



Agenda
Village of Glen Ellyn
Plan Commission
Special Meeting
Thursday, June 20, 2019
7:00 PM

Glen Ellyn Civic Center, Galligan Board Room

Individuals with disabilities who plan to attend the meeting and who require certain accommodations in order to allow them to observe and participate, or who have questions regarding the accessibility of the meeting or facilities, are requested to contact the Village at least 24 hours before the meeting.

- A. Call to Order**
- B. Public Comment (Non Agenda Items)**
- C. Approval of Draft Minutes from May 9, 2019 Plan Commission Meeting**
 - 1. May 9, 2019 Draft Plan Commission Meeting Minutes
- D. Approval of Draft Minutes from May 30, 2019 Special Plan Commission Meeting**
 - 1. May 30, 2019 Draft Special Plan Commission Meeting Minutes
- E. Public Hearing - 427-443 Duane Street & 425-431 Melrose Avenue - Avere on Duane - Planned Unit Development, Special Use Permit, Zoning Map Amendment, Sign Variation**
 - 1. 443, 435, 431-433, 427-429 Duane Street and 425-431 Melrose Avenue - Reva Development Partners - A Public Hearing to review the proposal for a Planned Unit Development for a multi-family residential building featuring 48 luxury apartment units
- F. Trustee's Report**
- G. Chairman's Report**
- H. Staff Report**
- I. Other Business**
- J. Adjournment**
- K. Agenda Items**

This note provides you with information regarding what happens to a petition after it has appeared before the Plan Commission. After the Commission makes a recommendation on a petition, the meeting minutes are prepared. Then, the petition, along with the meeting minutes and all pertinent material, is scheduled for consideration by the Village Board. The Village Board meets on the second and fourth Monday of each month at 7:00 p.m. in a meeting room on the third floor

of the Civic Center, 535 Duane Street. Questions regarding petitions scheduled for review by the Village Board should be directed to the Planning and Development Department at (630) 547-5250.

cc: Glen Ellyn Plan Commission
Craig Pryde, Plan Commission Liaison Trustee
Mark Franz, Village Manager
Bill Holmer, Assistant Village Manager
Staci Springer, Community Development Director
Kelly Purvis, Planner
Katie Ashbaugh, Planner
Meredith Hannah, Economic Development Manager
Lori Gloude, Administrative Assistant
Lindsey Kaminsky, Executive Assistant
Brian Baltudis, Facilities Supervisor
David Harris, Glen Ellyn Park District
Eric DePorter, School District 41
Dawn Bussey, Glen Ellyn Public Library
Emily Tammaru, Community Consolidated School District 89
Chris McClain, Glenbard School District 87



Plan Commission
535 Duane Street
Glen Ellyn, IL 60137

Meeting: 06/20/19 07:00 PM
Department: Plan Commission
Department Head: Kelly Purvis
Category: Minutes
Prepared By: Kelly Purvis

SCHEDULED

AGENDA ITEM (ID # 4024)

DOC ID: 4024

May 9, 2019 Draft Plan Commission Meeting Minutes

ATTACHMENTS:

- 5.9.19 Draft Minutes Plan Commission (PDF)

DRAFT MINUTES
REGULAR PLAN COMMISSION MEETING
MAY 9, 2019

Call to Order

The regular meeting of the Plan Commission was called to order by Chairperson Mary Loch at 7:00 p.m. Plan Commissioners Lloyd Berry, Phillip Hartweg, Tracy Heming-Littwin, John Mulherin and Jamie Vondruska were present. Plan Commissioners Angela Fanella, David Rodemann and Mohammed Saeed were excused. Also present were Village Planner Kelly Purvis, Associate Planner Cole Jackson, Trustee Liaison Craig Pryde and Recording Secretary Debbie Solomon.

Public Comment

No general comments on non-agenda items were made by the public at this Plan Commission meeting.

Approval of Draft Minutes

Chairperson Loch pointed out a word error in the minutes which was corrected. Commissioner Heming-Littwin moved, seconded by Commissioner Mulherin, to approve the amended minutes of the April 18, 2019 Special Plan Commission meeting. The motion carried unanimously by voice vote.

Chairperson Loch stated they cannot vote on the minutes from November 9, 2017 as there are only 3 Commissioners present who were at this meeting. Village Planner Purvis stated she will put these minutes on the next Plan Commission meeting agenda for a vote.

Public Hearing – 324 Roosevelt Road – Walgreens – Sign Variations

On the agenda was a public hearing to consider the application for approval of a Variation from the Sign Code, to allow the replacement of an electronic messaging sign board.

PUBLIC HEARING – 324 ROOSEVELT ROAD – WALGREENS – SIGN VARIATIONS

PUBLIC HEARING WITH DISCUSSION, CONSIDERATION AND RECOMMENDATION REGARDING A REQUEST FOR APPROVAL OF A VARIATION FROM THE SIGN CODE, TO ALLOW THE REPLACEMENT OF AN ELECTRONIC MESSAGING SIGN BOARD.

PLAN COMMISSION

-2-

MAY 9, 2019

Commissioner Heming-Littwin, seconded by Commissioner Mulherin, to open the public hearing at 7:02 p.m. The motion carried unanimously by voice vote.

Staff Introduction

Village Planner Purvis was sworn in and stated the petitioner is Philip Valenzo of Volkan Signs & Lighting, sign contractor for Walgreens Pharmacy, tenant of 324 Roosevelt Road, owned by Lambert Roosevelt, LLC, and Timothy Harris is at the meeting on behalf of Walgreens. Village Planner Purvis stated the petitioner has requested a Public Hearing regarding an application for approval of a Variation from the Sign Code, to allow the replacement of an electronic messaging sign board. Village Planner Purvis stated in order to replace the message board, the petitioner is specifically requesting approval of a variation from Section 4-5-15(B) of the Sign Code to allow a 24 square foot area of electronic message board in lieu of the 18 square feet permitted.

Village Planner Purvis stated the property on which the sign is located is on the northeast corner of Roosevelt Road and Lambert Avenue in the C3 Service Commercial District and is surrounded by commercial properties that are also zoned C3 Service Commercial District. Village Planner Purvis stated notice of the public hearing was published in the April 18, 2019 edition of the Daily Herald, and property owners within 250 feet of the property were notified by mail of the public hearing and a placard was placed on the property.

Village Planner Purvis stated the petitioner is proposing to replace the existing non-functional electronic message board with an approximate area of 24 square feet with a new, functional electronic message board with an approximate area of 24 square feet. Village Planner Purvis stated the message board is embedded within a larger freestanding sign that is located on the southwest corner of the property near the intersection of Lambert Avenue and Roosevelt Road. Village Planner Purvis stated the freestanding sign faces east/west.

Village Planner Purvis stated at the time of construction, the freestanding sign and electronic message board were in compliance with the Village Sign Code. Village Planner Purvis stated when the Sign Code was amended in 2014, the allowable area of an electronic message board was reduced from 23 square feet to 18 square feet. Village Planner Purvis stated this rendered the message board legal non-conforming, and Village Code requires legal non-conforming signs to be brought into compliance with the current Code or seek relief when structurally altered or replaced.

Village Planner Purvis stated in order for the petitioner to comply with the current Village Sign Code, the entire existing freestanding sign, including the brick structure surrounding the message board, would have to be removed and replaced. The variation request of 6 square feet

PLAN COMMISSION

-3-

MAY 9, 2019

would allow for the existing freestanding sign to remain and for the broken electronic message board to be replaced.

Questions from the Plan Commission

Commissioner Heming-Littwin asked if there was a specific reason why the Sign Code was changed. Village Planner Purvis stated there is not a specific reason that she is aware of.

Petitioner's Presentation

Timothy Harris, with Kieffer & Company at 585 Bond Street in Lincolnshire, Illinois, the national sign vendor for Walgreens, was sworn in and stated they just would like to do a like-for-like replacement with a brand new sign as the parts for the current sign are no longer being made.

Questions from the Plan Commission

Commissioner Heming-Littwin asked if the light output would be the same to which Mr. Harris stated it would be.

Commissioner Mulherin stated in the application, Walgreens has indicated the sign would have space for community notices, storm warnings and other important items.

Persons in Favor of or in Opposition to the Request

None

Commissioner Heming-Littwin, seconded by Commissioner Mulherin, to close the public hearing at 7:09 p.m. The motion carried unanimously by voice vote.

Comments from the Plan Commission

Commissioner Mulherin stated he is completely in favor of this.

Commissioner Heming-Littwin stated she is in favor of this. Commissioner Heming-Littwin stated it is a plus that Walgreens will put community information and emergency information as well as other items on the sign. Commissioner Heming-Littwin stated the Plan Commission may need to look at the Sign Code again.

PLAN COMMISSION

-4-

MAY 9, 2019

Commissioner Vondruska stated this is a sign for sign replacement, and he has no problems with it. Commissioner Vondruska stated it would not make sense to reconstruct 2 signs instead of replacing the 1 sign.

Motion

Commissioner Heming-Littwin moved, seconded by Commissioner Mulherin, to recommend approval of a Variation from the Sign Code to allow the replacement of the electronic message board on the property at 324 Roosevelt Road.

Having considered the applications of Volkan Signs & Lighting for approval of a variation from the Sign Code to allow the replacement of an existing non-conforming electronic message board within a larger free-standing sign on the property at 324 Roosevelt Road in the C3 Service Commercial District, the Plan Commission hereby adopts the findings of fact contained in the petitioner's application packet and presented by the petitioner at the public hearing, as well as the findings included in the deliberations of the Plan Commission, and recommends approval of the request, subject to the following conditions:

1. The sign shall be constructed in substantial conformance with the plans and testimony provided at the May 9, 2019 Plan Commission Public Hearing.

The motion carried with six (6) yes votes and zero (0) no votes as follows: Plan Commissioners Heming-Littwin, Mulherin, Berry, Hartweg, Vondruska and Chairperson Loch voted "yes."

Village Planner Purvis stated she does not know when this will be on the Village Board agenda for a vote, but she will let the petitioner know in advance of the meeting.

Pre-Application Meeting – 403-407 Duane Street – Duane Street Townhomes – Zoning Variations

On the agenda was a pre-application meeting to discuss the proposal for a 4 unit, attached single-family townhome development requiring variations from the Zoning Code.

Staff Presentation

Village Planner Purvis presented the background on this proposed townhome development and stated the petitioner is Allied Design-Build Inc. on behalf of Elshafei Equity Partners, owner of the property at 403 Duane Street and Duane Street Properties, LLC, owner of the property at 407 Duane Street. Village Planner Purvis stated the petitioner is requesting a pre-application meeting regarding the proposed development of four, three-story attached single-family

townhomes on the property at 403-407 Duane St. Variations will be required to construct the project as proposed.

Village Planner Purvis showed an overview picture of the site and stated the subject properties are located on the south side of Duane Street between Melrose Avenue and Lorraine Road and both are zoned as R4 Residential District. Village Planner Purvis stated the surrounding land uses include:

Land Use	Zoning
North: Public Parking Lot	C5B Central Business District
South: Multi-family Residential	R4 Residential
West: Single-family Residential	R4 Residential
East: Multi-family Residential	R4 Residential

Village Planner Purvis stated The Comprehensive Plan highlights this part of the downtown as an “improvement and development site”, suggesting that “older structures be replaced with high-quality townhomes and similar multi-family developments”. Village Planner Purvis stated it is also suggested that “these properties have excellent proximity to a wide range of Downtown facilities and services as well as public transportation, and could be suitable locations for new townhomes or small condominium buildings, of a scale and character similar to the newer existing multi-family developments already located within this immediate area”.

Village Planner Purvis showed a rendering of the proposed townhome development and stated the petitioner has requested a pre-application meeting to discuss the proposed project which will include the consolidation of the two lots and construction of four three-story attached single-family townhomes on the newly created lot. Village Planner Purvis stated the petitioner is requesting feedback from the Commission prior to requesting formal approval of the Zoning Variations that would be required to construct the project. Village Planner Purvis stated the petitioner originally proposed a five unit development on the site that would have required eight variations, but after a pre-application conference with staff, the plans have been revised to show a four unit development requiring four variations.

Village Planner Purvis stated in order to proceed with the project, the petitioner would need to receive approval of a lot consolidation (reviewed and approved by staff), approval of Zoning Variations (reviewed by the Plan Commission and Village Board) and approval of the Exterior Appearance (reviewed by staff and approved by the Village Board). Village Planner Purvis stated the total site is approximately 10,000 square feet and both parcels are currently vacant. The petitioner is proposing to construct four, three-story townhomes, and each unit will feature three bedrooms and three full bathrooms and will offer identical floor plans with

approximately 2,450 square feet of living space. Village Planner Purvis stated each unit would have an attached rear deck and tandem 2-car attached garage on the first level of the townhome. Village Planner Purvis stated the two middle units would have a shared driveway that leads to separate garages while the end units would have their own driveways.

Village Planner Purvis stated in order to construct the project as proposed 4 variations will be required.

1. Density. The project is out of compliance with the density standards in the Zoning Code. The Code requires a lot area of 4,950 square feet per unit for attached single-family dwellings in the R4 district. In accordance with this requirement, two units would be permitted on this property while four are proposed (2,500 square feet per dwelling unit).
2. Building Setbacks. The project adheres to the required setbacks with the exception of the rear yard setback. A 30 foot rear yard setback is required and 25 feet 9 inches is proposed.
3. Impervious Surface Coverage. 35% or less of the front yard may be impervious surface in the R4 zoning district. The petitioner is proposing 47.5% impervious surface coverage in the front yard due to the individual driveways for each unit.
4. Deck. The deck proposed in the rear of the building encroaches into the rear yard setback and is not permitted to be taller than 7 feet above the average adjoining ground. While a dimension is not provided on the elevation, it would appear that the deck is at least 10 feet tall.

Village Planner Purvis stated this project will have one shared driveway and two individual driveways all of which are proposed to be 11 feet wide at their start. Village Planner Purvis stated the Code requires a minimum width of 9 feet for one-way driveways intended for cars. Village Planner Purvis stated while a variation would not be required for a driveway of this width, Village Engineers raised concerns that the shared driveway approach may be too narrow and cause difficulty reversing out of the driveways onto the roadway. Staff would suggest the shared driveway be widened at the approach.

Village Planner Purvis stated a landscape buffer of 6-7 feet is required around all property lines abutting residentially zoned properties. Village Planner Purvis stated while this plan set does not include a landscape plan, one will be required as part of the formal application. Village Planner Purvis stated the proposed use, lot dimensions, building height, and parking per unit for the project are all Code compliant.

Village Planner Purvis stated the Plan Commission is requested to conduct a pre-application conference for the proposed development and provide comments to the petitioner. Village Planner Purvis stated the Commission's review should concentrate on the development concept and any anticipated variation requests. The specific details of the plan will be reviewed after a complete application has been submitted.

In reviewing the project, the Plan Commission may wish to:

1. Discuss whether the Commission is generally supportive of the proposal.
2. Discuss and provide feedback regarding the anticipated variation requests including: a reduced lot area per dwelling unit, a reduced rear yard setback, increased impervious surface coverage in the front yard, and a taller deck height than is permitted when the deck encroaches into the rear yard setback.
3. Provide feedback on the shared driveway width.
4. Clarify any concerns.

Questions from the Plan Commission

Commissioner Berry asked for a review of the density calculation. Village Planner Purvis stated they are basically asking for double the density on the lots, and they would need approximately 20,000 square feet for 4 units to be Code-compliant.

Petitioner's Presentation

Shafic Budron, President of Allied Design-Build Inc. and Randy Bees, Architect, introduced themselves. Mr. Budron stated there were a number of economic factors involved in this proposed development, and they originally sought to do a 5-unit development. Mr. Budron stated after talking with Village staff, they came to the consensus that 4 is the minimum needed to make the development economically feasible. Mr. Budron stated the best possible scenario was to consolidate the 2 properties and make 1 development.

Mr. Bees stated a 4-unit development is not out of character based on what is already in the area. Mr. Bees stated they would not be putting something in so large that it is too big compared to the surrounding area.

Comments from the Plan Commission

Commissioner Mulherin asked where the mechanicals would be. Mr. Bees stated the mechanicals would be on the main level with access off the deck. Mr. Bees showed a picture of the Main Floor plan and stated these would be in an insulated bump-out area as these townhomes will be slab on grade. Commissioner Mulherin asked what the market would be for this as he has concerns about the vertical living, the tandem parking and the lack of a basement. Mr. Bees stated there is ample storage on the Main Floor and based on the average townhome, these units will have more storage square footage than most townhome units that do not have a basement. Mr. Bees stated this site is attractive due to the proximity to the downtown and the train station.

Commissioner Heming-Littwin asked if these units would be sold or rentals. Mr. Budron stated these are being built for sale and not for rental. Mr. Budron stated the market for these townhomes would be younger couples who are commuters and want to live near downtown amenities. Mr. Budron stated the younger couples are fine with living in a vertical space. Mr. Budron stated the wild card is the pricing which they are estimating in the \$550,000 range.

Commissioner Mulherin asked if a market study was done. Mr. Budron stated that a full market analysis has not been done, but they did a comparative analysis, and these numbers have been suggested by experienced brokers in the area. Mr. Budron stated what they are proposing fits well with the surrounding area and with what is coming down the road.

Commissioner Heming-Littwin stated she does not have a problem with this, and she doesn't know how else to pare down impervious surface without a tandem garage. Commissioner Heming-Littwin stated the area by the center units does go down too quickly and suggested they widen this area but not all with concrete. Mr. Budron stated they have looked at brick pavers for this area. Commissioner Heming-Littwin stated she thinks these units will do well due to where they are located. Commissioner Heming-Littwin stated she thinks the deck height is a hardship due to the height needed on the first floor.

Commissioner Berry stated he agrees with Commissioner Heming-Littwin.

Commissioner Vondruska stated he looked at the site, and there are 3-story apartment buildings in the same area. Commissioner Vondruska stated the setback is a nominal difference, and he is fine with widening the driveway using pavers. Commissioner Vondruska stated the renderings seem to fit the character of the Village.

Commissioner Hartweg stated they should move forward with this, and he feels this is somewhat of a creative design. Commissioner Hartweg stated he does not like the narrow drive, but pavers should help this. Commissioner Hartweg stated the backyard variation fits the area and the deck.

Chairperson Loch stated she agrees with the Commissioners.

Commissioner Mulherin asked how this townhome development will be governed. Mr. Budron stated they have not fully discussed this yet. Commissioner Mulherin stated the Village staff will need to have covenants approved by somebody to ensure maintenance of the commonly owned areas.

Mary Beth Nelms, who resides at 1N144 Stacy Court, stated her company took care of the Legacy while it was under construction and stated this is a good design which fits in with the Village. Ms. Nelms asked if an elevator is in the package. Mr. Bees stated they have not taken an elevator into consideration yet, but they could possibly do a single-person lift. Ms. Nelms stated some of the units at the Legacy have an elevator option which cost approximately \$60,000 to \$80,000 for the option. Ms. Nelms stated she likes the mechanicals in the back underneath which will make it easy to get to these. Ms. Nelms stated she supports this project.

Chairperson Loch stated the Plan Commissioner will not vote on this since this is a Pre-Application Meeting. Chairperson Loch stated that the petitioners can use the feedback they got and proceed with this proposed development.

Trustee's Report

Trustee Pryde stated the new Village Board has a training, and the new Trustees will be sworn in on Monday. Trustee Pryde stated this is his last Plan Commission meeting, and the new Trustee Liaison will be Bill Enright.

Trustee Pryde stated the parking garage is moving forward slowly, and the Village Board did approve a Phase I budget for utility relocation and demolition of the house which will allow a pedestrian connection to Main Street.

Chairperson Loch thanked Trustee Pryde for being the liaison to the Plan Commission.

Chairperson's Report

None

PLAN COMMISSION

-10-

MAY 9, 2019

Staff Report

Village Planner Purvis introduced new Associate Planner Cole Jackson who will be the staff liaison to the Historic Preservation Commission.

Village Planner Purvis stated that the Plan Commission will review the draft downtown sub-area plan at the May 23rd meeting. Village Planner Purvis stated there may be a Pre-Application Meeting for the McChesney site in the next few months.

Other Business

None

Adjournment

Commissioner Mulherin moved, seconded by Commissioner Heming-Littwin, to adjourn the meeting at 7:50 p.m. The motion carried unanimously by voice vote.

Respectfully Submitted,

Debbie Solomon
Recording Secretary

Reviewed by Planner Purvis



Plan Commission
535 Duane Street
Glen Ellyn, IL 60137

Meeting: 06/20/19 07:00 PM
Department: Plan Commission
Department Head: Kelly Purvis
Category: Minutes
Prepared By: Kelly Purvis

SCHEDULED

AGENDA ITEM (ID # 4025)

DOC ID: 4025

May 30, 2019 Draft Special Plan Commission Meeting Minutes

ATTACHMENTS:

- 5.30.19 Draft Minutes Special Plan Commission (PDF)

DRAFT MINUTES
SPECIAL PLAN COMMISSION MEETING
MAY 30, 2019

Call to Order

The special meeting of the Plan Commission was called to order by Chairperson Mary Loch at 7:00 p.m. Plan Commissioners Lloyd Berry, Angela Fanella, Phillip Hartweg, Tracy Heming-Littwin, John Mulherin, David Rodemann and Jamie Vondruska were present. Plan Commissioner Mohammed Saeed was excused. Also present were Community Development Director Staci Springer, Village Planner Kelly Purvis, Village Planner Katie Ashbaugh, Associate Planner Cole Jackson, Trustee Liaison Bill Enright and Recording Secretary Debbie Solomon.

Public Comment

No general comments on non-agenda items were made by the public at this Plan Commission meeting.

Public Meeting – Draft Downtown Sub-Area Plan – 2019 Comprehensive Plan Update

On the agenda was a public meeting regarding the Draft Downtown Sub-Area Plan as a part of the 2019 Comprehensive Plan Update.

Chairperson Loch apologized for the cancelled meeting on May 23rd and explained what a Public Meeting is.

PUBLIC MEETING – DRAFT DOWNTOWN SUB-AREA PLAN – 2019 COMPREHENSIVE PLAN UPDATE

PUBLIC HEARING WITH DISCUSSION, CONSIDERATION AND RECOMMENDATION REGARDING A THE DRAFT DOWNTOWN SUB-AREA PLAN – 2019 COMPREHENSIVE PLAN UPDATE

Staff Introduction

Village Planner Purvis welcomed everyone to a discussion regarding the Draft Downtown Sub-Area Plan. Village Planner Purvis stated the Village's current Comprehensive Plan was adopted in 2001 and provides a vision for what the Village will look like in the year 2010. Village Planner Purvis stated the Comprehensive Plan was intended to be implemented over a 10 to 15-year period, and the typical lifespan of a Comprehensive Plan is approximately 10 years to ensure

PLAN COMMISSION

-2-

MAY 30, 2019

goals and information within the plan do not become obsolete. Village Planner Purvis stated in March of 2018, the Village Board discussed a timeframe and process by which to update the Comprehensive Plan, and in June of 2018, the Village Board approved a contract with Houseal Lavigne Associates to update the Village's Comprehensive Plan. Village Planner Purvis reviewed the meeting and research that Houseal Lavigne has done to date in working on this update.

Village Planner Purvis stated the Village is looking for feedback on the updated Plan so there will also be a discussion regarding the update to the Plan at the June 17th Village Board Workshop as well as a Village Open House to encourage public participation. Village Planner Purvis stated if you would like to receive notification regarding updates to the Comprehensive Plan, go to the Village's website, click Stay Connected and Notify Me and then select Comprehensive Plan Update, you will then receive update notifications via email or text.

John Houseal, Principal at Houseal Lavigne Associates, reviewed where they are in the process and how they got there. Mr. Houseal stated the purpose of a Comprehensive Plan is to be a foundation for decision-making and a roadmap for the next 10 to 20 years. Mr. Houseal stated a Comprehensive Plan is to be a policy guide on a broad spectrum of topics, but not regulatory as the Plan will not dictate zoning. Mr. Houseal stated a Comprehensive Plan is to be a living document and is meant to be changed and updated from time to time. Mr. Houseal stated a Comprehensive Plan is a legal document and is recognized across the country as such.

Mr. Houseal stated three things go into the planning process: where a village is starting right now, where the village wants to go and what a village has to do to get there. Mr. Houseal stated the Workgroup met on a regular basis to discuss goals and objectives to establish a vision as well as engaging the community in this too. Mr. Houseal stated they are first working on the Downtown Sub-Area Plans and then will complete the Village-Wide Plans as well.

Mr. Houseal stated as they worked on the Sub-Area Plan, they looked at everything building by building. Mr. Houseal stated when they look at the Village-wide Plan, they will look at many different things, including land use, transportation, open areas and environmental features among other things.

Mr. Houseal reviewed the community's input to date including the online questionnaire, Mapsocial, 3 stakeholder meetings, key person interviews, the Comprehensive Plan Workgroup, the Village Board Workshop scheduled for June 17th and the Village Open House scheduled for June 26th. Mr. Houseal stated the Sub-Area plans will eventually be Chapter 6 in the Comprehensive Plan, and this will include Stacy's Corners, Downtown Glen Ellyn and Roosevelt Road.

Mr. Houseal stated there are several hallmarks of a great downtown, including buildings at or near the street line for a street wall, an adequate amount of parking, multi-story buildings of mixed use, some increase in residential density and a pedestrian-oriented environment. Mr. Houseal stated the Subarea Framework sets the tone for everything addressed in a downtown, including key intersections, intersection improvements, gateway features, pedestrian corridors and alleyways, residential screening, parking enhancements, existing parking, public parking and maintaining access.

Brandon Nolin, Principal Associate at Houseal Lavigne, stated for Development Regulations, the downtown is zoned C5A and C5B. Mr. Nolin stated C5A is less dense than C5B which is different than other downtowns. Mr. Nolin stated in order to accommodate modern development, they looked at height maximums, building heights and the height and width of roadways to balance proportion, and the recommendation is that the Village needs to consider exploring revising the maximum height for the downtown to 60 feet.

Mr. Nolin stated there is additional parking needed on the north side of the railroad tracks as there is an imbalance between the north of the tracks and the south of the tracks. Mr. Nolin reviewed parking management best practices and parking ratios.

Mr. Nolin stated a market analysis was conducted, and there is some demand for multi-family housing development in the downtown. Mr. Nolin stated there is a strong retail potential to capture local demand.

Mr. Nolin showed a map of the downtown and stated the yellow boxes indicate under-utilized areas that are likely candidates for the Village to support doing more. Mr. Nolin stated the 3 red boxes are the Catalyst Sites, which are the McChesney & Miller block, the northwest corner of Pennsylvania Avenue and Main Street and the north side of Duane Street and Forest Avenue. Mr. Nolin reviewed these 3 sites and the possibilities for each. Mr. Nolin stated they are looking for feedback on these 3 suggested Catalyst Sites.

Discussion from the Plan Commission

McChesney & Miller

Commissioner Rodemann stated as they are looking at the hallmarks of a great downtown, they do need to include what caters to the identity of downtown Glen Ellyn. Commissioner Rodemann stated this site should be a full block development and provide access as well.

PLAN COMMISSION

-4-

MAY 30, 2019

Commissioner Mulherin stated they should be thinking of the future of transportation and parking with this site. Commissioner Mulherin stated he feels there could be some extra stories on the lower grade added as there is a grade of land difference on the property.

Commissioner Fanella stated they need to keep this site as flexible as possible, and she thinks they should include the Metra parking lot when this site is developed. Commissioner Fanella stated she agrees with possibly adding height at this site, but she does not want to see an overhead garage. Commissioner Fanella stated they need to take advantage of the wide drive aisle, and they should take the residential parking as low as staff is comfortable with. Commissioner Fanella stated they should also look at outdoor café possibilities.

Commissioner Heming-Littwin stated they can get more height out of this site than other areas, and they should think about the development of the parking lot across the street. Commissioner Heming-Littwin stated this is a part of Crescent where the Village could possibly do festivals. Commissioner Heming-Littwin stated it would be great to have a small open-space area with this development. Commissioner Heming-Littwin stated there should not be an overhead garage, but she feels an elevated pedestrian walkway would be fine. Commissioner Heming-Littwin stated the staff would need to think about the parking ratio.

Commissioner Berry stated he agrees with the elevated walkway suggestion, and he feels the proposed parking would be a nice range.

Commissioner Vondruska stated this seems the most obvious area to be developed, and this site is one of the lowest points in the downtown. Commissioner Vondruska stated they need to strike a balance of height versus the project going out. Commissioner Vondruska stated he could see a 3 or 4 story development here or entertain a 5 story development. Commissioner Vondruska stated there should be no parking garage over Crescent, but an elevated pedestrian walkway would be fine with him.

Commissioner Hartweg stated Crescent could be closed off for events, or you could make Crescent a 1-way street. Commissioner Hartweg stated the Crescent public right-of-way should be included in the development. Commissioner Hartweg stated the parking ratio sounds good. Commissioner Hartweg stated for this site, they need to look at what could happen 5 years from now and 20 years from now.

Chairperson Loch stated she is fine with the Glenwood/Crescent surface lot being included in this development. Chairperson Loch stated they could go up to 5 stories with this development due to the lower grade on the south side of the site. Chairperson Loch stated she is fine with the proposed parking ratio.

Pennsylvania Avenue and Main Street Site

Commissioner Hartweg stated the big question would be where to relocate the Fire Station, and he suggested possibly at Five Corners. Commissioner Hartweg stated there is a grade there so the height would need to be considered carefully. Commissioner Hartweg stated the proposed parking ratio is fine.

Commissioner Vondruska stated they could possibly relocate the Fire Station down the street. Commissioner Vondruska stated the maximum height at this site would be sensitive, and they would need to strike a balance to find the right project for this space. Commissioner Vondruska stated the aesthetic should blend in as best as possible. Commissioner Vondruska stated the parking ratio may need to be flexible due to what could come in the future.

Commissioner Berry asked if the pros and cons have been discussed with the Fire Department. Mr. Nolin stated the Fire Station would need to be centralized. Commissioner Heming-Littwin stated the current Fire Station location is very central, and there are boundaries for the volunteer fire fighters who respond to Station 1. Commissioner Heming-Littwin stated 1 fire vehicle would need to stay north of the railroad tracks, and the Fire Department should be visible in the downtown.

Chairperson Loch stated she likes the proposed rendering.

Commissioner Fanella stated she prefers that the Fire Station stays on this site as it adds charm to the downtown.

Commissioner Mulherin stated the Fire Station at this site is obsolete, and they should find a new location for this in town. Commissioner Mulherin stated the Fire Department should get a new modern Fire Station with updated amenities.

Commissioner Rodemann asked if it is realistic that the Ameritech/AT&T site be moved at some point. Commissioner Mulherin stated he thinks AT&T would want to a lot of money to do this. Commissioner Rodemann stated this is the largest of the Catalyst Sites, and it is a unique and deep site. Commissioner Rodemann stated if they do allow an extra floor on the building, they would need to ensure the setbacks are done to code to pull the outer wall back off the street.

Duane Street and Forest Avenue Site

PLAN COMMISSION

-6-

MAY 30, 2019

Commissioner Rodemann stated there should be access to both sides to expand the feel of the downtown. Commissioner Rodemann stated he is not a big fan of surface parking so a garage would be better.

Commissioner Mulherin stated this is an interesting site, and the concept of a mixed use of commercial and office space by the train station is a good idea. Commissioner Mulherin stated more professional office space is needed downtown, and he would be fine with a 3-story development.

Commissioner Fanella asked if the commercial space market is growing. Mr. Houseal stated shared spaces are still growing, and there is an increased demand for this space. Commissioner Fanella stated this should keep this development as flexible as possible.

Commissioner Heming-Littwin stated she would like to see the residential parking be underground on the US Bank site. Commissioner Heming-Littwin stated Forest Avenue should be left open, but possibly not as wide. Commissioner Heming-Littwin stated it would be a plus to have commercial and office space by the railroad tracks.

Commissioner Berry stated he agrees with keeping Forest open but not as wide. Commissioner Berry stated the site to the west of Forest could be user-driven.

Commissioner Vondruska stated he agrees with what the other Commissioners have said. Commissioner Vondruska stated he does not think logistically that Forest can be closed. Commissioner Vondruska stated this could be an interesting site.

Commissioner Hartweg stated he sees value on both sites, and he likes the commercial and residential idea. Commissioner Hartweg stated the right-of-way should be 2 lanes.

Chairperson Loch stated they should keep Forest open, and there should be no surface parking. Chairperson Loch stated she would be fine with 3 stories on this site.

General Plan Commission Comments

Commissioner Rodemann asked about the sidewalks and crossings. Community Development Director Springer stated these are still in the development stages, but they are trying to bump out the corners.

At 8:53 p.m., Chairperson Loch called for a 5-minute break.

At 8:58 p.m., Chairperson Loch reconvened the Plan Commission meeting.

Public Comment

Eleanor Saliamonas, who resides at 626 Newton Avenue, stated in the current Comprehensive Plan, the buildings should be limited to 3 stories at Pennsylvania and Main and asked what has happened to make the buildings go to 5 stories. Ms. Saliamonas stated they need to take the uniqueness of Glen Ellyn into consideration, and they should not do anything that takes away from the historic town. Ms. Saliamonas stated she suggests the Fire Station could be on Crescent by the train tracks.

John Svalenka, who resides at 415 Kenilworth, stated it is critical that the Fire Station remain at its current site or close to its current site. Mr. Svalenka stated the Main & Pennsylvania site could be the Fire Department with another building in the future as the City of Chicago is currently looking at possibly doing this. Mr. Svalenka stated the Comprehensive Plan should show maximum heights for the sites. Mr. Svalenka stated the Fire Station is one of the anchors of downtown. Mr. Svalenka stated the Catalyst Sites could have 5 stories, and he suggests underground parking for the McChesney & Miller site. Mr. Svalenka asked where the residents can send additional comments. Community Development Director Springer stated if you go to the Village's web site and search Comprehensive Plan, there is a comment section on the Comprehensive Plan page.

Joe Maude, who resides at 475 Duane Street, stated he has a consulting business and showed visuals of what 65-foot buildings would look like in these sites. Mr. Maude stated downtown Glen Ellyn is unique, and he does not think the ideas have been vetted in a way that show the possible negatives. Mr. Maude stated this plan is a fast track to turn the down into "Glen Canyon." Mr. Maude stated he is pro development, but this seems like fast development. Mr. Maude stated they need to look at the size in the context of the community, and there needs to be a study done on how the community will change with this. Mr. Maude stated buildings of 65 feet in height will be a negative impact on the town and the surrounding buildings.

Christopher Zebb, who resides at 389 Anthony Street, stated living in Glen Ellyn is unique, and no town has what Glen Ellyn has. Mr. Zebb stated they need to keep the character of the town and be fundamentally invested in the neighborhood. Mr. Zebb stated for height, they need to stick with 3 stories or possibly 4 stories. Mr. Zebb stated assumptions for the architecture should not be put in the Comprehensive Plan.

Ray Campbell, who resides at 460 Raintree Court, #3K, stated this was a great presentation, but he is concerned that Glen Ellyn will look like other towns as they are looking to the future and

trends. Mr. Campbell stated Glen Ellyn as a unique structure, and he would like to see the market research on the future growth and possible downtown residential needs. Mr. Campbell stated it is critical that the Fire Station stay in the downtown north of the railroad tracks, but the Fire Department does deserve a modern station. Mr. Campbell stated Forest should stay open, and office space with a mixed-use development would be good.

Sharon Wussow, who resides at 519 Western Avenue, stated she served on the Architectural Review Commission for many years. Ms. Wussow stated the Catalyst Sites seem inspired and have a great deal of potential. Ms. Wussow stated she suggest bollards in the middle of Crescent to block the road when needed, and it would be good to have zero-depth curbs here. Ms. Wussow stated the Fire Station site is a key location as it is the closest of the Catalyst Sites to the Downtown. Ms. Wussow stated it would be good to have street-level parking at the Fire Station site. Ms. Wussow stated at the US Bank site, she suggests adding more retail and other things, and Forest should be kept open. Ms. Wussow stated she thinks the height of the DuPage Medical Group building is good, and heights should be compared to this. Ms. Wussow stated she emphasizes moderation.

Rick Massa, who resides at 787 Forest Avenue, stated he has a background in private equity investment, and he has seen municipalities have visions that are out of step with reality. Mr. Massa stated the driving force of the Comprehensive Plan is economic development. Mr. Massa stated Glen Ellyn is vibrant and charming, and they should consider the planning process as there are impacts and trade-offs with up-zoning. Mr. Massa stated these developments could add a lot of residential units to downtown Glen Ellyn, and he wonders about schools and the capacities of the Police Department and Fire Department. Mr. Massa stated they should look at the trade-offs to see economic development versus the cost to get there. Mr. Massa stated there is no need to rush the Comprehensive Plan, and they should take a step back and look at the vision.

Megan Clifford, who resides at 793 Forest Avenue, stated she is the President of Protect Glen Ellyn, Inc. Ms. Clifford stated the Comprehensive Plan is the long-term plan for the Village, and for the Plan, they will look at pieces in the future, such as transportation, economics and environmental issues. Ms. Clifford stated they need to be strategic and use the Comprehensive Plan as a chance to get there. Ms. Clifford stated Glen Ellyn is unique and special, and they need to retain this. Ms. Clifford stated they need to take the time as a community to work through this, and there should be many more open meetings to engage the residents. Ms. Clifford stated the Comprehensive Plan will set the stage for the future of the town.

Christine Wilson, who resides at 537 Phillips Avenue, asked if the entire Comprehensive Plan is being redone. Mr. Houseal stated they are examining the entire Plan, but some things may carry forward. Ms. Wilson stated a hallmark of Glen Ellyn is that the downtown is on the

PLAN COMMISSION

-9-

MAY 30, 2019

Historic Register, and this is a draw. Ms. Wilson stated Glen Ellyn is a lively and vibrant place, and they should adapt and reuse older buildings. Ms. Wilson stated this is a unique downtown, and she does not want to see another town laid on top of it. Ms. Wilson stated they do not want to increase the density so much so that you cannot visit it. Ms. Wilson stated they need to keep the vision of Glen Ellyn that builds on the assets that Glen Ellyn has, and she does not want to see the community spirit lost.

Community Development Director Springer thanked Houseal Lavigne for their work and the presentation. Community Development Director Springer stated residents can sign up for notifications on any changes to the Comprehensive Plan website, and there is a link to the Comprehensive Plan on the Village's Home Page. Community Development Director Springer stated residents are welcome to offer comments as well as see the documents. Community Development Director Springer stated the Village is trying to get as much public input as they can, and the Village will do open houses, public hearings and a Village Board Workshop on this. Community Development Director Springer stated the Village will also notify the residents through social media, media and press releases as they do want the public involved.

Chairperson Loch stated the presentation was very helpful, and the Plan Commission appreciates all the input.

Commissioner Mulherin stated the Plan Commission does feel as passionate about the community as the residents do. Commissioner Mulherin stated he would like to age in place. Commissioner Mulherin stated they cannot tell the developers what to build, but the Plan Commission is committed to improving the economic based of the community.

Trustee's Report

Chairperson Loch welcomed Trustee Enright as the Plan Commission liaison.

Trustee Enright stated at the Village Board meeting, two police officers were sworn in, and the Madden Scholarships were awarded. Trustee Enright stated the Village Board is working on the Streetscape Plan, and they would like any input on this. Trustee Enright stated the parking garage is moving along as well.

Chairperson's Report

Chairperson Loch stated there will be a Special Plan Commission meeting on June 20, 2019.

PLAN COMMISSION

-10-

MAY 30, 2019

Staff Report

Village Planner Purvis stated there will be no meeting on June 13, but meetings on June 20 and June 27.

Commissioner Heming-Littwin asked when the next Streetscape Committee meeting is. Community Development Director Springer stated she would look for this and let them know.

Community Development Director Springer stated the Community Development Department is moving to the first floor of the Civic Center today, tomorrow and Monday. Community Development Director Springer stated Raising Kane will be breaking ground soon.

Community Development Director Springer introduced new Village Planner Katie Ashbaugh and Associate Planner Cole Jackson.

Other Business

None

Adjournment

Commissioner Heming-Littwin moved, seconded by Commissioner Fanella, to adjourn the meeting at 9:43 p.m. The motion carried unanimously by voice vote.

Respectfully Submitted,

Debbie Solomon
Recording Secretary



Plan Commission
535 Duane Street
Glen Ellyn, IL 60137

Meeting: 06/20/19 07:00 PM
Department: Plan Commission
Department Head: Kelly Purvis
Category: Public Hearing
Prepared By: Kelly Purvis

SCHEDULED

AGENDA ITEM (ID # 4023)

DOC ID: 4023

**443, 435, 431-433, 427-429 Duane Street and 425-431 Melrose Avenue -
Reva Development Partners - A Public Hearing to review the
proposal for a Planned Unit Development for a multi-family
residential building featuring 48 luxury apartment units**

PETITIONER: The petitioners are Warren James and Matt Nix of Reva Development Partners, contract purchasers of the properties located at 443, 435, 431-433, 427-429 Duane Street and 425-431 Melrose Avenue.

REQUEST: Reva Development Partners have submitted a formal application for the Planned Unit Development of the subject properties with a new multi-family residential building featuring 48 luxury apartment units, an underground parking garage and a surface parking lot on the south side of the site. In order to proceed with the project as proposed the petitioners will need approval of the following:

1. A Special Use Permit for a Planned Unit Development in accordance with Section 10-10-15 of the Glen Ellyn Zoning Code.
2. The following deviations from the Glen Ellyn Zoning Code:
 - a. Section 10-4-17-2(E) to allow the construction of a building that will be 68.65 feet in lieu of the permitted height of 60 feet; and
 - b. Section 10-4-17-2(E) to allow the portion of the building over 45 feet to be stepped back 0 feet in lieu of the minimum step back of 15 feet; and
 - c. Section 10-4-17-2(G) to allow 82 parking spaces to be provided for the development in lieu of 92 spaces required; and
 - d. Section 10-4-17-2(D)3(a) to allow a front yard setback along Melrose Avenue to be 17.81 feet in lieu of the required 25 feet; and
 - e. Section 10-4-17-2(D)3(a) to allow a front yard setback along Prospect Avenue to be 8 feet in lieu of the required 25 feet; and
 - f. Section 10-4-17-2(D)3(b) to allow a corner side yard setback along Duane Street of 10 feet in lieu of the required 25 feet; and

- g. Section 10-5-8(I) to allow 3 parking spaces in the garage to be 8 feet 6 inches wide in lieu of the 9 feet width required; and
 - h. Section 10-5-5(C)1 to allow an impervious surface setback along a portion of the southern property line to be 0 feet in lieu of the required 6.17 feet to allow for the construction of a private sidewalk and retaining wall at the property line; and
 - i. Any other deviations necessary to construct the development as depicted on the plans presented and available for public review.
3. A Special Use Permit in accordance with Section 10-10-14 of the Zoning Code to allow multi-family dwelling units in the C5B Central Business District.
 4. A Zoning Map Amendment in accordance with Section 10-10-13 of the Zoning Code to rezone two of the parcels on the property at 425 Melrose Avenue from R4 to C5B Central Business District, and to rezone one of the parcels on the property at 425 Melrose Avenue from R2 to C5B Central Business District zoning district.
 5. A Sign Variation from Section 4-5-11(D) of the Sign Code to allow two (2) residential development signs in lieu of the one (1) sign permitted.
 6. The Exterior Appearance of the building (reviewed by staff, with Village Board approval).
 7. The consolidation of the lots (reviewed and approved by staff).

Discussions related to the redevelopment agreement and the request for TIF funds will be considered by the Village Board.

LOCATION:

The subject properties are located on the south side of Duane Street between Melrose Avenue and Prospect Avenue with a portion of the site extending southerly along the east side of Melrose Avenue. The total site is comprised of six properties totaling 1.18 acres.

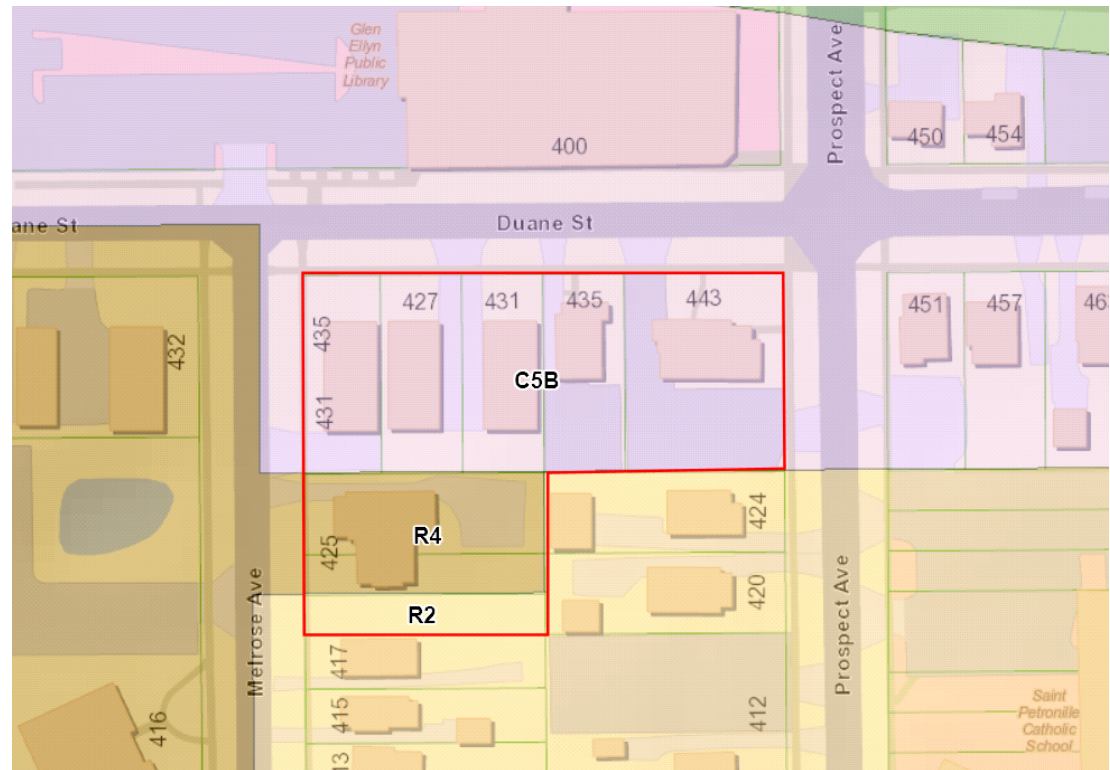
A majority of the property is zoned C5B Central Business District, Central Service Subdistrict. The property extending southerly along Melrose Avenue is zoned R4 Residential and R2 Residential.

The surrounding zoning and land uses are as follows:

Surrounding Land Uses

Zoning

North: Commercial, Glen Ellyn Public Library	C5B
South: Residential, Single Family	R2
East: Commercial	C5B
West: Residential, Multi-Family	R4



**PUBLIC
NOTICE:**

Notice of the public hearing was published in the June 5, 2019 edition of the Daily Herald and mailed to property owners within 350 feet of the subject property, and a placard was placed at 443 Duane Street and 425 Melrose Avenue on June 5, 2019.

**LONG TERM
PLANS:**

The Comprehensive Plan highlights this part of the downtown as an area where replacement of older structures with high-quality townhomes and similar multi-family developments would be appropriate. The Downtown Strategic Plan also suggests the site would be appropriate for multi-family development and further encourages that 450 dwelling units be added to the downtown. Excerpts from the 2001 Comprehensive Plan and the 2009 Downtown Strategic Plan are attached for the Commission's information.

BACKGROUND: Reva Development Partners came before the Plan Commission on November 9, 2017 for a pre-application meeting. The pre-application

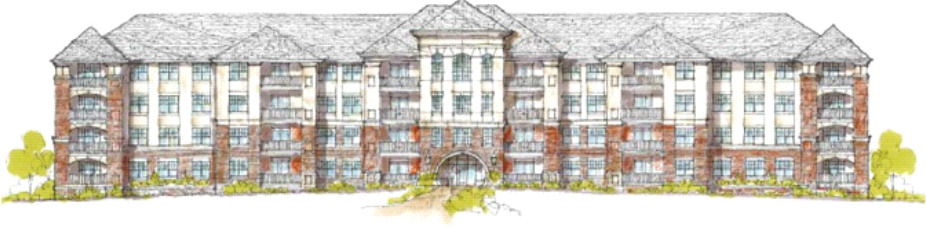
meeting was highly publicized. Eight members of the public present at the meeting spoke against the project. The Plan Commission was supportive of the project in concept including the proposed height deviation of approximately 8 feet. A copy of the November 9, 2017 Plan Commission meeting is attached.

PROJECT SUMMARY:

Reva Development Partners are proposing a 4-story multi-family development on the subject properties. The project includes 48 luxury apartment units with underground parking and a surface parking lot on the southwest portion of the site. More information about the project follows.

Residential Unit Mix

The proposed development would have 48 apartment units: 8 one-bedroom, one-bath units (4 with a den and 4 without); 40 two-bedroom, two-bath apartment units (14 with a den, 26 without). Unit sizes would range from 870 square feet to 1,656 square feet with expected rent ranges from \$2,010 to \$3,700 per month. The average apartment would have 1,354 square feet of living area (not including the balcony) with an average rent of \$2.25 per square foot. See the chart below for a full listing of the unit types and expected rents for each unit.



Plan Type	Total Proposed Units	Percent of Total	Bedrooms/ Baths	Net Leasable Sq. Ft.		Pro Forma Rents	
				Plan Size (Sq. Ft.)	Total	\$	\$/Sq. Ft.
B / One Bedroom	4	8.3	1 / 1.0	870	3,480	\$2,010	\$2.31
B-2 / One Bedroom+Den	4	8.3	1+Den / 1.0	980	3,920	2,250	2.30
D / Two Bedroom	8	16.7	2 / 2.0	1,340	10,720	3,020	2.25
C-1 / Two Bedroom	18	37.5	2 / 2.0	1,370	24,660	3,080	2.25
C-2 / Two Bedroom+Den	6	12.5	2+Den / 2.0	1,492	8,952	3,320	2.23
E / Two Bedroom+Den	8	16.7	2+Den / 2.0	1,656	13,248	3,700	2.23
Total/Average:	48	100.0	---	1,354	64,980	\$3,045	\$2.25

Source: REVA Development Partners, LLC AVERE on Duane Operating Proforma dated 7/13/2018.

The Market Analysis submitted by the developers (attached) suggests that there is a demand for this type of high-end rental product, specifically for consumers between the ages of 45-64. It is further suggested that the Avere

on Duane apartments would be 95% occupied within 9 months of first occupancy. The market study provides additional information about similar projects in the area, vacancy rates, and comparable rents for this kind of development.

Building Amenities

The development would include designer kitchens with high-end finishes, Smart Home technology, in-unit storage, walk-in closets (in master suites), individual balconies and one enclosed parking space per unit. A secured bike storage and repair station, pet spa, mail/package center and community room are also proposed.

DEVIATIONS:

Building Height

The project will require approval of a height deviation as part of the proposed Planned Unit Development. A total building height of 55 feet and 4-stories is permitted in the C5B zoning district. An additional 5 feet of height, is permitted when at least 75% of the floor area at or below grade is used for parking. Since the proposed project meets this requirement, the maximum permitted height for the project is 60 feet. The Code also requires that any portion of the structure higher than 45 feet be stepped back 15 feet from the front façade(s). In this case, the property has two front yards, one along Melrose Avenue and one along Prospect Avenue.

The building is proposed to be 68 feet 8 ½ inches from the average grade on the site and will be comparable in height to the Glen Ellyn Public Library. There is no step-back proposed for the top floor on the Melrose or Prospect frontages. The petitioners have included a building height study and 3-D models which provide some context as to how the development will fit into the existing neighborhood. Staff would also note that the site is in a low-lying part of the downtown. For comparison purposes, the approved Apex 400 site is 766.45 feet above sea level and the proposed Avere project is 744.1 feet above sea level. Therefore, this project is 22 feet lower than the Apex 400 building will be due to its low lying elevation in the downtown.

The Comprehensive Plan suggests that the Village should consider a range of factors when determining the height of new downtown buildings including: the height of nearby existing buildings, the pedestrian scale and orientation of downtown, the proximity of new buildings to residential neighborhoods, topography, the economics of downtown development, and sight lines in relation to prominent visual landmarks and historic features. Based upon the elevations, renderings and 3D models submitted, the project is consistent with the height of the adjacent library and less tall than St. Petronille Church to the southeast of the site. The building is residential in character with quality materials, sloped, shingled roofs and arches to mimic the architecture

of the library which should blend well with the surrounding area. The low-lying elevation of the site makes this a good location for a project of this size.

Building Setbacks

The Code requires that lots fronting on two non-intersecting streets meet the front yard setback requirement on both frontages. The two front yard setbacks of 25 feet are required from the lot lines adjacent to Melrose Avenue and Prospect Avenue. A corner side yard setback of 25 feet is also required from the lot line adjacent to Duane Street. The proposed setbacks for the development are as follows: 17.81 feet from the lot line along Melrose Avenue, 8 feet from the lot line along Prospect Avenue, and 10 feet from the lot line along Duane Street. According to the petitioners, the building has been positioned to maximize parking on the site, provide a long enough driveway to safely access the parking garage, and to minimize the impact of the development on the adjacent single-family homes to the south of the site.

The proposed front yard setback along Prospect Avenue is consistent with the 10.18 foot setback of the existing structure on the site. The proposed front yard setback along Melrose Avenue is greater than the setback of the existing structure at 13.83 feet from the property line. The current building setbacks along Duane Street are around 30 feet from the property line. For more information regarding the existing conditions on the site, see the attached Alta Survey and the Existing Conditions Site Plan.

Impervious Surface Setback

The Code requires that an impervious surface setback of 6.17 feet be provided from each lot line. The project proposes a walkway from the surface parking lot to the main entrance of the building (on the southeast side of the site) which then leads out to Prospect Avenue. Due to the positioning of the building and in order to provide an ADA compliant walkway, the walkway is proposed to be constructed adjacent to south the lot line. Therefore a deviation is necessary to reduce the impervious surface setback from 6.17 feet to 0 feet along the south property line. Note, a screening fence will be provided on the site between where the walkway is proposed and the adjacent property to the south.

Parking

The proposal includes an underground parking garage with 48 parking spaces that will be numbered and assigned to each unit. The surface parking lot on the southwest portion of the property provides an additional 34 surface parking spaces for residents and their guests. A total parking ratio of 1.7 spaces per unit (82 parking spaces total) is proposed for the development. The Village Code requires 1.5 parking spaces for every one-bedroom unit and 2 parking spaces for every unit with two or more bedrooms. With 8 one-

bedroom units proposed and 40 two-bedroom units proposed, the total required number of parking spaces for this project is 92 or 1.92 spaces per unit.

The Village has approved parking ratios as low as 1.29 per unit in the past for projects with studios or a high percentage of one-bedroom units (Apex 400). For further reference, the Crescent Station Condos received approval of a parking ratio of 1.5 parking stalls per unit but had more two-bedroom units than the Apex 400 development. The proposed development includes mostly two bedroom units. Staff is comfortable with the proposed parking ratio of 1.7 spaces per unit due to the building's proximity to the train station and based upon planning standards that suggest transit oriented developments require less parking. The Village's traffic consultant has reviewed the proposed parking ratio and has suggested that a parking ratio of 1.47-1.54 would be adequate for this development. See also, the attached residential parking evaluation provided by KLOA, the developer's traffic consultant.

Parking Stall Width

Three parking stalls within the garage are proposed to have a width of 8 feet 6 inches in lieu of the required 9 feet width required by Code. Due to the location of the stairwells in the garage, the three narrower parking stalls cannot be widened further. The Village's traffic consultant has suggested that these three stalls may present some challenges. Staff has suggested (and it is noted on the garage floor plan) that the parking stalls that do not meet the 9 foot Code requirement should be used by compact cars only. Parking stalls #4, #21 and #22 require a deviation from the Code.

ADDITIONAL SITE DETAILS:

Vehicular Access and Circulation

Two full movement vehicular access drives are proposed for the development. The parking garage is accessed from a full-access driveway on Melrose Avenue approximately 50 feet from the Duane Street right-of-way. The surface parking lot is accessed from a full-access driveway approximately 130 feet south of the parking garage access. Both access points are under stop control for vehicles exiting the development. A warning beacon is proposed at the garage entrance to warn pedestrians of vehicles exiting the garage. The Village's traffic consultant and Village staff believe that access from Melrose Avenue into the development is preferred to any other access point along Prospect or Duane Street. An Autoturn exhibit showing the ability of a firetruck to move through the surface parking lot is attached (in the final engineering plan set).

Traffic Analysis

The traffic counts conducted by KLOA, Inc., on Tuesday, August 28, 2018 indicate that the peak hours for traffic in the general vicinity of the subject

site occur between the hours of 7:15 am to 8:15 am, from 2:30 pm to 3:30 pm and from 5:00 pm to 6:00 pm.

The traffic study conducted by KLOA and the review of the project by the Village's traffic engineer both indicate that the traffic generated by the development will be lower than the traffic generated by the existing uses on the site. Vehicular delays at intersections are projected not to change levels of service or to be detectable.

Stormwater

This is a low-lying site that although not in a floodplain, is a known flooding area. The proposed development creates less impervious surface than what is existing on the site. In addition, permeable pavers are being used in the surface parking lot to help with stormwater absorption. Staff would suggest that as a condition of approval, the Utility Plan be revised to show downspouts on $\frac{3}{4}$ of the building directing stormwater toward Prospect Avenue, beyond the low point on Duane Street.

Utility Undergrounding

As shown on the attached demolition plan, all overhead utility lines on the site and on the east side of Melrose Avenue from Duane Street to Hillside Avenue would be undergrounded as part of the project.

Landscaping & Screening

The proposed landscaping for the development exceeds the Village's requirements and provides a mix of deciduous, ornamental and evergreen trees as well as deciduous and evergreen shrubs, perennials and ornamental grasses. Mechanical equipment will be screened and a 6-foot wood screening fence will be provided along property lines adjacent to residential uses.

Lighting

The Sternberg lighting proposed for the site is dark skies compliant with recessed LEDs. The attached photometric plan shows that the measured foot candles will not exceed .5 adjacent to residential properties and will not exceed 3 foot candles elsewhere on the site. Lighting will be installed in the public right-of-way to match the streetlights downtown.

Loading Space

A loading space is proposed on the east side of Melrose Avenue between the garage entrance and the surface parking lot entrance. The loading area will provide a space for delivery, moving and garbage trucks to park that will not interfere with the regular flow of traffic on the roadway or block parking stalls in the surface parking lot.

Refuse & Recycling

Refuse and recycling containers will be stored inside the parking garage and rolled out to the loading area on Melrose Avenue by the waste management provider, where they will be emptied and promptly returned to the parking garage. The petitioners have indicated that the 95 gallon refuse and recycling bins will be emptied several times per week (as needed).

**PUD PROCESS &
SUPPLEMENTAL
DOCUMENTS:**

With the authority granted in Section 10-10-15(A)3 of the Zoning Code, the Community Development Director has opted to allow the simultaneous review of the Preliminary and Final Planned Unit Development Plans for the Avere on Duane development. The Plan Commission may overrule this decision and require full compliance with the review procedures in Section 10-10-15, if it deems, in its opinion, it to be necessary for a full understanding of the proposed development and its impact upon surrounding areas and the Village.

All documentation listed in section 10-10-15(B)1 and (B)2, required to meet the minimum contents to constitute a preliminary plan have been provided for the Plan Commission's review. Three items from the list of supporting documentation in Section 10-10-15(B)3 have not been provided. Below is an explanation for each omission. The Plan Commission may request that any of this information be provided.

1. *A cost revenue study showing both the immediate and long term effects of the development on schools and municipal services, including a letter signed by the superintendents of affected school districts or other appropriate officials of the districts, and any affected park districts, public library, fire department or other public body, indicating the developer has notified the district or public body of the proposed development and its proposed effect on school enrollment or the services provide by the district or public body.*

In lieu of a cost revenue study, the Village has worked with the other taxing bodies and Municipal Service providers to come up with a formula (based upon the type of construction and the number of proposed bedrooms in a development) to mitigate the impact of development. The formula provides a monetary fee or "developer donation" amount to off-set the impact of the project on each of the above mentioned service providers.

Information regarding the perceived impact of the development is outlined in the Redevelopment Agreement (RDA), which is not typically reviewed by the Plan Commission. The RDA will be

provided to the Village Board for review prior to consideration of the development. If the Plan Commission would like to review the RDA, staff would be happy to provide that information for this project or future developments.

Information regarding developer donations for this project has been included in the paragraphs that follow.

2. *An Environmental Impact Study*

The petitioners submitted a Natural Resource Review from the Illinois Department of Natural Resources (IDNR Report). The IDNR has no record of natural resources in this area that might be affected by development. There are no known environmental conditions on the property that would indicate that there is a need for an additional environmental study.

3. *Covenants, conditions and restrictions*

The petitioners have indicated that the property will be under single ownership and maintained by a management company. Therefore covenants, conditions and restrictions that are typically reviewed with a condominium or townhome development would not be required in this case.

Additionally, all documentation required in Section 10-10-15(D) to constitute a final plan has been provided with the exception of a final version of the covenants, conditions and restrictions. These are not required for a development under single ownership.

REZONING:

As mentioned above, the majority of the site (5 out of 6 properties) is within the C5B Central Business District. The southernmost property on Melrose Avenue is made up of three separate parcels (under common ownership), with two of the parcels being in the R4 Residential District and one of the parcels being in the R2 Residential Zoning District. The property is currently improved with one single family residential home. The petitioners are proposing to rezone the residentially zoned property on Melrose Avenue to C5B Central Business District to be consistent with the remainder of the site.

SPECIAL USE:

In accordance with Section 10-4-17-2(B) of the Zoning Code, a special use is required for dwelling units in the C5B Zoning District. As is previously mentioned, the downtown plan calls for additional residential units in the downtown. The Comprehensive Plan also recommends that this location, on the periphery of the C5B District would be appropriate for multi-family development. Additionally, the petitioners' attached Special Use application provides evidence that the proposed use would be suitable for the site.

SIGN**VARIATION:**Signage

The petitioners are proposing one free standing monument sign along Duane Street near the intersection with Prospect Avenue. The sign base will be constructed of the primary material of the building (brick veneer) and will have landscaping around the base of the sign. A wall sign is proposed at the entrance to the building (on the south side of the building). Only one residential identification sign is permitted per development in the C5B zoning district, therefore a variation from the Sign Code is being requested to allow the wall sign at the front entrance to the building.

**EXTERIOR
APPEARANCE**

While the Plan Commission will not review the exterior appearance application for this development, staff would like to provide some information regarding the architecture of the building for the benefit of the public. The exterior appearance application will be reviewed by staff for conformance with the exterior appearance guidelines and considered by the Village Board on July 8th.

The building materials consist mostly of cast stone, brick veneer and synthetic stucco (EIFS) in earth tones. The style of the building is sympathetic to the adjacent library's architecture which is a modern blend of Richardsonian Romanesque and Victorian Architecture. The building is traditional in style and the petitioners suggest that the pitched/hipped roof design, like the elevations include varied projection to create interest. The soffits and eaves are appropriately scaled to the building and the building is properly articulated with inset balconies.

**DEVELOPER
DONATIONS:**

The developer donations that will be contributed to the other taxing districts by the developer are as follows:

1. Glen Ellyn Park District - \$45,529.60
2. School District 41 - \$28,696.00
3. School District 87 - \$10,030.40
4. Fire Company - \$24,000.00
5. Glen Ellyn Library - \$32,091.84

Staff recommends a condition on the PUD approval that requires the developers to pay these development donations at the time of building permit issuance.

STREETSCAPE

ELEMENTS: This part of the downtown is within the Urban Residential Streetscape Concept (see attached Streetscape Section). These areas, while technically in the downtown, are primarily residential in character and feel. Components of the Streetscape Plan that have been integrated into the development plans for this project are as follows: dark sky compliant lighting is proposed, parkway trees are proposed (and have been reviewed by the Village Forester), screen plantings are proposed to screen parking and utility areas and streetlights to match those in the downtown are proposed.

**CONSTRUCTION
SCHEDULE:**

The petitioners have provided a construction schedule as part of their PUD submittal. They anticipate preparation for the demolition of the buildings on the site to begin in August of 2019, with construction of the building beginning in at the end September, 2019. They anticipate substantial completion of the project by January of 2021.

**ADDITIONAL
NOTICE:**

Staff exceeded the notification requirements outlined in the Zoning Code by sending notice of the public hearing to property owners within 350 feet of the subject site, rather than 250 feet as required by the Zoning Ordinance. In addition, in order to ensure that the public was aware of the consideration of this downtown development, notice of this meeting was shared with the Downtown Alliance, the Chamber of Commerce, through the Village's social media outlets and through the Village's eNews.

**PROJECT
BENEFITS:**

The proposed project aligns with many of the recommendations in the Village's long term plans and could have a number of potential benefits, including:

1. A total of 48 new apartment units would be added to the downtown, the new residents of which would support existing downtown businesses and bring new life and vitality to the area. The Downtown Plan recommends that the Village add a minimum of 450 new residential units in the downtown.
2. The project would include the redevelopment of a number of currently underutilized sites in the downtown.
3. It would provide high-quality, luxury housing options that are not currently available in the Village that could allow existing residents to age in place.
4. It would be a new development meeting the current building code requirements of the Village.
5. It would provide a transit oriented development option, which has shown to be in high demand and has been a successful trend in other

suburban downtowns.

**COMMISSION
ACTION:**

The Plan Commission should consider the petitioners' requests for approval of the Preliminary and Final Planned Unit Development Plans with Deviations, a Special Use to allow residential units in the C5B District, a Zoning Map Amendment to rezone 425 Melrose Avenue to be consistent with the rest of the site, and a sign variation to allow two signs on the property instead of one, and make a recommendation to the Village Board for approval, approval with conditions, or denial.

Staff would recommend the Plan Commission consider the following conditions of approval:

1. That prior to the issuance of a building permit the petitioners pay the abovementioned Developer Donations to Village taxing bodies.
2. That the project be constructed in substantial conformance with the plans and testimony presented at the Plan Commission public hearing and before the Village Board of Trustees.
3. That prior to the issuance of a building permit, a construction management plan must be prepared, reviewed at a pre-construction meeting, and approved by the Police, Fire, Public Works and Community Development Departments.
4. That prior to the issuance of a building permit the Utility Plan shall be revised to show the roof drains on the northwest portion of the building (north of the parking garage entrance) be connected to the storm sewer at the intersection of Duane Street and Prospect Avenue.
5. That it is the obligation of the owners of the development to install and maintain the retaining walls on the site in perpetuity.
6. That it is the obligation of the property owners to install and maintain the loading area on the east side of the Melrose Avenue right-of-way in perpetuity.
7. That it is the obligation of the owners of the development to install, maintain, and replace all landscape materials in accordance with the approved landscape plan.

ATTACHMENTS:

- § Aerial Photo
- § Zoning Map
- § Notice of Public Hearing
- § Mailing Labels for Public Hearing Notice
- § Location Map for Notification
- § Certificate of Publication

- § Excerpts from 2001 Comprehensive Plan
- § Excerpts from the 2009 Downtown Strategic Plan
- § Section from the 2013 Streetscape Plan
- § Pre-application Meeting Minutes from November 9, 2017
- § Petitioners Application for Preliminary & Final PUD Approval
- § Petitioners' Application for a Special Use
- § Petitioner's Application for a Zoning Map Amendment
- § Petitioner's Application for a Sign Variation
- § Petitioner's Application for Exterior Appearance Approval
- § Addendum to the Application for Exterior Appearance Approval
- § Petitioners' Application for Lot Consolidation
- § Petitioners' Packet of Supporting Documents:
 1. Narrative Statement - Cover Letter
 2. Proof of Ownership
 3. Disclosures of Interest & Affidavits of Authorization
 4. Reimbursement of Fees Agreement
 5. List of Deviations
 6. Alta Survey
 7. Plat of Consolidation
 8. Letter, allowing recordation of the Plat
 9. Surrounding Conditions Plan
 10. Final Engineering Plans
 - a. Existing Conditions Site Plan
 - b. Demolition Plan
 - c. PUD Site Plan
 - d. Grading Plan
 - e. Cross Sections
 - f. Utility Plan
 - g. Stormwater Pollution Prevention Plan
 - h. SWPPP Notes and Details
 - i. Typical Details
 - j. Fire Truck Access Exhibit
 - k. Sight Distance Analysis
 11. Landscape Construction Package
 - a. Tree Survey
 - b. Hardscape Plans
 - c. Hardscape Plan & Sign Plan
 - d. Landscape Plan
 - e. Photometric Plans (2)
 - f. Planting Schedule/Notes
 - g. Site Details
 - h. Lighting Details (Cutsheets)(3)
 - i. Landscape Details
 - j. Site Plan Rendering
 - k. Aerial Perspectives (3D Models)

12. Floor Plans - Garage level through floor 4
13. Roof Plan
14. Example Unit Plan 1 BR
15. Example Unit Plan 2 BR
16. Building Elevations
17. Elevation Finish Schedule
18. Renderings
19. Building Roof Form Perspectives
20. Market Study
21. Traffic Impact Study
22. Residential Parking Ratio Evaluation, KLOA
23. IDNR Report
24. Geotechnical Report
25. Drainage Analysis
26. Land Use Opinion Application
27. Construction Schedule
28. Chart of Developer Donations
29. Public Comment (received prior to packet upload)

Cc: Staci Springer, Community Development Director
 Rich Daubert, Professional Engineer
 Amy McKenna, Development Civil Engineer
 Bob Minix, Professional Engineer
 Dan Shoenberg, Traffic Engineer
 Warren James, Petitioner
 Matt Nix, Petitioner

ATTACHMENTS:

- Aerial Photo (PDF)
- Zoning Map (PDF)
- Notice of Public Hearing (PDF)
- Mailing Labels for Public Notice (PDF)
- Location Map for Notification (PDF)
- Certificate of Publication (PDF)
- Excerpts from 2001 Comprehensive Plan (PDF)
- Excerpts from the 2009 Downtown Strategic Plan (PDF)
- Section from the 2013 Streetscape Plan (PDF)
- 11.9.17 Minutes Plan Commission (PDF)
- Preliminary PUD Application (PDF)
- Final PUD Application (PDF)
- Special Use Permit Application (PDF)
- Application for Zoning Map Amendment (PDF)
- Sign Variation Application (PDF)

- Application for Exterior Appearance Review (PDF)
- Addendum to the Application for Exterior Appearance Approval (PDF)
- Application for Lot Consolidation (PDF)
- 1. Narrative Statement - Cover Letter (PDF)
- 2. Proof of Ownership - All Properties (PDF)
- 3. Disclosures of Interest & Affidavits of Authorization (PDF)
- 4. Reimbursement of Fees Agreement (PDF)
- 5. List of Deviations and Clarifications (PDF)
- 6. Alta Survey (PDF)
- 7. Plat of Consolidation (PDF)
- 8. Letter of Authorization - Recordation of Plat (PDF)
- 9. Surrounding Conditions Plan (PDF)
- 10. Final Engineering Plans (PDF)
- 11. Landscape Construction Package (PDF)
- 12. Floor Plans (PDF)
- 13. Roof Plan (PDF)
- 14. Example Unit Plan - 1 bed (PDF)
- 15. Example Unit Plan - 2 bed (PDF)
- 16. Building Elevations (PDF)
- 17. Elevation Finish Schedule (PDF)
- 18. Renderings (PDF)
- 19. Building Roof Form Perspectives (PDF)
- 20. Market Study (PDF)
- 21. Traffic Impact Study (PDF)
- 22. Residential Parking Ratio Evaluation (PDF)
- 23. IDNR Eco Cat (PDF)
- 24. Geotechnical Report (PDF)
- 25. Drainage Analysis (PDF)
- 26. Land Use Opinion (PDF)
- 27. Construction Schedule (PDF)
- 28. Chart of Developer Donations (PDF)
- 29. Public Comment (received prior to packet upload) (PDF)



Map created on November 3, 2017.

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Map created on November 3, 2017.

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Disclaimer: This map is for general information purposes only. Although the information is believed to be generally accurate, errors may exist and the user should independently confirm for accuracy. The map does not constitute a regulatory determination and is not a base for engineering design. A Registered Land Surveyor should be consulted to determine precise location boundaries on the ground.

Zoning

	CC - Community College
	C2 - Community Commercial
	C3 - Service Commercial
	C4 - Office District
	C5A - CBD Retail Core
	C5B - CBD Service
	C6 - Commercial/Multi-use
	CR - Conservation Recreation
	RE - Residential Estate
	R0 - Single Family Residential
	R1 - Single Family Residential
	R2 - Single Family Residential
	R2B - Single Family Residential
	R3 - Multi-family Residential
	R4 - Multi-family Residential
	R5 - Planned Residential
	U - Unincorporated

NOTICE OF PUBLIC HEARING

Matt Nix & Warren James of REVA Development Partners are requesting approval of a Special Use for a Planned Unit Development with zoning deviations, a Special Use Permit, a Zoning Map Amendment and a Sign Variation all associated with the proposed construction of a four-story multi-family residential building to be called Avere on Duane. The proposed building has an underground parking garage and there would be additional surface parking in the rear of the building. The plans are for the redevelopment of a 1.18 acre site comprised of the following properties: 443 Duane Street, 435 Duane Street, 431-433 Duane Street, 427-429 Duane Street, 431 Melrose Avenue and 425 Melrose Avenue. The subject properties are located on the south side of Duane Street between Melrose Avenue and Prospect Avenue, with a portion of the site extending southerly along the east side of Melrose Avenue. The majority of the site is in the C5B Central Business District zoning district with a small portion of the site along Melrose Avenue in the R2 and R4 Residential zoning districts. As part of the project, the entire site would be rezoned to C5B Central Business District.

Before the Glen Ellyn Village Board can consider the application, the Plan Commission must conduct a public hearing. The Plan Commission will consider the requests on **Thursday, June 20, 2019 at 7:00 p.m.**, in the Galligan Board room on the third floor of the Civic Center, 535 Duane Street, Glen Ellyn, Illinois.

The Plan Commission will consider the petitioners' request for approval of the following:

1. A Special Use Permit for a Planned Unit Development in accordance with Section 10-10-15 of the Glen Ellyn Zoning Code.
2. The following deviations from the Glen Ellyn Zoning Code:
 - a. Section 10-4-17-2(E) to allow the construction of a building that will be 68.65 feet in lieu of the permitted height of 60 feet; and
 - b. Section 10-4-17-2(E) to allow the portion of the building over 45 feet to be stepped back 0 feet in lieu of the minimum step back of 15 feet; and
 - c. Section 10-4-17-2(G) to allow 82 parking spaces to be provided for the development in lieu of 92 spaces required; and
 - d. Section 10-4-17-2(D)3(a) to allow a front yard setback along Melrose Avenue to be 17.81 feet in lieu of the required 25 feet; and
 - e. Section 10-4-17-2(D)3(a) to allow a front yard setback along Prospect Avenue to be 8 feet in lieu of the required 25 feet; and
 - f. Section 10-4-17-2(D)3(b) to allow a corner side yard setback along Duane Street of 10 feet in lieu of the required 25 feet; and
 - g. Section 10-5-8(I) to allow 3 parking spaces to be 8 feet 6 inches wide in lieu of the 9 feet width required; and
 - h. Section 10-5-5(C)1 to allow an impervious surface setback along a portion of the southern property line to be 0 feet in lieu of the required 6.17 feet to allow for the construction of a private sidewalk and retaining wall at the property line; and
 - i. Any other deviations necessary to construct the development as depicted on the plans presented and available for public review.
3. A Special Use Permit in accordance with Section 10-10-14 of the Zoning Code to allow multi-family dwelling units in the C5B Central Business District.
4. A Zoning Map Amendment in accordance with Section 10-10-13 of the Zoning Code to rezone the R4 and R2 residentially zoned properties to C5B Central Business District zoning district.

5. A Sign Variation from Section 4-5-11(D) of the Sign Code to allow two residential development signs in lieu of 1 permitted sign.

The subject properties are legally described as follows:

443 DUANE STREET

LOTS 9, 10, 11 AND 12 IN BLOCK 3 IN GLENWOOD, BEING C.A. PHILLIPS SUBDIVISION OF PART OF SECTION 10 AND PART OF SECTION 11, TOWNSHIP 39 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF, RECORDED AUGUST 22, 1873 AS DOCUMENT 16688, IN DUPAGE COUNTY, ILLINOIS.

P.I.N.: 05-11-325-005; and

435 DUANE STREET

LOTS 7 AND 8 IN BLOCK 3 IN GLENWOOD, BEING C.A. PHILLIPS SUBDIVISION OF PART OF SECTION 10 AND PART OF SECTION 11, TOWNSHIP 39 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF, RECORDED AUGUST 22, 1873 AS DOCUMENT NUMBER 16688, IN DUPAGE COUNTY, ILLINOIS.

P.I.N.: 05-11-325-004; and

431-433 DUANE STREET

LOT 5 AND 6 IN BLOCK 3 IN GLENWOOD, BEING C.A. PHILLIPS SUBDIVISION OF PART OF SECTION 10 AND PART OF SECTION 11, TOWNSHIP 39 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF, RECORDED AUGUST 22, 1873 AS DOCUMENT NUMBER 16688, IN DUPAGE COUNTY, ILLINOIS.

P.I.N.: 05-11-325-003; and

427-429 DUANE STREET

LOT 3 AND 4 IN BLOCK 3 IN GLENWOOD, BEING C.A. PHILLIPS SUBDIVISION OF PART OF SECTION 10 AND PART OF SECTION 11, TOWNSHIP 39 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF, RECORDED AUGUST 22, 1873 AS DOCUMENT NUMBER 16688, IN DUPAGE COUNTY, ILLINOIS.

P.I.N.: 05-11-325-002; and

431 MELROSE AVENUE

LOTS 1 AND 2 IN BLOCK 3 IN GLENWOOD, BEING C.A. PHILLIPS SUBDIVISION OF PART OF SECTION 10 AND PART OF SECTION 11, TOWNSHIP 39 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF, RECORDED AUGUST 22, 1873 AS DOCUMENT NUMBER 16688, IN DUPAGE COUNTY, ILLINOIS.

P.I.N.: 05-11-325-001; and

425 MELROSE AVENUE

LOTS 37, 38, 39, 40 IN BLOCK 3 IN GLENWOOD, BEING C.A. PHILLIPS SUBDIVISION OF PART OF SECTION 10 AND PART OF SECTION 11, TOWNSHIP 39 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF, RECORDED AUGUST 22, 1873 AS DOCUMENT NUMBER 16688, IN DUPAGE COUNTY, ILLINOIS.

P.I.N.s: 05-11-325-006, 05-11-325-022, & 05-11-325-023

All persons who are interested are invited to attend the public hearing to listen and be heard. Plans related to the proposed development are available for public review at any time prior to or after the Plan Commission meeting in the Community Development Department of the Civic Center, 535 Duane Street, Glen Ellyn, Illinois, and also on the Village's website at: <http://glenellyn.org> (Home/Government/Departments/Community Development/Development Projects/Avere). Questions related to the project should be directed to Kelly Purvis, Planner, (630) 547-5371.

Individuals with disabilities who plan to attend the meeting and who require certain accommodations in order to allow them to observe and participate, or who have questions regarding the accessibility of the meeting or facilities, are requested to contact Brian Baltudis at (630) 547-5209 at least 24 hours in advance of the meeting.

Kelly Purvis
Planner, Village of Glen Ellyn

X:\Plandev\PLANNING\DEVELOPMENT PROJECTS\Duane\Duane 427-443 AVERE on Duane, PUD\Public Hearing Notice 190306.docx

Attachment: Notice of Public Hearing (4023 : Avere on Duane - PUD, SUP, ZMA, SV)

427 429 DUANE LLC
OR THE CURRENT PROPERTY OWNER
490 PENNSYLVANIA AVE
GLEN ELLYN, IL 60137

ANDERSON, WILLIAM & SARAH
OR THE CURRENT PROPERTY OWNER
416 MELROSE AVE 102
GLEN ELLYN, IL 60137

BIELBY, DONNA
OR THE CURRENT PROPERTY OWNER
1 WHEATON CTR 1710
WHEATON, IL 60187

BRAUN, ROBERT P
OR THE CURRENT PROPERTY OWNER
389 DUANE ST 4-201
GLEN ELLYN, IL 60137

BRISK, BETTY A
OR THE CURRENT PROPERTY OWNER
412 MELROSE AVE 103
GLEN ELLYN, IL 60137

CARLSON, MARY
OR THE CURRENT PROPERTY OWNER
404 MELROSE AVE 204
GLEN ELLYN, IL 60137

COMMUTER RAIL DIVISION
OR THE CURRENT PROPERTY OWNER
547 W JACKSON BLVD
CHICAGO, IL 60661

DAVIS, CHRIS M
OR THE CURRENT PROPERTY OWNER
416 MELROSE AVE 302
GLEN ELLYN, IL 60137

DIOCESE OF JOLIET
OR THE CURRENT PROPERTY OWNER
16555 WEBER RD
CREST HILL, IL 60403

DUANE STREET PROPERTIES
OR THE CURRENT PROPERTY OWNER
1200 INTERNATIONALE 125
WOODRIDGE, IL 60517

450 DUANE ST LLC
OR THE CURRENT PROPERTY OWNER
450 DUANE ST
GLEN ELLYN, IL 60137

BAPTISTA JR, ROBERT C
OR THE CURRENT PROPERTY OWNER
467 DUANE ST
GLEN ELLYN, IL 60137

BMO HARRIS BANK
OR THE CURRENT PROPERTY OWNER
111 W MONROE ST 24W
CHICAGO, IL 60603

BRESOLIN, JUDITH A
OR THE CURRENT PROPERTY OWNER
385 DUANE ST 4-303
GLEN ELLYN, IL 60137

BURKE, B & A BARRETT
OR THE CURRENT PROPERTY OWNER
415 MELROSE AVE
GLEN ELLYN, IL 60137

CARTER, ADAM C & SUSAN A
OR THE CURRENT PROPERTY OWNER
426 HILLSIDE AVE
GLEN ELLYN, IL 60137

COUNTY OF DU PAGE
OR THE CURRENT PROPERTY OWNER
421 N COUNTY FARM RD
WHEATON, IL 60187

DELANY, JOHN L
OR THE CURRENT PROPERTY OWNER
410 PROSPECT AVE
GLEN ELLYN, IL 60137

DISCH, LYNN
OR THE CURRENT PROPERTY OWNER
404 MELROSE AVE 104
GLEN ELLYN, IL 60137

DUNCAN, KRISTIN
OR THE CURRENT PROPERTY OWNER
402 HILLSIDE AVE
GLEN ELLYN, IL 60137

ALMENDINGER, CATHERINE I
OR THE CURRENT PROPERTY OWNER
395 DUANE ST 301
GLEN ELLYN, IL 60137

BARNETT, DANIEL A
OR THE CURRENT PROPERTY OWNER
417 MELROSE AVE
GLEN ELLYN, IL 60137

BOSSINGA, SUSANNA B
OR THE CURRENT PROPERTY OWNER
410 MELROSE AVE 102
GLEN ELLYN, IL 60137

BRINKER, TIMOTHY M & MARY
OR THE CURRENT PROPERTY OWNER
421 HILLSIDE AVE
GLEN ELLYN, IL 60137

CARDELLI, DAN
OR THE CURRENT PROPERTY OWNER
389 DUANE ST 4-202
GLEN ELLYN, IL 60137

CLARK, H JANE
OR THE CURRENT PROPERTY OWNER
395 DUANE ST 102
GLEN ELLYN, IL 60137

DASKO, JOSEPH R
OR THE CURRENT PROPERTY OWNER
395 DUANE ST 302
GLEN ELLYN, IL 60137

DI BATTISTA, CAROLINE
OR THE CURRENT PROPERTY OWNER
395 DUANE ST 101
GLEN ELLYN, IL 60137

DUANE ST LLC
OR THE CURRENT PROPERTY OWNER
906 NORTH PATH
WHEATON, IL 60187

DUPAGE COUNTY HWY DEPT
OR THE CURRENT PROPERTY OWNER
130 N COUNTY FARM RD
WHEATON, IL 60187

EICHIN, RICHARD & E A
OR THE CURRENT PROPERTY OWNER
471 DUANE ST
GLEN ELLYN, IL 60137

EMANUEL, ROLAND J
OR THE CURRENT PROPERTY OWNER
433 DUANE ST
GLEN ELLYN, IL 60137

FAMILY SHELTER SRVCE INC
OR THE CURRENT PROPERTY OWNER
PO BOX 3404
GLEN ELLYN, IL 60138

GLEN ELLYN LIBRARY
OR THE CURRENT PROPERTY OWNER
400 DUANE ST
GLEN ELLYN, IL 60137

HART, GRAHAM & LINDA
OR THE CURRENT PROPERTY OWNER
389 DUANE ST
GLEN ELLYN, IL 60137

HOWES, MICHAEL & KAREN
OR THE CURRENT PROPERTY OWNER
457 DUANE ST
GLEN ELLYN, IL 60137

KELLEGHAN, BARABRA J
OR THE CURRENT PROPERTY OWNER
406 HILLSIDE AVE
GLEN ELLYN, IL 60137

KLEINEDLER, SYLVIA
OR THE CURRENT PROPERTY OWNER
385 DUANE ST 104
GLEN ELLYN, IL 60137

KUNNEMANN, NANCY G
OR THE CURRENT PROPERTY OWNER
506 CARLTON AVE
GLEN ELLYN, IL 60137

LEONARD, LUANNE & LAURA
OR THE CURRENT PROPERTY OWNER
393 DUANE ST
GLEN ELLYN, IL 60137

EICHLER, F & S MANLEY
OR THE CURRENT PROPERTY OWNER
389 DUANE ST 301
GLEN ELLYN, IL 60137

ENGSTROM, CRAIG & N
OR THE CURRENT PROPERTY OWNER
404 MELROSE AVE 303
GLEN ELLYN, IL 60137

FETTER, MARY T
OR THE CURRENT PROPERTY OWNER
410 MELROSE AVE 201
GLEN ELLYN, IL 60137

HAMPTON, MARGARET
OR THE CURRENT PROPERTY OWNER
410 MELROSE AVE 101
GLEN ELLYN, IL 60137

HOGAN, LESLIE H
OR THE CURRENT PROPERTY OWNER
393 DUANE ST 303
GLEN ELLYN, IL 60137

HUDSON, JOHN & DAILENE
OR THE CURRENT PROPERTY OWNER
429 HILLSIDE AVE
GLEN ELLYN, IL 60137

KEOUGH, SARA
OR THE CURRENT PROPERTY OWNER
412 MELROSE ST 204
GLEN ELLYN, IL 60137

KOEHLER, GAYLE E
OR THE CURRENT PROPERTY OWNER
393 DUANE ST 104
GLEN ELLYN, IL 60137

LANDBERG, THOMAS J
OR THE CURRENT PROPERTY OWNER
451 DUANE ST
GLEN ELLYN, IL 60137

LORCH, MICHAEL & MARJORIE
OR THE CURRENT PROPERTY OWNER
396 PROSPECT AVE
GLEN ELLYN, IL 60137

ELSHAFEI EQUITY PARTNERS
OR THE CURRENT PROPERTY OWNER
1200 INTERNATIONALE 125
WOODRIDGE, IL 60517

FAMILY SHELTER CARE SERV
OR THE CURRENT PROPERTY OWNER
PO BOX 646
GLEN ELLYN, IL 60138

FRANKLIN & KENT DESIGNS
OR THE CURRENT PROPERTY OWNER
155 FOREST AVE
GLEN ELLYN, IL 60137

HARPER LEE HOLDINGS LLC
OR THE CURRENT PROPERTY OWNER
462 PROSPECT AVE
GLEN ELLYN, IL 60137

HOOD, SANDRA M
OR THE CURRENT PROPERTY OWNER
404 MELROSE AVE 203
GLEN ELLYN, IL 60137

KAMP, PETER
OR THE CURRENT PROPERTY OWNER
412 MELROSE AVE 1-303
GLEN ELLYN, IL 60137

KILKER, ELIZABETH
OR THE CURRENT PROPERTY OWNER
385 DUANE ST 103
GLEN ELLYN, IL 60137

KOUTOULAS, FRANK
OR THE CURRENT PROPERTY OWNER
8657 W SUMMERDALE
CHICAGO, IL 60656

LANTZ, SPENCER & CANDICE
OR THE CURRENT PROPERTY OWNER
410 MELROSE AVE 202
GLEN ELLYN, IL 60137

MAHENDRA, VIKAS
OR THE CURRENT PROPERTY OWNER
385 DUANE ST 304
GLEN ELLYN, IL 60137

MAIER, SHARI & STEPHANIE
OR THE CURRENT PROPERTY OWNER
416 MELROSE AVE 201
GLEN ELLYN, IL 60137

MEYERS, NANCY A
OR THE CURRENT PROPERTY OWNER
352 TAYLOR AVE
GLEN ELLYN, IL 60137

NOSAL, DOLORES L 80415-0
OR THE CURRENT PROPERTY OWNER
404 MELROSE
GLEN ELLYN, IL 60137

PIPER, ROBERT P
OR THE CURRENT PROPERTY OWNER
393 DUANE ST 103
GLEN ELLYN, IL 60137

SADLER, BOB KLOTZ
OR THE CURRENT PROPERTY OWNER
424 PROSPECT AVE
GLEN ELLYN, IL 60137

SCRIBNER, JEFFERY&SHIRLEY
OR THE CURRENT PROPERTY OWNER
432 HILLSIDE AVE
GLEN ELLYN, IL 60137

SHUMWAY, HOWARD
OR THE CURRENT PROPERTY OWNER
389 DUANE ST 102
GLEN ELLYN, IL 60137

SMITH, TATYANA
OR THE CURRENT PROPERTY OWNER
416 MELROSE AVE 202
GLEN ELLYN, IL 60137

STUART BUCKLEY ENTERPRISE
OR THE CURRENT PROPERTY OWNER
454 DUANE ST
GLEN ELLYN, IL 60137

TOBIN, RYAN B & ERIN M
OR THE CURRENT PROPERTY OWNER
417 HILLSIDE AVE
GLEN ELLYN, IL 60137

MARTELL, T & M JACKSON
OR THE CURRENT PROPERTY OWNER
412 MELROSE AVE 304
GLEN ELLYN, IL 60137

MUNCH, LAUREN E
OR THE CURRENT PROPERTY OWNER
404 MELROSE AVE 304
GLEN ELLYN, IL 60137

PAYTON, DEAN & LISA
OR THE CURRENT PROPERTY OWNER
425 HILLSIDE
GLEN ELLYN, IL 60137

RADZINSKI, JAMES D
OR THE CURRENT PROPERTY OWNER
415 HILLSIDE AVE
GLEN ELLYN, IL 60137

SALIM, FEBIANTO
OR THE CURRENT PROPERTY OWNER
389 DUANE ST 302
GLEN ELLYN, IL 60137

SHANNON, JENNIFER
OR THE CURRENT PROPERTY OWNER
640 N MAIN ST
GLEN ELLYN, IL 60137

SIMMONS, KAREN
OR THE CURRENT PROPERTY OWNER
465 DUANE ST
GLEN ELLYN, IL 60137

STACEY, CURT D
OR THE CURRENT PROPERTY OWNER
416 MELROSE AVE 301
GLEN ELLYN, IL 60137

STUTTS, ALLISON
OR THE CURRENT PROPERTY OWNER
410 MELROSE AVE 301
GLEN ELLYN, IL 60137

TUINENGA, JAMES & JANET
OR THE CURRENT PROPERTY OWNER
502 RAIN TREE DR
GLEN ELLYN, IL 60137

MAUDE, JOSEPH & SUSAN
OR THE CURRENT PROPERTY OWNER
475 DUANE ST
GLEN ELLYN, IL 60137

MUNROE, BARBARA
OR THE CURRENT PROPERTY OWNER
428 HILLSIDE AVE
GLEN ELLYN, IL 60137

PELLETTIERE, LYNETTE
OR THE CURRENT PROPERTY OWNER
385 DUANE ST 204
GLEN ELLYN, IL 60137

REGOLE JR, RICH & LAUREN
OR THE CURRENT PROPERTY OWNER
420 PROSPECT AVE
GLEN ELLYN, IL 60137

SCHAFER, CLAUDIA
OR THE CURRENT PROPERTY OWNER
410 MELROSE AVE 302
GLEN ELLYN, IL 60137

SHEEHY, BRENDAN & MARY
OR THE CURRENT PROPERTY OWNER
411 HILLSIDE AVE
GLEN ELLYN, IL 60137

SKILTON, KELLY A
OR THE CURRENT PROPERTY OWNER
412 MELROSE AVE 104
GLEN ELLYN, IL 60137

STOSUR, APRIL
OR THE CURRENT PROPERTY OWNER
395 DUANE ST 201
GLEN ELLYN, IL 60137

TAMMARU, TAIVO & NIKKI
OR THE CURRENT PROPERTY OWNER
404 PROSPECT AVE
GLEN ELLYN, IL 60137

VAZZANO, KATHY
OR THE CURRENT PROPERTY OWNER
416 MELROSE AVE 101
GLEN ELLYN, IL 60137

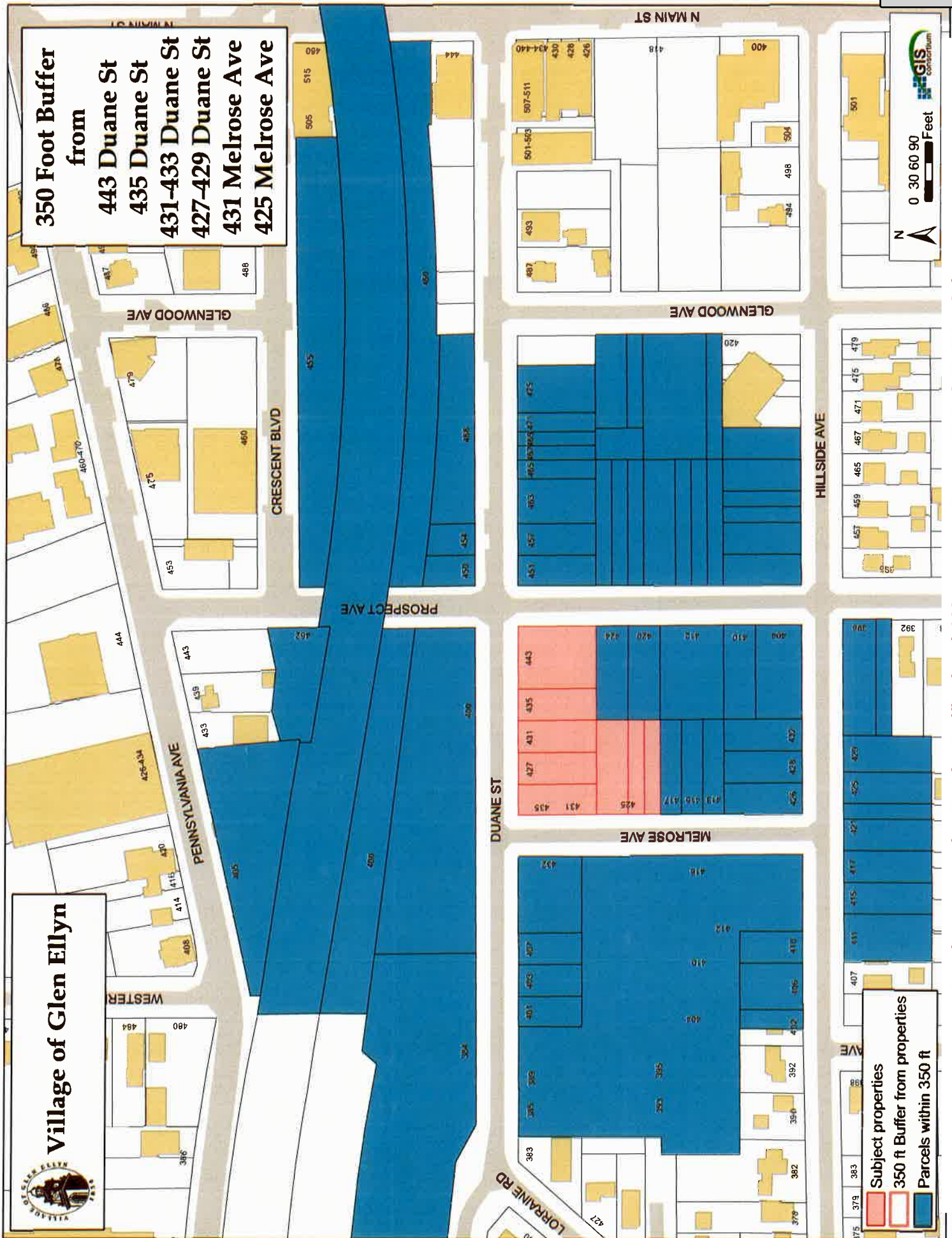
WALKER, KAMIAH A
OR THE CURRENT PROPERTY OWNER
393 DUANE ST 204
GLEN ELLYN, IL 60137

WHITE, WM & ROBB SACKETT
OR THE CURRENT PROPERTY OWNER
712 ESSEX CT
GLEN ELLYN, IL 60137

WILSON, CATHERINE JUNE
OR THE CURRENT PROPERTY OWNER
385 DUANE ST 203
GLEN ELLYN, IL 60137

WONG, GARY
OR THE CURRENT PROPERTY OWNER
413 MELROSE AVE
GLEN ELLYN, IL 60137

YU, CHIU & SHAUJING LUU
OR THE CURRENT PROPERTY OWNER
412 MELROSE AVE 203
GLEN ELLYN, IL 60137



Attachment: Location Map for Notification (4023 : Avere on Duane - PUD, SUP, ZMA, SV)

NOTICE OF PUBLIC HEARING

Matt Nix & Warren James of REVA Development Partners are requesting approval of a Special Use for a Planned Unit Development with zoning deviations, a Special Use Permit, a Zoning Map Amendment and a Sign Variation all associated with the proposed construction of a four-story multi-family residential building to be called Avere on Duane. The proposed building has an underground parking garage and there would be additional surface parking in the rear of the building. The plans are for the redevelopment of a 1.18 acre site comprised of the following properties: 443 Duane Street, 435 Duane Street, 431-433 Duane Street, 427-429 Duane Street, 431 Melrose Avenue and 425 Melrose Avenue. The subject properties are located on the south side of Duane Street between Melrose Avenue and Prospect Avenue, with a portion of the site extending southerly along the east side of Melrose Avenue. The majority of the site is in the C5B Central Business District zoning district with a small portion of the site along Melrose Avenue in the R2 and R4 Residential zoning districts. As part of the project, the entire site would be rezoned to C5B Central Business District. Before the Glen Ellyn Village Board can consider the application, the Plan Commission must conduct a public hearing. The Plan Commission will consider the requests on Thursday, June 20, 2019 at 7:00 p.m., in the Galligan Board room on the third floor of the Civic Center, 535 Duane Street, Glen Ellyn, Illinois. The Plan Commission will consider the petitioners' request for approval of the following:

1. A Special Use Permit for a Planned Unit Development in accordance with Section 10-10-15 of the Glen Ellyn Zoning Code;
2. The following deviations from the Glen Ellyn Zoning Code:
 - a. Section 10-4-17-2(E) to allow the construction of a building that will be 68.65 feet in lieu of the permitted height of 60 feet; and
 - b. Section 10-4-17-2(E) to allow the portion of the building over 45 feet to be stepped back 0 feet in lieu of the minimum step back of 15 feet; and
 - c. Section 10-4-17-2(G) to allow 82 parking spaces to be provided for the development in lieu of 92 spaces required; and
 - d. Section 10-4-17-2(D)3(a) to allow a front yard setback along Melrose Avenue to be 17.61 feet in lieu of the required 25 feet; and
 - e. Section 10-4-17-2(D)3(a) to allow a front yard setback along Prospect Avenue to be 8 feet in lieu of the required 25 feet; and
 - f. Section 10-4-17-2(D)3(b) to allow a corner side yard setback along Duane Street of 10 feet in lieu of the required 25 feet; and
 - g. Section 10-5-8(1) to allow 3 parking spaces to be 8 feet 6 inches wide in lieu of the 9 feet width required; and
 - h. Section 10-5-5(C)1 to allow an impervious surface setback along a portion of the southern property line to be 0 feet in lieu of the required 6.17 feet to allow for the construction of a private sidewalk and retaining wall at the property line; and
 - i. Any other deviations necessary to construct the development as depicted on the plans presented and available for public review.
3. A Special Use Permit in accordance with Section 10-10-14 of the Zoning Code to allow multi-family dwelling units in the C5B Central Business District.
4. An Online Map Amendment in accordance with Section 10-10-13 of the Zoning Code to rezone the R2 and R4 residentially zoned properties to C5B Central Business District zoning district.
5. A Sign Variation from Section 4-5-11(D) of the Sign Code to allow two residential development signs in lieu of 1 permitted sign.

The subject properties are legally described as follows:

443 DUANE STREET

LOTS 9, 10, 11 AND 12 IN BLOCK 3 IN GLENWOOD, BEING C.A. PHILLIPS SUBDIVISION OF PART OF SECTION 10 AND PART OF SECTION 11, TOWNSHIP 39 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF, RECORDED AUGUST 22, 1873 AS DOCUMENT 16688, IN DUPAGE COUNTY, ILLINOIS.

P.I.N.: 05-11-325-005; and

435 DUANE STREET

LOTS 7 AND 8 IN BLOCK 3 IN GLENWOOD, BEING C.A. PHILLIPS SUBDIVISION OF PART OF SECTION 10 AND PART OF SECTION 11, TOWNSHIP 39 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF, RECORDED AUGUST 22, 1873 AS DOCUMENT NUMBER 16688, IN DUPAGE COUNTY, ILLINOIS.

P.I.N.: 05-11-325-004; and

431-433 DUANE STREET

LOTS 5 AND 6 IN BLOCK 3 IN GLENWOOD, BEING C.A. PHILLIPS SUBDIVISION OF PART OF SECTION 10 AND PART OF SECTION 11, TOWNSHIP 39 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF, RECORDED AUGUST 22, 1873 AS DOCUMENT NUMBER 16688, IN DUPAGE COUNTY, ILLINOIS.

P.I.N.: 05-11-325-003; and

427-429 DUANE STREET

LOT 3 AND 4 IN BLOCK 3 IN GLENWOOD, BEING C.A. PHILLIPS SUBDIVISION OF PART OF SECTION 10 AND PART OF SECTION 11, TOWNSHIP 39 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF, RECORDED AUGUST 22, 1873 AS DOCUMENT NUMBER 16688, IN DUPAGE COUNTY, ILLINOIS.

P.I.N.: 05-11-325-002; and

431 MELROSE AVENUE

LOTS 1 AND 2 IN BLOCK 3 IN GLENWOOD, BEING C.A. PHILLIPS SUBDIVISION OF PART OF SECTION 10 AND PART OF SECTION 11, TOWNSHIP 39 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF, RECORDED AUGUST 22, 1873 AS DOCUMENT NUMBER 16688, IN DUPAGE COUNTY, ILLINOIS.

P.I.N.: 05-11-325-001; and

425 MELROSE AVENUE

LOTS 37, 38, 39, 40 IN BLOCK 3 IN GLENWOOD, BEING C.A. PHILLIPS SUBDIVISION OF PART OF SECTION 10 AND PART OF SECTION 11, TOWNSHIP 39 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF, RECORDED AUGUST 22, 1873 AS DOCUMENT NUMBER 16688, IN DUPAGE COUNTY, ILLINOIS.

P.I.N.s: 05-11-325-006, 05-11-325-022, & 05-11-325-023

All persons who are interested are invited to attend the public hearing to listen and be heard. Plans related to the proposed development are available for public review at any time prior to or after the Plan Commission meeting in the Community Development Department of the Civic Center, 535 Duane Street, Glen Ellyn, Illinois, and also on the Village's website at: http://glenellyn.org/Home/Government/Departments/Community_Development/Development_Projects/Avere. Questions related to the project should be directed to Kelly Purvis, Planner, (630) 547-5371. Individuals with disabilities who plan to attend the meeting and who require certain accommodations in order to allow them to observe and participate, or who have questions regarding the accessibility of the meeting or facilities, are requested to contact Brian Battulis at (630) 547-5209 at least 24 hours in advance of the meeting.

Kelly Purvis

Planner, Village of Glen Ellyn

Published in Daily Herald June 5, 2019 (4526229)

RECEIVED

JUN 11 2019

VILLAGE OF GLEN ELLYN

CERTIFICATE OF PUBLICATION

Paddock Publications, Inc.

DuPage County

Daily Herald

Corporation organized and existing under and by virtue of the laws of the State of Illinois, DOES HEREBY CERTIFY that it is the publisher of the **DuPage County DAILY HERALD**. That said **DuPage County DAILY HERALD** is a secular newspaper, published in Naperville and has been circulated daily in the Village(s) of:

Addison, Aurora, Bartlett, Bensenville, Bloomingdale, Carol Stream, Darien, Downers Grove, Elmhurst, Glen Ellyn, Glendale Heights, Hanover Park, Hinsdale, Itasca, Keeneyville, Lisle, Lombard, Madison, Naperville, Oakbrook, Oakbrook Terrace, Plainfield, Roselle, Villa Park, Warrenville, West Chicago, Westmont, Wheaton, Willowbrook, Winfield, Wood Dale, Woodridge

County(ies) of DuPage

and State of Illinois, continuously for more than one year prior to the date of the first publication of the notice hereinafter referred to and is general circulation throughout said Village(s), County(ies) and State.

I further certify that the DuPage County DAILY HERALD is a newspaper as defined in "an Act to revise the law in relation to notices as amended in 1992 Illinois Compiled Statutes, Chapter 715, Act 5, Section 1 and 5. That a notice of which the annexed printed slip is a true copy, was published 05-JUN-19 in said DuPage County DAILY HERALD.

IN WITNESS WHEREOF, the undersigned, the said PADDOCK PUBLICATIONS, Inc., has caused this certificate to be signed by, the authorized agent, at Arlington Heights, Illinois.

PADDOCK PUBLICATIONS, INC.
DAILY HERALD NEWSPAPERS

BY

Designee of the Publisher and Officer of the Daily Herald

Control # 4526229

The primary traffic issues within Downtown relate to the delays caused by rail traffic along the Union Pacific line that passes through the heart of the commercial area. While Downtown is served by three at-grade crossings, the delays at these crossings are a concern to many residents and business persons and a constraint to emergency vehicle response.

- **Parking.** Parking within Downtown is provided by a series of off-street parking lots and curb parking spaces along most streets. In addition to a number of private parking lots that serve specific businesses, the Village operates twelve municipal parking lots located both north and south of the railroad. Spaces in several municipal lots are designated for commuters.

A recent parking study undertaken by the Glen Ellyn Economic Development Corporation determined that, while there is an adequate number of total parking spaces to serve Downtown, parking is not well distributed, particularly within the heart of the commercial area. Parking concerns will increase in the future as Downtown continues to experience new development.

- **Appearance and Character.** Downtown has an attractive appearance and character due in part to its small, compact size; a number of buildings with architectural and historic interest; the area's pedestrian orientation; recent streetscape improvements along several streets and walkways; the presence of the Prairie Path; and the close proximity of attractive and well maintained in-

stitutional properties and residential neighborhoods.

However, several improvements could be undertaken to further upgrade the image, appearance and convenience of the Downtown streets, buildings, parking lots and open spaces.

Improvement and Development Guidelines

Downtown should continue to be improved and enhanced as the historic, pedestrian-oriented shopping, service and multi-purpose focal point for Glen Ellyn. While other commercial and office areas will have important functional roles as well, Downtown should remain unique in terms of the mix of uses and the range of businesses, services and other activities it offers to the community.

The traditional image and character of Downtown should be maintained and enhanced, existing uses and properties should be improved and upgraded, public improvements should be undertaken to enhance the public rights-of-way, and compatible new development and redevelopment should be promoted in selected locations.

Improvement and development recommendations for Downtown Glen Ellyn are described below and highlighted in Figures 12 and 13. Recommendations relate to: a) land-use, b) existing buildings, c) new construction, d) streets and transportation, e) parking, f) streetscape and pedestrian amenities, and g) open spaces.

LAND-USE:

- Downtown should consist of an exciting mix of retail, service, entertainment, office and public uses, as well as housing units. It should continue to be oriented primarily to the needs of the Glen Ellyn community.
- Downtown should remain relatively small and compact, and the present character of the area should essentially be maintained. However, the intensity of use could be increased in several blocks through the redevelopment of vacant properties, selected parking lots and other existing uses.
- The commercial portion of Downtown should be generally bounded by the properties along the north side of Pennsylvania Avenue on the north, Western Avenue and Prospect Avenue on the west, Duane and Hillside on the south, and Park Boulevard on the east (see the Land-Use Plan in Figure 12). The Downtown commercial area should not undergo expansion into adjacent neighborhoods.
- The central portion of Downtown should continue to be reserved primarily for retail and pedestrian-oriented service uses. It should include an attractive mix of local and national stores and businesses.
- Main Street between Pennsylvania and Hillside Avenue, and Crescent Boulevard between Main and Forest, should continue to be enhanced as the "pedestrian shopping area."

pearance of properties along the rail line, including parking lots and the rear portions of sites and buildings. These properties are highly visible to commuters on a daily basis, and many people base their impression of Downtown—and the community as a whole—on their view from the train.

NEW CONSTRUCTION:

- While new buildings need not be historic replicas, they should offer high quality and compatible interpretations of the predominant architectural styles now present within the Downtown. In particular, new buildings should reflect the attractive architectural detailing, quality of workmanship and traditional building materials that characterize Downtown's historic structures.

- New construction should respect the existing scale of Downtown and avoid extreme differences in building height. Two- and three-story buildings should predominate, although the height of buildings on specific parcels should continue to be governed by zoning.

- The Village should review building height requirements within the C5A and C5B zoning districts, while still supporting desirable retail and mixed-use development. A range of factors should be considered when determining the height of new Downtown buildings, including: a) the height of nearby existing buildings, b) the pedestrian scale and orientation of Downtown, c) the proximity of new buildings to residential neighborhoods, d) topography, e) the economics of

Downtown development, and f) sight lines in relation to prominent visual landmarks and historic features.

- New commercial buildings within the pedestrian shopping area should be located at or very near the sidewalk line in order to maintain close contact between pedestrians and the adjacent stores, shops and display windows. If buildings are set back from the sidewalk, landscaping and/or decorative amenities should be provided to maintain this pedestrian orientation.
- Buildings within the pedestrian shopping area should "front" the street. The placement of buildings at odd or irregular angles to the street should be discouraged within this area. However, buildings at key intersections may incorporate angled corners or other small setbacks.
- Most older Downtown commercial buildings have relatively small "footprints" and are located on lots with narrow widths. However, many contemporary commercial uses require larger spaces, more generous floor areas, and higher ceiling heights than are afforded by these older buildings. The Village should encourage the provision of larger spaces to accommodate new commercial uses, either as a part of new construction or through the interior remodeling and interconnection of several adjacent existing stores and shops.
- New construction should respect the predominant scale and proportion of existing Downtown buildings. Architectural details such as columns, pilasters, and window and door placement should be used to ar-

should be used to articulate the façades of large new buildings into several smaller vertical "segments" to reflect the scale and proportion of adjacent existing buildings.

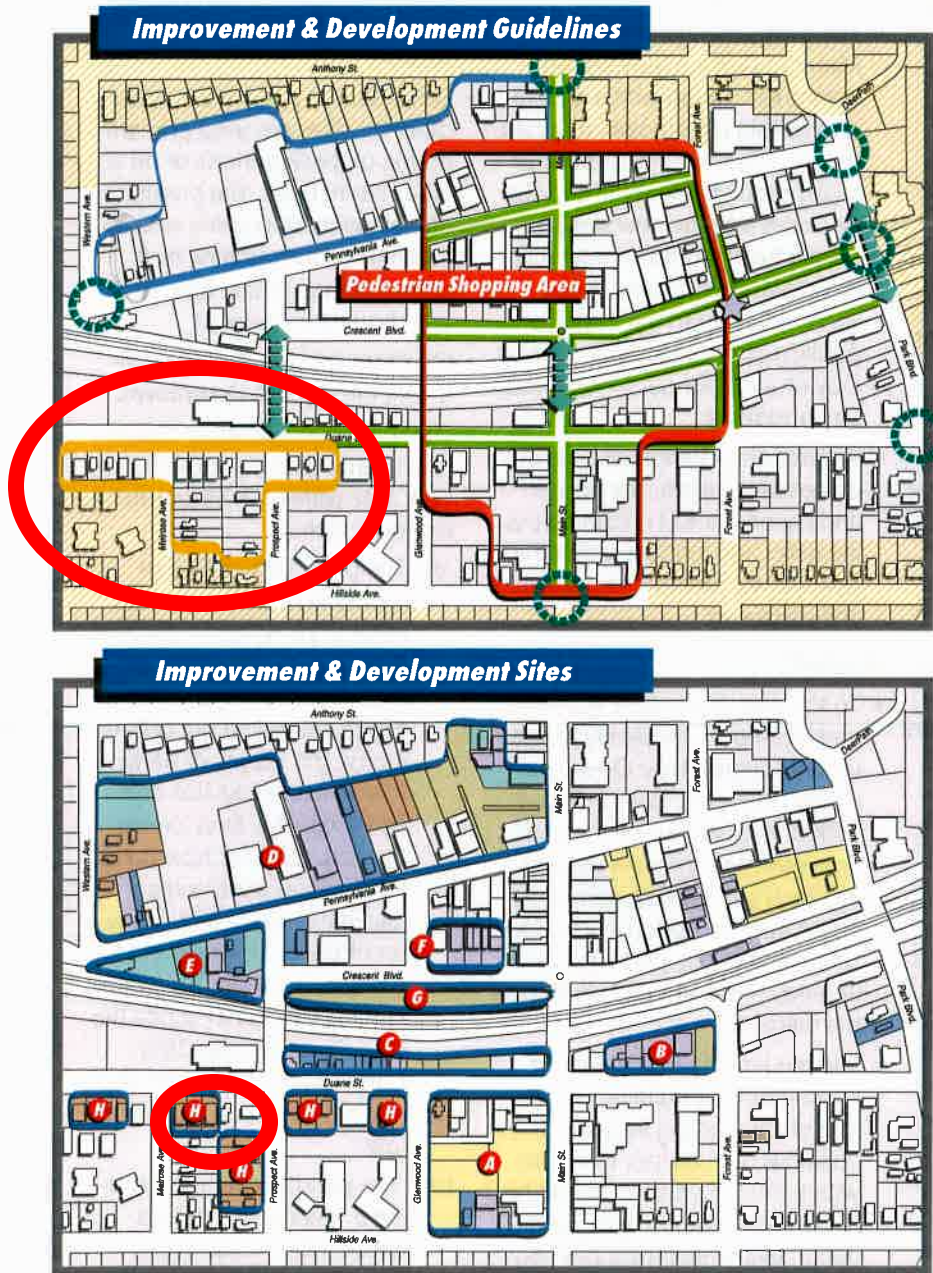
- New buildings should be constructed of traditional building materials such as brick and stone in the red and buff color ranges.
- Parking garages, if constructed, should complement the appearance of existing Downtown buildings in terms of scale, bulk, materials and façade articulation. The ground floor of parking structures within the pedestrian shopping area should be used for stores or pedestrian-oriented service establishments.

STREETS and TRANSPORTATION:

- The existing Downtown street system should be essentially maintained and no significant modifications are recommended. While opportunities to improve traffic safety and traffic flow should continue to be explored, pedestrians should receive priority within the Downtown area.
- The Village should use the new street classification established in the Comprehensive Plan—the "Village arterial"—as a guide for arterial streets passing through or near the Downtown. While the Village arterial should provide access to Downtown in a manner similar to the "minor arterial," it should be oriented to community traffic and should be characterized by an overall image, appearance and cross-section in keeping with the central portion of Glen Ellyn.

Figure 13

Downtown: Improvement Guidelines



Improvement Guidelines:

Continue to improve and enhance the heart of Downtown as a pedestrian-oriented shopping and business area.

Reorganize and redevelop the northwest quadrant of Downtown as an attractive and convenient office and service area.

Continue streetscape and other design enhancements, particularly along the east-west streets within Downtown.

Provide "gateway" design features that denote entry into the Downtown and delineate its boundaries.

Work with Metra to replace the existing commuter station with a new Downtown facility.

Improve pedestrian connections between the north and south sides of Downtown.

Promote replacement of older structures with high-quality townhomes and similar multi-family developments.

Maintain, preserve and protect surrounding neighborhoods. (See text for additional improvement and development guidelines)

Improvement & Development Sites:

Projects either underway or being discussed (see accompanying text).

Vacant buildings and land parcels should be reused or redeveloped.

Marginal and underutilized properties should be reused and upgraded or replaced with new development.

Residential properties that may be subject to redevelopment.

Surface parking lots along the frontage of primary shopping streets should be considered for new development.

Sound and viable businesses that would benefit from building or site improvements.

Clusters of properties that may represent special opportunities for improvement or development (see text).

Comprehensive Plan • Village of Glen Ellyn, Illinois

Prepared by Trkla, Pettigrew, Allen & Payne, Inc. • Parsons Transportation Group • April 2001

- **Site F** includes the north side of Crescent Boulevard, from Glenwood Avenue east to the alley. It currently contains several small buildings with retail and service uses.

Site F should be upgraded and improved for retail and pedestrian-oriented service use, which would help strengthen the east-west dimension of the pedestrian shopping area.

A desirable long-term redevelopment pattern for this block would entail new stores and shops along the Crescent Boulevard sidewalk, with parking located to the rear of the buildings.

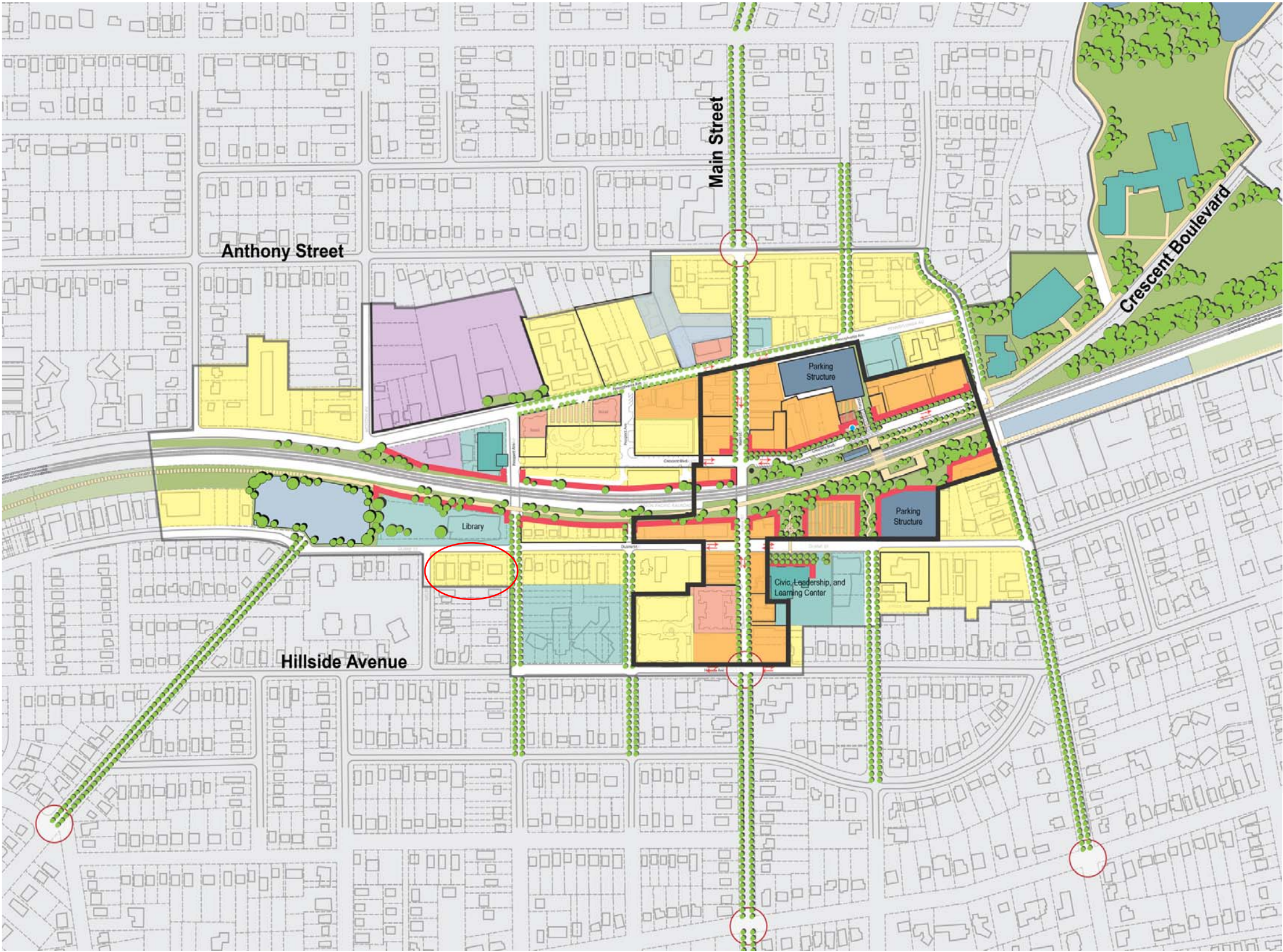
- **Site G** includes the south side of Crescent Boulevard between Main Street and Prospect Avenue. It currently contains Little Hands Toys, other commercial uses, and surface parking.

While this site would be a suitable location for retail or service uses, the limited depth of lots will be a major constraint to redevelopment. However, the site might be considered for a small parking deck, perhaps including some ground floor commercial space.

If new building development takes place, buildings should be positioned at street corners and other highly visible locations within the block. The one-story commercial building that houses Little Hands Toys adds to the image and character of Downtown and should be retained if possible.

If existing surface parking is retained, the lot should be extensively landscaped in order to improve views from the commuter train.

- **Site H.** Several areas in the southwest portion of Downtown are designated as "Site H." Each of these areas includes older single-family homes or multi-family structures that are showing signs of age and deferred maintenance. These properties have excellent proximity to a wide range of Downtown facilities and services as well as public transportation, and could be suitable locations for new townhomes or small condominium buildings, of a scale and character similar to the newer existing multi-family developments already located within this immediate area.



Source: Town Builder Studios

Figure 29:

Land Use Plan



Multiple Family Residential

The Downtown has been converted to a dense, mixed-use neighborhood with a variety of residential housing types and unit prices. The number of residential units in the Downtown has been maximized to ensure an active evening and weekend population. A total of 450 dwelling units have been added to the Downtown. They are smaller in size to cater to the needs of the smaller-sized households that are attracted to the downtown living concept. In addition, the young professional and empty-nester residents have the convenience of commuting into Downtown Chicago via Metra without the need for Downtown commuter parking.

Unit types include rental apartments above first floor retail in the Downtown core; mid-rise condominiums, garden condominiums, and townhouses surrounding the Downtown core; and existing single family homes with new accessory dwelling units³ on the periphery (within a quarter-mile) of the Downtown core. Pennsylvania Avenue and Glenwood Avenue have been converted into neighborhood streets.

A new urban residential neighborhood is located west of Main Street, north of the railroad tracks, south of Pennsylvania Avenue, and east of Prospect Avenue. Occupants include young professionals, empty-nesters, senior citizens, and young families. Existing businesses have been relocated to other Downtown locations, including the first floors of the buildings fronting Pennsylvania Avenue. This redevelopment was made possible with the Village's effort to assemble the property in partnership with the existing property owners and the private investment community.



Figure 33: Perspective Sketch – Pennsylvania Avenue Mixed-Use and Residential Buildings.
Source: Town Builder Studios.

Medical Office / Service

The DuPage Medical Group's Glen Ellyn Clinic has drawn newer office users into the Downtown, especially in its northwestern periphery. This has resulted in the incubation of start-up professional office businesses, increased Downtown employment opportunities, and an increased Downtown daytime population.

³ Accessory Dwelling Unit (ADU). A small efficiency apartment that typically includes a kitchenette, a bathroom, a combination living/dining/sleeping space, and is approximately 650 square feet in size. It is usually located above a two-car detached garage; however, it could be a part of the single family home – such as in an attic or a basement – as long as the proper building codes are adhered to. The ADU option can be accomplished by creating an overlay district for the “R-2” (Single Family) Residential District, and single family homes permitted by special use in the “R-4” (Multiple Family) Residential District.

Opportunity Sites

Communities will always change and evolve, and Glen Ellyn is no exception. The properties illustrated and listed below are identified for their potential to be redeveloped, repurposed, and/or reinvigorated.

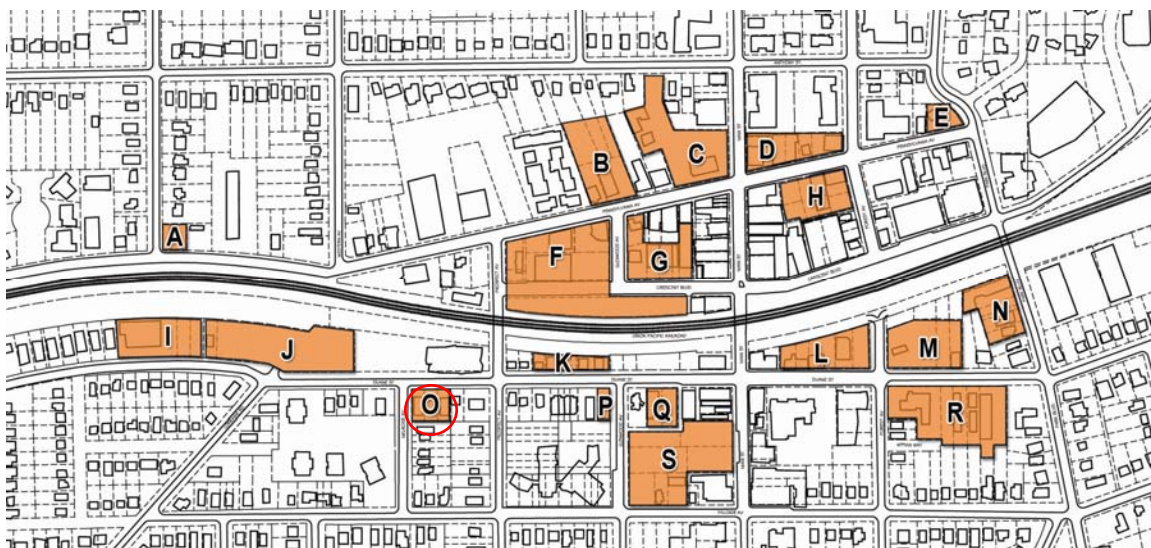


Figure 23: Properties Susceptible to Change

Source: Town Builder Studios

North side of Pennsylvania, left to right:

- A. Redevelop or retrofit vacant small office building.
- B. Redevelop or repurpose buildings and utilize back yards of adjacent residential properties.
- C. Redevelop Fire Station property – with or without relocation of Fire Station.
- D. Redevelop or repurpose buildings, and retain historic features.
- E. Redevelop or retrofit auto service property.

South side of Pennsylvania, left to right:

- F. Potential residential redevelopment with structured parking.
- G. Potential residential redevelopment with structured parking.
- H. Convert properties to a mixed-use parking structure with a pedestrian-friendly and historically-sensitive development pattern.

North side of Duane, left to right:

- I. Preliminary Planned Unite Development (PUD) approved for 20 townhomes on the three westernmost properties. (The developer will not be moving forward with this project.)
- J. House and Duane/Lorraine lot could be converted to other uses yet retain parking.
- K. PUD approved for a row house development between Prospect and Glenwood.
- L. Retrofit properties to historically-sensitive, mixed-use building designs, and include some greenspace.
- M. Retrofit bank property into a mixed-use parking structure with a pedestrian-friendly and historically-sensitive development pattern.
- N. Convert low-activity corner to new uses that cater to Illinois Prairie Path users.

→ South side of Duane, left to right:

- O. Redevelop existing multiple-family to new multiple-family with a historically-sensitive development pattern.
- P. Redevelop parking lot with a new multiple-family use.
- Q. Convert office building and parking lot into a more context-sensitive, office or mixed-use development.
- R. Redevelop funeral home (optional) and multiple family buildings into a new multiple-family redevelopment.

West side of Main Street:

- S. Redevelop parking lots to new uses such as a mixed-use building along Main Street and multiple family residential buildings along Glenwood Road, yet retain the parking supply. The building should have the same setback as the neighboring buildings.

Multi-Modal Transportation Analysis

Access to and within the Downtown is critical to its success. Streets, sidewalks, pathways and the railroad are the paths of access to the Downtown. Many residents who live near the Downtown choose to walk due to the short distance, for the exercise, and to avoid driving around Downtown looking for a parking space.

Pedestrians

Many participants in the planning process mentioned that one of the positive attributes of the Downtown is its pedestrian-friendliness. Many of these same people also mentioned that parking is not convenient, while others said that if someone is willing to walk just a block or two there is ample parking. Pedestrian-friendliness is more than just walking a block or two – the walk also needs to be enjoyable enough that a one- or two-block walk doesn't seem like a long distance.

Sidewalks and crosswalks are key components of pedestrian-friendliness – too narrow and people bump into each other as they pass by; too wide/empty and the ambiance can feel cold and uninviting; too poorly maintained and they become a safety hazard; and too much snow and ice and people might go home or shop in an enclosed mall. Not every driver yields to pedestrians in crosswalks, so crossing streets can sometimes result in an unpleasant experience.

Multiple participants mentioned issues regarding the maintenance of the sidewalks – either sections of concrete that are in need of repair/replacement or that sidewalks are not completely cleared of snow/ice. Piles of snow along the curb line also make it difficult for people to get in and out of their cars when they utilize on-street parking.

Bicycles

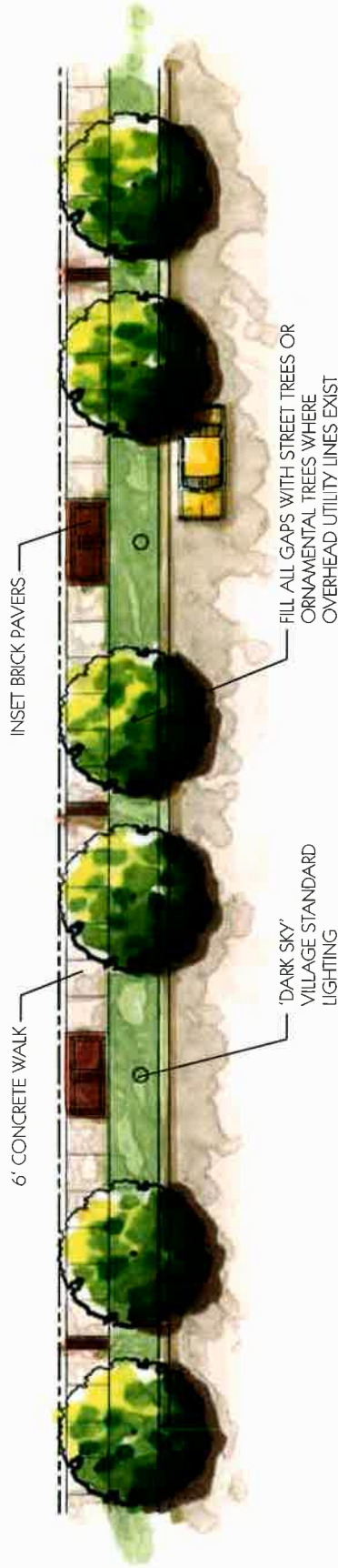
Finding safe routes of travel to and from the Downtown – for recreation or for transportation purposes – must be a high priority.

The DuPage County Bikeways and Trails Map, indicates a “Proposed Local Bikeway” along Lorraine Road from Duane Street, south to Roosevelt Road (via Greenfield Avenue and Lambert Avenue), past the Glen Ellyn Village Links, east on Fawell Boulevard, to points east of I-355.

Observations indicate that many more racks are needed in the Downtown due to high bicycle parking demand – especially on nice days (i.e. bikes are locked up to lamp posts, trees, and fences).

Prairie Path Park is listed as a point of interest along the Illinois Prairie Path, and a drinking fountain is the only amenity listed for Downtown Glen Ellyn in the DuPage County Trail Guide⁴. The Downtown has more than that to

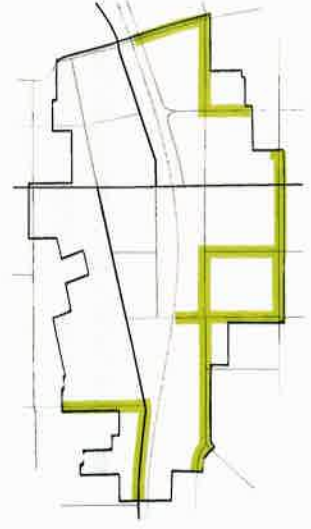
⁴ <http://www.dupageco.org/bikeways/trailGuide.pdf>



URBAN RESIDENTIAL STREETSCAPE CONCEPT

The Urban Residential Streetscape Areas are those areas that are still technically within Downtown but primarily residential in character and feel. Examples include Duane west of Glenwood and Western Avenue north of Pennsylvania. These locations include active uses such as the library and Glen Ellyn clinic, but are primarily residential in character in terms of parkways, sidewalk widths, setbacks etc.

'Dark Sky' Village lighting standards, applicable Village-wide but especially beneficial in residential neighborhoods, should be included at both sides of the street. Street trees or ornamental trees should be planted in any parkways lacking plantings. Screen plantings should be provided to screen parking, loading, or utility areas. Tree spacing will vary depending on preserved trees, light standard spacing, utility locations, etc., but should be no greater than 50' and no less than 25'.



DRAFT MINUTES
REGULAR PLAN COMMISSION MEETING
NOVEMBER 9, 2017

Call to Order

The regular meeting of the Plan Commission was called to order by Chairperson Mary Loch at 7:00 p.m. Plan Commissioners Angela Fanella, Phillip Hartweg, Tracy Heming-Littwin, Tim Loftus, David Rodemann, Mohammed Saeed and Jamie Vondruska were present. Plan Commissioner Terra Costa Howard was excused. Also present were Planning and Development Director Staci Hulseberg, Village Planner John Sterrett, Recording Secretary Barbara Utterback and Village Trustee Liaison Craig Pryde.

Public Comment

No general comments on non-agenda items were made by the public at this Plan Commission meeting.

Approval of Draft Minutes

Commissioner Heming-Littwin moved, seconded by Commissioner Saeed, to approve the minutes of the September 14, 2017 Plan Commission meeting. The motion carried unanimously by voice vote.

Chairperson Loch explained the Pre-Application process as these are informal presentations of a developer's concept.

Pre-Application Meeting – 400 N. Main Street – Nick Roberge and Joel Frieders – Zoning Text Amendment and Special Use Permit

On the agenda was a pre-application meeting regarding a proposed remodeling of the existing Giesche Shoes building located at 400 N. Main Street.

Staff Presentation

Village Planner Sterrett presented the background on this and showed an overview of the property. Village Planner Sterrett stated the subject property is located at 400 N. Main Street, on the northwest corner of Main Street and Hillside Avenue in the C5A Central Retail Core Sub-district. Village Planner Sterrett stated the petitioner is proposing to renovate the interior of

the existing building for the use of a restaurant, café and event space. Village Planner Sterrett stated the event space would require a Zoning Text Amendment and a Special Use Permit. Village Planner Sterrett stated the property is approximately 19,000 square feet in size, and there is a two-story vacant building that was formerly used for retail purposes (Giesche Shoes). Village Planner Sterrett stated there are seven existing parking spaces on Hillside Avenue, and there is some space in the back for parking as well.

Village Planner Sterrett stated the petitioner is proposing to do an interior renovation of the building to do a restaurant use in approximately 3,280 square feet of space on the south single-story portion of the building, an outdoor patio and an approximate 1,970 square foot rooftop dining area. Village Planner Sterrett stated the petitioner has indicated this could seat approximately 335 people within the restaurant space. Village Planner Sterrett stated there is also an event space and café use in the 3,670 square feet of 1st floor area on the two-story portion of the building, and the event space would be in the 6,300 square foot space on the 2nd floor. Village Planner Sterrett stated the total building would be able to hold 750 to 800 people.

Village Planner Sterrett stated a restaurant and a café are permitted uses in the C5A zoning district, but an event space is not a permitted use nor a Special Use in C5A so a Zoning Text Amendment would be required to add a use category for event space and a banquet facility within C5A. Village Planner Sterrett stated there would also need to be a Special Use Permit to allow an event space and banquet facility.

Village Planner Sterrett stated the Plan Commission should consider the potential Zoning Text Amendment to include a category for event spaces in C5A and potential parking issues on the site.

Questions from the Plan Commission

None

Petitioner's Presentation

Joel Frieders, petitioner and partner in JDR Construction and Elemy, LLC, introduced his partners: Jeremy Jensen, partner in JDR Construction and Elemy, LLC, Nick Roberge, owner of Maize + Mash and Barrel and Rye and Megan Paul, with VARA Design. Mr. Frieders stated their simple goal is to preserve the iconic and historical characteristics of the building while bringing in 3 complimentary businesses to downtown Glen Ellyn. Mr. Frieders stated they are proposing a café/lunch space, a restaurant concept with a street-side patio, rooftop dining, a 2nd story luxury event space and a 2nd story rooftop dining event space. Mr. Frieders stated the proposed

improvements would include updating the fire safety pieces of alarms and sprinklers, ensuring ADA accessibility, installing a freight elevator, installing energy-efficient windows and upgrading the utilities. Mr. Frieders stated they would leave the original façade intact as it is striking now.

Mr. Frieders stated in regards to parking, if they left the building as a retail establishment as it is right now, they would not need any additional parking. Mr. Frieders stated they met with a valet company, Top Tier Valet, to see if a valet service could be feasible. Mr. Frieders stated Joe Colucci with Top Tier Valet would reach out to the local churches to see about possibilities of using their parking lots.

Mr. Frieders stated there would be a positive impact on the neighboring properties as the new businesses and updates to the building would increase the value in the downtown while bringing Glen Ellyn into an event and food destination. Mr. Frieders stated they understand there could be noise concerns, but the building is built with concrete slabs so there is not a likelihood of noise reverberation. Mr. Frieders stated with concerns to odors, Mr. Roberge is in the restaurant business, and Mr. Roberge has not had any odor complaints with the restaurants he currently owns. Mr. Frieders stated they will be venting, using the appropriate exhaust hoods and fans.

Mr. Frieders referred to the Glen Ellyn Comprehensive Plan and stated the plan says that businesses in the downtown should maintain and expand the range of commercial development.

Comments from the Plan Commission

Commissioner Heming-Littwin asked for an explanation of the outdoor area as there seems to be two different outdoor spaces and if the 1st story is a part of the restaurant space or the event space. Mr. Jensen stated on weekdays, the 1st story is a part of the restaurant space, and on the weekends, it would be a part of the event space. Mr. Jensen stated a stairway and elevator would be added.

Commissioner Fanella asked if Maize + Mash would stay where it is currently or move into this space to which Mr. Roberge stated Maize + Mash would remain where it is. Commissioner Fanella asked how confident the valet company is that they will be able to find parking. Mr. Frieders stated the first possible lots would be at St. Petronille's Church and the Glen Ellyn Bible Church which would be approximately 150 to 175 spaces in total. Mr. Frieders stated part of their business model is explaining how the valet company comes up with their charges.

PLAN COMMISSION

-4-

NOVEMBER 9, 2017

Commissioner Saeed asked if they would rent the parking lots on long-term basis to which Mr. Frieders stated they would.

Commissioner Loftus asked how trash from the restaurant would be handled. Mr. Jensen stated there is an alley that goes along the west side where they would put the dumpsters. Mr. Jensen stated they would have garbage service often. Commissioner Loftus asked what their vision is regarding signage. Mr. Jensen stated they have not fully looked at their signing concept yet, but they will figure this out with next steps.

Commissioner Heming-Littwin asked what type of restaurant would go in the space. Mr. Roberge stated the concept will fit in, but will not be a concept already used in the downtown.

Commissioner Loftus asked if there would be outdoor music on the rooftop. Mr. Jensen stated they have not gotten to this yet, but they will ensure they are good neighbors.

Commissioner Hartweg stated there is no elevator now, it might make more sense to put the elevator in the middle of the building instead of at the edge. Mr. Jensen stated if they put the elevator in the middle of the building, this would separate the event space too much in the middle.

Commissioner Fanella asked if they would be taking out the planters in front and correct the unevenness to which Mr. Frieders stated they would be.

Commissioner Loftus asked about a proposed timeline. Mr. Frieders stated they could have the design done in 3 to 5 months and then another 12 to 18 months for the building to be redone.

Public Comments

Ann Elliott, who resides at 695 Oak Street, stated Glen Ellyn has a wonderful hub of restaurants. Ms. Elliott stated as Glen Ellyn is continuing to grow, they are strangling the restaurants as there is not enough parking. Ms. Elliott stated the valet seems like a great option, but feels many people will not use the valet. Ms. Elliott stated they would need to implement and push through a parking solution.

Michael Vai, co-owner of Fire + Wine at 433 N. Main Street, stated this design looks cool, but he does have some concerns. Mr. Vai stated there will be 4 restaurants coming into the downtown, and his customers complain now about the lack of parking. Mr. Vai stated his son runs a valet company, and he thought of using a valet company too, but a valet is expensive and then they all running all over the place to park and fetch cars. Mr. Vai asked where all the parkers would be put. Mr. Vai stated this new restaurant would also be a dilution to business

and wonders then who will want to come to the downtown. Mr. Vai stated this could bring a lot of congestion to the downtown even though this is a great project.

Bob Davidson, co-owner of Blackberry Market at 401 N. Main Street, stated he feels a little torn on this because himself and his wife engaged in a contract on this site a year ago and had Jamie Simoneit draw up numerous plans as they were trying to do the same thing that is being suggested. Mr. Davidson stated he is concerned for his business with this new development as well as the parking situation. Mr. Davidson stated the way people park in Glen Ellyn is to take a loop and then one more loop and if they cannot find parking, they go home. Mr. Davidson stated he is concerned with the proposed valet situation as well as people will first try to find open spots and then will go to the valet. Mr. Davidson stated he is concerned about the sheer number of restaurants in the downtown. Mr. Davidson stated he is constantly getting on his employees about parking in the correct places. Mr. Davidson stated they need to consider if this is good and the best thing for the community. Mr. Davidson stated he thinks an event space is needed, and they hated pulling out of this last year. Mr. Davidson stated they should look at the numbers because they were crazy and did not possibly make business sense. Mr. Davidson stated he does not want to see the Giesche Shoe building torn down.

Weldon Johnson, who resides at 325 Lorraine Street, stated the discussions have to do with resident benefits and economic development. Mr. Johnson stated there is a problem with parking and the overall traffic flow. Mr. Johnson stated there have been a lot of discussions about possible things coming to the Village, but very little seems to come from these discussions. Mr. Johnson stated something needs to be done about bringing things to conclusions in one way or another.

Cheryl Greber, who resides at 397 Lorraine Street, stated they move to Glen Ellyn because it is a small community with not much traffic. Ms. Greber stated the restaurant and concept look wonderful, but for downtown Chicago and not downtown Glen Ellyn. Ms. Greber stated parking will be bad as she had to park several blocks away just to get to tonight's meeting. Ms. Greber stated there is mass at St. Petronille's on Saturday nights so a valet using that lot would not work. Ms. Greber stated she lives fairly close to town and does not want people going to the restaurants parking in her front yard. Ms. Greber stated she does not want the traffic this will bring, and this is not meant for Glen Ellyn.

Claudia Schaefer, who resides at 410 Melrose, stated she loves seeing a project that maintains the integrity of a building, and she hopes the parking situation can be worked out. Ms. Schaefer stated instead of the REVA development, they should make this site a parking lot.

Christy Bockelman, who resides at 765 Prairie Avenue, stated the concept and design are beautiful, but the parking situation will be a nightmare. Ms. Bockelman asked for a show of

hands for how many people in the room had problems parking for tonight's meeting, and many people raised their hands. Ms. Bockelman stated parking and the capacity are big concerns as well as the dilution of business. Ms. Bockelman stated this would be like exchanging businesses as they would be trading money from one business to another. Ms. Bockelman stated this is a permit-variance happy community. Ms. Bockelman stated this seems out of scale and out of plan in Glen Ellyn.

Ken Kloss, who resides at 350 Ridgewood Avenue, stated for parking, they should utilize the space that was used for the Police Department's parking. Mr. Kloss stated they need to give the restaurants a chance. Mr. Kloss stated there should be a passageway that people can access from one point to another.

Christine Berg, who resides at 355 Center, stated she has lived in Glen Ellyn for a year and has heard about restaurant row and the parking situations. Ms. Berg asked if the town is starting to fail as businesses seem to be closing. Ms. Berg stated they need to have a town that the residents are happy to see, where things are getting done, where businesses can open and where the parking is fixed.

John Splenka, who resides at 415 Kenilworth, stated he is the Senior Planner for Carpentersville, and in his professional opinion, there is plenty of parking in the downtown, but there is a perception as to where you can find it. Mr. Splenka stated he is not sure if a parking garage would solve this problem. Mr. Splenka stated if you amend the Zoning Code to allow an event space, this would be an opportunity to consider what parking requirements will be needed for event spaces/banquet halls. Mr. Splenka stated he thinks the proposal has a lot of great ideas, but the number of occupants seems great as well. Mr. Splenka stated they should consider screening if there will be rooftop mechanical units. Mr. Splenka stated he thinks this could be a great project.

Mr. Jensen stated they appreciate all the comments. Mr. Jensen stated he talked to some of the business owners this evening, and the business owners feel they lose 15% income due to parking issues. Mr. Jensen stated they would like to be a partner in solving the parking issues.

Mr. Roberge stated Geneva has less if not close to less residents than Glen Ellyn and has double the number of restaurants, and Geneva is a destination town to go to. Mr. Roberge stated more businesses will attract more people, and they are not looking to replicate any business already currently in town. Mr. Roberge stated they want to do something the community will be proud of and will want to go to. Mr. Roberge stated the Giesche building is a hard building, and he is not sure what else could exist here. Mr. Roberge stated they are all for parking solutions and would like to help explore what can be done.

Comments from the Plan Commission

Commissioner Heming-Littwin thanked the petitioners for coming to the pre-application meeting and listening to the residents' concerns. Commissioner Heming-Littwin stated the Giesche building is not her favorite, but this proposal looks good. Commissioner Heming-Littwin stated she is aware of everyone's concerns about parking, and parking is something we need to figure out as a Village. Commissioner Heming-Littwin stated she does not feel that 100% of the onus for parking should be put on the new businesses coming to town. Commissioner Heming-Littwin stated for the outdoor dining and possible noise, they will have to follow code, and these details are still to be discussed. Commissioner Heming-Littwin stated this is a very unique concept, and if the right concept is put out there, people will come. Commissioner Heming-Littwin stated she loves what they have done so far, and she would love to see them go forward with this.

Commissioner Hartweg stated he feels this is a pretty good plan. Commissioner Hartweg stated the issue of parking is not going to go away. Commissioner Hartweg stated he feels their plan could fit this building.

Commissioner Loftus stated he is on the Plan Commission as well as the Historic Preservation Commission, and the Historic Preservation Commission worked for many years to get the downtown designated as historic districts, and the Giesche building qualifies as a historic building in the downtown. Commissioner Loftus stated it is better to utilize the existing building instead of tearing it down and putting up something that is 4 stories tall or higher. Commissioner Loftus stated parking garages have been discussed all over Glen Ellyn. Commissioner Loftus stated the feeling of Glen Ellyn is that it is a small town, but still a community that wants businesses to come. Commissioner Loftus stated he does have concerns around possible outdoor music and how this development could affect the neighbors.

Commissioner Vondruska stated he agrees on the parking issue as this is a problem. Commissioner Vondruska stated he thinks this project is awesome and thinks it is great that someone is making an attempt to save this building. Commissioner Vondruska stated this is a tough space to develop so it would have to be an ambitious project. Commissioner Vondruska stated he likes that Glen Ellyn is becoming a destination town. Commissioner Vondruska stated a Special Use permit for parking may be hard to do.

Mr. Roberge stated there is a need for a space for banquets and events in the downtown, and people are asking for this, and this demand then seems an appropriate use.

Commissioner Fanella stated she agrees with the need for an event space in the downtown, but they would need to balance this with the demands for parking. Commissioner Fanella stated she does not feel the Plan Commission can fully tackle the parking issue, and parking should not be a hindrance to new businesses coming to the Central Business District. Commissioner Fanella stated she feels they have done an amazing job with creating this idea, and it sounds like a great concept.

Commissioner Saeed stated this is a unique concept, and it would be a good addition to the downtown community. Commissioner Saeed stated they do need to find a solution to the parking issue. Commissioner Saeed stated it is a nice building, and it is good that they would not be tearing down the building.

Commissioner Rodemann stated he feels Glen Ellyn has a lot of parking, but the perception is that parking is not where it needs to be. Commissioner Rodemann stated he thinks the project will be a nice adaptive reuse of a structure. Commissioner Rodemann stated if it is not this project for this site then what. Commissioner Rodemann stated the project will fit with Glen Ellyn. Commissioner Rodemann stated the challenge is parking, but this should not all be put on new businesses' shoulders.

Mr. Johnson stated there was a discussion a while back to remove the fire station from where it is currently and put in a hotel with banquet services and meeting spaces. Mr. Johnson stated maybe they can still capitalize on this.

Chairperson Loch stated she has never been in love with this structure, but the renderings look wonderful. Chairperson Loch stated it would help if the parking problem is solved as this would help the petitioners. Chairperson Loch stated they could come back for another Pre-Application meeting or a public hearing on this, and the public will have more opportunities to comment on this project.

Pre-Application Meeting – 427-443 Duane Street & 425-435 Melrose Avenue – REVA
Development Partners – Planned Unit Development

On the agenda was a pre-application meeting regarding a proposed development on the property commonly known as 427-443 Duane Street and 425-435 Melrose Avenue.

Staff Presentation

Village Planner Sterrett presented the background on this proposed development and stated REVA Development Partners are proposing a 4 story, 48-unit apartment complex on these properties. Village Planner Sterrett showed an overview picture of the properties and stated the subject property is located on the south side of Duane Street and is bounded by Melrose Avenue to the west and Prospect Avenue to the east in the C5B District Central Service Sub-district, the R4 Residential District and the R2 Residential District. Village Planner Sterrett stated this site is made up of six properties with 1.17 acres in total. Village Planner Sterrett stated there are five properties on Duane Street which is part of the C5B District. Village Planner Sterrett stated the 6th property is on Melrose Avenue, and 2/3 of the property is zoned R4 Residential, and the other 1/3 is zoned R2 Residential. Village Planner Sterrett stated the property is not in a regulatory flood plain, but there is a low area on Duane Street; however, it would not be required to have stormwater detention for these properties.

Village Planner Sterrett stated the petitioners are proposing assembling the six properties to assemble a 4-story 48-unit rental building with underground parking and surface parking. Village Planner Sterrett stated they are proposing 8 1-bedroom apartments and 40 2-bedroom apartments. Village Planner Sterrett showed an overview of the site plan and stated the underground parking would have 48 stalls, with 34 stalls in the surface parking. Village Planner Sterrett stated this equals 1.7 parking stalls per unit, but code would require 92 stalls for the number of units proposed.

Village Planner Sterrett stated the proposed building structure would be setback a little under 18 feet from Melrose Avenue, 10 feet from Duane Street and 8 feet from Prospect Avenue, but the required setback is 25 feet. Village Planner Sterrett stated the impervious surface setback is 6.1 feet, and the proposal would meet this.

Village Planner Sterrett showed a cross-section of the building and stated it is proposed to be 66 feet in height from the ground level, but only 62 feet from the back of the building due to the grade change. Village Planner Sterrett stated the permitted height for a building in this zoning district is 60 feet. Village Planner Sterrett stated anything over 45 feet in height does need to be stepped back 15 feet from the elevation.

Village Planner Sterrett stated the required approvals for this proposed project would include a Zoning Map Amendment, a Special Use Permit for a Planned Unit Development (PUD) in C5B, a Special Use Permit for a Multi-Family Dwelling Unit, an Exterior Appearance Review and a Plat of Consolidation.

Petitioner's Presentation

Warren James, Principal with REVA Development Partners, introduced Matt Hicks, the other Principal with REVA Development Partners, and Rob Sackett, who is one of the property owners.

Mr. James stated he has been in business for 30 years and is a 3rd generation builder/developer. Mr. James stated Mr. Sackett approached him with this opportunity, and they thought this was a great opportunity in a great community. Mr. James stated they can fill a need in the community with this development. Mr. James provided background on REVA and the developments that REVA has done. Mr. James stated they come with a great deal of experience and knowledge of designing and executing successful developments.

Mr. Hicks stated they are trying to help a housing need in the community, and this is a wonderful location. Mr. Hicks stated with this location, they are proposing a boutique building because you see your amenities when you walk out the front door. Mr. Hicks showed renderings of the building and discussed the market, the specifics of the building and the benefits to the community. Mr. Hicks stated this is a boutique balanced on a unique scale, and the rents would be \$1,900 for the 1-bedroom units and \$2,800 for the 2-bedroom units. Mr. Hicks showed pictures of a typical 2-bedroom unit and relayed a description of what is usually included. Mr. Hicks stated amenities would include a package-concierge system, a resident lounge and a bike-storage area. Mr. Hicks stated a 48-unit building will have minimal impact on traffic and services, but these residents will be shopping and dining downtown.

Questions from the Plan Commission

Commissioner Loftus stated he is concerned that a variance is being requested for 10 less parking spots and asked where the other cars are going to park if there is the maximum numbers of cars for the units. Mr. James stated when they look at the mix of units, they do surveys overnight to see how much parking is actually used. Mr. James stated for this size development, generally 1.5 to 1.7 stalls per unit is adequate to serve the residents of the complex. Commissioner Loftus asked if elevations have been done to compare this to the Glen Ellyn Public Library across the street as he is concerned about a possible canyon effect on Duane Street. Mr. James stated they have not done this yet, but overall, both buildings are sympathetic to the other one.

Commissioner Fanella stated she feels like this is a very large development for the acreage, and the other REVA developments are roughly 20 units per acre. Commissioner Fanella stated she feels 48 units on this space feels heavy. Commissioner Fanella asked how they arrived at the size and number of units for this building. Mr. James stated this was due to economics and market-driven, and the scale and proportion will fit the site nicely. Mr. James stated this is more typical of an urban/suburban scale development. Commissioner Fanella stated she questions

baby boomers as renters and would like to see the research on this. Mr. James stated there has been a major shift in people's thinking since the economy downturn in 2008. Mr. James stated it was learned that the notion of a home being of value is not always the best place.

Commissioner Saeed asked if they can bring the building height down to 60 feet. Mr. James stated they will work with the Village to understand the definition of grade, and he is confident they can come in close to 60 feet. Commissioner Saeed asked if the setbacks on the front, east and west can come to the minimum of 25 feet. Mr. James stated they cannot do this without seriously compromising the building. Mr. James stated they are trying to deliver a building that meets the needs of the community and is economically viable. Mr. James stated they would have to take off a lot, and this would affect the floors and the number of units.

Commissioner Heming-Littwin asked if the variance is needed due to the grade on Melrose Avenue to which Mr. James stated it is. Commissioner Heming-Littwin asked if all the in and out is on Melrose Avenue to which Mr. James stated it will be.

Commissioner Rodemann asked about the sidewalks. Mr. James stated this proposal is their first pass at this, and they will need to go back to the engineers on this. Commissioner Rodemann asked if their goal is to maintain the street and the sidewalk and then slope it into the building to which Mr. James stated it is.

Public Comments

Adam Carter, who resides at 426 Hillside Avenue, stated a few things have stuck out to him on this. Mr. Carter stated this proposed development is not necessarily to scale for this area, but he is hearing it is to scale for this area. Mr. Carter stated there are a lot of requests for variances right off the bat for not enough parking stalls, going over the height requirements and not complying with the setbacks. Mr. Carter stated they talked about the possible clientele for these apartments and the need for this kind of housing in Glen Ellyn. Mr. Carter stated Arlington Heights, Naperville and Wheaton have this type of housing, but Glen Ellyn is much different and much smaller than these. Mr. Carter stated this would be a gargantuan apartment complex. Mr. Carter stated there could be issues with traffic configuration in this area. Mr. Carter stated the low spot on Duane makes him concerned about sewer and sanitary and would like this project referred to the Environmental Commission.

Jeff Scribner, who resides at 432 Hillside Avenue, stated he spoke to some of his neighbors, and many of them do not want anything to do with this, and they have not even seen the plans yet. Mr. Scribner stated he is concerned about the increased traffic as well as noise from the air conditioning units. Mr. Scribner stated when it rains, the water will be headed downhill toward this development. Mr. Scribner stated they have narrow streets, and they do not need heavy

traffic in this area. Mr. Scribner stated if they are going to build more apartments north of the railroad tracks, there is not a need to build apartments south of the railroad tracks.

Tim Brinker, who resides at 421 Hillside Avenue, stated Melrose Avenue basically dead-ends into this property. Mr. Brinker stated he has a lot of experience with building and zoning permits as they were trying to repair their front porch. Mr. Brinker stated during this process, they were asked if what they were doing to the porch would fit the character and culture of the neighborhood, and in his opinion, this development would not do this. Mr. Brinker stated he is concerned about the traffic, and this building is too massive for a residential neighborhood.

Claudia Schaefer, who resides at 410 Melrose Avenue, stated the gentlemen did a great job explaining how this development would benefit the people living in the 48 units, but not the rest of the Village. Ms. Schaefer stated this is distinctly not complimentary to the neighborhood. Ms. Schaefer stated the streets are very narrow. Ms. Schaefer stated she hopes the Plan Commission votes no on this and instead puts up nice 2-story townhomes on these under-utilized properties.

Mary Carlson, who resides at 404 Melrose Avenue, stated she did live in Elmhurst, and all the massive buildings in downtown Elmhurst have taken away from the charm of their downtown area. Ms. Carlson stated in Glen Ellyn, this has been preserved. Ms. Carlson stated there will be a canyon effect with the Glen Ellyn Public Library and the REVA development. Ms. Carlson stated there is also the safety piece with increased traffic when the church or the library is having events.

Erin Pavlich, who resides at 364 Lorraine, stated the building does not fit the community. Ms. Pavlich stated it would be a dangerous situation to add more traffic with 80 to 90 more cars. Ms. Pavlich stated there needs to be a traffic study done before any development like this. Ms. Pavlich stated she does not think the safety problems that this would add make this development worth it. Ms. Pavlich stated she would support a townhome development on these properties instead.

Christy Bockelman, who resides at 765 Prairie, stated the intersection of Duane and Prospect is already difficult to navigate so she cannot imagine adding more traffic here. Ms. Bockelman stated there will be an immense amount of water displacement, and she is concerned about there being more units per acre on this site than on other sites. Ms. Bockelman the builder talked about it being economically unviable to build under Glen Ellyn's current codes. Ms. Bockelman stated in this case, this should not then be built. Ms. Bockelman stated it should not be the responsibility should not be on the Village to accommodate, but on the builder.

Comments from the Plan Commission

Commissioner Fanella thanked the petitioners for bringing this proposal and the neighbors for the comments on this. Commissioner Fanella stated she would like to see this property developed, and she is fine with the zoning presented here. Commissioner Fanella stated she is not as concerned about the parking here. Commissioner Fanella stated she does see the need to add to the mix of the Village's housing. Commissioner Fanella stated this structure is being forced onto a piece of property that is too small, and she would be more in favor of it if it was more conforming to the height restrictions and setbacks, especially along Prospect.

Commissioner Loftus stated the Comprehensive Plan does mark this piece of land for multi-family, but it does not specify the density. Commissioner Loftus stated he is concerned about the height of the building compared to what is across the street as he thinks there will be a canyon effect. Commissioner Loftus stated once a building like this is built, more will come. Commissioner Loftus stated the setbacks are important to maintain the character of the neighborhood, and they should look at this. Commissioner Loftus stated they need to keep the character of the neighboring area.

Commissioner Rodemann stated he feels like this is too big a project for this piece of land. Commissioner Rodemann stated some simple fixes would help, possibly shortening the length of the building or reducing the density of the building. Commissioner Rodemann stated his problem with this building is supposedly it is a boutique building, but it feels cookie-cutter instead. Commissioner Rodemann stated terrace units on the top of the building might help. Commissioner Rodemann feels this is a great start, and he likes the layout of the units as well as the goal of meeting a need in Glen Ellyn. Commissioner Rodemann stated this project need to be more refined.

Commissioner Saeed stated this building looks very dense and congested in this area. Commissioner Saeed stated there needs to be a compromised on the height, and they should do the minimum setbacks, or the building will not fit well in here.

Commissioner Hartweg stated he likes this plan, but he does have concerns over the height and the potential problems with drainage. Commissioner Hartweg stated there might be traffic congestion at times. Commissioner Hartweg stated this is a good plan that needs to be tuned up.

Commissioner Heming-Littwin stated in the Comprehensive Plan, this area of town is meant for multi-family. Commissioner Heming-Littwin stated this will fit a need. Commissioner Heming-Littwin stated she likes the character of the building on the rendering, but she is concerned about the height issue as it may cause a cavernous effect. Commissioner Heming-Littwin stated the grading issues and the setback are due to the downward slope on Melrose Avenue into the garage. Commissioner Heming-Littwin stated she goes back and forth on the density of this, but a 4-story building with 48 units is not a lot of units. Commissioner Heming-Littwin stated going forward, she would like to see a reduction in some of the possibly requested variances. Commissioner Heming-Littwin stated she is not as concerned about the traffic in this area.

Commissioner Vondruska stated he thinks there is a need for this type of housing in Glen Ellyn. Commissioner Vondruska stated he understands the want to reduce the height from 66 inches to 60 inches, but he wants what will look like a nice roof rather than lowering. Commissioner Vondruska stated they need to fine-tune this plan, and he would like to see traffic and drainage studies for this.

Chairperson Loch stated she agrees there is a market for this type of housing in Glen Ellyn, and she likes the unit layout and product itself. Chairperson Loch explained what a PUD is and how PUDs can often require variations and deviations. Chairperson Loch stated she feels like will not make as much of a canyon effect as everyone is saying. Chairperson Loch stated she likes the proposed aesthetic look of the building, and she feels this is a good spot for a multi-unit building. Chairperson Loch thanked REVA Development Partners for bringing this possible project to Glen Ellyn.

Public Hearing – 645 Lenox Road

On the agenda was a public hearing regarding a public hearing to consider the application for Sign Variations at 645 Lenox Road, commonly known as Lake Ellyn Park.

PUBLIC HEARING – SIGN VARIATION – Glen Ellyn Park District – 645 LENOX ROAD – LAKE ELLYN PARK

DISCUSSION, CONSIDERATION AND RECOMMENDATION REGARDING A REQUEST FOR APPROVAL OF VARIATIONS FROM THE SIGN CODE FOR THE INSTALLATION OF THREE MONUMENT SIGNS AND ONE SPECIAL EVENT BANNER SIGN. THE SUBJECT PROPERTY IS LOCATED EAST OF LENOX ROAD BETWEEN ESSEX ROAD AND HAWTHORNE BOULEVARD IN THE CR COMMERCIAL RECREATION DISTRICT.

Plan Commissioner Saeed moved, seconded by Plan Commissioner Heming-Littwin, to open the public hearing. The motion carried unanimously by voice vote.

Staff Introduction

Village Planner John Sterrett was present to speak on behalf of the subject variation requests. Mr. Sterrett stated that variations from the sign code are being requested by the Glen Ellyn Park District for the property located at 645 Lenox Road, commonly known as Lake Ellyn Park. He displayed a map of Lake Ellyn Park and indicated the location of Lenox Road along the west side of the park, Essex Road to the north and Hawthorne Boulevard to the south. He stated there are two existing monument signs and one existing special event banner sign at Lake Ellyn Park. He added that the Park District is proposing to replace a 21-square foot monument sign at the main entrance off of Lenox Road with a 26-square foot free-standing sign, replace a 21-square foot monument sign located at the south end of the property near Lenox and Hawthorne with 26-square foot monument sign and replace the existing 15-square foot special event banner sign with one 17-square foot special event banner sign. He stated that originally the Park District had proposed to provide two banner signs—one on either side of the replacement sign—but then decided to scale it back to only replacing one sign. He stated that a 15-square foot monument sign is also being proposed to be installed near the north entrance of Essex Road. Mr. Sterrett stated that the existing sign along Lenox Road at the main entrance currently encroaches into the public right-of-way off of Lenox Road. He added that the Park District as they are proposing to remove that sign would like to place the replacement sign no closer to the street than where the existing sign is. He also stated staff would recommend that a condition of approval would be contingent upon receiving approval of a license agreement with the Village to place a sign within the public right-of-way. Mr. Sterrett stated that the variations being requested are to allow 3 free-standing signs in lieu of the maximum 1 sign permitted on the property, to allow a free-standing sign to encroach into the minimum setback of five feet from the property line (off the entrance of Lenox Road), to allow the free-standing sign to encroach into the public right-of-way and to allow a special event banner sign to be displayed permanently in lieu of the maximum 14 days prior to an event and also for the banner sign to be displayed permanently rather than a maximum of three times per year.

Petitioner's Presentation

Dan Hopkins of the Glen Ellyn Park District, 185 Spring Avenue, Glen Ellyn, IL was present to speak on behalf of the subject requests.

Chairperson Loch asked why Mr. Hopkins felt a third sign is needed on the north side. Mr. Hopkins responded that sign is necessary to help people locate the lake.

Mr. Hopkins stated the Glen Ellyn Park District received input in 2012 from residents who identified needs regarding recreation trends. He stated that the areas of highest priority were trail improvements, natural areas, neighborhood parks and improvements to Lake Ellyn Park. He stated a master plan was developed for Lake Ellyn including a conservation design forum. He added that they subsequently met with the neighbors and worked with the community throughout the entire process. Mr. Hopkins stated that from the outcome of the meetings is where they developed the priorities and that the boat house is the highest priority. He stated that additional work will include upgrades to the trail system, improvements to lake water quality, shoreline stabilization, and replacement of the existing playground, landscape enhancements, park amenity upgrades and improved signage. He added that they have been working on this project since 2014. He added that no illumination will be requested for this project.

Mr. Hopkins stated that an anonymous donation will pay for over half of the signage for this project and a grant was also received. He also stated that the signs will be updated and showed pictures of the signs and where the signs will be located on the site. He added that three variations are being requested as follows: 1. To allow three free-standing signs in lieu of a maximum of one sign permitted per property. 2. To allow one sign to encroach into the public right-of-way. 3. To allow one sign to encroach into the minimum setback of the property. Mr. Hopkins stated that the banner signs triggered two more variations: 1. To allow special event signs to be displayed permanently in lieu of 14 days. 2. To allow a temporary banner sign to be displayed for more than the permitted three times per year.

Questions from the Plan Commission

Mr. Hopkins responded to Plan Commissioner Heming-Littwin that verbiage will be on the new signs regarding rules at the subject area such as "No Tobacco," etc.

Persons in Favor of or in Opposition to the Request

Cinda SiligmueLLer of 630 Lenox Road, Glen Ellyn, IL stated she has been living in Glen Ellyn for five years but has been visiting here for 17 years. She stated she was concerned prior to this meeting as to where the signs would be located and is pleased they will not obstruct her view of the lake.

Plan Commissioner Heming-Littwin moved, seconded by Plan Commissioner Fanella, to close the public hearing. The motion carried unanimously by voice vote.

Comments from the Plan Commission

All of the Plan Commissioners were in favor of the variation requests as submitted by the petitioner, and Plan Commissioner Fanella requested adding the condition per staff.

Plan Commissioner Heming-Littwin moved, seconded by Plan Commissioner Hartweg, that after having considered the application of the Glen Ellyn Park District for approval of variations from the sign code for 645 Lenox Road commonly known as Lake Ellyn Park, the Plan Commission adopts the findings of fact in the petitioner's application packet and as presented by the petitioner at the public hearing as well as the findings included in the deliberations of the Plan Commission and recommends approval of the request subject to the condition that the approval of the sign variations be contingent on receiving approval of a license agreement with the Village to allow the proposed monument sign at the main entrance to be located within the public right-of-way.

The motion carried unanimously with eight (8) yes votes and zero (0) no votes as follows: Plan Commissioners Heming-Littwin, Hartweg, Fanella, Vondruska, Rodemann, Loftus, Saeed, and Chairperson Loch voted yes; zero voted no.

Public Hearing – Zoning Text Amendments

On the agenda was a public hearing regarding Zoning Text Amendments.

Commissioner Heming-Littwin moved, seconded by Commissioner Fanella, to open the public hearing. The motion carried unanimously by voice vote.

Commissioner Heming-Littwin moved, seconded by Commissioner Loftus, to continue the public hearing to the November 30, 2017, Special Plan Commission Meeting. The motion carried unanimously by voice vote.

Trustee's Report

Trustee Pryde stated there have been discussions at the Village Board regarding the 2018 Budget, Capital Projects and the possible Train Station/Underpass project. Trustee Pryde stated they are going to renovate the Civic Center to allow Innovation DuPage out of the College of DuPage to have some space in the Civic Center.

Chairperson's Report

PLAN COMMISSION

-18-

NOVEMBER 9, 2017

Chairperson Loch reminded the Plan Commissioners about the Special Plan Meeting on November 30th.

Staff Report

Planning and Development Director Hulseberg and Village Planner Sterrett reviewed possible projects coming to the Plan Commission in the new few months.

Other Business

None

Adjournment

Commissioner Hartweg moved, seconded by Commissioner Heming-Littwin, to adjourn the meeting at 10:05 p.m. The motion carried unanimously by voice vote.

Respectfully Submitted,

Debbie Solomon
Recording Secretary

Attachment: 11.9.17 Minutes Plan Commission (4023 : Avere on Duane - PUD, SUP, ZMA, SV)

**APPLICATION FOR APPROVAL OF
PRELIMINARY PLANNED UNIT DEVELOPMENT PLAN**

CLEAR PAGE

The undersigned petitions the President and Village Board of Trustees of the Village of Glen Ellyn, Illinois, to consider this Application for approval of a Preliminary Planned United Development Plan (PUD), as described below.

Date Filed: May 2, 2019 Application No. _____

Type of PUD: Residential
(Residential, Commercial, Other)

Name of Applicant: REVA Development Acquisitions, LLC

Address of Applicant: 116 W. Illinois St., FL7

Business Phone: 312-320-6712 (Mobile): 847-417-8915

Email: warren.james@revadevelopment.com (Fax): _____

Property Interest of Applicant: Contract Purchaser
(Owner, Owner Representative, Contract Purchaser, etc.)

Name of Owner(s): See attached ownership exhibit

Address: See attached ownership exhibit

Legal Description of Property:

See attached ownership exhibit

Zoning Classification: C5B/R4/R2 Property Size/Area: 1.18 acres

Present Use: Commercial Office/Pottery Studio/vacant residential

Requested Use/Construction:

48 Unit multi-family residential development with underground and surface parking.

Estimated Date to Start Construction: August 5, 2019

NARRATIVE STATEMENT

Narrative Statement evaluating the economic effects of adjoining property, the effect of such elements as noise, glare, odor, fumes, and vibration on adjoining property, a discussion of the general compatibility with the adjacent and other properties in the district, the effect of traffic, the relationship of the proposed use to the Comprehensive Plan, and how it fulfills the requirements of paragraph (E) of Section 10-10-14 of the Zoning Code:

The proposed apartment building is similar in scale and architectural character to the adjacent public library, including a combination of brick and synthetic stucco, pitched roof. The proposed apartment replaces three ranch style homes, two, 2-story single family homes and a 2-story commercial building. The existing single-family homes have been converted to commercial uses and are functionally obsolete. The proposed residential use is compatible with the adjacent residential uses to the south and the physical qualities of the proposed structure are sympathetic to the public library to the north. Vehicle access to the building is planned from Melrose, mitigating potential traffic issues on Prospect or Duane. The proposed building is consistent with the comprehensive plan which calls for additional multi-family housing. Off-street parking is provided to the south of the proposed structure.

1. Will be harmonious with and in accordance with the general objectives, or within a specific objective of the Comprehensive Plan and/or this Zoning Code:

The proposed plan is harmonious with the comprehensive plan and zoning ordinance. Specifically, it provides multi-family housing within the Glen Ellyn Downtown in keeping with the Glen Ellyn Downtown Strategic Plan (hereinafter referred to as "The Plan")

The Plan, adopted in 2009, includes several references encouraging the type of development proposed on the subject property. The Plan notes that *"there is a lack of residential units in the Downtown for smaller-sized to provide Glen Ellyn residents the opportunity to live near their workplaces."* Thus, in the list of Objectives included in The Plan, number 2 states: *"Increase the Village's population within walking distance of the Downtown, by increasing the number of dwelling units (and thereby, consumers) in an around the Downtown."* (Page 8.2) Furthermore, the property on which the apartment building is proposed is included in the downtown plan, designated for future use as *"Multiple Family Residential"*

The Plan notes that *"Elements such as surface parking lots and one-story buildings don't provide the intensity that is needed to create a successful Downtown and TOD district."* The Plan goes on to state *"Adding housing Downtown is especially important given the surrounding area is substantially built-out and population growth is likely to be limited. The creation of multi-family housing will serve the needs of empty nesters and younger-aged, smaller-size households."* The three single story ranch structures on Duane are specifically noted as item "O." on the list of sites identified for potential to be "redeveloped, repurposed, and/or reinvigorated."

The Plan also includes a section titled “Strategies and Measures.” The Plan sets forth a specific measure to *“Construct a minimum of 450 new dwelling units in the Downtown.”* (Village of Glen Ellyn Downtown Strategic Plan – Page 8.3 of 8)

The Plan recognizes that *“The Zoning Code needs to be updated to reflect the recommendations in the Market Analysis and minimize the perceived burden of government-imposed obstacles in the Downtown business and development review process.”* (Village of Glen Ellyn Downtown Strategic Plan – Page 8.4)

The Plan reads *“Provide additional dwelling units for different types of households – especially empty-nesters (couples who no longer need a big house but want to remain in Glen Ellyn) and young professionals (individuals and couples who want to live in Glen Ellyn but don’t need or want a house at this stage in their lives). There is a demand for Downtown residential living for people who want to enjoy the benefits of the Downtown including its charm, convenience, and the cluster of services available within a comfortable walk from home.”* (Village of Glen Ellyn Downtown Strategic Plan – Page 8.6)

AVERE on Duane is specifically designed to fulfill the multi-family housing needs described in The Plan.

2. Will be designed, constructed, operated, and maintained so as to be harmonious and appropriate in appearance with the existing or intended character of the general vicinity and that such use will not change the essential character of the same area:

The proposed design of the building is in keeping with the character and scale of the adjacent library. The proposed building is proximate to larger scale buildings such as the library and St. Petronille Church and is adjacent to existing multi-family buildings to the west. The assemblage of property (between Melrose and Prospect) is at the low end of the block as the terrain rises to the south. The first-floor elevation of the proposed apartment building is below the first-floor elevation of the adjacent single family home to the south on Prospect. The intended character of the area as set forth in the Glen Ellyn Strategic Plan is for multi-family residential consistent with the proposed development. The existing zoning of the five parcels along Duane upon which the proposed building would be located is C5B. The existing single-family home on Melrose included in the assemblage is on a parcel straddling both the R4 and R2 zoning districts. The actual use of the parcel on Melrose is the surface parking area for residents and guests of AVERE on Duane.

The use of the property is residential, which is consistent with uses to the south. In fact, the proposed residential use is more harmonious with the adjacent residential uses to the south and west than are the existing commercial uses.

3. Will not be hazardous or disturbing to existing or future neighborhood uses:

The proposed residential use is consistent with the residential uses to the east, south and west of the subject property. The Traffic Study prepared by KLOA in connection with the proposed development determined that the relatively low traffic generated by the use will not overburden adjacent streets and that the access to the building off Melrose is the most

appropriate location, avoiding the busier Prospect Avenue and Duane Street. The proposed use will not be hazardous or disturbing to existing or future neighborhood uses.

4. Will be served adequately by essential public facilities and services such as highways, streets, police and fire protection, drainage structures, refuse disposal, water, sewers and schools, or that the persons or agencies responsible for the establishment of the proposed use shall be able to provide adequately any such services:

The public facilities and services are sufficient to serve the proposed use. The character of the building and the targeted market will not place an undue demand on municipal services. The existing storm, sanitary and water services have sufficient capacity to serve the proposed development. The parking lot will be constructed with permeable pavers in order to capture runoff prior to discharge into the existing storm sewer. The building will be served by two elevators and equipped with automatic fire sprinklers and emergency generator for added safety. The anticipated future residents are most likely to be adults with few if any school aged children. The apartment building will be owned by a single entity and will be professionally managed. The owner of the building will contract for private refuse and recycling, building and grounds maintenance including landscaping and snow removal. The building will be equipped with a single gas meter and a single water meter which will be sub-metered inside the unit with each tenant paying their respective share. The owner of the building will be responsible for paying for the master metered utilities.

5. Will not create excessive additional requirements at public cost for public facilities and services and will not be detrimental to the economic welfare of the Village:

We anticipate the residents of the proposed building to be “renters by choice” that are seeking an alternative to a traditional single-family home. In keeping with the objectives set forth in The Plan, increasing downtown population is critical to attracting and supporting local retailers and restaurants. The target market of AVERE on Duane is primarily empty nesters, single professionals and couples that may be moving to the area or perhaps even the existing homeowner undertaking renovations or new home construction. Experience with similarly situated buildings indicates low demand on public services and few if any school aged students. For instance, at Deer Park Crossing in Deer Park, Illinois, a similar podium style apartment building(s) with 145 occupied units, presently has only three (3) school aged students living in the podium style apartment buildings.

As set forth in the Glen Ellyn Downtown Strategic Plan, “Due to the complexity and diversity of issues typically involved in redevelopment projects, (environmental, transportation, infrastructure, land acquisition and assembly, building demolition and/or rehabilitation, and business recruitment), a municipality needs a number of resources to help address the varying aspects of a redevelopment project. Municipalities across the country have demonstrated that locally-controlled economic development tools are critical components to the redevelopment process. Local funding sources such as Tax Increment Financing (TIF), Special Service Areas (SSAs), property tax abatements, and land acquisitions and/or write-downs, empower municipalities to guide redevelopment and provide timely assistance, which is critical to

making today's development projects a reality." (Page 10.32). The five parcels underlying the proposed apartment building are within the existing downtown TIF district and the economic viability of the project is dependent upon receiving TIF funding in substantial conformance with the outline agreed to between Village of Glen Ellyn and the Developer in June of 2018. As evidenced by the TIF projections and verified by the Village's consultant, the AVERE on Duane development will generate significant increment a substantial portion of which will inure to the benefit of the Village.

In summary, the proposed development of AVERE on Duane will add to the economic vibrancy of the community and will not incur significant demands on public resources or facilities and will result in a positive fiscal impact to the community and its taxing districts.

6. Will not involve uses, activities, processes, materials, equipment and/or conditions of operation that will be detrimental to any persons, property or the general welfare by reason of excessive production of traffic, noise, smoke, fumes, glare or odors:

The proposed residential use will not involve uses, activities, processes, material or equipment that would be detrimental to any persons or property or the general welfare and will not produce excessive traffic, noise, smoke, fumes, glare of odors.

