

**AGENDA  
PLANNING COMMISSION MEETING  
CITY OF SHOREVIEW**

**DATE: May 22, 2018  
TIME: 7:00 PM  
PLACE: SHOREVIEW CITY HALL  
LOCATION: 4600 NORTH VICTORIA**

- 1. CALL TO ORDER**  
**ROLL CALL**  
**APPROVAL OF AGENDA**
  
- 2. APPROVAL OF MINUTES**  
*April 24, 2018*
  
- 3. REPORT ON CITY COUNCIL ACTIONS**  
*Meeting Date: May 7, 2018 and May 21, 2018*  
*Brief Description of Meeting process- Chair John Doan*
  
- 4. OLD BUSINESS**  
  
**A. PUBLIC HEARING - PRELIMINARY PLAT\***  
*FILE NO: 2689-18-9*  
*APPLICANT: Sean Keatts*  
*LOCATION: 4140 Hodgson*
  
- 5. NEW BUSINESS**  
  
**A. MINOR SUBDIVISION\* - STANDARD VARIANCES**  
*FILE NO: 2691-18-11*  
*APPLICANT: Scott Deming*  
*LOCATION: 821 Tanglewood*
  
- 6. MISCELLANEOUS**  
  
**A. City Council Meeting Assignments**
  - *June 4, 2018 - Peterson*
  - *June 18, 2018 - Yarusso*  
**B. Pet boarding/kennels in the Industrial Zoning District**
  
- 7. ADJOURNMENT**

*\* These agenda items require City Council review or action. The Planning Commission will hold a hearing, obtain public comment, discuss the application and forward the application to City Council. The City Council will consider these items at their regular meetings which are held on the 1<sup>st</sup> or 3<sup>rd</sup> Monday of each month. For confirmation when an item is scheduled at City Council, please check the City's website at [www.shoreviewmn.gov](http://www.shoreviewmn.gov) or contact the Planning Department at 651-490-4682 or 651-490-4680*

**SHOREVIEW PLANNING COMMISSION  
MEETING MINUTES  
April 24, 2018**

**CALL TO ORDER**

Chair Doan called the April 24, 2018 Shoreview Planning Commission meeting to order at 7:02 p.m.

**ROLL CALL**

The following Commissioners were present: Chair Doan; Commissioners Anderson, Peterson, Riechers, Solomonson, and Yarusso.

Commissioner Wolfe was absent.

**APPROVAL OF AGENDA**

**MOTION:** by Commissioner Peterson, seconded by Commissioner Riechers to approve the April 24, 2018 Planning Commission meeting agenda as submitted.

**VOTE:**      **AYES:**        **Anderson, Peterson, Riechers, Solomonson, Yarusso, Doan**  
                  **NAYS:**         **None**  
                  **ABSENT:**      **Wolfe**

**APPROVAL OF MINUTES**

**Minutes of March 27, 2018 Commission Meeting Minutes**

Page 1: Commissioner Solomonson should not be listed as voting approval of the January 9, 2018 Planning Commission workshop minutes. He abstained.

Page 3: Third paragraph should read: "...conflicts regarding the retaining wall should..."

**MOTION:** by Commissioner Solomonson, seconded by Commissioner Anderson to approve the March 27, 2018 Planning Commission meeting minutes as corrected.

**VOTE:**      **AYES:**        **Anderson, Peterson, Riechers, Solomonson, Yarusso, Doan**  
                  **NAYS:**         **None**  
                  **ABSENT:**      **Wolfe**

## **REPORT ON CITY COUNCIL ACTIONS**

City Planner Castle reported that the City Council approved the following at its April 16th meeting as recommended by the Planning Commission:

- Minor Subdivision at 5885 Oxford Street submitted by Paul Elgersma
- Ordinances 961 and 962, Text Amendment: Chapter 200, Refuse Containers and Administrative Citations

## **NEW BUSINESS**

### **PUBLIC HEARING - VARIANCE, PRELIMINARY PLAT\***

**FILE NO: 2689-18-09**  
**APPLICANT: SEAN KEATTS**  
**LOCATION: 4140 HODGSON ROAD**

#### **Presentation by Aaron Sedey**

The property is located between Hawes and Demar and consists of 3.67 acres. It is currently developed with two single family homes and numerous accessory structures. The application is to split the parcel into eight single family residential lots. A variance is requested for key lot standards on Lots 4 and 5. The property is zoned R1, Detached Residential. All adjacent properties are zoned R1 with single family homes and designated for low density residential.

Access is provided by a public street extending east from Hodgson Road and lines up with Floral Drive to the west. The access road is approximately 306 feet long and terminates in a cul-de-sac. Hodgson Road is a minor arterial road under Ramsey County jurisdiction.

The proposed lots meet the City's minimum standards for the R1 District. Lots 4 and 5 are considered key lots because the side lot lines abut the rear lot line of the adjoining parcels to the east. A variance is required because the lots do not meet the minimum 90-foot width required for a key lot. A minimum 20-foot side yard structure setback is imposed on the key lots.

