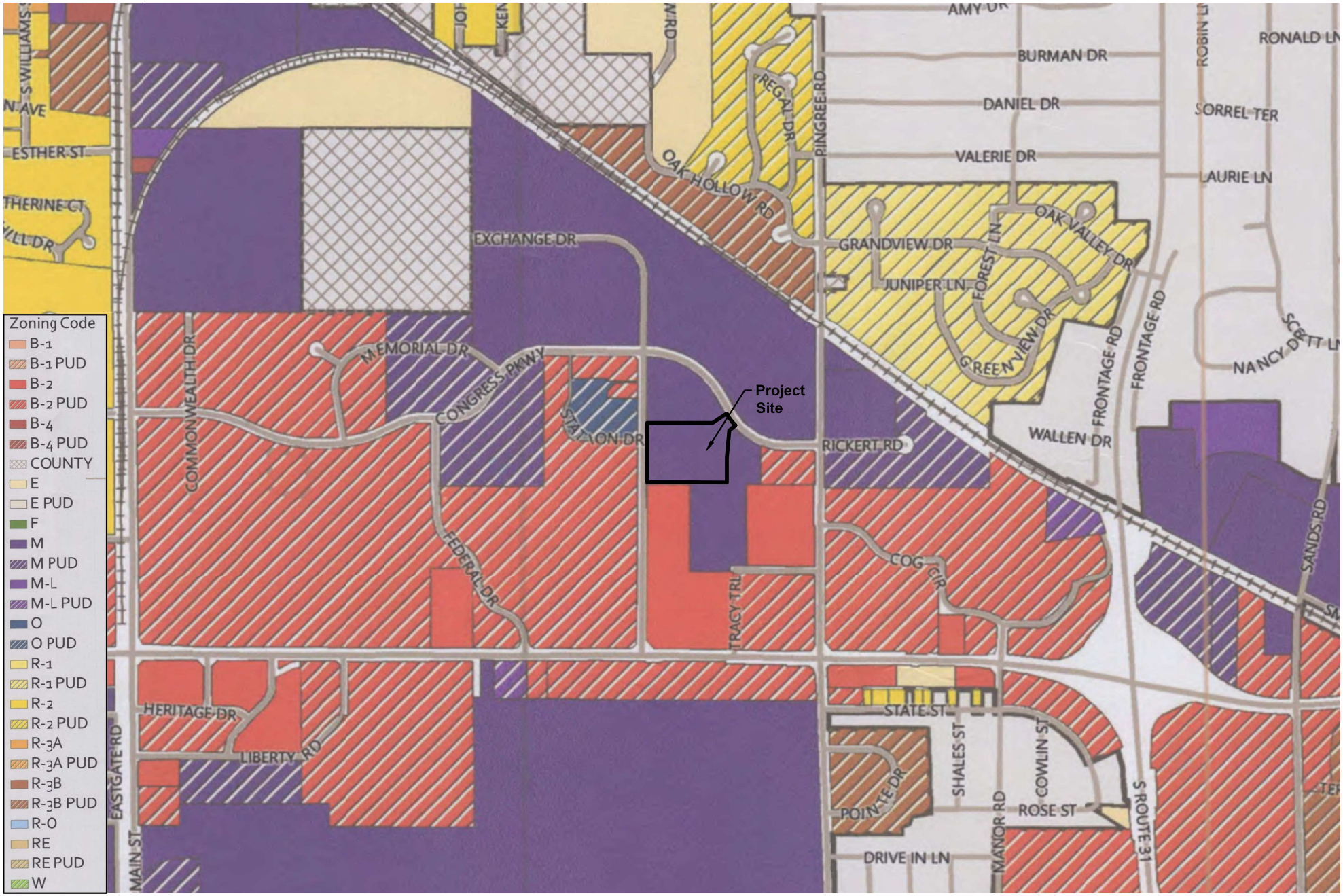
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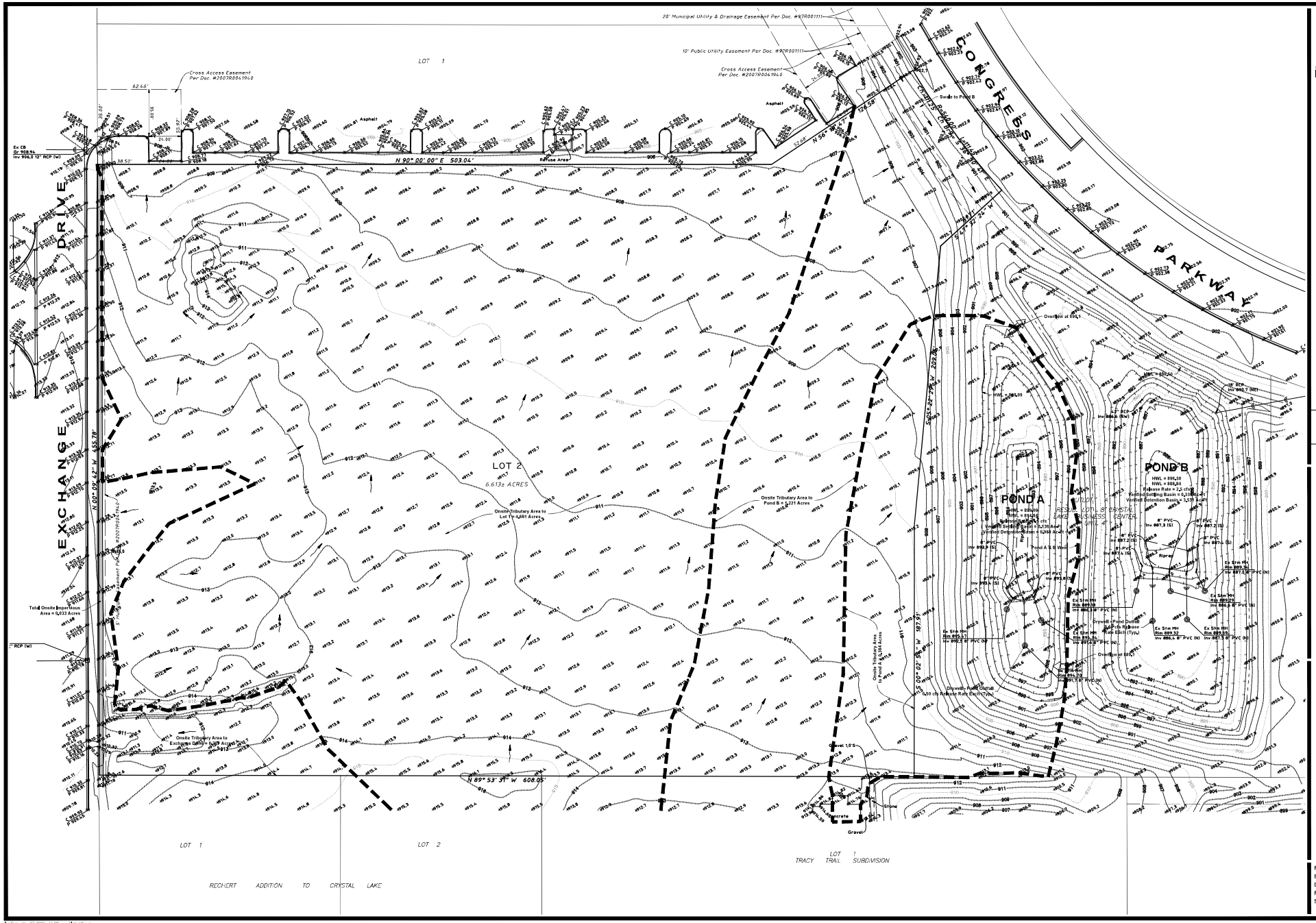
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APPENDIX C