7. Will have vehicular approaches to the property which shall be so designed as not to create an undue interference with traffic on surrounding public streets or roads:

The vehicular traffic will be directed to Melrose this minimizing the impact on Prospect or Duane. Melrose is a short street that serves existing multi-family and single-family residences. The findings of the Traffic Study prepared by KLOA include the following conclusions:

- **The traffic that will be generated by the proposed development will be low and will be reduced due to its proximity to public transportation.**
- **The traffic that will be generated by the proposed development can be accommodated by the area roadway system.**
- **Providing access to the proposed AVERE on Duane Development off Melrose Avenue will be adequate in accommodating the traffic projected to be generated by the proposed development.**
- **The proposed apartment development will provide a sufficient number of parking spaces to accommodate its projected parking demand.**

Additional detailed findings are contained in the traffic study prepared by KLOA and corroborated by the Village's traffic consultant, James J. Benes. (See referenced reports and letters)

In addition to the 48 underground parking spaces (1 per unit) there are 34 surface parking spaces and a loading zone proposed in the Melrose right of way, between the entrance to the parking area and the garage. Presently, parking is permitted on the East side of Melrose for

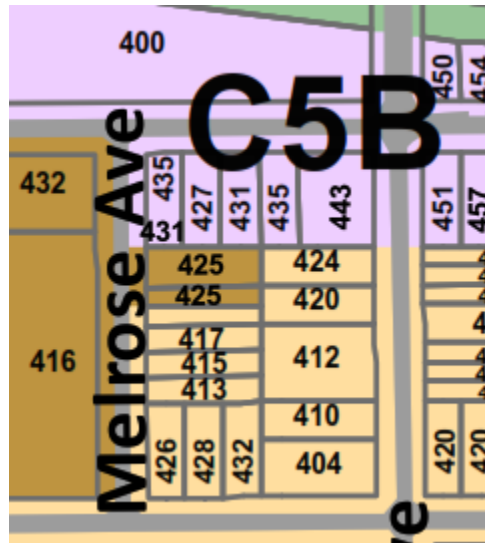
Discuss the Requested Zone Change with Respect to Each of the Following:

1. Identification of the existing uses of property within the general area of the affected property:

The property is adjacent to the public library to the North, existing single family to the east and south and existing multi-family residential to the West; and is proximate to St. Petronille church and downtown Glen Ellyn.

2. Identification of the zoning classification of property within the general area of the affected property:

Most of the site (including all the parcels along Duane Avenue where the proposed building is sited) is already zoned C5B. The existing single-family home located at 425 Melrose Avenue sits on a lot that is 100' x 148'. The northerly parcels are zoned R4 and the southerly 25' wide parcel is zoned R2. The zoning classification of the adjacent properties are as follows: to the north C5B, to the south is R2, to the east R2 and to the west R4.



3. Determination as to the suitability of the property in question to the uses permitted under the existing classification or district and under the proposed classification or district:

As noted above, most of the subject property is already zoned C5B which allows multi-family housing as a Special Use. The request is to change the zoning of 425 Melrose from R4 and R2 to C5B to be consistent with the balance of the property. The proposed use of the property at 425 Melrose is a parking lot to serve the proposed multi-family use which will be appropriately buffered as depicted on the proposed landscape plan.

4. The trend of development, if any, in the general area of the affected property, including changes, if any, which have taken place since the date the affected property was placed in its present zoning classification or district:

I (We) certify that all of the statements and documents submitted as part of this application are true to the best of my (our) knowledge and belief.

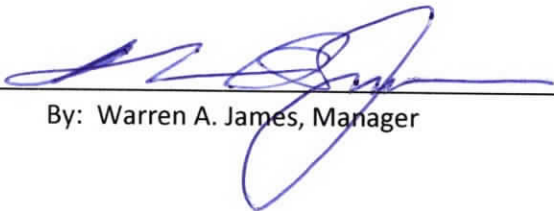
I (We) consent to entry in or upon the premises described in this application by any authorized official of the Village of Glen Ellyn for the purpose of inspection.

I (We) consent to pay the Village of Glen Ellyn all costs incurred for transcribing the public hearing on this application.

Signed on the 2nd day of May, 2019

REVA DEVELOPMENT ACQUISITIONS, LLC

By: REVA Development Partners, LLC, its manager



By: Warren A. James, Manager

**APPLICATION FOR APPROVAL OF
FINAL PLANNED UNIT DEVELOPMENT PLAN**

CLEAR PAGE

Date filed: 05/02/19 Application No. _____

Common Name of PUD: AVERE on Duane

Type of PUD: Residential

(Residential, Commercial, Other)

Name of Applicant: REVA Development Acquisitions, LLC

Address of Applicant: 116 W. Illinois St., FL7, Chicago, IL 60654

Business Phone: 312-320-6712 (Mobile): 847-417-8915

Email: warren.james@revadevelopment.com (Fax): _____

Property Interest of Applicant: Contract Purchaser

(Owner, Owner Representative, Contract Purchaser, etc.)

Name of Owner(s): See attached ownership exhibit

Address: See attached exhibit

Legal Description of Property:

See Attached Exhibit

Zoning Classification: C5B/R4/R2 Property Size/Area: 1.18 acres

Requested Use/Construction:

48 unit multi-family residential apartment building with 48 underground spaces and 34 surface parking spaces.

Date of Preliminary PUD Plan Approval: _____

Estimated Date to Start Construction: 08/05/19

MAY 2, 2019
Date


Signature of Applicant
REVA DEVELOPMENT PARTNERS, LLC
MANAGER
REVA DEVELOPMENT ACQUISITIONS, LLC

APPLICATION FOR SPECIAL USE PERMIT

CLEAR PAGE

The undersigned petitions the President and Village Board of Trustees of the Village of Glen Ellyn, Illinois, to consider the Special Use described in this application.

Date Filed: **05/02/19** Application No: _____

Name of Applicant: **REVA Development Acquisitions, LLC**

Address of Applicant: **116 W. Illinois St. FL7, Chicago, IL 60654**

Business Phone: **312-320-6712** Fax: _____

Home Phone: _____ Mobile Phone: **847-417-8915**

Email: **matt.nix@revadevelopment.com warren.james@revadevelopment.com**

Property Interest of Applicant: **Contract Purchaser**

(Owner, Contract Purchaser, Owner Representative)

Name of Owner: **See attached ownership exhibit**

Address of Owner: _____

Business Phone: _____ Fax: _____

Home Phone: _____ Mobile Phone: _____

Email: _____

Property Address: **See attached ownership exhibit**

Legal Description of Property:

See attached ownership exhibit

Permanent Index No. (PIN): **see attached** Zoning: **C5B/R4/R2**

Lot Dimensions: **irregular, see survey** Lot Area: **1.18 acres**

Present Use:

Commercial Office/Pottery Studio/Vacant Residential

Requested Use/Construction:

48-Unit multi-family residential apartment building with underground and surface parking

Estimated Date to Begin New Use/Construction: **August 5, 2019**

Names, Addresses, and Phone Numbers of Experts:

Architect: **BSB DESIGN, Paul Gianni**
220 North Smith St., Suite 210
Palatine, IL 60067
847-705-2200

Engineer: **HAEGER ENGINEERING, Kim Lask**
100 East State Parkway
Schaumburg, IL 60173
847-394-6600

Landscape Architect: **THE LAKOTA GROUP, Scott Freres**
116 W. Illinois St., FL7
Chicago, IL 60654
312-467-5445

Traffic Consultant: **KENIG, LINDGREN, O'HARA, ABBOONA, INC. (KLOA), Luay Aboona**
9575 West Higgins Road, Suite 400
Rosemont, IL 60018
847-518-9990

AVERE on Duane- Property Ownership Exhibit

Contact Name	Ownership Entity	Street Address, Glen Ellyn, IL 60137	PIN	Owner's Email	Area (Sq.Ft.)	Lot Frontage	Present Zoning	Legal Description
Jim Tuinega	TUINEGA, JAMES & JANET	443 Duane St.	0511325005	jimt@tem-inc.com	12,030	98 ft. on Duane; 122.75 on Prospect	C5B	LOTS 9, 10, 11 AND 12 IN BLOCK 3 IN GLENWOOD, BEING C. A. PHILLIPS SUBDIVISION OF PART OF SECTION 10 AND PART OF SECTION 11, TOWNSHIP 39 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED AUGUST 22, 1873 AS DOCUMENT 16688, IN DUPAGE COUNTY, ILLINOIS
Doug Funk	Duane Street, LLC	435 Duane St.	0511325004	dfunk@spenglerhomes.com	6,138	50 ft.	C5B	LOTS 7 AND 8 IN BLOCK 3 IN GLENWOOD, BEING C. A. PHILLIPS SUBDIVISION OF PART OF SECTION 10 AND PART OF SECTION 11, TOWNSHIP 39 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED AUGUST 22, 1873 AS DOCUMENT 16688, IN DUPAGE COUNTY, ILLINOIS.
Roland Emanuel	BEJA EMANUEL LLC	431-433 Duane St.	0511325003	ROLOBOYS@aol.com	6,138	50 ft.	C5B	Lots 5 and 6 in Block 3 in Glenwood, being C.A. Phillips Subdivision of part of Section 10 and part of Section 11, Township 39 North, Range 10, East of the Third Principal Meridian, according to the Plat thereof recorded August 22, 1873 as Document 16688, in DuPage County, Illinois
Grant Kief	427-429 Duane LLC	427-429 Duane St.	0511325002	kief@slibinc.com	6,138	50 ft.	C5B	LOTS 3 AND 4 IN BLOCK 3 IN GLENWOOD, BEING C. A. PHILLIPS SUBDIVISION OF PART OF SECTION 10 AND PART OF SECTION 11, TOWNSHIP 39 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED AUGUST 22, 1873 AS DOCUMENT 16688, IN DUPAGE COUNTY, ILLINOIS.
Robb Sackett	WHITE, WM L & ROBB SACKETT	431 Melrose Ave	0511325001	robbsackett1@gmail.com	6,128	48 ft. on Duane; 122.75 ft. on Melrose	C5B	Lots 1 and 2 in Block 3 in Glenwood, being C.A. Phillips Subdivision of part of Section 10 and part of Section 11, Township 39 North, Range 10, East of the Third Principal Meridian, according to the plat thereof recorded August 22, 1873 as document 16688, in DuPage County, Illinois.
Robb Sackett	425 MELROSE LLC	425 Melrose Ave	0511325006 0511325022 0511325023	robbsackett1@gmail.com	14,800	100 ft.	R4/R2	LOTS 37, 38, 39, 40 IN BLOCK 3 IN GLENWOOD, BEING C.A. PHILLIPS SUBDIVISION OF PART OF SECTION 10 AND PART OF SECTION 11, TOWNSHIP 39 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED AUGUST 22, 1873 AS DOCUMENT 16688, IN DUPAGE COUNTY, ILLINOIS.
Total/Summary					51,370			

NARRATIVE STATEMENT

Narrative Statement evaluating the economic effects of adjoining property, the effect of such elements as noise, glare, odor, fumes, and vibration on adjoining property, a discussion of the general compatibility with the adjacent and other properties in the district, the effect of traffic, the relationship of the proposed use to the Comprehensive Plan, and how it fulfills the requirements of paragraph (E) of Section 10-10-14 of the Zoning Code:

The proposed apartment building is similar in scale and architectural character to the adjacent public library, including a combination of brick and synthetic stucco, pitched roof. The proposed apartment replaces three ranch style homes, two, 2-story single family homes and a 2-story commercial building. The existing single-family homes have been converted to commercial uses and are functionally obsolete. The proposed residential use is compatible with the adjacent residential uses to the south and the physical qualities of the proposed structure are sympathetic to the public library to the north. Vehicle access to the building is planned from Melrose, mitigating potential traffic issues on Prospect or Duane. The proposed building is consistent with the comprehensive plan which calls for additional multi-family housing. Off-street parking is provided to the south of the proposed structure.

1. Will be harmonious with and in accordance with the general objectives, or within a specific objective of the Comprehensive Plan and/or this Zoning Code:

The proposed plan is harmonious with the comprehensive plan and zoning ordinance. Specifically, it provides multi-family housing within the Glen Ellyn Downtown in keeping with the Glen Ellyn Downtown Strategic Plan (hereinafter referred to as "The Plan")

The Plan, adopted in 2009, includes several references encouraging the type of development proposed on the subject property. The Plan notes that *"there is a lack of residential units in the Downtown for smaller-sized to provide Glen Ellyn residents the opportunity to live near their workplaces."* Thus, in the list of Objectives included in The Plan, number 2 states: *"Increase the Village's population within walking distance of the Downtown, by increasing the number of dwelling units (and thereby, consumers) in an around the Downtown."* (Page 8.2) Furthermore, the property on which the apartment building is proposed is included in the downtown plan, designated for future use as *"Multiple Family Residential"*

The Plan notes that *"Elements such as surface parking lots and one-story buildings don't provide the intensity that is needed to create a successful Downtown and TOD district."* The Plan goes on to state *"Adding housing Downtown is especially important given the surrounding area is substantially built-out and population growth is likely to be limited. The creation of multi-family housing will serve the needs of empty nesters and younger-aged, smaller-size households."* The three single story ranch structures on Duane are specifically noted as item "O." on the list of sites identified for potential to be "redeveloped, repurposed, and/or reinvigorated."

The Plan also includes a section titled “Strategies and Measures.” The Plan sets forth a specific measure to *“Construct a minimum of 450 new dwelling units in the Downtown.”* (Village of Glen Ellyn Downtown Strategic Plan – Page 8.3 of 8)

The Plan recognizes that *“The Zoning Code needs to be updated to reflect the recommendations in the Market Analysis and minimize the perceived burden of government-imposed obstacles in the Downtown business and development review process.”* (Village of Glen Ellyn Downtown Strategic Plan – Page 8.4)

The Plan reads *“Provide additional dwelling units for different types of households – especially empty-nesters (couples who no longer need a big house but want to remain in Glen Ellyn) and young professionals (individuals and couples who want to live in Glen Ellyn but don’t need or want a house at this stage in their lives). There is a demand for Downtown residential living for people who want to enjoy the benefits of the Downtown including its charm, convenience, and the cluster of services available within a comfortable walk from home.”* (Village of Glen Ellyn Downtown Strategic Plan – Page 8.6)

AVERE on Duane is specifically designed to fulfill the multi-family housing needs described in The Plan.

2. Will be designed, constructed, operated, and maintained so as to be harmonious and appropriate in appearance with the existing or intended character of the general vicinity and that such use will not change the essential character of the same area:

The proposed design of the building is in keeping with the character and scale of the adjacent library. The proposed building is proximate to larger scale buildings such as the library and St. Petronille Church and is adjacent to existing multi-family buildings to the west. The assemblage of property (between Melrose and Prospect) is at the low end of the block as the terrain rises to the south. The first-floor elevation of the proposed apartment building is below the first-floor elevation of the adjacent single family home to the south on Prospect. The intended character of the area as set forth in the Glen Ellyn Strategic Plan is for multi-family residential consistent with the proposed development. The existing zoning of the five parcels along Duane upon which the proposed building would be located is C5B. The existing single-family home on Melrose included in the assemblage is on a parcel straddling both the R4 and R2 zoning districts. The actual use of the parcel on Melrose is the surface parking area for residents and guests of AVERE on Duane.

The use of the property is residential, which is consistent with uses to the south. In fact, the proposed residential use is more harmonious with the adjacent residential uses to the south and west than are the existing commercial uses.

3. Will not be hazardous or disturbing to existing or future neighborhood uses:

The proposed residential use is consistent with the residential uses to the east, south and west of the subject property. The Traffic Study prepared by KLOA in connection with the proposed development determined that the relatively low traffic generated by the use will not overburden adjacent streets and that the access to the building off Melrose is the most

appropriate location, avoiding the busier Prospect Avenue and Duane Street. The proposed use will not be hazardous or disturbing to existing or future neighborhood uses.

4. Will be served adequately by essential public facilities and services such as highways, streets, police and fire protection, drainage structures, refuse disposal, water, sewers and schools, or that the persons or agencies responsible for the establishment of the proposed use shall be able to provide adequately any such services:

The public facilities and services are sufficient to serve the proposed use. The character of the building and the targeted market will not place an undue demand on municipal services. The existing storm, sanitary and water services have sufficient capacity to serve the proposed development. The parking lot will be constructed with permeable pavers in order to capture runoff prior to discharge into the existing storm sewer. The building will be served by two elevators and equipped with automatic fire sprinklers and emergency generator for added safety. The anticipated future residents are most likely to be adults with few if any school aged children. The apartment building will be owned by a single entity and will be professionally managed. The owner of the building will contract for private refuse and recycling, building and grounds maintenance including landscaping and snow removal. The building will be equipped with a single gas meter and a single water meter which will be sub-metered inside the unit with each tenant paying their respective share. The owner of the building will be responsible for paying for the master metered utilities.

5. Will not create excessive additional requirements at public cost for public facilities and services and will not be detrimental to the economic welfare of the Village:

We anticipate the residents of the proposed building to be “renters by choice” that are seeking an alternative to a traditional single-family home. In keeping with the objectives set forth in The Plan, increasing downtown population is critical to attracting and supporting local retailers and restaurants. The target market of AVERE on Duane is primarily empty nesters, single professionals and couples that may be moving to the area or perhaps even the existing homeowner undertaking renovations or new home construction. Experience with similarly situated buildings indicates low demand on public services and few if any school aged students. For instance, at Deer Park Crossing in Deer Park, Illinois, a similar podium style apartment building(s) with 145 occupied units, presently has only three (3) school aged students living in the podium style apartment buildings.

As set forth in the Glen Ellyn Downtown Strategic Plan, “Due to the complexity and diversity of issues typically involved in redevelopment projects, (environmental, transportation, infrastructure, land acquisition and assembly, building demolition and/or rehabilitation, and business recruitment), a municipality needs a number of resources to help address the varying aspects of a redevelopment project. Municipalities across the country have demonstrated that locally-controlled economic development tools are critical components to the redevelopment process. Local funding sources such as Tax Increment Financing (TIF), Special Service Areas (SSAs), property tax abatements, and land acquisitions and/or write-downs, empower municipalities to guide redevelopment and provide timely assistance, which is critical to

making today's development projects a reality." (Page 10.32). The five parcels underlying the proposed apartment building are within the existing downtown TIF district and the economic viability of the project is dependent upon receiving TIF funding in substantial conformance with the outline agreed to between Village of Glen Ellyn and the Developer in June of 2018. As evidenced by the TIF projections and verified by the Village's consultant, the AVERE on Duane development will generate significant increment a substantial portion of which will inure to the benefit of the Village.

In summary, the proposed development of AVERE on Duane will add to the economic vibrancy of the community and will not incur significant demands on public resources or facilities and will result in a positive fiscal impact to the community and its taxing districts.

6. Will not involve uses, activities, processes, materials, equipment and/or conditions of operation that will be detrimental to any persons, property or the general welfare by reason of excessive production of traffic, noise, smoke, fumes, glare or odors:

The proposed residential use will not involve uses, activities, processes, material or equipment that would be detrimental to any persons or property or the general welfare and will not produce excessive traffic, noise, smoke, fumes, glare of odors.

7. Will have vehicular approaches to the property which shall be so designed as not to create an undue interference with traffic on surrounding public streets or roads:

The vehicular traffic will be directed to Melrose this minimizing the impact on Prospect or Duane. Melrose is a short street that serves existing multi-family and single-family residences. The findings of the Traffic Study prepared by KLOA include the following conclusions:

- **The traffic that will be generated by the proposed development will be low and will be reduced due to its proximity to public transportation.**
- **The traffic that will be generated by the proposed development can be accommodated by the area roadway system.**
- **Providing access to the proposed AVERE on Duane Development off Melrose Avenue will be adequate in accommodating the traffic projected to be generated by the proposed development.**
- **The proposed apartment development will provide a sufficient number of parking spaces to accommodate its projected parking demand.**

Additional detailed findings are contained in the traffic study prepared by KLOA and corroborated by the Village's traffic consultant, James J. Benes. (See referenced reports and letters)

In addition to the 48 underground parking spaces (1 per unit) there are 34 surface parking spaces and a loading zone proposed in the Melrose right of way, between the entrance to the parking area and the garage. Presently, parking is permitted on the East side of Melrose for

up to 4 hours. As proposed, parking will not be permitted on the east side of Melrose between the entrances to the parking lot and the garage. Instead the pavement will be widened to create a loading zone so that delivery trucks, garbage pickup and moving trucks will not block vehicle movements along Melrose.

The Traffic Consultant opined, and the Developer's experience indicates that the parking ratio of 1.7 parking spaces per unit will adequately serve the residents, especially given the proximity to the train and downtown. In addition to the private parking on site, the 247 car Duane-Lorraine off-street public parking lot is just west of the subject property. While we do not expect residents to use the lot during the day when it is typically occupied by commuters, it does provide the option of additional public off-street parking during weekends and holidays.

8. Will not increase the potential for flood damage to adjacent property or require additional public expense for flood protection, rescue or relief:

The proposed multi-family building is located at the low end of Melrose and Prospect along Duane Street and is within the Lake Ellyn watershed boundary. The existing structures and associated driveways and parking areas include 0.72 acres of impervious area, or 61% of the total area. The proposed development reduces the impervious lot coverage to 0.58 acres or 49% impervious lot coverage. The proposed plan includes a permeable paver parking lot with underground permeable volume to capture and filter runoff from vehicles prior to discharge to the storm sewer. No additional expense is anticipated for flood protection, rescue or relief.

9. Will not result in destruction, loss or damage of natural, scenic or historical features of major importance to the community:

Section 7 of The Downtown Strategic Plan includes an "Historic Preservation Analysis." In the study, BauerLatoza Studio evaluated the existing structures within the Glen Ellyn Downtown and categorized them as "Outstanding" historic structures, "Notable" historic structures, "Contributing" historic structures and "Non-contributing" structures. Figure 22 on page 7.15 identifies each of the six structures to be demolished as part of the proposed development to be "Non-contributing" structures, meaning that the existing buildings *do not contribute* to the historic character of Downtown Glen Ellyn. The existing structures are economically and functionally obsolete and will not result in the loss or damage of any major natural, scenic or historical significance to the community.

I (We) certify that all of the statements and documents submitted as part of this application are true to the best of my (our) knowledge and belief.

I (We) consent to entry in or upon the premises described in this application by any authorized official of the Village of Glen Ellyn for the purpose of inspection.

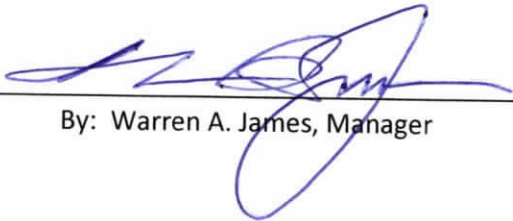
I (We) consent to pay the Village of Glen Ellyn all costs incurred for transcribing the public hearing on this application.

I (We) understand that no final action shall be taken by the Village Board subsequent to the public hearing until and upon payment of transcribing fees.

Signed on the 2nd day of May, 2019

REVA DEVELOPMENT ACQUISITIONS, LLC

By: REVA Development Partners, LLC, its manager



By: Warren A. James, Manager

Attachment: Special Use Permit Application (4023 : Avere on Duane - PUD, SUP, ZMA, SV)

APPLICATION FOR ZONING MAP AMENDMENT

CLEAR PAGE

You may attach separate sheets as needed to answer any of the following questions.

The undersigned petitions the President and Village Board of Trustees of the Village of Glen Ellyn, Illinois, to consider the Zoning Map Amendment described in this application.

Date Filed: **05/02/19** Application No: _____

Name of Applicant: **REVA Development Acquisitions, LLC**

Address of Applicant: **116 W. Illinois St. FL7
Chicago, IL 60654
Attention: Matt Nix / Warren James**

Business Phone No.: **312-320-6712** Home Phone No.: _____

Mobile Phone No.: **847-417-8915** Fax No.: _____

Property Interest of Applicant: **Contract Purchaser**

(Owner, Contract Purchaser, Owner Representative)

Name of Property Owner: **See attached ownership exhibit**

Address of Owner: **See attached ownership exhibit**

Phone No. (Business): **See attached** (Home): _____

Mobile Phone No.: _____ Fax No.: _____

Address of Property: **Duane Street between Melrose & Prospect**

Legal Description of Property:

See attached ownership exhibit for details

Attachment: Application for Zoning Map Amendment (4023 : Avere on Duane - PUD, SUP, ZMA, SV)

CLEAR PAGE

Lot Frontage: **541.50 ft. total frontage** Lot Area: **1.18 acres**

Present Use:

Two story single family home (vacant) on Melrose Ave.;
Three single-story residential buildings converted to commercial office use on Duane St.;
Two story single family home converted to pottery studio on Duane St.
Two story commercial office building on corner of Duane and Prospect.

Requested Zoning: **C5B (all property on Duane is already zoned C5B, only lot on Melrose to be rezoned)**

Requested Use/Construction:

48-unit multi-family apartment building with underground parking and surface parking lot.

Estimated Date to Begin New Use/Construction: **August 5, 2019**

Name(s), Address(es), and Phone No(s). of Experts (architects, engineers, etc.):

Architect: BSB Design, Paul Gianni

220 N. Smith Street, Palatine, IL 60067 847-705-2200

Engineer: Haeger Engineering, Kimberly Lask

100 E. State Parkway, Schaumburg, IL 60173 847-394-6600

Landplanner/Landscape Architect: The Lakota Group, Scott Freres

116 W. Illinois St., FL7, Chicago, IL 60654 312-467-5445

Traffic Engineer: Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA), Luay Aboona

9575 W. Higgins Road. Suite 400, Rosemont, IL 60018 847-518-9900

Market Analysis: Tracy Cross & Associates, Eric Doersching

1920 N. THoreau Dr., Suite 150, Schaumburg, IL 60173-4174 847-925-5400

AVERE on Duane- Property Ownership Exhibit

Contact Name	Ownership Entity	Street Address, Glen Ellyn, IL 60137	PIN	Owner's Email	Area (Sq.Ft.)	Lot Frontage	Present Zoning	Legal Description
Jim Tuinega	TUINEGA, JAMES & JANET	443 Duane St.	0511325005	jimt@tem-inc.com	12,030	98 ft. on Duane; 122.75 on Prospect	C5B	LOTS 9, 10, 11 AND 12 IN BLOCK 3 IN GLENWOOD, BEING C. A. PHILLIPS SUBDIVISION OF PART OF SECTION 10 AND PART OF SECTION 11, TOWNSHIP 39 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED AUGUST 22, 1873 AS DOCUMENT 16688, IN DUPAGE COUNTY, ILLINOIS
Doug Funk	Duane Street, LLC	435 Duane St.	0511325004	dfunk@spenglerhomes.com	6,138	50 ft.	C5B	LOTS 7 AND 8 IN BLOCK 3 IN GLENWOOD, BEING C. A. PHILLIPS SUBDIVISION OF PART OF SECTION 10 AND PART OF SECTION 11, TOWNSHIP 39 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED AUGUST 22, 1873 AS DOCUMENT 16688, IN DUPAGE COUNTY, ILLINOIS.
Roland Emanuel	BEJA EMANUEL LLC	431-433 Duane St.	0511325003	ROLOBOYS@aol.com	6,138	50 ft.	C5B	Lots 5 and 6 in Block 3 in Glenwood, being C.A. Phillips Subdivision of part of Section 10 and part of Section 11, Township 39 North, Range 10, East of the Third Principal Meridian, according to the Plat thereof recorded August 22, 1873 as Document 16688, in DuPage County, Illinois
Grant Kief	427-429 Duane LLC	427-429 Duane St.	0511325002	kief@slibinc.com	6,138	50 ft.	C5B	LOTS 3 AND 4 IN BLOCK 3 IN GLENWOOD, BEING C. A. PHILLIPS SUBDIVISION OF PART OF SECTION 10 AND PART OF SECTION 11, TOWNSHIP 39 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED AUGUST 22, 1873 AS DOCUMENT 16688, IN DUPAGE COUNTY, ILLINOIS.
Robb Sackett	WHITE, WM L & ROBB SACKETT	431 Melrose Ave	0511325001	robbsackett1@gmail.com	6,128	48 ft. on Duane; 122.75 ft. on Melrose	C5B	Lots 1 and 2 in Block 3 in Glenwood, being C.A. Phillips Subdivision of part of Section 10 and part of Section 11, Township 39 North, Range 10, East of the Third Principal Meridian, according to the plat thereof recorded August 22, 1873 as document 16688, in DuPage County, Illinois.
Robb Sackett	425 MELROSE LLC	425 Melrose Ave	0511325006 0511325022 0511325023	robbsackett1@gmail.com	14,800	100 ft.	R4/R2	LOTS 37, 38, 39, 40 IN BLOCK 3 IN GLENWOOD, BEING C.A. PHILLIPS SUBDIVISION OF PART OF SECTION 10 AND PART OF SECTION 11, TOWNSHIP 39 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED AUGUST 22, 1873 AS DOCUMENT 16688, IN DUPAGE COUNTY, ILLINOIS.
Total/Summary					51,370			

NARRATIVE STATEMENT

Narrative Statement evaluating the economic effects of adjoining property, the effect of such elements as noise, glare, odor, fumes, and vibration on adjoining property, a discussion of the general compatibility with the adjacent and other properties in the district, the effect of traffic, the relationship of the proposed use to the Comprehensive Plan, and how it fulfills the requirements of paragraph (E) of Section 10-10-14 of the Zoning Code:

The proposed apartment building is similar in scale and architectural character to the adjacent public library, including a combination of brick and synthetic stucco, pitched roof. The proposed apartment replaces three ranch style homes, two, 2-story single family homes and a 2-story commercial building. The existing single-family homes have been converted to commercial uses and are functionally obsolete. The proposed residential use is compatible with the adjacent residential uses to the south and the physical qualities of the proposed structure are sympathetic to the public library to the north. Vehicle access to the building is planned from Melrose, mitigating potential traffic issues on Prospect or Duane. The proposed building is consistent with the comprehensive plan which calls for additional multi-family housing. Off-street parking is provided to the south of the proposed structure.

1. Will be harmonious with and in accordance with the general objectives, or within a specific objective of the Comprehensive Plan and/or this Zoning Code:

The proposed plan is harmonious with the comprehensive plan and zoning ordinance. Specifically, it provides multi-family housing within the Glen Ellyn Downtown in keeping with the Glen Ellyn Downtown Strategic Plan (hereinafter referred to as "The Plan")

The Plan, adopted in 2009, includes several references encouraging the type of development proposed on the subject property. The Plan notes that *"there is a lack of residential units in the Downtown for smaller-sized to provide Glen Ellyn residents the opportunity to live near their workplaces."* Thus, in the list of Objectives included in The Plan, number 2 states: *"Increase the Village's population within walking distance of the Downtown, by increasing the number of dwelling units (and thereby, consumers) in an around the Downtown."* (Page 8.2) Furthermore, the property on which the apartment building is proposed is included in the downtown plan, designated for future use as *"Multiple Family Residential"*

The Plan notes that *"Elements such as surface parking lots and one-story buildings don't provide the intensity that is needed to create a successful Downtown and TOD district."* The Plan goes on to state *"Adding housing Downtown is especially important given the surrounding area is substantially built-out and population growth is likely to be limited. The creation of multi-family housing will serve the needs of empty nesters and younger-aged, smaller-size households."* The three single story ranch structures on Duane are specifically noted as item "O." on the list of sites identified for potential to be "redeveloped, repurposed, and/or reinvigorated."

The Plan also includes a section titled “Strategies and Measures.” The Plan sets forth a specific measure to *“Construct a minimum of 450 new dwelling units in the Downtown.”* (Village of Glen Ellyn Downtown Strategic Plan – Page 8.3 of 8)

The Plan recognizes that *“The Zoning Code needs to be updated to reflect the recommendations in the Market Analysis and minimize the perceived burden of government-imposed obstacles in the Downtown business and development review process.”* (Village of Glen Ellyn Downtown Strategic Plan – Page 8.4)

The Plan reads *“Provide additional dwelling units for different types of households – especially empty-nesters (couples who no longer need a big house but want to remain in Glen Ellyn) and young professionals (individuals and couples who want to live in Glen Ellyn but don’t need or want a house at this stage in their lives). There is a demand for Downtown residential living for people who want to enjoy the benefits of the Downtown including its charm, convenience, and the cluster of services available within a comfortable walk from home.”* (Village of Glen Ellyn Downtown Strategic Plan – Page 8.6)

AVERE on Duane is specifically designed to fulfill the multi-family housing needs described in The Plan.

2. Will be designed, constructed, operated, and maintained so as to be harmonious and appropriate in appearance with the existing or intended character of the general vicinity and that such use will not change the essential character of the same area:

The proposed design of the building is in keeping with the character and scale of the adjacent library. The proposed building is proximate to larger scale buildings such as the library and St. Petronille Church and is adjacent to existing multi-family buildings to the west. The assemblage of property (between Melrose and Prospect) is at the low end of the block as the terrain rises to the south. The first-floor elevation of the proposed apartment building is below the first-floor elevation of the adjacent single family home to the south on Prospect. The intended character of the area as set forth in the Glen Ellyn Strategic Plan is for multi-family residential consistent with the proposed development. The existing zoning of the five parcels along Duane upon which the proposed building would be located is C5B. The existing single-family home on Melrose included in the assemblage is on a parcel straddling both the R4 and R2 zoning districts. The actual use of the parcel on Melrose is the surface parking area for residents and guests of AVERE on Duane.

The use of the property is residential, which is consistent with uses to the south. In fact, the proposed residential use is more harmonious with the adjacent residential uses to the south and west than are the existing commercial uses.

3. Will not be hazardous or disturbing to existing or future neighborhood uses:

The proposed residential use is consistent with the residential uses to the east, south and west of the subject property. The Traffic Study prepared by KLOA in connection with the proposed development determined that the relatively low traffic generated by the use will not overburden adjacent streets and that the access to the building off Melrose is the most

appropriate location, avoiding the busier Prospect Avenue and Duane Street. The proposed use will not be hazardous or disturbing to existing or future neighborhood uses.

4. Will be served adequately by essential public facilities and services such as highways, streets, police and fire protection, drainage structures, refuse disposal, water, sewers and schools, or that the persons or agencies responsible for the establishment of the proposed use shall be able to provide adequately any such services:

The public facilities and services are sufficient to serve the proposed use. The character of the building and the targeted market will not place an undue demand on municipal services. The existing storm, sanitary and water services have sufficient capacity to serve the proposed development. The parking lot will be constructed with permeable pavers in order to capture runoff prior to discharge into the existing storm sewer. The building will be served by two elevators and equipped with automatic fire sprinklers and emergency generator for added safety. The anticipated future residents are most likely to be adults with few if any school aged children. The apartment building will be owned by a single entity and will be professionally managed. The owner of the building will contract for private refuse and recycling, building and grounds maintenance including landscaping and snow removal. The building will be equipped with a single gas meter and a single water meter which will be sub-metered inside the unit with each tenant paying their respective share. The owner of the building will be responsible for paying for the master metered utilities.

5. Will not create excessive additional requirements at public cost for public facilities and services and will not be detrimental to the economic welfare of the Village:

We anticipate the residents of the proposed building to be “renters by choice” that are seeking an alternative to a traditional single-family home. In keeping with the objectives set forth in The Plan, increasing downtown population is critical to attracting and supporting local retailers and restaurants. The target market of AVERE on Duane is primarily empty nesters, single professionals and couples that may be moving to the area or perhaps even the existing homeowner undertaking renovations or new home construction. Experience with similarly situated buildings indicates low demand on public services and few if any school aged students. For instance, at Deer Park Crossing in Deer Park, Illinois, a similar podium style apartment building(s) with 145 occupied units, presently has only three (3) school aged students living in the podium style apartment buildings.

As set forth in the Glen Ellyn Downtown Strategic Plan, “Due to the complexity and diversity of issues typically involved in redevelopment projects, (environmental, transportation, infrastructure, land acquisition and assembly, building demolition and/or rehabilitation, and business recruitment), a municipality needs a number of resources to help address the varying aspects of a redevelopment project. Municipalities across the country have demonstrated that locally-controlled economic development tools are critical components to the redevelopment process. Local funding sources such as Tax Increment Financing (TIF), Special Service Areas (SSAs), property tax abatements, and land acquisitions and/or write-downs, empower municipalities to guide redevelopment and provide timely assistance, which is critical to

making today's development projects a reality." (Page 10.32). The five parcels underlying the proposed apartment building are within the existing downtown TIF district and the economic viability of the project is dependent upon receiving TIF funding in substantial conformance with the outline agreed to between Village of Glen Ellyn and the Developer in June of 2018. As evidenced by the TIF projections and verified by the Village's consultant, the AVERE on Duane development will generate significant increment a substantial portion of which will inure to the benefit of the Village.

In summary, the proposed development of AVERE on Duane will add to the economic vibrancy of the community and will not incur significant demands on public resources or facilities and will result in a positive fiscal impact to the community and its taxing districts.

6. Will not involve uses, activities, processes, materials, equipment and/or conditions of operation that will be detrimental to any persons, property or the general welfare by reason of excessive production of traffic, noise, smoke, fumes, glare or odors:

The proposed residential use will not involve uses, activities, processes, material or equipment that would be detrimental to any persons or property or the general welfare and will not produce excessive traffic, noise, smoke, fumes, glare of odors.

7. Will have vehicular approaches to the property which shall be so designed as not to create an undue interference with traffic on surrounding public streets or roads:

The vehicular traffic will be directed to Melrose this minimizing the impact on Prospect or Duane. Melrose is a short street that serves existing multi-family and single-family residences. The findings of the Traffic Study prepared by KLOA include the following conclusions:

- **The traffic that will be generated by the proposed development will be low and will be reduced due to its proximity to public transportation.**
- **The traffic that will be generated by the proposed development can be accommodated by the area roadway system.**
- **Providing access to the proposed AVERE on Duane Development off Melrose Avenue will be adequate in accommodating the traffic projected to be generated by the proposed development.**
- **The proposed apartment development will provide a sufficient number of parking spaces to accommodate its projected parking demand.**

Additional detailed findings are contained in the traffic study prepared by KLOA and corroborated by the Village's traffic consultant, James J. Benes. (See referenced reports and letters)

In addition to the 48 underground parking spaces (1 per unit) there are 34 surface parking spaces and a loading zone proposed in the Melrose right of way, between the entrance to the parking area and the garage. Presently, parking is permitted on the East side of Melrose for

up to 4 hours. As proposed, parking will not be permitted on the east side of Melrose between the entrances to the parking lot and the garage. Instead the pavement will be widened to create a loading zone so that delivery trucks, garbage pickup and moving trucks will not block vehicle movements along Melrose.

The Traffic Consultant opined, and the Developer's experience indicates that the parking ratio of 1.7 parking spaces per unit will adequately serve the residents, especially given the proximity to the train and downtown. In addition to the private parking on site, the 247 car Duane-Lorraine off-street public parking lot is just west of the subject property. While we do not expect residents to use the lot during the day when it is typically occupied by commuters, it does provide the option of additional public off-street parking during weekends and holidays.

8. Will not increase the potential for flood damage to adjacent property or require additional public expense for flood protection, rescue or relief:

The proposed multi-family building is located at the low end of Melrose and Prospect along Duane Street and is within the Lake Ellyn watershed boundary. The existing structures and associated driveways and parking areas include 0.72 acres of impervious area, or 61% of the total area. The proposed development reduces the impervious lot coverage to 0.58 acres or 49% impervious lot coverage. The proposed plan includes a permeable paver parking lot with underground permeable volume to capture and filter runoff from vehicles prior to discharge to the storm sewer. No additional expense is anticipated for flood protection, rescue or relief.

9. Will not result in destruction, loss or damage of natural, scenic or historical features of major importance to the community:

Section 7 of The Downtown Strategic Plan includes an "Historic Preservation Analysis." In the study, BauerLatoza Studio evaluated the existing structures within the Glen Ellyn Downtown and categorized them as "Outstanding" historic structures, "Notable" historic structures, "Contributing" historic structures and "Non-contributing" structures. Figure 22 on page 7.15 identifies each of the six structures to be demolished as part of the proposed development to be "Non-contributing" structures, meaning that the existing buildings *do not contribute* to the historic character of Downtown Glen Ellyn. The existing structures are economically and functionally obsolete and will not result in the loss or damage of any major natural, scenic or historical significance to the community.

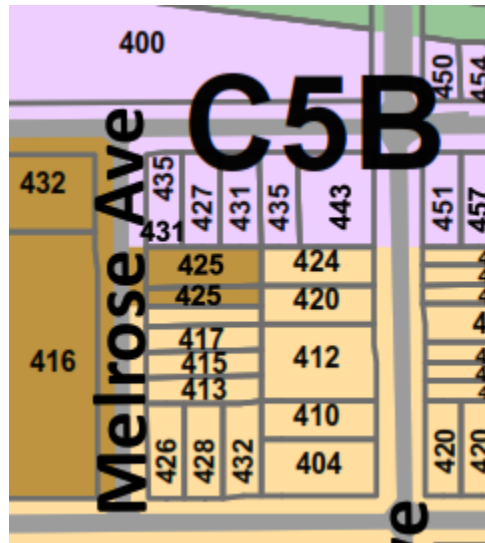
Discuss the Requested Zone Change with Respect to Each of the Following:

1. Identification of the existing uses of property within the general area of the affected property:

The property is adjacent to the public library to the North, existing single family to the east and south and existing multi-family residential to the West; and is proximate to St. Petronille church and downtown Glen Ellyn.

2. Identification of the zoning classification of property within the general area of the affected property:

Most of the site (including all the parcels along Duane Avenue where the proposed building is sited) is already zoned C5B. The existing single-family home located at 425 Melrose Avenue sits on a lot that is 100' x 148'. The northerly parcels are zoned R4 and the southerly 25' wide parcel is zoned R2. The zoning classification of the adjacent properties are as follows: to the north C5B, to the south is R2, to the east R2 and to the west R4.



3. Determination as to the suitability of the property in question to the uses permitted under the existing classification or district and under the proposed classification or district:

As noted above, most of the subject property is already zoned C5B which allows multi-family housing as a Special Use. The request is to change the zoning of 425 Melrose from R4 and R2 to C5B to be consistent with the balance of the property. The proposed use of the property at 425 Melrose is a parking lot to serve the proposed multi-family use which will be appropriately buffered as depicted on the proposed landscape plan.

4. The trend of development, if any, in the general area of the affected property, including changes, if any, which have taken place since the date the affected property was placed in its present zoning classification or district:

The only recent development in the immediate vicinity of the site is the construction of the Glen Ellyn Public Library immediately north of the subject property and a newer construction single family home to the east of the subject property. The height and scale of the Public Library building is similar to the proposed development.

5. The trend of development, if any, as to the proposed uses of property within the general area of the affected property, as represented on the Comprehensive Plan:

The 2001 Comprehensive Plan included the call to “promote replacement of older structures with high quality townhomes and similar multi-family development.” The more recent 2009 Glen Ellyn Downtown Strategic Plan calls to “redevelop existing multiple-family to new multiple-family with a historically-sensitive development pattern.”

6. The length of time the property has been vacant as zoned, considered in the context of the land development and the area surrounding the subject property:

Each of the existing homes on Duane and Melrose has long since been repurposed for other uses. The three single story structures have been converted to commercial office space, the two-story home on Duane is a pottery shop and the single-family home on Melrose is now vacant but was most recently used as a family shelter. Only the two-story building at the corner of Prospect and Duane is being used for its original purpose (commercial/office). As evidenced by the 2001 and 2009 comprehensive plans, the Village has promoted a change in use for nearly two decades calling for multi-family redevelopment.

7. The extent to which property values are diminished, if at all, by the particular zoning restrictions:

The property that is the subject of the rezoning request is zoned R4 and R2 and is proposed to be consolidated into a single parcel with the balance of the development site. The parcels that are the subject of rezoning are ancillary to the majority of the proposed development site which is already zoned C5B. The rezoning request allows for the consolidated parcel to have a single zoning designation consistent with the intent of the Downtown Plan. If the existing rezoning were to preclude the redevelopment of the consolidated parcel it would reduce the value of the subject property. Because this parcel will be developed with surface parking and landscaping there would be limited impact on the adjoining property values.

I (We) certify that all of the statements and documents submitted as part of this application are true to the best of my (our) knowledge and belief.

I (We) consent to entry in or upon the premises described in this application by any authorized official of the Village of Glen Ellyn for the purpose of inspection.

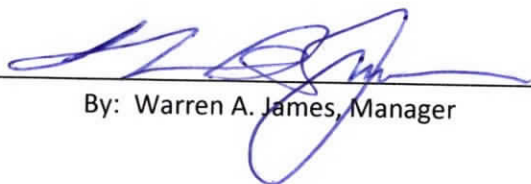
I (We) consent to pay the Village of Glen Ellyn all costs incurred for transcribing the public hearing on this application.

I (We) understand that no final action shall be taken by the Village Board subsequent to the public hearing until and upon payment of transcribing fees.

Signed on the 2nd day of May, 2019

REVA DEVELOPMENT ACQUISITIONS, LLC

By: REVA Development Partners, LLC, its manager



By: Warren A. James, Manager

VILLAGE OF GLEN ELLYN
535 Duane Street
Glen Ellyn, Illinois 60137
(630) 547-5250

APPLICATION FOR SIGN VARIATION

Note to the Applicant: This application should be filed with, and any questions regarding it, should be directed to the Director of the Village Planning and Development Department.

You may attach separate sheets as needed to answer any of the following questions.

The undersigned hereby petitions the Village of Glen Ellyn, Illinois, for one or more variations from the Glen Ellyn Sign Code, as described in this application.

I. APPLICANT INFORMATION

Name: REVA Development Partners (Matt Nix)

Address: 116 W Illinois St., FL7, Chicago, IL 60654

Phone No.: 312-320-6712 Fax No.: _____

E-mail: Matt.Nix@revadevelopment.com

Ownership Interest in the Property in Question: Property under contract

Name and address of the legal owner of the property (if other than the applicant):

See attached ownership spreadsheet

II. PROPERTY INFORMATION

Common address: See attached ownership spreadsheet

Permanent tax index number: _____ Zoning classification: _____

Present use: _____

Attachment: Sign Variation Application (4023 : Avere on Duane - PUD, SUP, ZMA, SV)

III. INFORMATION REGARDING THE VARIATION(S) REQUESTED

List of the variation(s) requested, including identification of the Sign Code provisions from which the variation is sought:

~~There is one site identification sign located on Duane near the intersection with~~
~~Prospect that identifies the name of the building "AVERE on Duane". We are~~
~~requesting relief from the underlying ordinance (Code Section 4-5-11(D)) to allow~~
~~1 free-standing and 1 wall sign on the property for a total of two signs in lieu of 1~~
~~permitted residential development identification sign. The additional wall sign would~~
~~be constructed via the installation of letters on the planter wall adjacent to the~~
~~main entrance off Melrose that will also read "AVERE on Duane."~~ The details of the
 signs as proposed are on sheet L2.1 from Lakota Group.

IV. EVIDENCE RELATING TO SIGN CODE STANDARDS FOR A VARIATION

The following items are intended to elicit information to support conclusions by the Plan Commission and the Village Board that the required findings/standards for a variation have been established and met. Therefore, please complete these items carefully.

Please note that a showing that granting the requested variation would be more profitable to the applicant or that the sign would be more valuable is not grounds for granting approval for a variation (Section 4-5-17(G)3(c) of the Sign Code).

A. Standards Applicable to All Variations Requested

1. Indicate how you believe the requested variation(s) complies with the Statement of Purpose in Section 4-5-2 of the Sign Code (attached):

~~The requested variation complies with the Statement of Purpose~~
~~in Section 4-5-2 because the additional signage adjacent to the main~~
~~entrance would allow people to properly identify the building when~~
~~approaching the entrance. Not being able to have a sign in this~~
~~location could lead to confusion for those who aren't familiar~~
~~with the building.~~

2. Provide evidence that the practical difficulties or hardship in complying with the Sign Code is based on unique circumstances due to an unusual physical limitation, such as an irregular lot shape, substantial lot depth, unusual geographic location, exceptional topographic feature, or other condition, that is peculiar to the subject property or establishment. Also share how the conditions upon which the request is based are not generally applicable to other property within the same zoning district:

~~The practical difficulty in complying with the Sign Code by limiting the building to only having one sign is that the main entrance to the building is on the opposite side (facing south) of where the first sign is to be located at the corner of Duane and Prospect. Having two signs would allow the property to be identified both from the street and from the parking lot as you approach the entrance.~~

3. Provide evidence that the variation(s), if granted, would have no adverse impact on property values in the surrounding area or be injurious to other property or improvements in the neighborhood in which the property is located:

~~The additional sign would have no adverse impact on the surrounding property. It is of reasonable size, is attractively designed, and is located in an area that would not effect the surrounding properties or neighborhood in a negative way. The sign is not free-standing and is comprised of letters placed on a planter wall that will already be in place as part of construction.~~

4. Provide evidence that the variation(s), if granted, would have no adverse impact on the existing or desired character of the surrounding area:

~~The requested additional sign is consistent with the character of the other signage and overall design of the building. Its scale, design, and location would reflect positively on the character of the surrounding area. The sign is not free-standing and is comprised of letters placed on a planter wall that will already be in place as part of construction.~~

5. Provide evidence that the variation(s), if granted, would not endanger the public health, safety, or welfare:

The requested additional sign would not have any adverse effect on public health, safety, or welfare. The additional sign would help people find the building without difficulty or confusion.

- B. For the purpose of supplementing the above standards, the PC, in making its recommendation that there are practical difficulties or particular hardships, may also take into consideration the extent to which the evidence establishes or fails to establish the following facts favorably to the applicant:

1. Provide evidence that the purpose of the variation(s) is not based exclusively upon a desire to make more money out of the property:

The requested additional sign has no impact on the money generated by the property and is simply to help identify the building at the main entrance. The sign is not free-standing and is comprised of letters placed on a planter wall that will already be in place as part of construction.

2. Provide evidence that the alleged difficulty or particular hardship has not been created by any person presently having an interest in the property or by the applicant:

The particular hardship has to do with the orientation of the building on the site and the particular dimensions of the site. The additional sign will allow the building to have sign visibility on both the north (street-side) and south (parking lot) side.

3. Provide evidence that the requested variation(s) is/are the minimum variation(s) necessary.

The ordinance only allows one sign, and we are requesting the minimum variation of one additional sign for the building.

4. Provide evidence that the property in question cannot yield a reasonable return if permitted to be used only under the conditions allowed by the regulations governing the district in which it is located:

Without the additional sign it would be difficult for people to identify the building when approaching the main entrance on the south side. Lack of appropriate signage could be confusing to potential residents and may detract them from renting.

Please add any additional comments which you believe may assist the PC in reviewing this application:

The combined square footage of the two proposed signs is 23.8 square feet, which is less than the 35 square feet that is permitted on a single sign.

VIII. CERTIFICATIONS, CONSENT AND SIGNATURE(S)

I (We) certify that all of the statements and documents submitted as part of this application are true and complete to the best of my (our) knowledge and belief.

I (We) consent to the entry in or upon the premises described in the application by any authorized official of the Village of Glen Ellyn.

I (We) certify that I (we) have carefully reviewed the Glen Ellyn Sign Variation Request Package and applicable provisions of the Glen Ellyn Sign Code.

I (We) understand that this application will not be submitted to the Review Boards and Commissions until all items on the attached list are reviewed by Village staff.

6/11/19 Matt Nix 
 Date Print Name Signature of Applicant

 Date Print Name Signature of Applicant

 Date Print Name Signature of Applicant

Attachment: Sign Variation Application (4023 : Avere on Duane - PUD, SUP, ZMA, SV)

SIGNAGE WORKSHEET

**List all proposed new, and existing signs to remain, on the establishment,
building and property for the specific type of facility**

FACILITY TYPES:

- ☐ **NONRESIDENTIAL ESTABLISHMENT** (For one establishment in one building on one property)
☐ **NONRESIDENTIAL ESTABLISHMENT** (For one establishment if more than one establishment is in the building or on the property)
☐ **MULTI-TENANT DEVELOPMENT** (For a development with more than two establishments on one property)
☐ **OFFICE COMPLEX** (For a development with more than one business office on one property)
☒ **RESIDENTIAL DEVELOPMENT** (For a development with more than twenty dwelling units on one property)
☐ **MULTI-FAMILY DWELLING** (For a development with more than three dwelling units on one property)
☐ **PARK OR PUBLIC RECREATION FACILITY**
☐ **OTHER FACILITY - DESCRIBE:** _____

SIGN TYPES: (*Please specify one of the following sign types)

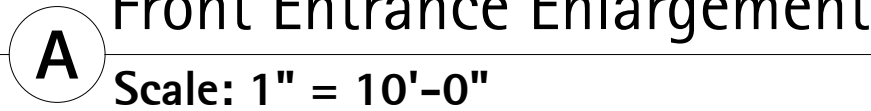
Awning, Breezeway, Common Program, Drive-thru Canopy, Freestanding, Indexing, Marquee, Menu Board, Message Board, Nameplate, Off-premises, Office Directory, Order Confirmation, Political Campaign, Portable, Private Parking Lot, Traffic Directional, Wall, Video Display, and Window Sign. (Sign Definitions Section 4-5-3)

Sign	New	Existing	Sign Type *	Dimensions (Length x Width)	Sign Area	Height
1	X		Freestanding	6' x 2'6"	15 sq ft	top is 5'11" from ground
Words/Symbols: AVERE ON DUANE						
2	X		Wall-mounted	4'8" x 1'10"	8.8 sq ft	top is 3'8" from ground
Words/Symbols: AVERE ON DUANE						
3						
Words/Symbols:						
4						
Words/Symbols:						
5						
Words/Symbols:						
6						
Words/Symbols:						
7						
Words/Symbols:						
8						
Words/Symbols:						

Attachment: Sign Variation Application (4023 : Avere on Duane - PUB, SUP, ZMA, SV)

AVERE on Duane- Ownership Matrix

Contact Name	Ownership Entity	Address	PIN	Owner's Email	SF	Acreage	Present Use	Legal Description
Jim Tuinega	TUINEGA, JAMES & JANET	443 Duane St., Glen Ellyn, IL 60137	0511325005	jimt@tem-inc.com	12,029.50	0.28	CSB	LOTS 9, 10, 11 AND 12 IN BLOCK 3 IN GLENWOOD, BEING C. A. PHILLIPS SUBDIVISION OF PART OF SECTION 10 AND PART OF SECTION 11, TOWNSHIP 39 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED AUGUST 22, 1873 AS DOCUMENT 16688, IN DUPAGE COUNTY, ILLINOIS
Doug Funk	Duane Street, LLC	435 Duane St., Glen Ellyn, IL 60137	0511325004	dfunk@spenglerhomes.com	6,137.50	0.14	CSB	LOTS 7 AND 8 IN BLOCK 3 IN GLENWOOD, BEING C. A. PHILLIPS SUBDIVISION OF PART OF SECTION 10 AND PART OF SECTION 11, TOWNSHIP 39 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED AUGUST 22, 1873 AS DOCUMENT 16688, IN DUPAGE COUNTY, ILLINOIS.
Roland Emanuel	BEJA EMANUEL LLC	431-433 Duane St., Glen Ellyn, IL 60137	0511325003	ROLOBOYS@aol.com	6,137.50	0.14	CSB	Lots 5 and 6 in Block 3 in Glenwood, being C.A. Phillips Subdivision of part of Section 10 and part of Section 11, Township 39 North, Range 10, East of the Third Principal Meridian, according to the Plat thereof recorded August 22, 1873 as Document 16688, in DuPage County, Illinois
Grant Kief	427-429 Duane LLC	427-429 Duane St., Glen Ellyn, IL 60137	0511325002	kief@slibinc.com	6,137.50	0.14	CSB	LOTS 3 AND 4 IN BLOCK 3 IN GLENWOOD, BEING C. A. PHILLIPS SUBDIVISION OF PART OF SECTION 10 AND PART OF SECTION 11, TOWNSHIP 39 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED AUGUST 22, 1873 AS DOCUMENT 16688, IN DUPAGE COUNTY, ILLINOIS.
Robb Sackett	WHITE, WM L & ROBB SACKETT	431 Melrose Ave, Glen Ellyn, IL 60137	0511325001	roobsackett1@gmail.com	5,892.00	0.14	CSB	Lots 1 and 2 in Block 3 in Glenwood, being C.A. Phillips Subdivision of part of Section 10 and part of Section 11, Township 39 North, Range 10, East of the Third Principal Meridian, according to the plat thereof recorded August 22, 1873 as document 16688, in DuPage County, Illinois.
Robb Sackett	425 MELROSE LLC	425 Melrose Ave, Glen Ellyn, IL 60137	0511325006 0511325022 0511325023	roobsackett1@gmail.com	14,800.00	0.34	R4/R2	LOTS 37, 38, 39, 40 IN BLOCK 3 IN GLENWOOD, BEING C.A. PHILLIPS SUBDIVISION OF PART OF SECTION 10 AND PART OF SECTION 11, TOWNSHIP 39 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED AUGUST 22, 1873 AS DOCUMENT 16688, IN DUPAGE COUNTY, ILLINOIS.
Total/Summary					51,134.00	1.18		

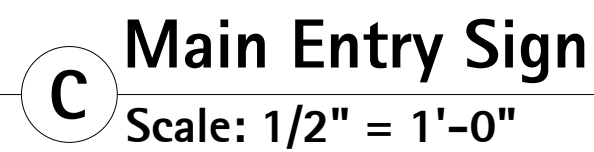


Scale: 1" = 10'-0"

NOTE: FOR FINAL ENTRY WALL LAYOUT, SEE ARCHITECTURAL PLANS



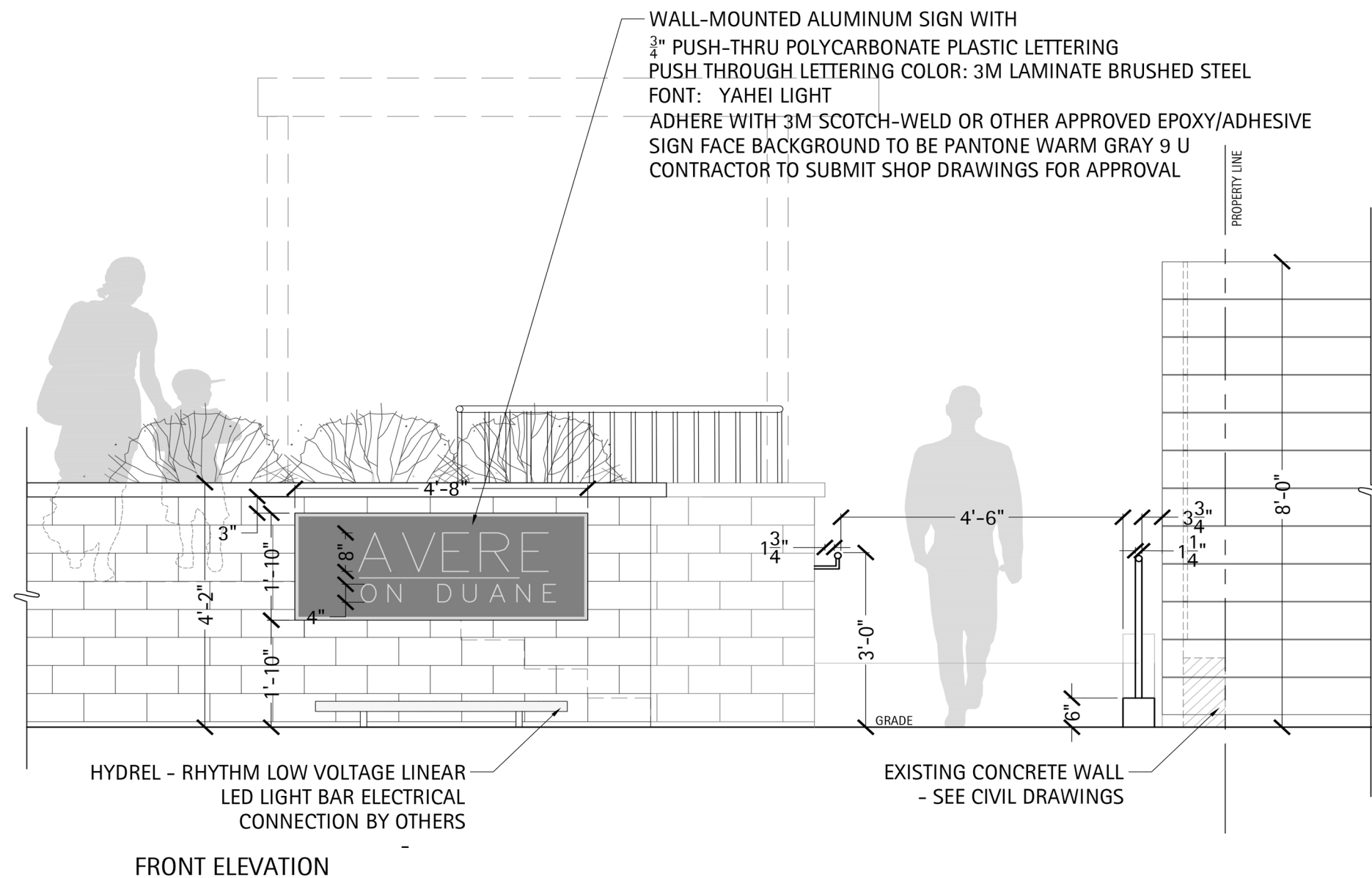
Scale: $1/2" = 1'-0"$



Scale: $1/2" = 1'-0"$



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LETTERING: 3M LAMINATE BRUSHED STEEL



PANTONE
 Lab 55.76, 3.03, 5.18
 sRGB 141, 132, 125
 HTML 8D847D

SIGN FACE BACKGROUND: PANTONE WARM GRAY 9 U

Main Entry Sign

Not to Scale

EXTERIOR APPEARANCE REVIEW APPLICATION

Please complete and return this form to the Planning and Development Department, 535 Duane St.,
Glen Ellyn, IL 60137. If you have questions, please phone: 630.547.5250

CLEAR PAGE

I. APPLICATION INFORMATION:

A. Date Filed: 01/22/19 B: Application No. _____

C. Project Name: AVERE on Duane

D. Project Description:

Four story luxury apartment building with 48 units over underground parking, with an average unit size in excess of 1300 sq.ft. located on 1.18 acres on Duane Street, between Prospect and Melrose Ave.

E. Address of Property: 427-443 Duane Street & 425-435 Melrose Ave.

F. Permanent Index No.: See Attached G. Zoning: C5B/R4/R2

H. Name of Applicant: REVA Development Partners, LLC

I. Address of Applicant: 116 W Illinois St., FL7, Chicago, IL 60654

J. Phone No. (Business): 312-464-8800 (Home) _____

K. (Mobile) 312-320-6712 (Other) _____

L. Fax No.: _____

M. E-mail Address of Applicant: matt.nix@revadevelopment.com

N. Name of Property Owner: See Attached

O. Address of Property Owner: assemblage; see attached list

P. Phone No. (Business): _____ (Home) _____

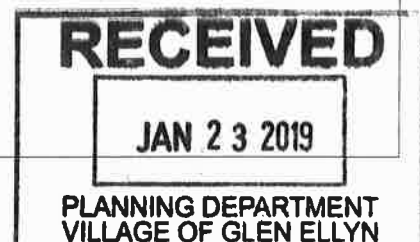
Q. E-Mail Address of Property Owner: _____

II. CONFORMANCE WITH APPEARANCE REVIEW GUIDELINES:

(You may attach separate sheets as needed to answer any of the following questions)

R. Please explain why the proposed architectural style was chosen.

The character of the proposed apartment building is complimentary to the adjacent library and in keeping with the traditional architecture found in Glen Ellyn. The composition of the elevations, fenestration, materials and colors are intended to stand the test of time.



CLEAR PAGE

S. Provide information about the architectural style and exterior materials of the buildings in the surrounding area:

The buildings in the immediate vicinity include an eclectic mix of architectural styles, including Colonial, Farmhouse, American Foursquare and Queen Anne Revival styles clad in siding, brick, asphalt roof shingles. Older stock apartment buildings to the West are characterized by French inspired mansard shingle roofs with brick facades and minimal fenestration. The Library directly across the street is a modern blended interpretation of Richardsonian Romanesque and Victorian Architecture.

T. Please explain how the project complies with the Appearance Review Guidelines:

The proposed structure is sympathetic to the adjacent library. The brick, cast stone and synthetic stucco are high quality, durable materials. Primary colors are earth tones. The building is traditional in style; elevations and fenestration are timeless. The pitched/hipped roof design, like the elevations include varied projections to create interest and without being overly busy. The soffits and eaves are appropriately scaled to the building. The building is properly articulated with inset balconies.

U. Please explain why any deviations from the Appearance Review Guidelines are proposed:

The use of synthetic stucco with proper drainage panels is compatible with the brick and stucco. Current design and construction specifications for synthetic stucco systems address problems commonly associated with legacy systems and flawed installation practices.

Signature: Date: 1/22/19



REVA
DEVELOPMENT
PARTNERS LLC

May 24, 2019

Ms. Staci Springer, AICP
Planning and Development Director
VILLAGE OF GLEN ELLYN
535 Duane St.
Glen Ellyn, IL 60137

**Re: AVERE on Duane Residential Redevelopment
Exterior Appearance Review Addendum
Exterior Insulation and Finish System (EIFS)**

Dear Ms. Springer,

Please accept this addendum to the Exterior Appearance Review Application which further describes the proposed use of exterior insulation and finish system (EIFS).

In keeping with best practices, we are proposing to use EIFS with a "drainage plane" which allows moisture to exit the wall cavity without impact to the underlying structure. When properly installed, including the use of a drainage plane, EIFS provides an attractive, durable and energy efficient cladding system that is superior in many respects to siding and/or masonry. We elected to use a combination of masonry and EIFS to create an aesthetically pleasing appearance that is compatible with the underlying framing materials and will provide long term value with limited ongoing maintenance.

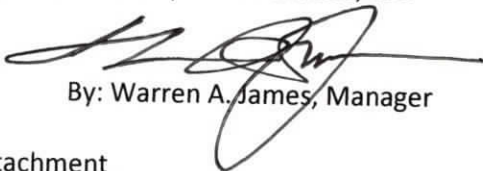
Attached herewith is an article published by Building Science Corporation that describes different types of EIFS and why "face-sealed" EIFS systems were the root cause of significant construction defect claims in the late 1980's and early 1990's. We recognize that generically the term "EIFS" was the headline in many construction defect stories decades ago which is likely why EIFS is discouraged for use in the Village of Glen Ellyn appearance review guidelines. The system we are proposing has been successfully installed on thousands of structures with great success.

As we will attest in the public hearing, we are making a significant investment in AVERE on Duane and intend to maintain ownership of the building for many years to come. Our specification of EIFS is made with the knowledge that we will be the responsible for the ongoing maintenance of AVERE on Duane.

Sincerely,

REVA DEVELOPMENT ACQUISITIONS, LLC

By: REVA Development Partners, LLC



By: Warren A. James, Manager

attachment

www.revadevelopment.com

Attachment: Addendum to the Application for Exterior Appearance Approval (4023 : Avere on Duane - PUD, SUP, ZMA, SV)

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BSD-146: EIFS - Problems and Solutions

[Joseph Lstiburek](#)

July 11, 2007

Abstract:

[Stucco](#) and [EIFS](#) are common [cladding](#) systems that appear similar from the exterior. These systems have very different attributes however. This Digest explains the reasons why face-sealed EIFS are fundamentally flawed as cladding systems for most applications, and describes how [drained](#) EIFS can be used successfully in almost all [climate](#) zones and exposures. Cracks, [lamina](#) deterioration, and movement joints are also discussed.

[EIFS and Stucco](#)

Exterior [Insulation](#) and Finish Systems (EIFS) are a relatively new [cladding](#) system that combine a finish with a layer of exterior insulation. The finish is comprised of polymeric (organic) bonded aggregate and cement reinforced with a glass mesh. Stucco is a cladding made of inorganic-cement (Portland cement and/or lime) bonded sand or earth used for thousands of years. Although these two claddings may look the same, they perform very differently.

Problems

EIFS became very popular in the 1980's and experienced a significant number of serious failures, almost all related to rain [penetration](#). Early EIFS used a face-sealed approach (defined later). Face-sealed exterior insulation and finishing systems (EIFS) are inherently defective and unfit for use as an exterior cladding system where moisture sensitive components are used without a provision for drainage or in locations and assemblies without adequate drying. Most EIFS of the past were face-sealed systems that by definition had no provision for drainage. The typical system also contains moisture sensitive materials. Specifically, the following moisture sensitive components are used: exterior gypsum board, oriented strand board ([OSB](#)) or [plywood sheathing](#), metal or wood studs, fiberglass cavity insulation and interior gypsum board sheathing ([Figure 2](#)).

[Drained](#) EIFS are significantly different from face-sealed systems in that, by definition, they have a provision for drainage ([Figure 3](#)). Unlike face-sealed perfect barrier systems such systems can be successfully used as an exterior cladding system in essentially all climates and exposures. Drainable EIFS are not subject to the same limitations of use as face-sealed or barrier systems. In fact, drainable EIFS are among the most robust and advanced moisture control assemblies available.



Figure 1: Hygro-thermal Regions

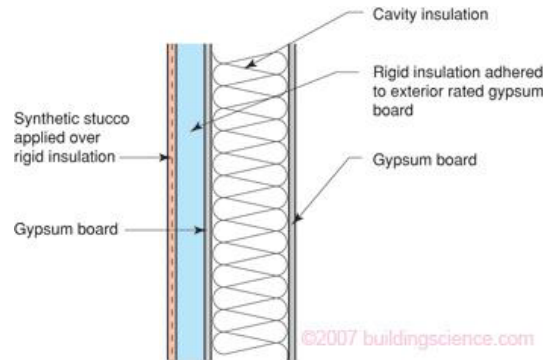


Figure 2: Face-sealed EIFS Assembly

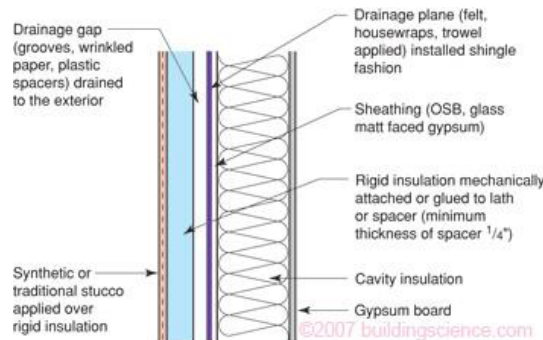


Figure 3: Drainable EIFS Assembly

Effect of Climate

The exterior and interior climates in many regions throughout North America provide limited drying potentials due to high relative humidities throughout the year. This is particularly a problem in hot-humid and mixed-humid climates. This limited drying potential provides inadequate drying for EIFS where moisture sensitive components are used without a provision for drainage. Inward drying is essentially eliminated by the installation of interior vapor barriers or impermeable interior finishes such as vinyl wall coverings.

Moisture damage is in essence a rate question. When the rate of wetting is greater than the rate of drying, accumulation occurs. When the quantity of accumulated moisture exceeds the safe or tolerable moisture storage capacity of a material, deterioration occurs. The typical moisture damage in an EIFS assembly is deterioration due to mold, wood decay fungi and corrosion leading to decay, loss of strength and discoloration. The components principally affected are the interior and exterior gypsum sheathing, the metal or wood studs and the fiberglass cavity insulation. Less affected are the EIFS lamina and sealants.

The rate of wetting of a building assembly is a function of exposure, design, construction and operation/maintenance. The rate of drying of a building is a function of the same parameters.

The principal wetting mechanism for EIFS assemblies is rain. Just as all cladding systems, EIFS are sensitive to the frequency and severity of rain. The amount of rainfall deposited on a surface determines the type of approach necessary to control rain. [Figure 4](#) is a map of annual rainfall for North America. This map defines four rain exposure regions based on annual rainfall on a horizontal surface: extreme, high, moderate and low. The rain that must be controlled by walls is rain on a vertical surface. The amount of rain actually deposited on a wall can vary dramatically (by a factor of ten) in a given climate zone depending on height, exposure, overhangs, and surface details. In short, the climate and the architecture defines the amount of rain exposure. For all but the lowest exposures (e.g., the wall of a one storey building with a wrap around porch) face-sealed approached cannot be recommended.



Photograph 1: Architectural details such as overhangs, balconies, and railing connections contribute to the amount of rain deposited in or on a wall.

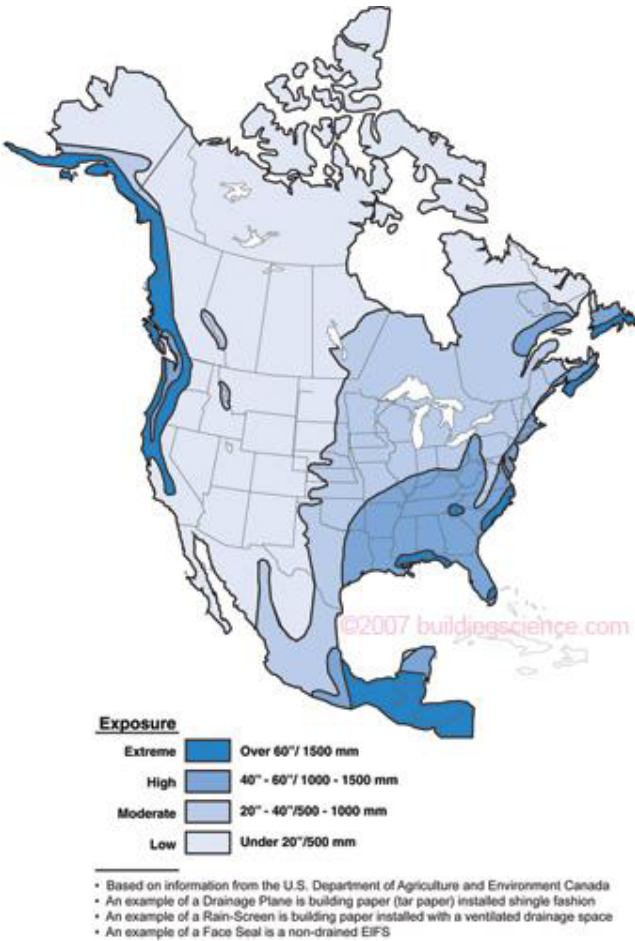


Figure 4: Rainfall Map of North America

Rain Control Strategies

Three broad types of rain control strategies are available for building enclosures (see also [BSD-013: Rain Control in Buildings](#)).

- Water managed:
 - Storage or reservoir
 - Drained
- Perfect barrier

The reservoir or storage approach is traditionally used with heavy, massive, solid assemblies of non-water sensitive materials such as stone, brick, masonry and concrete structures. The drained approach is traditionally used with light, hollow, water sensitive construction such as wood frame, curtain wall and steel frame structures. The perfect barrier approach has been applied to factory-built units, curtainwalls, and some EIFS.

The storage approach assumes that some rain water will pass through the cladding system into the wall assembly. In general, this rain water is stored in the mass of the wall assembly until drying by [diffusion](#), capillarity and air flow occurs to either the exterior or interior. The barrier approach relies on water resistant materials, a significant reservoir or storage capacity, and a balance of wetting potentials with drying potentials. Historically speaking this is the oldest technology used for rain control.

The drained approach also assumes that some rain water will pass through the cladding or face of the wall assembly. However, the majority of this rain water is drained back to the exterior. A [drainage plane](#) is installed behind the exterior cladding to facilitate this drainage. This drainage plane requires a drainage space (air gap), flashings, and weep openings to function. The drainage space, which can be as small as the space between two sheets of building paper, allows rain water to drain between the drainage plane and the exterior cladding. The [flashing](#) collects the draining water and directs it out through the weep openings to the exterior. The small amount of rain water that does not drain to the exterior, dries by diffusion, capillarity and air flow to either the exterior or the interior as in the storage approach.

The perfect barrier approach assumes that a single layer will control all rain penetration. If this layer is the exterior-most layer, the approach is often labelled “face-sealed.” If the barrier is placed within the assembly, it is termed the “concealed barrier.”

Traditional Stucco

Traditional stucco claddings have successfully employed the water managed approaches, both storage and drained. Traditional stucco rendered on the exterior with a Portland cement based stucco is a classic and successful example of a storage approach to rain control. A [vapor permeable](#) paint is often used over the stucco rendering to reduce rain water [absorption](#) while still allowing drying to the exterior. Interior finishes are typically vapor permeable and held away from the interior masonry surface to promote drying to the interior. The rain water that enters through the stucco face is harmlessly stored in the masonry wall until it can [dry](#) to either the interior or to the exterior.

Traditional stucco using the drained approach ([Figure 5](#)) is common to wood frame or steel [stud](#) walls that are sheathed with plywood or gypsum board. Two layers of building paper and metal lath are installed shingle fashion over the exterior sheathing. A Portland cement based stucco is then rendered over the metal lath and building papers. The building papers absorb water, swell and wrinkle. After application, the building papers dry, shrink and the stucco rendering debonds from the building papers creating a drainage space. The drainage space is connected to weep screeds or flashings to complete the system. The water that enters through the stucco face is drained back to the exterior by the drainage plane and the weep screeds or flashing system.

Traditional stucco systems recognize the obvious – stucco cracks. Furthermore, since traditional stucco cracks, traditional stucco systems leak. Since traditional stucco systems leak, the leaking rain water must be addressed. This is done either by constructing assemblies from water resistant materials such as masonry and relying on high drying potentials or by using water management – drainage planes, drainage spaces and flashing systems.

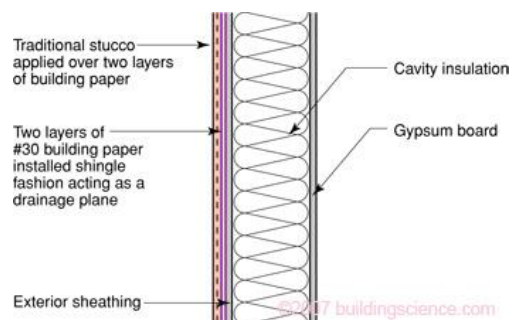


Figure 5: Traditional Drained Stucco Assembly

Many other traditional cladding systems also recognize the obvious – cladding systems leak. Brick leaks, wood [siding](#) leaks, vinyl siding leaks, stone leaks, granite leaks, stucco leaks, hardboard siding leaks, precast concrete leaks, curtain wall assemblies leak – everything leaks. Since everything leaks, assemblies are constructed out of water resistant materials or they are drained. This is a fundamental rule of design and construction.

Low-rise buildings with low exposure (overhangs, simple shapes) built in climates with little rain (e.g. less than 20" per year), and lots of drying capacity (dry air and sun) have long been built with little concern for rain control. Almost anything can be built using any type of material. In these situations, walls don't get very wet and they dry out quickly. The rate of wetting is low while the rate of drying is high – accumulation rarely occurs and even moisture sensitive materials can be used in a storage approach, and walls with failed perfect barriers rarely exhibit problems.

Traditional construction recognizes something else that is also obvious – it is not possible to rely on perfect workmanship and perfect materials. People are imperfect and materials are imperfect. There are limitations to what can be expected of individuals in the field and there is variation in the quality of materials – from sealants to the grade of wood, from the density of [foam](#) sheathing to the permeability of paint.

Face-Sealed EIFS and Sealant Joints

Relying on perfect workmanship and perfect materials to keep rain out, in a location where it rains, is a fundamental flaw in logic. It is contrary to historical experience and contrary to human nature. This is why EIFS are inherently defective and unfit for use as exterior cladding systems where moisture sensitive components are used without a provision for drainage or in locations without adequate drying. Adequate drying will occur in locations with high drying potentials – locations where, in essence, it does not rain much.

Rainwater penetration primarily occurs at joints and penetrations: between the EIFS lamina and windows, through balcony elements, through railings, through windows, through sliding doors, through service penetrations, through interfaces with other claddings, and through the roof system, particularly at the interface with the parapet. Water can even penetrate through large cracks in the lamina itself. That rain water enters should not be a surprise since, for all practical purposes, rain water penetration past the face is impossible to reliably prevent everywhere across the cladding.

Face-sealed perfect barrier EIFS systems are fundamentally flawed because they rely on perfect sealant material installed in a perfect manner to perfectly prepared substrates. It may be possible to install sealant in one joint perfectly – if the surfaces are clean, dry, dust free and the correct sealant, backer rod and gap are provided. Let us also assume good weather, not too cold, not too hot, not raining and the installer is well-trained and motivated by quality not speed. But how about installing sealant perfectly in 10 joints?

Is it possible for a technician to install sealant perfectly in 10 joints in a row? Let us assume perfectly prepared joints: joints that are “backwrapped” properly, with the correct gap. It is probably possible – a conscientious, properly trained, supervised technician could do 10 perfect joints in a row.

Now how about 100 joints? Recall, that the joints must be perfectly prepared and that this preparation is dependent on other trades and technicians: the window installation contractor and the foam and lamina application technician. I think most rational people would have a problem with 100 perfect joints. But the requirement for 100 perfect joints is nothing – a drop in the bucket for what is required. How about 1,000 perfect joints? Or 10,000 perfect joints? Now we are getting just a little bit outrageous. Yet, this is what is required of EIFS constructed with moisture sensitive components without provision for drainage or adequate drying.

But on the subject of joints, we are just beginning. How do you select the sealant? Well, the material must adhere to the lamina, must be resistant to ultra-violet light; the base coat bond strength to the rigid insulation (EPS) must be greater than the sealant bond; and the material also has to be affordable. Does such a sealant exist? Some come close to meeting these requirements, but they are not often used. Oh, by the way, all the windows leak. So even if one achieves the impossible, water will penetrate behind the perfect sealant at penetrations, and hence be trapped in the assembly.

How long should this joint last? How can you tell when the sealant in the joint needs to be replaced or how can you tell when the joint needs to be rehabilitated? How do you replace sealant in joints? How do you prepare the surfaces to take new sealant? If you attempt to grind the surfaces clean, you risk damaging the reinforcement. You think installing the sealant perfectly the first time was difficult – how about after the building has aged a decade? Now what? What indeed.

It is the new millennium and the arguments around these questions continue to rage – no consensus exists within the EIFS industry – consensus certainly does not exist among consultants engaged in the rehabilitation of EIFS clad buildings.

Any system that relies on perfect joints, sealed perfectly, with perfect windows is fundamentally, inherently defective. The system, if it is constructed with moisture sensitive materials in a climate where it rains and has a high humidity, is destined for problems.

Cracking

Traditional stucco cracks due to drying shrinkage or hygric stresses, embrittlement due to aging, and building movement. EIFS laminas do the same thing for essentially the same reasons. It is not possible to prevent traditional stucco from cracking. The same holds true for EIFS laminas. In both cases, the size of the cracks are controlled to manageable levels.

If drying shrinkage or hygric and thermal stress were not an issue in EIFS laminas, mesh reinforcing would not be necessary. The function of mesh reinforcing is to distribute the hygric stresses throughout the lamina rather than allowing stress relief to occur at a single location such as a large crack. In the most fundamental sense a crack is stress relief. When cracking begins to occur, an additional function of the mesh reinforcing is to promote micro-cracking – many tiny cracks rather than fewer larger cracks, and to limit crack propagation – short cracks rather than long ones. More mesh reinforcing provides more effective distribution of hygric stresses, effectively promotes micro-cracking and limits crack propagation.

Unfortunately, the use of fiberglass mesh in an alkaline environment leads to the deterioration of the fiberglass mesh. To compensate for this, the mesh is coated with plastic and the alkaline environment is buffered chemically. However, prolonged exposure of the lamina to moisture eventually leads to a loss of strength of the fiberglass mesh. This mechanism of deterioration can only be slowed, not stopped or prevented. There is no known solution to this problem. To further compensate for this problem, more mesh reinforcing and thicker mesh reinforcing is used. The logic being: if it's going to get weaker, make it stronger than you need initially, so that later it will still be strong enough. The flaw in this logic is the definition of “later.” Does later mean 1 year, 3 years, 5 years, 10 years, 25 years or 50 years? “Later” also depends on exposure. Ten years in Las Vegas is very different from 10 years in Columbia, SC.

Unfortunately, more mesh reinforcing leads to a thicker lamina, which decreases the elasticity of the system. To compensate for this problem, the elasticity of the system is increased by increasing the acrylic content. However, as the acrylic content is increased the permeability of the lamina is decreased while the sensitivity of the lamina to ultra-violet light (solar radiation) is increased. A decrease in permeability, of course, leads to a reduction in drying to the exterior.

The exposure to ultra-violet light leads to embrittlement and a decrease in elasticity of the system. The acrylic content also interferes with hydration and makes the lamina more sensitive to carbonation – a reaction with atmospheric carbon dioxide – that leads to embrittlement and a decrease in elasticity.

In short, as the system ages, the lamina becomes more brittle and subject to cracking. Some EIFS laminas crack sooner than others, but they all eventually crack. The cracks are due to hygric and thermal stresses, embrittlement due to aging, and building movement. The cracks in EIFS laminas are often found initially at reveals and at window openings. The hygric stresses and building movement stresses typically concentrate at locations where there is a change in thickness, a change in direction or at a termination such as an opening.



Photograph 2: Cracks in EIFS laminas are often found initially at reveals and at window openings.

Movements

Taking into account hygric stresses and embrittlement due to aging is one thing. Building movement is an entirely different – and more serious matter. All buildings move. Tall and large buildings move more than short and small buildings. Since all buildings move, control joints are necessary. If control joints are not provided, the building provides its own in the form of cracks.

Wood framing shrinks in the cross-grain direction during the drying of initial construction moisture, and continues to expand and contract in response to changes in local relative humidity. Cross-grain is often concentrated at rim joists, top and bottom plates, and around heavy framing at openings. If EIFS is adhered to a wood-framed building, these movements must be anticipated and accommodated. Typical shrinkage is in the order of 1/2" to 3/4" per storey near the rim joist.



Photograph 3: Frame shrinkage at the rim joist of this wood-framed building caused the stucco to buckle.

Steel framed buildings experience most movement at long-span beams. Many engineers design beams that allow deflection of 1/360th of span: that is a 30 ft span steel beam should be expected to deflect as much as 1" at midspan.

Tall concrete frame buildings are subject to frame shortening due to the mechanism of concrete creep, a fundamental characteristic of concrete experiencing loading over an extended period of time. The weight of a tall concrete building causes the columns to shorten by swelling. In order to take this into account, control joints are typically provided through the cladding system at every floor.

Summary

EIFS can provide an attractive lightweight and energy-saving cladding for a building. However, experience has clearly shown that rainwater must be managed, and face-sealed perfect barrier approaches (reliance on exposed sealants) cannot provide acceptable rain control or durability. To allow for drying of incidental moisture, such assemblies also should not contain interior vapor barriers or impermeable interior finishes. An important exception to this latter requirement is where the drainage plane is also a vapor impermeable air barrier membrane and the interior framing cavities are uninsulated ([Figure 6](#)).

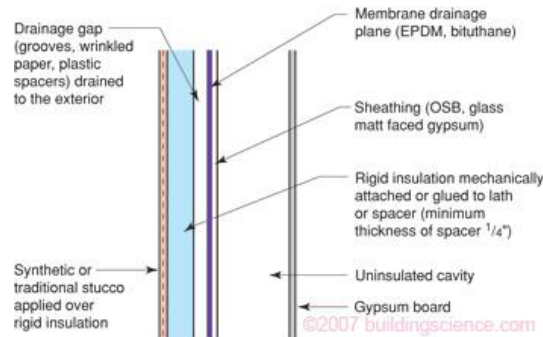


Figure 6: Drainable EIFS assembly with membrane

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[Building Science Fundamentals](#)
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Related Documents

[ETW: Wall - Exterior Insulation Finish Systems \(EIFS\) Wall Construction](#)
[BSI-029: Stucco Woes—The Perfect Storm](#)
[BSD-011: Thermal Control in Buildings](#)
[BSD-105: Understanding Drainage Planes](#)
[BSD-013: Rain Control in Buildings](#)
[GM-0702: Guide to Insulating Sheathing](#)
[RR-0406: Face Sealed vs. Drainable EIFS](#)
[BSI-058: Parthenon, Eh?](#)
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[BSD-146: EIFS - Problems and Solutions](#)

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Building Science Digest 146

EIFS - Problems and Solutions

2007-07-11 by Joseph Lstiburek

Abstract:

Stucco and EIFS are common cladding systems that appear similar from the exterior. These systems have very different attributes however. This Digest explains the reasons why face-sealed EIFS are fundamentally flawed as cladding systems for most applications, and describes how drained EIFS can be used successfully in almost all climate zones and exposures. Cracks, lamina deterioration, and movement joints are also discussed.

EIFS and Stucco

Exterior Insulation and Finish Systems (EIFS) are a relatively new cladding system that combine a finish with a layer of exterior insulation. The finish is comprised of polymeric (organic) bonded aggregate and cement reinforced with a glass mesh. Stucco is a cladding made of inorganic-cement (Portland cement and/or lime) bonded sand or earth used for thousands of years. Although these two claddings may look the same, they perform very differently.

Problems

EIFS became very popular in the 1980's and experienced a significant number of serious failures, almost all related to rain penetration. Early EIFS used a face-sealed approach (defined later). Face-sealed exterior insulation and finishing systems (EIFS) are inherently defective and unfit for use as an exterior cladding system where moisture sensitive components are used without a provision for drainage or in locations and assemblies without adequate drying. Most EIFS of the past were face-sealed systems that by definition had no provision for drainage. The typical system also contains moisture sensitive materials. Specifically, the following moisture sensitive components are used: exterior gypsum board, oriented strand board (OSB) or plywood sheathing, metal or wood studs, fiberglass cavity insulation and interior gypsum board sheathing (Fig. 2).

1

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Application for Approval of a Land Transfer, Lot Consolidation, or Two-Lot Subdivision



I. APPLICATION INFORMATION:

Date Filed: **05/02/19**

CLEAR PAGE

Request: (Please Check):

Land Transfer ☐ Lot Consolidation ☒ Two- Lot Subdivision ☐

Project Name: **AVERE on Duane**

Address of Property: **427-443 Duane St. & 425-435 Melrose Ave.**

Permanent Index No.: **See attached** Zoning: **C5B/R4/R2**

Name of Applicant: **REVA Development Acquisitions, LLC**

Address of Applicant: **116 W. Illinois St., FL7, Chicago, IL 60654**

Business Phone No.: **312-320-6712** Home Phone No.: _____

Mobile No.: **847-417-8915** Fax No.: _____

E-mail Address: **warren.james@revadevelopment.com**

Name of Property Owner: **See attached ownership exhibit**

Address of Property Owner: _____

Business Phone No.: _____ Home Phone No.: _____

Mobile No.: _____ Fax No.: _____

E-Mail Address of Property Owner: _____

Applicant Signature:  Date: **MAY 2, 2019**

**WARREN A. JAMES, MANAGER OF
REVA DEVELOPMENT PARTNERS, LLC, MANAGER OF
REVA DEVELOPMENT ACQUISITIONS, LLC**

Land Transfer, Lot Consolidation, or Two-Lot Subdivision Application Packet FILLABLE 081717 lg.docx

Attachment: Application for Lot Consolidation (4023 : Avere on Duane - PUD, SUP, ZMA, SV)

AVERE on Duane- Property Ownership Exhibit

Contact Name	Ownership Entity	Street Address, Glen Ellyn, IL 60137	PIN	Owner's Email	Area (Sq. Ft.)	Lot Frontage	Present Zoning	Legal Description
Jim Tuinega	TUINEGA, JAMES & JANET	443 Duane St.	0511325005	jimt@tem-inc.com	12,030	98 ft. on Duane; 122.75 on Prospect	CSB	LOTS 9, 10, 11 AND 12 IN BLOCK 3 IN GLENWOOD, BEING C. A. PHILLIPS SUBDIVISION OF PART OF SECTION 10 AND PART OF SECTION 11, TOWNSHIP 39 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED AUGUST 22, 1873 AS DOCUMENT 16688, IN DUPAGE COUNTY, ILLINOIS
Doug Funk	Duane Street, LLC	435 Duane St.	0511325004	dfunk@spenglerhomes.com	6,138	50 ft.	CSB	LOTS 7 AND 8 IN BLOCK 3 IN GLENWOOD, BEING C. A. PHILLIPS SUBDIVISION OF PART OF SECTION 10 AND PART OF SECTION 11, TOWNSHIP 39 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED AUGUST 22, 1873 AS DOCUMENT 16688, IN DUPAGE COUNTY, ILLINOIS
Roland Emanuel	BEJA EMANUEL LLC	431-433 Duane St.	0511325003	ROLOBOYS@aol.com	6,138	50 ft.	CSB	Lots 5 and 6 in Block 3 in Glenwood, being C. A. Phillips Subdivision of part of Section 10 and part of Section 11, Township 39 North, Range 10, East of the Third Principal Meridian, according to the Plat thereof recorded August 22, 1873 as Document 16688, in DuPage County, Illinois
Grant Kief	427-429 Duane LLC	427-429 Duane St.	0511325002	kief@slbinc.com	6,138	50 ft.	CSB	LOTS 3 AND 4 IN BLOCK 3 IN GLENWOOD, BEING C. A. PHILLIPS SUBDIVISION OF PART OF SECTION 10 AND PART OF SECTION 11, TOWNSHIP 39 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED AUGUST 22, 1873 AS DOCUMENT 16688, IN DUPAGE COUNTY, ILLINOIS
Robb Sackett	WHITE, WML & ROBB SACKETT	431 Melrose Ave	0511325001	robbasackett1@gmail.com	6,128	48 ft. on Duane; 122.75 ft. on Melrose	CSB	Lots 1 and 2 in Block 3 in Glenwood, being C. A. Phillips Subdivision of part of Section 10 and part of Section 11, Township 39 North, Range 10, East of the Third Principal Meridian, according to the plat thereof recorded August 22, 1873 as document 16688, in DuPage County, Illinois.
Robb Sackett	425 MELROSE LLC	425 Melrose Ave	0511325006 0511325022 0511325023	robbasackett1@gmail.com	14,800	100 ft.	R4/R2	LOTS 37, 38, 39, 40 IN BLOCK 3 IN GLENWOOD, BEING C. A. PHILLIPS SUBDIVISION OF PART OF SECTION 10 AND PART OF SECTION 11, TOWNSHIP 39 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED AUGUST 22, 1873 AS DOCUMENT 16688, IN DUPAGE COUNTY, ILLINOIS
Total/Summary					51,370			



June 12, 2019

Ms. Staci Springer, AICP
Planning and Development Director
VILLAGE OF GLEN ELLYN
535 Duane St.
Glen Ellyn, IL 60137

Re: AVERE on Duane Residential Redevelopment Application- Final Submittal

Dear Ms. Springer,

REVA Development Partners is pleased to re-submit plans for AVERE on Duane, a luxury multifamily development to be located on approximately 1.18 acres at 427-443 Duane St. and 425-435 Melrose Ave.

The Property:

The Property is an assemblage of eight individual land parcels along the Southeast corner of Duane St and Melrose Ave totaling approximately 1.18 acres. The parcels include six structures and surface parking for the various small businesses. The property is bordered by the Glen Public Library on the North and is four blocks from the Glen Ellyn Metra stop. The five parcels along Duane St are currently zoned C5B, and the three parcels along Melrose Ave are currently zoned R4 and R2. The C5B zoning currently allows for multifamily development, and the parcels zoned R4 and R2 are where the proposed surface parking will be located.

The Plan:

The plan is to construct a four-story, 48-unit luxury rental apartment building with underground parking garage and additional surface parking. This transit-oriented development includes 1 bedroom, 1 bedroom+den, 2 bedroom and 2 bedroom+den apartment homes ranging in size from approximately 868 sq.ft. to 1,615 sq.ft. The flats will be accessible via elevators and residents may access their home directly from common area. The underground parking garage, accessed from Melrose Ave., will have 48 parking spaces, with an additional 34 surface parking spaces for residents and guests, providing a total of 1.7 parking spaces per unit. The building includes a community room on the second floor over the lobby providing a gathering place including media and coffee/wet bar. The primary pedestrian entrance to the building is on the south side, adjacent to the surface parking lot with a pedestrian path leading east to Prospect, within easy walkable distance to Glen Ellyn stores, restaurants, and Metra station just a few blocks away.

The proposed architecture and unit mix is designed to meet the needs of affluent suburban markets like Glen Ellyn with larger than traditional apartments (1,332 sq.ft. average size) to appeal to a wide range of residents, including empty nesters, young professionals, relocating families and corporate employees. This “purpose built” luxury rental community will feature professional management and desirable amenities such as a package



concierge system, pet wash/grooming area, underground parking, smart home technology, and private storage spaces.

Detailed architectural and site plans are included in the submittal along with a series of images included in the landscape plan set that illustrates community context through computer generated 3D imagery depicting the proposed structure within the surrounding community.

Our intent is to construct a building with timeless architectural character and curb appeal. We endeavor to achieve our goal through good design and a mix of quality, low maintenance materials. The apartments will feature contemporary open floor plans, condominium quality interior finishes, state of the art technology and a variety of “green” features promoting healthy resident lifestyle.

Construction Information:

4 Stories of Residential (R-2) over 1 Story of Parking Garage (S-2)

R-2 occupancy will be Type V-A construction with an NFPA 13 R sprinkler system.

S-2 occupancy will be Type I-A construction with an NFPA 13 sprinkler system.

R-2 & S-2 occupancies will be separated with a 3 hour fire rated non-combustible floor/ceiling assembly.

S-2 bearing walls will be 3 hour fire rated assemblies, non-combustible

R-2 floor/ceilings & roof ceiling will be 1 hour fire rated assemblies, combustible

R-2 bearing walls, unit demising walls and corridor/unit walls will be 1 hour fire rated assemblies, combustible

Exit stair tower walls will be 2 hour fire rated assemblies, combustible

TIF Support

In keeping with our prior submittals, due the cost of the land assemblage and attendant demolition and redevelopment expenses, the project is economically viable only with TIF support as previously outlined.

Planned Development:

The proposal for a planned development which includes certain deviations from the underlying zoning and further clarifications of codes as outlined in greater detail in the submittal.

Development Team:

The principals of REVA are industry veterans with more than thirty years of residential development experience building luxury for-sale single-family and rental multi-family housing in highly discerning communities including Deerfield, Glenview, Lake Forest, Lake Bluff, Wilmette, Winnetka, Northfield, Hinsdale and Burr Ridge and other Chicago area communities. The team of consultants which includes BSB Design (Architects), Lakota Group (Land planner & Landscape Architect), and Kinzie Builders (General Contractor) have a similar track record supporting the highest level of quality in their commercial, retail and residential developments. The team proposes to continue its collaboration with the AVERE on Duane residential project with the intent to create value while fulfilling a need within the community.



We have submitted the following documents for review:

PLANS:

1. ALTA Survey
2. Surrounding Conditions Plan
3. Engineering Plans
4. PUD Site Plan
5. Turning exhibits
6. Consolidation Plat
7. Landscape & Hardscape Plans
8. Sign Plan
9. Photometric Plan
10. Light fixture cut sheets
11. 3-D models
12. Building Plans
13. Building Elevations/Renderings

DOCUMENTS:

14. Cover letter & Narrative
15. Ownership Matrix
16. List of Deviations and Clarifications
 - a. Roof Height Illustration
 - b. Roof Form Perspectives
 - c. Building Height Study
 - d. Building Section Study
17. Construction Schedule
18. Market Study
19. Traffic Study
20. Kane DuPage Land Use Opinion
21. Endangered Species Report (IDNR)
22. Geotech Report
23. Drainage Analysis
24. Sign Variation Application
25. Special Use Permit Application
26. Zoning Map Amendment Application
27. Exterior Appearance Application
28. Lot Consolidation Application
29. PUD – Preliminary and Final Application
30. Proof of Ownership
31. Disclosure of Interest and Affidavits of Authorization
32. Reimbursement of Fees Agreement

Attachment: 1. Narrative Statement - Cover Letter (4023 : Avere on Duane - PUD, SUP, ZMA, SV)



REVA
DEVELOPMENT
PARTNERS LLC

We look forward to presenting our plans to the Plan Commission and Board of Trustees.

Sincerely,

REVA DEVELOPMENT ACQUISITIONS, LLC

By: REVA Development Partners, LLC

By: Warren A. James, Manager

Attachment: 1. Narrative Statement - Cover Letter (4023 : Avere on Duane - PUD, SUP, ZMA, SV)

ALTA COMMITMENT FOR TITLE INSURANCE



CHICAGO TITLE INSURANCE COMPANY

Commitment Number:

18LK6128237WC

NOTICE

IMPORTANT - READ CAREFULLY: THIS COMMITMENT IS AN OFFER TO ISSUE ONE OR MORE TITLE INSURANCE POLICIES. ALL CLAIMS OR REMEDIES SOUGHT AGAINST THE COMPANY INVOLVING THE CONTENT OF THIS COMMITMENT OR THE POLICY MUST BE BASED SOLELY IN CONTRACT.

THIS COMMITMENT IS NOT AN ABSTRACT OF TITLE, REPORT OF THE CONDITION OF TITLE, LEGAL OPINION, OPINION OF TITLE, OR OTHER REPRESENTATION OF THE STATUS OF TITLE. THE PROCEDURES USED BY THE COMPANY TO DETERMINE INSURABILITY OF THE TITLE, INCLUDING ANY SEARCH AND EXAMINATION, ARE PROPRIETARY TO THE COMPANY, WERE PERFORMED SOLELY FOR THE BENEFIT OF THE COMPANY, AND CREATE NO EXTRACTIONAL LIABILITY TO ANY PERSON, INCLUDING A PROPOSED INSURED.

THE COMPANY'S OBLIGATION UNDER THIS COMMITMENT IS TO ISSUE A POLICY TO A PROPOSED INSURED IDENTIFIED IN SCHEDULE A IN ACCORDANCE WITH THE TERMS AND PROVISIONS OF THIS COMMITMENT. THE COMPANY HAS NO LIABILITY OR OBLIGATION INVOLVING THE CONTENT OF THIS COMMITMENT TO ANY OTHER PERSON.

COMMITMENT TO ISSUE POLICY

Subject to the Notice; Schedule B, Part I-Requirements; Schedule B, Part II-Exceptions; and the Commitment Conditions, Chicago Title Insurance Company, a Florida corporation (the "Company"), commits to issue the Policy according to the terms and provisions of this Commitment. This Commitment is effective as of the Commitment Date shown in Schedule A for each Policy described in Schedule A, only when the Company has entered in Schedule A both the specified dollar amount as the Proposed Policy Amount and the name of the Proposed Insured.

If all of the Schedule B, Part I-Requirements have not been met within one hundred eighty (180) days after the Commitment Date, this Commitment terminates and the Company's liability and obligation end.

Chicago Title Insurance Company

By:

President

Attest:

Secretary



This page is only a part of a 2016 ALTA® Commitment for Title Insurance issued by Chicago Title Insurance Company. This Commitment is not valid without the Notice; the Commitment to Issue Policy; the Commitment Conditions; Schedule A; Schedule B, Part I-Requirements; Schedule B, Part II-Exceptions; and a counter-signature by the Company or its issuing agent that may be in electronic form.

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ALTA Commitment for Title Insurance (08/01/2016)

Page 1

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 IL-CT-FWET-01080.225405-SPS-1-18-18LK6128237WC


CHICAGO TITLE INSURANCE COMPANY

COMMITMENT NO. 18LK6128237WC

Transaction Identification Data for reference only:

ORIGINATING OFFICE:	FOR SETTLEMENT INQUIRIES, CONTACT:
Chicago Title Company, LLC 5 Westbrook Corporate Center, Suite 100 Westchester, IL 60154 Main Phone: (708)409-9039 Email: ctwestchester@ctt.com	Chicago Title and Trust Company 5 Westbrook Corporate Center, Suite 100 Westchester, IL 60154 Main Phone: (708)409-9039 Main Fax: (708)409-9914

Issued By: Lanphier & Kowalkowski, Ltd.
568 S. Spring Rd., Suite B
Elmhurst, IL 60126

Order Number: 18LK6128237WC

Property Ref.: 443 Duane St, Glen Ellyn, IL 60137

SCHEDULE A

1. Commitment Date: February 2, 2018
2. Policy to be issued:
 - (a) ALTA Owner's Policy 2006
Proposed Insured: Reva Development Acquisitions, LLC
Proposed Policy Amount: \$755,000.00
3. The estate or interest in the Land described or referred to in this Commitment is:
Fee Simple
4. The Title is, at the Commitment Date, vested in:
[James W. Tuinenga and Janet E. Tuinenga, husband and wife, as joint tenants](#)
5. The Land is described as follows:

LOTS 9, 10, 11 AND 12 IN BLOCK 3 IN GLENWOOD, BEING C. A. PHILLIPS SUBDIVISION OF PART OF SECTION 10 AND PART OF SECTION 11, TOWNSHIP 39 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED AUGUST 22, 1873 AS DOCUMENT 16688, IN DUPAGE COUNTY, ILLINOIS.

END OF SCHEDULE A

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ALTA Commitment for Title Insurance (08/01/2016)



SCHEDULE B, PART I REQUIREMENTS

All of the following Requirements must be met:

1. The Proposed Insured must notify the Company in writing of the name of any party not referred to in this Commitment who will obtain an interest in the Land or who will make a loan on the Land. The Company may then make additional Requirements or Exceptions.
2. Pay the agreed amount for the estate or interest to be insured.
3. Pay the premiums, fees, and charges for the Policy to the Company.
4. Documents satisfactory to the Company that convey the Title or create the Mortgage to be insured, or both, must be properly authorized, executed, delivered, and recorded in the Public Records.
5. Notice: Please be aware that due to the conflict between federal and state laws concerning the cultivation, distribution, manufacture or sale of marijuana, the Company is not able to close or insure any transaction involving Land that is associated with these activities.
6. Be advised that the "good funds" of the title insurance act (215 ILCS 155/26) became effective 1-1-2010. This act places limitations upon the settlement agent's ability to accept certain types of deposits into escrow. Please contact your local Chicago Title office regarding the application of this new law to your transaction.
7. Effective June 1, 2009, pursuant to Public Act 95-988, satisfactory evidence of identification must be presented for the notarization of any and all documents notarized by an Illinois notary public. Satisfactory identification documents are documents that are valid at the time of the notarial act; are issued by a state or federal government agency; bear the photographic image of the individual's face; and bear the individual's signature.
8. **The Proposed Policy Amount(s) must be increased to the full value of the estate or interest being insured, and any additional premium must be paid at that time. An Owner's Policy should reflect the purchase price or full value of the Land. A Loan Policy should reflect the loan amount or value of the property as collateral. Proposed Policy Amount(s) will be revised and premiums charged consistent therewith when the final amounts are approved.**

END OF SCHEDULE B, PART I

Title Insurance Agent:

Lanphier & Kowalkowski, Ltd.
568 S. Spring Rd., Suite B
Elmhurst, IL 60126
Phone: (630)832-7759
Fax: (630)832-7868

Authorized Signatory

This page is only a part of a 2016 ALTA® Commitment for Title Insurance issued by Chicago Title Insurance Company. This Commitment is not valid without the Notice; the Commitment to Issue Policy; the Commitment Conditions; Schedule A; Schedule B, Part I-Requirements; Schedule B, Part II-Exceptions; and a counter-signature by the Company or its issuing agent that may be in electronic form.

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SCHEDULE B, PART II EXCEPTIONS

THIS COMMITMENT DOES NOT REPUBLISH ANY COVENANT, CONDITION, RESTRICTION, OR LIMITATION CONTAINED IN ANY DOCUMENT REFERRED TO IN THIS COMMITMENT TO THE EXTENT THAT THE SPECIFIC COVENANT, CONDITION, RESTRICTION, OR LIMITATION VIOLATES STATE OR FEDERAL LAW BASED ON RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, GENDER IDENTITY, HANDICAP, FAMILIAL STATUS, OR NATIONAL ORIGIN.

The Policy will not insure against loss or damage resulting from the terms and provisions of any lease or easement identified in Schedule A, and will include the following Exceptions unless cleared to the satisfaction of the Company:

1. **General Exceptions**
2. **Rights or claims of parties in possession not shown by Public Records.**
3. **Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the title that would be disclosed by an accurate and complete land survey of the Land.**
4. **Easements, or claims of easements, not shown by the Public Records.**
5. **Any lien, or right to a lien, for services, labor or material heretofore or hereafter furnished, imposed by law and not shown by the Public Records.**
6. **Taxes or special assessments which are not shown as existing liens by the Public Records.**
7. **We should be furnished a properly executed ALTA statement and, unless the land insured is a condominium unit, a survey if available. Matters disclosed by the above documentation will be shown specifically.**
8. Any defect, lien, encumbrance, adverse claim, or other matter that appears for the first time in the Public Records or is created, attaches, or is disclosed between the Commitment Date and the date on which all of the Schedule B, Part I-Requirements are met.

A 9. Taxes for the years 2017 and 2018.

Taxes for the years 2017 and 2018 are not yet due or payable.

Permanent Tax No.: [05-11-325-005](#)

Note: Taxes for the year 2016 amounting to \$17,023.34 are paid of record.

B 10. Mortgage dated December 6, 2007 and recorded December 17, 2007 as Document No. [R2007-220715](#) made by James W. Tuinega and Janet E. Tuinega, to Community Bank-Wheaton/Glen Ellyn to secure an indebtedness in the amount of \$250,000.00.

Modification agreement recorded as document [R2012-103606](#)

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**SCHEDULE B, PART II
EXCEPTIONS**
(continued)

Modification agreement recorded as document [R2017-070972](#)

- C 11. Assignment of Rents recorded December 17, 2007 as Document No. [R2007-220716](#) made by James W. Tuinenga and Janet E. Tuinenga, to Community Bank-Wheaton/Glen Ellyn.

Modification agreement recorded as document [R2017-070972](#)

- D 12. A financing statement as follows: Tem, Inc., debtor, Gen Enterprises, Inc., secured party, recorded on February 28, 2014 as Document No. [R2014-016717](#)

- F 13. Information should be furnished establishing whether any written agreement has been entered into by and between any party and a broker for the purposes of buying, selling, leasing or otherwise conveying any interest in the Land described herein. If such an agreement has been entered into, satisfactory evidence should be furnished establishing that the compensation agreed upon in such agreement has been paid and the broker's lien, or right to a lien, for such amount has been extinguished. In the event said evidence is not furnished, our policy(ies), when issued, will be subject to the following exception:

Any lien, or right to a lien, imposed by law under the provisions of the Commercial Real Estate Broker Lien Act for compensation agreed upon by a broker and the broker's client or customer under the terms of a written agreement entered into for the purposes of buying, selling, leasing, or otherwise conveying any interest in the Land described in Schedule A.

- E 14. The Company will require the following documents for review prior to the issuance of any title insurance predicated upon a conveyance or encumbrance from the entity named below.

Limited Liability Company: Reva Development Acquisitions, LLC

- a. A copy of its operating agreement, if any, and any and all amendments, supplements and/or modifications thereto, certified by the appropriate manager or member.
- b. If a domestic Limited Liability Company, a copy of its Articles of Organization and all amendments thereto with the appropriate filing stamps.
- c. If the Limited Liability Company is member-managed a full and complete current list of members certified by the appropriate manager or member.
- d. A current dated certificate of good standing from the proper governmental authority of the state in which the entity was created
- e. If less than all members, or managers, as appropriate, will be executing the closing documents, furnish evidence of the authority of those signing.

The Company reserves the right to add additional items or make further requirements after review of the requested documentation.

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**SCHEDULE B, PART II
EXCEPTIONS**
(continued)

- G 15. Existing unrecorded leases and all rights thereunder of the lessees and of any person or party claiming by, through or under the lessees.
- H 16. The Company should be furnished a statement that there is no property manager employed to manage the Land, or, in the alternative, a final lien waiver from any such property manager.
- J 17. The land lies within the boundaries of a special service area as disclosed by ordinance recorded as document [R96-207128](#) and re-recorded as document [R97-014858](#), and is subject to additional taxes under the terms of said ordinance and subsequent related ordinances.
- M 18. The land lies within the boundaries of a special service area #6 as disclosed by ordinance recorded as recording no. [R2009-193864](#), and is subject to additional taxes under the terms of said ordinance and subsequent related ordinances.
- K 19. Environmental notice of leaking underground storage tank recorded November 5, 2007 as document [R2007-199612](#) by the Illinois environmental protection agency.

(for further particulars, see record.)
- L 20. Public utility easement on the south line of the land as disclosed by poles on said land.
- N 21. Note for additional information: the DuPage County Recorder requires that any documents presented for recording contain the following information:
- A. The name and address of the party who prepared the document;
 - B. The name and address of the party to whom the document should be mailed after recording;
 - C. All permanent real estate tax index numbers of any property legally described in the document;
 - D. The address of any property legally described in the document;
 - E. All deeds should contain the address of the grantee and should also note the name and address of the party to whom the tax bills should be sent.
 - F. Any deeds conveying unsubdivided land, or, portions of subdivided and, may need to be accompanied by a properly executed "plat act affidavit."

In addition, please note that the municipalities of Addison, Aurora, Bartlett, Bolingbrook, Carol Stream, Elk Grove Village, Elmhurst, Glendale Heights, Glen Ellyn, Hanover Park, Naperville, Schaumburg, West Chicago, Wheaton, and Woodridge have enacted transfer tax ordinances. To record a conveyance of

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**SCHEDULE B, PART II
EXCEPTIONS**
(continued)

land located in these municipalities, the requirements of the transfer tax ordinances must be met. A conveyance of property in these cities may need to have the appropriate transfer tax stamps affixed before it can be recorded.

Furthermore, all deeds and mortgages should include the current marital status of all individual parties, where appropriate. A spouse of an individual grantor or mortgagor may have to sign the deed or mortgage in order to release any applicable homestead interest

This exception will not appear on the policy when issued.

- O 22. For residential property only:
- A provision for inflation coverage will be added to the owner's policy. This enhancement can automatically increase the amount of the owner's policy. For additional information, please contact your local underwriter
- P 23. All endorsement requests should be made prior to closing to allow ample time for the company to examine required documentation.
- (This note will be waived for policy).

END OF SCHEDULE B, PART II

Attachment: 2. Proof of Ownership - All Properties (4023 : Avere on Duane - PUD, SUP, ZMA, SV)

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ALTA Commitment for Title Insurance (08/01/2016)



COMMITMENT CONDITIONS**1. DEFINITIONS**

- (a) "Knowledge" or "Known": Actual or imputed knowledge, but not constructive notice imparted by the Public Records.
- (b) "Land": The land described in Schedule A and affixed improvements that by law constitute real property. The term "Land" does not include any property beyond the lines of the area described in Schedule A, nor any right, title, interest, estate, or easement in abutting streets, roads, avenues, alleys, lanes, ways, or waterways, but this does not modify or limit the extent that a right of access to and from the Land is to be insured by the Policy.
- (c) "Mortgage": A mortgage, deed of trust, or other security instrument, including one evidenced by electronic means authorized by law.
- (d) "Policy": Each contract of title insurance, in a form adopted by the American Land Title Association, issued or to be issued by the Company pursuant to this Commitment.
- (e) "Proposed Insured": Each person identified in Schedule A as the Proposed Insured of each Policy to be issued pursuant to this Commitment.
- (f) "Proposed Policy Amount": Each dollar amount specified in Schedule A as the Proposed Policy Amount of each Policy to be issued pursuant to this Commitment.
- (g) "Public Records": Records established under state statutes at the Commitment Date for the purpose of imparting constructive notice of matters relating to real property to purchasers for value and without Knowledge.
- (h) "Title": The estate or interest described in Schedule A.

2. If all of the Schedule B, Part I-Requirements have not been met within the time period specified in the Commitment to Issue Policy, this Commitment terminates and the Company's liability and obligation end.

3. The Company's liability and obligation is limited by and this Commitment is not valid without:

- (a) the Notice;
- (b) the Commitment to Issue Policy;
- (c) the Commitment Conditions;
- (d) Schedule A;
- (e) Schedule B, Part I-Requirements;
- (f) Schedule B, Part II-Exceptions; and
- (g) a counter-signature by the Company or its issuing agent that may be in electronic form.

4. COMPANY'S RIGHT TO AMEND

The Company may amend this Commitment at any time. If the Company amends this Commitment to add a defect, lien, encumbrance, adverse claim, or other matter recorded in the Public Records prior to the Commitment Date, any liability of the Company is limited by Commitment Condition 5. The Company shall not be liable for any other amendment to this Commitment.

5. LIMITATIONS OF LIABILITY

- (a) The Company's liability under Commitment Condition 4 is limited to the Proposed Insured's actual expense incurred in the interval between the Company's delivery to the Proposed Insured of the Commitment and the delivery of the amended Commitment, resulting from the Proposed Insured's good faith reliance to:
 - (i) comply with the Schedule B, Part I-Requirements;
 - (ii) eliminate, with the Company's written consent, any Schedule B, Part II-Exceptions; or
 - (iii) acquire the Title or create the Mortgage covered by this Commitment.
- (b) The Company shall not be liable under Commitment Condition 5(a) if the Proposed Insured requested the amendment or had Knowledge of the matter and did not notify the Company about it in writing.
- (c) The Company will only have liability under Commitment Condition 4 if the Proposed Insured would not have incurred the expense had the Commitment included the added matter when the Commitment was first delivered to the Proposed Insured.
- (d) The Company's liability shall not exceed the lesser of the Proposed Insured's actual expense incurred in good faith and described in Commitment Conditions 5(a)(i) through 5(a)(iii) or the Proposed Policy Amount.
- (e) The Company shall not be liable for the content of the Transaction Identification Data, if any.
- (f) In no event shall the Company be obligated to issue the Policy referred to in this Commitment unless all of the Schedule B, Part I-Requirements have been met to the satisfaction of the Company.
- (g) In any event, the Company's liability is limited by the terms and provisions of the Policy.

6. LIABILITY OF THE COMPANY MUST BE BASED ON THIS COMMITMENT

- (a) Only a Proposed Insured identified in Schedule A, and no other person, may make a claim under this Commitment.
- (b) Any claim must be based in contract and must be restricted solely to the terms and provisions of this Commitment.

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(continued)

- (c) Until the Policy is issued, this Commitment, as last revised, is the exclusive and entire agreement between the parties with respect to the subject matter of this Commitment and supersedes all prior commitment negotiations, representations, and proposals of any kind, whether written or oral, express or implied, relating to the subject matter of this Commitment.
- (d) The deletion or modification of any Schedule B, Part II-Exception does not constitute an agreement or obligation to provide coverage beyond the terms and provisions of this Commitment or the Policy.
- (e) Any amendment or endorsement to this Commitment must be in writing and authenticated by a person authorized by the Company.
- (f) When the Policy is issued, all liability and obligation under this Commitment will end and the Company's only liability will be under the Policy.

7. IF THIS COMMITMENT HAS BEEN ISSUED BY AN ISSUING AGENT

The issuing agent is the Company's agent only for the limited purpose of issuing title insurance commitments and policies. The issuing agent is not the Company's agent for the purpose of providing closing or settlement services.

8. PRO-FORMA POLICY

The Company may provide, at the request of a Proposed Insured, a pro-forma policy illustrating the coverage that the Company may provide. A pro-forma policy neither reflects the status of Title at the time that the pro-forma policy is delivered to a Proposed Insured, nor is it a commitment to insure.

9. ARBITRATION

The Policy contains an arbitration clause. All arbitrable matters when the Proposed Policy Amount is Two Million And No/100 Dollars (\$2,000,000.00) or less shall be arbitrated at the option of either the Company or the Proposed Insured as the exclusive remedy of the parties. A Proposed Insured may review a copy of the arbitration rules at <http://www.alta.org/arbitration>.

END OF CONDITIONS**1031 EXCHANGE SERVICES**

If your transaction involves a tax deferred exchange, we offer this service through our 1031 division, IPX1031. As the nation's largest 1031 company, IPX1031 offers guidance and expertise. Security for Exchange funds includes segregated bank accounts and a 100 million dollar Fidelity Bond. Fidelity National Title Group also provides a 50 million dollar Performance Guaranty for each Exchange. For additional information, or to set-up an Exchange, please call Scott Nathanson at (312)223-2178 or Anna Barsky at (312)223-2169.

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Inquire before you wire!

WIRE FRAUD ALERT

This Notice is not intended to provide legal or professional advice.
If you have any questions, please consult with a lawyer.

All parties to a real estate transaction are targets for wire fraud and many have lost hundreds of thousands of dollars because they simply relied on the wire instructions received via email, without further verification. **If funds are to be wired in conjunction with this real estate transaction, we strongly recommend verbal verification of wire instructions through a known, trusted phone number prior to sending funds.**

In addition, the following non-exclusive self-protection strategies are recommended to minimize exposure to possible wire fraud.

- **NEVER RELY** on emails purporting to change wire instructions. Parties to a transaction rarely change wire instructions in the course of a transaction.
- **ALWAYS VERIFY** wire instructions, specifically the ABA routing number and account number, by calling the party who sent the instructions to you. DO NOT use the phone number provided in the email containing the instructions, use phone numbers you have called before or can otherwise verify. **Obtain the number of relevant parties to the transaction as soon as an escrow account is opened.** DO NOT send an email to verify as the email address may be incorrect or the email may be intercepted by the fraudster.
- **USE COMPLEX EMAIL PASSWORDS** that employ a combination of mixed case, numbers, and symbols. Make your passwords greater than eight (8) characters. Also, change your password often and do NOT reuse the same password for other online accounts.
- **USE MULTI-FACTOR AUTHENTICATION** for email accounts. Your email provider or IT staff may have specific instructions on how to implement this feature.

For more information on wire-fraud scams or to report an incident, please refer to the following links:

Federal Bureau of Investigation:
<http://www.fbi.gov>

Internet Crime Complain Center:
<http://www.ic3.gov>

Attachment: 2. Proof of Ownership - All Properties (4023 : Avere on Duane - PUD, SUP, ZMA, SV)

**FIDELITY NATIONAL FINANCIAL
PRIVACY NOTICE
Revised May 1, 2018**

Fidelity National Financial, Inc. and its majority-owned subsidiary companies (collectively, "FNF", "our," or "we") respect and are committed to protecting your privacy. This Privacy Notice explains how we collect, use, and protect personal information, when and to whom we disclose such information, and the choices you have about the use and disclosure of that information.

Types of Information Collected

We may collect two types of information from you: Personal Information and Browsing Information.

Personal Information. FNF may collect the following categories of Personal Information:

- contact information (e.g., name, address, phone number, email address);
- demographic information (e.g., date of birth, gender, marital status);
- identity information (e.g. Social Security Number, driver's license, passport, or other government ID number);
- financial account information (e.g. loan or bank account information); and
- other personal information necessary to provide products or services to you.

Browsing Information. FNF may automatically collect the following types of Browsing Information when you access an FNF website, online service, or application (each an "FNF Website") from your Internet browser, computer, and/or mobile device:

- Internet Protocol (IP) address and operating system;
- browser version, language, and type;
- domain name system requests; and
- browsing history on the FNF Website, such as date and time of your visit to the FNF Website and visits to the pages within the FNF Website.

How Personal Information is Collected

We may collect Personal Information about you from:

- information we receive from you on applications or other forms;
- information about your transactions with FNF, our affiliates, or others; and
- information we receive from consumer reporting agencies and/or governmental entities, either directly from these entities or through others.

How Browsing Information is Collected

If you visit or use an FNF Website, Browsing Information may be collected during your visit. Like most websites, our servers automatically log each visitor to the FNF Website and may collect the Browsing Information described above. We use Browsing Information for system administration, troubleshooting, fraud investigation, and to improve our websites. Browsing Information generally does not reveal anything personal about you, though if you have created a user account for an FNF Website and are logged into that account, the FNF Website may be able to link certain browsing activity to your user account.

Other Online Specifics

Cookies. When you visit an FNF Website, a "cookie" may be sent to your computer. A cookie is a small piece of data that is sent to your Internet browser from a web server and stored on your computer's hard drive. Information gathered using cookies helps us improve your user experience. For example, a cookie can help the website load properly or can customize the display page based on your browser type and user preferences. You can choose whether or not to accept cookies by changing your Internet browser settings. Be aware that doing so may impair or limit some functionality of the FNF Website.

Web Beacons. We use web beacons to determine when and how many times a page has been viewed. This information is used to improve our websites.

Do Not Track. Currently our FNF Websites do not respond to "Do Not Track" features enabled through your browser.

Links to Other Sites. FNF Websites may contain links to other websites. FNF is not responsible for the privacy practices or the content of any of those other websites. We advise you to read the privacy policy of every website you visit.

Use of Personal Information

FNF uses Personal Information for three main purposes:

- To provide products and services to you or in connection with a transaction involving you.
- To improve our products and services.
- To communicate with you about our, our affiliates', and third parties' products and services, jointly or independently.

When Information Is Disclosed

We may make disclosures of your Personal Information and Browsing Information in the following circumstances:

- to enable us to detect or prevent criminal activity, fraud, material misrepresentation, or nondisclosure;
- to nonaffiliated service providers who provide or perform services or functions on our behalf and who agree to use the information only to provide such services or functions;
- to nonaffiliated third party service providers with whom we perform joint marketing, pursuant to an agreement with them to jointly market financial products or services to you;
- to law enforcement or authorities in connection with an investigation, or in response to a subpoena or court order; or
- in the good-faith belief that such disclosure is necessary to comply with legal process or applicable laws, or to protect the rights, property, or safety of FNF, its customers, or the public.

The law does not require your prior authorization and does not allow you to restrict the disclosures described above. Additionally, we may disclose your information to third parties for whom you have given us authorization or consent to make such disclosure. We do not otherwise share your Personal Information or Browsing Information with nonaffiliated third parties, except as required or permitted by law.

We reserve the right to transfer your Personal Information, Browsing Information, and any other information, in connection with the sale or other disposition of all or part of the FNF business and/or assets, or in the event of bankruptcy, reorganization, insolvency, receivership, or an assignment for the benefit of creditors. By submitting Personal Information and/or Browsing Information to FNF, you expressly agree and consent to the use and/or transfer of the foregoing information in connection with any of the above described proceedings.

Please see "**Choices With Your Information**" to learn the disclosures you can restrict.

Security of Your Information

We maintain physical, electronic, and procedural safeguards to guard your Personal Information. We limit access to nonpublic personal information about you to employees who need to know that information to do their job. When we provide Personal Information to others as discussed in this Privacy Notice, we expect that they process such information in compliance with our Privacy Notice and in compliance with applicable privacy laws.

Choices With Your Information

If you do not want FNF to share your information with our affiliates to directly market to you, you may send an "opt out" request by email, phone, or physical mail as directed at the end of this Privacy Notice. We do not share your Personal Information with nonaffiliates for their use to direct market to you.

Whether you submit Personal Information or Browsing Information to FNF is entirely up to you. If you decide not to submit Personal Information or Browsing Information, FNF may not be able to provide certain services or products to you.

For California Residents: We will not share your Personal Information or Browsing Information with nonaffiliated third parties, except as permitted by California law.

For Nevada Residents: You may be placed on our internal Do Not Call List by calling (888) 934-3354 or by contacting us via the information set forth at the end of this Privacy Notice. Nevada law requires that we also provide you with the following contact information: Bureau of Consumer Protection, Office of the Nevada Attorney General, 555 E. Washington St., Suite 3900, Las Vegas, NV 89101; Phone number: (702) 486-3132; email: BCPINFO@ag.state.nv.us.

For Oregon Residents: We will not share your Personal Information or Browsing Information with nonaffiliated third parties for marketing purposes, except after you have been informed by us of such sharing and had an opportunity to indicate that you do not want a disclosure made for marketing purposes.

For Vermont Residents: We will not disclose information about you creditworthiness to our affiliates and will not disclose your personal information, financial information, credit report, or health information to nonaffiliated third parties to market to you, other than as permitted by Vermont law, unless you authorize us to make those disclosures.

Information From Children

The FNF Websites are meant for adults and are not intended or designed to attract persons under the age of eighteen (18). We do not collect Personal Information from any person that we know to be under the age of thirteen (13) without permission from a parent or guardian.

International Users

FNF's headquarters is located within the United States. If you reside outside the United States and choose to provide Personal Information or Browsing Information to us, please note that we may transfer that information outside of your country of residence for any of the purposes described in this Privacy Notice. By providing FNF with your Personal Information and/or Browsing Information, you consent to our collection, transfer, and use of such information in accordance with this Privacy Notice.

FNF Website Services for Mortgage Loans

Certain FNF companies provide services to mortgage loan servicers, including hosting websites that collect customer information on behalf of mortgage loan servicers (the "Service Websites"). The Service Websites may contain links to both this Privacy Notice and the mortgage loan servicer or lender's privacy notice. The sections of this Privacy Notice titled When Information is Disclosed, Choices with Your Information, and Accessing and Correcting Information do not apply to the Service Websites. The mortgage loan servicer or lender's privacy notice governs use, disclosure, and access to your Personal Information. FNF does not share Personal Information collected through the Service Websites, except (1) as required or authorized by contract with the mortgage loan servicer or lender, or (2) as required by law or in the good-faith belief that such disclosure is necessary to comply with a legal process or applicable law, to enforce this Privacy Notice, or to protect the rights, property, or safety of FNF or the public.

Your Consent To This Privacy Notice; Notice Changes

By submitting Personal Information and/or Browsing Information to FNF, you consent to the collection and use of the information in accordance with this Privacy Notice. We may change this Privacy Notice at any time. The revised Privacy Notice, showing the new revision date, will be posted on the FNF Website. Each time you provide information to us following any amendment of this Privacy Notice, your provision of information to us will signify your assent to and acceptance of the terms of the revised Privacy Notice for all previously collected information and information collected from you in the future. We may use comments, information or feedback that you submit to us in any manner that we may choose without notice or compensation to you.

Accessing and Correcting Information; Contact Us

If you have questions, would like to access or correct your Personal Information, or want to opt-out of information sharing for affiliate marketing, send your requests via email to privacy@fnf.com, by phone to (888) 934-3354, or by mail to:

Fidelity National Financial, Inc.
601 Riverside Avenue,
Jacksonville, Florida 32204
Attn: Chief Privacy Officer

Attachment: 2. Proof of Ownership - All Properties (4023 : Avere on Duane - PUD, SUP, ZMA, SV)

ALTA COMMITMENT FOR TITLE INSURANCE



CHICAGO TITLE INSURANCE COMPANY

Commitment Number:

18004233LFE

NOTICE

IMPORTANT - READ CAREFULLY: THIS COMMITMENT IS AN OFFER TO ISSUE ONE OR MORE TITLE INSURANCE POLICIES. ALL CLAIMS OR REMEDIES SOUGHT AGAINST THE COMPANY INVOLVING THE CONTENT OF THIS COMMITMENT OR THE POLICY MUST BE BASED SOLELY IN CONTRACT.

THIS COMMITMENT IS NOT AN ABSTRACT OF TITLE, REPORT OF THE CONDITION OF TITLE, LEGAL OPINION, OPINION OF TITLE, OR OTHER REPRESENTATION OF THE STATUS OF TITLE. THE PROCEDURES USED BY THE COMPANY TO DETERMINE INSURABILITY OF THE TITLE, INCLUDING ANY SEARCH AND EXAMINATION, ARE PROPRIETARY TO THE COMPANY, WERE PERFORMED SOLELY FOR THE BENEFIT OF THE COMPANY, AND CREATE NO EXTRACONTRACTUAL LIABILITY TO ANY PERSON, INCLUDING A PROPOSED INSURED.

THE COMPANY'S OBLIGATION UNDER THIS COMMITMENT IS TO ISSUE A POLICY TO A PROPOSED INSURED IDENTIFIED IN SCHEDULE A IN ACCORDANCE WITH THE TERMS AND PROVISIONS OF THIS COMMITMENT. THE COMPANY HAS NO LIABILITY OR OBLIGATION INVOLVING THE CONTENT OF THIS COMMITMENT TO ANY OTHER PERSON.

COMMITMENT TO ISSUE POLICY

Subject to the Notice; Schedule B, Part I-Requirements; Schedule B, Part II-Exceptions; and the Commitment Conditions, Chicago Title Insurance Company, a Florida corporation (the "Company"), commits to issue the Policy according to the terms and provisions of this Commitment. This Commitment is effective as of the Commitment Date shown in Schedule A for each Policy described in Schedule A, only when the Company has entered in Schedule A both the specified dollar amount as the Proposed Policy Amount and the name of the Proposed Insured.

If all of the Schedule B, Part I-Requirements have not been met within one hundred eighty (180) days after the Commitment Date, this Commitment terminates and the Company's liability and obligation end.

Chicago Title Insurance Company

By:

President

Attest:

Secretary



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ALTA Commitment for Title Insurance (08/01/2016)

Page 1

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 IL-CT-FSWM-01080.225141-SPS-1-18-18004233LFE


CHICAGO TITLE INSURANCE COMPANY**COMMITMENT NO. 18004233LFE****Transaction Identification Data for reference only:**

ORIGINATING OFFICE:	FOR SETTLEMENT INQUIRIES, CONTACT:
Chicago Title Company, LLC 10 South LaSalle Street, Suite 2930 Chicago, IL 60603 Main Phone: 312-223-2809 Email: loopcommercial@ctt.com	Chicago Title and Trust Company 10 South LaSalle Street, Suite 2930 Chicago, IL 60603 Main Phone: (312)223-2801 Main Fax: 312-223-2920

Issued By: Chicago Title Company, LLC
10 South LaSalle Street, Suite 2930
Chicago, IL 60603

Order Number: 18004233LFE

Property Ref.: 435 Duane St, Glen Ellyn, IL 60137

SCHEDULE A

1. Commitment Date: February 16, 2018
2. Policy to be issued:
 - (a) ALTA Owner's Policy 2006
Proposed Insured: Reva Development Acquisitions, LLC
Proposed Policy Amount: \$425,000.00
3. The estate or interest in the Land described or referred to in this Commitment is:
Fee Simple
4. Title to the estate or interest in the Land is at the Commitment Date vested in:
[Duane Street, LLC, a Colorado Limited Liability Company](#)
5. The Land is described as follows:

LOTS 7 AND 8 IN BLOCK 3 IN GLENWOOD, BEING C. A. PHILLIPS SUBDIVISION OF PART OF SECTION 10 AND PART OF SECTION 11, TOWNSHIP 39 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED AUGUST 22, 1873 AS DOCUMENT 16688, IN DUPAGE COUNTY, ILLINOIS.

END OF SCHEDULE A

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ALTA Commitment for Title Insurance (08/01/2016)



SCHEDULE B, PART I REQUIREMENTS

All of the following Requirements must be met:

1. The Proposed Insured must notify the Company in writing of the name of any party not referred to in this Commitment who will obtain an interest in the Land or who will make a loan on the Land. The Company may then make additional Requirements or Exceptions.
2. Pay the agreed amount for the estate or interest to be insured.
3. Pay the premiums, fees, and charges for the Policy to the Company.
4. Documents satisfactory to the Company that convey the Title or create the Mortgage to be insured, or both, must be properly authorized, executed, delivered, and recorded in the Public Records.
5. Notice: Please be aware that due to the conflict between federal and state laws concerning the cultivation, distribution, manufacture or sale of marijuana, the Company is not able to close or insure any transaction involving Land that is associated with these activities.
6. Be advised that the "good funds" of the title insurance act (215 ILCS 155/26) became effective 1-1-2010. This act places limitations upon the settlement agent's ability to accept certain types of deposits into escrow. Please contact your local Chicago Title office regarding the application of this new law to your transaction.
7. Effective June 1, 2009, pursuant to Public Act 95-988, satisfactory evidence of identification must be presented for the notarization of any and all documents notarized by an Illinois notary public. Satisfactory identification documents are documents that are valid at the time of the notarial act; are issued by a state or federal government agency; bear the photographic image of the individual's face; and bear the individual's signature.
8. **The Proposed Policy Amount(s) must be increased to the full value of the estate or interest being insured, and any additional premium must be paid at that time. An Owner's Policy should reflect the purchase price or full value of the Land. A Loan Policy should reflect the loan amount or value of the property as collateral. Proposed Policy Amount(s) will be revised and premiums charged consistent therewith when the final amounts are approved.**

END OF SCHEDULE B, PART I

Attachment: 2. Proof of Ownership - All Properties (4023 : Avere on Duane - PUD, SUP, ZMA, SV)

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SCHEDULE B, PART II EXCEPTIONS

THIS COMMITMENT DOES NOT REPUBLISH ANY COVENANT, CONDITION, RESTRICTION, OR LIMITATION CONTAINED IN ANY DOCUMENT REFERRED TO IN THIS COMMITMENT TO THE EXTENT THAT THE SPECIFIC COVENANT, CONDITION, RESTRICTION, OR LIMITATION VIOLATES STATE OR FEDERAL LAW BASED ON RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, GENDER IDENTITY, HANDICAP, FAMILIAL STATUS, OR NATIONAL ORIGIN.

The Policy will not insure against loss or damage resulting from the terms and provisions of any lease or easement identified in Schedule A, and will include the following Exceptions unless cleared to the satisfaction of the Company:

1. **General Exceptions**
2. **Rights or claims of parties in possession not shown by Public Records.**
3. **Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the title that would be disclosed by an accurate and complete land survey of the Land.**
4. **Easements, or claims of easements, not shown by the Public Records.**
5. **Any lien, or right to a lien, for services, labor or material heretofore or hereafter furnished, imposed by law and not shown by the Public Records.**
6. **Taxes or special assessments which are not shown as existing liens by the Public Records.**
7. **We should be furnished a properly executed ALTA statement and, unless the land insured is a condominium unit, a survey if available. Matters disclosed by the above documentation will be shown specifically.**
8. Any defect, lien, encumbrance, adverse claim, or other matter that appears for the first time in the Public Records or is created, attaches, or is disclosed between the Commitment Date and the date on which all of the Schedule B, Part I-Requirements are met.
- A 9. Taxes for the years 2017 and 2018.

Taxes for the years 2017 and 2018 are not yet due or payable.

Permanent Tax No.: [05-11-325-004-0000](#)

Note: Taxes for the year 2016 amounting to \$7,263.26 are paid of record.
- B 10. Please be advised that our search did not disclose any open mortgages of record. If you should have knowledge of any outstanding obligation, please contact the Title Department immediately for further review prior to closing.

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**SCHEDULE B, PART II
EXCEPTIONS**
(continued)

- C 11. Municipal Real Estate Transfer Tax Stamps (or proof of exemption) must accompany any conveyance and certain other transfers or property located in Glen Ellyn. Please contact said municipality prior to closing for its specific requirements, which may include the payment of fees, an inspection or other approvals.
- D 12. The Company will require the following documents for review prior to the issuance of any title insurance predicated upon a conveyance or encumbrance from the entity named below.
- Limited Liability Company: Duane Street LLC
- a. A copy of its operating agreement, if any, and any and all amendments, supplements and/or modifications thereto, certified by the appropriate manager or member.
 - b. If a domestic Limited Liability Company, a copy of its Articles of Organization and all amendment thereto with the appropriate filing stamps.
 - c. If the Limited Liability Company is member-managed a full and complete current list of members certified by the appropriate manager or member.
 - d. A current dated certificate of good standing from the proper governmental authority of the state in which the entity was created
 - e. If less than all members, or managers, as appropriate, will be executing the closing documents, furnish evidence of the authority of those signing.

The Company reserves the right to add additional items or make further requirements after review of the requested documentation.

Attachment: 2. Proof of Ownership - All Properties (4023 : Avere on Duane - PUD, SUP, ZMA, SV)

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**SCHEDULE B, PART II
EXCEPTIONS**
(continued)

- E 13. The Company will require the following documents for review prior to the issuance of any title insurance predicated upon a conveyance or encumbrance from the entity named below.

Limited Liability Company: Reva Development Acquisitions, LLC

- a. A copy of its operating agreement, if any, and any and all amendments, supplements and/or modifications thereto, certified by the appropriate manager or member.
- b. If a domestic Limited Liability Company, a copy of its Articles of Organization and all amendment thereto with the appropriate filing stamps.
- c. If the Limited Liability Company is member-managed a full and complete current list of members certified by the appropriate manager or member.
- d. A current dated certificate of good standing from the proper governmental authority of the state in which the entity was created
- e. If less than all members, or managers, as appropriate, will be executing the closing documents, furnish evidence of the authority of those signing.

The Company reserves the right to add additional items or make further requirements after review of the requested documentation.

- F 14. The land lies within the boundaries of a special service area as disclosed by ordinance recorded as recording no. [R2009-193864](#), and is subject to additional taxes under the terms of said ordinance and subsequent related ordinances.

- G 15. Existing unrecorded leases and all rights thereunder of the lessees and of any person or party claiming by, through or under the lessees.

- H 16. The Company should be furnished a statement that there is no property manager employed to manage the Land, or, in the alternative, a final lien waiver from any such property manager.

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**SCHEDULE B, PART II
EXCEPTIONS**
(continued)

- I 17. Information should be furnished establishing whether any written agreement has been entered into by and between any party and a broker for the purposes of buying, selling, leasing or otherwise conveying any interest in the Land described herein. If such an agreement has been entered into, satisfactory evidence should be furnished establishing that the compensation agreed upon in such agreement has been paid and the broker's lien, or right to a lien, for such amount has been extinguished. In the event said evidence is not furnished, our policy(ies), when issued, will be subject to the following exception:
- Any lien, or right to a lien, imposed by law under the provisions of the Commercial Real Estate Broker Lien Act for compensation agreed upon by a broker and the broker's client or customer under the terms of a written agreement entered into for the purposes of buying, selling, leasing, or otherwise conveying any interest in the Land described in Schedule A.
- J 18. The land lies within the boundaries of a special service area as disclosed by ordinance recorded as documents [R1999-186944](#), [R1999-261538](#), [R2000-021154](#), and is subject to additional taxes under the terms of said ordinance and subsequent related ordinances.

Attachment: 2. Proof of Ownership - All Properties (4023 : Avere on Duane - PUD, SUP, ZMA, SV)

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ALTA Commitment for Title Insurance (08/01/2016)



SCHEDULE B, PART II EXCEPTIONS

(continued)

- K 19. Note for additional information: the DuPage County Recorder requires that any documents presented for recording contain the following information:
- A. The name and address of the party who prepared the document;
 - B. The name and address of the party to whom the document should be mailed after recording;
 - C. All permanent real estate tax index numbers of any property legally described in the document;
 - D. The address of any property legally described in the document;
 - E. All deeds should contain the address of the grantee and should also note the name and address of the party to whom the tax bills should be sent.
 - F. Any deeds conveying unsubdivided land, or, portions of subdivided and, may need to be accompanied by a properly executed "plat act affidavit."

In addition, please note that the municipalities of Addison, Aurora, Bartlett, Bolingbrook, Carol Stream, Elk Grove Village, Elmhurst, Glendale Heights, Glen Ellyn, Hanover Park, Naperville, Schaumburg, West Chicago, Wheaton, and Woodridge have enacted transfer tax ordinances. To record a conveyance of land located in these municipalities, the requirements of the transfer tax ordinances must be met. A conveyance of property in these cities may need to have the appropriate transfer tax stamps affixed before it can be recorded.

Furthermore, all deeds and mortgages should include the current marital status of all individual parties, where appropriate. A spouse of an individual grantor or mortgagor may have to sign the deed or mortgage in order to release any applicable homestead interest

This exception will not appear on the policy when issued.

- L 20. All endorsement requests should be made prior to closing to allow ample time for the company to examine required documentation.
(This note will be waived for policy).

END OF SCHEDULE B, PART II

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COMMITMENT CONDITIONS**1. DEFINITIONS**

- (a) "Knowledge" or "Known": Actual or imputed knowledge, but not constructive notice imparted by the Public Records.
- (b) "Land": The land described in Schedule A and affixed improvements that by law constitute real property. The term "Land" does not include any property beyond the lines of the area described in Schedule A, nor any right, title, interest, estate, or easement in abutting streets, roads, avenues, alleys, lanes, ways, or waterways, but this does not modify or limit the extent that a right of access to and from the Land is to be insured by the Policy.
- (c) "Mortgage": A mortgage, deed of trust, or other security instrument, including one evidenced by electronic means authorized by law.
- (d) "Policy": Each contract of title insurance, in a form adopted by the American Land Title Association, issued or to be issued by the Company pursuant to this Commitment.
- (e) "Proposed Insured": Each person identified in Schedule A as the Proposed Insured of each Policy to be issued pursuant to this Commitment.
- (f) "Proposed Policy Amount": Each dollar amount specified in Schedule A as the Proposed Policy Amount of each Policy to be issued pursuant to this Commitment.
- (g) "Public Records": Records established under state statutes at the Commitment Date for the purpose of imparting constructive notice of matters relating to real property to purchasers for value and without Knowledge.
- (h) "Title": The estate or interest described in Schedule A.

2. If all of the Schedule B, Part I-Requirements have not been met within the time period specified in the Commitment to Issue Policy, this Commitment terminates and the Company's liability and obligation end.

3. The Company's liability and obligation is limited by and this Commitment is not valid without:

- (a) the Notice;
- (b) the Commitment to Issue Policy;
- (c) the Commitment Conditions;
- (d) Schedule A;
- (e) Schedule B, Part I-Requirements;
- (f) Schedule B, Part II-Exceptions; and
- (g) a counter-signature by the Company or its issuing agent that may be in electronic form.

4. COMPANY'S RIGHT TO AMEND

The Company may amend this Commitment at any time. If the Company amends this Commitment to add a defect, lien, encumbrance, adverse claim, or other matter recorded in the Public Records prior to the Commitment Date, any liability of the Company is limited by Commitment Condition 5. The Company shall not be liable for any other amendment to this Commitment.

5. LIMITATIONS OF LIABILITY

- (a) The Company's liability under Commitment Condition 4 is limited to the Proposed Insured's actual expense incurred in the interval between the Company's delivery to the Proposed Insured of the Commitment and the delivery of the amended Commitment, resulting from the Proposed Insured's good faith reliance to:
 - (i) comply with the Schedule B, Part I-Requirements;
 - (ii) eliminate, with the Company's written consent, any Schedule B, Part II-Exceptions; or
 - (iii) acquire the Title or create the Mortgage covered by this Commitment.
- (b) The Company shall not be liable under Commitment Condition 5(a) if the Proposed Insured requested the amendment or had Knowledge of the matter and did not notify the Company about it in writing.
- (c) The Company will only have liability under Commitment Condition 4 if the Proposed Insured would not have incurred the expense had the Commitment included the added matter when the Commitment was first delivered to the Proposed Insured.
- (d) The Company's liability shall not exceed the lesser of the Proposed Insured's actual expense incurred in good faith and described in Commitment Conditions 5(a)(i) through 5(a)(iii) or the Proposed Policy Amount.
- (e) The Company shall not be liable for the content of the Transaction Identification Data, if any.
- (f) In no event shall the Company be obligated to issue the Policy referred to in this Commitment unless all of the Schedule B, Part I-Requirements have been met to the satisfaction of the Company.
- (g) In any event, the Company's liability is limited by the terms and provisions of the Policy.

6. LIABILITY OF THE COMPANY MUST BE BASED ON THIS COMMITMENT

- (a) Only a Proposed Insured identified in Schedule A, and no other person, may make a claim under this Commitment.
- (b) Any claim must be based in contract and must be restricted solely to the terms and provisions of this Commitment.

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(continued)

- (c) Until the Policy is issued, this Commitment, as last revised, is the exclusive and entire agreement between the parties with respect to the subject matter of this Commitment and supersedes all prior commitment negotiations, representations, and proposals of any kind, whether written or oral, express or implied, relating to the subject matter of this Commitment.
- (d) The deletion or modification of any Schedule B, Part II-Exception does not constitute an agreement or obligation to provide coverage beyond the terms and provisions of this Commitment or the Policy.
- (e) Any amendment or endorsement to this Commitment must be in writing and authenticated by a person authorized by the Company.
- (f) When the Policy is issued, all liability and obligation under this Commitment will end and the Company's only liability will be under the Policy.

7. IF THIS COMMITMENT HAS BEEN ISSUED BY AN ISSUING AGENT

The issuing agent is the Company's agent only for the limited purpose of issuing title insurance commitments and policies. The issuing agent is not the Company's agent for the purpose of providing closing or settlement services.

8. PRO-FORMA POLICY

The Company may provide, at the request of a Proposed Insured, a pro-forma policy illustrating the coverage that the Company may provide. A pro-forma policy neither reflects the status of Title at the time that the pro-forma policy is delivered to a Proposed Insured, nor is it a commitment to insure.

9. ARBITRATION

The Policy contains an arbitration clause. All arbitrable matters when the Proposed Policy Amount is Two Million And No/100 Dollars (\$2,000,000.00) or less shall be arbitrated at the option of either the Company or the Proposed Insured as the exclusive remedy of the parties. A Proposed Insured may review a copy of the arbitration rules at <http://www.alta.org/arbitration>.

END OF CONDITIONS**1031 EXCHANGE SERVICES**

If your transaction involves a tax deferred exchange, we offer this service through our 1031 division, IPX1031. As the nation's largest 1031 company, IPX1031 offers guidance and expertise. Security for Exchange funds includes segregated bank accounts and a 100 million dollar Fidelity Bond. Fidelity National Title Group also provides a 50 million dollar Performance Guaranty for each Exchange. For additional information, or to set-up an Exchange, please call Scott Nathanson at (312)223-2178 or Anna Barsky at (312)223-2169.

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Inquire before you wire!

WIRE FRAUD ALERT

This Notice is not intended to provide legal or professional advice. If you have any questions, please consult with a lawyer.

All parties to a real estate transaction are targets for wire fraud and many have lost hundreds of thousands of dollars because they simply relied on the wire instructions received via email, without further verification. **If funds are to be wired in conjunction with this real estate transaction, we strongly recommend verbal verification of wire instructions through a known, trusted phone number prior to sending funds.**

In addition, the following non-exclusive self-protection strategies are recommended to minimize exposure to possible wire fraud.

- **NEVER RELY** on emails purporting to change wire instructions. Parties to a transaction rarely change wire instructions in the course of a transaction.
- **ALWAYS VERIFY** wire instructions, specifically the ABA routing number and account number, by calling the party who sent the instructions to you. DO NOT use the phone number provided in the email containing the instructions, use phone numbers you have called before or can otherwise verify. **Obtain the number of relevant parties to the transaction as soon as an escrow account is opened.** DO NOT send an email to verify as the email address may be incorrect or the email may be intercepted by the fraudster.
- **USE COMPLEX EMAIL PASSWORDS** that employ a combination of mixed case, numbers, and symbols. Make your passwords greater than eight (8) characters. Also, change your password often and do NOT reuse the same password for other online accounts.
- **USE MULTI-FACTOR AUTHENTICATION** for email accounts. Your email provider or IT staff may have specific instructions on how to implement this feature.

For more information on wire-fraud scams or to report an incident, please refer to the following links:

Federal Bureau of Investigation:

<http://www.fbi.gov>

Internet Crime Complain Center:

<http://www.ic3.gov>

**FIDELITY NATIONAL FINANCIAL
PRIVACY NOTICE**

Effective: May 1, 2015; Last Updated: March 1, 2017

At Fidelity National Financial, Inc., we respect and believe it is important to protect the privacy of consumers and our customers. This Privacy Notice explains how we collect, use, and protect any information that we collect from you, when and to whom we disclose such information, and the choices you have about the use of that information. A summary of the Privacy Notice is below, and we encourage you to review the entirety of the Privacy Notice following this summary. You can opt-out of certain disclosures by following our opt-out procedure set forth at the end of this Privacy Notice.

<u>Types of Information Collected.</u> You may provide us with certain personal information about you, like your contact information, address demographic information, social security number (SSN), driver's license, passport, other government ID numbers and/or financial information. We may also receive browsing information from your Internet browser, computer and/or mobile device if you visit or use our websites or applications.	<u>How Information is Collected.</u> We may collect personal information from you via applications, forms, and correspondence we receive from you and others related to our transactions with you. When you visit our websites from your computer or mobile device, we automatically collect and store certain information available to us through your Internet browser or computer equipment to optimize your website experience.
<u>Use of Collected Information.</u> We request and use your personal information to provide products and services to you, to improve our products and services, and to communicate with you about these products and services. We may also share your contact information with our affiliates for marketing purposes.	<u>When Information Is Disclosed.</u> We may disclose your information to our affiliates and/or nonaffiliated parties providing services for you or us, to law enforcement agencies or governmental authorities, as required by law, and to parties whose interest in title must be determined.
<u>Choices With Your Information.</u> Your decision to submit information to us is entirely up to you. You can opt-out of certain disclosure or use of your information or choose to not provide any personal information to us.	<u>Information From Children.</u> We do not knowingly collect information from children who are under the age of 13, and our website is not intended to attract children.
<u>Privacy Outside the Website.</u> We are not responsible for the privacy practices of third parties, even if our website links to those parties' websites.	<u>International Users.</u> By providing us with your information, you consent to its transfer, processing and storage outside of your country of residence, as well as the fact that we will handle such information consistent with this Privacy Notice.
<u>The California Online Privacy Protection Act.</u> Some FNF companies provide services to mortgage loan servicers and, in some cases, their websites collect information on behalf of mortgage loan servicers. The mortgage loan servicer is responsible for taking action or making changes to any consumer information submitted through those websites.	
<u>Your Consent To This Privacy Notice.</u> By submitting information to us or by using our website, you are accepting and agreeing to the terms of this Privacy Notice.	<u>Access and Correction; Contact Us.</u> If you desire to contact us regarding this notice or your information, please contact us at privacy@fnf.com or as directed at the end of this Privacy Notice.

Attachment: 2. Proof of Ownership - All Properties (4023 : Avere on Duane - PUD, SUP, ZMA, SV)

FIDELITY NATIONAL FINANCIAL PRIVACY NOTICE

Effective: May 1, 2015; Last Updated: March 1, 2017

Fidelity National Financial, Inc. and its majority-owned subsidiary companies providing title insurance, real estate- and loan-related services (collectively, "FNF", "our" or "we") respect and are committed to protecting your privacy. We will take reasonable steps to ensure that your Personal Information and Browsing Information will only be used in compliance with this Privacy Notice and applicable laws. This Privacy Notice is only in effect for Personal Information and Browsing Information collected and/or owned by or on behalf of FNF, including Personal Information and Browsing Information collected through any FNF website, online service or application (collectively, the "Website").

Types of Information Collected

We may collect two types of information from you: Personal Information and Browsing Information.

Personal Information. FNF may collect the following categories of Personal Information:

- contact information (e.g., name, address, phone number, email address);
- demographic information (e.g., date of birth, gender, marital status);
- social security number (SSN), driver's license, passport, and other government ID numbers;
- financial account information; and
- other personal information needed from you to provide title insurance, real estate- and loan-related services to you.

Browsing Information. FNF may collect the following categories of Browsing Information:

- Internet Protocol (or IP) address or device ID/UDID, protocol and sequence information;
- browser language and type;
- domain name system requests;
- browsing history, such as time spent at a domain, time and date of your visit and number of clicks;
- http headers, application client and server banners; and
- operating system and fingerprinting data.

How Information is Collected

In the course of our business, we may collect *Personal Information* about you from the following sources:

- applications or other forms we receive from you or your authorized representative;
- the correspondence you and others send to us;
- information we receive through the Website;
- information about your transactions with, or services performed by, us, our affiliates or nonaffiliated third parties; and
- information from consumer or other reporting agencies and public records maintained by governmental entities that we obtain directly from those entities, our affiliates or others.

If you visit or use our Website, we may collect *Browsing Information* from you as follows:

- **Browser Log Files.** Our servers automatically log each visitor to the Website and collect and record certain browsing information about each visitor. The Browsing Information includes generic information and reveals nothing personal about the user.
- **Cookies.** When you visit our Website, a "cookie" may be sent to your computer. A cookie is a small piece of data that is sent to your Internet browser from a web server and stored on your computer's hard drive. When you visit a website again, the cookie allows the website to recognize your computer. Cookies may store user preferences and other information. You can choose whether or not to accept cookies by changing your Internet browser settings, which may impair or limit some functionality of the Website.

Use of Collected Information

Information collected by FNF is used for three main purposes:

- To provide products and services to you or any affiliate or third party who is obtaining services on your behalf or in connection with a transaction involving you.
- To improve our products and services.
- To communicate with you and to inform you about our, our affiliates' and third parties' products and services, jointly or independently.

When Information Is Disclosed

We may provide your Personal Information (excluding information we receive from consumer or other credit reporting agencies) and Browsing Information to various individuals and companies, as permitted by law, without

obtaining your prior authorization. Such laws do not allow consumers to restrict these disclosures. Please see the section "Choices With Your Personal Information" to learn how to limit the discretionary disclosure of your Personal Information and Browsing Information.

Disclosures of your Personal Information may be made to the following categories of affiliates and nonaffiliated third parties:

- to third parties to provide you with services you have requested, and to enable us to detect or prevent criminal activity, fraud, material misrepresentation, or nondisclosure;
- to our affiliate financial service providers for their use to market their products or services to you;
- to nonaffiliated third party service providers who provide or perform services on our behalf and use the disclosed information only in connection with such services;
- to nonaffiliated third party service providers with whom we perform joint marketing, pursuant to an agreement with them to market financial products or services to you;
- to law enforcement or other governmental authority in connection with an investigation, or civil or criminal subpoena or court order;
- to lenders, lien holders, judgment creditors, or other parties claiming an interest in title whose claim or interest must be determined, settled, paid, or released prior to closing; and
- other third parties for whom you have given us written authorization to disclose your Personal Information.

We may disclose Personal Information and/or Browsing Information when required by law or in the good-faith belief that such disclosure is necessary to:

- comply with a legal process or applicable laws;
- enforce this Privacy Notice;
- investigate or respond to claims that any material, document, image, graphic, logo, design, audio, video or any other information provided by you violates the rights of a third party; or
- protect the rights, property or personal safety of FNF, its users or the public.

We maintain reasonable safeguards to keep your Personal Information secure. When we provide Personal Information to our affiliates or third party service providers as discussed in this Privacy Notice, we expect that these parties process such information in compliance with our Privacy Notice or in a manner that is in compliance with applicable privacy laws. The use of your information by a business partner may be subject to that party's own Privacy Notice. Unless permitted by law, we do not disclose information we collect from consumer or credit reporting agencies with our affiliates or others without your consent.

We reserve the right to transfer your Personal Information, Browsing Information, and any other information, in connection with the sale or other disposition of all or part of the FNF business and/or assets, or in the event of our bankruptcy, reorganization, insolvency, receivership or an assignment for the benefit of creditors. You expressly agree and consent to the use and/or transfer of the foregoing information in connection with any of the above described proceedings. We cannot and will not be responsible for any breach of security by a third party or for any actions of any third party that receives any of the information that is disclosed to us.

Choices With Your Information

Whether you submit Personal Information or Browsing Information to FNF is entirely up to you. If you decide not to submit Personal Information or Browsing Information, FNF may not be able to provide certain services or products to you. The uses of your Personal Information and/or Browsing Information that, by law, you cannot limit, include:

- for our everyday business purposes – to process your transactions, maintain your account(s), to respond to law enforcement or other governmental authority in connection with an investigation, or civil or criminal subpoenas or court orders, or report to credit bureaus;
- for our own marketing purposes;
- for joint marketing with financial companies; and
- for our affiliates' everyday business purposes – information about your transactions and experiences.

You may choose to prevent FNF from disclosing or using your Personal Information and/or Browsing Information under the following circumstances ("opt-out"):

- for our affiliates' everyday business purposes – information about your creditworthiness; and
- for our affiliates to market to you.

To the extent permitted above, you may opt-out of disclosure or use of your Personal Information and Browsing Information by notifying us by one of the methods at the end of this Privacy Notice. We do not share your personal information with non-affiliates for their direct marketing purposes.

For California Residents: We will not share your Personal Information and Browsing Information with nonaffiliated third parties, except as permitted by California law. Currently, our policy is that we do not recognize "do not track" requests from Internet browsers and similar devices.

For Nevada Residents: You may be placed on our internal Do Not Call List by calling (888) 934-3354 or by contacting us via the information set forth at the end of this Privacy Notice. Nevada law requires that we also provide you with the following contact information: Bureau of Consumer Protection, Office of the Nevada Attorney General, 555 E. Washington St., Suite 3900, Las Vegas, NV 89101; Phone number: (702) 486-3132; email: BCPINFO@ag.state.nv.us.

For Oregon Residents: We will not share your Personal Information and Browsing Information with nonaffiliated third parties for marketing purposes, except after you have been informed by us of such sharing and had an opportunity to indicate that you do not want a disclosure made for marketing purposes.

For Vermont Residents: We will not share your Personal Information and Browsing Information with nonaffiliated third parties, except as permitted by Vermont law, such as to process your transactions or to maintain your account. In addition, we will not share information about your creditworthiness with our affiliates except with your authorization. For joint marketing in Vermont, we will only disclose your name, contact information and information about your transactions.

Information From Children

The Website is meant for adults and is not intended or designed to attract children under the age of thirteen (13). We do not collect Personal Information from any person that we know to be under the age of thirteen (13) without permission from a parent or guardian. By using the Website, you affirm that you are over the age of 13 and will abide by the terms of this Privacy Notice.

Privacy Outside the Website

The Website may contain links to other websites. FNF is not and cannot be responsible for the privacy practices or the content of any of those other websites.

International Users

FNF's headquarters is located within the United States. If you reside outside the United States or are a citizen of the European Union, please note that we may transfer your Personal Information and/or Browsing Information outside of your country of residence or the European Union for any of the purposes described in this Privacy Notice. By providing FNF with your Personal Information and/or Browsing Information, you consent to our collection and transfer of such information in accordance with this Privacy Notice.

The California Online Privacy Protection Act

For some FNF websites, such as the Customer CareNet ("CCN"), FNF is acting as a third party service provider to a mortgage loan servicer. In those instances, we may collect certain information on behalf of that mortgage loan servicer via the website. The information which we may collect on behalf of the mortgage loan servicer is as follows:

- first and last name;
- property address;
- user name and password;
- loan number;
- social security number - masked upon entry;
- email address;
- three security questions and answers; and
- IP address.

The information you submit through the website is then transferred to your mortgage loan servicer by way of CCN.

The mortgage loan servicer is responsible for taking action or making changes to any consumer information submitted through this website. For example, if you believe that your payment or user information is incorrect, you must contact your mortgage loan servicer.

CCN does not share consumer information with third parties, other than (1) those with which the mortgage loan servicer has contracted to interface with the CCN application, or (2) law enforcement or other governmental authority in connection with an investigation, or civil or criminal subpoenas or court orders. All sections of this Privacy Notice apply to your interaction with CCN, except for the sections titled "Choices with Your Information"

and "Access and Correction." If you have questions regarding the choices you have with regard to your personal information or how to access or correct your personal information, you should contact your mortgage loan servicer.

Your Consent To This Privacy Notice

By submitting Personal Information and/or Browsing Information to FNF, you consent to the collection and use of the information by us in compliance with this Privacy Notice. Amendments to the Privacy Notice will be posted on the Website. Each time you provide information to us, or we receive information about you, following any amendment of this Privacy Notice will signify your assent to and acceptance of its revised terms for all previously collected information and information collected from you in the future. We may use comments, information or feedback that you submit to us in any manner that we may choose without notice or compensation to you.

Accessing and Correcting Information; Contact Us

If you have questions, would like to access or correct your Personal Information, or want to opt-out of information sharing with our affiliates for their marketing purposes, please send your requests to privacy@fnf.com or by mail or phone to:

Fidelity National Financial, Inc.
601 Riverside Avenue
Jacksonville, Florida 32204
Attn: Chief Privacy Officer
(888) 934-3354

Attachment: 2. Proof of Ownership - All Properties (4023 : Avere on Duane - PUD, SUP, ZMA, SV)

ALTA COMMITMENT FOR TITLE INSURANCE

Issued By:


**CHICAGO TITLE
INSURANCE COMPANY**

Commitment Number:

CCHI1803470LD**NOTICE**

IMPORTANT - READ CAREFULLY: THIS COMMITMENT IS AN OFFER TO ISSUE ONE OR MORE TITLE INSURANCE POLICIES. ALL CLAIMS OR REMEDIES SOUGHT AGAINST THE COMPANY INVOLVING THE CONTENT OF THIS COMMITMENT OR THE POLICY MUST BE BASED SOLELY IN CONTRACT.

THIS COMMITMENT IS NOT AN ABSTRACT OF TITLE, REPORT OF THE CONDITION OF TITLE, LEGAL OPINION, OPINION OF TITLE, OR OTHER REPRESENTATION OF THE STATUS OF TITLE. THE PROCEDURES USED BY THE COMPANY TO DETERMINE INSURABILITY OF THE TITLE, INCLUDING ANY SEARCH AND EXAMINATION, ARE PROPRIETARY TO THE COMPANY, WERE PERFORMED SOLELY FOR THE BENEFIT OF THE COMPANY, AND CREATE NO EXTRACONTRACTUAL LIABILITY TO ANY PERSON, INCLUDING A PROPOSED INSURED.

THE COMPANY'S OBLIGATION UNDER THIS COMMITMENT IS TO ISSUE A POLICY TO A PROPOSED INSURED IDENTIFIED IN SCHEDULE A IN ACCORDANCE WITH THE TERMS AND PROVISIONS OF THIS COMMITMENT. THE COMPANY HAS NO LIABILITY OR OBLIGATION INVOLVING THE CONTENT OF THIS COMMITMENT TO ANY OTHER PERSON.

COMMITMENT TO ISSUE POLICY

Subject to the Notice; Schedule B, Part I-Requirements; Schedule B, Part II-Exceptions; and the Commitment Conditions, Chicago Title Insurance Company, a Florida corporation (the "Company"), commits to issue the Policy according to the terms and provisions of this Commitment. This Commitment is effective as of the Commitment Date shown in Schedule A for each Policy described in Schedule A, only when the Company has entered in Schedule A both the specified dollar amount as the Proposed Policy Amount and the name of the Proposed Insured.

If all of the Schedule B, Part I-Requirements have not been met within one hundred eighty (180) days after the Commitment Date, this Commitment terminates and the Company's liability and obligation end.

Chicago Title Insurance Company

By:

President

Attest:

Secretary

Countersigned By:

Authorized Officer or Agent



This page is only a part of a 2016 ALTA® Commitment for Title Insurance issued by Chicago Title Insurance Company. This Commitment is not valid without the Notice; the Commitment to Issue Policy; the Commitment Conditions; Schedule A; Schedule B, Part I-Requirements; Schedule B, Part II-Exceptions; and a counter-signature by the Company or its issuing agent that may be in electronic form.

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ALTA Commitment for Title Insurance (08/01/2016)

Page 1

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 IL-CT-FA83-02100.231406-SPS-1-18-CCHI1803470LD


CHICAGO TITLE INSURANCE COMPANY**COMMITMENT NO. CCHI1803470LD****Transaction Identification Data for reference only:**

ORIGINATING OFFICE:	FOR SETTLEMENT INQUIRIES, CONTACT:
Chicago Title Insurance Company 10 South LaSalle Street, Suite 3100 Chicago, IL 60603 Main Phone: (312)223-4627 Email: chicagocommercial@ctt.com	Chicago Title and Trust Company 10 South LaSalle Street, Suite 3100 Chicago, IL 60603 Main Phone: (312)223-4627 Main Fax: (312)223-3018

Order Number: CCHI1803470LD**Property Ref.:** 431-435 Melrose Avenue, Glen Ellyn, IL 60137**SCHEDULE A**

1. Commitment Date: November 27, 2018
2. Policy to be issued:
 - (a) ALTA Owner's Policy 2006
Proposed Insured: REVA Development Acquisitions, LLC
Proposed Policy Amount: \$280,000.00
 - (b) ALTA Loan Policy 2006
Proposed Insured: Lender with a contractual obligation under a loan agreement with the Proposed Insured for an Owner's Policy
Proposed Policy Amount: \$10,000.00
3. The estate or interest in the Land described or referred to in this Commitment is:
Fee Simple
4. The Title is, at the Commitment Date, vested in:
William L. White and Robb A. Sackett, each to an undivided 1/2 interest
5. The Land is described as follows:
SEE EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF

END OF SCHEDULE A

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ALTA Commitment for Title Insurance (08/01/2016)



EXHIBIT "A"

Legal Description

Lots 1 and 2 in Block 3 in Glenwood, being C.A. Phillips Subdivision of part of Section 10 and part of Section 11, Township 39 North, Range 10, East of the Third Principal Meridian, according to the plat thereof recorded August 22, 1873 as document 16688, in DuPage County, Illinois.

Attachment: 2. Proof of Ownership - All Properties (4023 : Avere on Duane - PUD, SUP, ZMA, SV)

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SCHEDULE B, PART I REQUIREMENTS

All of the following Requirements must be met:

1. The Proposed Insured must notify the Company in writing of the name of any party not referred to in this Commitment who will obtain an interest in the Land or who will make a loan on the Land. The Company may then make additional Requirements or Exceptions.
2. Pay the agreed amount for the estate or interest to be insured.
3. Pay the premiums, fees, and charges for the Policy to the Company.
4. Documents satisfactory to the Company that convey the Title or create the Mortgage to be insured, or both, must be properly authorized, executed, delivered, and recorded in the Public Records.
5. Notice: Please be aware that due to the conflict between federal and state laws concerning the cultivation, distribution, manufacture or sale of marijuana, the Company is not able to close or insure any transaction involving Land that is associated with these activities.
6. Be advised that the "good funds" of the title insurance act (215 ILCS 155/26) became effective 1-1-2010. This act places limitations upon the settlement agent's ability to accept certain types of deposits into escrow. Please contact your local Chicago Title office regarding the application of this new law to your transaction.
7. Effective June 1, 2009, pursuant to Public Act 95-988, satisfactory evidence of identification must be presented for the notarization of any and all documents notarized by an Illinois notary public. Satisfactory identification documents are documents that are valid at the time of the notarial act; are issued by a state or federal government agency; bear the photographic image of the individual's face; and bear the individual's signature.
8. **The Proposed Policy Amount(s) must be increased to the full value of the estate or interest being insured, and any additional premium must be paid at that time. An Owner's Policy should reflect the purchase price or full value of the Land. A Loan Policy should reflect the loan amount or value of the property as collateral. Proposed Policy Amount(s) will be revised and premiums charged consistent therewith when the final amounts are approved.**

END OF SCHEDULE B, PART I

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SCHEDULE B, PART II EXCEPTIONS

THIS COMMITMENT DOES NOT REPUBLISH ANY COVENANT, CONDITION, RESTRICTION, OR LIMITATION CONTAINED IN ANY DOCUMENT REFERRED TO IN THIS COMMITMENT TO THE EXTENT THAT THE SPECIFIC COVENANT, CONDITION, RESTRICTION, OR LIMITATION VIOLATES STATE OR FEDERAL LAW BASED ON RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, GENDER IDENTITY, HANDICAP, FAMILIAL STATUS, OR NATIONAL ORIGIN.

The Policy will not insure against loss or damage resulting from the terms and provisions of any lease or easement identified in Schedule A, and will include the following Exceptions unless cleared to the satisfaction of the Company:

General Exceptions

1. **Rights or claims of parties in possession not shown by Public Records.**
2. **Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the title that would be disclosed by an accurate and complete land survey of the Land.**
3. **Easements, or claims of easements, not shown by the Public Records.**
4. **Any lien, or right to a lien, for services, labor or material heretofore or hereafter furnished, imposed by law and not shown by the Public Records.**
5. **Taxes or special assessments which are not shown as existing liens by the Public Records.**
6. **We should be furnished a properly executed ALTA statement and, unless the land insured is a condominium unit, a survey if available. Matters disclosed by the above documentation will be shown specifically**
7. Any defect, lien, encumbrance, adverse claim, or other matter that appears for the first time in the Public Records or is created, attaches, or is disclosed between the Commitment Date and the date on which all of the Schedule B, Part I—Requirements are met.
- A 8. Taxes for the year 2018.

Taxes for the year 2018 are not yet due or payable.

Permanent tax no. 05-11-325-001.

Taxes for the year 2017 in the amount of \$7,558.34 are marked paid.
- B 9. Mortgage dated February 26, 1999 and recorded March 3, 1999 as Document No. R99-053229 made by William White and Robb A. Sackett to Firststar Bank Illinois to secure an indebtedness in the amount of \$332,000.00.

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**SCHEDULE B, PART II
EXCEPTIONS**
(continued)

- C 10. Commercial Open-End Mortgage and Assignment of Leases and Rents dated August 22, 2013 and recorded August 27, 2013 as document R2013-123944 made by Robb A. Sackett and Mary B. Sackett, and William L. White and Barbara B. White, to Central Bank & Trust Co. to secure a note for \$406,800.00.
- Purported Release recorded May 30, 2018 as document R2018-047390. Due to the fact that there is no new Mortgage of record we should be furnished with further confirmation that said Mortgage is paid in full.
- Also
- Our searches appear to indicate that the subject land is not presently encumbered by a new Mortgage. This must be substantiated by a sworn statement from the party in title, and this commitment is subject to such further exceptions as may then be deemed necessary.
- D 11. If work has been performed on the Land within the last six months which may subject the Land to liens under the mechanics lien laws, the Company should be furnished satisfactory evidence that those who have performed such work have been fully paid and have waived their rights to a lien. If evidence is not provided or is unsatisfactory, this commitment/policy will be subject to the following exception:
- Any lien, or right to a lien, for services, labor or material, heretofore or hereafter furnished, imposed by law, and not shown by the Public Records.
- The Company reserves the right to add additional items or make further requirements after review of the requested documentation.
- E 12. Existing unrecorded leases and all rights thereunder of the lessees and of any person or party claiming by, through or under the lessees.
- F 13. The Company should be furnished a statement that there is no property manager employed to manage the Land, or, in the alternative, a final lien waiver from any such property manager.
- G 14. Municipal Real Estate Transfer Tax Stamps (or proof of exemption) must accompany any conveyance and certain other transfers or property located in Glen Ellyn. Please contact said municipality prior to closing for its specific requirements, which may include the payment of fees, an inspection or other approvals.
- M 15. If applicable, the spouse or civil union partner of the party in title should join in the conveyance or mortgage for the purpose of releasing homestead.
- N 16. The Company will require the following documents for review prior to the issuance of any title insurance

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**SCHEDULE B, PART II
EXCEPTIONS**
(continued)

predicated upon a conveyance or encumbrance from the entity named below.

Limited Liability Company: REVA Development Acquisitions, LLC

- a. A copy of its operating agreement, if any, and any and all amendments, supplements and/or modifications thereto, certified by the appropriate manager or member.
- b. If a domestic Limited Liability Company, a copy of its Articles of Organization and all amendment thereto with the appropriate filing stamps.
- c. If the Limited Liability Company is member-managed a full and complete current list of members certified by the appropriate manager or member.
- d. A current dated certificate of good standing from the proper governmental authority of the state in which the entity was created
- e. If less than all members, or managers, as appropriate, will be executing the closing documents, furnish evidence of the authority of those signing.

The Company reserves the right to add additional items or make further requirements after review of the requested documentation.

Affects the proposed buyer herein.

- | | | |
|---|-----|--|
| H | 17. | Right, title and interest of HBC Insurance Agency Inc. under an rerecorded contract to purchase the Land, and rights of all parties claiming thereunder. |
| | | |
| L | 18. | To assist in our analysis of the name search, the Company should be furnished prior to closing an Information Statement signed by: William White |
| | | The Company reserves the right to add additional items or make further requirements after review of the requested documentation. |
| | | |
| I | 19. | The Land lies within the boundaries of a Special Service Area as disclosed by ordinance recorded as document R96-207128, re-recorded as document R97-014858 and ordinance recorded December 27, 1996 as document R96-207173 and ordinance recorded December 21, 1999 as document R1999-261538 and ordinance recorded February 11, 2000 as document R2000-021154, and is subject to additional taxes under the terms of said ordinance and subsequent related ordinances. |
| | | |
| J | 20. | The Land lies within the boundaries of a Special Service Area as disclosed by ordinance recorded as document R2009-193864, and is subject to additional taxes under the terms of said ordinance and |

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**SCHEDULE B, PART II
EXCEPTIONS**
(continued)

subsequent related ordinances.

- O 21. All endorsement requests should be made prior to closing to allow ample time for the company to examine required documentation.

(This note will be waived for policy).

- K 22. A. Note for additional information: the DuPage County Recorder requires that any documents presented for recording contain the following information:

The name and address of the party who prepared the document;

The name and address of the party to whom the document should be mailed after recording;

All permanent real estate tax index numbers of any property legally described in the document;

The address of any property legally described in the document;

All deeds should contain the address of the grantee and should also note the name and address of the party to whom the tax bills should be sent.

Any deeds conveying unsubdivided land, or, portions of subdivided and, may need to be accompanied by a properly executed "plat act affidavit."

In addition, please note that the municipalities of Addison, Aurora, Bartlett, Bolingbrook, Carol Stream, Elk Grove Village, Elmhurst, Glendale Heights, Glen Ellyn, Hanover Park, Naperville, Schaumburg, West Chicago, Wheaton, and Woodridge have enacted transfer tax ordinances. To record a conveyance of land located in these municipalities, the requirements of the transfer tax ordinances must be met. A conveyance of property in these cities may need to have the appropriate transfer tax stamps affixed before it can be recorded.

Furthermore, all deeds and mortgages should include the current marital status of all individual parties, where appropriate. A spouse of an individual grantor or mortgagor may have to sign the deed or mortgage in order to release any applicable homestead interest

This exception will not appear on the policy when issued.

END OF SCHEDULE B, PART II

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COMMITMENT CONDITIONS**1. DEFINITIONS**

- (a) "Knowledge" or "Known": Actual or imputed knowledge, but not constructive notice imparted by the Public Records.
- (b) "Land": The land described in Schedule A and affixed improvements that by law constitute real property. The term "Land" does not include any property beyond the lines of the area described in Schedule A, nor any right, title, interest, estate, or easement in abutting streets, roads, avenues, alleys, lanes, ways, or waterways, but this does not modify or limit the extent that a right of access to and from the Land is to be insured by the Policy.
- (c) "Mortgage": A mortgage, deed of trust, or other security instrument, including one evidenced by electronic means authorized by law.
- (d) "Policy": Each contract of title insurance, in a form adopted by the American Land Title Association, issued or to be issued by the Company pursuant to this Commitment.
- (e) "Proposed Insured": Each person identified in Schedule A as the Proposed Insured of each Policy to be issued pursuant to this Commitment.
- (f) "Proposed Policy Amount": Each dollar amount specified in Schedule A as the Proposed Policy Amount of each Policy to be issued pursuant to this Commitment.
- (g) "Public Records": Records established under state statutes at the Commitment Date for the purpose of imparting constructive notice of matters relating to real property to purchasers for value and without Knowledge.
- (h) "Title": The estate or interest described in Schedule A.

2. If all of the Schedule B, Part I-Requirements have not been met within the time period specified in the Commitment to Issue Policy, this Commitment terminates and the Company's liability and obligation end.

3. The Company's liability and obligation is limited by and this Commitment is not valid without:

- (a) the Notice;
- (b) the Commitment to Issue Policy;
- (c) the Commitment Conditions;
- (d) Schedule A;
- (e) Schedule B, Part I-Requirements;
- (f) Schedule B, Part II-Exceptions; and
- (g) a counter-signature by the Company or its issuing agent that may be in electronic form.

4. COMPANY'S RIGHT TO AMEND

The Company may amend this Commitment at any time. If the Company amends this Commitment to add a defect, lien, encumbrance, adverse claim, or other matter recorded in the Public Records prior to the Commitment Date, any liability of the Company is limited by Commitment Condition 5. The Company shall not be liable for any other amendment to this Commitment.

5. LIMITATIONS OF LIABILITY

- (a) The Company's liability under Commitment Condition 4 is limited to the Proposed Insured's actual expense incurred in the interval between the Company's delivery to the Proposed Insured of the Commitment and the delivery of the amended Commitment, resulting from the Proposed Insured's good faith reliance to:
 - (i) comply with the Schedule B, Part I-Requirements;
 - (ii) eliminate, with the Company's written consent, any Schedule B, Part II-Exceptions; or
 - (iii) acquire the Title or create the Mortgage covered by this Commitment.
- (b) The Company shall not be liable under Commitment Condition 5(a) if the Proposed Insured requested the amendment or had Knowledge of the matter and did not notify the Company about it in writing.
- (c) The Company will only have liability under Commitment Condition 4 if the Proposed Insured would not have incurred the expense had the Commitment included the added matter when the Commitment was first delivered to the Proposed Insured.
- (d) The Company's liability shall not exceed the lesser of the Proposed Insured's actual expense incurred in good faith and described in Commitment Conditions 5(a)(i) through 5(a)(iii) or the Proposed Policy Amount.
- (e) The Company shall not be liable for the content of the Transaction Identification Data, if any.
- (f) In no event shall the Company be obligated to issue the Policy referred to in this Commitment unless all of the Schedule B, Part I-Requirements have been met to the satisfaction of the Company.
- (g) In any event, the Company's liability is limited by the terms and provisions of the Policy.

6. LIABILITY OF THE COMPANY MUST BE BASED ON THIS COMMITMENT

- (a) Only a Proposed Insured identified in Schedule A, and no other person, may make a claim under this Commitment.
- (b) Any claim must be based in contract and must be restricted solely to the terms and provisions of this Commitment.