Storm water flows north. The Stormwater Management Plan was reviewed by the Ramsey-Washington Metro Watershed District. The existing infiltration basin does not have an outlet and is a significant concern of the City and Watershed District. The City would assume ownership of this basin after development. Since there is no outlet, the City would need to adopt an emergency response plan to address potential flooding of adjacent homes. The City's Public Works Department does not support the proposed Storm Water Management Plan because of the potential flooding liability.

The density allowed in the R1 District is 4 units per acre. The proposed density is 2.18 units per acre.

There are an estimated 30 landmark trees that will be removed. Removal of landmark trees requires a replacement ratio of 6 replacement trees for every 1 landmark tree removed.

Staff believes the proposed single family residential subdivision is a reasonable use of the property, but there are concerns with the design and key lot width variances for Lots 4 and 5.

There may be unique circumstances related to the land—shape, size, surrounding development pattern—but the need for the variance is tied to the subdivision design an number of parcels. If the variance is granted, the character of the neighborhood will not be changed.

Notice of the public hearing was published in the City’s legal newspaper and mailed to property owners within 350 feet. Two resident comments were received opposing the subdivision and citing concerns about drainage and concerns about the key lots 4 and 5. The Watershed District expressed concern about the proposed infiltration basin with no outlet that would require an emergency response plan to be adopted by the City. The City Department of Public Works agrees with the Watershed District. Ramsey County supports the road placement. A 50-foot right-of-way is required. Permits will be needed for any improvements in the right-of-way.

Staff finds that the proposal generally complies with the zoning and subdivision. Staff supports the proposed investment and redevelopment of the property for detached residential homes. However, given the concerns of the Watershed District and Public Works Department regarding the issues with the potential key Lots 4 and 5, staff is does not support the plan at this time.

Staff recommends this matter be tabled to allow the applicant time to address stormwater issues.

Commissioner Riechers asked if staff has a preferred plan for drainage. Mr. Sedey responded that the applicant is working with the Watershed District on the issue.

Commissioner Solomonson asked if Lot 5 would be buildable with the required 20-foot setback. Mr. Sedey explained that there are many house designs that could be used in the allowed buildable area.

**Mr. Sean Keatts**, 1475 18th Avenue NW, New Brighton, stated he will answer any questions. He stated that he believes Lot 5 is buildable with the setbacks.

Commissioner Peterson asked if there would be options to move lot lines to widen Lots 4 and 5.

**Mr. Keatts** answered that the surveyor worked to make sure all the lots met the required 75-foot width. Commissioner Peterson asked about an outlet for the storm water basin. **Mr. Keatts** stated that his consultant is working with the Watershed District. There will be a meeting with the City and Watershed District to work out this issue. Commissioner Peterson noted the removal of landmark trees and asked if additional trees can be preserved. **Mr. Keatts** stated that the trees marked for removal are based on the survey. Depending on how plans are designed, he anticipates saving as many trees as possible.

Chair Doan asked the time line for this project and size of homes. **Mr. Keatts** answered that it depends on working out the issues with the City. He would hope that construction could begin within a couple months. The square footage of the homes would be approximately 3500 square feet. The houses will fit in the neighborhood with nice curb appeal that people would like. He also worked on the development at 1075 Sherwood.

Commissioner Peterson referred to the soil borings and asked if storm water will have to sit a period of time or infiltrate quickly. **Mr. Keatts** responded that it is his understanding that the soil is more sand than clay.

City Attorney Kelly stated that proper notice was given for the public hearing.

Chair Doan opened the public hearing.

**Mr. Ryan Olson**, 4141 Rustic Place, stated that he understands change will come and he is not opposed to the development. His concern is the key lots. Under City Code, key lots are discouraged. Builders should stay within City guidelines. If Lots 4 and 5 don't fit, they do not fit. The City website indicates the new homes will sell in the \$600,000 range. People who buy those lots will want larger yards. Six lots will fit. It does not make sense to squeeze more houses in.

**Mr. Steve Kerrigan** stated that he owns the property at 238 Hawes. It is a rental property now, but he plans to move in and use it for a retirement home. A primary concern is the water issue. There will be a tremendous amount of fill brought in. His property on Hawes sits at the lowest elevation in the neighborhood and will be more so with the basin that does not drain. He has already experienced flooding on his driveway. There has also been pooling in front of his house at least three times in the last 10 years with water at 2 and 3 feet. Whose responsibility is it if flooding occurs? He is pleased to see single family residential development, but his lot will suffer.