DRAINAGE EXHIBITS

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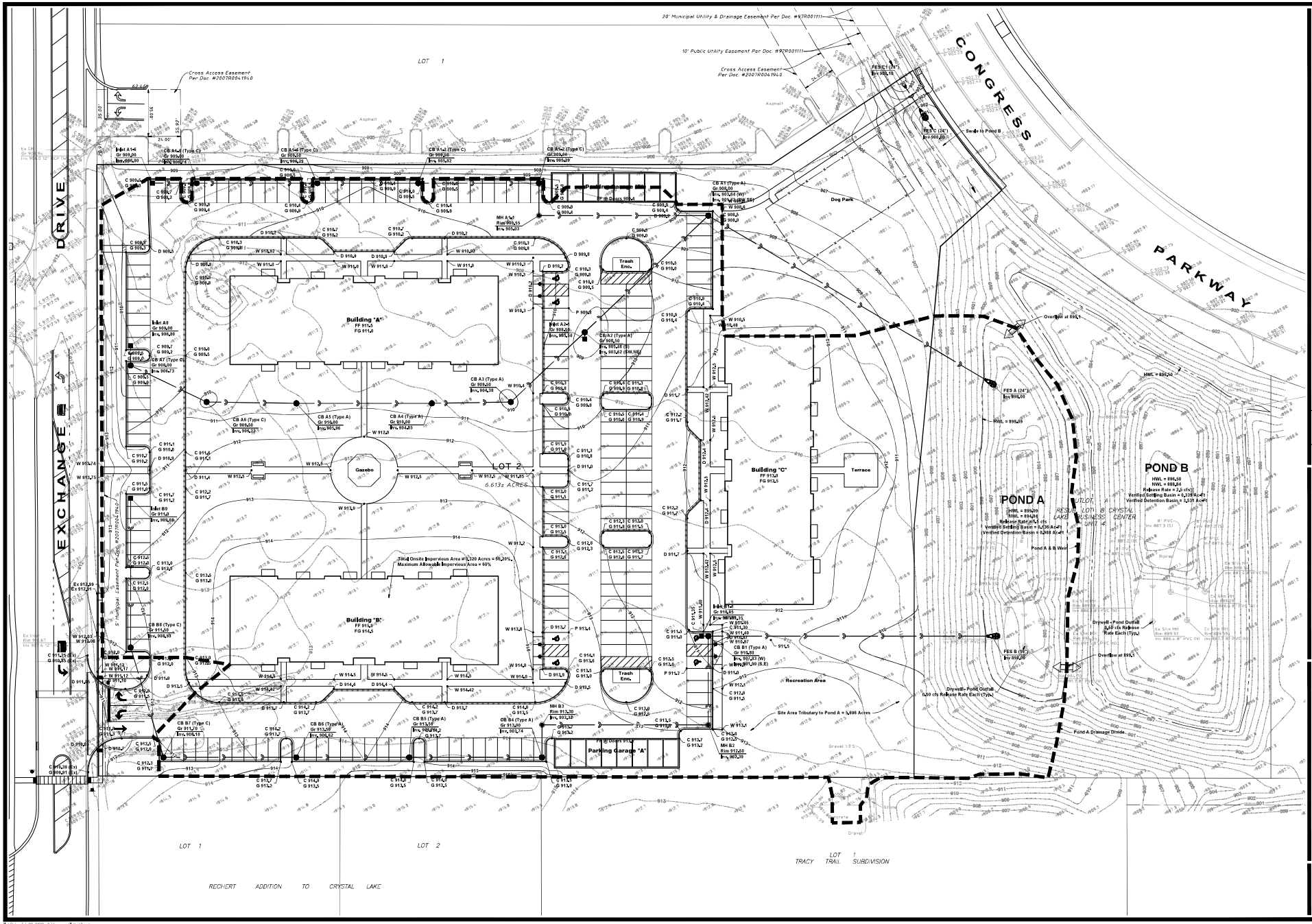
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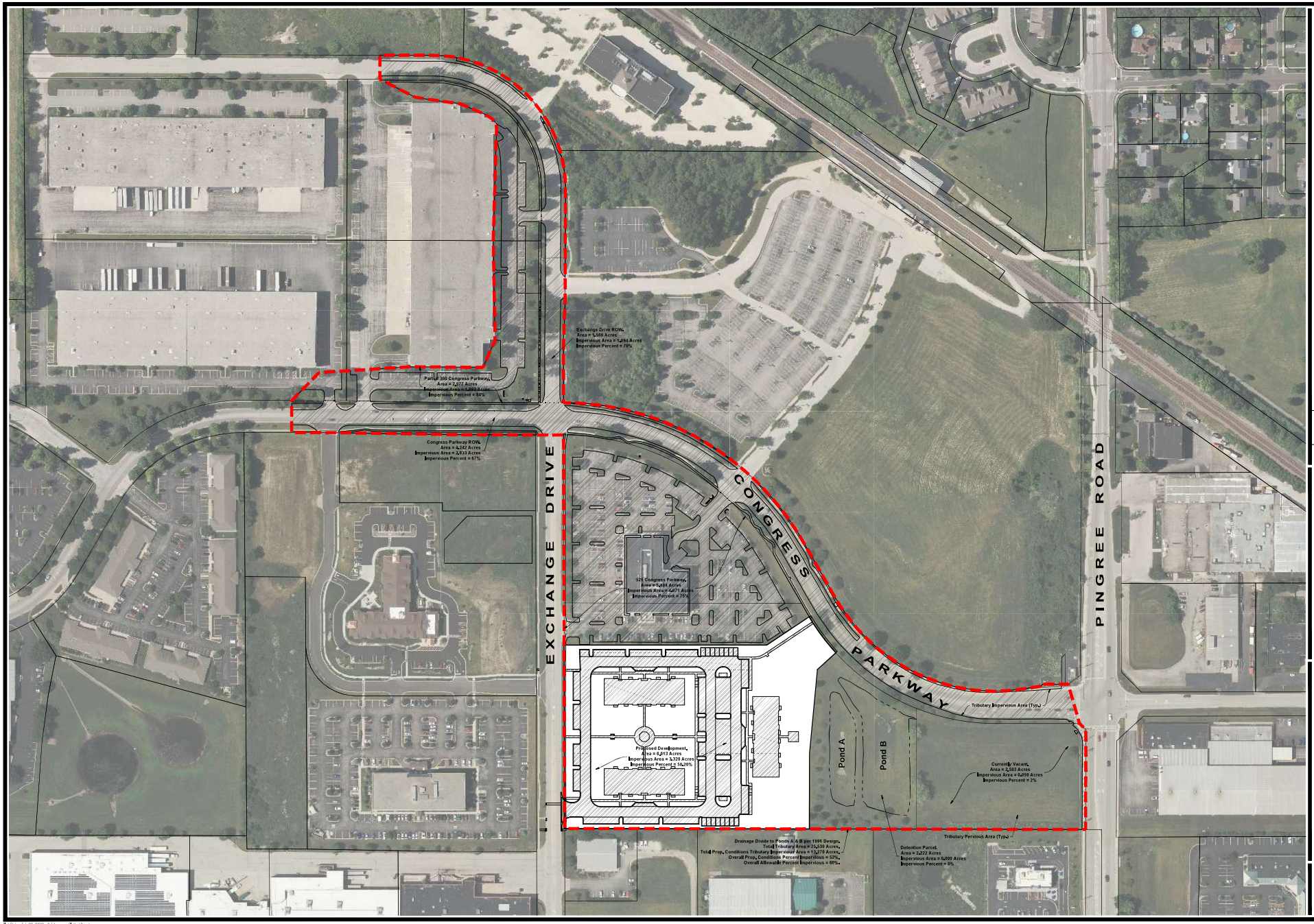
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PROPOSED CONDITIONS POND TRIB. AREA COVERAGE EXHIBIT