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(continued)

- (c) Until the Policy is issued, this Commitment, as last revised, is the exclusive and entire agreement between the parties with respect to the subject matter of this Commitment and supersedes all prior commitment negotiations, representations, and proposals of any kind, whether written or oral, express or implied, relating to the subject matter of this Commitment.
- (d) The deletion or modification of any Schedule B, Part II-Exception does not constitute an agreement or obligation to provide coverage beyond the terms and provisions of this Commitment or the Policy.
- (e) Any amendment or endorsement to this Commitment must be in writing and authenticated by a person authorized by the Company.
- (f) When the Policy is issued, all liability and obligation under this Commitment will end and the Company's only liability will be under the Policy.

7. IF THIS COMMITMENT HAS BEEN ISSUED BY AN ISSUING AGENT

The issuing agent is the Company's agent only for the limited purpose of issuing title insurance commitments and policies. The issuing agent is not the Company's agent for the purpose of providing closing or settlement services.

8. PRO-FORMA POLICY

The Company may provide, at the request of a Proposed Insured, a pro-forma policy illustrating the coverage that the Company may provide. A pro-forma policy neither reflects the status of Title at the time that the pro-forma policy is delivered to a Proposed Insured, nor is it a commitment to insure.

9. ARBITRATION

The Policy contains an arbitration clause. All arbitrable matters when the Proposed Policy Amount is Two Million And No/100 Dollars (\$2,000,000.00) or less shall be arbitrated at the option of either the Company or the Proposed Insured as the exclusive remedy of the parties. A Proposed Insured may review a copy of the arbitration rules at <http://www.alta.org/arbitration>.

END OF CONDITIONS**1031 EXCHANGE SERVICES**

If your transaction involves a tax deferred exchange, we offer this service through our 1031 division, IPX1031. As the nation's largest 1031 company, IPX1031 offers guidance and expertise. Security for Exchange funds includes segregated bank accounts and a 100 million dollar Fidelity Bond. Fidelity National Title Group also provides a 50 million dollar Performance Guaranty for each Exchange. For additional information, or to set-up an Exchange, please call Scott Nathanson at (312)223-2178 or Anna Barsky at (312)223-2169.

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ALTA COMMITMENT FOR TITLE INSURANCE



CHICAGO TITLE INSURANCE COMPANY

Commitment Number:

18GNW624002WH

NOTICE

IMPORTANT - READ CAREFULLY: THIS COMMITMENT IS AN OFFER TO ISSUE ONE OR MORE TITLE INSURANCE POLICIES. ALL CLAIMS OR REMEDIES SOUGHT AGAINST THE COMPANY INVOLVING THE CONTENT OF THIS COMMITMENT OR THE POLICY MUST BE BASED SOLELY IN CONTRACT.

THIS COMMITMENT IS NOT AN ABSTRACT OF TITLE, REPORT OF THE CONDITION OF TITLE, LEGAL OPINION, OPINION OF TITLE, OR OTHER REPRESENTATION OF THE STATUS OF TITLE. THE PROCEDURES USED BY THE COMPANY TO DETERMINE INSURABILITY OF THE TITLE, INCLUDING ANY SEARCH AND EXAMINATION, ARE PROPRIETARY TO THE COMPANY, WERE PERFORMED SOLELY FOR THE BENEFIT OF THE COMPANY, AND CREATE NO EXTRACTIONAL LIABILITY TO ANY PERSON, INCLUDING A PROPOSED INSURED.

THE COMPANY'S OBLIGATION UNDER THIS COMMITMENT IS TO ISSUE A POLICY TO A PROPOSED INSURED IDENTIFIED IN SCHEDULE A IN ACCORDANCE WITH THE TERMS AND PROVISIONS OF THIS COMMITMENT. THE COMPANY HAS NO LIABILITY OR OBLIGATION INVOLVING THE CONTENT OF THIS COMMITMENT TO ANY OTHER PERSON.

COMMITMENT TO ISSUE POLICY

Subject to the Notice; Schedule B, Part I-Requirements; Schedule B, Part II-Exceptions; and the Commitment Conditions, Chicago Title Insurance Company, a Florida corporation (the "Company"), commits to issue the Policy according to the terms and provisions of this Commitment. This Commitment is effective as of the Commitment Date shown in Schedule A for each Policy described in Schedule A, only when the Company has entered in Schedule A both the specified dollar amount as the Proposed Policy Amount and the name of the Proposed Insured.

If all of the Schedule B, Part I-Requirements have not been met within one hundred eighty (180) days after the Commitment Date, this Commitment terminates and the Company's liability and obligation end.

Chicago Title Insurance Company

By:

President

Attest:

Secretary



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ALTA Commitment for Title Insurance (08/01/2016)



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IL-CT-FWET-01080.225034-SPS-1-18-18GNW624002WH

CHICAGO TITLE INSURANCE COMPANY

COMMITMENT NO. 18GNW624002WH

Transaction Identification Data for reference only:

ORIGINATING OFFICE:	FOR SETTLEMENT INQUIRIES, CONTACT:
Chicago Title Company, LLC 2441 Warrenville Rd, Suite 100 Lisle, IL 60532 Main Phone: (630)871-3500 Email: ctwheaton@ctt.com	Chicago Title and Trust Company 2441 Warrenville Rd, Suite 100 Lisle, IL 60532 Main Phone: (630)871-3500 Main Fax: (630)871-3588

Issued By: Steven K. Norgaard, P.C.
493 Duane St. # 400
Glen Ellyn, IL 60137

Order Number: 18GNW624002WH

Property Ref.: 427 Duane St, Glen Ellyn, IL 60137-4528

SCHEDULE A

1. Commitment Date: November 29, 2018
2. Policy to be issued:
 - (a) ALTA Owner's Policy 2006
Proposed Insured: REVA Development Acquisitions, LLC
Proposed Policy Amount: \$300,000.00
3. The estate or interest in the Land described or referred to in this Commitment is:
Fee Simple
4. The Title is, at the Commitment Date, vested in:
[427-429 Duane LLC, an Illinois limited liability company](#)
5. The Land is described as follows:

LOTS 3 AND 4 IN BLOCK 3 IN GLENWOOD, BEING C. A. PHILLIPS SUBDIVISION OF PART OF SECTION 10 AND PART OF SECTION 11, TOWNSHIP 39 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED AUGUST 22, 1873 AS DOCUMENT [16688](#), IN DUPAGE COUNTY, ILLINOIS.

END OF SCHEDULE A

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ALTA Commitment for Title Insurance (08/01/2016)



SCHEDULE B, PART I REQUIREMENTS

All of the following Requirements must be met:

1. The Proposed Insured must notify the Company in writing of the name of any party not referred to in this Commitment who will obtain an interest in the Land or who will make a loan on the Land. The Company may then make additional Requirements or Exceptions.
2. Pay the agreed amount for the estate or interest to be insured.
3. Pay the premiums, fees, and charges for the Policy to the Company.
4. Documents satisfactory to the Company that convey the Title or create the Mortgage to be insured, or both, must be properly authorized, executed, delivered, and recorded in the Public Records.
5. Notice: Please be aware that due to the conflict between federal and state laws concerning the cultivation, distribution, manufacture or sale of marijuana, the Company is not able to close or insure any transaction involving Land that is associated with these activities.
6. **The Proposed Policy Amount(s) must be increased to the full value of the estate or interest being insured, and any additional premium must be paid at that time. An Owner's Policy should reflect the purchase price or full value of the Land. A Loan Policy should reflect the loan amount or value of the property as collateral. Proposed Policy Amount(s) will be revised and premiums charged consistent therewith when the final amounts are approved.**
7. Be advised that the "good funds" of the title insurance act (215 ILCS 155/26) became effective 1-1-2010. This act places limitations upon the settlement agent's ability to accept certain types of deposits into escrow. Please contact your local Chicago Title office regarding the application of this new law to your transaction.
8. Effective June 1, 2009, pursuant to Public Act 95-988, satisfactory evidence of identification must be presented for the notarization of any and all documents notarized by an Illinois notary public. Satisfactory identification documents are documents that are valid at the time of the notarial act; are issued by a state or federal government agency; bear the photographic image of the individual's face; and bear the individual's signature.
9. The Company should be furnished a statement that there is no property manager employed to manage the Land, or, in the alternative, a final lien waiver from any such property manager.

END OF SCHEDULE B, PART I

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**SCHEDULE B, PART I
REQUIREMENTS**
(continued)

Title Insurance Agent:

Steven K. Norgaard, P.C.
493 Duane St. # 400
Glen Ellyn, IL 60137
Phone: (630)545-1005
Fax: (630)545-1051

Authorized Signatory

Attachment: 2. Proof of Ownership - All Properties (4023 : Avere on Duane - PUD, SUP, ZMA, SV)

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SCHEDULE B, PART II EXCEPTIONS

THIS COMMITMENT DOES NOT REPUBLISH ANY COVENANT, CONDITION, RESTRICTION, OR LIMITATION CONTAINED IN ANY DOCUMENT REFERRED TO IN THIS COMMITMENT TO THE EXTENT THAT THE SPECIFIC COVENANT, CONDITION, RESTRICTION, OR LIMITATION VIOLATES STATE OR FEDERAL LAW BASED ON RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, GENDER IDENTITY, HANDICAP, FAMILIAL STATUS, OR NATIONAL ORIGIN.

The Policy will not insure against loss or damage resulting from the terms and provisions of any lease or easement identified in Schedule A, and will include the following Exceptions unless cleared to the satisfaction of the Company:

General Exceptions

1. **Rights or claims of parties in possession not shown by Public Records.**
2. **Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the title that would be disclosed by an accurate and complete land survey of the Land.**
3. **Easements, or claims of easements, not shown by the Public Records.**
4. **Any lien, or right to a lien, for services, labor or material heretofore or hereafter furnished, imposed by law and not shown by the Public Records.**
5. **Taxes or special assessments which are not shown as existing liens by the Public Records.**
6. **We should be furnished a properly executed ALTA statement and, unless the land insured is a condominium unit, a survey if available. Matters disclosed by the above documentation will be shown specifically.**
7. Any defect, lien, encumbrance, adverse claim, or other matter that appears for the first time in the Public Records or is created, attaches, or is disclosed between the Commitment Date and the date on which all of the Schedule B, Part I-Requirements are met.
- C 8. Taxes for the year 2018.

Taxes for the year 2018 are not yet due or payable.

Permanent Tax No.: [05-11-325-002-0000](#)

Note: Taxes for the year 2017 amounting to \$7,913.04 are paid of record.
- G 9. Please be advised that our search did not disclose any open mortgages of record. If you should have knowledge of any outstanding obligation, please contact the Title Department immediately for further review prior to closing.
- A 10. The Company will require the following documents for review prior to the issuance of any title insurance

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**SCHEDULE B, PART II
EXCEPTIONS**
(continued)

predicated upon a conveyance or encumbrance from the entity named below.

Limited Liability Company: 427-429 Duane LLC

- a. A copy of its operating agreement, if any, and any and all amendments, supplements and/or modifications thereto, certified by the appropriate manager or member.
- b. If a domestic Limited Liability Company, a copy of its Articles of Organization and all amendment thereto with the appropriate filing stamps.
- c. If the Limited Liability Company is member-managed a full and complete current list of members certified by the appropriate manager or member.
- d. A current dated certificate of good standing from the proper governmental authority of the state in which the entity was created
- e. If less than all members, or managers, as appropriate, will be executing the closing documents, furnish evidence of the authority of those signing.

The Company reserves the right to add additional items or make further requirements after review of the requested documentation.

- B 11. The Company will require the following documents for review prior to the issuance of any title insurance predicated upon a conveyance or encumbrance from the entity named below.

Limited Liability Company: REVA Development Acquisitions, LLC

- a. A copy of its operating agreement, if any, and any and all amendments, supplements and/or modifications thereto, certified by the appropriate manager or member.
- b. If a domestic Limited Liability Company, a copy of its Articles of Organization and all amendment thereto with the appropriate filing stamps.
- c. If the Limited Liability Company is member-managed a full and complete current list of members certified by the appropriate manager or member.
- d. A current dated certificate of good standing from the proper governmental authority of the state in which the entity was created
- e. If less than all members, or managers, as appropriate, will be executing the closing documents, furnish evidence of the authority of those signing.

The Company reserves the right to add additional items or make further requirements after review of the requested documentation.

- D 12. Existing unrecorded leases and all rights thereunder of the lessees and of any person or party claiming by,

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**SCHEDULE B, PART II
EXCEPTIONS**
(continued)

through or under the lessees.

- E 13. Municipal Real Estate Transfer Tax Stamps (or proof of exemption) must accompany any conveyance and certain other transfers or property located in Glen Ellyn. Please contact said municipality prior to closing for its specific requirements, which may include the payment of fees, an inspection or other approvals.
- H 14. The land lies within the boundaries of a Special Service Area as disclosed by ordinance recorded as recording No. [R1999-186944](#), and is subject to additional taxes under the terms of said ordinance and subsequent related ordinances.
- J 15. The land lies within the boundaries of a Special Service Area as disclosed by ordinance recorded as recording No. [R2009-193864](#), and is subject to additional taxes under the terms of said ordinance and subsequent related ordinances.
- K 16. Hazardous Substances Certificate and Indemnity Agreement recorded March 16, 2005 as Document Number [R2005-052890](#).
- I 17. Party sidewalk located on the Land and the property to the east and adjoining as disclosed by Morris Engineering, Inc's December 18, 2018 Survey, Job No. 18-12-0173.
- L 18. Party Driveway located on the Land and the property to the east and adjoining as disclosed by Morris Engineering, Inc's December 18, 2018 Survey, Job No. 18-12-0173.
- F 19. All endorsement requests should be made prior to closing to allow ample time for the company to examine required documentation.

(This note will be waived for policy)

END OF SCHEDULE B, PART II

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COMMITMENT CONDITIONS**1. DEFINITIONS**

- (a) "Knowledge" or "Known": Actual or imputed knowledge, but not constructive notice imparted by the Public Records.
- (b) "Land": The land described in Schedule A and affixed improvements that by law constitute real property. The term "Land" does not include any property beyond the lines of the area described in Schedule A, nor any right, title, interest, estate, or easement in abutting streets, roads, avenues, alleys, lanes, ways, or waterways, but this does not modify or limit the extent that a right of access to and from the Land is to be insured by the Policy.
- (c) "Mortgage": A mortgage, deed of trust, or other security instrument, including one evidenced by electronic means authorized by law.
- (d) "Policy": Each contract of title insurance, in a form adopted by the American Land Title Association, issued or to be issued by the Company pursuant to this Commitment.
- (e) "Proposed Insured": Each person identified in Schedule A as the Proposed Insured of each Policy to be issued pursuant to this Commitment.
- (f) "Proposed Policy Amount": Each dollar amount specified in Schedule A as the Proposed Policy Amount of each Policy to be issued pursuant to this Commitment.
- (g) "Public Records": Records established under state statutes at the Commitment Date for the purpose of imparting constructive notice of matters relating to real property to purchasers for value and without Knowledge.
- (h) "Title": The estate or interest described in Schedule A.

2. If all of the Schedule B, Part I-Requirements have not been met within the time period specified in the Commitment to Issue Policy, this Commitment terminates and the Company's liability and obligation end.

3. The Company's liability and obligation is limited by and this Commitment is not valid without:

- (a) the Notice;
- (b) the Commitment to Issue Policy;
- (c) the Commitment Conditions;
- (d) Schedule A;
- (e) Schedule B, Part I-Requirements;
- (f) Schedule B, Part II-Exceptions; and
- (g) a counter-signature by the Company or its issuing agent that may be in electronic form.

4. COMPANY'S RIGHT TO AMEND

The Company may amend this Commitment at any time. If the Company amends this Commitment to add a defect, lien, encumbrance, adverse claim, or other matter recorded in the Public Records prior to the Commitment Date, any liability of the Company is limited by Commitment Condition 5. The Company shall not be liable for any other amendment to this Commitment.

5. LIMITATIONS OF LIABILITY

- (a) The Company's liability under Commitment Condition 4 is limited to the Proposed Insured's actual expense incurred in the interval between the Company's delivery to the Proposed Insured of the Commitment and the delivery of the amended Commitment, resulting from the Proposed Insured's good faith reliance to:
 - (i) comply with the Schedule B, Part I-Requirements;
 - (ii) eliminate, with the Company's written consent, any Schedule B, Part II-Exceptions; or
 - (iii) acquire the Title or create the Mortgage covered by this Commitment.
- (b) The Company shall not be liable under Commitment Condition 5(a) if the Proposed Insured requested the amendment or had Knowledge of the matter and did not notify the Company about it in writing.
- (c) The Company will only have liability under Commitment Condition 4 if the Proposed Insured would not have incurred the expense had the Commitment included the added matter when the Commitment was first delivered to the Proposed Insured.
- (d) The Company's liability shall not exceed the lesser of the Proposed Insured's actual expense incurred in good faith and described in Commitment Conditions 5(a)(i) through 5(a)(iii) or the Proposed Policy Amount.
- (e) The Company shall not be liable for the content of the Transaction Identification Data, if any.
- (f) In no event shall the Company be obligated to issue the Policy referred to in this Commitment unless all of the Schedule B, Part I-Requirements have been met to the satisfaction of the Company.
- (g) In any event, the Company's liability is limited by the terms and provisions of the Policy.

6. LIABILITY OF THE COMPANY MUST BE BASED ON THIS COMMITMENT

- (a) Only a Proposed Insured identified in Schedule A, and no other person, may make a claim under this Commitment.
- (b) Any claim must be based in contract and must be restricted solely to the terms and provisions of this Commitment.

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(continued)

- (c) Until the Policy is issued, this Commitment, as last revised, is the exclusive and entire agreement between the parties with respect to the subject matter of this Commitment and supersedes all prior commitment negotiations, representations, and proposals of any kind, whether written or oral, express or implied, relating to the subject matter of this Commitment.
- (d) The deletion or modification of any Schedule B, Part II-Exception does not constitute an agreement or obligation to provide coverage beyond the terms and provisions of this Commitment or the Policy.
- (e) Any amendment or endorsement to this Commitment must be in writing and authenticated by a person authorized by the Company.
- (f) When the Policy is issued, all liability and obligation under this Commitment will end and the Company's only liability will be under the Policy.

7. IF THIS COMMITMENT HAS BEEN ISSUED BY AN ISSUING AGENT

The issuing agent is the Company's agent only for the limited purpose of issuing title insurance commitments and policies. The issuing agent is not the Company's agent for the purpose of providing closing or settlement services.

8. PRO-FORMA POLICY

The Company may provide, at the request of a Proposed Insured, a pro-forma policy illustrating the coverage that the Company may provide. A pro-forma policy neither reflects the status of Title at the time that the pro-forma policy is delivered to a Proposed Insured, nor is it a commitment to insure.

9. ARBITRATION

The Policy contains an arbitration clause. All arbitrable matters when the Proposed Policy Amount is Two Million And No/100 Dollars (\$2,000,000.00) or less shall be arbitrated at the option of either the Company or the Proposed Insured as the exclusive remedy of the parties. A Proposed Insured may review a copy of the arbitration rules at <http://www.alta.org/arbitration>.

END OF CONDITIONS**1031 EXCHANGE SERVICES**

If your transaction involves a tax deferred exchange, we offer this service through our 1031 division, IPX1031. As the nation's largest 1031 company, IPX1031 offers guidance and expertise. Security for Exchange funds includes segregated bank accounts and a 100 million dollar Fidelity Bond. Fidelity National Title Group also provides a 50 million dollar Performance Guaranty for each Exchange. For additional information, or to set-up an Exchange, please call Scott Nathanson at (312)223-2178 or Anna Barsky at (312)223-2169.

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ALTA COMMITMENT FOR TITLE INSURANCE

Issued By:

**CHICAGO TITLE
INSURANCE COMPANY**

Commitment Number:

CCHI1803522LD**NOTICE**

IMPORTANT - READ CAREFULLY: THIS COMMITMENT IS AN OFFER TO ISSUE ONE OR MORE TITLE INSURANCE POLICIES. ALL CLAIMS OR REMEDIES SOUGHT AGAINST THE COMPANY INVOLVING THE CONTENT OF THIS COMMITMENT OR THE POLICY MUST BE BASED SOLELY IN CONTRACT.

THIS COMMITMENT IS NOT AN ABSTRACT OF TITLE, REPORT OF THE CONDITION OF TITLE, LEGAL OPINION, OPINION OF TITLE, OR OTHER REPRESENTATION OF THE STATUS OF TITLE. THE PROCEDURES USED BY THE COMPANY TO DETERMINE INSURABILITY OF THE TITLE, INCLUDING ANY SEARCH AND EXAMINATION, ARE PROPRIETARY TO THE COMPANY, WERE PERFORMED SOLELY FOR THE BENEFIT OF THE COMPANY, AND CREATE NO EXTRACONTRACTUAL LIABILITY TO ANY PERSON, INCLUDING A PROPOSED INSURED.

THE COMPANY'S OBLIGATION UNDER THIS COMMITMENT IS TO ISSUE A POLICY TO A PROPOSED INSURED IDENTIFIED IN SCHEDULE A IN ACCORDANCE WITH THE TERMS AND PROVISIONS OF THIS COMMITMENT. THE COMPANY HAS NO LIABILITY OR OBLIGATION INVOLVING THE CONTENT OF THIS COMMITMENT TO ANY OTHER PERSON.

COMMITMENT TO ISSUE POLICY

Subject to the Notice; Schedule B, Part I-Requirements; Schedule B, Part II-Exceptions; and the Commitment Conditions, Chicago Title Insurance Company, a Florida corporation (the "Company"), commits to issue the Policy according to the terms and provisions of this Commitment. This Commitment is effective as of the Commitment Date shown in Schedule A for each Policy described in Schedule A, only when the Company has entered in Schedule A both the specified dollar amount as the Proposed Policy Amount and the name of the Proposed Insured.

If all of the Schedule B, Part I-Requirements have not been met within one hundred eighty (180) days after the Commitment Date, this Commitment terminates and the Company's liability and obligation end.

Chicago Title Insurance Company

By:

President

Attest:

Secretary

Countersigned By:

Authorized Officer or Agent



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ALTA Commitment for Title Insurance (08/01/2016)

Page 1

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IL-CT-FA83-02100.231406-SPS-1-18-CCHI1803522LD

CHICAGO TITLE INSURANCE COMPANY**COMMITMENT NO. CCHI1803522LD****Transaction Identification Data for reference only:**

ORIGINATING OFFICE:	FOR SETTLEMENT INQUIRIES, CONTACT:
Chicago Title Insurance Company 10 South LaSalle Street, Suite 3100 Chicago, IL 60603 Main Phone: (312)223-4627 Email: chicagocommercial@ctt.com	Chicago Title and Trust Company 10 South LaSalle Street, Suite 3100 Chicago, IL 60603 Main Phone: (312)223-4627 Main Fax: (312)223-3018

Order Number: CCHI1803522LD**Property Ref.:** 431-433 Duane Street, Glen Ellyn, IL 60137**SCHEDULE A**

1. Commitment Date: November 28, 2018
2. Policy to be issued:
 - (a) ALTA Owner's Policy 2006
Proposed Insured: REVA Development Acquisitions, LLC
Proposed Policy Amount: \$300,000.00
 - (b) ALTA Loan Policy 2006
Proposed Insured: Lender with a contractual obligation under a loan agreement with the Proposed Insured for an Owner's Policy
Proposed Policy Amount: \$10,000.00
3. The estate or interest in the Land described or referred to in this Commitment is:
Fee Simple
4. The Title is, at the Commitment Date, vested in:
Beja Emanuel, L.L.C., subject to disposition of the requirement noted at exception reference letter G
5. The Land is described as follows:
SEE EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF

END OF SCHEDULE A

This page is only a part of a 2016 ALTA® Commitment for Title Insurance issued by Chicago Title Insurance Company. This Commitment is not valid without the Notice; the Commitment to Issue Policy; the Commitment Conditions; Schedule A; Schedule B, Part I-Requirements; Schedule B, Part II-Exceptions; and a counter-signature by the Company or its issuing agent that may be in electronic form.

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ALTA Commitment for Title Insurance (08/01/2016)



EXHIBIT "A"

Legal Description

Lots 5 and 6 in Block 3 in Glenwood, being C.A. Phillips Subdivision of part of Section 10 and part of Section 11, Township 39 North, Range 10, East of the Third Principal Meridian, according to the Plat thereof recorded August 22, 1873 as Document 16688, in DuPage County, Illinois.

Attachment: 2. Proof of Ownership - All Properties (4023 : Avere on Duane - PUD, SUP, ZMA, SV)

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SCHEDULE B, PART I REQUIREMENTS

All of the following Requirements must be met:

1. The Proposed Insured must notify the Company in writing of the name of any party not referred to in this Commitment who will obtain an interest in the Land or who will make a loan on the Land. The Company may then make additional Requirements or Exceptions.
2. Pay the agreed amount for the estate or interest to be insured.
3. Pay the premiums, fees, and charges for the Policy to the Company.
4. Documents satisfactory to the Company that convey the Title or create the Mortgage to be insured, or both, must be properly authorized, executed, delivered, and recorded in the Public Records.
5. Notice: Please be aware that due to the conflict between federal and state laws concerning the cultivation, distribution, manufacture or sale of marijuana, the Company is not able to close or insure any transaction involving Land that is associated with these activities.
6. Be advised that the "good funds" of the title insurance act (215 ILCS 155/26) became effective 1-1-2010. This act places limitations upon the settlement agent's ability to accept certain types of deposits into escrow. Please contact your local Chicago Title office regarding the application of this new law to your transaction.
7. Effective June 1, 2009, pursuant to Public Act 95-988, satisfactory evidence of identification must be presented for the notarization of any and all documents notarized by an Illinois notary public. Satisfactory identification documents are documents that are valid at the time of the notarial act; are issued by a state or federal government agency; bear the photographic image of the individual's face; and bear the individual's signature.
8. **The Proposed Policy Amount(s) must be increased to the full value of the estate or interest being insured, and any additional premium must be paid at that time. An Owner's Policy should reflect the purchase price or full value of the Land. A Loan Policy should reflect the loan amount or value of the property as collateral. Proposed Policy Amount(s) will be revised and premiums charged consistent therewith when the final amounts are approved.**

END OF SCHEDULE B, PART I

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SCHEDULE B, PART II EXCEPTIONS

THIS COMMITMENT DOES NOT REPUBLISH ANY COVENANT, CONDITION, RESTRICTION, OR LIMITATION CONTAINED IN ANY DOCUMENT REFERRED TO IN THIS COMMITMENT TO THE EXTENT THAT THE SPECIFIC COVENANT, CONDITION, RESTRICTION, OR LIMITATION VIOLATES STATE OR FEDERAL LAW BASED ON RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, GENDER IDENTITY, HANDICAP, FAMILIAL STATUS, OR NATIONAL ORIGIN.

The Policy will not insure against loss or damage resulting from the terms and provisions of any lease or easement identified in Schedule A, and will include the following Exceptions unless cleared to the satisfaction of the Company:

General Exceptions

1. **Rights or claims of parties in possession not shown by Public Records.**
2. **Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the title that would be disclosed by an accurate and complete land survey of the Land.**
3. **Easements, or claims of easements, not shown by the Public Records.**
4. **Any lien, or right to a lien, for services, labor or material heretofore or hereafter furnished, imposed by law and not shown by the Public Records.**
5. **Taxes or special assessments which are not shown as existing liens by the Public Records.**
6. **We should be furnished a properly executed ALTA statement and, unless the land insured is a condominium unit, a survey if available. Matters disclosed by the above documentation will be shown specifically**
7. Any defect, lien, encumbrance, adverse claim, or other matter that appears for the first time in the Public Records or is created, attaches, or is disclosed between the Commitment Date and the date on which all of the Schedule B, Part I—Requirements are met.
- C 8. Taxes for the year 2018.

Taxes for the year 2018 are not yet due or payable.

Permanent tax no. 05-11-325-003.

Taxes for the year 2017 in the amount of \$7,912.25 are marked paid.
- H 9. Mortgage dated February 18, 1997 and recorded March 4, 1997 as document R97-030334 made by Richard Sieple and Betty B. Sieple to Oxford Bank & Trust to secure a note in the amount of \$200,000.00.

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SCHEDULE B, PART II EXCEPTIONS

(continued)

This exception will be waived with either a recordable release from the mortgagee or trustee, a Hold Harmless Letter from an acceptable title company, or our payout pursuant to a current payoff letter from the mortgagee or current note holder. In addition, if the mortgage or trust deed is held by a non-institutional lender, the original note and mortgage or trust deed also must be submitted for retention by the Company.

- I 10. Assignment of Rents recorded March 4, 1997 as document R97-030335 made by Richard Sieple and Betty B. Sieple to Oxford Bank & Trust.

- J 11. Note: Our searches appear to indicate that the subject land is not presently encumbered by a recorded mortgage executed by the party in title herein. This must be substantiated by a sworn statement from the party in title, and this commitment is subject to such further exceptions as may then be deemed necessary.

- A 12. Existing unrecorded leases and all rights thereunder of the lessees and of any person or party claiming by, through or under the lessees.

- B 13. The Company should be furnished a statement that there is no property manager employed to manage the Land, or, in the alternative, a final lien waiver from any such property manager.

- D 14. Municipal Real Estate Transfer Tax Stamps (or proof of exemption) must accompany any conveyance and certain other transfers or property located in the Village of Glen Ellyn. Please contact said municipality prior to closing for its specific requirements, which may include the payment of fees, an inspection or other approvals.

- E 15. The Company will require the following documents for review prior to the issuance of any title insurance predicated upon a conveyance or encumbrance from the entity named below.

 Limited Liability Company: Beja Emanuel, L.L.C.

 a. A copy of its operating agreement, if any, and any and all amendments, supplements and/or modifications thereto, certified by the appropriate manager or member.

 b. If a domestic Limited Liability Company, a copy of its Articles of Organization and all amendment thereto with the appropriate filing stamps.

 c. If the Limited Liability Company is member-managed a full and complete current list of members certified by the appropriate manager or member.

 d. A current dated certificate of good standing from the proper governmental authority of the state in which the entity was created

 e. If less than all members, or managers, as appropriate, will be executing the closing documents,

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SCHEDULE B, PART II EXCEPTIONS (continued)

furnish evidence of the authority of those signing.

The Company reserves the right to add additional items or make further requirements after review of the requested documentation.

- F 16. The Company will require the following documents for review prior to the issuance of any title insurance predicated upon a conveyance or encumbrance from the entity named below.

Limited Liability Company: REVA Development Acquisitions, LLC

- a. A copy of its operating agreement, if any, and any and all amendments, supplements and/or modifications thereto, certified by the appropriate manager or member.
- b. If a domestic Limited Liability Company, a copy of its Articles of Organization and all amendment thereto with the appropriate filing stamps.
- c. If the Limited Liability Company is member-managed a full and complete current list of members certified by the appropriate manager or member.
- d. A current dated certificate of good standing from the proper governmental authority of the state in which the entity was created
- e. If less than all members, or managers, as appropriate, will be executing the closing documents, furnish evidence of the authority of those signing.

The Company reserves the right to add additional items or make further requirements after review of the requested documentation.

Affects the proposed buyer herein.

- G 17. Our title finding is for convenience only and is based on the assumption the company will be furnished with satisfactory documentation supporting the validity of the quit claim deed from Roland J. Emanuel, Todd R. Beja and Jack R. Field to Beja Emanuel, L.L.C. recorded March 24, 2010 as document R2010-038757 and is subject to our receipt and review of the documentations requested herein.

- K 18. The Land lies within the boundaries of a Special Service Area as disclosed by ordinance recorded as document R96-207128 and re-recorded as document R97-014858 and ordinance recorded December 27, 1996 as document R96-207173 and ordinance recorded December 21, 1999 as document R1999-261538 and ordinance recorded February 11, 2000 as document R2000-021154, and is subject to additional taxes under the terms of said ordinance and subsequent relating ordinances.

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**SCHEDULE B, PART II
EXCEPTIONS**
(continued)

- L 19. The land lies within the boundaries of a special service area as disclosed by ordinance recorded as document R2009-193864, and is subject to additional taxes under the terms of said ordinance and subsequent related ordinances.
- Note: a full payment letter must be presented in conjunction with any deed to be recorded.
- N 20. All endorsement requests should be made prior to closing to allow ample time for the company to examine required documentation.
- (This note will be waived for policy).
- M 21. A. Note for additional information: the DuPage County Recorder requires that any documents presented for recording contain the following information:
- The name and address of the party who prepared the document;
- The name and address of the party to whom the document should be mailed after recording;
- All permanent real estate tax index numbers of any property legally described in the document;
- The address of any property legally described in the document;
- All deeds should contain the address of the grantee and should also note the name and address of the party to whom the tax bills should be sent.
- Any deeds conveying unsubdivided land, or, portions of subdivided and, may need to be accompanied by a properly executed "plat act affidavit."
- In addition, please note that the certain municipalities located in the County have enacted transfer tax ordinances. To record a conveyance of land located in these municipalities, the requirements of the transfer tax ordinances must be met. A conveyance of property in these cities may need to have the appropriate transfer tax stamps affixed before it can be recorded.
- This exception will not appear on the policy when issued.

END OF SCHEDULE B, PART II

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ALTA Commitment for Title Insurance (08/01/2016)



COMMITMENT CONDITIONS**1. DEFINITIONS**

- (a) "Knowledge" or "Known": Actual or imputed knowledge, but not constructive notice imparted by the Public Records.
- (b) "Land": The land described in Schedule A and affixed improvements that by law constitute real property. The term "Land" does not include any property beyond the lines of the area described in Schedule A, nor any right, title, interest, estate, or easement in abutting streets, roads, avenues, alleys, lanes, ways, or waterways, but this does not modify or limit the extent that a right of access to and from the Land is to be insured by the Policy.
- (c) "Mortgage": A mortgage, deed of trust, or other security instrument, including one evidenced by electronic means authorized by law.
- (d) "Policy": Each contract of title insurance, in a form adopted by the American Land Title Association, issued or to be issued by the Company pursuant to this Commitment.
- (e) "Proposed Insured": Each person identified in Schedule A as the Proposed Insured of each Policy to be issued pursuant to this Commitment.
- (f) "Proposed Policy Amount": Each dollar amount specified in Schedule A as the Proposed Policy Amount of each Policy to be issued pursuant to this Commitment.
- (g) "Public Records": Records established under state statutes at the Commitment Date for the purpose of imparting constructive notice of matters relating to real property to purchasers for value and without Knowledge.
- (h) "Title": The estate or interest described in Schedule A.

2. If all of the Schedule B, Part I-Requirements have not been met within the time period specified in the Commitment to Issue Policy, this Commitment terminates and the Company's liability and obligation end.

3. The Company's liability and obligation is limited by and this Commitment is not valid without:

- (a) the Notice;
- (b) the Commitment to Issue Policy;
- (c) the Commitment Conditions;
- (d) Schedule A;
- (e) Schedule B, Part I-Requirements;
- (f) Schedule B, Part II-Exceptions; and
- (g) a counter-signature by the Company or its issuing agent that may be in electronic form.

4. COMPANY'S RIGHT TO AMEND

The Company may amend this Commitment at any time. If the Company amends this Commitment to add a defect, lien, encumbrance, adverse claim, or other matter recorded in the Public Records prior to the Commitment Date, any liability of the Company is limited by Commitment Condition 5. The Company shall not be liable for any other amendment to this Commitment.

5. LIMITATIONS OF LIABILITY

- (a) The Company's liability under Commitment Condition 4 is limited to the Proposed Insured's actual expense incurred in the interval between the Company's delivery to the Proposed Insured of the Commitment and the delivery of the amended Commitment, resulting from the Proposed Insured's good faith reliance to:
 - (i) comply with the Schedule B, Part I-Requirements;
 - (ii) eliminate, with the Company's written consent, any Schedule B, Part II-Exceptions; or
 - (iii) acquire the Title or create the Mortgage covered by this Commitment.
- (b) The Company shall not be liable under Commitment Condition 5(a) if the Proposed Insured requested the amendment or had Knowledge of the matter and did not notify the Company about it in writing.
- (c) The Company will only have liability under Commitment Condition 4 if the Proposed Insured would not have incurred the expense had the Commitment included the added matter when the Commitment was first delivered to the Proposed Insured.
- (d) The Company's liability shall not exceed the lesser of the Proposed Insured's actual expense incurred in good faith and described in Commitment Conditions 5(a)(i) through 5(a)(iii) or the Proposed Policy Amount.
- (e) The Company shall not be liable for the content of the Transaction Identification Data, if any.
- (f) In no event shall the Company be obligated to issue the Policy referred to in this Commitment unless all of the Schedule B, Part I-Requirements have been met to the satisfaction of the Company.
- (g) In any event, the Company's liability is limited by the terms and provisions of the Policy.

6. LIABILITY OF THE COMPANY MUST BE BASED ON THIS COMMITMENT

- (a) Only a Proposed Insured identified in Schedule A, and no other person, may make a claim under this Commitment.
- (b) Any claim must be based in contract and must be restricted solely to the terms and provisions of this Commitment.

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(continued)

- (c) Until the Policy is issued, this Commitment, as last revised, is the exclusive and entire agreement between the parties with respect to the subject matter of this Commitment and supersedes all prior commitment negotiations, representations, and proposals of any kind, whether written or oral, express or implied, relating to the subject matter of this Commitment.
- (d) The deletion or modification of any Schedule B, Part II-Exception does not constitute an agreement or obligation to provide coverage beyond the terms and provisions of this Commitment or the Policy.
- (e) Any amendment or endorsement to this Commitment must be in writing and authenticated by a person authorized by the Company.
- (f) When the Policy is issued, all liability and obligation under this Commitment will end and the Company's only liability will be under the Policy.

7. IF THIS COMMITMENT HAS BEEN ISSUED BY AN ISSUING AGENT

The issuing agent is the Company's agent only for the limited purpose of issuing title insurance commitments and policies. The issuing agent is not the Company's agent for the purpose of providing closing or settlement services.

8. PRO-FORMA POLICY

The Company may provide, at the request of a Proposed Insured, a pro-forma policy illustrating the coverage that the Company may provide. A pro-forma policy neither reflects the status of Title at the time that the pro-forma policy is delivered to a Proposed Insured, nor is it a commitment to insure.

9. ARBITRATION

The Policy contains an arbitration clause. All arbitrable matters when the Proposed Policy Amount is Two Million And No/100 Dollars (\$2,000,000.00) or less shall be arbitrated at the option of either the Company or the Proposed Insured as the exclusive remedy of the parties. A Proposed Insured may review a copy of the arbitration rules at <http://www.alta.org/arbitration>.

END OF CONDITIONS**1031 EXCHANGE SERVICES**

If your transaction involves a tax deferred exchange, we offer this service through our 1031 division, IPX1031. As the nation's largest 1031 company, IPX1031 offers guidance and expertise. Security for Exchange funds includes segregated bank accounts and a 100 million dollar Fidelity Bond. Fidelity National Title Group also provides a 50 million dollar Performance Guaranty for each Exchange. For additional information, or to set-up an Exchange, please call Scott Nathanson at (312)223-2178 or Anna Barsky at (312)223-2169.

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ALTA COMMITMENT FOR TITLE INSURANCE

Issued By:

**CHICAGO TITLE
INSURANCE COMPANY**

Commitment Number:

CCHI1803472LD**NOTICE**

IMPORTANT - READ CAREFULLY: THIS COMMITMENT IS AN OFFER TO ISSUE ONE OR MORE TITLE INSURANCE POLICIES. ALL CLAIMS OR REMEDIES SOUGHT AGAINST THE COMPANY INVOLVING THE CONTENT OF THIS COMMITMENT OR THE POLICY MUST BE BASED SOLELY IN CONTRACT.

THIS COMMITMENT IS NOT AN ABSTRACT OF TITLE, REPORT OF THE CONDITION OF TITLE, LEGAL OPINION, OPINION OF TITLE, OR OTHER REPRESENTATION OF THE STATUS OF TITLE. THE PROCEDURES USED BY THE COMPANY TO DETERMINE INSURABILITY OF THE TITLE, INCLUDING ANY SEARCH AND EXAMINATION, ARE PROPRIETARY TO THE COMPANY, WERE PERFORMED SOLELY FOR THE BENEFIT OF THE COMPANY, AND CREATE NO EXTRACONTRACTUAL LIABILITY TO ANY PERSON, INCLUDING A PROPOSED INSURED.

THE COMPANY'S OBLIGATION UNDER THIS COMMITMENT IS TO ISSUE A POLICY TO A PROPOSED INSURED IDENTIFIED IN SCHEDULE A IN ACCORDANCE WITH THE TERMS AND PROVISIONS OF THIS COMMITMENT. THE COMPANY HAS NO LIABILITY OR OBLIGATION INVOLVING THE CONTENT OF THIS COMMITMENT TO ANY OTHER PERSON.

COMMITMENT TO ISSUE POLICY

Subject to the Notice; Schedule B, Part I-Requirements; Schedule B, Part II-Exceptions; and the Commitment Conditions, Chicago Title Insurance Company, a Florida corporation (the "Company"), commits to issue the Policy according to the terms and provisions of this Commitment. This Commitment is effective as of the Commitment Date shown in Schedule A for each Policy described in Schedule A, only when the Company has entered in Schedule A both the specified dollar amount as the Proposed Policy Amount and the name of the Proposed Insured.

If all of the Schedule B, Part I-Requirements have not been met within one hundred eighty (180) days after the Commitment Date, this Commitment terminates and the Company's liability and obligation end.

Chicago Title Insurance Company

By:

President

Attest:

Secretary

Countersigned By:

Authorized Officer or Agent



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ALTA Commitment for Title Insurance (08/01/2016)

Page 1

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CHICAGO TITLE INSURANCE COMPANY**COMMITMENT NO. CCHI1803472LD****Transaction Identification Data for reference only:**

ORIGINATING OFFICE:	FOR SETTLEMENT INQUIRIES, CONTACT:
Chicago Title Insurance Company 10 South LaSalle Street, Suite 3100 Chicago, IL 60603 Main Phone: (312)223-4627 Email: chicagocommercial@ctt.com	Chicago Title and Trust Company 10 South LaSalle Street, Suite 3100 Chicago, IL 60603 Main Phone: (312)223-4627 Main Fax: (312)223-3018

Order Number: CCHI1803472LD**Property Ref.:** 425 Melrose Avenue, Glen Ellyn, IL 60137**SCHEDULE A**

1. Commitment Date: November 30, 2018
2. Policy to be issued:
 - (a) ALTA Owner's Policy 2006
Proposed Insured: REVA Development Acquisitions, LLC
Proposed Policy Amount: \$640,000.00
 - (b) ALTA Loan Policy 2006
Proposed Insured: Lender with a contractual obligation under a loan agreement with the Proposed Insured for an Owner's Policy
Proposed Policy Amount: \$10,000.00
3. The estate or interest in the Land described or referred to in this Commitment is:
Fee Simple
4. The Title is, at the Commitment Date, vested in:
425 Melrose, LLC
5. The Land is described as follows:
LOTS 37, 38, 39, 40 IN BLOCK 3 IN GLENWOOD, BEING C.A. PHILLIPS SUBDIVISION OF PART OF SECTION 10 AND PART OF SECTION 11, TOWNSHIP 39 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED AUGUST 22, 1873 AS DOCUMENT 16688, IN DUPAGE COUNTY, ILLINOIS.

END OF SCHEDULE A

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ALTA Commitment for Title Insurance (08/01/2016)



SCHEDULE B, PART I REQUIREMENTS

All of the following Requirements must be met:

1. The Proposed Insured must notify the Company in writing of the name of any party not referred to in this Commitment who will obtain an interest in the Land or who will make a loan on the Land. The Company may then make additional Requirements or Exceptions.
2. Pay the agreed amount for the estate or interest to be insured.
3. Pay the premiums, fees, and charges for the Policy to the Company.
4. Documents satisfactory to the Company that convey the Title or create the Mortgage to be insured, or both, must be properly authorized, executed, delivered, and recorded in the Public Records.
5. Notice: Please be aware that due to the conflict between federal and state laws concerning the cultivation, distribution, manufacture or sale of marijuana, the Company is not able to close or insure any transaction involving Land that is associated with these activities.
6. Be advised that the "good funds" of the title insurance act (215 ILCS 155/26) became effective 1-1-2010. This act places limitations upon the settlement agent's ability to accept certain types of deposits into escrow. Please contact your local Chicago Title office regarding the application of this new law to your transaction.
7. Effective June 1, 2009, pursuant to Public Act 95-988, satisfactory evidence of identification must be presented for the notarization of any and all documents notarized by an Illinois notary public. Satisfactory identification documents are documents that are valid at the time of the notarial act; are issued by a state or federal government agency; bear the photographic image of the individual's face; and bear the individual's signature.
8. **The Proposed Policy Amount(s) must be increased to the full value of the estate or interest being insured, and any additional premium must be paid at that time. An Owner's Policy should reflect the purchase price or full value of the Land. A Loan Policy should reflect the loan amount or value of the property as collateral. Proposed Policy Amount(s) will be revised and premiums charged consistent therewith when the final amounts are approved.**

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SCHEDULE B, PART II EXCEPTIONS

THIS COMMITMENT DOES NOT REPUBLISH ANY COVENANT, CONDITION, RESTRICTION, OR LIMITATION CONTAINED IN ANY DOCUMENT REFERRED TO IN THIS COMMITMENT TO THE EXTENT THAT THE SPECIFIC COVENANT, CONDITION, RESTRICTION, OR LIMITATION VIOLATES STATE OR FEDERAL LAW BASED ON RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, GENDER IDENTITY, HANDICAP, FAMILIAL STATUS, OR NATIONAL ORIGIN.

The Policy will not insure against loss or damage resulting from the terms and provisions of any lease or easement identified in Schedule A, and will include the following Exceptions unless cleared to the satisfaction of the Company:

General Exceptions

1. **Rights or claims of parties in possession not shown by Public Records.**
2. **Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the title that would be disclosed by an accurate and complete land survey of the Land.**
3. **Easements, or claims of easements, not shown by the Public Records.**
4. **Any lien, or right to a lien, for services, labor or material heretofore or hereafter furnished, imposed by law and not shown by the Public Records.**
5. **Taxes or special assessments which are not shown as existing liens by the Public Records.**
6. **We should be furnished a properly executed ALTA statement and, unless the land insured is a condominium unit, a survey if available. Matters disclosed by the above documentation will be shown specifically**
7. Any defect, lien, encumbrance, adverse claim, or other matter that appears for the first time in the Public Records or is created, attaches, or is disclosed between the Commitment Date and the date on which all of the Schedule B, Part I—Requirements are met.
- C 8. Note for additional information: the County Recorder requires that any documents presented for recording contain the following information:
 - A. The name and address of the party who prepared the document;
 - B. The name and address of the party to whom the document should be mailed after recording;
 - C. All permanent real estate tax index numbers of any property legally described in the document;
 - D. The address of any property legally described in the document;
 - E. All deeds should contain the address of the grantee and should also note the name and address of the party to whom the tax bills should be sent.
 - F. Any deeds conveying unsubdivided land, or, portions of subdivided and, may need to be accompanied by a properly executed "plat act affidavit."

In addition, please note that the certain municipalities located in the County have enacted transfer tax ordinances. To record a conveyance of land located in these municipalities, the requirements of the transfer tax ordinances must be met. A conveyance of property in these cities may need to have the

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**SCHEDULE B, PART II
EXCEPTIONS**
(continued)

appropriate transfer tax stamps affixed before it can be recorded.

This exception will not appear on the policy when issued.

D 9. Taxes for the years 2018 and 2019.

Taxes for the years 2018 and 2019 are not yet due or payable.

Permanent Tax No.: 05-11-325-006

(Affects Lots 39 and 40)

Note: Taxes for the year 2017 are marked exempt on the Collector's books.

H a. The General Taxes as shown below are marked exempt on the Collector's Warrants. Unless satisfactory evidence is submitted to substantiate said exemption, our policy, if and when issued, will be subject to said taxes.

Tax Number: 05-11-325-006

E 10. Taxes for the years 2018 and 2019.

Taxes for the years 2018 and 2019 are not yet due or payable.

Permanent Tax No.: 05-11-325-022

(Affects Lot 38)

Note: Taxes for the year 2017 are marked exempt on the Collector's books.

I a. The General Taxes as shown below are marked exempt on the Collector's Warrants. Unless satisfactory evidence is submitted to substantiate said exemption, our policy, if and when issued, will be subject to said taxes.

Tax Number: 05-11-325-022

F 11. Taxes for the years 2018 and 2019.

Taxes for the years 2018 and 2019 are not yet due or payable.

Permanent Tax No.: 05-11-325-023

(Affects Lot 37)

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ALTA Commitment for Title Insurance (08/01/2016)

**SCHEDULE B, PART II
EXCEPTIONS**
(continued)

Note: Taxes for the year 2017 are marked exempt on the Collector's books.

- J a. The General Taxes as shown below are marked exempt on the Collector's Warrants. Unless satisfactory evidence is submitted to substantiate said exemption, our policy, if and when issued, will be subject to said taxes.

Tax Number: 05-11-325-023

- B 12. Existing unrecorded leases and all rights thereunder of the lessees and of any person or party claiming by, through or under the lessees.

- A 13. The Company should be furnished a statement that there is no property manager employed to manage the Land, or, in the alternative, a final lien waiver from any such property manager.

- G 14. Municipal Real Estate Transfer Tax Stamps (or proof of exemption) must accompany any conveyance and certain other transfers or property located in Glen Ellyn. Please contact said municipality prior to closing for its specific requirements, which may include the payment of fees, an inspection or other approvals.

- K 15. Our title-finding is for convenience only and is based on the assumption The Company will be furnished with satisfactory documentation supporting the validity of the Quit Claim Deed from IRA Services Trust Company CFBO Robb Sackett IRA753452 under Tax ID 26-2627205 - 50% and Roland Emanuel 50% to 425 Melrose, LLC recorded May 23, 2018 as document number R2018-045587 and is subject to our receipt and review of the documentation requested herein.

- L a. The Company will require the following documents for review authorizing the conveyance by the corporation named below:

Name of Corporation: IRA Services Trust Company CFBO Robb Sackett IRA753452 under Tax ID 26-2627205

(a) A Copy of the corporation By-laws and Articles of Incorporation

(b) An original or certified copy of a resolution authorizing the transaction contemplated herein

(c) If the Articles and/or By-laws require approval by a 'parent' organization, a copy of the Articles and By-laws of the parent

(d) A current dated certificate of good standing from the proper governmental authority of the state in which the entity was created

The Company reserves the right to add additional items or make further requirements after review of the requested documentation.

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SCHEDULE B, PART II EXCEPTIONS

(continued)

- M 16. The Company will require the following documents for review prior to the issuance of any title insurance predicated upon a conveyance or encumbrance from the entity named below.

Limited Liability Company: 425 Melrose LLC

- a. A copy of its operating agreement, if any, and any and all amendments, supplements and/or modifications thereto, certified by the appropriate manager or member.
- b. If a domestic Limited Liability Company, a copy of its Articles of Organization and all amendment thereto with the appropriate filing stamps.
- c. If the Limited Liability Company is member-managed a full and complete current list of members certified by the appropriate manager or member.
- d. A current dated certificate of good standing from the proper governmental authority of the state in which the entity was created
- e. If less than all members, or managers, as appropriate, will be executing the closing documents, furnish evidence of the authority of those signing.

The Company reserves the right to add additional items or make further requirements after review of the requested documentation.

- N 17. Note for information (Endorsement Requests):

All endorsement requests should be made prior to closing to allow ample time for the company to examine required documentation.

Note: before any endorsements can be approved, we should be informed as to the land use and as to what type of structure is on the land.

(This note will be waived for policy)

- O 18. Informational Note:

To schedule any closings in the Chicago Commercial Center, please call (312)223-2707.

END OF SCHEDULE B, PART II

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COMMITMENT CONDITIONS**1. DEFINITIONS**

- (a) "Knowledge" or "Known": Actual or imputed knowledge, but not constructive notice imparted by the Public Records.
- (b) "Land": The land described in Schedule A and affixed improvements that by law constitute real property. The term "Land" does not include any property beyond the lines of the area described in Schedule A, nor any right, title, interest, estate, or easement in abutting streets, roads, avenues, alleys, lanes, ways, or waterways, but this does not modify or limit the extent that a right of access to and from the Land is to be insured by the Policy.
- (c) "Mortgage": A mortgage, deed of trust, or other security instrument, including one evidenced by electronic means authorized by law.
- (d) "Policy": Each contract of title insurance, in a form adopted by the American Land Title Association, issued or to be issued by the Company pursuant to this Commitment.
- (e) "Proposed Insured": Each person identified in Schedule A as the Proposed Insured of each Policy to be issued pursuant to this Commitment.
- (f) "Proposed Policy Amount": Each dollar amount specified in Schedule A as the Proposed Policy Amount of each Policy to be issued pursuant to this Commitment.
- (g) "Public Records": Records established under state statutes at the Commitment Date for the purpose of imparting constructive notice of matters relating to real property to purchasers for value and without Knowledge.
- (h) "Title": The estate or interest described in Schedule A.

2. If all of the Schedule B, Part I-Requirements have not been met within the time period specified in the Commitment to Issue Policy, this Commitment terminates and the Company's liability and obligation end.

3. The Company's liability and obligation is limited by and this Commitment is not valid without:

- (a) the Notice;
- (b) the Commitment to Issue Policy;
- (c) the Commitment Conditions;
- (d) Schedule A;
- (e) Schedule B, Part I-Requirements;
- (f) Schedule B, Part II-Exceptions; and
- (g) a counter-signature by the Company or its issuing agent that may be in electronic form.

4. COMPANY'S RIGHT TO AMEND

The Company may amend this Commitment at any time. If the Company amends this Commitment to add a defect, lien, encumbrance, adverse claim, or other matter recorded in the Public Records prior to the Commitment Date, any liability of the Company is limited by Commitment Condition 5. The Company shall not be liable for any other amendment to this Commitment.

5. LIMITATIONS OF LIABILITY

- (a) The Company's liability under Commitment Condition 4 is limited to the Proposed Insured's actual expense incurred in the interval between the Company's delivery to the Proposed Insured of the Commitment and the delivery of the amended Commitment, resulting from the Proposed Insured's good faith reliance to:
 - (i) comply with the Schedule B, Part I-Requirements;
 - (ii) eliminate, with the Company's written consent, any Schedule B, Part II-Exceptions; or
 - (iii) acquire the Title or create the Mortgage covered by this Commitment.
- (b) The Company shall not be liable under Commitment Condition 5(a) if the Proposed Insured requested the amendment or had Knowledge of the matter and did not notify the Company about it in writing.
- (c) The Company will only have liability under Commitment Condition 4 if the Proposed Insured would not have incurred the expense had the Commitment included the added matter when the Commitment was first delivered to the Proposed Insured.
- (d) The Company's liability shall not exceed the lesser of the Proposed Insured's actual expense incurred in good faith and described in Commitment Conditions 5(a)(i) through 5(a)(iii) or the Proposed Policy Amount.
- (e) The Company shall not be liable for the content of the Transaction Identification Data, if any.
- (f) In no event shall the Company be obligated to issue the Policy referred to in this Commitment unless all of the Schedule B, Part I-Requirements have been met to the satisfaction of the Company.
- (g) In any event, the Company's liability is limited by the terms and provisions of the Policy.

6. LIABILITY OF THE COMPANY MUST BE BASED ON THIS COMMITMENT

- (a) Only a Proposed Insured identified in Schedule A, and no other person, may make a claim under this Commitment.
- (b) Any claim must be based in contract and must be restricted solely to the terms and provisions of this Commitment.

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(continued)

- (c) Until the Policy is issued, this Commitment, as last revised, is the exclusive and entire agreement between the parties with respect to the subject matter of this Commitment and supersedes all prior commitment negotiations, representations, and proposals of any kind, whether written or oral, express or implied, relating to the subject matter of this Commitment.
- (d) The deletion or modification of any Schedule B, Part II-Exception does not constitute an agreement or obligation to provide coverage beyond the terms and provisions of this Commitment or the Policy.
- (e) Any amendment or endorsement to this Commitment must be in writing and authenticated by a person authorized by the Company.
- (f) When the Policy is issued, all liability and obligation under this Commitment will end and the Company's only liability will be under the Policy.

7. IF THIS COMMITMENT HAS BEEN ISSUED BY AN ISSUING AGENT

The issuing agent is the Company's agent only for the limited purpose of issuing title insurance commitments and policies. The issuing agent is not the Company's agent for the purpose of providing closing or settlement services.

8. PRO-FORMA POLICY

The Company may provide, at the request of a Proposed Insured, a pro-forma policy illustrating the coverage that the Company may provide. A pro-forma policy neither reflects the status of Title at the time that the pro-forma policy is delivered to a Proposed Insured, nor is it a commitment to insure.

9. ARBITRATION

The Policy contains an arbitration clause. All arbitrable matters when the Proposed Policy Amount is Two Million And No/100 Dollars (\$2,000,000.00) or less shall be arbitrated at the option of either the Company or the Proposed Insured as the exclusive remedy of the parties. A Proposed Insured may review a copy of the arbitration rules at <http://www.alta.org/arbitration>.

END OF CONDITIONS**1031 EXCHANGE SERVICES**

If your transaction involves a tax deferred exchange, we offer this service through our 1031 division, IPX1031. As the nation's largest 1031 company, IPX1031 offers guidance and expertise. Security for Exchange funds includes segregated bank accounts and a 100 million dollar Fidelity Bond. Fidelity National Title Group also provides a 50 million dollar Performance Guaranty for each Exchange. For additional information, or to set-up an Exchange, please call Scott Nathanson at (312)223-2178 or Anna Barsky at (312)223-2169.

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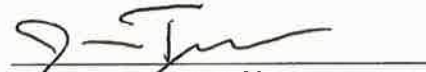
AFFIDAVIT OF AUTHORIZATION

I, **James Tuinega** owner of the property described as

443 Duane St., Glen Ellyn, IL 60137
PIN: 05-11-325-005

verify that **REVA Development Partners**

is duly authorized to apply and represent my interests before the Glen Ellyn Plan Commission, Zoning Board of Appeals, and/or Village Board of Trustees. Owner acknowledges that any notice given applicant is actual notice to owner.


 Owner Signature

Subscribed and sworn to before me this

28th day of December, 2018


 Notary Public



CLEAR PAGE

AFFIDAVIT OF AUTHORIZATION

I, Janet Tuinenga owner of the property described as

443 Duane St., Glen Ellyn, IL 60137
PIN: 05-11-325-005

verify that REVA Development Partners

is duly authorized to apply and represent my interests before the Glen Ellyn Plan Commission, Zoning Board of Appeals, and/or Village Board of Trustees. Owner acknowledges that any notice given applicant is actual notice to owner.

Janet Tuinenga
Owner Signature

Subscribed and sworn to before me this

1st day of MAY, 2019

Deanne Prochnow
Notary Public



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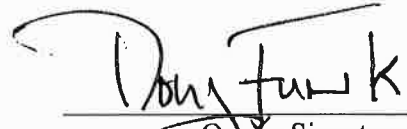
AFFIDAVIT OF AUTHORIZATION

I, Doug Funk owner of the property described as

435 Duane St., Glen Ellyn, IL 60137
 PIN: 05-11-325-004

verify that REVA Development Partners

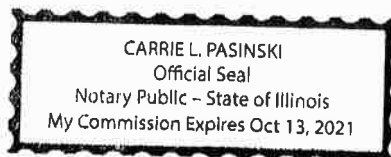
is duly authorized to apply and represent my interests before the Glen Ellyn Plan Commission, Zoning Board of Appeals, and/or Village Board of Trustees. Owner acknowledges that any notice given applicant is actual notice to owner.


 Owner Signature

Subscribed and sworn to before me this

28th day of December, 2018
Carrie L Pasinski

Notary Public



OWNERSHIP BY A CORPORATION

CLEAR PAGE

Date: 4/18/19

Address: **431-433 Duane St, Glen Ellyn, IL**

Legal Description:

Lots 5 and 6 in Block 3 in Glenwood, being C.A. Phillips Subdivision of part of Section 10 and part of Section 11, Township 39 North, Range 10, East of the Third Principal Meridian, according to the Plat thereof recorded August 22, 1873 as Document 16688, in DuPage County, Illinois

LIST ALL SHAREHOLDERS AND OFFICERS/DIRECTORS (AND % OF INTEREST

OWNED IN EXCESS OF 5% OF STOCK)

Name: Zolund Emanuel Address: 433 Duane Street GE % 51

Name: Todd Beja Address: 433 Olive Street GE % 49

Name: _____ Address: _____ %

Name: _____ Address: _____ %

Name: _____ Address: _____ %

Name: _____ Address: _____ %

Name: _____ Address: _____ %

Name: _____ Address: _____ %

Name: _____ Address: _____ %

Name: _____ Address: _____ %

Name: _____ Address: _____ %

Name: _____ Address: _____ %

Name: _____ Address: _____ %

Name: _____ Address: _____ %

Name: _____ Address: _____ %

Name: _____ Address: _____ %

Name: _____ Address: _____ %

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AFFIDAVIT OF AUTHORIZATION

I, **Roland Emanuel** owner of the property described as

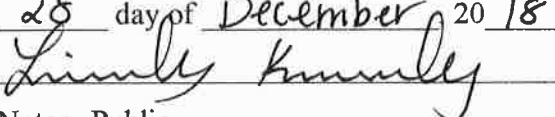
431-433 Duane St., Glen Ellyn, IL 60137
PIN: 05-11-325-003

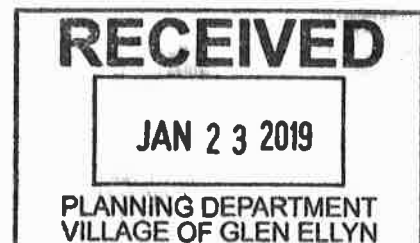
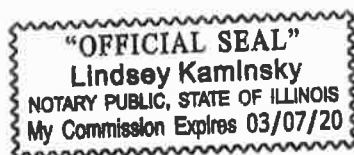
verify that **REVA Development Partners**

is duly authorized to apply and represent my interests before the Glen Ellyn Plan Commission, Zoning Board of Appeals, and/or Village Board of Trustees. Owner acknowledges that any notice given applicant is actual notice to owner.


 Owner Signature

Subscribed and sworn to before me this

28 day of December 20 18

 Notary Public



CLEAR PAGE

AFFIDAVIT OF AUTHORIZATION

I, **Todd Beja** _____ owner of the property described as

431-433 Duane St., Glen Ellyn, IL 60137
PIN: 05-11-325-003

verify that **REVA Development Partners** _____

is duly authorized to apply and represent my interests before the Glen Ellyn Plan Commission, Zoning Board of Appeals, and/or Village Board of Trustees. Owner acknowledges that any notice given applicant is actual notice to owner.



Owner Signature

Subscribed and sworn to before me this

25th day of April, 2019
Lukas Dabros _____

Notary Public



OWNERSHIP BY A CORPORATION

CLEAR PAGE

Date: 1/22/2019

Address: **427-429 Duane St., Glen Ellyn, IL**

Legal Description:

LOTS 3 and 4 in block 3 in Glenwood, being C.A. Phillips Subdivision of part of section 10 and part of section 11, Township 39 North, Range 10, east of the third principal meridian, according to the plat thereof recorded August 22, 1873 as document 16688, in DuPage County, Illinois

LIST ALL SHAREHOLDERS AND OFFICERS/DIRECTORS (AND % OF INTEREST

OWNED IN EXCESS OF 5% OF STOCK)

OWNED IN EXCESS OF 5% OF STOCK)

Name: RYAN SAUL Address: 235 N JEFFERSON ST
BATAVIA IL 60510 % 50

Name: GRANT KIEF Address: 464 PENNSYLVANIA AVE
GLEN ELYN, IL 60137 % 50

Name: _____ Address: _____ % _____

Name: _____ Address: _____ %

Name: _____ Address: _____ % _____

Name: _____ Address: _____ % _____

Name: _____ Address: _____ % _____

Name: _____ Address: _____ % _____

Name: _____ Address: _____ % _____

Name: _____ Address: _____ % _____

Name: _____ Address: _____ % _____

Name: _____ Address: _____ % _____

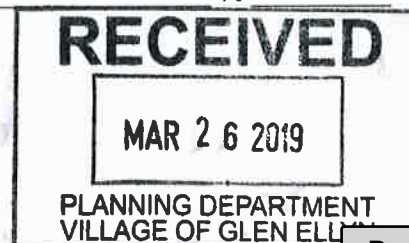
Name: _____ Address: _____ % _____

Name: _____ Address: _____ % _____

Name: _____ Address: _____ % _____

Name: _____ Address: _____ % _____

Name: _____ Address: _____ % _____



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AFFIDAVIT OF AUTHORIZATION

I, 427-429 Duane LLC owner of the property described as

427-429 Duane St., Glen Ellyn, IL 60137
PIN: 05-11-325-002

verify that REVA Development Partners

is duly authorized to apply and represent my interests before the Glen Ellyn Plan Commission, Zoning Board of Appeals, and/or Village Board of Trustees. Owner acknowledges that any notice given applicant is actual notice to owner.

427-429 Duane, LLC
By: Ryan Saul
Ryan Saul, Manager

Subscribed and sworn to before me this

22nd day of January, 2019
Patty Walker

Notary Public



AFFIDAVIT OF AUTHORIZATION

I, Grant Kief, member of 427-429 Duane, LLC owner of the property described as:

427-429 Duane St., Glen Ellyn, IL 60137 (PIN: 05-11-325-002)

verify that REVA Development Partners

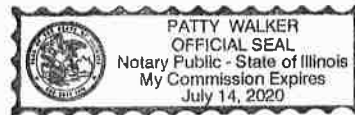
is duly authorized to apply and represent my interests before the Glen Ellyn Plan Commission, Zoning Board of Appeals, and/or Village Board of Trustees. Owner acknowledges that any notice given applicant is actual notice to owner.


OWNER SIGNATURE

Subscribed and sworn to before me this

5th day of June, 2019
Patty Walker

Notary Public



CLEAR PAGE

AFFIDAVIT OF AUTHORIZATION

I, **William White** _____ owner of the property described as

431-435 Melrose Ave., Glen Ellyn, IL 60137
PIN: 05-11-325-001

verify that **REVA Development Partners** _____

is duly authorized to apply and represent my interests before the Glen Ellyn Plan Commission, Zoning Board of Appeals, and/or Village Board of Trustees. Owner acknowledges that any notice given applicant is actual notice to owner.



Owner Signature

Subscribed and sworn to before me this

24th day of April, 2019
Gayle S Drew

Notary Public



CLEAR PAGE

AFFIDAVIT OF AUTHORIZATION

I, **Robb Sackett** _____ owner of the property described as

431-435 Melrose Ave., Glen Ellyn, IL 60137
PIN: 05-11-325-001

verify that **REVA Development Partners** _____

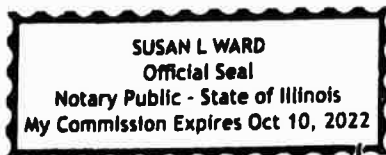
is duly authorized to apply and represent my interests before the Glen Ellyn Plan Commission, Zoning Board of Appeals, and/or Village Board of Trustees. Owner acknowledges that any notice given applicant is actual notice to owner.


 Owner Signature

Subscribed and sworn to before me this

26th day of December, 2018
Susan L Ward

Notary Public



OWNERSHIP BY A CORPORATION

CLEAR PAGE

January 22, 2019

Date: _____

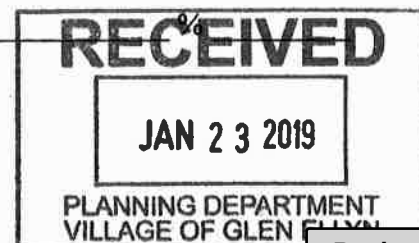
Address: **425 Melrose Ave, Glen Ellyn, IL**

Legal Description:

**LOTS 37, 38, 39, 40 IN BLOCK 3 IN GLENWOOD, BEING C.A. PHILLIPS
SUBDIVISION OF PART OF SECTION 10 AND PART OF SECTION 11, TOWNSHIP
39 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN,
ACCORDING TO THE PLAT THEREOF RECORDED AUGUST 22, 1873 AS
DOCUMENT 16688, IN DUPAGE COUNTY, ILLINOIS.**

**LIST ALL SHAREHOLDERS AND OFFICERS/DIRECTORS (AND % OF INTEREST
OWNED IN EXCESS OF 5% OF STOCK)**

Name: Roland Emanuel	Address: 708 Essex Ct, Glen Ellyn	% 50
Name: Robb Sackett	Address: 977 Waverly Rd., Glen Ellyn	% 50
Name: _____	Address: _____	% _____
Name: _____	Address: _____	% _____
Name: _____	Address: _____	% _____
Name: _____	Address: _____	% _____
Name: _____	Address: _____	% _____
Name: _____	Address: _____	% _____
Name: _____	Address: _____	% _____
Name: _____	Address: _____	% _____
Name: _____	Address: _____	% _____
Name: _____	Address: _____	% _____
Name: _____	Address: _____	% _____
Name: _____	Address: _____	% _____
Name: _____	Address: _____	% _____
Name: _____	Address: _____	% _____
Name: _____	Address: _____	% _____



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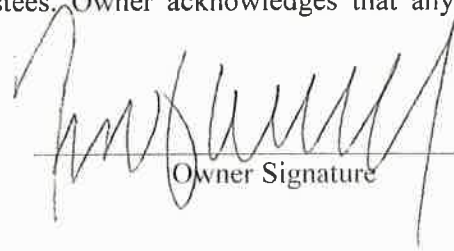
AFFIDAVIT OF AUTHORIZATION

I, **Roland Emanuel** owner of the property described as

425 Melrose Ave., Glen Ellyn, IL 60137
PIN: 05-11-325-006, 05-11-325-022, 05-11-325-023

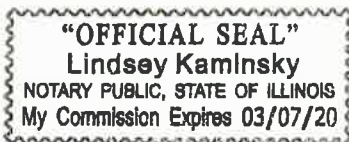
verify that **REVA Development Partners**

is duly authorized to apply and represent my interests before the Glen Ellyn Plan Commission, Zoning Board of Appeals, and/or Village Board of Trustees. Owner acknowledges that any notice given applicant is actual notice to owner.


 Owner Signature

Subscribed and sworn to before me this

2 day of May, 2019
Lindsey Kaminsky
 Notary Public



RECEIVED

JUN 03 2019

VILLAGE OF GLEN ELLYN

CLEAR PAGE

AFFIDAVIT OF AUTHORIZATION

I, **Robb Sackett** owner of the property described as

425 Melrose Ave., Glen Ellyn, IL 60137
 PIN: 05-11-325-006, 05-11-325-022, 05-11-325-023

verify that **REVA Development Partners**

is duly authorized to apply and represent my interests before the Glen Ellyn Plan Commission, Zoning Board of Appeals, and/or Village Board of Trustees. Owner acknowledges that any notice given applicant is actual notice to owner.


 Owner Signature

Subscribed and sworn to before me this

28th day of December, 2018
Susan L Ward

Notary Public



REIMBURSEMENT OF FEES AGREEMENT

CLEAR PAGE

Village of Glen Ellyn Acct: # _____

Initial Deposit Amount: _____

- I. DESCRIPTION OF PROJECT: **AVERE on Duane Multi-family Residential**
- II. OWNER:
- A. Owner of Property: **See attached ownership exhibit**
- B. Owner's Address: _____
- C. Owner's Home Phone Number: _____ Fax: _____
- D. Owner's Work Phone Number: _____
- E. Owner's E-mail: _____
- F. If Owner is a Land Trust or Corporation, the attached disclosures of interest should be filled out.
- III. PERSON MAKING REQUEST (Petitioner):
- A. Name of Petitioner: **REVA Development Acquisitions, LLC**
- B. Petitioner's Address: **116 W. Illinois St, FL7, Chicago, IL 60654**
- C. Petitioner's Home Phone Number: _____
- D. Petitioner's Work Number: **312-320-6712 / 847-417-8915**
- E. Petitioner's E-mail: **warren.james@revadevelopment.com**
- IV. LOCATION OF PROPERTY:
- A. General Location of Property: **Duane St., between Prospect & Melrose**
- B. Acreage of Parcel: **1.18 acres**
- C. Permanent Index Number(s): **see attached ownership exhibit**
- D. Legal Description (Please attach)
- V. REIMBURSEMENT OF FEES:

The Ordinances of the Village require the owners of property, or individuals seeking to utilize property, to receive approval by ordinance or the issuance of a permit to undertake various uses or improvements of property in the Village. These uses can include requests for textual or map changes in the Zoning Ordinance, applications for building permits, requests for zoning relief and other similar requests. The Village has established a fee schedule for the anticipated use of staff time in processing such petitions or applications. In many cases, however the Village cannot reasonably evaluate the validity or compliance of the petition

or application with the Ordinances of the Village without the use of reports from various consultants. In some cases, the application or petition requires among other things, public hearings and associated public notice costs, preparation of minutes or transcripts from the public hearing or meeting, recording costs of Ordinances and the preparation of reports by consultants whose services require the payment of out-of-pocket expenses by the Village. These expenses would not have been incurred but for the petition or application. The Village does not intend to seek to make a profit on its utilization of such consultants, but requires that the applicant, or the person receiving benefit, shall be obligated to reimburse the out-of-pocket expenses incurred by the Village. The Village shall seek to employ consultants who shall charge rates consistent with those paid by private parties who seek similar consulting services. The Village intends, through this Agreement, to cause the payment of out-of-pocket expenses and to require the creation of an escrow fund to guarantee that the petition or application will not result in the citizens of the Village being required to pay for costs incurred at the request of the owner or applicant.

This document shall constitute a contract when an application is made for a license, permit, request for zoning relief or other approval involving the use of real property. Should the Village, in its sole and exclusive discretion, determine that it is necessary or desirable for the Village to obtain professional services, including, but not limited to, attorneys, engineers, planners, architects, surveyors, court reporters, traffic, drainage or other consultants, including full and/or part time site inspection services during the actual construction of any required improvements, and/or to incur costs related to any required notices or recordations, in connection with any application or petition filed by the petitioner then the petitioner and owner shall be jointly and severally liable for the payment of such professional fees and costs, as shall actually be incurred by the Village. The Planning and Development Director is hereby authorized to assign the above described services to the Village staff or to consultants, as the Director deems appropriate and without prior notification to the petitioner.

Any application or petition to be reviewed by the Planning and Development Department or by the Plan Commission shall require the petitioner to establish an escrow account with the Village in an amount determined by the Planning and Development Director to reimburse the Village for all out of pocket costs associated with the request. These out of pocket costs will cover such things as services provided by the Village's consulting engineer, consulting attorney, consulting planner, traffic consultant, wetland consultant, landscape consultant, architectural consultant, appraiser and transcriber, among others, as well as reproduction costs, public hearing notice costs, recording costs, etc. Along with the application the petitioner shall also submit a signed copy of this agreement thereby acknowledging and agreeing to reimburse the Village for all out of pocket costs associated with the application or petition.

This agreement shall be accompanied by an initial deposit in an amount to be determined by the Director of Planning and Development but shall be no less than \$500. The Village will provide an itemized list of Village expenses incurred related to any charge to the escrow account, and the petitioner shall deposit funds to reimburse the Village for those expenses upon notice from the Village that the deposit has dropped below \$300. If the expenses are not reimbursed, then reviews meetings and permits associated with out of pocket costs will cease, and the request will not be moved forward through the review process. At the completion of the review process, and development of the project, if appropriate, any remaining balance from the deposit will be returned to the petitioner, without interest, after all expenses have been paid.

The Village shall deduct the incurred expenditures and costs from the funds deposited. If the remaining deposit balance falls below \$300.00, the petitioner, upon notice by the Village, shall be required to replenish the deposit to its initial amount. The Village shall mail the petitioner regular invoices for the

fees and costs incurred. The petitioner shall replenish the deposit amount within thirty (30) days of issuance of each such invoice directing replenishment of the deposit.

A petitioner who withdraws his or her petition may apply in writing to the Planning and Development Director for a refund of his or her remaining escrow balance. The Planning and Development Director may, at his or her discretion, approve such refund less any actual fees and costs, which the Village has already paid or incurred relative to the application.

Upon the failure of the petitioner or owner to reimburse the Village in accordance with this Agreement, no further action shall be undertaken on the application by the Village President and Board of Trustees, or by any other official or quasi-official individual or body thereunder, including the conduct of any hearings or deliberations, reviews of any plans or applications, the granting of any relief or approvals, issuance of any permits or occupancies, performance of inspections and the execution or recording of any documents, until all such outstanding fees are paid in full and/or the initial deposit is restored to its full amount. Upon any failure to reimburse the Village in accordance with this Section, the Village may in its discretion, apply any or all of the initial deposit to the outstanding balance due.

The remedies available to the Village as set forth hereinabove are non-exclusive and nothing herein shall be deemed to limit or waive the Village's right to seek relief of such fees against any or all responsible parties in a court of competent jurisdiction.

Any remaining balance of any funds deposited pursuant to this Agreement shall be refunded at such time as the completion of Village deliberation on the petition or application, recordation of all necessary documents associated with the petition or application, issuance of a building permit, approval of a final inspection, or issuance of a final certificate of occupancy upon the real property in question whichever occurs later.

BY SIGNING BELOW, THE PETITIONER AND OWNER ACKNOWLEDGE THAT EACH OF THEM HAS READ THE FOREGOING PARAGRAPHS AND EACH OF THEM FULLY UNDERSTANDS AND AGREES TO COMPLY WITH THE TERMS SET FORTH HEREIN. FURTHER, BY SIGNING BELOW, EACH SIGNATORY WARRANTS THAT HE/SHE/IT POSSESSES FULL AUTHORITY TO SO SIGN.

THE PETITIONER AND OWNER AGREE THAT PETITIONER AND OWNER SHALL BE JOINTLY AND SEVERALLY LIABLE FOR PAYMENT OF FEES REFERRED TO IN APPLICABLE SECTIONS OF THE ORDINANCES OF THE VILLAGE OF GLEN ELLYN, AND THE OBLIGATIONS FOR PAYMENT RELATING TO THE FILING OF PETITION OR APPLICATION, AS SET FORTH HEREIN.


 WARREN A. MANNER, MANAGER
 REVA DEVELOPMENT PARTNERS, LLC
 MANAGER OF
 REVA DEVELOPMENT ACQUISITION, LLC

Owner Signature

Date: MAY 2, 2019

Village of Glen Ellyn

By: _____
 Planning and Development Director

Date: _____



Date: June 12, 2019

To: Ms. Staci Springer, AICP
Planning and Development Director
VILLAGE OF GLEN ELLYN

From: Warren James
REVA Development Acquisitions, LLC

Re: AVERE on Duane Residential Redevelopment
List of deviations and explanation for requested relief

REVA Development Partners is pleased to submit plans for AVERE on Duane, a luxury multifamily development to be located on approximately 1.18 acres at 427-443 Duane St. and 425-435 Melrose Ave. In keeping with our proposal, we would like to call your attention to the following proposed deviations followed by explanations and justifications for the requested relief.

Deviations from the Code:

Building Height: Deviation from section 10-4-17-2(E)- The underlying zoning code prescribes a maximum building height of 60 feet (55 ft + 5 ft bonus due to minimum of 75% parking at lowest level below grade) The proposed actual building height is 68.65' as measured from the average existing grade (Highest Ridge Height at +812.5' – Average Existing Grade at +744.1' = 68.65' total height)

Building Face Setback: Deviation from section 10-4-17-2(E)- The underlying zoning code prescribes a step back of 15' at the 45' height level. The building as designed does not comply because there is no step-back. The height to the main roof eave is 51.7' as measured from the average existing grade.

Parking Ratio: Deviation from section 10-4-17-2(G)8- The proposed plan includes 48 underground and 34 surface parking space for a total of 82 spaces or a ratio of 1.7 spaces per unit, 10 spaces less than the code prescribed 92 spaces.

Front and Side Yard Setbacks: Deviation from section 10-4-17-2(D)3(a) & 10-4-17-2(D)3(b) - The proposed plan incorporates varying setbacks less than the prescribed 25' setback from each yard. The request is that the setbacks be approved as requested based on the proposed plan.

Impervious Surface Setback: Deviation from section 10-5-5(C)1- Relief from the underlying zoning is requested to allow the ADA/Fair Housing required access ramp to the main entrance to be closer the property line than is allowed by the underlying code.



Parking Space Width: Deviation from section 10-5-8(I)- The proposed plan includes three parking spaces that are less than the required 9' width.

Justification for Deviations:

The justification for the requested deviations and code clarifications are as follows.

Building Height:

The first attachment illustrates the building roof form as proposed along with a similar rendering that shows that portion of the roof that exceeds the 60' foot height limit as defined by the applicable code. As illustrated in the exhibit, a small percentage of the total roof area exceeds the maximum building height. By its nature, the peak height of a hip roof condition is located toward the center of the building, reducing the apparent height of the building as views from the street. The circumstances that exacerbate the roof height calculations are described in more detail below.

- 1) The existing site conditions include low lying Duane Avenue, which while not technically in a flood prone area, has been known to inundate during periods of intense rainfall. The civil engineer prepared a drainage study which set the elevation of the lowest opening to the foundation (the driveway leading to the underground parking). Then using sound engineering practices in consultation with the Village staff, the engineer established the height of the garage floor which set the overall height of the building relative to the existing grade.
- 2) The Village prescribed measurement of the overall building height is based on the "average existing grade" of the site. It must be noted that the existing buildings are much lower than either the library to the north or the single-family homes to the south. In fact, there are retaining walls along the south property line due to the much higher grade to the south. The "average existing grade" is thus substantially lower than the grade of the existing homes to the south which results in a higher building height than what otherwise would be calculated using the average grade of the proposed site. It should also be noted that because of the terrain rising to the south the first-floor elevation of the proposed apartment building (753.65) is lower than the first-floor elevation of the existing single-family home to the south (754.6).
- 3) Due to the aforementioned topographical issues, the overall building height (as measured per the code) is higher than allowed in the underlying zoning, but the height of the south elevation of the proposed building is substantially lower than the north side overall due to the upward slope of the natural grade. See the attached Building Height Study prepared by BSB that illustrates height relationship to adjacent structures and grades.



- 4) The roof form (hip roof) was selected as the most aesthetically appropriate for the neighborhood, even though the resulting peak elevation is higher than a flat roof. As depicted in the attached Building Roof Form Study, we evaluated a flat roof with parapet which meets the building height requirement of 60' but found it to be less attractive than the hip roof form. The height of parapet walls associated with the flat roof is higher than the eave height of the hip roof thus the building with a flat roof would appear taller as viewed from the adjacent public walkways.

Building Step back

- 5) The underlying code requires a building step back at 45 feet, which would typically be above the fourth floor. The primary eave height of the proposed building is 42 feet above the first-floor elevation which would comply, but for the sloping grade across the site and the fact the datum used is to measure per the code is the "average existing grade." When measured from the average existing grade, the main eave height is 51.2' (See attached excerpt from the architectural plans). Even this measurement exaggerates the apparent height of the eaves since the final grade of the building will be higher than the average existing grade. In addition to the grading issues, that skew the measurement of the eave height, the architectural style of the building places uses varying step backs in the vertical planes so as not to create long uninterrupted horizontal planes. By so doing, the building has a more varied roof form and integrates the balconies into the varying vertical planes of the elevations. While we acknowledge the design intent of the step back, we maintain that the minimal exceedance coupled with the mitigating factor of low average existing grade, sloping terrain and appropriate variation in building façade supports the request for relief.

Parking Ratio

- 6) The underlying code requires 92 parking spaces compared to 82 parking spaces as shown on the plans. The project is considered a Transit-Oriented Development ("TOD") due to its proximity to the Glen Ellyn Metra station, so it doesn't need as many parking spaces as a non-TOD development would. As noted in the KLOA Traffic Impact Study, "The proposed apartment development will provide a sufficient number of parking spaces to accommodate its projected parking demand." The proposed parking supply at 1.71 spaces per unit exceeds the Institute of Transportation Engineers requirements and is higher than the 1.4 spaces per unit at similar sites.

Front and Side Yard Setbacks

- 7) The physical geometry of the building is dictated by the underground parking requirements and thus the relationship of the building to the overall site. With 48 units and 48 underground parking spaces, we believe we are properly positioned to meet market demand. Given the fixed parameters of parking space width, drive aisle width, required exit stairwells and elevator lobby, the foundation dimensions drive the overall building length and depth. With public ROW to the North, East and West, and the precedent of the library to the south, we positioned the building on the site to maximize the separation



from the single family homes to the South and while providing adequate driveway length on the west side to transition the grade to the underground parking area.

Impervious Surface Setback

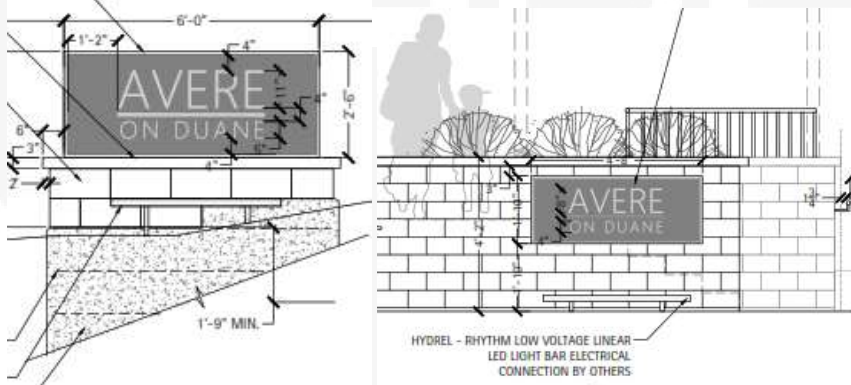
- 8) The position of the main entrance and the need to provide an accessible route create the circumstance requiring relief from the impervious surface setback. With solid fence screening to the south and appropriate drainage the impervious surface will not negatively impact the adjacent home.

Parking Space Width

- 9) The parking lot has been designed to accommodate as many spaces as physically possible. The interior spaces adjacent to the stairwell (spaces 4, 21, and 22) are slightly less than the required 9' width but were widened as much as possible. These spaces will be designated for compact cars only to accommodate the narrower width.

Additional Sign Request

- 10) There is one site identification sign located on Duane near the intersection with Prospect that identifies the name of the building "AVERE on Duane". We are requesting relief from the underlying ordinance to permit the installation of letters on the planter wall adjacent to the main entrance off Melrose that also read "AVERE on Duane." The details of the signs as proposed are on sheet L2.1 from Lakota Group.



We look forward to presenting our plans and providing further explanation or the requested relief before the Plan Commission and Board of Trustees.

Attachments:

Roof Height Illustration
Roof Form Perspectives
Building Height Study
Building Section Study



REVA
DEVELOPMENT
PARTNERS LLC



ROOF CONDITION MEETING
60 FT HEIGHT FROM AVERAGE EXISTING GRADE



PROPOSED ROOF CONDITION

3-D PERSPECTIVES



REVA
DEVELOPMENT
PARTNERS LLC



PARAPET CONDITION

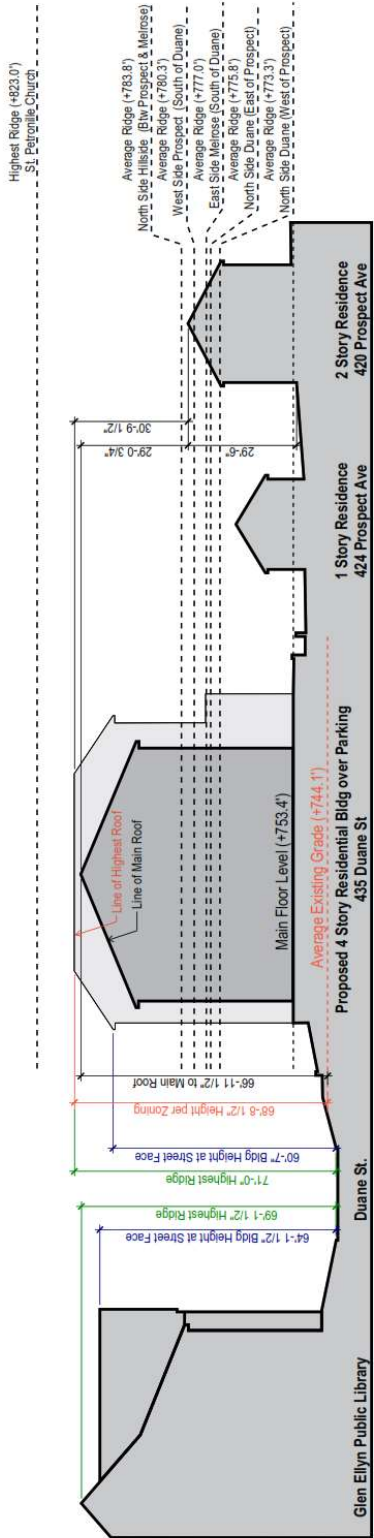
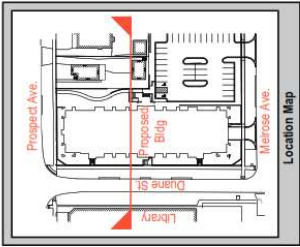


HIP ROOF CONDITION

3-D PERSPECTIVES

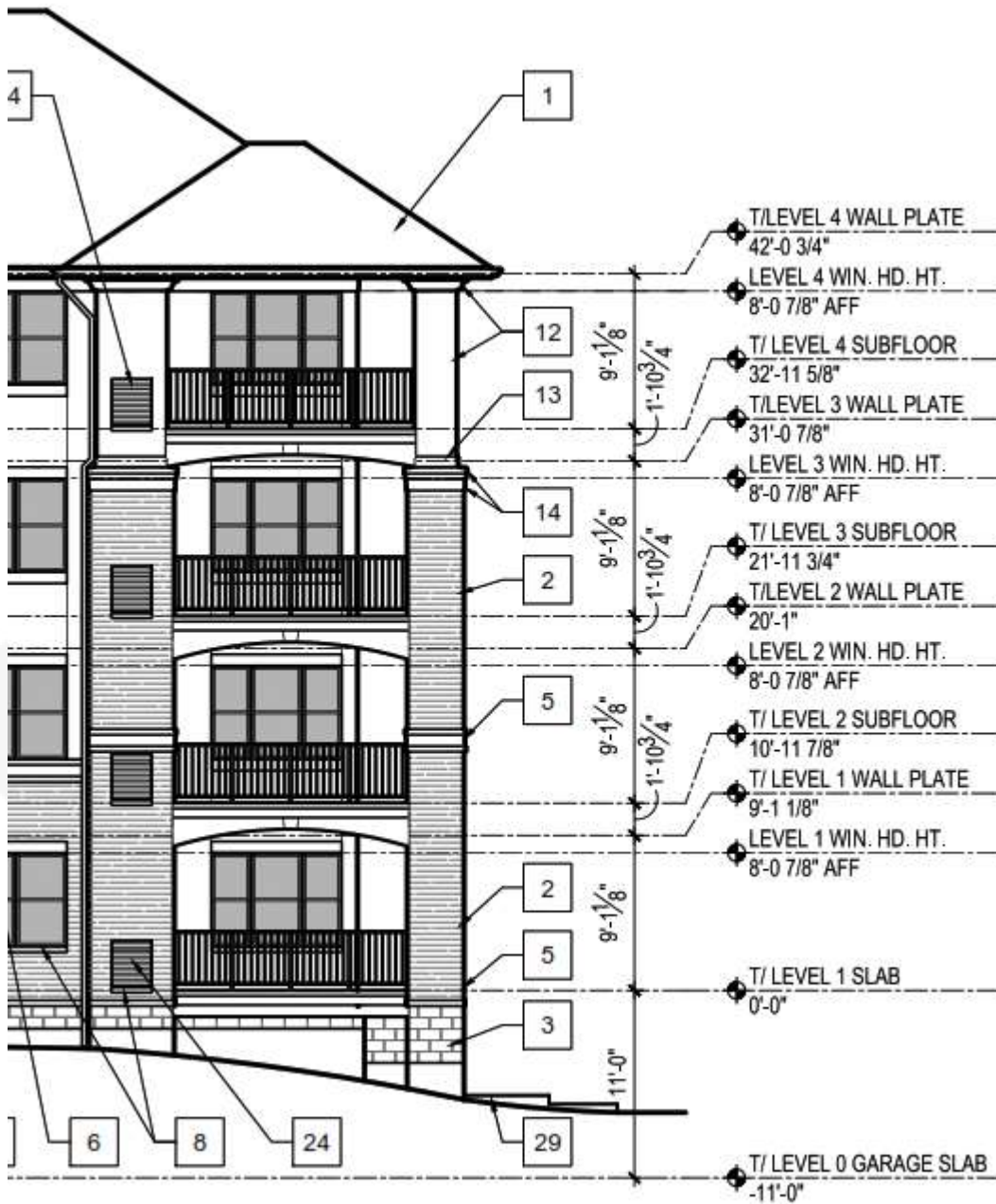


REVA
DEVELOPMENT
PARTNERS LLC



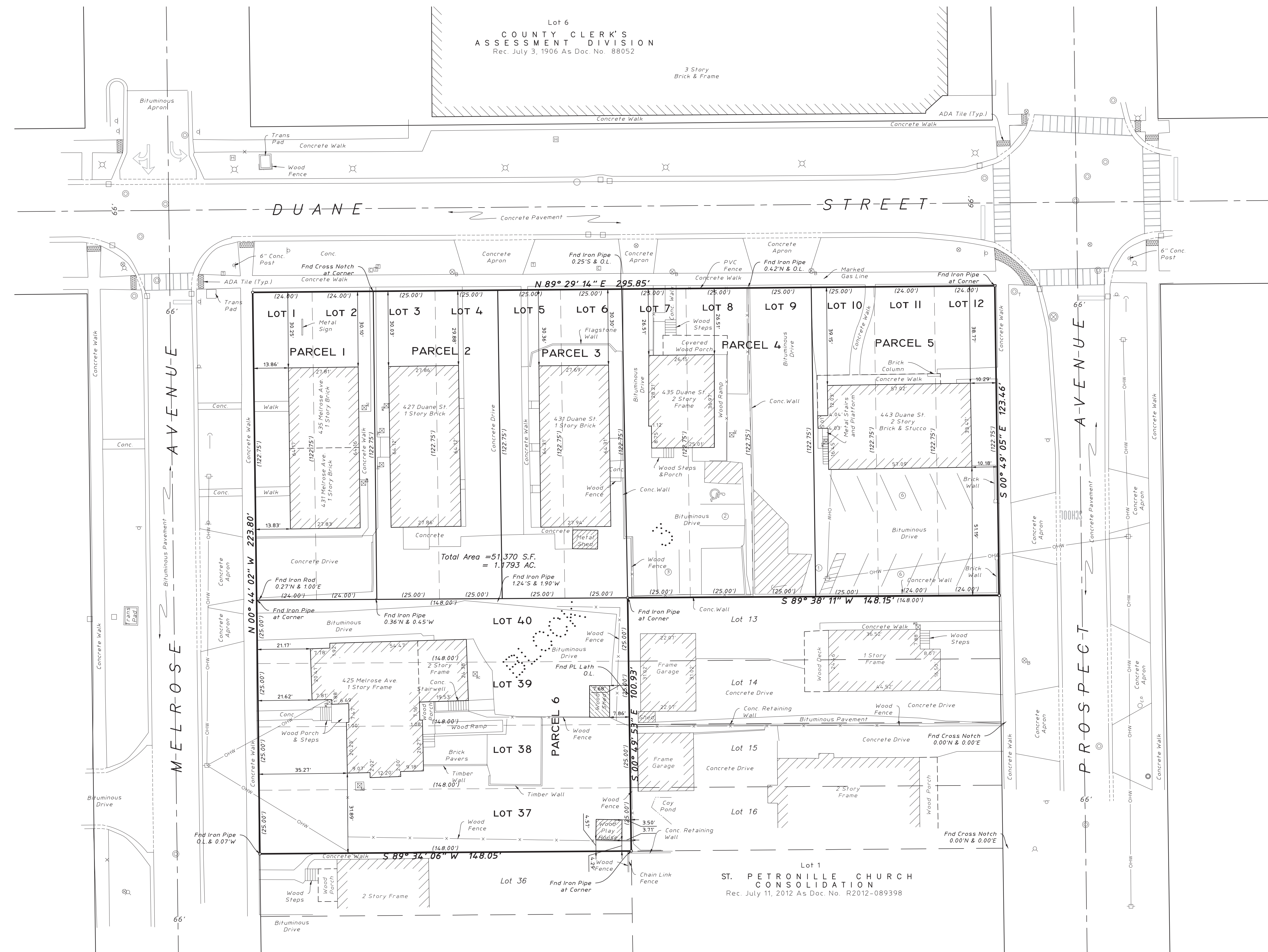
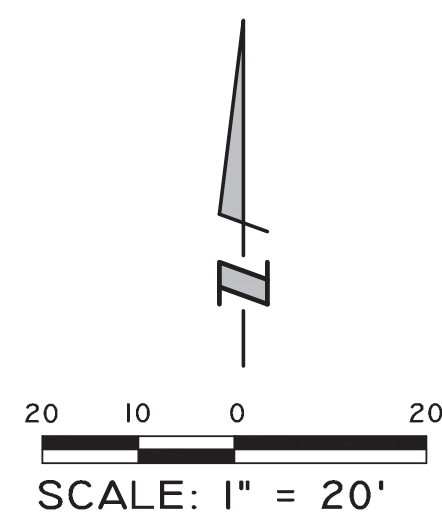


REVA
DEVELOPMENT
PARTNERS LLC



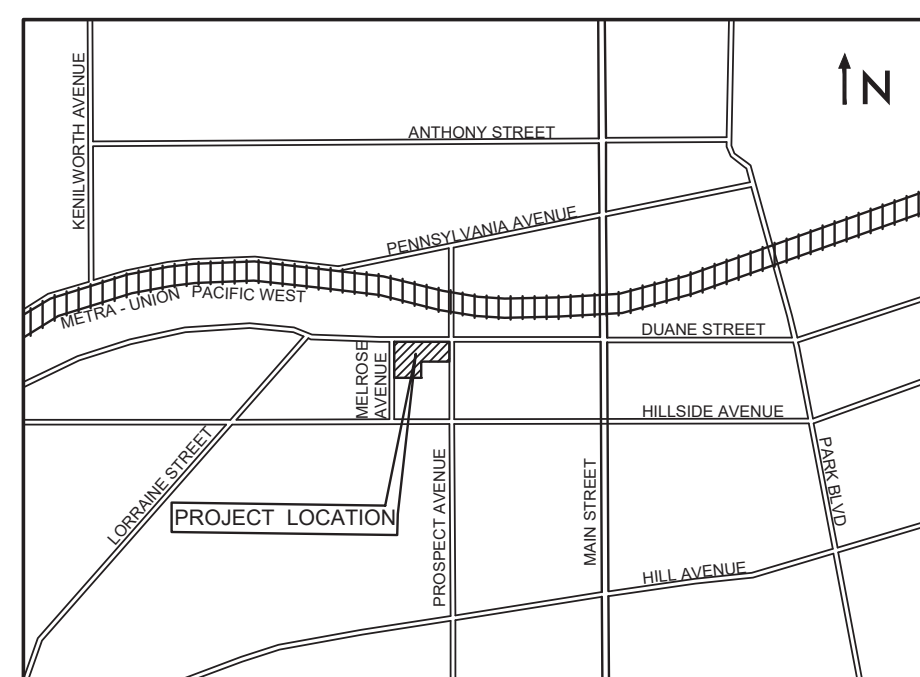
Attachment: 5. List of Deviations and Clarifications (4023 : Avere on Duane - PUD, SUP, ZMA, SV)

ALTA / NSPS LAND TITLE SURVEY



LEGEND

	Manhole		Guy Wire
	Catch Basin		Utility Pole
	Inlet		Telephone Pedestal
	Clean Out		Cable TV Pedestal
	Fire Hydrant		Handicapped Parking Stall
	Valve Vault		Number of Parking Stalls
	Valve Box		Curb & Gutter
	B-Box		Depressed Curb
	Sprinkler		Retaining Wall
	Light Pole		Deciduous Tree
	Hand Hole		Coniferous Tree
	Fence		Record
	Pipe Bollard		On Line
	Sign		
	Overhead Utility Line		
	Electric Meter		

VICINITY MAP
NOT TO SCALEOrdered By: REVA
Order No.: 17189

EXPIRES 11-30-20

PARCEL 1
LEGAL DESCRIPTIONS FOR CHICAGO TITLE INSURANCE COMPANY COMMITMENT FOR TITLE INSURANCE ORDER NO. 1401 CCHI1803470LD

LOTS 1 AND 2 IN BLOCK 3 IN GLENWOOD, BEING C. A. PHILLIPS SUBDIVISION OF PART OF SECTION 10 AND PART OF SECTION 11, TOWNSHIP 39 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF, RECORDED AUGUST 22, 1873 AS DOCUMENT NUMBER 16688, IN DUPAGE COUNTY, ILLINOIS.

PARCEL 2
LEGAL DESCRIPTIONS FOR CHICAGO TITLE INSURANCE COMPANY COMMITMENT FOR TITLE INSURANCE ORDER NO. 18GNW624002WH

LOTS 3 AND 4 IN BLOCK 3 IN GLENWOOD, BEING C. A. PHILLIPS SUBDIVISION OF PART OF SECTION 10 AND PART OF SECTION 11, TOWNSHIP 39 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF, RECORDED AUGUST 22, 1873 AS DOCUMENT NUMBER 16688, IN DUPAGE COUNTY, ILLINOIS.

PARCEL 3
LEGAL DESCRIPTIONS FOR CHICAGO TITLE INSURANCE COMPANY COMMITMENT FOR TITLE INSURANCE ORDER NO. CCHI1803522LD

LOTS 5 AND 6 IN BLOCK 3 IN GLENWOOD, BEING C. A. PHILLIPS SUBDIVISION OF PART OF SECTION 10 AND PART OF SECTION 11, TOWNSHIP 39 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF, RECORDED AUGUST 22, 1873 AS DOCUMENT NUMBER 16688, IN DUPAGE COUNTY, ILLINOIS.

PARCEL 4
LEGAL DESCRIPTIONS FOR CHICAGO TITLE INSURANCE COMPANY COMMITMENT FOR TITLE INSURANCE ORDER NO. 18004233LFE

LOTS 7 AND 8 IN BLOCK 3 IN GLENWOOD, BEING C. A. PHILLIPS SUBDIVISION OF PART OF SECTION 10 AND PART OF SECTION 11, TOWNSHIP 39 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF, RECORDED AUGUST 22, 1873 AS DOCUMENT NUMBER 16688, IN DUPAGE COUNTY, ILLINOIS.

PARCEL 5
LEGAL DESCRIPTIONS FOR CHICAGO TITLE INSURANCE COMPANY COMMITMENT FOR TITLE INSURANCE ORDER NO. 18LK6128237WC

LOTS 9, 10, 11, AND 12 IN BLOCK 3 IN GLENWOOD, BEING C. A. PHILLIPS SUBDIVISION OF PART OF SECTION 10 AND PART OF SECTION 11, TOWNSHIP 39 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF, RECORDED AUGUST 22, 1873 AS DOCUMENT NUMBER 16688, IN DUPAGE COUNTY, ILLINOIS.

PARCEL 6
LEGAL DESCRIPTIONS FOR CHICAGO TITLE INSURANCE COMPANY COMMITMENT FOR TITLE INSURANCE ORDER NO. CCHI1803472LD

LOTS 37, 38, 39, AND 40 IN BLOCK 3 IN GLENWOOD, BEING C. A. PHILLIPS SUBDIVISION OF PART OF SECTION 10 AND PART OF SECTION 11, TOWNSHIP 39 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF, RECORDED AUGUST 22, 1873 AS DOCUMENT NUMBER 16688, IN DUPAGE COUNTY, ILLINOIS.

Surveyor's notes:

- The basis of bearing shown hereon is based on NAD 83(2011) Illinois East Zone 1201 State Plane Coordinates as referenced from Kara Company's RTK Network.
- Underground utilities are not shown hereon.
- Based on information provided on the Flood Insurance Rate Map Community - Panel No. 17043C0503H dated December 16, 2004 produced by the Federal Emergency Management Agency (FEMA) for Cook County, Illinois, the property shown and described hereon is located within Zone X, which is defined by FEMA as "Areas determined to be outside the 0.2% annual chance floodplain".
- In the preparation of this survey reference was made to Chicago Title Insurance Company Commitment for Title Insurance Order No. CCHI1803470LD with an Effective Date of November 27, 2018. (Parcel 1)

With respect to **Schedule B** of said commitment:

Exception I - Special Services Area Ordinance - Doc No. R1996-207128, R1997-014858, R1996-207173, R1999-261538, & R2000-021154 - The subject property is located within the land described therein, however there are no other items to plot.

Exception J - Special Services Area Ordinance - Doc No. R2009-193864 - The subject property is located within the land described therein, however there are no other items to plot.

- In the preparation of this survey reference was made to Chicago Title Insurance Company Commitment for Title Insurance Order No. 18GNW624002WH with an Effective Date of November 29, 2018. (Parcel 2)

With respect to **Schedule B** of said commitment:

Exception I - Special Services Area Ordinance - Doc No. R1999-186944 - The subject property is located within the land described therein, however there are no other items to plot.

Exception J - Special Services Area Ordinance - Doc No. R2009-193864 - The subject property is located within the land described therein, however there are no other items to plot.

Exception K - Hazardous Substances Certificate and Indemnity Agreement - Doc No. R2005-052890 - The subject property is located within the land described therein, however there are no other items to plot.

- In the preparation of this survey reference was made to Chicago Title Insurance Company Commitment for Title Insurance Order No. CCHI1803522LD with an Effective Date of November 28, 2018. (Parcel 3)

With respect to **Schedule B** of said commitment:

Exception K - Special Services Area Ordinance - Doc No. R1996-207128, R1997-014858, R1996-207173, R1999-261538, & R2000-021154 - The subject property is located within the land described therein, however there are no other items to plot.

Exception L - Special Services Area Ordinance - Doc No. R2009-193864 - The subject property is located within the land described therein, however there are no other items to plot.

- In the preparation of this survey reference was made to Chicago Title Insurance Company Commitment for Title Insurance Order No. 18004233LFE with an Effective Date of February 16, 2018. (Parcel 4)

With respect to **Schedule B** of said commitment:

Exception F - Special Services Area Ordinance - Doc No. R2009-193864 - The subject property is located within the land described therein, however there are no other items to plot.

- In the preparation of this survey reference was made to Chicago Title Insurance Company Commitment for Title Insurance Order No. 18LK6128237WC with an Effective Date of February 2, 2018. (Parcel 5)

With respect to **Schedule B** of said commitment:

Exception J - Special Services Area Ordinance - Doc No. R1996-207128 & R1997-014858 - The subject property is located within the land described therein, however there are no other items to plot.

Exception M - Special Services Area Ordinance - Doc No. R2009-193864 - The subject property is located within the land described therein, however there are no other items to plot.

Exception K - Environmental Notice - Doc No. R2007-199612 - The subject property is the land described therein, however there are no other items to plot.

- In the preparation of this survey reference was made to Chicago Title Insurance Company Commitment for Title Insurance Order No. CCHI1803472LD with an Effective Date of November 30, 2018. (Parcel 6)

State of Illinois)
County of Cook) SS:

To: REVA Development Acquisitions, LLC;
William L. White and Robb A. Sackett, each to an undivided 1/2 interest;
427-429 Duane LLC;
Beja Emanuel, L.L.C., subject to disposition of the requirement noted at exception reference letter C;
Duane Street, LLC, a Colorado Limited Liability Company;
James W. Tunenga and Janet E. Tunenga, husband and wife, as joint tenants;
425 Melrose, LLC; and
Chicago Title Insurance Company its successors and/or assigns,

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2016 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes Items 1, 3, 4, 7a, and 8 of Table A thereof. The field work was completed on December 18, 2017.

This professional service conforms to the current Illinois minimum standards for a boundary survey.

Schaumburg, Illinois December 14, 2018

By: Illinois Professional Land Surveyor No. 3695

P.I.N. No. 05-II-325-001
05-II-325-002
05-II-325-003
05-II-325-004
05-II-325-005
05-II-325-006
05-II-325-007
05-II-325-008
05-II-325-009
05-II-325-010

MAIL PLAT TO:

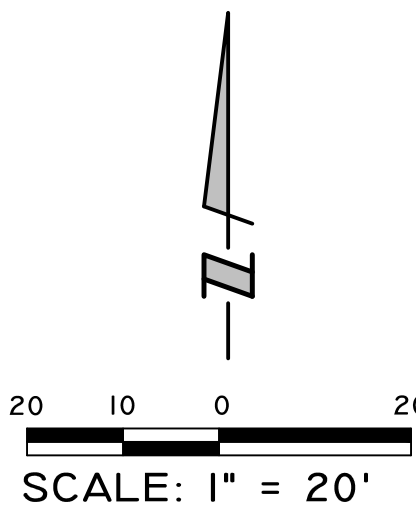
HAEGER ENGINEERING LLC
CONSULTING ENGINEERS AND LAND SURVEYORS
100 EAST STATE PARKWAY
SCHAUMBURG, IL 60173

AVERE ON DUANE SUBDIVISION

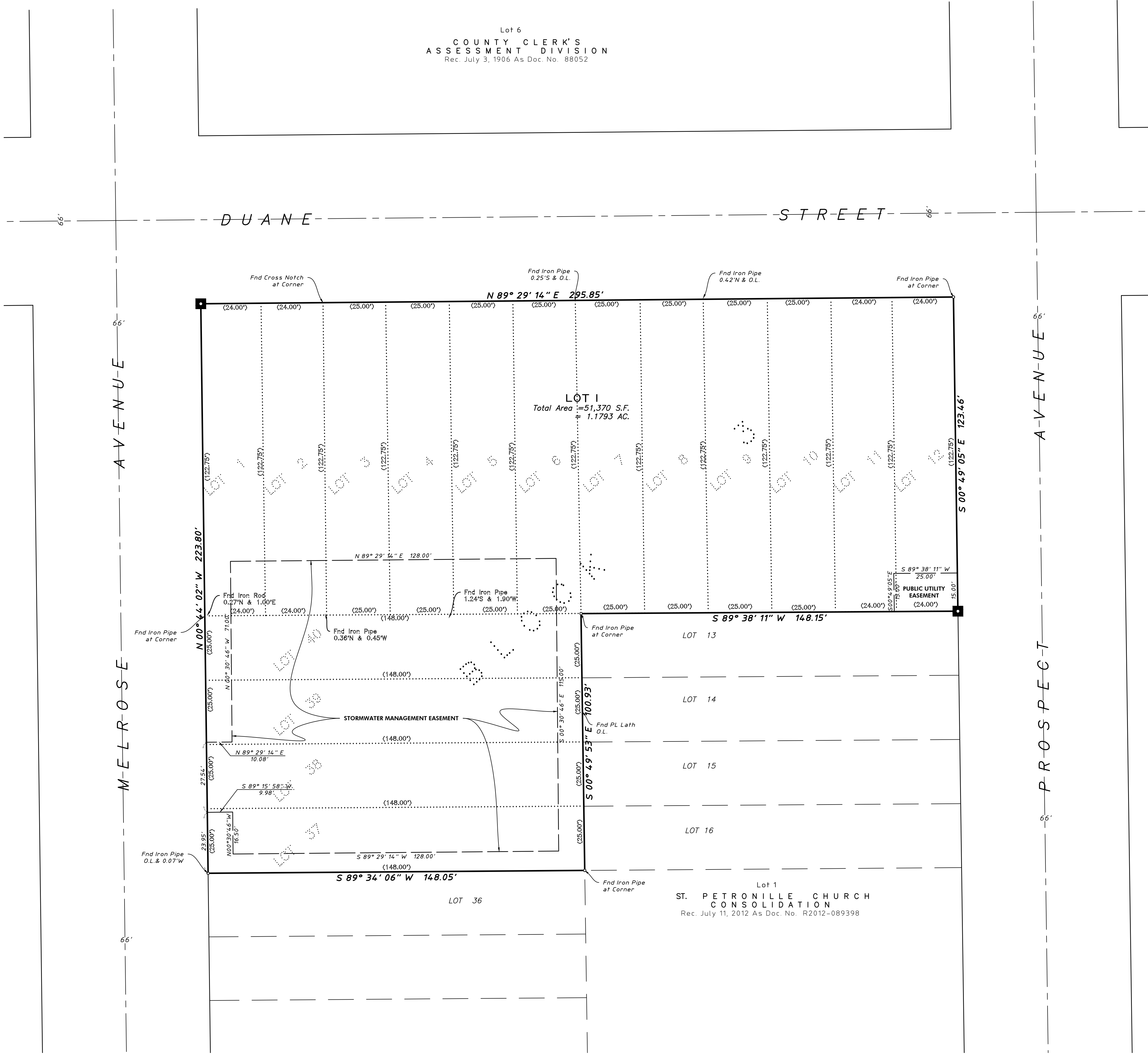
OF

BEING A SUBDIVISION OF LOTS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 37, 38, 39, AND 40 IN BLOCK 3 IN GLENWOOD, BEING C. A. PHILLIPS SUBDIVISION OF PART OF SECTION 10 AND PART OF SECTION 11, TOWNSHIP 39 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF, RECORDED AUGUST 22, 1873 AS DOCUMENT NUMBER 16688, IN DUPAGE COUNTY, ILLINOIS.

SHEET 1 OF 2

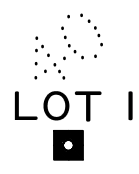


Lot 6
COUNTY CLERK'S
ASSESSMENT DIVISION
Rec. July 3, 1906 As Doc. No. 88052



Surveyor's Notes:

- Field work was completed on December 18, 2017.
- The basis of bearing shown hereon are based on NAD 83(2012) Illinois East Zone 1201 State Plane Coordinates as referenced from Kara Company's RTK Network.



LEGEND

Underlying Subdivision Lot No. ————
New Subdivision Lot No.
Concrete Monument Set ()
Property Corner B.S.L.
Subdivision Boundary Line O.L.

Road Center Line ————
Underlying Lot Lines ————
New Easement Lines ————
Record Building Setback Line ————
On Line ————

PREPARED FOR:

SEND NEW TAX BILL TO:

SUBMITTED BY AND RETURN TO:

VILLAGE OF GLEN ELLYN
535 DUANE STREET
GLEN ELLYN, IL 60137

HAEGER ENGINEERING
consulting engineers • land surveyors

100 East State Parkway, Schaumburg, IL 60173
Tel: 847.394.6600 Fax: 847.394.6608
Illinois Professional Design Firm License No. 184-003152
www.haegerengineering.com

LETTER OF AUTHORIZATION

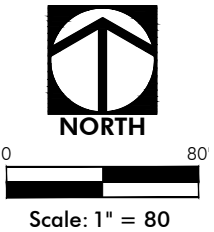
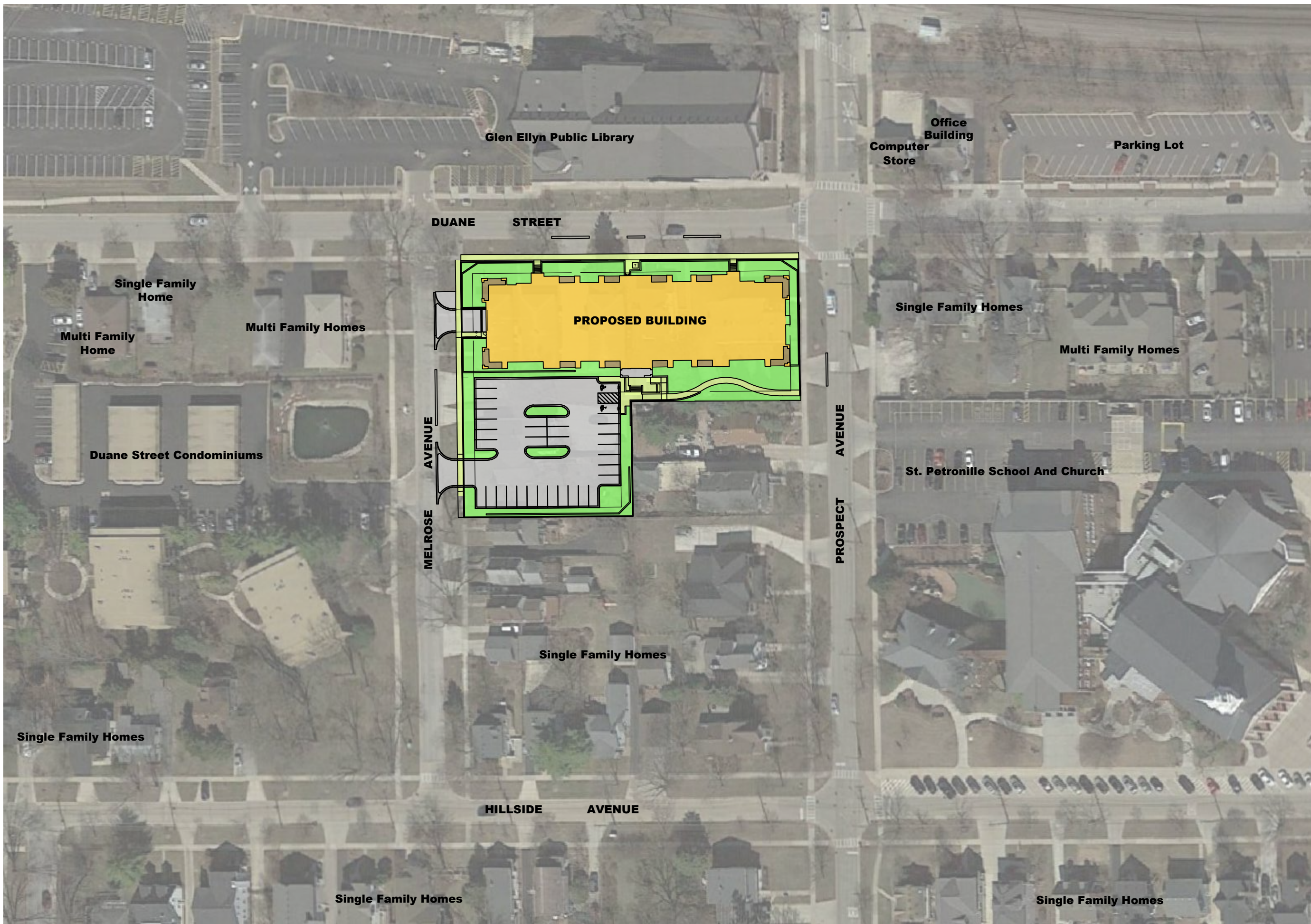
CLEAR PAGE

I, **Jeffrey W. Glunt PLS 035-3695**, Registered
Land Surveyor with the State of Illinois, hereby authorize a representative from the Village of
Glen Ellyn to record the plat(s) or plan(s) prepared by me for:

**AVERE ON DUANE SUBDIVISION
BEING A SUBDIVISION OF LOTS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 37, 38, 39, AND 40
IN BLOCK 3 IN GLENWOOD, BEING C. A. PHILLIPS SUBDIVISION OF PART
OF SECTION 10 AND PART OF SECTION 11, TOWNSHIP 39 NORTH, RANGE 10,
EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT
THEREOF, RECORDED AUGUST 22, 1873 AS DOCUMENT NUMBER 16688, IN
DUPAGE COUNTY, ILLINOIS.**


Signature

05/03/2019
Date



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**SURROUNDING
CONDITIONS PLAN**
**AVERE ON DUANE
SITE IMPROVEMENT PLANS**
Attachment: 9. Surrounding Conditions Plan (4023 : Avere on Duane - PUD, SUP, ZMA, SV)

Project Manager: KM
Engineer: KM
Date: 01-18-2019
Project No. 1718
Sheet

AVERE ON DUANE DUANE AND PROSPECT SITE IMPROVEMENT PLANS

SECTION 11 TOWNSHIP 39 NORTH RANGE 10 EAST
GLEN ELLYN, ILLINOIS
DuPAGE COUNTY

DEVELOPER / OWNER:
REVA Development Partners, LLC
116 W. Illinois Street, Floor 7
Chicago, IL 60654
Tel: 312-464-8800

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

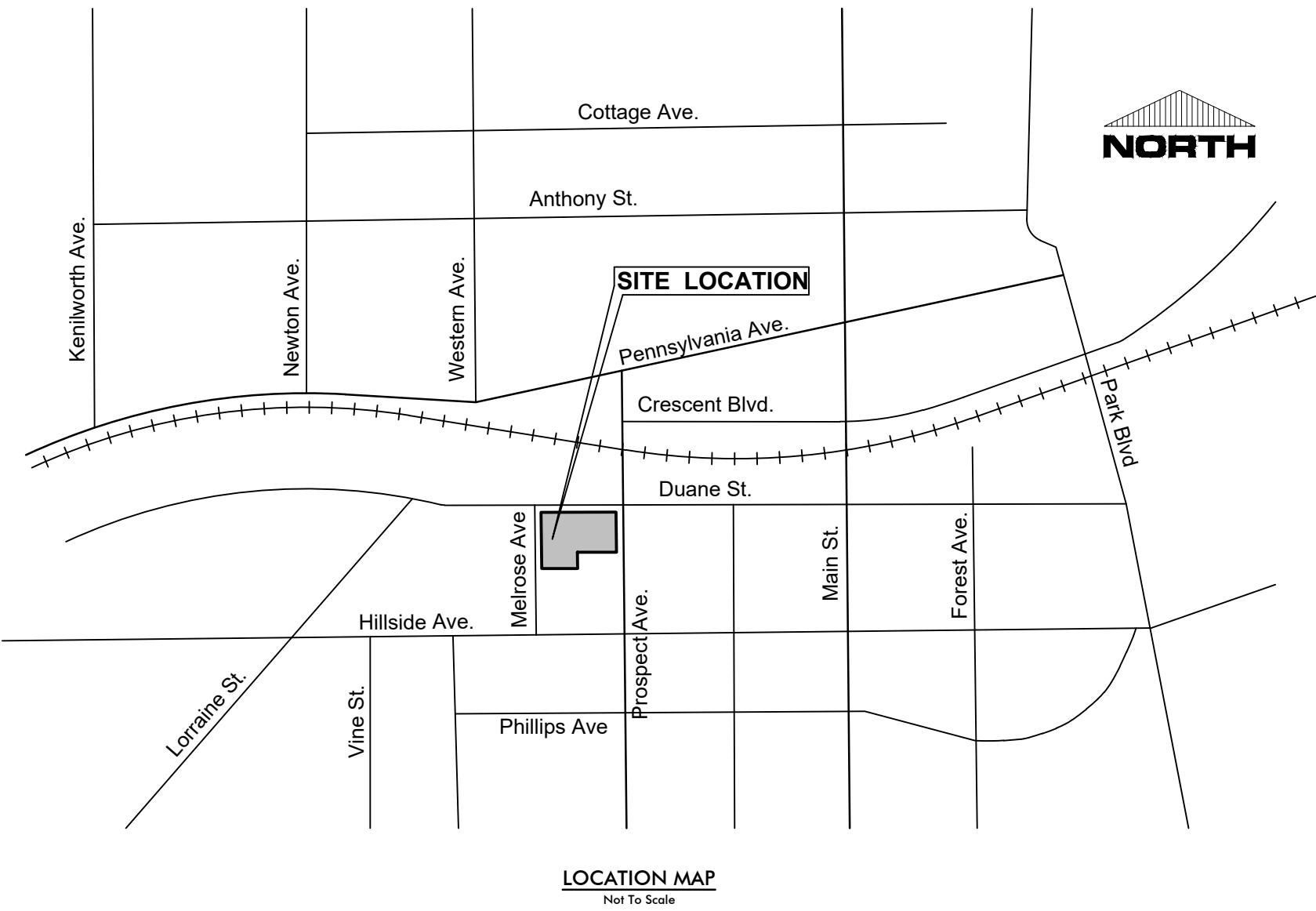
VILLAGE:
Village of Glen Ellyn
355 Duane Street
Glen Ellyn, IL 60137
Tel: 630-469-5000
Fax: 630-469-8849

BENCHMARKS:

Site Benchmark:

GP # 4094 (See Survey)
Description: Bolt on Hydrant
Elevation: 745.96 NAVD 88 (Geoid 12A)

CP # 603 (See Survey)
Description: Cross Notch in Sidewalk
Elevation: 745.02 NAVD 88 (Geoid 12A)



INDEX TO SHEETS	
NO.	DESCRIPTION
C1.0	COVER SHEET
C2.0	GENERAL NOTES AND SPECIFICATIONS
C2.1	GENERAL NOTES AND SPECIFICATIONS
C3.0	EXISTING CONDITIONS SITE PLAN
C4.0	DEMOLITION PLAN
C5.0	PUD SITE PLAN
C6.0	GRADING PLAN
C6.1	CROSS SECTIONS
C7.0	UTILITY PLAN
C8.0	STORMWATER POLLUTION PREVENTION PLAN
C8.1	SWPPP NOTES AND DETAILS
C9.0	TYPICAL DETAILS
C9.1	TYPICAL DETAILS
C9.2	TYPICAL DETAILS
EX1.0	FIRE TRUCK ACCESS EXHIBIT
EX2.0	SIGHT DISTANCE ANALYSIS

Existing Symbol	Description	Proposed Symbol
	Storm Sewer Manhole	
	Catch Basin	
	Inlet	
	Flared End Section	
	Headwall	
	Area Drain	
	Sanitary Sewer Manhole	
	Clean Out	
	Storm Sewer	
	Storm Sewer Service	
	Perforated Underdrain	
	Sanitary Sewer	
	Sanitary Sewer Service	
	Combined Sewer	
	Force Main	
	Water Main	
	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	
	Sign	
	Gas Valve	
	Gas Line	
	Electric Line	
	Overhead Utility Line	
	Fiber Optic Line	
	Electrical Pedestal	
	Electric Manhole	
	Guy Wire	
	Utility Pole	
	Telephone Pedestal	
	Telephone Manhole	
	Telephone Line	
	Cable TV Line	
	Cable TV Pedestal	
	Flagpole	
	Mailbox	
	Handicapped Parking Stall	
	Number of Parking Stalls	
	Curb & Gutter	
	Reverse Pitch Curb & Gutter	
	Depressed Curb	
	Retaining Wall	
	Curb Elevation and Gutter/Pavement Elevation	
	Pavement Elevation	
	Sidewalk Elevation	
	Ground Elevation	
	Top of Wall Elevation	
	Bottom of Wall Elevation	
	Open Lid Frame & Grate	
	Closed Lid Frame & Lid	
	Swale	
	Hardscape Flow	
	Softscape Flow	
	Contour Line	
	Wetland	
	Wetland Buffer	
	Normal Water Level	
	High Water Level	
	Flood Plain	
	Flood Way	
	Deciduous Tree	
	Coniferous Tree	
	Bush	
	Brushline	
	Soil Boring	
	Over Land Flow Route	
	Recommended Garage Hand With Driveway Slope	



Know what's below.
Call before you dig.

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

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COVER SHEET

AVERE ON DUANE

SITE IMPROVEMENT PLANS

GLEN ELLYN, ILLINOIS

Project Manager: K M L
Engineer: K M L
Date: 03-22-2019
Project No. 17189
Sheet C1.0

GENERAL NOTES

- Definition of Terms:
- a. "Owner" shall mean the person or entity with which Haeger Engineering, LLC has been contracted with to prepare the Plans and Specifications.
- b. "Engineer" shall mean Haeger Engineering, LLC.
- c. "Contractor" shall mean the persons or entities responsible for performing and constructing the work described in the Plans, Specifications and other Construction Documents including but not limited to furnishing all labor, materials, tools, equipments, and other incidentals necessary.
- d. "Plans and Specifications" shall mean the Engineering Drawings and any Specifications prepared by Haeger Engineering, LLC. The Plans and Specifications shall be the final design.
- e. "Jurisdictional Agency" shall mean any local, municipal, county, township, state or federal entity of government or other entity having jurisdiction of some aspect of the project from whom approval, permit and/or review and approval was required.
2. The Specifications governing this project are as follows:
- a. All applicable Village/County and other applicable Jurisdictional Agency Ordinances, Codes, Regulations, Requirements, Policies, Specifications, Standards, etc.
- b. Roadway and Earthwork construction shall conform to the Illinois Department of Transportation (IDOT) "Standard Specifications for Road and Bridge Construction", latest edition and any subsequent "Supplemental Specifications and Recurring Special Provisions" as well as any applicable IDOT Highway Specifications. Hereafter these items shall be collectively be referred to as the IDOT "Standard Specifications".
- c. Water Main, Storm Sewer, and Sanitary Sewer construction shall conform to the "Standard Specifications for Water and Sewer Construction in Illinois", latest edition.
- d. Soil Erosion and Sedimentation Control shall conform to the Illinois Environmental Protection Agency (IEPA) "Illinois Urban Manual" (IUM), latest edition and "Illinois Procedures and Standards for Urban Soil Erosion and Sedimentation Control", latest edition.
- e. Traffic Control shall conform to the "Manual of Uniform Traffic Control Devices" (MUTCD), latest edition, as well as the latest edition of the "Illinois Supplement to the MUTCD", and IDOT "Quality Standard for Work Zone Traffic Control Devices", latest edition.
- f. All handcarp Accessibility items shall conform to the Illinois Accessibility Code (IAC), latest edition.
3. If a conflict, contradiction, or discrepancy occurs between any of the above Specifications the more stringent requirement shall apply, unless directed otherwise by the applicable Jurisdictional Agency.
3. Contract Documents:
- a. The Engineers' Plans and Specifications shall be included as part of the Contract Documents.
- b. The Contractor shall be responsible for obtaining all Specifications, and other Contract Documents prepared for the work. They shall visit the site of the work and acquaint themselves with all local conditions, codes, and requirements affecting the Contract. If awarded the contract, they shall not be allowed extra compensation by reason of any unforeseen difficulties or obstacles which the Contractor could have discovered or reasonably anticipated or inferred prior to bidding for construction.
- c. Should it appear that the work covered by the Plans and Specifications or other Contract Documents is not sufficiently detailed or explained, a Request For Information (RFI) Form shall be submitted to the Engineer for further explanations and drawings as may be necessary to clarify the point in question prior to the contract award. It is the intention of the Contract Documents to provide a job complete in every respect. Incidental items or accessories necessary to complete the work may not be specifically noted or shown but they are necessary to complete the project shall be considered incidental to the Contract. The Contractor is responsible for this result and to turn over the project in complete operating condition, irrespective of whether the contract documents cover every individual item in minute detail.
- d. The Contractor shall review the subsurface exploration and geotechnical report (a.k.a. soil boring report) prepared by the Owner and Engineer. The Contractor shall be responsible to become familiar with the subsurface soil conditions for the site. Copies of all such soil boring reports for the property can be obtained from the Owner. If any additional soils data is needed to confirm the Contractor's opinions of the subsurface conditions, this shall be done at the Contractor's expense. The Contractor shall obtain the Owner's written authorization to access the site to conduct a supplemental soils investigation. The Engineer and Engineer may not representation or warranty regarding the number, location, spacing or depth of borings taken, nor of the accuracy or reliability of the information given in the results thereof. Furthermore, the Owner and Engineer assume no responsibility for the possibility that during construction, the soil and groundwater conditions may vary between borings or are different than previously indicated. Any bracing, shoring, dewatering or other construction methods may be necessary for the Contractor in order to install the proposed improvements shall be considered incidental to the Contract and no additional compensation will be allowed.
4. Should any apparent errors, omissions, discrepancies or conflicts be discovered on the Plans, Specifications, Quantities or other Contract Documents by the Contractor, whether prior to or after the award of the contract, the Contractor shall be called to the same before work is begun thereon, so that proper clarification can be provided or revision made. If any work is done without contacting the Engineer, it shall be considered that the Contractor has proceeded at their own risk and expense.
5. Whenever the performance of work is considered on the Plans, and no specific item is included in the Contract for payment, the work shall be considered incidental to the Contract and no additional compensation will be allowed. The Contractor shall provide all necessary personnel, materials, equipment, etc. necessary to perform all the work required for construction of the proposed improvements.
6. The base plan/drawing for the Engineering Plans (existing conditions, site topography, utilities, rights-of-way, etc.) was obtained from the topographic survey prepared by:
- Haeger Engineering LLC
100 East State Parkway
Champaign, IL 618173
847-394-6600
HE Job No. 17-189
January 9, 2018
7. The Owner shall obtain the necessary approvals from the following Jurisdictional Agencies:
- a. Village of Glen Ellyn
- b. Illinois Environmental Protection Agency (IEPA) - Sewer Division
- c. Illinois Environmental Protection Agency (IEPA) - Noise of Intent (NOI) General Permit to Discharge Storm Water from Construction Site Activities
- d. Illinois Department of Natural Resources/Office of Water Resources (IDNR/OWR)
- e. Kane-DoPuage Soil & Water Conservation District
8. The Contractor shall, unless otherwise agreed upon in writing with the Owner prior to the start of construction, shall be responsible for obtaining all necessary permits, including permits, etc., as may be required for the execution of this work as well as provide all necessary notices, pay all fees required, post bonds, obtain all necessary insurance, and comply with all laws, ordinances, rules, and regulations relating to the work and to the preservation of public health and safety. The Contractor shall also provide all required insurance and/or bonds as may be required by the Jurisdictional Agency. The Contractor shall be responsible for obtaining all necessary permits, including permits, etc., as may be required for the execution of this work as well as provide all necessary notices, pay all fees required, post bonds, obtain all necessary insurance, and comply with all laws, ordinances, rules, and regulations relating to the work and to the preservation of public health and safety. The Contractor shall also provide all required insurance and/or bonds as may be required by the Jurisdictional Agency.
9. No work shall proceed until the appropriate permit or permits have been obtained for the item or items to be constructed. If any work does proceed without the appropriate permits or approvals, it is being done without the permission or consent of the Engineer. The Contractor and Party authorizing the work to proceed shall be held liable for the work being done in violation of the applicable laws, rules, and regulations. The Contractor shall be held liable or responsible for any work being performed without a permit.
10. The Contractor shall indemnify and hold harmless the Owner, employees, Village/City, and other Jurisdictional Agencies as well as all of their respective officers, engineers, agents, and Engineers from and against all losses, claims, demands, payments, suits, actions, recoveries, and judgment of damages and costs and expenses, including reasonable attorneys' fees, arising out of or from the negligence or omission of said Contractor, their agents or employees in the execution of the work or in the guarding of it.
11. The construction shall be under the general inspection and observation of the designated individual authorized by the Village/City or other applicable Jurisdictional Agencies. The Village/City, Jurisdictional Agency, Owner, and Engineer shall be notified at least two working days prior to the commencement of work.
12. The location of existing underground utilities such as water mains, sewers, gas lines, electric lines, cable TV lines, fiber optic lines, etc., as shown on the Plans, has been determined from the best available information and has been provided for the convenience of the Contractor. However, the Contractor shall be responsible for determining the responsibility in the event that during construction, utilities other than those shown may be encountered and that the actual location of these which are shown may be different from the location as shown on the Plans. The Contractor is to verify the location of all utilities prior to the start of work and is responsible for damage to the same. The Contractor shall contact J.U.L.I.E. or Digger by Dialing 311 (Outside the City of Chicago - J.U.L.I.E. 1-800-892-0123 or within the City of Chicago - Dialing 312-744-7000) and the Village/City Public Works Department. If the Contractor is unable to reach J.U.L.I.E. or Digger, the Contractor shall contact the Owners of each respective utility directly for utility locations at least 48 hours, excluding weekends and holidays, before digging.
13. In some instances, (existing utilities are shown on the Plans according to information obtained from the Village/City, County, and/or surveys performed by Others. The Owner and Engineer do not guarantee the accuracy or completeness of this information. The Contractor shall be aware of potential conflicts with existing or other proposed utilities as indicated on the Plans or that because apparent as the result of field locates by Others. The Contractor shall make their own investigations as necessary to determine the existence, nature, and location of all utility lines and related appurtenances within the limits or adjacent to the proposed improvements. The Contractor shall locate all utilities far enough in advance to avoid all conflicts between existing utilities and proposed improvements and make the Engineer aware of any such conflicts. If the Contractor encounters a conflict between the proposed improvements and existing utility that was not indicated in advance by the Contractor, then the Contractor shall at no cost to Owner, relocate the proposed improvements and/or relocate the utility.
14. The Contractor will be required to cooperate with all utility companies involved in connection with the removal, temporary relocation, construction, reconstruction or abandonment by these companies

- [illegible]

- placement, or construction. If structural elements such as retaining walls are required, the drawings and any required supporting design calculations must be prepared, and signed and sealed by an Illinois licensed Structural Engineer.
- The Owner/Engineer shall be responsible for having a set of approved Plans and Specifications with the latest revision date on the job site at all times during the construction period.
- The Contractor shall maintain a clean, legible, undamaged set of Field Marked Construction Plans. These Field Marked Construction Plans shall show the location of the actual installed location of all underground utilities including related appurtenances (sanitary, storm, water, service stubs, gas, electric, telecommunications, etc.) and other elements that would be difficult to measure and record at a later date. Any approved modifications, deviations, or alterations from the approved Plans should also be noted and shown on these Field Marked Construction Plans. These Field Marked Construction Plans shall be provided to the Owner/Engineer at the completion of construction.
- All work that is performed that is not in conformity with the Plans, Specifications or other Contract Documents that is that is defective shall be removed and replaced, or otherwise corrected or remedied by and at the sole expense of the Contractor. Any unauthorized work or work performed beyond the limits or in excess of that shown on the Plans will not be measured or paid for.
- The Contractor shall be responsible for obtaining all necessary permits. All Documents shall be guaranteed against all defects in materials and workmanship of whatever nature by the Contractor and his surety for a minimum period of 12 months from the date of final acceptance of the work by the Village/City, other applicable Jurisdictional Agencies, and the Owner, unless otherwise agreed upon in writing with the Owner prior to the start of construction.
- Final payment of all work shall be inspected and approved by the Owner or designated representative. Final payment will be made after the Contractor's work has been approved and accepted or as required by the Contract Documents.
- If required, the Owner shall have As-built or Record Drawings prepared and submitted to the Village/City and all other applicable Jurisdictional Agencies for approval after the completion of construction. If required, the Owner shall have As-built or Record Drawings prepared and submitted to the Village/City and all other applicable Jurisdictional Agencies for approval. The As-built or Record Drawings must be prepared, and signed and sealed by a registered professional Engineer in Illinois.

DEMOLITION AND CLEARING

1. The Contractor shall perform all demolition, clearing, grubbing, and tree removal and protection work in accordance with all applicable Federal, State, County and Local requirements or as noted in the Plans.
2. Prior to the commencement of any demolition or clearing activities, the Owner or Contractor shall obtain all applicable permits to disconnect the existing utility services to each building proposed for demolition.
3. The Contractor shall coordinate all demolition work with the Village/City, utility companies, and other Jurisdictional Agencies, so as to ensure the protection of all existing sewer, water main, and other utilities, and further to ensure that proper stormwater conveyance is attained until the proposed improvements can be constructed.
4. Clearing shall consist of the removal and legal disposal of all obstructions such as trees, hedges, fences, walls, accumulations of rubbish of whatever nature, and all logs, shrubs, brush, grass, weeds, and other vegetation and stumps. These items shall be removed whenever they are found within the street right-of-ways and within the limits of construction. Trees to be saved or protected shall be marked by the Engineer. All trees except those designated to be saved or protected shall be removed, as well as all stumps and hedges within the limits of construction, shall be removed completely and legally disposed of off-site or as otherwise designated on the Plans or authorized by the Owner. Trees designated to be saved or protected as indicated on the Plans or as directed by the Engineer, shall be protected from damage in accordance with the procedures outlined in Section 201 of the IDOT Standard Specifications.
5. All items to be removed on the Plans including items not specifically noted but necessary to be removed to construct the proposed improvements shall be demolished or removed as necessary and disposed of legally off-site or as approved by the Owner.
6. Existing utilities to be disconnected shall be done so at the main or as directed by the applicable Jurisdictional Agency or as noted on the Plans.
7. Utilities not needed to be abandoned shall be abandoned as required by the applicable Jurisdictional Agency or as noted on the Plans.
8. All existing pavement or concrete to be removed shall be saw-cut along the limits of the proposed removal to provide a clean vertical edge. The cost of saw-cutting shall be considered incidental to the removal of each item.
9. All voids or any item removed under any proposed building, pavement walk or other structure shall be filled or with concrete or other material of sufficient strength and quality to be approved by the Engineer, or with concrete as necessary by the Contractor.
10. The Contractor shall implement a daily program for dust control as it relates to the demolition and clearing activities. This program is to be approved by the Village/City prior to the start of any demolition or clearing work.
11. All items to be removed from existing buildings that are to be removed shall be disconnected and removed as required by the applicable Jurisdictional Agency.
12. All existing wells shown on the Plans to be abandoned (or that are discovered during the course of construction shall be exposed and cut-off three (3) feet below the proposed finished grade and sealed by the Contractor in accordance with Section 920 of the "Illinois Water Well Construction Code", latest edition, as required by the Health Department or by any other Local, County, State or Federal rules and regulations.
13. All existing septic tanks, grease traps or similar shown on the Plans to be abandoned or that are discovered during the course of construction shall have all liquids and solids removed and disposed of legally off-site by a licensed commercial hauler in accordance with the requirements of the Health Department or as required by any Local, County, State or Federal rules and regulations. The structure shall then be removed and the remaining off-site or broken in-place, so as not to hold liquid, and back-filled with suitable materials by the Contractor or as required by the Health Department or by any other Local, County, State or Federal rules and regulations.
14. Any material containing asbestos or other hazardous materials found within existing structures or other items to be removed in order to construct the proposed improvements shall be removed from the site and legally disposed of off-site by the Contractor in accordance with applicable County, State or Federal rules or regulations.
15. All fire access lanes or routes located within the existing project area shall remain in service, clean of debris, and accessible for use by emergency vehicles at all times while demolition and clearing work is being performed.
16. The Contractor shall assume the responsibility of the Contractor to legally remove from the site any and all materials and debris which results from their demolition or clearing operations at no additional expense to the Owner. Burning or incineration on the site is not permitted.

EARTHWORK AND GRADING

- [illegible]

9. The Contractor shall take precautionary measures to minimize earthwork and other activities in the areas where trees are to be saved or protected as to not cause injury to roots or trunks.
10. Embankment placement including preparation of existing ground surface, placement, embankment compaction and compaction shall be in accordance with Section 205 of the IDOT Standard Specifications. All embankments located within structural fill areas or zones of influence thereof shall be constructed to a minimum 95% of the modified proctor density in accordance with ASTM D1557.
11. Embankments located in non-structural fill areas shall be constructed to a minimum of 90% of the modified proctor density.
12. Topsoil spread shall consist of placing a minimum of a four (4) inch layer of topsoil or depth indicated on the Plans over the disturbed unpaved areas within the construction limits. These areas shall then be seeded, sodded, landscaped, stabilized, etc. as indicated on the Plans.
13. Sod shall be placed on all disturbed areas within the right-of-way and at other locations indicated on the Plans.
14. Refer to the Landscape Plans prepared by Others for additional information on the landscaping and ground cover requirements.
15. Contoured subgrade grading and final finished grading for all proposed improvements shall be within a tolerance of plus or minus one-tenth (0.1) foot of the design elevation.
16. Contractor shall provide uniform slopes between proposed grades and smooth vertical curves/transitions through all high and low points. Smooth transitions shall be provided where any change in slope occurs.
17. The subgrade for the proposed streets and other pavement areas shall be proof-rolled by the Contractor in the presence of the Village/City Engineer or applicable Jurisdictional Agency and the Geotechnical/Soils Engineer. Any unstable areas or failures encountered shall be removed and remediated immediately. Remedial measures shall be documented by the Geotechnical/Soils Engineer and the Geotechnical/Soils Engineer. Any unstable areas or failures encountered and remediation method include approximate size, quantity, etc. shall be documented by the Geotechnical/Soils Engineer.
18. It shall be the responsibility of the Contractor to legally remove from the site any and all materials and equipment resulting from operations at no additional expense to the Owner. Burning or incineration on the site is not permitted.

SEWER AND WATER MAIN GENERAL NOTES

4. All sanitary sewers, storm sewers and water mains as well as their services and other related appearances shall be constructed and tested in accordance with the "Standard Specifications for Water and Sewer Construction in Illinois", latest edition, the requirements of the applicable provisions of the Illinois State Sanitary Code, and the applicable Typical Details.
5. Rough grading shall be within one (1) foot of finished subgrade elevation shall be completed prior to the commencement of the underground utility construction.
6. Trench excavation, bedding and backfill, and compaction for sanitary sewers, storm sewers, water mains as well as their services and other related appearances shall be in accordance with applicable provisions of the Illinois State Sanitary Code.
7. When in the opinion of the Geotechnical/Soils Engineer, unsuitable soil conditions are encountered within utility trenches which require the removal of unsuitable materials below the depth of the bedding specified, the Contractor shall remove the unsuitable soils and replace the material with granular compacted bedding material as directed by the Geotechnical/Soils Engineer, Village/City or other applicable jurisdictional Agency. The depth of the required removal and replacement shall be documented by the Geotechnical/Soils Engineer and witnessed by the Contractor. This work, when approved by the Owner and Geotechnical/Soils Engineer, will be measured and paid for at the contract unit price per cubic yard in place for unsuitable soil which price shall include the removal and off-site disposal of unsuitable soil, the additional bedding material, and all labor, materials and equipment required to perform this work.
8. All utility trenches for the proposed sanitary sewer, storm sewer, water main and services lying under or where the inner edge of the trench is within two (2) feet of any present area, curb, curb and gutter stabilized shoulder, sidewalk, building, utility crossing or other structural area shall be backfilled with select granular backfill material and compacted as noted on the Plans.
9. The Contractor shall be responsible for dewatering any excavation for the installation of sanitary sewers, storm sewers, water mains as well as their services and other related appearances. Any dewatering required to construct the proposed underground improvements shall be considered incidental to the respective underground improvement.
10. Connections to an existing sewer main shall be to an existing service stub, wye, tee, or manhole where possible. Sewer connections to existing sanitary shall be machine cut, be made concrete. All pipe connections to sanitary structures shall be made with flexible watertight gasket/bolt (resilient connector) conforming to ASTM C923.
11. When connecting to an existing sewer main by means other than an existing service stub, wye, tee, or manhole, one of the following methods shall be used:
 - a. Circular saw-cut of sewer main by proper tools ("shear-pat" machine or similar) and proper installation of a suitable hub-wye saddle or hub-bell.
 - b. Remove the entire Section of pipe breaking only the top of one bell and replace with a wye or tee branch Section.
 - c. With pipe cutter, band-saw and accurately cut out the desired length of pipe for insertion of proper fittings, using "Band-Saw" and flexible type couplings to hold it firmly in place.
 - d. Other method approved by Jurisdictional Agency.
12. "Band-Saw" or similar flexible type couplings shall be used in the connection of sewer pipe of dissimilar materials.
13. The Contractor shall locate the locations of the ends of the service stubs with 4"x4" wood posts extending a minimum of three (3) feet above the ground. The top twelve (12) inches of wood posts shall be used for marking for sanitary, storm sewer, and blue for water. The Contractor shall keep accurate records of all service connection locations.
14. All structures including but not limited to frames and lids or grates, cleanouts, b-boxes, etc. shall be adjusted as necessary by the Contractor to final finished grade elevation.
15. All sanitary sewers, storm sewers, water mains as well as their services and other related appearances shall show the proper construction and installation of the Village/City, Owner, and Engineer as necessary during construction, prior to inspection and testing, and at the end of the project.
16. The Contractor shall coordinate the testing and televising so that it can be witnessed by the applicable Jurisdiction Agency.
17. The cost of the cleaning, televising, and testing shall be considered incidental to the Contractor.
18. The Contractor shall be responsible for any and all necessary corrective work required as the result of testing or television inspection shall be performed by the Contractor at no additional cost to the Owner and without delay. All dips, cracks, leaks, improperly sealed joints and departures from the approved grades and alignment shall be repaired by removing and replacing the involved sections of pipe. Upon completion thereof, the sewer shall be retested and/or re-televised and such further inspection made as may appear warranted by the Owner or as required by the applicable Jurisdiction Agency.
19. Refer to Sanitary Sewer, Storm Sewer, Water Main and Water Main Protection Requirements for additional requirements.

SANITARY SEWER

2. Refer to Sewer and Water Main General Notes for additional requirements.
3. Gravity Sanitary Sewer Pipe shall be constructed from one or more of the following materials as specified on the Plans:
 - a. Polyvinyl Chloride (PVC) Pipe conforming to ASTM D3034 with a Standard Dimension Ratio (SDR) of 26 unless noted otherwise on the Plans with elastomeric gasket joints conforming to ANSI D3212 and D417.
 - b. Ductile Iron Pipe (DIP), Class 52, conforming to ANSI A21.51 and AWWA C151 with rubber gasket joints conforming to ANSI A21.11 and AWWA C111. The interior of the pipe and fittings shall be cement-mortar lined in accordance with ANSI A21.4 and AWWA C104. The exterior of all pipes and fittings shall be coated with an asphaltic coating per ANSI A21.51 and AWWA C151 for ductile iron pipe, and ANSI A21.10/A21.53 and AWWA C110/C153 for fittings.
3. Where water main quality pipe and joints are required to meet the water main protection requirements, the sanitary sewer pipe shall be constructed from one or more of the following materials as specified on the Plans:
 - a. Polyvinyl Chloride (PVC) Pipe conforming to ASTM D2241 with a Standard Dimension Ratio (SDR) of 26 unless noted otherwise on the Plans with elastomeric gasket joints conforming to ANSI D3139 and D417.
 - b. Ductile Iron Pipe (DIP), Class 52, conforming to ANSI A21.51 and AWWA C151 with rubber gasket joints conforming to ANSI A21.11 and AWWA C111. The interior of the pipe and fittings shall be cement-mortar lined in accordance with ANSI A21.4 and AWWA C104. The exterior of all pipes and fittings shall be coated with an asphaltic coating per ANSI A21.51 and AWWA C151 for ductile iron pipe, and ANSI A21.10/A21.53 and AWWA C110/C153 for fittings.
4. All sanitary manholes shall be constructed of precast reinforced concrete sections with longtongue and shorttongue conforming to ASTM A778 with a minimum thickness of 48-inches. The manhole diameter shall not be specified in the Plans the required manhole diameter shall be determined by size of pipes and their orientation. The precast reinforced concrete base and bottom section shall be monolithically cast. All pipe openings in the structure shall be precast into the structure walls at the proper invert elevation and orientation. Benches and defined channel invert flow lines shall be provided at all transitions to provide smooth defined flow path between all inlet and outlet pipe openings. Sanitary manholes shall have ecentric offset cones, except where necessary due to height and opening restrictions, where a precast reinforced concrete flat top slab section shall be provided in-lieu of an eccentric cone section. Flat top slabs shall conform to IDOT Standard Detail 602601 as well as meet the H-20/S16 loading requirement. Concrete adjusting rings will be permitted where necessary to sit the structure on uneven ground. The structure shall be installed at a minimum height or as permitted by the applicable Jurisdictional Agency. All joints between structure sections

- drainage rings and frames shall be securely sealed to one another using a resilient, flexible, non-hardening bituminous mastic or butyl sealed compound in accordance with ASTM C990, or flexible rubber gasket in accordance with ASTM C448 in order to provide a watertight joint. The Contractor shall repair any damage to the structure and/or sanitary manholes with mortar.
- External chimney stacks shall be provided on all sanitary manholes and all sanitary manholes shall be watertight.
- Sanitary manhole frames and lids shall be be Neenah R-1713 with Type B, self-sealing, watertight lids with concealed pick holes or approved equal, unless noted otherwise in the Plans. Sanitary manhole frames and lids shall be installed in accordance with the Standard Specifications for Water and Sewer Construction. Manhole steps shall be furnished and installed in all Sanitary and Storm structures in accordance with the "Standard Specifications for Water and Sewer Construction", latest edition and as shown on the Plans. Steps shall be polypropylene coated steel core reinforced steps with slip, load, and pullout ratings in accordance with ASTM C478 and OSHA requirements. The steps shall be placed uniformly at twelve (12) to sixteen (16) inches on-center and shall be located directly below the manhole frame opening and shall not be located directly above a pipe opening with the alignment of the steps gently perpendicular to the pipe flow direction wherever possible.
- An external drop manhole structure in accordance with Plans or other Jurisdictional Agency requirements shall be provided where the difference between inverts is greater than or equal to two (2) feet.
- The minimum cover over sanitary sewer lines and services shall be three (3) feet.
- The minimum sanitary service line size shall be 6-inch diameter pipe at a 1.0% minimum slope. All services stubs shall be capped with a watertight plug until connection is ready to be made. The plug shall be properly secured to withstand the required test pressures.
- Sanitary sewer service risers shall be installed where the mainline sewer depth is greater than twelve (12) feet or in locations indicated on the Plans.
- Cleanouts shall be provided in locations shown on the Plans or as required by the Jurisdictional Agency.
- All floor drains shall discharge into the sanitary sewer.
- External grease traps, if applicable, shall be provided in accordance with the Jurisdictional Agency requirements at the locations shown on Plans. Contractor shall submit shop drawings for review and approval prior to ordering or fabricating the grease trap.
- Sanitary sewers and related appurtenances shall be tested and televised in accordance with the following:
- a. All sanitary sewers shall be tested for acceptability by either an air test, infiltration of water test, or exfiltration of water test or a combination thereof in accordance with the "Standard Specifications for Water and Sewer Construction", latest edition or in accordance with the requirements of the Village/City or applicable Jurisdictional Agency, whichever is more restrictive. The maximum allowable rate of infiltration or exfiltration shall not exceed 200 gallons per inch diameter of pipe per mile of pipe per day.
 - b. All sanitary sewers shall be deflection tested in accordance with the "Standard Specifications for Water and Sewer Construction", latest edition or in accordance with the requirements of the Village/City or applicable Jurisdictional Agency, whichever is more restrictive. Deflection shall not exceed the manufacturer's recommended deflection limits or a maximum of 5% of the internal diameter of the pipe, whichever is more stringent.
 - c. All sanitary sewers shall be tested for leakage test in accordance with ASTM C959 - "Standard Practice for Infiltration and Exfiltration Acceptance Testing of Installed Precast Concrete Pipe Sewer Lines" or ASTM C1244 - "Standard Test Method for Concrete Sewer Manholes by the Negative Pressure (Vacuum) Test Prior to Backfill".
 - d. The Contractor shall televise all newly constructed sanitary sewers in accordance with applicable Jurisdictional Agency requirements prior to the completion of the project and final acceptance. A copy of the inspection video shall be provided to the applicable Jurisdictional Agency and the Engineer for review.

		Village Review
		Village Review
		Client Review
		Village Review
		Revision
No.	Date	
4	06-12-2019	
3	05-31-2019	
2	05-03-2019	
1	04-29-2019	

Attachment: 10. Final Engineering Plans (4023 : Avere on Duane - PUD, SUP, ZMA, SV)

GENERAL NOTES AND SPECIFICATIONS

AVERE ON DUANE

SITE IMPROVEMENT PLANS

GLEN ELYN, ILLINOIS

Project Manager: K M L
Engineer: K M L
Date: 03-22-2019
Project No. 17189
Sheet **C2.0** /

STORM SEWER

- Refer to Sewer and Water Main General Notes for additional requirements.
- Storm Sewer Pipe shall be constructed from one or more of the following materials as specified on the Plans:
 - Reinforced Concrete Pipe (RCP) conforming to ASTM C76 with O-Ring gasket joints conforming to ASTM C443. Pipe class shall be per Section 550 of IDOT Standard Specifications, except that pipe shall be a minimum Class III in non-structural areas (i.e., grass, parkway, etc.) and a minimum of Class IV in or within zone of influence of all structural areas (i.e., roadways, parking lots, curbs, walks, etc.).
 - Polyvinyl Chloride (PVC) Pipe conforming to ASTM D3034 with a Standard Dimension Ratio (SDR) of 26 unless noted otherwise on the Plans with elastomeric gasket joints conforming to ASTM D3312 and ASTM D3350.
 - High Density Polyethylene (HDPE) Pipe with smooth wall interior conforming to ASTM D3350 with joints conforming to ASTM D3212 and ASTM D3350.
 - Ductile Iron Pipe (DIP), Class 52, conforming to ANSI A21.51 and AWWA C151 with rubber gasket joints conforming to ANSI A21.11 and AWWA C111. The interior of the pipe and fittings shall be cement-mortar lined in accordance with ANSI A21.4 and AWWA C104. The exterior of all pipes and fittings shall be coated with an asphaltic coating per ANSI A21.51 and AWWA C151 for ductile iron pipe, and ANSI A21.10/A21.53 and AWWA C110/C153 for fittings.
- Where water main quality pipe and joints are required to meet the water main protection requirements the storm sewer pipe shall be constructed from one or more of the following materials as specified on the Plans:
 - Reinforced Concrete Pipe (RCP) conforming to ASTM C361 with O-Ring gasket joints conforming to ASTM C443 and C361. Pipe class shall be per Section 550 of IDOT Standard Specifications, except that pipe shall be a minimum Class III in non-structural areas (i.e., grass, parkway, etc.) and a minimum of Class IV in or within zone of influence of all structural areas (i.e., roadways, parking lots, curbs, walks, etc.).
 - Polyvinyl Chloride (PVC) Pipe conforming to ASTM D2241 with a Standard Dimension Ratio (SDR) of 26 unless noted otherwise on the Plans with elastomeric gasket joints conforming to ASTM D3139 and F477.
 - High Density Polyethylene (HDPE) pressure pipe with smooth wall interior and joints conforming to AWWA C-506.
 - Ductile Iron Pipe (DIP), Class 52, conforming to ANSI A21.51 and AWWA C151 with rubber gasket joints conforming to ANSI A21.11 and AWWA C111. The interior of the pipe and fittings shall be cement-mortar lined in accordance with ANSI A21.4 and AWWA C104. The exterior of all pipes and fittings shall be coated with an asphaltic coating per ANSI A21.51 and AWWA C151 for ductile iron pipe, and ANSI A21.10/A21.53 and AWWA C110/C153 for fittings.
- Non-circular reinforced concrete pipe shall be constructed from one or more of the following materials as specified on the Plans:
 - Reinforced Concrete Arch Pipe in accordance with ASTM C506 and AASHTO M206.
 - Reinforced Concrete Elliptical Pipe in accordance with ASTM C507 and AASHTO M207.
 - Reinforced Concrete Box Culvert Sections in accordance with ASTM C1433.
- All storm structures shall be constructed of precast reinforced concrete sections with tongue and groove joints conforming to ASTM C478. If the structure diameter is not specified in the Plans the required manhole diameter shall be determined by size of pipes and their orientation. The precast reinforced concrete base and bottom section shall be monolithically cast. All pipe openings in the structure shall be precast into the structure walls at the proper invert elevation and orientation. Benches and defined channel invert flow line shall be provided at bottom of structures to provide smooth defined flow path between all inlet and outlet pipe inverts. Storm manholes and catch basins shall have eccentric offset cones, except where necessary due to height and opening restrictions, where a precast reinforced concrete flat top slab section shall be provided in-lieu of an eccentric cone section. Flat top slabs shall conform to IDOT Standard Detail 602601 as well as meet the H-20/HS-20 loading requirement. Catch Basins shall have the sump depth as specified in the Plans. Concrete adjusting rings will be permitted where necessary and shall be limited to two (2) adjusting rings totaling not more than eight (8) inches in height. All joints between structure sections, adjusting rings and frames shall be securely sealed to one another using a resilient, flexible, non-hardening bituminous mastic or butyl sealing compound in accordance with ASTM C990, or flexible rubber gasket in accordance with ASTM C443 in order to provide a watertight joint. The Contractor shall remove all excess mastic on inside of structure and butter joints with mortar.
- Manhole steps shall be furnished and installed in all Sanitary and Storm structures in accordance with the "Standard Specifications for Water and Sewer Construction", latest edition and as shown on the Plans. Steps shall be polypropylene coated steel core reinforced steps with slip, load, and pullout ratings in accordance with ASTM C478 and OSHA requirements. The steps shall be placed uniformly at twelve (12) to sixteen (16) inches on-center and shall be located directly below the manhole frame opening and shall not be located directly over a pipe opening with the alignment of the steps generally perpendicular to the pipe flow direction wherever possible.
- Open lid storm structures are designated with "Gr" on the Plans and closed lid storm structures are designated with "Rim" on the Plans.
- Closed lid storm structures frames and lids shall be Neenah R-1713 with Type B lid, or approved equal, unless noted otherwise in the Plans. Closed lid storm lids shall be imprinted with the word "STORM" cast into the lid.
- Open lid storm structures frames and lids shall be Neenah R-2504-D, or approved equal, unless noted otherwise in the Plans.
- Yard area drain structures shall be Nyloplast inline drains or drain basin structures, or approved equal, unless noted otherwise in the Plans.
- Concrete flared end sections shall be precast reinforced concrete with an end block cast separate to anchor flared end section in place in accordance with IDOT Standard 542301 for circular concrete pipe and IDOT Standard 542306 for elliptical concrete pipe. Grating for flared end sections shall be in accordance with IDOT Standard 542311 and shall be provided at all flared end sections twelve (12) inches or greater.
- Rip-Rap with filter fabric in accordance with Section 281 of the IDOT Standard Specifications shall be provided at locations shown on the Plans.
- Cleanouts shall be provided in locations shown on the Plans or as required by the Jurisdictional Agency.
- All downspouts, footing drains, and outside storm drains shall discharge to the storm sewer or discharge at grade. No stormwater shall be discharged into the sanitary sewer system.
- Perforated pipe underdrains shall be corrugated flexible HDPE pipe conforming to AASHTO M252 or M294, perforated polyethylene pipe of diameter specified on the Plans with a smooth interior and wrapped in a soil filter fabric sock supplied and installed by the Contractor.
- Elevations of structures located in curb and gutter are flow line elevations.
- Elevations of flared end sections are provided at the extreme outer end of the flared end section.

WATER MAIN

- Refer to Sewer and Water Main General Notes for additional requirements.
- Water Main Pipe shall be constructed from one or more of the following materials as specified on the Plans:
 - Ductile Iron Pipe (DIP), Class 52 conforming to ANSI A21.51 and AWWA C151 with a 150 psi working pressure, with push-on double sealing rubber gasket joints conforming to ANSI A21.11 and AWWA C111. The interior of the pipe and fittings shall be cement-mortar lined in accordance with ANSI A21.4 and AWWA C104. The exterior of all pipes and fittings shall be coated with an asphaltic coating per ANSI A21.51 and AWWA C151 for ductile iron pipe, and ANSI A21.10/A21.53 and AWWA C110/C153 for fittings.
 - All ductile iron or cast iron pipe, fittings, valves, and hydrants shall receive an 8-mil polyethylene encasement in accordance with AWWA C105, Encasement shall be U.S. Pipe V-Bio Enhanced Polywrap or an approved equal. The encasement material shall be an eight (8) mil thick polyethylene tube designed for water main application and in the size recommended by the manufacturer for the size of force main or water main installed. The casing shall be lapped 12 inches and held in place with polyethylene adhesive tape. Repair any rips, punctures, or other damage to the polyethylene with tape or cutting open a short length of tube, wrapping it around the pipe and securing with tape. Wrap valves, tees, crosses, and special fittings with a flat sheet obtained by splitting open a length of polyethylene tube. Pass the sheet under the valve of fitting and bringing it up around the body. Join the seams by bringing the edges together, folding over twice and securing with tape. The pipe invert shall be adequately protected by a 12-in. lap with the tubing. The backfill material shall be free of rocks and debris which may damage the polyethylene. Installation of DIP and fittings shall be in accordance with AWWA C600.
 - Polyvinyl Chloride (PVC) Pipe, SDR 18 conforming to AWWA C900 (4"-12" diameters) and AWWA C905 (14"-48" diameters) with a pressure rating of 235 conforming to ASTM D2241 and joints in accordance with ASTM D3139 with elastomeric seals in accordance with ASTM F477. Installation of PVC pipe and fittings shall be in accordance with AWWA C905.
 - High Density Polyethylene (HDPE) pressure pipe and fittings for water main in accordance with AWWA C906, DR 11, 160 psi, with ductile iron pipe outside dimension.
- Ductile iron fittings or cast iron fittings shall conform to ANSI A21.10 and AWWA C111; and compact ductile iron fittings shall conform to ANSI A21.53 and AWWA C153.
- All water structures shall be constructed of precast reinforced concrete sections with tongue and groove joints conforming to ASTM C478 and shall have a minimum inside diameter of 48-inches. If structure diameter is not specified in the Plans the required structure diameter shall be determined by size of pipes and appurtenances that need to be located within said structure. The precast reinforced concrete base and bottom section shall be monolithically cast. All pipe openings in the structure shall be precast into the structure walls at the proper invert elevation and orientation. Water structures shall have concentric cones, except where necessary due to height and opening restrictions, where a precast reinforced concrete flat top slab section shall be provided in-lieu of an eccentric cone section. Flat top slabs shall conform to IDOT Standard Detail 602601 as well as meet the H-20/HS-20 loading requirement. Concrete adjusting rings will be permitted where necessary and shall be limited to two (2) adjusting rings totaling not more than eight (8) inches in height. All joints between structure sections, adjusting rings and frames shall be securely sealed to one another using a resilient, flexible, non-hardening bituminous mastic or butyl sealing compound in accordance with ASTM C990, or flexible rubber gasket in accordance with ASTM C443 in order to provide a watertight joint. The Contractor shall remove all excess mastic on inside of structure and butter joints with mortar. All water structures shall be watertight.
- Valve vaults shall have minimum inside diameter of forty-eight (48) inches for eight (8) inch diameter and smaller valves, and have a minimum inside diameter of sixty (60) inches for ten (10) inch and larger valves.
- Water services 2 1/2 inches in diameter and smaller shall be Type K Copper for underground services conforming to ASTM B88 and ASTM B251. Larger diameter water services shall be of same pipe and

- joint materials as the mainline water main or as noted on the Plans.
- The minimum cover from finished grade to the top of the water main and water services shall be 5.5 feet.
- Water main fittings (i.e., bends, elbows, tees, reducers, etc.) may not be specifically referenced on the Plans and are to be considered incidental and included in the linear footage cost of the watermain.
- The standards for maximum deflection at pipe joints and laying radius for the various pipe types and the lengths shall be per the following:
 - Ductile Iron Pipe (DIP) - AWWA C600.
 - Polyvinyl Chloride (PVC) Pipe - AWWA C900.
 - High Density Polyethylene (HDPE) - Per Manufacturer's requirements.
- Thrust blocking shall be installed on water mains at all tees, elbows, plugs, and bends 11 1/2 degrees or greater etc. per the "Standard Specifications for Water and Sewer Construction", latest edition. Thrust blocking shall be poured in place Portland Cement.
- All bends greater than 10 degrees, hydrants, tees, and fittings shall be mechanical joint with Mega-Lug retaining glands or Field Lok gasket in casings, between fittings and at grade changes.
- All bolts and nuts shall be stainless steel.
- A tracer wire shall be installed on all non-metallic water mains. The wire shall be continuous from valve vault to valve vault.
- Frame and lids for water structures shall be Neenah R-1713 or approved equal and lids shall be imprinted with the word "WATER" cast into the lid.
- All water valves, fire hydrants, b-boxes, corporation stops, curb stops, ground key stops, service boxes, tapping sleeves, and other water main related appurtenances shall conform to Village/City or applicable Jurisdictional Agency Requirements and shall furnish and install the same. Contractor shall verify exact model, style, type, and manufacturer required prior to ordering. All fire hydrants shall be painted in accordance with the applicable Jurisdictional Agency requirements.
- Valves shall be non-rising stem type and shall close by turning clockwise. All valves shall be resilient wedge gate or ball valves, except that butterfly valves shall be installed on all water mains 16" diameter and larger, conforming to AWWA C500 with a minimum rated working pressure of 200 psi and in accordance with applicable Jurisdictional Agency requirements. Specialty valves and fittings such as cut-in-valves, tapping sleeves and valves, pressure reducing valves, insertion valves, and air release valves shall conform to the requirements of the applicable Jurisdictional Agency requirements and shall be installed at locations indicated on the Plans.
- When making connections to existing water mains requires a shutdown that requires an interruption in service, the Contractor shall contact the Owner of the water main and they shall mutually agree upon a date and a time for connections which will allow ample time to perform the work required in order to make the required connection. Notifications of all users to be affected by the interruption shall be provided a minimum of twenty-four (24) hours prior to the service interruption. All water mains opened to atmosphere must be disinfected prior to returning the water main to service.
- Water Main and related appurtenances shall be tested in accordance with the following:
 - All water mains shall be tested by means of a pressure test and leakage test, in accordance with the "Standard Specifications for Water and Sewer Construction", latest edition, AWWA C600, and in accordance with applicable Jurisdictional Agency requirements.
 - All water structures (i.e., valve vaults) shall be subject to a leakage test in accordance with IEPA guidelines and Jurisdictional Agency requirements.
- After completion of the water main testing, the water mains and related appurtenances shall be flushed clean and disinfected (chlorinated) in accordance with the "Standard Specifications for Water and Sewer Construction", latest edition and in accordance with applicable Jurisdictional Agency requirements.

WATER MAIN PROTECTION REQUIREMENTS

Water mains, water services and related appurtenances shall be protected from any existing or proposed drains, sanitary sewers, storm sewers, combined sewer force mains, and sewer service lines. The previously mentioned items shall collectively be referred to as "sewer(s)" for the remainder of this section. Horizontal and vertical separation requirements between water mains and sewers as well as other water main protection requirements shall be in accordance with "Standard Specifications for Water and Sewer Construction in Illinois", latest edition and per the following:

- Horizontal Separation:
 - Whenever possible, an existing or proposed water main must be at least ten (10) feet horizontally from any existing or proposed drain, storm sewer, sanitary sewer, combined sewer or sewer service.
 - Should local conditions exist which would prevent a lateral separation of ten (10) feet, an existing or proposed water main may be closer than ten (10) feet to a sewer provided that the water main invert is at least eighteen (18) inches above the crown of the sewer, and is either in a separate trench or in the same trench on an undisturbed earth shelf located to one side of the sewer.
 - If it is impossible to obtain proper horizontal and vertical separation as described in Items 1a and 1b above, both the water main and sewer must be constructed of pipe and joint material that conforms to water main quality pipe and joint standards, and be pressure tested to the maximum expected surcharge head to assure water tightness before backfilling.
- Vertical Separation:
 - Whenever water mains cross sewers, the water main shall be laid at such an elevation that the invert of the water main is at least eighteen (18) inches above the crown of the sewer. This vertical separation shall be maintained for that portion of the water main located within ten (10) feet horizontally of any sewer crossing. This must be measured as the perpendicular distance from the water main to the sewer. A length of water main pipe shall be centered over the sewer to be crossed with joints placed equidistant from the sewer.
 - Where conditions exist that the minimum vertical separation set forth in Item 2a above cannot be maintained, or it is necessary for the water main to pass under a sewer, one of the following two measures must be taken:
 - The water main shall be installed within a PVC casing pipe that conforms to water main quality pipe and joint standards and the casing pipe shall extend on each side of the crossing until the normal distance from the water main to the sewer is at least ten (10) feet.
 - The involved sewer shall be constructed of pipe and joint material which would conform to water main quality pipe and joint standards until the normal distance on either side of the crossing from the water main to the sewer is at least ten (10) feet.
 - In making such crossings, a length of water main pipe shall be centered over the sewer to be crossed with joints equidistant from the sewer. Where a water main must cross under a sewer, a vertical separation of eighteen (18) inches between the invert of the sewer and the crown of the water main shall be maintained, along with means to support the sewer to prevent their settling and breaking the water main.
- The horizontal and vertical separation between water service lines and sewers or related service lines should be the same as for water mains, as detailed above, except that when minimum horizontal and vertical separation cannot be maintained, water main quality pipe and joints as described under Vertical Separation above, may be used for sewer or related service lines.
- Water mains or services shall not be allowed to pass through or come into contact with sewer structures.
- Water mains shall be separated from septic tanks, disposal fields, seepage beds, and sewage lift stations by a minimum of twenty-five (25) feet.
- Water mains shall be separated from sanitary sewer force mains by a minimum of at least ten (10) feet horizontally and there shall be an eighteen (18) inch vertical separation at crossings.
- The Contractor shall protect water mains and service lines from the entrance of hydrocarbons through diffusion through any material used in the construction of the line.
- Casing pipe shall be installed in locations and of material specified on the Plans or where necessary to meet the water main protection requirements. The carrier pipe shall be securely blocked and banded with appropriately spaced sand, clean and sanitary and storm sewers shall maintain the specified gradient. Upon installing the carrier pipe the voids between the casing and carrier pipe shall be filled with sand, pea gravel or flowable fill and the ends shall be sealed.

PAVEMENT, CURB & GUTTER, AND WALKS

- All work under this Section shall be performed in accordance the IDOT Standard Specifications or as specified in the Plans.
- Concrete curb or curb and gutter shall be constructed in accordance with the Plans and Section 606 of the IDOT Standard Specifications. A 1/2" pre-molded fiber filler shall be placed in the concrete at (#4) epoxy coated smooth round dowel bars with greased end caps, centered on joint, shall be provided at expansion joints. Expansion joints shall be provided at a maximum of sixty (60) foot intervals and at all points of curvature and tangency, curb returns, five (5) feet either side of edge of structures, and at the end of each pour. Construction joints shall be provided at maximum twenty (20) foot intervals.
- Where proposed curb or curb and gutter connects to an existing curb or curb and gutter, the existing curb or curb and gutter shall be saw-cut and then two 18" long x 1/2" (#4) epoxy coated smooth round dowel bars with greased end caps shall be drilled and installed nine (9) inches into the existing and proposed curb. Bars shall be installed in a location similar to that of the expansion joint in the curb or gutter as applicable.
- All curb and gutter constructed over a utility trench shall be reinforced with two (2) #4 epoxy coated reinforcing bars for a length of ten (10) feet centered over the trench or as shown on the plans.
- Reversed pitched curb and gutter shall be installed in areas where pavement slopes away from the curb.
- Sidewalks and walks shall be constructed in accordance with the Plans and Section 424 of the IDOT Standard Specifications. Concrete sidewalks and walks shall be thickened to a minimum of 6" at all driveways. All sidewalks and walks shall be IDOT Portland Cement Concrete, Class SI, on compacted aggregate base course as shown on the Plans. Scored contraction joints shall be provided at five (5) foot intervals or as specified in the Plans. Expansion joints consisting of a 1/2" pre-molded fiber joint filler shall be provided at maximum fifty (50) foot intervals, and adjacent to concrete curbs, drives, foundations, ramps, etc. as well as when crossing existing concrete walls.
- Sidewalks and walks constructed over a utility trench shall be reinforced with three (3) #4 round epoxy coated reinforcing bars for a length of ten (10) feet centered over the utility trench or as shown on the plans.
- Curb ramps accessible to the disabled with raised truncated dome detectable warning surface of standard brick red color or other contrasting color shall be provided at locations where sidewalks meets curb and at other locations shown on the Plans in accordance with the Illinois Accessibility Code (IAC), latest edition and IDOT Standard 424001, latest revision.
- Curing and protection of all exposed concrete surfaces shall be in accordance with the IDOT Standard

- Specifications. No "honey-combing" or other similar failures of the concrete surfaces will be accepted.
- Aggregate base course shall be in accordance with the Plans and Section 351 of the IDOT Standard Specifications. Aggregate base course material shall be CA-6, Type B, 100% crushed gravel conforming to Section 1004 of the IDOT Standard Specifications.
- Bituminous binder and surface courses shall be Hot Mix Asphalt (HMA) of type and compacted thickness as specified in the Plans and shall be constructed in accordance with Section 406 of the IDOT Standard Specifications. The surface course shall be made with virgin materials; no recycled material shall be allowed unless specifically approved otherwise on the Plans. The Contractor shall provide and pay for the services of a competent paving laboratory to design and supervise the control of the paving mixture. All paving materials and mixes shall be IDOT certified.
- Portland cement concrete (PCC) pavement shall be Class PV with reinforcement as specified on Plans and be constructed in accordance with Section 420 of the IDOT Standard Specifications.
- All concrete work shall be finished with a broom finish unless specified otherwise in the Plans.
- The Contractor shall saw-cut the exposed edges of all existing pavement adjacent to any proposed pavement, apron, sidewalk, curb and gutter or similar to provide a smooth, clean edge that is free of loose material. A proper transition butt joint and/or taper shall also be provided as necessary. Refer to butt joint detail for additional information.
- The testing of the subgrade, aggregate base course, bituminous aggregate material, binder course, surface course, and concrete work shall be required and be performed in accordance with the IDOT Standard Specifications and requirements of the applicable Jurisdictional Agency. A qualified testing firm shall be employed to perform the required tests, ensure quality and conformance, and provide the results to the Engineer, Owner, and Jurisdictional Agency. The Contractor shall provide the Owner with a construction schedule and shall coordinate all required testing with the testing firm.
- Prior to the commencement of any paving activities, a proof-roll must be performed by the Contractor and approved by the Village/City or applicable Jurisdictional Agency, and the Owner. All areas not passing the proof-roll shall be remediated as recommended by the Soils/Geotechnical Engineer and approved by the Owner. Any remediate areas shall be re-tested.
- Prior to installation of the aggregate base course:
 - The subgrade shall be prepared in accordance with Section 301 of the IDOT Standard Specifications.
 - The Contractor shall be responsible for all subgrade compaction and preparation to within 0.1-ft of the proposed subgrade elevation. Subgrade shall be compacted to a minimum 95% of the modified proctor density in accordance with ASTM D1557.
 - Sub-grade shall pass a proof-roll and any unsuitable areas in the subgrade shall be remediated as recommended by the Soils/Geotechnical Engineer and approved by the Owner.
- Prior to the installation of the binder course:
 - The aggregate base course shall be prepared in accordance with Section 351 of the IDOT Standard Specifications.
 - The binder course shall be placed only when the temperature in the shade is at least 40° F and the forecast is for rising temperatures.
- Prior to the installation of the surface course:
 - The Contractor shall patch and repair all damaged and failed areas in the binder course to the satisfaction of the Village/City or applicable Jurisdictional Agency, and the Owner.
 - The Contractor shall repair all damaged curb and gutter or other concrete pavement to the satisfaction of the Village/City or applicable Jurisdictional Agency, and the Owner.
 - Structures within pavement shall be adjusted to final surface grade.
 - The Contractor shall clean and prime the binder course at a rate of 0.05 gallons per square yard prior to the placement of the surface course.
 - The surface course shall be placed only when the air temperature in the shade is at least 45° F and the forecast is for rising temperatures.
- Pavement marking/stripping:
 - All Pavement markings shall be in accordance with Section 780 of the IDOT Standard Specifications and the MUTCD, and be of the material type, size and color specified on the Plans.
 - Pavement marking on freeways shall be placed with truck-mounted equipment. Markings on roads other than freeways may be placed with either truck-mounted or hand-operated equipment.
 - Before applying the pavement marking material, the pavement shall be clean, dry, and free of debris or any other material that would reduce the adhesion of the markings on the pavement.
 - Pavement markings shall be applied in accordance with the manufacturer's recommended instructions.
 - Painted markings shall be uniform and have clean, straight edges.
 - Pavement marking words and symbols shall conform closely to the dimensions and spacing specified in the MUTCD, IDOT Standard Details, and the Plans.
 - Deviations from the required dimensions and spacing or other departures from reasonable standards of professionalism will be cause for rejection by the Engineer.
- Handicapped stalls shall be striped and signed in accordance with the Illinois Accessibility Code (IAC), latest edition and any other applicable ADA guidelines. Handicapped stalls shall be a minimum of sixteen (16) feet wide and signage shall be affixed to a post permanently mounted in the ground or wall and located in the center of the space no further than five (5) feet from the front of the accessible space. The minimum height to the bottom of the fine sign shall be four (4) feet. Handicapped stall surfaces shall be yellow color.
- All signs shall be in accordance with Section 720 of the IDOT Standard Specifications and the MUTCD, and be of the material type, size, and color specified on the Plans.
- Raised reflective pavement markers shall be in accordance with Section 781 of the IDOT Standard Specifications and be recessed into the pavement as required by the applicable Jurisdictional Agency.
- Pavement marking and marker removal shall be in accordance with Section 783 of the IDOT Standard Specifications.
- All pavements, curb, curb and gutters, walks, etc. shall be cleaned to the satisfaction of the Village/City or applicable Jurisdictional Agency, Owner, and Engineer as necessary during construction and at the end of the project prior to the final acceptance.