**MOTION:** by Commissioner Solomonson, seconded by Commissioner Riechers to close the public hearing at 7:35 p.m.

**VOTE:**       **AYES:**        **Anderson, Peterson, Riechers, Solomonson, Yarusso, Doan**  
                  **NAYS:**        **None**  
                  **ABSENT:**     **Wolfe**

Commissioner Peterson noted that the flooding referred to by Mr. Kerrigan is since the reconstruction of Hawes. He asked if the City has any reports of flooding on Hawes. Mr. Sedey explained that there used to be a storm water sewer pipe along property lines, but the City did not have easement access to it so it was taken out. When the pipe was removed, water began to pool. Drains can clog which is also an issue. He will refer it to Public Works to review the drainage again.

Commissioner Anderson asked if there is a workable solution. Mr. Sedey answered that is what the Watershed District and the developer are looking into.

Commissioner Peterson noted that in another development credit was given for the size tree planted. There is little buffering to the north and east. He asked if the location of tree planting can be stipulated. Ms. Castle stated that a condition can be included as to where more landscaping should be added. At this time Landscape Plan has not been submitted.

Commissioner Solomonson stated that with the fill being brought in the front will be 924 and the back at 916, an 8 foot difference. He asked if the building height would be based on the front yard elevation. Ms. Castle answered, yes, from the front to the midpoint of the roof.

Commissioner Solomonson stated that the back will appear higher from neighboring rambler homes. He asked if there is any concern about the placement of homes in relation to future County road and trail improvements. Mr. Sedey stated that the County does not have plans at this time. The County made no comments about house and building pad locations.

Commissioner Solomonson stated that Lot 5 is the smallest lot with the biggest need for additional setback from neighbors. He would like to see Lot 5 reconfigured to not need a

variance. The homes could appear to be 43 feet in height from the back and very high being adjacent to surrounding 1950s ramblers. He is concerned about potential flooding.

Commissioner Yarusso stated that she understands the economic incentive to develop eight lots rather than six. But creating eight lots raises problems the Commission is asked to solve. If there were six lots, there would be no need for a variance, more trees might be saved, and possibly a location for the outlet to solve the drainage problem could be found. She supports tabling this matter to try to solve these problems.

Commissioner Riechers stated that her concerns, too, are density, the size of Lot 5 and drainage. Work needs to be done with the Watershed District to find a suitable outlet for drainage.

Commissioner Peterson stated that there are a number of options and he would not be inclined to support a variance. There could be smaller lots with smaller homes. The height of the new homes will be substantially different which creates a need for additional setback.

Commissioner Anderson agreed with other Commissioner comments. He questioned whether Lot 5 would be a viable lot with a 20-foot setback and only one variance. He would anticipate the need for another variance in the future.

Chair Doan stated he would also be open to more creativity to make sure this plan fits as closely as possible within City guidelines. He would accept staff's recommendation to table this item for further analysis and work and extend the review period from 60 to 120 days.

**MOTION:** by Commissioner Solomonson, seconded by Commissioner Yarusso to table the Preliminary Plat and variances submitted by Sean Keatts and Builders, 4140 Hodgson Road to a future Planning Commission meeting to allow time for the applicant to review possibilities to alter the storm water issues and potential key lots for a Planning Commission decision, and the review period shall be extended from 60 to 120 days.

**VOTE:**       **AYES:**        **Anderson, Peterson, Riechers, Solomonson, Yarusso, Doan**  
                  **NAYS:**        **None**  
                  **ABSENT:**     **Wolfe**

City Attorney Kelly asked if this item will be brought to the next Planning Commission meeting. Ms. Castle stated that she expects this plan will be revised and when next reviewed, new notices will be sent and published for the public hearing.

**PUBLIC HEARING - COMPREHENSIVE PLAN AMENDMENT, PRELIMINARY PLAT, PLANNED UNIT DEVELOPMENT-DEVELOPMENT STAGE\***

**FILE NO:**           **2690-18-10**  
**APPLICANT:**      **JPL Development**  
**LOCATION:**         **0 Rice Creek Parkway – PIN: 043023230002**

**Presentation by Niki Hill, AICP, Economic Development and Planning Associate**

The Comprehensive Plan Amendment application is to change the land use from O, Office to MU, Mixed Use with residential and commercial uses. The Preliminary Plat divides the property

into four parcels to be developed in two phases with multi-family residential apartments, townhomes and an outlet for future commercial development. Two parcels will be for the apartment complex. One parcel is for townhomes and the fourth parcel will be held vacant for future commercial development. The proposed Preliminary Plat complies with the City's subdivision standards.

The property consists of 18.54 acres and is the final vacant parcel in the Rice Creek Corporate Park, which was developed by Wispark as a mixed use PUD that includes residential, retail, business park and office uses. This parcel is designated for office use, which was anticipated when the PUD for the corporate park was approved in 1999.

Concept plans were reviewed by the Planning Commission and City Council. At that time a number of items were requested to be addressed, including parking, development density, traffic, buffer from traffic noise, proximity to services and site design. The land use change to residential would mean medium density residential across from existing medium density residential. This would have the least impact to adjacent properties. The underlying zoning within the PUD shows Lot 1 as Medium Density Residential, Lots 2 and 3 as High Density Residential and Lot 4 as Commercial.