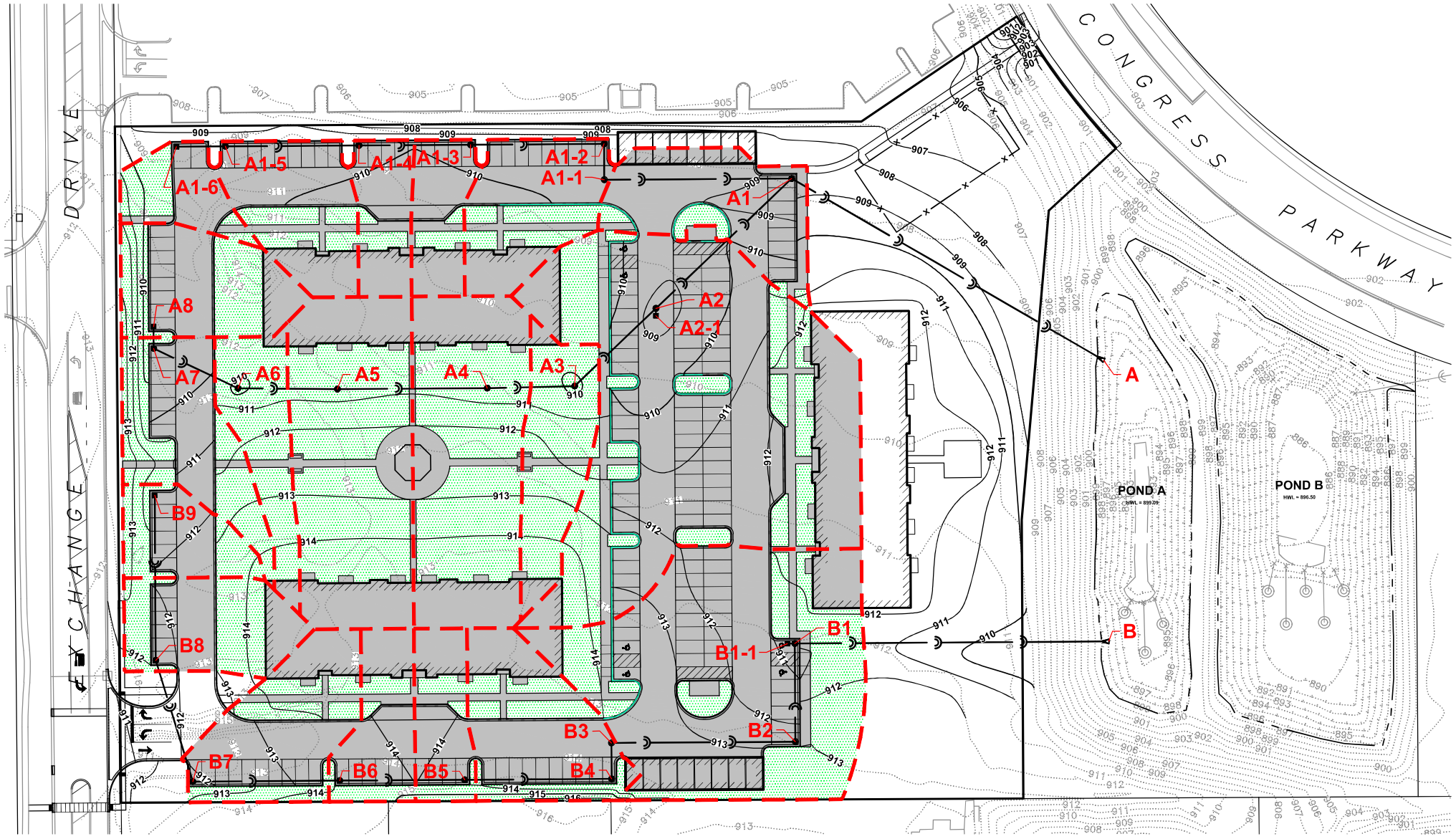
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CRYSTAL LAKE, ILLINOIS

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STORM SEWER TRIBUTARY AREA EXHIBIT

SITE IMPROVEMENTS
551 CONGRESS PARKWAY

CRYSTAL LAKE, MCHENRY COUNTY, ILLINOIS

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Development Concept
THE COURTYARD AT CONGRESS STATION
551 CONGRESS PARKWAY
CRYSTAL LAKE, ILLINOIS
11/9/2021

Overall Concept

The overall Development Concept for **The Courtyard** is to provide an alternative to Home Ownership – being tied down to one place with Mortgage Payments, Real Estate Taxes, Home Upkeep and Repair etc.