SOIL EROSION AND SEDIMENTATION CONTROL GENERAL NOTES

- All soil erosion and sedimentation control (SESC) measures shall be installed and properly maintained in accordance with the Illinois Environmental Protection Agency's (IEPA) "Illinois Urban Manual", latest edition and Illinois Department of Transportation and Standards for Urban Soil Erosion and Sedimentation Control, latest edition, and shall be followed as directed by the Village/City and Engineer. In addition, on sites that will ultimately result in the disturbance of one (1) acre or more the provisions outlined in the General National Pollutant Discharge Elimination System (NPDES) General Permit No. ILR10, latest edition, shall also be followed.
- Prior to commencement of construction, on sites that will ultimately result in the disturbance of one (1) acre or more, the Contractor shall be responsible for obtaining a copy of the notice of coverage letter and the IEPA National Pollutant Discharge Elimination System (NPDES) General Permit ILR10 from the Owner. The Owner together along with the Contractor and/or other entities if so designated by the Owner, shall be responsible for ensuring that all the requirements of the General Permit and the Storm Water Pollution Prevention Act (SWPPP) including but not limited to the installation, maintenance, as well as the installation of any additional measures necessary that may be required, and inspections of the soil erosion and sediment control measures as well as completing all of the necessary applicable certifications, reports, logs, etc. Inspections are required to be performed at least once every seven (7) calendar days and within 24 hours of the end of a storm event of 0.5 inches of rain (or equivalent snowfall) or greater. The SWPPP and all the required paperwork shall be kept on-site and be organized and ready for viewing.
- All erosion control measures are to be installed prior to any demolition, earth moving activities or other disturbance.
- Soil Erosion Control measures shall include the provision of an erosion control fence as required along the area of disturbance, a stabilized construction entrance, and sediment traps or other inlet protection method at each inlet or catch basin.
- Contractor to establish a temporary stabilized construction entrance as well as install all perimeter silt fence prior to the start of any clearing or grading activities.
- Temporary gravel stabilized construction entrance shall be maintained, adjusted, and/or relocated as necessary to prevent mud and other debris from being tracked onto adjacent public roadways. Any mud or other debris being tracked onto a public road shall be properly removed as soon as practical, but before the end of each working day.
- After the start of mass grading and before all storm water conveyance improvements are in place and functional, all on-site storm water shall be temporarily diverted into the detention basin or a properly constructed temporary sedimentation basin or collection device, as per local requirements, so as to prevent erosion and sedimentation from moving onto adjacent property.
- Disturbed areas shall be stabilized by seeding within seven (7) calendar days of the completion of disturbance. If construction activity on a portion of the site is to resume within fourteen (14) calendar days of the end of the last disturbance, then stabilization measures do not have to be initiated on that portion of the site by the 7th day after the completion of said disturbance. Areas with slopes 3H:1V or greater shall be stabilized with erosion control blankets or mats in addition to seeding.
- The Contractor shall provide adequate planning and supervision during the project construction period for implementing construction methods, processes and cleanup procedures necessary to prevent water pollution and control erosion.
- No sediment or debris shall be allowed to enter the existing storm sewer system or flow off-site.
- All temporary erosion and sedimentation control measures shall be maintained, repaired and/or replaced as necessary to ensure effective performance. If required, a designated erosion control inspector shall inspect all measures every seven (7) calendar days, or within twenty-four (24) hours of a 0.5-inch rain event or equivalent snowfall, and report where items are in non-compliance. Otherwise, the Contractor shall be responsible for the inspection as well as maintenance of all measures and shall be subject to the terms of Federal, State, and local requirements.
- All temporary erosion and sedimentation control measures are to remain in place and be functioning until final stabilization. After final stabilization, the Contractor is to remove and properly dispose of all erosion and sedimentation measures according to Jurisdictional Agency requirements within thirty (30) days. All disturbed areas or trapped sediment that accumulates from said measures shall be permanently stabilized.
- Topsoil stockpiles shall not be located in flood prone areas or buffers protecting wetlands, or waters of

- the United States or County. Stockpiles shall be protected from erosion by installing silt fence around the perimeter of the stockpile(s). Stockpiles shall be seeded within seven (7) calendar days of completion.
- If dewatering services are used, adjoining properties and discharge locations shall be protected from erosion. Discharges shall be routed through an effective sediment control measure (i.e., sediment Trap, sediment Basin, or other appropriate measure).
- All storm sewers, drainage structures, catch basin sumps and/or retention/detention/sedimentation basins provided within this project are to be cleaned at the end of construction and prior to final acceptance. Cleaning may also be required during the course of construction if it is determined that the structures are not properly functioning and their performance is impaired.
- Storm water conveyance swales, channels, streams or similar, if disturbed, are to be stabilized within 48 hours after the end of active disturbance.
- All concrete work shall be finished with a broom finish unless specified otherwise in the Plans. The Contractor shall inspect catch basins and clean out as if necessary. The contractor shall use silt/erosion control fence staked in place to prevent siltation of all drainage structures.
- The Contractor shall water the site, as required during dry weather to control dust.
- Erosion Control Maintenance and Replacement Notes:
 - Silt fences are to be cleaned as required during the course of the construction of the project or if the Engineer determines that they are not properly functioning and their performance is impaired.
 - Sediment traps and basins shall be inspected immediately after each rainfall and at least daily during prolonged rainfall. Any required repairs shall be made immediately.
 - Should the fabric decomposed or become ineffective prior to the end of the expected life and the barrier still be necessary, the fabric shall be replaced promptly.
 - Sediment deposits should be removed after each storm event. They must be removed when deposits reach approximately half the height of the barrier.
 - Mud or dust which is deposited on adjacent roadways shall be removed at the end of each day.
- The sediment and erosion control measures indicated on the plans are the minimum requirements. Additional measures may be required, as directed by the Engineer or Jurisdictional Agency.
- The Contractor shall assume responsibility for maintenance of all soil erosion and sedimentation control measures during and after construction. However, the Contractor shall not transfer these improvements for the purpose of maintenance until they have completed with the above and until they have received final inspection and approval from the Jurisdictional Agency or designated erosion control inspector and a Notice of Termination has been filed (NOT).
- The work shall generally follow the following typical Construction Sequencing:
 - Installation of them soil erosion and sediment control (SE/SC) measures:
 - Selective vegetation removal for silt fence installation
 - Silt fence installation
 - Construction fencing around areas not to be disturbed
 - Stabilized construction entrance
 - Install tree protection fencing and tree removal where necessary (clear & grub)
 - Construct sediment trapping devices (sediment traps, basins, etc.)
 - Construct detention facilities and outlet control structure with restrictor.
 - Strip and stockpile topsoil and mass grade the site
 - Temporarily stabilize topsoil stockpiles (seed and silt fence around toe of slope)
 - Install sanitary sewer, storm sewer, watermain and associated inlet & outlet protection
 - Permanently stabilize detention basins with seed and erosion control blanket
 - Temporarily stabilize all areas including lots that have reached temporary grade
 - Install roadways, parking areas, etc.
 - Final grade and permanently stabilize all outlot areas with topsoil and seed
 - Install structures and grade individual lots
 - Permanently stabilize site with topsoil and seed
 - Remove all temporary SE/SC measures after the site is stabilized with vegetation



Scale: 1" = 20'

Lot 6
COUNTY CLERK'S
ASSESSMENT DIVISION
Rec. July 3, 1906 As Doc. No. 88052

CP# 603
Cross Notch
N: 1897333.8230
E: 1055608.9349
Elev.: 745.02

Ex Sfm MH
Rim 743.35
Inv 738.45 (12" VCP N)
737.50 (12" RCP N)
738.30 (12" PVC S)
738.00 (15" PVC SW)

Ex Sfm MH
Rim 742.97
Inv 731.46 (12" RCP E)
731.46 (42" RCP SW)
----- (15" PVC N) Not Visible

CP# 4094
Site BM
N: 1897289.9969
E: 1055963.6988
Elev.: 745.96

Ex Sfm MH
Rim 742.89
Inv 732.87 (18" RCP N)
732.87 (18" RCP S)
738.22 (12" PVC SE)
736.87 (12" PVC SW)

Ex Inlet
Rim 742.94
Inv 737.24 (12" PVC E)
No Visual to Many Rings

Ex Valve Vault
Rim 743.36
T/P XXX XX 16" DIP N.E.W.

Ex Sfm MH
Rim 749.81
Inv 736.81 (18" RCP N.S)
745.31 (6" PVC SW)
741.81 (8" PVC SE)

Ex San MH
Rim 751.16
Inv 742.95 (8" PVC N.S)

CP# 4522
Site BM
N: 1897056.2800
E: 1055923.6892
Elev.: 753.46

Lot 1
ST. PETRONILLE CHURCH
CONSOLIDATION
Rec. July 11, 2012 As Doc. No. R2012-089398

CP# 602
Cross Notch
N: 1897051.6173
E: 1055554.1047
Elev.: 748.46

Water Service per 2008 Street
Improvements Record Drawing
Sanitary Service per 2008 Street
Improvements Record Drawing

Village Review
05-31-2019

Village Review
04-29-2019

No. 1
Date

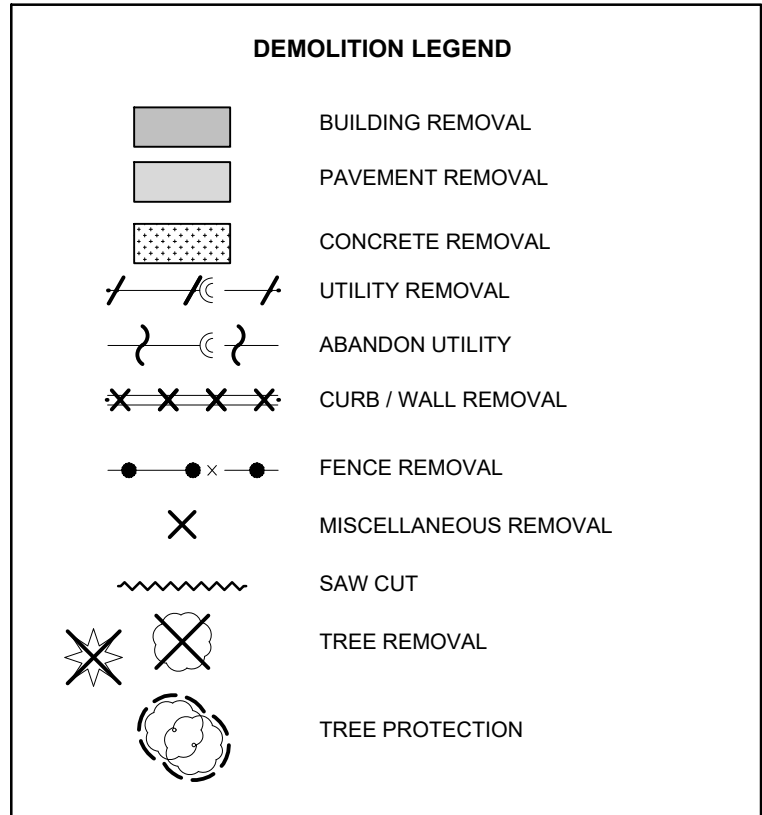
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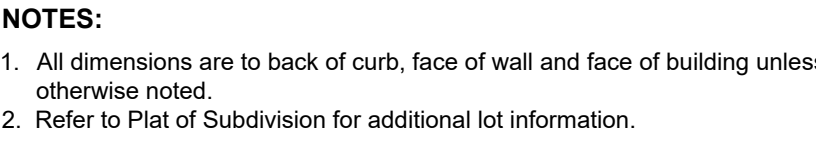
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EXISTING CONDITIONS SITE PLAN
AVERE ON DUANE
SITE IMPROVEMENT PLANS
GLEN ELYN, ILLINOIS

Project Manager: K M L
Engineer: K M L
Date: 03-22-2019
Project No. 17189
Sheet C3.0

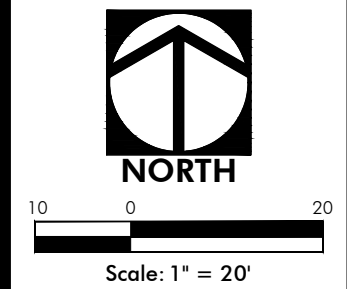


C4.0 /



Lot 6
COUNTY CLERK'S
ASSESSMENT DIVISION
Rec. July 3, 1906 As Doc. No. 88052

GRADING LEGEND	
C	Back of Curb Elevation
G	Gutter Flow Line Elevation
W	Sidewalk Elevation
P	Pavement Elevation
TW	Top of Retaining Wall Elevation
BW	Bottom of Retaining Wall Elevation
ETW	Top of Existing Retaining Wall Elevation



AVERAGE EXISTING GRADE	
Bldg Location	Elevation
NW Corner	743.0
SW Corner	743.8
NE Corner	743.7
SE Corner	746.1
Average Existing Grade	744.15

NOTES:
1. Based on information provided on the Flood Insurance Rate Map Community in DuPage County - Panel Nos. 17043C0064J and 17043C0152J date pending August 1, 2019 produced by the Federal Emergency Management Agency (FEMA) for DuPage County, Illinois, the property shown and described hereon is located within Zone X, which is defined by FEMA as "Areas determined to be outside the 0.2% annual chance floodplain."

PROPOSED BUILDING
F.F. 753.65
G.F. 742.65

SE CORNER DUANE & MELROSE GRADING DETAIL
Scale: 1"=10'

SW CORNER DUANE & PROSPECT GRADING DETAIL
Scale: 1"=10'

GARAGE ENTRANCE GRADING DETAIL
Scale: 1"=10'

FRONT ENTRANCE GRADING DETAIL
Scale: 1"=10'

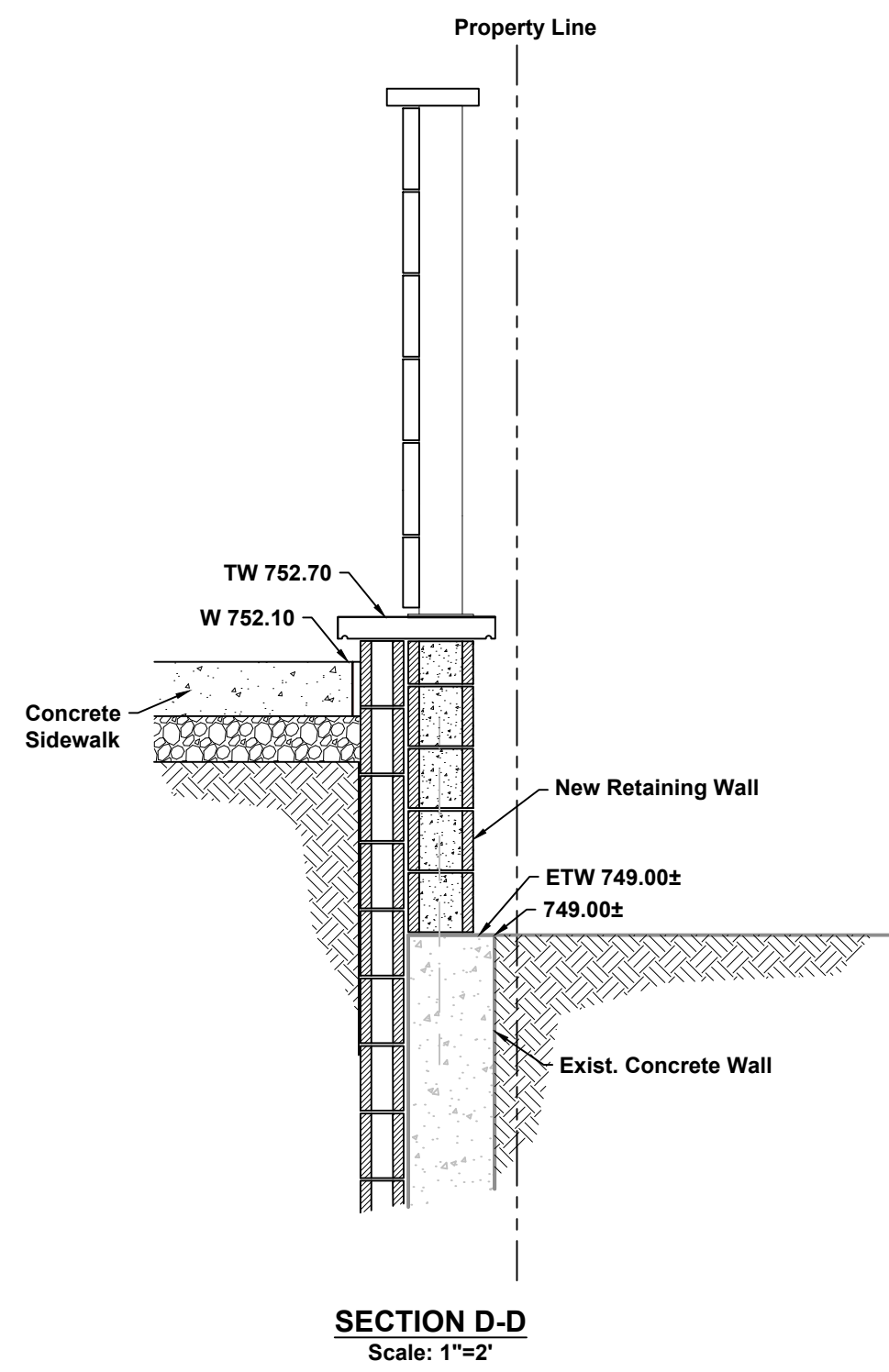
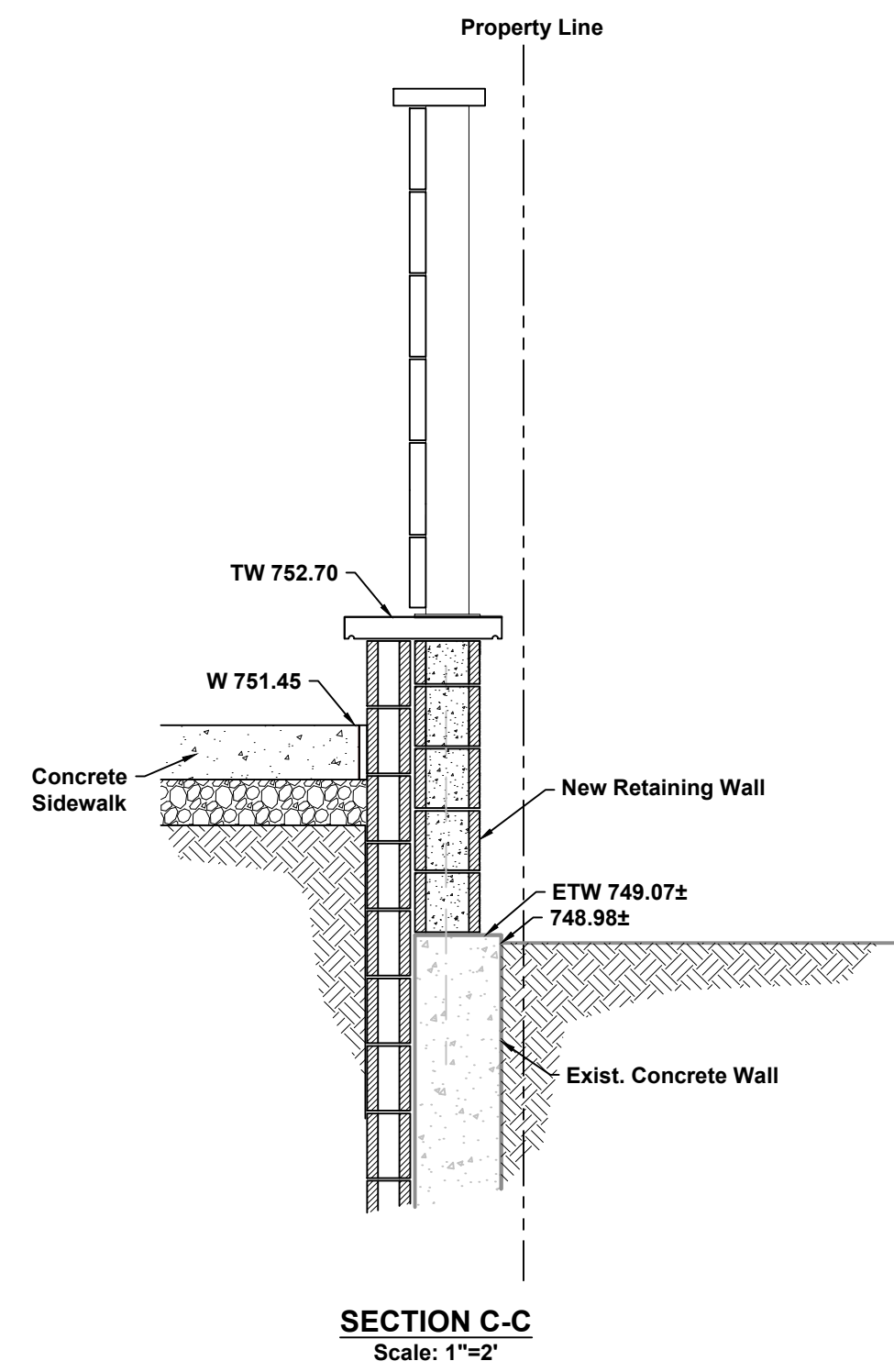
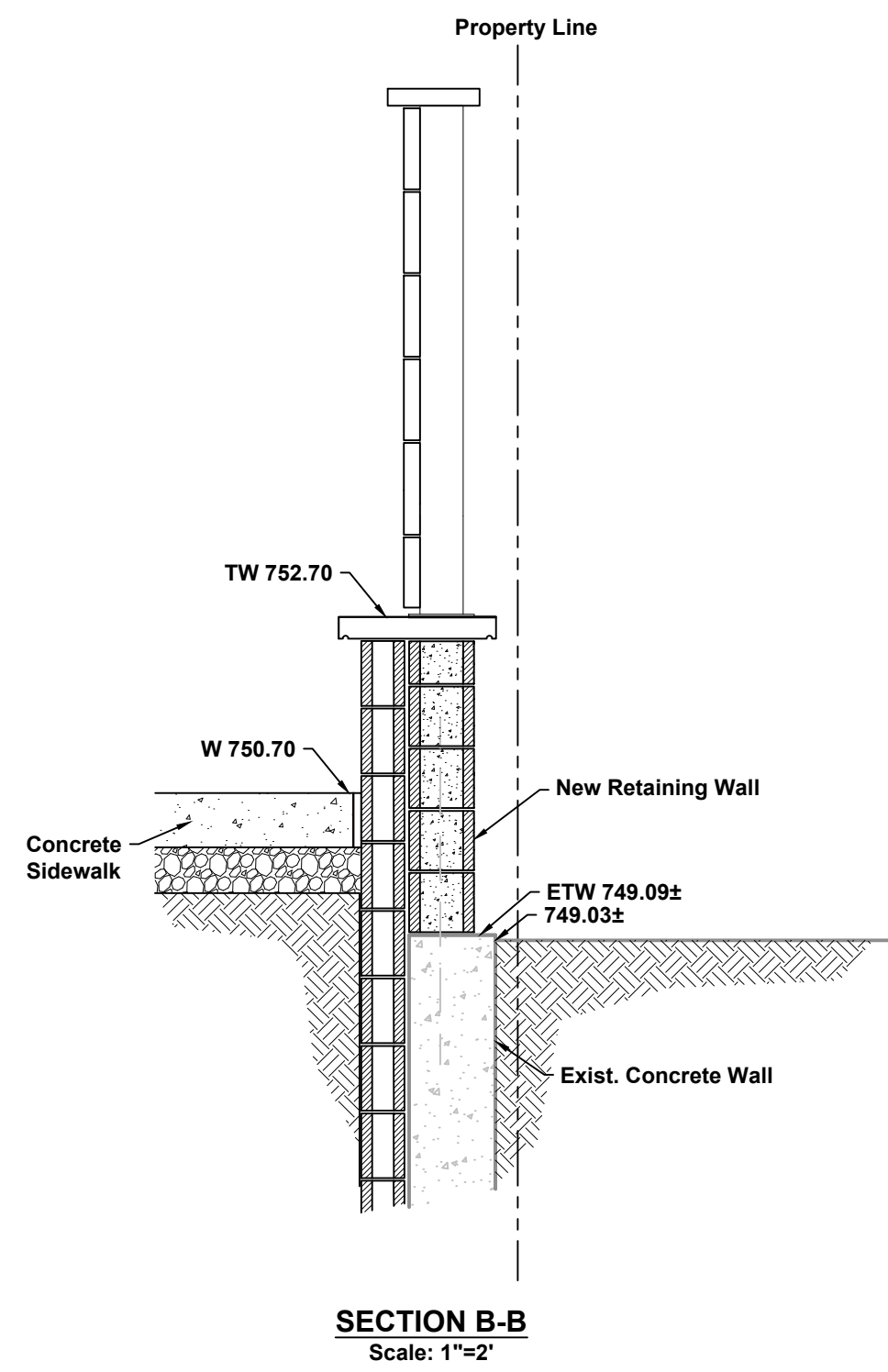
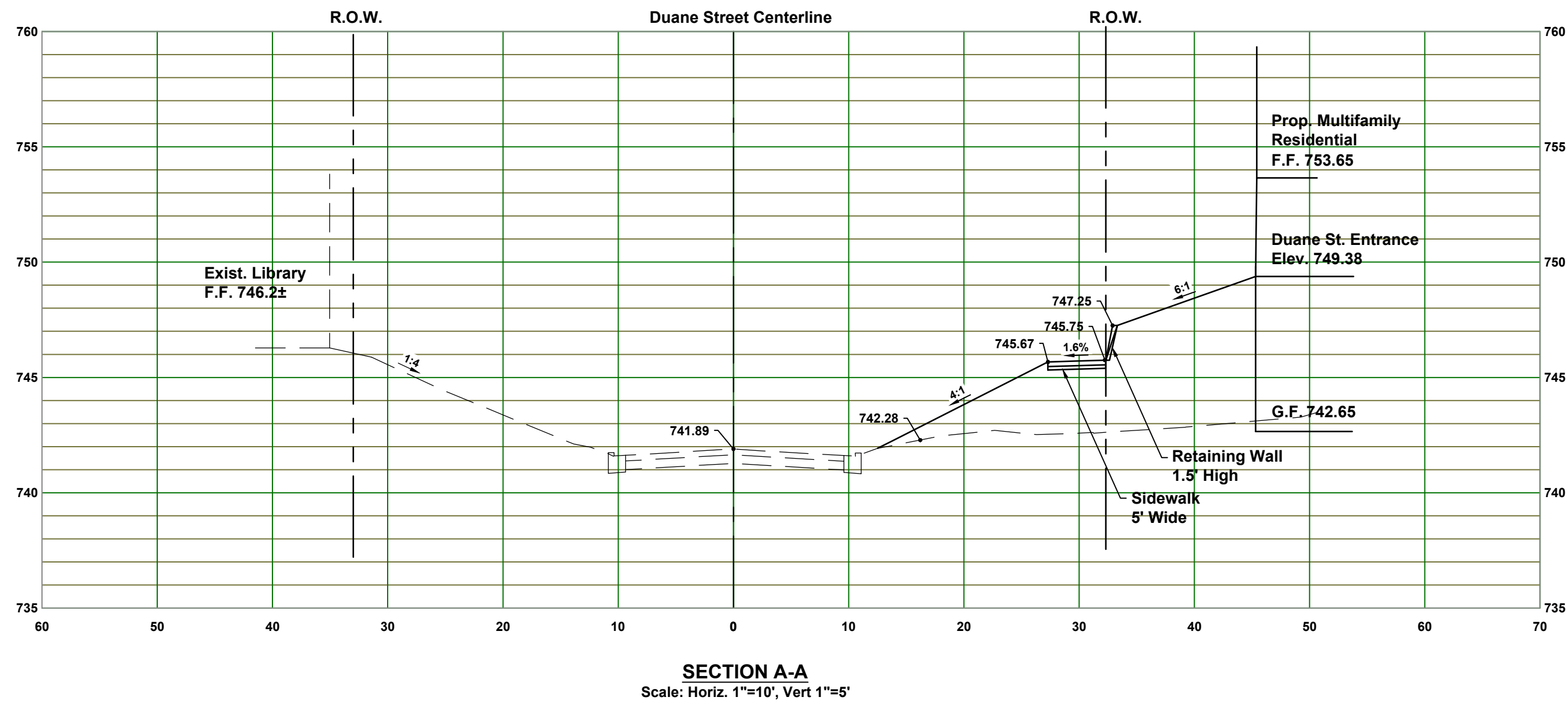
DRIVEWAY GRADING DETAIL
Scale: 1"=10'

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GRADING PLAN
AVERE ON DUANE
SITE IMPROVEMENT PLANS
GLEN ELYN, ILLINOIS

Project Manager: K M L
Engineer: K M L
Date: 03-22-2019
Project No. 17189
Sheet **C6.0**

Attachment: 10. Final Engineering Plans (4023: Avere on Duane - PUD, SUP, ZMA, SV)



CROSS SECTIONS

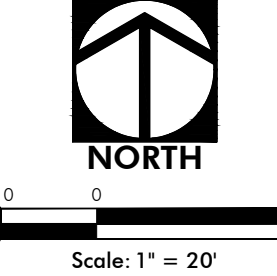
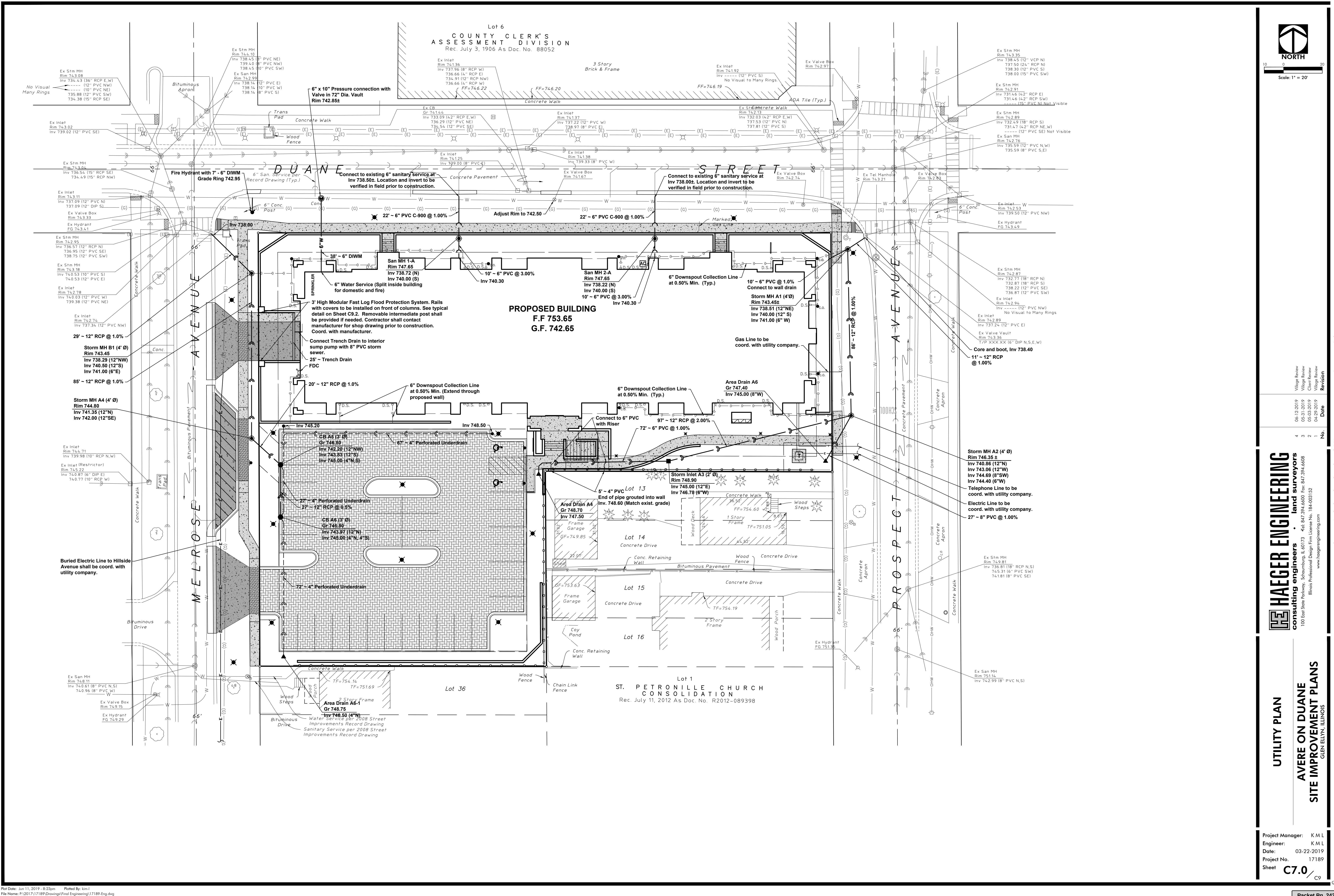
AVERE ON DUANE
SITE IMPROVEMENT PLANS
GLEN ELYN, ILLINOIS

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No.	Date	Revision
4	06-12-2019	Village Review
3	05-31-2019	Village Review
2	05-03-2019	Client Review
1	04-29-2019	Village Review

Attachment: 10. Final Engineering Plans (4023 - Avere on Duane - PUD, SUP, ZMA, SV)

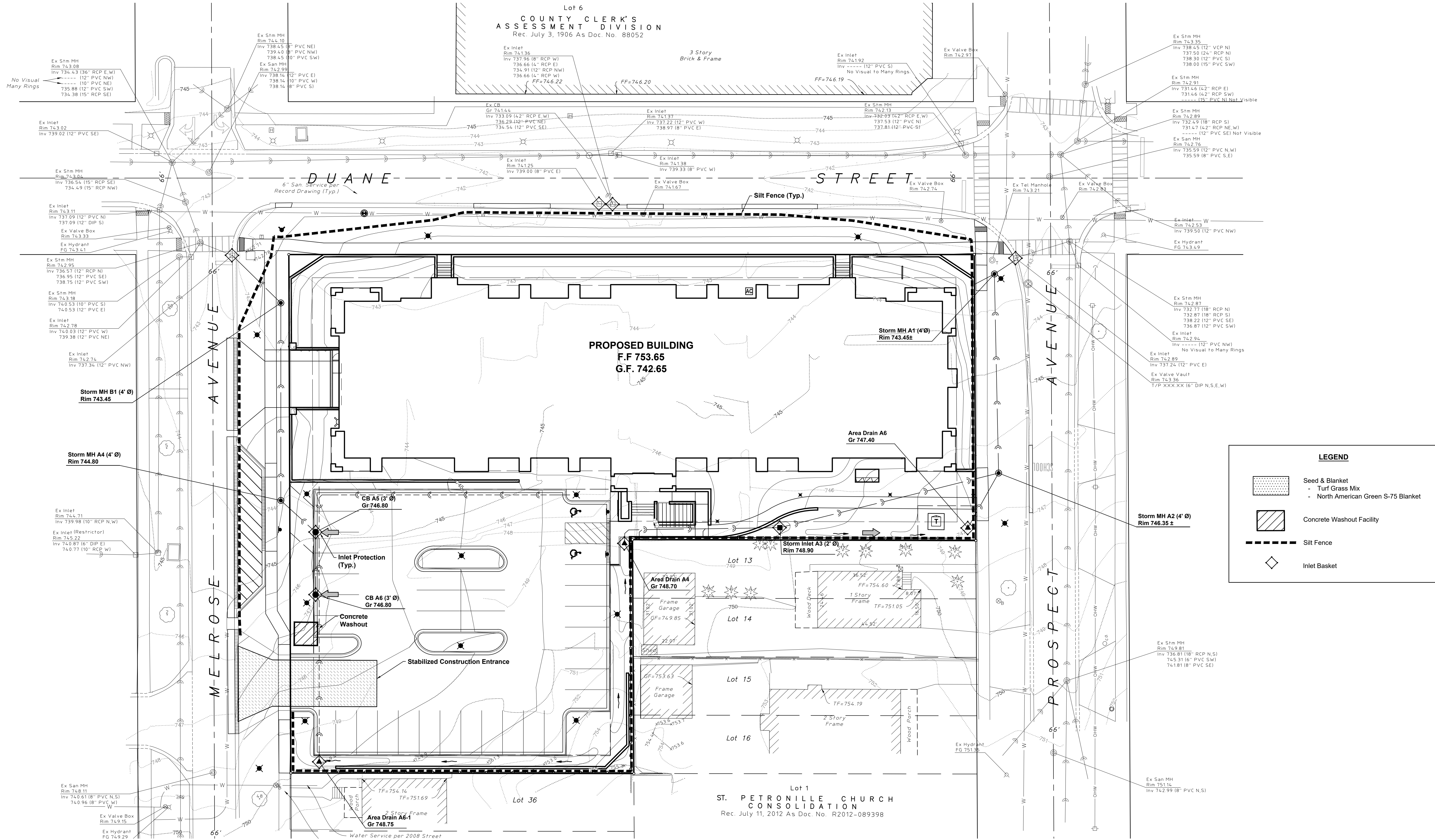
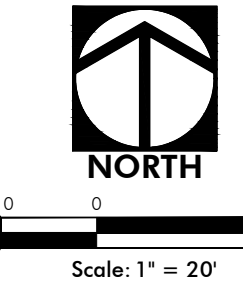
Project Manager: K M L
Engineer: K M L
Date: 03-22-2019
Project No. 17189
Sheet



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UTILITY PLAN
AVERE ON DUANE
SITE IMPROVEMENT PLANS
GLEN ELYN, ILLINOIS

Project Manager: K M L
Engineer: K M L
Date: 03-22-2019
Project No. 17189
Sheet **C7.0**



LEGEND

- Seed & Blanket
 - Turf Grass Mix
 - North American Green S-75 Blanket
- Concrete Washout Facility
- Silt Fence
- Inlet Basket

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STORMWATER POLLUTION PREVENTION PLAN
AVERE ON DUANE
SITE IMPROVEMENT PLANS
GLEN ELYN, ILLINOIS

Project Manager: K M L
Engineer: K M L
Date: 03-22-2019
Project No. 17189
Sheet **C8.0**

Attachment: 10. Final Engineering Plans (4023 - Avere on Duane - PUD, SUP, ZMA, SV)

Stormwater Pollution Prevention Plan

This plan has been prepared to comply with the provisions of the NPDES Permit Number ILR10AL46, issued by the Illinois Environmental Protection Agency for storm water discharges from Construction Site Activities.

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

Owner's Name _____ Signature _____
Title _____ Date _____
Name of Firm/Company _____

I. Site Description:

A. The following is a description of the project location:

The project is located at the southwest corner of Duane Street and Prospect Avenue in Glen Ellyn, IL, in Section 11, Township 39 North, Range 10 East all in DuPage County, Illinois.

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

Redevelopment of the entire site to accommodate a multi-family development with drive aisles, parking, and related improvements to utilities including storm sewer, sanitary sewer, and water main.

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

Exact phasing and sequencing has yet to be determined. Generally, trees will be removed as required, and then clearing and grubbing will occur. Next, mass grading will commence for the building pad and parking areas. Then the underground utilities will be constructed. Finally, the buildings, parking lots, etc. will be constructed, followed by the installation of landscaping.

D. The total area of the construction site is estimated to be approximately ± 1.18 acres.

E. The following is a description of potentially erosive areas associated with this project:

Areas with side slopes exceeding 3:1 slopes. Although slopes in excess of 3:1 are not proposed, the Contractor shall monitor the slopes and provide stabilization and/or protection as necessary.

F. The following is a description of soil disturbing activities, their locations, and their erosive factors (e.g. steepness of slopes, length of slopes, etc):

The soil disturbing activities consist of grading and general infrastructure improvements over the entire site. The Contractor shall be responsible for maintaining all disturbances within the site, and shall protect all off-site areas as needed.

G. See the erosion control plans and/or drainage plans for this contract for information regarding drainage patterns, approximate slopes anticipated before and after major grading activities, locations where vehicles enter or exit the site and controls to prevent offsite sediment tracking (to be added after contractor identifies locations), areas of soil disturbance, the location of major structural and non-structural controls identified in the plan, the location of areas where stabilization practices are expected to occur, surface waters (including wetlands) and locations where storm water is discharged to surface water including wetlands.

H. The following pollutants of concern will be associated with this construction project:

Soil sediment and dust, and construction of bituminous pavement.

II. Controls:

This section of the plan addresses the controls that will be implemented for each of the major construction activities described in I.C. above and for all use areas, borrow sites, and waste sites. For each measure discussed, the contractor will be responsible for its implementation as indicated. The contractor shall provide to the resident engineer a plan for the implementation of the measures indicated. The contractor, and subcontractors, will notify the resident engineer of any proposed changes, maintenance, or modifications to keep construction activities compliant with the permit. Each such contractor has signed the required certification on forms which are attached to, and are a part of, this plan.

A. Erosion and Sediment Controls

1. Stabilized Practices: Provided below is a description of interim and permanent stabilization practices, including site specific scheduling of the implementation of the practices. Site plans will ensure that existing vegetation is preserved where attainable and disturbed portions of the site will be stabilized. Stabilization practices may include but are not limited to: temporary seeding, permanent seeding, mulching, geotextiles, sodding, vegetative buffer strips, protection of trees, preservation of mature vegetation, and other appropriate measures. Except as provided below in II(A)(1)(a) and II(A)(3), stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 7 days after the construction activity in that portion of the site has temporarily or permanently ceases on all disturbed portions of the site where construction will not occur for a period of 14 or more calendar days.

a. Where the initiation of stabilization measures by the 7th day after construction activity temporarily or permanently ceases is precluded by snow cover, stabilization measures shall be initiated as soon as practicable thereafter.

The following Stabilization Practices will be used for this project: Temporary blanket & seeding, permanent seeding as shown on the Plans.

Describe how the Stabilization Practices listed above will be utilized: Seed & blanket.

See Storm Water Pollution Prevention (SWPP) Plan. SWPP Plan shall be modified as necessary by the Contractor during construction to prevent sediment from leaving the site or entering the offsite storm sewer.

2. Structural Practices: Provided below is a description of structural practices that will be implemented, to the degree attainable, to divert flows from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Such practices may include but are not limited to: perimeter erosion barrier, earth dikes, drainage swales, sediment traps, ditch checks, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins. The installation of these devices may be subject to Section 404 of the Clean Water Act.

The following Structural Practices will be used for this project: Perimeter erosion control (silt) fence.

Describe how the Structural Practices listed above will be utilized:

See Storm Water Pollution Prevention (SWPP) Plan. SWPP Plan shall be modified as necessary by the Contractor during construction to prevent sediment from leaving the site or entering the offsite wetland.

3. Storm Water Management: Provided below is a description of measures that will be installed during the construction process to control pollutants in storm water discharges that will occur after construction operations have been completed. The installation of these devices may be subject to Section 404 of the Clean Water Act.

a. Such practices may include but are not limited to: storm water detention structures (including wet ponds), storm water retention structures, flow attenuation by use of open vegetated swales and natural depressions, infiltration of runoff on site, and sequential systems (which combine several practices).

The practices selected for implementation were determined on the basis of the technical guidance in Section 59-8 (Erosion and Sediment Control) in Chapter 59 (Landscape Design and Erosion Control) of the Illinois Department of Transportation Bureau of Design and Environment Manual. If practices other than those discussed in Section 59-8 are selected for implementation or if practices are applied to situations different from those covered in Section 59-8, the technical basis for such decisions will be explained below.

b. Velocity dissipation devices will be placed at discharge locations and along the length of any

outfall channel as necessary to provide a non-erosive velocity flow from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g. maintenance of hydrologic conditions such as the hyporheic and hydrodynamics present prior to the initiation of construction activities).

Description of Storm Water Management Controls: Installation of a storm sewer system. All inlets will be protected with silt baskets.

4. Other Controls:

a. Vehicle Entrances and Exits - Stabilized construction entrances and exits must be constructed to prevent tracking of sediments onto roadways.

The contractor will provide the resident engineer with a written plan identifying the location of stabilized entrances and exits and the procedures (s)he will use to construct and maintain them.

b. Material Delivery, Storage, and Use - The following BMPs shall be implemented to help prevent discharges of construction materials during delivery, storage, and use:

- All products delivered to the project site must be properly labeled.
- Water tight shipping containers and/or semi trailers shall be used to store hand tools, small parts, and most construction materials that can be carried by hand, such as paint cans, solvents, and grease.
- A storage/containment facility should be chosen for larger items such as drums and items shipped or stored on pallets. Such material is to be covered by a tin roof or large sheets of plastic to prevent precipitation from coming in contact with the products being stored.
- Large items such as light stands, framing materials and lumber shall be stored in the open in a general storage area. Such material shall be elevated with wood blocks to minimize contact with storm water runoff.
- Spill clean-up materials, material safety data sheets, an inventory of materials, and emergency contact numbers shall be maintained and stored in one designated area and each Contractor is to inform his/her employees and the resident engineer of this location.

c. Stockpile Management - BMPs shall be implemented to reduce or eliminate pollution of storm water from stockpiles of soil and paving materials such as but not limited to portland cement concrete rubble, asphalt concrete, asphalt concrete rubble, aggregate base, aggregate sub base, and pre-mixed aggregate. The following BMPs may be considered:

- Perimeter Erosion Barrier
- Temporary Seeding
- Temporary Mulch
- Plastic Covers
- Soil Binders
- Storm Drain Inlet Protection

The contractor will provide the resident engineer with a written plan of the procedures (s)he will use on the project and how they will be maintained.

d. Waste Disposal. No materials, including building materials, shall be discharged into Waters of the State, except as authorized by a Section 404 permit.

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

f. The contractor shall provide a written and graphic plan to the resident engineer identifying where each of the above areas will be located and how they are to be managed.

5. Approved State or Local Laws

The management practices, controls and provisions contained in this plan will be in accordance with IDOT specifications, which are at least as protective as the requirements contained in the Illinois Environmental Protection Agency's Illinois Urban Manual, 1995. Procedures and requirements specified in applicable sediment and erosion site plans or storm water management plans approved by local officials shall be described or incorporated by reference in the space provided below. Requirements specified in sediment and erosion site plans, site permits, storm water management site plans or site permits approved by local officials that are applicable to protecting surface water resources are, upon submittal of an NOI, to be authorized to discharge under permit ILR10 incorporated by reference and are enforceable under this permit even if they are not specifically included in the plan.

Description of procedures and requirements specified in applicable sediment and erosion site plans or storm water management plans approved by local officials:

See Storm Water Pollution Prevention (SWPP) Plan. SWPP Plan shall be modified as necessary by the Contractor during construction to prevent sediment from leaving the site or entering the offsite storm sewer.

III. Maintenance:

The following is a description of procedures that will be used to maintain, in good and effective operating conditions, the vegetation, erosion and sediment control measures and other protective measures identified in this plan. The resident engineer will provide maintenance guides to the contractor for the practices associated with this project.

All disturbed areas shall be graded to keep runoff and sediment on-site to the greatest extent possible. Site shall be graded in such a manner to direct runoff to storm structures with catch-all inlet protection. Contractor shall maintain, replace, clean, and add additional measures as needed during the progression of construction to prevent sediment, debris, etc from leaving the site.

IV. Inspections:

Qualified personnel shall inspect disturbed areas of the construction site which have not yet been finally stabilized, structural control measures, and locations where vehicles and equipment enter and exit the site. Such inspections shall be conducted at least once every seven (7) calendar days and within 24 hours of the end of a storm that is 0.5 inches or greater or equivalent snowfall.

A. Disturbed areas, use areas (storage of materials, stockpiles, machine maintenance, fueling, etc.), borrow sites, and waste sites shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. Erosion and sediment control measures identified in the plan shall be observed to ensure that they are operating correctly. Discharge locations or points that are accessible, shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters. Locations where vehicles enter or exit the site shall be inspected for evidence of off site sediment tracking.

B. Based on the results of the inspection, the description of potential pollutant sources identified in section I above and pollution prevention measures identified in section II above shall be revised as appropriate as soon as practicable after such inspection. Any changes to this plan resulting from the required inspections shall be implemented within 1/2 hour to 1 week based on the urgency of the situation. The resident engineer will notify the contractor of the time required to implement such actions through the weekly inspection report.

C. A report summarizing the scope of the inspection, name(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of this storm water pollution prevention plan, and actions taken in accordance with section IV(B) shall be made and retained as part of the plan for at least three (3) years after the date of the inspection. The report shall be signed in accordance with Part VI. G of the general permit.

D. If any violation of the provisions of this plan is identified during the conduct of the construction work covered by this plan, the resident engineer shall notify the appropriate EPA Field Operations Section office by email at: epa.swnoncomp@illinois.gov, telephone or fax within 24 hours of the incident. The resident Engineer shall then complete and submit an "Incidence of Noncompliance" (ION) report for the identified violation within 5 days of the incident. The resident engineer shall use forms provided by the Illinois Environmental Protection Agency and shall include specific information on the cause of noncompliance, actions which were taken to prevent any further causes of noncompliance, and a statement detailing any environmental impact which may have resulted from the noncompliance. All reports of noncompliance shall be signed by a responsible authority in accordance with Part VI. G of the general permit.

The Incidence of Non-Compliance shall be mailed to the following address:

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

V. Non-Storm Water Discharges:

Except for flows from fire fighting activities, sources of non-storm water that is combined with storm water discharges associated with the industrial activity addressed in this plan must be described below. Appropriate pollution prevention measures, as described below, will be implemented for the non-storm water component(s) of the discharge.

A. Spill Prevention and Control - BMPs shall be implemented to contain and clean-up spills and prevent

material discharges to the storm drain system. The contractor shall produce a written plan stating how his/her company will prevent, report, and clean up spills and provide a copy to all of his/her employees and the resident engineer. The contractor shall notify all of his/her employees on the proper protocol for reporting spills. The contractor shall notify the resident engineer of any spills immediately.

B. Concrete Residuals and Washout Wastes - The following BMPs shall be implemented to control residual concrete, concrete sediments, and rinse water:

- Temporary Concrete Washout Facilities shall be constructed for rinsing out concrete trucks. Signs shall be installed directing concrete truck drivers where designated washout facilities are located.
- The contractor shall have the location of temporary concrete washout facilities approved by the resident engineer.
- All temporary concrete washout facilities are to be inspected by the contractor after each use and all spills must be reported to the resident engineer and cleaned up immediately.
- Concrete waste solids/liquids shall be disposed of properly.

C. Litter Management - A proper number of dumpsters shall be provided on site to handle debris and litter associated with the project. The Contractor is responsible for ensuring his/her employees place all litter including marking paint cans, soda cans, food wrappers, wood lathe, marking ribbon, construction string, and all other construction related litter in the proper dumpsters.

D. Vehicle and Equipment Cleaning - Vehicles and equipment are to be cleaned in designated areas only, preferably off site.

E. Vehicle and Equipment Fueling - A variety of BMPs can be implemented during fueling of vehicles and equipment to prevent pollution. The contractor shall inform the resident engineer as to which BMPs will be used on the project. The contractor shall inform the resident engineer how (s)he will be informing his/her employees of these BMPs (i.e. signs, training, etc.). Below are a few examples of these BMPs:

- Containment
- Spill Prevention and Control
- Use of Drip Pans and Absorbents
- Automatic Shut-Off Nozzles
- Topping Off Restrictions
- Leak Inspection and Repair

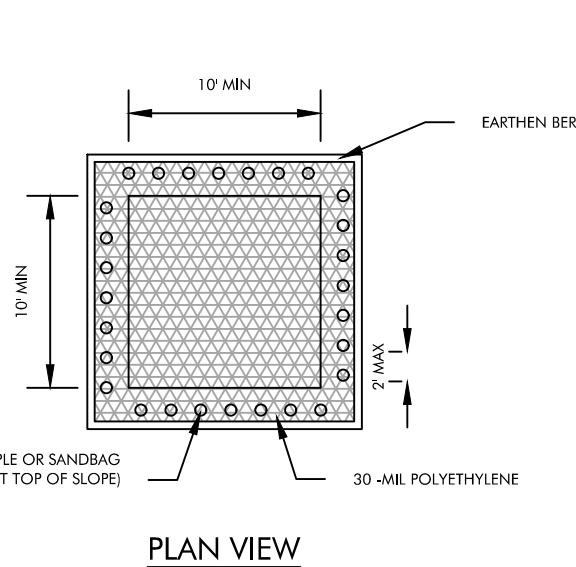
F. Vehicle and Equipment Maintenance - On site maintenance must be performed in accordance with all environmental laws such as proper storage and no dumping of old engine oil or other fluids on site.

VI. Failure to Comply:

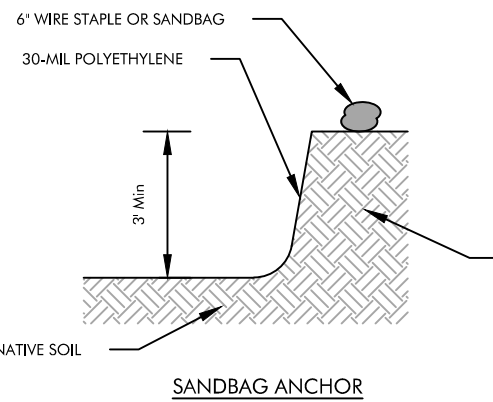
Failure to comply with any provisions of this Storm Water Pollution Prevention Plan will result in the implementation of an Erosion and Sediment Control Deficiency Deduction against the contractor and/or penalties under the NPDES permit which could be passed onto the contractor.

VILLAGE OF GLEN ELLYN EROSION CONTROL NOTES

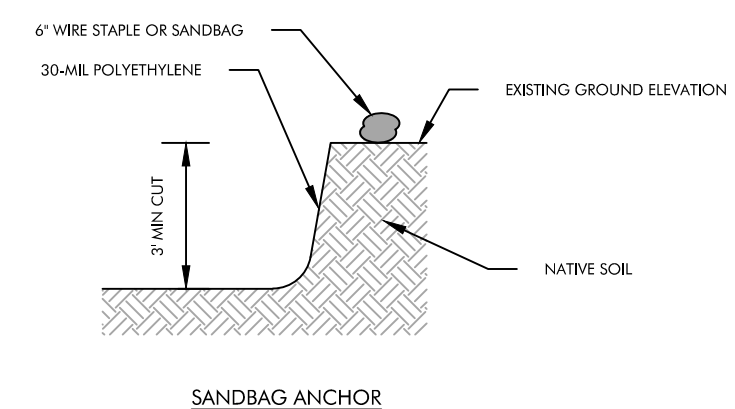
- Sediment and erosion control devices shall be functional before land is otherwise disturbed on the site.
- Vehicular access to the site shall be restricted to a gravel drive. Said gravel drive shall be installed before any construction begins above the top of foundation.
- Any soil, mud, or debris that is washed, tracked, or deposited onto the street shall be removed before the end of each workday.
- The surface of stripped areas shall be permanently or temporarily protected from soil erosion within 15 days after final grade is reached. Stripped areas not at final grade that will remain undisturbed for more than 15 days after initial disturbance shall be protected from erosion.
- If a stockpile is to remain in place for more than three days, then sediment and erosion control shall be provided for such stockpile.
- Storm sewer inlets shall be protected with sediment trapping or filter control devices during construction.
- Water pumped or otherwise discharged from the site during construction dewatering shall be filtered.



PLAN VIEW

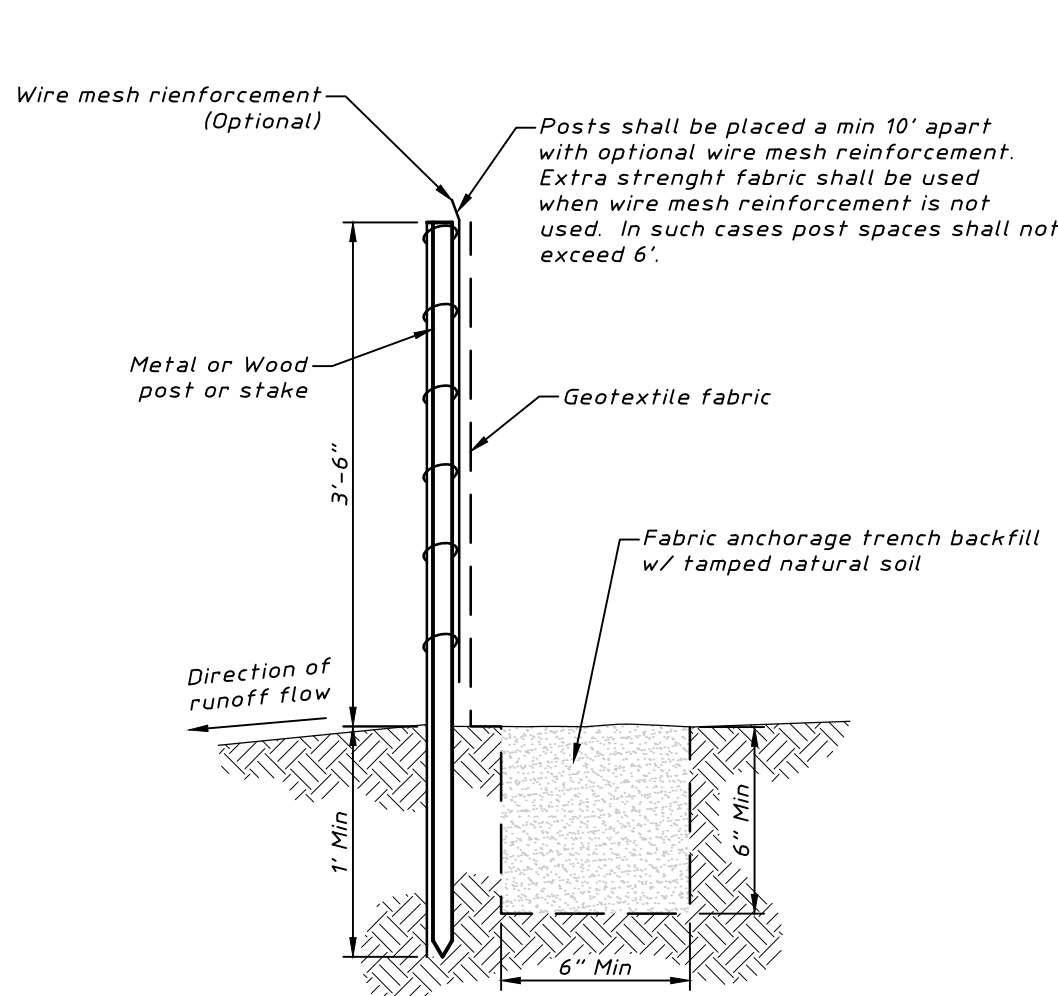


EARTHEN BERM ANCHOR SECTIONS



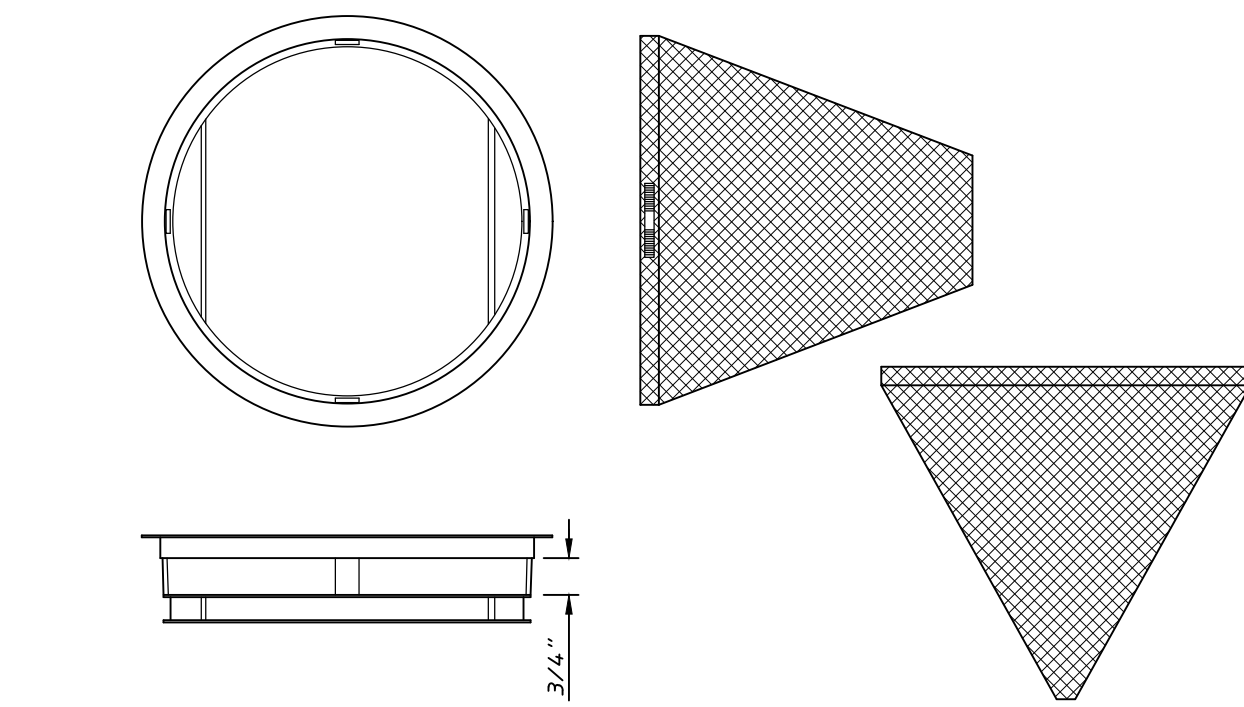
SUBGRADE ANCHOR SECTIONS

CONCRETE WASHOUT - EARTHEN



NOTES: Depending upon configuration, attach fabric to wire mesh w/ hog rings, steel posts w/ tie wires, wood posts w/ nails.

SILT FENCE

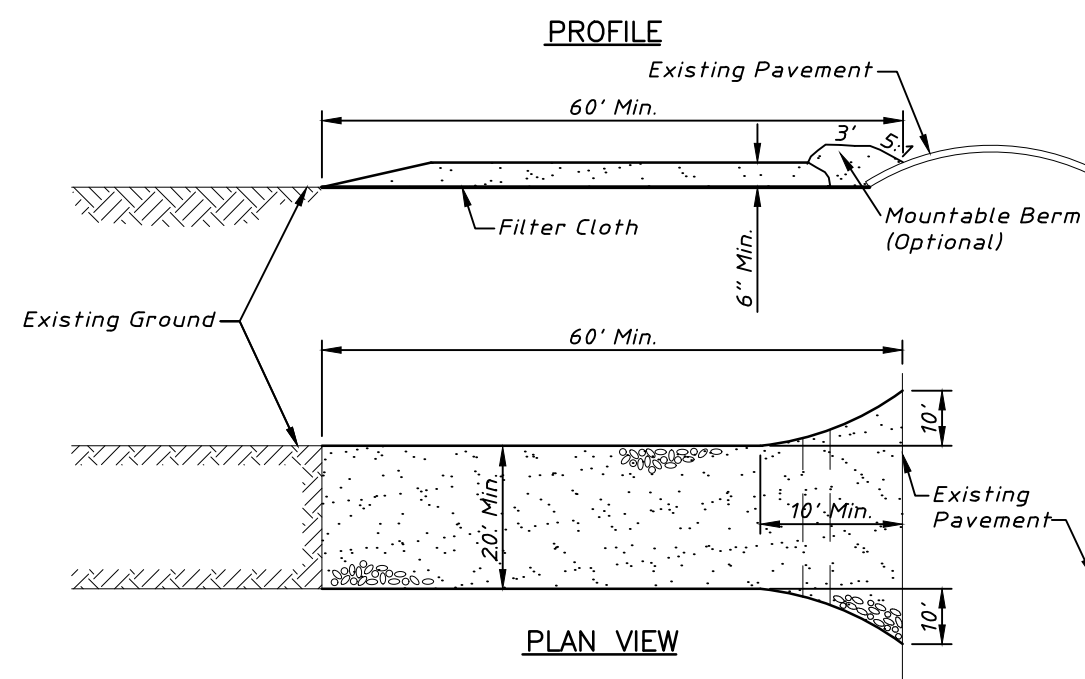


GENERAL NOTES:

FRAME: Top flange fabricated from 1-1/4"x1-1/4"x1/8" angle. Base rim fabricated from 1-1/2"x1/2"x1/8" channel. Handles and suspension brackets fabricated from 1-1/4"x1/4" flat stock. All domestic steel conforming to ASTM-A36.

SEDIMENT BAG: Bag fabricated from 4 oz./sq.yd. non-woven polypropylene geotextile reinforced with polyester mesh. Bag secured to base rim with a stainless steel strap and lock. All storm structures must have either a curb silt basket catch-all or an inlet silt basket catch-all inserted prior to construction.

INLET SILT BASKET CATCH-ALL

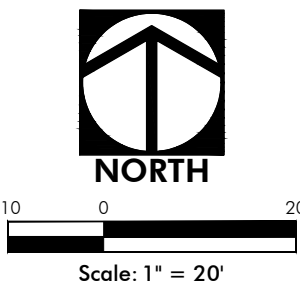


CONSTRUCTION SPECIFICATIONS:

- Stone Size - Use 2" stone, or reclaimed or recycled concrete equivalent.
- Length - As required, but not less than 120 feet (except on a single residence lot where a 30 foot minimum length would apply).
- Thickness - Not less than six (6) inches.
- Width - Twenty-four (24) feet minimum, but not less than the full width at points where ingress or egress occurs.
- Filter Cloth - Will be placed over the entire area prior to placing of stone. Filter will not be required on a single family residence lot.
- Surface Water - All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be permitted.
- Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanup of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.
- Washing - Wheels shall be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.
- Periodic inspection and needed maintenance shall be provided after each rain.

STABILIZED CONSTRUCTION ENTRANCE

Owner/Contractor Certification Statement	
This certification statement is part of the Storm Water Pollution Prevention Plan for AVERE on Duane, in accordance with General NPDES Permit No. ILRXXXXX issued by the Illinois Environmental Protection Agency.	
I certify under penalty of law that I understand the terms of the general National Pollutant Discharge Elimination System (NPDES) permit (ILR 10) that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification.	
In addition, I have read and understand all of the information and requirements stated in the Storm Water Pollution Prevention Plan for the above mentioned project. I have provided all documentation required to be in compliance with the ILR10 and Storm Water Pollution Prevention Plan and will provide timely updates to these documents as necessary.	
Name _____	Signature _____
Title _____	Date _____
Name of Firm/Company _____	Telephone _____
Address _____	City/State/Zip _____
The Owner, and all Contractor's and Sub-Contractor's performing work on this site are required to sign the above illustrated Certification Statement. The signed Certifications shall be maintained on the site with the SWPPP.	



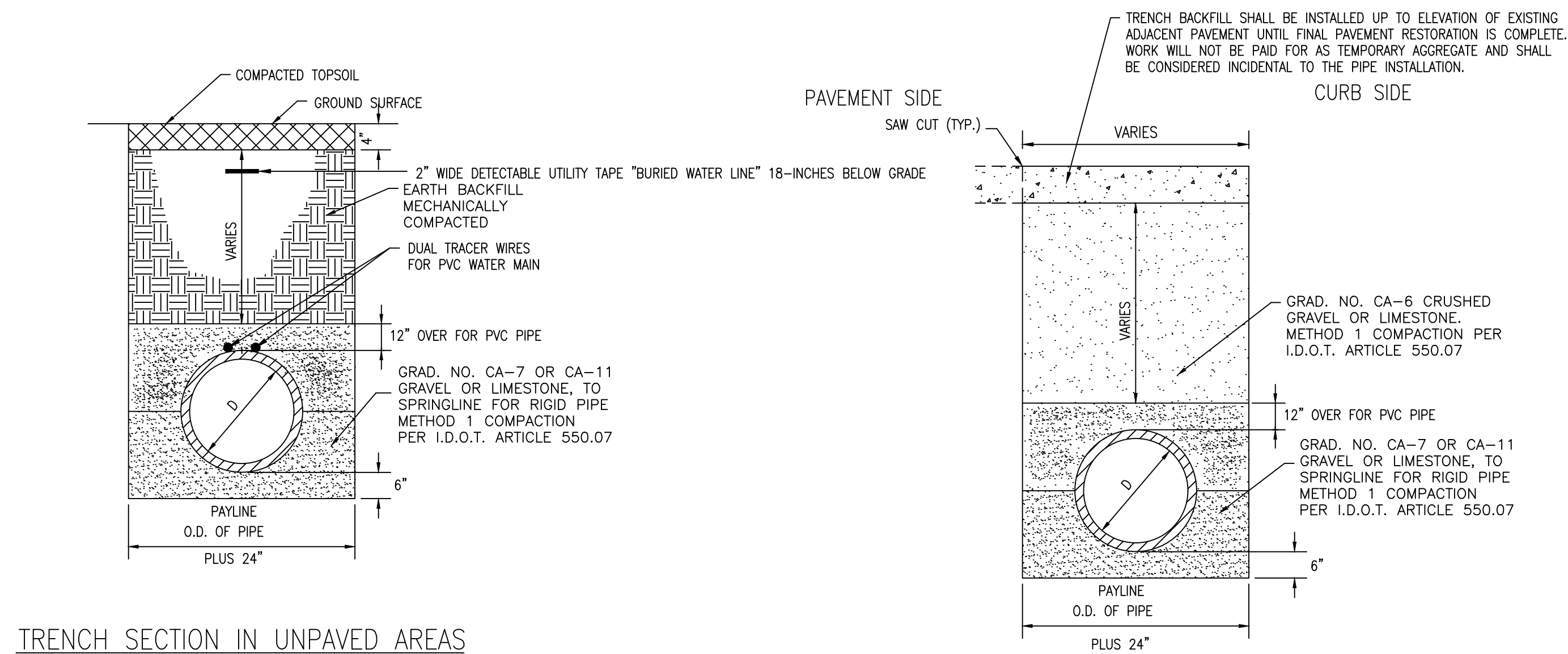
Revision	Date	No.
Village Review	06-12-2019	4
Village Review	05-31-2019	3
Client Review	05-03-2019	2
Village Review	04-29-2019	1

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consulting engineers • land surveyors
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Illinois Professional Design Firm License No. 184-003132
www.haegerengineering.com

SWPPP NOTES AND DETAILS
AVERE ON DUANE
SITE IMPROVEMENT PLANS
GLEN ELLYN, ILLINOIS

Project Manager: K M L
Engineer: K M L
Date: 03-22-2019
Project No. 17189
Sheet **C8.1** / C9

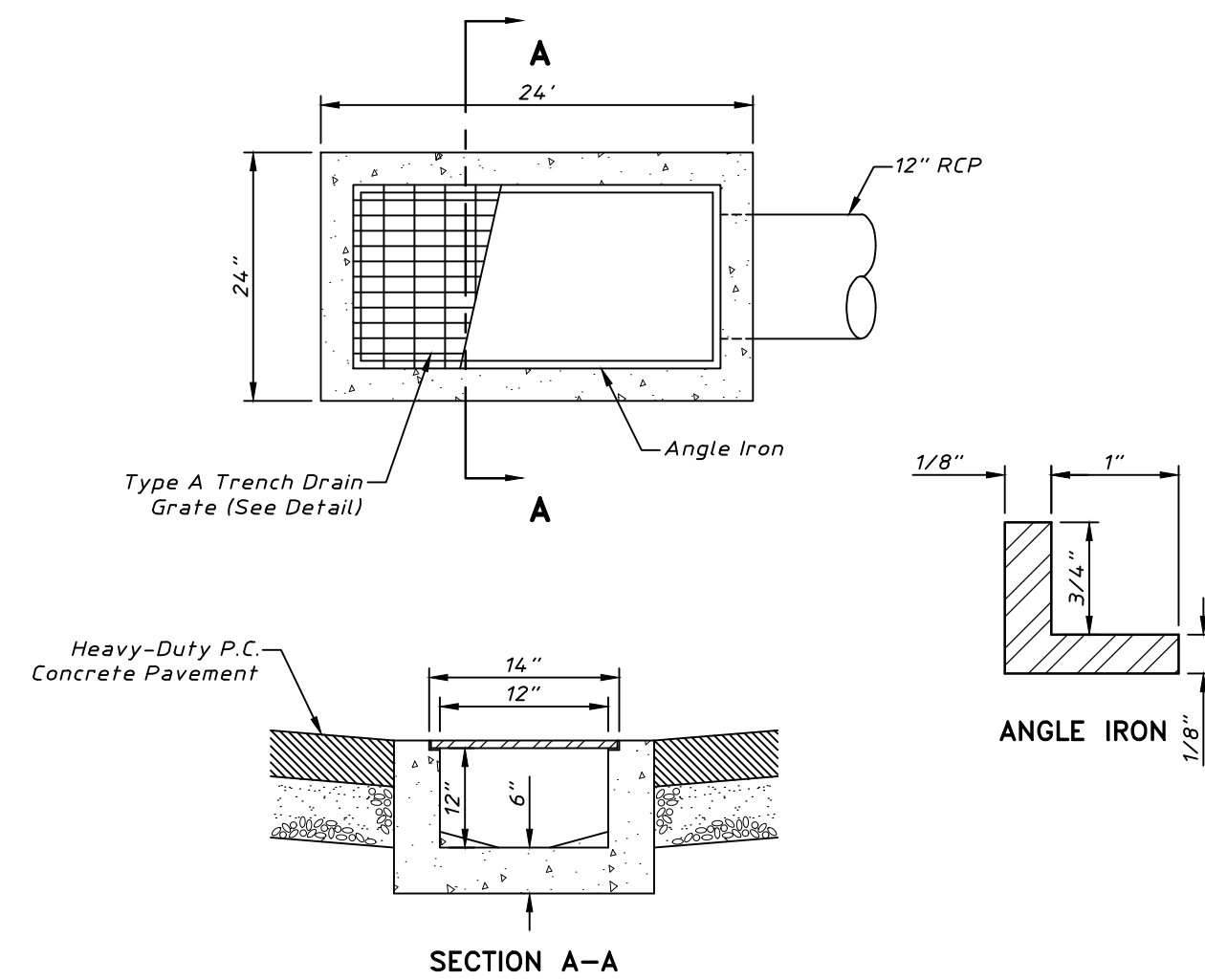


TRENCH SECTION IN UNPAVED AREAS
NOT TO SCALE

NOTES:

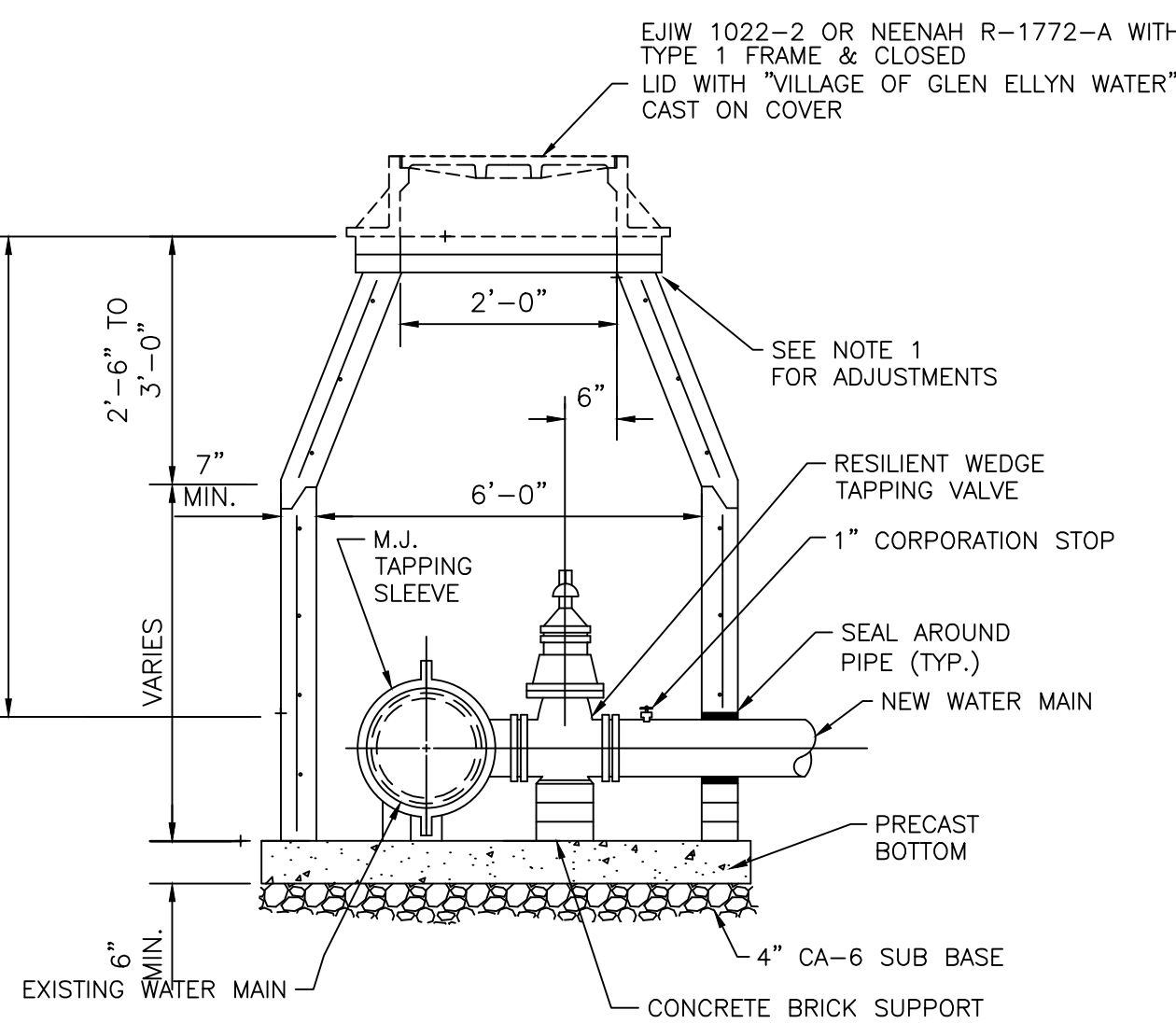
1. PRECAST-REINFORCED CONCRETE RISER RINGS AND CONES SHALL COMPLY WITH TEST STRENGTH - A.S.T.M. C-39. ADJUSTMENT RINGS SHALL NOT EXCEED 8" IN HEIGHT.
2. MINIMUM WALL THICKNESS SHALL BE 5" AND MINIMUM CIRCULAR REINFORCEMENT SHALL BE 0.18 SQUARE INCH PER FOOT.
3. THE BOTTOM MAY BE EITHER PRECAST WITH INVERTS AS INTEGRAL PART OR CAST IN PLACE WITH CLASS "SI" CONCRETE.
4. MANHOLE WALL THICKNESS "T" SHALL BE AS SHOWN IN THE LIST BELOW.
5. ALL STEPS SHALL BE CAST IRON AND CONFORM WITH NEENAH STANDARDS R-1981-1 OR APPROVED EQUAL.
6. ALL JOINTS BETWEEN PRE-CAST ELEMENTS, ADJUSTING RINGS AND MANHOLE FRAMES ON ALL UNDERGROUND STRUCTURES, SHALL BE SET IN PLACE WITH ONE OF THE FOLLOWING BUTYL RUBBER JOINT SEALANTS WITH A MINIMUM CROSS SECTIONAL AREA OF 1.25 SQ. IN.: CONCRETE PRODUCTS SUPPLY CO. - EZ STIK ST8, HAMILTON - KENT GASKET CO.- KENT SEAL, OR EQUAL, AS APPROVED BY VILLAGE. ALL JOINTS SHALL BE TUCKPOINTED WITH HYDRAULIC CEMENT.
7. ALL SANITARY SEWER MANHOLES SHALL BE CONSTRUCTED WITH FLEXIBLE MANHOLE COUPLINGS, AS MANUFACTURED BY ALOK PRODUCTS INC. (ALOK MANHOLE CONNECTOR), PRESS-SEAL GASKET CORPORATION (PRESS WEDGE II) OR EQUAL, AS APPROVED BY VILLAGE ENGINEER. ALL MATERIALS SHALL COMPLY WITH, AND INSTALLATION PROCEDURES SHALL FOLLOW THOSE SPECIFIED BY THE MANUFACTURER OR VILLAGE.
8. AN EXTERIOR JOINT COLLAR SHALL BE INSTALLED AT ALL JOINTS BETWEEN SANITARY MANHOLE ELEMENTS. JOINT COLLARS WILL NOT BE REQUIRED FOR ADJUSTING RINGS. THE JOINT COLLAR SHALL BE MACWRAP EXTERIOR JOINT SEALER AS MANUFACTURED BY MAR-MAC MANUFACTURING COMPANY OR AN APPROVED EQUAL. THE COLLAR SHALL CONSIST OF A BAND NINE INCH (9) WIDE. MASTIC COLLARS REQUIRING THE USE OF A PRIMER WILL NOT BE ACCEPTED.
9. COST FOR CHIMNEY SEAL SHALL BE INCIDENTAL TO THE CONTRACT PRICE OF SANITARY MANHOLE.

EJIW 1022-2 OR NEENAH R-1772-A WITH SELF-SEALING HEAVY DUTY SOLID COVER



NOTE:
Use Neenah R-4990-DX Heavy-Duty Trench Frame with Type A Grate

TRENCH DRAIN DETAIL



NOTES:

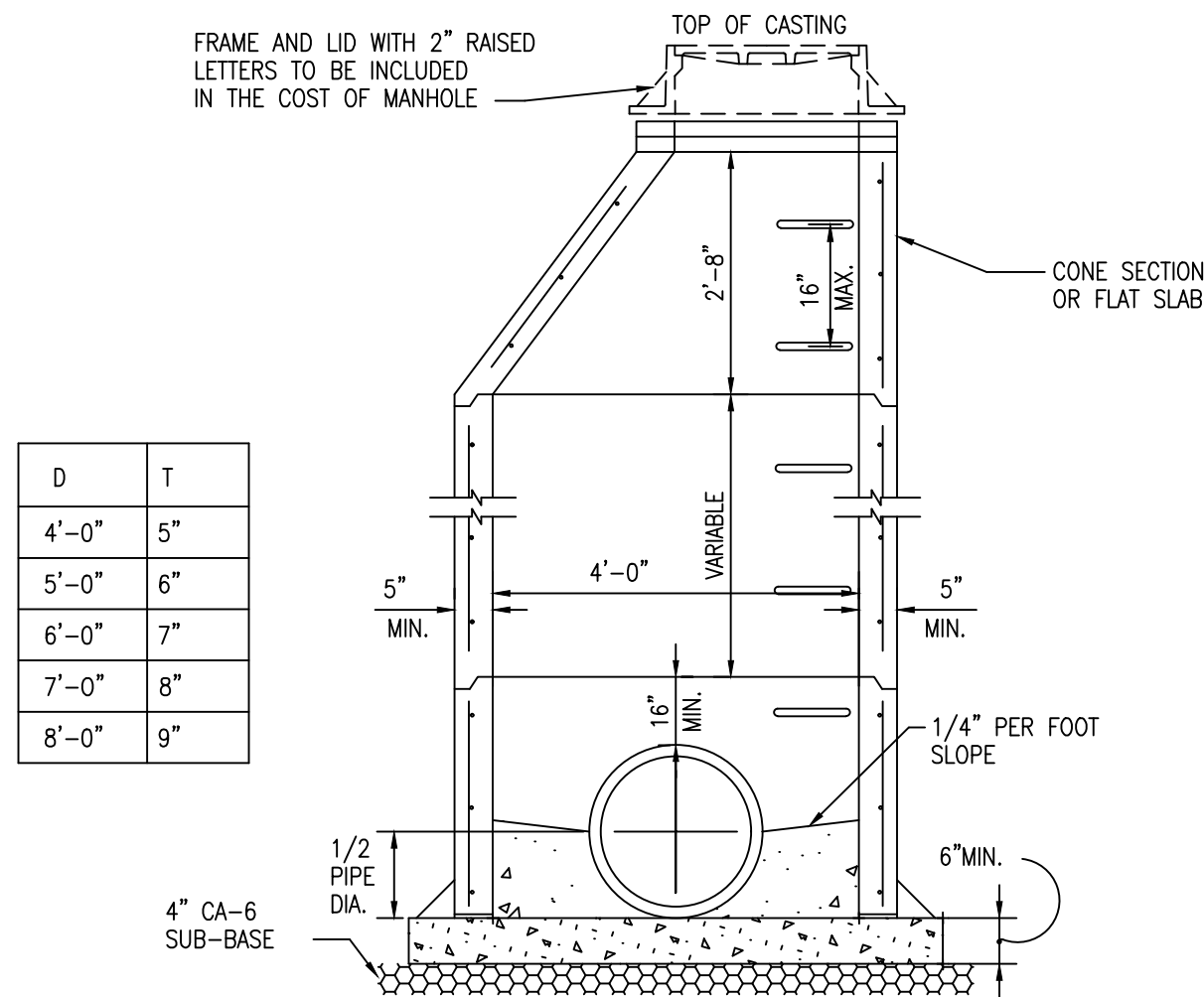
1. PRECAST-REINFORCED CONCRETE RISER RINGS AND CONES SHALL COMPLY WITH TEST STRENGTH - A.S.T.M. C-39. ADJUSTMENT RINGS SHALL NOT EXCEED 8" IN HEIGHT.
2. MINIMUM CIRCULAR REINFORCEMENT SHALL BE 0.18 SQUARE INCH PER FOOT.
3. PRECAST ADJUSTMENT RINGS WILL BE REQUIRED FOR ALL ADJUSTMENTS WITH MAX. ADJUSTMENT EQUAL TO 1 1/2".
4. ALL VALVES SHALL BE ENCLOSED IN A VAULT UNLESS OTHERWISE SPECIFIED.
5. ALL JOINTS BETWEEN PRE-CAST ELEMENTS, ADJUSTING RINGS AND MANHOLE FRAMES ON ALL UNDERGROUND STRUCTURES, SHALL BE SET IN PLACE WITH ONE OF THE FOLLOWING BUTYL RUBBER JOINT SEALANTS AS MANUFACTURED BY CONCRETE PRODUCTS SUPPLY CO. - EZ STIK ST8, HAMILTON-KENT GASKET CO. - KENT SEAL, OR EQUAL, AS APPROVED BY THE VILLAGE ENGINEER, AND ALL JOINTS TO BE TUCKPOINTED W/ANTI-HYDRAULIC CEMENT.

PRESSURE CONNECTION VALVE VAULT
NOT TO SCALE

TRENCH SECTION IN PAVED AREAS
NOT TO SCALE

NOTES:

1. PRECAST-REINFORCED CONCRETE RISER RINGS AND CONES SHALL COMPLY WITH TEST STRENGTH - A.S.T.M. C-39. ADJUSTMENT RINGS SHALL NOT EXCEED 8" IN HEIGHT.
2. MINIMUM WALL THICKNESS SHALL BE 5" AND MINIMUM CIRCULAR REINFORCEMENT SHALL BE 0.18 SQUARE INCH PER FOOT.
3. THE BOTTOM MAY BE EITHER PRECAST WITH INVERTS AS INTEGRAL PART OR CAST IN PLACE WITH CLASS "SI" CONCRETE.
4. MANHOLE WALL THICKNESS "T" SHALL BE AS SHOWN IN THE LIST BELOW.
5. ALL STEPS SHALL BE CAST IRON AND CONFORM WITH NEENAH STANDARDS R-1981-1 OR APPROVED EQUAL.
6. ALL JOINTS BETWEEN PRE-CAST ELEMENTS, ADJUSTING RINGS AND MANHOLE FRAMES ON ALL UNDERGROUND STRUCTURES, SHALL BE SET IN PLACE WITH TWO ROWS OF ONE OF THE FOLLOWING BUTYL RUBBER JOINT SEALANTS: CONCRETE PRODUCTS SUPPLY CO. - EZ STIK ST8, HAMILTON-KENT GASKET CO. - KENT SEAL, OR EQUAL, AS APPROVED BY VILLAGE ENGINEERS, AND ALL JOINTS TO BE TUCKPOINTED WITH HYDRAULIC CEMENT.
7. SEE CONSTRUCTION PLANS FOR ACTUAL TYPE OF CASTING SPECIFIED.



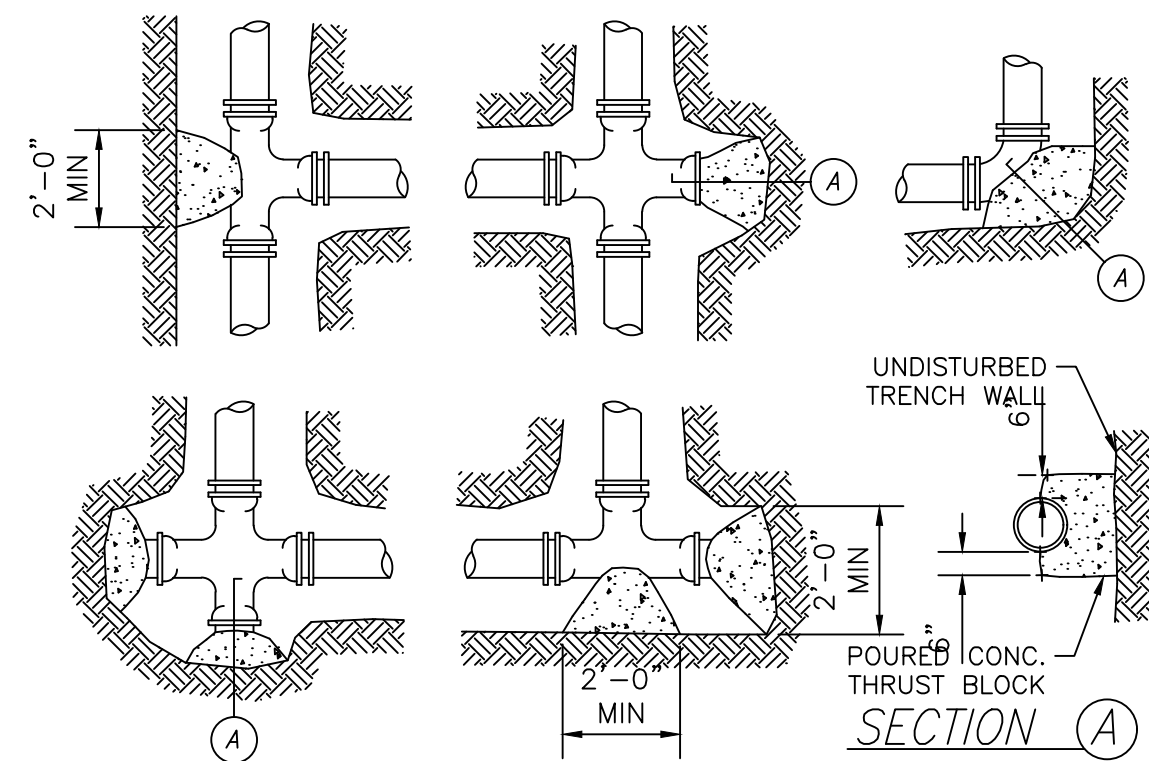
STORM SEWER MANHOLE, TYPE A
NOT TO SCALE

TYPE "C" MANHOLE IS WITHOUT CONE SECTION AND HAVING PRECAST FLAT TOP (DOT STD. 602601).

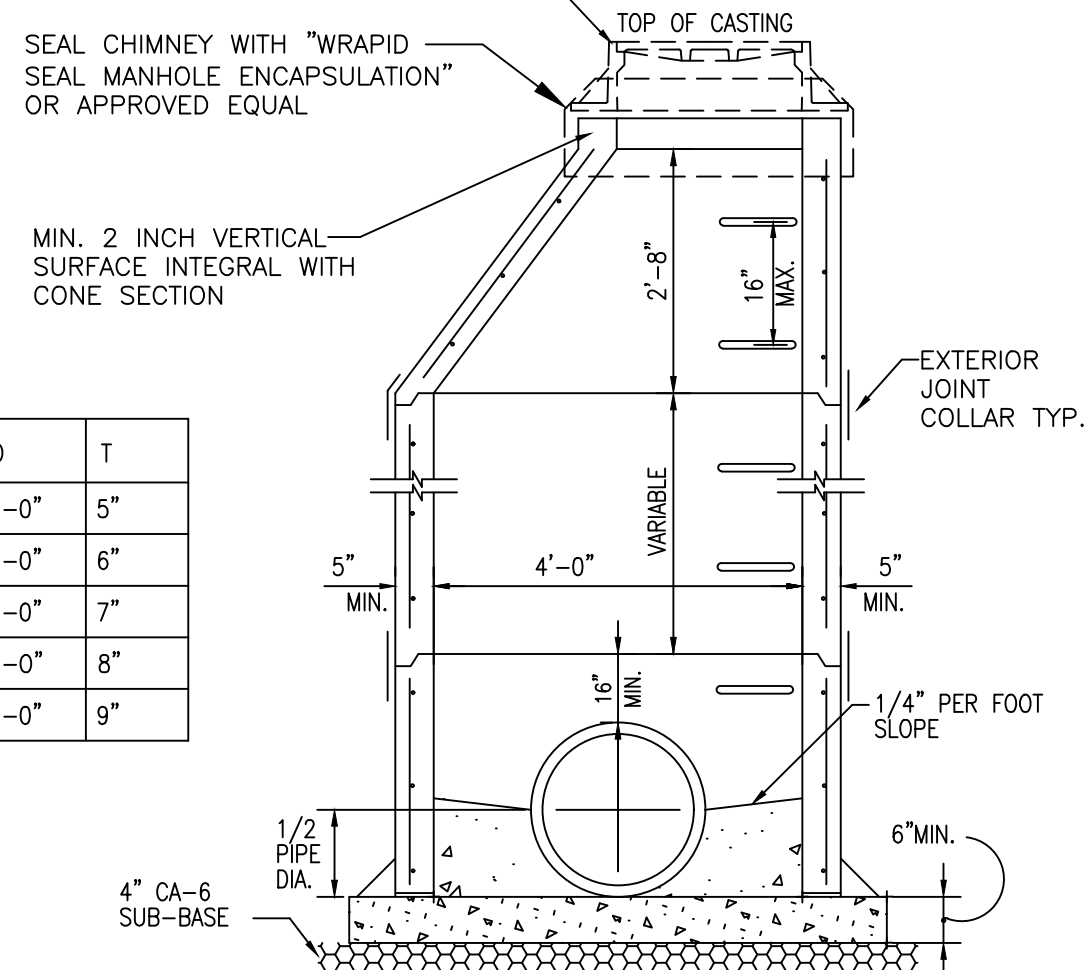
SIZE (DIA. IN INCH.)	DEAD END OR TEE (SQ. FT.)	1/4 BEND 90 (SQ. FT.)	1/8 BEND 45 (SQ. FT.)	1/16 BEND 22.5° BEND (SQ. FT.)	1/32 BEND 11.25° BEND (SQ. FT.)
6	3.9	5.5	3.0	1.5	1.5
8	6.7	9.4	5.1	2.6	2.6
10	10.9	15.4	8.4	4.3	4.3
12	15.5	21.8	11.9	6.1	6.1
14	21.0	29.6	16.1	8.2	8.2
16	28.5	37.9	20.6	12.5	12.5
18	38.6	54.4	29.7	14.9	14.9
20	47.8	67.4	36.7	18.6	18.6
24	69.0	97.2	52.9	26.8	26.8

NOTES:

1. THE ABOVE TABLE IS BASED ON 2,000 PSF SOIL BEARING AGAINST THE UNDISTURBED TRENCH WALL AND ARE TO REPRESENT THE MINIMUM VERTICAL AREA OF THE THRUST BLOCK PERPENDICULAR TO THE FITTING INCLUDING THE ANGLE OF THE FITTING.
2. THRUST BLOCKING TO PREVENT MOVEMENT OF LINES UNDER PRESSURE AT BENDS, TEES, CAPS, VALVES, HYDRANTS AND AT POINTS SPECIFIED SHALL BE CLASS "SI" CONCRETE. A MIN. OF 12" THICK, PLACED BETWEEN SOLID GROUND AND FITTING, AND SHALL BE ANCHORED IN SUCH A MANNER THAT PIPE AND FITTING WILL BE ACCESSIBLE FOR REPAIRS. THRUST BLOCK SHALL BE PLACED AT BENDS OF 11 1/4" OR MORE. RETAINER GLANDS MAY BE USED IN PLACE OF THRUST BLOCKS. THE COST OF THRUST BLOCKS OR RETAINER GLANDS SHALL BE INCLUDED IN THE COST OF THE FITTING.
3. PROVIDE POLYETHYLENE ENCASEMENT THROUGHOUT THE ENTIRE LENGTH OF THE WATERMAIN.

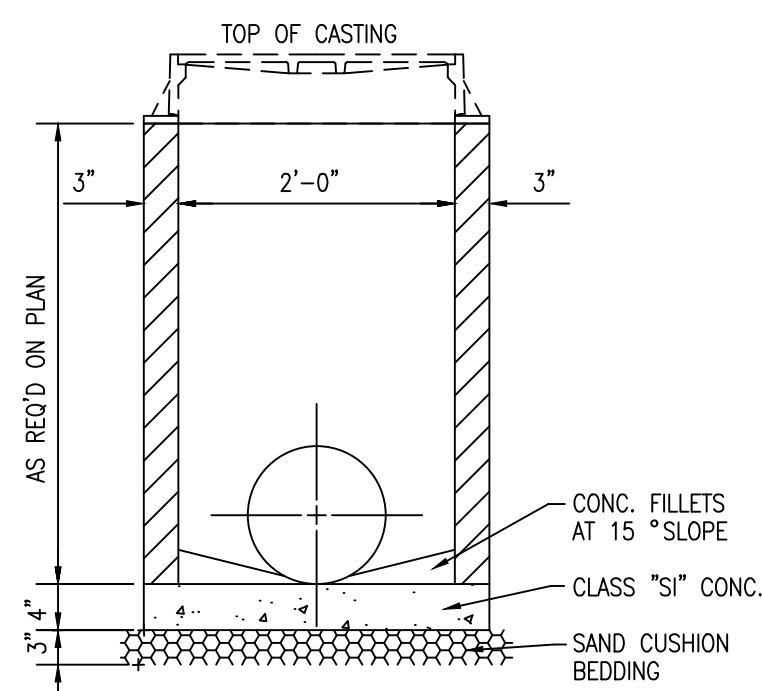


THRUST BLOCK DETAIL
NOT TO SCALE



SANITARY SEWER MANHOLE, TYPE A
NOT TO SCALE

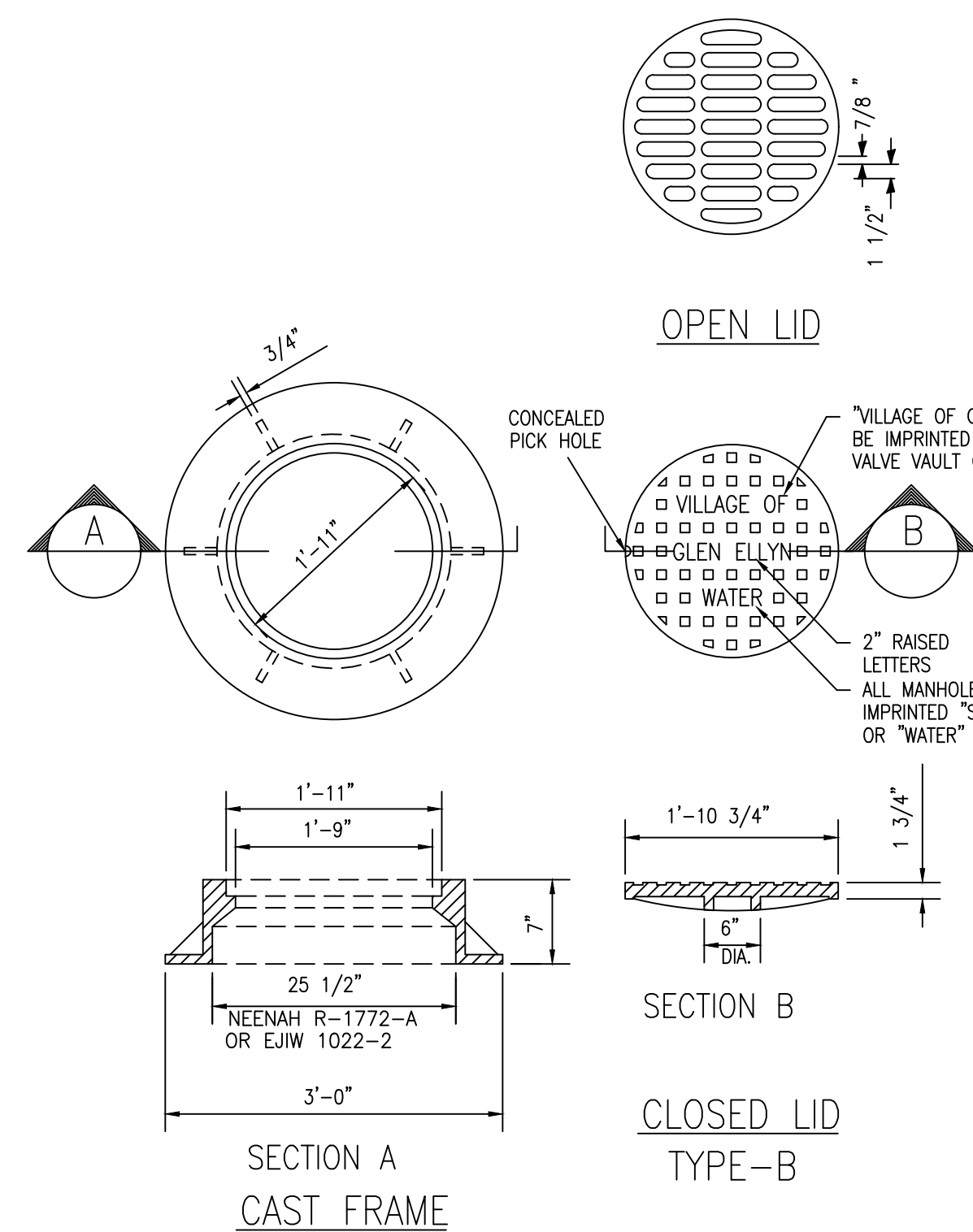
TYPE "C" MANHOLE IS WITHOUT CONE SECTION AND HAVING PRECAST FLAT TOP



NOTES:

1. MINIMUM WALL THICKNESS SHALL BE 3" AND MINIMUM CIRCULAR REINFORCEMENT SHALL BE 0.18 SQUARE INCH PER FOOT.
2. THE BOTTOM MAY BE EITHER PRECAST WITH INVERTS AS INTEGRAL PART OR CAST IN PLACE WITH CLASS "SI" CONCRETE.
3. ALL JOINTS BETWEEN PRE-CAST ELEMENTS, ADJUSTING RINGS AND FRAMES ON ALL UNDERGROUND STRUCTURES, SHALL BE SET IN PLACE WITH TWO ROWS OF ONE OF THE FOLLOWING BUTYL RUBBER JOINT SEALANTS: CONCRETE PRODUCTS SUPPLY CO. - EZ STIK ST8, HAMILTON - KENT GASKET CO. - KENT SEAL, OR EQUAL, AS APPROVED BY THE VILLAGE ENGINEERS, AND ALL JOINTS TO BE TUCKPOINTED WITH HYDRAULIC CEMENT.
4. DRAINAGE STRUCTURES LOCATED IN REAR OR SIDE YARD AREAS SHALL BE INSTALLED WITH 2-6 INCH OR 3-4 INCH ADJUSTING RINGS. THIS WILL PROVIDE FOR A FUTURE MAXIMUM ADJUSTMENT OF 12 INCHES.
5. CASTING FOR SOME SLOPE CONDITIONS, USE EJIW V-4010-2 (NEENAH R-3065-2) OR APPROVED EQUAL.
6. SEE CONSTRUCTION PLANS FOR ACTUAL TYPE OF CASTING SPECIFIED.

INLET, TYPE A
NOT TO SCALE



SECTION A
CAST FRAME

SECTION B
CLOSED LID
TYPE-B

TYPE 1 FRAME & LID
NOT TO SCALE

NOTES:

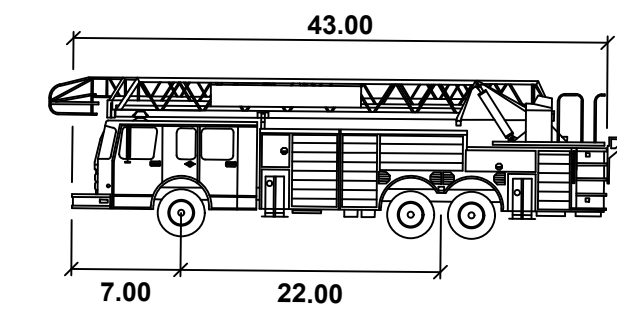
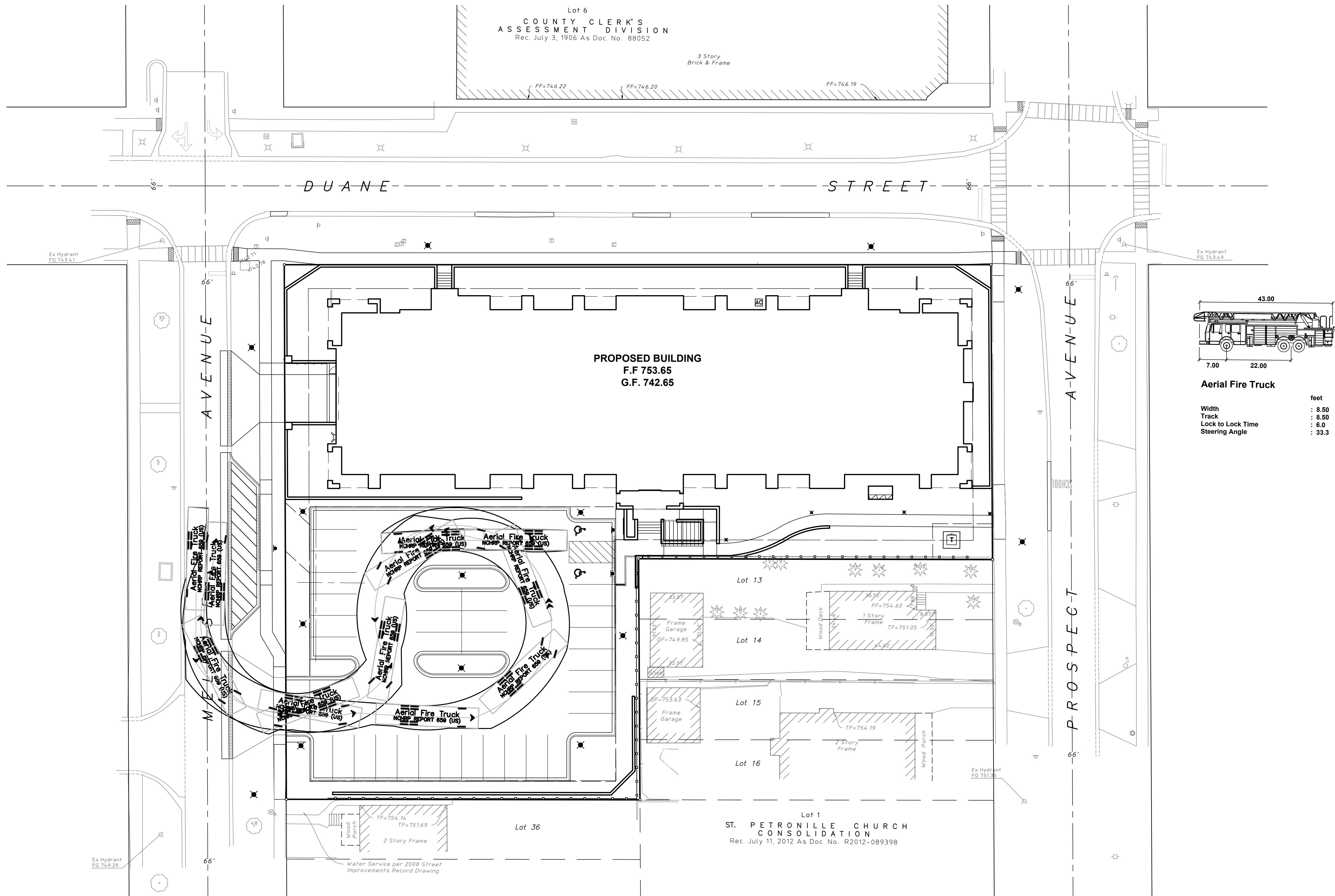
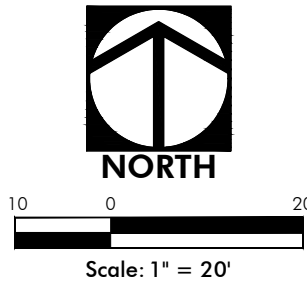
1. DUCTILE IRON CASTING SHALL BE GRADE 60-40-18 AND SHALL BE TESTED IN ACCORDANCE WITH FEDERAL SPECIFICATIONS.
2. ALL FRAMES AND LIDS SHALL BE MACHINED.
3. THE MANHOLE LIDS SHALL HAVE RAISED LETTERS AS SHOWN.
4. ALTERNATIVE TO DUCTILE IRON LID, GRAY IRON LID MAY BE USED.
5. FRAME AND LID TO BE EJIW-1022-2 OR NEENAH R-1772-A
6. CLOSED LID SHALL HAVE A CONCEALED PICK HOLE
7. SANITARY MANHOLE LID SHALL BE "SELF-SEALING".
8. WATER VALVE VAULT LIDS SHALL BE IMPRINTED WITH THE DESIGNATION "VILLAGE OF GLEN ELLYN WATER". OPEN LID STRUCTURES SHALL HAVE "DUMP NO WASTE" AND "DRAINS TO RIVER" CAST INTO THE FRAME.

HAEGER ENGINEERING
consulting engineers • land surveyors
100 East State Parkway, Schaumburg, IL 60173 • Tel: 847.394.6600 Fax: 847.394.6608
Illinois Professional Design Firm License No. 184-003152
www.haegeringengineering.com

TYPICAL DETAILS
AVERE ON DUANE
SITE IMPROVEMENT PLANS
GLEN ELLYN, ILLINOIS

Project Manager: K M L
Engineer: K M L
Date: 03-22-2019
Project No. 17189
Sheet **C9.0**

Project Manager: K M L
Engineer: K M L
Date: 03-22-2019
Project No. 17189
Sheet C9.1



Aerial Fire Truck	
	feet
Width	: 8.50
Track	: 8.50
Lock to Lock Time	: 6.0
Steering Angle	: 33.3

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FIRE TRUCK ACCESS EXHIBIT

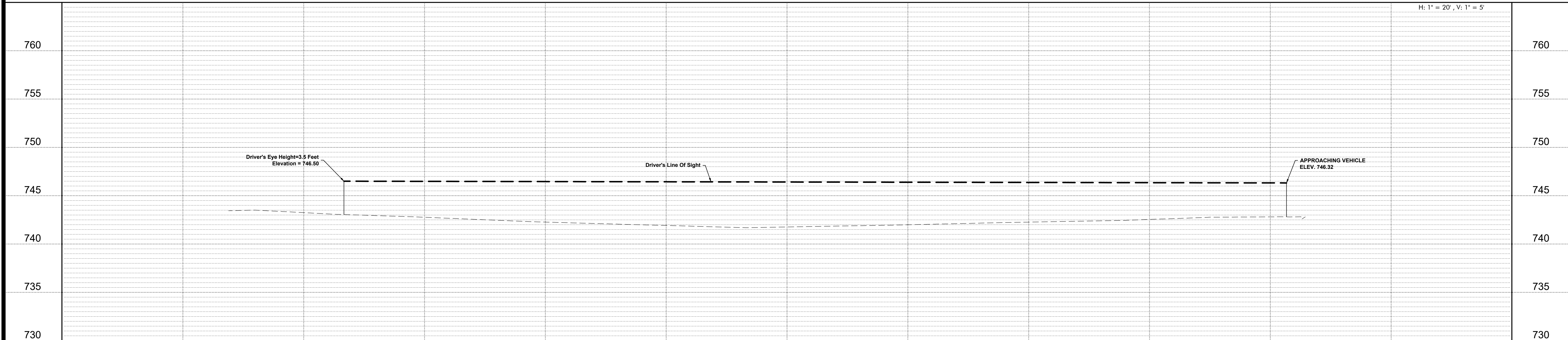
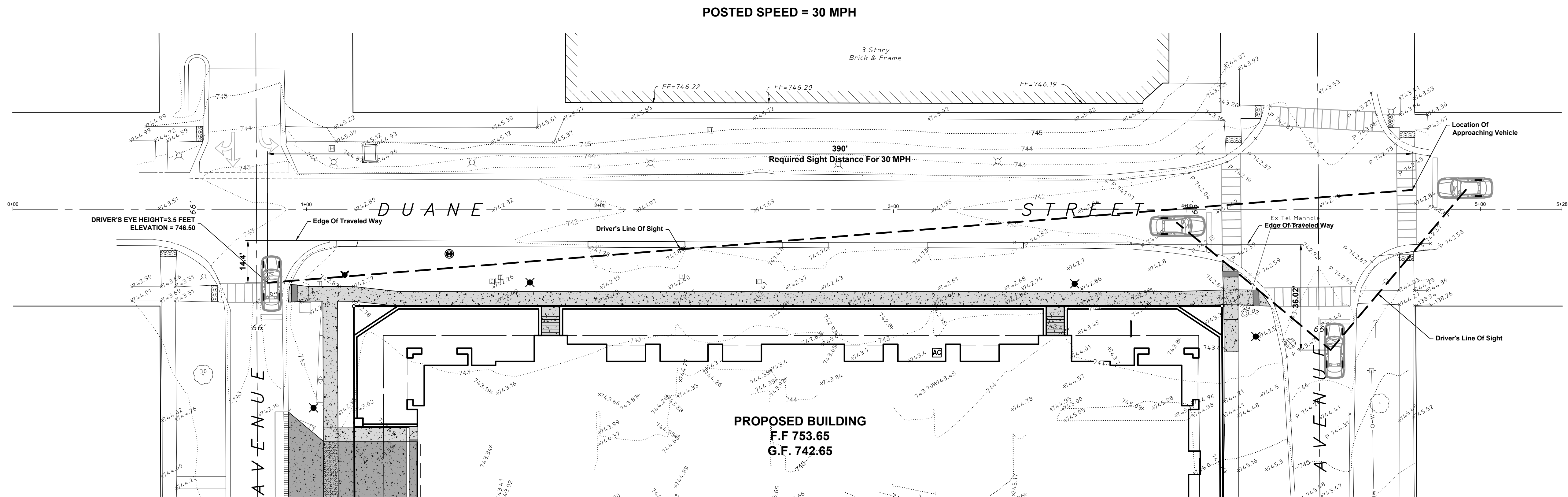
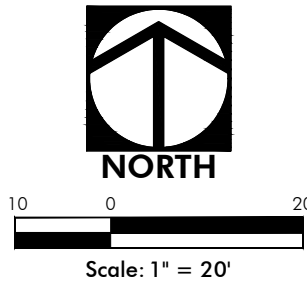
AVERE ON DUANE

SITE IMPROVEMENT PLANS

GLEN ELYN, ILLINOIS

Project Manager: K M L
Engineer: K M L
Date: 03-22-2019
Project No. 17189
Sheet **EX1.0**

No.	Date	Revision
4	06-12-2019	Village Review
3	05-31-2019	Village Review
2	05-03-2019	Client Review
1	04-29-2019	Village Review



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www.haegerengineering.com

SIGHT DISTANCE ANALYSIS
AVERE ON DUANE
SITE IMPROVEMENT PLANS
GLEN ELLYN, ILLINOIS

Project Manager: K M L
Engineer: K M L
Date: 03-22-2019
Project No. 17189
Sheet **EX2.0**

AVERE on DUANE

Glen Ellyn, Illinois

PROJECT NUMBER 17046

Landscape Construction Package

AOD Submittal
June 11, 2019

AOD Submittal
May 31, 2019

AOD Submittal
April 28, 2019

PUD Submittal
March 25, 2019

Prepared for:



116 West Illinois Street, 7th Floor
Chicago, Illinois 60654
p 312.464.8800
www.revadevelopment.com

NOT FOR CONSTRUCTION

Prepared by:



116 West Illinois Street, 7th Floor
Chicago, Illinois 60654
p 312.467.5445
f 312.467.5484
info@thelakotagroup.com



1304 N. Plum Grove Road
Shampaign, Illinois 60173
p 847.394.6600
f 847.394.6608
www.haegerengineering.com



1540 E. Dundee Road, Suite 310
Palatine, Illinois 60074
p 847.705.2200
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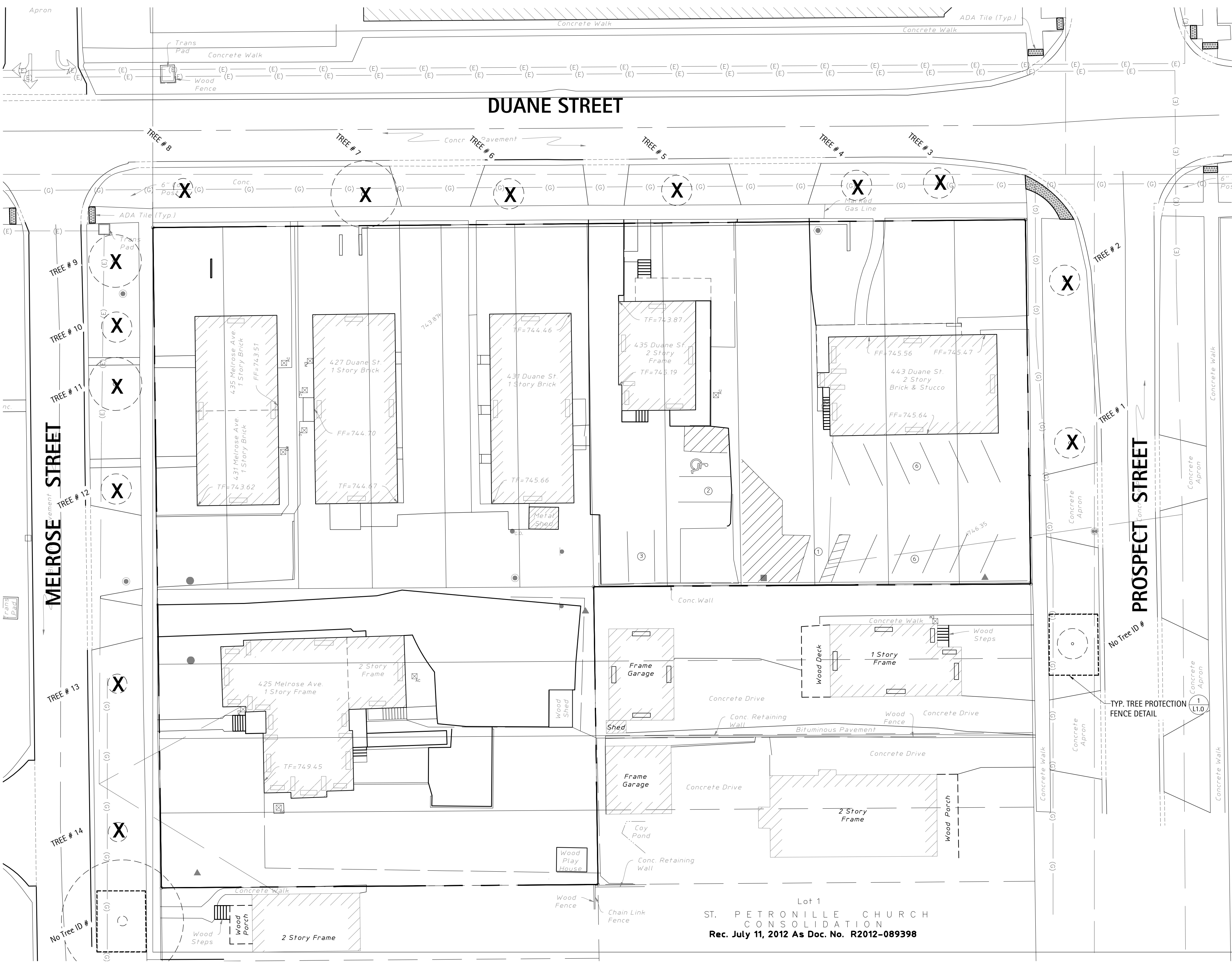
Sheet Legend

- L-1.0 Tree Survey - ROW
- L-2.0 Hardscape Plan
- L-2.1 Hardscape Plan
- L-3.0 Landscape Plan
- L-4.0 Photometric Plan
- L-4.1 Photometric Plan
- L-5.0 Planting Schedule/Notes
- L-6.0 Site Details
- L-6.1 Site Details
- L-6.2 Site Details
- L-6.3 Site Details
- L-6.4 Site Details
- L-6.5 Site Details
- L-6.6 Site Details
- L-6.7 Landscape Details
- L-7.0 Site Plan Rendering
- L-7.1 Aerial Perspectives

Site Location

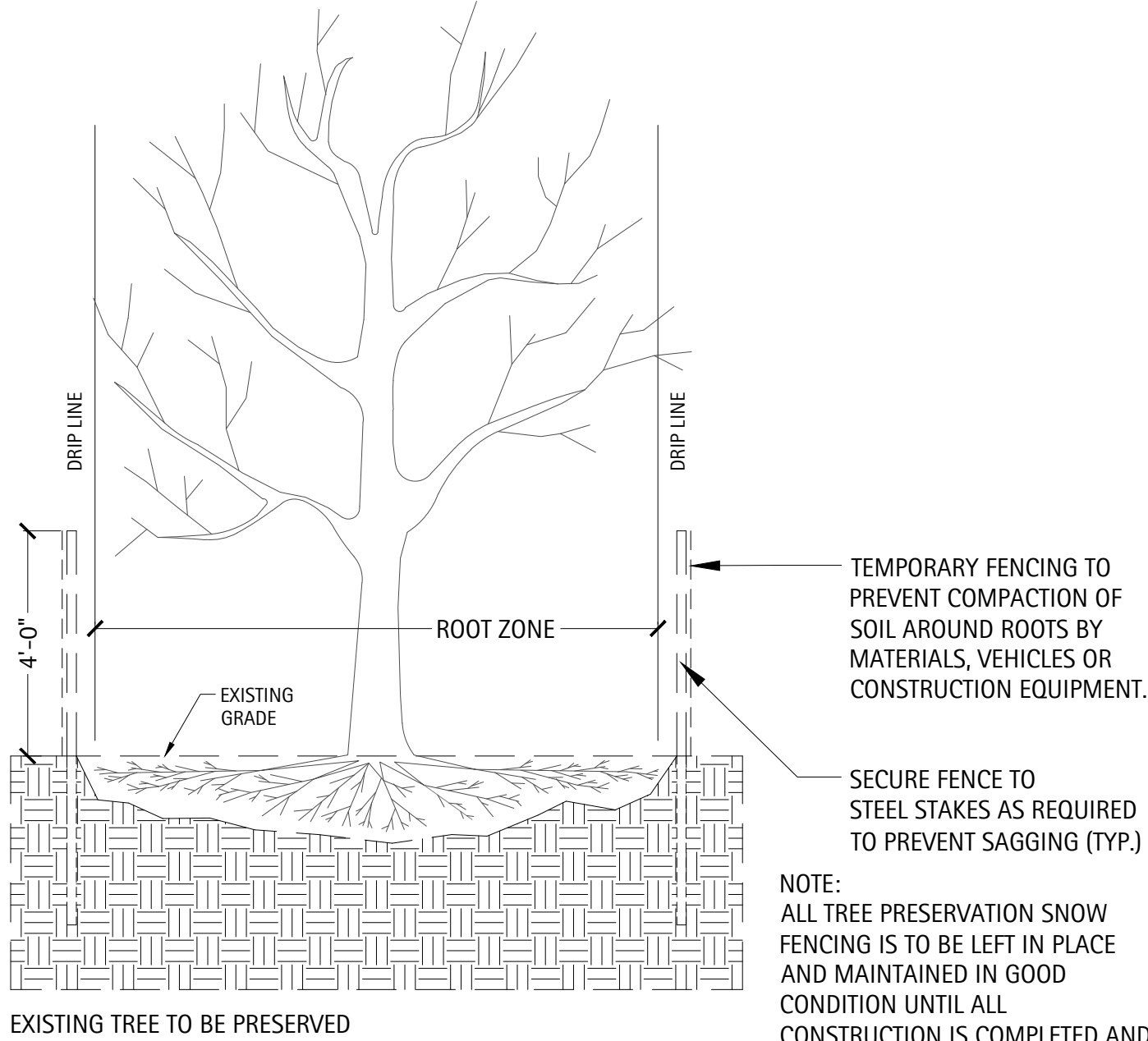


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LEGEND

- Existing Tree to Remain
- Existing Tree to be Removed
- Tree Protection Fence



1 Typical Tree Protection Detail
Scale: NTS

TREE ACTION PLAN											
Tree No.		Tree Description	Condition	D.B.H.* Diameter at Breast Height	Public Tree	Private Tree	Adjacent Property Tree	Border Tree	Impacted Tree	Protected Tree	Action
1	104622	Triumph Elm	Excellent	3	X				X		Remove
2	102471	Kentucky Coffeetree	Excellent	2	X				X		Remove
3	23831	Princeton Serenity Ginkgo	Average	4	X				X		Remove
4	25387	Autumn Gold Ginkgo	Fair	4	X				X		Remove
5	2705	Ginkgo	Excellent	12	X				X		Remove
6	No Tree ID #	Crabapple	Fair	8	X				X		Remove
7	2702	Honeylocust	Good	26	X				X		Remove
8	104298	Greenspire Littleleaf Linden	Excellent	2	X				X		Remove
9	9901	Norway Maple	Fair	19	X				X		Remove
10	9902	Ginkgo	Excellent	10	X				X		Remove
11	9903	Ginkgo	Good	18	X				X		Remove
12	22928	Pacific Sunset Purpleblow Maple	Average	11	X				X		Remove
13	104451	Royal Raindrops Crabapple	Excellent	2	X				X		Remove
14	25805	Paperbark Maple	Excellent	4	X				X		Remove

* The diameter of the trunk of the tree measured in inches at a point 4.5 feet above ground line.

Prepared by: The Lakota Group ISA Certification No. Tree ID # and species were provided by the Village of Glen Ellyn

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116 West Illinois Street
Floor 7
Chicago, Illinois 60654
p 312.467.5445
f 312.467.5484
thelakotagroup.com

PREPARED FOR
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116 W. ILLINOIS ST.
CHICAGO, ILLINOIS 60654

PROJECT
AVERE on Duane
427 Duane St.
Glen Ellyn, Illinois 60137

CONSULTANTS
Civil Engineer
Haeger Engineering
Schaumburg, Illinois
T 847.394.6600

Architect
BSB Design, Inc.
Palatine, Illinois
T 847.705.2200

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04	20190611	AOD Submittal

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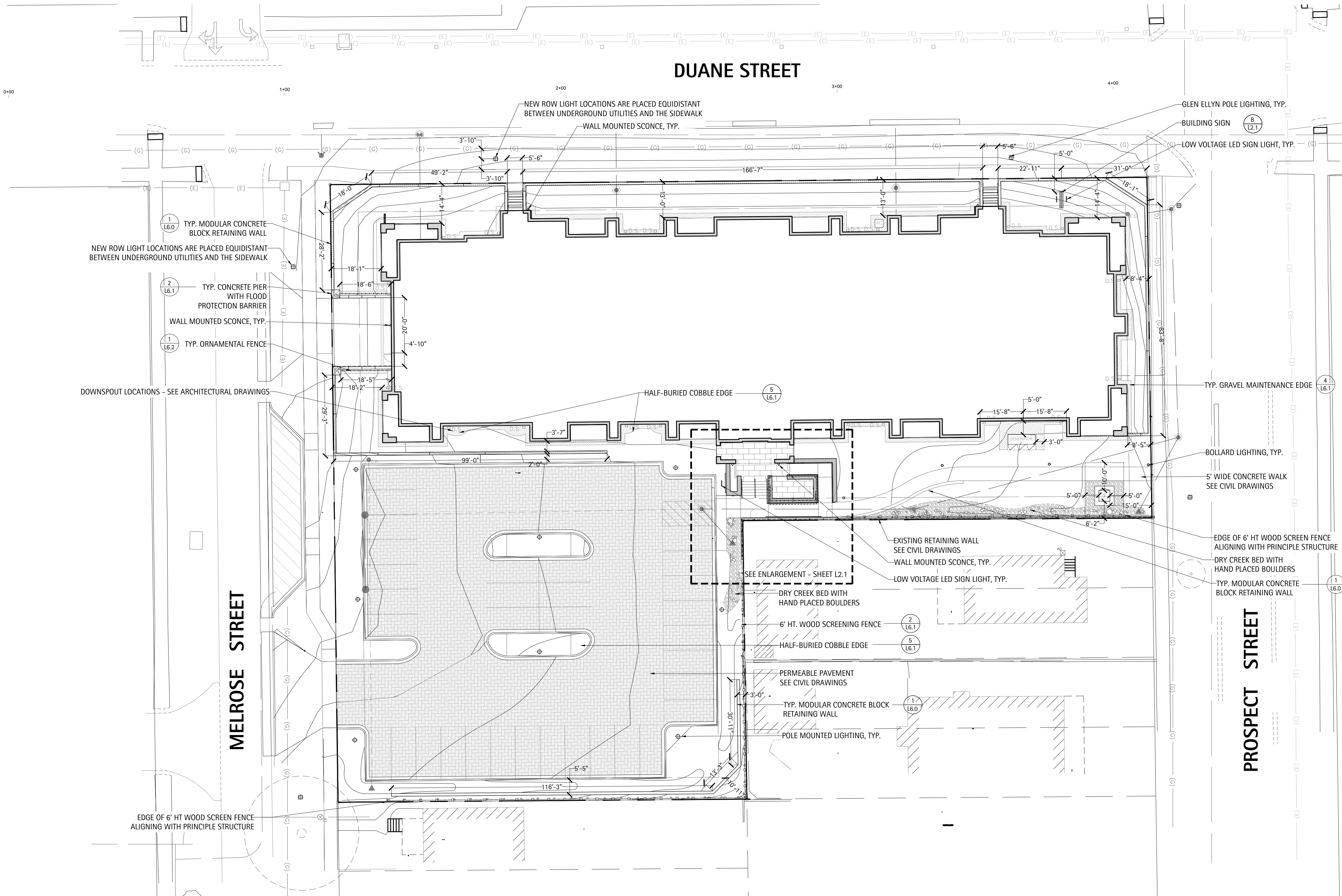
SHEET TITLE
TREE SURVEY - ROW

SCALE IN FEET
1" = 20'

NORTH

SHEET NUMBER
L1.0

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LEGEND

- Existing Tree to Remain
- Shade Tree, Typical. See Detail 1, Sheet L6.7
- Ornamental Tree, Typical. See Detail 3, Sheet L6.7
- Evergreen Tree, Typical. See Detail 2, Sheet L6.7
- Shrub, Typical. See Detail 4, Sheet L6.7
- Ornamental Grass, Typical. See Detail 5, Sheet L6.7
- Perennials and Groundcover, Typical. See Detail 5, Sheet L6.7
- Sod - Restore sod in the ROW
- Pole Mounted Lighting, See Detail 1, Sheet L6.4
- Bollard Path Light, See Detail 2, Sheet L6.4
- Wall Mounted Sconce, See Detail 3-4, Sheet L6.4
- Glen Ellyn Pole Lighting, See Detail 1, Sheet L6.5
- Under Coping Light, See Detail 2, Sheet L6.5
- Low Voltage LED Sign Light, See Detail 2, Sheet L6.6
- Landscape Uplight, See Detail 3, Sheet L6.6
- Tivoli Light, See Detail 3, Sheet L6.5
- To be attached to the inside beam. Provide clearance of 7.5' ht minimum.

NOTE:
The Lakota Group recognizes the Village's 2013 Downtown Streetscape and Parkway Plan and the project's location is in the Residential Fringe area and believe our plan will accommodate future improvements.

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SHEET TITLE
HARDSCAPE
PLAN

SCALE IN FEET
1" = 20'

NORTH

SHEET NUMBER
L2.0
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p 312.467.5445
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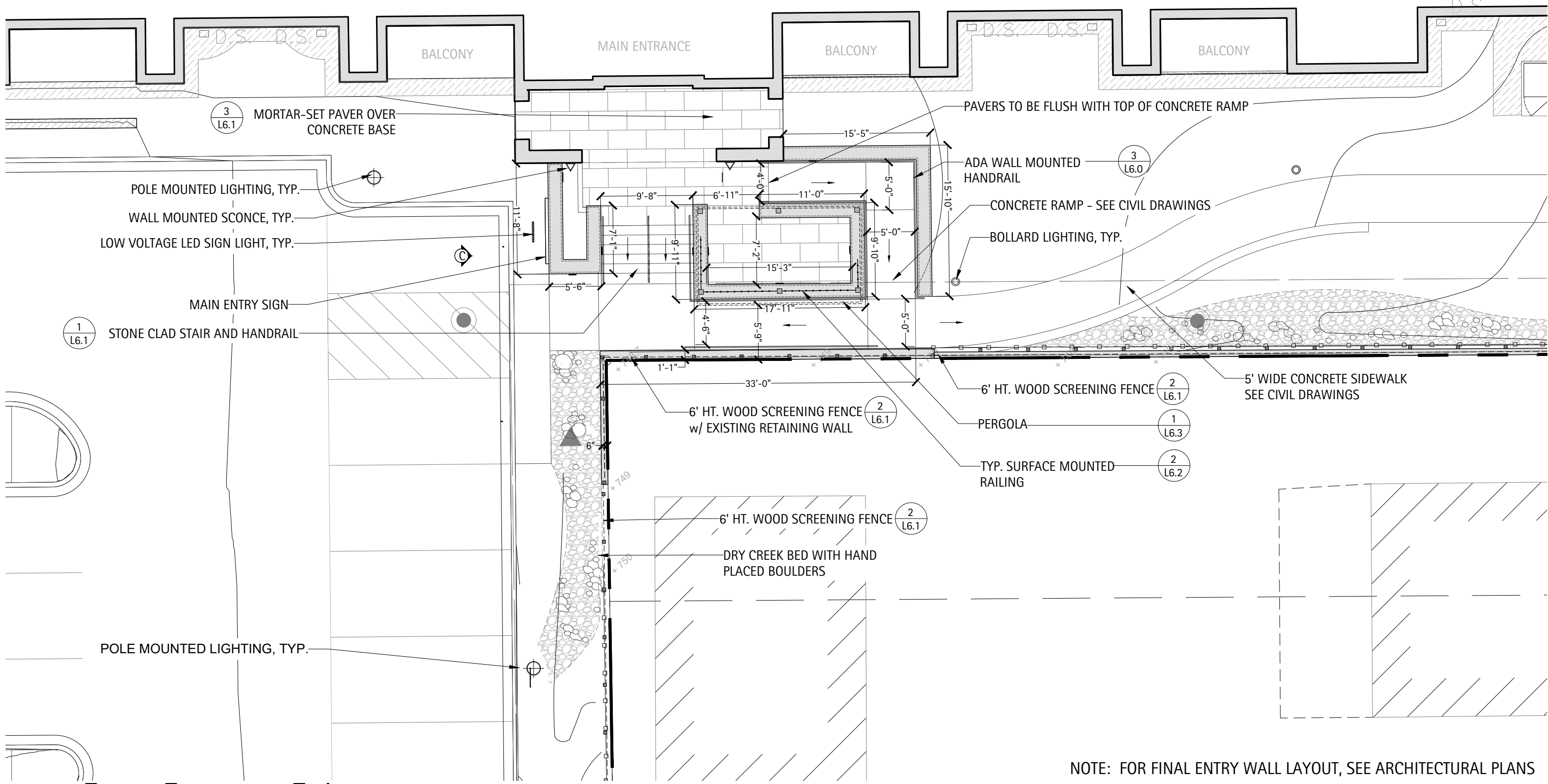
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SHEET TITLE
HARDSCAPE PLAN

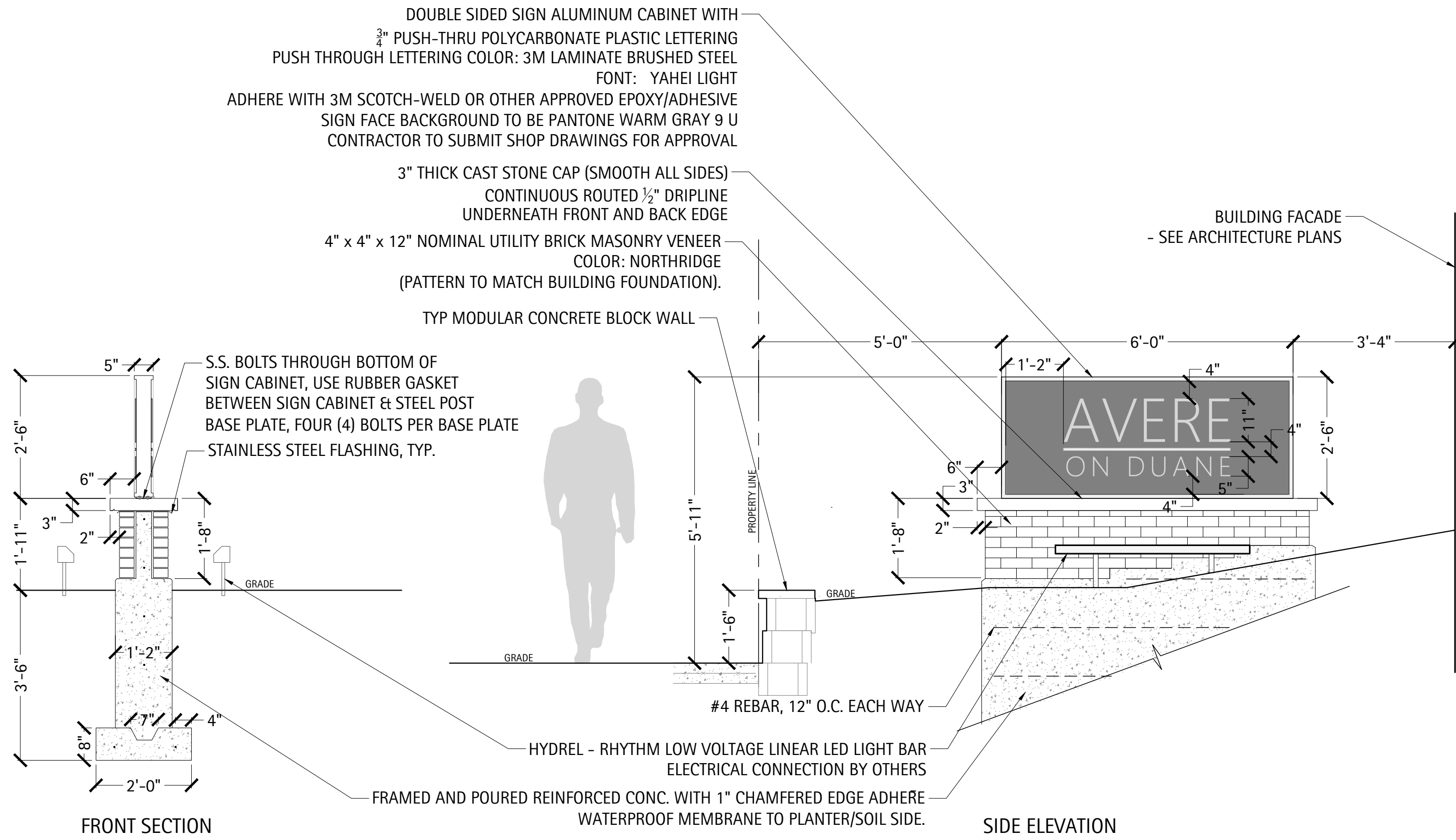
SCALE IN FEET

NORTH

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A Front Entrance Enlargement
Scale: 1" = 10'-0"





LETTERING: 3M LAMINATE BRUSHED STEEL

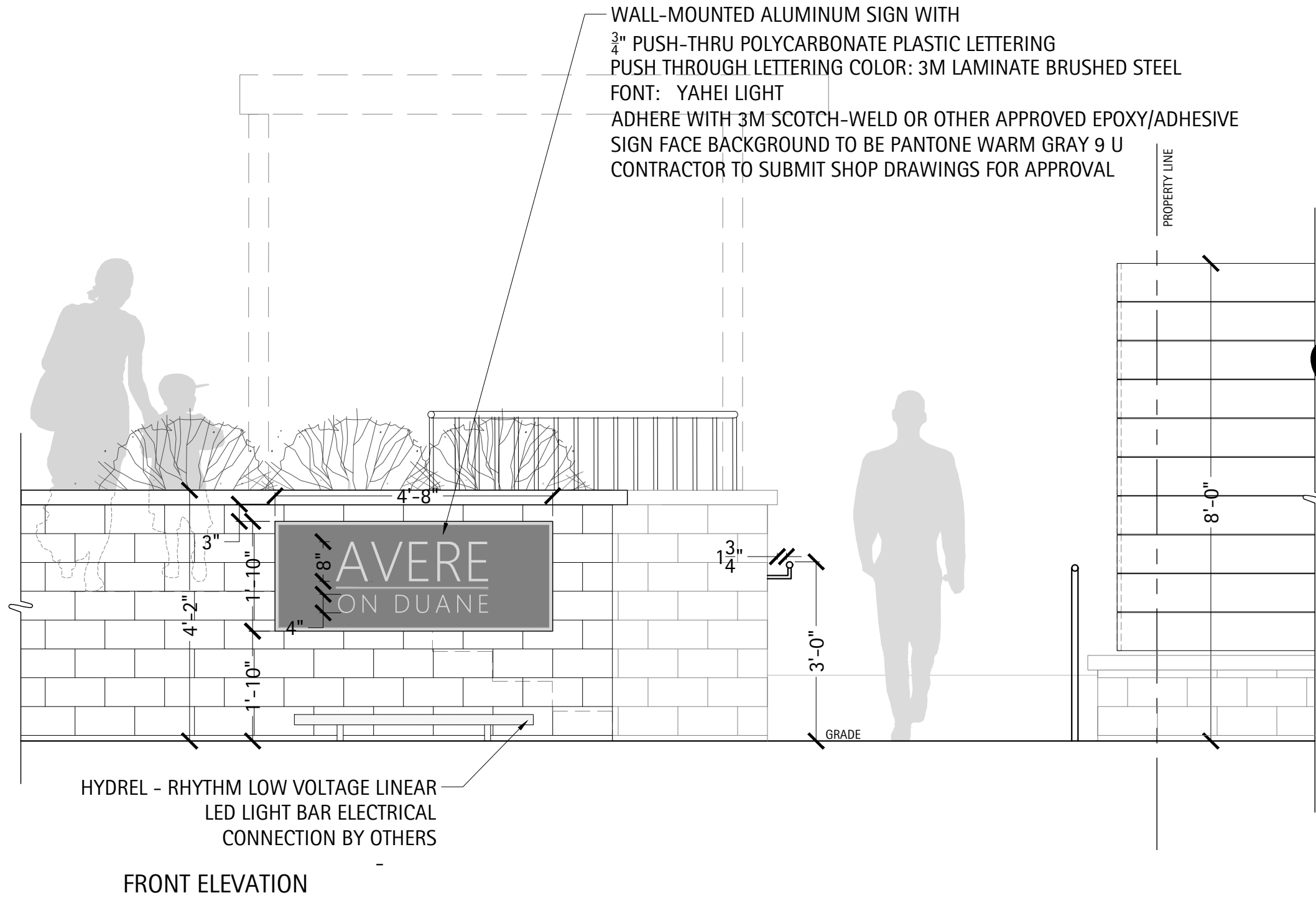


PANTONE Warm Gray 9 UP

PANTONE Lab 55.76, 3.03, 5.18
sRGB 141, 132, 125
HTML #80807D

SIGN FACE BACKGROUND: PANTONE WARM GRAY 9 U

B Building Sign
Scale: 1/2" = 1'-0"





LETTERING: 3M LAMINATE BRUSHED STEEL



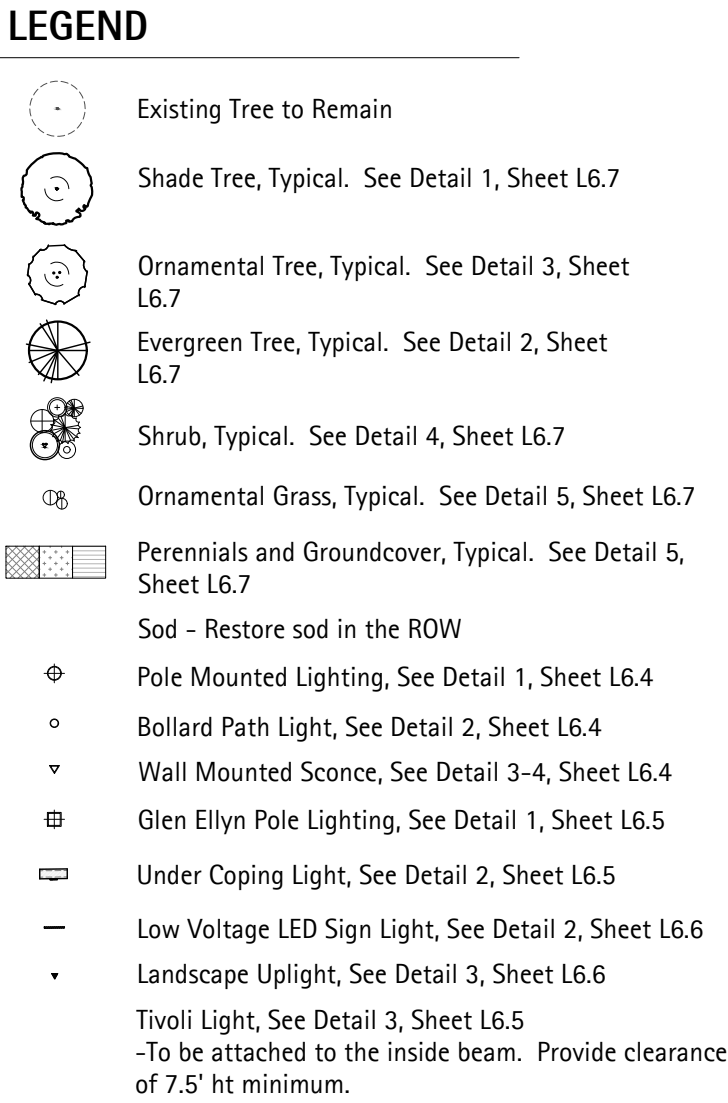
PANTONE Warm Gray 9 UP

PANTONE Lab 55.76, 3.03, 5.18
sRGB 141, 132, 125
HTML #80807D

SIGN FACE BACKGROUND: PANTONE WARM GRAY 9 U

C Main Entry Sign
Scale: 1/2" = 1'-0"

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Chicago, Illinois 60654
p 312.467.5445
f 312.467.5484
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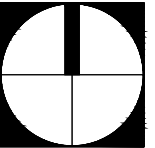
SHEET TITLE

LANDSCAPE PLAN

SCALE IN FEET
1" = 20'



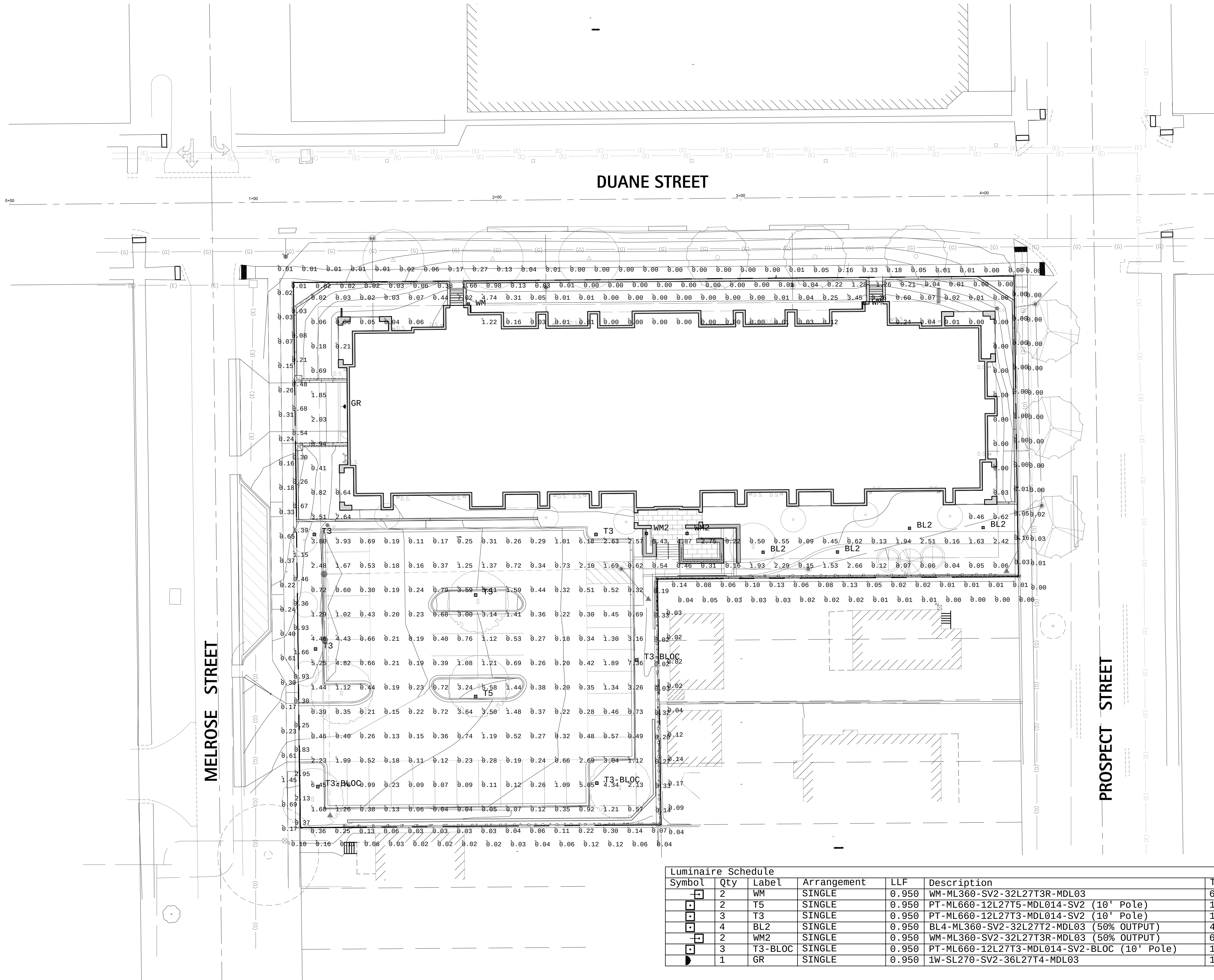
NORTH **SHEET NUMBER**



L3.0

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NOTE:
ALL BOLLARD AND POLE MOUNTED LIGHTS ARE TO BE PLACED 10' OFF OF ANY UTILITY STRUCTURE

Lighting Schedule without Glen Ellyn ROW Lights

Calculation Summary								
Label	Description		CalcType	Units	Avg	Max	Min	Avg/Min
CalcPts_1	All Surface Readings		Illuminance	Fc	1.00	9.26	0.00	N.A.
SOFTSCAPE_01	5' Off Property Readings		Illuminance	Fc	0.10	1.45	0.00	N.A.
SOFTSCAPE_02	At Property Line Readings		Illuminance	Fc	0.27	2.95	0.00	N.A.

E.1.ac

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p 312.467.5445
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SHEET TITLE

PHOTOMETRIC PLAN

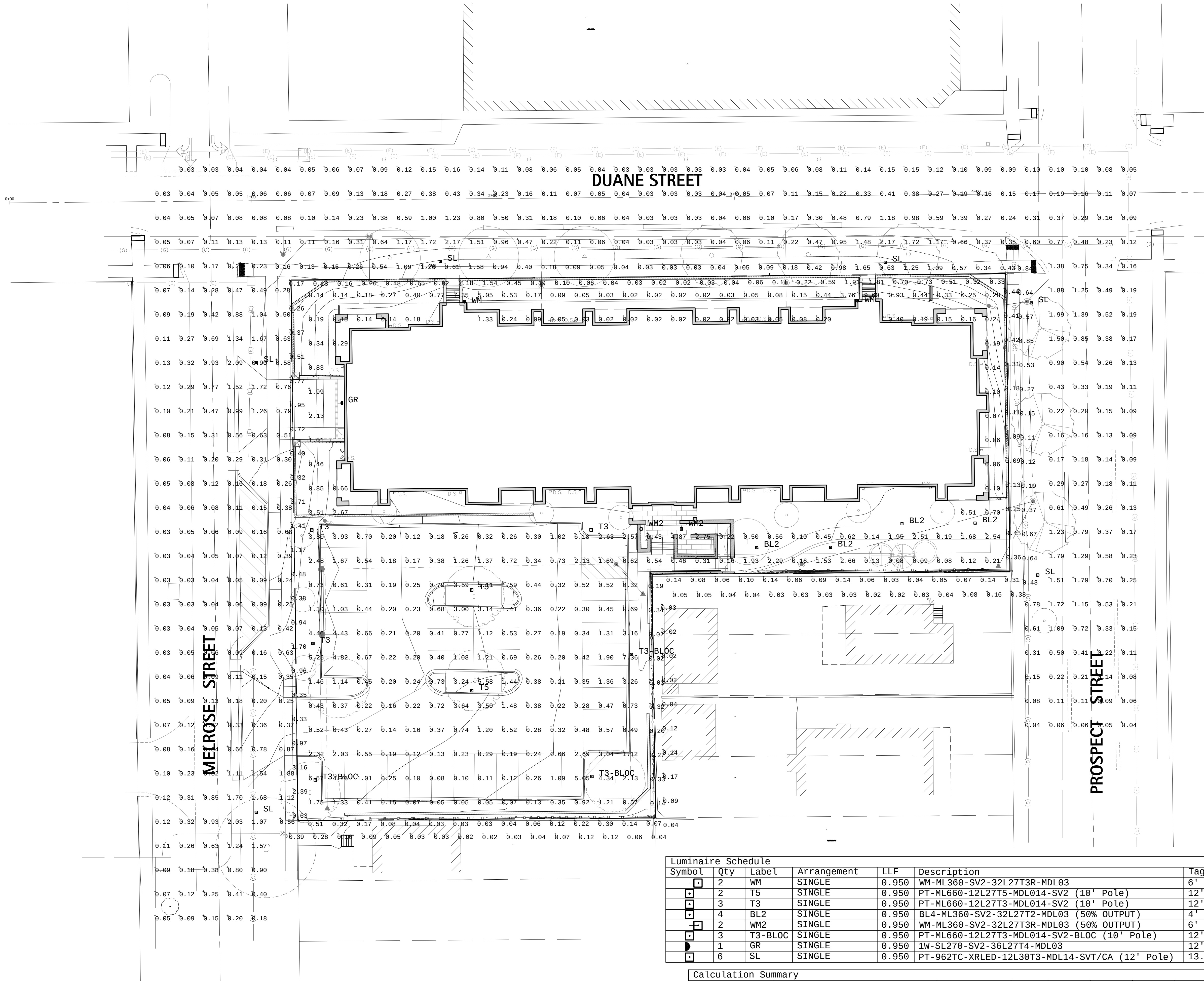
SCALE IN FEET
1" = 20'

NORTH

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NOTE:
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Lighting Schedule with Glen Ellyn ROW Lights

Luminaire Schedule							
Symbol	Qty	Label	Arrangement	LLF	Description	Tag	Lum. Watts
◻	2	WM	SINGLE	0.950	WM-ML360-SV2-32L27T3R-MDL03	6' MH	38.3
◻	2	T5	SINGLE	0.950	PT-ML660-12L27T5-MDL014-SV2 (10' Pole)	12' MH	45.6
◻	3	T3	SINGLE	0.950	PT-ML660-12L27T3-MDL014-SV2 (10' Pole)	12' MH	45.6
◻	4	BL2	SINGLE	0.950	BL4-ML360-SV2-32L27T2-MDL03 (50% OUTPUT)	4' MH	19.25
◻	2	WM2	SINGLE	0.950	WM-ML360-SV2-32L27T3R-MDL03 (50% OUTPUT)	6' MH	19.13
◻	3	T3-BLOC	SINGLE	0.950	PT-ML660-12L27T3-MDL014-SV2-BLOC (10' Pole)	12' MH	45.6
◻	1	GR	SINGLE	0.950	1W-SL270-SV2-36L27T4-MDL03	12' AG	42.7
◻	6	SL	SINGLE	0.950	PT-962TC-XRLED-12L30T3-MDL14-SVT/CA (12' Pole)	13.5' MH	59.9

Calculation Summary							
Label	Description	CalcType	Units	Avg	Max	Min	Avg/Min
CalcPts_1	All Surface Readings	Illuminance	Fc	1.04	9.60	0.02	52.00
OFF PROPERTY	Off Property Readings	Illuminance	Fc	0.36	2.17	0.03	12.00
SOFTSCAPE_01	5' Off Property Readings	Illuminance	Fc	0.35	1.88	0.02	17.50
SOFTSCAPE_02	At Property Line Readings	Illuminance	Fc	0.42	3.16	0.02	21.00

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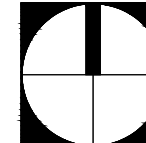
PHOTOMETRIC PLAN

SCALE IN FEET
1" = 20'

0' 10' 20' 60'

NORTH

SHEET NUMBER



L4.1

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GENERAL NOTES

1. Landscape Contractor shall verify all utility locations (existing and proposed) along with existing conditions and grades (existing and proposed), and note any discrepancies to owner, Engineer, and Landscape Architect immediately, before proceeding with any work.

2. Base information for these plans was taken from Engineer's site survey, geometric, and grading plans. Contractor shall verify all dimensions and locations of existing and proposed features, and familiarize themselves with any obstacles encumbering the installation of this project.

3. Any existing tree surveys or locations for these plans were prepared by the Engineer or a certified arborist. See plans for information.

4. All soil/underground conditions shall be referred to soil testing reports prepared by the owner's consultant.

5. Any archeological information relevant to these plans shall be referred to archeological survey and reports (if appropriate to job site) by the owner's consultant.

GENERAL PLANTING NOTES

GENERAL CONDITIONS

1. Contractor shall familiarize themselves with all landscape specifications prior to commencement of work. Any questions or concerns shall be directed to Project Engineer or Landscape Architect in writing prior to landscape work commencement.

2. All project limits shall be fenced with temporary plastic fencing at 48" height, staked at 4' on center, and clearly signed for construction activities. All existing, protected vegetation shall be fenced at a minimum of the plants drip line or as approved by Landscape Architect.

3. The Landscape Contractor shall keep all areas clean and orderly at all times.

4. The Landscape Contractor shall keep all roadways and walkways clear of mud and debris that result from landscape operations.

SITE GRADING & BERMING

5. Berming shall occur along all noted landscape areas to the designed berming heights shown on the plans. All grading, drainage, and utilities shall be evaluated in the field for conflict points with designed berming. Landscape Architect and Project Engineer shall review and approve prior to finished grading. Finished shape and contouring shall be at Landscape Architect's direction.

6. All grading and drainage shall be properly pitched to existing or proposed drainage swales and structures. Landscape Architect and Project Engineer shall field verify and approve.

7. All stone work to be approved by Landscape Architect in field. All stone color samples shall be approved by Landscape Architect prior to ordering.

SOIL & PLANTING MIX

8. All soil planting mix for backfill or beds, whether from on-site stockpile or new imported soil, shall be tested for approved specified pH levels and nutrient content. Submit testing agency with laboratory report to project Landscape Architect for approval, along with recommendations to amending soil as appropriate for use in planting.

9. Topsoil shall be clean, pulverized soil from an acceptable source. Topsoil shall be free of debris, stones, and other material not more than one inch (1") diameter in size. Contractor shall provide the Landscape Architect with receipt of soil source and soil test results from a qualified lab upon request.

10. It is anticipated that all planting areas, including lawn, shall be thoroughly tilled to a minimum of 12-18" depth. All on-site topsoil shall be amended and reused as approved, or removed off-site and disposed of properly. New planting soil mix consisting of pulverized topsoil and mushroom compost shall be installed and properly compacted to the following depths noted in the specifications and landscape planting details.

11. Clean topsoil mix should have a tested and approved pH of 6.0 -- 7.0

12. All planting beds shall be thoroughly tilled and amended with topsoil/compost mix to a minimum of 12" depth.

13. The Landscape Contractor shall prepare planting beds by adding soil amendments to approved on-site or imported topsoil mix in the following quantities:
Trees and Shrubs: three (3) parts topsoil, (1) part peat, and one (1) part sand
Perennials and Groundcovers: three (3) parts topsoil, one (1) part peat, and two (2) parts decomposed mushroom compost. (See Specifications)

14. All excess materials and spoils resulting from the landscape work shall be legally disposed of off-site by the Landscape Contractor.

6. All surface drainage shall be diverted away from structures and noted site features in all areas as shown on the Civil Engineer's grading plans. Surface drainage shall be diverted to existing or proposed basin structures or inlets as directed by the grading plans. Any site underdrainage as shown in the landscape drawings shall be provided at Landscape Architect's direction. Where poor subsurface drainage conditions occur in the field, Contractor shall notify Landscape Architect immediately and make recommendations for solutions to drainage issues before proceeding with work.

7. Where possible, and at Engineer's approval and per code, all underdrainage shall be tied into existing or proposed storm structures.

8. Landscape accent lighting as shown on these plans is for general location and intent only. The specified fixture and wattage shall be provided and installed on the desired feature at Landscape Architect's direction. Contractor shall field stake all accent lighting locations and obtain Landscape Architect's approval before final installation. Please refer to electrical plans for conduit or low-voltage cable routing and power-source (timer, transformers, switch boxes, etc.).

PLANTING STANDARDS

15. All plant material shall be top-quality grade, free of defects, and meet accepted horticultural standards established by the American Nurserymen's Association (AAN) and as deemed appropriate by Landscape Architect. Landscape Architect shall have the right to reject any, and all, plant material delivered to the site that does not meet acceptable standards.

16. Sizes shown on plant schedule are minimum acceptable sizes.

17. All plants to be balled-in-burlap or container-grown as specified in plant schedule. All plastic root wrapping material and metal wire baskets shall be removed.

18. All new and transplanted plants to be sprayed with an antidessecant within twenty-four (24) hours after planting. Antitranspirant shall be "Wiltpruf" or an approved equal.

19. Landscape Architect shall field verify and approve all final staked tree, shrub, and perennial bed locations prior to installation.

20. The Landscape Contractor shall repair to its original condition any plant material which becomes damaged as a result of landscape operations.

21. All perennials shall be planted at least two (2) feet from the tree trunks planted within planting areas.

22. Landscape Architect shall approve all plant materials for quality, condition and specified sizes. Plant material shall be approved at nursery location, during tagging or before removal and transport to job site. Shrubs, perennials and groundcovers shall be approved at job site prior to installation.

FERTILIZER & MULCHING

23. Prior to mulching tree and shrub planting areas, apply time-release fertilizer by broadcasting over entire planting areas. Rate is to manufacturer's recommendations. Fertilizer is to have no less than 10% available phosphoric acid, and 3-8% total nitrogen soluble potash.

24. All plantings shall receive a slow-release fertilizer with a ratio of 10/10/10.

25. All trees and shrub beds shall receive a minimum of 3" thick shredded hardwood mulch top-dressing.

26. All perennials and groundcover beds shall be top-dressed with two inches (2") minimum of mushroom compost.

MAINTENANCE & WARRANTIES

27. All plants shall be thoroughly watered in at time of planting and watered and maintained throughout construction until final acceptance by owner. Contractor shall water all plants immediately after planting. Flood plants twice during the first twenty-four (24) hours after planting.

28. Landscape Contractor shall warranty all trees, shrubs, perennials, and ornamental grasses under this contract will be healthy and in flourishing condition of active growth one year from date of final acceptance.

29. All newly sodded or seeded areas shall be maintained, watered, and mowed throughout their growing seasons during construction and until final acceptance by owner.

SYMBOL		BOTANIC NAME	COMMON NAME	SIZE	REMARKS
DECIDUOUS TREES					
AR 5	1	Acer rubrum 'Red Sunset'	Red Sunset Red Maple	5" caliper	B&B
AF 3	3	Acer x freemanii 'Autumn Blaze'	Freemanii Maple	3" caliper	B&B
AH 3	3	Aesculus hippocastanum	Horse Chestnut	3" caliper	B&B
GT 3	3	Gleditsia triacanthos inermis 'Skyline'	Skyline Thornless Honeylocust	3" caliper	B&B
UAA 3	5	Ulmus 'Morton'	Accolade Elm	3" caliper	B&B
ORNAMENTAL TREES					
CAR 10	11	Carpinus caroliniana	American Hornbeam	10' ht.	B&B/Multi Stem
CC 10	4	Cercis canadensis	Red bud	10' ht.	B&B/Single Stem
MSS 5	9	Malus sargentii	Sargent Crabapple	5' ht.	B&B/Multi Stem
SR 3	9	Syringa reticulata 'Ivory Silk'	Japanese Tree Lilac	3" caliper	B&B/Multi Stem
EVERGREEN TREES					
PGD 8	1	Picea glauca 'Densata'	Black Hills Spruce	8' ht.	B&B
PGD 10	1	Picea glauca 'Densata'	Black Hills Spruce	10' ht.	B&B
PM 12	1	Pseudotsuga menziesii	Douglas Fir	12' ht.	B&B
DECIDUOUS SHRUBS					
AM	57	Aronia melanocarpa	Glossy Black Chokeberry	24-30" ht.	#5 Container
CS	14	Cornus sericea 'Kelseyi'	Dwarf Kelsey Redtwig Dogwood	18-24" ht.	#5 Container
HPQF	64	Hydrangea paniculata 'Dwarf Quick Fire'	Dwarf Quick Fire Hydrengaea	30-36" ht.	B&B
VC	4	Viburnum carlesii	Korean Spice Viburnum	36" ht.	B&B
VD	41	Viburnum dentatum	Arrowwood Viburnum	30-36" ht.	B&B
EVERGREEN SHRUBS					
BM	104	Buxus microphylla 'Wintergreen'	Wintergreen Boxwood	18"-24" ht.	B&B
JCK	49	Juniperus chinensis 'Kallays Compacta'	Kallays Compact Juniper	5 gal.	#5 Container
JH	4	Juniperus horizontalis 'Plumosa Compacta'	Youngstown Andorra Juniper	15-18" ht.	#3 Container
TM	18	Taxus media 'Densiformis'	Dense Yew	24" spr.	B&B
TMH 30	3	Taxus media "Hicksii"	Hicks Yew	30" ht.	B&B
TMH 48	6	Taxus media "Hicksii"	Hicks Yew	48" ht.	B&B
TOE 8	5	Thuja occidentalis 'Emerald Green'	Emerald Green Arborvitae	8' ht.	B&B
PERENNIALS, ORNAMENTAL GRASSES					
asb	177	Allium 'Summer Beauty'	Summer Beauty Allium	1 gal.	CG/18" o.c. spacing
gs	4	Geranium sanguineum	Bloody Red Cranesbill	1 gal.	CG/18" o.c. spacing
hh	180	Hemerocallis 'Happy Returns'	Happy Returns Daylily	1 gal.	CG/18" o.c. spacing
hgc	30	Hosta 'Guacamole'	Guacamole Hosta	1 gal.	CG/36" o.c. spacing
isc	49	Iris siberica 'Caesar's Brother'	Caesar's Brother Iris	1 gal.	CG/18" o.c. spacing
nm	105	Nepeta x faassenii 'Walkers Low'	Walkers Low Catmint	1 gal.	CG/24" o.c. spacing
pah	18	Pennisetum apolocuroides 'Hameln'	Dwarf Fountain Grass	3 gal.	CG/24" o.c. spacing
sh	402	Sporobolus heterolepsis	Prairie Dropseed	1 gal.	CG/24" o.c. spacing
GROUNDCOVERS					
lsp	1960	Liriope spicata	Lilyturf	quart	CG/12" o.c. spacing

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f 312.467.5484
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DEVELOPMENT

PARTNERS LLC

116 W. ILLINOIS ST.
CHICAGO, ILLINOIS 60654

PROJECT

AVERE on

Duane

427 Duane St.

Glen Ellyn, Illinois 60137

CONSULTANTS

Civil Engineer

Haeger Engineering

Schaumburg, Illinois

T 847.394.6600

Architect

BSB Design, Inc.