Staff believes this development will help meet the goals of the Housing Chapter 7 of the Comprehensive Plan. The Economic Development Authority (EDA) has identified this parcel in their 2016/2017 work plan and calls for continued efforts to determine future development options. Shoreview's Housing Action Plan recognizes the need for new rental housing opportunities to expand housing choice in the City and attract younger households.

This proposal meets PUD objectives of high quality building design, improved storm water management, housing choice and land use compatibility. Code flexibility is required for the proposed apartments in regard to building height, structure setbacks and parking. Lot 1 with townhome development meets height and setback requirements. The apartment buildings on Lots 2 and 3 are designed as 4 stories at a height of 48.9 feet. The maximum height allowed is 35 feet. The maximum height allowed can be exceeded if there is firefighting capability, and if an additional 1 foot of setback is provided for every additional foot of height over 35 feet. Heights of other apartment complexes in the City range from 41.5 feet to 78.5 feet. Country Inn Suites, located in the northwest corner of the Corporate Park, has a height of 56 feet.

The proposed height of 48.9 feet requires a setback of 43.9 feet on all sides. Staff believes that reduced building setbacks are appropriate given adjoining land uses and cross use easements for the areas where the deviations occur. The proposed deviations will not negatively impact views from public streets or adjoining properties.

There are some concerns about the parcel for commercial use. The centralized location of the parcel along Rice Creek Parkway may not be an ideal location for all types of commercial uses allowed by Code. Allowable uses will be defined in the Development Agreement to ensure that the future use of the parcel is compatible with the residential uses.

Parking exceeds the requirement by 37 stalls for Lot 1, Medium Density townhomes. Underground parking is provided for Lots 2 and 3 with 57 surface parking stalls in Phase 1 and 44 surface parking stalls in Phase 2. The total number is 517 parking stalls, a ratio of 1.65 stalls per unit, which is less than the ratio of 2.5 stalls per unit required by the City. The City's ratio requires a total of 780 parking stalls with 312 stalls enclosed. Shared parking is expected with the cross easements on the development. There are 48 stalls shown in proof of parking with 24 future surface stalls on each of Lots 2 and 3, if needed.

Separate clubhouses are proposed for both the townhomes and apartments. Both will have pools. A playground structure is planned as well as a dog park and walkways. Under zoning codes of R2 and R3, accessory structures except garages are not allowed. Staff believes the deviations are acceptable. Other residential developments have clubhouses, and they will enhance the development.

Impervious surface coverage is limited to 65% for multi-family residential use and commercial park use. Medium density is limited to 55%. Proposed impervious surface on all lots is less than the maximum allowed. The project is located within the Rice Creek Watershed District. A regional stormwater basin was sized to handle runoff from the site. Stormwater service stubs are located at the property line in various locations. On-site stormwater treatment must meet the requirements of Rice Creek Watershed District. The Public Works Department has submitted comments on the Watershed District permits required, stormwater, utilities and traffic.

The architectural design for the apartments is two 4-story buildings at a height of 48.9 feet. The townhomes are two stories with attached garages. Garden units are two stories with garages underneath. The back side of the garage on garden units will have window/false windows to help break up the visual wall appearance to the freeway. Exterior building materials include brick, centurion stone, James Hardie lap siding and panels.

The site requires an Environmental Assessment Worksheet (EAW) because over 150 units are proposed, and a Comprehensive Plan Amendment is requested. The developer will complete the EAW and submit it to the Environmental Quality Board for review, after which the City will determine whether or not an Environmental Impact Statement (EIS) is required.

One written comment was received expressing concerns about how this development will impact their property, the Rice Creek Waterway and trail access. These concerns include stormwater drainage management of the site.

The Building Official has concerns about the clubhouse for the apartments being located on the property line because of possible building code implications. This must be addressed prior to the final PUD application.

Lake Johanna Fire Department has stated that the developer should verify fire apparatus access roads, turning radius of cul-de-sacs, and that roads meet minimum standards of the Minnesota Fire Code.



Staff finds that the proposed development is consistent with Shoreview's land use and housing policies and meets the criteria for the Comprehensive Plan Amendment, Preliminary Plat and PUD. Medium and high density multi-family residential will benefit the community and nearby employment centers. Staff is recommending the Planning Commission hold the public hearing and forward a recommendation to the City Council for approval of the applications with the conditions listed.

Commissioner Solomonson referred to a letter received from the Mn/DOT regarding noise standards and residential development possibly too close to the freeway.

Commissioner Yarusso noted that the noise studies by the stated have been done along this area of the freeway, and this portion is not part of a noise wall project. There are insufficient funds to build noise walls in the places identified. The rule is to avoid creating a situation that does not now exist. The noise issue will have to be addressed on the property because it will not be addressed by Mn/DOT. Ms. Castle noted that noise is part of the EAW that must be completed. Commissioner Yarusso stated that she will be looking to see if the EAW differentiates noise as a result of the development and noise coming into the development from the freeway.