Up Scale Rental Residences, such as **The Courtyard**, is a Life Style Choice; not so much built on Economics, (our residences will lease for between $1,500 a month for a 1 Bedroom/1 Bathroom residence to over $2,700 a month for our largest 2 Bedroom/2 Bathroom residence but to offer a more mobile attachment free lifestyle.

To attract this upscale clientele, we provide 4 different floor plans, which vary in size and layout, but with features found in upscale homes, such as hardwood floors in all living areas (carpet in bedrooms) ceramic tile floors and walls in bathrooms, kitchens all with designer countertops and appliances including in unit washer and dryers. All utilities are separately metered for future conversion to Condominiums.

Amenities include 2 large Terraces with BBQ areas, large open space, recreational areas, bike room and tenant storage lockers. But the biggest amenity is the location, 1 block from the Metra Train Station and walking distance to many restaurants and retail shopping.

Site Specific Concept

Another plus for these Upscale Residences is the fact that there will be very few school aged children as the Residents will be economically upscale, mobile, young working professionals and older empty nesters.

Site specifically we are presenting 3 – 3 story, 31-unit buildings centered around a large courtyard all with the afore mentioned amenities. Every unit will have either a private patio or balcony while the exterior architecture is more residential in character with a variety of materials building articulation and roof lines.

All the above being said, we are excited about becoming part of the Crystal Lake Community and while looking to present an alternative lifestyle, become a good and stable part of the neighborhood.

Sam Schwartz
223 W. Jackson Blvd., Suite 1101
Chicago, IL 60606
(773) 305-0800
samschwartz.com

Sam Schwartz

Memorandum

To: Abigail Wilgreen PE CFM, City of Crystal Lake
From: Sara Disney Haufe, PE, PTOE, and Kathleen Murphy, PE
Date: December 6, 2021
Re: 551 Congress Apartments – Technical Memorandum

Sam Schwartz Consulting, LLC, (Sam Schwartz) was retained through an existing on-call contract with the City of Crystal Lake to prepare a technical memorandum detailing the projected traffic characteristics of a multifamily residential development proposed on the east side of Exchange Drive south of Congress Parkway in Crystal Lake, Illinois. Under the proposed development plan, three three-story buildings would be constructed providing a total of 93 dwelling units, including 21 one-bedroom units and 72 two-bedroom units. The development would include 199 total parking spaces (including six accessible spaces) in an on-site parking lot that would be accessed via a single driveway on Exchange Drive. A site plan is included in the Appendix.

The following memorandum documents Sam Schwartz's methodology and projections for the traffic characteristics of the proposed site. The contents of this memorandum reflect typical industry practices for estimating traffic for developments of this nature.

Trip Generation Projections

Using the Institute of Transportation Engineers (ITE) manual Trip Generation, 11th Edition, site-generated trip projections were calculated according to data provided for ITE Land Use Code (LUC) 220 – Multifamily Housing (Low-Rise). This category corresponds to multifamily dwellings with two or three stories. Within LUC 220, the ITE manual provides data for a variety of settings, including General Urban/Suburban, Dense Multi-Use Urban, and Center City Core. In addition to these settings, the ITE manual provides data for two subcategories: Close to Rail Transit (defined as within a half-mile walking distance of a rail transit station entrance) and Not Close to Rail Transit. Given the vehicle-centric nature of area development, demonstrated by the large parking lots that are generally located between the street and commercial areas, the study area fits the ITE definition of a General Urban/Suburban setting. Although the proposed site will be approximately one quarter-mile walking distance from the Pingree Road Metra commuter rail station, the Close to Rail Transit subcategory for a General Urban/Suburban setting only has data from one site during the peak hours of adjacent street traffic. Because of this small sample size, using the data for this subcategory and setting is not likely to produce reliable results. Additionally, local census data on area mode split would provide a more representative estimate of potential non-auto trips generated by the subject site than this single-survey data in the ITE manual, as further discussed in the subsequent paragraph. Therefore, data for the Not Close to Rail Transit subcategory in a General Urban/Suburban setting was utilized for the purposes of this evaluation to estimate baseline trip generation potential for the site. This data is shown in **Table 1** on the following page.

Sam Schwartz Engineering, DPC is a firm authorized to perform engineering services in different states and works in cooperation with Sam Schwartz Consulting, LLC, collectively comprising the Sam Schwartz team. Working as a team provides both companies access to the entire network of professionals.

Table 1. ITE Trip Generation Data

Land Use	Weekday Daily	Weekday Morning Peak Hour	Weekday Evening Peak Hour
Multifamily Housing (Low-Rise) *Setting: General Urban/Suburban* *Subcategory: Not Close to Rail Transit*	T = 6.41(X) + 75.31 50% in / 50% out	T = 0.40(X) 24% in / 76% out	T = 0.51(X) 63% in / 37% out

T = Trips generated
X = Number of dwelling units

Since the proposed residential development is located in close proximity to the Pingree Road Metra station, it is likely that this development would attract residents who would walk to the station to commute via Metra. Therefore, the trip projections were reduced to account for the projected non-auto mode share, which was determined using local data for commuters in the surrounding neighborhood. The American Community Survey *Means of Transportation to Work* database was referenced to obtain information about commuting patterns for Census Tract 8713.01, shown in ***Figure 1***. The location of the proposed development within this census tract is marked below.



Figure 1: Census Tract Boundaries & Area Transit Service

The resulting mode split data reveals that approximately 13.1 percent of residents in the census tract travel to and from work via non-auto modes, which include public transportation, walking, bicycling, and working from home. Census tract data is attached to this memorandum. Since the non-auto mode share for this development may be higher than the census tract average due to its close proximity to transit, a 13.1 percent non-auto mode share can be considered conservative for this evaluation. The baseline trip

generation data was therefore reduced accordingly, and the resulting vehicular trip generation projections for the proposed site are shown in **Table 2**.

Table 2. Site-Generated Vehicle Trip Projections

Land Use	Size	Weekday Daily	Weekday Morning Peak Hour			Weekday Evening Peak Hour		
			In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	93 dwelling units	670	10	30	40	30	20	50
Minus Non-Auto Mode Share (13.1%)		*-90*	*–*	*-5*	*-5*	*-5*	*–*	*-5*
Total Vehicle Trips (rounded to nearest multiple of five)		**580**	**10**	**25**	**35**	**25**	**20**	**45**

As shown, the proposed development is expected to generate 35 total vehicle trips in the morning peak hour and 45 trips in the evening peak hour. On a typical weekday, approximately 580 total vehicle trips are expected to be generated.