Palatine, Illinois

T 847.705.2200

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04	20190611	AOD Submittal

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SHEET TITLE

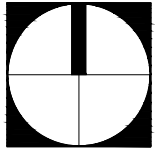
PLANTING

SCHEDULE AND

NOTES

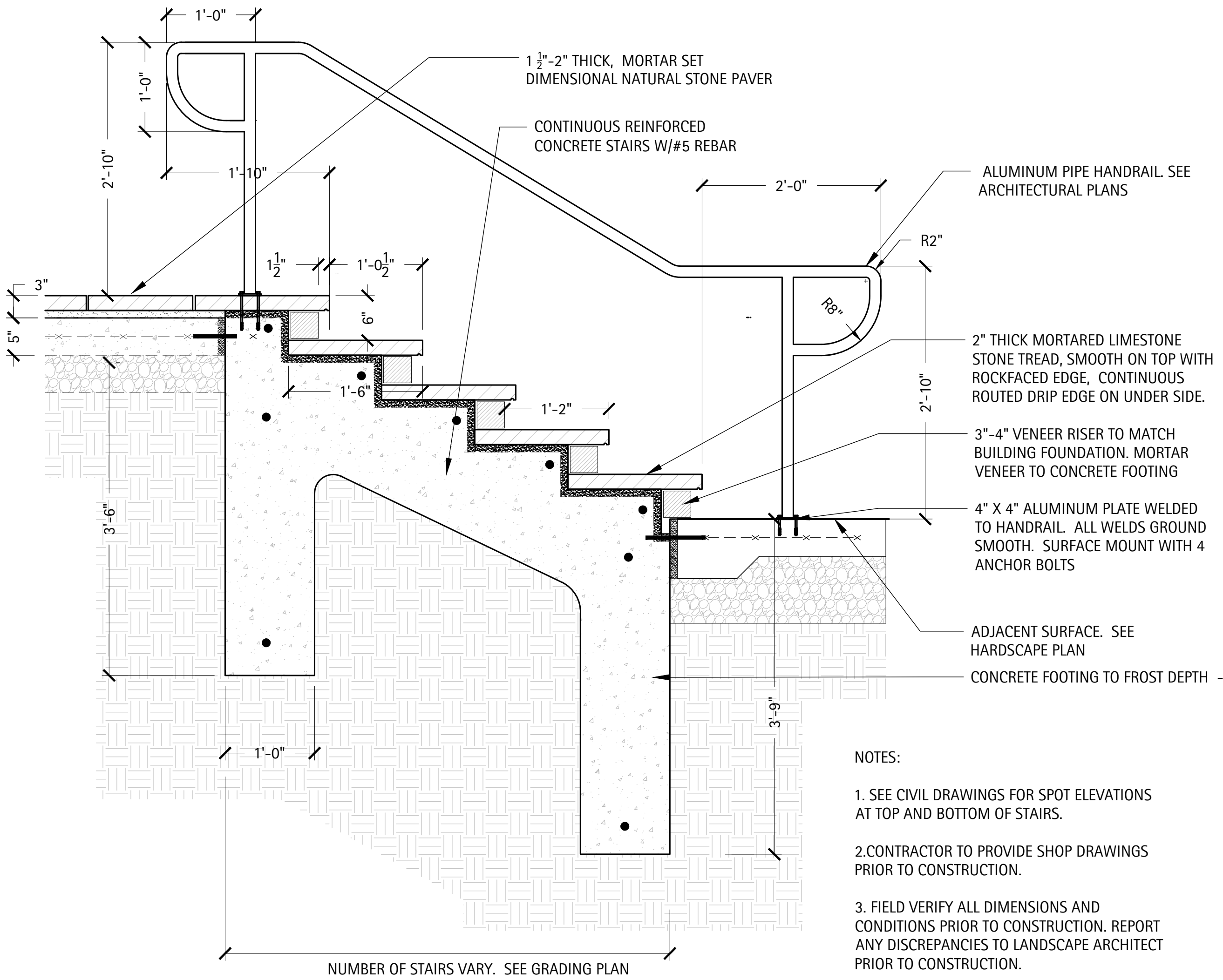
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NORTH SHEET NUMBER

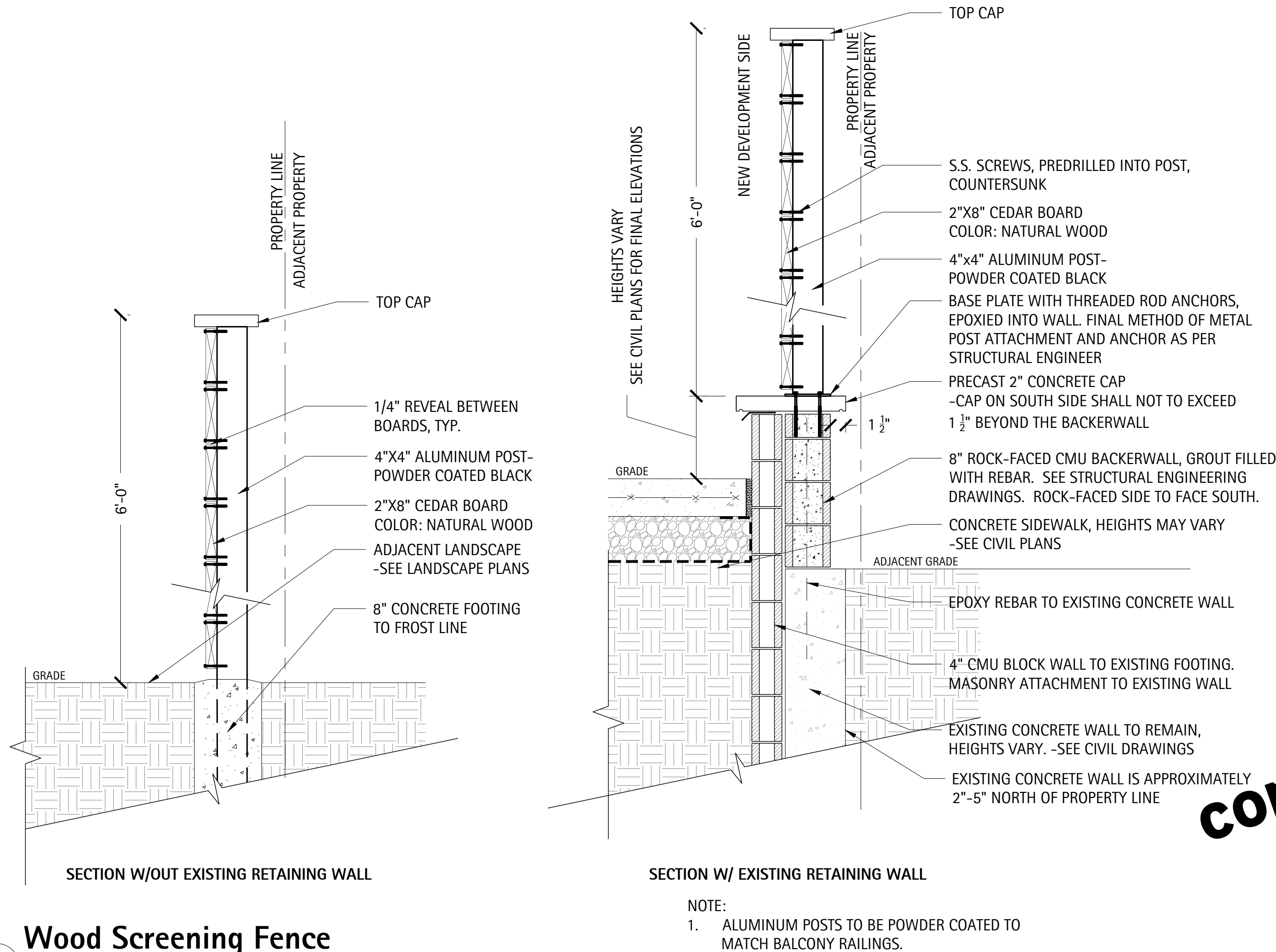
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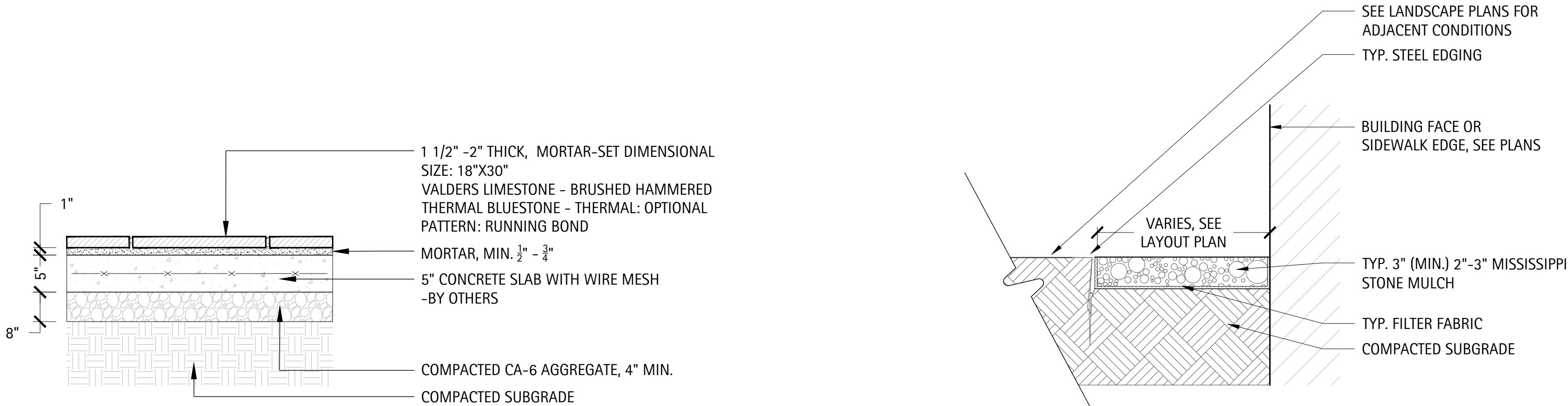
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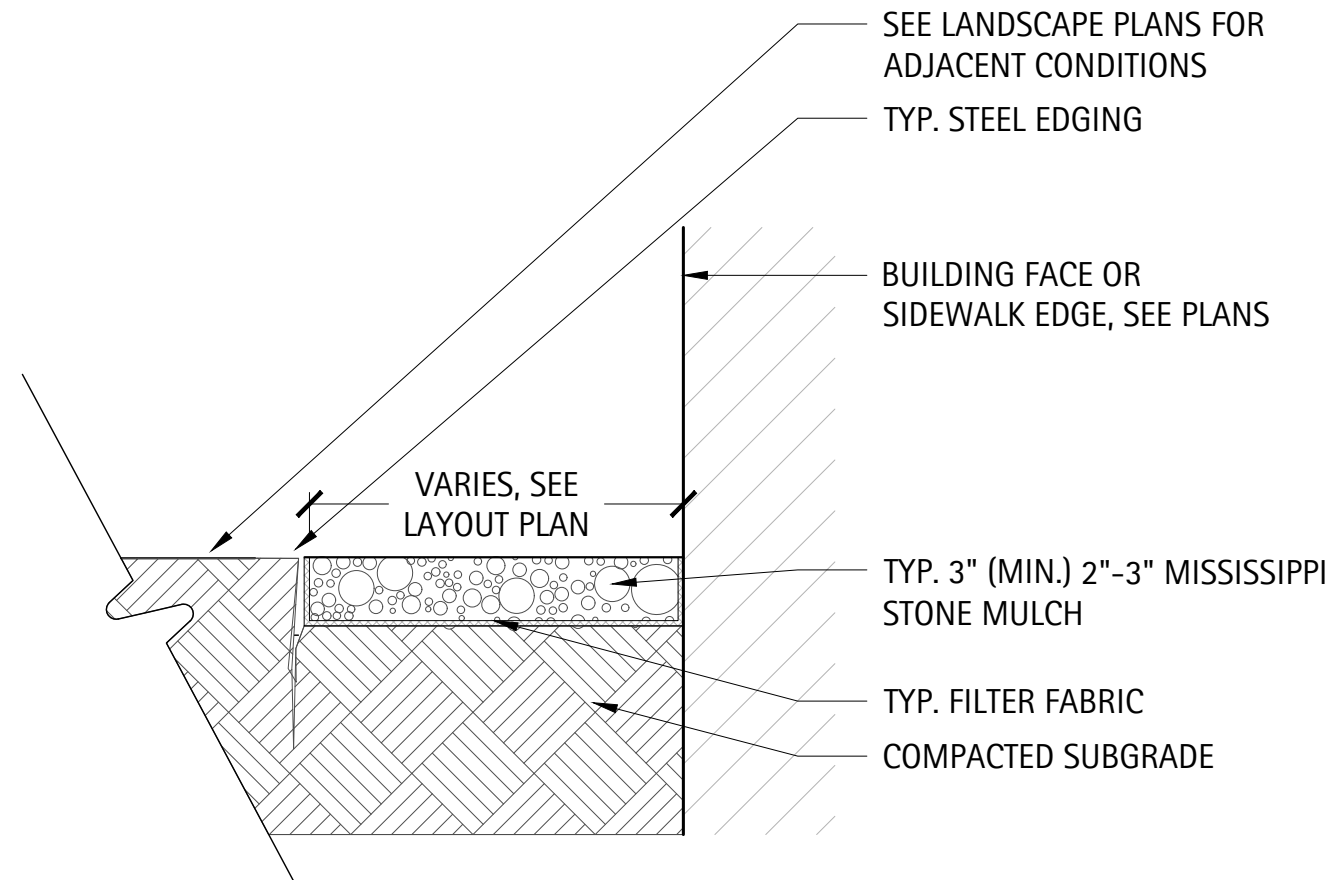
1 Stone Clad Stair with Hand Rail
Scale: 1" = 1'-0"



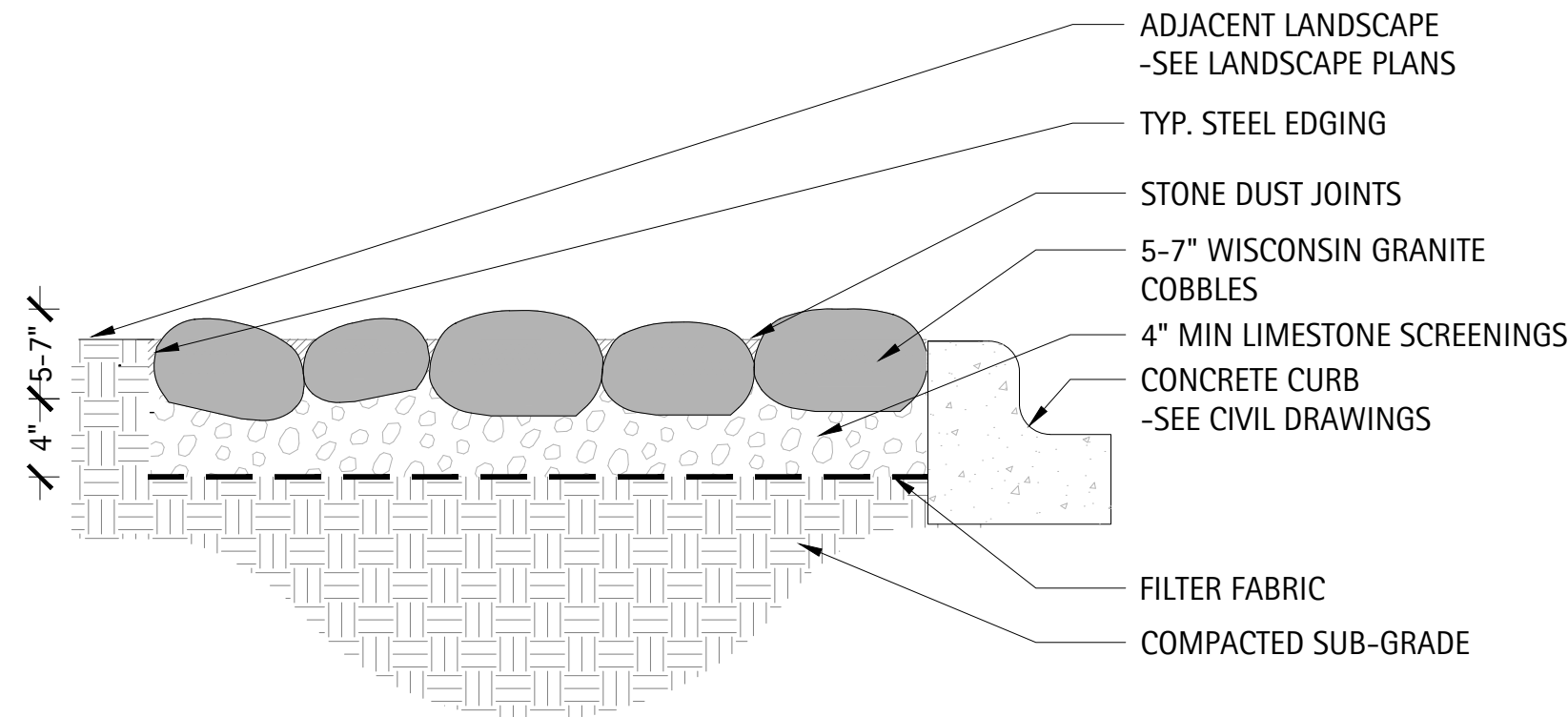
2 Wood Screening Fence
Scale: 1" = 1'-0"



3 Mortar-Set Paver Over Concrete Base
Scale: 1" = 1'-0"



4 Typ. Gravel Maintenance Edge
Scale: 1" = 1'-0"



5 Section - Half-Buried Cobble Edge
Scale: 1" = 1'-0"

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CHICAGO, ILLINOIS 60654

PROJECT
AVERE on Duane
427 Duane St.
Glen Ellyn, Illinois 60137

CONSULTANTS
Civil Engineer
Haeger Engineering
Schaumburg, Illinois
T 847.394.6600

Architect
BSB Design, Inc.
Palatine, Illinois
T 847.705.2200

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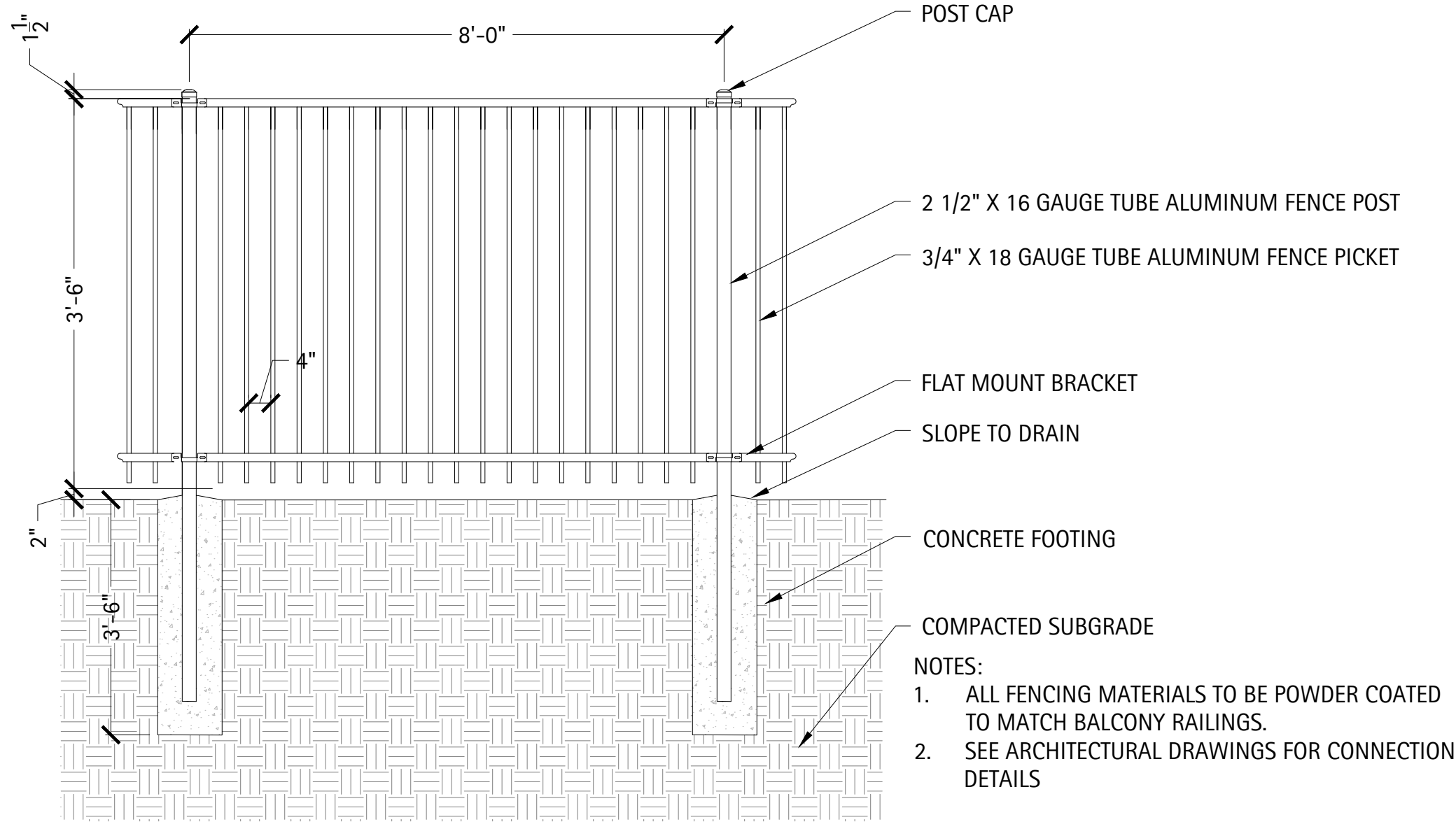
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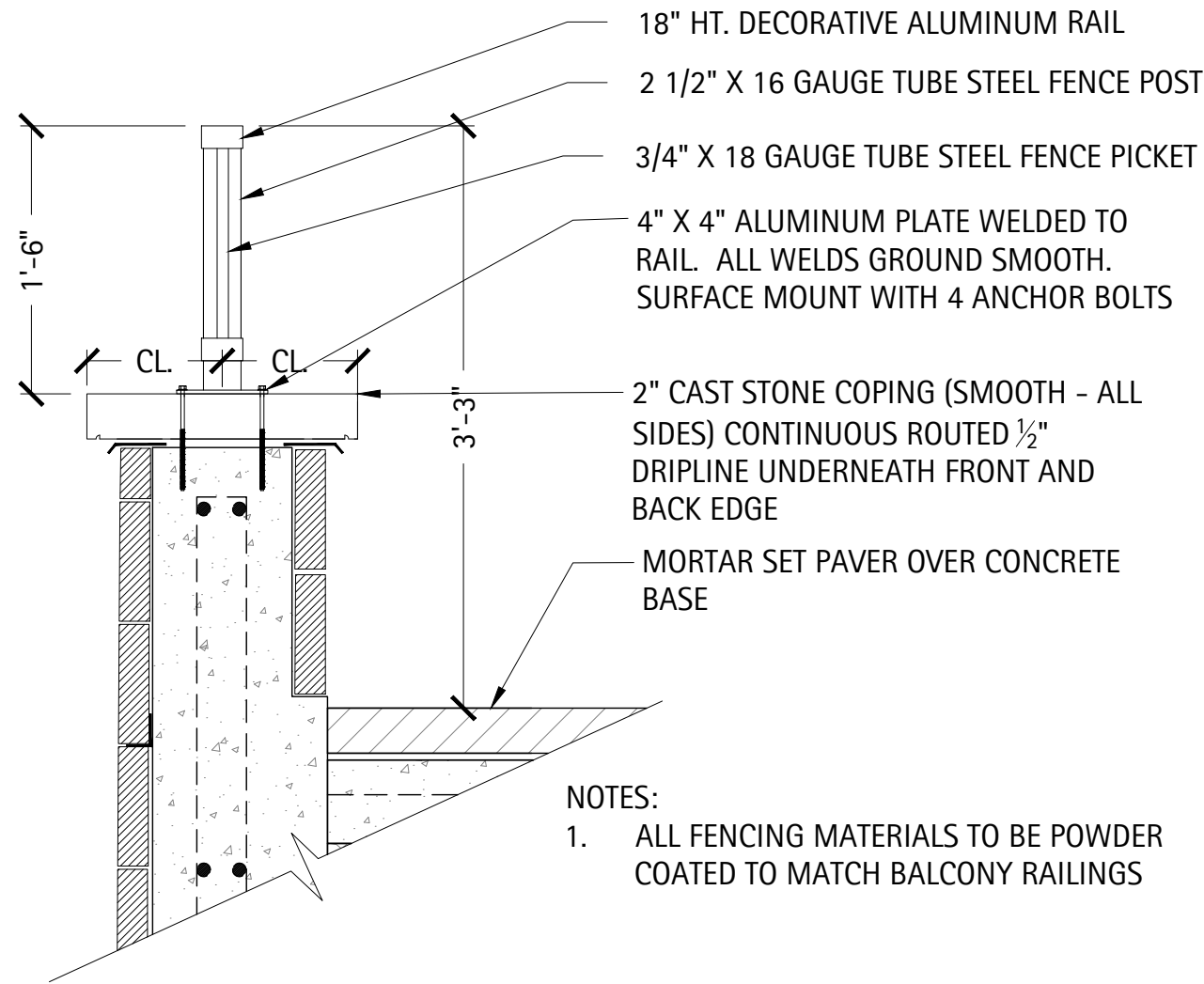
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SITE DETAILS
SCALE IN FEET

SHEET NUMBER
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1 Elevation - Ornamental Fence
Scale: 1/2" = 1'-0"



2 Typical Surface Mounted Railing
Scale: 1"=1'

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**SITE
DETAILS**

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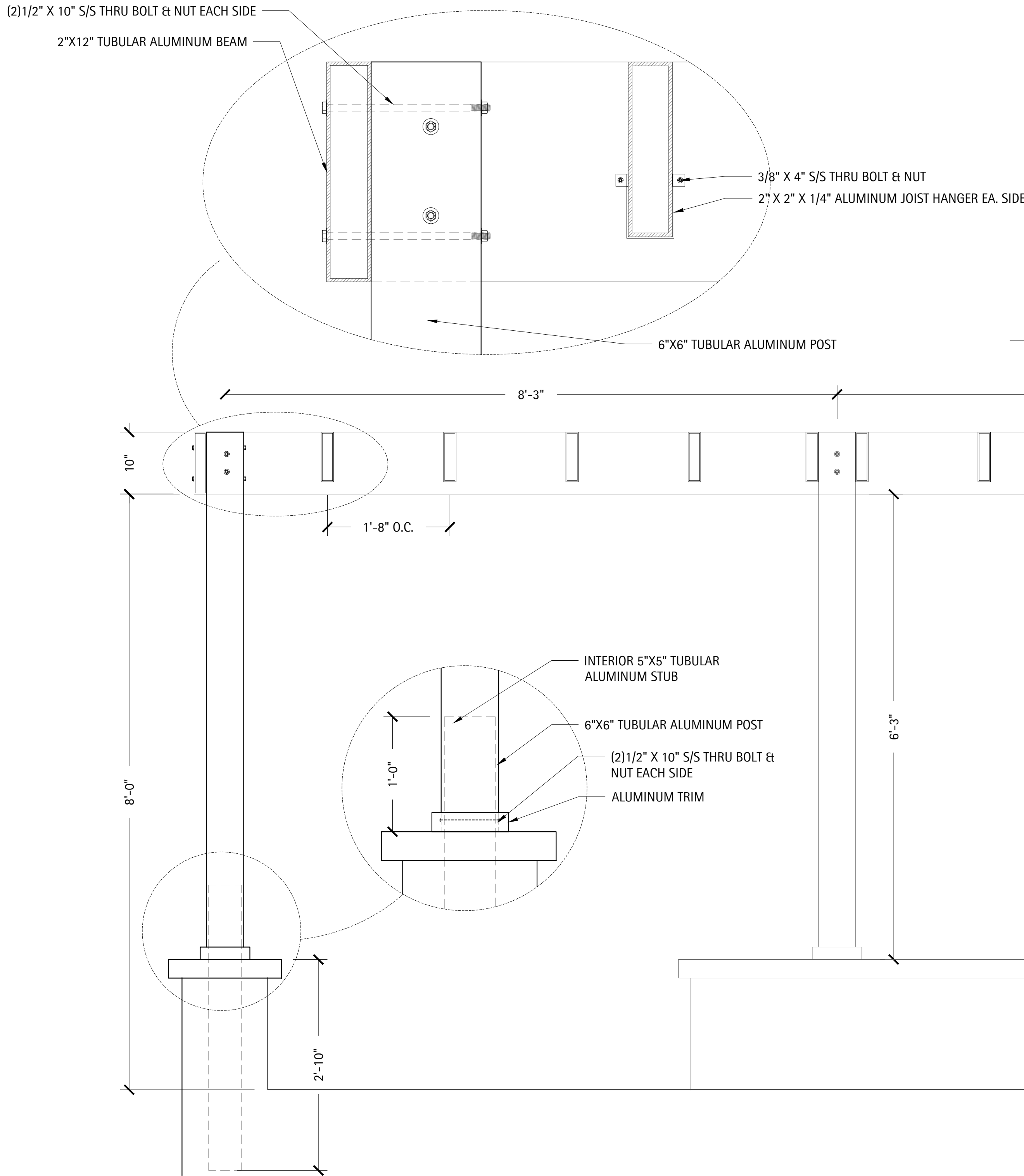
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1

Elevation - Pergola

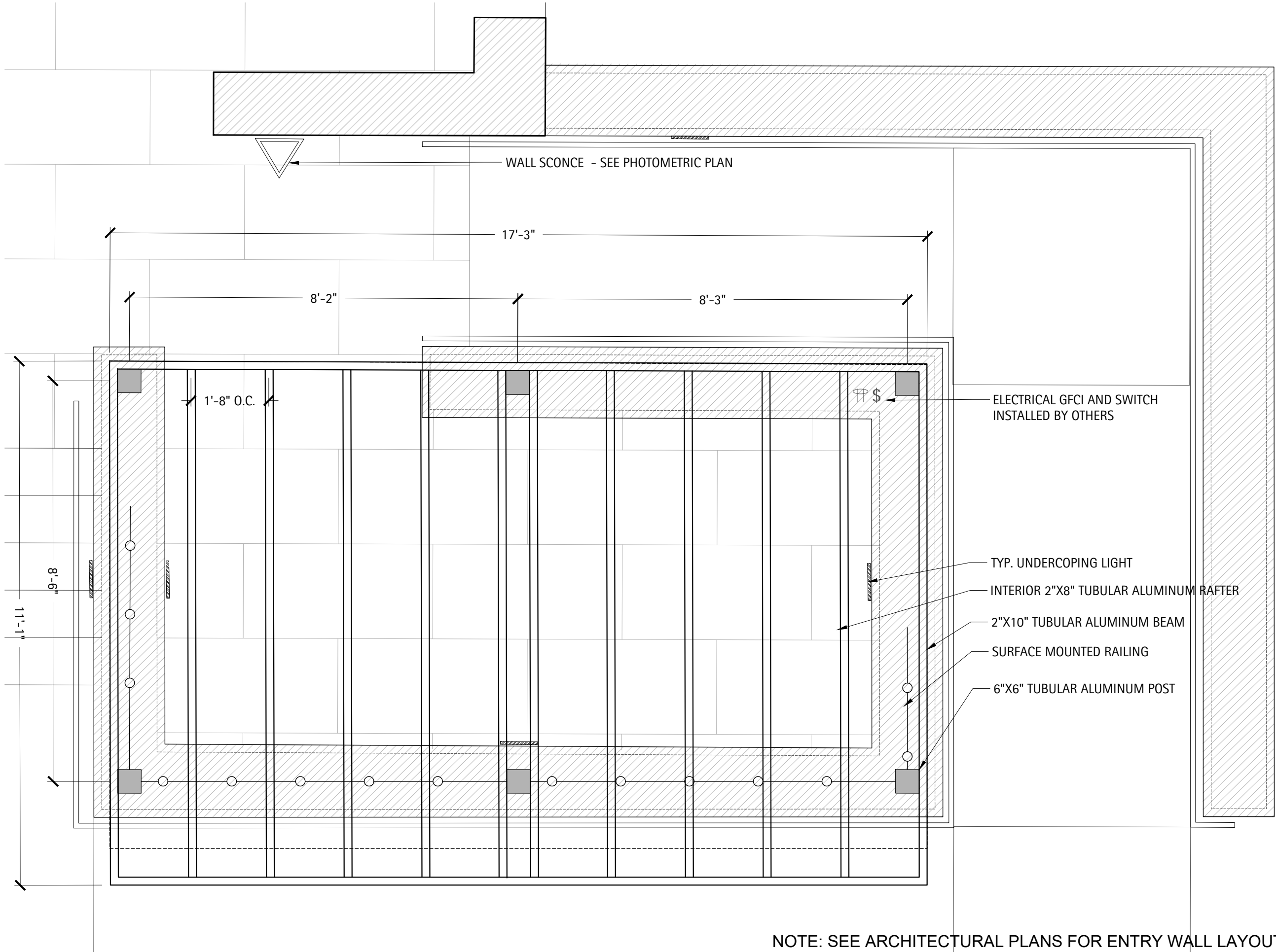
Scale: 1"=1'-0"



- NOTE:
- PERGOLA TO BE POWDER COATED TO MATCH BALCONY RAILINGS.
 - CONTRACTOR TO PROVIDE SHOP DRAWINGS PRIOR TO CONSTRUCTION.
 - SEE ARCHITECTURAL PLANS FOR ENTRY WALL LAYOUT.

Plan - Pergola

Scale: 1/2"=1'-0"



E.1.ac

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**AVERE on
Duane**
427 Duane St.
Glen Ellyn, Illinois 60137

CONSULTANTS
Civil Engineer
Haeger Engineering
Schaumburg, Illinois
T 847.394.6600

Architect
BSB Design, Inc.
Palatine, Illinois
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**SITE
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962TC-XRLED GLEN ELLYN SERIES

LED

Electronic Drivers

The LED Driver shall be U.L. Recognized.
It shall be securely mounted inside the fixture, for optimal performance and longevity. It shall be supplied with a quick-disconnect electrical connector on the power supply, providing easy power connections and fixture installation. It shall have overload as well as short circuit protection, and have a DC voltage output, constant current design, 50/60HZ. It shall be supplied with line-ground, line-neutral and neutral-ground electrical surge protection in accordance with IEEE/ANSI C62.41.2 guidelines. It shall be dimmable using a 0-10v signal.

For sources over 50w: The driver shall have a minimum efficiency of 90%. The driver shall be rated at full load with THD<20%, and a power factor of greater than 0.90. The driver shall contain over-heat protection.

For sources under 50w: The driver shall have a minimum efficiency of 88%.

Warranty

Five-year warranty. See product and finish warranty guide for details.

Finish

Refer to website for details.

Fixtures

962TC

**962TCGT
(Glow Top)**

Performance (Based on CSA Lens)

LIGHT SOURCE	72 DELIVERED LUMENS	EFFICIENCY (LP/W)	70 DELIVERED LUMENS	EFFICIENCY (LP/W)	14 DELIVERED LUMENS	EFFICIENCY (LP/W)	15 DELIVERED LUMENS*	EFFICIENCY (LP/W)	INTENSITY
09L27T_MDL07	1610	73.1	1800	72.6	1550	70.3	1670	75.9	22
09L35T_MDL07	1895	86	1880	85.5	1820	82.8	1965	89.4	22
09L45T_MDL07	2035	92.5	2025	92	1960	89	2115	96.1	22
09L27T_MDL14	2860	59.6	2810	58.5	2745	57.1	2960	61.6	48
09L35T_MDL14	3370	70.2	3310	69.3	3230	67.3	3485	72.6	48
09L45T_MDL14	3625	75.5	3560	74.1	3470	72.3	3745	78	48
12L27T_MDL14	4060	67.6	3960	66	3945	65.7	4120	68.6	60
12L35T_MDL14	4760	79.6	4660	77.7	4640	77.4	4850	80.9	60
12L45T_MDL14	5140	85.6	5010	83.5	4990	83.2	5210	86.9	60

*Glow top option adds 10 watts.

SternbergLighting

ESTABLISHED 1923 • EMPLOYEES OWNED

800-621-3376

555 Lawrence Ave., Roselle, IL 60012

info@sternberglighting.com

www.sternberglighting.com

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SPECIFICATION SHEET

MODEL 4260-LED Landscape Series • Step & Brick Lights

FIXTURE ORDERING INFORMATION

TO ORDER FIXTURE: Select appropriate choice from each column as in the following example.

EXAMPLE: SL-4260-B-W-LB2ND

MOUNTING	MODEL	FINISH	COLOR TEMPERATURE	LAMP
SL- Step light	4260	B - Black BR - Architectural Brick Z - Architectural Bronze LZ - Light Bronze DZ - Dark Bronze GT - Granite TC - Terracotta R - Rust HG - Hunter Green WB - Weathered Bronze WI - Weathered Iron W - White G - Verde P - Powder M - Mocha SS - Stainless Steel CSN - Copper BSN - Brass BSO - Oldie Brass	W - Warm C - Cool	LB2ND - 2.5 watt LED - Group B Emitter Qty - 1 Temperature - Warm (W), Neutral (N), Cool (C) <u>Operating voltage range - 6 to 15V.</u> (Please see lamp order code column on lamp guide, Vista product catalog.)

Fixtures shipped with standard lamp, unless otherwise specified.

Vista Professional Outdoor Lighting reserves the right to modify the design and/or construction of the fixture shown without further notification.

1425 Sunrayer Avenue • Sun Valley, CA 95040 • (800) 527-0997 • (800) 766-VISTA (B478)
FAX: (800) 676-VISTA (B476) • email: usa@vistolighting.com • www.vistolighting.com

4260-LED 11.14

1 Glen Ellyn Street Light

Scale: NTS

2 Under Coping Light

Scale: NTS

GUIDE | Litesphere

Strand

12V DC

Shatterproof

Made in USA

Dimmable

Warranty

Features

Technical drawing of the Litesphere light fixture showing dimensions and features:

- Socket and cord color available in Black or White
- Fitted O-Ring for IP65 rating
- Nichia SMD LED's L70 @ 60,000 hours STD, HQ, or VHO LED's
- Shatterproof UV stabilized Polycarbonate globe.

Dimensions:

- 2"
- 1"
- 3 1/8"
- 2 3/16"
- "G19 Size"

Mounting

Catenary cable hangers
(Hanger clips included, cable available)

Direct/Surface

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www.thelighting.com tel: 714-957-0101 fax: 714-427-3458

PHOTOMETRY | Litesphere

Standard Spacing Options & Max Run Chart

(Custom spacing available, please consult factory.)

	6" OC			12" OC			18" OC			24" OC		
	STANDARD (S)	HIGH (H)	VERY HIGH (V)	(S)	(H)	(V)	(S)	(H)	(V)	(S)	(H)	(V)
Lumens Per Foot	11	29.9	180	6	15	90.2	4	10	60	3	7	45
Watts Per Foot	.17	.46	1.92	.09	.23	.96	.06	.15	.64	.04	.12	.48
*Max Single Run	100'	60'	30'	150'	90'	45'	180'	110'	55'	200'	130'	60'

Lumens Per Watt **STD 40** **HO 46** **VHO 94**

Tested @ 3000K w/ clear globe

*Max run lengths based on Tivoli's recommended lumen drop.

Lowest operating temperature for system -40°F

Globes Available

Colored Globes Available

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www.tivoliighting.com tel: 714-957-0101 fax: 714-427-3458



SPEC

Litesphere



Project: _____

Type: _____ Length: _____

Notes: _____

Ordering Information

Product	Wire	Spacing	LED Type	CTT	Globe	Voltage
LSL						12
Litesphere	B Black W White	06 6" OC 12 12" OC 18 18" OC 24 24" OC CS Custom	V Very High Output H High Output S Standard Output	19 1900K 27 2700K 30 3000K 35 3500K 40 4000K 50 5000K AM *Amber RB *Royal Blue RD *Red GN *Green YL *Yellow	C Clear F Frosted Y Yellow R Red O Orange G Green B Blue P Purple Z Varied Colors	12 12V DC
					V LED required S Saber L Flare	

!

Trolli manufactures Litesphere to your specified lengths.
 Individual lengths and runs must be specified at time of ordering as a separate line item.
 See page 7 for run length ordering information

*Available in
WHO LED only

For colored globes,
3500K recommended.

Trolli, LLC, reserves the right to modify this specification without prior notice.

Page 6 of 9

www.trollighting.com tel: 714-957-6101 fax: 714-427-3468

3 Tivoli Light at Pergola

Scale: NTS

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1011E
ILLINOIS
ONE-CALL SYSTEM

Attachment: 11. Landscape Construction Packag

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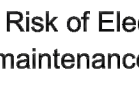
**LIGHTING
DETAILS**

SCALE IN FEET

SHEET NUMBER

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SLEDB-110V-M

FLASH TUBE REMOVAL

WARNING: Risk of Electric Shock. Lamp **MUST** be removed from power source and discharged prior to performing maintenance!

Flash tube is easily removed by inserting a flat blade screwdriver between socket and tube and prying upward, working around the base of the tube.

MAINTENANCE

If the lens becomes dirty, wipe down with a mild soap and water solution.

It is recommended to occasionally inspect the unit for any defects and to ensure the cable is not frayed and is gripping tightly in all points of cable contact.

WARRANTY

These instructions may not cover all details or variations of this product for your equipment or installation requirements. Should further information not covered by these instructions be required, please contact Larson Electronics at 1-800-369-6671 or email sales@larsonelectronics.com for further assistance.

Please visit larsonelectronics.com for **Warranty** and **Return** information.

Larson Electronics, LLC

Phone: (800) 369-6671

Fax: (903) 498-3364

www.larsonelectronics.com

2 of 2

Section - Tree Uplighting
Scale: 1" = 1'-0"

PROFESSIONAL
OUTDOOR LIGHTING

SPECIFICATION SHEET

Type: _____

Model: _____

Project: _____

MODEL 2207-LED Landscape Series • Up & Accent Lights

FIXTURE SPECIFICATIONS:

HOUSING:

Die-cast, copper-free aluminum.

SHROUD:

Die-cast, copper-free aluminum fitted to housing with a silicone O-ring gasket - providing a superior weather-tight seal.

FINISH:

Polyester powder-coat finish available in Black, Architectural Bronze, Dark Bronze, Light Bronze, Verde, Pewter, Architectural Brick, Granite, Terracotta, Rust, Hunter Green, Mocha, Weathered Bronze, Weathered Iron, and White.

LENS:

Clear, tempered, shock and heat-resistant, soda-lime glass lens. Optical effect lenses are available; see accessories column on fixture ordering information sheet.

LAMP TYPE:

High Output LED with Vista exclusive smart-driver, powered to operate for 50,000 hours.

ELECTRICAL:

Input voltage range 6-15V AC, regulated to achieve uniform illumination throughout the cable run of fixtures. Integral surge & reverse polarity protection.

MOUNTING:

Injection-molded, glass-reinforced Noryl GTX® composite adjustable knuckle with 1½" NPT. Fixture may be mounted into threaded hubs in junction boxes, ground stakes, tree-mount brackets, or mounting canopies. Please see fixture ordering information for mounting selection.

FASTENERS:

All fasteners are stainless steel.

WIRING:

Prewired with a three-foot pigtail of 18-2 direct-burial cable and underground connectors for a secure connection to supply cable.

All Vista luminaires are **MADE IN U.S.A.**

DIMENSIONS:

Vista Professional Outdoor Lighting reserves the right to modify the design and/or construction of the fixture shown without further notification.

1625 Surveyor Avenue • Stiel Valley, CA 93063 • (805) 527-0987 • (800) 766-VISTA (8478)
FAX: (888) 670-VISTA (8478) • email@vistapro.com • www.vistapro.com

Section - Tree Uplighting
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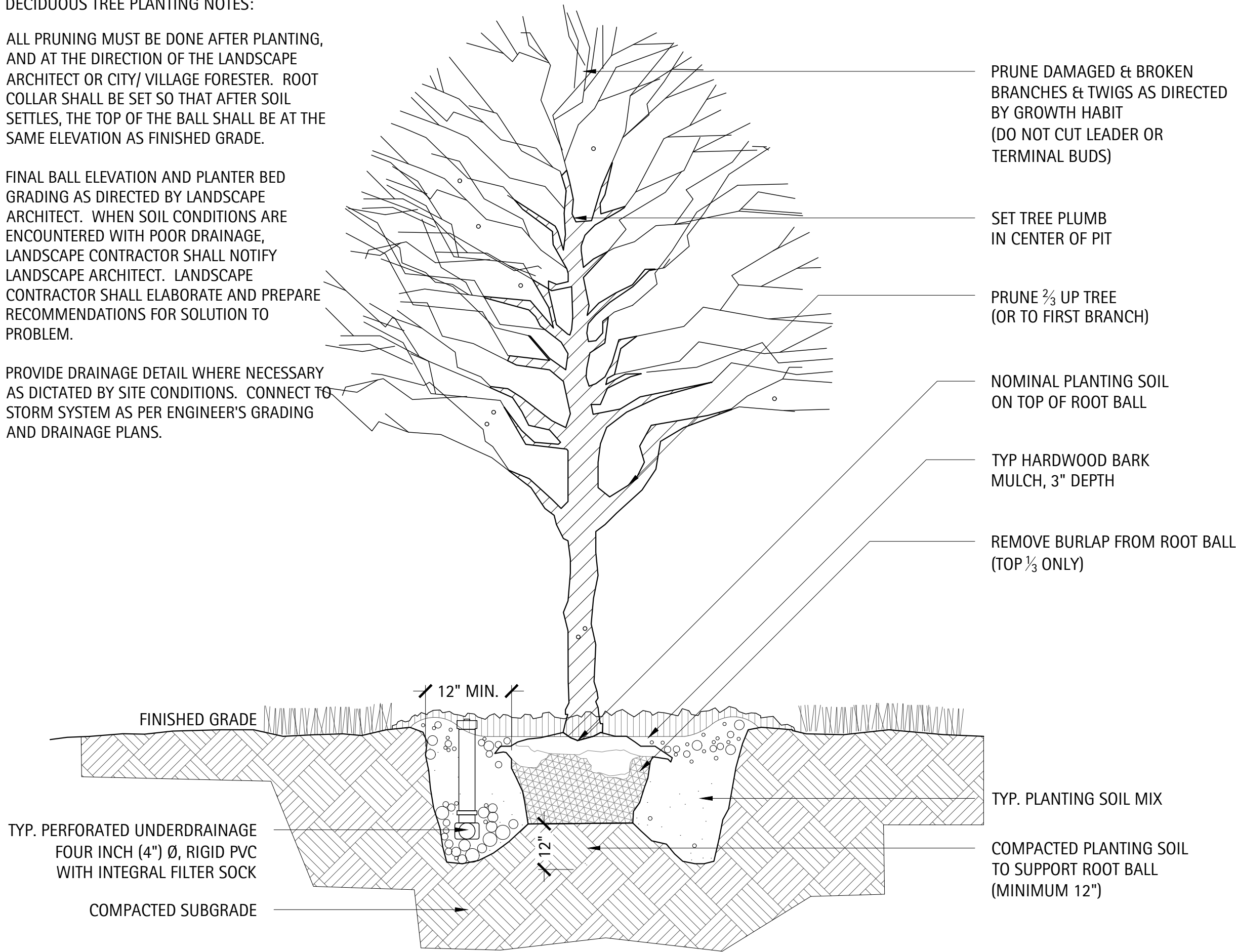
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DECIDUOUS TREE PLANTING NOTES:

ALL PRUNING MUST BE DONE AFTER PLANTING, AND AT THE DIRECTION OF THE LANDSCAPE ARCHITECT OR CITY/ VILLAGE FORESTER. ROOT COLLAR SHALL BE SET SO THAT AFTER SOIL SETTLES, THE TOP OF THE BALL SHALL BE AT THE SAME ELEVATION AS FINISHED GRADE.

FINAL BALL ELEVATION AND PLANTER BED GRADING AS DIRECTED BY LANDSCAPE ARCHITECT. WHEN SOIL CONDITIONS ARE ENCOUNTERED WITH POOR DRAINAGE, LANDSCAPE CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT. LANDSCAPE CONTRACTOR SHALL ELABORATE AND PREPARE RECOMMENDATIONS FOR SOLUTION TO PROBLEM.

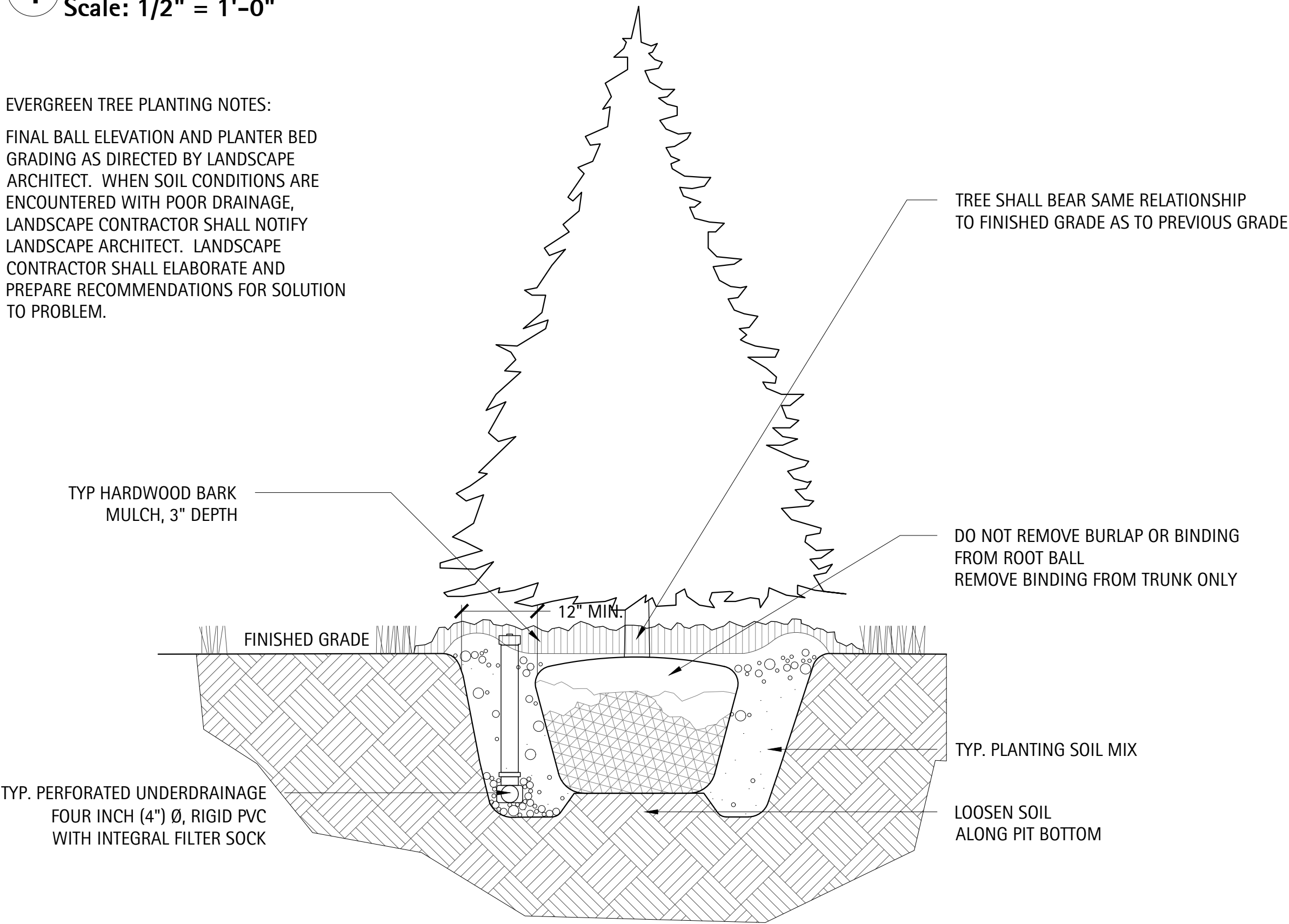
PROVIDE DRAINAGE DETAIL WHERE NECESSARY AS DICTATED BY SITE CONDITIONS. CONNECT TO STORM SYSTEM AS PER ENGINEER'S GRADING AND DRAINAGE PLANS.



1 Section – Shade Tree Planting
Scale: 1/2" = 1'-0"

EVERGREEN TREE PLANTING NOTES:

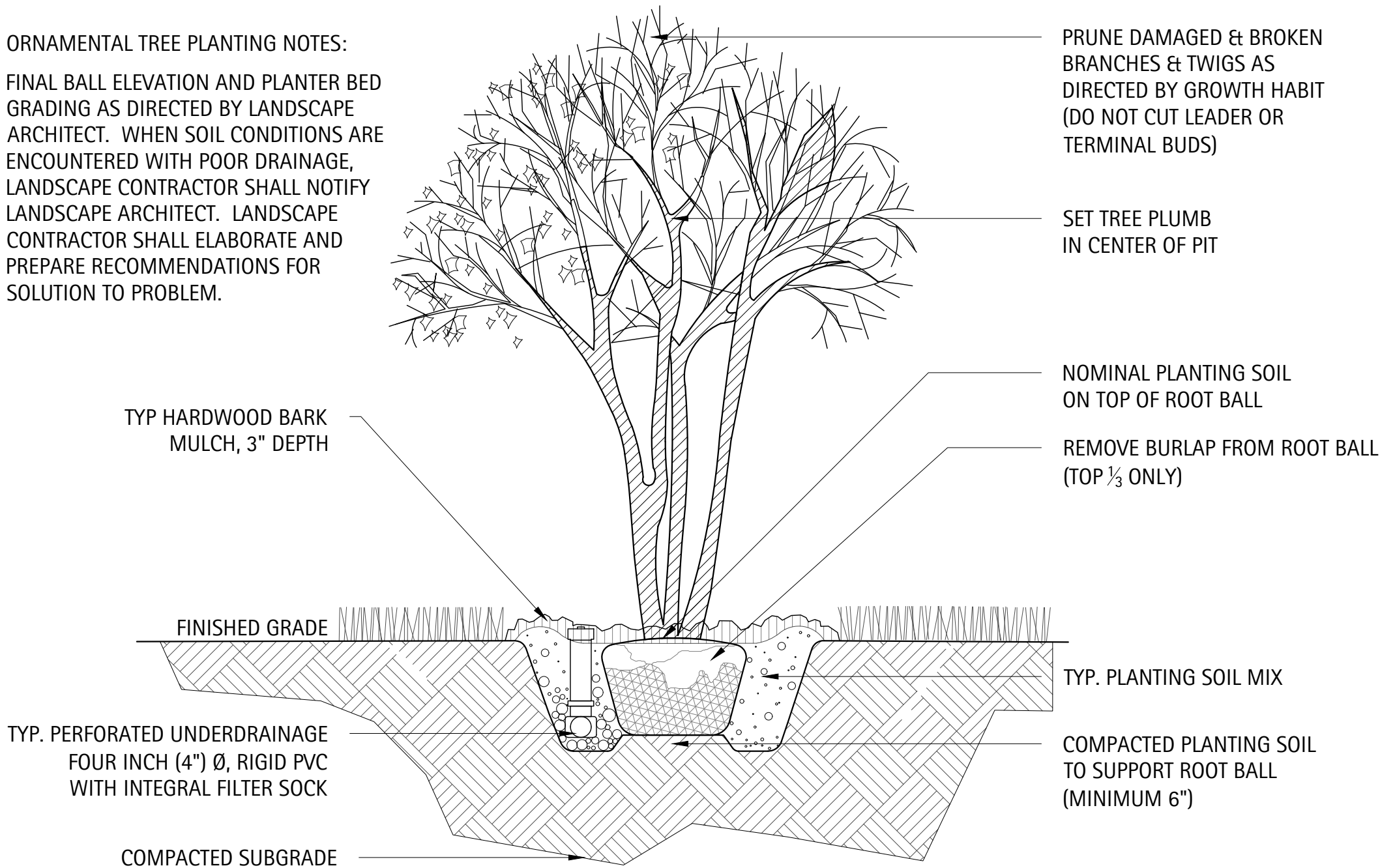
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2 Section – Evergreen Tree Planting
Scale: 1/2" = 1'-0"

ORNAMENTAL TREE PLANTING NOTES:

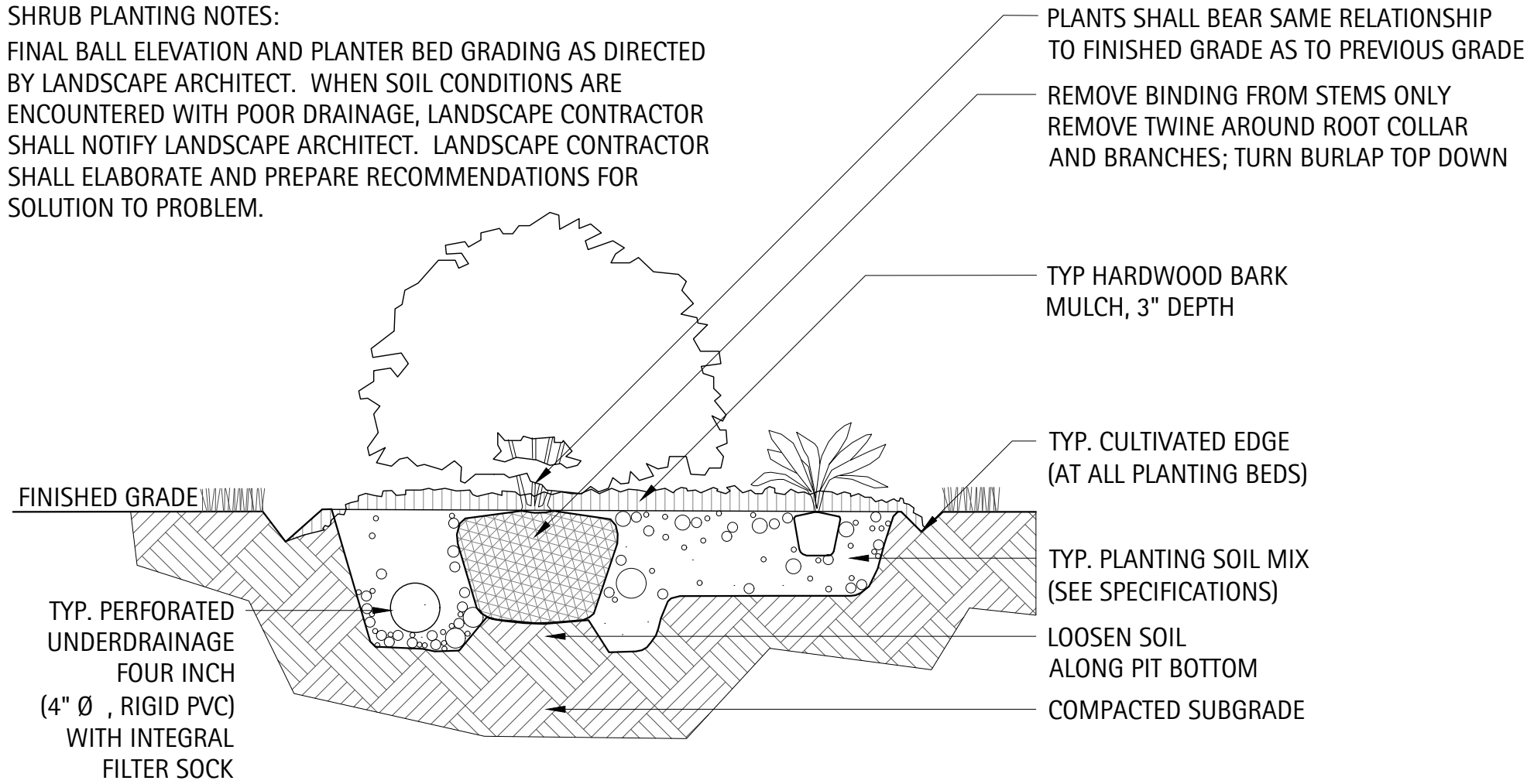
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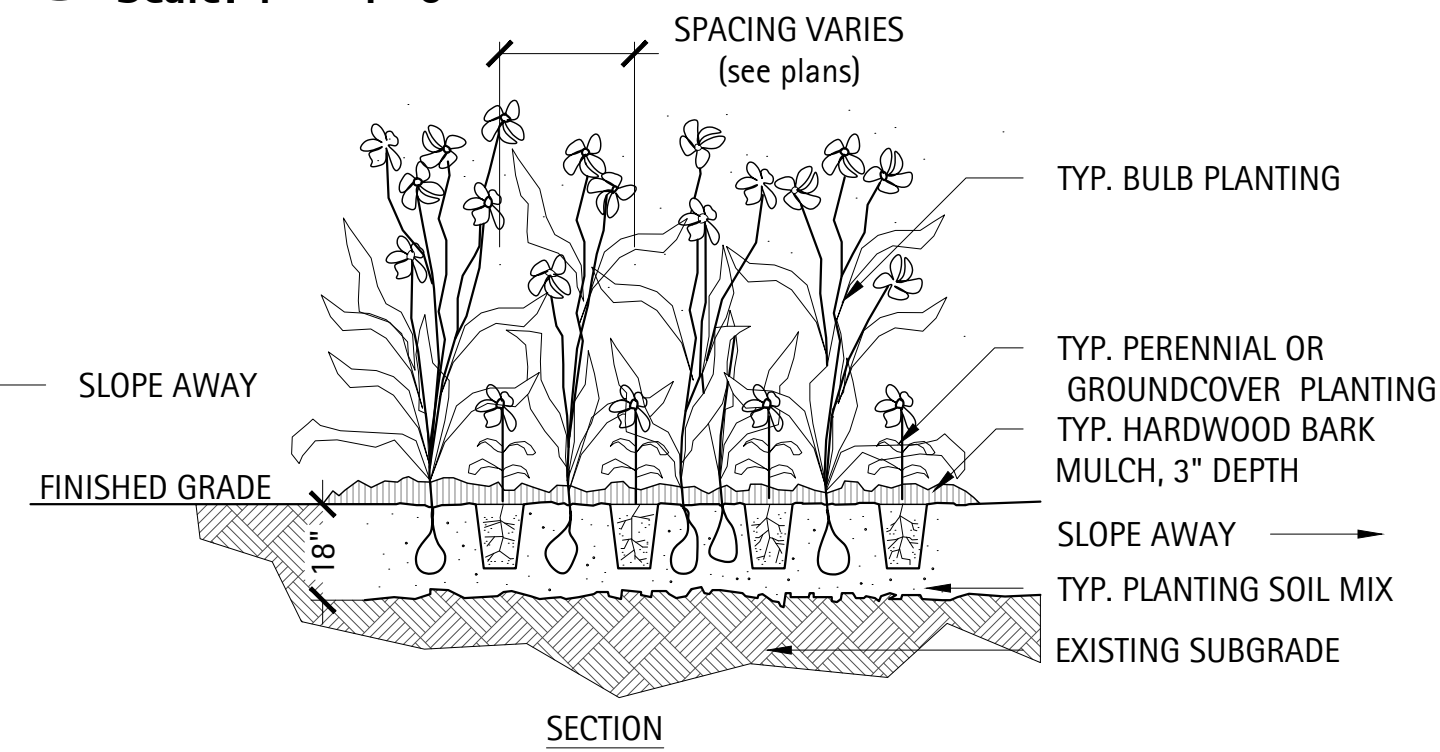
3 Section – Ornamental Tree Planting
Scale: 1/2" = 1'-0"

SHRUB PLANTING NOTES:

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4 Section – Shrub Planting
Scale: 1" = 1'-0"

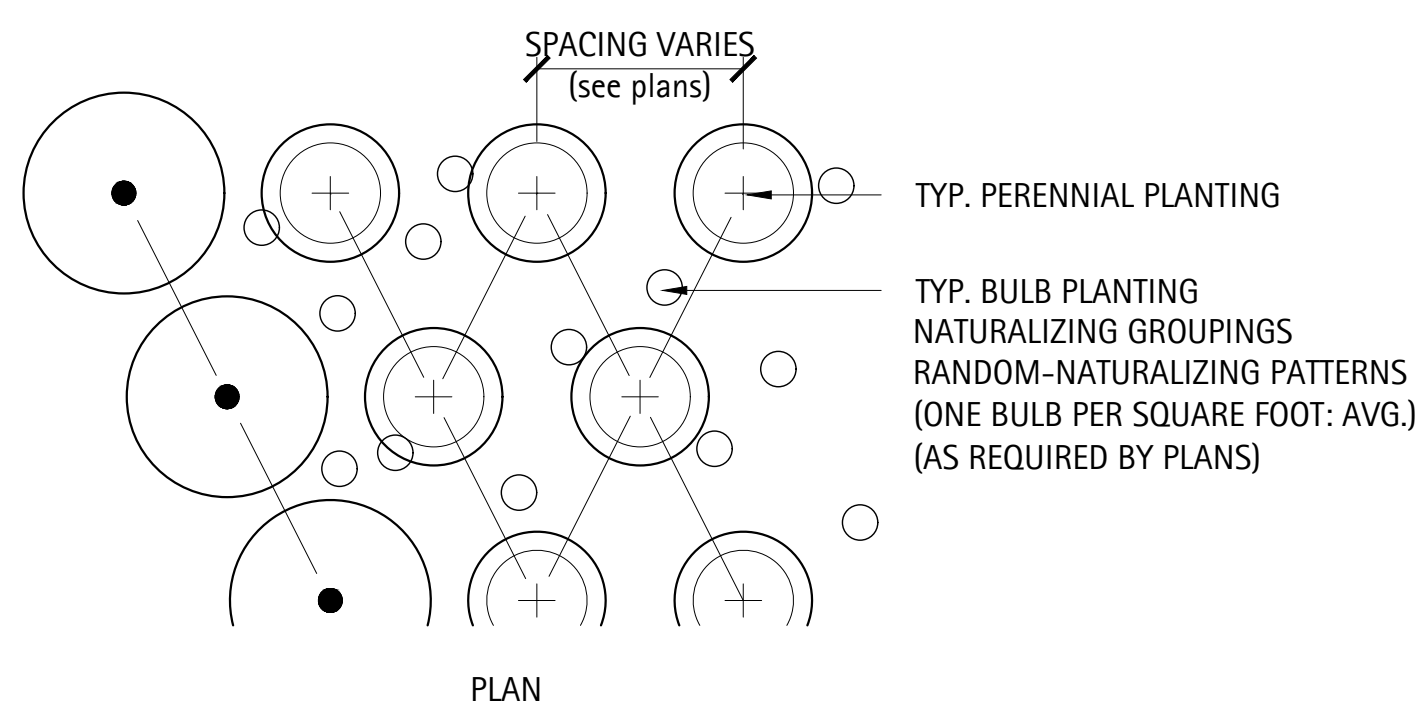


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PERENNIAL PLANTING LAYOUTS TO BE APPROVED IN THE FIELD BY LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.

5 Plan, Section – Perennial, Groundcover, and Bulb Planting
Scale: 1/2" = 1'-0"



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PARTNERS LLC
116 W. ILLINOIS ST.
CHICAGO, ILLINOIS 60654

PROJECT
AVERE on
Duane
427 Duane St.
Glen Ellyn, Illinois 60137

CONSULTANTS
Civil Engineer
Haeger Engineering
Schaumburg, Illinois
T 847.394.6600
Architect
BSB Design, Inc.
Palatine, Illinois
T 847.705.2200

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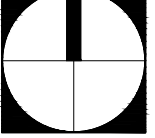
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01	20190325	PUD Submittal
02	20190429	AOD Submittal
03	20190531	AOD Submittal
04	20190611	AOD Submittal

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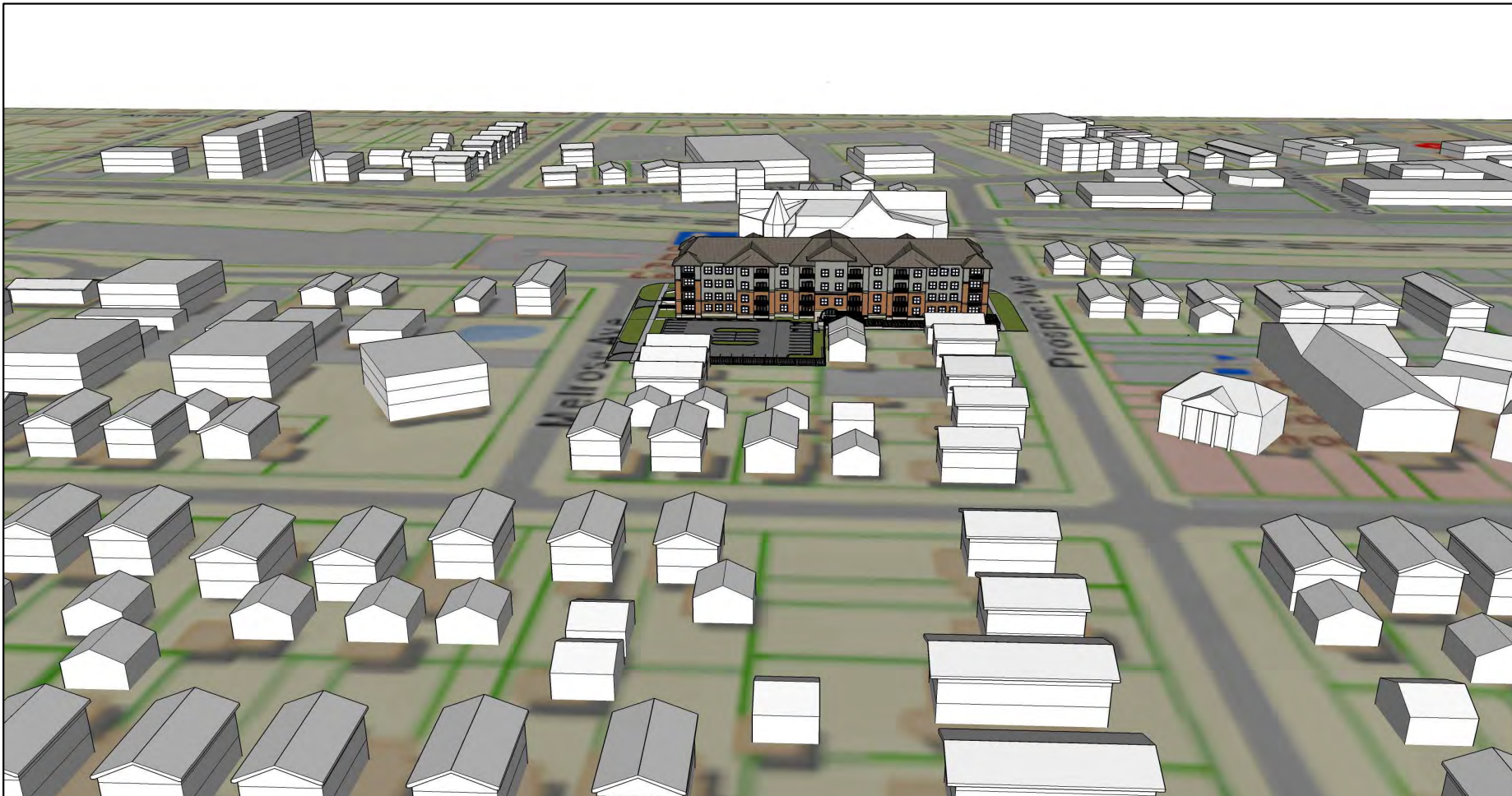
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SHEET TITLE
**SITE PLAN
RENDERING**

SCALE IN FEET
1" = 20'
0' 10' 20' 60'

NORTH

SHEET NUMBER
L7.0
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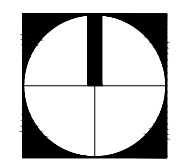
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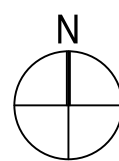
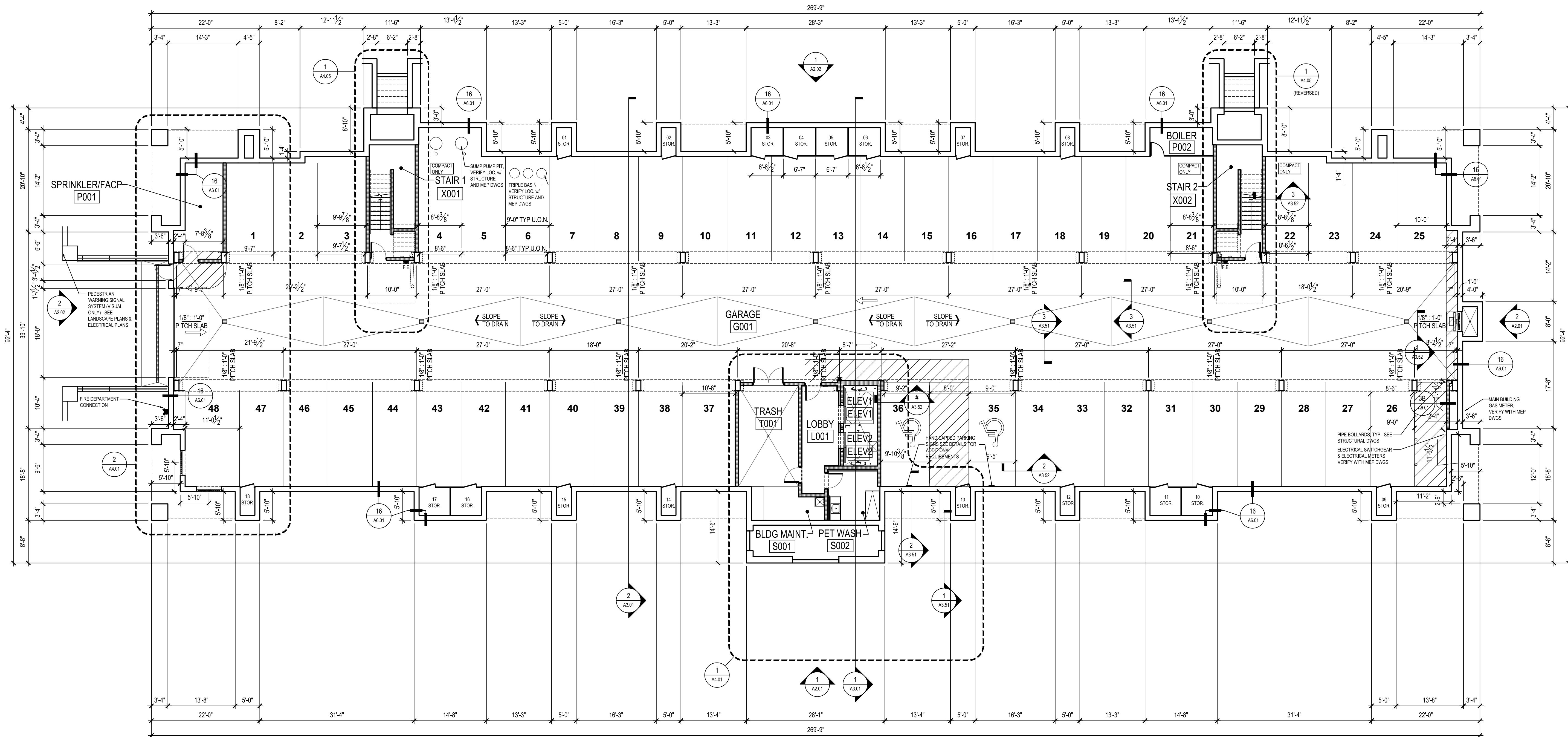
SHEET TITLE
**AERIAL
PERSPECTIVES**

SCALE IN FEET

NORTH

SHEET NUMBER
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BUILDING PLAN NOTES

1. SEE EDGE OF SLAB PLANS AND UNIT PLANS FOR ADDITIONAL DIMENSIONS AND OTHER INFORMATION.
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4. GC IS RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES WITH THE FULL SET OF CONSTRUCTION DOCUMENTS.
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6. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
7. REFERENCE STRUCTURAL DRAWINGS FOR BEARING WALL LOCATIONS.
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13. ALL WALKING SURFACES AT MEANS OF EGRESS ROUTES SHALL HAVE SLIP RESISTANT FINISH.



1 BUILDING PLAN - LEVEL 0 - PARKING GARAGE
3/32" = 1'-0"

ISSUE DATE: 11/28/2018

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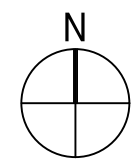
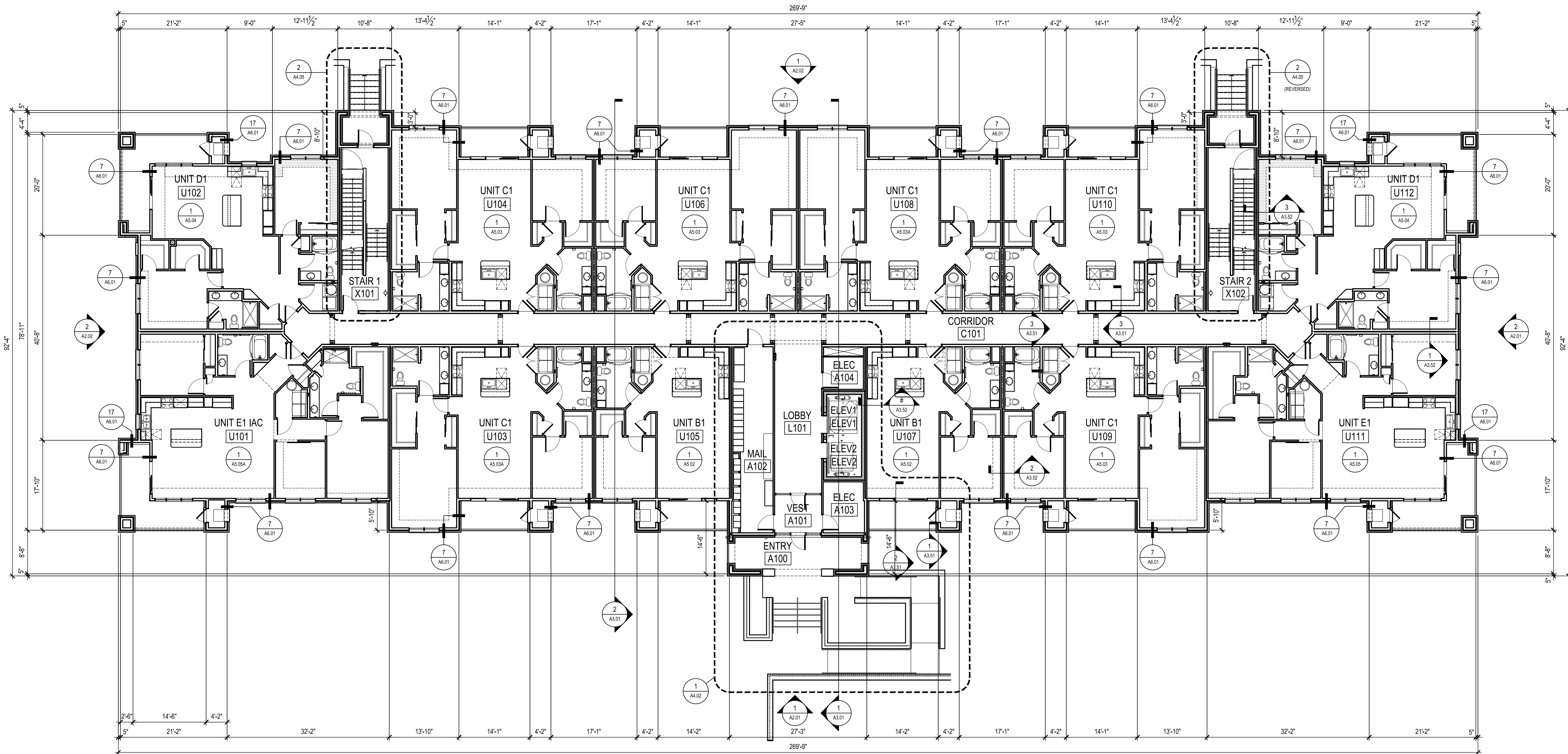
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JOB NO: MH180369.00 PROJ MGR: JG
DRAWN: J. PA, WP CHECKED: ML
BUILDING PLAN - LEVEL 0 - PARKING GARAGE

APT
A1.00

BUILDING PLAN NOTES

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1 BUILDING PLAN - LEVEL 1 - APARTMENTS
3/32" = 1'-0"

ISSUE DATE: 11/28/2018

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BUILDING PLAN - LEVEL 1 - APARTMENTS

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A1.01

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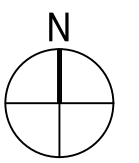
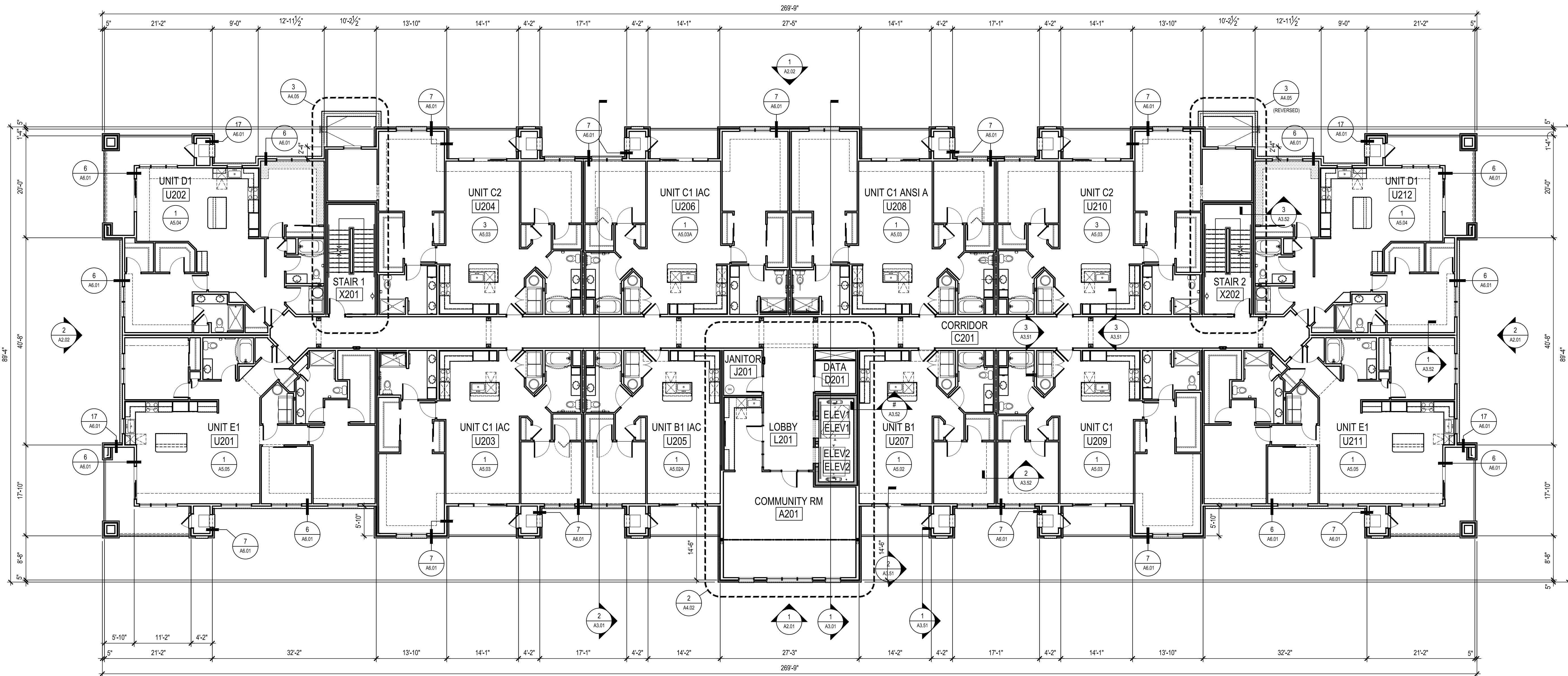
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BUILDING PLAN - LEVEL 2 - APARTMENTS

APT
A1.02



1 BUILDING PLAN - LEVEL 2 - APARTMENTS
3/32" = 1'-0"

VILLAGE RE-SUBMITTAL 06-12-2019

Attachment: 12. Floor Plans (4023 - Avere on Duane - PUD, SUP, ZMA, SV)

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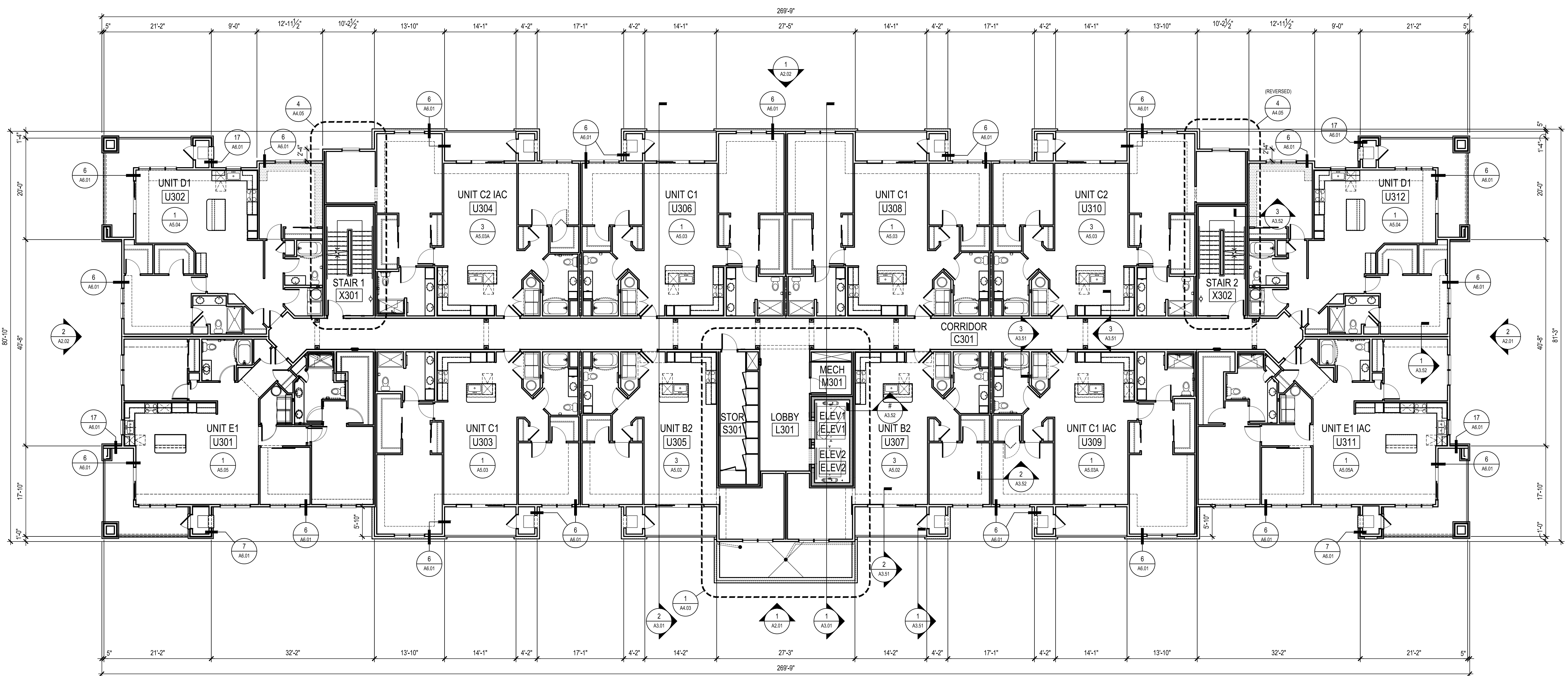
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BUILDING PLAN - LEVEL 3 - APARTMENTS

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A1.03

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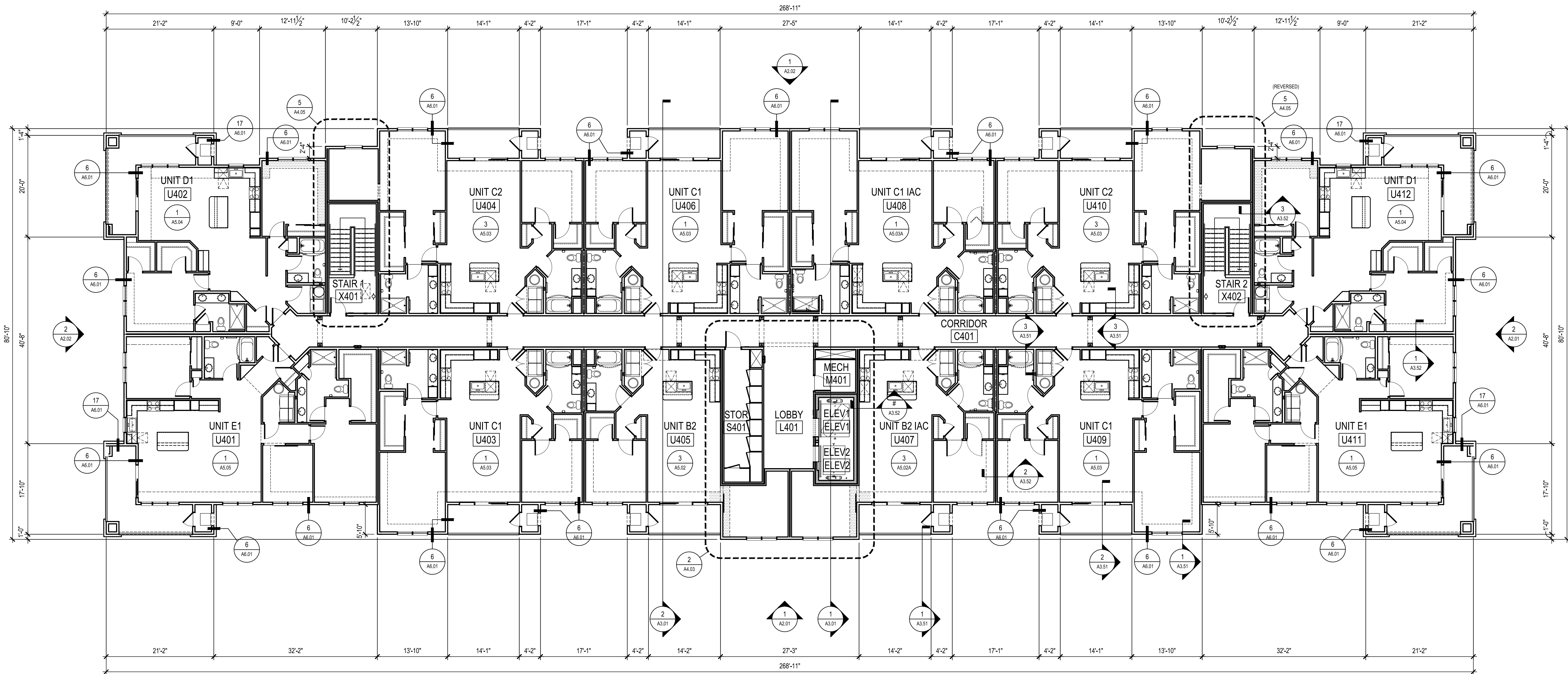
Attachment: 12. Floor Plans (4023 - Avere on Duane - PUD, SUP, ZMA, SV)



BUILDING PLAN - LEVEL 3 - APARTMENTS
3/32" = 1'-0"

BUILDING PLAN NOTES

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1 BUILDING PLAN - LEVEL 4 - APARTMENTS
3/32" = 1'-0"

ISSUE DATE: 11/28/2018

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BUILDING PLAN - LEVEL 4 - APARTMENTS

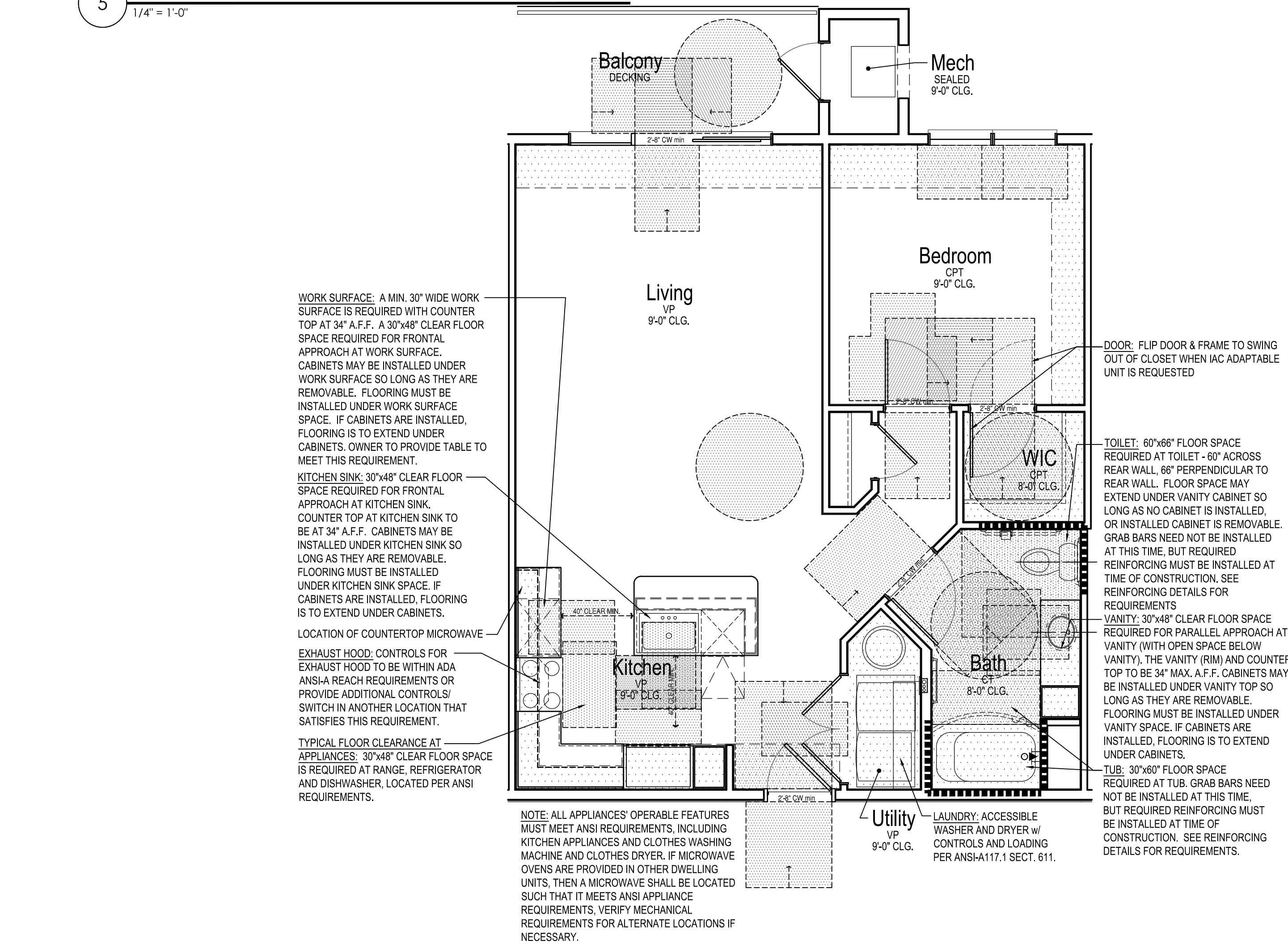
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ROOF PLAN NOTES

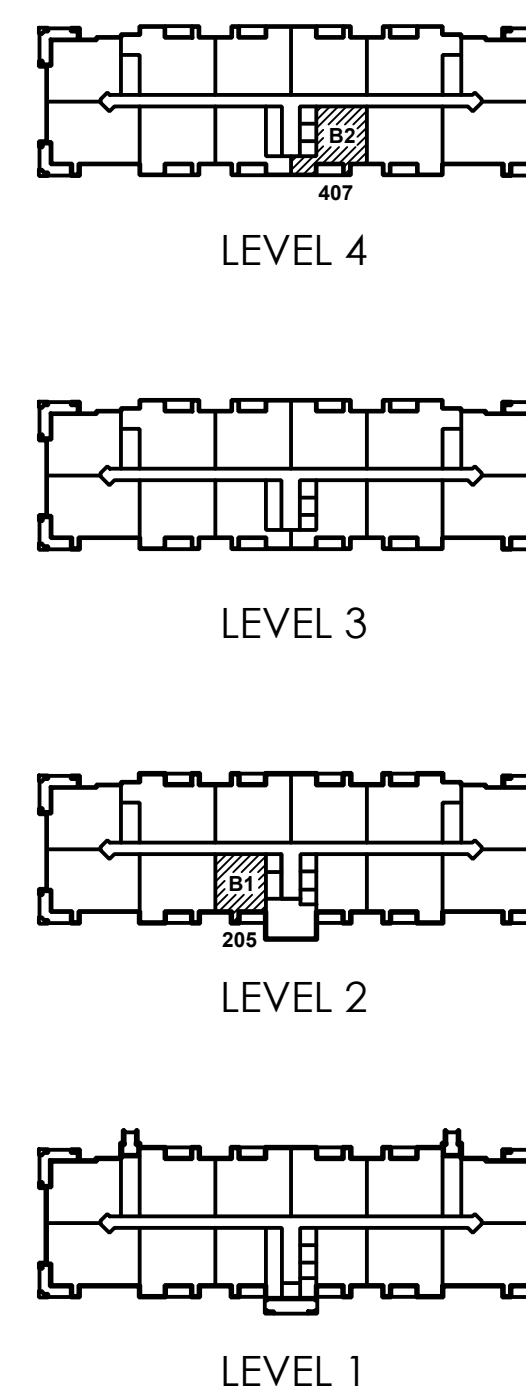
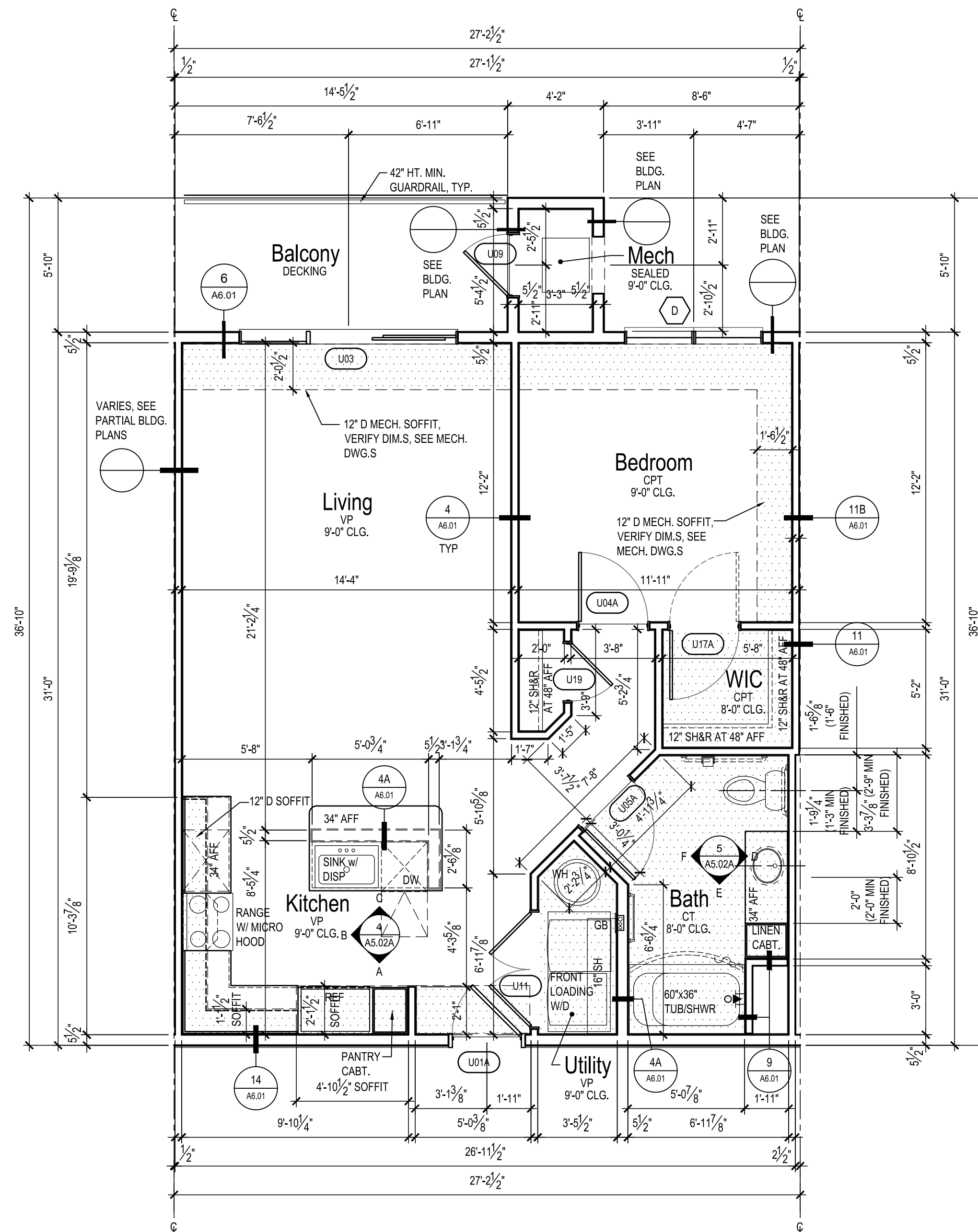
1. ALL FLAT ROOFS SHALL HAVE MIN. 1/4" PER FOOT SLOPE FOR DRAINAGE. REFERENCE BUILDING SECTIONS AND STRUCTURAL DETAILS FOR PARAPET CONSTRUCTION.
2. ROOF CRICKETS TO SLOPE AS NEEDED FOR POSITIVE DRAINAGE.
3. FLASH ALL ROOF PENETRATIONS PER MANUFACTURER'S REQUIREMENTS TO PROVIDE CONTINUOUS WARRANTY.
4. EXTERIOR FINISH MATERIALS AT SLOPE RETURNS FROM HIGH PARAPETS TO EXTEND TO REAR END OF PARAPET WALL.
5. ALL ROOF PENETRATIONS (SLIDING STACK VENTS, ETC.) TO BE PAINTED TO MATCH FINISHED ROOFING COLOR.
6. CONTINUE ROOF MEMBRANE UP PARAPET WALLS & OVER BLOCKING, TURNING DOWN MIN. 3" AT EXTERIOR FACE EDGE.
7. TURN ROOF MEMBRANE UP 4" ONTO HIGHER PARAPET WALLS AT END/JUNCTURE OF "LOW" PARAPET WALLS.
8. COPING TO INCLUDE CONTINUOUS CLEAT AT EXTERIOR SIDE AND MECHANICAL ATTACHMENT AT INTERIOR SIDE OF ROOF.
9. SEE 18. SERIES SHEETS FOR RELEVANT ROOF AND WATERPROOFING DETAILS.
10. TPO TO BE MECHANICALLY FASTENED. MAINTAIN 12" MINIMUM FROM END OF HIP/RIDGE TO ROOF EDGE/INTERSECTION.
11. PROVIDE VAPOR RETARDER WITH A TRANSMISSION RATE NOT EXCEEDING 1 PERM PER ASTM E96 ON THE WARM SIDE OF THE ATTIC INSULATION.
12. USE 5" PREFINISHED ALUMINUM GUTTERS AND 3" X 4" DOWNSPOUTS. FINISH COLOR TO BE SELECTED BY ARCHITECT. PROVIDE SPLASH GUARD EXTENSIONS AT VALLEYS TO DIRECT OVERFLOW.
13. ALL ROOF OVERHANGS ARE 24" UNLESS NOTED OTHERWISE.
14. ALL ROOF PITCHES SHALL BE 5:12 UNLESS OTHERWISE NOTED.
15. ATTIC ACCESS SHALL BE 36" MINIMUM DOWNSPOUT ON TOP OF ACCESS PANEL.
16. PROVIDE DRAFT STOPPING WITH MINIMUM OF 1/2" WOOD SHEATHING TO SUBDIVIDE THE ATTIC INTO SPACES OF 3,000 SQUARE FEET MAXIMUM AREAS, TYPICAL.
17. PROVIDE SELF-CLOSING, 24" X 84" MINIMUM, UNLESS NOTED OTHERWISE, ACCESS DOOR PANEL IN DRAFT STOP ASSEMBLY WHERE SHOWN FOR FIRE DEPARTMENT ACCESS TO ATTIC COMPARTMENT FROM COMMON AREA.
18. PROVIDE 34" WYNDOW WALK FROM ATTIC ACCESS TO DRAFT STOP PANEL(S) FOR INSPECTION ACCESS, TYP.
19. PROVIDE VALLEY FLASHING 18" UP EACH SLOPED FACE.
20. DOWNSPOUTS TO TERMINATE AT GRADE - PROVIDE SPLASHBLOCKS; REFER TO CIVIL ENGINEERING DRAWINGS FOR ADDITIONAL INFORMATION.
21. CONTRACTOR TO VERIFY AND COORDINATE LOCATIONS OF ALL MECHANICAL, ELECTRICAL AND PLUMBING ITEMS WITH MEP DRAWINGS.

AMERICAN LOUVER AND VENT COMPANY'S STATED ACTUAL VENTED NET FREE AREA: (VERIFY WITH ELEVATIONS FOR LOCATIONS), VERIFY NET FREE AREAS WITH LOUVER MANUFACTURERS.
24x18 (HORIZONTAL RECTANGLE VENT) - MODEL #: RGV2418 = 156.0 SQIN
18x18 (SQUARE VENT) MODEL #: SGV1818 = 116.0 SQIN





1 UNIT B1 FLOOR PLAN - 1 BEDROOM 1 BATH - IAC
1/4" = 1'-0"



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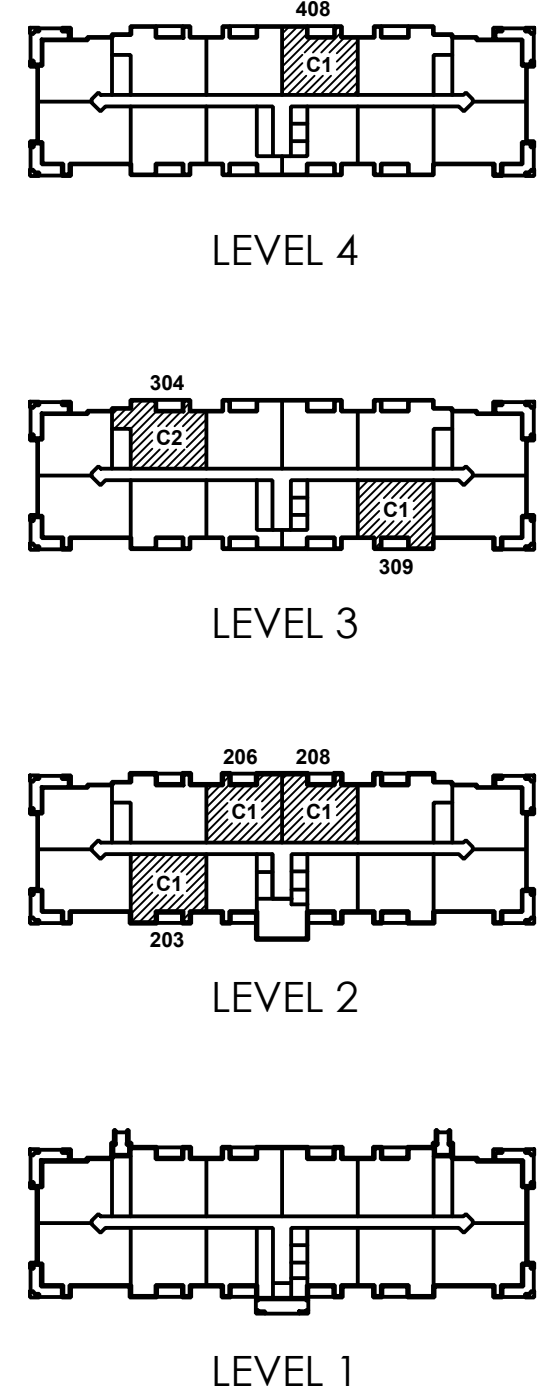
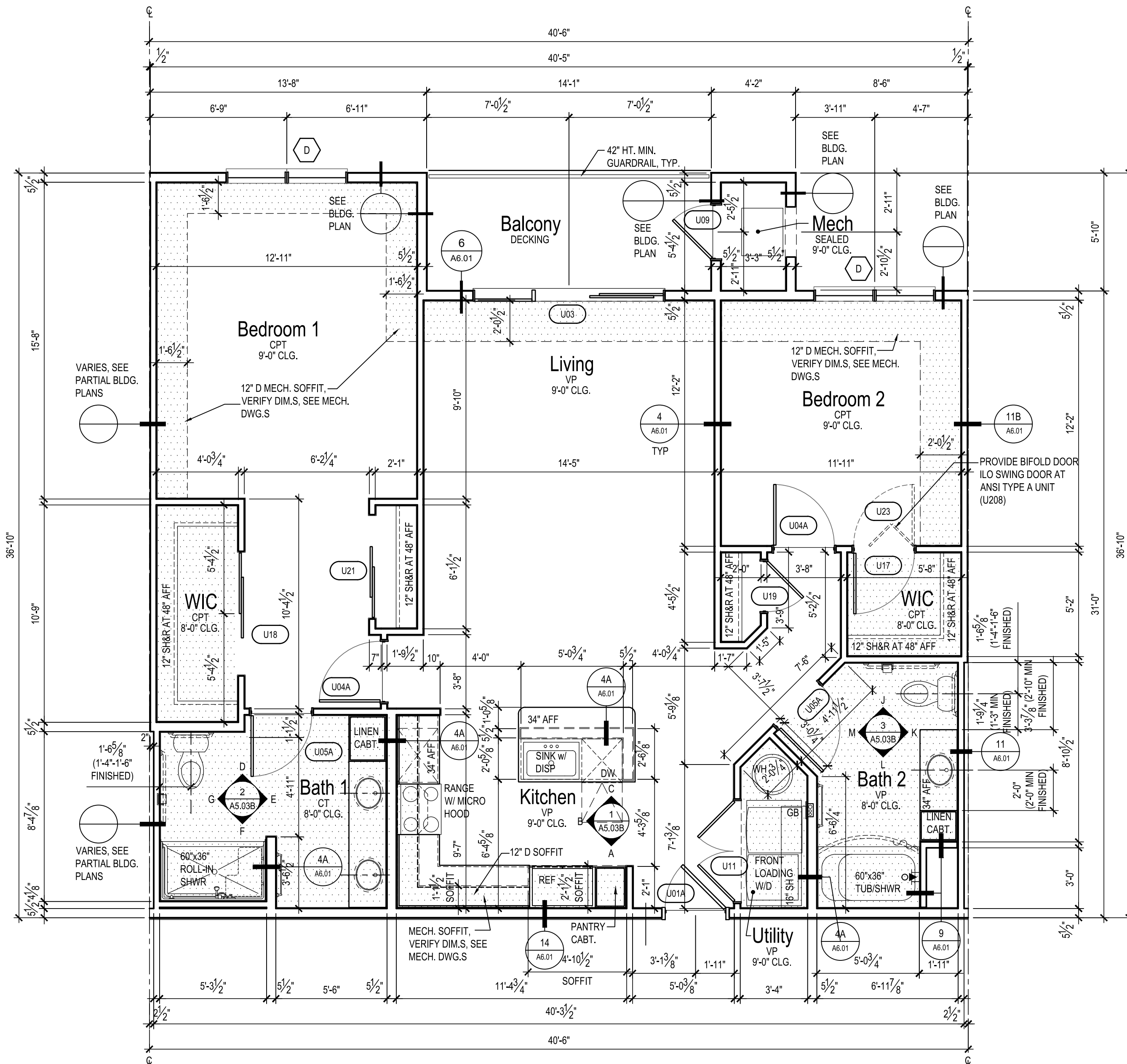
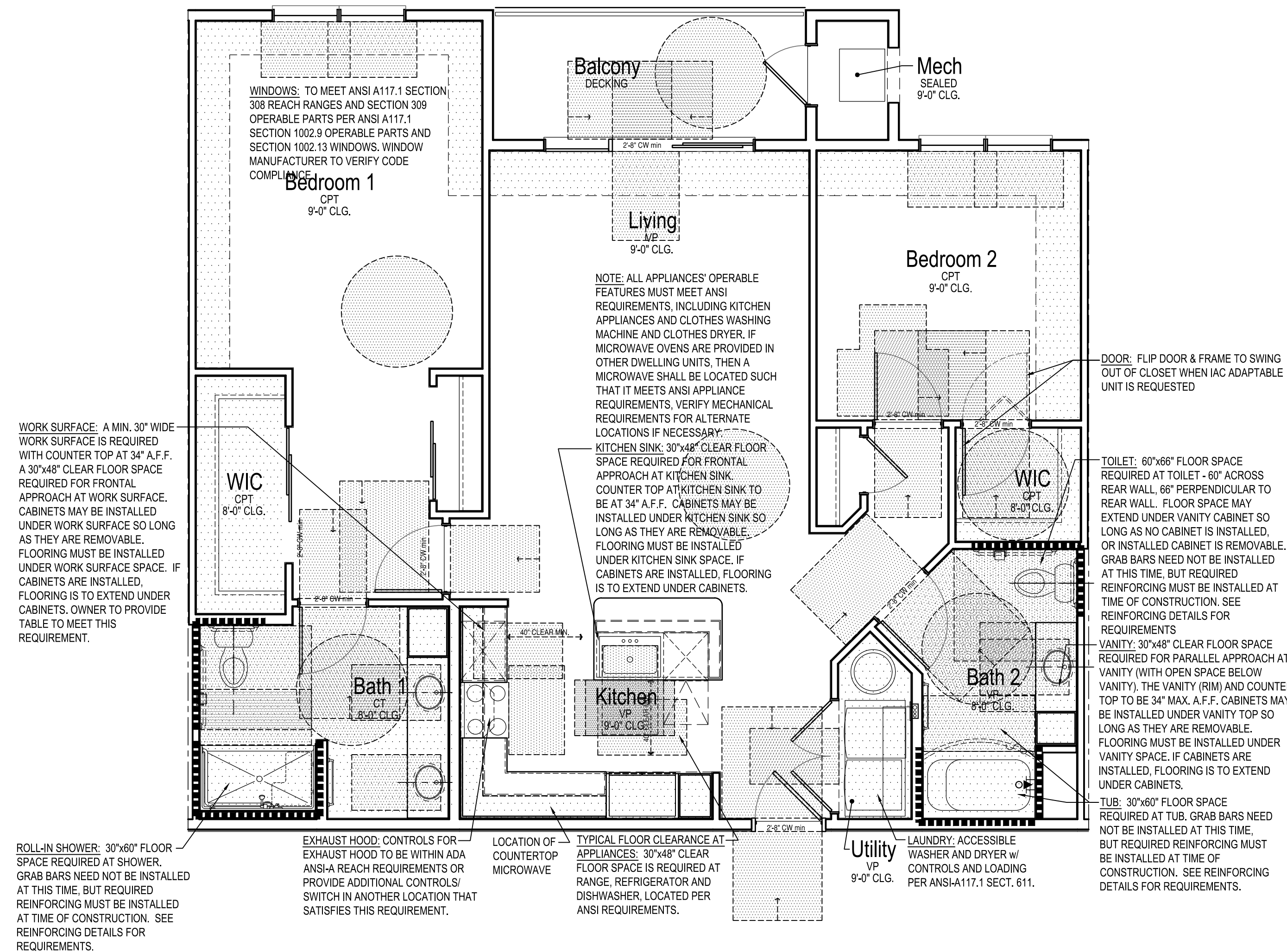
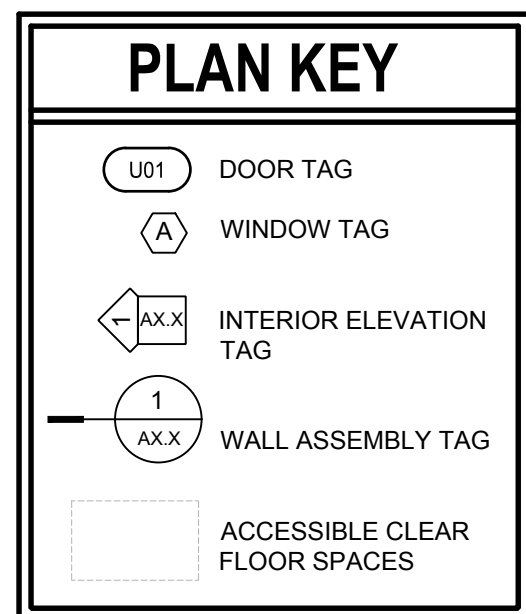
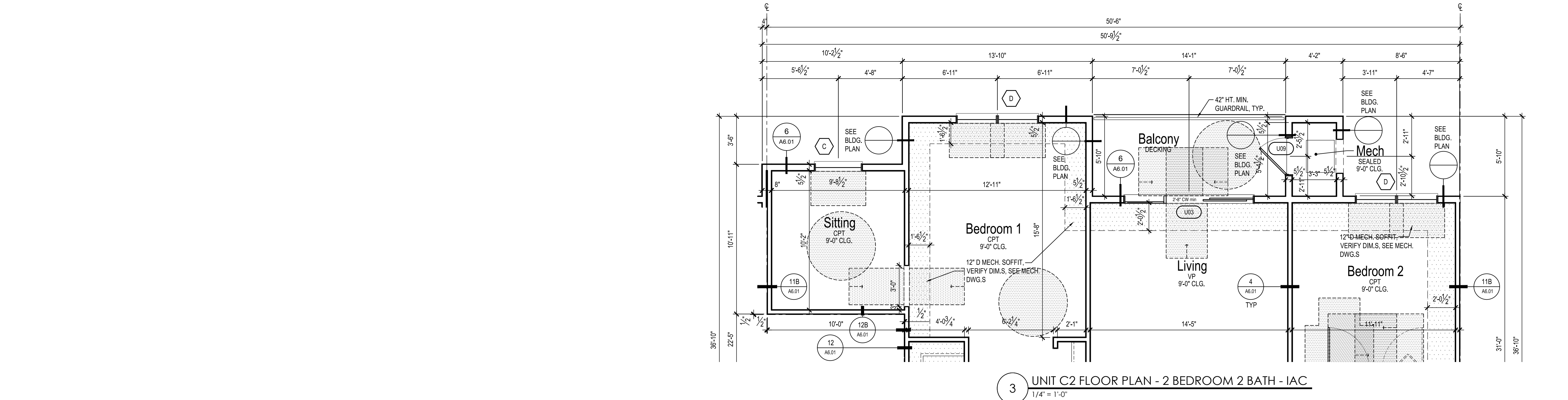
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JOB NO: MR180369.00 PROJ MGR: JC
DRAWN: JL, PA, WP CHECKED: MI

UNITS B1 AND B2 IAC FLOOR PLANS AND
INTERIOR ELEVATIONS

APT

A5.02A



UNIT KEY PLANS

ISSUE DATE: 11/28/2018

REVISIONS

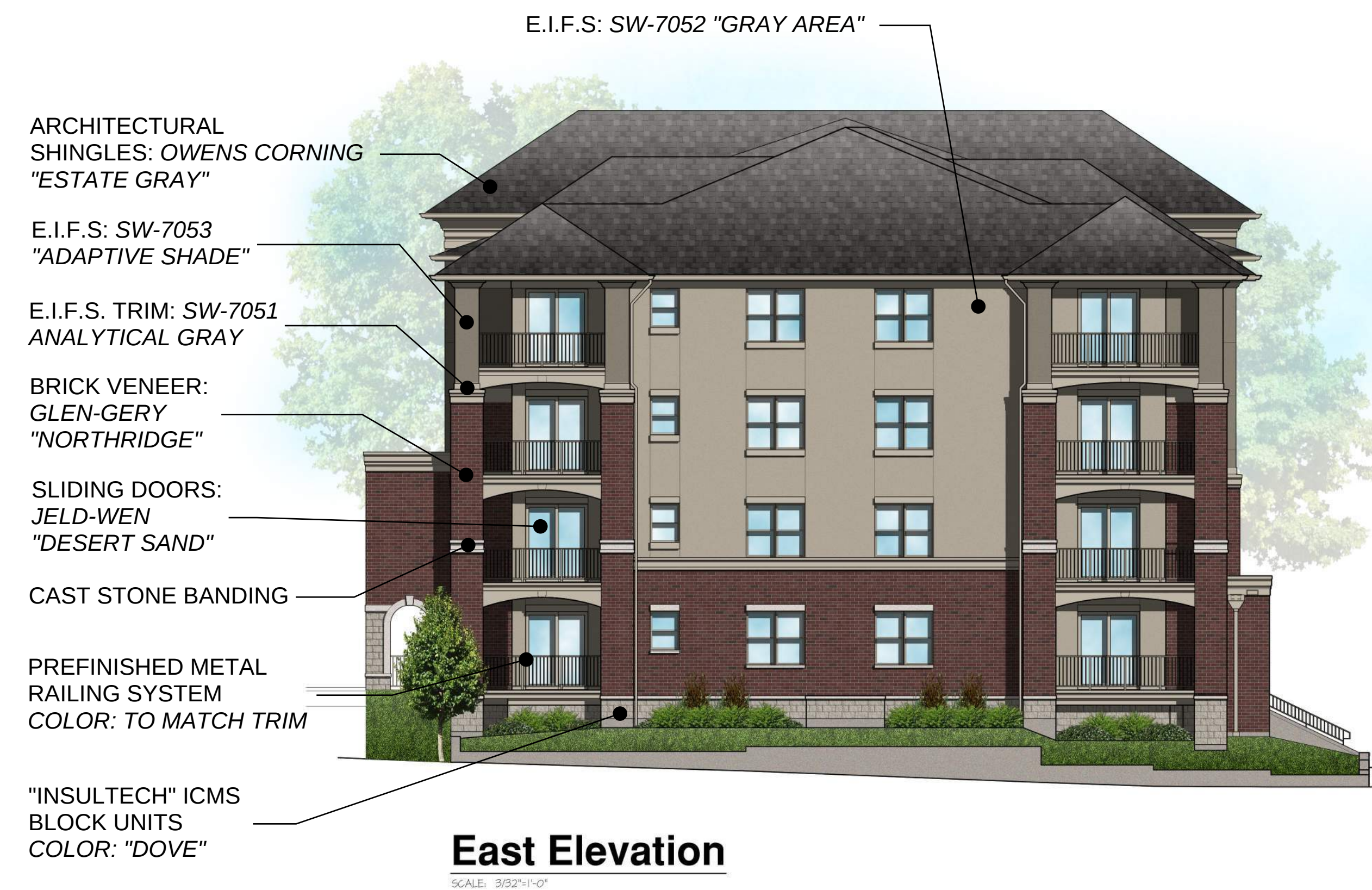
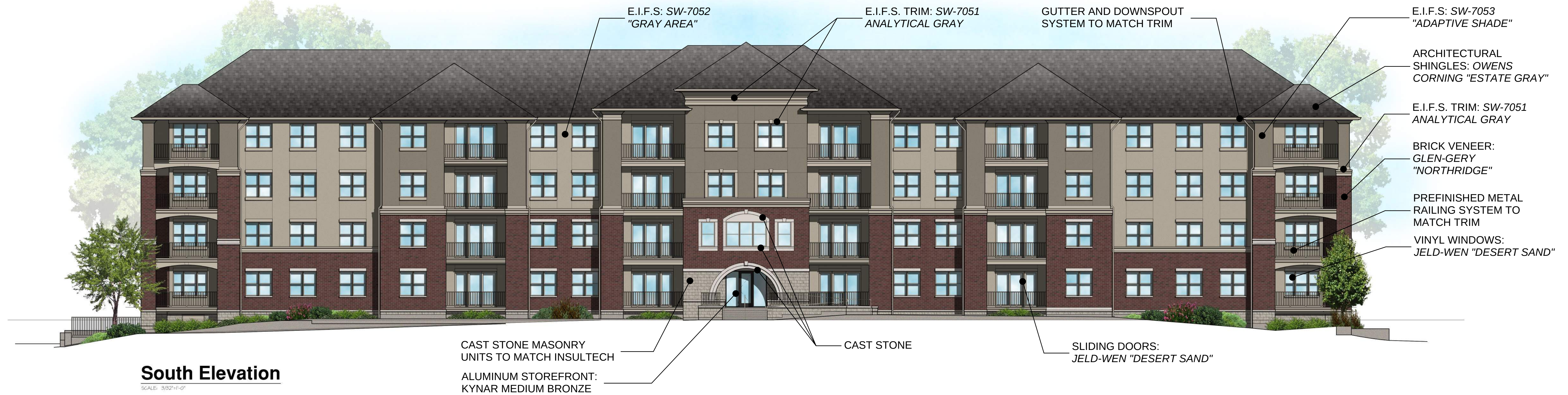


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(847) 705-2200JOB NO: MR180359.00 PROJ MGR: JG
DRAWN: J. PA, WP CHECKED: ML
UNITS C1 AND C2 IAC- ANSIA FLOOR PLANS

APT

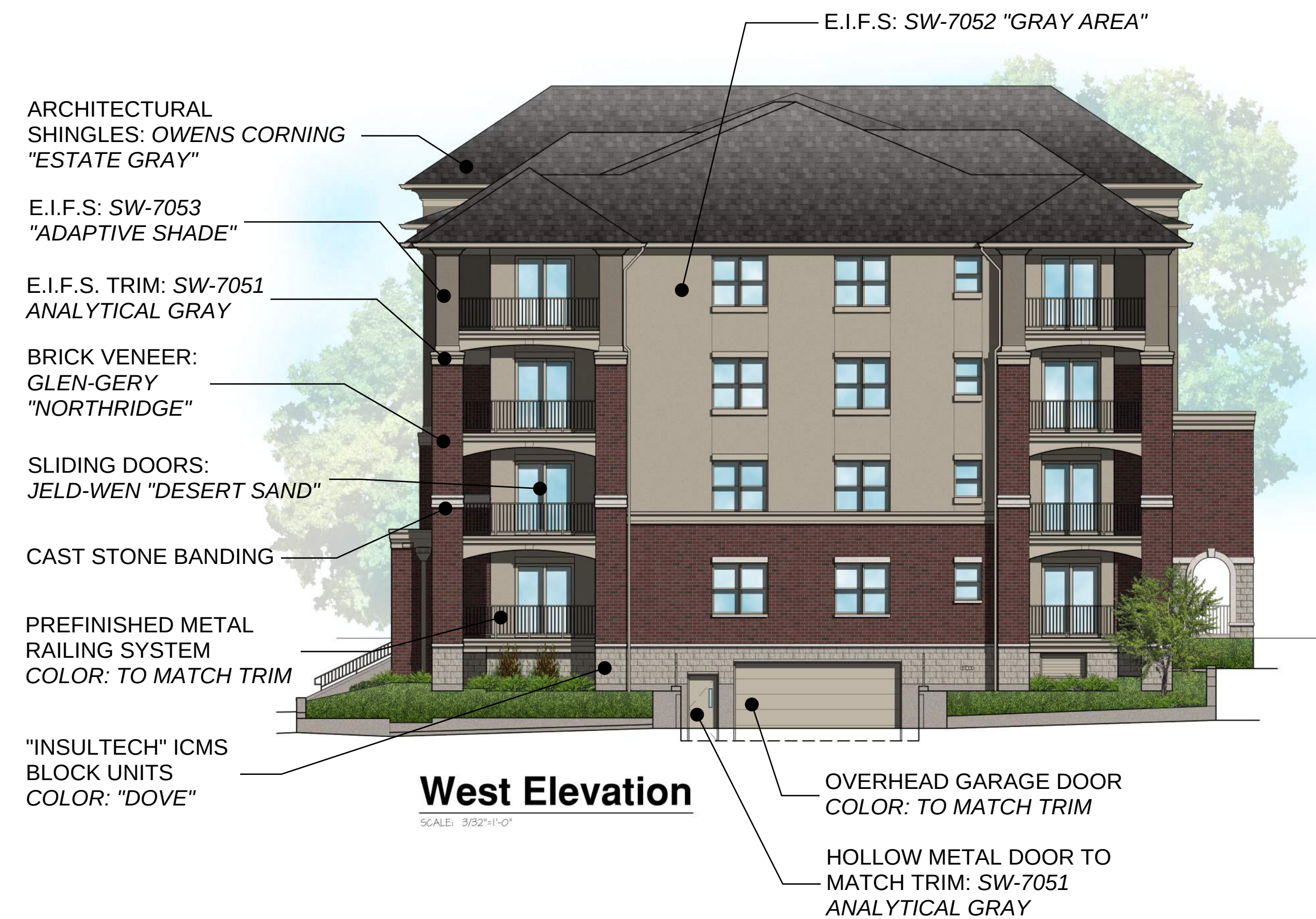
A5.03A



Character Elevations

AVERE ON DUANE
Glen Ellyn, IL

June 11, 2019



Character Elevations

AVERE ON DUANE
Glen Ellyn, IL

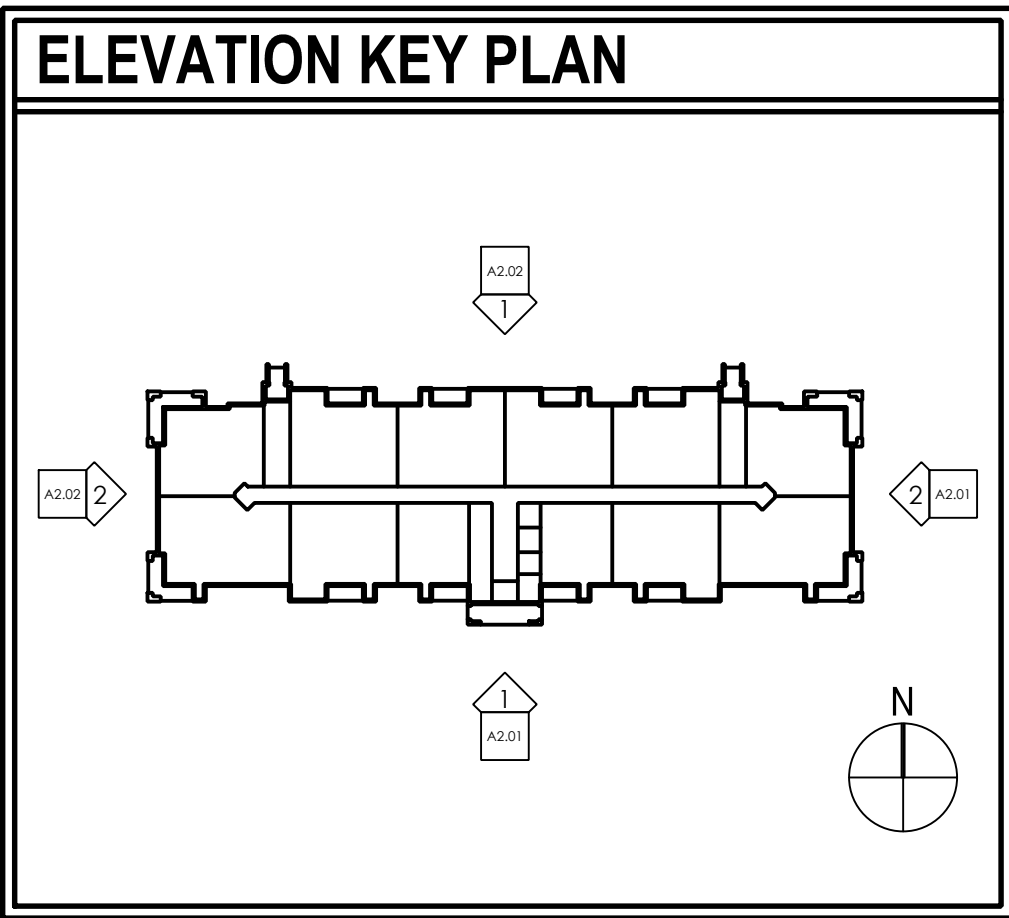
June 11, 2019



1 SOUTH ELEVATION
3/32" = 1'-0"



2 EAST ELEVATION
3/32" = 1'-0"



ELEVATION FINISH SCHEDULE	
TAG	MATERIAL
1	ROOF SHINGLES
2	BRICK VENEER - UTILITY SIZE
3	"INSULTECH" ICMS BLOCK UNITS
4	CAST STONE MASONRY UNITS
5	CAST STONE BANDING - SEE DTL.
6	CAST STONE - 8"
7	CAST STONE ARCH - 8"
8	CAST STONE SILL - 4"
9	CAST STONE APRON - 8"
10	CAST KEYSTONE - 10" HEIGHT
11	CAST KEYSTONE - 12" HEIGHT
12	E.I.F.S.
13	E.I.F.S. TRIM - 8"
14	E.I.F.S. SILL / TRIM
15	E.I.F.S. KEYSTONE - 10" HEIGHT
16	E.I.F.S. ACCENTUATED JOINT
17	E.I.F.S. CORNICE - SEE DTL.
18	E.I.F.S. TRIM
19	VINYL SINGLE-HUNG WINDOWS
20	VINYL SLIDING PATIO DOOR
21	ALUMINUM STOREFRONT DOOR / WINDOWS
22	PRE-FINISHED METAL RAILING SYSTEM
23	PRE-FINISHED OVERHEAD GARAGE DOOR
24	MECHANICAL LOUVER PER MFR.
25	GARAGE VENTILATION LOUVER
26	PRE-FINISHED METAL COPING
27	MASONRY CONTROL JOINT
28	CAST STONE CAP
29	RETAINING WALL - SEE CIVIL DWGS.
30	METAL DOOR, PAINTED
31	COMPOSITE TRIM
32	PREFINISHED ALUMINUM GUTTER
33	PREFINISHED ALUMINUM DOWNSPOUT
34	FIRE DEPARTMENT CONNECTION

NOTE: KEY NOTES INDICATE TYPICAL MATERIALS - REVIEW ELEVATIONS & DETAILS FOR ADDITIONAL INFORMATION.

ISSUE DATE: 11/28/2018
REVISIONS



AVERE ON DUANE
437 DUANE STREET
GLEN ELLYN, IL 60137



1540 E. Dundee Road, Suite 310
Palatine, IL 60074
(847) 705-2200
JOB NO: MH180369.00 PROJ MGR: JG
DRAWN: JL, PA, WP CHECKED: ML
ELEVATIONS

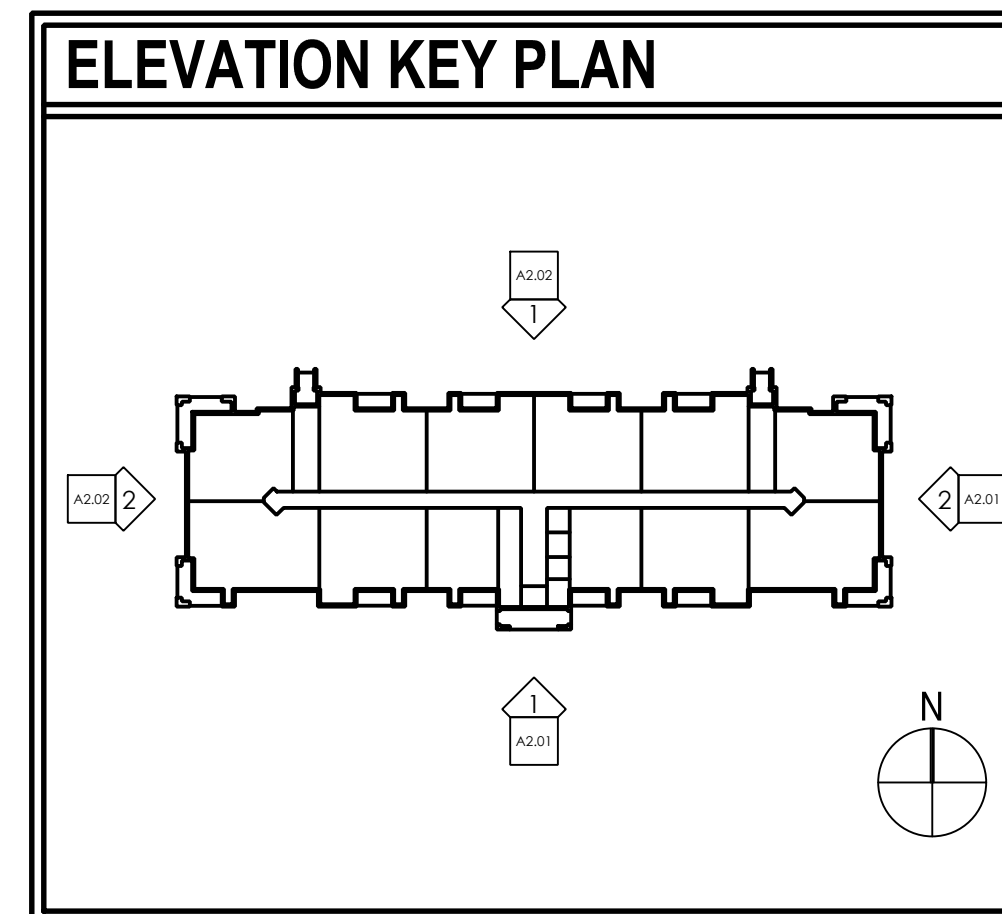
APT
A2.01



1 NORTH ELEVATION
3/32" = 1'-0"



2 WEST ELEVATION
3/32" = 1'-0"



ELEVATION FINISH SCHEDULE	
TAG	MATERIAL
1	ROOF SHINGLES
2	BRICK VENEER - UTILITY SIZE
3	"INSULTECH" ICMS BLOCK UNITS
4	CAST STONE MASONRY UNITS
5	CAST STONE BANDING - SEE DTL.
6	CAST STONE - 8"
7	CAST STONE ARCH - 8"
8	CAST STONE SILL - 4"
9	CAST STONE APRON - 8"
10	CAST KEYSTONE - 10" HEIGHT
11	CAST KEYSTONE - 12" HEIGHT
12	E.I.F.S.
13	E.I.F.S. TRIM - 8"
14	E.I.F.S. SILL / TRIM
15	E.I.F.S. KEYSTONE - 10" HEIGHT
16	E.I.F.S. ACCENTUATE JOINT
17	E.I.F.S. CORNICE - SEE DTL.
18	E.I.F.S. TRIM
19	VINYL SINGLE-HUNG WINDOWS
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NOTE: KEY NOTES INDICATE TYPICAL MATERIALS - REVIEW ELEVATIONS & DETAILS FOR ADDITIONAL INFORMATION.

ISSUE DATE: 11/28/2018	
REVISIONS	



AVERE ON DUANE
437 DUANE STREET
GLEN ELLYN, IL 60137



1540 E. Dundee Road, Suite 310
Palatine, IL 60074
(847) 705-2200

JOB NO: MR180359.00 PROJ MGR: JG
DRAWN: JL, PA, WP CHECKED: ML
ELEVATIONS

APT
A2.02





Attachment: 18. Renderings (4023 : Avere on Duane - PUD, SUP, ZMA, SV)



PARAPET CONDITION



HIP ROOF CONDITION

3-D PERSPECTIVES



TRACY CROSS & ASSOCIATES, INC.

**Planning Analysis
Rental Apartment Development
--- AVERE on Duane Apartments ---
Glen Ellyn, Illinois**

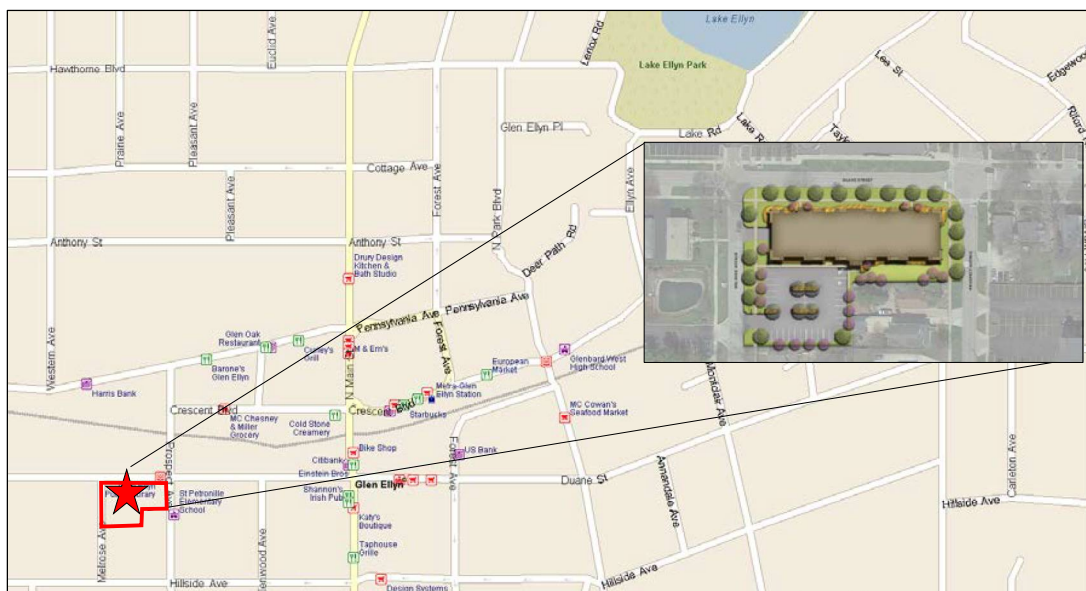
SEPTEMBER 2018

INTRODUCTION

At the request of Reva Development Partners, LLC, Tracy Cross & Associates, Inc. evaluated the market potential for rental apartment development in Glen Ellyn, DuPage County, Illinois. Specifically, this analysis addresses the overall marketability of transit-oriented rental apartments within an approximate 51,134 square foot land assemblage located at the southwest intersection of Duane Street and Prospect Avenue in the village's downtown district. The property is situated three blocks west of the Glen Ellyn METRA commuter rail station at Main Street, and is also two miles west of Route 53, two miles south of Route 64/North Avenue and two miles of Route 38/Roosevelt Road. These major regional roadways link area residents with the Interstate 88/I-355 and I-290/I-294 highway systems which are situated within a four- to seven mile distance south and east, respectively.



**GEOGRAPHIC DELINEATION: AVERE ON DUANE PROPERTY
-- GLEN ELLYN, ILLINOIS --**



Source: REVA Development Partners, LLC and Microsoft Street & Trips

REAL ESTATE MARKET ANALYSIS
1920 N. THOREAU DRIVE, SUITE 150
SCHAUMBURG, IL 60173-4174
t 847.925.5400 f 847.925.5415
www.tcrossinc.com

Overall, this analysis establishes the following:

- ❑ Conclusions regarding the depth of the Glen Ellyn area for rental apartment development during the 2018-2023 forecast period based upon pertinent, economic, demographic and residential construction trends which define the marketplace.
- ❑ Conclusions regarding the marketability of 48 moderate-density apartments to be distributed within a four-story residential building developed over one level of underground parking. These conclusions are based upon factors associated with the location of the property, the performance of proximate newer construction rental developments, and the near term outlook for apartment development in Glen Ellyn and its near west suburban environs.
- ❑ A forecast of anticipated absorption at Client's proforma rents.
- ❑ Alternative benchmark rental strategies and associated absorption forecasts to enable further financial modeling.

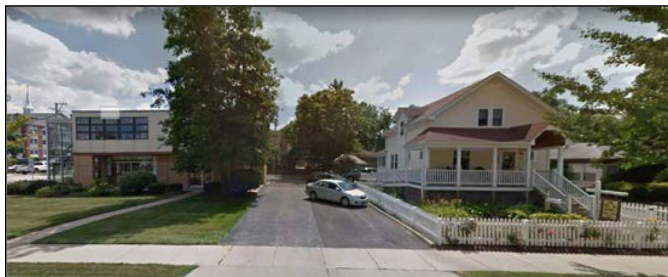
**General Limiting
Conditions**

Tracy Cross & Associates, Inc. has made extensive efforts to confirm the accuracy and timeliness of the information contained in this study. Such information was compiled from a variety of sources, including interviews with developers and their agents, government officials, and other third parties. Although Tracy Cross & Associates, Inc. believes all information in this study is correct, it does not warrant the accuracy of such information and assumes no responsibility for inaccuracies in the information provided by third parties.

Conclusions and recommendations established in this analysis represent a professional opinion and are based upon forecasts into the future which could be significantly altered by outside occurrences. These include, among others, the possible interplay of unforeseen social, economic, physical/environmental, and governmental actions. In this regard, Tracy Cross & Associates, Inc., its owners, and its employees shall be held harmless of changes in conditions that may materially result from these occurrences.

THE SUBJECT PROPERTY AND ITS ENVIRONS

The subject property consists of an approximate 51,134 square foot assemblage aligning Duane Street between Prospect and Melrose avenues in downtown Glen Ellyn, Illinois. Existing converted commercial buildings will be vacated to accommodate redevelopment in conjunction with the village's Strategic Plan to expand residential, retail and office uses in its downtown district.



Planning Analysis
REVA Development Partners, LLC
AVERE on Duane Apartments
Glen Ellyn, Illinois

The Glen Ellyn Public Library is situated directly north of the site, along with the main trail of the Illinois Prairie Path, a 61-mile non-motorized nature path. The village of Glen Ellyn boasts a vibrant downtown business district replete with fine dining and casual eateries, numerous long-established local merchants, epicurean markets, a cinema, art and antique galleries, jewelers and specialty boutiques, along with numerous consumer service providers, churches and civic gathering spots, all within a four-block walking distance of the subject site. Regional concentrations of shopping are available at Oakbrook Center and Yorktown Center, located within six miles southeast.



Glen Ellyn Public Library



Main Street Shopping District-Glen Ellyn, IL

METRA's UP-West commuter rail station is located three blocks east of the property. Travel time to Chicago's Ogilvie Transportation Center from this location averages 45 minutes. In addition to METRA, Glen Ellyn is well-served by local and regional transportation systems including the I-355/Route 53, I-88 and I-290/294 highway systems, along with North Avenue/US 64, Roosevelt Road/Route 38 and Butterfield Road/Route 56, which represent major commutation and commercial arterials of the western suburbs. These roadways link area residents with major sources of employment in and around Glen Ellyn, Downers Grove, Elmhurst, Oak Brook, Lisle, Lombard, Naperville, Aurora, Warrenville and Woodridge, as well as heavy satellite employment concentrations in Itasca, Schaumburg, Elk Grove Village and around O'Hare, which can all be reached within a 30-minute drive time. The property is also within a reasonable seven-mile distance of several major suburban medical campuses including Advocate Glen Oak Hospital in Glendale Heights, Central DuPage Hospital in Winfield, and Edward-Elmhurst Memorial in Elmhurst, while Loyola University Medical Center is located roughly twelve miles east in Maywood. Overall, the site occupies an **excellent** location relative to employment, shopping, services and recreation, while its location in downtown Glen Ellyn offers an ideal marketing window for REVA Development Partners, LLC.

Located in southeastern DuPage County, the village of Glen Ellyn is situated approximately 22 miles due west of downtown Chicago and 10.0 miles southwest of O'Hare International Airport. Glen Ellyn supports an estimated 2018 population of 28,145 distributed among 10,721 households. The median age of a householder in Glen Ellyn stands at 55.5 years. By age category, 13.3 percent of resident householders are under the age of 35, while 35.4 percent are aged between 35 and 54 years. Another 38.1 percent align age categories of 55 to 74, while the remaining 13.2 percent are at least 75 years of age.

Household distributions in Glen Ellyn favor ownership status, equal to 74.9 percent of the village's household base (8,035 households), with the remaining 25.1 percent representing renters. Overall, householders in Glen Ellyn are quite affluent, earning an estimated 2018 median income of \$105,641 annually, with 60.0 percent of resident households earning at least \$75,000 annually, while roughly 52.0 percent of resident householders earn at least \$100,000 per annum.



Planning Analysis
REVA Development Partners, LLC
AVERE on Duane Apartments
Glen Ellyn, Illinois

Residentially, Glen Ellyn boasts numerous established tree-lined neighborhoods of single family homes, along with larger lot subdivisions concentrated in its southern quadrants. As might be expected, Glen Ellyn experienced its strongest growth period during the post-war era of the 1950s through the 1970s when roughly 60 percent of its housing stock was constructed. Reflecting its mature generally built-out nature, residential construction of late primarily reflects single family teardown/replacement activity, along with limited newer attached for sale townhome development priced from the high \$400,000s to well over \$1.0 million.



THE PROPOSED DEVELOPMENT

As conceptualized by REVA Development Partners, AVERE on Duane will consist of 48 apartments distributed within a four-story residential building developed over one level of private underground parking to accommodate 48 single parking spaces. Another 34 private surface parking spaces will accommodate additional resident and guest parking, translating to an overall parking ratio of 1.71 parking spaces per residential unit. This parking ratio is fully consistent with the transit-oriented nature of the proposed development and is viewed as *more than sufficient*. For perspective, among newer, urban-oriented moderate-density rental developments the typical parking ratio stands at 1.54 parking spaces per residential unit. The parking garage will also provide secured bicycle storage and a pet grooming area.

A mail/package center and private lockers for optional lease will be located off the first floor residential lobby. It is expected that some level of Smart-Home technology and concierge services will also be provided.

Utilizing energy-efficient construction technologies, AVERE on Duane will feature architectural design aesthetics complimentary to its downtown Glen Ellyn environs. As summarized in the following text table, residential design concepts include a variety of one, one bedroom plus den, two and two bedroom plus den plan styles which range in unit size from 870 to 1,656 square feet. Overall, the conceptualized 48-unit development will provide 64,980 net leasable square feet, with the average apartment residence containing 1,354 square feet of living area, exclusive of balcony.



Planning Analysis
REVA Development Partners, LLC
AVERE on Duane Apartments
Glen Ellyn, Illinois



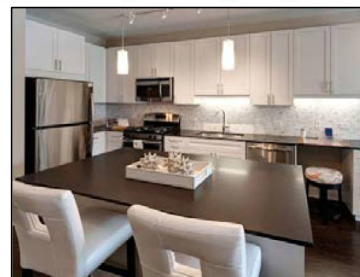
PROPOSED MATRIX⁽¹⁾: AVERE ON DUANE
-- GLEN ELLYN, ILLINOIS --



Plan Type	Total Proposed Units	Percent of Total	Bedrooms/ Baths	Net Leasable Sq. Ft.		Pro Forma Rents	
				Plan Size (Sq. Ft.)	Total	\$	\$/Sq. Ft.
B / One Bedroom	4	8.3	1 / 1.0	870	3,480	\$2,010	\$2.31
B-2 / One Bedroom+Den	4	8.3	1+Den / 1.0	980	3,920	2,250	2.30
D / Two Bedroom	8	16.7	2 / 2.0	1,340	10,720	3,020	2.25
C-1 / Two Bedroom	18	37.5	2 / 2.0	1,370	24,660	3,080	2.25
C-2 / Two Bedroom+Den	6	12.5	2+Den / 2.0	1,492	8,952	3,320	2.23
E / Two Bedroom+Den	8	16.7	2+Den / 2.0	1,656	13,248	3,700	2.23
Total/Average:	48	100.0	---	1,354	64,980	\$3,045	\$2.25

Source: REVA Development Partners, LLC *AVERE on Duane Operating Proforma* dated 7/13/2018.

As delineated in **Exhibit 1**, all apartments are expected to provide quality interior appointments commensurate with new construction apartment development throughout the region. Typically these include nine-foot ceiling height, laminate plank-style wood flooring throughout, designer kitchens with quartz/granite or comparable countertop/island, ceramic tile backsplash, energy-efficient stainless steel appliances including full-size washer and dryer, walk-in closets in most master bedrooms, and designer baths with ceramic tile flooring, quartz/granite vanity tops, frameless glass shower door and solid-surface shower surround. All apartments will provide internet Smart Home technology and cable connectivity, some level of in-unit storage, and balconies. For analytical purposes, it is assumed that the resident will be billed directly for all utilities. However, should REVA Development elect to utilize a resident billing system for water, refuse collection and/or internet service/basic cable, incremental fees in the range of \$100 to \$125 per month are viewed as reasonable. Construction of AVERE on Duane is expected to commence in 2019 in anticipation of initial occupancies beginning in the fall of 2020.





1

BENCHMARK FEATURES AND AMENITIES: AVERE ON DUANE
-- GLEN ELLYN, ILLINOIS --



Interior Features and Appointments

- Individually Controlled Heat/Air Conditioning
- Internet/Cable Connectivity
- Designer Finishes Throughout
- Nine-Foot Ceilings
- Laminate Plank-Style Wood Flooring Throughout
- Designer Baths with Ceramic Flooring/Quartz or Comparable Vanities/Frameless Glass Shower Door/Solid-Surface Surround
- Walk-In Master Bedroom Closet (most plan styles)
- In-Unit Storage
- Balcony
- Designer Kitchen Cabinetry and Lighting
- Quartz/Granite or Comparable Kitchen Countertops/Islands
- Energy Efficient Stainless Steel Appliances
 - Gas Oven/Range
 - Dishwasher
 - Refrigerator
 - Microwave
- Garbage Disposal
- Full-Size Washer and Dryer

Community Amenities



- Non-smoking environment.
- Secured Reception Lobby
- Secured Package/Mail Center w/Technology Concierge
- Smart Home Technology
- Pet Spa
- Furnished Roof Terrace with Grilling Station (TBD)
- Secured Bicycle Storage/Repair Station
- Tenant Paid Water/Refuse or Resident Billing System
- Individually Metered Gas/Electric/Internet/Cable Service
- Optional Storage (as available) @ \$50 per Month
- Enclosed Parking:
 - Assigned Single Space @ \$150 per Month
- Separate On-Site Leasing and Management Offices

Source: Tracy Cross & Associates, Inc.

Attachment: 20. Market Study (4023 : Avere on Duane - PUD, SUP, ZMA, SV)

A FORECAST OF ABSORPTION

The market potential for rental apartment development within the Duane Street property is viewed as **favorable** based upon the strength of the near west suburban area's apartment sector and the property's **excellent** location proximate to significant concentrations of employment, health care, dining, shopping, entertainment and recreation, along with access to transportation. Our general conclusion also considers the expectation of continued economic growth during the forecast period, along with new construction rental requirements in the marketplace during the 2018-2023 forecast period and beyond. Despite these strengths, however, it must be recognized that the proposed development must compete with other existing newer apartment developments throughout the general area, as well as new rental projects currently under construction and/or in the planning pipeline, while the potential remains for additional rental projects to be announced over the mid-term.

Assuming for analytical purposes market introduction in 2020, at July 2018 proforma rents the conceptualized development will achieve an overall absorption rate of 5.0 units per month. This projected absorption pace will enable the 48-unit AVERE on Duane Apartments to generate a stabilized occupancy level of 95.0 percent or 46 units occupied within a nine (9) month timeframe **from first occupancy**. This leasing period assumes extensive marketing commence with site improvements and three- to six months of lease reservation marketing prior to initial deliveries. While the marketplace is expected to maintain relatively balanced occupancies during the 2018-2023 forecast period, over the course of lease-up, it may be necessary to offer a nominal discount or lease incentive on *select units* if the leasing mix appears imbalanced. Also, while it is understood that unit counts may vary with final design and approvals, it is strongly suggested that a *proportionate ratio of unit types and plan sizes be maintained* in order to achieve the forecasted rates of absorption.

The conceptualized apartment development fully addresses current and expected future trends in the residential marketplace; is representative of the newer suburban apartment offerings in the region; and is designed to appeal across a broad spectrum of consumer segments, including not only younger singles and childless couples, but also more mature consumers desirous of a lifestyle environment. To this point, lifestyle rental alternatives are generating strong interest among consumers between the ages of 45 and 64 given the high level of amenities and, in many cases, concierge services available to residents. Several national multifamily developments report that up to 45.0 percent of their leasing activity now reflects these lifestyle age cohorts. As detailed in later sections of this report, and lending support to absorption potentials at AVERE on Duane, it is noted that roughly 41.0 percent of Glen Ellyn Market Area householders, and a slightly higher 43.6 percent of Glen Ellyn's household base, align age categories between 45 and 64, while American Community Survey estimates as of 2016 reveal that roughly 30.0 percent of the market area's *existing renters* also reflect these profile lifestyle age categories.

Also, as summarized in the following table, the conceptualized plan types are generally consistent with unit type distributions among newer rental communities in other near west suburban locales, while the proposed development offers a continuum of plan types and unit sizes which will enable AVERE on Duane to align with incomes in the market area. It is also anticipated that plan offerings among developments now under construction and/or in the final approval stage throughout the general area and likely to be marketing in tandem with AVERE on Duane will feature similar plan designs.



Planning Analysis
REVA Development Partners, LLC
AVERE on Duane Apartments
Glen Ellyn, Illinois



UNIT MIX ANALYSIS: REPRESENTATIVE NEWER APARTMENT FLATS
-- NEAR WEST SUBURBAN CMA - JUNE 2018 --

Unit Type	AVERE on Duane				Selected Newer Apartment Flats			
	Total Units		Plan Size (Sq. Ft.)		Total Units		Plan Size (Sq. Ft.)	
	Number	Percent	Range	Average	Number	Percent	Range	Average
Studio	---	---	---	---	58	1.9	507 - 724	570
Convertible/JR-1	---	---	---	---	19	0.6	472 - 760	652
One Bedroom Flat	4	8.3	870	870	1,777	58.2	598 - 1,480	806
One Bedroom+Den	4	8.3	980	980	145	4.7	797 - 1,258	874
Two Bedroom Flat	26	54.2	1,340 - 1,370	1,361	920	30.1	897 - 1,427	1,159
Two Bedroom+Den	14	29.2	1,492 - 1,656	1,586	62	2.0	1,246 - 1,573	1,399
Three Bedroom	---	---	---	---	74	2.4	1,299 - 1,749	1,468
Three Bedroom+Den	---	---	---	---	---	---	---	---
Total/Averages:	48	100.0	870 - 1,656	1,354	3,055	100.0	472 - 1,749	934

Source: REVA Development Partners, LLC and Tracy Cross & Associates, Inc.

Appendices A1 and A2 further illustrate the competitive positioning of the proposed development, in both whole dollars and for comparable footage, relative to newer and/or larger-scale developments in the marketplace which share commonalities in terms of sources of employment, transportation systems and/or mixed-use lifestyle amenities. These value relationships and the projected absorption period reconcile variances in project scale, plan portfolios, community amenities, and location with the certainty of heightened competition through the lease-up period and beyond.

To assist the Client in its proforma financial modeling, the following text table outlines alternative benchmark strategies and attendant absorption forecasts for the 48-unit development.



ALTERNATIVE RENT/ABSORPTION SCENARIOS: AVERE ON DUANE
-- GLEN ELLYN, ILLINOIS --

A 48-Unit Development						
Average Posted Proforma Rent 1,354 Sq. Ft. Residence		Variance From Benchmark	Anticipated Monthly Absorption		Average Monthly Absorption Rate ⁽¹⁾	Months to Stabilization @ 95% (46 Units)
\$	\$/Sq. Ft.		First 12 Months of Occupancy	Thereafter		
\$3,245	\$2.40	+\$200	3.2	2.2	3.1	15.6
3,195	2.36	+150	3.6	2.5	3.5	13.2
3,145	2.32	+100	4.1	---	4.1	11.2
3,095	2.29	+50	4.6	---	4.8	10.0
3,045	2.25	Proforma	5.0	---	5.0	9.0

⁽¹⁾ Starting at the first month of occupancy.

Source: Tracy Cross & Associates, Inc.



Planning Analysis
REVA Development Partners, LLC
AVERE on Duane Apartments
Glen Ellyn, Illinois

It is again noted that proforma posted rents are presented in July 2018 dollars. Looking forward, it is quite probable that market area rents will continue to advance, albeit at a much moderated pace over the forecast period, or in the range of 1.5 to 3.0 percent annually. For pro forma comparisons, assuming market introduction in 2020 and barring unforeseen economic turmoil, an average 2.0 percent annual rent growth applied to the suggested proposed rent strategy would yield an average *posted* base rent of \$3,169 or \$2.34 per square foot at market introduction.

MARKET FUNDAMENTALS

The geographic area from which primary demand support for AVERE on Duane Apartments will emanate consists of a four-township area that includes Addison, Bloomingdale, Milton, and York townships in DuPage County. *Generally* extending south from the Cook/DuPage County line at Devon Avenue/Elgin-O'Hare Expressway to 38th Street, and west from County Line Road to Kuhn Road, this defined *Glen Ellyn Market Area* forms a homogenous component of the near west suburbs defined by its dependence upon like sources of employment, commuting patterns established along the I-290/294/88/355 highway systems, US 64/North Avenue, and Routes 38/Roosevelt Road and 56/Butterfield Road; the METRA commuter rail system; socio-economic and demographic similarities of area residents; and the alignment and location of residential developments which will serve as a source of competition both direct and indirect.



GEOGRAPHIC DELINEATION: GLEN ELLYN MARKET AREA



Source: Microsoft Streets & Trips and Tracy Cross & Associates, Inc.



Planning Analysis
REVA Development Partners, LLC
AVERE on Duane Apartments
Glen Ellyn, Illinois

The following paragraphs summarize pertinent market dynamics which support the proforma rent strategy and inform the absorption forecast:

- According to the Illinois Department of Employment Security, there are nearly 1.6 million *suburban* private sector jobs within convenient commuting distance of Glen Ellyn. While one cannot overlook the negative lingering impact of the most recent recession, the subject development is expected to enter the market at a time of tangible yet reserved economic conditions which will have a positive influence upon the rental sector. As summarized in the following table, for example, between 2013 and 2017, the six-county metro area added 60,429 private sector jobs reflecting albeit modest annual growth of 1.7 percent. Areas serving the Glen Ellyn property accounted for roughly 46.0 percent of total suburban private sector employment growth during the four-year period, averaging worker additions of 27,750 yearly. Notably, the lion's share of this job growth occurred in DuPage and suburban Cook counties, concentrated along the I-88/355/55 and I-294/290 employment corridors.



PRIVATE SECTOR EMPLOYMENT TRENDS
-- SUBURBAN AREAS INCLUDING AND PROXIMATE TO GLEN ELLYN --
2000 - 2017

Area	Total Private Sector Employment					Average Annual Change			
	2000	2005	2010	2013	2017	2000 - 2005	2005 - 2010	2010 - 2013	2013 - 2017
Six-County Chicago Metro Area ⁽¹⁾	3,487,542	3,333,380	3,133,051	3,314,262	3,555,979	-30,832	-40,066	60,404	60,429
Within a 40-Minute Commute of Glen Ellyn:	1,561,737	1,502,889	1,396,468	1,476,327	1,587,327	-11,770	-21,284	26,620	27,750
DuPage County	524,025	519,841	484,910	529,732	565,134	-837	-6,986	14,941	8,851
Suburban Cook County ⁽²⁾	813,787	744,299	664,001	676,743	717,169	-13,898	-16,060	4,247	10,107
Kane County	105,739	105,317	92,063	98,499	102,470	-84	-2,651	2,145	993
Will County	118,186	133,432	155,494	171,353	202,554	3,049	4,412	5,286	7,800

⁽¹⁾ Includes Cook, DuPage, Kane, Lake, McHenry, and Will counties in Illinois.

⁽²⁾ Includes West Suburban, Northwest Suburban and Southwest Suburban Cook County as defined by IDES.

Source: Illinois Department of Employment Security: *Where Workers Work 2017*

- Positive employment will continue to foster relatively steady rates of household growth during the 2018-2023 forecast period. Specifically, as outlined in Appendix A3, estimates derived from the 2010 Census carried forward to 2018 indicate that the Glen Ellyn Market Area supports a 2018 household base of 164,598, representing the annual addition of 405 households yearly since 2010, with household growth through 2023 projected at 429 yearly. Household growth forecasts reconcile the expectation of measured improvement in the regional economy over the forecast period, offset by continued weakness in the condominium sector and a diminishing supply of land available for both single family and townhome development of scale, as the maturing nature of the Glen Ellyn Market Area as a whole effectively *limits* new construction to redevelopment sites such as the subject Duane Street initiative. For sale potentials will also be undermined by tighter lending controls and higher mortgage interest rates as well as constraints upon supply caused by zoning covenants and subdivision regulations which will push new home development to higher price points in several of the market area's constituent municipalities such as Glen Ellyn itself, Bloomingdale, Elmhurst, Itasca, Medinah, and Oak Brook, among others.



Planning Analysis
REVA Development Partners, LLC
AVERE on Duane Apartments
Glen Ellyn, Illinois

- Although tenure distributions in the market area favor ownership housing which currently accounts for 73.1 percent of all occupied units, an estimated 44,228 resident market area households or 26.9 percent represent renters. In fact, since 2000 net household growth in the Glen Ellyn Market Area has largely been attributed to renters, averaging 289 net household additions yearly or 86.3 percent of total annual household additions over the last 18 years, lending support to the proposed apartment development. Renter household growth in the market area reflects increased occupancies in existing inventory and elevated participation in distressed ownership inventory (both attached and detached) brought back to the market as rentals, coupled with accelerated levels of new rental apartment construction of late. Also consistent with the proposed lifestyle development, analysis of household composition reveals that more than one-half of resident market area households (92,715 households or 56.3 percent) consist of persons living alone or in two-person arrangements.

 **HOUSEHOLD COMPOSITION: 2018**
-- GLEN ELLYN MARKET AREA --

Attribute	Glen Ellyn Market Area		Village of Glen Ellyn	
	Number	Percent	Number	Percent
Total Households	164,578	100.0	10,721	100.0
1-Person Household	42,063	25.6	2,852	26.6
2-Person Household	50,652	30.8	3,237	30.2
3-Person Household	27,040	16.4	1,686	15.7
4-Person Household	24,508	14.9	1,646	15.4
5-Person Household	12,471	7.6	887	8.3
6-Person Household	4,950	3.0	287	2.7
7 or More Person Household	2,894	1.8	126	1.2
Total 1- and 2-Person Households	92,715	56.3	6,089	56.8

Source: U.S. Department of Commerce, Bureau of the Census: Census 2010;
and Environics Analytics.

- Householders in the Glen Ellyn Market Area are relatively affluent, earning an estimated 2018 median income of \$81,555, with households in Glen Ellyn proper earning a substantially higher median \$105,641 per annum. Also, as summarized in the following text table and detailed in Appendix A4, in the strongest renter profile age categories of "Under 35" and "Aged 45 to 64", nearly one-half of profile age groups earn in excess of \$80,000 per annum, requisite income levels necessary to support the proforma rent strategy.

 **HOUSEHOLD AGE AND INCOME CHARACTERISTICS: 2018**
-- GLEN ELLYN MARKET AREA --

Attribute	Total Households					
	Glen Ellyn Market Area			Village of Glen Ellyn		
	Number	Percent	Median	Number	Percent	Median
Total Households	164,618	100.0	\$81,555	10,721	100.0	\$105,641
Under 25 Years	4,061	2.5	36,339	287	2.7	34,854
25 - 34 Years	20,753	12.6	76,604	1,139	10.6	85,554
35 - 44 Years	29,010	17.6	95,171	1,555	14.5	120,578
45 - 54 Years	32,249	19.6	106,505	2,239	20.9	184,301
55 - 64 Years	34,541	21.0	98,914	2,435	22.7	140,999
65 - 74 Years	24,630	15.0	67,927	1,646	15.4	77,957
75 - 84 Years	12,969	7.9	45,382	873	8.1	49,278
85 Years and Over	6,405	3.9	35,150	547	5.1	37,100
Total Households Under 35 Years	24,814	15.1	\$70,014	1,426	13.3	\$75,350
With Incomes of \$80,000 or More	10,560	42.6	---	623	43.7	---
Total Households Aged 45 to 64 Years	66,790	40.6	\$102,579	4,674	43.6	\$161,742
With Incomes of \$80,000 or More	31,197	46.7	---	3,467	74.2	---

Source: Environics Analytics and Tracy Cross & Associates, Inc.

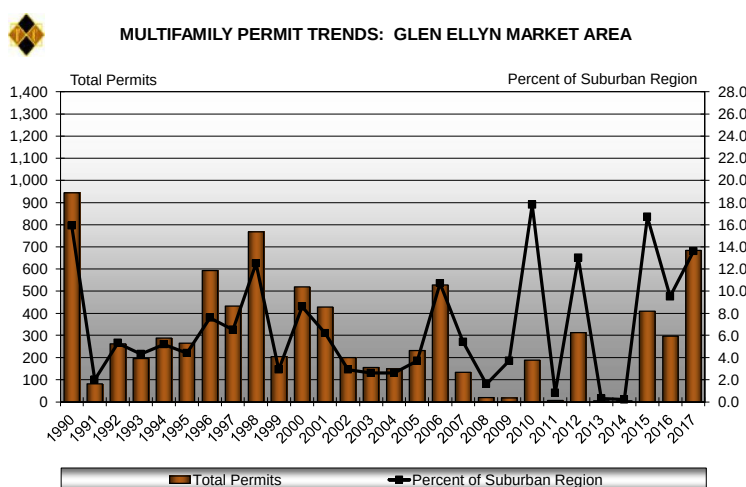


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REVA Development Partners, LLC
AVERE on Duane Apartments
Glen Ellyn, Illinois

- Since 1990 and through 2017, residential construction activity in the Glen Ellyn Market Area averaged 1,009 units yearly. Annual permit authorizations were distributed between 712 single family units (including single address townhomes and duplexes) and 297 in the multifamily sector. However, as detailed in Appendix A5 and reflecting its generally built-out character, the four-township market area accounted for only 4.5 percent of total suburban residential construction over the last 27 years. As Appendix A5 also reveals, the strongest recent periods of residential construction in the Glen Ellyn Market Area occurred during the 2001-2006 timeframe when volumes averaged 1,212 yearly. Contributing to this period of accelerated activity were robust single family detached, townhome and condominium for sale options fostered by relatively low interest rates, shifts from renter to ownership tenure, speculative investment purchases and, as we now know, extremely lax lending practices during the 2003-2005 timeframe. For example, single family authorizations in the market area during the 2001-2006 period averaged 930 annually, falling to only 299 units per year during the more recent 2011-2017 timeframe.

- As noted, multifamily authorizations in the four-township area have averaged 297 yearly since 1990. However, as illustrated in the adjacent graphic and also detailed in Appendix A5, market area multifamily construction has been highly cyclical. For example, between 2000 and 2006, an average of 316 units were issued yearly, recording a peak level of 528 units in 2006, reflecting spurious condominium for sale development during the seven-year period concentrated in the downtown districts of the market area's constituent rail line communities. Thereafter, multifamily authorizations began to slide precipitously,

averaging a nominal 79 units yearly between 2008 and 2014. During the more recent 2015-2017 timeframe, multifamily authorizations have spiked, averaging 464 units annually and reaching the 684 unit mark 2017. Multifamily authorizations during this more recent period reflect authorization of several moderate- to larger-scale rental developments such as the 192-unit *Elmhurst 255* in downtown Elmhurst; *Courthouse Square* (149) in Wheaton; *The Residences at Hamilton Lakes* (297) in Itasca; *Apex 41* (181 units) in Lombard; as well as *Elan Yorktown* (295) and *Overture* (175) and the 315-unit *Lakeside Village of Oakbrook Terrace*, in Lombard and Oakbrook Terrace, respectively, which are currently under construction and accepting lease reservations for occupancy in the next few months. Nonetheless, despite accelerated construction of late, the Glen Ellyn Market Area as accounted for a nominal 6.7 percent of all multifamily construction in the whole of suburban Chicago since 1990.



Source: U.S. Bureau of the Census: *C-40 Construction Reports* and Tracy Cross & Associates, Inc.



Planning Analysis
REVA Development Partners, LLC
AVERE on Duane Apartments
Glen Ellyn, Illinois

- Based upon a synthesis of noted economic trends, over the 2018-2023 forecast period, the four-township Glen Ellyn Market Area could support construction of 300 new rental units annually (or a total of 1,500 units through 2023) without creating market weakness **if competitive rents were maintained**. This new construction requirement reflects estimates of likely renter household growth over the five-year period, multifamily construction trends over the past two-plus decades, replacement demand given an aging inventory, as well as a 5.0 to 6.0 percent vacancy allowance necessary to maintain market balance. This annual rental construction requirement is sufficient to support the development of the proposed 48-unit AVERE on Duane Apartments.



ANNUAL RENTAL CONSTRUCTION REQUIREMENT SUMMARY: 2018 - 2023
-- GLEN ELLYN MARKET AREA --

Attribute	Number
Expected Annual Household Growth	429
Expected Annual Renter Household Growth @ 45.0 Percent of Total ⁽¹⁾	195
Annual Vacancy Requirement to Maintain Balance in the Market ⁽²⁾	50
Annual Replacement Demand @ 0.1 Percent of 2018 Rental Inventory	55
Derived Annual Construction Requirement	300
⁽¹⁾ Determined by applying the expected percentage of new renter households to the expected number of new household additions from 2018 through 2023.	
⁽²⁾ A balanced marketplace generally requires vacancies in the range of 5.0 to 6.0 percent; represents annualized estimate applied to total market area renter households over the five-year forecast period.	

Source: Tracy Cross & Associates, Inc.

- While the 300-unit yearly construction requirement alone represents sufficient support for the proposed development, the forecasted pace of absorption can also be supported by turnover in the Glen Ellyn Market Area's existing rental stock which, in 2018, is represented by 44,228 households. Of these, an estimated 13,300 will move annually with at least 50 percent of these mobile households remaining renters, staying in the local area and thus representing part of the proposed development's pool of prospective renters. From an aggregate annual base of new and existing renters, AVERE on Duane Apartments' forecasted overall absorption rate of 5.0 units monthly represents *less than 1.0 percent* of the overall market area's annual rental construction requirement and turnover potentials.
- Further, forecasted rate of absorption also considers the potential impact of apartment developments currently under construction and/or in the final stages of approval throughout the market area. As detailed in Appendix A6, apart from AVERE on Duane, there are currently twelve developments and no fewer than 2,722 potential new rental units in various stages of the planning pipeline in west suburban areas generally proximate to Glen Ellyn. Most notable are the 315-unit *Lakeside Village of Oakbrook Terrace* located roughly six miles southeast at 22nd Street and Royce Boulevard which is now under construction and expected to begin leasing in late-2018. Similarly, *Elan Yorktown* (295 units) is under construction 4.5 miles southeast within the mixed-use Yorktown Center in Lombard, where occupancies are anticipated in 2019. In addition Opus Group is expected to shortly begin construction of the transit-oriented *100 North Addison* in downtown Elmhurst.

THE RENTAL MARKETPLACE – AN OVERVIEW

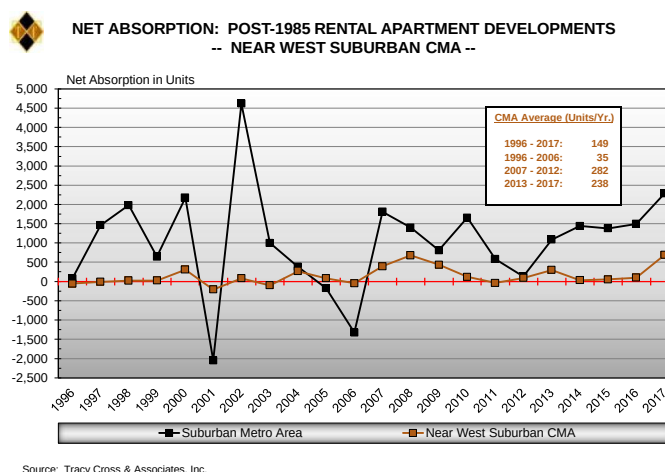
As noted, apartment construction in suburban areas proximate to Glen Ellyn has been relatively limited over the last nearly 30 years. The following paragraphs therefore summarize sector trends from a *regional* perspective, focusing upon newer suburban alternatives throughout the *Near West Suburban CMA* encompassing portions of southwestern DuPage and western Cook counties. For perspective, as of



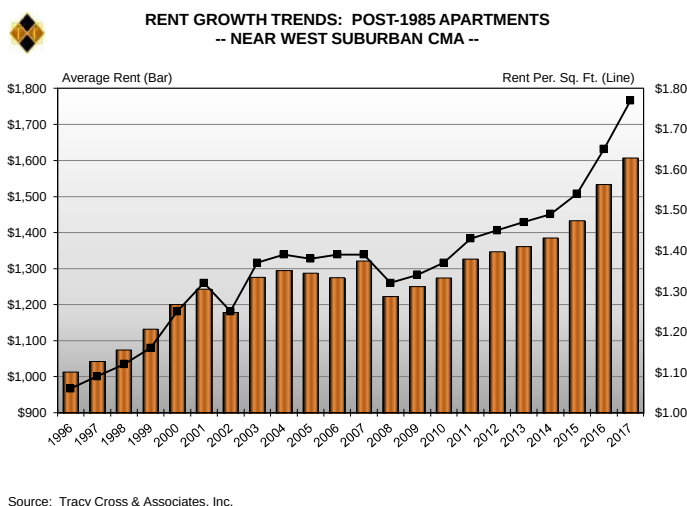
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AVERE on Duane Apartments
Glen Ellyn, Illinois

December 2017, the Near West Suburban CMA was host to 23 separate communities marketing a total of 6,137 apartments built or fully renovated in 1985 or later. Our analysis then transitions to 14 developments located in Downers Grove, Elmhurst, Itasca, LaGrange, Lisle, Lombard, Oakbrook Terrace, and Wheaton built since 2007, as conditions among these newer construction alternatives will most directly influence absorption potentials within the Glen Ellyn property.

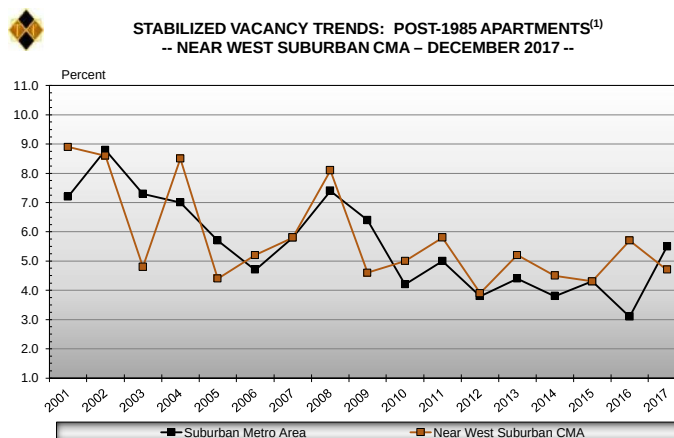
- Since 1995 and through 2017, the suburban marketplace as a whole averaged a net absorption of 1,041 rental units annually. Cyclical in nature, absorption levels during this 22-year period peaked in 1999 at 3,583 net units, reflecting strong new construction activity during the 1997-1999 timeframe, primarily concentrated in the region's western suburbs. As shown in the adjoining graphic, net absorption in the Near West Suburban CMA has averaged 149 units annually since 1995, accounting for a modest 14.3 percent of net suburban Chicago absorption over the last 22 years. Notably, net absorption in the Near West Suburban CMA during the more recent 2013-2017 period has advanced to an annual average of 238 units yearly, recording a net absorption of 691 units in 2017, the highest annual level noted in the CMA over the last 22 years. Recent net absorption levels are attributed in large part to increased occupancies among existing post-1985 developments, coupled with *sporadic* new construction of late.



- Rental rate growth has also been subject to market forces. As depicted in this trend line narrative, efforts to encourage lease-up and higher occupancies during the 2003-2005 housing boom period, and again during the recent recession which brought with it staggering job losses region-wide, necessitated substantial concessions and/or rent rollbacks, with average posted base rents in the Near West Suburban CMA settling at \$1.32 per square foot at the close of 2009. Since 2009, however, posted rents have risen steadily to a December 2017 average of \$1.77 per square foot, reflecting rent growth of 3.3 percent annually since 2009 and 4.7 percent annually during the more recent 2013-2017 period. These relatively strong rent growth rates largely reflect introduction of several higher-density, amenity-enhanced lifestyle developments introduced in the last several years, concentrated in areas north of I-88 and east of I-355.



- The overall lack of new suburban rental construction also had a dramatic impact upon vacancies throughout the suburban marketplace. As illustrated, suburban vacancies among stabilized developments fell from a high of 8.8 percent in 2002 to a relatively balanced 4.7 percent by the close of 2006. In tandem with advancing rents and the impact of the recession, vacancies began to move upward again in 2007, reaching the 7.4 percent market in 2008. Notably, by the close of 2011, rent concessions, coupled with upheaval in the for sale sector saw suburban-wide vacancies settle at 5.0 percent, indicative of market balance. While the Near West Suburban CMA generally mirrored suburban trend lines during the 2001-2006 timeframe, this component of the suburban area was sharply impacted by the severe economic downturn between 2007 and 2009, with vacancies quickly rising to the 8.0 percent mark. Measured economic improvement over the last few years, coupled with the sporadic new construction have served to move the suburban marketplace closer to balance as evidenced by a stabilized vacancy rate of 5.5 percent suburban-wide, and 4.7 percent in the localized near west suburbs, at the close of 2017. For perspective, a balanced market generally requires vacancies in the range of 5.0 to 6.0 percent to allow for movement throughout the marketplace.



(1) Excludes developments undergoing lease-up.
 Source: Tracy Cross & Associates, Inc.

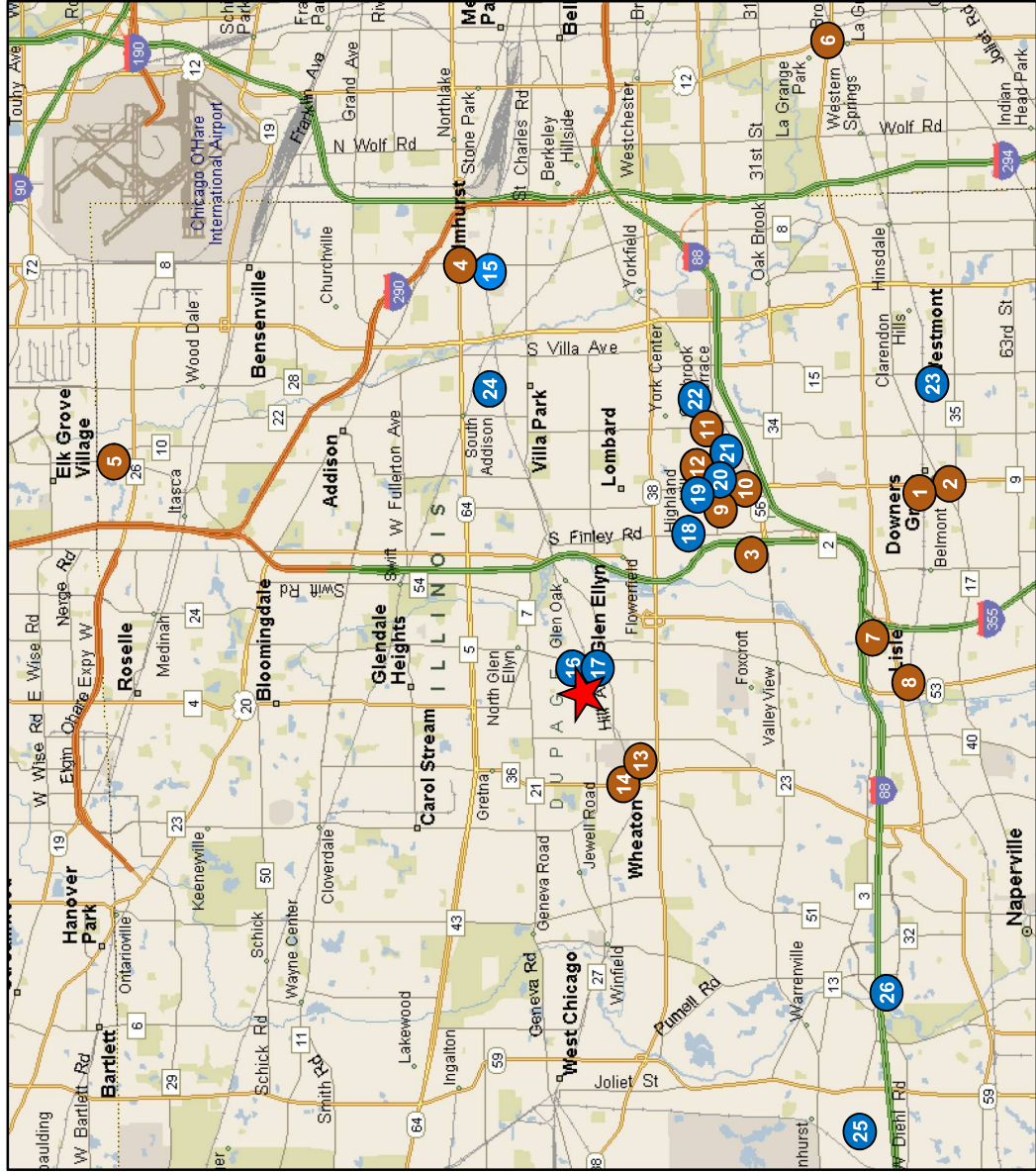
NEWER AND MORE COMPARABLE DEVELOPMENTS

Certainly not all of the apartment complexes found in the western suburbs will be directly or even indirectly competitive with the proposed AVERE on Duane Apartments. From a practical standpoint, and considering developments of scale, plan designs, community amenities and/or location, 14 west suburban rental developments built in 2007 or later, are viewed to represent the most direct sources of competitive substitution vis-à-vis the proposed Glen Ellyn development. Again, these include selected rental communities in Downers Grove, Elmhurst, Itasca, LaGrange, Lisle, Lombard, Oakbrook Terrace, and Wheaton which collectively provide 3,055 units. All of the selected newer more developments represent elevator-served midrise, highrise and/or mixed-use developments which include structured parking. Overall, the 14 newer apartment communities in the CMA are of larger scale, averaging 218 units in size. **Exhibit 2** provides a geographic orientation of the 14 newer construction developments for perspective.

- As summarized on **Exhibit 3**, as of June 2018, overall posted base rents among the 14 newer developments averaged \$2,046 monthly for a 934 square foot apartment home. This translates to a value ratio of \$2.19 per square foot, consistent with the \$2.17 per square foot average noted one year ago (June 2017) and stands a sharp 23.7 percent higher than the \$1.77 per square foot average noted among post-1985 apartments in the CMA at the close of 2017. Notably, the market area has also begun to witness an uptick in the level of discounts and other lease incentives offered, as evidenced by an average *effective rent* of \$1,859 or \$2.13 per square foot (an approximate 3.0 percent discount from posted rents). Comparatively, in June 2017, discounts and lease incentives were negligible, typically reflecting discounted application fees and/or security deposits for qualified applicants. As might be expected, the strongest discounts are currently noted among



GEOGRAPHIC ORIENTATION: NEWER APARTMENT DEVELOPMENTS
-- NEAR WEST SUBURBAN CMA --



Key	Development	Total Units
1	Burlington Station	89
2	Maple & Main	115
3	Residences at The Grove	294
4	Elmhurst 255	192
5	Residences at Hamilton Lakes	297
6	Uptown LaGrange	254
7	Avant at the Arboretum	310
8	Marq on Main	202
9	Apex 41	181
10	City View at the Highlands	403
11	Regency Place	112
12	Overture (AA)	175
13	Courthouse Square	149
14	Wheaton 121	306
Projects Under Construction/In Planning		
15	100 North Addison (AP-2019)	164
16	Crescent Apartments (CS)	150
17	Apex 400 (PP)	107
18	Woodmoor (UC)	288
19	Yorktown Apt-Ph III (Appr'd)	78
20	Yorktown Center III (AP-2020)	500
21	Elan Yorktown (UC-2019)	295
22	Lakeside Vlg of OBT (UC)	315
23	Quincy Station (FP 2020)	94
24	Garden Station (On Hold)	230
25	TBD/Atlantic Realty (PP)	259
26	Vanguard Cantera (PP)	242
★	AVERE on Duane	48

Source: Tracy Cross & Associates, Inc.



3

**COMPOSITE SUMMARY: REPRESENTATIVE NEWER APARTMENT FLATS
-- NEAR WEST SUBURBAN CMA - JUNE 2018 --**

Municipality/ Development	Year Built/ Renovated	Number of Units	Number Vacant	Percent Vacant	Average Unit Size (Sq. Ft.)	Rent Characteristics					Stabilized Developments ⁽¹⁾		
						Average Posted June 2017	June 2018			Average Effective	Number of Units	Number Vacant	Percent Vacant
							Average Posted	\$	\$/Sq.				
CMA Totals/Averages:	---	3,055	646	21.1	934	\$2,059	\$2,046	\$1,992	\$2.19	\$2.13	1,742	69	4.0
Downers Grove	---	474	186	39.2	976	\$2,214	\$1,985	\$1,946	\$2.03	\$1.99	270	10	3.7
Burlington Station ⁽²⁾	2018	89	75	84.3	1,029	---	2,214	2,214	2.15	2.15	---	---	---
Maple & Main ⁽³⁾	2018	115	101	87.8	873	---	2,108	1,946	2.41	2.23	---	---	---
The Residences at The Grove	2008	270	10	3.7	1,003	2,214	1,858	1,858	1.85	1.85	270	10	3.7
Elmhurst	---	192	0	0.0	929	\$2,217	\$2,281	\$2,281	\$2.46	\$2.46	192	0	0.0
Elmhurst 255	2016	192	0	0.0	929	2,217	2,281	2,281	2.46	2.46	192	0	0.0
Itasca	---	297	141	47.5	949	\$2,123	\$2,123	\$1,783	\$2.24	\$1.88	---	---	---
Residences at Hamilton Lakes ⁽⁴⁾	2017	297	141	47.5	949	2,123	2,123	1,783	2.24	1.88	---	---	---
La Grange	---	254	52	20.5	961	\$2,327	\$2,219	\$2,198	\$2.31	\$2.29	---	---	---
Uptown La Grange ⁽⁵⁾	2017	254	52	20.5	961	2,327	2,219	2,198	2.31	2.29	---	---	---
Lisle	---	512	188	36.7	880	\$1,688	\$1,776	\$1,746	\$2.02	\$1.98	310	18	5.8
Avant at the Arboretum	2013	310	18	5.8	936	1,688	1,771	1,771	1.89	1.89	310	18	5.8
Marq on Main ⁽⁶⁾	2018	202	170	84.2	795	---	1,783	1,708	2.24	2.15	---	---	---
Lombard	---	759	50	6.6	943	\$1,515	\$2,148	\$2,104	\$2.28	\$2.23	403	12	3.0
Apex 41 ⁽⁷⁾	2016	181	21	11.6	951	2,148	2,193	2,010	2.31	2.11	---	---	---
City View at The Highlands	2013/2016	403	12	3.0	916	1,889	1,781	1,781	1.94	1.94	403	12	3.0
Overture Yorktown ⁽⁸⁾	2018	175	17	9.7	995	---	2,946	2,946	2.96	2.96	---	---	---
Oakbrook Terrace	---	112	11	9.8	1,199	\$2,698	\$2,762	\$2,532	\$2.30	\$2.11	112	11	9.8
Regency Place	2007	112	11	9.8	1,199	2,698	2,762	2,532	2.30	2.11	112	11	9.8
Wheaton	---	455	18	4.0	919	\$1,921	\$1,893	\$1,893	\$2.06	\$2.06	455	18	4.0
Courthouse Square	2016	149	16	10.7	974	2,057	2,144	2,144	2.20	2.20	149	16	10.7
Wheaton 121	2013	306	2	0.7	892	1,855	1,771	1,771	1.99	1.99	306	2	0.7

⁽¹⁾ Excludes rental programs currently undergoing renovation and/or new programs undergoing initial absorption.

⁽²⁾ Development began leasing May 2018; initial occupancies anticipated September 2018. Current absorption rate of 10.5 units per month reflects 14 units leased as of June 8, 2018.

⁽³⁾ Development began leasing February 12, 2018; initial occupancies anticipated September 2018. Current absorption rate of 3.7 units per month reflects 14 units leased.

⁽⁴⁾ Development began leasing May 2017; currently absorbing at a rate of 15.2 du/mo.

⁽⁵⁾ Development began leasing January 2017; currently absorbing at a rate of 15.8 du/mo.

⁽⁶⁾ Development began leasing May 22, 2018; initial occupancies anticipated August 2018. Currently absorbing at a leasing rate of 42.7 du/mo. with 32 units leased as of June 8, 2018.

⁽⁷⁾ Development began leasing July 2016; currently absorbing at a rate of 7.6 du/mo.

⁽⁸⁾ Age-restricted Active Adult Development. Pre-leasing 1/15/2018; initial occupancies anticipated December 2018. Current absorption rate of 3.2 units per month reflects 17 units leased as of August 2018.

Source: Tracy Cross & Associates, Inc.

Planning Analysis
REVA Development Partners, LLC
AVERE on Duane Apartments
Glen Ellyn, Illinois

developments undergoing initial lease-up, where discounts typically reflect one- to two months free or an average discount of 7.5 percent from posted rents.