Commissioner Peterson stated that the watershed permit process and EAW may bring up additional issues. His concern is whether the Planning Commission would be able to review revisions that are required. Ms. Hill responded that the conditions of approval include being able to obtain a watershed permit. If revisions have to be made to get the permit, the plan would come back to the Planning Commission. Ms. Castle stated that a condition can be added that the EAW must be submitted according to state rules. If issues arise from the EAW, which requires an EIS, those issues must be resolved prior to final approval action by the City.

Commissioner Riechers asked if other developments have had similar parking constraints and fewer parking stalls allowed than required by Code. Ms. Hill answered that the two most recent apartment developments were approved without meeting the City's parking standard. The City's requirement of 2.5 parking stalls per unit is a high standard in comparison to other communities.

Commissioner Solomonson asked how this site would be connected to the trail and the location of crosswalks. Ms. Hill showed a pathways that along the southern border of the site and along Rice Creek Parkway that connect to trails and two existing crosswalks. No additional crosswalks are planned.

**Mr. El Tinklenberg**, Representative for JPL, thanked the owners of Children's Hospital who have conscientiously studied the issues raised at the Concept Stage Review. Two neighborhood meetings have been held, which are extremely important to build a relationship. Two further meetings are planned, one for the construction schedule and one to know who contact people are after the project is built. JPL builds the project to own and manage it. He introduced the development team: Brian Wood, Civil Engineer with Westood; John Porta, JPL; Rod Jones, JPL; Mike Lang, JPL; Chuck Rietzel, Architect; Tom

**Mr. Wood** noted the addition of carriage houses to provide more of a buffer from the freeway, and the density of the townhomes has been reduced. The parking ramp was removed and

underground parking added. A trail was added along the perimeter of the development. The townhomes are closer to Rice Creek Parkway and a street in front of the townhomes removed. The apartment buildings are separated. There are carriage homes on that site as well.

**Mr. Wood** stated that the downstream regional pond was constructed to handle runoff from this site. However, since the rules have changed, there may be mitigation that has to be done on-site to handle water. A meeting was held with Mn/DOT, when berms and fencing were discussed. There is no anticipation of a noise wall.

Commissioner Anderson asked the reason there are two parcels for the apartment buildings. **Mr. Tinklenberg** answered that the lot lines were placed in order to finance each part of the project separately. If there is an issue, it can be adjusted.

Chair Doan asked if the clubhouse and pool would be built with the first apartment building or second one. **Mr. Porta** answered that the clubhouse will mainly serve the townhomes. The clubhouse for apartments will be in each building. The pool will be built with the first phase. **Mr. Tinklenberg** added that all utility work will be done in the first phase.

Commissioner Riechers asked if affordable housing units are being considered. **Mr. Tinklenberg** stated that there are discussions with staff. Ramsey County was approached for funding, but the affordable housing funding provided by the County has already been used for 2018. JPL has committed to providing affordable units on their own. Rents for affordable units have not yet been set.

Commissioner Anderson asked if more than four affordable units could be added by applying for County funds in 2019. **Mr. Tinklenberg** explained by 2019, financing will be set. JPL is offering to equal what would have been provided by Ramsey County. **Mr. Lang** noted that the total project value is approximately \$90 million, and the County's \$300,000 would dominate. It is more efficient to dedicate four units at 75% of market rate rent.

Commissioner Solomonson asked if there are trees or other features in the courtyard. **Mr. Porta** stated that there will be astro turf, plantings, fire pits, gazebos and seating areas. Planters may be provided for tenants to grow their own gardens.

Chair Doan noted the good improvements made with trails and green space. He appreciates the fact that JPL is willing to provide four affordable units. However, four units out of 368 total, is only 1%. He asked if it would be possible to stretch that further to more units. This is the largest site left in Shoreview and there is concern that every factor be considered. **Mr. Tinklenberg** stated that there is an openness on the part of JPL to consider more affordable units.

Chair Doan asked if other state funding has been explored for affordable units. **Mr. Tinklenberg** answered, no, but JPL is open to doing that. Ms. Castle commented that in discussions with the County staff was advised that this project would have a difficult time accessing state funding for affordable units. She further noted that because there is no public financing, the City has no authority to attach conditions regarding affordable units, although JPL is certainly aware that this is an important factor for the City.

Commissioner Peterson asked how snow removal and storage will be handled. **Mr. Wood** answered that the specific areas will be delineated with the Final Plat. There are perimeter areas that can be used.

Chair Doan stated that the number of affordable units is a sticking point for him, but he will vote to move the project forward.