Site Access & Circulation

Access to the site is proposed via a single driveway to Exchange Drive, located approximately 300 feet south of the existing Station Drive. On the site plan, this driveway is shown to provide one left-turn lane and one right-turn lane for outbound traffic, as well as a single receiving lane. Given the relatively low trip projections for the peak hours, which are not expected to exceed 45 vehicles per hour as shown in Table 2, a single outbound lane should sufficiently accommodate peak hour demand; the outbound lane configuration as shown would therefore be expected to provide adequate capacity. The internal traffic circulation shown on the site plan was also found to be acceptable, including the placement of the site access driveway at the southern end of the property.

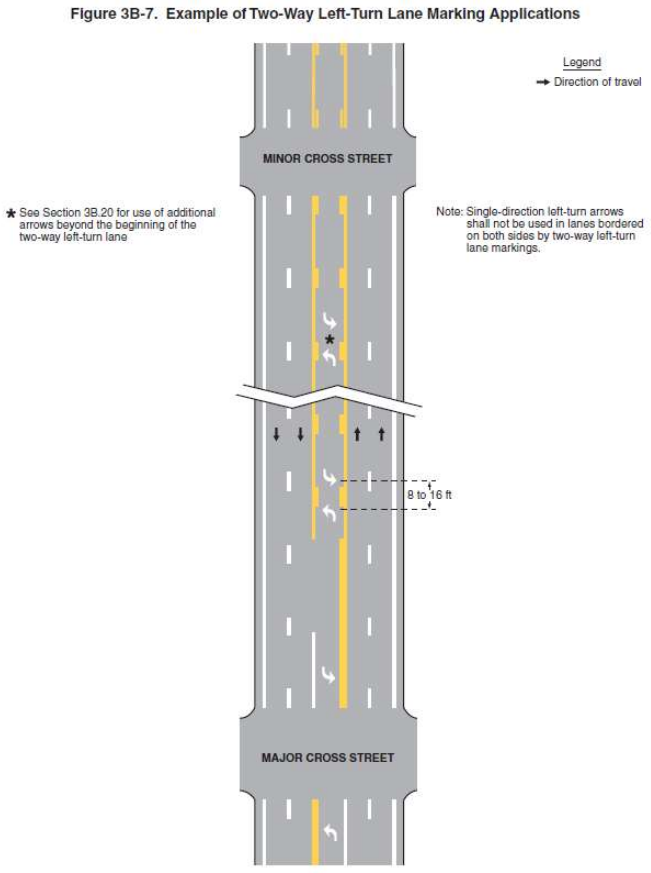


Figure 2: Two-Way Left Turn Lane Application (MUTCD)

Warrants for auxiliary turn lanes along Exchange Drive at the site driveway would not be met based on the anticipated site trip projections and a review of existing traffic volumes on Exchange Drive (which were referenced from previously collected count data

at Exchange Drive and Congress Parkway for the nearby Project Cooper development). However, because there is an existing striped median at the access location that transitions into a northbound left-turn lane on Exchange Drive at Station Drive just north of the site driveway, it is recommended that a southbound left-turn lane be striped along Exchange Drive at the site driveway. It is recommended that the median on the roadway segment between Station Drive and the site driveway be restriped as a two-way left-turn lane, with northbound and southbound left-turn lanes on either end consisting of a 50-foot storage bay and a 50-foot taper transition for each. An excerpt from the Manual on Uniform Traffic Control Devices (MUTCD) illustrating this proposed configuration is shown in ***Figure 2***.

Area Traffic Operations

The dominant routing of site-generated trips during the weekday peak hours is expected to be to and from the south on Exchange Drive to connect to Northwest Highway (US 14) approximately one quarter-mile south of the site, since this regional arterial route would connect residents to numerous employment centers throughout the metropolitan area. The intersection of Exchange Drive and US 14 currently serves as the main access point to the Bohl Farm Marketplace retail center, which includes several big-box stores, restaurant outlots, and smaller retailers. Based on the traffic projections shown previously in Table 2, anticipated site traffic from this residential development would make up a small percentage of traffic on the southbound approach of Exchange Drive at Northwest Highway. With existing dual southbound left-turn lanes on Exchange Drive at this location, as well as dedicated turn lanes onto Exchange Drive from Northwest Highway and signalized intersection control, the addition of a relatively small number of site trips at this location should have a negligible effect on operations.

Although the majority of site-generated trips are expected to travel to and from the south on Exchange Drive, it is expected that some will travel to and from the north on Exchange Drive and use Congress Parkway to access Main Street to the west or Pingree Road to the east. Using an estimated directional distribution of the site-generated trips, Sam Schwartz expects that approximately 15 percent of site trips would utilize this intersection and has identified the relative increase in traffic attributable to the proposed residential development as compared to existing volumes at the intersection of Congress Parkway and Exchange Drive, shown in **Table 3** below. Similar comparison tables were previously completed for nearby developments to facilitate discussions between the City and area developers regarding future area improvements that would provide benefits to existing and future users.

Table 3. Projected Traffic Volume Increase due to Proposed Development

Intersection	Total Intersection Traffic Volume PM Peak Hour (vehicles per hour)		Percent Increase
	Existing	Existing + Residential Development	
Congress Parkway / Exchange Drive	1,030	1,037	0.7%

Area Pedestrian Access

In addition to being located near the Pingree Road Metra Station, as discussed earlier in this memorandum, the proposed residential development is also located less than a quarter-mile from the Bohl Farm Marketplace retail center. This retail center includes a Fresh Thyme grocery store, a Target, a Planet Fitness gym, and several other retailers and restaurants that would be within walking distance for site residents. Therefore, area pedestrian infrastructure was reviewed for potential improvements that could be made to facilitate this expected pedestrian activity.

The City of Crystal Lake has indicated that there are plans to construct a roundabout at the intersection of Congress Parkway and Exchange Drive, which would include crosswalks on all four legs of the intersection. These proposed crosswalks would create a continuous pedestrian connection from the proposed residential development to the Pingree Road Metra station. A preliminary geometric plan for this intersection reconstruction can be found in the Appendix.

There are existing curb ramps on Exchange Drive at the proposed site driveway location. Since the ramp on the east side of Exchange Drive will have to be demolished in order to construct the site driveway as proposed, it is recommended that both ramps be reconstructed just south of the proposed site driveway. Since residents of the proposed development would be expected to use this crossing to access the shops at the Bohl Farm Marketplace, it is recommended that a high-visibility crosswalk be striped between these ramps and “Stop Here for Pedestrians” signage (MUTCD sign code R1-5b, shown in ***Figure 3***) be posted on both legs of Exchange Drive in accordance with the MUTCD. A continuous sidewalk should be provided across the site driveway, and a stop bar should be striped behind the sidewalk.