- ❑ Excluding Burlington Station, Maple and Main, Residences at Hamilton Lakes, Uptown LaGrange, Marq on Main, Apex 41 and Overture Yorktown which are undergoing their initial period of absorption, vacancies among the remaining seven stabilized rental communities currently stand at 4.0 percent with 69 of 1,742 stabilized units unoccupied as of June 2018. This compares with a stabilized vacancy factor of 2.9 percent noted in June 2017, indicative of market softening. The projected absorption rate fully considers the impact of advancing stabilized vacancies in the marketplace and reinforces the necessity for an aggressive marketing approach in order to achieve a reasonable absorption period for the 48-unit development.

- ❑ As summarized in the adjoining text table, absorption rates among the seven stabilized developments averaged 10.4 units monthly overall, with projects of fewer than 200 units reflecting an average absorption rate of 9.2 units per month during their respective lease-up periods.



ABSORPTION TRENDS: SELECT APARTMENTS BUILT IN 2000 OR LATER
 -- NEAR WEST SUBURBAN CMA - JUNE 2018 --

Absorption Summary			
Attribute	Total	Developments of Less Than 200 Units	Developments of 200 Units or More
Number of Stabilized Developments	7	3	4
Total Units	1,581	453	1,128
Average Development Size	226	151	282
Average Occupancy Absorption to Stabilization ⁽¹⁾	10.4	9.2	11.3
As a Percent of Total Units	4.6	6.1	4.0

⁽¹⁾ Stabilization achieved at 94.0 to 96.0 percent occupancies.

Source: Tracy Cross & Associates, Inc.

an absorption rate consistent with the 5.0 units per month pace projected for AVERE on Duane Apartments.

- ❑ Excluding Burlington Station, Maple & Main, Marq on Main, and Overture Yorktown which began leasing in the spring 2018 in anticipation of initial occupancies fall 2018, the three remaining new communities in the CMA are currently generating an average absorption rate of 12.9 units per month. As summarized in the adjacent table, these newest developments are of large scale, averaging 190 units in size and feature extensive levels of community amenities. Similar to AVERE on Duane, all are located within mixed-use lifestyle environs convenient to shopping, dining and/or entertainment, while all except Apex 41 and The



APARTMENT DEVELOPMENTS UNDERGOING INITIAL LEASE-UP
 -- NEAR WEST SUBURBAN CMA - JUNE 2018 --

Development/Location	Total Units	Initial Occupancy (Month/Year)	Average Absorption Rate (Units/Month)
Apex 41/Lombard	181	September 2016	7.6
Uptown La Grange/La Grange	254	May 2017	15.8
The Residences at Hamilton Lakes/Itasca	297	August 2017	15.2
Burlington Station/Downers Grove	89	Antic. 10/2018	8.4 ⁽¹⁾
Maple & Main/Downers Grove	115	Antic. 9/2018	3.7 ⁽¹⁾
Marq on Main/Lisle	202	Antic. 9/2018	42.7 ⁽¹⁾
Overture Yorktown (AA)/Lombard	175	Antic. 12/2018	3.2 ⁽¹⁾
Total Units/Average Unit Absorption⁽¹⁾:	1,313	---	12.9 ⁽²⁾
Average Development Size⁽¹⁾:	188	---	---

⁽¹⁾ Statistics reflect initial leasing absorption rate; occupancies anticipated late 2018.
⁽²⁾ Average absorption rate excludes Burlington Station, Maple & Main and Marq on Main.

Source: Tracy Cross & Associates, Inc.



Planning Analysis
REVA Development Partners, LLC
AVERE on Duane Apartments
Glen Ellyn, Illinois

Residences at Hamilton Lakes also represent transit-oriented developments within walking distance of METRA. Again, the 5.0-units monthly forecasted absorption pace for AVERE on Duane balances its downtown Glen Ellyn locale with the boutique scale of the proposed development and the overall lack of on-site amenities.

- As proforma rents suggest that AVERE on Duane will appeal to more mature discretionary consumer segments, it is prudent to highlight pertinent characteristics of Regency Place and, especially, the newly-introduced Overture Yorktown, which evoke a similar cachet:

- Regency Place** is a 112-unit development aligning Meyers Road at 22nd Street in Oakbrook Terrace. Introduced in March 2007, this community offers a variety of one, one bedroom plus den, two, two bedroom plus den and three bedroom plan types which, similar to the proposed AVERE, range in unit size from 856 to 1,749 square feet. Corresponding posted base rents currently extend from \$2,055 to \$4,150 and average \$2,762 which includes a 1,199 square foot residence. Current posted rents yield a value ratio of \$2.30 per square foot. The resident is billed directly for all utilities. Assigned enclosed parking is *included* in the monthly rent, with a single space allocated to one bedroom units, while two spaces are allocated to two and three bedroom plan types. Regency Place provides an extensive level of community amenities, including a resident club with demonstration kitchen and multiple social areas, a business center, multi-media room, fitness center, indoor lap pool, an e-lounge café, and a lushly landscaped terrace with fireside lounge and grill area. Limited concierge services including package delivery and dry cleaning drop-off are also provided. As noted, Regency Place generated a modest overall absorption rate of 3.9-units monthly, achieving stabilization in June 2009. Vacancy rates in this community historically spike during the October-March timeframe, indicating at least some level of seasonal tenants. At present, Regency Place reflects a vacancy rate of 9.8 percent with eleven units unoccupied, and is offering a leasing incentive of one month free with a 12-month lease or a 7.7 percent discount from posted rents.



- Overture Yorktown** is currently under construction within the mixed-use Yorktown Center aligning Butterfield Road at Highland Avenue in Lombard. This 175-unit community will be restricted to residents aged 55 and older. Plan offerings are expected to include a variety of one, one bedroom plus den, two and two bedroom plus den designs ranging in unit size from 769 to 1,327 square feet. Corresponding posted base rents extend from \$1,955 to \$4,500 monthly and average \$2,946 which includes a 995 square foot apartment. This translates to a value ratio of \$2.96 per square foot. Here, as well, one (unassigned) enclosed parking space is included in the monthly rent. It is expected that the tenants will be billed directly for all utilities. Community amenities will include an expansive resident club with demonstration kitchen, an e-lounge café and game room, a fitness center with personal trainer, sports courts, a private hair and nail salon, an outdoor pool, roof terrace with fireside lounge and grill area, and a pet spa. Overture Yorktown will also provide a social director. Lease reservations began in mid-January 2018 in anticipation of initial occupancies in



Planning Analysis
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AVERE on Duane Apartments
Glen Ellyn, Illinois

December. As of mid-September, 17 units had been reserved, translating to an initial absorption rate of 3.2 units per month.

- On a weighted basis, June 2018 posted rents among the 14 newer apartments in the CMA extend, on average, from \$1,484 for the limited number of studio apartments offered to an average high of \$3,477 for a two bedroom plus den or three bedroom flat. Posted rents typically exclude premiums, utilities, parking and other incremental fees. As detailed in Appendices A1 and A2, the proforma rental strategy for AVERE on Duane places the proposed 48-unit development, for comparable footage, some \$176 monthly above the market average. Notably, proforma rents position AVERE roughly \$130 monthly higher than a comparably-sized residence at the amenity-enriched Regency Place, but well below Overture



POSTED RENT BY UNIT TYPE: POST-2000 APARTMENT FLATS
-- NEAR WEST SUBURBAN CMA - JUNE 2018 --

Plan Type	Number of Units	Percent of Total	Average Unit Size (Sq. Ft.)	Rent Characteristics	
				Average Monthly	\$/Sq. Ft.
Studio	58	1.9	570	\$1,484	\$2.60
JR-1/Convertible	19	0.6	652	1,559	2.39
One Bedroom Flat	1,777	58.2	806	1,786	2.22
One Bedroom+Den Flat	145	4.7	874	2,207	2.53
Two Bedroom Flat	920	30.1	1,159	2,389	2.06
Two Bedroom+Den Flat	62	2.0	1,399	3,477	2.49
Three Bedroom Flat	74	2.4	1,468	3,402	2.32
Total / Weighted Average	3,055	100.0	934	\$2,046	\$2.19

Source: Tracy Cross & Associates, Inc.

Yorktown for comparable footage. In *whole dollars*, however, AVERE on Duane will represent the *highest posted rents* among the 14 newest projects in the near west suburbs. These variances suggest that the Client must maintain an aggressive marketing posture through stabilization, and a *judicious approach* to rent growth thereafter in order to maintain a competitive advantage in the marketplace.

- For added perspective, **Exhibit 4** further delineates pertinent feature and amenity characteristics, and summarizes the range of leasing requirements and other incremental fees currently in effect among seven of the *newest construction* and/or more proximate apartment programs in the Near West Suburban CMA. These interior appointments and fee schedules are consistent with those assumed to be provided at AVERE on Duane and factored into the absorption forecast.





DEVELOPMENT PROFILE SUMMARY: REPRESENTATIVE NEWER APARTMENT DEVELOPMENTS
— NEAR WEST SUBURBAN CMA - JUNE 2018 —

Attribute								
Project Name	OVERTURE (AA)	REGENCY PLACE	MARQ ON MAIN	UPTOWN LA GRANGE	RES AT HAMILTON LAKES	ELMHURST 255	COURTHOUSE SQUARE	
Location	LOMBARD	OAKBROOK TERRACE	LISLE	LA GRANGE	ITASCA	ELMHURST	WHEATON	
Year Built	2018	2007	2018	2017	2017	2016	2016	
Units	175	112	202	254	297	192	149	
Project Type/Number of Floors	MIDRISE / 7 FLOORS	MIDRISE / 4 FLOORS	MIDRISE / 5 FLOORS	MIDRISE / 5 FLOORS	MIDRISE / 4 FLOORS	MIDRISE / 6 FLOORS	MIDRISE / 6 FLOORS	
Average Unit Size	995	1,199	795	961	949	929	974	
Average Posted Base Rent	\$2,946	\$2,762	\$1,783	\$2,219	\$2,123	\$2,281	\$2,144	
Average Rent/Sq. Ft.	\$2.96	\$2.30	\$2.24	\$2.31	\$2.24	\$2.46	\$2.20	
PARKING / UTILITIES / INCREMENTAL FEES								
Parking⁽¹⁾	NA / INCL NA / INCL NA / NA NA / NA	INCL / INCL NA / NA NA / NA NA / NA	\$95 / NA NA / INCL NA / NA NA / NA	\$125 / NA INCL / INCL NA / \$100	\$125 / NA NA / INCL NA / NA	\$45 MC: \$125-\$175(T) / NA NA / NA NA / NA NA / NA	\$125 / NA NA / NA NA / NA NA / NA	
Utilities^(1,2)	TENANT TENANT TENANT TENANT	TENANT TENANT TENANT TENANT	TENANT TENANT TENANT TENANT	TENANT \$10 TENANT TENANT	TENANT TENANT TENANT TENANT	TENANT TENANT TENANT TENANT	TENANT TENANT TENANT TENANT	
Premiums⁽¹⁾	NA NA	\$10-\$15 NA	VARIES VARIES	\$10 - \$150 (FL 5) NA	VARIES VARIES	VARIES VARIES	VARIES VARIES	
Other Fees⁽¹⁾	\$150 / \$60 \$300 \$300 / \$50 TBD / TBD	\$175 / \$65 \$175 \$300 / \$25 INCL / NA	\$150 / \$65 \$88 \$300 / NA NA / INCL	\$400 / \$60 NA \$500 / \$35 \$40 / INCL	\$200-\$500 / \$65 NA \$300 / \$25 TBD / INCL	\$250 / \$65 \$500 - 1 MO \$300 / \$30 INCL / INCL	\$150 / \$65 \$175 \$300 / NA \$30 / INCL	
STANDARD FEATURES AND COMMUNITY AMENITIES								
Interior Features⁽¹⁾	Flooring: Common/Bedroom Kitchen Appliances/Washer-Dryer Kitchen Counters/Flooring Bath Counter/Flooring Patio/Balcony	CRPT / CRPT SS / UNIT GRANITE / FX WOOD GRANITE / SGDS INCL	FX WOOD / FX WOOD SS / UNIT QUARTZ / FX WOOD QUARTZ / CERAMIC INCL	FX WOOD / CRPT SS / UNIT QUARTZ / FX WOOD QUARTZ / CERAMIC OPT	FX WOOD / FX WOOD SS / UNIT QUARTZ / FX WOOD QUARTZ / CERAMIC INCL	FX WOOD / FX WOOD SS / UNIT QUARTZ / FX WOOD QUARTZ / CERAMIC INCL	FX WOOD / CRPT SS / UNIT GRANITE / FX WOOD GRANITE / CERAMIC OPT	
Community/Building Amenities⁽¹⁾	Clubroom/Gourmet Kitchen Fitness Center/Wi-Fi/E-Lounge Media Room/Business Center Doorman/Concierge Playground/Sport Court/Game Room Garden/Rooft Terrace Fireside Lounge/Grill Area Swimming Pool Pet Park/Grooming Station	INCL / INCL INCL / INCL / INCL INCL / INCL NA / PKG SVC NA / NA / NA NA / NA / NA INCL / INCL INCL / INCL INDOOR NA / NA	INCL / INCL INCL / INCL / INCL NA / INCL NA / NA NA / NA / NA INCL / INCL INCL / INCL OUTDOOR NA / NA	INCL / INCL INCL / INCL / NA NA / INCL NA / NA NA / INCL INCL / INCL INCL / INCL OUTDOOR INCL / INCL	INCL / INCL INCL / INCL / INCL INCL / INCL SP INTERCOM / PKG SVC NA / NA / NA NA / INCL NA / INCL INCL / INCL OUTDOOR NA / INCL	INCL / INCL INCL / INCL / INCL INCL / INCL NA / NA NA / INCL / NA NA / INCL INCL / INCL OUTDOOR NA / NA	INCL / INCL INCL / INCL / INCL INCL / INCL NA / PBOX, PKG SVC NA / NA / INCL INCL / NA INCL / INCL OUTDOOR NA / INCL	

⁽¹⁾ Indicates incremental monthly fee as applicable.

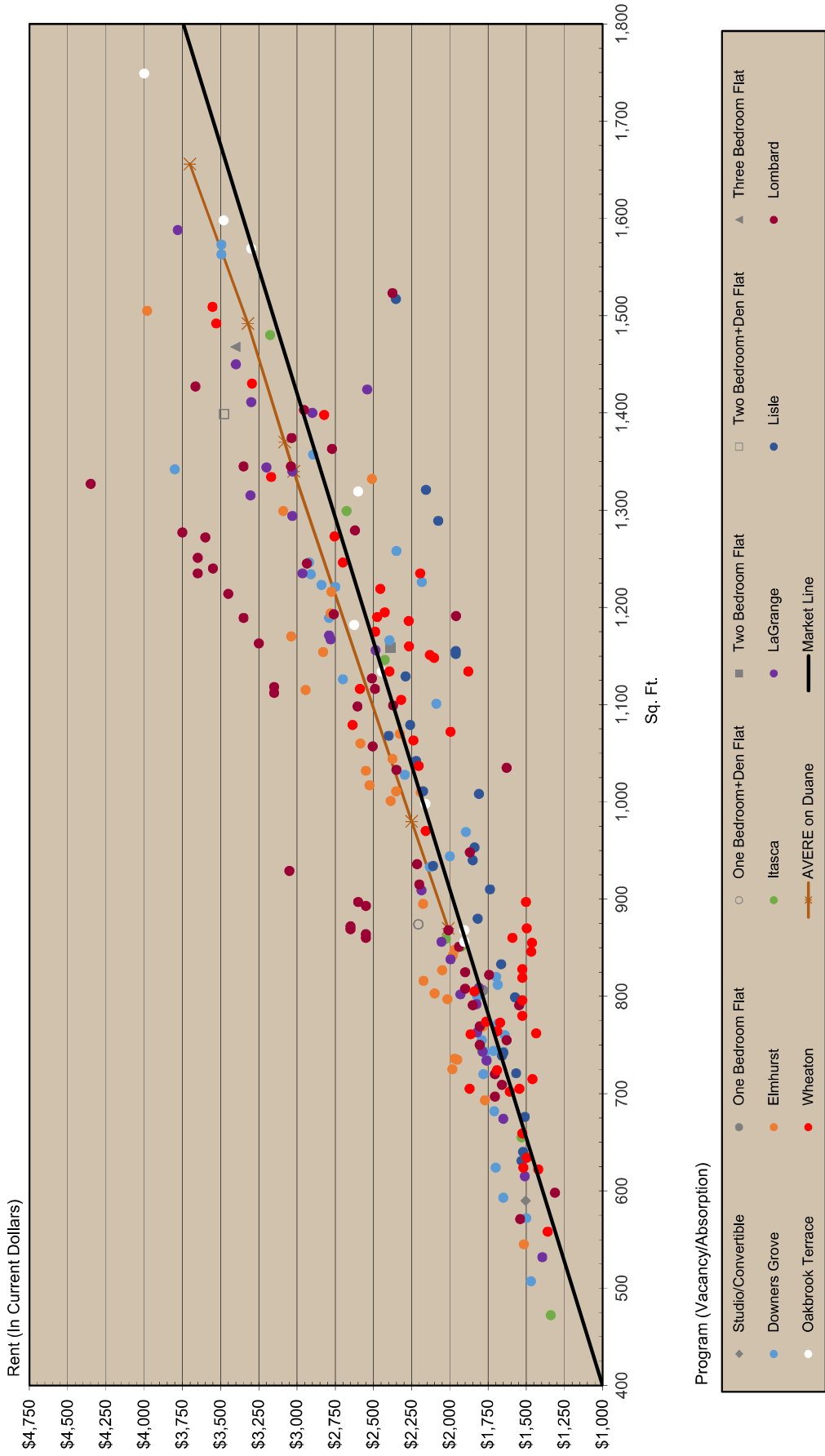
⁽²⁾ Assumes tenant responsible for all utilities as standard unless otherwise indicated.

Source: Tracy Cross & Associates, Inc.



A1

Rent/Value Comparisons
Representative Newer Apartment Flats
West Suburban CMA
June 2018



Rent/value analysis uses a scatter diagram to graphically represent a set of observations found in today's marketplace, specifically the square footage of units offered and their associated rent levels. Regression analysis is then used to fit a line through the set of market observations that represent the "best fit" or average market line. This market line can then be used to predict the performance of a new, untested product line or offer explanations regarding the occupancy/absorption rates of currently available product lines.



A2

Rent/Value Comparisons
Representative Newer Apartment Flats
West Suburban CMA
June 2018

Plan Size (Sq. Ft.)	Average Market Rent	Development/Location	Year Built/ Renovated	Total Units	Average Plan Size (Sq. Ft.)	Average Posted Rent		Average Market Rent	Variance From Market	Vacancy Rate / (Monthly Absorption)
						Dollars	Rent per Sq. Ft.			
400	\$999	(1-4) Overture Yorktown/Lombard	2018	175	995	\$2,796	\$2.81	\$2,165	\$+631	(3.2/Mo.)
500	1,195	Elmhurst 255/Elmhurst	2016	192	929	2,281	2.46	2,036	+245	0.0
600	1,391	Maple & Main/Downers Grove	2018	115	873	2,108	2.41	1,926	+182	(3.7/Mo.)
700	1,587	AVERE on Duane/Glen Ellyn	2020	48	1,354	3,045	2.25	2,869	+176	5.0/Mo. Fest
800	1,783	Uptown LaGrange/LaGrange	2017	254	961	2,219	2.31	2,099	+120	(15.8/Mo.)
900	1,979	Apex 41/Lombard	2016	181	951	2,193	2.31	2,079	+114	(7.6/Mo.)
1,000	2,175	Residences at Hamilton Lakes/Itasca	2017	297	949	2,123	2.24	2,075	+48	(15.2/Mo.)
1,100	2,371	Regency Place/Oakbrook Terrace	2007	112	1,199	2,612	2.18	2,565	+47	9.8
1,200	2,567	Courthouse Square/Wheaton	2016	149	974	2,144	2.20	2,124	+20	10.7
1,300	2,763	Marq on Main/Lisle	2018	202	795	1,783	2.24	1,773	+10	(42.7/Mo.)
1,400	2,959									
1,500	3,155									
1,600	3,351	---- Market ----	2014	3,055 / 218	934	2,046	2.19	2,046	0	4.0 / (9.0/Mo.)
1,700	3,547	(3) Burlington Station/Downers Grove	2018	89	1,029	2,214	2.15	2,232	-18	(8.4/Mo.)
1,800	3,743	Wheaton 121/Wheaton	2013	306	892	1,771	1.99	1,963	-192	0.7
		Residences at the Grove/Downers Grove	2008	270	938	1,858	1.98	2,053	-195	3.7
		Avant at the Arboretum/Lisle	2013	310	936	1,771	1.89	2,050	-279	5.8
		(4) City View at the Highlands/Lombard	2003/2016	403	916	1,706	1.86	2,010	-304	3.0

Slope: \$1.96 per sq. ft.

- (1) Age-restricted development; initial occupancies anticipated December 2018.
(2) Absorption rate reflects initial three (3) weeks of leasing activity; excluded from market average absorption statistics.
(3) Absorption rate reflects 21 units pre-leased through August; initial occupancy expected 10/1/2018.
(4) Average rent adjusted downward to reflect value of enclosed parking included in the monthly rent; utilized for analytical purposes only.



A3

POPULATION, HOUSEHOLDS, TENURE, AND INCOME: 2018
-- GLEN ELLYN MARKET AREA --

Attribute/Year	Glen Ellyn Market Area	Village of Glen Ellyn	Attribute/Year	Glen Ellyn Market Area	Village of Glen Ellyn
Population			Households		
1990	407,471	24,944	1990	144,914	9,413
2000	442,489	26,961	2000	158,565	10,187
2010	441,027	27,450	2010	161,356	10,381
2018	444,707	28,145	2018	164,598	10,721
2023	445,916	28,259	2023	166,743	10,796
Average Annual Change			Average Annual Change		
1990- 2000	3,502	202	1990 - 2000	1,365	77
2000 - 2010	-146	49	2000 - 2010	279	19
2010 - 2018	460	87	2010 - 2018	405	43
2018 - 2023	242	23	2018 - 2023	429	15
2018 Household Tenure			2018 Household Income		
Total Housing Units	175,495	11,407	Total Households	164,618	10,721
Total Occupied	164,598	10,721	Under \$25,000	20,661	1,392
Owner Occupied	120,370	8,035	25,000 - 34,999	11,294	659
Percent	73.1	74.9	35,000 - 49,999	17,094	811
Renter Occupied	44,228	2,686	50,000 - 74,999	27,048	1,353
Percent	26.9	25.1	75,000 - 99,999	21,880	937
Vacant	10,897	686	100,000 and Over	66,641	5,569
Percent	6.2	6.0	Median	\$81,555	\$105,641
2018 Household Size			2018 Travel Time to Work		
Total Population	444,707	28,145	Total Workers Age 16+	214,239	12,269
In Group Quarters	7,448	35	Less than 30 Minutes	126,546	7,033
In Households	437,259	28,110	30 - 44 Minutes	46,369	2,525
Total Households	164,598	10,721	45 - 59 Minutes	19,655	1,097
Average Persons Per Household	2.66	2.62	60 or More Minutes	21,669	1,614
			Average Minutes to Work	30.2	32.0

Source: U.S. Department of Commerce, Bureau of the Census: Census 2000 and Census 2010 and Environics Analytics.

Attachment: 20. Market Study (4023 : Avere on Duane - PUD, SUP, ZMA, SV)



A4

**HOUSEHOLD INCOME BY AGE OF HOUSEHOLDER: 2018 ESTIMATE
-- GLEN ELLYN MARKET AREA --**

Age of Householder	2018 Income													
	Under \$25,000		\$25,000 - 34,999		\$35,000 - 49,999		\$50,000 - 74,999		\$75,000 - 99,999		\$100,000 and Over		Total	Median
	Number of Households	Percent of Total Households	Number of Households	Percent of Total Households	Number of Households	Percent of Total Households	Number of Households	Percent of Total Households	Number of Households	Percent of Total Households	Number of Households	Percent of Total Households		
Glen Ellyn Market Area														
15 - 24 Years	1,256	0.76	705	0.43	606	0.37	828	0.50	328	0.20	338	0.21	4,061	\$36,339
25 - 34 Years	2,092	1.27	1,318	0.80	2,501	1.52	4,227	2.57	3,276	1.99	7,339	4.46	20,753	76,604
35 - 44 Years	2,332	1.42	1,358	0.82	2,584	1.57	4,724	2.87	4,304	2.61	13,708	8.33	29,010	95,171
45 - 54 Years	2,249	1.37	1,193	0.72	2,516	1.53	4,801	2.92	4,297	2.61	17,193	10.44	32,249	106,505
55 - 64 Years	3,434	2.09	1,680	1.02	2,879	1.75	5,036	3.06	4,426	2.69	17,086	10.38	34,541	98,914
65 - 74 Years	3,827	2.32	2,298	1.40	3,086	1.87	4,189	2.54	3,299	2.00	7,931	4.82	24,630	67,927
75 - 84 Years	3,221	1.96	1,801	1.09	2,023	1.23	2,318	1.41	1,378	0.84	2,228	1.35	12,969	45,382
85 Years & Over	2,250	1.37	941	0.57	899	0.55	925	0.56	552	0.34	838	0.51	6,405	35,150
Total	20,661	12.55	11,294	6.86	17,094	10.38	27,048	16.43	21,860	13.28	66,661	40.49	164,618	\$81,555
Village of Glen Ellyn														
15 - 24 Years	111	1.04	33	0.31	43	0.40	70	0.65	10	0.09	20	0.19	287	\$34,854
25 - 34 Years	169	1.58	55	0.51	127	1.18	172	1.60	104	0.97	512	4.78	1,139	85,554
35 - 44 Years	163	1.52	43	0.40	117	1.09	167	1.56	120	1.12	945	8.81	1,555	120,578
45 - 54 Years	116	1.08	64	0.60	98	0.91	196	1.83	178	1.66	1,587	14.80	2,239	184,301
55 - 64 Years	211	1.97	98	0.91	116	1.08	232	2.16	200	1.87	1,578	14.72	2,435	140,999
65 - 74 Years	230	2.15	162	1.51	145	1.35	261	2.43	188	1.75	660	6.16	1,646	77,957
75 - 84 Years	205	1.91	128	1.19	108	1.01	158	1.47	88	0.82	186	1.73	873	49,278
85 Years & Over	187	1.74	76	0.71	57	0.53	97	0.90	49	0.46	81	0.76	547	37,100
Total	1,392	12.98	659	6.15	811	7.56	1,353	12.62	937	8.74	5,569	51.94	10,721	\$105,641

Source: Envrionics Analytics and Tracy Cross & Associates, Inc.



A5

RESIDENTIAL BUILDING PERMIT TRENDS: SUBURBAN CHICAGO AND THE GLEN ELLYN MARKET AREA 1990 - 2017

Year	Suburban Chicago			Glen Ellyn Market Area					Village of Glen Ellyn						
	Total	Single Family	Multi-Family	Total	Percent of Suburban Area	Single Family	Percent of Suburban Area	Multi-Family	Percent of Suburban Area	Total	Percent of Market Area	Single Family	Percent of Market Area	Multi-Family	Percent of Market Area
1990	25,931	20,002	5,929	2,028	7.8	1,084	5.4	944	15.9	32	1.6	32	3.0	0	0.0
1991	22,415	18,294	4,121	844	3.8	763	4.2	81	2.0	34	4.0	34	4.5	0	0.0
1992	27,354	22,410	4,944	1,479	5.4	1,217	5.4	262	5.3	42	2.8	42	3.5	0	0.0
1993	29,664	25,125	4,539	1,682	5.7	1,486	5.9	196	4.3	148	8.8	48	3.2	100	51.0
1994	31,639	26,051	5,588	1,560	4.9	1,271	4.9	289	5.2	60	3.8	52	4.1	8	2.8
1995	30,020	23,969	6,051	1,320	4.4	1,056	4.4	264	4.4	40	3.0	40	3.8	0	0.0
1996	32,110	24,320	7,790	1,422	4.4	829	3.4	593	7.6	87	6.1	43	5.2	44	7.4
1997	28,879	22,188	6,691	1,193	4.1	761	3.4	432	6.5	39	3.3	33	4.3	6	1.4
1998	30,813	24,668	6,145	1,498	4.9	730	3.0	768	12.5	230	15.4	52	7.1	178	23.2
1999	34,812	27,789	7,023	1,314	3.8	1,109	4.0	205	2.9	115	8.8	115	10.4	0	0.0
2000	32,476	26,475	6,001	1,386	4.3	867	3.3	519	8.6	69	5.0	69	8.0	0	0.0
2001	34,970	28,072	6,898	1,256	3.6	828	2.9	428	6.2	60	4.8	60	7.2	0	0.0
2002	37,252	30,469	6,783	1,351	3.6	1,151	3.8	200	2.9	110	8.1	75	6.5	35	17.5
2003	37,409	31,402	6,007	979	2.6	823	2.6	156	2.6	74	7.6	74	9.0	0	0.0
2004	36,905	31,200	5,705	1,052	2.9	902	2.9	150	2.6	57	5.4	57	6.3	0	0.0
2005	38,523	32,181	6,342	1,178	3.1	946	2.9	232	3.7	109	9.3	73	7.7	36	15.5
2006	29,149	24,216	4,933	1,457	5.0	929	3.8	528	10.7	77	5.3	73	7.9	4	0.8
2007	17,359	14,868	2,491	726	4.2	592	4.0	134	5.4	45	6.2	41	6.9	4	3.0
2008	7,301	6,113	1,188	223	3.1	204	3.3	19	1.6	29	13.0	17	8.3	12	63.2
2009	3,752	3,263	489	161	4.3	143	4.4	18	3.7	7	4.3	7	4.9	0	0.0
2010	4,223	3,169	1,054	329	7.8	141	4.4	188	17.8	13	4.0	13	9.2	0	0.0
2011	4,048	3,213	835	198	4.9	191	5.9	7	0.8	21	10.6	21	11.0	0	0.0
2012	6,679	4,283	2,396	564	8.4	252	5.9	312	13.0	24	4.3	24	9.5	0	0.0
2013	7,069	5,542	1,527	351	5.0	347	6.3	4	0.3	29	8.3	29	8.4	0	0.0
2014	8,500	5,931	2,569	397	4.7	393	6.6	4	0.2	52	13.1	52	13.2	0	0.0
2015	8,366	5,905	2,461	753	9.0	343	5.8	410	16.7	40	5.3	17	5.0	23	5.6
2016	9,008	5,888	3,120	604	6.7	307	5.2	297	9.5	17	2.8	17	5.5	0	0.0
2017	10,805	5,779	5,026	947	8.8	263	4.6	684	13.6	23	2.4	23	8.7	0	0.0
2018 ⁽¹⁾	10,354	6,375	3,979	1,412	13.6	253	4.0	1,159	29.1	46	3.3	46	18.2	0	0.0
Annual Average															
1990 - 2017	22,408	17,957	4,452	1,009	4.5	712	4.0	297	6.7	60	6.0	44	6.2	16	5.4

⁽¹⁾ Annualized estimate YTD June 2018.

(1) Annualized estimate YTD June 2018.

Sources: U.S. Department of Commerce, Bureau of the Census, C-40 Construction Reports and Tracy Cross & Associates, Inc.

Attachment: 20. Market Study (4023 : Avere on Duane - PUD, SUP, ZMA, SV)



APARTMENT PROJECTS IN PLANNING⁽¹⁾: WEST SUBURBAN AREAS PROXIMATE TO GLEN ELLYN

Municipality/ Proposed Development Name	Location	Builder/Developer	Current Status ^(2,3)	Leasing	Number of Units
Elmhurst 100 North Addison	100 North Addison Avenue	Opus Group	Approved	2019	164
Glen Ellyn Crescent Apartments Apex 400	NW inter Crescent Blvd and Glenwood Avenue 400-418 N. Main Street	Springbank Capital Advisors GSP Development	CS CS	--- ---	150 107
Lombard Woodmoor Yorktown Apartments III Elan Yorktown Yorktown Center III	Finley Road and Oak Creek Drive 2201-11 Highland Avenue 50 Yorktown Ring Road Grace Street and Yorktown Ring Road	Donven Homes AIMCO Residential Greystar Development TBD	INF Approved UC Approved	--- --- 2019 2020	288 78 295 500
Oakbrook Terrace Lakeside Village of Oak Brook	Royce Road and Renaissance Blvd	Interforum Holdings	UC	2018	315
Villa Park Garden Station	401 N. Ardmore Avenue	Golden Spike Development	FP (On Hold)	---	230
Warrenville TBD Vanguard Cantera	Route 59 and Duke Parkway Diehl Road at Interstate 88	Atlantic Realty Partners Covington Realty	PP PP	--- ---	259 242
Westmont Quincy Station	Quincy Street and Cass Avenue	Holladay Properties	FP	---	94
Market Area Total⁽³⁾					2,722

⁽¹⁾ As of 8/2018.

⁽²⁾ Status key: Concept Stage (CS); Preliminary Plat Approval (PP); Final Plat Approval (FP); Site Improvements started (INF); Permits issued/under construction (UC).

⁽³⁾ Excludes developments with unit counts and product idioms yet to be determined.

Source: Tracy Cross & Associates, Inc.

Traffic Impact Study Proposed AVERE on Duane Development

Glen Ellyn, Illinois



Prepared For:



Prepared By:



March 25, 2019

Attachment: 21. Traffic Impact Study (4023 : Avere on Duane - PUD, SUP, ZMA, SV)

1. Introduction

This report summarizes the methodologies, results, and findings of a traffic impact study conducted by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) for the proposed AVERE on Duane development to be located in the southwest quadrant of the intersection of Duane Street with Prospect Avenue in Glen Ellyn, Illinois. As proposed, the site, which is currently occupied by an insurance agency, a pottery shop, Tem Environmental, Inc., and four single-family homes, will be redeveloped to provide an apartment building containing 48 units and 82 parking spaces of which 48 will be indoors. Access to the site will be provided via two full-movement access drives off Melrose Avenue.

The purpose of this study was to examine background traffic conditions, assess the impact that the proposed development will have on traffic conditions in the area, determine if any roadway or access improvements are necessary to accommodate traffic generated by the proposed development, and evaluate the adequacy of the proposed parking supply.

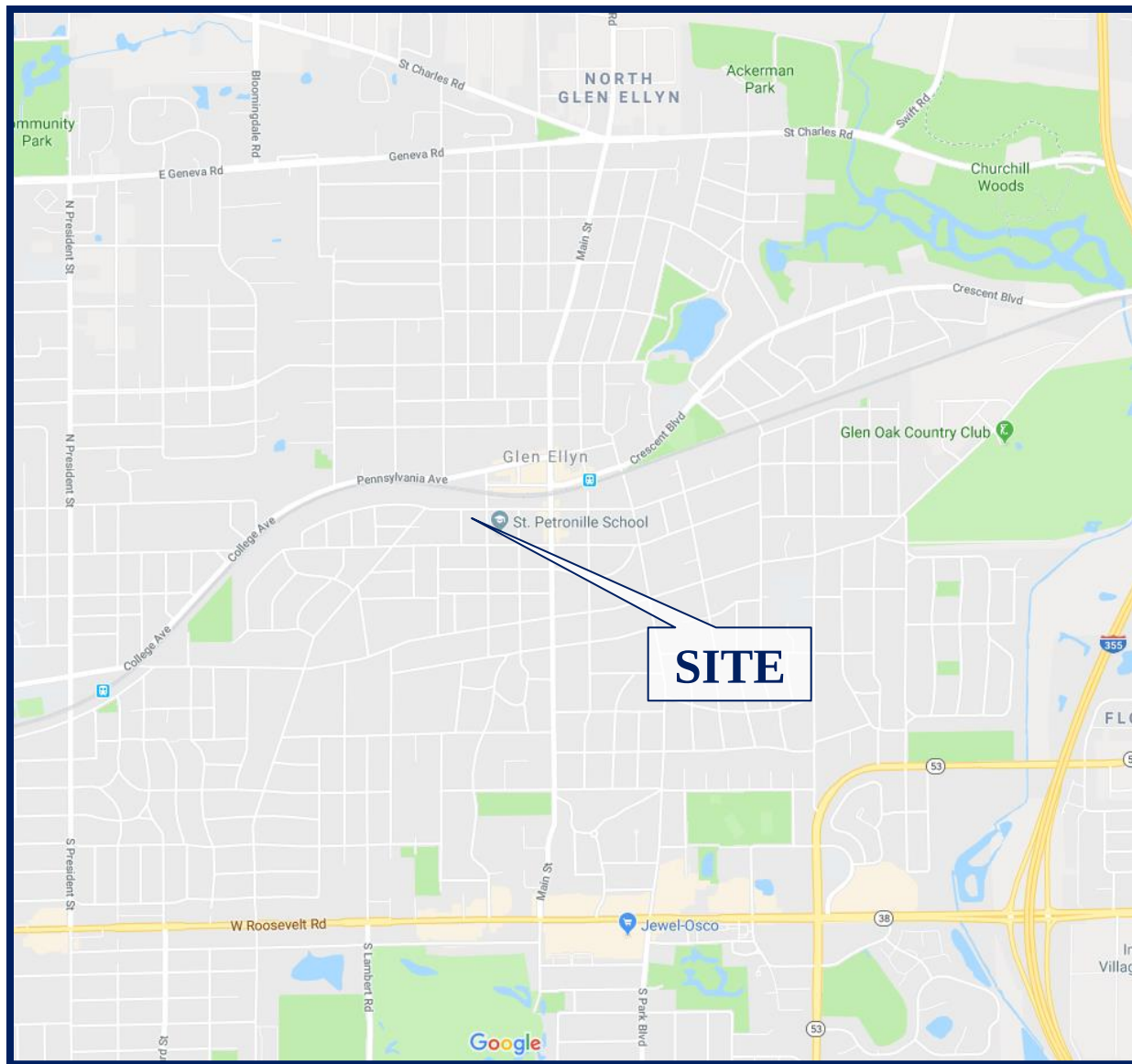
Figure 1 shows the location of the site in relation to the area roadway system. **Figure 2** shows an aerial view of the site.

The sections of this report present the following:

- Existing roadway conditions
- A description of the proposed development
- Directional distribution of the development traffic
- Vehicle trip generation for the development
- Future traffic conditions including access to the development
- Traffic analyses for the weekday morning, afternoon, and evening peak hours
- Recommendations with respect to adequacy of the site access and adjacent roadway system
- Evaluation of the adequacy of the proposed parking supply

Traffic capacity analyses were conducted for the weekday morning, weekday afternoon, and weekday evening peak hours for the following conditions:

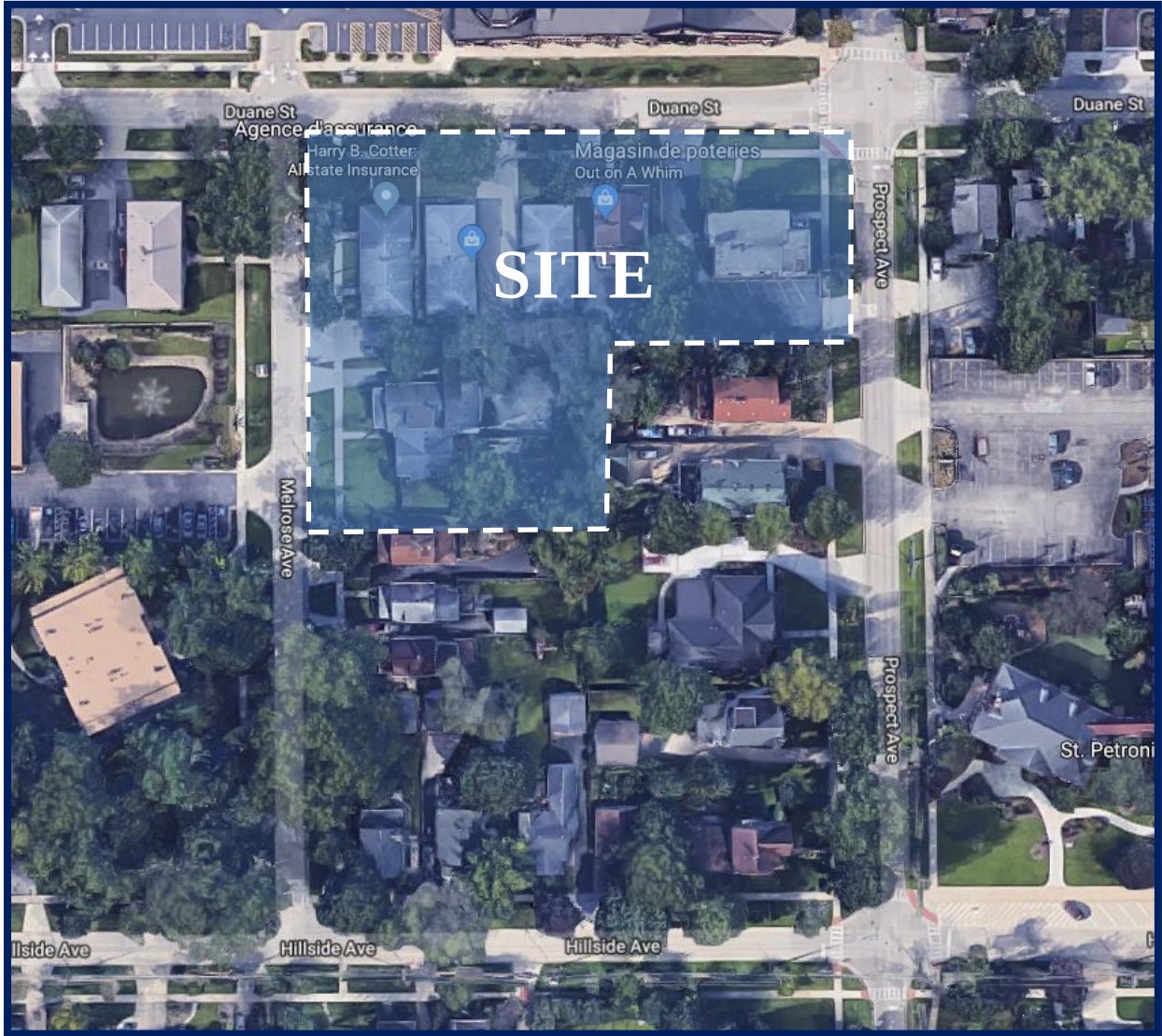
1. Existing Conditions - Analyzes the capacity of the existing roadway system using existing peak hour traffic volumes in the surrounding area.
2. Future Conditions – Analyzes the projected traffic volumes which include the existing traffic volumes increased by an ambient area growth factor (growth not attributable to any particular development), and the traffic estimated to be generated by the proposed subject development.



Site Location

Figure 1

Attachment: 21. Traffic Impact Study (4023 : Avere on Duane - PUD, SUP, ZMA, SV)



Aerial View of Site

Figure 2

Attachment: 21. Traffic Impact Study (4023 : Avere on Duane - PUD, SUP, ZMA, SV)

2. Existing Conditions

Existing transportation conditions in the vicinity of the site were documented based on field visits conducted by KLOA, Inc. in order to obtain a database for projecting future conditions. The following provides a description of the geographical location of the site, physical characteristics of the area roadway system including lane usage and traffic control devices, and existing peak hour traffic volumes.

Site Location

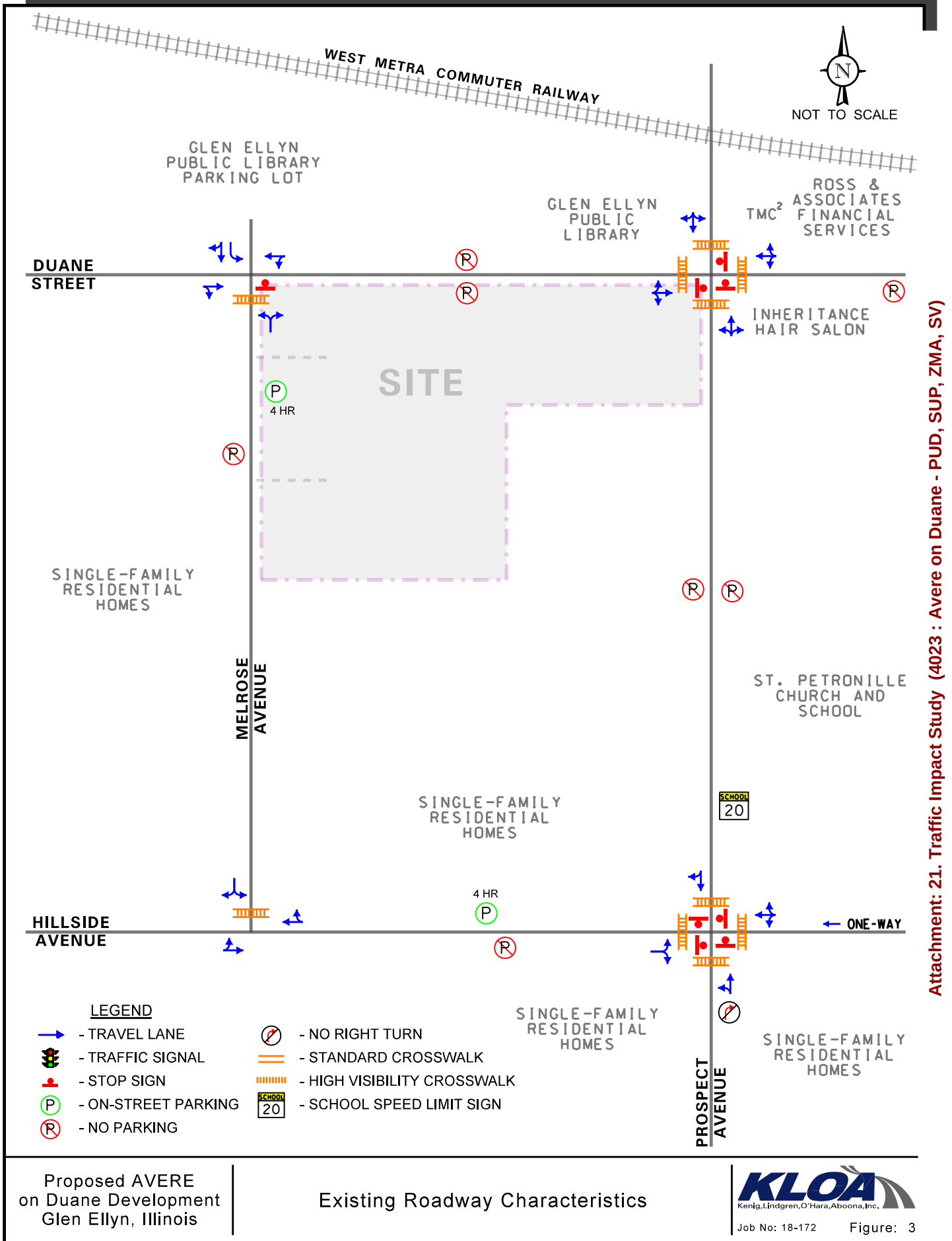
The site is located in the southwest quadrant of the intersection of Duane Street with Prospect Avenue in Glen Ellyn, Illinois. The site is currently occupied by an insurance agency, a pottery shop, Tem Environmental, Inc., and four single-family homes. Land uses in the vicinity of the site include the following: Glen Ellyn Public Library, TMC2, and Rose & Associates to the north, a residential area and private parking lot to the west, St. Petronille Catholic Church, School, and private parking lot to the east, and a residential area to the south. It should be noted that the Glen Ellyn Metra station is located approximately one half of a mile to the northeast of the site.

Existing Roadway System Characteristics

The characteristics of the existing roadways near the development are described below. **Figure 3** illustrates the existing roadway characteristics.

Duane Street is an east-west local street that provides one through lane in each direction and is classified as a community collector roadway by the Village of Glen Ellyn Comprehensive Plan. At its unsignalized intersection with Melrose Avenue, Duane Street provides a shared through/right-turn lane on the eastbound approach and a shared through/left-turn lane on the westbound approach. At its three-way stop-sign controlled intersection with Prospect Avenue, Duane Street provides a shared left-turn/through/right-turn lane under stop sign control with a high visibility crosswalk provided on both legs. On-street parking is not permitted on either side of the roadway west of Prospect Avenue. Duane Street is under the jurisdiction of the Village of Glen Ellyn and has a posted school zone speed limit of 20 miles per hour.

Melrose Avenue is a north-south roadway that provides one through lane in each direction and is classified as a local street by the Village of Glen Ellyn Comprehensive Plan. At its unsignalized intersection with Duane Street, Melrose Avenue provides a shared left-turn/right-turn lane under stop sign control with a high visibility crosswalk provided on the south leg. The north leg of the intersection is the outbound-only access drive serving the Glen Ellyn Public Library, which provides an exclusive left-turn lane and a shared through/right-turn lane. At its uncontrolled intersection with Hillside Avenue, Melrose Avenue provides a shared left-turn/right-turn lane and a high visibility crosswalk on the north leg. On-street parking is permitted on the east side of the roadway between Duane Street and Hillside Avenue and is restricted to four-hour customer parking. On-street parking is not permitted on the west side of the roadway. Melrose Avenue is under the jurisdiction of the Village of Glen Ellyn and has a posted limit of 25 miles per hour.



Attachment: 21. Traffic Impact Study (4023 : Avere on Duane - PUD, SUP, ZMA, SV)

Prospect Avenue is a north-south roadway that provides one through lane in each direction and is classified as a neighborhood collector street by the Village of Glen Ellyn Comprehensive Plan. At its three way stop-sign controlled intersection with Duane Street, Prospect Avenue provides a shared left-turn/through/right-turn lane and a high visibility crosswalk on both approaches. At its all way stop-sign controlled intersection with Hillside Avenue, Prospect Avenue provides a shared through/right-turn lane and a high visibility crosswalk on the southbound approach, a shared left-turn/through lane on the northbound approach, and a high visibility crosswalk on both approaches. On-street parking is not permitted on either side of the roadway. Prospect Avenue is under the jurisdiction of the Village of Glen Ellyn, carries an Annual Average Daily Traffic (AADT) volume of 3,950 vehicles (IDOT AADT 2016), and has a posted school zone speed limit of 20 miles per hour.

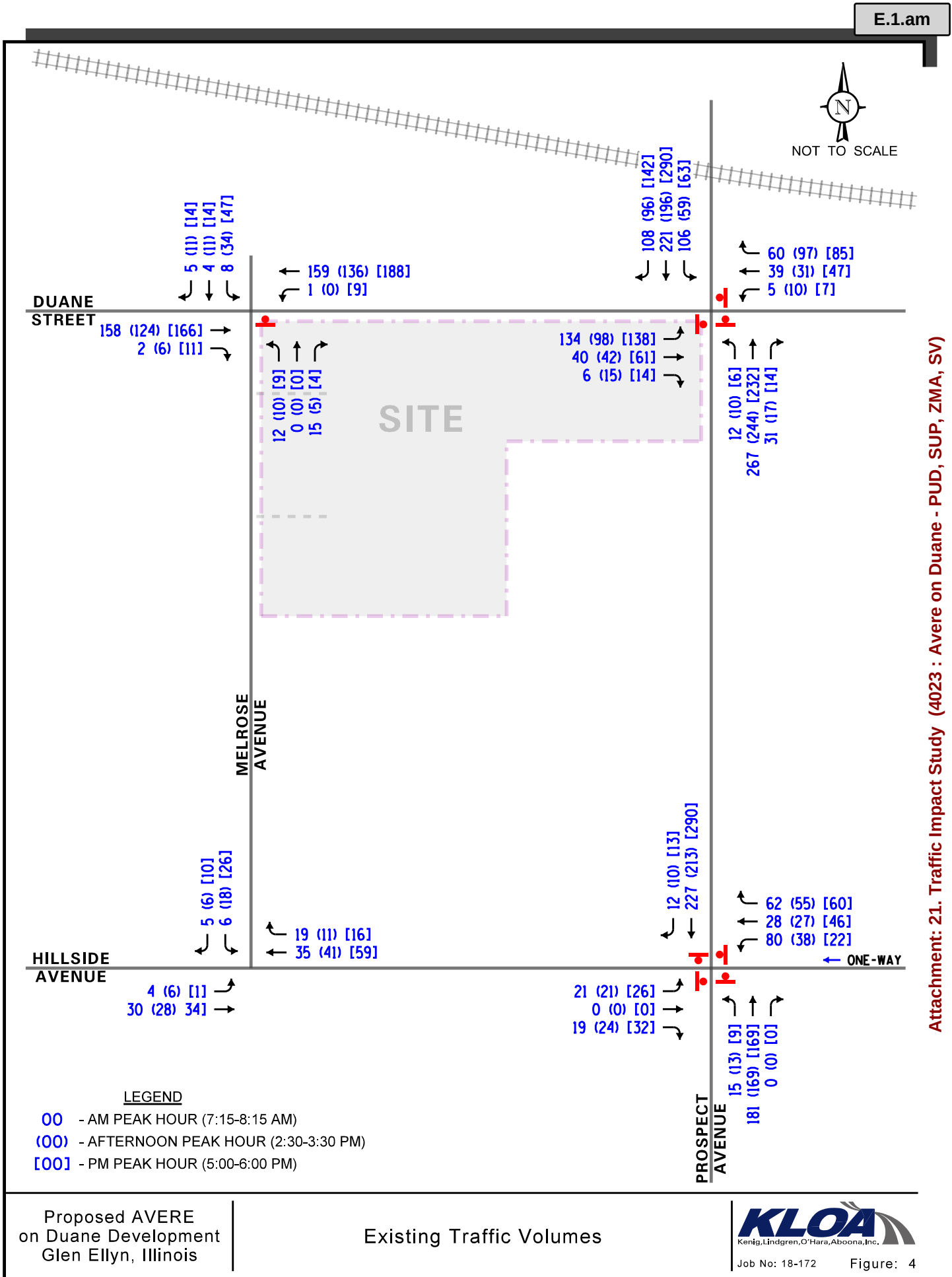
Hillside Avenue is an east-west roadway that is restricted to one-way westbound travel east of Prospect Avenue and is classified as a neighborhood collector street by the Village of Glen Ellyn Comprehensive Plan. At its all way stop-sign controlled intersection with Prospect Avenue, Hillside Avenue provides a shared left-turn/through/right-turn lane and a high visibility crosswalk on the westbound approach and a shared left-turn/right-turn lane and a high visibility crosswalk on the eastbound approach. At its unsignalized intersection with Melrose Avenue, Hillside Avenue provides a shared through/right-turn lane on the westbound approach and a shared left-turn/through lane on the eastbound approach. On-street parking is permitted but is restricted to four-hour parking on the north side of the roadway and is not permitted on the south side of the roadway. Hillside Avenue is under the jurisdiction of the Village of Glen Ellyn and has a posted speed limit of 25 miles per hour.

Existing Traffic Volumes

In order to determine current traffic conditions in the vicinity of the site, KLOA, Inc. conducted peak period traffic counts using Miovision Scout Video Collection Units on Tuesday, August 28, 2018 during the weekday morning (7:00 A.M. to 9:00 A.M.) and weekday afternoon (2:30 P.M. to 6:00 P.M.) peak periods at the following intersections:

- Duane Street with Melrose Avenue
- Prospect Avenue with Duane Street
- Hillside Avenue with Melrose Avenue
- Prospect Avenue with Hillside Avenue

It should be noted that the traffic counts started earlier in the afternoon to coincide with the dismissal time of St. Petronille School, which was in session when the traffic counts were conducted. The results of the traffic counts indicated that the weekday morning peak hour of traffic occurs from 7:15 A.M. to 8:15 A.M., the weekday afternoon peak hour of traffic occurs from 2:30 P.M. to 3:30 P.M., and the weekday evening peak hour of traffic occurs from 5:00 P.M. to 6:00 P.M. **Figure 4** illustrates the existing peak hour traffic volumes and **Figure 5** illustrates the existing pedestrian and bicycle peak hour traffic volumes. Copies of the traffic count summary sheets are included in the Appendix.

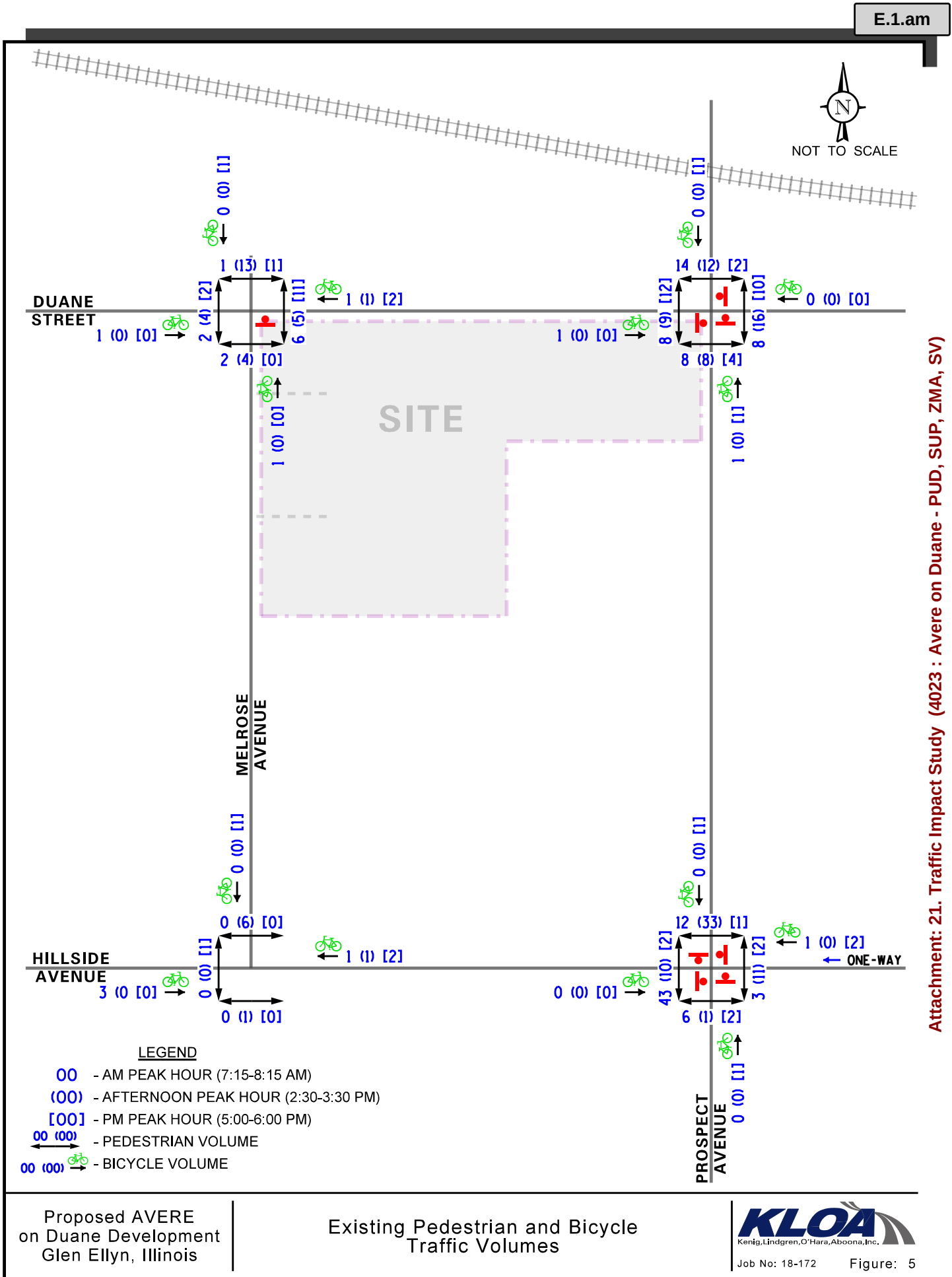


Attachment: 21. Traffic Impact Study (4023 : Avere on Duane - PUD, SUP, ZMA, SV)

Proposed AVERE
on Duane Development
Glen Ellyn, Illinois

Existing Traffic Volumes

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Job No: 18-172 Figure: 4



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Glen Ellyn, Illinois

Existing Pedestrian and Bicycle
Traffic Volumes

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Job No: 18-172 Figure: 5

St. Petronille School Operations

St. Petronille School is a private Catholic school that has an enrollment of approximately 500 students in kindergarten through eighth grade. The morning drop-off for St. Petronille School generally occurs between 7:45 A.M. and 8:15 A.M. and the afternoon pick-up generally occurs between 3:05 P.M. and 3:20 P.M. For safety purposes, school crossing guards help children from 8:00 A.M. to 8:10 A.M. and from 3:00 P.M. to 3:10 P.M. at the intersections of Prospect Avenue with Duane Street and Hillside Avenue.

The loading zone of grades four through eight occurs along the north side of Hillside Avenue between Melrose Avenue and Glenwood Avenue and loading for kindergarten through third grade occurs within the parking lot on the north side of the school building. The orientation of the loading zones results in all of the school traffic exiting the loading zone onto/toward Prospect Avenue.

Additionally, during the morning drop-off period, Glenwood Avenue is barricaded between Hillside Avenue and the parish office. The restriction of Hillside Avenue to one-way westbound movements combined with the barricade restriction on Glenwood Avenue results in all vehicles entering the loading area from the intersection of Main Street with Hillside Avenue or from northbound Glenwood Avenue at Hillside Avenue.

Furthermore, there is one bus that serves St. Petronille School and the loading zone for the bus is also located on the north side of Hillside Avenue to the west of the passenger vehicle loading zone. This bus also accesses the loading zone via Hillside Avenue. During the morning drop-off period, westbound queues on Hillside Avenue were observed to extend from the loading zone to Main Street with the majority of activity concluding by 8:15 A.M.

During afternoon pick-up, parents were observed to park within the church parking lot, on Hillside Avenue, and on Glenwood Avenue south of Hillside Avenue. The majority of pick-up activity concluded by 3:35 P.M.

Train Observations

Located approximately 200 feet north of Duane Street is the at-grade railroad crossing on Prospect Avenue with the Union Pacific – West Metra Commuter Railway that carries 25 inbound trips and 24 outbound trips on weekdays, resulting in a total of 49 commuter trains per day. This railroad also carries an average of 40 freight trains per day. Field observations conducted during the peak hours indicated that northbound queues on Prospect Avenue at the at-grade railroad crossing only extended beyond Duane Street two times during the weekday morning peak hour, three times during the afternoon peak hour, and four times during the evening peak hour, with queues clearing Duane Street within three minutes following the train event. However, the queues did not block the intersection of Duane Street with Prospect Avenue and generally did not extend to Hillside Avenue. As such, train events have a limited impact on the traffic.

Crash Analysis

KLOA, Inc. obtained crash data for the past most recent available five years (2012 to 2016) for the intersections of Main Street with Hillside Avenue, Main Street with Duane Street, Hillside Avenue with Glenwood Avenue and Duane Street with Glenwood Avenue. A review of the crash data¹ indicated the following:

- The intersection of Duane Street with Melrose Avenue experienced zero crashes in 2012, zero crashes in 2013, one crash in 2014, two crashes in 2015, and zero crashes in 2016.
- The intersection of Hillside Avenue with Melrose Avenue experienced only one crash between 2012 and 2016.
- The intersection of Prospect Avenue with Duane Street experienced only three crashes in 2012, five crashes in 2013, six crashes in 2014, three crashes in 2015, and two crashes in 2016.
- The intersection of Prospect Avenue with Hillside Avenue experienced zero crashes in 2012, two crashes in 2013, zero crashes in 2014, one crash in 2015, and zero crashes in 2016.
- No fatalities were reported at any of the study area intersections.

¹ IDOT DISCLAIMER: The motor vehicle crash data referenced herein was provided by the Illinois Department of Transportation. Any conclusions drawn from analysis of the aforementioned data are the sole responsibility of the data recipient(s). Additionally, for coding years 2015 to present, the Bureau of Data Collection uses the exact latitude/longitude supplied by the investigating law enforcement agency to locate crashes. Therefore, location data may vary in previous years since data prior to 2015 was physically located by bureau personnel.

3. Traffic Characteristics of the Proposed Development

In order to properly evaluate future traffic conditions in the surrounding area, it was necessary to determine the traffic characteristics of the proposed development, including the directional distribution and volumes of traffic that it will generate.

Proposed Site and Development Plan

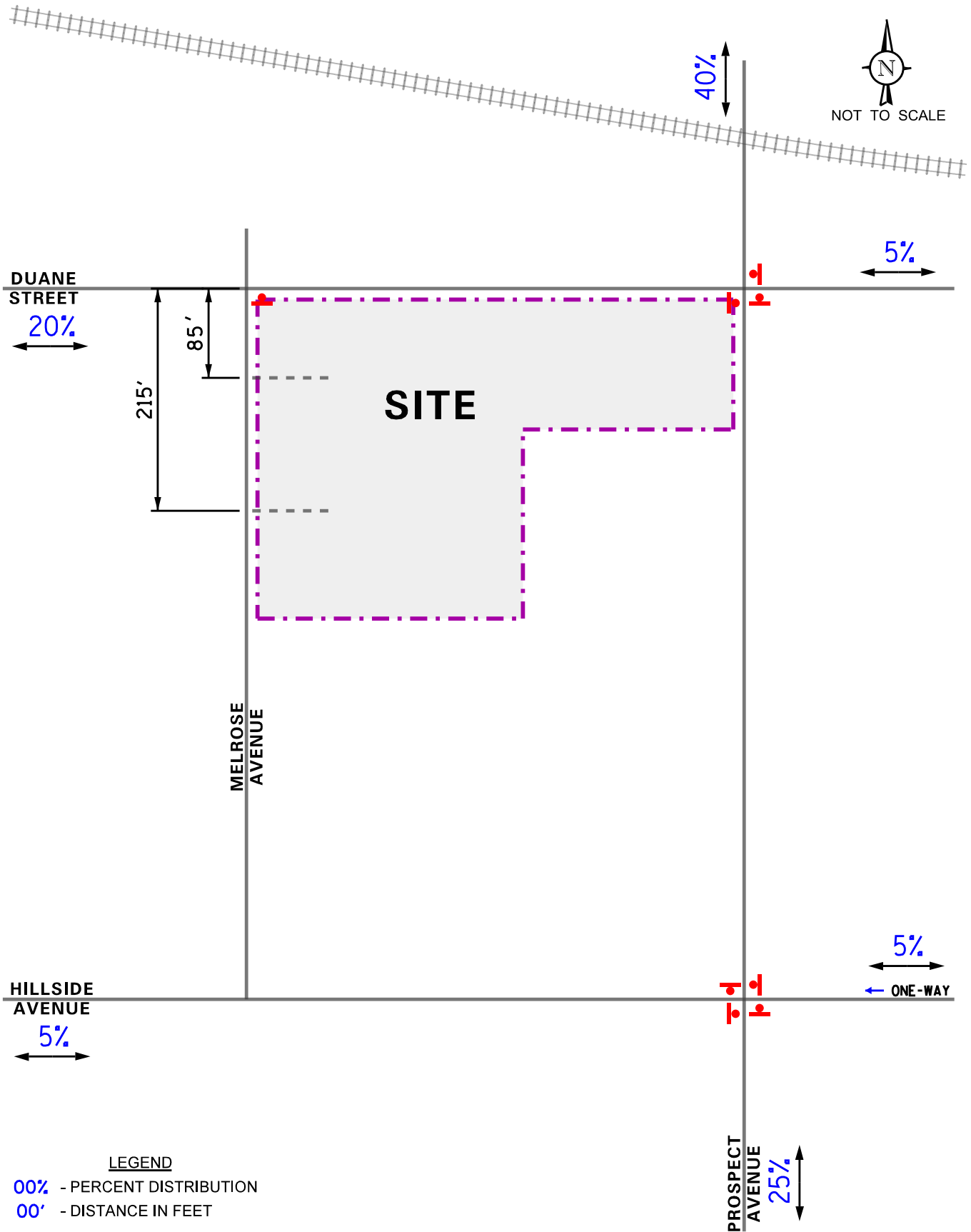
As proposed, the plans call for the redeveloping the site with one apartment building containing 48 apartment units and 82 parking spaces of which 48 spaces will be indoors. Access to the site will be provided via the following:

- A full-movement access drive off Melrose Street located approximately 85 feet south of Duane Street. This access drive will provide one inbound lane and one outbound lane and outbound movements should be under stop sign control. This access drive will serve the proposed parking garage containing 48 parking spaces.
- A full-movement access drive off Melrose Street located approximately 215 feet south of Duane Street. This access drive will provide one inbound lane and one outbound lane and outbound movements should be under stop sign control. This access drive will serve the proposed parking lot containing 34 spaces.

A copy of the preliminary site plan depicting the proposed development and access is included in the Appendix.

Directional Distribution

The directions from which residents of the apartment units will approach and depart the site were estimated based on existing travel patterns, as determined from the traffic counts. **Figure 6** illustrates the directional distribution of the development-generated traffic.



Attachment: 21. Traffic Impact Study (4023 : Avere on Duane - PUD, SUP, ZMA, SV)

Proposed AVERE
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Glen Ellyn, Illinois

Estimated Directional Distribution

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Estimated Site Traffic Generation

The volume of traffic generated by the proposed apartment development was estimated using data published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 10th Edition. The “Multifamily Housing (Mid Rise)” (Land-Use Code 221) was used for the apartment units.

As previously indicated, the proposed development is located within one-half of a mile of the Glen Ellyn station for the Union Pacific – West Metra Commuter Railway. As such, many of the residents will utilize public transportation to get to work. Based on census data provided for households located within one-half of a mile of the Glen Ellyn Metra station, approximately 25 percent of residents utilize public transportation, bicycle, or walking to travel to/from work. However, in order to provide a conservative analysis, no reduction has been applied to account for public transportation.

Table 1 tabulates the vehicle trips anticipated for this development.

Table 1

ESTIMATED SITE-GENERATED TRAFFIC VOLUMES¹

ITE Land Use Code	Type/Size	Weekday Morning Peak Hour			Weekday Afternoon Peak Hour			Weekday Evening Peak Hour			Daily Two- Way Trips
		In	Out	Total	In	Out	Total	In	Out	Total	
221	Apartments (48 Units)	4	13	17	9	5	14	13	9	22	260
1 – Trip generation estimates do not take into account the 25 percent reduction for public transportation.											

Trip Generation Comparison

The amount of traffic that will be generated by the proposed development was compared with the trips estimated to be generated by the existing uses on site. The site currently contains six structures, three of which are occupied by commercial/retail uses, one by a multi-tenant office building, one by a residential pottery studio, and one by a family shelter service. **Table 2** shows the estimated vehicle trips utilizing ITE trip rates that will be generated by the proposed development as compared to the approximately 3,822 square feet of office space, 7,286 square feet of combined commercial/retail space, and the family shelter that occupy the site.

As can be seen from Table 2, the proposed apartment development is projected to generate a comparable amount of traffic during the morning peak hour, approximately 64 percent fewer trips during the afternoon peak hour, and approximately 42 percent fewer trips during the evening peak hour. As such, the proposed development will generally have a significantly lower impact on area roadways and intersections.

Table 2
TRIP GENERATION COMPARISON

ITE Land Use Code	Type/Size	Weekday Morning Peak Hour			Weekday Afternoon Peak Hour			Weekday Evening Peak Hour			Daily Two- Way Trips
		In	Out	Total	In	Out	Total	In	Out	Total	
Existing Uses On Site											
712	Small Office Building (3,822 s.f.)	6	1	7	3	7	10	3	6	9	62
820	Retail (7,286 s.f.)	4	3	7	13	15	28	13	15	28	276
210	Single Detached Housing (1 unit)	<u>0</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>0</u>	<u>1</u>	<u>1</u>	<u>0</u>	<u>1</u>	<u>10</u>
Total		10	5	15	17	22	39	17	21	38	348
221	Proposed Development	<u>4</u>	<u>13</u>	<u>17</u>	<u>9</u>	<u>5</u>	<u>14</u>	<u>13</u>	<u>9</u>	<u>22</u>	<u>260</u>
Difference		-6	+8	+2	-8	-17	-25	-4	-12	-16	-188

4. Projected Traffic Conditions

The total projected traffic volumes include the existing traffic volumes, increase in background traffic due to growth, and the traffic estimated to be generated by the proposed subject development.

Development Traffic Assignment

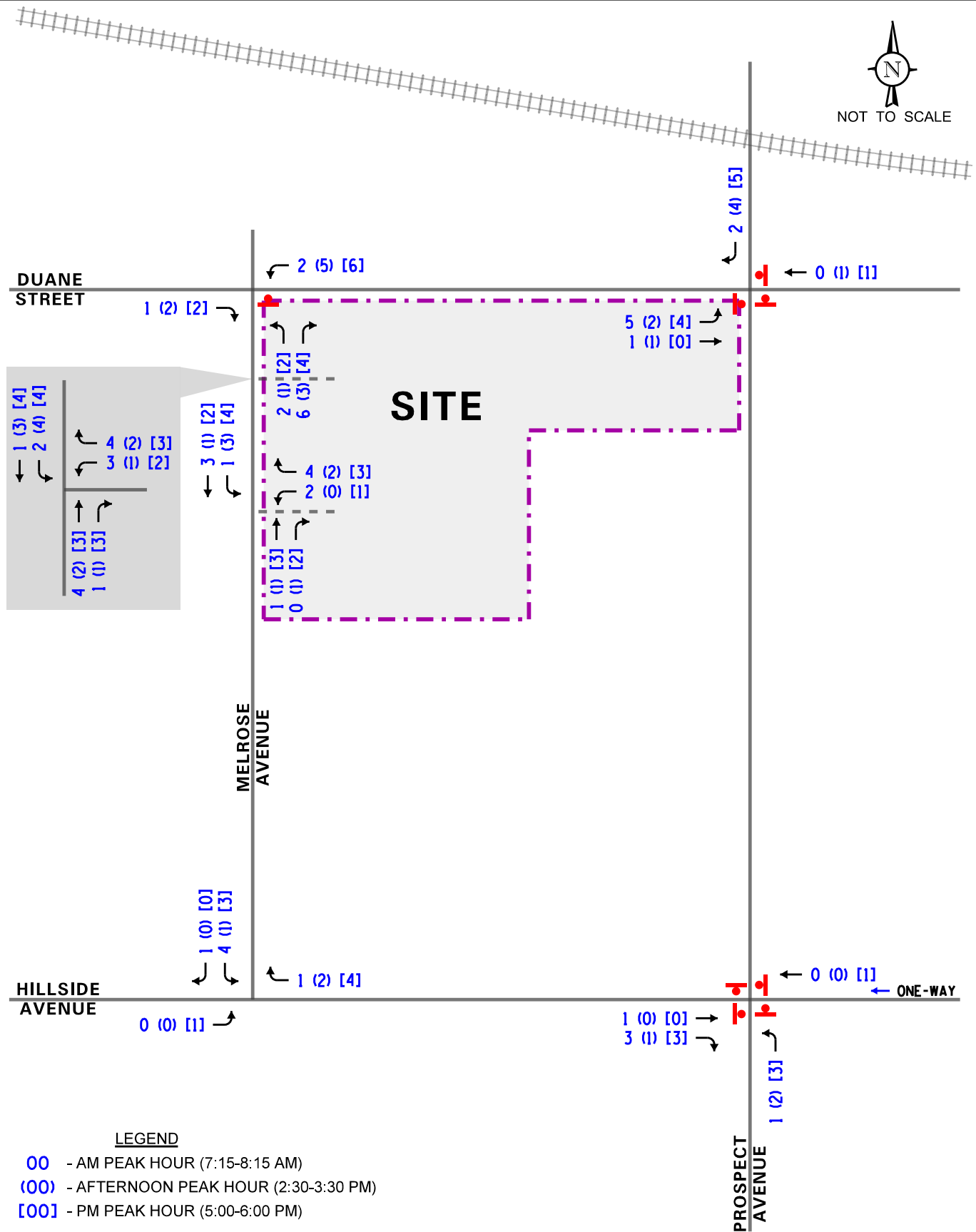
The estimated weekday morning and evening peak hour traffic volumes that will be generated by the proposed development (apartments) were assigned to the roadway system in accordance with the previously described directional distribution (Figure 6). **Figure 7** illustrates the site traffic assignment.

Background Traffic Conditions

The existing traffic volumes (Figure 4) were increased by a regional growth factor to account for the increase in existing traffic related to regional growth in the area (i.e., not attributable to any particular planned development). Based on ADT projections provided by the Chicago Metropolitan Agency for Planning (CMAP) in a letter dated October 5, 2018, an increase of approximately 0.79 percent per year for six years (buildout year plus five years) was applied to project Year 2024 conditions. It should be noted that this background growth was applied to all existing traffic volumes. A copy of the CMAP 2040 projections letter is included in the Appendix. Furthermore, the background traffic volumes also included the traffic that will be generated by APEX 400 development and the proposed conversion of Hillside Avenue to two-way traffic from Glenwood Avenue to Main Street. The Year 2024 background traffic volumes are illustrated in **Figure 8**.

Total Projected Traffic Volumes

The development-generated traffic (Figure 7) was added to the Year 2024 background traffic volumes (Figure 8) to determine the Year 2024 total projected traffic volumes, as illustrated in **Figure 9**.

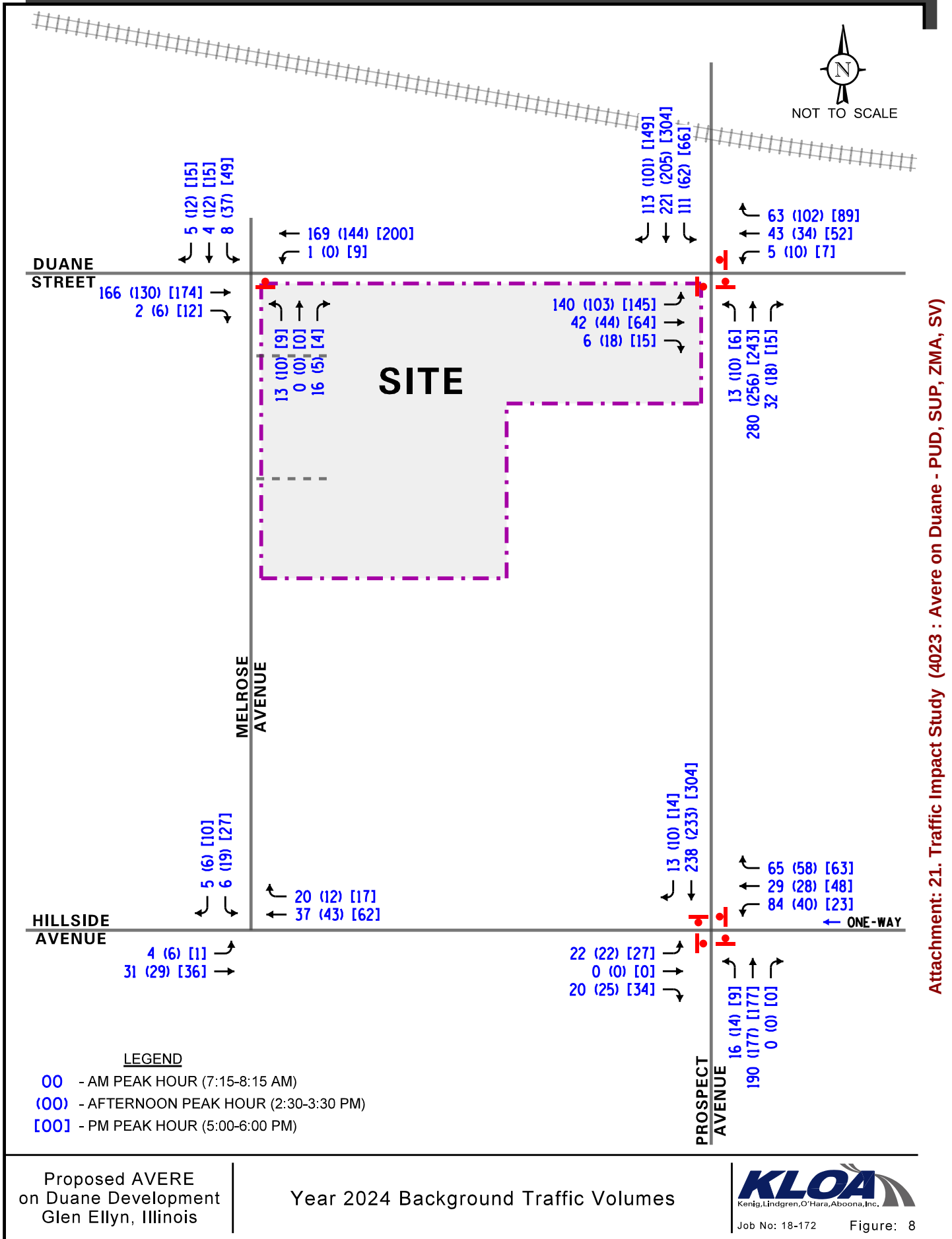


Attachment: 21. Traffic Impact Study (4023 : Avere on Duane - PUD, SUP, ZMA, SV)

Proposed AVERE
on Duane Development
Glen Ellyn, Illinois

Estimated Site-Generated
Traffic Volumes

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Job No: 18-172 Figure: 7

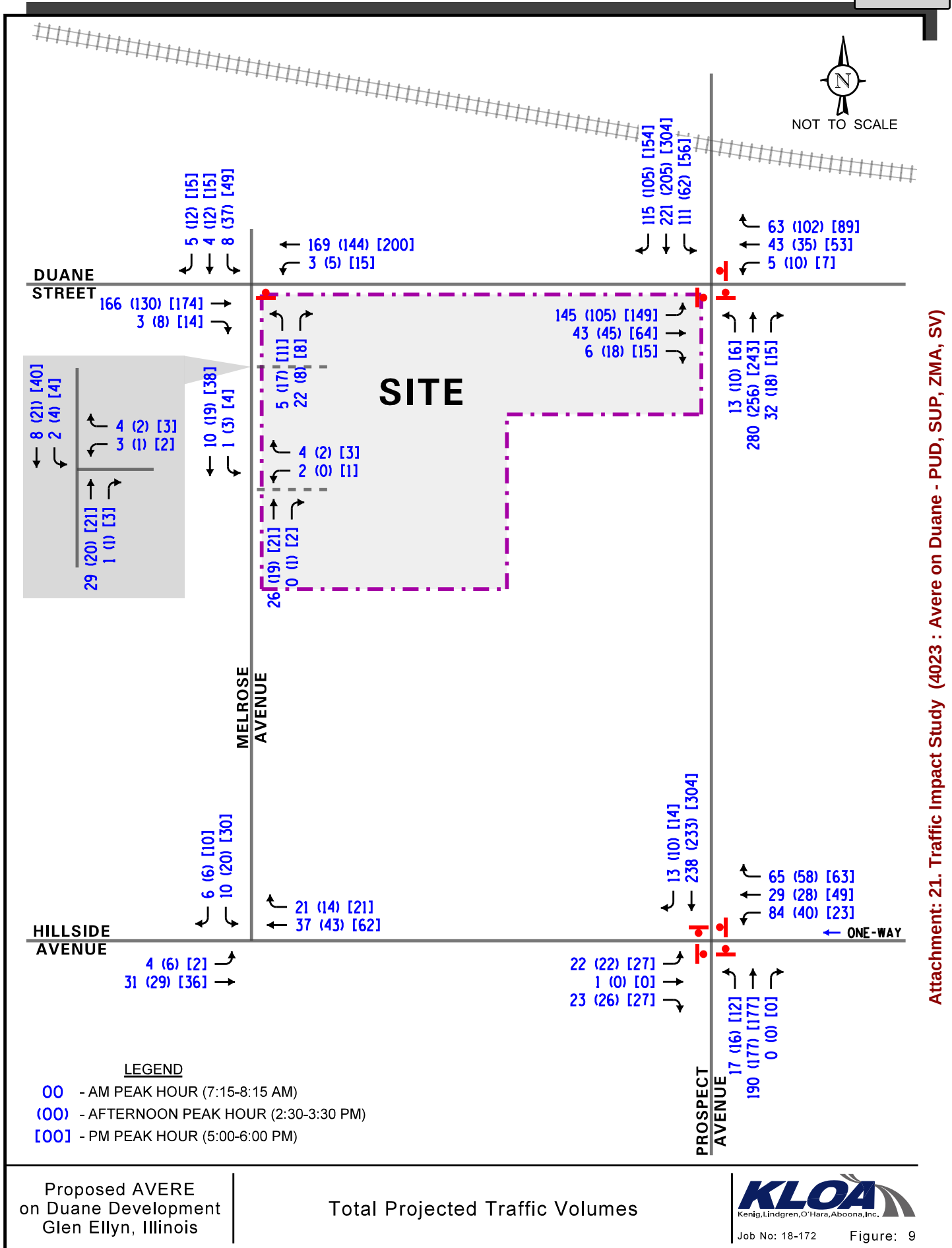


Attachment: 21. Traffic Impact Study (4023 : Avere on Duane - PUD, SUP, ZMA, SV)

Proposed AVERE
on Duane Development
Glen Ellyn, Illinois

Year 2024 Background Traffic Volumes

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Job No: 18-172 Figure: 8



5. Traffic Analysis and Recommendations

The following provides an evaluation conducted for the weekday morning, weekday afternoon, and weekday evening peak hours. The analysis includes conducting capacity analyses to determine how well the roadway system and access drives are projected to operate and whether any roadway improvements or modifications are required.

Traffic Analyses

Roadway and adjacent or nearby intersection analyses were performed for the weekday morning, weekday afternoon, and weekday evening peak hours for the existing (Year 2018) and future projected (Year 2024) traffic volumes.

The traffic analyses were performed using the methodologies outlined in the Transportation Research Board's *Highway Capacity Manual (HCM)*, 2010 and analyzed using the Synchro/SimTraffic 10 computer software. Synchro/SimTraffic 10 was utilized to represent the operations of the intersections more accurately due to their proximity to one another.

The analyses for the unsignalized intersections determine the average control delay to vehicles at an intersection. Control delay is the elapsed time from a vehicle joining the queue at a stop sign (includes the time required to decelerate to a stop) until its departure from the stop sign and resumption of free flow speed. The methodology analyzes each intersection approach controlled by a stop sign and considers traffic volumes on all approaches and lane characteristics.

The ability of an intersection to accommodate traffic flow is expressed in terms of level of service, which is assigned a letter from A to F based on the average control delay experienced by vehicles passing through the intersection. The *Highway Capacity Manual* definitions for levels of service and the corresponding control delay for signalized intersections and unsignalized intersections are included in the Appendix of this report.

Summaries of the traffic analysis results showing the level of service and overall intersection delay (measured in seconds) for the existing and Year 2024 total projected conditions are presented in **Tables 3** and **4**, respectively. A discussion of the intersections follows. Summary sheets for the capacity analyses are included in the Appendix.

Table 3
CAPACITY ANALYSIS RESULTS – YEAR 2018 EXISTING CONDITIONS

Intersection	Weekday Morning Peak Hour		Weekday Afternoon Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay
Melrose Avenue with Duane Street						
• Northbound Approach	B	10.4	B	10.5	B	11.2
• Southbound Approach	B	10.9	B	10.7	B	11.7
• Westbound Left Turns	A	7.6	A	0.1	A	7.6
Prospect Avenue with Duane Street						
• ICU ¹	C	67.5%	C	67.7%	D	75.0%
Melrose Avenue with Hillside Avenue²						
• Southbound Approach	A	8.9	A	9.2	A	9.4
• Eastbound Left Turns	A	7.5	A	7.5	A	7.4
Prospect Avenue with Hillside Avenue						
• Overall	B	10.8	A	9.8	B	10.2
• Eastbound Approach	A	8.9	A	8.6	A	8.7
• Westbound Approach	B	10.6	A	9.3	A	9.4
• Northbound Approach	B	10.6	A	10.0	A	9.6
• Southbound Approach	B	11.3	B	10.2	B	11.2
LOS = Level of Service Delay is measured in seconds. 1 – The operation of this intersection is based on a critical volume to saturation flow (v/s) evaluation, also known as the Intersection Capacity Utilization (ICU) method. 2 – For purpose of the analysis, Melrose Avenue southbound approach was assumed to be under stop sign control.						

Table 4
CAPACITY ANALYSIS RESULTS - YEAR 2024 PROJECTED TRAFFIC CONDITIONS

Intersection	Weekday Morning Peak Hour		Weekday Afternoon Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay
Melrose Avenue with Duane Street						
• Northbound Approach	B	10.6	B	10.9	B	11.7
• Southbound Approach	B	11.3	B	11.0	B	12.7
• Westbound Left Turns	A	7.6	A	7.5	A	7.7
Prospect Avenue with Duane Street						
• ICU ¹	C	69.8%	C	70.5%	D	77.6%
Melrose Avenue with Hillside Avenue²						
• Southbound Approach	A	9.0	A	9.3	A	9.4
• Eastbound Left Turns	A	7.6	A	7.5	A	7.6
Prospect Avenue with Hillside Avenue						
• Overall	B	11.3	B	10.2	B	11.9
• Eastbound Approach	A	9.2	A	8.8	B	10.8
• Westbound Approach	B	11.0	A	9.6	A	9.4
• Northbound Approach	B	11.2	B	10.3	B	10.3
• Southbound Approach	B	12.0	B	10.7	B	13.8
Melrose Avenue with North Access Drive						
• Westbound Left Turns	A	8.6	A	8.6	A	8.6
• Southbound Left Turns	A	7.3	A	7.3	A	7.3
Melrose Avenue with South Access Drive						
• Westbound Left Turns	A	8.6	A	8.4	A	8.6
• Southbound Left Turns	A	7.3	A	7.3	A	7.3
LOS = Level of Service Delay is measured in seconds. 1 – The operation of this intersection is based on a critical volume to saturation flow (v/s) evaluation, also known as the Intersection Capacity Utilization (ICU) method. 2 – For purpose of the analysis, Melrose Avenue southbound approach was assumed to be under stop sign control.						

Discussion and Recommendations

The following summarizes how the intersections are projected to operate and identifies any roadway and traffic control improvements necessary to accommodate the development traffic.

Melrose Avenue with Duane Street

It should be noted that since the north leg of the intersection is exit-only and is not under traffic control, it was assumed for analysis purposes that the southbound approach would be under stop sign control. Based on that, the results of the capacity analysis indicate that the westbound and southbound approaches of this intersection currently operate at Level of Service (LOS) B during the weekday morning, weekday afternoon, and weekday evening peak hours. Under Year 2024 conditions, the two approaches are projected to continue operating at LOS B during the peak hours with increases in delay of approximately one second or less. The 95th percentile queues for the northbound approach will be approximately one car length which will not extend to the proposed location of the access drive for the garage. As such, this intersection has sufficient reserve capacity to accommodate the traffic projected to be generated by the proposed development and no roadway or traffic control improvements are required.

Prospect Avenue with Duane Street

Because of the traffic control configuration of this intersection where the southbound traffic is free flow and the other three approaches are under stop sign control, the intersection could not be analyzed using HCM procedures. This intersection's traffic control is designed to allow southbound movements to operate under free flow conditions in order to keep southbound queues from extending onto the train tracks. Given this traffic control configuration and the limitations of the HCM procedures, the intersection was analyzed using the intersection capacity utilization (ICU) level of service. The ICU indicates how much reserve capacity is available or how much an intersection is over capacity.

Based on the ICU analysis, the intersection currently utilizes approximately 67 to 75 percent of the capacity of the intersection. Under future conditions it is projected that the intersection will utilize approximately 70 to 78 percent of the capacity of the intersection. As a result, the intersection will continue to operate efficiently and with minimal delays. As previously indicated and based on field observations, this intersection experiences queueing during events when train gates are down. While the proposed development will contribute traffic to the intersection, this additional traffic will not be significant and will not exceed 4.0 percent. As such, the proposed development traffic will have a limited impact on the operations of this intersection and no roadway or traffic control improvements will be necessary.

Hillside Avenue with Melrose Avenue

It should be noted that since the intersection is not under traffic control, it was assumed for analysis purposes that the southbound approach would be under stop sign control. Based on that, the results of the capacity analysis indicate that all the approaches of this intersection currently operate at LOS A during the weekday morning, weekday afternoon, and weekday evening peak hours. Under Year 2024 conditions, all the approaches are projected to continue operating at LOS A during the peak hours with increases in delay of approximately one second or less.

Prospect Avenue with Hillside Avenue

The results of the capacity analysis indicate that overall the intersection operates at LOS B or better during the weekday morning, weekday afternoon, and weekday evening peak hours. Under Year 2024 conditions, overall the intersection is projected to operate at LOS B during the weekday peak hours with increases in delay of approximately two seconds or less. Additionally, all the approaches of this intersection will operate at LOS B or better during the peak hours with increases in delay of approximately three seconds or less and 95th percentile queues of two to three vehicles. As such, this intersection has sufficient reserve capacity to accommodate the traffic projected to be generated by the proposed development and no roadway improvements or signal modifications will be required.

Melrose Avenue with Proposed Access Drives

The results of the capacity analysis indicate that the westbound left-turn movements from the access drives are projected to operate at LOS A during the peak hours. Furthermore, southbound left-turning movements from Duane Street onto the access drives are projected to operate at LOS A during the peak hours with 95th percentile queues of one to two vehicles. As such, the proposed access drives off Melrose Street will be adequate in accommodating the traffic projected to be generated by the proposed development and no roadway improvements will be required.

Residential Parking Evaluation

As proposed, the apartment development will provide a total of 82 parking spaces, at a ratio of 1.71 spaces per unit, and will provide 88 bedrooms, at a ratio of 0.93 spaces per bedroom. Based on a review of survey data published by the Institute of Transportation Engineers (ITE) in the *Parking Generation Manual*, 5th Edition for Land-Use Code 221 (Mid-Rise Apartments), the following was determined:

- The average parking supply ratio at similar sites was 1.4 spaces per unit.
- The 85th percentile peak parking demand ratio is 1.47 spaces per dwelling unit.
- The 85th percentile peak parking demand ratio for sites within one-half mile of a rail transit station is 1.27 spaces per dwelling unit.
- The 85th percentile peak parking demand ratio is 0.87 spaces per bedroom.
- The 85th percentile peak parking demand ratio for sites within one-half mile of a rail transit station is 0.86 spaces per bedroom.

As can be seen, the proposed parking supply at ratios of 1.71 spaces per unit and 0.93 spaces per bedroom exceed ITE's requirements.

Furthermore, the proposed parking supply is consistent with other apartment developments (built or planned) in the Chicago area which provide an average parking at a ratio of 1.27 spaces per unit. The location, number of units, and number of parking spaces provided for these developments are summarized in **Table A** in the Appendix.

Lastly, for comparison purposes, KLOA, Inc. also examined US Census data compiled by the Center for Transit-Oriented Development. Based on the Census data, the average number of vehicles available per renter-occupied household within one-quarter mile from the Glen Ellyn Metra station is 0.95 vehicles. Given that the proposed apartment building is located within 1,000 feet of the Glen Ellyn Metra station, it is anticipated that the apartment building will have the same characteristics as other apartment developments within the one-half mile radius.

6. Conclusion

Based on the preceding analyses and recommendations, the following conclusions have been made:

- The traffic that will be generated by the proposed development will be low and will be reduced due to its proximity to public transportation.
- The traffic that will be generated by the proposed development can be accommodated by the area roadway system.
- Providing access to the proposed AVERE on Duane Development off Melrose Avenue will be adequate in accommodating the traffic projected to be generated by the proposed development.
- The proposed apartment development will provide a sufficient number of parking spaces to accommodate its projected parking demand.

Appendix

Traffic Count Summary Sheets
Site Plan
CMAP 2040 Projections Letter
Level of Service Criteria
Capacity Analysis Summary Sheets

Traffic Count Summary Sheets



Kenig, Lindgren, O'Hara, Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Duane Street with Melrose Avenue
Site Code:
Start Date: 08/28/2018
Page No: 1

Turning Movement Data

Start Time	Duane Street Eastbound					Duane Street Westbound					Melrose Avenue Northbound					Library Outbound Access Southbound					Int. Total				
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total							
7:00 AM	0	0	38	0	2	38	0	0	29	0	1	29	0	6	0	2	1	8	0	3	0	1	2	4	79
7:15 AM	0	0	43	0	0	43	0	0	39	0	0	39	0	2	0	3	2	5	0	1	0	1	1	2	89
7:30 AM	0	0	39	0	1	39	0	0	60	0	0	60	0	6	0	1	2	7	0	2	0	0	1	2	108
7:45 AM	0	0	44	1	1	45	0	1	29	0	1	30	0	2	1	1	1	4	0	3	2	2	0	7	86
Hourly Total	0	0	164	1	4	165	0	1	157	0	2	158	0	16	1	7	6	24	0	9	2	4	4	15	362
8:00 AM	0	0	33	1	0	34	0	0	32	0	0	32	0	2	0	10	1	12	0	2	2	2	0	6	84
8:15 AM	0	0	27	0	0	27	0	0	18	0	0	18	0	0	0	0	0	0	0	0	0	0	0	0	45
8:30 AM	0	0	26	0	0	26	0	0	21	0	0	21	0	1	0	1	0	2	0	4	1	3	0	8	57
8:45 AM	0	0	34	1	0	35	0	1	24	0	0	25	0	1	0	0	0	1	0	3	1	1	0	5	66
Hourly Total	0	0	120	2	0	122	0	1	95	0	0	96	0	4	0	11	1	15	0	9	4	6	0	19	252
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2:30 PM	0	0	39	5	0	44	0	0	29	0	0	29	0	2	0	0	0	2	0	9	4	3	0	16	91
2:45 PM	0	0	28	1	2	29	0	0	35	0	1	35	0	2	0	1	0	3	0	8	1	2	9	11	78
Hourly Total	0	0	67	6	2	73	0	0	64	0	1	64	0	4	0	1	0	5	0	17	5	5	9	27	169
3:00 PM	0	1	31	0	1	32	0	0	41	0	4	41	0	5	0	1	2	6	0	9	5	3	1	17	96
3:15 PM	0	0	26	0	1	26	0	0	31	0	0	31	0	1	0	3	2	4	0	8	1	3	3	12	73
3:30 PM	0	0	26	0	2	26	0	0	40	0	1	40	0	3	0	0	1	3	0	11	5	2	0	18	87
3:45 PM	0	0	34	0	0	34	0	0	40	0	0	40	0	2	0	0	0	2	0	11	7	0	0	18	94
Hourly Total	0	1	117	0	4	118	0	0	152	0	5	152	0	11	0	4	5	15	0	39	18	8	4	65	350
4:00 PM	0	0	28	0	0	28	0	3	44	0	0	47	0	3	0	5	3	8	0	12	3	2	1	17	100
4:15 PM	0	0	23	0	0	23	0	2	38	0	0	40	0	2	0	0	1	2	0	6	4	4	0	14	79
4:30 PM	0	0	32	0	0	32	1	1	39	0	0	41	0	1	0	0	0	1	0	10	6	2	1	18	92
4:45 PM	0	0	33	0	0	33	0	3	49	0	0	52	0	3	0	1	0	4	0	8	4	3	0	15	104
Hourly Total	0	0	116	0	0	116	1	9	170	0	0	180	0	9	0	6	4	15	0	36	17	11	2	64	375
5:00 PM	0	0	46	1	0	47	0	1	52	0	1	53	0	1	0	0	3	1	0	13	2	4	1	19	120
5:15 PM	0	0	28	3	0	31	0	1	39	0	0	40	0	5	0	1	3	6	0	17	2	3	1	22	99
5:30 PM	0	0	43	0	0	43	0	3	57	0	0	60	0	2	0	0	2	2	0	10	4	4	0	18	123
5:45 PM	0	0	49	7	0	56	0	4	42	0	0	46	0	1	0	3	3	4	0	7	7	3	0	17	123
Hourly Total	0	0	166	11	0	177	0	9	190	0	1	199	0	9	0	4	11	13	0	47	15	14	2	76	465
Grand Total	0	1	750	20	10	771	1	20	828	0	9	849	0	53	1	33	27	87	0	157	61	48	21	266	1973
Approach %	0.0	0.1	97.3	2.6	-	-	0.1	2.4	97.5	0.0	-	-	0.0	60.9	1.1	37.9	-	-	0.0	59.0	22.9	18.0	-	-	-
Total %	0.0	0.1	38.0	1.0	-	39.1	0.1	1.0	42.0	0.0	-	43.0	0.0	2.7	0.1	1.7	-	4.4	0.0	8.0	3.1	2.4	-	13.5	-
Lights	0	1	735	20	-	756	1	20	817	0	-	838	0	52	0	33	-	85	0	155	60	47	-	262	1941
% Lights	-	100.0	98.0	100.0	-	98.1	100.0	100.0	98.7	-	-	98.7	-	98.1	0.0	100.0	-	97.7	-	98.7	98.4	97.9	-	98.5	98.4
Buses	0	0	6	0	-	6	0	0	1	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	7
% Buses	-	0.0	0.8	0.0	-	0.8	0.0	0.0	0.1	-	-	0.1	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.4
Single-Unit Trucks	0	0	6	0	-	6	0	0	3	0	-	3	0	1	0	0	-	1	0	2	0	1	-	3	13

% Single-Unit Trucks	-	0.0	0.8	0.0	-	0.8	0.0	0.0	0.4	-	1.9	0.0	0.0	-	1.1	-	1.3	0.0	2.1	-	1.1	0.7
Articulated Trucks	0	0	1	0	-	1	0	0	0	-	0	0	0	-	0	0	0	0	0	-	0	1
% Articulated Trucks	-	0.0	0.1	0.0	-	0.1	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.1
Bicycles on Road	0	0	2	0	-	2	0	0	7	0	0	0	1	0	1	0	0	1	0	-	1	11
% Bicycles on Road	-	0.0	0.3	0.0	-	0.3	0.0	0.0	0.8	-	0.0	100.0	0.0	-	1.1	-	0.0	1.6	0.0	-	0.4	0.6
Pedestrians	-	-	-	-	10	-	-	-	-	9	-	-	-	27	-	-	-	-	-	21	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	100.0	-	-	-	-	-	100.0	-	-



Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Duane Street with Melrose Avenue
Site Code:
Start Date: 08/28/2018
Page No.: 3

Turning Movement Peak Hour Data (7:15 AM)

Start Time	Duane Street Eastbound						Duane Street Westbound						Melrose Avenue Northbound						Library Outbound Access Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:15 AM	0	0	43	0	0	43	0	0	39	0	0	39	0	2	0	3	2	5	0	1	0	1	1	2	89
7:30 AM	0	0	39	0	1	39	0	0	60	0	0	60	0	6	0	1	2	7	0	2	0	0	1	2	108
7:45 AM	0	0	44	1	1	45	0	1	29	0	1	30	0	2	1	1	1	4	0	3	2	2	0	7	86
8:00 AM	0	0	33	1	0	34	0	0	32	0	0	32	0	2	0	10	1	12	0	2	2	2	0	6	84
Total	0	0	159	2	2	161	0	1	160	0	1	161	0	12	1	15	6	28	0	8	4	5	2	17	367
Approach %	0.0	0.0	98.8	1.2	-	-	0.0	0.6	99.4	0.0	-	-	0.0	42.9	3.6	53.6	-	-	0.0	47.1	23.5	29.4	-	-	-
Total %	0.0	0.0	43.3	0.5	-	43.9	0.0	0.3	43.6	0.0	-	43.9	0.0	3.3	0.3	4.1	-	7.6	0.0	2.2	1.1	1.4	-	4.6	-
PHF	0.000	0.000	0.903	0.500	-	0.894	0.000	0.250	0.667	0.000	-	0.671	0.000	0.500	0.250	0.375	-	0.583	0.000	0.667	0.500	0.625	-	0.607	0.850
Lights	0	0	152	2	-	154	0	1	158	0	-	159	0	12	0	15	-	27	0	8	4	4	-	16	356
% Lights	-	-	95.6	100.0	-	95.7	-	100.0	98.8	-	-	98.8	-	100.0	0.0	100.0	-	96.4	-	100.0	100.0	80.0	-	94.1	97.0
Buses	0	0	3	0	-	3	0	0	1	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	4
% Buses	-	-	1.9	0.0	-	1.9	-	0.0	0.6	-	-	0.6	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	1.1
Single-Unit Trucks	0	0	2	0	-	2	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	1	-	1	3
% Single-Unit Trucks	-	-	1.3	0.0	-	1.2	-	0.0	0.0	-	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	20.0	-	5.9	0.8
Articulated Trucks	0	0	1	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1
% Articulated Trucks	-	-	0.6	0.0	-	0.6	-	0.0	0.0	-	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.3
Bicycles on Road	0	0	1	0	-	1	0	0	1	0	-	1	0	0	1	0	-	1	0	0	0	0	-	0	3
% Bicycles on Road	-	-	0.6	0.0	-	0.6	-	0.0	0.6	-	-	0.6	-	0.0	100.0	0.0	-	3.6	-	0.0	0.0	0.0	-	0.0	0.8
Pedestrians	-	-	-	-	2	-	-	-	-	-	1	-	-	-	-	-	6	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-



Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Duane Street with Melrose Avenue
Site Code:
Start Date: 08/28/2018
Page No: 4

Turning Movement Peak Hour Data (2:30 PM)

Start Time	Duane Street Eastbound						Duane Street Westbound						Melrose Avenue Northbound						Library Outbound Access Southbound						Int. Total	
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total		
2:30 PM	0	0	39	5	0	44	0	0	29	0	0	29	0	2	0	0	0	0	2	0	9	4	3	0	16	91
2:45 PM	0	0	28	1	2	29	0	0	35	0	1	35	0	2	0	1	0	3	3	0	8	1	2	9	11	78
3:00 PM	0	1	31	0	1	32	0	0	41	0	4	41	0	5	0	1	2	6	6	0	9	5	3	1	17	96
3:15 PM	0	0	26	0	1	26	0	0	31	0	0	31	0	1	0	3	2	4	4	0	8	1	3	3	12	73
Total	0	1	124	6	4	131	0	0	136	0	5	136	0	10	0	5	4	15	15	0	34	11	11	13	56	338
Approach %	0.0	0.8	94.7	4.6	-	-	0.0	0.0	100.0	0.0	-	-	0.0	66.7	0.0	33.3	-	-	-	0.0	60.7	19.6	19.6	-	-	-
Total %	0.0	0.3	36.7	1.8	-	38.8	0.0	0.0	40.2	0.0	-	40.2	0.0	3.0	0.0	1.5	-	4.4	4.4	0.0	10.1	3.3	3.3	-	16.6	-
PHF	0.000	0.250	0.795	0.300	-	0.744	0.000	0.000	0.829	0.000	-	0.829	0.000	0.500	0.000	0.417	-	0.625	0.625	0.000	0.944	0.550	0.917	-	0.824	0.880
Lights	0	1	124	6	-	131	0	0	134	0	-	134	0	9	0	5	-	14	14	0	33	11	11	-	55	334
% Lights	-	100.0	100.0	100.0	-	100.0	-	-	98.5	-	-	98.5	-	90.0	-	100.0	-	93.3	93.3	-	97.1	100.0	100.0	-	98.2	98.8
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0
% Buses	-	0.0	0.0	0.0	-	0.0	-	-	0.0	-	-	0.0	-	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	0	0	0	-	0	0	0	1	0	-	1	0	1	0	0	-	1	1	0	1	0	0	-	1	3
% Single-Unit Trucks	-	0.0	0.0	0.0	-	0.0	-	-	0.7	-	-	0.7	-	10.0	-	0.0	-	6.7	6.7	-	2.9	0.0	0.0	-	1.8	0.9
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	0.0	-	0.0	-	-	0.0	-	-	0.0	-	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	0	0	-	0	0	0	1	0	-	1	0	0	0	0	-	0	0	0	0	0	0	-	0	1
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	-	0.7	-	-	0.7	-	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.3
Pedestrians	-	-	-	-	4	-	-	-	-	-	5	-	-	-	-	-	-	4	-	-	-	-	-	13	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-



Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Duane Street with Melrose Avenue
Site Code:
Start Date: 08/28/2018
Page No.: 5

Turning Movement Peak Hour Data (5:00 PM)

Start Time	Duane Street Eastbound						Duane Street Westbound						Melrose Avenue Northbound						Library Outbound Access Southbound						
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
5:00 PM	0	0	46	1	0	47	0	1	52	0	1	53	0	1	0	0	3	1	0	13	2	4	1	19	120
5:15 PM	0	0	28	3	0	31	0	1	39	0	0	40	0	5	0	1	3	6	0	17	2	3	1	22	99
5:30 PM	0	0	43	0	0	43	0	3	57	0	0	60	0	2	0	0	2	2	0	10	4	4	0	18	123
5:45 PM	0	0	49	7	0	56	0	4	42	0	0	46	0	1	0	3	3	4	0	7	7	3	0	17	123
Total	0	0	166	11	0	177	0	9	190	0	1	199	0	9	0	4	11	13	0	47	15	14	2	76	465
Approach %	0.0	0.0	93.8	6.2	-	-	0.0	4.5	95.5	0.0	-	-	0.0	69.2	0.0	30.8	-	-	0.0	61.8	19.7	18.4	-	-	-
Total %	0.0	0.0	35.7	2.4	-	38.1	0.0	1.9	40.9	0.0	-	42.8	0.0	1.9	0.0	0.9	-	2.8	0.0	10.1	3.2	3.0	-	16.3	-
PHF	0.000	0.000	0.847	0.393	-	0.790	0.000	0.563	0.833	0.000	-	0.829	0.000	0.450	0.000	0.333	-	0.542	0.000	0.691	0.536	0.875	-	0.864	0.945
Lights	0	0	164	11	-	175	0	9	188	0	-	197	0	9	0	4	-	13	0	47	14	14	-	75	460
% Lights	-	-	98.8	100.0	-	98.9	-	100.0	98.9	-	-	99.0	-	100.0	-	100.0	-	100.0	-	100.0	93.3	100.0	-	98.7	98.9
Buses	0	0	1	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1
% Buses	-	-	0.6	0.0	-	0.6	-	0.0	0.0	-	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.2
Single-Unit Trucks	0	0	1	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1
% Single-Unit Trucks	-	-	0.6	0.0	-	0.6	-	0.0	0.0	-	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.2
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	-	-	0.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	0	0	-	0	0	0	2	0	-	2	0	0	0	0	-	0	0	0	1	0	-	1	3
% Bicycles on Road	-	-	0.0	0.0	-	0.0	-	0.0	1.1	-	-	1.0	-	0.0	-	0.0	-	0.0	-	0.0	6.7	0.0	-	1.3	0.6
Pedestrians	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	11	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-



Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400
Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Prospect Avenue with Duane
Street
Site Code:
Start Date: 08/28/2018
Page No: 1

Turning Movement Data

Start Time	Duane Street Eastbound					App. Total	Duane Street Westbound					Prospect Avenue Northbound					Prospect Avenue Southbound					Int. Total			
	U-Turn	Left	Thru	Right	Peds		U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total							
7:00 AM	0	27	14	0	0	41	0	0	4	2	5	6	0	6	40	3	3	49	0	12	48	20	0	80	176
7:15 AM	0	37	11	0	3	48	0	0	11	15	1	26	0	3	61	5	2	69	0	14	47	24	1	85	228
7:30 AM	0	32	8	4	0	44	0	2	17	7	0	26	0	4	54	7	0	65	0	16	60	39	1	115	250
7:45 AM	0	32	9	2	3	43	0	1	6	21	3	28	0	3	65	7	3	75	0	39	60	22	2	121	267
Hourly Total	0	128	42	6	6	176	0	3	38	45	9	86	0	16	220	22	8	258	0	81	215	105	4	401	921
8:00 AM	0	33	13	0	2	46	0	2	5	17	10	24	0	2	88	12	3	102	0	37	54	23	4	114	286
8:15 AM	0	26	4	0	0	30	0	0	6	18	0	24	0	0	49	2	0	51	0	12	36	12	1	60	165
8:30 AM	0	20	8	0	1	28	0	1	5	21	1	27	0	3	50	1	0	54	0	10	39	12	0	61	170
8:45 AM	0	22	15	0	1	37	0	0	7	13	1	20	0	3	36	1	0	40	0	7	45	15	0	67	164
Hourly Total	0	101	40	0	4	141	0	3	23	69	12	95	0	8	223	16	3	247	0	66	174	62	5	302	785
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2:30 PM	0	29	13	4	1	46	0	1	3	16	0	20	0	3	53	4	0	60	0	11	53	22	0	86	212
2:45 PM	0	18	11	4	2	33	0	4	8	12	3	24	0	4	27	1	3	32	0	16	36	22	2	74	163
Hourly Total	0	47	24	8	3	79	0	5	11	28	3	44	0	7	80	5	3	92	0	27	89	44	2	160	375
3:00 PM	0	25	9	4	2	38	0	3	10	22	5	35	0	1	62	5	0	68	0	20	69	30	4	119	260
3:15 PM	0	26	9	3	4	38	0	2	10	47	8	59	0	2	102	7	5	111	0	12	38	22	6	72	280
3:30 PM	0	19	8	2	4	29	0	2	10	18	1	30	0	0	50	5	4	55	0	5	41	29	5	75	189
3:45 PM	0	40	11	2	6	53	0	4	10	18	1	32	0	2	72	4	1	78	0	13	54	26	2	93	256
Hourly Total	0	110	37	11	16	158	0	11	40	105	15	156	0	5	286	21	10	312	0	50	202	107	17	359	985
4:00 PM	0	32	13	3	1	48	0	2	9	22	0	33	0	6	55	1	0	62	0	11	55	30	7	96	239
4:15 PM	0	24	4	3	0	31	0	3	8	15	0	26	0	3	44	3	1	50	0	14	64	30	1	108	215
4:30 PM	0	33	7	4	1	44	0	1	12	20	1	33	0	6	51	3	1	60	0	11	58	24	0	93	230
4:45 PM	0	25	13	2	1	40	0	1	13	26	4	40	0	4	53	0	0	57	0	14	67	34	3	115	252
Hourly Total	0	114	37	12	3	163	0	7	42	83	5	132	0	19	203	7	2	229	0	50	244	118	11	412	936
5:00 PM	0	47	13	1	1	61	0	1	13	22	1	36	0	1	59	1	2	61	0	12	74	39	2	125	283
5:15 PM	0	25	16	6	1	47	0	2	10	20	0	32	0	3	57	2	5	62	0	12	80	25	5	117	258
5:30 PM	0	31	19	3	1	53	0	3	11	16	1	30	0	1	68	7	1	76	0	17	82	48	0	147	306
5:45 PM	0	35	13	4	1	52	0	1	13	27	0	41	0	1	49	4	2	54	0	22	55	30	5	107	254
Hourly Total	0	138	61	14	4	213	0	7	47	85	2	139	0	6	233	14	10	253	0	63	291	142	12	496	1101
Grand Total	0	638	241	51	36	930	0	36	201	415	46	652	0	61	1245	85	36	1391	0	337	1215	578	51	2130	5103
Approach %	0.0	68.6	25.9	5.5	-	-	0.0	5.5	30.8	63.7	-	-	0.0	4.4	89.5	6.1	-	-	0.0	15.8	57.0	27.1	-	-	-
Total %	0.0	12.5	4.7	1.0	-	18.2	0.0	0.7	3.9	8.1	-	12.8	0.0	1.2	24.4	1.7	-	27.3	0.0	6.6	23.8	11.3	-	41.7	-
Lights	0	626	236	51	-	913	0	35	199	407	-	641	0	61	1227	84	-	1372	0	336	1207	573	-	2116	5042
% Lights	-	98.1	97.9	100.0	-	98.2	-	97.2	99.0	98.1	-	98.3	-	100.0	98.6	98.8	-	98.6	-	99.7	99.3	99.1	-	99.3	98.8
Buses	0	6	0	0	-	6	0	0	0	1	-	1	0	0	6	0	-	6	0	0	0	0	-	0	13
% Buses	-	0.9	0.0	0.0	-	0.6	-	0.0	0.0	0.2	-	0.2	-	0.0	0.5	0.0	-	0.4	-	0.0	0.0	0.0	-	0.0	0.3
Single-Unit Trucks	0	6	2	0	-	8	0	0	1	5	-	6	0	0	8	1	-	9	0	1	3	3	-	11	34

% Single-Unit Trucks	-	0	0	0.8	0.0	-	0.9	-	0.9	-	0.0	0.5	1.2	-	0.6	-	0.3	0.6	0.5	-	0.5	0.7
Articulated Trucks	0	0	0	1	0	-	1	0	2	-	1	0	0	-	2	0	0	0	0	-	0	5
% Articulated Trucks	-	0.0	0.4	0.0	-	-	0.1	-	0.3	-	2.8	0.0	0.2	-	0.1	-	0.0	0.0	0.0	-	0.0	0.1
Bicycles on Road	0	0	2	0	0	-	2	0	2	-	0	1	0	-	2	0	0	1	2	-	3	9
% Bicycles on Road	-	0.0	0.8	0.0	-	-	0.2	-	0.3	-	0.0	0.5	0.2	-	0.1	-	0.0	0.1	0.3	-	0.1	0.2
Pedestrians	-	-	-	-	-	36	-	-	-	46	-	-	-	36	-	-	-	-	-	51	-	-
% Pedestrians	-	-	-	-	-	100.0	-	-	-	100.0	-	-	-	100.0	-	-	-	-	-	100.0	-	-



Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Prospect Avenue with Duane Street
Site Code: 08/28/2018
Start Date: 08/28/2018
Page No.: 3

Turning Movement Peak Hour Data (7:15 AM)

Start Time	Duane Street Eastbound						Duane Street Westbound						Prospect Avenue Northbound						Prospect Avenue Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:15 AM	0	37	11	0	3	48	0	0	11	15	1	26	0	3	61	5	2	69	0	14	47	24	1	85	228
7:30 AM	0	32	8	4	0	44	0	2	17	7	0	26	0	4	54	7	0	65	0	16	60	39	1	115	250
7:45 AM	0	32	9	2	3	43	0	1	6	21	3	28	0	3	65	7	3	75	0	39	60	22	2	121	267
8:00 AM	0	33	13	0	2	46	0	2	5	17	10	24	0	2	88	12	3	102	0	37	54	23	4	114	286
Total	0	134	41	6	8	181	0	5	39	60	14	104	0	12	268	31	8	311	0	106	221	108	8	435	1031
Approach %	0.0	74.0	22.7	3.3	-	-	0.0	4.8	37.5	57.7	-	-	0.0	3.9	86.2	10.0	-	-	0.0	24.4	50.8	24.8	-	-	-
Total %	0.0	13.0	4.0	0.6	-	17.6	0.0	0.5	3.8	5.8	-	10.1	0.0	1.2	26.0	3.0	-	30.2	0.0	10.3	21.4	10.5	-	42.2	-
PHF	0.000	0.905	0.788	0.375	-	0.943	0.000	0.625	0.574	0.714	-	0.929	0.000	0.750	0.761	0.646	-	0.762	0.000	0.679	0.921	0.692	-	0.899	0.901
Lights	0	130	38	6	-	174	0	4	39	58	-	101	0	12	263	31	-	306	0	106	219	107	-	432	1013
% Lights	-	97.0	92.7	100.0	-	96.1	-	80.0	100.0	96.7	-	97.1	-	100.0	98.1	100.0	-	98.4	-	100.0	99.1	99.1	-	99.3	98.3
Buses	0	3	0	0	-	3	0	0	0	0	-	0	0	0	3	0	-	3	0	0	0	0	-	0	6
% Buses	-	2.2	0.0	0.0	-	1.7	-	0.0	0.0	0.0	-	0.0	-	0.0	1.1	0.0	-	1.0	-	0.0	0.0	0.0	-	0.0	0.6
Single-Unit Trucks	0	1	1	0	-	2	0	0	0	2	-	2	0	0	1	0	-	1	0	0	2	1	-	3	8
% Single-Unit Trucks	-	0.7	2.4	0.0	-	1.1	-	0.0	0.0	3.3	-	1.9	-	0.0	0.4	0.0	-	0.3	-	0.0	0.9	0.9	-	0.7	0.8
Articulated Trucks	0	0	1	0	-	1	0	1	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	2
% Articulated Trucks	-	0.0	2.4	0.0	-	0.6	-	20.0	0.0	0.0	-	1.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.2
Bicycles on Road	0	0	1	0	-	1	0	0	0	0	-	0	0	0	1	0	-	1	0	0	0	0	-	0	2
% Bicycles on Road	-	0.0	2.4	0.0	-	0.6	-	0.0	0.0	0.0	-	0.0	-	0.0	0.4	0.0	-	0.3	-	0.0	0.0	0.0	-	0.0	0.2
Pedestrians	-	-	-	-	8	-	-	-	-	-	14	-	-	-	-	-	8	-	-	-	-	-	8	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-



Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Prospect Avenue with Duane
Street
Site Code:
Start Date: 08/28/2018
Page No: 4

Turning Movement Peak Hour Data (2:30 PM)

Start Time	Duane Street Eastbound						Duane Street Westbound						Prospect Avenue Northbound						Prospect Avenue Southbound					
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total
2:30 PM	0	29	13	4	1	46	0	1	3	16	0	20	0	3	53	4	0	60	0	11	53	22	0	86
2:45 PM	0	18	11	4	2	33	0	4	8	12	3	24	0	4	27	1	3	32	0	16	36	22	2	74
3:00 PM	0	25	9	4	2	38	0	3	10	22	5	35	0	1	62	5	0	68	0	20	69	30	4	119
3:15 PM	0	26	9	3	4	38	0	2	10	47	8	59	0	2	102	7	5	111	0	12	38	22	6	72
Total	0	98	42	15	9	155	0	10	31	97	16	138	0	10	244	17	8	271	0	59	196	96	12	351
Approach %	0.0	63.2	27.1	9.7	-	-	0.0	7.2	22.5	70.3	-	-	0.0	3.7	90.0	6.3	-	-	0.0	16.8	55.8	27.4	-	-
Total %	0.0	10.7	4.6	1.6	-	16.9	0.0	1.1	3.4	10.6	-	15.1	0.0	1.1	26.7	1.9	-	29.6	0.0	6.4	21.4	10.5	-	38.4
PHF	0.000	0.845	0.808	0.938	-	0.842	0.000	0.625	0.775	0.516	-	0.585	0.000	0.625	0.598	0.607	-	0.610	0.000	0.738	0.710	0.800	-	0.737
Lights	0	97	42	15	-	154	0	10	30	97	-	137	0	10	238	16	-	264	0	59	193	96	-	348
% Lights	-	99.0	100.0	100.0	-	99.4	-	100.0	96.8	100.0	-	99.3	-	100.0	97.5	94.1	-	97.4	-	100.0	98.5	100.0	-	99.1
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	2	0	-	2	0	0	0	0	-	0
% Buses	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.8	0.0	-	0.7	-	0.0	0.0	0.0	-	0.0
Single-Unit Trucks	0	1	0	0	-	1	0	0	1	0	-	1	0	0	4	1	-	5	0	0	3	0	-	3
% Single-Unit Trucks	-	1.0	0.0	0.0	-	0.6	-	0.0	3.2	0.0	-	0.7	-	0.0	1.6	5.9	-	1.8	-	0.0	1.5	0.0	-	0.9
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0
% Articulated Trucks	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0
Pedestrians	-	-	-	-	9	-	-	-	-	-	16	-	-	-	-	-	8	-	-	-	-	-	12	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-



Kenig, Lindgren, O'Hara, Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Prospect Avenue with Duane
Street
Site Code:
Start Date: 08/28/2018
Page No: 5

Turning Movement Peak Hour Data (5:00 PM)

Start Time	Duane Street Eastbound						Duane Street Westbound						Prospect Avenue Northbound						Prospect Avenue Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
5:00 PM	0	47	13	1	1	61	0	1	13	22	1	36	0	1	59	1	2	61	0	12	74	39	2	125	283
5:15 PM	0	25	16	6	1	47	0	2	10	20	0	32	0	3	57	2	5	62	0	12	80	25	5	117	258
5:30 PM	0	31	19	3	1	53	0	3	11	16	1	30	0	1	68	7	1	76	0	17	82	48	0	147	306
5:45 PM	0	35	13	4	1	52	0	1	13	27	0	41	0	1	49	4	2	54	0	22	55	30	5	107	254
Total	0	138	61	14	4	213	0	7	47	85	2	139	0	6	233	14	10	253	0	63	291	142	12	496	1101
Approach %	0.0	64.8	28.6	6.6	-	-	0.0	5.0	33.8	61.2	-	-	0.0	2.4	92.1	5.5	-	-	0.0	12.7	58.7	28.6	-	-	-
Total %	0.0	12.5	5.5	1.3	-	19.3	0.0	0.6	4.3	7.7	-	12.6	0.0	0.5	21.2	1.3	-	23.0	0.0	5.7	26.4	12.9	-	45.0	-
PHF	0.000	0.734	0.803	0.583	-	0.873	0.000	0.583	0.904	0.787	-	0.848	0.000	0.500	0.857	0.500	-	0.832	0.000	0.716	0.887	0.740	-	0.844	0.900
Lights	0	137	60	14	-	211	0	7	47	82	-	136	0	6	231	14	-	251	0	63	289	142	-	494	1092
% Lights	-	99.3	98.4	100.0	-	99.1	-	100.0	100.0	96.5	-	97.8	-	100.0	99.1	100.0	-	99.2	-	100.0	99.3	100.0	-	99.6	99.2
Buses	0	1	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1
% Buses	-	0.7	0.0	0.0	-	0.5	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.1
Single-Unit Trucks	0	0	1	0	-	1	0	0	0	2	-	2	0	0	1	0	-	1	0	0	1	0	-	1	5
% Single-Unit Trucks	-	0.0	1.6	0.0	-	0.5	-	0.0	0.0	2.4	-	1.4	-	0.0	0.4	0.0	-	0.4	-	0.0	0.3	0.0	-	0.2	0.5
Articulated Trucks	0	0	0	0	-	0	0	0	0	1	-	1	0	0	0	0	-	0	0	0	0	0	-	0	1
% Articulated Trucks	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	1.2	-	0.7	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.1
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	0	0	1	0	-	1	2
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.4	0.0	-	0.4	-	0.0	0.3	0.0	-	0.2	0.2
Pedestrians	-	-	-	-	4	-	-	-	-	-	2	-	-	-	-	-	10	-	-	-	-	-	12	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-



Kenig, Lindgren, O'Hara, Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Hillside Avenue with Melrose Avenue
Site Code: 08/28/2018
Start Date: 08/28/2018
Page No: 1

Turning Movement Data

Start Time	Hillside Avenue Eastbound					Hillside Avenue Westbound					Melrose Avenue Southbound				
	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Right	Peds	Int. Total
7:00 AM	0	1	14	0	15	0	5	6	0	11	0	0	1	3	27
7:15 AM	0	2	12	0	14	0	7	3	0	10	0	0	0	0	24
7:30 AM	0	0	6	0	6	0	6	6	0	12	0	1	0	0	19
7:45 AM	0	1	13	0	14	0	3	2	0	5	0	3	4	2	26
Hourly Total	0	4	45	0	49	0	21	17	0	38	0	4	5	5	96
8:00 AM	0	2	1	0	3	0	19	9	0	28	0	2	1	1	34
8:15 AM	0	0	4	0	4	0	3	0	0	3	0	1	0	1	8
8:30 AM	0	0	5	0	5	0	3	4	0	7	0	2	0	0	14
8:45 AM	0	0	6	0	6	0	3	0	0	3	0	3	0	0	12
Hourly Total	0	2	16	0	18	0	28	13	0	41	0	8	1	2	68
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2:30 PM	0	3	7	0	10	0	6	2	0	8	0	7	2	0	27
2:45 PM	0	0	7	0	7	0	8	3	1	11	0	2	0	2	20
Hourly Total	0	3	14	0	17	0	14	5	1	19	0	9	2	2	47
3:00 PM	0	1	8	0	9	0	11	5	0	16	0	7	3	1	35
3:15 PM	0	2	6	0	8	0	17	1	0	18	0	2	1	3	29
3:30 PM	0	0	10	0	10	0	7	4	0	11	0	3	2	2	26
3:45 PM	0	0	7	0	7	0	12	1	0	13	0	6	0	1	26
Hourly Total	0	3	31	0	34	0	47	11	0	58	0	18	6	7	116
4:00 PM	0	1	11	0	12	0	10	6	0	16	0	4	0	0	32
4:15 PM	0	1	6	0	7	0	7	2	0	9	0	6	0	1	22
4:30 PM	0	0	8	0	8	0	17	1	0	18	0	7	0	0	33
4:45 PM	1	1	7	0	9	0	14	4	0	18	0	4	1	0	32
Hourly Total	1	3	32	0	36	0	48	13	0	61	0	21	1	1	119
5:00 PM	0	0	5	0	5	0	19	1	0	20	0	3	1	0	29
5:15 PM	0	0	7	0	7	0	14	8	0	22	0	6	0	0	35
5:30 PM	0	1	10	0	11	0	10	5	0	15	0	3	4	0	33
5:45 PM	0	0	12	0	12	0	18	2	0	20	0	14	6	1	52
Hourly Total	0	1	34	0	35	0	61	16	0	77	0	26	11	1	149
Grand Total	1	16	172	0	189	0	219	75	1	294	0	86	26	18	595
Approach %	0.5	8.5	91.0	-	-	0.0	74.5	25.5	-	-	0.0	76.8	23.2	-	-
Total %	0.2	2.7	28.9	-	31.8	0.0	36.8	12.6	-	49.4	0.0	14.5	4.4	-	18.8
Lights	1	14	167	-	182	0	209	74	-	283	0	86	24	-	575
% Lights	100.0	87.5	97.1	-	96.3	-	95.4	98.7	-	96.3	-	100.0	92.3	-	96.6
Buses	0	0	1	-	1	0	3	0	-	3	0	0	0	-	4
% Buses	0.0	0.0	0.6	-	0.5	-	1.4	0.0	-	1.0	-	0.0	0.0	-	0.7
Single-Unit Trucks	0	1	2	-	3	0	4	0	-	4	0	0	1	-	8
% Single-Unit Trucks	0.0	6.3	1.2	-	1.6	-	1.8	0.0	-	1.4	-	0.0	3.8	-	1.3

[illegible]



Kenig, Lindgren, O'Hara, Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Hillside Avenue with Melrose Avenue
Site Code:
Start Date: 08/28/2018
Page No.: 3

Turning Movement Peak Hour Data (7:15 AM)

Start Time	Hillside Avenue Eastbound					Hillside Avenue Westbound					Melrose Avenue Southbound				
	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Right	Peds	App. Total
7:15 AM	0	2	12	0	14	0	7	3	0	10	0	0	0	0	0
7:30 AM	0	0	6	0	6	0	6	6	0	12	0	1	0	0	1
7:45 AM	0	1	13	0	14	0	3	2	0	5	0	3	4	2	7
8:00 AM	0	2	1	0	3	0	19	9	0	28	0	2	1	1	3
Total	0	5	32	0	37	0	35	20	0	55	0	6	5	3	11
Approach %	0.0	13.5	86.5	-	-	0.0	63.6	36.4	-	-	0.0	54.5	45.5	-	-
Total %	0.0	4.9	31.1	-	35.9	0.0	34.0	19.4	-	53.4	0.0	5.8	4.9	-	10.7
PHF	0.000	0.625	0.615	-	0.661	0.000	0.461	0.556	-	0.491	0.000	0.500	0.313	-	0.393
Lights	0	4	29	-	33	0	33	19	-	52	0	6	5	-	11
% Lights	-	80.0	90.6	-	89.2	-	94.3	95.0	-	94.5	-	100.0	100.0	-	100.0
Buses	0	0	1	-	1	0	2	0	-	2	0	0	0	-	0
% Buses	-	0.0	3.1	-	2.7	-	5.7	0.0	-	3.6	-	0.0	0.0	-	0.0
Single-Unit Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0
% Single-Unit Trucks	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0
Bicycles on Road	0	1	2	-	3	0	0	1	-	1	0	0	0	-	0
% Bicycles on Road	-	20.0	6.3	-	8.1	-	0.0	5.0	-	1.8	-	0.0	0.0	-	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	3	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-



Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400
Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Hillside Avenue with Melrose Avenue
Site Code:
Start Date: 08/28/2018
Page No: 4

Turning Movement Peak Hour Data (2:30 PM)

Start Time	Hillside Avenue Eastbound					Hillside Avenue Westbound					Melrose Avenue Southbound				
	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Right	Peds	Int. Total
2:30 PM	0	3	7	0	10	0	6	2	0	8	0	7	2	0	27
2:45 PM	0	0	7	0	7	0	8	3	1	11	0	2	0	2	20
3:00 PM	0	1	8	0	9	0	11	5	0	16	0	7	3	1	35
3:15 PM	0	2	6	0	8	0	17	1	0	18	0	2	1	3	29
Total	0	6	28	0	34	0	42	11	1	53	0	18	6	6	111
Approach %	0.0	17.6	82.4	-	-	0.0	79.2	20.8	-	-	0.0	75.0	25.0	-	-
Total %	0.0	5.4	25.2	-	30.6	0.0	37.8	9.9	-	47.7	0.0	16.2	5.4	-	21.6
PHF	0.000	0.500	0.875	-	0.850	0.000	0.618	0.550	-	0.736	0.000	0.643	0.500	-	0.793
Lights	0	5	27	-	32	0	40	11	-	51	0	18	5	-	106
% Lights	-	83.3	96.4	-	94.1	-	95.2	100.0	-	96.2	-	100.0	83.3	-	95.5
Buses	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0
% Buses	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0
Single-Unit Trucks	0	1	1	-	2	0	1	0	-	1	0	0	1	-	4
% Single-Unit Trucks	-	16.7	3.6	-	5.9	-	2.4	0.0	-	1.9	-	0.0	16.7	-	4.2
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0
Bicycles on Road	0	0	0	-	0	0	1	0	-	1	0	0	0	-	1
% Bicycles on Road	-	0.0	0.0	-	0.0	-	2.4	0.0	-	1.9	-	0.0	0.0	-	0.9
Pedestrians	-	-	-	0	-	-	-	-	1	-	-	-	-	6	-
% Pedestrians	-	-	-	-	-	-	-	-	100.0	-	-	-	-	100.0	-



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Rosemont, Illinois, United States 60018
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Count Name: Hillside Avenue with Melrose Avenue
Site Code:
Start Date: 08/28/2018
Page No.: 5

Turning Movement Peak Hour Data (5:00 PM)

Start Time	Hillside Avenue Eastbound					Hillside Avenue Westbound					Melrose Avenue Southbound				
	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Right	Peds	App. Total
5:00 PM	0	0	5	0	5	0	19	1	0	20	0	3	1	0	4
5:15 PM	0	0	7	0	7	0	14	8	0	22	0	6	0	0	6
5:30 PM	0	1	10	0	11	0	10	5	0	15	0	3	4	0	7
5:45 PM	0	0	12	0	12	0	18	2	0	20	0	14	6	1	20
Total	0	1	34	0	35	0	61	16	0	77	0	26	11	1	37
Approach %	0.0	2.9	97.1	-	-	0.0	79.2	20.8	-	-	0.0	70.3	29.7	-	-
Total %	0.0	0.7	22.8	-	23.5	0.0	40.9	10.7	-	51.7	0.0	17.4	7.4	-	24.8
PHF	0.000	0.250	0.708	-	0.729	0.000	0.803	0.500	-	0.875	0.000	0.464	0.458	-	0.463
Lights	0	1	34	-	35	0	58	16	-	74	0	26	10	-	36
% Lights	-	100.0	100.0	-	100.0	-	95.1	100.0	-	96.1	-	100.0	90.9	-	97.3
Buses	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0
% Buses	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0
Single-Unit Trucks	0	0	0	-	0	0	1	0	-	1	0	0	0	-	0
% Single-Unit Trucks	-	0.0	0.0	-	0.0	-	1.6	0.0	-	1.3	-	0.0	0.0	-	0.0
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0
Bicycles on Road	0	0	0	-	0	0	2	0	-	2	0	0	1	-	1
% Bicycles on Road	-	0.0	0.0	-	0.0	-	3.3	0.0	-	2.6	-	0.0	9.1	-	2.7
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	1	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-



Kenig Lindgren O'Hara Aboona, Inc.
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(847)518-9990

Count Name: Prospect Avenue with Hillside Avenue
Site Code:
Start Date: 08/28/2018
Page No: 1

Turning Movement Data

Start Time	Hillside Avenue Eastbound						Hillside Avenue Westbound						Prospect Avenue Northbound						Prospect Avenue Southbound					
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total
7:00 AM	0	8	0	5	3	13	0	1	6	3	1	10	0	4	39	0	3	43	0	0	47	0	3	47
7:15 AM	0	8	0	5	0	13	0	5	5	9	2	19	0	2	52	0	2	54	0	0	43	3	4	46
7:30 AM	0	7	0	2	1	9	0	1	7	10	2	18	0	6	52	0	1	58	0	0	65	1	2	66
7:45 AM	0	6	0	8	1	14	0	15	5	14	4	34	0	1	46	0	0	47	0	0	63	2	12	65
Hourly Total	0	29	0	20	5	49	0	22	23	36	9	81	0	13	189	0	6	202	0	0	218	6	21	224
8:00 AM	0	0	0	4	4	4	0	59	12	29	4	100	0	6	31	0	0	37	0	0	56	6	25	62
8:15 AM	0	2	0	2	0	4	0	2	2	5	2	9	0	0	28	0	0	28	0	0	36	2	0	38
8:30 AM	0	4	0	3	1	7	0	5	5	11	0	21	0	2	40	0	0	42	0	0	40	0	1	40
8:45 AM	0	6	0	3	0	9	0	1	1	9	0	11	0	1	24	0	0	25	0	0	45	1	0	46
Hourly Total	0	12	0	12	5	24	0	67	20	54	6	141	0	9	123	0	0	132	0	0	177	9	26	186
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2:30 PM	0	8	0	6	2	14	0	2	3	5	1	10	0	4	45	0	0	49	0	0	52	2	1	54
2:45 PM	0	4	0	5	2	9	0	3	7	17	1	27	0	2	33	0	0	35	0	0	40	2	0	42
Hourly Total	0	12	0	11	4	23	0	5	10	22	2	37	0	6	78	0	0	84	0	0	92	4	1	96
3:00 PM	0	5	0	10	3	15	0	14	7	18	5	39	0	5	40	0	1	45	0	0	69	3	18	72
3:15 PM	0	4	0	3	3	7	0	19	10	15	4	44	0	2	51	0	0	53	0	0	52	3	14	55
3:30 PM	0	4	0	8	0	12	0	2	5	7	0	14	0	3	46	0	0	49	0	0	42	1	3	43
3:45 PM	0	7	0	8	1	15	0	6	5	12	4	23	0	4	57	0	1	61	0	0	60	5	1	65
Hourly Total	0	20	0	29	7	49	0	41	27	52	13	120	0	14	194	0	2	208	0	0	223	12	36	235
4:00 PM	0	5	0	6	1	11	0	6	10	12	0	28	0	3	41	0	0	44	0	0	60	3	1	63
4:15 PM	0	5	0	7	0	12	0	4	7	7	0	18	0	1	38	0	1	39	0	0	70	2	1	72
4:30 PM	0	4	0	9	1	13	0	3	13	7	0	23	0	1	49	0	0	50	0	0	59	2	1	61
4:45 PM	0	4	0	7	0	11	0	1	13	13	2	27	0	5	46	0	0	51	0	0	70	2	4	72
Hourly Total	0	18	0	29	2	47	0	14	43	39	2	96	0	10	174	0	1	184	0	0	259	9	7	268
5:00 PM	0	4	0	5	0	9	0	6	11	17	0	34	0	3	40	0	1	43	0	0	74	3	0	77
5:15 PM	0	5	0	3	1	8	0	4	14	12	0	30	0	6	52	0	0	58	0	0	80	5	1	85
5:30 PM	0	8	0	6	1	14	0	2	8	14	0	24	0	0	47	0	0	47	0	0	84	4	0	88
5:45 PM	0	7	0	14	0	21	0	10	15	17	1	42	0	0	31	0	1	31	0	0	53	1	1	54
Hourly Total	0	24	0	28	2	52	0	22	48	60	1	130	0	9	170	0	2	179	0	0	291	13	2	304
Grand Total	0	115	0	129	25	244	0	171	171	263	33	605	0	61	928	0	11	989	0	0	1260	53	93	1313
Approach %	0.0	47.1	0.0	52.9	-	-	0.0	28.3	28.3	43.5	-	-	0.0	6.2	93.8	0.0	-	-	0.0	0.0	96.0	4.0	-	-
Total %	0.0	3.6	0.0	4.1	-	7.7	0.0	5.4	5.4	8.3	-	19.2	0.0	1.9	29.5	0.0	-	31.4	0.0	0.0	40.0	1.7	-	41.7
Lights	0	114	0	127	-	241	0	168	166	259	-	593	0	60	915	0	-	975	0	0	1252	52	-	1304
% Lights	-	99.1	-	98.4	-	98.8	-	98.2	97.1	98.5	-	98.0	-	98.4	98.6	-	-	98.6	-	-	99.4	98.1	-	99.3
Buses	0	0	0	1	-	1	0	1	1	1	-	3	0	0	1	5	0	-	6	0	0	1	0	1
% Buses	-	0.0	-	0.8	-	0.4	-	0.6	0.6	0.4	-	0.5	-	1.6	0.5	-	-	0.6	-	-	0.1	0.0	-	0.1
Single-Unit Trucks	0	1	0	1	-	2	0	2	1	3	-	6	0	0	5	0	-	5	0	0	6	1	-	7

% Single-Unit Trucks	-	0.9	-	0.8	-	0.8	-	1.2	0.6	1.1	-	1.0	-	0.0	0.5	-	-	0.5	-	1.9	0.5	0.6
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	2	0	0	2	0	0	0	2
% Articulated Trucks	-	0.0	-	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.2	-	-	0.2	-	0.0	0.0	0.1
Bicycles on Road	0	0	0	0	-	0	0	0	3	0	-	3	0	0	1	0	0	1	0	0	1	5
% Bicycles on Road	-	0.0	-	0.0	-	0.0	-	0.0	1.8	0.0	-	0.5	-	0.0	0.1	-	-	0.1	-	0.0	0.1	0.2
Pedestrians	-	-	-	-	25	-	-	-	-	-	33	-	-	-	-	-	-	11	-	-	93	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	100.0	-



Kenig Lindgren O'Hara Aboona, Inc.
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Count Name: Prospect Avenue with Hillside
Avenue
Site Code:
Start Date: 08/28/2018
Page No.: 3

Turning Movement Peak Hour Data (7:15 AM)

Start Time	Hillside Avenue Eastbound						Hillside Avenue Westbound						Prospect Avenue Northbound						Prospect Avenue Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:15 AM	0	8	0	5	0	13	0	5	5	9	2	19	0	2	52	0	2	54	0	0	43	3	4	46	132
7:30 AM	0	7	0	2	1	9	0	1	7	10	2	18	0	6	52	0	1	58	0	0	65	1	2	66	151
7:45 AM	0	6	0	8	1	14	0	15	5	14	4	34	0	1	46	0	0	47	0	0	63	2	12	65	160
8:00 AM	0	0	0	4	4	4	0	59	12	29	4	100	0	6	31	0	0	37	0	0	56	6	25	62	203
Total	0	21	0	19	6	40	0	80	29	62	12	171	0	15	181	0	3	196	0	0	227	12	43	239	646
Approach %	0.0	52.5	0.0	47.5	-	-	0.0	46.8	17.0	36.3	-	-	0.0	7.7	92.3	0.0	-	-	0.0	0.0	95.0	5.0	-	-	-
Total %	0.0	3.3	0.0	2.9	-	6.2	0.0	12.4	4.5	9.6	-	26.5	0.0	2.3	28.0	0.0	-	30.3	0.0	0.0	35.1	1.9	-	37.0	-
PHF	0.000	0.656	0.000	0.594	-	0.714	0.000	0.339	0.604	0.534	-	0.428	0.000	0.625	0.870	0.000	-	0.845	0.000	0.000	0.873	0.500	-	0.905	0.796
Lights	0	21	0	18	-	39	0	79	27	60	-	166	0	15	179	0	-	194	0	0	225	12	-	237	636
% Lights	-	100.0	-	94.7	-	97.5	-	98.8	93.1	96.8	-	97.1	-	100.0	98.9	-	-	99.0	-	-	99.1	100.0	-	99.2	98.5
Buses	0	0	0	1	-	1	0	0	1	1	-	2	0	0	2	0	-	2	0	0	0	0	-	0	5
% Buses	-	0.0	-	5.3	-	2.5	-	0.0	3.4	1.6	-	1.2	-	0.0	1.1	-	-	1.0	-	-	0.0	0.0	-	0.0	0.8
Single-Unit Trucks	0	0	0	0	-	0	0	1	0	1	-	2	0	0	0	0	-	0	0	0	2	0	-	2	4
% Single-Unit Trucks	-	0.0	-	0.0	-	0.0	-	1.3	0.0	1.6	-	1.2	-	0.0	0.0	-	-	0.0	-	-	0.9	0.0	-	0.8	0.6
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	-	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	-	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	0	0	-	0	0	0	1	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	1
% Bicycles on Road	-	0.0	-	0.0	-	0.0	-	0.0	3.4	0.0	-	0.6	-	0.0	0.0	-	-	0.0	-	-	0.0	0.0	-	0.0	0.2
Pedestrians	-	-	-	-	6	-	-	-	-	-	12	-	-	-	-	-	-	3	-	-	-	-	-	43	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-



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Count Name: Prospect Avenue with Hillside
Avenue
Site Code:
Start Date: 08/28/2018
Page No: 4

Turning Movement Peak Hour Data (2:30 PM)

Start Time	Hillside Avenue Eastbound						Hillside Avenue Westbound						Prospect Avenue Northbound						Prospect Avenue Southbound						Int. Total	
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total		
2:30 PM	0	8	0	6	2	14	0	2	3	5	1	10	0	4	45	0	0	49	0	0	52	2	1	54	127	
2:45 PM	0	4	0	5	2	9	0	3	7	17	1	27	0	2	33	0	0	35	0	0	40	2	0	42	113	
3:00 PM	0	5	0	10	3	15	0	14	7	18	5	39	0	5	40	0	1	45	0	0	69	3	18	72	171	
3:15 PM	0	4	0	3	3	7	0	19	10	15	4	44	0	2	51	0	0	53	0	0	52	3	14	55	159	
Total	0	21	0	24	10	45	0	38	27	55	11	120	0	13	169	0	1	182	0	0	213	10	33	223	570	
Approach %	0.0	46.7	0.0	53.3	-	-	0.0	31.7	22.5	45.8	-	-	0.0	7.1	92.9	0.0	-	-	0.0	0.0	95.5	4.5	-	-	-	
Total %	0.0	3.7	0.0	4.2	-	7.9	0.0	6.7	4.7	9.6	-	21.1	0.0	2.3	29.6	0.0	-	31.9	0.0	0.0	37.4	1.8	-	39.1	-	
PHF	0.000	0.856	0.000	0.600	-	0.750	0.000	0.500	0.675	0.764	-	0.682	0.000	0.650	0.828	0.000	-	0.858	0.000	0.000	0.772	0.833	-	0.774	0.833	
Lights	0	20	0	24	-	44	0	36	27	53	-	116	0	12	165	0	-	177	0	0	210	10	-	220	557	
% Lights	-	95.2	-	100.0	-	97.8	-	94.7	100.0	96.4	-	96.7	-	92.3	97.6	-	-	97.3	-	-	98.6	100.0	-	98.7	97.7	
Buses	0	0	0	0	-	0	0	1	0	0	-	1	0	1	2	0	-	3	0	0	1	0	-	1	5	
% Buses	-	0.0	-	0.0	-	0.0	-	2.6	0.0	0.0	-	0.8	-	7.7	1.2	-	-	1.6	-	-	0.5	0.0	-	0.4	0.9	
Single-Unit Trucks	0	1	0	0	-	1	0	1	0	2	-	3	0	0	2	0	-	2	0	0	2	0	-	2	8	
% Single-Unit Trucks	-	4.8	-	0.0	-	2.2	-	2.6	0.0	3.6	-	2.5	-	0.0	1.2	-	-	1.1	-	-	0.9	0.0	-	0.9	1.4	
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	
% Articulated Trucks	-	0.0	-	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	-	0.0	0.0	-	0.0	0.0	
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	
% Bicycles on Road	-	0.0	-	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	-	0.0	0.0	-	0.0	0.0	
Pedestrians	-	-	-	-	10	-	-	-	-	-	11	-	-	-	-	-	-	1	-	-	-	-	33	-	-	
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-



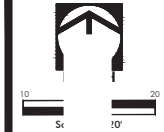
Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400
Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Prospect Avenue with Hillside
Avenue
Site Code:
Start Date: 08/28/2018
Page No.: 5

Turning Movement Peak Hour Data (5:00 PM)

Start Time	Hillside Avenue Eastbound						Hillside Avenue Westbound						Prospect Avenue Northbound						Prospect Avenue Southbound						
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
5:00 PM	0	4	0	5	0	9	0	6	11	17	0	34	0	3	40	0	1	43	0	0	74	3	0	77	163
5:15 PM	0	5	0	3	1	8	0	4	14	12	0	30	0	6	52	0	0	58	0	0	80	5	1	85	181
5:30 PM	0	8	0	6	1	14	0	2	8	14	0	24	0	0	47	0	0	47	0	0	84	4	0	88	173
5:45 PM	0	7	0	14	0	21	0	10	15	17	1	42	0	0	31	0	1	31	0	0	53	1	1	54	148
Total	0	24	0	28	2	52	0	22	48	60	1	130	0	9	170	0	2	179	0	0	291	13	2	304	665
Approach %	0.0	46.2	0.0	53.8	-	-	0.0	16.9	36.9	46.2	-	-	0.0	5.0	95.0	0.0	-	-	0.0	0.0	95.7	4.3	-	-	-
Total %	0.0	3.6	0.0	4.2	-	7.8	0.0	3.3	7.2	9.0	-	19.5	0.0	1.4	25.6	0.0	-	26.9	0.0	0.0	43.8	2.0	-	45.7	-
PHF	0.000	0.750	0.000	0.500	-	0.619	0.000	0.550	0.800	0.882	-	0.774	0.000	0.375	0.817	0.000	-	0.772	0.000	0.000	0.866	0.650	-	0.864	0.919
Lights	0	24	0	28	-	52	0	22	46	60	-	128	0	9	168	0	-	177	0	0	288	13	-	301	658
% Lights	-	100.0	-	100.0	-	100.0	-	100.0	95.8	100.0	-	98.5	-	100.0	98.8	-	-	98.9	-	-	99.0	100.0	-	99.0	98.9
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Buses	-	0.0	-	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	-	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	0	0	2	0	-	2	3
% Single-Unit Trucks	-	0.0	-	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.6	-	-	0.6	-	-	0.7	0.0	-	0.7	0.5
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	-	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	-	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	0	0	-	0	0	0	2	0	-	2	0	0	1	0	-	1	0	0	1	0	-	1	4
% Bicycles on Road	-	0.0	-	0.0	-	0.0	-	0.0	4.2	0.0	-	1.5	-	0.0	0.6	-	-	0.6	-	-	0.3	0.0	-	0.3	0.6
Pedestrians	-	-	-	-	2	-	-	-	-	-	1	-	-	-	-	-	2	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

Site Plan



SITE DATA	
Lot / Parcel Area	1.18 Ac.
Proposed Open Space (115.8' x 29.6')	0.08 Ac.
Yard Summary	
Front (Duane Street)	10' Min.
Side (Prospect Avenue)	8' Min.
Side (Melrose Avenue)	17.81' Min.
Rear	20.74' Min.
Land Coverage	
Existing Conditions	
Impervious Area	0.72 Ac.
Pervious Area	0.46 Ac.
Proposed Conditions	
Impervious Area	0.58 Ac.
Pervious Area	0.60 Ac.

PARKING SUMMARY	
Interior Parking	
Standard Stalls	46
Accessible Stalls	2
Exterior Parking	
Regular Stalls	32
Handicapped Stalls	2
TOTAL PARKING STALLS	82

BUILDING DATA			
Building Area SF	Residential Area	Common Area	Total Floor Area
Garage	---	---	19,389
Level 1	15,680	3,421	19,101
Level 2	15,900	3,193	19,093
Level 3	16,188	2,548	18,736
Level 4	16,188	2,501	18,689
Total Floor Area			95,008

Building Height Max = 55 ft + 5 ft (min. 75% parking at lowest level) = 60 ft above average grade
Actual Building Height = Highest ridge + 812.5 - 744.1 (Ave Exist Grade) = 68.65 ft total height

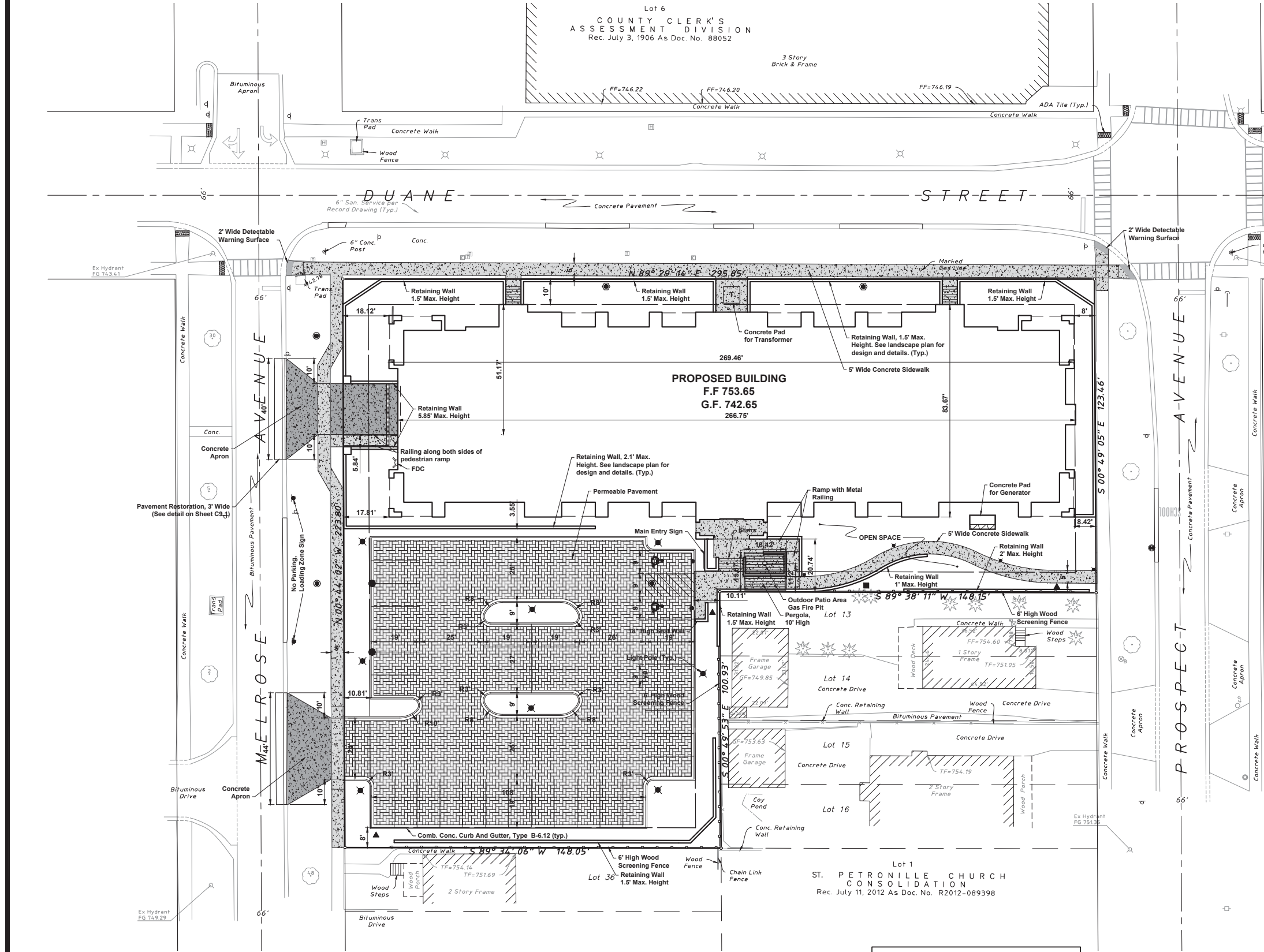
DENSITY CALCULATIONS			
Land Area (Ac.)	1.179		
Total Units	48		
Unit Mix			
	Units	Units / Acre	Units / Unit
1 Bedroom	4	3	0.08
1 Bedroom + Den	4	3	0.08
2 Bedroom	26	22	0.54
2 Bedroom + Den	14	12	0.29
Total Units	48	41	1.00
Total Bedrooms			
Area (Not Rentable SF)	60,188	51,037	1,254
Area (Gross SF)	75,619	64,122	1,575

FAR
Total Land Area = 51,370 SF
Total Floor Area = 95,008 SF
F.A.R. = 1.47

UNIT MATRIX					
	Units	NSF (SF)	GSF (SF)	Total NSF	Total GSF
1 Bedroom Units					
1 Bed / 1 Bath (ANSI-B)	3	809	868	2,427	2,604
1 Bed / 1 Bath (IAC)	1	809	868	809	868
1 Bed / 1 Bath / 1 Den (ANSI-B)	3	938	1,012	2,814	3,036
1 Bed / 1 Bath / 1 Den (IAC)	1	938	1,012	938	1,012
Total 1 Bedroom	8			6,988	7,520
2 Bedroom Units					
2 Bed / 2 Bath (ANSI-B)	13	1,281	1,360	16,653	17,680
2 Bed / 2 Bath (IAC)	4	1,281	1,360	5,124	5,440
2 Bed / 2 Bath (ANSI-A)	1	1,281	1,360	1,281	1,360
2 Bed / 2 Bath / Sitting (ANSI-B)	5	1,381	1,470	6,905	7,350
2 Bed / 2 Bath / Sitting (IAC)	1	1,381	1,470	1,381	1,470
2 Bed / 2 Bath / Dining (ANSI-B)	8	1,205	1,277	9,640	10,216
2 Bed / 2 Bath / Dining / Den (ANSI-B)	6	1,527	1,615	9,162	9,690
2 Bed / 2 Bath / Dining / Den (IAC)	2	1,527	1,615	3,054	3,230
Total 2 Bedroom	40			53,200	56,436

Notes:
1. Metrics shown are from plans by BSB Design plans.
2. NSF measured at interior face of gyp board at perimeter of unit.
3. GSF measured to exterior face of stud at exterior and corridor walls and to center of demising walls.

PAVING LEGEND	
	PERMEABLE PAVEMENT - Permeable Pavers 2" Bedding, CA-16 12" Aggregate Base Course, CA-7
	CONCRETE DRIVEWAY APRON 8" Portland Cement Concrete (Class PV) 2" Aggregate Base Course, CA-6, Gr 8 or Gr 9
	CONCRETE SIDEWALK - STANDARD 5" Portland Cement Concrete (Class SI) 2" Aggregate Base Course, CA-6, Crushed
	CONCRETE SIDEWALK - THROUGH DRIVEWAYS 8" Portland Cement Concrete (Class SI) 2" Aggregate Base Course, CA-6, Crushed



HAEGER ENGINEERING
Attachment: 21. Traffic Impact Study (4023 : Avere on Duane - PUD, SUP, ZMA, SV)
PUD SITE PLAN
SITE IMPROVEMENT PLANS
GLEN ELYN, ILLINOIS

Project # K M L
Engineer K M L
Date: 03-22-2019
Project No. 17189
Sheet 17 of 17

CMAP 2040 Projections Letter



Chicago Metropolitan Agency for Planning

233 South Wacker Drive
Suite 800
Chicago, Illinois 60606

312 454 0400
www.cmap.illinois.gov

October 5, 2018

Elise Purguette
Consultant
Kenig, Lindgren, O'Hara and Aboona, Inc.
9575 West Higgins Road
Suite 400
Rosemont, IL 60018

Subject: Prospect Avenue from Hillside Avenue and Duane Street
IDOT

Dear Ms. Purguette:

In response to a request made on your behalf and dated October 4, 2018, we have developed year 2040 average daily traffic (ADT) projections for the subject location.

ROAD SEGMENT	Current ADT	Year 2040 ADT
Prospect Ave fr Hillside Ave to Duane St	3,950	4,700

Traffic projections are developed using existing ADT data provided in the request letter and the results from the March 2018 CMAP Travel Demand Analysis. The regional travel model uses CMAP 2040 socioeconomic projections and assumes the implementation of the GO TO 2040 Comprehensive Regional Plan for the Northeastern Illinois area. The provision of this data in support of your request does not constitute a CMAP endorsement of the proposed development or any subsequent developments.

If you have any questions, please call me at (312) 386-8806.

Sincerely,

Jose Rodriguez, PTP, AICP
Senior Planner, Research & Analysis

cc: Quigley (IDOT)
S:\AdminGroups\ResearchAnalysis\2018cy_TrafficForecasts\GlenEllyn\du-48-18\du-48-18.docx

Attachment: 21. Traffic Impact Study (4023 : Avere on Duane - PUD, SUP, ZMA, SV)

Level of Service Criteria

LEVEL OF SERVICE CRITERIA

Signalized Intersections		
Level of Service	Interpretation	Average Control Delay (seconds per vehicle)
A	Favorable progression. Most vehicles arrive during the green indication and travel through the intersection without stopping.	≤10
B	Good progression, with more vehicles stopping than for Level of Service A.	>10 - 20
C	Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear. Number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.	>20 - 35
D	The volume-to-capacity ratio is high and either progression is ineffective or the cycle length is too long. Many vehicles stop and individual cycle failures are noticeable.	>35 - 55
E	Progression is unfavorable. The volume-to-capacity ratio is high and the cycle length is long. Individual cycle failures are frequent.	>55 - 80
F	The volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.	>80.0
Unsignalized Intersections		
Level of Service	Average Total Delay (SEC/VEH)	
A	0 - 10	
B	> 10 - 15	
C	> 15 - 25	
D	> 25 - 35	
E	> 35 - 50	
F	> 50	

Source: *Highway Capacity Manual*, 2010.

Capacity Analysis Summary Sheets

HCM 6th TWSC

1: MELROSE AVENUE & DUANE STREET

12/05/2018

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	158	2	1	159	0	12	0	15	8	4	5
Future Vol, veh/h	0	158	2	1	159	0	12	0	15	8	4	5
Conflicting Peds, #/hr	0	0	2	2	0	1	2	0	6	6	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	4	0	0	1	0	0	0	0	0	0	20
Mvmt Flow	0	186	2	1	187	0	14	0	18	9	5	6
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	190	0	0	386	378	195	391	379	189
Stage 1	-	-	-	-	-	-	189	189	-	189	189	-
Stage 2	-	-	-	-	-	-	197	189	-	202	190	-
Critical Hdwy	-	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.4
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	-	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.48
Pot Cap-1 Maneuver	0	-	-	1396	-	0	576	557	851	572	556	809
Stage 1	0	-	-	-	-	0	817	748	-	817	748	-
Stage 2	0	-	-	-	-	0	809	748	-	805	747	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	1393	-	-	566	555	845	557	554	807
Mov Cap-2 Maneuver	-	-	-	-	-	-	566	555	-	557	554	-
Stage 1	-	-	-	-	-	-	817	747	-	817	747	-
Stage 2	-	-	-	-	-	-	796	747	-	784	746	-
Approach	EB		WB				NB			SB		
HCM Control Delay, s	0		0				10.4			11		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	SBLn1	SBLn2					
Capacity (veh/h)	693	-	-	1393	-	557	671					
HCM Lane V/C Ratio	0.046	-	-	0.001	-	0.017	0.016					
HCM Control Delay (s)	10.4	-	-	7.6	0	11.6	10.5					
HCM Lane LOS	B	-	-	A	A	B	B					
HCM 95th %tile Q(veh)	0.1	-	-	0	-	0.1	0					

18-172 - Proposed AVERE on Duane Development - Glen Ellyn
Existing AM Peak Hour

Synchro 10 Report

Attachment: 21. Traffic Impact Study (4023 : Avere on Duane - PUD, SUP, ZMA, SV)

Intersection Capacity Utilization 2: PROSPECT AVENUE & DUANE STREET

12/05/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (vph)	134	40	6	5	39	60	12	267	31	106	221	108
Pedestrians	14		8	8		14	8		8	8		8
Ped Button		Yes			Yes			Yes			Yes	
Pedestrian Timing (s)		16.0			16.0			16.0			16.0	
Free Right			No			No			No			No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	180	0	0	104	0	0	310	0	0	435	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.96	0.85	0.95	0.91	0.85	0.95	0.98	0.85	0.95	0.95	0.85
Saturated Flow (vph)	0	1820	0	0	1731	0	0	1868	0	0	1807	0
Ped Intf Time (s)	0.0	0.0	1.0	0.0	1.0	1.7	0.0	0.1	1.0	0.0	0.3	1.0
Pedestrian Frequency (%)		0.23			0.37			0.23			0.23	
Protected Option Allowed		No			No			No			No	
Reference Time (s)			0.0			0.0			0.0			0.0
Adj Reference Time (s)			0.0			0.0			0.0			0.0
Permitted Option												
Adj Saturation A (vph)	0	269		0	1758		0	1805		0	642	
Reference Time A (s)	0.0	80.4		0.0	8.1		0.0	20.7		0.0	81.6	
Adj Saturation B (vph)	0	0		0	0		NA	NA		NA	NA	
Reference Time B (s)	16.9	19.9		8.3	16.2		NA	NA		NA	NA	
Reference Time (s)		19.9			8.1			20.7			81.6	
Adj Reference Time (s)		23.9			15.0			24.7			85.6	
Split Option												
Ref Time Combined (s)	0.0	11.9		0.0	8.2		0.0	20.0		0.0	29.1	
Ref Time Seperate (s)	8.9	2.6		0.3	3.7		0.8	17.2		7.0	14.9	
Reference Time (s)	11.9	11.9		8.2	8.2		20.0	20.0		29.1	29.1	
Adj Reference Time (s)	16.9	16.9		15.1	15.1		24.0	24.0		33.1	33.1	
Summary	EB WB		NB SB		Combined							
Protected Option (s)	NA		NA									
Permitted Option (s)	23.9		85.6									
Split Option (s)	32.0		57.2									
Minimum (s)	23.9		57.2		81.1							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization			67.5%		ICU Level of Service					C		
Reference Times and Phasing Options do not represent an optimized timing plan.												

HCM 6th TWSC

3: HILLSIDE AVENUE & MELROSE AVENUE

12/05/2018

Intersection						
Int Delay, s/veh	1.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	30	35	19	6	5
Future Vol, veh/h	4	30	35	19	6	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	20	9	6	5	0	0
Mvmt Flow	5	39	46	25	8	7
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	71	0	-	0	108	59
Stage 1	-	-	-	-	59	-
Stage 2	-	-	-	-	49	-
Critical Hdwy	4.3	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.38	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1422	-	-	-	894	1012
Stage 1	-	-	-	-	969	-
Stage 2	-	-	-	-	979	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1422	-	-	-	890	1012
Mov Cap-2 Maneuver	-	-	-	-	890	-
Stage 1	-	-	-	-	965	-
Stage 2	-	-	-	-	979	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.9	0		8.9		
HCM LOS				A		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1422	-	-	-	942	
HCM Lane V/C Ratio	0.004	-	-	-	0.015	
HCM Control Delay (s)	7.5	0	-	-	8.9	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0	

HCM 6th AWSC

4: PROSPECT AVENUE & HILLSIDE AVENUE

12/05/2018

Intersection	
Intersection Delay, s/veh	10.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	0	19	80	28	62	15	181	0	0	227	12
Future Vol, veh/h	21	0	19	80	28	62	15	181	0	0	227	12
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	0	0	5	1	7	3	0	1	0	0	1	0
Mvmt Flow	26	0	24	100	35	78	19	226	0	0	284	15
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB	WB		NB		SB						
Opposing Approach	WB	EB		SB		NB						
Opposing Lanes	1	1		1		1						
Conflicting Approach Left	SB	NB		EB		WB						
Conflicting Lanes Left	1	1		1		1						
Conflicting Approach Right	NB	SB		WB		EB						
Conflicting Lanes Right	1	1		1		1						
HCM Control Delay	8.9	10.6		10.6		11.3						
HCM LOS	A	B		B		B						

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	53%	47%	0%
Vol Thru, %	92%	0%	16%	95%
Vol Right, %	0%	47%	36%	5%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	196	40	170	239
LT Vol	15	21	80	0
Through Vol	181	0	28	227
RT Vol	0	19	62	12
Lane Flow Rate	245	50	212	299
Geometry Grp	1	1	1	1
Degree of Util (X)	0.338	0.076	0.31	0.404
Departure Headway (Hd)	5.069	5.468	5.249	4.973
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	713	658	689	729
Service Time	3.069	3.476	3.249	2.973
HCM Lane V/C Ratio	0.344	0.076	0.308	0.41
HCM Control Delay	10.6	8.9	10.6	11.3
HCM Lane LOS	B	A	B	B
HCM 95th-tile Q	1.5	0.2	1.3	2

HCM 6th TWSC

1: MELROSE AVENUE & DUANE STREET

12/05/2018

Intersection												
Int Delay, s/veh	2.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	124	6	0	136	0	10	0	5	34	11	11
Future Vol, veh/h	0	124	6	0	136	0	10	0	5	34	11	11
Conflicting Peds, #/hr	0	0	4	4	0	13	4	0	5	5	0	4
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	0	1	0	10	0	0	3	0	0
Mvmt Flow	0	141	7	0	155	0	11	0	6	39	13	13
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	152	0	0	321	304	154	308	307	159
Stage 1	-	-	-	-	-	-	149	149	-	155	155	-
Stage 2	-	-	-	-	-	-	172	155	-	153	152	-
Critical Hdwy	-	-	-	4.1	-	-	7.2	6.5	6.2	7.13	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.2	5.5	-	6.13	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.2	5.5	-	6.13	5.5	-
Follow-up Hdwy	-	-	-	2.2	-	-	3.59	4	3.3	3.527	4	3.3
Pot Cap-1 Maneuver	0	-	-	1441	-	0	617	613	897	642	610	892
Stage 1	0	-	-	-	-	0	835	778	-	845	773	-
Stage 2	0	-	-	-	-	0	811	773	-	847	775	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	1436	-	-	594	611	889	635	608	889
Mov Cap-2 Maneuver	-	-	-	-	-	-	594	611	-	635	608	-
Stage 1	-	-	-	-	-	-	835	775	-	845	773	-
Stage 2	-	-	-	-	-	-	784	773	-	838	772	-
Approach	EB		WB				NB		SB			
HCM Control Delay, s	0		0				10.5		10.7			
HCM LOS							B		B			
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	SBLn1	SBLn2					
Capacity (veh/h)	668	-	-	1436	-	635	722					
HCM Lane V/C Ratio	0.026	-	-	-	-	0.061	0.035					
HCM Control Delay (s)	10.5	-	-	0	-	11	10.2					
HCM Lane LOS	B	-	-	A	-	B	B					
HCM 95th %tile Q(veh)	0.1	-	-	0	-	0.2	0.1					

18-172 - Proposed AVERE on Duane Development - Glen Ellyn
Existing AFT Peak Hour

Synchro 10 Report

Attachment: 21. Traffic Impact Study (4023 : Avere on Duane - PUD, SUP, ZMA, SV)

Intersection Capacity Utilization 2: PROSPECT AVENUE & DUANE STREET

12/05/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Volume (vph)	98	42	15	10	31	97	10	244	17	59	196	96
Pedestrians	12		8	8		12	9		16	16		9
Ped Button		Yes			Yes			Yes			Yes	
Pedestrian Timing (s)		16.0			16.0			16.0			16.0	
Free Right			No			No			No			No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	155	0	0	138	0	0	271	0	0	351	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.95	0.85	0.95	0.89	0.85	0.95	0.99	0.85	0.95	0.95	0.85
Saturated Flow (vph)	0	1813	0	0	1694	0	0	1879	0	0	1807	0
Ped Intf Time (s)	0.0	0.1	1.0	0.0	1.0	1.5	0.0	0.1	1.9	0.0	0.3	1.1
Pedestrian Frequency (%)		0.23			0.33			0.41			0.26	
Protected Option Allowed		No			No			No			No	
Reference Time (s)			0.0			0.0			0.0			0.0
Adj Reference Time (s)			0.0			0.0			0.0			0.0
Permitted Option												
Adj Saturation A (vph)	0	379		0	1714		0	1773		0	814	
Reference Time A (s)	0.0	49.2		0.0	10.7		0.0	18.5		0.0	52.0	
Adj Saturation B (vph)	NA	NA		0	0		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		8.7	18.8		NA	NA		NA	NA	
Reference Time (s)		49.2			10.7			18.5			52.0	
Adj Reference Time (s)		53.2			16.4			22.5			56.0	
Split Option												
Ref Time Combined (s)	0.0	10.4		0.0	10.8		0.0	17.4		0.0	23.6	
Ref Time Seperate (s)	6.5	2.9		0.7	3.2		0.7	15.7		3.9	13.3	
Reference Time (s)	10.4	10.4		10.8	10.8		17.4	17.4		23.6	23.6	
Adj Reference Time (s)	15.7	15.7		16.5	16.5		21.4	21.4		27.6	27.6	
Summary	EB WB		NB SB		Combined							
Protected Option (s)	NA		NA									
Permitted Option (s)	53.2		56.0									
Split Option (s)	32.2		49.1									
Minimum (s)	32.2		49.1		81.2							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization			67.7%		ICU Level of Service					C		
Reference Times and Phasing Options do not represent an optimized timing plan.												

HCM 6th TWSC

3: HILLSIDE AVENUE & MELROSE AVENUE

12/05/2018

Intersection						
Int Delay, s/veh	2.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	28	41	11	18	6
Future Vol, veh/h	6	28	41	11	18	6
Conflicting Peds, #/hr	6	0	0	6	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	17	4	3	0	0	17
Mvmt Flow	8	35	52	14	23	8
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	72	0	-	0	117	65
Stage 1	-	-	-	-	65	-
Stage 2	-	-	-	-	52	-
Critical Hdwy	4.27	-	-	-	6.4	6.37
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.353	-	-	-	3.5	3.453
Pot Cap-1 Maneuver	1438	-	-	-	884	959
Stage 1	-	-	-	-	963	-
Stage 2	-	-	-	-	976	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1430	-	-	-	868	954
Mov Cap-2 Maneuver	-	-	-	-	868	-
Stage 1	-	-	-	-	951	-
Stage 2	-	-	-	-	970	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.3	0		9.2		
HCM LOS				A		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1430	-	-	-	888	
HCM Lane V/C Ratio	0.005	-	-	-	0.034	
HCM Control Delay (s)	7.5	0	-	-	9.2	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0.1	

HCM 6th AWSC

4: PROSPECT AVENUE & HILLSIDE AVENUE

12/05/2018

Intersection	
Intersection Delay, s/veh	9.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	21	0	24	38	27	55	13	169	0	0	213	10
Future Vol, veh/h	21	0	24	38	27	55	13	169	0	0	213	10
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	5	0	0	5	0	4	8	2	0	0	1	0
Mvmt Flow	25	0	29	46	33	66	16	204	0	0	257	12
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.6	9.3	10	10.2
HCM LOS	A	A	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	7%	47%	32%	0%
Vol Thru, %	93%	0%	23%	96%
Vol Right, %	0%	53%	46%	4%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	182	45	120	223
LT Vol	13	21	38	0
Through Vol	169	0	27	213
RT Vol	0	24	55	10
Lane Flow Rate	219	54	145	269
Geometry Grp	1	1	1	1
Degree of Util (X)	0.296	0.077	0.2	0.347
Departure Headway (Hd)	4.861	5.109	4.988	4.654
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	735	695	714	768
Service Time	2.92	3.188	3.055	2.709
HCM Lane V/C Ratio	0.298	0.078	0.203	0.35
HCM Control Delay	10	8.6	9.3	10.2
HCM Lane LOS	A	A	A	B
HCM 95th-tile Q	1.2	0.2	0.7	1.6

Attachment: 21. Traffic Impact Study (4023 : Avere on Duane - PUD, SUP, ZMA, SV)

HCM 6th TWSC

1: MELROSE AVENUE & DUANE STREET

12/05/2018

Intersection

Int Delay, s/veh 2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↱			↱			↱		↱	↱	
Traffic Vol, veh/h	0	166	11	9	188	0	9	0	4	47	14	14
Future Vol, veh/h	0	166	11	9	188	0	9	0	4	47	14	14
Conflicting Peds, #/hr	1	0	0	0	0	1	2	0	6	6	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	1	0	0	1	0	0	0	0	0	7	0
Mvmt Flow	0	177	12	10	200	0	10	0	4	50	15	15

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	189	0	0	420	403	189	411	409	202
Stage 1	-	-	-	-	-	-	183	183	-	220	220	-
Stage 2	-	-	-	-	-	-	237	220	-	191	189	-
Critical Hdwy	-	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.57	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.57	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.57	-
Follow-up Hdwy	-	-	-	2.2	-	-	3.5	4	3.3	3.5	4.063	3.3
Pot Cap-1 Maneuver	0	-	-	1397	-	0	547	539	858	555	524	844
Stage 1	0	-	-	-	-	0	823	752	-	787	712	-
Stage 2	0	-	-	-	-	0	771	725	-	815	734	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	1397	-	-	521	535	853	546	520	842
Mov Cap-2 Maneuver	-	-	-	-	-	-	521	535	-	546	520	-
Stage 1	-	-	-	-	-	-	823	752	-	787	706	-
Stage 2	-	-	-	-	-	-	734	719	-	806	734	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.3	11.2	11.8
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	592	-	-	1397	-	546	643
HCM Lane V/C Ratio	0.023	-	-	0.007	-	0.092	0.046
HCM Control Delay (s)	11.2	-	-	7.6	0	12.3	10.9
HCM Lane LOS	B	-	-	A	A	B	B
HCM 95th %tile Q(veh)	0.1	-	-	0	-	0.3	0.1

18-172 - Proposed AVERE on Duane Development - Glen Ellyn
Existing PM Peak Hour

Synchro 10 Report

Attachment: 21. Traffic Impact Study (4023 : Avere on Duane - PUD, SUP, ZMA, SV)

Intersection Capacity Utilization 2: PROSPECT AVENUE & DUANE STREET

12/05/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (vph)	138	61	14	7	47	85	6	232	14	63	290	142
Pedestrians	2		4	4		2	12		10	10		12
Ped Button		Yes			Yes			Yes			Yes	
Pedestrian Timing (s)		16.0			16.0			16.0			16.0	
Free Right			No			No			No			No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	213	0	0	139	0	0	252	0	0	495	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.96	0.85	0.95	0.91	0.85	0.95	0.99	0.85	0.95	0.95	0.85
Saturated Flow (vph)	0	1820	0	0	1721	0	0	1882	0	0	1807	0
Ped Intf Time (s)	0.0	0.0	0.5	0.0	0.2	0.3	0.0	0.1	1.2	0.0	0.4	1.5
Pedestrian Frequency (%)		0.12			0.06			0.28			0.33	
Protected Option Allowed		No			No			No			No	
Reference Time (s)			0.0			0.0			0.0			0.0
Adj Reference Time (s)			0.0			0.0			0.0			0.0
Permitted Option												
Adj Saturation A (vph)	0	312		0	1740		0	1788		0	856	
Reference Time A (s)	0.0	82.1		0.0	9.7		0.0	17.0		0.0	69.8	
Adj Saturation B (vph)	NA	NA		0	0		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		8.5	17.9		NA	NA		NA	NA	
Reference Time (s)		82.1			9.7			17.0			69.8	
Adj Reference Time (s)		86.1			14.2			21.0			73.8	
Split Option												
Ref Time Combined (s)	0.0	14.1		0.0	9.9		0.0	16.1		0.0	33.3	
Ref Time Seperate (s)	9.2	4.0		0.5	3.4		0.4	14.8		4.2	19.7	
Reference Time (s)	14.1	14.1		9.9	9.9		16.1	16.1		33.3	33.3	
Adj Reference Time (s)	18.3	18.3		14.2	14.2		20.1	20.1		37.3	37.3	
Summary	EB WB		NB SB		Combined							
Protected Option (s)	NA		NA									
Permitted Option (s)	86.1		73.8									
Split Option (s)	32.6		57.4									
Minimum (s)	32.6		57.4		90.0							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization			75.0%		ICU Level of Service					D		
Reference Times and Phasing Options do not represent an optimized timing plan.												