**MOTION:** by Commissioner Peterson, seconded by Commissioner Solomonson to recommend the City Council approve the Comprehensive Plan Amendment, Preliminary Plat, and PUD – Development Stage applications submitted by JPL Development, LLC for the 0 Rice Creek Parkway. The proposal includes the development of 68 townhomes, 300 apartment units and a future commercial lot. Said approvals are subject to the following conditions:

*Comprehensive Plan Amendment*

1. The amendment changes the land use designation from O, Office to MU, Mixed Use.
2. Environmental Assessment Worksheet must be completed. After their review, the City will then make a determination as to whether or not an Environmental Impact Statement is required.
3. Review and approval of the amendment by the Metropolitan Council.
4. The amendment will not be effective until the City grants approval of the Final Plat and PUD - Final Stage requests and the development agreements are executed.

*Preliminary Plat*

1. A public use dedication fee shall be submitted as required by ordinance prior to release of the final plat by the City.
2. The Final Plat shall be submitted to the City for approval with the Final Stage PUD application.
3. The Declaration of Easements, Restrictions, Covenants and Conditions shall be amended to reflect the changes in land use, parking and impervious surface coverage for each lot within the Plat. This Declaration shall be submitted to the City Attorney for review and approval prior to the release of the Final Plat. Executed and recorded copies of the Declaration shall be submitted to the City.
4. Drainage and Utility Easements shall be dedicated over the stormwater ponding areas. Other drainage and utility easements shall be provided over the proposed stormwater management areas, infiltration basins and as required by the Public Works Director.

*Planned Unit Development – Development Stage*

1. This approval permits the development of a townhome development on Lot 1, a multi-family residential apartment complex that will be constructed in two phases on Lots 2 and 3, and a future commercial use on Lot 4. The apartment complex will consist of 2 separate apartment buildings and 12 garden units; each apartment building will be 4-stories in height with about 150 apartment units between the two buildings. Parking shall be provided on-site in an underground parking structure and surface parking lot.

2. The items identified in the City Engineer's memo dated April 16 shall be addressed in the Final PUD submittal.
3. A Phasing Plan shall be submitted with the Final PUD application and shall include the construction schedule and development activities for each phase.
4. Approval of the final grading, drainage, utility, and erosion control plans by the Public Works Director is required, prior to submittal to the issuance of a building permit. Final plans shall identify site construction limits and the treatment of work (i.e. driveways, parking areas, grading, etc.) at the periphery of these construction limits.
5. The developer shall secure a permit from the Rice Creek Watershed District prior to commencing any grading on the property.
6. Declaration of Easements, Restrictions, Covenants and Conditions are required and shall identify the permitted land uses and shared parking within the PUD. This Declaration shall be submitted to the City Attorney for review and approval prior to the release of the Final Plat. Executed and recorded copies of the Declaration shall be submitted to the City.
7. The proposed apartment housing structures shall be of a 4-story design and include the architectural enhancements and high-quality building materials as identified as depicted on the plans submitted with this application. The structure shall not exceed the 48'9"-foot height as identified in this report and on the submitted plans.
8. The applicant is required to enter into agreements related to the subdivision, site development and erosion control. Said agreements shall be executed prior to the issuance of any permits for this project. The agreement shall address:
  - a) Construction management and nuisances that may occur during the construction process, including on-site parking for contractors. No parking is permitted on Rice Creek Parkway or the adjacent neighborhood streets of Bluestem and Prairie Ridge Drive.
  - b) Landscape maintenance
  - c) Maintenance of stormwater management facilities
9. This approval shall expire after two months if the Planned Unit Development - Final Stage application has not been submitted for City review and approval, as per Section 203.060 (C)(6).

This approval is based on the following findings:

1. The proposed Comprehensive Plan Amendment changing the land use to MU, Mixed Use in order to permit a mixed use development, primarily residential is consistent with the policies of the Comprehensive Plan related to land use and housing.
2. The proposed development of the site will not adversely impact the planned land use of the surrounding property.
3. The development supports the City's goals for creating and maintaining a well-balanced community that provides life-cycle and affordable housing with a diverse mix of housing types and values.

Discussion:

Chair Doan asked if there should be a condition related to state noise standards and appropriate mitigations measures are included. City Attorney Kelly responded that condition is not

necessary because the state rules require the local municipality to insure that developments not compatible with noise rules are placed in violation of those rules.

Commissioner Solomonson asked if the Planning Commission will review the future proposal for the commercial site. Ms. Castle explained that the Development Agreement will specify uses for Lot 4. When development plans are submitted, there will a Planning Commission review.

**VOTE:**       **AYES:**       **Anderson, Peterson, Riechers, Solomonson, Yarusso, Doan**  
                  **NAYS:**       **None**  
                  **ABSENT:**   **Wolfe**

**MISCELLANEOUS**

**Council Meetings:** Commissioner Anderson will attend the May 7, 2018 City Council meeting, when planning items will be considered. Commissioner Peterson will attend the June meeting in place of Chair Doan.