Figure 3: R1-5b Sign (MUTCD)

Within the proposed site, some additional sidewalk segments are recommended to connect the internal sidewalk network with the sidewalk on Exchange Drive, which will provide easier pedestrian access both to the Metra station and to the shopping center. First, a sidewalk segment should be constructed along the north side of the site driveway to provide pedestrian access between the proposed sidewalk running south of Building “B” and the sidewalk on Exchange Drive. Another sidewalk segment should be constructed near the north end of the site to connect the proposed sidewalk along the north side of Building “A” to the existing sidewalk along Exchange Drive.

Recommendations and Conclusions

Based on the assumptions and analyses detailed in this memorandum, the following recommendations should be implemented as part of the proposed residential development:

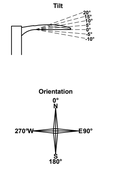
- Restripe the median on Exchange Drive between Station Drive and the proposed site driveway to provide a two-way left-turn lane, bookended by dedicated left-turn lanes into Station Drive and the proposed site access driveway, each with a 50-foot storage bay and 50-foot taper transition.
- Relocate the existing curb ramps on Exchange Drive at the proposed site driveway south of the driveway. Stripe a high-visibility crosswalk between the ramps and post “Stop Here for Pedestrians” signage on both legs of Exchange Drive.
- Provide a continuous sidewalk across the site driveway and stripe a stop bar behind the sidewalk.
- Construct sidewalks between the site parking lot and the existing sidewalk on Exchange Drive near the north and south ends of the site.

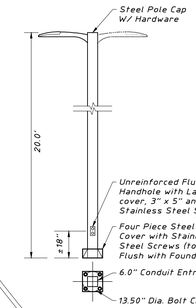
With implementation of the above recommendations, it is anticipated that area traffic operation would be generally acceptable after completion of the subject development.

Schedule								
Symbol	Label	Quantity	Manufacturer	Catalog Number	Lamp	Lumens	LLF	Wattage
✖	A	20	Sternberg Lighting	G14LED- 1L40TS-MDL060	LED	Absolute	1.0	25.8
⊕	B	8	Lithonia Lighting	DSX1 LED P2 30K T3M MVOLT	LED	Absolute	1.0	70
⊕	C	11	Lithonia Lighting	DSX1 LED P2 30K T3M MVOLT HS	LED	Absolute	1.0	70
⊕	D	1	Lithonia Lighting	DSX1 LED P2 30K T4M MVOLT	LED	Absolute	1.0	70

Statistics (Calculated 5 ft Above Finished Grade)					
Description	Avg (fc)	Max (fc)	Min (fc)	Max/Min	Avg/Min
Calculation Zone - 50' Beyond Property Line	0.4	5.3	0.0	N/A	N/A
Statistical Zone - Property Line	1.4	5.3	0.1	53:1	14:1
Statistical Zone - Pavement	0.5	5.3	0.0	N/A	N/A

Luminaires				Luminaires			
Label	Mounting Height	Orientation	Tilt	Label	Mounting Height	Orientation	Tilt
A1	10.0'	0°	0°	B1	20.0'	270°	5°
A2	10.0'	0°	0°	B2	20.0'	90°	5°
A3	10.0'	0°	0°	B3	20.0'	270°	5°
A4	10.0'	0°	0°	B4	20.0'	90°	5°
A5	10.0'	0°	0°	B5	20.0'	270°	5°
A6	10.0'	0°	0°	B6	20.0'	90°	5°
A7	10.0'	0°	0°	B7	20.0'	270°	5°
A8	10.0'	0°	0°	B8	20.0'	90°	5°
A9	10.0'	0°	0°	C1	20.0'	180°	5°
A10	10.0'	0°	0°	C2	20.0'	180°	5°
A11	10.0'	0°	0°	C3	20.0'	180°	5°
A12	10.0'	0°	0°	C4	20.0'	180°	5°
A13	10.0'	0°	0°	C5	20.0'	90°	5°
A14	10.0'	0°	0°	C6	20.0'	90°	5°
A15	10.0'	0°	0°	C7	20.0'	90°	5°
A16	10.0'	0°	0°	C8	20.0'	90°	5°
A17	10.0'	0°	0°	C9	20.0'	0°	5°
A18	10.0'	0°	0°	C10	20.0'	0°	5°
A19	10.0'	0°	0°	C11	20.0'	0°	5°
A20	10.0'	0°	0°	D1	20.0'	0°	0°





LIGHT POLE DETAIL
Not to scale



D-Series Size 1
LED Area Luminaire

Introduction
The modern styling of the D-Series is striking yet unobtrusive - making a bold, progressive statement that's right at home in any part of the environment. The D-Series distills the benefits of the latest in LED technology into a high performance, high efficacy family of luminaires.

The outstanding photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. It is ideal for replacing 70W to 400W HID lamps in pedestrian and area lighting applications with typical energy savings of 60% and expected service life of over 100,000 hours.

Ordering Information
EXAMPLE: DSX1 LED P7 40K T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

DSX1 LED							
Series	LEDs	Color temperature	Distribution	Voltage	Mounting
DSX1 LED	Forward optics P1 P4 P7 P10 P2 P5 P8 P3 P6 P9 Rotated optics P12 P15 P18 P13 P16	30K 3000 K 40K 4000 K 50K 5000 K TFTM Type I short (Automotive) T2S Type II short T2M Type II medium T3S Type III short T3M Type III medium T4M Type IV medium TFTM Forward throw medium	BLC Backlight control LCCO Left corner cutoff RCCO Right corner cutoff	MVOLT VOLT (277V-480V)* 120 208* 240* 277* 347* 480*	Shipped included SPA Square pole mounting RPA Round pole mounting * WBA Wall bracket * SPUMBA Square pole universal mounting adapter * RPUMBA Round pole universal mounting adapter * Shipped separately KMA8 DDBXD U Mast arm mounting bracket adapter (specify finish) *

Options		Finish	
Shipped installed NLTAIR2 nLight AIR generation 2 enabled * PER NEMA twist-lock receptacle only (controls ordered separately) * PER5 NEMA twist-lock receptacle only (controls ordered separately) * * PIRHN 360° motion sensor, high/low/ambient configuration. Ambient sensor enabled at 1fc. Dimming when paired with nLight AIR generation 2 enabled sensors. * DS Dual switching * * *	PIR Mid-Mtg. Amb. Ambient sensor enabled at 1fc. 9' (2.7m) mounting height, ambient sensor enabled at 1fc. * PIRH Mid-Mtg. Amb. Ambient sensor enabled at 1fc. 15' (4.6m) mounting height, ambient sensor enabled at 1fc. * PIRH1FC3V Mid-Mtg. Amb. Ambient sensor enabled at 1fc. 15' (4.6m) mounting height, ambient sensor enabled at 3fc. * FAO Field adjustable output * *	Shipped included DDBXD Dark bronze DBLXD Black DNAXD Natural aluminum DWHXD White DSSTXD Textured dark bronze DBLBXD Textured black DNATXD Textured natural aluminum DWHGXD Textured white

Ordering Information

Accessories
Ordered and shipped separately.