HCM 6th TWSC

3: HILLSIDE AVENUE & MELROSE AVENUE

12/05/2018

Intersection						
Int Delay, s/veh	2.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	34	59	16	26	10
Future Vol, veh/h	1	34	59	16	26	10
Conflicting Peds, #/hr	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	72	72	72	72	72	72
Heavy Vehicles, %	0	0	5	0	0	9
Mvmt Flow	1	47	82	22	36	14
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	104	0	-	0	142	94
Stage 1	-	-	-	-	93	-
Stage 2	-	-	-	-	49	-
Critical Hdwy	4.1	-	-	-	6.4	6.29
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.381
Pot Cap-1 Maneuver	1500	-	-	-	856	944
Stage 1	-	-	-	-	936	-
Stage 2	-	-	-	-	979	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1500	-	-	-	855	943
Mov Cap-2 Maneuver	-	-	-	-	855	-
Stage 1	-	-	-	-	935	-
Stage 2	-	-	-	-	979	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.2	0		9.3		
HCM LOS				A		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1500	-	-	-	878	
HCM Lane V/C Ratio	0.001	-	-	-	0.057	
HCM Control Delay (s)	7.4	0	-	-	9.3	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0.2	

HCM 6th AWSC

4: PROSPECT AVENUE & HILLSIDE AVENUE

12/05/2018

Intersection

Intersection Delay, s/veh	10.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	26	0	32	22	46	60	9	169	0	0	290	13
Future Vol, veh/h	26	0	32	22	46	60	9	169	0	0	290	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	0	0	4	0	0	1	0	0	1	0
Mvmt Flow	28	0	35	24	50	65	10	184	0	0	315	14
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.7	9.2	9.5	11.1
HCM LOS	A	A	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	45%	17%	0%
Vol Thru, %	95%	0%	36%	96%
Vol Right, %	0%	55%	47%	4%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	178	58	128	303
LT Vol	9	26	22	0
Through Vol	169	0	46	290
RT Vol	0	32	60	13
Lane Flow Rate	193	63	139	329
Geometry Grp	1	1	1	1
Degree of Util (X)	0.258	0.089	0.191	0.423
Departure Headway (Hd)	4.794	5.066	4.946	4.622
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	745	700	719	774
Service Time	2.858	3.15	3.019	2.679
HCM Lane V/C Ratio	0.259	0.09	0.193	0.425
HCM Control Delay	9.5	8.7	9.2	11.1
HCM Lane LOS	A	A	A	B
HCM 95th-tile Q	1	0.3	0.7	2.1

Attachment: 21. Traffic Impact Study (4023 : Avere on Duane - PUD, SUP, ZMA, SV)

HCM 6th TWSC

1: MELROSE AVENUE & DUANE STREET

12/05/2018

Intersection												
Int Delay, s/veh	1.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	166	3	3	169	0	14	0	20	8	4	5
Future Vol, veh/h	0	166	3	3	169	0	14	0	20	8	4	5
Conflicting Peds, #/hr	0	0	2	2	0	1	2	0	6	6	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	4	0	0	1	0	0	0	0	0	0	20
Mvmt Flow	0	195	4	4	199	0	16	0	24	9	5	6
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	201	0	0	414	406	205	422	408	201
Stage 1	-	-	-	-	-	-	199	199	-	207	207	-
Stage 2	-	-	-	-	-	-	215	207	-	215	201	-
Critical Hdwy	-	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.4
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	-	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.48
Pot Cap-1 Maneuver	0	-	-	1383	-	0	552	537	841	546	536	796
Stage 1	0	-	-	-	-	0	807	740	-	800	734	-
Stage 2	0	-	-	-	-	0	792	734	-	792	739	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	1380	-	-	541	534	835	526	533	794
Mov Cap-2 Maneuver	-	-	-	-	-	-	541	534	-	526	533	-
Stage 1	-	-	-	-	-	-	807	739	-	800	732	-
Stage 2	-	-	-	-	-	-	777	732	-	765	738	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	0		0.1			10.6			11.3			
HCM LOS						B			B			
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	SBLn1	SBLn2					
Capacity (veh/h)	682	-	-	1380	-	526	652					
HCM Lane V/C Ratio	0.059	-	-	0.003	-	0.018	0.016					
HCM Control Delay (s)	10.6	-	-	7.6	0	12	10.6					
HCM Lane LOS	B	-	-	A	A	B	B					
HCM 95th %tile Q(veh)	0.2	-	-	0	-	0.1	0					

Intersection Capacity Utilization 2: PROSPECT AVENUE & DUANE STREET

12/05/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Volume (vph)	145	43	6	5	43	63	13	280	32	111	221	115
Pedestrians	14		8	8		14	8		8	8		8
Ped Button		Yes			Yes			Yes			Yes	
Pedestrian Timing (s)		16.0			16.0			16.0			16.0	
Free Right			No			No			No			No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	194	0	0	111	0	0	325	0	0	447	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.96	0.85	0.95	0.91	0.85	0.95	0.98	0.85	0.95	0.95	0.85
Saturated Flow (vph)	0	1821	0	0	1734	0	0	1868	0	0	1804	0
Ped Intf Time (s)	0.0	0.0	1.0	0.0	1.0	1.7	0.0	0.1	1.0	0.0	0.3	1.0
Pedestrian Frequency (%)		0.23			0.37			0.23			0.23	
Protected Option Allowed		No			No			No			No	
Reference Time (s)			0.0			0.0			0.0			0.0
Adj Reference Time (s)			0.0			0.0			0.0			0.0
Permitted Option												
Adj Saturation A (vph)	0	261		0	1759		0	1805		0	639	
Reference Time A (s)	0.0	89.3		0.0	8.5		0.0	21.7		0.0	84.1	
Adj Saturation B (vph)	0	0		0	0		NA	NA		NA	NA	
Reference Time B (s)	17.6	20.8		8.3	16.6		NA	NA		NA	NA	
Reference Time (s)		20.8			8.5			21.7			84.1	
Adj Reference Time (s)		24.8			15.3			25.7			88.1	
Split Option												
Ref Time Combined (s)	0.0	12.8		0.0	8.6		0.0	21.0		0.0	30.0	
Ref Time Seperate (s)	9.6	2.8		0.3	3.9		0.9	18.1		7.4	15.0	
Reference Time (s)	12.8	12.8		8.6	8.6		21.0	21.0		30.0	30.0	
Adj Reference Time (s)	17.6	17.6		15.4	15.4		25.0	25.0		34.0	34.0	
Summary	EB WB		NB SB		Combined							
Protected Option (s)	NA		NA									
Permitted Option (s)	24.8		88.1									
Split Option (s)	32.9		59.0									
Minimum (s)	24.8		59.0		83.8							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization			69.8%		ICU Level of Service					C		
Reference Times and Phasing Options do not represent an optimized timing plan.												

HCM 6th TWSC

3: HILLSIDE AVENUE & MELROSE AVENUE

12/05/2018

Intersection						
Int Delay, s/veh	1.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	31	37	21	10	6
Future Vol, veh/h	4	31	37	21	10	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	20	9	6	5	0	0
Mvmt Flow	5	41	49	28	13	8
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	77	0	-	0	114	63
Stage 1	-	-	-	-	63	-
Stage 2	-	-	-	-	51	-
Critical Hdwy	4.3	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.38	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1415	-	-	-	887	1007
Stage 1	-	-	-	-	965	-
Stage 2	-	-	-	-	977	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1415	-	-	-	883	1007
Mov Cap-2 Maneuver	-	-	-	-	883	-
Stage 1	-	-	-	-	961	-
Stage 2	-	-	-	-	977	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.9	0		9		
HCM LOS				A		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1415	-	-	-	926	
HCM Lane V/C Ratio	0.004	-	-	-	0.023	
HCM Control Delay (s)	7.6	0	-	-	9	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0.1	

HCM 6th AWSC

4: PROSPECT AVENUE & HILLSIDE AVENUE

12/05/2018

Intersection	
Intersection Delay, s/veh	11.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	22	1	23	84	29	65	17	190	0	0	238	13
Future Vol, veh/h	22	1	23	84	29	65	17	190	0	0	238	13
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	0	0	5	1	7	3	0	1	0	0	1	0
Mvmt Flow	28	1	29	105	36	81	21	238	0	0	298	16
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.2	11	11.2	12
HCM LOS	A	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	48%	47%	0%
Vol Thru, %	92%	2%	16%	95%
Vol Right, %	0%	50%	37%	5%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	207	46	178	251
LT Vol	17	22	84	0
Through Vol	190	1	29	238
RT Vol	0	23	65	13
Lane Flow Rate	259	58	222	314
Geometry Grp	1	1	1	1
Degree of Util (X)	0.37	0.089	0.331	0.44
Departure Headway (Hd)	5.151	5.569	5.353	5.048
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	699	642	672	715
Service Time	3.179	3.611	3.385	3.075
HCM Lane V/C Ratio	0.371	0.09	0.33	0.439
HCM Control Delay	11.2	9.2	11	12
HCM Lane LOS	B	A	B	B
HCM 95th-tile Q	1.7	0.3	1.4	2.3

Attachment: 21. Traffic Impact Study (4023 : Avere on Duane - PUD, SUP, ZMA, SV)

HCM 6th TWSC

5: MELROSE AVENUE & NORTH ACCESS DRIVE

12/07/2018

Intersection						
Int Delay, s/veh	1.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	4	29	1	2	8
Future Vol, veh/h	3	4	29	1	2	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	4	32	1	2	9
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	46	33	0	0	33	0
Stage 1	33	-	-	-	-	-
Stage 2	13	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	964	1041	-	-	1579	-
Stage 1	989	-	-	-	-	-
Stage 2	1010	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	963	1041	-	-	1579	-
Mov Cap-2 Maneuver	963	-	-	-	-	-
Stage 1	988	-	-	-	-	-
Stage 2	1010	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	8.6	0	1.5			
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	- 1006	1579	-		
HCM Lane V/C Ratio	-	- 0.008	0.001	-		
HCM Control Delay (s)	-	- 8.6	7.3	0		
HCM Lane LOS	-	- A	A	A		
HCM 95th %tile Q(veh)	-	- 0	0	-		

HCM 6th TWSC

6: MELROSE AVENUE & SOUTH ACCESS DRIVE

12/07/2018

Intersection						
Int Delay, s/veh	1.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	WT		WT		WT	
Traffic Vol, veh/h	2	4	26	0	1	10
Future Vol, veh/h	2	4	26	0	1	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	4	28	0	1	11
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	41	28	0	0	28	0
Stage 1	28	-	-	-	-	-
Stage 2	13	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	970	1047	-	-	1585	-
Stage 1	995	-	-	-	-	-
Stage 2	1010	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	969	1047	-	-	1585	-
Mov Cap-2 Maneuver	969	-	-	-	-	-
Stage 1	994	-	-	-	-	-
Stage 2	1010	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	8.6	0	0.7			
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	- 1020	1585	-		
HCM Lane V/C Ratio	-	- 0.006	0.001	-		
HCM Control Delay (s)	-	- 8.6	7.3	0		
HCM Lane LOS	-	- A	A	A		
HCM 95th %tile Q(veh)	-	- 0	0	-		

HCM 6th TWSC

1: MELROSE AVENUE & DUANE STREET

12/05/2018

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	130	8	5	144	0	17	0	8	37	12	12
Future Vol, veh/h	0	130	8	5	144	0	17	0	8	37	12	12
Conflicting Peds, #/hr	0	0	4	4	0	13	4	0	5	5	0	4
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	0	1	0	10	0	0	3	0	0
Mvmt Flow	0	148	9	6	164	0	19	0	9	42	14	14
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	161	0	0	351	333	162	338	337	168
Stage 1	-	-	-	-	-	-	157	157	-	176	176	-
Stage 2	-	-	-	-	-	-	194	176	-	162	161	-
Critical Hdwy	-	-	-	4.1	-	-	7.2	6.5	6.2	7.13	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.2	5.5	-	6.13	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.2	5.5	-	6.13	5.5	-
Follow-up Hdwy	-	-	-	2.2	-	-	3.59	4	3.3	3.527	4	3.3
Pot Cap-1 Maneuver	0	-	-	1430	-	0	589	590	888	614	587	881
Stage 1	0	-	-	-	-	0	827	772	-	823	757	-
Stage 2	0	-	-	-	-	0	790	757	-	838	769	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	1425	-	-	563	585	880	602	582	878
Mov Cap-2 Maneuver	-	-	-	-	-	-	563	585	-	602	582	-
Stage 1	-	-	-	-	-	-	827	769	-	823	753	-
Stage 2	-	-	-	-	-	-	757	753	-	825	766	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.3			10.9			11		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	SBLn1	SBLn2					
Capacity (veh/h)	636	-	-	1425	-	602	700					
HCM Lane V/C Ratio	0.045	-	-	0.004	-	0.07	0.039					
HCM Control Delay (s)	10.9	-	-	7.5	0	11.4	10.4					
HCM Lane LOS	B	-	-	A	A	B	B					
HCM 95th %tile Q(veh)	0.1	-	-	0	-	0.2	0.1					

Intersection Capacity Utilization 2: PROSPECT AVENUE & DUANE STREET

12/05/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Volume (vph)	105	45	18	10	35	102	10	256	18	62	205	105
Pedestrians	12		8	8		12	9		16	16		9
Ped Button		Yes			Yes			Yes			Yes	
Pedestrian Timing (s)		16.0			16.0			16.0			16.0	
Free Right			No			No			No			No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	168	0	0	147	0	0	284	0	0	372	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.95	0.85	0.95	0.89	0.85	0.95	0.99	0.85	0.95	0.95	0.85
Saturated Flow (vph)	0	1811	0	0	1696	0	0	1879	0	0	1804	0
Ped Intf Time (s)	0.0	0.1	1.0	0.0	1.0	1.5	0.0	0.1	1.9	0.0	0.3	1.1
Pedestrian Frequency (%)		0.23			0.33			0.41			0.26	
Protected Option Allowed		No			No			No			No	
Reference Time (s)			0.0			0.0			0.0			0.0
Adj Reference Time (s)			0.0			0.0			0.0			0.0
Permitted Option												
Adj Saturation A (vph)	0	370		0	1715		0	1777		0	806	
Reference Time A (s)	0.0	54.5		0.0	11.3		0.0	19.3		0.0	55.7	
Adj Saturation B (vph)	NA	NA		0	0		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		8.7	19.4		NA	NA		NA	NA	
Reference Time (s)		54.5			11.3			19.3			55.7	
Adj Reference Time (s)		58.5			16.9			23.3			59.7	
Split Option												
Ref Time Combined (s)	0.0	11.2		0.0	11.4		0.0	18.3		0.0	25.1	
Ref Time Seperate (s)	7.0	3.1		0.7	3.5		0.7	16.5		4.1	14.0	
Reference Time (s)	11.2	11.2		11.4	11.4		18.3	18.3		25.1	25.1	
Adj Reference Time (s)	16.4	16.4		16.9	16.9		22.3	22.3		29.1	29.1	
Summary	EB WB		NB SB		Combined							
Protected Option (s)	NA		NA									
Permitted Option (s)	58.5		59.7									
Split Option (s)	33.3		51.3									
Minimum (s)	33.3		51.3		84.6							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												

Intersection Summary

Intersection Capacity Utilization 70.5% ICU Level of Service C
Reference Times and Phasing Options do not represent an optimized timing plan.

HCM 6th TWSC

3: HILLSIDE AVENUE & MELROSE AVENUE

12/05/2018

Intersection						
Int Delay, s/veh	2.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	29	43	14	20	6
Future Vol, veh/h	6	29	43	14	20	6
Conflicting Peds, #/hr	6	0	0	6	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	17	4	3	0	0	17
Mvmt Flow	8	37	54	18	25	8
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	78	0	-	0	123	69
Stage 1	-	-	-	-	69	-
Stage 2	-	-	-	-	54	-
Critical Hdwy	4.27	-	-	-	6.4	6.37
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.353	-	-	-	3.5	3.453
Pot Cap-1 Maneuver	1431	-	-	-	877	954
Stage 1	-	-	-	-	959	-
Stage 2	-	-	-	-	974	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1423	-	-	-	861	949
Mov Cap-2 Maneuver	-	-	-	-	861	-
Stage 1	-	-	-	-	947	-
Stage 2	-	-	-	-	968	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.3	0		9.3		
HCM LOS				A		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1423	-	-	-	880	
HCM Lane V/C Ratio	0.005	-	-	-	0.037	
HCM Control Delay (s)	7.5	0	-	-	9.3	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0.1	

HCM 6th AWSC

4: PROSPECT AVENUE & HILLSIDE AVENUE

12/05/2018

Intersection												
Intersection Delay, s/veh	10.2											
Intersection LOS	B											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	22	0	26	40	28	58	16	177	0	0	233	10
Future Vol, veh/h	22	0	26	40	28	58	16	177	0	0	233	10
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	5	0	0	5	0	4	8	2	0	0	1	0
Mvmt Flow	27	0	31	48	34	70	19	213	0	0	281	12
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			1		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			1			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	1			1			1			1		
HCM Control Delay	8.8			9.6			10.3			10.7		
HCM LOS	A			A			B			B		
Lane	NBLn1	EBLn1	WBLn1	SBLn1								
Vol Left, %	8%	46%	32%	0%								
Vol Thru, %	92%	0%	22%	96%								
Vol Right, %	0%	54%	46%	4%								
Sign Control	Stop	Stop	Stop	Stop								
Traffic Vol by Lane	193	48	126	243								
LT Vol	16	22	40	0								
Through Vol	177	0	28	233								
RT Vol	0	26	58	10								
Lane Flow Rate	233	58	152	293								
Geometry Grp	1	1	1	1								
Degree of Util (X)	0.319	0.084	0.215	0.383								
Departure Headway (Hd)	4.932	5.215	5.088	4.712								
Convergence, Y/N	Yes	Yes	Yes	Yes								
Cap	723	679	698	758								
Service Time	3.003	3.311	3.168	2.779								
HCM Lane V/C Ratio	0.322	0.085	0.218	0.387								
HCM Control Delay	10.3	8.8	9.6	10.7								
HCM Lane LOS	B	A	A	B								
HCM 95th-tile Q	1.4	0.3	0.8	1.8								

Attachment: 21. Traffic Impact Study (4023 : Avere on Duane - PUD, SUP, ZMA, SV)

HCM 6th TWSC

5: MELROSE AVENUE & NORTH ACCESS DRIVE

12/07/2018

Intersection						
Int Delay, s/veh	1.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	2	20	1	4	21
Future Vol, veh/h	1	2	20	1	4	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	2	22	1	4	23
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	54	23	0	0	23	0
Stage 1	23	-	-	-	-	-
Stage 2	31	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	954	1054	-	-	1592	-
Stage 1	1000	-	-	-	-	-
Stage 2	992	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	951	1054	-	-	1592	-
Mov Cap-2 Maneuver	951	-	-	-	-	-
Stage 1	997	-	-	-	-	-
Stage 2	992	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	8.6	0	1.2			
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	1017	1592	-	
HCM Lane V/C Ratio	-	-	0.003	0.003	-	
HCM Control Delay (s)	-	-	8.6	7.3	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0	0	-	

Attachment: 21. Traffic Impact Study (4023 : Avere on Duane - PUD, SUP, ZMA, SV)

HCM 6th TWSC

6: MELROSE AVENUE & SOUTH ACCESS DRIVE

12/07/2018

Intersection						
Int Delay, s/veh	0.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	2	19	1	3	19
Future Vol, veh/h	0	2	19	1	3	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	2	21	1	3	21
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	49	22	0	0	22	0
Stage 1	22	-	-	-	-	-
Stage 2	27	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	960	1055	-	-	1593	-
Stage 1	1001	-	-	-	-	-
Stage 2	996	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	958	1055	-	-	1593	-
Mov Cap-2 Maneuver	958	-	-	-	-	-
Stage 1	999	-	-	-	-	-
Stage 2	996	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	8.4	0	1			
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	- 1055	1593	-		
HCM Lane V/C Ratio	-	- 0.002	0.002	-		
HCM Control Delay (s)	-	- 8.4	7.3	0		
HCM Lane LOS	-	- A	A	A		
HCM 95th %tile Q(veh)	-	- 0	0	-		

HCM 6th TWSC

1: MELROSE AVENUE & DUANE STREET

12/05/2018

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	174	14	15	200	0	11	0	8	47	15	14
Future Vol, veh/h	0	174	14	15	200	0	11	0	8	47	15	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	4	0	0	1	0	0	0	0	0	0	20
Mvmt Flow	0	205	16	18	235	0	13	0	9	55	18	16
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	221	0	0	501	484	213	489	492	235
Stage 1	-	-	-	-	-	-	213	213	-	271	271	-
Stage 2	-	-	-	-	-	-	288	271	-	218	221	-
Critical Hdwy	-	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.4
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	-	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.48
Pot Cap-1 Maneuver	0	-	-	1360	-	0	484	486	832	493	481	762
Stage 1	0	-	-	-	-	0	794	730	-	739	689	-
Stage 2	0	-	-	-	-	0	724	689	-	789	724	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	1360	-	-	455	479	832	482	474	762
Mov Cap-2 Maneuver	-	-	-	-	-	-	455	479	-	482	474	-
Stage 1	-	-	-	-	-	-	794	730	-	739	679	-
Stage 2	-	-	-	-	-	-	680	679	-	780	724	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.5			11.7			12.7		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	SBLn1	SBLn2					
Capacity (veh/h)	562	-	-	1360	-	482	580					
HCM Lane V/C Ratio	0.04	-	-	0.013	-	0.115	0.059					
HCM Control Delay (s)	11.7	-	-	7.7	0	13.4	11.6					
HCM Lane LOS	B	-	-	A	A	B	B					
HCM 95th %tile Q(veh)	0.1	-	-	0	-	0.4	0.2					

Intersection Capacity Utilization 2: PROSPECT AVENUE & DUANE STREET

12/05/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	149	64	15	7	53	89	6	243	15	66	304	154
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	228	0	0	149	0	0	264	0	0	524	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.96	0.85	0.95	0.91	0.85	0.95	0.99	0.85	0.95	0.95	0.85
Saturated Flow (vph)	0	1820	0	0	1726	0	0	1882	0	0	1805	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00			
Protected Option Allowed	No			No			No			No		
Reference Time (s)	0.0			0.0			0.0			0.0		
Adj Reference Time (s)	0.0			0.0			0.0			0.0		
Permitted Option												
Adj Saturation A (vph)	0	300		0	1744		0	1791		0	851	
Reference Time A (s)	0.0	91.3		0.0	10.3		0.0	17.7		0.0	73.9	
Adj Saturation B (vph)	NA	NA		0	0		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		8.5	18.4		NA	NA		NA	NA	
Reference Time (s)	91.3			10.3			17.7			73.9		
Adj Reference Time (s)	95.3			14.3			21.7			77.9		
Split Option												
Ref Time Combined (s)	0.0	15.0		0.0	10.4		0.0	16.8		0.0	34.8	
Ref Time Seperate (s)	9.9	4.2		0.5	3.7		0.4	15.5		4.4	20.2	
Reference Time (s)	15.0	15.0		10.4	10.4		16.8	16.8		34.8	34.8	
Adj Reference Time (s)	19.0	19.0		14.4	14.4		20.8	20.8		38.8	38.8	
Summary	EB WB		NB SB		Combined							
Protected Option (s)	NA		NA									
Permitted Option (s)	95.3		77.9									
Split Option (s)	33.4		59.7									
Minimum (s)	33.4		59.7		93.1							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	77.6%			ICU Level of Service			D					
Reference Times and Phasing Options do not represent an optimized timing plan.												

HCM 6th TWSC

3: HILLSIDE AVENUE & MELROSE AVENUE

12/05/2018

Intersection						
Int Delay, s/veh	2.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	36	62	21	30	10
Future Vol, veh/h	2	36	62	21	30	10
Conflicting Peds, #/hr	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	20	9	6	5	0	0
Mvmt Flow	3	47	82	28	39	13
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	110	0	-	0	149	97
Stage 1	-	-	-	-	96	-
Stage 2	-	-	-	-	53	-
Critical Hdwy	4.3	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.38	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1375	-	-	-	848	965
Stage 1	-	-	-	-	933	-
Stage 2	-	-	-	-	975	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1375	-	-	-	846	964
Mov Cap-2 Maneuver	-	-	-	-	846	-
Stage 1	-	-	-	-	931	-
Stage 2	-	-	-	-	975	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.4	0		9.4		
HCM LOS				A		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1375	-	-	-	873	
HCM Lane V/C Ratio	0.002	-	-	-	0.06	
HCM Control Delay (s)	7.6	0	-	-	9.4	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0.2	

HCM 6th AWSC

4: PROSPECT AVENUE & HILLSIDE AVENUE

12/05/2018

Intersection

Intersection Delay, s/veh 11.9

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	27	0	37	23	49	63	12	177	0	0	304	14
Future Vol, veh/h	27	0	37	23	49	63	12	177	0	0	304	14
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	0	0	5	1	7	3	0	1	0	0	1	0
Mvmt Flow	34	0	46	29	61	79	15	221	0	0	380	18
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.4	10.3	10.8	13.8
HCM LOS	A	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	42%	17%	0%
Vol Thru, %	94%	0%	36%	96%
Vol Right, %	0%	58%	47%	4%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	189	64	135	318
LT Vol	12	27	23	0
Through Vol	177	0	49	304
RT Vol	0	37	63	14
Lane Flow Rate	236	80	169	398
Geometry Grp	1	1	1	1
Degree of Util (X)	0.339	0.123	0.253	0.547
Departure Headway (Hd)	5.159	5.548	5.406	4.954
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	697	645	663	731
Service Time	3.19	3.595	3.448	2.954
HCM Lane V/C Ratio	0.339	0.124	0.255	0.544
HCM Control Delay	10.8	9.4	10.3	13.8
HCM Lane LOS	B	A	B	B
HCM 95th-tile Q	1.5	0.4	1	3.3

Attachment: 21. Traffic Impact Study (4023 : Avere on Duane - PUD, SUP, ZMA, SV)

HCM 6th TWSC

5: MELROSE AVENUE & NORTH ACCESS DRIVE

12/07/2018

Intersection						
Int Delay, s/veh	1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	R	T	R	L	T
Traffic Vol, veh/h	2	3	21	3	4	40
Future Vol, veh/h	2	3	21	3	4	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	3	23	3	4	43
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	76	25	0	0	26	0
Stage 1	25	-	-	-	-	-
Stage 2	51	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	927	1051	-	-	1588	-
Stage 1	998	-	-	-	-	-
Stage 2	971	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	924	1051	-	-	1588	-
Mov Cap-2 Maneuver	924	-	-	-	-	-
Stage 1	995	-	-	-	-	-
Stage 2	971	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	8.6	0	0.7			
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	996	1588	-	
HCM Lane V/C Ratio	-	-	0.005	0.003	-	
HCM Control Delay (s)	-	-	8.6	7.3	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0	0	-	

HCM 6th TWSC

6: MELROSE AVENUE & SOUTH ACCESS DRIVE

12/07/2018

Intersection						
Int Delay, s/veh	0.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	3	21	2	4	38
Future Vol, veh/h	1	3	21	2	4	38
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	3	23	2	4	41
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	73	24	0	0	25	0
Stage 1	24	-	-	-	-	-
Stage 2	49	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	931	1052	-	-	1589	-
Stage 1	999	-	-	-	-	-
Stage 2	973	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	928	1052	-	-	1589	-
Mov Cap-2 Maneuver	928	-	-	-	-	-
Stage 1	996	-	-	-	-	-
Stage 2	973	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	8.6	0	0.7			
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	1018	1589	-	
HCM Lane V/C Ratio	-	-	0.004	0.003	-	
HCM Control Delay (s)	-	-	8.6	7.3	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0	0	-	

Parking Ratios of Similar Developments

Table A
PARKING RATIOS OF APARTMENT DEVELOPMENTS (NEAR PUBLIC TRANSIT)

Development	Location	Units	Parking	Parking Ratio
River 595	Des Plaines	60	104	1.73
Kingston Pointe	Des Plaines	144	228	1.58
Walker & Parker	Clarendon Hills	42	42	1.00
Forest & Gilbert	Downers Grove	89	102	1.15
Adriatic Grove	Downers Grove	48	64	1.33
Residences at the Grove	Downers Grove	294	345	1.17
100 North Addison	Elmhurst	165	199	1.21
1717 Ridge	Evanston	175	205	1.17
AMLI Evanston	Evanston	214	312	1.46
Central Station	Evanston	80	80	1.00
E2	Evanston	356	371	1.04
The Reserve at Evanston	Evanston	195	219	1.12
Midtown Square	Glenview	138	160	1.16
The Reserve at Glenview	Glenview	239	333	1.39
Uptown La Grange	La Grange	254	336	1.32
Ninety7Fifty on the Park	Orland Park	295	300	1.02
Wheaton 121	Wheaton	306	400	1.31
The Residences of Wilmette	Wilmette	75	117	1.56
Average		185	224	1.26

Residential Parking Evaluation

As proposed, the apartment development will provide a total of 82 parking spaces, at a ratio of 1.71 spaces per unit, and will provide 88 bedrooms, at a ratio of 0.93 spaces per bedroom. Based on a review of survey data published by the Institute of Transportation Engineers (ITE) in the *Parking Generation Manual*, 5th Edition for Land-Use Code 221 (Mid-Rise Apartments), the following was determined:

- The average parking supply ratio at similar sites was 1.4 spaces per unit.
- The 85th percentile peak parking demand ratio is 1.47 spaces per dwelling unit.
- The 85th percentile peak parking demand ratio for sites within one-half mile of a rail transit station is 1.27 spaces per dwelling unit.
- The 85th percentile peak parking demand ratio is 0.87 spaces per bedroom.
- The 85th percentile peak parking demand ratio for sites within one-half mile of a rail transit station is 0.86 spaces per bedroom.

As can be seen, the proposed parking supply at ratios of 1.71 spaces per unit and 0.93 spaces per bedroom exceed ITE's requirements.

Furthermore, the proposed parking supply is consistent with other apartment developments (built or planned) in the Chicago area which provide an average parking at a ratio of 1.27 spaces per unit. The location, number of units, and number of parking spaces provided for these developments are summarized in **Table A** in the Appendix.

Lastly, for comparison purposes, KLOA, Inc. also examined US Census data compiled by the Center for Transit-Oriented Development. Based on the Census data, the average number of vehicles available per renter-occupied household within one-quarter mile from the Glen Ellyn Metra station is 0.95 vehicles. Given that the proposed apartment building is located within 1,000 feet of the Glen Ellyn Metra station, it is anticipated that the apartment building will have the same characteristics as other apartment developments within the one-half mile radius.

Applicant: Jonathan Stitgen
Contact: Jonathan Stitgen
Address: 100 East State Parkway
Schaumburg, IL 60173

IDNR Project Number: 1804644
Date: 12/05/2017
Alternate Number: 17-189

Project: Avere on Duane
Address: S.E. Corner of Melrose Ave & Duane St, Glen Ellyn

Description: It is proposed to construct a 48 unit Apartment Building along with associated parking and facilities, on an approximate 1.2 acre parcel of land located along the south side of Duane Ave, between Melrose and Prospect, in Glen Ellyn, Illinois. The property is presently developed with various homes and commercial uses and consists of 8 PIN's.

Natural Resource Review Results

Consultation for Endangered Species Protection and Natural Areas Preservation (Part 1075)

The Illinois Natural Heritage Database contains no record of State-listed threatened or endangered species, Illinois Natural Area Inventory sites, dedicated Illinois Nature Preserves, or registered Land and Water Reserves in the vicinity of the project location.

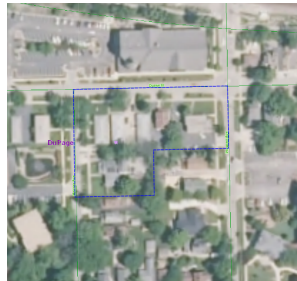
Consultation is terminated. This consultation is valid for two years unless new information becomes available that was not previously considered; the proposed action is modified; or additional species, essential habitat, or Natural Areas are identified in the vicinity. If the project has not been implemented within two years of the date of this letter, or any of the above listed conditions develop, a new consultation is necessary. Termination does not imply IDNR's authorization or endorsement.

Location

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

County: DuPage

Township, Range, Section:
39N, 10E, 11



IL Department of Natural Resources

Contact

Adam Rawe
217-785-5500
Division of Ecosystems & Environment

Government Jurisdiction

IL Environmental Protection Agency
Alan Keller
1021 North Grand Avenue E
P.O. Box 19276
Springfield, Illinois 62794 -9276

Disclaimer

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

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TESTING SERVICE CORPORATION

Corporate Office

360 S. Main Place, Carol Stream, IL 60188-2404
630.462.2600 • Fax 630.653.2988

Local Offices:

457 E. Gundersen Drive, Carol Stream, IL 60188-2492
630.653.3920 • Fax 630.653.2726

650 N. Peace Road, Suite D, DeKalb, IL 60115-8401
815.748.2100 • Fax 815.748.2110

1350 TriState Parkway, Unit 122, Gurnee, IL 60031-9135
847.249.6040 • Fax 844.767.4721

2235 23RD Avenue, Rockford, IL 61104-7334
815.394.2562 • Fax 815.394.2566

203 Earl Road, Suite A, Shorewood, IL 60404-9446
815.744.1510 • Fax 815.744.1728

Geotechnical & Environmental Engineering



Construction Materials Engineering & Testing



Laboratory Testing of Soils, Concrete & Asphalt



Geo-Environmental Drilling & Sampling

Final Geotechnical Report

AVERE on Duane

SEC Duane & Melrose Streets

Glen Ellyn, Illinois

REVA Development Acquisitions, LLC

GEOTECHNICAL GROUP

April 24, 2019
L-88,672A

FINAL GEOTECHNICAL REPORT
AVERE ON DUANE
SEC DUANE & MELROSE STREETS
GLEN ELLYN, ILLINOIS

PREPARED FOR:
REVA DEVELOPMENT ACQUISITIONS, LLC
116 WEST ILLINOIS, 7TH FLOOR
CHICAGO, ILLINOIS 60654

PREPARED BY:
TESTING SERVICE CORPORATION
457 EAST GUNDERSEN DRIVE
CAROL STREAM, ILLINOIS 60188
630-653-3920

Attachment: 24. Geotechnical Report (4023 : Avere on Duane - PUD, SUP, ZMA, SV)

TABLE OF CONTENTS

Section	Page
I. TEXT	
1.0 Introduction	2
2.0 Field Investigation and Laboratory Testing	3
3.0 Discussion of Test Data	4
4.0 Analysis and Recommendations	6
4.1 Building Foundations	6
4.2 Basement Construction	9
4.3 Pavement Design and Construction	12
4.4 Groundwater Management	14
5.0 Closure	14
II. APPENDIX	

April 24, 2019
L-88,672A

FINAL GEOTECHNICAL REPORT
AVERE ON DUANE
SEC DUANE & MELROSE STREETS
GLEN ELLYN, ILLINOIS

1.0 INTRODUCTION

This final geotechnical report has been prepared for AVERE on Duane, a proposed 48-unit apartment building in Glen Ellyn, Illinois. It incorporates changes made to development plans since the site was originally drilled in August 2018, i.e. the top of finished floor (FF) has been raised about 4½ feet to Elevation 753.65 and permeable paver parking lot is now planned. Our engineering services continue to be provided in accordance with TSC Proposal No. 59,920A dated July 19, 2018 and the attached General Conditions.

The approximate 1.2-acre L-shaped site is located at the southeast corner (SEC) of Duane and Melrose Streets, near downtown Glen Ellyn. It is also bordered by Prospect Street along the east side and by commercial and residential developments along the south side. Presently, there are four (4) 1 to 2-story office/commercial buildings and three (3) houses as well as associated grass landscaped and parking/driveway areas on the site. The office/commercial buildings appeared to all be slab-on-grade structures (no basements), with the houses having basements which are partially below grade (i.e. relatively shallow). The site slopes down from the north to the south toward Duane Street, with existing grade at the boring locations varying from approximate Elevations 742.5 to 749.0 - a grade differential of 6½ feet.

Present plans call for the construction of a 4-story apartment building with underground parking. The proposed building will have a footprint of ±20,000 sf, occupying most of the northern portion of the site. The top of finished floor (FF) has been raised to Elevation 753.65 on the current PUD Site Plan by Haeger Engineering (dated 03-22-2019), with the garage basement level 11'-0" feet deeper at Elevation 742.65.

Attachment: 24. Geotechnical Report (4023 : Avere on Duane - PUD, SUP, ZMA, SV)



An elevator pit with the top of slab at 5'-0" below the basement level is planned in the middle portion of the south (back) wall of the building.

While foundation loads were not available at the time this report was prepared, they are anticipated to be moderate considering that a podium type building is proposed, i.e. 4-story wood-frame structure over a 1-story concrete base. In this regard, the maximum column and wall loads are not anticipated to exceed about 400 kips and 12 kips/ft, respectively. The proposed site redevelopment also includes a permeable paver parking lot in the southwest portion of the site.

The results of field and laboratory testing and recommendations based upon these data are included in this report. Specifically addressed are building foundations, basement construction, pavement design and construction, and groundwater management.

2.0 FIELD INVESTIGATION AND LABORATORY TESTING

Seven (7) soil borings, numbered 1 - 7, were performed as part of this subsurface exploration. They have been plotted on a Site Plan originally provided to us and which has not changed significantly. Reference is made to this Boring Location Plan in the Appendix for the drilling layout, ground surface elevations at the borings also being shown. The elevations were acquired by TSC using a Trimble R8s GNSS receiver which uses the North American Vertical Datum of 1988 (NAVD88), being rounded to the nearest 0.5 foot on the boring logs and location plan.

Borings 1 - 5 were drilled in the area of the proposed building and extended to 40 feet below existing grade, with Borings 6 and 7 in the proposed parking lot made 10 feet deep. They were drilled and samples tested according to currently recommended American Society for Testing and Materials specifications. Soil sampling was performed at 2½-foot intervals to a depth of 20 feet and every 5 feet thereafter. The samples were taken in conjunction with the Standard Penetration Test (SPT), for which driving resistance to a 2" split-spoon sampler (N value in blows per foot) provides an indication of the relative density of granular materials and consistency of cohesive soils. Water level readings were taken during and following completion of drilling operations, with the boreholes then backfilled and those located in existing pavement areas patched at the surface.



Soil samples were examined in the laboratory to verify field descriptions and to classify them in accordance with the Unified Soil Classification System. Laboratory testing included water content determinations for all cohesive and intermediate (silt or loamy) soil types. An estimate of unconfined compressive strength was obtained for all cohesive soils using a calibrated pocket penetrometer (Qp), with actual measurements of unconfined compressive strength (Qu) performed on representative samples of native clays. Dry unit weight tests were also run on specimens of cohesive fill.

Reference is made to the boring logs in the Appendix which indicate subsurface stratigraphy and soil descriptions, results of field and laboratory tests, as well as water level observations. Definitions of descriptive terminology are also included. While strata changes are shown as a definite line on the boring logs, the actual transition between soil layers will probably be more gradual. Fluctuations on the groundwater table may also occur due to variations in precipitation (short-term and seasonal) as well as rises or drops in ditch, pond or other nearby surface water features, i.e. water levels at a future date may be higher or lower than those recorded at the time of drilling.

3.0 DISCUSSION OF TEST DATA

Boring 2 was performed in an existing driveway, encountering 4 inches P.C. concrete at the surface underlain by 8 inches granular base course materials. Borings 3 - 5 were drilled in existing asphalt pavement areas, encountering 3 to 6 inches bituminous concrete at the surface underlain by 5 to 8 inches granular base course materials. These measurements should be considered approximate, as they were estimated from the disturbed sides of the augered holes. Pavement cores should be taken if more accurate thicknesses or descriptions of the paving materials (including possible fabric interlayers) are required.

Approximately 3 feet of primarily clayey topsoil fill materials were encountered at the surface of Boring 1. About 12 and 16 inches of topsoil fill materials were found at the surface of Borings 6 and 7, respectively. A layer of clayey topsoil (possible partial fill) was also encountered underlying the pavement section in Boring 5, extending to a depth of about 3 feet below existing grade. Samples of the deeper topsoil materials from Borings 1 and 5 exhibited water contents of 26 to 29 percent.

Fill materials were found underlying the pavement section in Borings 2 - 4 and the topsoil respread layer in B-6, extending to a depth of about 3 feet below existing grade in Borings 2 and 4 and to depths of 10½



and 8 feet in Borings 3 and 6, respectively. The fill consisted primarily of clayey sand and silty clay soils in Borings 2 and 4, respectively, and crushed stone in Borings 3 and 6. The clayey sand fill exhibited a SPT N-value of 8 blows per foot (bpf), the silty clay fill having a dry unit weight of 104 pounds per cubic foot (pcf) at a water content of 21 percent, and the crushed stone fill SPT N-values ranging from 11 to 27 bpf.

The uppermost approximate 2 to 5 feet of native soils below the fill materials in Borings 2 and 4 consisted of silty clay of apparent medium to high plasticity. These CL/CH materials (Unified classification) were typified by moderate unconfined compressive strengths of about 1.0 to 1.5 tons per square foot (tsf) at relatively high water contents of 30 to 32 percent.

Relatively soft and very moist silty clay deposits were found underlying the topsoil materials, clayey sand fill and CL/CH materials in Borings 1, 2 and 5, extending to depths of approximately 6 to 8 feet below existing grade. They exhibited unconfined compressive strengths/pocket penetrometer readings of 0.25 to 0.5 tsf at water contents of 22 to 38 percent. An organic clay stratum was also encountered underlying the soft clay deposit in Boring 1, extending to a depth of 10½ feet below existing grade and exhibiting water contents on the order of 55 percent. The presence of relatively soft and organic clay soils at B-1 was confirmed in a test pit subsequently performed in the front yard of the existing building right at the corner of Duane and Melrose Streets, on this basis encompassing up to the approximate western third of the proposed apartment building footprint.

Underlying native otherwise consisted of strata of silt/clayey silt, clayey sand and gravel, silty sand and gravel and sand and gravel ranging from very loose to dense in relative density/state of compactness, as well as silty clay ranging from tough to hard in consistency. The silt, sand and gravel materials exhibited SPT N-values ranging from 2 to 32 bpf. The silty clay deposits had unconfined compressive strengths of 1.5 to 4.5 tsf at water contents between 11 and 22 percent.

Boring 7 (drilled to a depth of 10 feet on higher ground) was "dry" both during and upon completion of drilling operations. Free water was otherwise first encountered while drilling and sampling in the borings at depths typically ranging from 5 to 13 feet below existing grade. The only exception was Boring 3 where free water was found at a depth of 33 feet. While the water level remained at depths of about 5 and 8 feet in Borings 5 and 6, respectively, the water levels rose by 3 to 8 feet in Borings 1, 2 and 4.



Based on the water level observations made in the borings, we estimate a groundwater table on the order of Elevation 638± at the time of our field exploration (August 30, 2018). Fluctuations in the water table should be expected to occur due to variations in rainfall, evaporation, construction operations, surface runoff and other site specific factors, i.e. water level readings at a future date may be higher or lower than those recorded at the time of drilling.

4.0 ANALYSIS AND RECOMMENDATIONS

4.1 Building Foundations

As previously discussed, the project consists of a 4-story apartment building with parking in a basement structure. The top of finished floor (FF) for the first floor is shown at Elevation 753.65 on the PUD Site Plan prepared by Haeger Engineering, with the garage basement level 11'-0" feet deeper at Elevation 742.65. While foundation loads were not available, they are anticipated to be moderate considering that a podium type building is proposed, i.e. 4-story wood-frame structure over a 1-story concrete base. In this regard, the maximum column and wall loads are not anticipated to exceed about 400 kips and 12 kips/ft, respectively.

Footing foundations for the proposed apartment building are anticipated to bear at depths on the order of 3 to 4 feet below the basement level, i.e. on the order of approximate Elevations 739. This correlates to depths of about 3 to 7 feet below existing grade at the boring locations. The footing excavations will have to be extended through the soft clay and organic clay deposits found in Borings 1 and 2, as well as loose to very loose silt, clayey silt and clayey sand and gravel deposits encountered in Borings 1, 4 and 5. Summarized in the following table is the shallowest depth/elevation at which native soils considered capable of supporting a net allowable bearing pressure of 4000 pounds per square foot (psf) were encountered. Foundation undercuts are also estimated in the far right-hand column, based on a design footing grade at Elevation 739.0±.



Boring No.	Ground Surface Elevation	Depth of Existing Fill (Feet)	4000 psf Native Bearing		Estimated Foundation Undercut (Feet)**
			Depth (Feet)*	Elevation*	
1	743.0	3.0	13.0	730.0	9.0
2	742.5	3.0	8.0	734.5	4.5
3	746.0	10.5	10.5	735.5	4.5
4	743.0	3.0	10.5	732.5	6.5
5	746.0	3.0	13.0	733.0	6.0

* The depth/elevation of 3000 psf native bearing soils are rounded to nearest 0.5 foot.

** Estimated foundation undercuts based on a design footing grade at approximate Elevation 739.0, i.e. 3 to 4 feet below the basement level.

As shown in the above table, foundation undercuts in the range of about 4.5 to 9.0 feet are indicated to reach the 4000 psf native bearing soils (firm sand and gravel/silty sand and gravel and very tough to hard silty clay). The footings may be placed at the bottom of the undercuts and foundation walls/piers increased in height, or the overexcavations could be backfilled to proposed footing grade with lean concrete. If lean concrete is utilized, it should extend at least 6 inches beyond each footing face and have a minimum compressive strength of 1500 pci.

It is recommended that all continuous wall footings be made at least 24 inches wide and isolated foundations at least 3.0 feet square, regardless of calculated dimensions. For frost considerations, all exterior footings should be constructed at least 3.5 feet below outside finished grade and 4.0 feet for foundations located outside of heated building limits. Interior footings may be constructed at higher elevations as long as they are protected against frost heave in the event of winter construction.

The 4000 psf bearing value may be increased by up to 33 percent for intermittent loads such as wind and seismic loading; the 33% increase may also be applied to the toe pressure of eccentrically loaded footings as long as the average bearing pressure does not exceed 4000 psf. Based on the anticipated FF, anticipated foundation loads and assuming that above recommendations are followed, total settlements are not anticipated to exceed $\frac{3}{4}$ " to 1", with differential settlements of $\frac{1}{2}$ " or less.



Regarding a seismic site class per International Building Code (IBC), Site Class D may be utilized. To determine whether Site Class C is a possibility, it would be necessary to determine the in-situ shear wave velocity profile in the upper 100 feet at the site using a surface-wave seismic method such as the Refraction Microtremor (ReMi) method.

An alternative to the foundation undercut option discussed above is the use of footing foundations in conjunction with ground improvement methods. In this regard, the existing fill materials and underlying soft/very moist native clay and organic clay soils and loose silt, clayey silt and clayey sand and gravel deposits may be improved/ reinforced with rammed aggregate piers ("geopiers") or vibro piers ("stone columns").

The piers are constructed by making 24 to 36-inch diameter holes through the fill and low strength/loose soils and backfilling them with thin lifts of compacted aggregate. Compaction densifies the aggregate and increases the lateral stress in the soil matrix. This system will serve to reduce settlements and increase bearing capacity by replacing the existing fill materials and low strength/very moist/loose native soils with a stiffer composite soil matrix.

Footing foundations bearing on geopier/stone column-improved ground should ideally be able to be designed for a net allowable bearing pressure of at least 3000 to 4000 psf while limiting total settlements to 1" or less. Specialty contractors with experience in the design and installation of aggregate piers should be consulted in regard to these matters. Aggregate pier ground improvement is a specialty, geotechnical design-build system that is prepared by the installer, and it is typical for the design soil bearing capacity of the aggregate pier-improved ground and the anticipated settlements of the foundations to be provided by the selected ground improvement firm.

It is recommended that the width of all continuous wall footings be made at least equal to (and ideally larger than) the width of the aggregate pier elements and isolated foundations be made at least 3.0 feet square, regardless of calculated dimensions. For frost considerations, all exterior footings should be constructed at least 3.5 feet below outside finished grade and 4.0 feet for foundations located outside of heated building limits. Interior footings may be constructed at higher elevations as long as they are protected against frost heave in the event of winter construction.



4.2 Basement Construction

As previously discussed, the building will have a basement level of Elevation 742.65 with subgrade for it set at -2'-0" below the top of slab (approximate Elevation 740.5). On this basis excavation depths in the range of about 2 to 6 feet below existing grade are indicated at Borings 1 - 5 drilled in the area of the proposed apartment building. Relatively soft and/or very moist silty clay soils were encountered at or close to subgrade level in the majority of the borings, with loose silty sand also present at B-5.

The above materials will provide a deficient (unstable) subgrade support for basement floor slab construction. In this regard, it is understood that cement stabilization is to be performed on the subgrade soils, in order to create a stable base for construction activities. Organic clay was found underlying the upper subgrade in B-1 as well as a test pit performed nearby, encompassing up to the approximate western third of the apartment building footprint. Associated settlement of the garage floor slab will be limited by grade not being raised in this area (i.e. no additional load on the organic soils).

As previously discussed, we estimate a groundwater table on the order of Elevation 638 at the time of our field exploration (August 30, 2018). Fluctuations in the water table should be expected to occur due to variations in rainfall, evaporation, construction operations, surface runoff and other site specific factors, i.e. water level readings at a future date may be higher or lower than those recorded at the time of drilling. In this regard, the basement level should ideally be located at least 1 to 2 feet higher than the water levels observed in the borings to account for a potential rise in the water table in the wetter times of the year, i.e. the basement level should ideally be set no lower than around Elevation 640 as is presently the case.

It should be noted that wet (saturated) sand and gravel deposits were found at footing grade or at the bottom of the foundation undercuts for Borings 1 and 2. Therefore, groundwater seepage and accumulations should be anticipated during foundation excavations that will require the use of dewatering/unwatering procedures, as a minimum to include pumping from strategically placed sumps. The presence of sand and gravel was confirmed in the test pit dug between Borings 1 and 2.

Assuming that groundwater inflow can be adequately controlled during basement excavation by conventional dewatering procedures (i.e. by means of strategically placed sump pits), the following guidelines may be followed for basement construction. It is recommended that a minimum 6-inch free-



draining aggregate layer be provided below the basement floor slab. IDOT gradation CA-7 ($\frac{1}{4}$ " to $\frac{3}{4}$ " chips with no fines) meets this general requirement. The purpose of the granular fill will be to provide a base for the placement of the concrete slabs and to provide for drainage beneath them.

Perimeter drain tile should be installed for all basement and below grade structures. In connection with them, at least 2'-0" of drainage fill (typically CA-7 material) should be placed against the basement walls to facilitate the collection of underground seepage and prevent the build up of hydrostatic pressure behind the wall. Above this free draining material, a minimum 2'-0" clay cap should be placed to minimize surface water infiltration.

It is also recommended that a permanent underslab drainage system be installed. The basement slab underdrain piping should be installed at maximum 30 to 40-foot intervals within deepened trenches. The subdrains should consist of perforated drain tile surrounded with a minimum 4 inches of filter material or wrapped in geotextile filter fabric. The subdrains should be constructed so as to collect any water which may seep into the drainage fill layer.

The perimeter drain tile and floor subdrains should be connected to sump pits with an automatic pumping system. These should include back-up pumps as well as an auxiliary power source in the event that electrical power is lost. While the exterior and interior drain tile systems may be tied into the same sumps the lines should otherwise not be interconnected. Damp-proofing of below grade walls is also recommended as a minimum, with the basement walls (and elevator pit walls and slab) ideally to be waterproofed up to Elevation 740 (or higher) and provided with water-stops at the construction joints between the footings and walls.

As previously mentioned, an elevator pit with the top of slab at 5'-0" below the basement level is planned in the middle portion of the south (back) wall of the building. Assuming a pit slab on the order of 1'-6" thick, a bottom of slab on the order of Elevation 736.0 is indicated, i.e. about 2 feet below the water table. Therefore, the elevation pit walls and slab should be waterproofed and the slab designed for uplift.

In connection with below-grade construction, the Contractor must either brace the sides of the excavations or slope them back in accordance with current OSHA requirements to prevent excavation instability. In this regard, all excavations should comply with the requirements of OSHA 29CFR, Part 1926, Subpart P,



"Excavations" and its appendices as well as any other applicable codes. This document states that excavation safety is the responsibility of the Contractor. Reference to this OSHA requirement should be included in the job specifications. Stockpiles of material or equipment should not be placed near the top of excavation slopes.

Lateral earth pressures for permanent underground structures will be dependent on the type of backfill used, whether it is in a drained or undrained state, as well as loading conditions. Equivalent fluid pressures (EFP) given below for cohesive and granular backfills assuming active (K_a) and at-rest (K_o) earth pressures. The values shown represent the increase in lateral pressure over a 1.0 foot distance measured in pounds per square foot (psf/ft).

<u>BACKFILL TYPE</u>	<u>EQUIVALENT FLUID PRESSURE (PSF/FT)</u>			
	<u>ACTIVE CONDITION*</u>		<u>AT-REST STATE**</u>	
	<u>DRAINED</u>	<u>UNDRAINED</u>	<u>DRAINED</u>	<u>UNDRAINED</u>
GRANULAR	35	80	55	90
COHESIVE	50	90	70	100

* Based on $K_a = 0.27$ & 0.39 for granular and cohesive backfill, respectively.

**Based on Based on $K_o = 0.43$ & 0.56 for granular and cohesive backfill, respectively.

The active condition applies to retaining walls which are free to rotate at their top. At-rest pressures should be used for basement walls and other buried structures which are fixed at their top and bottom or otherwise restrained from moving.

The values shown above are nominal, i.e. are based on average soil conditions. They also assume a level backfill height behind the walls; sloping backfill will increase lateral earth pressures and should be analyzed on an individual basis. It should be noted that for the EFP values given for granular soils be valid, the wedge of granular materials should extend a minimum distance at the top of the wall (or ground surface) equal to the height of the wall.



Appropriate surcharge loads should be included in the design of retaining/below-grade walls for any adjacent pavements, sidewalks, floor slabs and foundations lying within a 1.5H:1V zone from the base of the below grade floor slab to the ground surface. Surcharge loads of 100 and 200 psf are normally used for sidewalks and pavements, respectively.

Backfill placed against retaining walls, basement walls and the like should be compacted to between 90 and 95 percent of Modified Proctor density. Compaction in excess of 95 percent is not desirable, since it can result in higher lateral earth pressures than recommended for design. Also, heavy compaction equipment should not be used on the high side of the wall within a horizontal distance equal to the height of backfilling, as this may result in over-stressing of the wall and excessive deflection.

If no appreciable amount of settlement of the backfill soils can be tolerated, it is recommended that granular fill be used. This would specifically apply to all exterior entrance and sidewalk areas. These materials should be capped with a minimum of 2 feet of engineered clay fill to minimize surface water infiltration. The clay fill should be compacted to a minimum of 90 percent of maximum dry density as determined by the Modified Proctor test (ASTM D 1557). In addition, the ground surface over the backfill zone should be graded away from the building so that water is prevented from ponding next to the walls.

The sliding resistance at the base of foundation elements will be dependent on the normal (dead) load and friction coefficient of underlying soils. It is recommended that an ultimate friction factor (μ) of 0.4 be used for the interface between the mass concrete foundation (rough surface) and the underlying native sand and gravel or clay soils.

4.3 Pavement Design and Construction

The proposed site redevelopment also includes a permeable parking lot in the southwest portion of the site. Two (2) houses and associated grass landscaped and driveway areas are present on this portion of the site. These structures will be demolished and removed to make way for the new development. Building demolition must be taken into account in site grading plans. In this regard, existing concrete floor slabs and foundation walls as well as asphalt/concrete pavements are normally removed as part of site demolition. This will promote subsurface drainage and minimize obstructions in future utility excavations. Other buried structures should ideally be cut off at least 1'-0" below subgrade level in pavement areas.



Shallow utility lines located under proposed building areas should ideally be removed. Granular backfill should be placed in the excavations that are left, to be compacted to 95 percent Modified Proctor density. Deeper pipes may be filled with flowable grout. However, the condition of backfill materials left in-place over these pipes will have to be further evaluated when the site is stripped, i.e. their suitability for pavement support.

Borings 6 and 7 were drilled in the area of permeable paver parking lot. Surficial topsoil at B-6 was underlain by crushed stone fill which extended to approximately 8 feet below existing grade, likely representing utility trench backfill or the like. Tough to hard native silty clays predominated in B-7, presumably representing subgrade soils across most of the area.

It is recommended that pavement areas be cleared of vegetation prior to mass-grading. Stripping operations should also include the removal of all surficial topsoil, root zone materials and other decomposable plant matter. The pavement areas should then be proof-rolled, in order to detect the presence of unsuitable soil types. The proof-roll should be performed using a loaded dump truck or other approved piece of heavy rubber-tired construction equipment. All soft or unstable materials determined by proof-rolling should be reworked and recompacted or, if subgrade instability persists, removed and replaced. Solutions to such instability problems would likely consist of undercutting the unstable soils one to two feet and replacement with coarse granular material such as IDOT gradation CA-1 or CA-7.

New fill should otherwise consist of approved granular materials or inorganic silty clays of low to medium plasticity. It is recommended that compaction be to a minimum of 95 percent of maximum dry density as determined by the Modified Proctor test (ASTM D 1557). The fill should be placed in maximum 10 inch lifts loose measure, each lift to be compacted to the specified density prior to the placement of additional fill.

Moisture control is important in the compaction of most soil types, and it is recommended that the water content of new fill be within 1 percentage point on the low side and 3 percentage points on the high side of optimum moisture as established by its laboratory compaction curve. If the soil is compacted too dry, it will have an apparent stability which will be lost if it later becomes saturated. If the soil is too wet, the Contractor will not be able to achieve proper compaction.



It is recommended that a nominal Illinois Bearing Ratio (IBR) value of 3.0 be used in the design of pavements. A modulus of subgrade reaction of 150 pci may be used for rigid pavement design (i.e. in connection with driveway aprons). Use of these values assume that any soft or unstable areas will be remediated, i.e. subgrade stabilized until passing a proof-roll.

Tough to hard silty clay soils are expected to predominate at subgrade level for the permeable paver parking lot on the basis of B-7. These cohesive materials are estimated to have very low coefficients of permeability in the range of 10^{-6} to 10^{-8} cm/sec, making them practically impervious. Design Infiltration Rates for USDA Soil Textures (University of Wisconsin, Madison, 2006) gives estimated values for these soil types of 0.07 in/hr or less, also considered to be very low.

4.4 Groundwater Management

Serious groundwater problems are not anticipated taking into consideration that the garage basement level has been raised by about 4½ feet from that originally proposed. The accumulation of run-off water or seepage at the base of excavations should still be expected to occur during foundation construction and site work at some locations. The Contractor should be prepared to remove these accumulations by dewatering/unwatering procedures, as a minimum to include pumping from strategically placed sumps.

5.0 CLOSURE

It is recommended that full-time inspection be provided by testing Service Corporation personnel during foundation construction, so that the soils at foundation levels can be observed and tested. In addition, adequacy of building materials, fill placement and compaction as well as basement and pavement construction should be monitored for compliance with the recommended procedures and specifications.

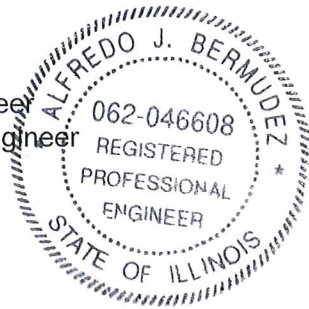
The analyses and recommendations submitted in this report are based upon the data obtained from four (7) soil borings performed at the locations indicated on the Boring Location Plan. This report does not reflect any variations which may occur between these borings or elsewhere on the site, the nature and extent of which may not become evident until during the course of construction. If variations are then identified, recommendations contained in this report should be re-evaluated after performing on-site observations.

REVA Development Acquisitions, LLC
AVERE on Duane, Glen Ellyn, IL
L-88,672A - April 24, 2019



We are available to review this report with you at your convenience.

Alfredo J. Bermudez
Senior Geotechnical Engineer
Registered Professional Engineer
Illinois No. 062-046608



AJB/MVM:if

Enc.

Michael V. Machalinski, P.E.
Vice President

Attachment: 24. Geotechnical Report (4023 : Avere on Duane - PUD, SUP, ZMA, SV)

APPENDIX

UNIFIED CLASSIFICATION CHART

LEGEND FOR BORING LOGS

BORING LOGS

BORING LOCATION PLAN



TESTING SERVICE CORPORATION

GENERAL CONDITIONS

Geotechnical and Construction Services

1. PARTIES AND SCOPE OF WORK: If Client is ordering the services on behalf of another, Client represents and warrants that Client is the duly authorized agent of said party for the purpose of ordering and directing said services, and in such case the term "Client" shall also include the principal for whom the services are being performed. Prices quoted and charged by TSC for its services are predicated on the conditions and the allocations of risks and obligations expressed in these General Conditions. Unless otherwise stated in writing, Client assumes sole responsibility for determining whether the quantity and the nature of the services ordered by Client are adequate and sufficient for Client's intended purpose. Unless otherwise expressly assumed in writing, TSC's services are provided exclusively for client. TSC shall have no duty or obligation other than those duties and obligations expressly set forth in this Agreement. TSC shall have no duty to any third party. Client shall communicate these General Conditions to each and every party to whom the Client transmits any report prepared by TSC. Ordering services from TSC shall constitute acceptance of TSC's proposal and these General Conditions.

2. SCHEDULING OF SERVICES: The services set forth in this Agreement will be accomplished in a timely and workmanlike manner. If TSC is required to delay any part of its services to accommodate the requests or requirements of Client, regulatory agencies, or third parties, or due to any cause beyond its reasonable control, Client agrees to pay such additional charges, if any, as may be applicable.

3. ACCESS TO SITE: TSC shall take reasonable measures and precautions to minimize damage to the site and any improvements located thereon as a result of its services or the use of its equipment; however, TSC has not included in its fee the cost of restoration of damage which may occur. If Client desires or requires TSC to restore the site to its former condition, TSC will, upon written request, perform such additional work as is necessary to do so and Client agrees to pay to TSC the cost thereof plus TSC's normal markup for overhead and profit.

4. CLIENT'S DUTY TO NOTIFY ENGINEER: Client represents and warrants that Client has advised TSC of any known or suspected hazardous materials, utility lines and underground structures at any site at which TSC is to perform services under this Agreement. Unless otherwise agreed in writing, TSC's responsibility with respect to underground utility locations is to contact the Illinois Joint Utility Locating Information for Excavators for the location of public, but not private, utilities.

5. DISCOVERY OF POLLUTANTS: TSC's services shall not include investigation for hazardous materials as defined by the Resource Conservation Recovery Act, 42 U.S.C. § 6901, et. seq., as amended ("RCRA") or by any state or Federal statute or regulation. In the event that hazardous materials are discovered and identified by TSC, TSC's sole duty shall be to notify Client.

6. MONITORING: If this Agreement includes testing construction materials or observing any aspect of construction of improvements, Client's construction personnel will verify that the pad is properly located and sized to meet Client's projected building loads. Client shall cause all tests and inspections of the site, materials and work to be timely and properly performed in accordance with the plans, specifications, contract documents, and TSC's recommendations. No claims for loss, damage or injury shall be brought against TSC unless all tests and inspections have been so performed and unless TSC's recommendations have been followed.

TSC's services shall not include determining or implementing the means, methods, techniques or procedures of work done by the contractor(s) being monitored or whose work is being tested. TSC's services shall not include the authority to accept or reject work or to in any manner supervise the work of any contractor. TSC's services or failure to

perform same shall not in any way operate or excuse any contractor from the performance of its work in accordance with its contract. "Contractor" as used herein shall include subcontractors, suppliers, architects, engineers and construction managers.

Information obtained from borings, observations and analyses of sample materials shall be reported in formats considered appropriate by TSC unless directed otherwise by Client. Such information is considered evidence, but any inference or conclusion based thereon is, necessarily, an opinion also based on engineering judgment and shall not be construed as a representation of fact. Subsurface conditions may not be uniform throughout an entire site and ground water levels may fluctuate due to climatic and other variations. Construction materials may vary from the samples taken. Unless otherwise agreed in writing, the procedures employed by TSC are not designed to detect intentional concealment or misrepresentation of facts by others.

7. DOCUMENTS AND SAMPLES: Client is granted an exclusive license to use findings and reports prepared and issued by TSC and any sub-consultants pursuant to this Agreement for the purpose set forth in TSC's proposal provided that TSC has received payment in full for its services. TSC and, if applicable, its sub-consultant, retain all copyright and ownership interests in the reports, boring logs, maps, field data, field notes, laboratory test data and similar documents, and the ownership and freedom to use all data generated by it for any purpose. Unless otherwise agreed in writing, test specimens or samples will be disposed immediately upon completion of the test. All drilling samples or specimens will be disposed sixty (60) days after submission of TSC's report.

8. TERMINATION: TSC's obligation to provide services may be terminated by either party upon (7) seven days prior written notice. In the event of termination of TSC's services, TSC shall be compensated by Client for all services performed up to and including the termination date, including reimbursable expenses. The terms and conditions of these General Conditions shall survive the termination of TSC's obligation to provide services.

9. PAYMENT: Client shall be invoiced periodically for services performed. Client agrees to pay each invoice within thirty (30) days of its receipt. Client further agrees to pay interest on all amounts invoiced and not paid or objected to in writing for valid cause within sixty (60) days at the rate of twelve (12%) per annum (or the maximum interest rate permitted by applicable law, whichever is the lesser) until paid and TSC's costs of collection of such accounts, including court costs and reasonable attorney's fees.

10. WARRANTY: TSC's professional services will be performed, its findings obtained and its reports prepared in accordance with these General Conditions and with generally accepted principles and practices. In performing its professional services, TSC will use that degree of care and skill ordinarily exercised under similar circumstances by members of its profession. In performing physical work in pursuit of its professional services, TSC will use that degree of care and skill ordinarily used under similar circumstances. This warranty is in lieu of all other warranties or representations, either express or implied. Statements made in TSC reports are opinions based upon engineering judgment and are not to be construed as representations of fact.

Should TSC or any of its employees be found to have been negligent in performing professional services or to have made and breached any express or implied warranty, representation or contract, Client, all parties claiming through Client and all parties claiming to have in any way relied upon TSC's services or work agree that the maximum aggregate amount of damages for which TSC, its officers, employees and agents shall be liable is limited to \$50,000 or the total amount of the fee paid to TSC for its services performed with respect to the project, whichever amount is greater.

In the event Client is unwilling or unable to limit the damages for which TSC may be liable in accordance with the provisions set forth in the preceding paragraph, upon written request of Client received within five days of Client's acceptance of TSC's proposal together with payment of an additional fee in the amount of 5% of TSC's estimated cost for its services (to be adjusted to 5% of the amount actually billed by TSC for its services on the project at time of completion), the limit on damages shall be increased to \$500,000 or the amount of TSC's fee, whichever is the greater. This charge is not to be construed as being a charge for insurance of any type, but is increased consideration for the exposure to an award of greater damages.

11. INDEMNITY: Subject to the provisions set forth herein, TSC and Client hereby agree to indemnify and hold harmless each other and their respective shareholders, directors, officers, partners, employees, agents, subsidiaries and division (and each of their heirs, successors, and assigns) from any and all claims, demands, liabilities, suits, causes of action, judgments, costs and expenses, including reasonable attorneys' fees, arising, or allegedly arising, from personal injury, including death, property damage, including loss of use thereof, due in any manner to the negligence of either of them or their agents or employees or independent contractors. In the event both TSC and Client are found to be negligent or at fault, then any liability shall be apportioned between them pursuant to their pro rata share of negligence or fault. TSC and Client further agree that their liability to any third party shall, to the extent permitted by law, be several and not joint. The liability of TSC under this provision shall not exceed the policy limits of insurance carried by TSC. Neither TSC nor Client shall be bound under this indemnity agreement to liability determined in a proceeding in which it did not participate represented by its own independent counsel. The indemnities provided hereunder shall not terminate upon the termination or expiration of this Agreement, but may be modified to the extent of any waiver of subrogation agreed to by TSC and paid for by Client.

12. SUBPOENAS: TSC's employees shall not be retained as expert witnesses except by separate, written agreement. Client agrees to pay TSC pursuant to TSC's then current fee schedule for any TSC employee(s) subpoenaed by any party as an occurrence witness as a result of TSC's services.

13. OTHER AGREEMENTS: TSC shall not be bound by any provision or agreement (i) requiring or providing for arbitration of disputes or controversies arising out of this Agreement or its performance, (ii) wherein TSC waives any rights to a mechanics lien or surety bond claim; (iii) that conditions TSC's right to receive payment for its services upon payment to Client by any third party or (iv) that requires TSC to indemnify any party beyond its own negligence. These General Conditions are notice, where required, that TSC shall file a lien whenever necessary to collect past due amounts. This Agreement contains the entire understanding between the parties. Unless expressly accepted by TSC in writing prior to delivery of TSC's services, Client shall not add any conditions or impose conditions which are in conflict with those contained herein, and no such additional or conflicting terms shall be binding upon TSC. The unenforceability or invalidity of any provision or provisions shall not render any other provision or provisions unenforceable or invalid. This Agreement shall be construed and enforced in accordance with the laws of the State of Illinois. In the event of a dispute arising out of or relating to the performance of this Agreement, the breach thereof or TSC's services, the parties agree to try in good faith to settle the dispute by mediation under the Construction Industry Mediation Rules of the American Arbitration Association as a condition precedent to filing any demand for arbitration, or any petition or complaint with any court. Paragraph headings are for convenience only and shall not be construed as limiting the meaning of the provisions contained in these General Conditions.

APPENDIX

UNIFIED CLASSIFICATION CHART

LEGEND FOR BORING LOGS

BORING LOGS

BORING LOCATION PLAN

Testing Service Corporation

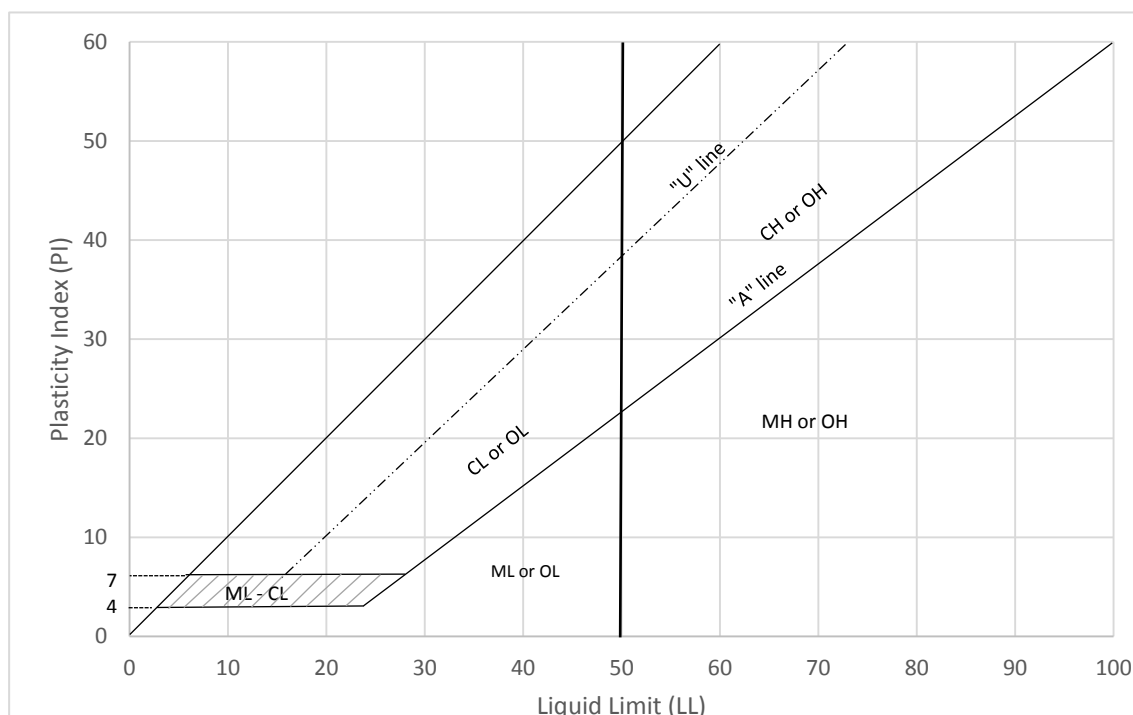
Unified Classification Chart



CRITERIA FOR ASSIGNING GROUP SYMBOLS AND GROUP NAMES USING LABORATORY TEST ^a				SOIL CLASSIFICATION	
				Group Symbol	GROUP NAME ^b
COARSE - GRAINED SOILS more than 50% retained on No. 200 sieve	GRAVELS More than 50% of coarse fraction retained on No. 4 sieve	CLEAN GRAVELS less than 5% fines ^c	$C_u \geq 4$ and $1 \leq C_c \leq 3$ ^e	GW	Well-graded gravel ^f
			$C_u < 4$ and/or $1 > C_c > 3$ ^e	GP	Poorly-graded gravel ^f
		GRAVELS WITH FINES more than 12% fines ^c	Fines classify as ML or MH	GM	Silty gravel ^{f, g, h}
			Fines classify as CL or CH	GC	Clayey gravel ^{f, g, h}
	SANDS 50% or more of coarse fraction passes No. 4 sieve	CLEAN SANDS less than 5% fines ^d	$C_u \geq 6$ and $1 \leq C_c \leq 3$ ^e	SW	Well-graded sand ⁱ
			$C_u < 6$ and/or $1 > C_c > 3$ ^e	SP	Poorly-graded sand ⁱ
		SANDS WITH FINES more than 12% fines ^d	Fines classify as ML or MH	SM	Silty sand ^{g, h, f}
			Fines classify as CL or CH	SC	Clayey sand ^{g, h, f}
FINE - GRAINED SOILS 50% or more passed the No. 200 sieve	SILTS & CLAYS Liquid limit less than 50%	Inorganic	PI > 7 or plots on or above "A" line ^j	CL	Lean clay ^{k, l, m}
			PI < 4 or plots below "A" line ^j	ML	Silt ^{k, l, m}
		Organic	$\frac{\text{Liquid limit} - \text{oven dried}}{\text{Liquid limit} - \text{not dried}} < 0.75$	OL	Organic clay ^{k, l, m, n} Organic silt ^{k, l, m, o}
	SILTS & CLAYS Liquid limit 50% or more	Inorganic	PI plots on or above "A" line	CH	Fat clay ^{k, l, m}
			PI plots below "A" line	MH	Elastic silt ^{k, l, m}
		Organic	$\frac{\text{Liquid limit} - \text{oven dried}}{\text{Liquid limit} - \text{not dried}} < 0.75$	OH	Organic clay ^{k, l, m, p} Organic silt ^{k, l, m, q}
Highly organic soils		Primarily organic matter, dark in color, and organic odor		PT	Peat

- a. Based on the material passing the 3-inch (75-mm) sieve.
b. If field sample contained cobbles and/or boulders, add "with cobbles and/or boulders" to group name
c. Gravels with 5 to 12% fines require dual symbols
GW-GM well graded gravel with silt
GW-GC well graded gravel with clay
GP-GM poorly graded gravel with silt
GP-GC poorly graded gravel with clay
d. Sands with 5 to 12% fines require dual symbols
SW-SM well graded sand with silt
SW-SC well graded sand with clay
SP-SM poorly graded sand with silt
SP-SC poorly graded sand with clay
e. $C_u = D_{60}/D_{10}$ $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$

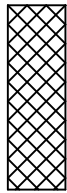
- f. If soils contains $\geq 15\%$ sand, add "with sand" to group name.
g. If fines classify as CL-ML, use dual symbol GC-GM, SC-SM
h. If fines are organic, add "with organic fines" to group name
i. If soils contains $\geq 15\%$ gravel, add "with gravel" to group name
j. If Atterberg Limits plot in hatched area, soil is a CL - ML, silty clay
k. If soils contains 15 to 29% plus No. 200, add "with sand" or "with gravel" whichever is predominant
l. If soil contains $\geq 30\%$ plus No. 200, predominantly sand, add "sandy" to group name.
m. If soils contains $\geq 30\%$ plus No. 200, predominantly gravel, add "gravelly" to group name
n. PI ≥ 4 and plots on or above "A" line
o. PI ≥ 4 and plots below "A" line
p. PI plots on or above "A" line
q. PI plots below "A" line



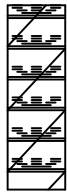


TESTING SERVICE CORPORATION

LEGEND FOR BORING LOGS



FILL



TOPSOIL



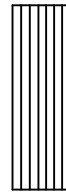
PEAT



GRAVEL



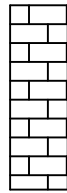
SAND



SILT



CLAY



DOLOMITE

SAMPLE TYPE

SS = Split Spoon
 ST = Thin-Walled Tube
 A = Auger
 MC = Macro-Core (Geo Probe)

WATER LEVELS:

▼ While Drilling
 ▽ End of Boring
 ▼ 24 Hours

FIELD AND LABORATORY TEST DATA

N = Standard Penetration Resistance in Blows per Foot
 WC = In-Situ Water Content
 Qu = Unconfined Compressive Strength in Tons per Square Foot
 * Pocket Penetrometer Measurement: Maximum Reading = 4.5 tsf
 Y_{DRY} = Dry Unit Weight in Pounds per Cubic Foot

SOIL DESCRIPTION

MATERIAL

BOULDER

COBBLE

Coarse GRAVEL

Small GRAVEL

Coarse SAND

Medium SAND

Fine SAND

SILT and CLAY

PARTICLE SIZE RANGE

Over 12 inches

12 inches to 3 inches

3 inches to $\frac{3}{4}$ inch $\frac{3}{4}$ inch to No. 4 Sieve

No. 4 Sieve to No. 10 Sieve

No. 10 Sieve to No. 40 Sieve

No. 40 Sieve to No. 200 Sieve

Passing No. 200 Sieve

COHESIVE SOILS

CONSISTENCY

Qu (tsf)

Very Soft	Less than 0.3
Soft	0.3 to 0.6
Stiff	0.6 to 1.0
Tough	1.0 to 2.0
Very Tough	2.0 to 4.0
Hard	4.0 and over

COHESIONLESS SOILS

RELATIVE DENSITY

N (bpf)

Very Loose	0 - 4
Loose	4 - 10
Firm	10 - 30
Dense	30 - 50
Very Dense	50 and over

MODIFYING TERM

Trace

Little

Some

PERCENT BY WEIGHT

1 - 10

10 - 20

20 - 35

PROJECT **AVERE on Duane, SEC Duane & Melrose Streets, Glen Ellyn, IL**

E.1.ap

CLIENT **REVA Development Acquisitions, LLC, Chicago, Illinois**BORING **1** DATE STARTED **8-30-18** DATE COMPLETED **8-30-18** JOB **L-88,67**

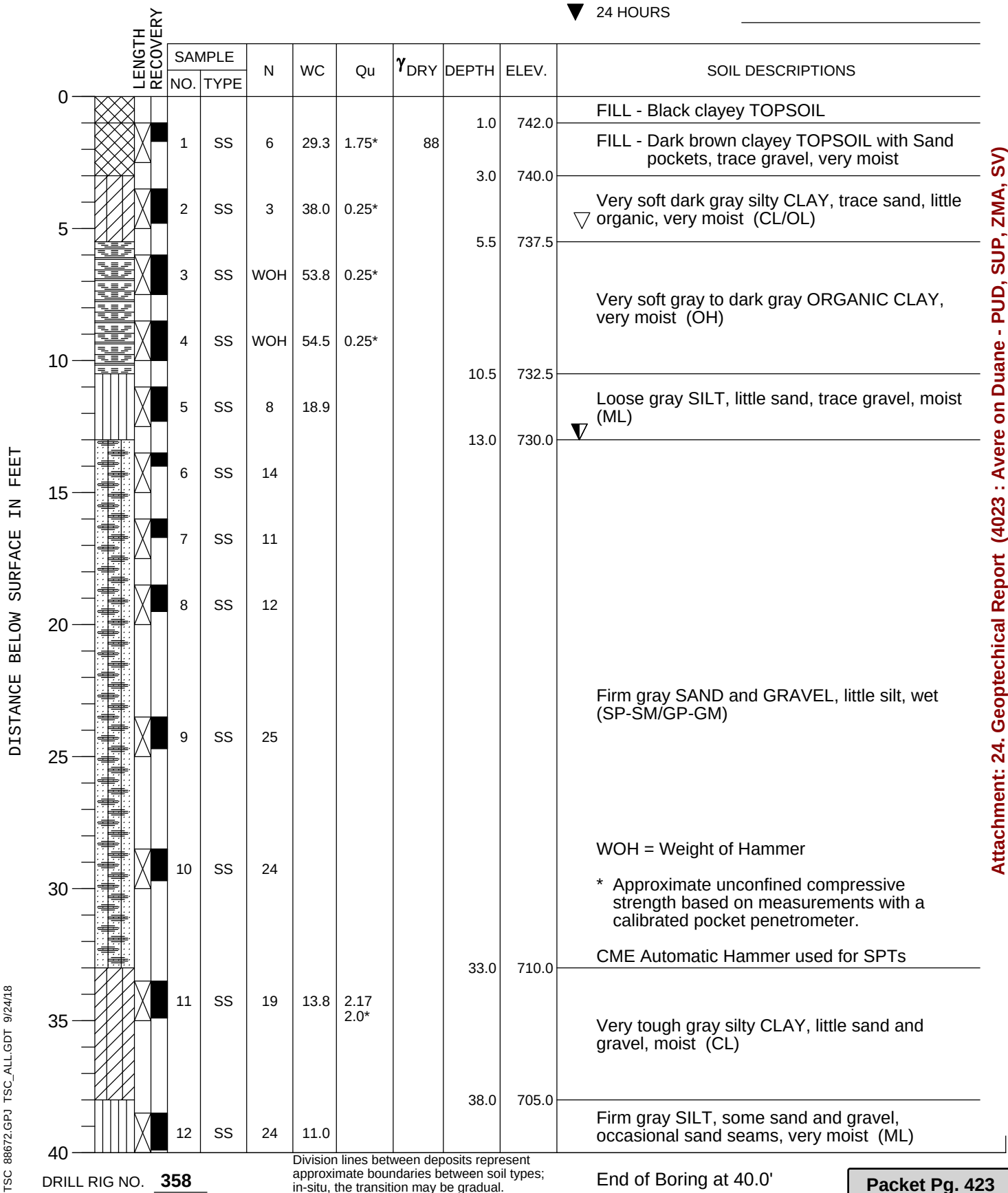
ELEVATIONS

GROUND SURFACE **743.0**END OF BORING **703.0**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **13.0'**▽ AT END OF BORING **5.0'**

▼ 24 HOURS



PROJECT **AVERE on Duane, SEC Duane & Melrose Streets, Glen Ellyn, IL**

E.1.ap

CLIENT **REVA Development Acquisitions, LLC, Chicago, Illinois**BORING **2** DATE STARTED **8-30-18** DATE COMPLETED **8-30-18** JOB **L-88,67**

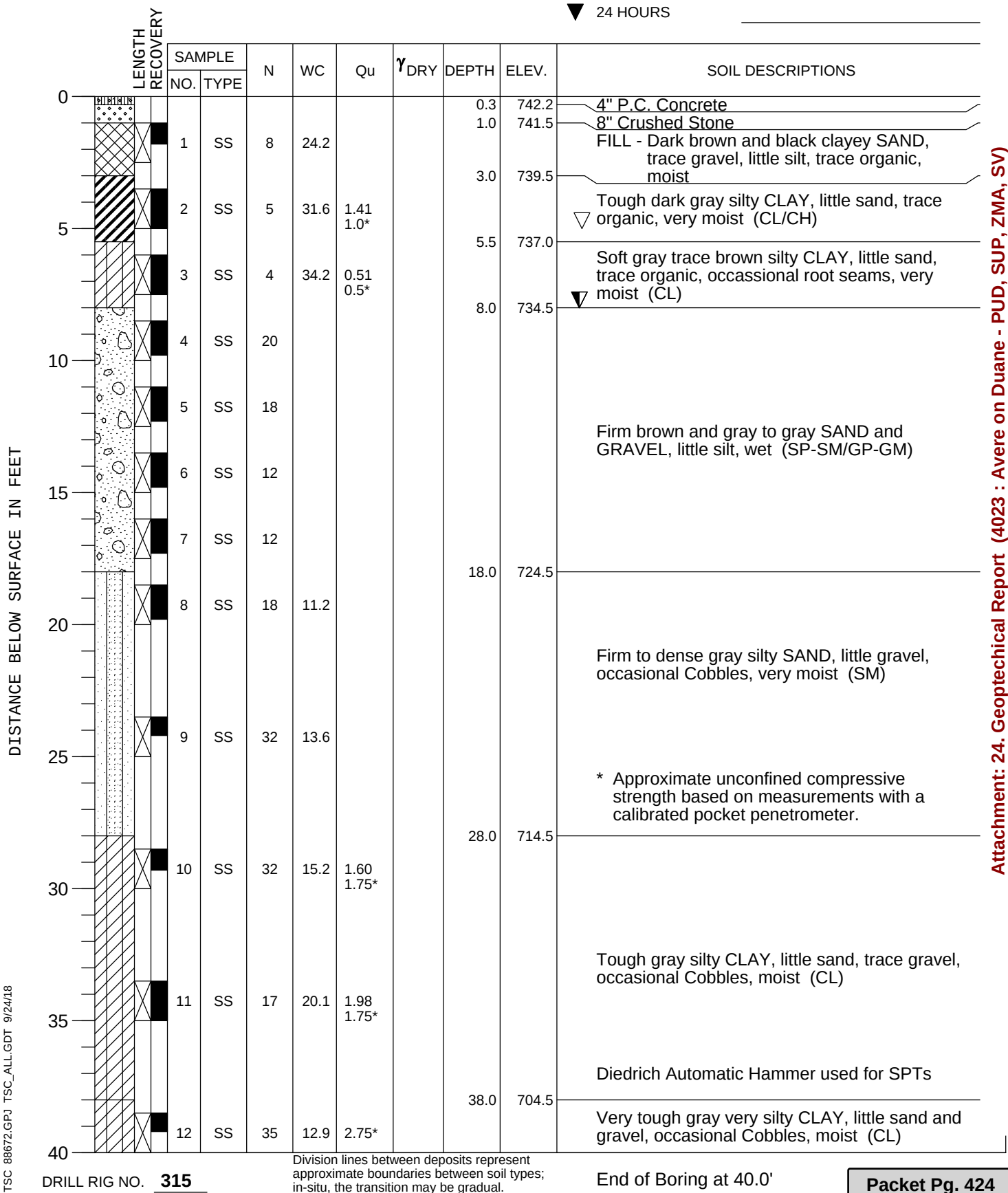
ELEVATIONS

GROUND SURFACE **742.5**END OF BORING **702.5**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **8.0'**▽ AT END OF BORING **5.0'**

▼ 24 HOURS



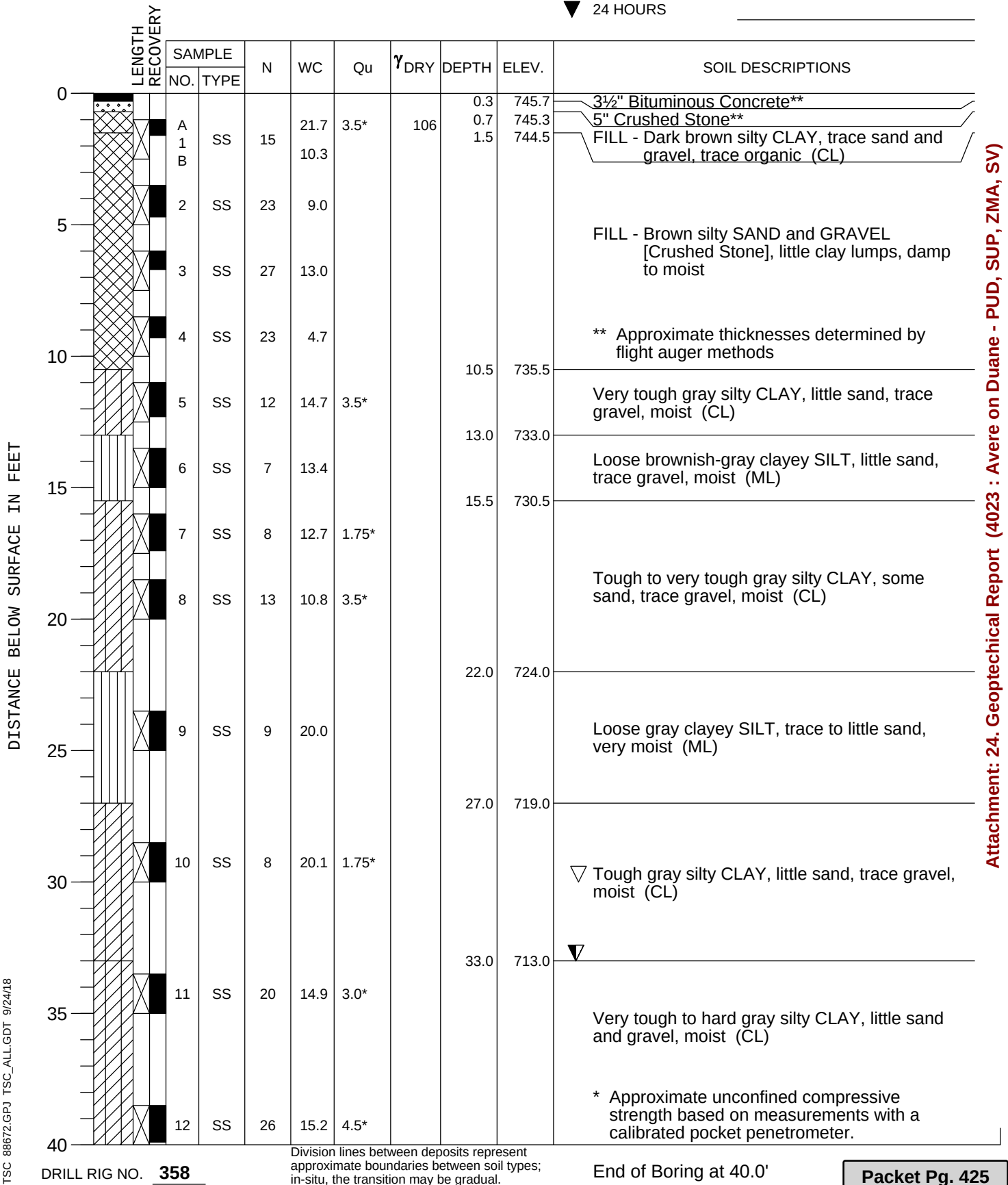
BORING	3	DATE STARTED	8-30-18	DATE COMPLETED	8-30-18	JOB	L-88,671
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ELEVATIONS

GROUND SURFACE	746.0
END OF BORING	706.0

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING	<u>33.0'</u>
▽ AT END OF BORING	<u>30.0'</u>
▼ 24 HOURS	



Attachment: 24. Geoptechnical Report (4023 : Avere on Duane - PUD, SUP, ZMA, SV)

PROJECT **AVERE on Duane, SEC Duane & Melrose Streets, Glen Ellyn, IL**

E.1.ap

CLIENT **REVA Development Acquisitions, LLC, Chicago, Illinois**BORING **4** DATE STARTED **8-30-18** DATE COMPLETED **8-30-18** JOB **L-88,67**

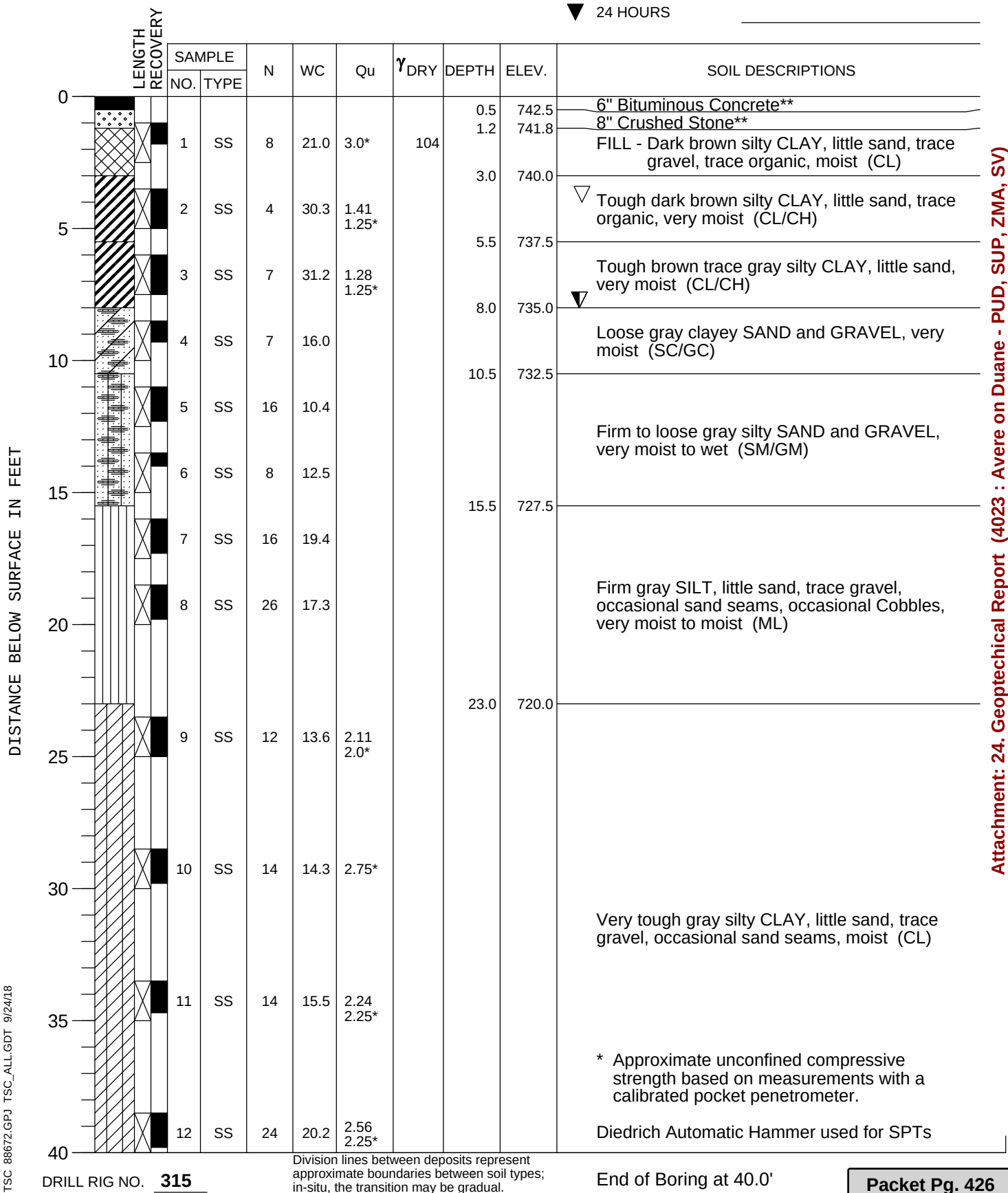
ELEVATIONS

GROUND SURFACE **743.0**END OF BORING **703.0**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **8.0'**▽ AT END OF BORING **4.0'**

▼ 24 HOURS



PROJECT **AVERE on Duane, SEC Duane & Melrose Streets, Glen Ellyn, IL**

E.1.ap

CLIENT **REVA Development Acquisitions, LLC, Chicago, Illinois**BORING **5** DATE STARTED **8-30-18** DATE COMPLETED **8-30-18** JOB **L-88,67**

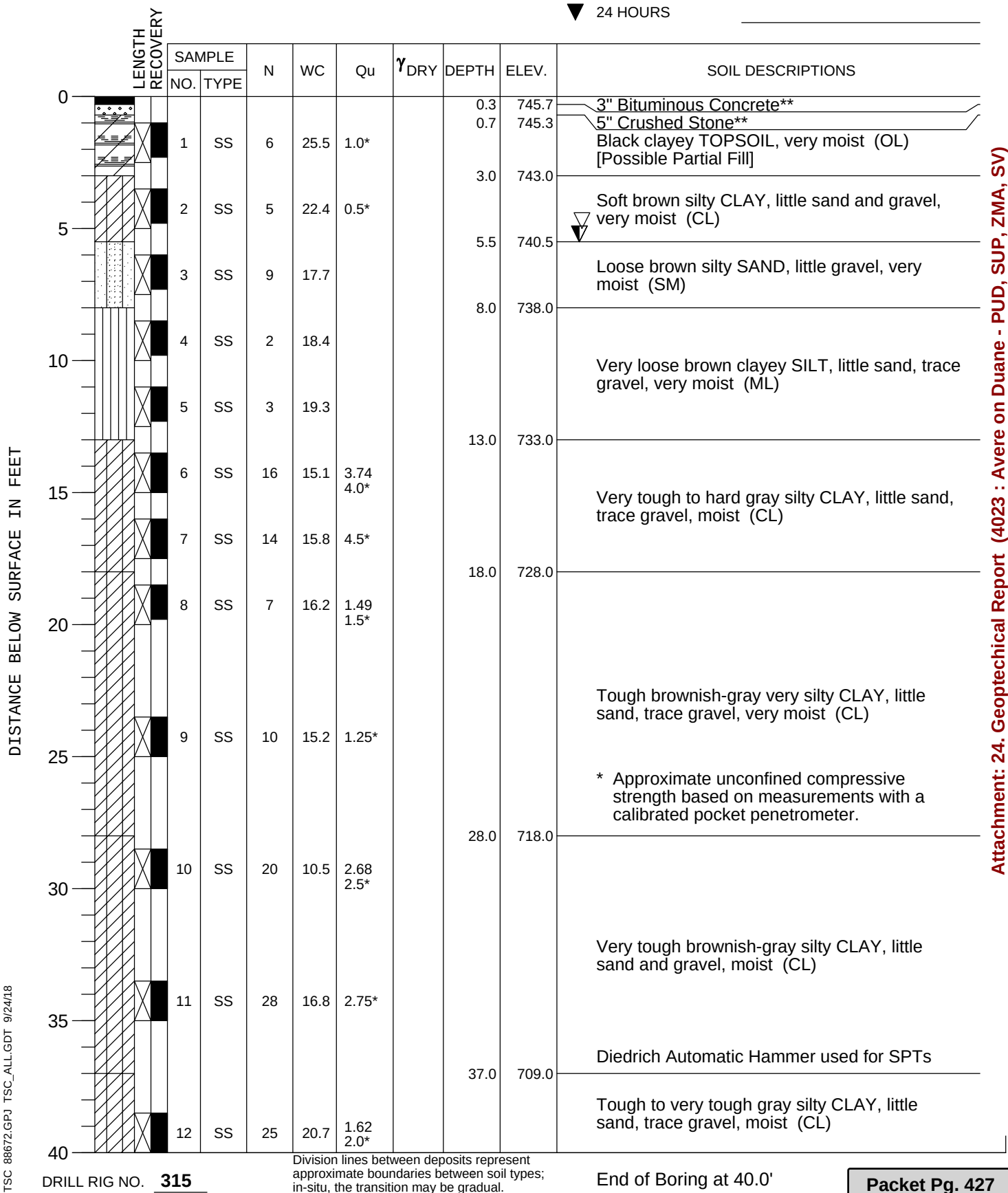
ELEVATIONS

GROUND SURFACE **746.0**END OF BORING **706.0**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **5.5'**▽ AT END OF BORING **5.0'**

▼ 24 HOURS



PROJECT **AVERE on Duane, SEC Duane & Melrose Streets, Glen Ellyn, IL**

E.1.ap

CLIENT **REVA Development Acquisitions, LLC, Chicago, Illinois**BORING **6** DATE STARTED **8-30-18** DATE COMPLETED **8-30-18** JOB **L-88,67**

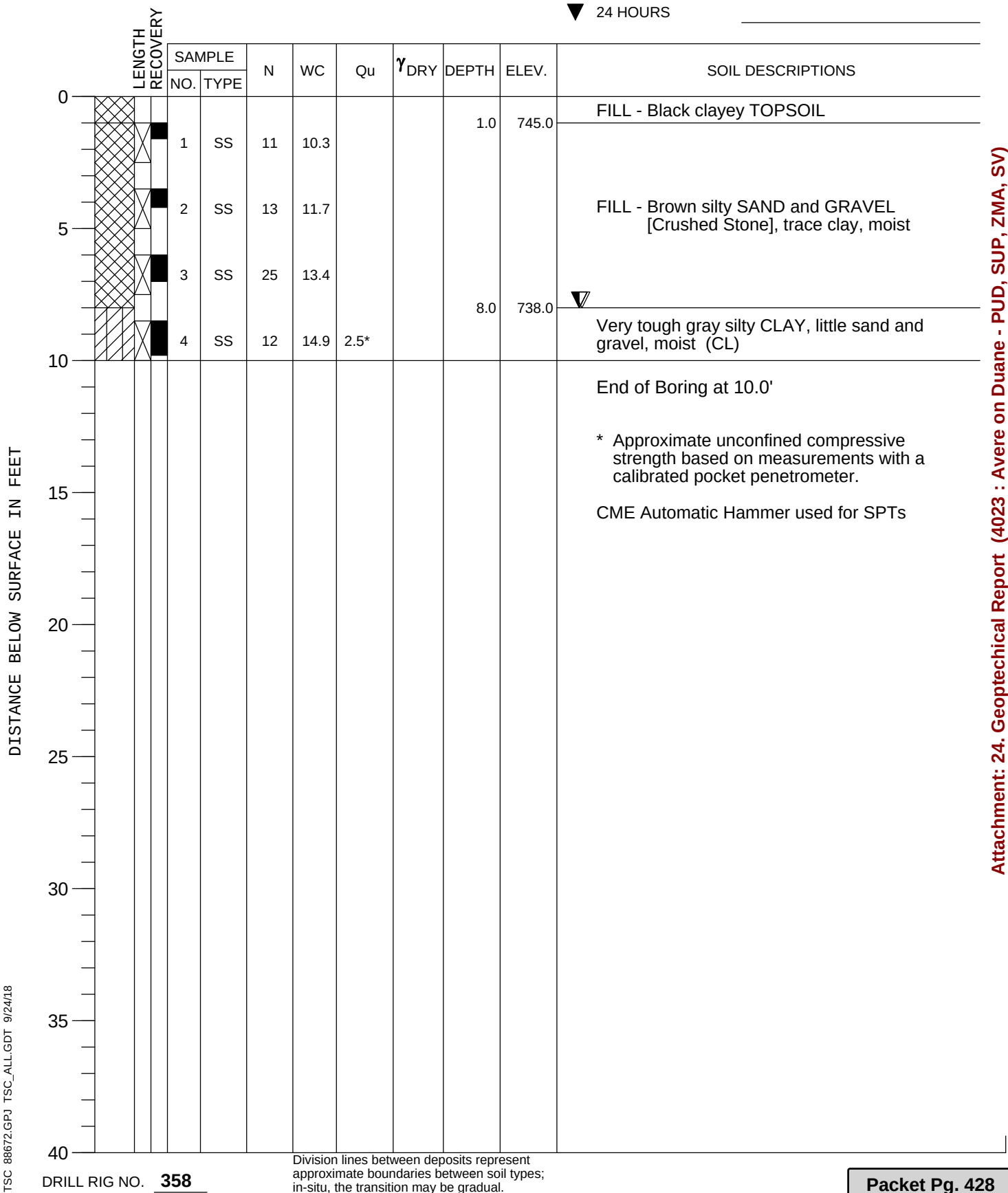
ELEVATIONS

GROUND SURFACE **746.0**END OF BORING **736.0**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **8.0'**▽ AT END OF BORING **8.0'**

▼ 24 HOURS



Attachment: 24. Geotechnical Report (4023 : Avere on Duane - PUD, SUP, ZMA, SV)

DRILL RIG NO. **358**

Packet Pg. 428

PROJECT **AVERE on Duane, SEC Duane & Melrose Streets, Glen Ellyn, IL**

E.1.ap

CLIENT **REVA Development Acquisitions, LLC, Chicago, Illinois**BORING **7** DATE STARTED **8-30-18** DATE COMPLETED **8-30-18** JOB **L-88,67**

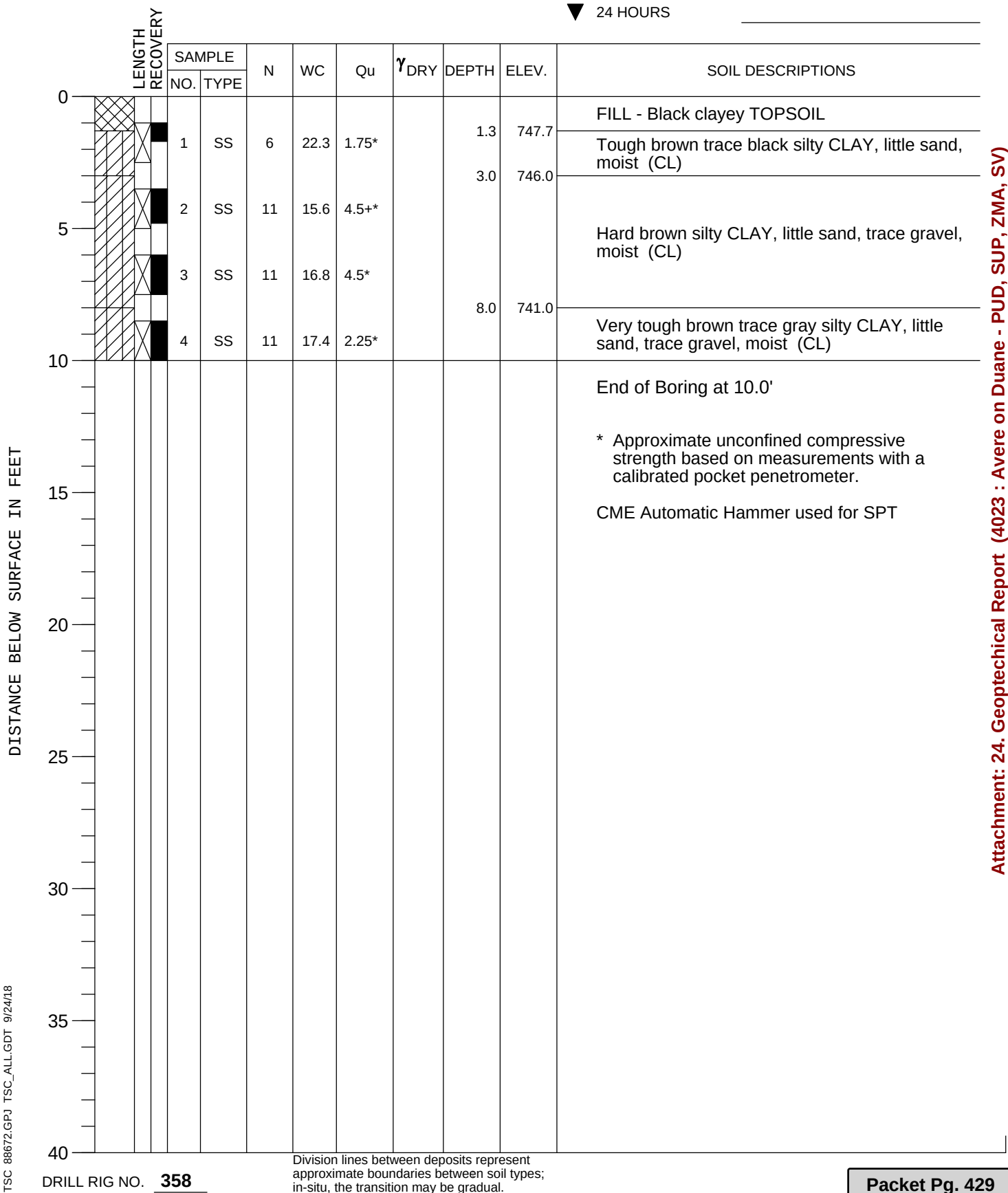
ELEVATIONS

GROUND SURFACE **749.0**END OF BORING **739.0**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **Dry**▽ AT END OF BORING **Dry**

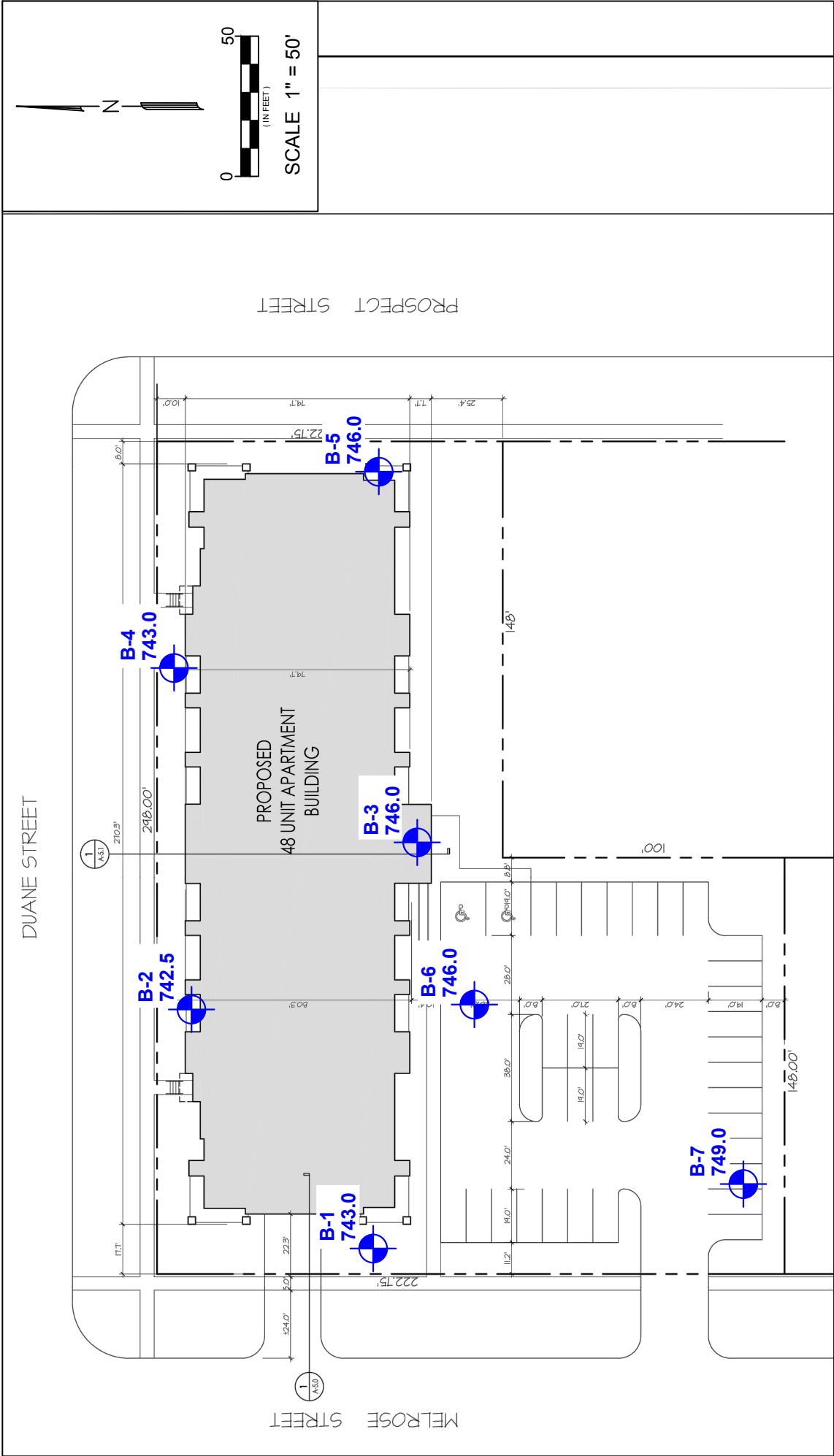
▼ 24 HOURS



Attachment: 24. Geotechnical Report (4023 : Avere on Duane - PUD, SUP, ZMA, SV)

DRILL RIG NO. **358**

Packet Pg. 429



NOTE: GROUND SURFACE ELEVATIONS AT THE BORINGS WERE ACQUIRED BY TSC USING A TRIMBLE R8S GNSS RECEIVER, BEING ROUNDED TO THE NEAREST 0.5 FOOT.

LEGEND	BORING LOCATION PLAN AVERE ON DUANE 48-UNIT APARTMENT BUILDING	TESTING SERVICE CORPORATION 457 EAST GUNDERSEN DRIVE CAROL STREAM, ILLINOIS 60814 TSC	DRAWN BY: JAC	PAGE NO.
			CHECKED BY: AJB	
SOIL BORING LOCATION			JOB NO. : 1 00 070	1 OF 1
Attachment: 24. Geotechnical Report (4023 : Avere on Duane - PUD, SUP, ZMA, SV)			DATE: 03-20-10	

DUANE STREET DRAINAGE ANALYSIS MEMORANDUM

To: Rich Daubert, P.E.
Village of Glen Ellyn

Cc: Warren James
REVA Development Acquisitions, LLC

From: Kim Lask, P.E., PTOE, CFM

Date: August 16, 2018
Revised March 12, 2019
Revised April 22, 2019

Subject: Avere on Duane, Glen Ellyn, IL
HE Project No.: 17-189

REVISION NOTE

The Duane Street Drainage Analysis was revised per review comments from the Village of Glen Ellyn dated April 11, 2019.

INTRODUCTION

This memorandum was prepared to evaluate Duane Street drainage between Prospect Avenue and Melrose Street adjacent to the proposed Avere on Duane multi-family residential development. The Avere on Duane development consists of a new multi-family residential building with below ground parking garage, parking lot, and related utilities.

There is an existing depressional area on Duane Street that has experienced flooding in the past during high intensity rains. The purpose of this report is to summarize the hydrologic and hydraulic analyses and to identify the 100-year base flood elevation (BFE) on Duane Street. The BFE will be used as a basis for determining the sidewalk elevation adjacent to the ramp down to the parking garage to protect from stormwater inundation.

The project is located in part of Section 10 and 11, Township 39 North, Range 10 East, Village of Glen Ellyn, DuPage County, Illinois.

Attachment: 25. Drainage Analysis (4023 : Avere on Duane - PUD, SUP, ZMA, SV)



EXISTING CONDITIONS

Regional topographic mapping was provided by DuPage County 2014 2' contours, and the onsite topographic survey was prepared by Haeger Engineering on Jan. 9, 2018. The "Village of Glen Ellyn Stormwater Master Plan Update" and the "Hydrologic and Hydraulic Study for Lake Ellyn" prepared by Rezek, Henry, Meisenheimer and Gende, Inc. (RHMG) dated May 2000 and April 2012, respectively, were used as a basis to determine tributary drainage areas and regional storm sewer routing.

The main 36" storm sewer trunk line starts just south of Hill Avenue and runs north down Lorraine Street to Duane Street. The 42" Duane Street storm sewer runs east to Glenwood Avenue, turns north and runs under the railroad tracks, then heads northeast to Lake Ellyn. The 24" and 27" lateral pipes that run north at Prospect Avenue which drain stormwater from Duane Street have also been included in the stormwater modeling.

Tributary areas upstream of the proposed development were based on an analysis of the contours derived from the County map and the topographic survey. Drainage areas were separated taking into account storm sewer routing and points of overflow.

The analysis was divided into six drainage areas. Drainage areas DA-1, DA-2, and DA-3 are tributary to the storm sewer trunk system and overflow to Duane Street during high intensity rains. Drainage area DA-4 includes 48.2 acres that is tributary to the storm sewer trunk system. The modeled DA-4 pond is a catch basin that merges the flow from the 10" pipe from DA-5, the 8" pipe from DA-6, and the rest of the upstream storm sewer system. Overflow from DA-4 bubbles up through the structure grate and then flows along the road to the west. The DA-5 depression enters into a 10" pipe towards the storm sewer trunk system and has an overflow to Lorraine Street. The DA-6 depression enters into an 8" pipe towards the storm sewer trunk system and has an overflow to Traver Street. The tributary areas were evaluated and are indicated on the Existing Conditions Drainage Exhibit attached to this memorandum and summarized below in *Table 1*.

Table 1 – Summary of Drainage Areas

	Tributary Area (ac.)	Curve Number	Time of Concentration (min.)	Storage Volume (ac.ft.)	Overflow Elevation (ft.)
DA-1	52.726	84.0	60	0.301	748.0 +/-
DA-2	3.275	84.0	10	0.421	745.1 +/-
DA-3	22.770	84.0	20	1.049	751.0 +/-
DA-4	48.150	84.0	60	0.007	769.3 +/-
DA-5	17.723	84.0	30	7.013	772.0 +/-
DA-6	20.050	84.0	30	9.445	769.9 +/-

As previously stated, there is an existing depressional area on Duane Street that experiences flooding during high intensity rains. The lowest inlet on Duane Street is at elevation 741.25 and the overflow



occurs in the swale along the railroad tracks at elevation 748.0+/- as shown on the Existing Conditions Drainage Exhibit. Village staff has indicated that flooding limits are around elevation 742.0+/- as observed from previous flooding events.

DRAINAGE CALCULATIONS / STORMWATER MODEL

Bentley PondPack V8i stormwater modeling software with Bulletin 70 and Huff rainfall distribution was used to calculate the 100-year BFE of Duane Street adjacent to the proposed development. The runoff curve number was used to determine rainfall losses. An impervious area of 40% was assumed for the study and is based on the existing land coverage which results in a curve number of 84.0. This is comparable to the assumptions in the RHMG studies.

Depressional areas within each sub-area were added to the model as basins, and overflow elevations were assumed based on available topographic information. The location of the depressional areas can be seen on the Existing Conditions Drainage Exhibit. The 42" Duane Street outfall storm sewer was assumed to be flowing full. The inside of pipe crown elevation of 734.97 of the 42" outfall storm sewer was used as the tailwater elevation for the model's outfall. As previously stated, the depressional area on Duane Street was evaluated to determine the BFE adjacent to the development.

A critical duration analysis of the system was prepared evaluating the 100-year storm event from 5 minutes to 10-days to determine the worst-case duration. Based on the PondPack model, the critical storm occurs during the 100-year 2-hour storm event. The peak elevation on Duane Street is at elevation 742.76 with a discharge of 197.62 cfs. **Table 2** summarizes the peak discharge results.

Table 2 – Critical Duration Peak Discharge / Elevation Summary

	Peak Discharge (cfs)	Peak Elevation (ft.)
DA-1	197.62	742.76
DA-2	2.96	745.29
DA-3	48.13	751.68
DA-4	87.06	769.98
DA-5	2.15	771.40
DA-6	1.31	768.92

CONCLUSION

The analysis was conducted to identify the 100-year BFE on Duane Street adjacent to the Avere on Duane development. The results of the analysis indicate a 100-year BFE of 742.76 on Duane Street. It is recommended that a factor of safety of 15" above the BFE, or elevation 744.00, be used as the sidewalk elevation adjacent to the ramp down to the parking garage to protect from stormwater inundation.



Exhibits

Attachment: 25. Drainage Analysis (4023 : Avere on Duane - PUD, SUP, ZMA, SV)



0 400'
Scale: 1" = 400'

HAEGER ENGINEERING
consulting engineers • land surveyors

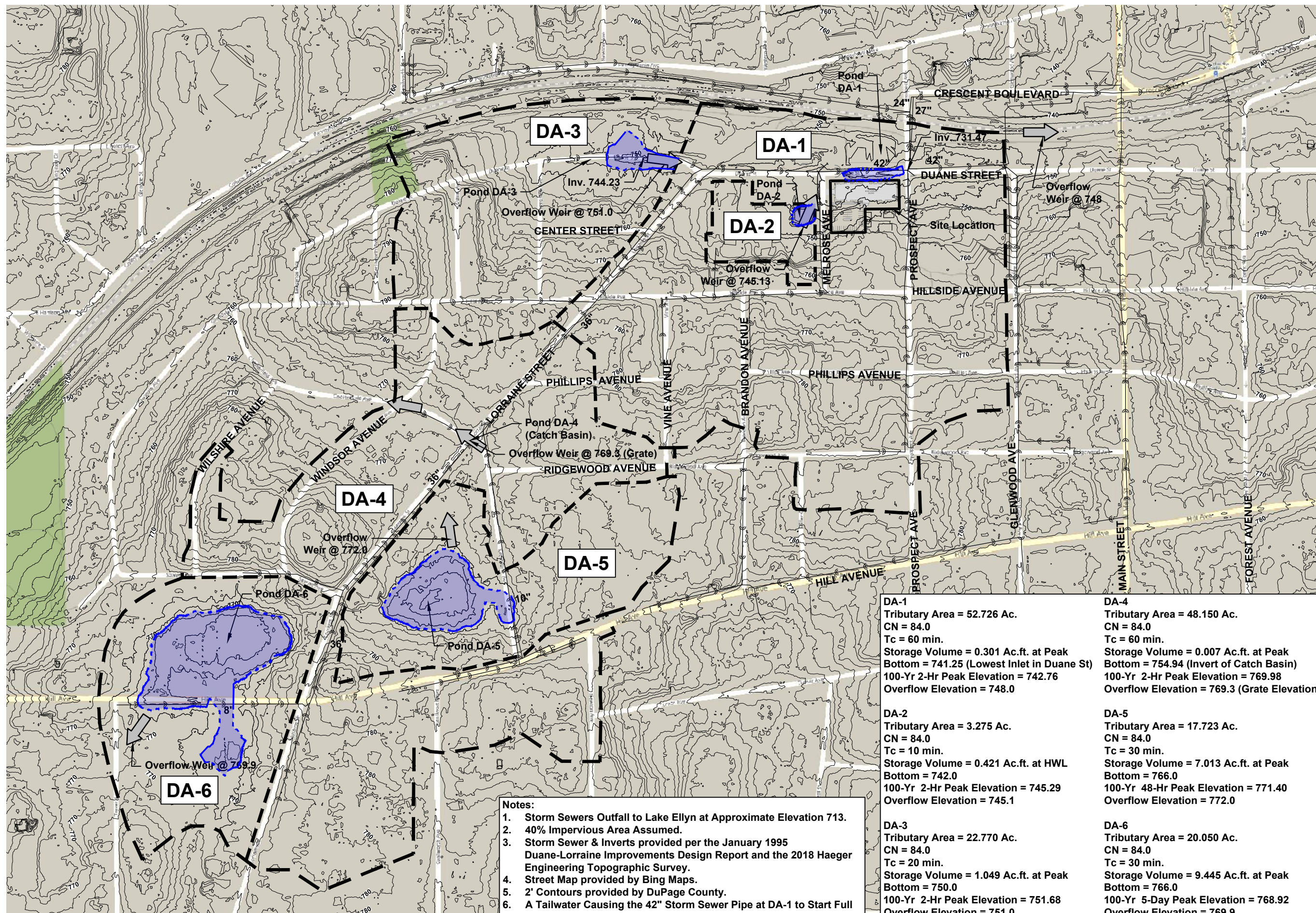
100 East State Parkway, Schaumburg, IL 60173 Tel: 847.394.6600 Fax: 847.394.6608
Illinois Professional Design Firm License No. 184-003152
www.haegerengineering.com

EXISTING CONDITIONS DRAINAGE EXHIBIT

AVERE ON DUANE SITE IMPROVEMENTS

Attachment: 25. Drainage Analysis (4023 : Avere on Duane - PUD, SUP, ZMA, SV)

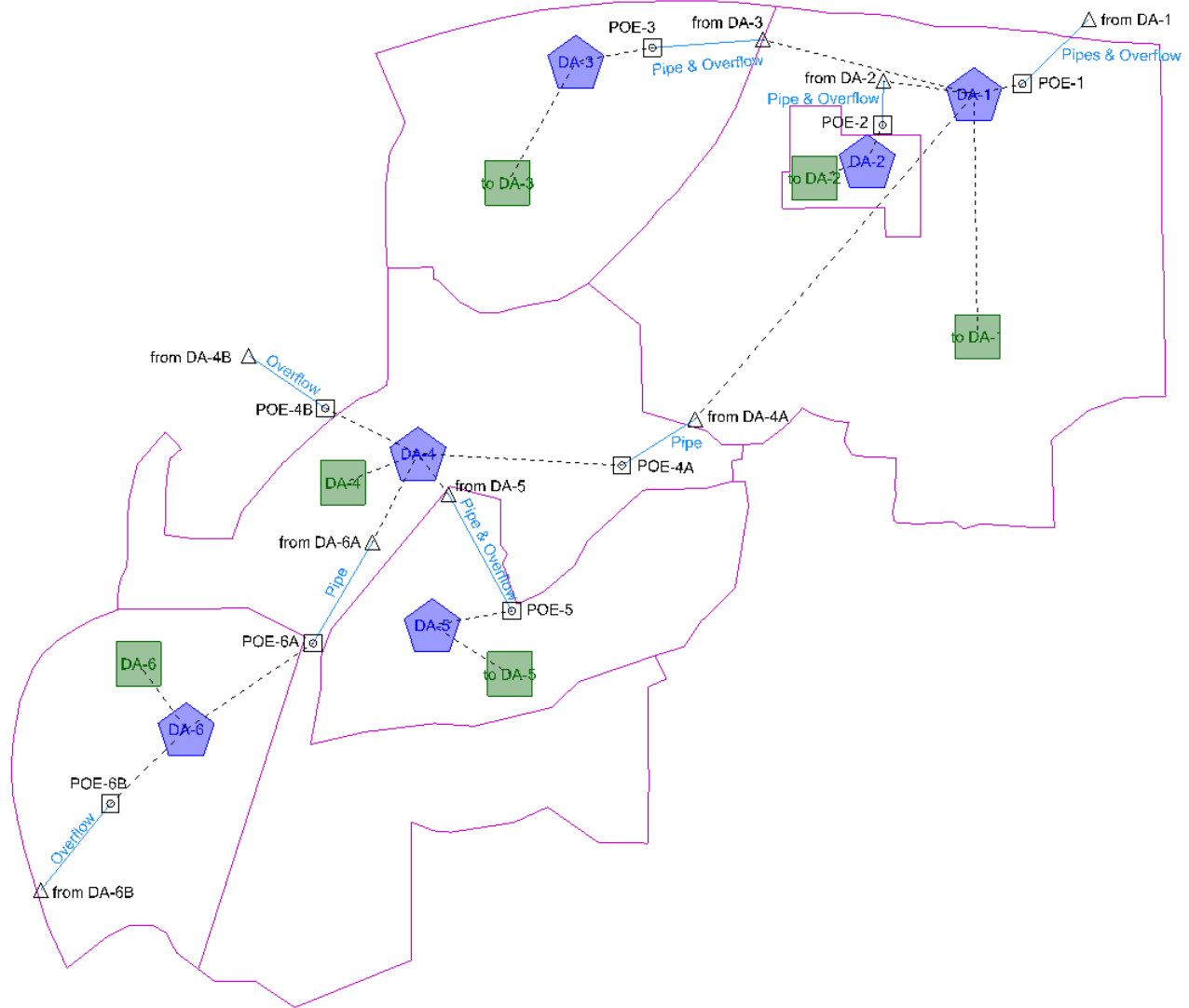
Project Manager: KM
Engineer: DJ
Date: 04-22-2019
Project No. 17-18
Sheet 1





PondPack Model / Calculations

Attachment: 25. Drainage Analysis (4023 : Avere on Duane - PUD, SUP, ZMA, SV)



EXISTING CONDITIONS MODEL

100-Year Critical Duration Storm Events

100-YEAR CRITICAL DURATION ANALYSIS - EXISTING CONDITIONS

HAEGER ENGINEERING, LLC
consulting engineers and land surveyors

Project: Avere on Duane
Location: Glen Ellyn, Illinois
Project #: 17-189

Prepared: DJV
Reviewed: KL
Date: 08/13/18
Revised: 03/12/19
Revised: 04/22/19

Flow Analysis:

Flow	Pond Pack Results	5min, 100 year Storm Event	10min, 100 year Storm Event	15min, 100 year Storm Event	30min, 100 year Storm Event	1hr, 100 year Storm Event	2hr, 100 year Storm Event	3hr, 100 year Storm Event	6hr, 100 year Storm Event	12hr, 100 year Storm Event	18hr, 100 year Storm Event	24hr, 100 year Storm Event	48hr, 100 year Storm Event	72hr, 100 year Storm Event	5day, 100 year Storm Event	10day, 100 year Storm Event	Critical Event
DA-1 (IN)	Q Peak (cfs)	14.48	77.08	105.45	171.49	195.55	205.00	192.13	161.16	126.13	109.74	96.24	55.44	41.28	29.49	17.98	205.00
DA-2 (IN)	Q Peak (cfs)	2.37	8.41	10.84	13.07	12.37	9.70	8.19	6.35	3.64	3.01	2.49	1.36	0.98	0.68	0.38	13.07
DA-3 (IN)	Q Peak (cfs)	8.60	36.40	50.45	67.03	69.38	61.57	49.64	37.74	24.94	20.86	17.27	9.45	6.84	4.71	2.66	69.38
DA-4 (IN)	Q Peak (cfs)	6.22	27.83	41.37	68.37	82.70	87.26	79.20	62.21	50.70	45.24	38.86	23.13	17.69	13.20	8.78	87.26
DA-4	Q Peak (cfs)	6.22	27.83	41.37	68.37	82.70	87.26	79.20	62.21	49.59	42.04	35.62	19.85	14.42	9.95	5.62	87.26
DA-5 (IN)	Q Peak (cfs)	4.51	19.96	28.93	41.05	45.09	42.77	36.24	26.18	19.07	16.11	13.41	7.35	5.32	3.67	2.07	45.09
DA-6 (IN)	Q Peak (cfs)	5.11	22.59	32.73	46.43	51.01	48.39	41.00	29.61	21.57	18.23	15.17	8.31	6.02	4.15	2.34	51.01
DA-6	Q Peak (cfs)	5.11	22.59	32.73	46.43	51.01	48.39	41.00	29.61	21.57	18.23	15.17	8.31	6.02	4.15	2.34	51.01
from DA-1	Q Peak (cfs)	14.43	76.92	105.01	171.41	190.52	197.62	188.76	161.03	126.00	109.72	96.24	55.44	41.28	29.49	17.98	197.62
from DA-4B	Q Peak (cfs)	0.00	0.00	0.00	0.49	16.11	21.26	12.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.26
from DA-6B	Q Peak (cfs)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
to DA-1	Q Peak (cfs)	6.82	30.47	45.30	74.87	90.56	95.55	86.72	68.12	54.31	46.03	39.01	21.74	15.79	10.90	6.16	95.55
to DA-2	Q Peak (cfs)	2.37	8.41	10.84	13.07	12.37	9.70	8.19	6.35	3.64	3.01	2.49	1.36	0.98	0.68	0.38	13.07
to DA-3	Q Peak (cfs)	8.60	36.40	50.45	67.03	69.38	61.57	49.64	37.74	24.94	20.86	17.27	9.45	6.84	4.71	2.66	69.38
to DA-5	Q Peak (cfs)	4.51	19.96	28.93	41.05	45.09	42.77	36.24	26.18	19.07	16.11	13.41	7.35	5.32	3.67	2.07	45.09

Basin Analysis:

Basin	Pond Pack Results	5min, 100 year Storm Event	10min, 100 year Storm Event	15min, 100 year Storm Event	30min, 100 year Storm Event	1hr, 100 year Storm Event	2hr, 100 year Storm Event	3hr, 100 year Storm Event	6hr, 100 year Storm Event	12hr, 100 year Storm Event	18hr, 100 year Storm Event	24hr, 100 year Storm Event	48hr, 100 year Storm Event	72hr, 100 year Storm Event	5day, 100 year Storm Event	10day, 100 year Storm Event	Critical Event
DA-1	Storage (acft)	0.003	0.005	0.006	0.009	0.149	0.301	0.109	0.008	0.007	0.006	0.006	0.004	0.004	0.004	0.003	0.301
	Elevation (ft)	735.02	736.57	738.28	741.06	742.30	742.76	742.18	740.41	739.10	738.43	737.75	735.73	735.41	735.28	735.04	742.76
	Discharge (cfs)	14.43	76.92	105.01	171.41	190.52	197.62	188.76	161.03	126.00	109.72	96.24	55.44	41.28	29.49	17.98	197.62
DA-2	Storage (acft)	0.011	0.103	0.162	0.286	0.397	0.421	0.420	0.402	0.345	0.276	0.224	0.074	0.012	0.001	0.000	0.421
	Elevation (ft)	742.10	743.01	743.60	744.49	745.15	745.29	745.28	745.18	744.84	744.43	744.12	742.72	742.11	741.62	741.31	745.29
	Discharge (cfs)	0.95	1.32	1.51	1.76	1.89	2.93	2.96	2.02	1.85	1.75	1.66	1.22	0.96	0.68	0.38	2.96
DA-3	Storage (acft)	0.000	0.259	0.581	0.954	1.036	1.049	0.987	0.844	0.661	0.318	0.018	0.000	0.000	0.000	0.000	1.049
	Elevation (ft)	746.05	750.67	751.20	751.58	751.67	751.68	751.62	751.47	751.28	750.83	750.05	746.18	745.84	745.54	745.21	751.68
	Discharge (cfs)	8.23	18.62	20.02	39.22	47.39	48.13	40.90	29.12	20.56	17.64	17.02	9.45	6.84	4.71	2.66	48.13
DA-4	Storage (acft)	0.000	0.000	0.000	0.002	0.007	0.007	0.006	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007
	Elevation (ft)	755.58	757.18	757.98	769.45	769.91	769.98	769.86	764.78	758.40	758.19	757.80	756.81	756.50	756.22	755.82	769.98
	Discharge (cfs)	6.20	27.81	41.17	67.58	82.30	87.06	79.04	62.14	50.45	45.23	38.85	23.13	17.69	13.20	8.78	87.06
DA-5	Storage (acft)	0.170	0.768	1.151	1.999	2.936	3.950	4.334	5.063	5.863	6.293	6.657	7.013	6.517	5.388	3.601	7.013
	Elevation (ft)	766.37	767.68	768.19	768.84	769.57	770.18	770.34	770.62	770.94	771.11	771.26	771.40	771.20	770.75	770.05	771.40
	Discharge (cfs)	0.00	0.00	0.00	0.00	0.00	1.96	1.98	2.03	2.07	2.10	2.12	2.15	2.11	2.05	1.93	2.15
DA-6	Storage (acft)	0.192	0.869	1.302	2.261	3.321	4.591	5.093	6.118	7.255	7.797	8.480	9.220	9.435	9.445	7.078	9.445
	Elevation (ft)	766.08	766.38	766.58	767.00	767.47	768.01	768.11	768.30	768.51	768.61	768.74	768.88	768.92	768.92	768.48	768.92
	Discharge (cfs)	0.00	0.00	0.00	0.00	0.00	1.23	1.23	1.25	1.27	1.27	1.29	1.30	1.31	1.31	1.27	1.31

Attachment: 25. Drainage Analysis (4023 : Avere on Duane - PUD, SUP, ZMA, SV)

Table of Contents		
	Unit Hydrograph Summary, 100 years	175
	Unit Hydrograph Summary, 100 years	175
	Unit Hydrograph Summary, 100 years	175
	Unit Hydrograph Summary, 100 years	175
	Unit Hydrograph Summary, 100 years	175
	Unit Hydrograph Summary, 100 years	175
	Unit Hydrograph Summary, 100 years	175
	Unit Hydrograph Summary, 100 years	175
	Unit Hydrograph Summary, 100 years	175
	Unit Hydrograph Summary, 100 years	175
DA-1	Elevation vs. Volume Curve, 100 years	205
DA-2	Elevation vs. Volume Curve, 100 years	206
DA-3	Elevation vs. Volume Curve, 100 years	207
DA-4	Elevation vs. Volume Curve, 100 years	208
DA-5	Elevation vs. Volume Curve, 100 years	209
DA-6	Elevation vs. Volume Curve, 100 years	210
COS #1	Outlet Input Data, 100 years	211
COS #2	Outlet Input Data, 100 years	216
COS #3	Outlet Input Data, 100 years	218
COS #4A	Outlet Input Data, 100 years	221
COS #4B	Outlet Input Data, 100 years	223
COS #5		

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Table of Contents

COS #6A	Outlet Input Data, 100 years	225
COS #6B	Outlet Input Data, 100 years	228
DA-1	Outlet Input Data, 100 years	230
	Interconnected Pond Routing Summary, 100 years	232
	Interconnected Pond Routing Summary, 100 years	232
	Interconnected Pond Routing Summary, 100 years	232
	Interconnected Pond Routing Summary, 100 years	232
	Interconnected Pond Routing Summary, 100 years	232
	Interconnected Pond Routing Summary, 100 years	232
	Interconnected Pond Routing Summary, 100 years	232
	Interconnected Pond Routing Summary, 100 years	232
	Interconnected Pond Routing Summary, 100 years	232
	Interconnected Pond Routing Summary, 100 years	232
	Interconnected Pond Routing Summary, 100 years	232
	Interconnected Pond Routing Summary, 100 years	232
	Interconnected Pond Routing Summary, 100 years	232
DA-2	Interconnected Pond Routing Summary, 100 years	247
	Interconnected Pond Routing Summary, 100 years	247
	Interconnected Pond Routing Summary, 100 years	247
	Interconnected Pond Routing Summary, 100 years	247
	Interconnected Pond Routing Summary, 100 years	247
	Interconnected Pond Routing Summary, 100 years	247
	Interconnected Pond Routing Summary, 100 years	247
	Interconnected Pond Routing Summary, 100 years	247
	Interconnected Pond Routing Summary, 100 years	247
	Interconnected Pond Routing Summary, 100 years	247
	Interconnected Pond Routing Summary, 100 years	247

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Subsection: Master Network Summary

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)
to DA-5	10d 100y	100	13.500	204.000	2.07
to DA-5	5m100y	100	0.170	0.350	4.51
to DA-5	10m100y	100	0.768	0.400	19.96
to DA-5	15m100y	100	1.151	0.400	28.93
to DA-5	30m100y	100	1.999	0.500	41.05
to DA-5	1h100y	100	2.936	0.550	45.09
to DA-5	2h100y	100	4.120	0.700	42.77
to DA-5	3h100y	100	4.628	0.850	36.24
to DA-5	6h100y	100	5.757	0.950	26.18
to DA-5	12h100y	100	7.017	5.000	19.07
to DA-5	18h100y	100	7.549	11.700	16.11
to DA-5	24h100y	100	8.408	15.600	13.41
to DA-5	72h100y	100	10.112	61.200	5.32
to DA-5	48h100y	100	9.229	40.800	7.35
to DA-5	5d 100y	100	11.801	102.000	3.67
to DA-1	10d 100y	100	40.163	204.000	6.16
to DA-1	5m100y	100	0.505	0.650	6.82
to DA-1	10m100y	100	2.286	0.650	30.47
to DA-1	15m100y	100	3.425	0.700	45.30
to DA-1	30m100y	100	5.946	0.800	74.87
to DA-1	1h100y	100	8.734	0.950	90.56
to DA-1	2h100y	100	12.257	1.100	95.55
to DA-1	3h100y	100	13.768	1.200	86.72
to DA-1	6h100y	100	17.127	1.600	68.12
to DA-1	12h100y	100	20.877	5.600	54.31
to DA-1	18h100y	100	22.459	11.850	46.03
to DA-1	24h100y	100	25.013	15.700	39.01
to DA-1	72h100y	100	30.082	61.200	15.79
to DA-1	48h100y	100	27.457	40.950	21.74
to DA-1	5d 100y	100	35.108	102.000	10.90
to DA-3	10d 100y	100	17.345	203.950	2.66
to DA-3	5m100y	100	0.217	0.250	8.60
to DA-3	10m100y	100	0.985	0.300	36.40
to DA-3	15m100y	100	1.479	0.300	50.45
to DA-3	30m100y	100	2.569	0.350	67.03
to DA-3	1h100y	100	3.775	0.450	69.38
to DA-3	2h100y	100	5.295	0.550	61.57
to DA-3	3h100y	100	5.949	0.700	49.64
to DA-3	6h100y	100	7.396	0.750	37.74
to DA-3	12h100y	100	9.016	4.900	24.94
to DA-3	18h100y	100	9.699	11.700	20.86
to DA-3	24h100y	100	10.802	15.600	17.27
to DA-3	72h100y	100	12.991	61.150	6.84
to DA-3	48h100y	100	11.857	40.800	9.45
to DA-3	5d 100y	100	15.162	101.950	4.71

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[08.11.01.56]
Page 2 of 323

Subsection: Master Network Summary

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)
to DA-2	10d 100y	100	2.495	203.950	0.38
to DA-2	5m100y	100	0.031	0.150	2.37
to DA-2	10m100y	100	0.142	0.200	8.41
to DA-2	15m100y	100	0.213	0.200	10.84
to DA-2	30m100y	100	0.370	0.250	13.07
to DA-2	1h100y	100	0.543	0.300	12.37
to DA-2	2h100y	100	0.761	0.350	9.70
to DA-2	3h100y	100	0.855	0.400	8.19
to DA-2	6h100y	100	1.064	0.650	6.35
to DA-2	12h100y	100	1.297	4.800	3.64
to DA-2	18h100y	100	1.395	11.700	3.01
to DA-2	24h100y	100	1.554	15.550	2.49
to DA-2	72h100y	100	1.868	61.150	0.98
to DA-2	48h100y	100	1.705	40.800	1.36
to DA-2	5d 100y	100	2.181	101.950	0.68
DA-6	10d 100y	100	15.273	204.000	2.34
DA-6	5m100y	100	0.192	0.350	5.11
DA-6	10m100y	100	0.869	0.400	22.59
DA-6	15m100y	100	1.302	0.400	32.73
DA-6	30m100y	100	2.261	0.500	46.43
DA-6	1h100y	100	3.322	0.550	51.01
DA-6	2h100y	100	4.661	0.700	48.39
DA-6	3h100y	100	5.236	0.850	41.00
DA-6	6h100y	100	6.513	0.950	29.61
DA-6	12h100y	100	7.939	5.000	21.57
DA-6	18h100y	100	8.540	11.700	18.23
DA-6	24h100y	100	9.512	15.600	15.17
DA-6	72h100y	100	11.439	61.200	6.02
DA-6	48h100y	100	10.441	40.800	8.31
DA-6	5d 100y	100	13.350	102.000	4.15
DA-4	10d 100y	100	36.677	204.000	5.62
DA-4	5m100y	100	0.461	0.650	6.22
DA-4	10m100y	100	2.087	0.650	27.83
DA-4	15m100y	100	3.127	0.700	41.37
DA-4	30m100y	100	5.430	0.800	68.37
DA-4	1h100y	100	7.976	0.950	82.70
DA-4	2h100y	100	11.193	1.100	87.26
DA-4	3h100y	100	12.573	1.200	79.20
DA-4	6h100y	100	15.640	1.600	62.21
DA-4	12h100y	100	19.065	5.600	49.59
DA-4	18h100y	100	20.510	11.850	42.04
DA-4	24h100y	100	22.842	15.700	35.62
DA-4	72h100y	100	27.471	61.200	14.42
DA-4	48h100y	100	25.074	40.950	19.85
DA-4	5d 100y	100	32.061	102.000	9.95

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[08.11.01.56]
Page 3 of 323

Subsection: Master Network Summary

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)
from DA-1	10d 100y	100	119.440	204.000	17.98
from DA-1	5m100y	100	1.359	0.400	14.43
from DA-1	10m100y	100	5.593	0.700	76.92
from DA-1	15m100y	100	8.320	0.750	105.01
from DA-1	30m100y	100	14.383	0.800	171.41
from DA-1	1h100y	100	20.600	1.000	190.52
from DA-1	2h100y	100	31.248	1.200	197.62
from DA-1	3h100y	100	35.937	1.300	188.76
from DA-1	6h100y	100	45.730	1.650	161.03
from DA-1	12h100y	100	55.211	5.650	126.00
from DA-1	18h100y	100	60.804	11.900	109.72
from DA-1	24h100y	100	66.231	15.750	96.24
from DA-1	72h100y	100	79.377	61.250	41.28
from DA-1	48h100y	100	71.251	40.900	55.44
from DA-1	5d 100y	100	124.533	102.000	29.49
from DA-6	10d 100y	100	0.000	0.000	0.00
from DA-6	5m100y	100	0.000	0.000	0.00
from DA-6	10m100y	100	0.000	0.000	0.00
from DA-6	15m100y	100	0.000	0.000	0.00
from DA-6	30m100y	100	0.000	0.000	0.00
from DA-6	1h100y	100	0.000	0.000	0.00
from DA-6	2h100y	100	0.000	0.000	0.00
from DA-6	3h100y	100	0.000	0.000	0.00
from DA-6	6h100y	100	0.000	0.000	0.00
from DA-6	12h100y	100	0.000	0.000	0.00
from DA-6	18h100y	100	0.000	0.000	0.00
from DA-6	24h100y	100	0.000	0.000	0.00
from DA-6	72h100y	100	0.000	0.000	0.00
from DA-6	48h100y	100	0.000	0.000	0.00
from DA-6	5d 100y	100	0.000	0.000	0.00
from DA-4	10d 100y	100	0.000	0.000	0.00
from DA-4	5m100y	100	0.000	0.000	0.00
from DA-4	10m100y	100	0.000	0.000	0.00
from DA-4	15m100y	100	0.000	0.000	0.00
from DA-4	30m100y	100	0.003	0.850	0.49
from DA-4	1h100y	100	0.518	1.000	16.11
from DA-4	2h100y	100	0.887	1.100	21.26
from DA-4	3h100y	100	0.504	1.250	12.82
from DA-4	6h100y	100	0.000	0.000	0.00
from DA-4	12h100y	100	0.000	0.000	0.00
from DA-4	18h100y	100	0.000	0.000	0.00
from DA-4	24h100y	100	0.000	0.000	0.00
from DA-4	72h100y	100	0.000	0.000	0.00
from DA-4	48h100y	100	0.000	0.000	0.00
from DA-4	5d 100y	100	0.000	0.000	0.00

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[08.11.01.56]
Page 4 of 323

Subsection: Master Network Summary

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
DA-5 (IN)	10d 100y	100	13.500	204.000	2.07	(N/A)	(N/A)
DA-5 (OUT)	10d 100y	100	10.091	193.300	1.93	770.05	3.601
DA-5 (IN)	5m100y	100	0.170	0.350	4.51	(N/A)	(N/A)
DA-5 (OUT)	5m100y	100	0.000	0.000	0.00	766.37	0.170
DA-5 (IN)	10m100y	100	0.768	0.400	19.96	(N/A)	(N/A)
DA-5 (OUT)	10m100y	100	0.000	0.000	0.00	767.68	0.768
DA-5 (IN)	15m100y	100	1.151	0.400	28.93	(N/A)	(N/A)
DA-5 (OUT)	15m100y	100	0.000	0.000	0.00	768.19	1.151
DA-5 (IN)	30m100y	100	1.999	0.500	41.05	(N/A)	(N/A)
DA-5 (OUT)	30m100y	100	0.000	0.000	0.00	768.94	1.999
DA-5 (IN)	1h100y	100	2.936	0.550	45.09	(N/A)	(N/A)
DA-5 (OUT)	1h100y	100	0.000	0.000	0.00	769.57	2.936
DA-5 (IN)	2h100y	100	4.120	0.700	42.77	(N/A)	(N/A)
DA-5 (OUT)	2h100y	100	0.711	2.200	1.96	770.18	3.950
DA-5 (IN)	3h100y	100	4.628	0.850	36.24	(N/A)	(N/A)
DA-5 (OUT)	3h100y	100	1.219	3.500	1.98	770.34	4.334
DA-5 (IN)	6h100y	100	5.757	0.950	26.18	(N/A)	(N/A)
DA-5 (OUT)	6h100y	100	2.348	6.450	2.03	770.62	5.063
DA-5 (IN)	12h100y	100	7.017	5.000	19.07	(N/A)	(N/A)
DA-5 (OUT)	12h100y	100	3.060	12.300	2.07	770.94	5.863
DA-5 (IN)	18h100y	100	7.549	11.700	16.11	(N/A)	(N/A)
DA-5 (OUT)	18h100y	100	4.115	18.350	2.10	771.11	6.293
DA-5 (IN)	24h100y	100	8.408	15.600	13.41	(N/A)	(N/A)
DA-5 (OUT)	24h100y	100	3.706	24.300	2.12	771.26	6.657
DA-5 (IN)	72h100y	100	10.112	61.200	5.32	(N/A)	(N/A)
DA-5 (OUT)	72h100y	100	4.194	72.300	2.11	771.20	6.517
DA-5 (IN)	48h100y	100	9.229	40.800	7.35	(N/A)	(N/A)
DA-5 (OUT)	48h100y	100	3.158	48.400	2.15	771.40	7.013
DA-5 (IN)	5d 100y	100	11.801	102.000	3.67	(N/A)	(N/A)
DA-5 (OUT)	5d 100y	100	8.392	120.150	2.05	770.75	5.388
DA-3 (IN)	10d 100y	100	17.345	203.950	2.66	(N/A)	(N/A)
DA-3 (OUT)	10d 100y	100	17.345	203.950	2.66	745.21	0

Subsection: Master Network Summary

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
DA-3 (OUT)	2h100y	100	5.295	0.800	48.13	751.68	1.049
DA-3 (IN)	3h100y	100	5.949	0.700	49.64	(N/A)	(N/A)
DA-3 (OUT)	3h100y	100	5.949	1.000	40.90	751.62	0.987
DA-3 (IN)	6h100y	100	7.396	0.750	37.74	(N/A)	(N/A)
DA-3 (OUT)	6h100y	100	7.396	1.550	29.12	751.47	0.844
DA-3 (IN)	12h100y	100	9.016	4.900	24.94	(N/A)	(N/A)
DA-3 (OUT)	12h100y	100	9.016	5.650	20.56	751.28	0.661
DA-3 (IN)	18h100y	100	9.699	11.700	20.86	(N/A)	(N/A)
DA-3 (OUT)	18h100y	100	9.699	10.450	17.64	750.83	0.318
DA-3 (IN)	24h100y	100	10.802	15.600	17.27	(N/A)	(N/A)
DA-3 (OUT)	24h100y	100	10.802	15.100	17.02	750.05	0.018
DA-3 (IN)	72h100y	100	12.991	61.150	6.84	(N/A)	(N/A)
DA-3 (OUT)	72h100y	100	12.991	61.200	6.84	745.84	0.000
DA-3 (IN)	48h100y	100	11.857	40.800	9.45	(N/A)	(N/A)
DA-3 (OUT)	48h100y	100	11.857	40.800	9.45	746.18	0.000
DA-3 (IN)	5d 100y	100	15.162	101.950	4.71	(N/A)	(N/A)
DA-3 (OUT)	5d 100y	100	15.162	102.000	4.71	745.54	0.000
DA-2 (IN)	10d 100y	100	2.495	203.950	0.38	(N/A)	(N/A)
DA-2 (OUT)	10d 100y	100	2.495	203.950	0.38	741.31	0.000
DA-2 (IN)	5m100y	100	0.031	0.150	2.37	(N/A)	(N/A)
DA-2 (OUT)	5m100y	100	0.031	0.250	0.95	742.10	0.011
DA-2 (IN)	10m100y	100	0.142	1.200	8.41	(N/A)	(N/A)
DA-2 (OUT)	10m100y	100	0.142	0.350	1.32	743.01	0.103
DA-2 (IN)	15m100y	100	0.213	0.200	10.84	(N/A)	(N/A)
DA-2 (OUT)	15m100y	100	0.213	0.450	1.51	743.60	0.162
DA-2 (IN)	30m100y	100	0.370	0.250	13.07	(N/A)	(N/A)
DA-2 (OUT)	30m100y	100	0.370	0.650	1.76	744.49	0.286
DA-2 (IN)	1h100y	100	0.543	0.300	12.37	(N/A)	(N/A)
DA-2 (OUT)	1h100y	100	0.543	1.350	1.89	745.15	0.397
DA-2 (IN)	2h100y	100	0.761	0.350	9.70	(N/A)	(N/A)
DA-2 (OUT)	2h100y	100	0.761	1.150	2.93	745.29	0.421
DA-2 (IN)	3h100y	100	0.855	0.400	8.19	(N/A)	(N/A)
DA-2 (OUT)	3h100y	100	0.855	1.550	2.96	745.28	0.420
DA-2 (IN)	6h100y	100	1.064	0.650	6.35	(N/A)	(N/A)
DA-2 (OUT)	6h100y	100	1.064	2.800	2.02	745.18	0.402
DA-2 (IN)	12h100y	100	1.297	4.800	3.64	(N/A)	(N/A)
DA-2 (OUT)	12h100y	100	1.297	6.700	1.85	744.84	0.345
DA-2 (IN)	18h100y	100	1.395	11.700	3.01	(N/A)	(N/A)
DA-2 (OUT)	18h100y	100	1.395	12.750	1.75	744.43	0.276
DA-2 (IN)	24h100y	100	1.554	15.550	2.49	(N/A)	(N/A)
DA-2 (OUT)	24h100y	100	1.554	16.850	1.66	744.12	0.224
DA-2 (IN)	72h100y	100	1.868	61.150	0.98	(N/A)	(N/A)
DA-2 (OUT)	72h100y	100	1.868	61.300	0.96	742.11	0.012

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[08.11.01.56]
Page 6 of 323

Subsection: Master Network Summary

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
DA-2 (IN)	48h100y	100	1.705	40.800	1.36	(N/A)	(N/A)
DA-2 (OUT)	48h100y	100	1.705	43.250	1.22	742.72	0.074
DA-2 (IN)	5d 100y	100	2.181	101.950	0.68	(N/A)	(N/A)
DA-2 (OUT)	5d 100y	100	2.181	102.000	0.68	741.62	0.001
DA-1 (IN)	10d 100y	100	119.446	204.000	17.98	(N/A)	(N/A)
DA-1 (OUT)	10d 100y	100	119.440	204.000	17.98	735.04	0.003
DA-1 (IN)	5m100y	100	1.363	0.350	14.48	(N/A)	(N/A)
DA-1 (OUT)	5m100y	100	1.359	0.400	14.43	735.02	0.003
DA-1 (IN)	10m100y	100	5.597	0.700	77.08	(N/A)	(N/A)
DA-1 (OUT)	10m100y	100	5.593	0.700	76.92	736.57	0.005
DA-1 (IN)	15m100y	100	8.323	0.700	105.45	(N/A)	(N/A)
DA-1 (OUT)	15m100y	100	8.320	0.750	105.01	738.28	0.006
DA-1 (IN)	30m100y	100	14.386	0.800	171.49	(N/A)	(N/A)
DA-1 (OUT)	30m100y	100	14.383	0.800	171.41	741.06	0.009
DA-1 (IN)	1h100y	100	20.603	0.800	195.55	(N/A)	(N/A)
DA-1 (OUT)	1h100y	100	20.600	1.000	190.52	742.30	0.149
DA-1 (IN)	2h100y	100	31.253	1.050	205.00	(N/A)	(N/A)
DA-1 (OUT)	2h100y	100	31.248	1.200	197.62	742.76	0.301
DA-1 (IN)	3h100y	100	35.943	1.200	192.13	(N/A)	(N/A)
DA-1 (OUT)	3h100y	100	35.937	1.300	188.76	742.18	0.109
DA-1 (IN)	6h100y	100	45.736	1.600	161.16	(N/A)	(N/A)
DA-1 (OUT)	6h100y	100	45.730	1.650	161.03	740.41	0.008
DA-1 (IN)	12h100y	100	55.220	5.600	126.13	(N/A)	(N/A)
DA-1 (OUT)	12h100y	100	55.211	5.650	126.00	739.10	0.007
DA-1 (IN)	18h100y	100	60.811	11.900	109.74	(N/A)	(N/A)
DA-1 (OUT)	18h100y	100	60.804	11.900	109.72	738.43	0.006
DA-1 (IN)	24h100y	100	66.241	15.750	96.24	(N/A)	(N/A)
DA-1 (OUT)	24h100y	100	66.231	15.750	96.24	737.75	0.006
DA-1 (IN)	72h100y	100	79.378	61.200	41.28	(N/A)	(N/A)
DA-1 (OUT)	72h100y	100	79.377	61.250	41.28	735.41	0.004
DA-1 (IN)	48h100y	100	71.262	40.850	55.44	(N/A)	(N/A)
DA-1 (OUT)	48h100y	100	71.251	40.900	55.44	735.73	0.004
DA-1 (IN)	5d 100y	100	124.540	102.000	29.49	(N/A)	(N/A)
DA-1 (OUT)	5d 100y	100	124.533	102.000	29.49	735.28	0.004
DA-6 (IN)	10d 100y	100	15.273	204.000	2.34	(N/A)	(N/A)
DA-6 (OUT)	10d 100y	100	9.391	227.600	1.27	768.48	7.078
DA-6 (IN)	5m100y	100	0.192	0.350	5.11	(N/A)	(N/A)
DA-6 (OUT)	5m100y	100	0.000	0.000	0.00	766.08	0.192
DA-6 (IN)	10m100y	100	0.869	0.400	22.59	(N/A)	(N/A)
DA-6 (OUT)	10m100y	100	0.000	0.000	0.00	766.38	0.869
DA-6 (IN)	15m100y	100	1.302	0.400	32.73	(N/A)	(N/A)
DA-6 (OUT)	15m100y	100	0.000	0.000	0.00	766.58	1.302
DA-6 (IN)	30m100y	100	2.261	0.500	46.43	(N/A)	(N/A)

17189-Existing Conditions.pcc
4/22/2019

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Center
27 Siemon Company Drive Suite 200 W
Watertown, CT 06795 USA +1-203-755-1666

Bentley PondPack V8i
[08.11.01.56]
Page 7 of 323

Subsection: Master Network Summary

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
DA-6 (OUT)	30m100y	100	0.000	0.000	0.00	767.00	2.261
DA-6 (IN)	1h100y	100	3.322	0.550	51.01	(N/A)	(N/A)
DA-6 (OUT)	1h100y	100	0.000	0.000	0.00	767.47	3.321
DA-6 (IN)	2h100y	100	4.661	0.700	48.39	(N/A)	(N/A)
DA-6 (OUT)	2h100y	100	0.277	2.350	1.23	768.01	4.591
DA-6 (IN)	3h100y	100	5.236	0.850	41.00	(N/A)	(N/A)
DA-6 (OUT)	3h100y	100	0.851	2.550	1.23	768.11	5.093
DA-6 (IN)	6h100y	100	6.513	0.950	29.61	(N/A)	(N/A)
DA-6 (OUT)	6h100y	100	2.084	6.550	1.25	768.30	6.118
DA-6 (IN)	12h100y	100	7.939	5.000	21.57	(N/A)	(N/A)
DA-6 (OUT)	12h100y	100	1.861	10.300	1.27	768.51	7.255
DA-6 (IN)	18h100y	100	8.540	11.700	18.23	(N/A)	(N/A)
DA-6 (OUT)	18h100y	100	2.547	18.500	1.27	768.61	7.797
DA-6 (IN)	24h100y	100	9.512	15.600	15.17	(N/A)	(N/A)
DA-6 (OUT)	24h100y	100	2.227	23.150	1.29	768.74	8.480
DA-6 (IN)	72h100y	100	11.439	61.200	6.02	(N/A)	(N/A)
DA-6 (OUT)	72h100y	100	2.364	71.850	1.31	768.92	9.435
DA-6 (IN)	48h100y	100	10.441	40.800	8.31	(N/A)	(N/A)
DA-6 (OUT)	48h100y	100	1.786	52.550	1.30	768.88	9.220
DA-6 (IN)	5d 100y	100	13.350	102.000	4.15	(N/A)	(N/A)
DA-6 (OUT)	5d 100y	100	8.966	119.300	1.31	768.92	9.445
DA-4 (IN)	10d 100y	100	56.160	204.000	8.78	(N/A)	(N/A)
DA-4 (OUT)	10d 100y	100	59.443	204.000	8.78	755.82	0.000
DA-4 (IN)	5m100y	100	0.461	0.650	6.22	(N/A)	(N/A)
DA-4 (OUT)	5m100y	100	0.609	0.700	6.20	755.58	0.000
DA-4 (IN)	10m100y	100	2.087	0.650	27.83	(N/A)	(N/A)
DA-4 (OUT)	10m100y	100	2.184	0.700	27.81	757.18	0.000
DA-4 (IN)	15m100y	100	3.127	0.700	41.37	(N/A)	(N/A)
DA-4 (OUT)	15m100y	100	3.206	0.700	41.17	757.98	0.000
DA-4 (IN)	30m100y	100	5.430	0.800	68.37	(N/A)	(N/A)
DA-4 (OUT)	30m100y	100	5.504	0.850	67.58	769.45	0.002
DA-4 (IN)	1h100y	100	7.976	0.950	82.70	(N/A)	(N/A)
DA-4 (OUT)	1h100y	100	8.068	1.000	82.30	769.91	0.007
DA-4 (IN)	2h100y	100	12.181	1.100	87.26	(N/A)	(N/A)
DA-4 (OUT)	2h100y	100	13.826	1.100	87.06	769.98	0.007
DA-4 (IN)	3h100y	100	14.643	1.200	79.20	(N/A)	(N/A)
DA-4 (OUT)	3h100y	100	15.875	1.250	79.04	769.86	0.006
DA-4 (IN)	6h100y	100	20.072	1.600	62.21	(N/A)	(N/A)
DA-4 (OUT)	6h100y	100	20.149	1.650	62.14	764.78	0.001
DA-4 (IN)	12h100y	100	23.987	5.750	50.70	(N/A)	(N/A)
DA-4 (OUT)	12h100y	100	24.031	5.800	50.45	758.40	0.000
DA-4 (IN)	18h100y	100	27.171	11.850	45.24	(N/A)	(N/A)
DA-4 (OUT)	18h100y	100	27.258	11.900	45.23	758.19	0.000

17189-Existing Conditions.pcc
4/22/2019

Bentley Systems, Inc. Heastad Methods Solution
Center
27 Siemon Company Drive Suite 200 W
Watertown, CT 06795 USA +1-203-755-1666

Bentley PondPack V8i
[08.11.01.56]
Page 8 of 323

Subsection: Master Network Summary

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
DA-4 (IN)	24h100y	100	28.775	15.700	38.86	(N/A)	(N/A)
DA-4 (OUT)	24h100y	100	28.872	15.750	38.85	757.80	0.000
DA-4 (IN)	72h100y	100	34.029	61.200	17.69	(N/A)	(N/A)
DA-4 (OUT)	72h100y	100	34.436	61.250	17.69	756.50	0.000
DA-4 (IN)	48h100y	100	30.018	40.950	23.13	(N/A)	(N/A)
DA-4 (OUT)	48h100y	100	30.242	40.950	23.13	756.81	0.000
DA-4 (IN)	5d 100y	100	49.419	102.000	13.20	(N/A)	(N/A)
DA-4 (OUT)	5d 100y	100	72.090	102.050	13.20	756.22	0.000

Subsection: Time-Depth Curve
Label: 100 Year Critical Storm

Return Event: 100 years
Storm Event: 10d100y

Time-Depth Curve: 10d100y	
Label	10d100y
Start Time	0.000 hours
Increment	12.000 hours
End Time	240.000 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 12.000 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.00	0.22	0.56	0.89	1.11
60.000	1.45	1.78	2.12	2.45	2.79
120.000	3.12	3.56	3.90	4.34	5.01
180.000	5.68	6.57	8.02	9.36	10.25
240.000	11.14	(N/A)	(N/A)	(N/A)	(N/A)

17189-Existing Conditions.ppc
4/22/2019

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Center
27 Siemon Company Drive Suite 200 W
Watertown, CT 06795 USA +1-203-755-1666

Bentley PondPack V8i
[08.11.01.56]
Page 10 of 323

Subsection: Time-Depth Curve
Label: 100 Year Critical Storm

Return Event: 100 years
Storm Event: 10m100y

Time-Depth Curve: 10m100y	
Label	10m100y
Start Time	0.000 hours
Increment	0.008 hours
End Time	0.167 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.008 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.00	0.27	0.55	0.72	0.87
0.042	1.00	1.10	1.19	1.25	1.32
0.083	1.37	1.40	1.44	1.47	1.50
0.125	1.54	1.57	1.60	1.62	1.64
0.167	1.67	(N/A)	(N/A)	(N/A)	(N/A)

17189-Existing Conditions.ppc
4/22/2019

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Center
27 Siemon Company Drive Suite 200 W
Watertown, CT 06795 USA +1-203-755-1666

Bentley PondPack V8i
[08.11.01.56]
Page 11 of 323

Subsection: Time-Depth Curve
Label: 100 Year Critical Storm

Return Event: 100 years
Storm Event: 12h100y

Time-Depth Curve: 12h100y	
Label	12h100y
Start Time	0.000 hours
Increment	0.600 hours
End Time	12.000 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.600 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.00	0.20	0.53	0.79	1.05
3.000	1.45	1.91	2.57	3.36	4.09
6.000	4.61	5.01	5.34	5.60	5.80
9.000	6.00	6.13	6.26	6.39	6.46
12.000	6.59	(N/A)	(N/A)	(N/A)	(N/A)

17189-Existing Conditions.ppc
4/22/2019

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Center
27 Siemon Company Drive Suite 200 W
Watertown, CT 06795 USA +1-203-755-1666

Bentley PondPack V8i
[08.11.01.56]
Page 12 of 323

Subsection: Time-Depth Curve
Label: 100 Year Critical Storm

Return Event: 100 years
Storm Event: 15m100y

Time-Depth Curve: 15m100y	
Label	15m100y
Start Time	0.000 hours
Increment	0.013 hours
End Time	0.250 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.013 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.00	0.33	0.68	0.88	1.07
0.063	1.23	1.35	1.46	1.54	1.62
0.125	1.68	1.72	1.76	1.80	1.85
0.188	1.89	1.93	1.97	1.99	2.01
0.250	2.05	(N/A)	(N/A)	(N/A)	(N/A)

17189-Existing Conditions.ppc
4/22/2019

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Center
27 Siemon Company Drive Suite 200 W
Watertown, CT 06795 USA +1-203-755-1666

Bentley PondPack V8i
[08.11.01.56]
Page 13 of 323

Subsection: Time-Depth Curve
Label: 100 Year Critical Storm

Return Event: 100 years
Storm Event: 18h100y

Time-Depth Curve: 18h100y	
Label	18h100y
Start Time	0.000 hours
Increment	0.900 hours
End Time	18.000 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.900 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.00	0.21	0.42	0.63	0.84
4.500	1.05	1.32	1.60	1.88	2.23
9.000	2.65	3.14	3.97	4.88	5.51
13.500	5.92	6.20	6.41	6.62	6.76
18.000	6.97	(N/A)	(N/A)	(N/A)	(N/A)

17189-Existing Conditions.ppc
4/22/2019

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Center
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Bentley PondPack V8i
[08.11.01.56]
Page 14 of 323

Subsection: Time-Depth Curve
Label: 100 Year Critical Storm

Return Event: 100 years
Storm Event: 1h100y

Time-Depth Curve: 1h100y	
Label	1h100y
Start Time	0.000 hours
Increment	0.050 hours
End Time	1.000 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.00	0.57	1.17	1.53	1.85
0.250	2.14	2.35	2.53	2.67	2.81
0.500	2.92	2.99	3.06	3.13	3.20
0.750	3.28	3.35	3.42	3.45	3.49
1.000	3.56	(N/A)	(N/A)	(N/A)	(N/A)

17189-Existing Conditions.ppc
4/22/2019

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Center
27 Siemon Company Drive Suite 200 W
Watertown, CT 06795 USA +1-203-755-1666

Bentley PondPack V8i
[08.11.01.56]
Page 15 of 323

Subsection: Time-Depth Curve
Label: 100 Year Critical Storm

Return Event: 100 years
Storm Event: 24h100y

Time-Depth Curve: 24h100y	
Label	24h100y
Start Time	0.000 hours
Increment	1.200 hours
End Time	24.000 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 1.200 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.00	0.23	0.45	0.68	0.91
6.000	1.14	1.44	1.74	2.05	2.43
12.000	2.88	3.41	4.32	5.31	5.99
18.000	6.44	6.75	6.97	7.20	7.35
24.000	7.58	(N/A)	(N/A)	(N/A)	(N/A)

17189-Existing Conditions.ppc
4/22/2019

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Center
27 Siemon Company Drive Suite 200 W
Watertown, CT 06795 USA +1-203-755-1666

Bentley PondPack V8i
[08.11.01.56]
Page 16 of 323

Subsection: Time-Depth Curve
Label: 100 Year Critical Storm

Return Event: 100 years
Storm Event: 2h100yh

Time-Depth Curve: 2h100yh	
Label	2h100yh
Start Time	0.000 hours
Increment	0.100 hours
End Time	2.000 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.100 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.00	0.72	1.48	1.92	2.32
0.500	2.68	2.95	3.17	3.35	3.53
1.000	3.67	3.75	3.84	3.93	4.02
1.500	4.11	4.20	4.29	4.34	4.38
2.000	4.47	(N/A)	(N/A)	(N/A)	(N/A)

17189-Existing Conditions.ppc
4/22/2019

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Center
27 Siemon Company Drive Suite 200 W
Watertown, CT 06795 USA +1-203-755-1666

Bentley PondPack V8i
[08.11.01.56]
Page 17 of 323

Subsection: Time-Depth Curve
Label: 100 Year Critical Storm

Return Event: 100 years
Storm Event: 30m100y

Time-Depth Curve: 30m100y	
Label	30m100y
Start Time	0.000 hours
Increment	0.025 hours
End Time	0.500 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.025 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.00	0.45	0.92	1.20	1.46
0.125	1.68	1.85	1.99	2.10	2.21
0.250	2.30	2.35	2.41	2.46	2.52
0.375	2.58	2.63	2.69	2.72	2.74
0.500	2.80	(N/A)	(N/A)	(N/A)	(N/A)

17189-Existing Conditions.ppc
4/22/2019

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Center
27 Siemon Company Drive Suite 200 W
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Bentley PondPack V8i
[08.11.01.56]
Page 18 of 323

Subsection: Time-Depth Curve
Label: 100 Year Critical Storm

Return Event: 100 years
Storm Event: 3h100y

Time-Depth Curve: 3h100y	
Label	3h100y
Start Time	0.000 hours
Increment	0.150 hours
End Time	3.000 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.150 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.00	0.78	1.60	2.09	2.52
0.750	2.91	3.20	3.44	3.64	3.83
1.500	3.98	4.07	4.17	4.27	4.37
2.250	4.46	4.56	4.66	4.70	4.75
3.000	4.85	(N/A)	(N/A)	(N/A)	(N/A)

17189-Existing Conditions.ppc
4/22/2019

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Center
27 Siemon Company Drive Suite 200 W
Watertown, CT 06795 USA +1-203-755-1666

Bentley PondPack V8i
[08.11.01.56]
Page 19 of 323

Subsection: Time-Depth Curve
Label: 100 Year Critical Storm

Return Event: 100 years
Storm Event: 48h100y

Time-Depth Curve: 48h100y	
Label	48h100y
Start Time	0.000 hours
Increment	2.400 hours
End Time	48.000 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 2.400 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.00	0.16	0.41	0.65	0.82
12.000	1.06	1.31	1.55	1.80	2.04
24.000	2.28	2.61	2.86	3.18	3.67
36.000	4.16	4.81	5.88	6.85	7.51
48.000	8.16	(N/A)	(N/A)	(N/A)	(N/A)

17189-Existing Conditions.ppc
4/22/2019

Bentley Systems, Inc. Haestad Methods Solution
Center
27 Siemon Company Drive Suite 200 W
Watertown, CT 06795 USA +1-203-755-1666

Bentley PondPack V8i
[08.11.01.56]
Page 20 of 323

Subsection: Time-Depth Curve
Label: 100 Year Critical Storm

Return Event: 100 years
Storm Event: 5d100y

Time-Depth Curve: 5d100y	
Label	5d100y
Start Time	0.000 hours
Increment	6.000 hours
End Time	120.000 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 6.000 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.00	0.20	0.50	0.80	1.00
30.000	1.29	1.59	1.89	2.19	2.49
60.000	2.79	3.19	3.49	3.88	4.48
90.000	5.08	5.88	7.17	8.37	9.16
120.000	9.96	(N/A)	(N/A)	(N/A)	(N/A)

17189-Existing Conditions.ppc
4/22/2019

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Center
27 Siemon Company Drive Suite 200 W
Watertown, CT 06795 USA +1-203-755-1666

Bentley PondPack V8i
[08.11.01.56]
Page 21 of 323

Subsection: Time-Depth Curve
Label: 100 Year Critical Storm

Return Event: 100 years
Storm Event: 5m100y

Time-Depth Curve: 5m100y	
Label	5m100y
Start Time	0.000 hours
Increment	0.004 hours
End Time	0.083 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.004 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.00	0.15	0.30	0.39	0.47
0.021	0.55	0.60	0.65	0.68	0.72
0.042	0.75	0.75	0.78	0.80	0.82
0.062	0.84	0.86	0.87	0.88	0.89
0.083	0.91	(N/A)	(N/A)	(N/A)	(N/A)

17189-Existing Conditions.ppc
4/22/2019

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[08.11.01.56]
Page 22 of 323

Subsection: Time-Depth Curve
Label: 100 Year Critical Storm

Return Event: 100 years
Storm Event: 6h100y

Time-Depth Curve: 6h100y	
Label	6h100y
Start Time	0.000 hours
Increment	0.300 hours
End Time	6.000 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.300 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.00	0.91	1.87	2.44	2.95
1.500	3.41	3.75	4.03	4.26	4.49
3.000	4.66	4.77	4.88	5.00	5.11
4.500	5.23	5.34	5.45	5.51	5.57
6.000	5.68	(N/A)	(N/A)	(N/A)	(N/A)

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4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 23 of 323

Subsection: Time-Depth Curve
Label: 100 Year Critical Storm

Return Event: 100 years
Storm Event: 72h100y

Time-Depth Curve: 72h100y	
Label	72h100y
Start Time	0.000 hours
Increment	3.600 hours
End Time	72.000 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 3.600 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.00	0.18	0.44	0.70	0.88
18.000	1.14	1.40	1.67	1.93	2.20
36.000	2.46	2.81	3.07	3.42	3.95
54.000	4.48	5.18	6.32	7.38	8.08
72.000	8.78	(N/A)	(N/A)	(N/A)	(N/A)

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4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 24 of 323

Subsection: Unit Hydrograph Summary
Label: DA-4

Return Event: 100 years
Storm Event: 1h100y

Storm Event	1h100y
Return Event	100 years
Duration	24.000 hours
Depth	3.56 in
Time of Concentration (Composite)	1.000 hours
Area (User Defined)	48.150 acres

Computational Time Increment	0.133 hours
Time to Peak (Computed)	0.933 hours
Flow (Peak, Computed)	82.97 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	0.950 hours
Flow (Peak Interpolated Output)	82.70 ft ³ /s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	48.150 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.99 in
Runoff Volume (Pervious)	7.977 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	7.976 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	1.000 hours
Computational Time Increment	0.133 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	54.56 ft ³ /s
Unit peak time, Tp	0.667 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 25 of 323

Subsection: Unit Hydrograph Summary
Label: DA-4

Return Event: 100 years
Storm Event: 1h100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	2.667 hours
Total unit time, Tb	3.333 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 26 of 323

Subsection: Unit Hydrograph Summary
Label: DA-4

Return Event: 100 years
Storm Event: 2h100yh

SCS Unit Hydrograph Parameters	
Storm Event	2h100yh
Return Event	100 years
Duration	24.000 hours
Depth	4.47 in
Time of Concentration (Composite)	1.000 hours
Area (User Defined)	48.150 acres
Computational Time Increment	0.133 hours
Time to Peak (Computed)	1.067 hours
Flow (Peak, Computed)	87.61 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	1.100 hours
Flow (Peak Interpolated Output)	87.26 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	48.150 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.79 in
Runoff Volume (Pervious)	11.193 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	11.193 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	1.000 hours
Computational Time Increment	0.133 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	54.56 ft ³ /s
Unit peak time, Tp	0.667 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 27 of 323

Subsection: Unit Hydrograph Summary
Label: DA-4

Return Event: 100 years
Storm Event: 2h100yh

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	2.667 hours
Total unit time, Tb	3.333 hours

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 28 of 323

Subsection: Unit Hydrograph Summary
Label: DA-4

Return Event: 100 years
Storm Event: 3h100y

SCS Unit Hydrograph Parameters	
Storm Event	3h100y
Return Event	100 years
Duration	24.000 hours
Depth	4.85 in
Time of Concentration (Composite)	1.000 hours
Area (User Defined)	48.150 acres
Computational Time Increment	0.133 hours
Time to Peak (Computed)	1.200 hours
Flow (Peak, Computed)	79.20 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	1.200 hours
Flow (Peak Interpolated Output)	79.20 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	48.150 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.13 in
Runoff Volume (Pervious)	12.573 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	12.573 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	1.000 hours
Computational Time Increment	0.133 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	54.56 ft ³ /s
Unit peak time, Tp	0.667 hours

17189-Existing Conditions.ppc
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Bentley PondPack V8i
[08.11.01.56]
Page 28 of 323

Subsection: Unit Hydrograph Summary
Label: DA-4

Return Event: 100 years
Storm Event: 3h100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	2.667 hours
Total unit time, Tb	3.333 hours

17189-Existing Conditions.ppc
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Bentley PondPack V8i
[08.11.01.56]
Page 30 of 323

Subsection: Unit Hydrograph Summary
Label: DA-4

Return Event: 100 years
Storm Event: 5d100y

SCS Unit Hydrograph Parameters	
Storm Event	5d100y
Return Event	100 years
Duration	400.000 hours
Depth	9.96 in
Time of Concentration (Composite)	1.000 hours
Area (User Defined)	48.150 acres
Computational Time Increment	0.133 hours
Time to Peak (Computed)	102.000 hours
Flow (Peak, Computed)	9.95 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	102.000 hours
Flow (Peak Interpolated Output)	9.95 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	48.150 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	7.99 in
Runoff Volume (Pervious)	32.061 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	32.061 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	1.000 hours
Computational Time Increment	0.133 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	54.56 ft ³ /s
Unit peak time, Tp	0.667 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 31 of 323

Subsection: Unit Hydrograph Summary
Label: DA-4

Return Event: 100 years
Storm Event: 5d100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	2.667 hours
Total unit time, Tb	3.333 hours

17189-Existing Conditions.ppc
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Bentley PondPack V8i
[08.11.01.56]
Page 32 of 323

Subsection: Unit Hydrograph Summary
Label: DA-4

Return Event: 100 years
Storm Event: 5m100y

SCS Unit Hydrograph Parameters	
Storm Event	5m100y
Return Event	100 years
Duration	24.000 hours
Depth	0.91 in
Time of Concentration (Composite)	1.000 hours
Area (User Defined)	48.150 acres
Computational Time Increment	0.133 hours
Time to Peak (Computed)	0.667 hours
Flow (Peak, Computed)	6.28 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	0.650 hours
Flow (Peak Interpolated Output)	6.22 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	48.150 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.12 in
Runoff Volume (Pervious)	0.461 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.461 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	1.000 hours
Computational Time Increment	0.133 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	54.56 ft ³ /s
Unit peak time, Tp	0.667 hours

17189-Existing Conditions.ppc
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Bentley PondPack V8i
[08.11.01.56]
Page 33 of 323

Subsection: Unit Hydrograph Summary
Label: DA-4

Return Event: 100 years
Storm Event: 5m100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	2.667 hours
Total unit time, Tb	3.333 hours

17189-Existing Conditions.ppc
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Bentley PondPack V8i
[08.11.01.56]
Page 34 of 323

Subsection: Unit Hydrograph Summary
Label: DA-4

Return Event: 100 years
Storm Event: 6h100y

SCS Unit Hydrograph Parameters	
Storm Event	6h100y
Return Event	100 years
Duration	24.000 hours
Depth	5.68 in
Time of Concentration (Composite)	1.000 hours
Area (User Defined)	48.150 acres
Computational Time Increment	
Computational Time Increment	0.133 hours
Time to Peak (Computed)	1.600 hours
Flow (Peak, Computed)	62.21 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	1.600 hours
Flow (Peak Interpolated Output)	62.21 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	48.150 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.90 in
Runoff Volume (Pervious)	15.640 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	15.640 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	1.000 hours
Computational Time Increment	0.133 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	54.56 ft ³ /s
Unit peak time, Tp	0.667 hours

17189-Existing Conditions.ppc
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Bentley PondPack V8i
[08.11.01.56]
Page 35 of 323

Subsection: Unit Hydrograph Summary
Label: DA-4

Return Event: 100 years
Storm Event: 6h100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	2.667 hours
Total unit time, Tb	3.333 hours

17189-Existing Conditions.ppc
4/22/2019

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Center
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Bentley PondPack V8i
[08.11.01.56]
Page 36 of 323