**Workshops:** Planning Commission workshops are scheduled for May 1st and May 8<sup>th</sup>.

**Training:** Ms. Castle reported contact with the Government Training Service who would be willing to do a customized training program in June or July. No specific date or topic has been set. The subject will have to do with the Planning Commission’s role in processing land use applications.

Chair Doan also asked for better understand the public engagement process. Ms. Castle suggested a second training on teamwork, when public engagement can be considered.

**ADJOURNMENT**

**MOTION:**   by Commissioner Yarusso, seconded by Commissioner Anderson to adjourn the meeting at 9:14 p.m.

**VOTE:**       **AYES:**       **Anderson, Peterson, Riechers, Solomonson, Yarusso, Doan**  
                  **NAYS:**       **None**  
                  **ABSENT:**   **Wolfe**

ATTEST:

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Kathleen Castle  
City Planner

**TO:** Planning Commission  
**FROM:** Aaron Sedey, Associate Planner  
**DATE:** May 17, 2018  
**SUBJECT:** Preliminary Plat (Major Subdivision), 4140 Hodgson Road, Sean Keatts, File No. 2689-18-09

### **INTRODUCTION**

This is a continuation from the April 24, 2018 Planning Commission. Sean Keatts of Cara Builders LLC submitted a Preliminary Plat (Major Subdivision) application to subdivide and develop the property at 4140 Hodgson Road into 8 lots for single-family detached homes. Variances are no longer requested for two key lots that are lacked the required width since they now meet the required width.

A proposed public street that terminates in a cul-de-sac will be constructed to provide access. There are two existing single family homes that will be removed along with numerous accessory structures. Stormwater runoff is proposed to be managed with an infiltration basin. Municipal water and sewer will be installed by the applicant and provide services to each parcel.

### **SITE CHARACTERISTICS**

The property has an area of 3.6 acres and is located on the east side of Hodgson Road. The property is currently developed with two legal nonconforming single-family homes with detached garage, and accessory structures. Access to the property is from Hodgson Road. Vegetation on the site consists of open areas with grasses and wooded areas with heavy tree coverage on the western and southern property lines. The property is currently served by a septic system.

The surrounding property is developed with detached single family dwellings that are generally one-story in height. The area was principally developed in the 1950's.

### **COMPREHENSIVE PLAN**

The property is guided for Low Density Residential (0 to 4 units per acre) as are the adjoining properties to the north, west, east and south which are developed for single-family residential use.

### **DEVELOPMENT ORDINANCE REQUIREMENTS**

Preliminary Plats require the Planning Commission to hold a public hearing, review the application and forward a recommendation to the City Council. The City Council then takes final action on the application. After the preliminary plat is approved, the applicant will need to submit a Final Plat application which is reviewed and acted on by the City Council.

Preliminary Plats are reviewed in accordance with subdivision and zoning district standards in the Development Regulations.

The City's subdivision standards (Sec. 204) require all lots to have frontage on a public right-of-way. Municipal sanitary sewer and water service must be provided to the new lots. The standards also require 5-foot public drainage and utility easements along side property lines, and 10-feet along front

and rear lines. Public drainage easements are also required over watercourses, drainages or floodways, as necessary.

The property is located in the R1, Detached Residential as are the adjoining properties to the north, west, east and south. In the R1 district, minimum lot standards (Sec. 205.082 (D)(1)) require a lot area of 10,000 square feet, a width of 75 feet and a depth of 125 feet. Corner lots must have a minimum width of 90 feet along the front property line.

Principal structure setbacks are required to be a minimum of 25 feet from a front property line, 10-feet from a side lot line and 30-feet from a rear property line (Sec. 205.082 (D)(2)). Attached accessory structures must be setback a minimum of 5-feet from a side property line. The minimum structure setback required from a minor arterial roadway is 40-feet.

Key lots are any lots, which the rear of which abuts the side lot line of an adjoining lot, or any lot, the side lot line of which abuts the rear lot line. These types of parcels are discouraged, however, when they are adjacent to an existing parcel, additional width and setback restrictions are imposed to minimize the development impacts on the existing property (Section 204.030 C.9). In this case, a minimum 90-foot width is required for the key lots. Key Lots also require a minimum 20-foot structure setback (Section 205.080 D.1.f) from the side property line.

#### **APRIL 2018 PLANNING COMMISSION**

This case was heard at the April 24, 2018 meeting and was tabled and the review period extended by the Planning Commission. This was done for concerns from the Planning Commission relating to the key lot standards not being met and that the stormwater management plan wasn't supported by the Watershed or Public Works Department. Guidance from the Planning Commission was to figure out a suitable solution for stormwater that has the approval of the watershed and to address the needs of the key lots standards by making it work with the additional setbacks or remove lots to achieve the requirements.

#### **STAFF REVIEW**

#### **PRELIMINARY PLAT**

The preliminary plat was reviewed in accordance with the City's standards for subdivisions (Section 204) and the R1 (Section 205.080). The following outlines some of the key features of the proposed subdivision.