DLL127F 1.5 JU Photocell - SSL twist-lock (120-277V) *
DLL347F 1.5 CUL JU Photocell - SSL twist-lock (347V) *
DSHORT SBK U Shorting cap *
DSHORT SBK U Shorting cap *
DSX1HS 20 C Square pole shield for P1, P2, P3, P4 and P7 *
DSX1HS 20 C U Square pole shield for P5, P6, P8, P9 and P10 *
DSX1HS 20 C U Square pole shield for P12, P13, P15, P16, P18 and P19 *
DSX1WG U Wire guard accessory *
DSX1EGSM U Extended gasketing for spacing mounts *
Luminaire Replacement Kit (specify finish) *
DSX1EGSMKIT U Extended gasketing for spacing mounts kit *

NOTES
1 P4, P5 and P6 available only with P2, P3, P5 and P10.
2 Not available with HS, PIRH, PIRH1FC3V, PER, PER5 or DS.
3 Any Type D distribution with photocontrol will be provided with NLTAIR2 PIR.
4 Not available with NLTAIR2 PIR, NLTAIR2 PIRH, PIRH1FC3V, PER, PER5 or DS.
5 Available with nLight AIR generation 2 and ZT. Wireless enabled at time of fixture order. Must be ordered with NLTAIR2 PIR, PIRH, PIRH1FC3V, PER, PER5 or DS. Not available with SPUMBA, RPUMBA, WBA, KMA8 DDBXD U, DSHORT SBK U, DSX1HS 20 C U, DSX1HS 20 C U, DSX1EGSM U, DSX1EGSMKIT U, DSX1WG U, DSX1EGSM U, DSX1EGSMKIT U, DSX1HS 20 C, DSX1HS 20 C U, DSX1EGSM U, DSX1EGSMKIT U, DSX1WG U, DSX1EGSM U, DSX1EGSMKIT U or DSX1HS 20 C U.
6 Not available with P18, P19, P15, P16, P12 or P13.
7 Not available with SPUMBA, RPUMBA, WBA, KMA8 DDBXD U, DSHORT SBK U, DSX1HS 20 C U, DSX1HS 20 C U, DSX1EGSM U, DSX1EGSMKIT U, DSX1WG U, DSX1EGSM U, DSX1EGSMKIT U, DSX1HS 20 C, DSX1HS 20 C U, DSX1EGSM U, DSX1EGSMKIT U, DSX1WG U, DSX1EGSM U, DSX1EGSMKIT U or DSX1HS 20 C U.
8 Requires minimum 5 inch round pole. Not available with P18, P19, P15, P16, P12 or P13.
9 Reference Motion Sensor Default Settings guide.
10 Reference Dimming Occupancy Sensor Default Settings guide.
11 Reference Bird Spikes Ordering Information guide.
12 Not available with SC, CCO and RCCO. Also available as a separate accessory; see Accessories Information.
13 Not available with P1, P2, P3, P4, P5, P6, P7, P8, P9, P10, P12, P13, P15, P16, P18 or P19.
14 Requires luminaire to be specified with P20, P21 or P22 option. See Control Options Table on page 4.
15 Not available with P20, P21, P22, SPUMBA, RPUMBA, WBA, KMA8 DDBXD U, DSHORT SBK U, DSX1HS 20 C U, DSX1HS 20 C U, DSX1EGSM U, DSX1EGSMKIT U, DSX1WG U, DSX1EGSM U, DSX1EGSMKIT U, DSX1HS 20 C, DSX1HS 20 C U, DSX1EGSM U, DSX1EGSMKIT U, DSX1WG U, DSX1EGSM U, DSX1EGSMKIT U or DSX1HS 20 C U.

Options
DS Dual switching

Drilling

HANDHOLE ORIENTATION



Tenon Mounting Slipfitter

Tenon O.D.	Min.	AS3198	AS3199	AS1126	AS3200	AS3201
2 3/8"	Min.	AS3198	AS3199	AS1126	AS3200	AS3201
4"	Min.	AS3198	AS3199	AS1126	AS3200	AS3201

Mounting Options	Drilling Template	Qty	A	B	C	D	E
Basic Location		Quad	90 (3.5)	90 (3.5)	90 (3.5)	90 (3.5)	90 (3.5)
Offset Handhole		Quad	90 (3.5)	90 (3.5)	90 (3.5)	90 (3.5)	90 (3.5)
Offset Handhole		Quad	90 (3.5)	90 (3.5)	90 (3.5)	90 (3.5)	90 (3.5)

DSX1 Area Luminaire - EPA

Mounting Options	Qty	A	B	C	D	E
Mounting Type						
SSS1.5G	1	1.5 ft²	1.5 ft²	1.5 ft²	1.5 ft²	1.5 ft²

Tenon Mounting Slipfitter						
Tenon O.D.	A	B	C	D	E	G
2 3/8"	3.5"	3.5"	3.5"	3.5"	3.5"	3.5"
4"	3.5"	3.5"	3.5"	3.5"	3.5"	3.5"

Performance Data

Lumen Ambient Temperature (LAT) Multipliers
Use these factors to determine relative lumen output for average ambient temperatures over the specified range.

Ambient	LAT multiplier
0°C	1.04
10°C	1.02
20°C	1.01
25°C	1.00
30°C	0.99
40°C	0.98

Projected LED Lumen Maintenance
Values determined for ambient temperature in accordance with IESNA LM-80-08 and projected per IESNA TM-21-11.
To calculate L87, use the lumen maintenance factor that corresponds to the desired number of hours from the chart below and multiply by the values in the Lumen Output table.

Hours	Lumen maintenance factor
25,000	0.96
50,000	0.92
100,000	0.85

Ordering Information					
Option	Standard (4000K, 5000K, AMBPC)	High CCT (3000K, 3500K, 3500K, 3500K, 3500K)	Standard (4000K, 5000K, AMBPC)	Quad	Total lumen maintenance
P20 or P21	Multiply by 0.90	Multiply by 0.85	Qualified at 25C	0 mile	0 mile
P22 or P23	Multiply by 0.90	Multiply by 0.85	Qualified at 25C	0 mile	0 mile

The values multiplier stated is used as dual to down control.