Subsection: Unit Hydrograph Summary
Label: DA-4

Return Event: 100 years
Storm Event: 10d100y

SCS Unit Hydrograph Parameters	
Storm Event	10d100y
Return Event	100 years
Duration	252.000 hours
Depth	11.14 in
Time of Concentration (Composite)	1.000 hours
Area (User Defined)	48.150 acres
Computational Time Increment	
Computational Time Increment	0.133 hours
Time to Peak (Computed)	204.000 hours
Flow (Peak, Computed)	5.62 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	204.000 hours
Flow (Peak Interpolated Output)	5.62 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	48.150 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	9.14 in
Runoff Volume (Pervious)	36.677 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	36.677 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	1.000 hours
Computational Time Increment	0.133 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	54.56 ft ³ /s
Unit peak time, Tp	0.667 hours

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 37 of 323

Subsection: Unit Hydrograph Summary
Label: DA-4

Return Event: 100 years
Storm Event: 10d100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	2.667 hours
Total unit time, Tb	3.333 hours

17189-Existing Conditions.ppc
4/22/2019

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Center
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Bentley PondPack V8i
[08.11.01.56]
Page 38 of 323

Subsection: Unit Hydrograph Summary
Label: DA-4

Return Event: 100 years
Storm Event: 10m100y

SCS Unit Hydrograph Parameters	
Storm Event	10m100y
Return Event	100 years
Duration	24.000 hours
Depth	1.67 in
Time of Concentration (Composite)	1.000 hours
Area (User Defined)	48.150 acres
Computational Time Increment	
Computational Time Increment	0.133 hours
Time to Peak (Computed)	0.667 hours
Flow (Peak, Computed)	28.16 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	0.650 hours
Flow (Peak Interpolated Output)	27.83 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	48.150 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.52 in
Runoff Volume (Pervious)	2.088 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	2.087 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	1.000 hours
Computational Time Increment	0.133 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	54.56 ft ³ /s
Unit peak time, Tp	0.667 hours

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 38 of 323

Subsection: Unit Hydrograph Summary
Label: DA-4

Return Event: 100 years
Storm Event: 10m100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	2.667 hours
Total unit time, Tb	3.333 hours

17189-Existing Conditions.ppc
4/22/2019

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Center
27 Siemon Company Drive Suite 200 W
Watertown, CT 06795 USA +1-203-755-1666

Bentley PondPack V8i
[08.11.01.56]
Page 46 of 323

Subsection: Unit Hydrograph Summary
Label: DA-4

Return Event: 100 years
Storm Event: 12h100y

SCS Unit Hydrograph Parameters	
Storm Event	12h100y
Return Event	100 years
Duration	24.000 hours
Depth	6.59 in
Time of Concentration (Composite)	1.000 hours
Area (User Defined)	48.150 acres
Computational Time Increment	
Computational Time Increment	0.133 hours
Time to Peak (Computed)	5.600 hours
Flow (Peak, Computed)	49.59 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	5.600 hours
Flow (Peak Interpolated Output)	49.59 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	48.150 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	4.75 in
Runoff Volume (Pervious)	19.065 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	19.065 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	1.000 hours
Computational Time Increment	0.133 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	54.56 ft ³ /s
Unit peak time, Tp	0.667 hours

17189-Existing Conditions.ppc
4/22/2019

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Center
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Bentley PondPack V8i
[08.11.01.56]
Page 41 of 323

Subsection: Unit Hydrograph Summary
Label: DA-4

Return Event: 100 years
Storm Event: 12h100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	2.667 hours
Total unit time, Tb	3.333 hours

17189-Existing Conditions.ppc
4/22/2019

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Center
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Watertown, CT 06795 USA +1-203-755-1666

Bentley PondPack V8i
[08.11.01.56]
Page 42 of 323

Subsection: Unit Hydrograph Summary
Label: DA-4

Return Event: 100 years
Storm Event: 15m100y

SCS Unit Hydrograph Parameters	
Storm Event	15m100y
Return Event	100 years
Duration	24.000 hours
Depth	2.05 in
Time of Concentration (Composite)	1.000 hours
Area (User Defined)	48.150 acres
Computational Time Increment	0.133 hours
Time to Peak (Computed)	0.667 hours
Flow (Peak, Computed)	41.66 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	0.700 hours
Flow (Peak Interpolated Output)	41.37 ft³/s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	48.150 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.78 in
Runoff Volume (Pervious)	3.128 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	3.127 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	1.000 hours
Computational Time Increment	0.133 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	54.56 ft³/s
Unit peak time, Tp	0.667 hours

17189-Existing Conditions.ppc
4/22/2019

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Center
27 Siemon Company Drive Suite 200 W
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Bentley PondPack V8i
[08.11.01.56]
Page 43 of 323

Subsection: Unit Hydrograph Summary
Label: DA-4

Return Event: 100 years
Storm Event: 15m100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	2.667 hours
Total unit time, Tb	3.333 hours

17189-Existing Conditions.ppc
4/22/2019

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Center
27 Siemon Company Drive Suite 200 W
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Bentley PondPack V8i
[08.11.01.56]
Page 44 of 323

Subsection: Unit Hydrograph Summary
Label: DA-4

Return Event: 100 years
Storm Event: 18h100y

SCS Unit Hydrograph Parameters	
Storm Event	18h100y
Return Event	100 years
Duration	36.000 hours
Depth	6.97 in
Time of Concentration (Composite)	1.000 hours
Area (User Defined)	48.150 acres
Computational Time Increment	0.133 hours
Time to Peak (Computed)	11.867 hours
Flow (Peak, Computed)	42.08 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	11.850 hours
Flow (Peak Interpolated Output)	42.04 ft³/s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	48.150 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.11 in
Runoff Volume (Pervious)	20.510 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	20.510 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	1.000 hours
Computational Time Increment	0.133 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	54.56 ft³/s
Unit peak time, Tp	0.667 hours

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 45 of 323

Subsection: Unit Hydrograph Summary
Label: DA-4

Return Event: 100 years
Storm Event: 18h100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	2.667 hours
Total unit time, Tb	3.333 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 46 of 323

Subsection: Unit Hydrograph Summary
Label: DA-4

Return Event: 100 years
Storm Event: 24h100y

SCS Unit Hydrograph Parameters	
Storm Event	24h100y
Return Event	100 years
Duration	36.000 hours
Depth	7.58 in
Time of Concentration (Composite)	1.000 hours
Area (User Defined)	48.150 acres
Computational Time	
Increment	0.133 hours
Time to Peak (Computed)	15.733 hours
Flow (Peak, Computed)	35.65 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	15.700 hours
Flow (Peak Interpolated Output)	35.62 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	48.150 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.69 in
Runoff Volume (Pervious)	22.842 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	22.842 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	1.000 hours
Computational Time Increment	0.133 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	54.56 ft ³ /s
Unit peak time, Tp	0.667 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 47 of 323

Subsection: Unit Hydrograph Summary
Label: DA-4

Return Event: 100 years
Storm Event: 24h100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	2.667 hours
Total unit time, Tb	3.333 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 48 of 323

Subsection: Unit Hydrograph Summary
Label: DA-4

Return Event: 100 years
Storm Event: 30m100y

SCS Unit Hydrograph Parameters	
Storm Event	30m100y
Return Event	100 years
Duration	24.000 hours
Depth	2.80 in
Time of Concentration (Composite)	1.000 hours
Area (User Defined)	48.150 acres
Computational Time	
Increment	0.133 hours
Time to Peak (Computed)	0.800 hours
Flow (Peak, Computed)	68.37 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	0.800 hours
Flow (Peak Interpolated Output)	68.37 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	48.150 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.35 in
Runoff Volume (Pervious)	5.430 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	5.430 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	1.000 hours
Computational Time Increment	0.133 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	54.56 ft ³ /s
Unit peak time, Tp	0.667 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 48 of 323

Subsection: Unit Hydrograph Summary
Label: DA-4

Return Event: 100 years
Storm Event: 30m100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	2.667 hours
Total unit time, Tb	3.333 hours

17189-Existing Conditions.ppc
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Bentley PondPack V8i
[08.11.01.56]
Page 50 of 323

Subsection: Unit Hydrograph Summary
Label: DA-4

Return Event: 100 years
Storm Event: 48h100y

SCS Unit Hydrograph Parameters	
Storm Event	48h100y
Return Event	100 years
Duration	54.000 hours
Depth	8.16 in
Time of Concentration (Composite)	1.000 hours
Area (User Defined)	48.150 acres
Computational Time Increment	
Computational Time Increment	0.133 hours
Time to Peak (Computed)	40.933 hours
Flow (Peak, Computed)	19.86 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	40.950 hours
Flow (Peak Interpolated Output)	19.85 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	48.150 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.25 in
Runoff Volume (Pervious)	25.074 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	25.074 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	1.000 hours
Computational Time Increment	0.133 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	54.56 ft ³ /s
Unit peak time, Tp	0.667 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 51 of 323

Subsection: Unit Hydrograph Summary
Label: DA-4

Return Event: 100 years
Storm Event: 48h100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	2.667 hours
Total unit time, Tb	3.333 hours

17189-Existing Conditions.ppc
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Bentley PondPack V8i
[08.11.01.56]
Page 52 of 323

Subsection: Unit Hydrograph Summary
Label: DA-4

Return Event: 100 years
Storm Event: 72h100y

SCS Unit Hydrograph Parameters	
Storm Event	72h100y
Return Event	100 years
Duration	76.000 hours
Depth	8.78 in
Time of Concentration (Composite)	1.000 hours
Area (User Defined)	48.150 acres
Computational Time Increment	
Computational Time Increment	0.133 hours
Time to Peak (Computed)	61.200 hours
Flow (Peak, Computed)	14.42 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	61.200 hours
Flow (Peak Interpolated Output)	14.42 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	48.150 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.85 in
Runoff Volume (Pervious)	27.471 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	27.471 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	1.000 hours
Computational Time Increment	0.133 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	54.56 ft ³ /s
Unit peak time, Tp	0.667 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 53 of 323

Subsection: Unit Hydrograph Summary
Label: DA-4

Return Event: 100 years
Storm Event: 72h100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	2.667 hours
Total unit time, Tb	3.333 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 54 of 323

Subsection: Unit Hydrograph Summary
Label: DA-6

Return Event: 100 years
Storm Event: 1h100y

Storm Event	1h100y
Return Event	100 years
Duration	24.000 hours
Depth	3.56 in
Time of Concentration (Composite)	0.500 hours
Area (User Defined)	20.050 acres
Computational Time Increment	0.067 hours
Time to Peak (Computed)	0.533 hours
Flow (Peak, Computed)	51.02 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	0.550 hours
Flow (Peak Interpolated Output)	51.01 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	20.050 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.99 in
Runoff Volume (Pervious)	3.322 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	3.322 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.500 hours
Computational Time Increment	0.067 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	45.44 ft ³ /s
Unit peak time, Tp	0.333 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 55 of 323

Subsection: Unit Hydrograph Summary
Label: DA-6

Return Event: 100 years
Storm Event: 1h100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	1.333 hours
Total unit time, Tb	1.667 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 56 of 323

Subsection: Unit Hydrograph Summary
Label: DA-6

Return Event: 100 years
Storm Event: 2h100yh

Storm Event	2h100yh
Return Event	100 years
Duration	24.000 hours
Depth	4.47 in
Time of Concentration (Composite)	0.500 hours
Area (User Defined)	20.050 acres
Computational Time Increment	0.067 hours
Time to Peak (Computed)	0.733 hours
Flow (Peak, Computed)	48.42 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	0.700 hours
Flow (Peak Interpolated Output)	48.39 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	20.050 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.79 in
Runoff Volume (Pervious)	4.661 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	4.661 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.500 hours
Computational Time Increment	0.067 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	45.44 ft ³ /s
Unit peak time, Tp	0.333 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 57 of 323

Subsection: Unit Hydrograph Summary
Label: DA-6

Return Event: 100 years
Storm Event: 2h100yh

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	1.333 hours
Total unit time, Tb	1.667 hours

17189-Existing Conditions.ppc
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Bentley PondPack V8i
[08.11.01.56]
Page 58 of 323

Subsection: Unit Hydrograph Summary
Label: DA-6

Return Event: 100 years
Storm Event: 3h100y

SCS Unit Hydrograph Parameters	
Storm Event	3h100y
Return Event	100 years
Duration	24.000 hours
Depth	4.85 in
Time of Concentration (Composite)	0.500 hours
Area (User Defined)	20.050 acres
Computational Time Increment	
Computational Time Increment	0.067 hours
Time to Peak (Computed)	0.867 hours
Flow (Peak, Computed)	41.02 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	0.850 hours
Flow (Peak Interpolated Output)	41.00 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	20.050 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.13 in
Runoff Volume (Pervious)	5.236 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	5.236 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.500 hours
Computational Time Increment	0.067 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	45.44 ft ³ /s
Unit peak time, Tp	0.333 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 59 of 323

Subsection: Unit Hydrograph Summary
Label: DA-6

Return Event: 100 years
Storm Event: 3h100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	1.333 hours
Total unit time, Tb	1.667 hours

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 60 of 323

Subsection: Unit Hydrograph Summary
Label: DA-6

Return Event: 100 years
Storm Event: 5d100y

SCS Unit Hydrograph Parameters	
Storm Event	5d100y
Return Event	100 years
Duration	400.000 hours
Depth	9.96 in
Time of Concentration (Composite)	0.500 hours
Area (User Defined)	20.050 acres
Computational Time Increment	
Computational Time Increment	0.067 hours
Time to Peak (Computed)	102.000 hours
Flow (Peak, Computed)	4.15 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	102.000 hours
Flow (Peak Interpolated Output)	4.15 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	20.050 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	7.99 in
Runoff Volume (Pervious)	13.350 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	13.350 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.500 hours
Computational Time Increment	0.067 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	45.44 ft ³ /s
Unit peak time, Tp	0.333 hours

17189-Existing Conditions.ppc
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Bentley PondPack V8i
[08.11.01.56]
Page 61 of 323

Subsection: Unit Hydrograph Summary
Label: DA-6

Return Event: 100 years
Storm Event: 5d100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	1.333 hours
Total unit time, Tb	1.667 hours

17189-Existing Conditions.ppc
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Bentley PondPack V8i
[08.11.01.56]
Page 62 of 323

Subsection: Unit Hydrograph Summary
Label: DA-6

Return Event: 100 years
Storm Event: 5m100y

Storm Event	5m100y
Return Event	100 years
Duration	24.000 hours
Depth	0.91 in
Time of Concentration (Composite)	0.500 hours
Area (User Defined)	20.050 acres
Computational Time Increment	0.067 hours
Time to Peak (Computed)	0.333 hours
Flow (Peak, Computed)	5.16 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	0.350 hours
Flow (Peak Interpolated Output)	5.11 ft³/s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	20.050 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.12 in
Runoff Volume (Pervious)	0.192 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.192 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.500 hours
Computational Time Increment	0.067 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	45.44 ft³/s
Unit peak time, Tp	0.333 hours

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 63 of 323

Subsection: Unit Hydrograph Summary
Label: DA-6

Return Event: 100 years
Storm Event: 5m100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	1.333 hours
Total unit time, Tb	1.667 hours

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 64 of 323

Subsection: Unit Hydrograph Summary
Label: DA-6

Return Event: 100 years
Storm Event: 6h100y

Storm Event	6h100y
Return Event	100 years
Duration	24.000 hours
Depth	5.68 in
Time of Concentration (Composite)	0.500 hours
Area (User Defined)	20.050 acres
Computational Time Increment	0.067 hours
Time to Peak (Computed)	0.933 hours
Flow (Peak, Computed)	29.68 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	0.950 hours
Flow (Peak Interpolated Output)	29.61 ft³/s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	20.050 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.90 in
Runoff Volume (Pervious)	6.513 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	6.513 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.500 hours
Computational Time Increment	0.067 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	45.44 ft³/s
Unit peak time, Tp	0.333 hours

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 65 of 323

Subsection: Unit Hydrograph Summary
Label: DA-6

Return Event: 100 years
Storm Event: 6h100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	1.333 hours
Total unit time, Tb	1.667 hours

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 66 of 323

Subsection: Unit Hydrograph Summary
Label: DA-6

Return Event: 100 years
Storm Event: 10d100y

SCS Unit Hydrograph Parameters	
Storm Event	10d100y
Return Event	100 years
Duration	252.000 hours
Depth	11.14 in
Time of Concentration (Composite)	0.500 hours
Area (User Defined)	20.050 acres
Computational Time Increment	
Computational Time Increment	0.067 hours
Time to Peak (Computed)	204.000 hours
Flow (Peak, Computed)	2.34 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	204.000 hours
Flow (Peak Interpolated Output)	2.34 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	20.050 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	9.14 in
Runoff Volume (Pervious)	15.273 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	15.273 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.500 hours
Computational Time Increment	0.067 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	45.44 ft ³ /s
Unit peak time, Tp	0.333 hours

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 67 of 323

Subsection: Unit Hydrograph Summary
Label: DA-6

Return Event: 100 years
Storm Event: 10d100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	1.333 hours
Total unit time, Tb	1.667 hours

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 68 of 323

Subsection: Unit Hydrograph Summary
Label: DA-6

Return Event: 100 years
Storm Event: 10m100y

SCS Unit Hydrograph Parameters	
Storm Event	10m100y
Return Event	100 years
Duration	24.000 hours
Depth	1.67 in
Time of Concentration (Composite)	0.500 hours
Area (User Defined)	20.050 acres
Computational Time Increment	
Computational Time Increment	0.067 hours
Time to Peak (Computed)	0.400 hours
Flow (Peak, Computed)	22.59 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	0.400 hours
Flow (Peak Interpolated Output)	22.59 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	20.050 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.52 in
Runoff Volume (Pervious)	0.869 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.869 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.500 hours
Computational Time Increment	0.067 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	45.44 ft ³ /s
Unit peak time, Tp	0.333 hours

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 68 of 323

Subsection: Unit Hydrograph Summary
Label: DA-6

Return Event: 100 years
Storm Event: 10m100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	1.333 hours
Total unit time, Tb	1.667 hours

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 70 of 323

Subsection: Unit Hydrograph Summary
Label: DA-6

Return Event: 100 years
Storm Event: 12h100y

SCS Unit Hydrograph Parameters	
Storm Event	12h100y
Return Event	100 years
Duration	24.000 hours
Depth	6.59 in
Time of Concentration (Composite)	0.500 hours
Area (User Defined)	20.050 acres
Computational Time Increment	
Computational Time Increment	0.067 hours
Time to Peak (Computed)	5.000 hours
Flow (Peak, Computed)	21.57 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	5.000 hours
Flow (Peak Interpolated Output)	21.57 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	20.050 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	4.75 in
Runoff Volume (Pervious)	7.939 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	7.939 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.500 hours
Computational Time Increment	0.067 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	45.44 ft ³ /s
Unit peak time, Tp	0.333 hours

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 71 of 323

Subsection: Unit Hydrograph Summary
Label: DA-6

Return Event: 100 years
Storm Event: 12h100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	1.333 hours
Total unit time, Tb	1.667 hours

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 72 of 323

Subsection: Unit Hydrograph Summary
Label: DA-6

Return Event: 100 years
Storm Event: 15m100y

SCS Unit Hydrograph Parameters	
Storm Event	15m100y
Return Event	100 years
Duration	24.000 hours
Depth	2.05 in
Time of Concentration (Composite)	0.500 hours
Area (User Defined)	20.050 acres
Computational Time Increment	
Computational Time Increment	0.067 hours
Time to Peak (Computed)	0.400 hours
Flow (Peak, Computed)	32.73 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	0.400 hours
Flow (Peak Interpolated Output)	32.73 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	20.050 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.78 in
Runoff Volume (Pervious)	1.302 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.302 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.500 hours
Computational Time Increment	0.067 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	45.44 ft ³ /s
Unit peak time, Tp	0.333 hours

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 73 of 323

Subsection: Unit Hydrograph Summary
Label: DA-6

Return Event: 100 years
Storm Event: 15m100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	1.333 hours
Total unit time, Tb	1.667 hours

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 74 of 323

Subsection: Unit Hydrograph Summary
Label: DA-6

Return Event: 100 years
Storm Event: 18h100y

SCS Unit Hydrograph Parameters	
Storm Event	18h100y
Return Event	100 years
Duration	36.000 hours
Depth	6.97 in
Time of Concentration (Composite)	0.500 hours
Area (User Defined)	20.050 acres
Computational Time Increment	
Computational Time Increment	0.067 hours
Time to Peak (Computed)	11.733 hours
Flow (Peak, Computed)	18.24 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	11.700 hours
Flow (Peak Interpolated Output)	18.23 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	20.050 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.11 in
Runoff Volume (Pervious)	8.540 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	8.540 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.500 hours
Computational Time Increment	0.067 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	45.44 ft ³ /s
Unit peak time, Tp	0.333 hours

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 75 of 323

Subsection: Unit Hydrograph Summary
Label: DA-6

Return Event: 100 years
Storm Event: 18h100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	1.333 hours
Total unit time, Tb	1.667 hours

17189-Existing Conditions.ppc
4/22/2019

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Center
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Bentley PondPack V8i
[08.11.01.56]
Page 76 of 323

Subsection: Unit Hydrograph Summary
Label: DA-6

Return Event: 100 years
Storm Event: 24h100y

SCS Unit Hydrograph Parameters	
Storm Event	24h100y
Return Event	100 years
Duration	36.000 hours
Depth	7.58 in
Time of Concentration (Composite)	0.500 hours
Area (User Defined)	20.050 acres
Computational Time Increment	
Computational Time Increment	0.067 hours
Time to Peak (Computed)	15.600 hours
Flow (Peak, Computed)	15.17 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	15.600 hours
Flow (Peak Interpolated Output)	15.17 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	20.050 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.69 in
Runoff Volume (Pervious)	9.512 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	9.512 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.500 hours
Computational Time Increment	0.067 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	45.44 ft ³ /s
Unit peak time, Tp	0.333 hours

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 77 of 323

Subsection: Unit Hydrograph Summary
Label: DA-6

Return Event: 100 years
Storm Event: 24h100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	1.333 hours
Total unit time, Tb	1.667 hours

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 78 of 323

Subsection: Unit Hydrograph Summary
Label: DA-6

Return Event: 100 years
Storm Event: 30m100y

SCS Unit Hydrograph Parameters	
Storm Event	30m100y
Return Event	100 years
Duration	24.000 hours
Depth	2.80 in
Time of Concentration (Composite)	0.500 hours
Area (User Defined)	20.050 acres
Computational Time Increment	
Computational Time Increment	0.067 hours
Time to Peak (Computed)	0.467 hours
Flow (Peak, Computed)	46.66 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	0.500 hours
Flow (Peak Interpolated Output)	46.43 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	20.050 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.35 in
Runoff Volume (Pervious)	2.261 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	2.261 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.500 hours
Computational Time Increment	0.067 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	45.44 ft ³ /s
Unit peak time, Tp	0.333 hours

17189-Existing Conditions.ppc
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Bentley PondPack V8i
[08.11.01.56]
Page 79 of 323

Subsection: Unit Hydrograph Summary
Label: DA-6

Return Event: 100 years
Storm Event: 30m100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	1.333 hours
Total unit time, Tb	1.667 hours

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 88 of 323

Subsection: Unit Hydrograph Summary
Label: DA-6

Return Event: 100 years
Storm Event: 48h100y

SCS Unit Hydrograph Parameters	
Storm Event	48h100y
Return Event	100 years
Duration	54.000 hours
Depth	8.16 in
Time of Concentration (Composite)	0.500 hours
Area (User Defined)	20.050 acres
Computational Time Increment	
Computational Time Increment	0.067 hours
Time to Peak (Computed)	40.800 hours
Flow (Peak, Computed)	8.31 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	40.800 hours
Flow (Peak Interpolated Output)	8.31 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	20.050 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.25 in
Runoff Volume (Pervious)	10.441 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	10.441 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.500 hours
Computational Time Increment	0.067 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	45.44 ft ³ /s
Unit peak time, Tp	0.333 hours

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 81 of 323

Subsection: Unit Hydrograph Summary
Label: DA-6

Return Event: 100 years
Storm Event: 48h100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	1.333 hours
Total unit time, Tb	1.667 hours

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 82 of 323

Subsection: Unit Hydrograph Summary
Label: DA-6

Return Event: 100 years
Storm Event: 72h100y

SCS Unit Hydrograph Parameters	
Storm Event	72h100y
Return Event	100 years
Duration	76.000 hours
Depth	8.78 in
Time of Concentration (Composite)	0.500 hours
Area (User Defined)	20.050 acres
Computational Time Increment	
Computational Time Increment	0.067 hours
Time to Peak (Computed)	61.200 hours
Flow (Peak, Computed)	6.02 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	61.200 hours
Flow (Peak Interpolated Output)	6.02 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	20.050 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.85 in
Runoff Volume (Pervious)	11.439 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	11.439 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.500 hours
Computational Time Increment	0.067 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	45.44 ft ³ /s
Unit peak time, Tp	0.333 hours

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 83 of 323

Subsection: Unit Hydrograph Summary
Label: DA-6

Return Event: 100 years
Storm Event: 72h100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	1.333 hours
Total unit time, Tb	1.667 hours

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 84 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-1

Return Event: 100 years
Storm Event: 1h100y

SCS Unit Hydrograph Parameters	
Storm Event	1h100y
Return Event	100 years
Duration	24.000 hours
Depth	3.56 in
Time of Concentration (Composite)	1.000 hours
Area (User Defined)	52.726 acres
Computational Time Increment	
Computational Time Increment	0.133 hours
Time to Peak (Computed)	0.933 hours
Flow (Peak, Computed)	90.85 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	0.950 hours
Flow (Peak Interpolated Output)	90.56 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	52.726 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.99 in
Runoff Volume (Pervious)	8.735 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	8.734 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	1.000 hours
Computational Time Increment	0.133 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	59.74 ft ³ /s
Unit peak time, Tp	0.667 hours

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 85 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-1

Return Event: 100 years
Storm Event: 1h100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	2.667 hours
Total unit time, Tb	3.333 hours

17189-Existing Conditions.ppc
4/22/2019

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Center
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Bentley PondPack V8i
[08.11.01.56]
Page 86 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-1

Return Event: 100 years
Storm Event: 2h100yh

SCS Unit Hydrograph Parameters	
Storm Event	2h100yh
Return Event	100 years
Duration	24.000 hours
Depth	4.47 in
Time of Concentration (Composite)	1.000 hours
Area (User Defined)	52.726 acres
Computational Time Increment	
Computational Time Increment	0.133 hours
Time to Peak (Computed)	1.067 hours
Flow (Peak, Computed)	95.93 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	1.100 hours
Flow (Peak Interpolated Output)	95.55 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	52.726 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.79 in
Runoff Volume (Pervious)	12.257 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	12.257 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	1.000 hours
Computational Time Increment	0.133 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	59.74 ft ³ /s
Unit peak time, Tp	0.667 hours

17189-Existing Conditions.ppc
4/22/2019

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Center
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Bentley PondPack V8i
[08.11.01.56]
Page 87 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-1

Return Event: 100 years
Storm Event: 2h100yh

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	2.667 hours
Total unit time, Tb	3.333 hours

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 88 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-1

Return Event: 100 years
Storm Event: 3h100y

SCS Unit Hydrograph Parameters	
Storm Event	3h100y
Return Event	100 years
Duration	24.000 hours
Depth	4.85 in
Time of Concentration (Composite)	1.000 hours
Area (User Defined)	52.726 acres
Computational Time Increment	
Computational Time Increment	0.133 hours
Time to Peak (Computed)	1.200 hours
Flow (Peak, Computed)	86.72 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	1.200 hours
Flow (Peak Interpolated Output)	86.72 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	52.726 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.13 in
Runoff Volume (Pervious)	13.768 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	13.768 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	1.000 hours
Computational Time Increment	0.133 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	59.74 ft ³ /s
Unit peak time, Tp	0.667 hours

17189-Existing Conditions.ppc
4/22/2019

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Center
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Bentley PondPack V8i
[08.11.01.56]
Page 89 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-1

Return Event: 100 years
Storm Event: 3h100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	2.667 hours
Total unit time, Tb	3.333 hours

17189-Existing Conditions.ppc
4/22/2019

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Center
27 Siemon Company Drive Suite 200 W
Watertown, CT 06795 USA +1-203-755-1666

Bentley PondPack V8i
[08.11.01.56]
Page 90 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-1

Return Event: 100 years
Storm Event: 5d100y

SCS Unit Hydrograph Parameters	
Storm Event	5d100y
Return Event	100 years
Duration	400.000 hours
Depth	9.96 in
Time of Concentration (Composite)	1.000 hours
Area (User Defined)	52.726 acres
Computational Time Increment	0.133 hours
Time to Peak (Computed)	102.000 hours
Flow (Peak, Computed)	10.90 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	102.000 hours
Flow (Peak Interpolated Output)	10.90 ft³/s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	52.726 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	7.99 in
Runoff Volume (Pervious)	35.108 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	35.108 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	1.000 hours
Computational Time Increment	0.133 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	59.74 ft³/s
Unit peak time, Tp	0.667 hours

17189-Existing Conditions.ppc
4/22/2019

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Center
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Bentley PondPack V8i
[08.11.01.56]
Page 91 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-1

Return Event: 100 years
Storm Event: 5d100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	2.667 hours
Total unit time, Tb	3.333 hours

17189-Existing Conditions.ppc
4/22/2019

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Center
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Bentley PondPack V8i
[08.11.01.56]
Page 92 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-1

Return Event: 100 years
Storm Event: 5m100y

SCS Unit Hydrograph Parameters	
Storm Event	5m100y
Return Event	100 years
Duration	24.000 hours
Depth	0.91 in
Time of Concentration (Composite)	1.000 hours
Area (User Defined)	52.726 acres
Computational Time Increment	0.133 hours
Time to Peak (Computed)	0.667 hours
Flow (Peak, Computed)	6.88 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	0.650 hours
Flow (Peak Interpolated Output)	6.82 ft³/s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	52.726 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.12 in
Runoff Volume (Pervious)	0.505 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.505 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	1.000 hours
Computational Time Increment	0.133 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	59.74 ft³/s
Unit peak time, Tp	0.667 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 93 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-1

Return Event: 100 years
Storm Event: 5m100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	2.667 hours
Total unit time, Tb	3.333 hours

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[08.11.01.56]
Page 94 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-1

Return Event: 100 years
Storm Event: 6h100y

Storm Event	6h100y
Return Event	100 years
Duration	24.000 hours
Depth	5.68 in
Time of Concentration (Composite)	1.000 hours
Area (User Defined)	52.726 acres
Computational Time	
Increment	0.133 hours
Time to Peak (Computed)	1.600 hours
Flow (Peak, Computed)	68.12 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	1.600 hours
Flow (Peak Interpolated Output)	68.12 ft³/s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	52.726 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.90 in
Runoff Volume (Pervious)	17.127 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	17.127 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	1.000 hours
Computational Time Increment	0.133 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	59.74 ft³/s
Unit peak time, Tp	0.667 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 95 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-1

Return Event: 100 years
Storm Event: 6h100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	2.667 hours
Total unit time, Tb	3.333 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 96 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-1

Return Event: 100 years
Storm Event: 10d100y

Storm Event	10d100y
Return Event	100 years
Duration	252.000 hours
Depth	11.14 in
Time of Concentration (Composite)	1.000 hours
Area (User Defined)	52.726 acres
Computational Time	
Increment	0.133 hours
Time to Peak (Computed)	204.000 hours
Flow (Peak, Computed)	6.16 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	204.000 hours
Flow (Peak Interpolated Output)	6.16 ft³/s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	52.726 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	9.14 in
Runoff Volume (Pervious)	40.163 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	40.163 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	1.000 hours
Computational Time Increment	0.133 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	59.74 ft³/s
Unit peak time, Tp	0.667 hours

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[08.11.01.56]
Page 97 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-1

Return Event: 100 years
Storm Event: 10d100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	2.667 hours
Total unit time, Tb	3.333 hours

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[08.11.01.56]
Page 98 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-1

Return Event: 100 years
Storm Event: 10m100y

Storm Event	10m100y
Return Event	100 years
Duration	24.000 hours
Depth	1.67 in
Time of Concentration (Composite)	1.000 hours
Area (User Defined)	52.726 acres
Computational Time Increment	
Time to Peak (Computed)	0.667 hours
Flow (Peak, Computed)	30.84 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	0.650 hours
Flow (Peak Interpolated Output)	30.47 ft³/s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	52.726 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.52 in
Runoff Volume (Pervious)	2.286 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	2.286 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	1.000 hours
Computational Time Increment	0.133 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	59.74 ft³/s
Unit peak time, Tp	0.667 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 99 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-1

Return Event: 100 years
Storm Event: 10m100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	2.667 hours
Total unit time, Tb	3.333 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 100 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-1

Return Event: 100 years
Storm Event: 12h100y

Storm Event	12h100y
Return Event	100 years
Duration	24.000 hours
Depth	6.59 in
Time of Concentration (Composite)	1.000 hours
Area (User Defined)	52.726 acres
Computational Time Increment	
Time to Peak (Computed)	5.600 hours
Flow (Peak, Computed)	54.31 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	5.600 hours
Flow (Peak Interpolated Output)	54.31 ft³/s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	52.726 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	4.75 in
Runoff Volume (Pervious)	20.877 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	20.877 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	1.000 hours
Computational Time Increment	0.133 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	59.74 ft³/s
Unit peak time, Tp	0.667 hours

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[08.11.01.56]
Page 101 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-1

Return Event: 100 years
Storm Event: 12h100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	2.667 hours
Total unit time, Tb	3.333 hours

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[08.11.01.56]
Page 102 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-1

Return Event: 100 years
Storm Event: 15m100y

Storm Event	15m100y
Return Event	100 years
Duration	24.000 hours
Depth	2.05 in
Time of Concentration (Composite)	1.000 hours
Area (User Defined)	52.726 acres
Computational Time Increment	
Time to Peak (Computed)	0.667 hours
Flow (Peak, Computed)	45.62 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	0.700 hours
Flow (Peak Interpolated Output)	45.30 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	52.726 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.78 in
Runoff Volume (Pervious)	3.425 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	3.425 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	1.000 hours
Computational Time Increment	0.133 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	59.74 ft ³ /s
Unit peak time, Tp	0.667 hours

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[08.11.01.56]
Page 103 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-1

Return Event: 100 years
Storm Event: 15m100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	2.667 hours
Total unit time, Tb	3.333 hours

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[08.11.01.56]
Page 104 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-1

Return Event: 100 years
Storm Event: 18h100y

Storm Event	18h100y
Return Event	100 years
Duration	36.000 hours
Depth	6.97 in
Time of Concentration (Composite)	1.000 hours
Area (User Defined)	52.726 acres
Computational Time Increment	
Time to Peak (Computed)	11.867 hours
Flow (Peak, Computed)	46.08 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	11.850 hours
Flow (Peak Interpolated Output)	46.03 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	52.726 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.11 in
Runoff Volume (Pervious)	22.459 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	22.459 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	1.000 hours
Computational Time Increment	0.133 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	59.74 ft ³ /s
Unit peak time, Tp	0.667 hours

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[08.11.01.56]
Page 105 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-1

Return Event: 100 years
Storm Event: 18h100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	2.667 hours
Total unit time, Tb	3.333 hours

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[08.11.01.56]
Page 108 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-1

Return Event: 100 years
Storm Event: 24h100y

Storm Event	24h100y
Return Event	100 years
Duration	36.000 hours
Depth	7.58 in
Time of Concentration (Composite)	1.000 hours
Area (User Defined)	52.726 acres
Computational Time	
Increment	0.133 hours
Time to Peak (Computed)	15.733 hours
Flow (Peak, Computed)	39.04 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	15.700 hours
Flow (Peak Interpolated Output)	39.01 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	52.726 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.69 in
Runoff Volume (Pervious)	25.013 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	25.013 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	1.000 hours
Computational Time Increment	0.133 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	59.74 ft ³ /s
Unit peak time, Tp	0.667 hours

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[08.11.01.56]
Page 107 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-1

Return Event: 100 years
Storm Event: 24h100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	2.667 hours
Total unit time, Tb	3.333 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 108 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-1

Return Event: 100 years
Storm Event: 30m100y

Storm Event	30m100y
Return Event	100 years
Duration	24.000 hours
Depth	2.80 in
Time of Concentration (Composite)	1.000 hours
Area (User Defined)	52.726 acres
Computational Time	
Increment	0.133 hours
Time to Peak (Computed)	0.800 hours
Flow (Peak, Computed)	74.87 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	0.800 hours
Flow (Peak Interpolated Output)	74.87 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	52.726 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.35 in
Runoff Volume (Pervious)	5.947 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	5.946 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	1.000 hours
Computational Time Increment	0.133 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	59.74 ft ³ /s
Unit peak time, Tp	0.667 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 108 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-1

Return Event: 100 years
Storm Event: 30m100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	2.667 hours
Total unit time, Tb	3.333 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 110 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-1

Return Event: 100 years
Storm Event: 48h100y

SCS Unit Hydrograph Parameters	
Storm Event	48h100y
Return Event	100 years
Duration	54.000 hours
Depth	8.16 in
Time of Concentration (Composite)	1.000 hours
Area (User Defined)	52.726 acres
Computational Time	
Increment	0.133 hours
Time to Peak (Computed)	40.933 hours
Flow (Peak, Computed)	21.74 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	40.950 hours
Flow (Peak Interpolated Output)	21.74 ft³/s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	52.726 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.25 in
Runoff Volume (Pervious)	27.457 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	27.457 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	1.000 hours
Computational Time Increment	0.133 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	59.74 ft³/s
Unit peak time, Tp	0.667 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 111 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-1

Return Event: 100 years
Storm Event: 48h100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	2.667 hours
Total unit time, Tb	3.333 hours

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[08.11.01.56]
Page 112 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-1

Return Event: 100 years
Storm Event: 72h100y

SCS Unit Hydrograph Parameters	
Storm Event	72h100y
Return Event	100 years
Duration	76.000 hours
Depth	8.78 in
Time of Concentration (Composite)	1.000 hours
Area (User Defined)	52.726 acres
Computational Time	
Increment	0.133 hours
Time to Peak (Computed)	61.200 hours
Flow (Peak, Computed)	15.79 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	61.200 hours
Flow (Peak Interpolated Output)	15.79 ft³/s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	52.726 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.85 in
Runoff Volume (Pervious)	30.082 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	30.082 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	1.000 hours
Computational Time Increment	0.133 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	59.74 ft³/s
Unit peak time, Tp	0.667 hours

17189-Existing Conditions.ppc
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Bentley PondPack V8i
[08.11.01.56]
Page 113 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-1

Return Event: 100 years
Storm Event: 72h100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	2.667 hours
Total unit time, Tb	3.333 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 114 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-2

Return Event: 100 years
Storm Event: 1h100y

Storm Event	1h100y
Return Event	100 years
Duration	24.000 hours
Depth	3.56 in
Time of Concentration (Composite)	0.167 hours
Area (User Defined)	3.275 acres
Computational Time Increment	0.022 hours
Time to Peak (Computed)	0.289 hours
Flow (Peak, Computed)	12.38 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	0.300 hours
Flow (Peak Interpolated Output)	12.37 ft³/s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	3.275 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.99 in
Runoff Volume (Pervious)	0.543 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.543 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.167 hours
Computational Time Increment	0.022 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	22.22 ft³/s
Unit peak time, Tp	0.111 hours

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4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 115 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-2

Return Event: 100 years
Storm Event: 1h100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	0.445 hours
Total unit time, Tb	0.557 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 116 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-2

Return Event: 100 years
Storm Event: 2h100yh

Storm Event	2h100yh
Return Event	100 years
Duration	24.000 hours
Depth	4.47 in
Time of Concentration (Composite)	0.167 hours
Area (User Defined)	3.275 acres
Computational Time Increment	0.022 hours
Time to Peak (Computed)	0.334 hours
Flow (Peak, Computed)	9.72 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	0.350 hours
Flow (Peak Interpolated Output)	9.70 ft³/s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	3.275 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.79 in
Runoff Volume (Pervious)	0.761 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.761 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.167 hours
Computational Time Increment	0.022 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	22.22 ft³/s
Unit peak time, Tp	0.111 hours

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 117 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-2

Return Event: 100 years
Storm Event: 2h100yh

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	0.445 hours
Total unit time, Tb	0.557 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 118 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-2

Return Event: 100 years
Storm Event: 3h100y

Storm Event	3h100y
Return Event	100 years
Duration	24.000 hours
Depth	4.85 in
Time of Concentration (Composite)	0.167 hours
Area (User Defined)	3.275 acres
Computational Time Increment	
Time to Peak (Computed)	0.379 hours
Flow (Peak, Computed)	8.27 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	0.400 hours
Flow (Peak Interpolated Output)	8.19 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	3.275 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.13 in
Runoff Volume (Pervious)	0.855 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.855 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.167 hours
Computational Time Increment	0.022 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	22.22 ft ³ /s
Unit peak time, Tp	0.111 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 119 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-2

Return Event: 100 years
Storm Event: 3h100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	0.445 hours
Total unit time, Tb	0.557 hours

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 120 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-2

Return Event: 100 years
Storm Event: 5d100y

Storm Event	5d100y
Return Event	100 years
Duration	400.000 hours
Depth	9.96 in
Time of Concentration (Composite)	0.167 hours
Area (User Defined)	3.275 acres
Computational Time Increment	
Time to Peak (Computed)	101.981 hours
Flow (Peak, Computed)	0.68 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	101.950 hours
Flow (Peak Interpolated Output)	0.68 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	3.275 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	7.99 in
Runoff Volume (Pervious)	2.181 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	2.181 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.167 hours
Computational Time Increment	0.022 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	22.22 ft ³ /s
Unit peak time, Tp	0.111 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 121 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-2

Return Event: 100 years
Storm Event: 5d100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	0.445 hours
Total unit time, Tb	0.557 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 122 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-2

Return Event: 100 years
Storm Event: 5m100y

SCS Unit Hydrograph Parameters	
Storm Event	5m100y
Return Event	100 years
Duration	24.000 hours
Depth	0.91 in
Time of Concentration (Composite)	0.167 hours
Area (User Defined)	3.275 acres
Drainage Area	
Computational Time Increment	0.022 hours
Time to Peak (Computed)	0.156 hours
Flow (Peak, Computed)	2.38 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	0.150 hours
Flow (Peak Interpolated Output)	2.37 ft³/s
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.12 in
Runoff Volume (Pervious)	0.031 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.031 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.167 hours
Computational Time Increment	0.022 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	22.22 ft³/s
Unit peak time, Tp	0.111 hours

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[08.11.01.56]
Page 123 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-2

Return Event: 100 years
Storm Event: 5m100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	0.445 hours
Total unit time, Tb	0.557 hours

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 124 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-2

Return Event: 100 years
Storm Event: 6h100y

SCS Unit Hydrograph Parameters	
Storm Event	6h100y
Return Event	100 years
Duration	24.000 hours
Depth	5.68 in
Time of Concentration (Composite)	0.167 hours
Area (User Defined)	3.275 acres
Drainage Area	
Computational Time Increment	0.022 hours
Time to Peak (Computed)	0.646 hours
Flow (Peak, Computed)	6.37 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	0.650 hours
Flow (Peak Interpolated Output)	6.35 ft³/s
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.90 in
Runoff Volume (Pervious)	1.064 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.064 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.167 hours
Computational Time Increment	0.022 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	22.22 ft³/s
Unit peak time, Tp	0.111 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 125 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-2

Return Event: 100 years
Storm Event: 6h100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	0.445 hours
Total unit time, Tb	0.557 hours

17189-Existing Conditions.ppc
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Bentley PondPack V8i
[08.11.01.56]
Page 126 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-2

Return Event: 100 years
Storm Event: 10d100y

Storm Event	
Storm Event	10d100y
Return Event	100 years
Duration	252.000 hours
Depth	11.14 in
Time of Concentration (Composite)	0.167 hours
Area (User Defined)	3.275 acres
Computational Time	
Increment	0.022 hours
Time to Peak (Computed)	203.985 hours
Flow (Peak, Computed)	0.38 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	203.950 hours
Flow (Peak Interpolated Output)	0.38 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	3.275 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	9.14 in
Runoff Volume (Pervious)	2.495 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	2.495 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.167 hours
Computational Time Increment	0.022 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	22.22 ft ³ /s
Unit peak time, Tp	0.111 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 127 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-2

Return Event: 100 years
Storm Event: 10d100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	0.445 hours
Total unit time, Tb	0.557 hours

17189-Existing Conditions.ppc
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Bentley PondPack V8i
[08.11.01.56]
Page 126 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-2

Return Event: 100 years
Storm Event: 10m100y

Storm Event	
Storm Event	10m100y
Return Event	100 years
Duration	24.000 hours
Depth	1.67 in
Time of Concentration (Composite)	0.167 hours
Area (User Defined)	3.275 acres
Computational Time	
Increment	0.022 hours
Time to Peak (Computed)	0.178 hours
Flow (Peak, Computed)	8.83 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	0.200 hours
Flow (Peak Interpolated Output)	8.41 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	3.275 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.52 in
Runoff Volume (Pervious)	0.142 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.142 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.167 hours
Computational Time Increment	0.022 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	22.22 ft ³ /s
Unit peak time, Tp	0.111 hours

17189-Existing Conditions.ppc
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Bentley PondPack V8i
[08.11.01.56]
Page 126 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-2

Return Event: 100 years
Storm Event: 10m100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	0.445 hours
Total unit time, Tb	0.557 hours

17189-Existing Conditions.ppc
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Bentley PondPack V8i
[08.11.01.56]
Page 130 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-2

Return Event: 100 years
Storm Event: 12h100y

Storm Event	12h100y
Return Event	100 years
Duration	24.000 hours
Depth	6.59 in
Time of Concentration (Composite)	0.167 hours
Area (User Defined)	3.275 acres
Computational Time Increment	
Time to Peak (Computed)	4.810 hours
Flow (Peak, Computed)	3.64 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	4.800 hours
Flow (Peak Interpolated Output)	3.64 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	3.275 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	4.75 in
Runoff Volume (Pervious)	1.297 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.297 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.167 hours
Computational Time Increment	0.022 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	22.22 ft ³ /s
Unit peak time, Tp	0.111 hours

17189-Existing Conditions.ppc
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Bentley PondPack V8i
[08.11.01.56]
Page 131 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-2

Return Event: 100 years
Storm Event: 12h100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	0.445 hours
Total unit time, Tb	0.557 hours

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 132 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-2

Return Event: 100 years
Storm Event: 15m100y

Storm Event	15m100y
Return Event	100 years
Duration	24.000 hours
Depth	2.05 in
Time of Concentration (Composite)	0.167 hours
Area (User Defined)	3.275 acres
Computational Time Increment	
Time to Peak (Computed)	0.178 hours
Flow (Peak, Computed)	10.93 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	0.200 hours
Flow (Peak Interpolated Output)	10.84 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	3.275 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.78 in
Runoff Volume (Pervious)	0.213 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.213 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.167 hours
Computational Time Increment	0.022 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	22.22 ft ³ /s
Unit peak time, Tp	0.111 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 133 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-2

Return Event: 100 years
Storm Event: 15m100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	0.445 hours
Total unit time, Tb	0.557 hours

17189-Existing Conditions.ppc
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Bentley PondPack V8i
[08.11.01.56]
Page 136 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-2

Return Event: 100 years
Storm Event: 18h100y

Storm Event	18h100y
Return Event	100 years
Duration	36.000 hours
Depth	6.97 in
Time of Concentration (Composite)	0.167 hours
Area (User Defined)	3.275 acres
Computational Time Increment	0.022 hours
Time to Peak (Computed)	11.690 hours
Flow (Peak, Computed)	3.02 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	11.700 hours
Flow (Peak Interpolated Output)	3.01 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	3.275 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.11 in
Runoff Volume (Pervious)	1.395 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.395 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.167 hours
Computational Time Increment	0.022 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	22.22 ft ³ /s
Unit peak time, Tp	0.111 hours

17189-Existing Conditions.ppc
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Bentley PondPack V8i
[08.11.01.56]
Page 136 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-2

Return Event: 100 years
Storm Event: 18h100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	0.445 hours
Total unit time, Tb	0.557 hours

17189-Existing Conditions.ppc
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Bentley PondPack V8i
[08.11.01.56]
Page 136 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-2

Return Event: 100 years
Storm Event: 24h100y

Storm Event	24h100y
Return Event	100 years
Duration	36.000 hours
Depth	7.58 in
Time of Concentration (Composite)	0.167 hours
Area (User Defined)	3.275 acres
Computational Time Increment	0.022 hours
Time to Peak (Computed)	15.587 hours
Flow (Peak, Computed)	2.49 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	15.550 hours
Flow (Peak Interpolated Output)	2.49 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	3.275 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.69 in
Runoff Volume (Pervious)	1.554 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.554 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.167 hours
Computational Time Increment	0.022 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	22.22 ft ³ /s
Unit peak time, Tp	0.111 hours

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 137 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-2

Return Event: 100 years
Storm Event: 24h100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	0.445 hours
Total unit time, Tb	0.557 hours

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 138 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-2

Return Event: 100 years
Storm Event: 30m100y

Storm Event	30m100y
Return Event	100 years
Duration	24.000 hours
Depth	2.80 in
Time of Concentration (Composite)	0.167 hours
Area (User Defined)	3.275 acres
Computational Time Increment	
Time to Peak (Computed)	0.223 hours
Flow (Peak, Computed)	13.36 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	0.250 hours
Flow (Peak Interpolated Output)	13.07 ft³/s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	3.275 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.35 in
Runoff Volume (Pervious)	0.369 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.370 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.167 hours
Computational Time Increment	0.022 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	22.22 ft³/s
Unit peak time, Tp	0.111 hours

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 138 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-2

Return Event: 100 years
Storm Event: 30m100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	0.445 hours
Total unit time, Tb	0.557 hours

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 140 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-2

Return Event: 100 years
Storm Event: 48h100y

Storm Event	48h100y
Return Event	100 years
Duration	54.000 hours
Depth	8.16 in
Time of Concentration (Composite)	0.167 hours
Area (User Defined)	3.275 acres
Computational Time Increment	
Time to Peak (Computed)	40.793 hours
Flow (Peak, Computed)	1.36 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	40.800 hours
Flow (Peak Interpolated Output)	1.36 ft³/s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	3.275 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.25 in
Runoff Volume (Pervious)	1.705 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.705 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.167 hours
Computational Time Increment	0.022 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	22.22 ft³/s
Unit peak time, Tp	0.111 hours

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 141 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-2

Return Event: 100 years
Storm Event: 48h100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	0.445 hours
Total unit time, Tb	0.557 hours

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 142 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-2

Return Event: 100 years
Storm Event: 72h100y

Storm Event	
Storm Event	72h100y
Return Event	100 years
Duration	76.000 hours
Depth	8.78 in
Time of Concentration (Composite)	0.167 hours
Area (User Defined)	3.275 acres
Computational Time	
Increment	0.022 hours
Time to Peak (Computed)	61.189 hours
Flow (Peak, Computed)	0.98 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	61.150 hours
Flow (Peak Interpolated Output)	0.98 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	3.275 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.85 in
Runoff Volume (Pervious)	1.868 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.868 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.167 hours
Computational Time Increment	0.022 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	22.22 ft ³ /s
Unit peak time, Tp	0.111 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 143 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-2

Return Event: 100 years
Storm Event: 72h100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	0.445 hours
Total unit time, Tb	0.557 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 144 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-3

Return Event: 100 years
Storm Event: 1h100y

Storm Event	
Storm Event	1h100y
Return Event	100 years
Duration	24.000 hours
Depth	3.56 in
Time of Concentration (Composite)	0.333 hours
Area (User Defined)	22.770 acres
Computational Time	
Increment	0.044 hours
Time to Peak (Computed)	0.444 hours
Flow (Peak, Computed)	69.64 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	0.450 hours
Flow (Peak Interpolated Output)	69.38 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	22.770 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.99 in
Runoff Volume (Pervious)	3.772 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	3.775 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.333 hours
Computational Time Increment	0.044 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	77.48 ft ³ /s
Unit peak time, Tp	0.222 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 145 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-3

Return Event: 100 years
Storm Event: 1h100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	0.888 hours
Total unit time, Tb	1.110 hours

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 146 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-3

Return Event: 100 years
Storm Event: 2h100yh

Storm Event	2h100yh
Return Event	100 years
Duration	24.000 hours
Depth	4.47 in
Time of Concentration (Composite)	0.333 hours
Area (User Defined)	22.770 acres
Computational Time Increment	0.044 hours
Time to Peak (Computed)	0.577 hours
Flow (Peak, Computed)	61.83 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	0.550 hours
Flow (Peak Interpolated Output)	61.57 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	22.770 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.79 in
Runoff Volume (Pervious)	5.293 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	5.295 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.333 hours
Computational Time Increment	0.044 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	77.48 ft ³ /s
Unit peak time, Tp	0.222 hours

17189-Existing Conditions.ppc
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Bentley PondPack V8i
[08.11.01.56]
Page 147 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-3

Return Event: 100 years
Storm Event: 2h100yh

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	0.888 hours
Total unit time, Tb	1.110 hours

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 146 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-3

Return Event: 100 years
Storm Event: 3h100y

Storm Event	3h100y
Return Event	100 years
Duration	24.000 hours
Depth	4.85 in
Time of Concentration (Composite)	0.333 hours
Area (User Defined)	22.770 acres
Computational Time Increment	0.044 hours
Time to Peak (Computed)	0.710 hours
Flow (Peak, Computed)	49.65 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	0.700 hours
Flow (Peak Interpolated Output)	49.64 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	22.770 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.13 in
Runoff Volume (Pervious)	5.946 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	5.949 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.333 hours
Computational Time Increment	0.044 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	77.48 ft ³ /s
Unit peak time, Tp	0.222 hours

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 146 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-3

Return Event: 100 years
Storm Event: 3h100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	0.888 hours
Total unit time, Tb	1.110 hours

17189-Existing Conditions.ppc
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Bentley PondPack V8i
[08.11.01.56]
Page 152 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-3

Return Event: 100 years
Storm Event: 5d100y

SCS Unit Hydrograph Parameters	
Storm Event	5d100y
Return Event	100 years
Duration	400.000 hours
Depth	9.96 in
Time of Concentration (Composite)	0.333 hours
Area (User Defined)	22.770 acres
Drainage Area	
Computational Time Increment	0.044 hours
Time to Peak (Computed)	101.987 hours
Flow (Peak, Computed)	4.71 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	101.950 hours
Flow (Peak Interpolated Output)	4.71 ft ³ /s
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	7.99 in
Runoff Volume (Pervious)	15.161 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	15.162 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.333 hours
Computational Time Increment	0.044 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	77.48 ft ³ /s
Unit peak time, Tp	0.222 hours

17189-Existing Conditions.ppc
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Center
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Bentley PondPack V8i
[08.11.01.56]
Page 151 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-3

Return Event: 100 years
Storm Event: 5d100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	0.888 hours
Total unit time, Tb	1.110 hours

17189-Existing Conditions.ppc
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Bentley PondPack V8i
[08.11.01.56]
Page 152 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-3

Return Event: 100 years
Storm Event: 5m100y

SCS Unit Hydrograph Parameters	
Storm Event	5m100y
Return Event	100 years
Duration	24.000 hours
Depth	0.91 in
Time of Concentration (Composite)	0.333 hours
Area (User Defined)	22.770 acres
Drainage Area	
Computational Time Increment	0.044 hours
Time to Peak (Computed)	0.222 hours
Flow (Peak, Computed)	8.61 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	0.250 hours
Flow (Peak Interpolated Output)	8.60 ft ³ /s
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.12 in
Runoff Volume (Pervious)	0.218 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.217 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.333 hours
Computational Time Increment	0.044 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	77.48 ft ³ /s
Unit peak time, Tp	0.222 hours

17189-Existing Conditions.ppc
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Center
27 Siemon Company Drive Suite 200 W
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Bentley PondPack V8i
[08.11.01.56]
Page 153 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-3

Return Event: 100 years
Storm Event: 5m100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	0.888 hours
Total unit time, Tb	1.110 hours

17189-Existing Conditions.ppc
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Bentley PondPack V8i
[08.11.01.56]
Page 154 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-3

Return Event: 100 years
Storm Event: 6h100y

Storm Event	6h100y
Return Event	100 years
Duration	24.000 hours
Depth	5.68 in
Time of Concentration (Composite)	0.333 hours
Area (User Defined)	22.770 acres
Computational Time Increment	0.044 hours
Time to Peak (Computed)	0.755 hours
Flow (Peak, Computed)	37.78 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	0.750 hours
Flow (Peak Interpolated Output)	37.74 ft³/s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	22.770 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.90 in
Runoff Volume (Pervious)	7.396 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	7.396 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.333 hours
Computational Time Increment	0.044 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	77.48 ft³/s
Unit peak time, Tp	0.222 hours

17189-Existing Conditions.ppc
4/22/2019

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Center
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Bentley PondPack V8i
[08.11.01.56]
Page 155 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-3

Return Event: 100 years
Storm Event: 6h100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	0.888 hours
Total unit time, Tb	1.110 hours

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 156 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-3

Return Event: 100 years
Storm Event: 10d100y

Storm Event	10d100y
Return Event	100 years
Duration	252.000 hours
Depth	11.14 in
Time of Concentration (Composite)	0.333 hours
Area (User Defined)	22.770 acres
Computational Time Increment	0.044 hours
Time to Peak (Computed)	203.974 hours
Flow (Peak, Computed)	2.66 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	203.950 hours
Flow (Peak Interpolated Output)	2.66 ft³/s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	22.770 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	9.14 in
Runoff Volume (Pervious)	17.345 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	17.345 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.333 hours
Computational Time Increment	0.044 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	77.48 ft³/s
Unit peak time, Tp	0.222 hours

17189-Existing Conditions.ppc
4/22/2019

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Center
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Bentley PondPack V8i
[08.11.01.56]
Page 157 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-3

Return Event: 100 years
Storm Event: 10d100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	0.888 hours
Total unit time, Tb	1.110 hours

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 158 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-3

Return Event: 100 years
Storm Event: 10m100y

Storm Event	10m100y
Return Event	100 years
Duration	24.000 hours
Depth	1.67 in
Time of Concentration (Composite)	0.333 hours
Area (User Defined)	22.770 acres
Computational Time Increment	
Time to Peak (Computed)	0.266 hours
Flow (Peak, Computed)	37.18 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	0.300 hours
Flow (Peak Interpolated Output)	36.40 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	22.770 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.52 in
Runoff Volume (Pervious)	0.987 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.985 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.333 hours
Computational Time Increment	0.044 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	77.48 ft ³ /s
Unit peak time, Tp	0.222 hours

17189-Existing Conditions.ppc
4/22/2019

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Center
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Bentley PondPack V8i
[08.11.01.56]
Page 159 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-3

Return Event: 100 years
Storm Event: 10m100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	0.888 hours
Total unit time, Tb	1.110 hours

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 160 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-3

Return Event: 100 years
Storm Event: 12h100y

Storm Event	12h100y
Return Event	100 years
Duration	24.000 hours
Depth	6.59 in
Time of Concentration (Composite)	0.333 hours
Area (User Defined)	22.770 acres
Computational Time Increment	
Time to Peak (Computed)	4.884 hours
Flow (Peak, Computed)	24.96 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	4.900 hours
Flow (Peak Interpolated Output)	24.94 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	22.770 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	4.75 in
Runoff Volume (Pervious)	9.016 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	9.016 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.333 hours
Computational Time Increment	0.044 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	77.48 ft ³ /s
Unit peak time, Tp	0.222 hours

17189-Existing Conditions.ppc
4/22/2019

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Center
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Bentley PondPack V8i
[08.11.01.56]
Page 161 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-3

Return Event: 100 years
Storm Event: 12h100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	0.888 hours
Total unit time, Tb	1.110 hours

17189-Existing Conditions.ppc
4/22/2019

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Center
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Watertown, CT 06795 USA +1-203-755-1666

Bentley PondPack V8i
[08.11.01.56]
Page 162 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-3

Return Event: 100 years
Storm Event: 15m100y

Storm Event	15m100y
Return Event	100 years
Duration	24.000 hours
Depth	2.05 in
Time of Concentration (Composite)	0.333 hours
Area (User Defined)	22.770 acres
Computational Time Increment	0.044 hours
Time to Peak (Computed)	0.311 hours
Flow (Peak, Computed)	51.20 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	0.300 hours
Flow (Peak Interpolated Output)	50.45 ft³/s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	22.770 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.78 in
Runoff Volume (Pervious)	1.479 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.479 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.333 hours
Computational Time Increment	0.044 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	77.48 ft³/s
Unit peak time, Tp	0.222 hours

17189-Existing Conditions.ppc
4/22/2019

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Center
27 Siemon Company Drive Suite 200 W
Watertown, CT 06795 USA +1-203-755-1666

Bentley PondPack V8i
[08.11.01.56]
Page 163 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-3

Return Event: 100 years
Storm Event: 15m100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	0.888 hours
Total unit time, Tb	1.110 hours

17189-Existing Conditions.ppc
4/22/2019

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Center
27 Siemon Company Drive Suite 200 W
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Bentley PondPack V8i
[08.11.01.56]
Page 164 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-3

Return Event: 100 years
Storm Event: 18h100y

Storm Event	18h100y
Return Event	100 years
Duration	36.000 hours
Depth	6.97 in
Time of Concentration (Composite)	0.333 hours
Area (User Defined)	22.770 acres
Computational Time Increment	0.044 hours
Time to Peak (Computed)	11.677 hours
Flow (Peak, Computed)	20.86 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	11.700 hours
Flow (Peak Interpolated Output)	20.86 ft³/s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	22.770 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.11 in
Runoff Volume (Pervious)	9.699 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	9.699 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.333 hours
Computational Time Increment	0.044 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	77.48 ft³/s
Unit peak time, Tp	0.222 hours

17189-Existing Conditions.ppc
4/22/2019

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Center
27 Siemon Company Drive Suite 200 W
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Bentley PondPack V8i
[08.11.01.56]
Page 165 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-3

Return Event: 100 years
Storm Event: 18h100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	0.888 hours
Total unit time, Tb	1.110 hours

17189-Existing Conditions.ppc
4/22/2019

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Center
27 Siemon Company Drive Suite 200 W
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Bentley PondPack V8i
[08.11.01.56]
Page 168 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-3

Return Event: 100 years
Storm Event: 24h100y

Storm Event	24h100y
Return Event	100 years
Duration	36.000 hours
Depth	7.58 in
Time of Concentration (Composite)	0.333 hours
Area (User Defined)	22.770 acres
Computational Time Increment	0.044 hours
Time to Peak (Computed)	15.584 hours
Flow (Peak, Computed)	17.28 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	15.600 hours
Flow (Peak Interpolated Output)	17.27 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	22.770 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.69 in
Runoff Volume (Pervious)	10.802 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	10.802 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.333 hours
Computational Time Increment	0.044 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	77.48 ft ³ /s
Unit peak time, Tp	0.222 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 167 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-3

Return Event: 100 years
Storm Event: 24h100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	0.888 hours
Total unit time, Tb	1.110 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 168 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-3

Return Event: 100 years
Storm Event: 30m100y

Storm Event	30m100y
Return Event	100 years
Duration	24.000 hours
Depth	2.80 in
Time of Concentration (Composite)	0.333 hours
Area (User Defined)	22.770 acres
Computational Time Increment	0.044 hours
Time to Peak (Computed)	0.355 hours
Flow (Peak, Computed)	67.39 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	0.350 hours
Flow (Peak Interpolated Output)	67.03 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	22.770 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.35 in
Runoff Volume (Pervious)	2.568 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	2.569 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.333 hours
Computational Time Increment	0.044 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	77.48 ft ³ /s
Unit peak time, Tp	0.222 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 168 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-3

Return Event: 100 years
Storm Event: 30m100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	0.888 hours
Total unit time, Tb	1.110 hours

17189-Existing Conditions.ppc
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Bentley PondPack V8i
[08.11.01.56]
Page 170 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-3

Return Event: 100 years
Storm Event: 48h100y

SCS Unit Hydrograph Parameters	
Storm Event	48h100y
Return Event	100 years
Duration	54.000 hours
Depth	8.16 in
Time of Concentration (Composite)	0.333 hours
Area (User Defined)	22.770 acres
Computational Time Increment	
Time to Peak (Computed)	40.804 hours
Flow (Peak, Computed)	9.45 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	40.800 hours
Flow (Peak Interpolated Output)	9.45 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	22.770 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.25 in
Runoff Volume (Pervious)	11.857 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	11.857 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.333 hours
Computational Time Increment	0.044 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	77.48 ft ³ /s
Unit peak time, Tp	0.222 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 171 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-3

Return Event: 100 years
Storm Event: 48h100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	0.888 hours
Total unit time, Tb	1.110 hours

17189-Existing Conditions.ppc
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Bentley PondPack V8i
[08.11.01.56]
Page 172 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-3

Return Event: 100 years
Storm Event: 72h100y

SCS Unit Hydrograph Parameters	
Storm Event	72h100y
Return Event	100 years
Duration	76.000 hours
Depth	8.78 in
Time of Concentration (Composite)	0.333 hours
Area (User Defined)	22.770 acres
Computational Time Increment	
Time to Peak (Computed)	61.183 hours
Flow (Peak, Computed)	6.84 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	61.150 hours
Flow (Peak Interpolated Output)	6.84 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	22.770 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.85 in
Runoff Volume (Pervious)	12.991 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	12.991 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.333 hours
Computational Time Increment	0.044 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	77.48 ft ³ /s
Unit peak time, Tp	0.222 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 173 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-3

Return Event: 100 years
Storm Event: 72h100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	0.888 hours
Total unit time, Tb	1.110 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 174 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-5

Return Event: 100 years
Storm Event: 1h100y

Storm Event	1h100y
Return Event	100 years
Duration	24.000 hours
Depth	3.56 in
Time of Concentration (Composite)	0.500 hours
Area (User Defined)	17.723 acres
Computational Time Increment	0.067 hours
Time to Peak (Computed)	0.533 hours
Flow (Peak, Computed)	45.10 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	0.550 hours
Flow (Peak Interpolated Output)	45.09 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	17.723 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.99 in
Runoff Volume (Pervious)	2.936 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	2.936 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.500 hours
Computational Time Increment	0.067 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	40.16 ft ³ /s
Unit peak time, Tp	0.333 hours

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[08.11.01.56]
Page 175 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-5

Return Event: 100 years
Storm Event: 1h100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	1.333 hours
Total unit time, Tb	1.667 hours

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[08.11.01.56]
Page 176 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-5

Return Event: 100 years
Storm Event: 2h100yh

Storm Event	2h100yh
Return Event	100 years
Duration	24.000 hours
Depth	4.47 in
Time of Concentration (Composite)	0.500 hours
Area (User Defined)	17.723 acres
Computational Time Increment	0.067 hours
Time to Peak (Computed)	0.733 hours
Flow (Peak, Computed)	42.80 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	0.700 hours
Flow (Peak Interpolated Output)	42.77 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	17.723 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.79 in
Runoff Volume (Pervious)	4.120 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	4.120 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.500 hours
Computational Time Increment	0.067 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	40.16 ft ³ /s
Unit peak time, Tp	0.333 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 177 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-5

Return Event: 100 years
Storm Event: 2h100yh

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	1.333 hours
Total unit time, Tb	1.667 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 178 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-5

Return Event: 100 years
Storm Event: 3h100y

Storm Event	3h100y
Return Event	100 years
Duration	24.000 hours
Depth	4.85 in
Time of Concentration (Composite)	0.500 hours
Area (User Defined)	17.723 acres
Computational Time Increment	0.067 hours
Time to Peak (Computed)	0.867 hours
Flow (Peak, Computed)	36.26 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	0.850 hours
Flow (Peak Interpolated Output)	36.24 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	17.723 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.13 in
Runoff Volume (Pervious)	4.628 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	4.628 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.500 hours
Computational Time Increment	0.067 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	40.16 ft ³ /s
Unit peak time, Tp	0.333 hours

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[08.11.01.56]
Page 179 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-5

Return Event: 100 years
Storm Event: 3h100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	1.333 hours
Total unit time, Tb	1.667 hours

17189-Existing Conditions.ppc
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[08.11.01.56]
Page 180 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-5

Return Event: 100 years
Storm Event: 5d100y

Storm Event	5d100y
Return Event	100 years
Duration	400.000 hours
Depth	9.96 in
Time of Concentration (Composite)	0.500 hours
Area (User Defined)	17.723 acres
Computational Time Increment	0.067 hours
Time to Peak (Computed)	102.000 hours
Flow (Peak, Computed)	3.67 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	102.000 hours
Flow (Peak Interpolated Output)	3.67 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	17.723 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	7.99 in
Runoff Volume (Pervious)	11.801 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	11.801 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.500 hours
Computational Time Increment	0.067 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	40.16 ft ³ /s
Unit peak time, Tp	0.333 hours

17189-Existing Conditions.ppc
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Bentley PondPack V8i
[08.11.01.56]
Page 181 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-5

Return Event: 100 years
Storm Event: 5d100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	1.333 hours
Total unit time, Tb	1.667 hours

17189-Existing Conditions.ppc
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Bentley PondPack V8i
[08.11.01.56]
Page 182 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-5

Return Event: 100 years
Storm Event: 5m100y

Storm Event	5m100y
Return Event	100 years
Duration	24.000 hours
Depth	0.91 in
Time of Concentration (Composite)	0.500 hours
Area (User Defined)	17.723 acres
Computational Time Increment	0.067 hours
Time to Peak (Computed)	0.333 hours
Flow (Peak, Computed)	4.56 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	0.350 hours
Flow (Peak Interpolated Output)	4.51 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	17.723 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.12 in
Runoff Volume (Pervious)	0.170 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.170 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.500 hours
Computational Time Increment	0.067 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	40.16 ft ³ /s
Unit peak time, Tp	0.333 hours

17189-Existing Conditions.ppc
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Bentley PondPack V8i
[08.11.01.56]
Page 183 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-5

Return Event: 100 years
Storm Event: 5m100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	1.333 hours
Total unit time, Tb	1.667 hours

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 184 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-5

Return Event: 100 years
Storm Event: 6h100y

Storm Event	6h100y
Return Event	100 years
Duration	24.000 hours
Depth	5.68 in
Time of Concentration (Composite)	0.500 hours
Area (User Defined)	17.723 acres
Computational Time Increment	0.067 hours
Time to Peak (Computed)	0.933 hours
Flow (Peak, Computed)	26.23 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	0.950 hours
Flow (Peak Interpolated Output)	26.18 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	17.723 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.90 in
Runoff Volume (Pervious)	5.757 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	5.757 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.500 hours
Computational Time Increment	0.067 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	40.16 ft ³ /s
Unit peak time, Tp	0.333 hours

17189-Existing Conditions.ppc
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Bentley PondPack V8i
[08.11.01.56]
Page 185 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-5

Return Event: 100 years
Storm Event: 6h100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	1.333 hours
Total unit time, Tb	1.667 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 186 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-5

Return Event: 100 years
Storm Event: 10d100y

SCS Unit Hydrograph Parameters	
Storm Event	10d100y
Return Event	100 years
Duration	252.000 hours
Depth	11.14 in
Time of Concentration (Composite)	0.500 hours
Area (User Defined)	17.723 acres
Computational Time Increment	
Computational Time Increment	0.067 hours
Time to Peak (Computed)	204.000 hours
Flow (Peak, Computed)	2.07 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	204.000 hours
Flow (Peak Interpolated Output)	2.07 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	17.723 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	9.14 in
Runoff Volume (Pervious)	13.500 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	13.500 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.500 hours
Computational Time Increment	0.067 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	40.16 ft ³ /s
Unit peak time, Tp	0.333 hours

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 187 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-5

Return Event: 100 years
Storm Event: 10d100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	1.333 hours
Total unit time, Tb	1.667 hours

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 186 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-5

Return Event: 100 years
Storm Event: 10m100y

SCS Unit Hydrograph Parameters	
Storm Event	10m100y
Return Event	100 years
Duration	24.000 hours
Depth	1.67 in
Time of Concentration (Composite)	0.500 hours
Area (User Defined)	17.723 acres
Computational Time Increment	
Computational Time Increment	0.067 hours
Time to Peak (Computed)	0.400 hours
Flow (Peak, Computed)	19.96 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	0.400 hours
Flow (Peak Interpolated Output)	19.96 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	17.723 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.52 in
Runoff Volume (Pervious)	0.768 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.768 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.500 hours
Computational Time Increment	0.067 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	40.16 ft ³ /s
Unit peak time, Tp	0.333 hours

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 186 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-5

Return Event: 100 years
Storm Event: 10m100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	1.333 hours
Total unit time, Tb	1.667 hours

17189-Existing Conditions.ppc
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Bentley PondPack V8i
[08.11.01.56]
Page 190 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-5

Return Event: 100 years
Storm Event: 12h100y

Storm Event	12h100y
Return Event	100 years
Duration	24.000 hours
Depth	6.59 in
Time of Concentration (Composite)	0.500 hours
Area (User Defined)	17.723 acres
Computational Time Increment	0.067 hours
Time to Peak (Computed)	5.000 hours
Flow (Peak, Computed)	19.07 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	5.000 hours
Flow (Peak Interpolated Output)	19.07 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	17.723 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	4.75 in
Runoff Volume (Pervious)	7.017 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	7.017 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.500 hours
Computational Time Increment	0.067 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	40.16 ft ³ /s
Unit peak time, Tp	0.333 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 191 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-5

Return Event: 100 years
Storm Event: 12h100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	1.333 hours
Total unit time, Tb	1.667 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 192 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-5

Return Event: 100 years
Storm Event: 15m100y

Storm Event	15m100y
Return Event	100 years
Duration	24.000 hours
Depth	2.05 in
Time of Concentration (Composite)	0.500 hours
Area (User Defined)	17.723 acres
Computational Time Increment	0.067 hours
Time to Peak (Computed)	0.400 hours
Flow (Peak, Computed)	28.93 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	0.400 hours
Flow (Peak Interpolated Output)	28.93 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	17.723 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.78 in
Runoff Volume (Pervious)	1.151 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.151 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.500 hours
Computational Time Increment	0.067 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	40.16 ft ³ /s
Unit peak time, Tp	0.333 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 193 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-5

Return Event: 100 years
Storm Event: 15m100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	1.333 hours
Total unit time, Tb	1.667 hours

17189-Existing Conditions.ppc
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Bentley PondPack V8i
[08.11.01.56]
Page 194 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-5

Return Event: 100 years
Storm Event: 18h100y

Storm Event	18h100y
Return Event	100 years
Duration	36.000 hours
Depth	6.97 in
Time of Concentration (Composite)	0.500 hours
Area (User Defined)	17.723 acres
Computational Time Increment	0.067 hours
Time to Peak (Computed)	11.733 hours
Flow (Peak, Computed)	16.12 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	11.700 hours
Flow (Peak Interpolated Output)	16.11 ft³/s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	17.723 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.11 in
Runoff Volume (Pervious)	7.549 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	7.549 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.500 hours
Computational Time Increment	0.067 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	40.16 ft³/s
Unit peak time, Tp	0.333 hours

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 195 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-5

Return Event: 100 years
Storm Event: 18h100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	1.333 hours
Total unit time, Tb	1.667 hours

17189-Existing Conditions.ppc
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Bentley PondPack V8i
[08.11.01.56]
Page 196 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-5

Return Event: 100 years
Storm Event: 24h100y

Storm Event	24h100y
Return Event	100 years
Duration	36.000 hours
Depth	7.58 in
Time of Concentration (Composite)	0.500 hours
Area (User Defined)	17.723 acres
Computational Time Increment	0.067 hours
Time to Peak (Computed)	15.600 hours
Flow (Peak, Computed)	13.41 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	15.600 hours
Flow (Peak Interpolated Output)	13.41 ft³/s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	17.723 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.69 in
Runoff Volume (Pervious)	8.408 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	8.408 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.500 hours
Computational Time Increment	0.067 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	40.16 ft³/s
Unit peak time, Tp	0.333 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 197 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-5

Return Event: 100 years
Storm Event: 24h100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	1.333 hours
Total unit time, Tb	1.667 hours

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 198 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-5

Return Event: 100 years
Storm Event: 30m100y

Storm Event	30m100y
Return Event	100 years
Duration	24.000 hours
Depth	2.80 in
Time of Concentration (Composite)	0.500 hours
Area (User Defined)	17.723 acres
Computational Time Increment	0.067 hours
Time to Peak (Computed)	0.467 hours
Flow (Peak, Computed)	41.25 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	0.500 hours
Flow (Peak Interpolated Output)	41.05 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	17.723 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.35 in
Runoff Volume (Pervious)	1.999 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.999 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.500 hours
Computational Time Increment	0.067 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	40.16 ft ³ /s
Unit peak time, Tp	0.333 hours

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Bentley PondPack V8i
[08.11.01.56]
Page 199 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-5

Return Event: 100 years
Storm Event: 30m100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	1.333 hours
Total unit time, Tb	1.667 hours

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[08.11.01.56]
Page 200 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-5

Return Event: 100 years
Storm Event: 48h100y

Storm Event	48h100y
Return Event	100 years
Duration	54.000 hours
Depth	8.16 in
Time of Concentration (Composite)	0.500 hours
Area (User Defined)	17.723 acres
Computational Time Increment	0.067 hours
Time to Peak (Computed)	40.800 hours
Flow (Peak, Computed)	7.35 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	40.800 hours
Flow (Peak Interpolated Output)	7.35 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	17.723 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.25 in
Runoff Volume (Pervious)	9.229 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	9.229 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.500 hours
Computational Time Increment	0.067 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	40.16 ft ³ /s
Unit peak time, Tp	0.333 hours

17189-Existing Conditions.ppc
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Bentley PondPack V8i
[08.11.01.56]
Page 201 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-5

Return Event: 100 years
Storm Event: 48h100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	1.333 hours
Total unit time, Tb	1.667 hours

17189-Existing Conditions.ppc
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Bentley PondPack V8i
[08.11.01.56]
Page 202 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-5

Return Event: 100 years
Storm Event: 72h100y

Storm Event	
Storm Event	72h100y
Return Event	100 years
Duration	76.000 hours
Depth	8.78 in
Time of Concentration (Composite)	0.500 hours
Area (User Defined)	17.723 acres
Computational Time	
Increment	0.067 hours
Time to Peak (Computed)	61.200 hours
Flow (Peak, Computed)	5.32 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	61.200 hours
Flow (Peak Interpolated Output)	5.32 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	17.723 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.85 in
Runoff Volume (Pervious)	10.112 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	10.112 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.500 hours
Computational Time Increment	0.067 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	40.16 ft ³ /s
Unit peak time, Tp	0.333 hours

17189-Existing Conditions.ppc
4/22/2019

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[08.11.01.56]
Page 203 of 323

Subsection: Unit Hydrograph Summary
Label: to DA-5

Return Event: 100 years
Storm Event: 72h100y

SCS Unit Hydrograph Parameters	
Unit receding limb, Tr	1.333 hours
Total unit time, Tb	1.667 hours

17189-Existing Conditions.ppc
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[08.11.01.56]
Page 204 of 323

Subsection: Elevation vs. Volume Curve
Label: DA-1

Return Event: 100 years
Storm Event: 1h100y

Elevation-Volume		
Pond Elevation (ft)	Pond Volume (ac-ft)	
731.47		0.000
741.25		0.009
742.00		0.049
743.00		0.379
744.00		1.530
746.00		8.069
748.00		20.372
750.00		37.943

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4/22/2019

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[08.11.01.56]
Page 205 of 323

Subsection: Elevation vs. Volume Curve
Label: DA-2

Return Event: 100 years
Storm Event: 1h100y

Elevation-Volume

Pond Elevation (ft)	Pond Volume (ac-ft)
740.87	0.000
742.00	0.001
744.00	0.203
746.00	0.542
748.00	1.381
750.00	3.226

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Bentley PondPack V8i
[08.11.01.56]
Page 206 of 323

Subsection: Elevation vs. Volume Curve
Label: DA-3

Return Event: 100 years
Storm Event: 1h100y

Elevation-Volume

Pond Elevation (ft)	Pond Volume (ac-ft)
744.23	0.000
750.00	0.001
751.00	0.383
752.00	1.360
754.00	6.754

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Bentley PondPack V8i
[08.11.01.56]
Page 207 of 323

Subsection: Elevation vs. Volume Curve
Label: DA-4

Return Event: 100 years
Storm Event: 2h100yh

Elevation-Volume

Pond Elevation (ft)	Pond Volume (ac-ft)
754.94	0.000
769.30	0.001
770.30	0.010

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[08.11.01.56]
Page 208 of 323

Subsection: Elevation vs. Volume Curve
Label: DA-5

Return Event: 100 years
Storm Event: 1h100y

Elevation-Volume

Pond Elevation (ft)	Pond Volume (ac-ft)
766.00	0.000
768.00	0.912
770.00	3.486
772.00	8.536
774.00	18.045

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[08.11.01.56]
Page 209 of 323

Subsection: Elevation vs. Volume Curve
Label: DA-6

Return Event: 100 years
Storm Event: 1h100y

Elevation-Volume

Pond Elevation (ft)	Pond Volume (ac-ft)
766.00	0.000
768.00	4.520
770.00	15.246
772.00	32.892

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4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 210 of 323

Subsection: Outlet Input Data
Label: COS #1

Return Event: 100 years
Storm Event: 1h100y

Requested Pond Water Surface Elevations

Minimum (Headwater)	731.47 ft
Increment (Headwater)	0.10 ft
Maximum (Headwater)	750.00 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Culvert-Circular	Culvert #1 - COS #1	Forward	TW	731.47	750.00
Culvert-Circular	Culvert #3 - COS #1	Forward	TW	737.51	750.00
Culvert-Circular	Culvert #2 - COS #1	Forward	TW	737.51	750.00
Irregular Weir	Weir #1 - COS #1	Forward	TW	748.00	750.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

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4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 211 of 323

Subsection: Outlet Input Data
Label: COS #1

Return Event: 100 years
Storm Event: 1h100y

Structure ID: Culvert #1 - COS #1 Structure Type: Culvert-Circular	
Number of Barrels	1
Diameter	42.00 in
Length	4.00 ft
Length (Computed Barrel)	4.00 ft
Slope (Computed)	0.002 ft/ft
Outlet Control Data	
Manning's n	0.013
Ke	0.500
Kb	0.006
Kr	0.000
Convergence Tolerance	0.10 ft
Inlet Control Data	
Equation Form	Form 1
K	0.0098
M	2.0000
C	0.0398
Y	0.6700
T1 ratio (HW/D)	1.159
T2 ratio (HW/D)	1.306
Slope Correction Factor	-0.500

Use unsubmerged inlet control 0 equation below T1
elevation.
Use submerged inlet control 0 equation above T2
elevation

In transition zone between unsubmerged and submerged
inlet control,
interpolate between flows at T1 & T2...

T1 Elevation	735.53 ft	T1 Flow	63.00 ft ³ /s
T2 Elevation	736.04 ft	T2 Flow	72.00 ft ³ /s

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 212 of 323

Subsection: Outlet Input Data
Label: COS #1

Return Event: 100 years
Storm Event: 1h100y

**Structure ID: Weir #1 - COS #1
Structure Type: Irregular Weir**

Station (ft)	Elevation (ft)
0.00	2.00
475.00	0.01
610.00	0.00
675.00	2.00

Lowest Elevation 748.00 ft
Weir Coefficient 3.00 (ft^{0.5}/s)

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 213 of 323

Subsection: Outlet Input Data
Label: COS #1

Return Event: 100 years
Storm Event: 1h100y

Structure ID: Culvert #2 - COS #1	
Structure Type: Culvert-Circular	
Number of Barrels	1
Diameter	27.00 in
Length	290.00 ft
Length (Computed Barrel)	290.00 ft
Slope (Computed)	0.003 ft/ft
Outlet Control Data	
Manning's n	0.013
Ke	0.500
Kb	0.011
Kr	0.000
Convergence Tolerance	0.10 ft
Inlet Control Data	
Equation Form	Form 1
K	0.0098
M	2.0000
C	0.0398
Y	0.6700
T1 ratio (HW/D)	1.159
T2 ratio (HW/D)	1.305
Slope Correction Factor	-0.500

Use unsubmerged inlet control 0 equation below T1 elevation.
Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control,
interpolate between flows at T1 & T2...

T1 Elevation	740.12 ft	T1 Flow	20.87 ft ³ /s
T2 Elevation	740.45 ft	T2 Flow	23.86 ft ³ /s

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 214 of 323

Subsection: Outlet Input Data
Label: COS #1

Return Event: 100 years
Storm Event: 1h100y

Structure ID: Culvert #3 - COS #1	
Structure Type: Culvert-Circular	
Number of Barrels	1
Diameter	24.00 in
Length	290.00 ft
Length (Computed Barrel)	290.00 ft
Slope (Computed)	0.003 ft/ft
Outlet Control Data	
Manning's n	0.013
Ke	0.500
Kb	0.012
Kr	0.000
Convergence Tolerance	0.10 ft
Inlet Control Data	
Equation Form	Form 1
K	0.0098
M	2.0000
C	0.0398
Y	0.6700
T1 ratio (HW/D)	1.159
T2 ratio (HW/D)	1.305
Slope Correction Factor	-0.500

Use unsubmerged inlet control 0 equation below T1 elevation.
Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control,
interpolate between flows at T1 & T2...

T1 Elevation	739.83 ft	T1 Flow	15.55 ft ³ /s
T2 Elevation	740.12 ft	T2 Flow	17.77 ft ³ /s

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 215 of 323

Subsection: Outlet Input Data
Label: COS #2

Return Event: 100 years
Storm Event: 1h100y

Requested Pond Water Surface Elevations	
Minimum (Headwater)	740.77 ft
Increment (Headwater)	0.10 ft
Maximum (Headwater)	750.00 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Orifice-Circular	Orifice #1 - COS #2	Forward + Reverse	TW	740.87	750.00
Irregular Weir	Weir #1 - COS #2	Forward + Reverse	TW	745.13	750.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 216 of 323

Subsection: Outlet Input Data
Label: COS #2

Return Event: 100 years
Storm Event: 1h100y

Structure ID: Weir #1 - COS #2 Structure Type: Irregular Weir

Station (ft)	Elevation (ft)
0.00	4.87
204.00	2.87
332.00	0.87
377.00	0.57
407.00	0.00
425.00	0.27
463.00	0.67
468.00	0.87
494.00	1.86
518.00	2.44
526.00	2.87
554.00	4.87

Lowest Elevation	745.13 ft
Weir Coefficient	3.00 (ft ^{0.5} /s)

Structure ID: Orifice #1 - COS #2	
Structure Type: Orifice-Circular	
Number of Openings	1
Elevation	740.87 ft
Orifice Diameter	6.00 in
Orifice Coefficient	0.610

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 217 of 323

Subsection: Outlet Input Data
Label: COS #3

Return Event: 100 years
Storm Event: 1h100y

Requested Pond Water Surface Elevations	
Minimum (Headwater)	744.23 ft
Increment (Headwater)	0.10 ft
Maximum (Headwater)	754.00 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Culvert-Circular	Culvert - COS #3	Forward + Reverse	TW	744.23	754.00
Irregular Weir	Weir #1 - COS #3	Forward + Reverse	TW	751.00	754.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 218 of 323

Subsection: Outlet Input Data
Label: COS #3

Return Event: 100 years
Storm Event: 1h100y

Requested Pond Water Surface Elevations	
Minimum (Headwater)	754.94 ft
Increment (Headwater)	0.10 ft
Maximum (Headwater)	770.30 ft

Outlet Control Data	
Manning's n	0.013
Ke	0.500
Kb	0.015
Kr	0.000
Convergence Tolerance	0.10 ft

Inlet Control Data	
Equation Form	Form 1
K	0.0098
M	2.0000
C	0.0398
Y	0.6700
T1 ratio (HW/D)	1.154
T2 ratio (HW/D)	1.300
Slope Correction Factor	-0.500

Use unsubmerged inlet control 0 equation below T1
elevation.
Use submerged inlet control 0 equation above T2
elevation

In transition zone between unsubmerged and submerged
inlet control,
interpolate between flows at T1 & T2...

T1 Elevation	746.25 ft	T1 Flow	11.14 ft ³ /s
T2 Elevation	746.51 ft	T2 Flow	12.73 ft ³ /s

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 219 of 323

Subsection: Outlet Input Data
Label: COS #3

Return Event: 100 years
Storm Event: 1h100y

Structure ID: Weir #1 - COS #3
Structure Type: Irregular Weir

Station (ft)	Elevation (ft)
0.00	3.00
70.00	1.00
120.00	0.00
150.00	1.00
190.00	3.00

Lowest Elevation 751.00 ft
Weir Coefficient 3.00 (ft^{0.5}/s)

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4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 220 of 323

Subsection: Outlet Input Data
Label: COS #4A

Return Event: 100 years
Storm Event: 1h100y

Requested Pond Water Surface Elevations	
Minimum (Headwater)	754.94 ft
Increment (Headwater)	0.10 ft
Maximum (Headwater)	770.30 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Culvert-Circular	Culvert - COS #4A	Forward + Reverse	TW	754.39	770.30
Tailwater Settings	Tailwater			(N/A)	(N/A)

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 221 of 323

Subsection: Outlet Input Data
Label: COS #4A

Return Event: 100 years
Storm Event: 1h100y

Structure ID: Culvert - COS #4A	
Structure Type: Culvert-Circular	
Number of Barrels	1
Diameter	36.00 in
Length	2,600.00 ft
Length (Computed Barrel)	2,600.10 ft
Slope (Computed)	0.009 ft/ft
Outlet Control Data	
Manning's n	0.013
Ke	0.500
Kb	0.007
Kr	0.000
Convergence Tolerance	0.10 ft
Inlet Control Data	
Equation Form	Form 1
K	0.0098
M	2.0000
C	0.0398
Y	0.6700
T1 ratio (HW/D)	1.156
T2 ratio (HW/D)	1.302
Slope Correction Factor	-0.500

Use unsubmerged inlet control 0 equation below T1 elevation.
Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control,
interpolate between flows at T1 & T2...

T1 Elevation	757.86 ft	T1 Flow	42.85 ft ³ /s
T2 Elevation	758.30 ft	T2 Flow	48.97 ft ³ /s

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 222 of 323

Subsection: Outlet Input Data
Label: COS #4B

Return Event: 100 years
Storm Event: 1h100y

Requested Pond Water Surface Elevations	
Minimum (Headwater)	754.94 ft
Increment (Headwater)	0.10 ft
Maximum (Headwater)	770.30 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Irregular Weir	Weir #1 - COS #4B	Forward	TW	769.30	770.30
Tailwater Settings	Tailwater			(N/A)	(N/A)

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 223 of 323

Subsection: Outlet Input Data
Label: COS #4B

Return Event: 100 years
Storm Event: 1h100y

Structure ID: Weir #1 - COS #4B
Structure Type: Irregular Weir

Station (ft)	Elevation (ft)
0.00	1.00
16.00	0.50
16.50	0.00
40.00	0.50
40.50	1.00

Lowest Elevation 769.30 ft
Weir Coefficient 3.00 (ft^{0.5}/s)

Structure ID: TW	
Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall
Convergence Tolerances	
Maximum Iterations	50
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.10 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.10 ft
Flow Tolerance (Minimum)	0.001 ft ³ /s
Flow Tolerance (Maximum)	10.000 ft ³ /s

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 224 of 323

Subsection: Outlet Input Data
Label: COS #5

Return Event: 100 years
Storm Event: 1h100y

Requested Pond Water Surface Elevations	
Minimum (Headwater)	766.00 ft
Increment (Headwater)	0.10 ft
Maximum (Headwater)	774.00 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Culvert-Circular	Culvert #1 - COS #5	Forward + Reverse	TW	770.00	774.00
Irregular Weir	Weir #1 - COS #5	Forward + Reverse	TW	772.00	774.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 225 of 323

Subsection: Outlet Input Data
Label: COS #5

Return Event: 100 years
Storm Event: 1h100y

Structure ID: Weir #1 - COS #5
Structure Type: Irregular Weir

Station (ft)	Elevation (ft)
0.00	2.00
70.00	0.00
140.00	2.00

Lowest Elevation 772.00 ft
Weir Coefficient 3.00 (ft^{0.5}/s)

Structure ID: Culvert #1 - COS #5
Structure Type: Culvert-Circular

Number of Barrels 1
Diameter 10.00 in
Length 750.00 ft
Length (Computed Barrel) 750.00 ft
Slope (Computed) 0.004 ft/ft

Outlet Control Data

Manning's n 0.013
Ke 0.500
Kb 0.040
Kr 0.000
Convergence Tolerance 0.10 ft

Inlet Control Data

Equation Form Form 1
K 0.0098
M 2.0000
C 0.0398
Y 0.6700
T1 ratio (HW/D) 1.159
T2 ratio (HW/D) 1.305
Slope Correction Factor -0.500

Use unsubmerged inlet control 0 equation below T1 elevation.
Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control,
interpolate between flows at T1 & T2...

T1 Elevation	766.80 ft	T1 Flow	1.74 ft ³ /s
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17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 228 of 323

Subsection: Outlet Input Data
Label: COS #5

Return Event: 100 years
Storm Event: 1h100y

Use unsubmerged inlet control 0 equation below T1 elevation.
Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control,
interpolate between flows at T1 & T2...

T2 Elevation	766.92 ft	T2 Flow	1.99 ft ³ /s
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17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 227 of 323

Subsection: Outlet Input Data
Label: COS #6A

Return Event: 100 years
Storm Event: 1h100y

Requested Pond Water Surface Elevations

Minimum (Headwater) 766.00 ft
Increment (Headwater) 0.10 ft
Maximum (Headwater) 772.00 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Culvert-Circular	Culvert #1 - COS #6A	Forward + Reverse	TW	768.00	772.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 228 of 323

Subsection: Outlet Input Data
Label: COS #6A

Return Event: 100 years
Storm Event: 1h100y

Structure ID: Culvert #1 - COS #6A
Structure Type: Culvert-Circular

Number of Barrels 1
Diameter 8.00 in
Length 600.00 ft
Length (Computed Barrel) 600.01 ft
Slope (Computed) 0.005 ft/ft

Outlet Control Data

Manning's n 0.013
Ke 0.500
Kb 0.054
Kr 0.000
Convergence Tolerance 0.10 ft

Inlet Control Data

Equation Form Form 1
K 0.0098
M 2.0000
C 0.0398
Y 0.6700
T1 ratio (HW/D) 1.157
T2 ratio (HW/D) 1.304
Slope Correction Factor -0.500

Use unsubmerged inlet control 0 equation below T1 elevation.
Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control,
interpolate between flows at T1 & T2...

T1 Elevation	764.77 ft	T1 Flow	1.00 ft ³ /s
T2 Elevation	764.87 ft	T2 Flow	1.14 ft ³ /s

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 228 of 323

Subsection: Outlet Input Data
Label: COS #6B

Return Event: 100 years
Storm Event: 1h100y

Requested Pond Water Surface Elevations	
Minimum (Headwater)	766.00 ft
Increment (Headwater)	0.10 ft
Maximum (Headwater)	772.00 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Irregular Weir	Weir #1 - COS #6B	Forward	TW	769.90	772.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 230 of 323

Subsection: Outlet Input Data
Label: COS #6B

Return Event: 100 years
Storm Event: 1h100y

Structure ID: Weir #1 - COS #6B
Structure Type: Irregular Weir

Station (ft)	Elevation (ft)
0.00	2.10
42.00	0.10
47.00	0.00
52.00	0.10
710.00	2.10

Lowest Elevation 769.90 ft
Weir Coefficient 3.00 (ft^{0.5}/s)

Structure ID: TW

Structure Type: TW Setup, DS Channel

Tailwater Type Free Outfall

Convergence Tolerances

Maximum Iterations	50
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.10 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.10 ft
Flow Tolerance (Minimum)	0.001 ft ³ /s
Flow Tolerance (Maximum)	10.000 ft ³ /s

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 231 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-1

Return Event: 100 years
Storm Event: 1h100y

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions		Calculation Tolerances	
Elevation (Starting Water Surface Computed)	731.47 ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000 ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00 ft ³ /s	ICPM Time Step	0.050 hours

	Time to Peak (hours)	Maximum Storage		
		Elevation (ft)	Volume (ac-ft)	
	1.000	742.30	0.149	
Forward Flow Peaks		Reverse Flow Peaks		
Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Time to Peak (hours)	Flow (Peak) (ft ³ /s)	
Pond Inflow....	0.550	51.01	0.000	0.00
Pond Outflow...	0.000	0.00	0.000	0.00

Total Volume In		Total Volume Out	
Volume (ac-ft)	Direction	Volume (ac-ft)	Direction
Pond Inflow....	3.322 Forward	0.000	Reverse
Pond Outflow...	0.000 Reverse	0.000	Forward

Mass Balance (ac-ft)	
Volume (Initial ICPM)	0.000 ac-ft
Volume (Total In ICPM)	20.603 ac-ft
Volume (Total Out ICPM)	20.600 ac-ft
Volume (Ending)	0.003 ac-ft
Elevation (Ending)	734.97 ft
Difference	0.000 ac-ft
Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 232 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-1

Return Event: 100 years
Storm Event: 2h100yh

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions		Calculation Tolerances	
Elevation (Starting Water Surface Computed)	731.47 ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000 ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00 ft ³ /s	ICPM Time Step	0.050 hours

	Time to Peak (hours)	Maximum Storage		
		Elevation (ft)	Volume (ac-ft)	
	1.200	742.76	0.301	
Forward Flow Peaks		Reverse Flow Peaks		
Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Time to Peak (hours)	Flow (Peak) (ft ³ /s)	
Pond Inflow....	0.700	48.39	0.000	0.00
Pond Outflow...	2.350	1.23	0.000	0.00

Total Volume In		Total Volume Out	
Volume (ac-ft)	Direction	Volume (ac-ft)	Direction
Pond Inflow....	4.661 Forward	0.000	Reverse
Pond Outflow...	0.000 Reverse	0.277	Forward

Mass Balance (ac-ft)	
Volume (Initial ICPM)	0.000 ac-ft
Volume (Total In ICPM)	31.253 ac-ft
Volume (Total Out ICPM)	31.248 ac-ft
Volume (Ending)	0.003 ac-ft
Elevation (Ending)	734.97 ft
Difference	0.002 ac-ft
Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 233 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-1

Return Event: 100 years
Storm Event: 3h100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	731.47	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		1.300	742.18	0.109
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		0.850	41.00	0.000
Pond Inflow....				0.00
Pond Outflow...		2.550	1.23	0.000
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....		5.236	Forward 0.000	Reverse
Pond Outflow...		0.000	Reverse 0.851	Forward
Mass Balance (ac-ft)				
		Volume (Initial ICPM)	0.000 ac-ft	
		Volume (Total In ICPM)	35.943 ac-ft	
		Volume (Total Out ICPM)	35.937 ac-ft	
		Volume (Ending)	0.003 ac-ft	
		Elevation (Ending)	734.97 ft	
		Difference	0.002 ac-ft	
		Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %	

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 234 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-1

Return Event: 100 years
Storm Event: 5d100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	731.47	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		101.950	735.28	0.004
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		102.000	4.15	0.000
Pond Inflow....				0.00
Pond Outflow...		119.300	1.31	0.000
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....		13.350	Forward 0.000	Reverse
Pond Outflow...		0.000	Reverse 8.966	Forward
Mass Balance (ac-ft)				
		Volume (Initial ICPM)	0.000 ac-ft	
		Volume (Total In ICPM)	124.540 ac-ft	
		Volume (Total Out ICPM)	124.533 ac-ft	
		Volume (Ending)	0.003 ac-ft	
		Elevation (Ending)	734.97 ft	
		Difference	0.003 ac-ft	
		Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %	

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 235 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-1

Return Event: 100 years
Storm Event: 5m100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	731.47	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		0.400	735.02	0.003
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		0.350	5.11	0.000
Pond Inflow....				0.00
Pond Outflow...		0.000	0.00	0.000
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....		0.192	Forward 0.000	Reverse
Pond Outflow...		0.000	Reverse 0.000	Forward
Mass Balance (ac-ft)				
		Volume (Initial ICPM)	0.000 ac-ft	
		Volume (Total In ICPM)	1.363 ac-ft	
		Volume (Total Out ICPM)	1.359 ac-ft	
		Volume (Ending)	0.003 ac-ft	
		Elevation (Ending)	734.97 ft	
		Difference	0.000 ac-ft	
		Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %	

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 236 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-1

Return Event: 100 years
Storm Event: 6h100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	731.47	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		1.650	740.41	0.008
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		0.950	29.61	0.000
Pond Inflow....				0.00
Pond Outflow...		6.550	1.25	0.000
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....		6.513	Forward 0.000	Reverse
Pond Outflow...		0.000	Reverse 2.084	Forward
Mass Balance (ac-ft)				
		Volume (Initial ICPM)	0.000 ac-ft	
		Volume (Total In ICPM)	45.736 ac-ft	
		Volume (Total Out ICPM)	45.730 ac-ft	
		Volume (Ending)	0.003 ac-ft	
		Elevation (Ending)	734.97 ft	
		Difference	0.002 ac-ft	
		Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %	

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 237 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-1

Return Event: 100 years
Storm Event: 10d100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	731.47	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		203.550	735.04	0.003
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
Pond Inflow....	204.000	2.34	0.000	0.00
Pond Outflow...	227.600	1.27	0.000	0.00
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....	15.273	Forward	0.000	Reverse
Pond Outflow...	0.000	Reverse	9.391	Forward
Mass Balance (ac-ft)				
Volume (Initial ICPM)		0.000 ac-ft		
Volume (Total In ICPM)		119.446 ac-ft		
Volume (Total Out ICPM)		119.440 ac-ft		
Volume (Ending)		0.003 ac-ft		
Elevation (Ending)		734.97 ft		
Difference		0.003 ac-ft		
Percent of Inflow Volume (Interconnected Pond Mass Balance)		0.0 %		

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4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 238 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-1

Return Event: 100 years
Storm Event: 10m100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	731.47	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		0.700	736.57	0.005
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
Pond Inflow....	0.400	22.59	0.000	0.00
Pond Outflow...	0.000	0.00	0.000	0.00
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....	0.869	Forward	0.000	Reverse
Pond Outflow...	0.000	Reverse	0.000	Forward
Mass Balance (ac-ft)				
Volume (Initial ICPM)		0.000 ac-ft		
Volume (Total In ICPM)		5.597 ac-ft		
Volume (Total Out ICPM)		5.593 ac-ft		
Volume (Ending)		0.003 ac-ft		
Elevation (Ending)		734.97 ft		
Difference		0.000 ac-ft		
Percent of Inflow Volume (Interconnected Pond Mass Balance)		0.0 %		

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Bentley PondPack V8i
[08.11.01.56]
Page 238 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-1

Return Event: 100 years
Storm Event: 12h100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	731.47	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		5.650	739.10	0.007
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
Pond Inflow....	5.000	21.57	0.000	0.00
Pond Outflow...	10.300	1.27	0.000	0.00
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....	7.939	Forward	0.000	Reverse
Pond Outflow...	0.000	Reverse	1.861	Forward
Mass Balance (ac-ft)				
Volume (Initial ICPM)		0.000 ac-ft		
Volume (Total In ICPM)		55.220 ac-ft		
Volume (Total Out ICPM)		55.211 ac-ft		
Volume (Ending)		0.003 ac-ft		
Elevation (Ending)		734.98 ft		
Difference		0.006 ac-ft		
Percent of Inflow Volume (Interconnected Pond Mass Balance)		0.0 %		

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Bentley PondPack V8i
[08.11.01.56]
Page 240 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-1

Return Event: 100 years
Storm Event: 15m100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	731.47	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		0.750	738.28	0.006
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
Pond Inflow....	0.400	32.73	0.000	0.00
Pond Outflow...	0.000	0.00	0.000	0.00
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....	1.302	Forward	0.000	Reverse
Pond Outflow...	0.000	Reverse	0.000	Forward
Mass Balance (ac-ft)				
Volume (Initial ICPM)		0.000 ac-ft		
Volume (Total In ICPM)		8.323 ac-ft		
Volume (Total Out ICPM)		8.320 ac-ft		
Volume (Ending)		0.003 ac-ft		
Elevation (Ending)		734.97 ft		
Difference		0.000 ac-ft		
Percent of Inflow Volume (Interconnected Pond Mass Balance)		0.0 %		

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 241 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-1

Return Event: 100 years
Storm Event: 18h100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	731.47	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		11.900	738.43	0.006
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
Pond Inflow....	11.700	18.23	0.000	0.00
Pond Outflow...	18.500	1.27	0.000	0.00
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....	8.540	Forward	0.000	Reverse
Pond Outflow...	0.000	Reverse	2.547	Forward
Mass Balance (ac-ft)				
Volume (Initial ICPM)		0.000 ac-ft		
Volume (Total In ICPM)		60.811 ac-ft		
Volume (Total Out ICPM)		60.804 ac-ft		
Volume (Ending)		0.003 ac-ft		
Elevation (Ending)		734.98 ft		
Difference		0.004 ac-ft		
Percent of Inflow Volume (Interconnected Pond Mass Balance)		0.0 %		

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 242 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-1

Return Event: 100 years
Storm Event: 24h100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	731.47	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		15.750	737.75	0.006
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
Pond Inflow....	15.600	15.17	0.000	0.00
Pond Outflow...	23.150	1.29	0.000	0.00
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....	9.512	Forward	0.000	Reverse
Pond Outflow...	0.000	Reverse	2.227	Forward
Mass Balance (ac-ft)				
Volume (Initial ICPM)		0.000 ac-ft		
Volume (Total In ICPM)		66.241 ac-ft		
Volume (Total Out ICPM)		66.231 ac-ft		
Volume (Ending)		0.003 ac-ft		
Elevation (Ending)		734.98 ft		
Difference		0.006 ac-ft		
Percent of Inflow Volume (Interconnected Pond Mass Balance)		0.0 %		

17189-Existing Conditions.ppc
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Bentley PondPack V8i
[08.11.01.56]
Page 243 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-1

Return Event: 100 years
Storm Event: 30m100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	731.47	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		0.800	741.06	0.009
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
Pond Inflow....	0.500	46.43	0.000	0.00
Pond Outflow...	0.000	0.00	0.000	0.00
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....	2.261	Forward	0.000	Reverse
Pond Outflow...	0.000	Reverse	0.000	Forward
Mass Balance (ac-ft)				
Volume (Initial ICPM)		0.000 ac-ft		
Volume (Total In ICPM)		14.386 ac-ft		
Volume (Total Out ICPM)		14.383 ac-ft		
Volume (Ending)		0.003 ac-ft		
Elevation (Ending)		734.97 ft		
Difference		0.000 ac-ft		
Percent of Inflow Volume (Interconnected Pond Mass Balance)		0.0 %		

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Bentley PondPack V8i
[08.11.01.56]
Page 244 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-1

Return Event: 100 years
Storm Event: 48h100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	731.47	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		40.900	735.73	0.004
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
Pond Inflow....	40.800	8.31	0.000	0.00
Pond Outflow...	52.550	1.30	0.000	0.00
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....	10.441	Forward	0.000	Reverse
Pond Outflow...	0.000	Reverse	1.786	Forward
Mass Balance (ac-ft)				
Volume (Initial ICPM)		0.000 ac-ft		
Volume (Total In ICPM)		71.262 ac-ft		
Volume (Total Out ICPM)		71.251 ac-ft		
Volume (Ending)		0.003 ac-ft		
Elevation (Ending)		734.98 ft		
Difference		0.007 ac-ft		
Percent of Inflow Volume (Interconnected Pond Mass Balance)		0.0 %		

17189-Existing Conditions.ppc
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Bentley PondPack V8i
[08.11.01.56]
Page 245 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-1

Return Event: 100 years
Storm Event: 72h100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	731.47	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		61.200	735.41	0.004
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		61.200	6.02	6.400
Pond Inflow....				0.00
Pond Outflow...		71.850	1.31	0.002
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....		11.439	Forward 0.000	Reverse
Pond Outflow...		0.000	Reverse 2.364	Forward
Mass Balance (ac-ft)				
		Volume (Initial ICPM)	0.000 ac-ft	
		Volume (Total In ICPM)	79.378 ac-ft	
		Volume (Total Out ICPM)	79.377 ac-ft	
		Volume (Ending)	0.003 ac-ft	
		Elevation (Ending)	734.98 ft	
		Difference	-0.002 ac-ft	
		Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %	

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 246 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-2

Return Event: 100 years
Storm Event: 1h100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	740.87	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		1.100	745.15	0.397
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		0.550	51.01	0.000
Pond Inflow....				0.00
Pond Outflow...		0.000	0.00	0.000
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....		3.322	Forward 0.000	Reverse
Pond Outflow...		0.000	Reverse 0.000	Forward
Mass Balance (ac-ft)				
		Volume (Initial ICPM)	0.000 ac-ft	
		Volume (Total In ICPM)	0.543 ac-ft	
		Volume (Total Out ICPM)	0.543 ac-ft	
		Volume (Ending)	0.000 ac-ft	
		Elevation (Ending)	740.87 ft	
		Difference	0.000 ac-ft	
		Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %	

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 247 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-2

Return Event: 100 years
Storm Event: 2h100yh

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	740.87	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		1.200	745.29	0.421
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		0.700	48.39	0.000
Pond Inflow....				0.00
Pond Outflow...		2.350	1.23	0.000
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....		4.661	Forward 0.000	Reverse
Pond Outflow...		0.000	Reverse 0.277	Forward
Mass Balance (ac-ft)				
		Volume (Initial ICPM)	0.000 ac-ft	
		Volume (Total In ICPM)	0.761 ac-ft	
		Volume (Total Out ICPM)	0.761 ac-ft	
		Volume (Ending)	0.000 ac-ft	
		Elevation (Ending)	740.87 ft	
		Difference	0.000 ac-ft	
		Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %	

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 246 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-2

Return Event: 100 years
Storm Event: 3h100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	740.87	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		1.550	745.28	0.420
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		0.850	41.00	0.000
Pond Inflow....				0.00
Pond Outflow...		2.550	1.23	0.000
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....		5.236	Forward 0.000	Reverse
Pond Outflow...		0.000	Reverse 0.851	Forward
Mass Balance (ac-ft)				
		Volume (Initial ICPM)	0.000 ac-ft	
		Volume (Total In ICPM)	0.855 ac-ft	
		Volume (Total Out ICPM)	0.855 ac-ft	
		Volume (Ending)	0.000 ac-ft	
		Elevation (Ending)	740.87 ft	
		Difference	0.000 ac-ft	
		Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %	

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 246 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-2

Return Event: 100 years
Storm Event: 5d100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	740.87	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		102.000	741.62	0.001
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		102.000	4.15	0.000
Pond Inflow....				0.00
Pond Outflow...		119.300	1.31	0.000
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....		13.350	Forward 0.000	Reverse
Pond Outflow...		0.000	Reverse 8.966	Forward
Mass Balance (ac-ft)				
		Volume (Initial ICPM)	0.000 ac-ft	
		Volume (Total In ICPM)	2.181 ac-ft	
		Volume (Total Out ICPM)	2.181 ac-ft	
		Volume (Ending)	0.000 ac-ft	
		Elevation (Ending)	740.87 ft	
		Difference	0.000 ac-ft	
		Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %	

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 250 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-2

Return Event: 100 years
Storm Event: 5m100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	740.87	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		0.250	742.10	0.011
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		0.350	5.11	0.000
Pond Inflow....				0.00
Pond Outflow...		0.000	0.00	0.000
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....		0.192	Forward 0.000	Reverse
Pond Outflow...		0.000	Reverse 0.000	Forward
Mass Balance (ac-ft)				
		Volume (Initial ICPM)	0.000 ac-ft	
		Volume (Total In ICPM)	0.031 ac-ft	
		Volume (Total Out ICPM)	0.031 ac-ft	
		Volume (Ending)	0.000 ac-ft	
		Elevation (Ending)	740.87 ft	
		Difference	0.000 ac-ft	
		Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %	

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 251 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-2

Return Event: 100 years
Storm Event: 6h100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	740.87	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		2.800	745.18	0.402
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		0.950	29.61	0.000
Pond Inflow....				0.00
Pond Outflow...		6.550	1.25	0.000
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....		6.513	Forward 0.000	Reverse
Pond Outflow...		0.000	Reverse 2.084	Forward
Mass Balance (ac-ft)				
		Volume (Initial ICPM)	0.000 ac-ft	
		Volume (Total In ICPM)	1.064 ac-ft	
		Volume (Total Out ICPM)	1.064 ac-ft	
		Volume (Ending)	0.000 ac-ft	
		Elevation (Ending)	740.87 ft	
		Difference	0.000 ac-ft	
		Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %	

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 252 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-2

Return Event: 100 years
Storm Event: 10d100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	740.87	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		203.950	741.31	0.000
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		204.000	2.34	0.000
Pond Inflow....				0.00
Pond Outflow...		227.600	1.27	0.000
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....		15.273	Forward 0.000	Reverse
Pond Outflow...		0.000	Reverse 9.391	Forward
Mass Balance (ac-ft)				
		Volume (Initial ICPM)	0.000 ac-ft	
		Volume (Total In ICPM)	2.495 ac-ft	
		Volume (Total Out ICPM)	2.495 ac-ft	
		Volume (Ending)	0.000 ac-ft	
		Elevation (Ending)	740.87 ft	
		Difference	0.000 ac-ft	
		Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %	

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 253 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-2

Return Event: 100 years
Storm Event: 10m100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	740.87	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		0.350	743.01	0.103
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
Pond Inflow....	0.400	22.59	0.000	0.00
Pond Outflow...	0.000	0.00	0.000	0.00
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....	0.869	Forward	0.000	Reverse
Pond Outflow...	0.000	Reverse	0.000	Forward
Mass Balance (ac-ft)				
Volume (Initial ICPM)		0.000 ac-ft		
Volume (Total In ICPM)		0.142 ac-ft		
Volume (Total Out ICPM)		0.142 ac-ft		
Volume (Ending)		0.000 ac-ft		
Elevation (Ending)		740.87 ft		
Difference		0.000 ac-ft		
Percent of Inflow Volume (Interconnected Pond Mass Balance)		0.0 %		

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 254 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-2

Return Event: 100 years
Storm Event: 12h100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	740.87	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		6.700	744.84	0.345
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
Pond Inflow....	5.000	21.57	0.000	0.00
Pond Outflow...	10.300	1.27	0.000	0.00
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....	7.939	Forward	0.000	Reverse
Pond Outflow...	0.000	Reverse	1.861	Forward
Mass Balance (ac-ft)				
Volume (Initial ICPM)		0.000 ac-ft		
Volume (Total In ICPM)		1.297 ac-ft		
Volume (Total Out ICPM)		1.297 ac-ft		
Volume (Ending)		0.000 ac-ft		
Elevation (Ending)		740.87 ft		
Difference		0.000 ac-ft		
Percent of Inflow Volume (Interconnected Pond Mass Balance)		0.0 %		

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 255 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-2

Return Event: 100 years
Storm Event: 15m100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	740.87	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		0.450	743.60	0.162
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
Pond Inflow....	0.400	32.73	0.000	0.00
Pond Outflow...	0.000	0.00	0.000	0.00
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....	1.302	Forward	0.000	Reverse
Pond Outflow...	0.000	Reverse	0.000	Forward
Mass Balance (ac-ft)				
Volume (Initial ICPM)		0.000 ac-ft		
Volume (Total In ICPM)		0.213 ac-ft		
Volume (Total Out ICPM)		0.213 ac-ft		
Volume (Ending)		0.000 ac-ft		
Elevation (Ending)		740.87 ft		
Difference		0.000 ac-ft		
Percent of Inflow Volume (Interconnected Pond Mass Balance)		0.0 %		

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 256 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-2

Return Event: 100 years
Storm Event: 18h100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	740.87	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		12.750	744.43	0.276
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
Pond Inflow....	11.700	18.23	0.000	0.00
Pond Outflow...	18.500	1.27	0.000	0.00
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....	8.540	Forward	0.000	Reverse
Pond Outflow...	0.000	Reverse	2.547	Forward
Mass Balance (ac-ft)				
Volume (Initial ICPM)		0.000 ac-ft		
Volume (Total In ICPM)		1.395 ac-ft		
Volume (Total Out ICPM)		1.395 ac-ft		
Volume (Ending)		0.000 ac-ft		
Elevation (Ending)		740.87 ft		
Difference		0.000 ac-ft		
Percent of Inflow Volume (Interconnected Pond Mass Balance)		0.0 %		

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 257 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-2

Return Event: 100 years
Storm Event: 24h100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	740.87	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		16.850	744.12	0.224
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
Pond Inflow....	15.600	15.17	0.000	0.00
Pond Outflow...	23.150	1.29	0.000	0.00
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....	9.512	Forward	0.000	Reverse
Pond Outflow...	0.000	Reverse	2.227	Forward
Mass Balance (ac-ft)				
Volume (Initial ICPM)		0.000 ac-ft		
Volume (Total In ICPM)		1.554 ac-ft		
Volume (Total Out ICPM)		1.554 ac-ft		
Volume (Ending)		0.000 ac-ft		
Elevation (Ending)		740.87 ft		
Difference		0.000 ac-ft		
Percent of Inflow Volume (Interconnected Pond Mass Balance)		0.0 %		

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 258 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-2

Return Event: 100 years
Storm Event: 30m100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	740.87	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		0.650	744.49	0.286
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
Pond Inflow....	0.500	46.43	0.000	0.00
Pond Outflow...	0.000	0.00	0.000	0.00
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....	2.261	Forward	0.000	Reverse
Pond Outflow...	0.000	Reverse	0.000	Forward
Mass Balance (ac-ft)				
Volume (Initial ICPM)		0.000 ac-ft		
Volume (Total In ICPM)		0.370 ac-ft		
Volume (Total Out ICPM)		0.370 ac-ft		
Volume (Ending)		0.000 ac-ft		
Elevation (Ending)		740.87 ft		
Difference		0.000 ac-ft		
Percent of Inflow Volume (Interconnected Pond Mass Balance)		0.0 %		

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4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 259 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-2

Return Event: 100 years
Storm Event: 48h100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	740.87	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		43.250	742.72	0.074
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
Pond Inflow....	40.800	8.31	0.000	0.00
Pond Outflow...	52.550	1.30	0.000	0.00
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....	10.441	Forward	0.000	Reverse
Pond Outflow...	0.000	Reverse	1.786	Forward
Mass Balance (ac-ft)				
Volume (Initial ICPM)		0.000 ac-ft		
Volume (Total In ICPM)		1.705 ac-ft		
Volume (Total Out ICPM)		1.705 ac-ft		
Volume (Ending)		0.000 ac-ft		
Elevation (Ending)		740.87 ft		
Difference		0.000 ac-ft		
Percent of Inflow Volume (Interconnected Pond Mass Balance)		0.0 %		

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 260 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-2

Return Event: 100 years
Storm Event: 72h100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	740.87	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		61.300	742.11	0.012
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
Pond Inflow....	61.200	6.02	6.400	0.00
Pond Outflow...	71.850	1.31	0.002	0.00
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....	11.439	Forward	0.000	Reverse
Pond Outflow...	0.000	Reverse	2.364	Forward
Mass Balance (ac-ft)				
Volume (Initial ICPM)		0.000 ac-ft		
Volume (Total In ICPM)		1.868 ac-ft		
Volume (Total Out ICPM)		1.868 ac-ft		
Volume (Ending)		0.000 ac-ft		
Elevation (Ending)		740.87 ft		
Difference		0.000 ac-ft		
Percent of Inflow Volume (Interconnected Pond Mass Balance)		0.0 %		

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 261 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-3

Return Event: 100 years
Storm Event: 1h100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	744.23	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		0.700	751.67	1.036
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		0.550	51.01	0.000
Pond Inflow....				0.00
Pond Outflow...		0.000	0.00	0.00
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....		3.322 Forward	0.000 Reverse	
Pond Outflow...		0.000 Reverse	0.000 Forward	
Mass Balance (ac-ft)				
		Volume (Initial ICPM)	0.000 ac-ft	
		Volume (Total In ICPM)	3.775 ac-ft	
		Volume (Total Out ICPM)	3.775 ac-ft	
		Volume (Ending)	0.000 ac-ft	
		Elevation (Ending)	744.23 ft	
		Difference	0.000 ac-ft	
		Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %	

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 262 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-3

Return Event: 100 years
Storm Event: 2h100yh

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	744.23	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		0.850	751.68	1.049
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		0.700	48.39	0.000
Pond Inflow....				0.00
Pond Outflow...		2.350	1.23	0.00
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....		4.661 Forward	0.000 Reverse	
Pond Outflow...		0.000 Reverse	0.277 Forward	
Mass Balance (ac-ft)				
		Volume (Initial ICPM)	0.000 ac-ft	
		Volume (Total In ICPM)	5.295 ac-ft	
		Volume (Total Out ICPM)	5.295 ac-ft	
		Volume (Ending)	0.000 ac-ft	
		Elevation (Ending)	744.23 ft	
		Difference	0.000 ac-ft	
		Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %	

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 263 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-3

Return Event: 100 years
Storm Event: 3h100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	744.23	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		1.000	751.62	0.987
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		0.850	41.00	0.000
Pond Inflow....				0.00
Pond Outflow...		2.550	1.23	0.00
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....		5.236 Forward	0.000 Reverse	
Pond Outflow...		0.000 Reverse	0.851 Forward	
Mass Balance (ac-ft)				
		Volume (Initial ICPM)	0.000 ac-ft	
		Volume (Total In ICPM)	5.949 ac-ft	
		Volume (Total Out ICPM)	5.949 ac-ft	
		Volume (Ending)	0.000 ac-ft	
		Elevation (Ending)	744.23 ft	
		Difference	0.000 ac-ft	
		Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %	

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 264 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-3

Return Event: 100 years
Storm Event: 5d100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	744.23	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		101.950	745.54	0.000
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		102.000	4.15	0.000
Pond Inflow....				0.00
Pond Outflow...		119.300	1.31	0.00
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....		13.350 Forward	0.000 Reverse	
Pond Outflow...		0.000 Reverse	8.966 Forward	
Mass Balance (ac-ft)				
		Volume (Initial ICPM)	0.000 ac-ft	
		Volume (Total In ICPM)	15.162 ac-ft	
		Volume (Total Out ICPM)	15.162 ac-ft	
		Volume (Ending)	0.000 ac-ft	
		Elevation (Ending)	744.23 ft	
		Difference	0.000 ac-ft	
		Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %	

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 265 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-3

Return Event: 100 years
Storm Event: 5m100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	744.23	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		0.300	746.05	0.000
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		0.350	5.11	0.000
Pond Inflow....				0.00
Pond Outflow...		0.000	0.00	0.000
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....		0.192	Forward 0.000	Reverse
Pond Outflow...		0.000	Reverse 0.000	Forward
Mass Balance (ac-ft)				
		Volume (Initial ICPM)	0.000 ac-ft	
		Volume (Total In ICPM)	0.217 ac-ft	
		Volume (Total Out ICPM)	0.217 ac-ft	
		Volume (Ending)	0.000 ac-ft	
		Elevation (Ending)	744.23 ft	
		Difference	0.000 ac-ft	
		Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %	

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 266 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-3

Return Event: 100 years
Storm Event: 6h100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	744.23	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		1.600	751.47	0.844
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		0.950	29.61	0.000
Pond Inflow....				0.00
Pond Outflow...		6.550	1.25	0.000
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....		6.513	Forward 0.000	Reverse
Pond Outflow...		0.000	Reverse 2.084	Forward
Mass Balance (ac-ft)				
		Volume (Initial ICPM)	0.000 ac-ft	
		Volume (Total In ICPM)	7.396 ac-ft	
		Volume (Total Out ICPM)	7.396 ac-ft	
		Volume (Ending)	0.000 ac-ft	
		Elevation (Ending)	744.23 ft	
		Difference	0.000 ac-ft	
		Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %	

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 267 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-3

Return Event: 100 years
Storm Event: 10d100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	744.23	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		203.850	745.21	0.000
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		204.000	2.34	0.000
Pond Inflow....				0.00
Pond Outflow...		227.600	1.27	0.000
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....		15.273	Forward 0.000	Reverse
Pond Outflow...		0.000	Reverse 9.391	Forward
Mass Balance (ac-ft)				
		Volume (Initial ICPM)	0.000 ac-ft	
		Volume (Total In ICPM)	17.345 ac-ft	
		Volume (Total Out ICPM)	17.345 ac-ft	
		Volume (Ending)	0.000 ac-ft	
		Elevation (Ending)	744.23 ft	
		Difference	0.000 ac-ft	
		Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %	

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 268 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-3

Return Event: 100 years
Storm Event: 10m100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	744.23	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		0.450	750.67	0.259
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		0.400	22.59	0.000
Pond Inflow....				0.00
Pond Outflow...		0.000	0.00	0.000
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....		0.869	Forward 0.000	Reverse
Pond Outflow...		0.000	Reverse 0.000	Forward
Mass Balance (ac-ft)				
		Volume (Initial ICPM)	0.000 ac-ft	
		Volume (Total In ICPM)	0.985 ac-ft	
		Volume (Total Out ICPM)	0.985 ac-ft	
		Volume (Ending)	0.000 ac-ft	
		Elevation (Ending)	744.23 ft	
		Difference	0.000 ac-ft	
		Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %	

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 268 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-3

Return Event: 100 years
Storm Event: 12h100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	744.23	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		5.650	751.28	0.661
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
Pond Inflow....	5.000	21.57	0.000	0.00
Pond Outflow...	10.300	1.27	0.000	0.00
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....	7.939	Forward	0.000	Reverse
Pond Outflow...	0.000	Reverse	1.861	Forward
Mass Balance (ac-ft)				
Volume (Initial ICPM)		0.000 ac-ft		
Volume (Total In ICPM)		9.016 ac-ft		
Volume (Total Out ICPM)		9.016 ac-ft		
Volume (Ending)		0.000 ac-ft		
Elevation (Ending)		744.23 ft		
Difference		0.000 ac-ft		
Percent of Inflow Volume (Interconnected Pond Mass Balance)		0.0 %		

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 270 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-3

Return Event: 100 years
Storm Event: 15m100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	744.23	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		0.550	751.20	0.581
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
Pond Inflow....	0.400	32.73	0.000	0.00
Pond Outflow...	0.000	0.00	0.000	0.00
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....	1.302	Forward	0.000	Reverse
Pond Outflow...	0.000	Reverse	0.000	Forward
Mass Balance (ac-ft)				
Volume (Initial ICPM)		0.000 ac-ft		
Volume (Total In ICPM)		1.479 ac-ft		
Volume (Total Out ICPM)		1.479 ac-ft		
Volume (Ending)		0.000 ac-ft		
Elevation (Ending)		744.23 ft		
Difference		0.000 ac-ft		
Percent of Inflow Volume (Interconnected Pond Mass Balance)		0.0 %		

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 271 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-3

Return Event: 100 years
Storm Event: 18h100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	744.23	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		12.000	750.83	0.318
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
Pond Inflow....	11.700	18.23	0.000	0.00
Pond Outflow...	18.500	1.27	0.000	0.00
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....	8.540	Forward	0.000	Reverse
Pond Outflow...	0.000	Reverse	2.547	Forward
Mass Balance (ac-ft)				
Volume (Initial ICPM)		0.000 ac-ft		
Volume (Total In ICPM)		9.699 ac-ft		
Volume (Total Out ICPM)		9.699 ac-ft		
Volume (Ending)		0.000 ac-ft		
Elevation (Ending)		744.23 ft		
Difference		0.000 ac-ft		
Percent of Inflow Volume (Interconnected Pond Mass Balance)		0.0 %		

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 272 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-3

Return Event: 100 years
Storm Event: 24h100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	744.23	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		15.700	750.05	0.018
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
Pond Inflow....	15.600	15.17	0.000	0.00
Pond Outflow...	23.150	1.29	0.000	0.00
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....	9.512	Forward	0.000	Reverse
Pond Outflow...	0.000	Reverse	2.227	Forward
Mass Balance (ac-ft)				
Volume (Initial ICPM)		0.000 ac-ft		
Volume (Total In ICPM)		10.802 ac-ft		
Volume (Total Out ICPM)		10.802 ac-ft		
Volume (Ending)		0.000 ac-ft		
Elevation (Ending)		744.23 ft		
Difference		0.000 ac-ft		
Percent of Inflow Volume (Interconnected Pond Mass Balance)		0.0 %		

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 273 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-3

Return Event: 100 years
Storm Event: 30m100y

Infiltration					
Infiltration Method (Computed)					
No Infiltration					
Initial Conditions			Calculation Tolerances		
Elevation (Starting Water Surface Computed)	744.23	ft	Flow Tolerance (Minimum)	0.000	ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35	
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050	hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)	
		0.600	751.58	0.954	
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)
Pond Inflow....	0.500		46.43	0.000	0.00
Pond Outflow...	0.000		0.00	0.000	0.00
		Total Volume In Direction Volume (ac-ft)	Forward	Total Volume Out Direction Volume (ac-ft)	Reverse
Pond Inflow....	2.261		0.000	0.000	
Pond Outflow...	0.000		Reverse	Forward	
Mass Balance (ac-ft)					
Volume (Initial ICPM)		0.000 ac-ft			
Volume (Total In ICPM)		2.569 ac-ft			
Volume (Total Out ICPM)		2.569 ac-ft			
Volume (Ending)		0.000 ac-ft			
Elevation (Ending)		744.23 ft			
Difference		0.000 ac-ft			
Percent of Inflow Volume (Interconnected Pond Mass Balance)		0.0 %			

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 274 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-3

Return Event: 100 years
Storm Event: 48h100y

Infiltration					
Infiltration Method (Computed)					
No Infiltration					
Initial Conditions			Calculation Tolerances		
Elevation (Starting Water Surface Computed)	744.23	ft	Flow Tolerance (Minimum)	0.000	ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35	
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050	hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)	
		40.800	746.18	0.000	
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)
Pond Inflow....	40.800		8.31	0.000	0.00
Pond Outflow...	52.550		1.30	0.000	0.00
		Total Volume In Direction Volume (ac-ft)	Forward	Total Volume Out Direction Volume (ac-ft)	Reverse
Pond Inflow....	10.441		0.000	0.000	
Pond Outflow...	0.000		Reverse	Forward	
Mass Balance (ac-ft)					
Volume (Initial ICPM)		0.000 ac-ft			
Volume (Total In ICPM)		11.857 ac-ft			
Volume (Total Out ICPM)		11.857 ac-ft			
Volume (Ending)		0.000 ac-ft			
Elevation (Ending)		744.23 ft			
Difference		0.000 ac-ft			
Percent of Inflow Volume (Interconnected Pond Mass Balance)		0.0 %			

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 275 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-3

Return Event: 100 years
Storm Event: 72h100y

Infiltration					
Infiltration Method (Computed)					
No Infiltration					
Initial Conditions			Calculation Tolerances		
Elevation (Starting Water Surface Computed)	744.23	ft	Flow Tolerance (Minimum)	0.000	ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35	
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050	hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)	
		61.200	745.84	0.000	
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)
Pond Inflow....	61.200		6.02	6.400	0.00
Pond Outflow...	71.850		1.31	0.002	0.00
		Total Volume In Direction Volume (ac-ft)	Forward	Total Volume Out Direction Volume (ac-ft)	Reverse
Pond Inflow....	11.439		0.000	0.000	
Pond Outflow...	0.000		Reverse	Forward	
Mass Balance (ac-ft)					
Volume (Initial ICPM)		0.000 ac-ft			
Volume (Total In ICPM)		12.991 ac-ft			
Volume (Total Out ICPM)		12.991 ac-ft			
Volume (Ending)		0.000 ac-ft			
Elevation (Ending)		744.23 ft			
Difference		0.000 ac-ft			
Percent of Inflow Volume (Interconnected Pond Mass Balance)		0.0 %			

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 276 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-4

Return Event: 100 years
Storm Event: 1h100y

Infiltration					
Infiltration Method (Computed)					
No Infiltration					
Initial Conditions			Calculation Tolerances		
Elevation (Starting Water Surface Computed)	754.94	ft	Flow Tolerance (Minimum)	0.000	ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35	
Outflow (Starting)	1.14	ft ³ /s	ICPM Time Step	0.050	hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)	
		1.000	769.91	0.007	
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)
Pond Inflow....	0.550		51.01	0.000	0.00
Pond Outflow...	0.000		0.00	0.000	0.00
		Total Volume In Direction Volume (ac-ft)	Forward	Total Volume Out Direction Volume (ac-ft)	Reverse
Pond Inflow....	3.322		0.000	0.000	
Pond Outflow...	0.000		Reverse	Forward	
Mass Balance (ac-ft)					
Volume (Initial ICPM)		0.000 ac-ft			
Volume (Total In ICPM)		7.976 ac-ft			
Volume (Total Out ICPM)		8.068 ac-ft			
Volume (Ending)		0.000 ac-ft			
Elevation (Ending)		754.94 ft			
Difference		-0.092 ac-ft			
Percent of Inflow Volume (Interconnected Pond Mass Balance)		1.1 %			

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 277 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-4

Return Event: 100 years
Storm Event: 2h100yh

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	754.94	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	1.14	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		1.100	769.98	0.007
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		0.700	48.39	0.000
Pond Inflow....				0.00
Pond Outflow...		2.350	1.23	0.000
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....		4.661	Forward 0.000	Reverse
Pond Outflow...		0.000	Reverse 0.277	Forward
Mass Balance (ac-ft)				
		Volume (Initial ICPM)	0.000 ac-ft	
		Volume (Total In ICPM)	12.181 ac-ft	
		Volume (Total Out ICPM)	13.826 ac-ft	
		Volume (Ending)	0.000 ac-ft	
		Elevation (Ending)	754.94 ft	
		Difference	-1.645 ac-ft	
		Percent of Inflow Volume (Interconnected Pond Mass Balance)	11.9 %	

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 278 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-4

Return Event: 100 years
Storm Event: 3h100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	754.94	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	1.14	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		1.250	769.86	0.006
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		0.850	41.00	0.000
Pond Inflow....				0.00
Pond Outflow...		2.550	1.23	0.000
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....		5.236	Forward 0.000	Reverse
Pond Outflow...		0.000	Reverse 0.851	Forward
Mass Balance (ac-ft)				
		Volume (Initial ICPM)	0.000 ac-ft	
		Volume (Total In ICPM)	14.643 ac-ft	
		Volume (Total Out ICPM)	15.875 ac-ft	
		Volume (Ending)	0.000 ac-ft	
		Elevation (Ending)	754.94 ft	
		Difference	-1.232 ac-ft	
		Percent of Inflow Volume (Interconnected Pond Mass Balance)	7.8 %	

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 279 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-4

Return Event: 100 years
Storm Event: 5d100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	754.94	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	1.14	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		102.000	756.22	0.000
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		102.000	4.15	0.000
Pond Inflow....				0.00
Pond Outflow...		119.300	1.31	0.000
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....		13.350	Forward 0.000	Reverse
Pond Outflow...		0.000	Reverse 8.966	Forward
Mass Balance (ac-ft)				
		Volume (Initial ICPM)	0.000 ac-ft	
		Volume (Total In ICPM)	49.419 ac-ft	
		Volume (Total Out ICPM)	72.090 ac-ft	
		Volume (Ending)	0.000 ac-ft	
		Elevation (Ending)	754.94 ft	
		Difference	-22.671 ac-ft	
		Percent of Inflow Volume (Interconnected Pond Mass Balance)	31.4 %	

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 280 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-4

Return Event: 100 years
Storm Event: 5m100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	754.94	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	1.14	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		0.700	755.58	0.000
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		0.350	5.11	0.000
Pond Inflow....				0.00
Pond Outflow...		0.000	0.00	0.000
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....		0.192	Forward 0.000	Reverse
Pond Outflow...		0.000	Reverse 0.000	Forward
Mass Balance (ac-ft)				
		Volume (Initial ICPM)	0.000 ac-ft	
		Volume (Total In ICPM)	0.461 ac-ft	
		Volume (Total Out ICPM)	0.609 ac-ft	
		Volume (Ending)	0.000 ac-ft	
		Elevation (Ending)	754.94 ft	
		Difference	-0.148 ac-ft	
		Percent of Inflow Volume (Interconnected Pond Mass Balance)	24.2 %	

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Bentley PondPack V8i
[08.11.01.56]
Page 281 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-4

Return Event: 100 years
Storm Event: 6h100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	754.94	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	1.14	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		1.650	764.78	0.001
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		0.950	29.61	0.000
Pond Inflow....				0.00
Pond Outflow...		6.550	1.25	0.000
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....		6.513	Forward 0.000	Reverse
Pond Outflow...		0.000	Reverse 2.084	Forward
Mass Balance (ac-ft)				
		Volume (Initial ICPM)	0.000 ac-ft	
		Volume (Total In ICPM)	20.072 ac-ft	
		Volume (Total Out ICPM)	20.149 ac-ft	
		Volume (Ending)	0.000 ac-ft	
		Elevation (Ending)	754.94 ft	
		Difference	-0.076 ac-ft	
		Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.4 %	

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Bentley PondPack V8i
[08.11.01.56]
Page 282 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-4

Return Event: 100 years
Storm Event: 10d100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	754.94	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	1.14	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		203.850	755.82	0.000
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		204.000	2.34	0.000
Pond Inflow....				0.00
Pond Outflow...		227.600	1.27	0.000
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....		15.273	Forward 0.000	Reverse
Pond Outflow...		0.000	Reverse 9.391	Forward
Mass Balance (ac-ft)				
		Volume (Initial ICPM)	0.000 ac-ft	
		Volume (Total In ICPM)	56.160 ac-ft	
		Volume (Total Out ICPM)	59.443 ac-ft	
		Volume (Ending)	0.000 ac-ft	
		Elevation (Ending)	754.96 ft	
		Difference	-3.284 ac-ft	
		Percent of Inflow Volume (Interconnected Pond Mass Balance)	5.5 %	

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4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 283 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-4

Return Event: 100 years
Storm Event: 10m100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	754.94	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	1.14	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		0.700	757.18	0.000
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		0.400	22.59	0.000
Pond Inflow....				0.00
Pond Outflow...		0.000	0.00	0.000
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....		0.869	Forward 0.000	Reverse
Pond Outflow...		0.000	Reverse 0.000	Forward
Mass Balance (ac-ft)				
		Volume (Initial ICPM)	0.000 ac-ft	
		Volume (Total In ICPM)	2.087 ac-ft	
		Volume (Total Out ICPM)	2.184 ac-ft	
		Volume (Ending)	0.000 ac-ft	
		Elevation (Ending)	754.94 ft	
		Difference	-0.096 ac-ft	
		Percent of Inflow Volume (Interconnected Pond Mass Balance)	4.4 %	

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Bentley PondPack V8i
[08.11.01.56]
Page 284 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-4

Return Event: 100 years
Storm Event: 12h100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	754.94	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	1.14	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		5.800	758.40	0.000
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		5.000	21.57	0.000
Pond Inflow....				0.00
Pond Outflow...		10.300	1.27	0.000
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....		7.939	Forward 0.000	Reverse
Pond Outflow...		0.000	Reverse 1.861	Forward
Mass Balance (ac-ft)				
		Volume (Initial ICPM)	0.000 ac-ft	
		Volume (Total In ICPM)	23.987 ac-ft	
		Volume (Total Out ICPM)	24.031 ac-ft	
		Volume (Ending)	0.000 ac-ft	
		Elevation (Ending)	755.22 ft	
		Difference	-0.044 ac-ft	
		Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.2 %	

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 285 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-4

Return Event: 100 years
Storm Event: 15m100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	754.94	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	1.14	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		0.700	757.98	0.000
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		0.400	32.73	0.000
Pond Inflow....				0.00
Pond Outflow...		0.000	0.00	0.000
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....		1.302	Forward 0.000	Reverse
Pond Outflow...		0.000	Reverse 0.000	Forward
Mass Balance (ac-ft)				
		Volume (Initial ICPM)	0.000 ac-ft	
		Volume (Total In ICPM)	3.127 ac-ft	
		Volume (Total Out ICPM)	3.206 ac-ft	
		Volume (Ending)	0.000 ac-ft	
		Elevation (Ending)	754.94 ft	
		Difference	-0.079 ac-ft	
		Percent of Inflow Volume (Interconnected Pond Mass Balance)	2.5 %	

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4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 286 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-4

Return Event: 100 years
Storm Event: 18h100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	754.94	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	1.14	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		11.900	758.19	0.000
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		11.700	18.23	0.000
Pond Inflow....				0.00
Pond Outflow...		18.500	1.27	0.000
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....		8.540	Forward 0.000	Reverse
Pond Outflow...		0.000	Reverse 2.547	Forward
Mass Balance (ac-ft)				
		Volume (Initial ICPM)	0.000 ac-ft	
		Volume (Total In ICPM)	27.171 ac-ft	
		Volume (Total Out ICPM)	27.258 ac-ft	
		Volume (Ending)	0.000 ac-ft	
		Elevation (Ending)	755.09 ft	
		Difference	-0.087 ac-ft	
		Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.3 %	

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4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 287 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-4

Return Event: 100 years
Storm Event: 24h100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	754.94	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	1.14	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		15.750	757.80	0.000
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		15.600	15.17	0.000
Pond Inflow....				0.00
Pond Outflow...		23.150	1.29	0.000
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....		9.512	Forward 0.000	Reverse
Pond Outflow...		0.000	Reverse 2.227	Forward
Mass Balance (ac-ft)				
		Volume (Initial ICPM)	0.000 ac-ft	
		Volume (Total In ICPM)	28.775 ac-ft	
		Volume (Total Out ICPM)	28.872 ac-ft	
		Volume (Ending)	0.000 ac-ft	
		Elevation (Ending)	755.23 ft	
		Difference	-0.096 ac-ft	
		Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.3 %	

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 288 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-4

Return Event: 100 years
Storm Event: 30m100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	754.94	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	1.14	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		0.850	769.45	0.002
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		0.500	46.43	0.000
Pond Inflow....				0.00
Pond Outflow...		0.000	0.00	0.000
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....		2.261	Forward 0.000	Reverse
Pond Outflow...		0.000	Reverse 0.000	Forward
Mass Balance (ac-ft)				
		Volume (Initial ICPM)	0.000 ac-ft	
		Volume (Total In ICPM)	5.430 ac-ft	
		Volume (Total Out ICPM)	5.504 ac-ft	
		Volume (Ending)	0.000 ac-ft	
		Elevation (Ending)	754.94 ft	
		Difference	-0.074 ac-ft	
		Percent of Inflow Volume (Interconnected Pond Mass Balance)	1.3 %	

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 288 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-4

Return Event: 100 years
Storm Event: 48h100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	754.94	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	1.14	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		40.950	756.81	0.000
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
Pond Inflow....	40.800	8.31	0.000	0.00
Pond Outflow...	52.550	1.30	0.000	0.00
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....	10.441	Forward	0.000	Reverse
Pond Outflow...	0.000	Reverse	1.786	Forward
Mass Balance (ac-ft)				
Volume (Initial ICPM)		0.000 ac-ft		
Volume (Total In ICPM)		30.018 ac-ft		
Volume (Total Out ICPM)		30.242 ac-ft		
Volume (Ending)		0.000 ac-ft		
Elevation (Ending)		755.24 ft		
Difference		-0.224 ac-ft		
Percent of Inflow Volume (Interconnected Pond Mass Balance)		0.7 %		

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 290 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-4

Return Event: 100 years
Storm Event: 72h100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	754.94	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	1.14	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		61.250	756.50	0.000
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
Pond Inflow....	61.200	6.02	6.400	0.00
Pond Outflow...	71.850	1.31	0.002	0.00
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....	11.439	Forward	0.000	Reverse
Pond Outflow...	0.000	Reverse	2.364	Forward
Mass Balance (ac-ft)				
Volume (Initial ICPM)		0.000 ac-ft		
Volume (Total In ICPM)		34.029 ac-ft		
Volume (Total Out ICPM)		34.436 ac-ft		
Volume (Ending)		0.000 ac-ft		
Elevation (Ending)		755.23 ft		
Difference		-0.408 ac-ft		
Percent of Inflow Volume (Interconnected Pond Mass Balance)		1.2 %		

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 291 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-5

Return Event: 100 years
Storm Event: 1h100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	766.00	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		2.500	769.57	2.936
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
Pond Inflow....	0.550	51.01	0.000	0.00
Pond Outflow...	0.000	0.00	0.000	0.00
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....	3.322	Forward	0.000	Reverse
Pond Outflow...	0.000	Reverse	0.000	Forward
Mass Balance (ac-ft)				
Volume (Initial ICPM)		0.000 ac-ft		
Volume (Total In ICPM)		2.936 ac-ft		
Volume (Total Out ICPM)		0.000 ac-ft		
Volume (Ending)		2.936 ac-ft		
Elevation (Ending)		769.57 ft		
Difference		0.000 ac-ft		
Percent of Inflow Volume (Interconnected Pond Mass Balance)		0.0 %		

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 292 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-5

Return Event: 100 years
Storm Event: 2h100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	766.00	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		2.600	770.18	3.950
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
Pond Inflow....	0.700	48.39	0.000	0.00
Pond Outflow...	2.350	1.23	0.000	0.00
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....	4.661	Forward	0.000	Reverse
Pond Outflow...	0.000	Reverse	0.277	Forward
Mass Balance (ac-ft)				
Volume (Initial ICPM)		0.000 ac-ft		
Volume (Total In ICPM)		4.120 ac-ft		
Volume (Total Out ICPM)		0.711 ac-ft		
Volume (Ending)		3.409 ac-ft		
Elevation (Ending)		769.94 ft		
Difference		0.000 ac-ft		
Percent of Inflow Volume (Interconnected Pond Mass Balance)		0.0 %		

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 293 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-5

Return Event: 100 years
Storm Event: 3h100y

Infiltration				
Infiltration Method (Computed) No Infiltration				
Initial Conditions				
Calculation Tolerances				
Elevation (Starting Water Surface Computed)	766.00	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		3.500	770.34	4.334
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		0.850	41.00	0.000
Pond Inflow....				0.00
Pond Outflow...		2.550	1.23	0.000
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....		5.236	0.000	Reverse
Pond Outflow...		0.000	0.851	Forward
Mass Balance (ac-ft)				
		Volume (Initial ICPM)	0.000	ac-ft
		Volume (Total In ICPM)	4.628	ac-ft
		Volume (Total Out ICPM)	1.219	ac-ft
		Volume (Ending)	3.409	ac-ft
		Elevation (Ending)	769.94	ft
		Difference	0.000	ac-ft
		Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0	%

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 294 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-5

Return Event: 100 years
Storm Event: 5d100y

Infiltration				
Infiltration Method (Computed) No Infiltration				
Initial Conditions				
Calculation Tolerances				
Elevation (Starting Water Surface Computed)	766.00	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		120.150	770.75	5.388
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		102.000	4.15	0.000
Pond Inflow....				0.00
Pond Outflow...		119.300	1.31	0.000
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....		13.350	0.000	Reverse
Pond Outflow...		0.000	8.966	Forward
Mass Balance (ac-ft)				
		Volume (Initial ICPM)	0.000	ac-ft
		Volume (Total In ICPM)	11.801	ac-ft
		Volume (Total Out ICPM)	8.392	ac-ft
		Volume (Ending)	3.409	ac-ft
		Elevation (Ending)	769.94	ft
		Difference	0.000	ac-ft
		Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0	%

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 295 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-5

Return Event: 100 years
Storm Event: 5m100y

Infiltration				
Infiltration Method (Computed) No Infiltration				
Initial Conditions				
Calculation Tolerances				
Elevation (Starting Water Surface Computed)	766.00	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		1.650	766.37	0.170
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		0.350	5.11	0.000
Pond Inflow....				0.00
Pond Outflow...		0.000	0.00	0.000
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....		0.192	0.000	Reverse
Pond Outflow...		0.000	0.000	Forward
Mass Balance (ac-ft)				
		Volume (Initial ICPM)	0.000	ac-ft
		Volume (Total In ICPM)	0.170	ac-ft
		Volume (Total Out ICPM)	0.000	ac-ft
		Volume (Ending)	0.170	ac-ft
		Elevation (Ending)	766.37	ft
		Difference	0.000	ac-ft
		Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0	%

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 296 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-5

Return Event: 100 years
Storm Event: 6h100y

Infiltration				
Infiltration Method (Computed) No Infiltration				
Initial Conditions				
Calculation Tolerances				
Elevation (Starting Water Surface Computed)	766.00	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		6.450	770.62	5.063
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		0.950	29.61	0.000
Pond Inflow....				0.00
Pond Outflow...		6.550	1.25	0.000
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....		6.513	0.000	Reverse
Pond Outflow...		0.000	2.084	Forward
Mass Balance (ac-ft)				
		Volume (Initial ICPM)	0.000	ac-ft
		Volume (Total In ICPM)	5.757	ac-ft
		Volume (Total Out ICPM)	2.348	ac-ft
		Volume (Ending)	3.409	ac-ft
		Elevation (Ending)	769.94	ft
		Difference	0.000	ac-ft
		Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0	%

17189-Existing Conditions.ppc
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Bentley PondPack V8i
[08.11.01.56]
Page 297 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-5

Return Event: 100 years
Storm Event: 10d100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	766.00	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		204.550	770.05	3.601
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
Pond Inflow....	204.000	2.34	0.000	0.00
Pond Outflow...	227.600	1.27	0.000	0.00
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....	15.273	Forward	0.000	Reverse
Pond Outflow...	0.000	Reverse	9.391	Forward
Mass Balance (ac-ft)				
Volume (Initial ICPM)		0.000 ac-ft		
Volume (Total In ICPM)		13.500 ac-ft		
Volume (Total Out ICPM)		10.091 ac-ft		
Volume (Ending)		3.409 ac-ft		
Elevation (Ending)		769.94 ft		
Difference		0.000 ac-ft		
Percent of Inflow Volume (Interconnected Pond Mass Balance)		0.0 %		

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 298 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-5

Return Event: 100 years
Storm Event: 10m100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	766.00	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		1.800	767.68	0.768
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
Pond Inflow....	0.400	22.59	0.000	0.00
Pond Outflow...	0.000	0.00	0.000	0.00
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....	0.869	Forward	0.000	Reverse
Pond Outflow...	0.000	Reverse	0.000	Forward
Mass Balance (ac-ft)				
Volume (Initial ICPM)		0.000 ac-ft		
Volume (Total In ICPM)		0.768 ac-ft		
Volume (Total Out ICPM)		0.000 ac-ft		
Volume (Ending)		0.768 ac-ft		
Elevation (Ending)		767.68 ft		
Difference		0.000 ac-ft		
Percent of Inflow Volume (Interconnected Pond Mass Balance)		0.0 %		

17189-Existing Conditions.ppc
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Bentley PondPack V8i
[08.11.01.56]
Page 298 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-5

Return Event: 100 years
Storm Event: 12h100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	766.00	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		12.300	770.94	5.863
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
Pond Inflow....	5.000	21.57	0.000	0.00
Pond Outflow...	10.300	1.27	0.000	0.00
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....	7.939	Forward	0.000	Reverse
Pond Outflow...	0.000	Reverse	1.861	Forward
Mass Balance (ac-ft)				
Volume (Initial ICPM)		0.000 ac-ft		
Volume (Total In ICPM)		7.017 ac-ft		
Volume (Total Out ICPM)		3.060 ac-ft		
Volume (Ending)		3.953 ac-ft		
Elevation (Ending)		770.19 ft		
Difference		0.004 ac-ft		
Percent of Inflow Volume (Interconnected Pond Mass Balance)		0.1 %		

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4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 300 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-5

Return Event: 100 years
Storm Event: 15m100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	766.00	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		1.800	768.19	1.151
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
Pond Inflow....	0.400	32.73	0.000	0.00
Pond Outflow...	0.000	0.00	0.000	0.00
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....	1.302	Forward	0.000	Reverse
Pond Outflow...	0.000	Reverse	0.000	Forward
Mass Balance (ac-ft)				
Volume (Initial ICPM)		0.000 ac-ft		
Volume (Total In ICPM)		1.151 ac-ft		
Volume (Total Out ICPM)		0.000 ac-ft		
Volume (Ending)		1.151 ac-ft		
Elevation (Ending)		768.19 ft		
Difference		0.000 ac-ft		
Percent of Inflow Volume (Interconnected Pond Mass Balance)		0.0 %		

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4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 301 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-5

Return Event: 100 years
Storm Event: 18h100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	766.00	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		18.350	771.11	6.293
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		11.700	18.23	0.000
Pond Inflow....				0.00
Pond Outflow...		18.500	1.27	0.000
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....	8.540	Forward	0.000	Reverse
Pond Outflow...	0.000	Reverse	2.547	Forward
Mass Balance (ac-ft)				
Volume (Initial ICPM)		0.000 ac-ft		
Volume (Total In ICPM)		7.549 ac-ft		
Volume (Total Out ICPM)		4.115 ac-ft		
Volume (Ending)		3.433 ac-ft		
Elevation (Ending)		769.96 ft		
Difference		0.001 ac-ft		
Percent of Inflow Volume (Interconnected Pond Mass Balance)		0.0 %		

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 302 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-5

Return Event: 100 years
Storm Event: 24h100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	766.00	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		24.300	771.26	6.657
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		15.600	15.17	0.000
Pond Inflow....				0.00
Pond Outflow...		23.150	1.29	0.000
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....	9.512	Forward	0.000	Reverse
Pond Outflow...	0.000	Reverse	2.227	Forward
Mass Balance (ac-ft)				
Volume (Initial ICPM)		0.000 ac-ft		
Volume (Total In ICPM)		8.408 ac-ft		
Volume (Total Out ICPM)		3.706 ac-ft		
Volume (Ending)		4.698 ac-ft		
Elevation (Ending)		770.48 ft		
Difference		0.004 ac-ft		
Percent of Inflow Volume (Interconnected Pond Mass Balance)		0.0 %		

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 303 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-5

Return Event: 100 years
Storm Event: 30m100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	766.00	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		2.050	768.84	1.999
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		0.500	46.43	0.000
Pond Inflow....				0.00
Pond Outflow...		0.000	0.00	0.000
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....	2.261	Forward	0.000	Reverse
Pond Outflow...	0.000	Reverse	0.000	Forward
Mass Balance (ac-ft)				
Volume (Initial ICPM)		0.000 ac-ft		
Volume (Total In ICPM)		1.999 ac-ft		
Volume (Total Out ICPM)		0.000 ac-ft		
Volume (Ending)		1.999 ac-ft		
Elevation (Ending)		768.84 ft		
Difference		0.000 ac-ft		
Percent of Inflow Volume (Interconnected Pond Mass Balance)		0.0 %		

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 304 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-5

Return Event: 100 years
Storm Event: 48h100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	766.00	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		48.350	771.40	7.013
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		40.800	8.31	0.000
Pond Inflow....				0.00
Pond Outflow...		52.550	1.30	0.000
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....	10.441	Forward	0.000	Reverse
Pond Outflow...	0.000	Reverse	1.786	Forward
Mass Balance (ac-ft)				
Volume (Initial ICPM)		0.000 ac-ft		
Volume (Total In ICPM)		9.229 ac-ft		
Volume (Total Out ICPM)		3.158 ac-ft		
Volume (Ending)		6.066 ac-ft		
Elevation (Ending)		771.02 ft		
Difference		0.004 ac-ft		
Percent of Inflow Volume (Interconnected Pond Mass Balance)		0.0 %		

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 305 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-5

Return Event: 100 years
Storm Event: 72h100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	766.00	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		72.300	771.20	6.517
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
Pond Inflow....	61.200	6.02	6.400	0.00
Pond Outflow...	71.850	1.31	0.002	0.00
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....	11.439	Forward	0.000	Reverse
Pond Outflow...	0.000	Reverse	2.364	Forward
Mass Balance (ac-ft)				
		Volume (Initial ICPM)	0.000 ac-ft	
		Volume (Total In ICPM)	10.112 ac-ft	
		Volume (Total Out ICPM)	4.194 ac-ft	
		Volume (Ending)	5.914 ac-ft	
		Elevation (Ending)	770.96 ft	
		Difference	0.004 ac-ft	
		Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %	

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 306 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-6

Return Event: 100 years
Storm Event: 1h100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	766.00	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		2.450	767.47	3.321
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
Pond Inflow....	0.550	51.01	0.000	0.00
Pond Outflow...	0.000	0.00	0.000	0.00
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....	3.322	Forward	0.000	Reverse
Pond Outflow...	0.000	Reverse	0.000	Forward
Mass Balance (ac-ft)				
		Volume (Initial ICPM)	0.000 ac-ft	
		Volume (Total In ICPM)	3.322 ac-ft	
		Volume (Total Out ICPM)	0.000 ac-ft	
		Volume (Ending)	3.322 ac-ft	
		Elevation (Ending)	767.47 ft	
		Difference	0.000 ac-ft	
		Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %	

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 307 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-6

Return Event: 100 years
Storm Event: 2h100yh

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	766.00	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		2.700	768.01	4.591
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
Pond Inflow....	0.700	48.39	0.000	0.00
Pond Outflow...	2.350	1.23	0.000	0.00
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....	4.661	Forward	0.000	Reverse
Pond Outflow...	0.000	Reverse	0.277	Forward
Mass Balance (ac-ft)				
		Volume (Initial ICPM)	0.000 ac-ft	
		Volume (Total In ICPM)	4.661 ac-ft	
		Volume (Total Out ICPM)	0.277 ac-ft	
		Volume (Ending)	4.384 ac-ft	
		Elevation (Ending)	767.94 ft	
		Difference	0.000 ac-ft	
		Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %	

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 308 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-6

Return Event: 100 years
Storm Event: 3h100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	766.00	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		3.650	768.11	5.093
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
Pond Inflow....	0.850	41.00	0.000	0.00
Pond Outflow...	2.550	1.23	0.000	0.00
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....	5.236	Forward	0.000	Reverse
Pond Outflow...	0.000	Reverse	0.851	Forward
Mass Balance (ac-ft)				
		Volume (Initial ICPM)	0.000 ac-ft	
		Volume (Total In ICPM)	5.236 ac-ft	
		Volume (Total Out ICPM)	0.851 ac-ft	
		Volume (Ending)	4.384 ac-ft	
		Elevation (Ending)	767.94 ft	
		Difference	0.000 ac-ft	
		Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %	

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 309 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-6

Return Event: 100 years
Storm Event: 5d100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	766.00	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		120.350	768.92	9.445
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		102.000	4.15	0.000
Pond Inflow....				0.00
Pond Outflow...		119.300	1.31	0.000
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....		13.350	Forward 0.000	Reverse
Pond Outflow...		0.000	Reverse 8.966	Forward
Mass Balance (ac-ft)				
		Volume (Initial ICPM)	0.000 ac-ft	
		Volume (Total In ICPM)	13.350 ac-ft	
		Volume (Total Out ICPM)	8.966 ac-ft	
		Volume (Ending)	4.384 ac-ft	
		Elevation (Ending)	767.94 ft	
		Difference	0.000 ac-ft	
		Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %	

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Bentley PondPack V8i
[08.11.01.56]
Page 310 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-6

Return Event: 100 years
Storm Event: 5m100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	766.00	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		1.550	766.08	0.192
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		0.350	5.11	0.000
Pond Inflow....				0.00
Pond Outflow...		0.000	0.00	0.000
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....		0.192	Forward 0.000	Reverse
Pond Outflow...		0.000	Reverse 0.000	Forward
Mass Balance (ac-ft)				
		Volume (Initial ICPM)	0.000 ac-ft	
		Volume (Total In ICPM)	0.192 ac-ft	
		Volume (Total Out ICPM)	0.000 ac-ft	
		Volume (Ending)	0.192 ac-ft	
		Elevation (Ending)	766.08 ft	
		Difference	0.000 ac-ft	
		Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %	

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Bentley PondPack V8i
[08.11.01.56]
Page 311 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-6

Return Event: 100 years
Storm Event: 6h100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	766.00	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		6.550	768.30	6.118
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		0.950	29.61	0.000
Pond Inflow....				0.00
Pond Outflow...		6.550	1.25	0.000
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....		6.513	Forward 0.000	Reverse
Pond Outflow...		0.000	Reverse 2.084	Forward
Mass Balance (ac-ft)				
		Volume (Initial ICPM)	0.000 ac-ft	
		Volume (Total In ICPM)	6.513 ac-ft	
		Volume (Total Out ICPM)	2.084 ac-ft	
		Volume (Ending)	4.428 ac-ft	
		Elevation (Ending)	767.96 ft	
		Difference	0.001 ac-ft	
		Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %	

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Bentley PondPack V8i
[08.11.01.56]
Page 312 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-6

Return Event: 100 years
Storm Event: 10d100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	766.00	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		240.200	768.48	7.078
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		204.000	2.34	0.000
Pond Inflow....				0.00
Pond Outflow...		227.600	1.27	0.000
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....		15.273	Forward 0.000	Reverse
Pond Outflow...		0.000	Reverse 9.391	Forward
Mass Balance (ac-ft)				
		Volume (Initial ICPM)	0.000 ac-ft	
		Volume (Total In ICPM)	15.273 ac-ft	
		Volume (Total Out ICPM)	9.391 ac-ft	
		Volume (Ending)	5.879 ac-ft	
		Elevation (Ending)	768.25 ft	
		Difference	0.003 ac-ft	
		Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %	

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Bentley PondPack V8i
[08.11.01.56]
Page 313 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-6

Return Event: 100 years
Storm Event: 10m100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	766.00	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		1.700	766.38	0.869
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		0.400	22.59	0.000
Pond Inflow....	0.000	0.00	0.000	0.00
Pond Outflow...	0.000	0.00	0.000	0.00
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....	0.869	Forward	0.000	Reverse
Pond Outflow...	0.000	Reverse	0.000	Forward
Mass Balance (ac-ft)				
Volume (Initial ICPM)		0.000 ac-ft		
Volume (Total In ICPM)		0.869 ac-ft		
Volume (Total Out ICPM)		0.000 ac-ft		
Volume (Ending)		0.869 ac-ft		
Elevation (Ending)		766.38 ft		
Difference		0.000 ac-ft		
Percent of Inflow Volume (Interconnected Pond Mass Balance)		0.0 %		

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 314 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-6

Return Event: 100 years
Storm Event: 12h100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	766.00	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		12.450	768.51	7.255
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		5.000	21.57	0.000
Pond Inflow....	10.300	1.27	0.000	0.00
Pond Outflow...			0.000	0.00
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....	7.939	Forward	0.000	Reverse
Pond Outflow...	0.000	Reverse	1.861	Forward
Mass Balance (ac-ft)				
Volume (Initial ICPM)		0.000 ac-ft		
Volume (Total In ICPM)		7.939 ac-ft		
Volume (Total Out ICPM)		1.861 ac-ft		
Volume (Ending)		6.075 ac-ft		
Elevation (Ending)		768.29 ft		
Difference		0.003 ac-ft		
Percent of Inflow Volume (Interconnected Pond Mass Balance)		0.0 %		

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 315 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-6

Return Event: 100 years
Storm Event: 15m100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	766.00	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		1.800	766.58	1.302
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		0.400	32.73	0.000
Pond Inflow....	0.000	0.00	0.000	0.00
Pond Outflow...	0.000	0.00	0.000	0.00
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....	1.302	Forward	0.000	Reverse
Pond Outflow...	0.000	Reverse	0.000	Forward
Mass Balance (ac-ft)				
Volume (Initial ICPM)		0.000 ac-ft		
Volume (Total In ICPM)		1.302 ac-ft		
Volume (Total Out ICPM)		0.000 ac-ft		
Volume (Ending)		1.302 ac-ft		
Elevation (Ending)		766.58 ft		
Difference		0.000 ac-ft		
Percent of Inflow Volume (Interconnected Pond Mass Balance)		0.0 %		

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4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 316 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-6

Return Event: 100 years
Storm Event: 18h100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	766.00	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		18.450	768.61	7.797
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		11.700	18.23	0.000
Pond Inflow....	18.500	1.27	0.000	0.00
Pond Outflow...			0.000	0.00
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....	8.540	Forward	0.000	Reverse
Pond Outflow...	0.000	Reverse	2.547	Forward
Mass Balance (ac-ft)				
Volume (Initial ICPM)		0.000 ac-ft		
Volume (Total In ICPM)		8.540 ac-ft		
Volume (Total Out ICPM)		2.547 ac-ft		
Volume (Ending)		5.991 ac-ft		
Elevation (Ending)		768.27 ft		
Difference		0.003 ac-ft		
Percent of Inflow Volume (Interconnected Pond Mass Balance)		0.0 %		

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 317 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-6

Return Event: 100 years
Storm Event: 24h100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	766.00	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		24.400	768.74	8.480
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		15.600	15.17	0.000
Pond Inflow....				0.00
Pond Outflow...		23.150	1.29	0.000
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....		9.512 Forward	0.000 Reverse	
Pond Outflow...		0.000 Reverse	2.227 Forward	
Mass Balance (ac-ft)				
		Volume (Initial ICPM)	0.000 ac-ft	
		Volume (Total In ICPM)	9.512 ac-ft	
		Volume (Total Out ICPM)	2.227 ac-ft	
		Volume (Ending)	7.282 ac-ft	
		Elevation (Ending)	768.51 ft	
		Difference	0.003 ac-ft	
		Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %	

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 318 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-6

Return Event: 100 years
Storm Event: 30m100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	766.00	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		2.100	767.00	2.261
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		0.500	46.43	0.000
Pond Inflow....				0.00
Pond Outflow...		0.000	0.00	0.000
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....		2.261 Forward	0.000 Reverse	
Pond Outflow...		0.000 Reverse	0.000 Forward	
Mass Balance (ac-ft)				
		Volume (Initial ICPM)	0.000 ac-ft	
		Volume (Total In ICPM)	2.261 ac-ft	
		Volume (Total Out ICPM)	0.000 ac-ft	
		Volume (Ending)	2.261 ac-ft	
		Elevation (Ending)	767.00 ft	
		Difference	0.000 ac-ft	
		Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %	

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4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 319 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-6

Return Event: 100 years
Storm Event: 48h100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	766.00	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		48.500	768.88	9.220
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		40.800	8.31	0.000
Pond Inflow....				0.00
Pond Outflow...		52.550	1.30	0.000
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....		10.441 Forward	0.000 Reverse	
Pond Outflow...		0.000 Reverse	1.786 Forward	
Mass Balance (ac-ft)				
		Volume (Initial ICPM)	0.000 ac-ft	
		Volume (Total In ICPM)	10.441 ac-ft	
		Volume (Total Out ICPM)	1.786 ac-ft	
		Volume (Ending)	8.653 ac-ft	
		Elevation (Ending)	768.77 ft	
		Difference	0.003 ac-ft	
		Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %	

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4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 320 of 323

Subsection: Interconnected Pond Routing Summary
Label: DA-6

Return Event: 100 years
Storm Event: 72h100y

Infiltration				
Infiltration Method (Computed)				
No Infiltration				
Initial Conditions			Calculation Tolerances	
Elevation (Starting Water Surface Computed)	766.00	ft	Flow Tolerance (Minimum)	0.000 ft ³ /s
Volume (Starting)	0.000	ac-ft	Maximum Iterations	35
Outflow (Starting)	0.00	ft ³ /s	ICPM Time Step	0.050 hours
		Time to Peak (hours)	Maximum Storage Elevation (ft)	Volume (ac-ft)
		72.450	768.92	9.435
		Forward Flow Peaks Time to Peak (hours)	Flow (Peak) (ft ³ /s)	Reverse Flow Peaks Time to Peak (hours)
		61.200	6.02	6.400
Pond Inflow....				0.00
Pond Outflow...		71.850	1.31	0.002
		Total Volume In Direction Volume (ac-ft)	Total Volume Out Direction Volume (ac-ft)	
Pond Inflow....		11.439 Forward	0.000 Reverse	
Pond Outflow...		0.000 Reverse	2.364 Forward	
Mass Balance (ac-ft)				
		Volume (Initial ICPM)	0.000 ac-ft	
		Volume (Total In ICPM)	11.439 ac-ft	
		Volume (Total Out ICPM)	2.364 ac-ft	
		Volume (Ending)	9.073 ac-ft	
		Elevation (Ending)	768.85 ft	
		Difference	0.003 ac-ft	
		Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %	

17189-Existing Conditions.ppc
4/22/2019

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Bentley PondPack V8i
[08.11.01.56]
Page 321 of 323

Index

1
100 Year Critical Storm (Time-Depth Curve, 100 years)...10, 11, 12, 13, 14, 15, 16,
17, 18, 19, 20, 21, 22, 23, 24
C
COS #1 (Outlet Input Data, 100 years)...211, 212, 213, 214, 215
COS #2 (Outlet Input Data, 100 years)...216, 217
COS #3 (Outlet Input Data, 100 years)...218, 219, 220
COS #4A (Outlet Input Data, 100 years)...221, 222
COS #4B (Outlet Input Data, 100 years)...223, 224
COS #5 (Outlet Input Data, 100 years)...225, 226, 227
COS #6A (Outlet Input Data, 100 years)...228, 229
COS #6B (Outlet Input Data, 100 years)...230, 231
D
DA-1 (Elevation vs. Volume Curve, 100 years)...205
DA-1 (Interconnected Pond Routing Summary, 100 years)...232, 233, 234, 235,
236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246
DA-2 (Elevation vs. Volume Curve, 100 years)...206
DA-2 (Interconnected Pond Routing Summary, 100 years)...247, 248, 249, 250,
251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261
DA-3 (Elevation vs. Volume Curve, 100 years)...207
DA-3 (Interconnected Pond Routing Summary, 100 years)...262, 263, 264, 265,
266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276
DA-4 (Elevation vs. Volume Curve, 100 years)...208
DA-4 (Interconnected Pond Routing Summary, 100 years)...277, 278, 279, 280,
281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291
DA-4 (Unit Hydrograph Summary, 100 years)...25, 26, 27, 28, 29, 30, 31, 32, 33,
34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54
DA-5 (Elevation vs. Volume Curve, 100 years)...209
DA-5 (Interconnected Pond Routing Summary, 100 years)...292, 293, 294, 295,
296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306
DA-6 (Elevation vs. Volume Curve, 100 years)...210
DA-6 (Interconnected Pond Routing Summary, 100 years)...307, 308, 309, 310,
311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321
DA-6 (Unit Hydrograph Summary, 100 years)...55, 56, 57, 58, 59, 60, 61, 62, 63,
64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84
M
Master Network Summary...2, 3, 4, 5, 6, 7, 8, 9
t

to DA-1 (Unit Hydrograph Summary, 100 years)...85, 86, 87, 88, 89, 90, 91, 92,
93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110,
111, 112, 113, 114
to DA-2 (Unit Hydrograph Summary, 100 years)...115, 116, 117, 118, 119, 120,
121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136,
137, 138, 139, 140, 141, 142, 143, 144
to DA-3 (Unit Hydrograph Summary, 100 years)...145, 146, 147, 148, 149, 150,
151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166,
167, 168, 169, 170, 171, 172, 173, 174
to DA-5 (Unit Hydrograph Summary, 100 years)...175, 176, 177, 178, 179, 180,
181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196,
197, 198, 199, 200, 201, 202, 203, 204

LAND USE OPINION APPLICATION

Kane-DuPage Soil and Water Conservation District
2315 Dean Street, Suite 100, St. Charles, IL 60175-4823
(630) 584-7960 Ext. 3

Send report to:

PETITIONER: REVA Development Partners LLC

ADDRESS: 116 W. Illinois St., 7th Floor

Chicago, IL 60654

EMAIL: matt.nix@revadevelopment.com

CONTACT PERSON: Matt Nix

TELEPHONE: 312-464-8800

Please allow 30 days for inspection and processing.

FOR OFFICE USE ONLY

LUO# _____ Date Due _____
Date initially rec'd _____
Date all rec'd _____ Date completed _____
Fee Paid _____ Refund Due _____
By _____ Overpayment _____
_____ No Report Nec _____
_____ Gov't Agency _____

Location:

Township Milton
Section(s) 10 and 11
Township(s) 39 N Range(s) 10 E

TYPE OF PROPOSAL: ☐ Change in Zoning from _____ to _____ Project or Subdivision Name AVERE on Duane
☒ Subdivision or Planned Unit Development (PUD)
☐ Variance-Please describe fully on separate sheet
☒ Special Use Permit-Please describe fully on separate sheet

Unit of Government Responsible for Permits Village of Glen Ellyn Date of Public Hearing _____
Current Use of Site Commercial, residential Proposed Use Multi-Family Residential
Surrounding Land Use Multi-Family Residential, Single family residential, commercial Number of Acres 1.18
Location address (or nearest intersection) Southwest corner of Duane Street and Prospect Avenue

PROPOSED IMPROVEMENTS: (check all applicable items)Planned Structures:

☐ Dwellings w/o Basements
☒ Dwellings with Basements
☐ Commercial Buildings
Other _____

Open Space:

☐ Park/Playground Areas
☒ Common Open Space Areas
Other _____

Water Supply:

☐ Individual Wells
☒ Community Water

Wastewater Treatment:

☐ Septic System
☒ Sanitary Sewers
☐ Other _____

Stormwater Treatment:

☐ Drainage Ditches or Swales
☒ Storm Sewers
☐ Dry Detention Basin
☐ Wet Retention Basin
☒ No Detention Facilities Proposed
☐ Other _____

EXISTING SITE CHARACTERISTICS: (check all applicable items)

☐ Ponds or Lakes ☐ Floodplain ☐ Woodland ☐ Drainage Tiles ☐ Stream(s)
☐ Wetland(s) ☐ Floodway ☐ Cropland ☒ Disturbed Land ☐ Other _____

REQUIRED: INCLUDE ONE COPY EACH OF THE FOLLOWING-Processing will not begin without the following:

- ☐ APPLICATION completed and signed
☐ FEE according to schedule below
☐ PLAT OF SURVEY/SITE PLAN showing legal description, legal measurements
☐ SITE /CONCEPT PLAN showing lots, streets, storm water detention areas, open areas, etc.
☐ LOCATION MAP (if not on maps above)-include distances from major roadways or tax parcel number

IF AVAILABLE - NOT REQUIRED:

- ☐ ZONING or LAND USE PETITION filed with unit of government (if relevant)
☐ TOPOGRAPHY MAP OR WETLANDS DELINEATIONS

FEE AMOUNTS: last updated November 1, 2013

\$423.00 for **1 - 3 acres** or fraction thereof

\$459.00 for **4 - 5 acres** or fraction thereof

For **5 - 200 acres** see chart

> **200 acres:** ADD \$14.00 for each additional acre or fraction thereof over the 200 acre amount.

\$65.00 processing fee if no report is required

***If there is more than one parcel in question and they are non-contiguous please contact KDSWCD for fee amount. ***

MAKE CHECKS PAYABLE TO: Kane-DuPage Soil and Water Conservation District

I (we) understand the filing of this application allows the authorized representative of the Kane-DuPage Soil and Water Conservation District to visit and conduct an evaluation of the site.

Petitioner or Authorized Agent _____

Date 1/21/19

This opinion will be issued on a nondiscriminatory basis without regard to race, color, religion, sex, age, marital status, handicap, or national origin.

Revised November 1, 2013

Avere on Duane						
ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors
1		AVERE ON DUANE				
2		Construction Schedule				
3		6.10.19				
4		Site Development	321 days	Fri 7/5/19	Fri 9/25/20	
5		Permitting Process	36 days	Fri 7/5/19	Fri 8/23/19	
18		Demolition & Construction Staging	36 days	Mon 8/19/19	Mon 10/7/19	
19		Site tree clearing and bldg prep for demo	4 days	Mon 8/19/19	Thu 8/22/19	
20		Demolition	10 days	Fri 8/23/19	Thu 9/5/19	19
21		Grade for geopiers	2 days	Fri 9/6/19	Mon 9/9/19	20
22		Geo-Pier soil stabilization	10 days	Tue 9/10/19	Mon 9/23/19	21
23		Underground Utilities - San, Water & Storm	6 days	Tue 9/24/19	Tue 10/1/19	22
24		Dry Utility Sleeving	2 days	Wed 10/2/19	Thu 10/3/19	23
25		Cement Stabilization	2 days	Fri 10/4/19	Mon 10/7/19	24,23
26		Parking Lot/Driveway Staging area for construction	2 days	Tue 9/24/19	Wed 9/25/19	22
27		Parking lot improvements	33 days	Wed 8/12/20	Fri 9/25/20	
28		Subgrade for walks, curbs, lot	2 days	Wed 8/12/20	Thu 8/13/20	46
29		Street lighting	3 days	Fri 8/14/20	Tue 8/18/20	28
30		Concrete Curbs and Sidewalks	10 days	Mon 8/17/20	Fri 8/28/20	29
31		Subgrade prep/stone/permeable paver lot	10 days	Mon 8/31/20	Fri 9/11/20	30
32		Topsoil respread/landscape/fencing	10 days	Mon 9/14/20	Fri 9/25/20	31
33		Vertical	384 days	Wed 7/24/19	Mon 1/11/21	
34		Building Permit Submittal Process	40 days	Wed 7/24/19	Tue 9/17/19	
35		Podium Building	338 days	Thu 9/26/19	Mon 1/11/21	
36		Foundation Excavation	5 days	Thu 9/26/19	Wed 10/2/19	26
37		Footings, Foundations, Walls and Stone	25 days	Thu 10/3/19	Wed 11/6/19	36
38		Foundation Precast	15 days	Thu 11/7/19	Wed 11/27/19	37
39		Mechanicals	12 days	Thu 11/28/19	Fri 12/13/19	38
40		Concrete Slab	4 days	Mon 12/16/19	Thu 12/19/19	39
41		Masonry (Elevator, stairwell, mechanical)	10 days	Fri 12/20/19	Thu 1/2/20	40
42		Concrete Topping	4 days	Fri 1/3/20	Wed 1/8/20	41
43		Framing	16 wks	Thu 1/9/20	Wed 4/29/20	42
44		Mechanicals	55 days	Thu 3/26/20	Wed 6/10/20	43FS-25 days
45		Insulation	30 days	Thu 4/30/20	Wed 6/10/20	44FS-30 days
46		Drywall / HVAC	70 days	Thu 5/14/20	Wed 8/19/20	45FS-20 days
47		Interior Trim	70 days	Thu 6/25/20	Wed 9/30/20	46FS-40 days
48		Punch Work Village Acceptance	70 days	Tue 8/4/20	Mon 11/9/20	47FS-42 days
49		Completion Window	45 days	Tue 11/10/20	Mon 1/11/21	48
50		Project Substantial Completion	1 day	Tue 1/12/21	Tue 1/12/21	49
51						
52		Note: Schedule subject to change based on final village approvals, closing date, permit issuance, and weather delays beyond contractor's control				

AVERE ON DUANE- DEVELOPER DONATIONS							
Unit Type	Unit Mix	Glen Ellyn	School	H.S. District 87	Fire Company	Library	TOTAL
		Park District	District 41				
1 BR	8	2,900.70	17.00	-	500.00	364.68	30,259.04
2 BR	40	3,158.10	714.00	250.76	500.00	729.36	214,088.80
SUBTOTAL	48	149,529.60	28,696.00	10,030.40	24,000.00	32,091.84	244,347.84
Developer Donation Reduction*		(100,000.00)					(100,000.00)
TOTAL	48	49,529.60	28,696.00	10,030.40	24,000.00	32,091.84	144,347.84

* Per June 18, 2018 TIF Request as presented to the Village Board, REVA has requested developer donations be reduced by \$100,000 to assist in controlling project costs

Kelly Purvis

From: Staci Springer
Sent: Thursday, June 06, 2019 11:55 AM
To: Kelly Purvis
Subject: FW: AAvere on Duane

Please include in PC Packet. Thanks.

Staci

-----Original Message-----

From: Mary Prescott [mailto:pres1535@gmail.com]
Sent: Wednesday, June 5, 2019 10:36 AM
To: Staci Springer
Subject: AAvere on Duane

To whom it may concern,

I have been a resident and home owner in Glen Ellyn for 30 years. I also managed a small business in Glen Ellen's downtown area for ten years.

After looking at the plans for the condos on Duane, I think the location is perfect for many reasons.

1. Aesthetically it will improve the neighborhood
2. Our village is losing the 50 somethings who are downsizing to villages like Elmhurst who are building multiple condos like these in their downtown area.
3. God know Glen Ellyn can use help with our increasing taxes
4. A majority of residents buying there will utilize the fact that they can walk to run most of their errands ..which is the draw for condos built in downtown areas. Which will not increase congestion in the downtown area.

I would appreciate if you can forward my comments to the elected official in charge of this project, since I will not be at the public hearing on July 13th.

Thank you,
 Mary Prescott

Attachment: 29. Public Comment (received prior to packet upload) (4023 : Avere on Duane - PUD, SUP, ZMA, SV)