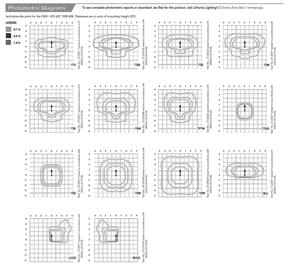
Electrical Load

Configuration	Drive Current (mA)	System Watts (W)	Current (A) 120	208	240	277	347	480
Forward Optics (Non-Rotated)	P1	30	0.26	0.15	0.13	0.11	0.09	0.06
	P2	30	0.26	0.15	0.13	0.11	0.09	0.06
	P3	30	0.26	0.15	0.13	0.11	0.09	0.06
	P4	30	0.26	0.15	0.13	0.11	0.09	0.06
	P5	30	0.26	0.15	0.13	0.11	0.09	0.06
	P6	30	0.26	0.15	0.13	0.11	0.09	0.06
	P7	30	0.26	0.15	0.13	0.11	0.09	0.06
	P8	30	0.26	0.15	0.13	0.11	0.09	0.06
	P9	30	0.26	0.15	0.13	0.11	0.09	0.06
	P10	30	0.26	0.15	0.13	0.11	0.09	0.06
Rotated Optics (Rotated 90 degrees)	P12	30	0.26	0.15	0.13	0.11	0.09	0.06
	P13	30	0.26	0.15	0.13	0.11	0.09	0.06

Control Options			
Nomenclature	Description	Functionality	Primary control device
PER	NEMA photocontrol socket (5-pin)	Allows the luminaire to be controlled by a photocontrol, eliminating the need for a light source.	Photocontrol
PER5	NEMA photocontrol socket (7-pin)	Allows the luminaire to be controlled by a photocontrol, eliminating the need for a light source.	Photocontrol
PIR	Motion sensor, factory-integrated, 9' (2.7m) mounting height, ambient sensor enabled at 1fc.	The luminaire is controlled by the motion sensor. Dimming, ambient sensor enabled at 1fc.	Integrated motion sensor
PIRH	Motion sensor, factory-integrated, 15' (4.6m) mounting height, ambient sensor enabled at 1fc.	The luminaire is controlled by the motion sensor. Dimming, ambient sensor enabled at 1fc.	Integrated motion sensor
PIRH1FC3V	Motion sensor, factory-integrated, 15' (4.6m) mounting height, ambient sensor enabled at 3fc.	The luminaire is controlled by the motion sensor. Dimming, ambient sensor enabled at 3fc.	Integrated motion sensor
FAO	Field adjustable output * *	Provides ability to customize the luminaire's light output in the field.	Dependent upon control device
DS	Dual switching * * *	Luminaires can be switched in two separate circuits.	Dependent upon control device
PER for use with nLight AIR generation 2 enabled sensors	Factory-integrated NEMA photocontrol socket (5-pin) and nLight AIR generation 2 enabled sensor.	Luminaire can be controlled by nLight AIR generation 2 enabled sensors.	nLight AIR generation 2 enabled sensors
NLTAIR2 PIRHN	nLight AIR enabled luminaire for outdoor sensing of occupancy and ambient light for daylight harvesting.	Motion and ambient light sensing with group response. Luminaire can be controlled by nLight AIR generation 2 enabled sensors for the nLight AIR app.	nLight AIR sensors can be programmed and commissioned from the ground using the nSPIRE or the app.

Photometric Diagrams To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's Outdoor Area Site 1 lumen/sq.ft.

Isofootcandle plots for the DSX1 LED 40C 1000 40K. Distances are in units of mounting height (20').



Performance Data

Lumen Output
Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerance allowed by Lighting Facts Contact factory for performance data on any configurations not shown below.

Drive Current	Drive Current (mA)	Performance Package	System Watts (W)	Distribution	Voltage	25°C / 77°F						40°C / 104°F					
						Lumens	LPW	Zone 1	Zone 2	Zone 3	Zone 4	Lumens	LPW	Zone 1	Zone 2	Zone 3	Zone 4
30	530	P1	30W	T1S	120	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T2S	208	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T2M	240	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T3S	277	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T3M	347	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T4M	480	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T4W	120	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T5W	208	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T5VW	240	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T5HW	277	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T1S	347	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T2S	480	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T2M	120	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T3S	208	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T3M	240	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T4M	277	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T4W	347	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T5W	480	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T5VW	120	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T5HW	208	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T1S	240	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T2S	277	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T2M	347	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T3S	480	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T3M	120	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T4M	208	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T4W	240	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T5W	277	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T5VW	347	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T5HW	480	4,477	149	1	1	1	1	4,294	143	1	1	1	1
40	700	P1	40W	T1S	120	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T2S	208	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T2M	240	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T3S	277	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T3M	347	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T4M	480	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T4W	120	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T5W	208	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T5VW	240	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T5HW	277	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T1S	347	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T2S	480	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T2M	120	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T3S	208	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T3M	240	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T4M	277	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T4W	347	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T5W	480	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T5VW	120	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T5HW	208	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T1S	240	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T2S	277	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T2M	347	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T3S	480	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T3M	120	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T4M	208	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T4W	240	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T5W	277	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T5VW	347	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T5HW	480	5,969	149	1	1	1	1	5,725	143	1	1	1	1
30	530	P5	30W	T1S	120	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T2S	208	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T2M	240	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T3S	277	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T3M	347	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T4M	480	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T4W	120	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T5W	208	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T5VW	240	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T5HW	277	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T1S	347	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T2S	480	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T2M	120	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T3S	208	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T3M	240	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T4M	277	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T4W	347	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T5W	480	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T5VW	120	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T5HW	208	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T1S	240	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T2S	277	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T2M	347	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T3S	480	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T3M	120	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T4M	208	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T4W	240	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T5W	277	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T5VW	347	4,477	149	1	1	1	1	4,294	143	1	1	1	1
				T5HW	480	4,477	149	1	1	1	1	4,294	143	1	1	1	1
40	700	P5	40W	T1S	120	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T2S	208	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T2M	240	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T3S	277	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T3M	347	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T4M	480	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T4W	120	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T5W	208	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T5VW	240	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T5HW	277	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T1S	347	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T2S	480	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T2M	120	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T3S	208	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T3M	240	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T4M	277	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T4W	347	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T5W	480	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T5VW	120	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T5HW	208	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T1S	240	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T2S	277	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T2M	347	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T3S	480	5,969	149	1	1	1	1	5,725	143	1	1	1	1
				T3M	120	5,969