***Street Network/Traffic.*** Currently, access to the property is from Hodgson Road. The proposed public street would align with Floral Drive is located in the same area as the existing driveway and will have an estimated length of about 306-feet. The street design is consistent with City design standards (Section 204.030 and 040). Hodgson Road is classified as "A" Minor Arterial.

***Lot Layout.*** The proposed Lots 1, 2, 3, 6, 7, and 8 comply with the minimum lot standards of the R1 zoning district. The lots are required to have a minimum width of 75-feet for an interior lot, a

minimum width of 90 feet for a corner lot, a minimum depth of 125-feet, and a minimum area of 10,000 square feet (Section 205.082 D.1.f).

Two of the proposed parcels (Lots 4 and 5) are key lots, since their side lot lines abut the rear lot line of existing parcels to the east. When key lots are adjacent to an existing parcel, additional width and setback restrictions are imposed to minimize the development impacts on the existing property (Section 204.030 C.9). Both parcels comply with the key lot standards, now that the developer has shifted the lot lines of the proposed lots. On Lot 4 and 5, the building pad shows the new proposed parcels comply with the key lot 20-foot structure setback requirement (Section 205.080 D.1.f) from the side property line.

***Stormwater Management.*** The existing drainage pattern generally flows toward the northeast where the proposed infiltration basin is located. This infiltration basin is located in the rear yards of Lots 2, 3 and 4 and is designed to capture stormwater runoff from the development. The stormwater basin will continue to take runoff from neighboring properties and the runoff of the proposed development. Please see City Engineers comments. Access to this infiltration basin would be provided by an easement that extends along the rear property line of Lots 1 and 2. This infiltration basin would be conveyed to the City at the culmination of the development.

The property is located in the Ramsey Washington Metro Watershed District. The Watershed District and Public Works Department have been working on concerns with the developer on the design of this system, it will require the developer to gain access to Hawes or Rustic to install an overflow outlet. See the attached comments from the City Engineer.

***Density.*** The Comprehensive Plan designates this property as Low-Density Residential (RL), where a development density of zero to four units per acre is allowed. The proposed 2.18 units per acre density comply with the Comprehensive Plan and is consistent with the density established in this area.

***Tree Preservation and Landscaping.*** The property contains both open and wooded areas. Tree removal and replacement plans are required prior to approval of the final plat. The submitted plans estimate that 40 landmark trees will be removed for the subdivision. These trees are located throughout the site. Trees along the western and southern boundaries will remain.

Replacement trees are required at a rate of 6 replacement trees for each landmark tree removed (Section 209.050 B.2.C.i.bb). A plan needs to be submitted that identifies the location of these replacement trees. If all of the required replacement trees cannot be planted on-site, a financial contribution to the City's forestry fund will be required.

***Architectural Standards.*** The City does not have single family residential architectural standards in City Code to enforce and allows citizens and developers design a principal of their architectural tastes as long as it meets setbacks. Lots 2, 3 and 4 are designed as walkout lots with lowest floor elevations set at 916.2. This elevation is similar to or slightly lower than the elevation of the homes on Hawes Avenue. The proposed building pads are located an estimated 140-180 feet from the rear lot line and



are separated by the infiltration basin. Staff is recommending landscaping be installed along the north lot line of these lots to mitigate the visual impact.

**Grading.** The City Code states that grading shall not be altered as to direct additional surface and storm water onto adjoining properties.

### **PUBLIC/AGENCY COMMENT**

Notice of the Public Hearing was published in the City's legal newspaper, and mailed to property owners within 350 feet of the property boundary. Several written comments from neighbors were submitted with concerns as they bought their home because it was next to the open space, drainage, trees and height of potential homes. Please see attached comments.

Nicole Soderholm of the Ramsey Washington Metro Watershed District (RWMWD) at the time of writing the report still stated they were working with the applicant on the outlet. The project is subject to the permitting requirements of the District.

City Engineer Tom Wesolowski, reviewed the proposed and stormwater calculations and is in agreement with the Watershed that the outlet and easement to make the stormwater management plan for the proposed development. Please see attached comments.

Natural Resources Coordinator Ellen Brenna recommends that an actual landscaping plan be submitted prior to the final plat application, that shows species, arrangement of plantings to scale and takes soil type and topography into account. Also tree placement should be a minimum 10 feet apart.

No further comment from Ramsey County.

### **RECOMMENDATION**

Staff is supportive of the reuse of this property for new detached single family residential subdivision since it is consistent with the Comprehensive Plan and the R1 zoning and does not require any variances to be developed.

Staff has reviewed the proposal in accordance with the preliminary plat requirements. The preliminary plat complies with the City's R1, Detached Residential zoning district and subdivision standards. Staff is supportive of the Preliminary Plat as long as an overflow stormwater pipe and the required easement is obtained to address the Watershed and Public Works request. Therefore Staff recommends the Planning Commission recommend approval of the Preliminary Plat to the City Council, subject to the following conditions:

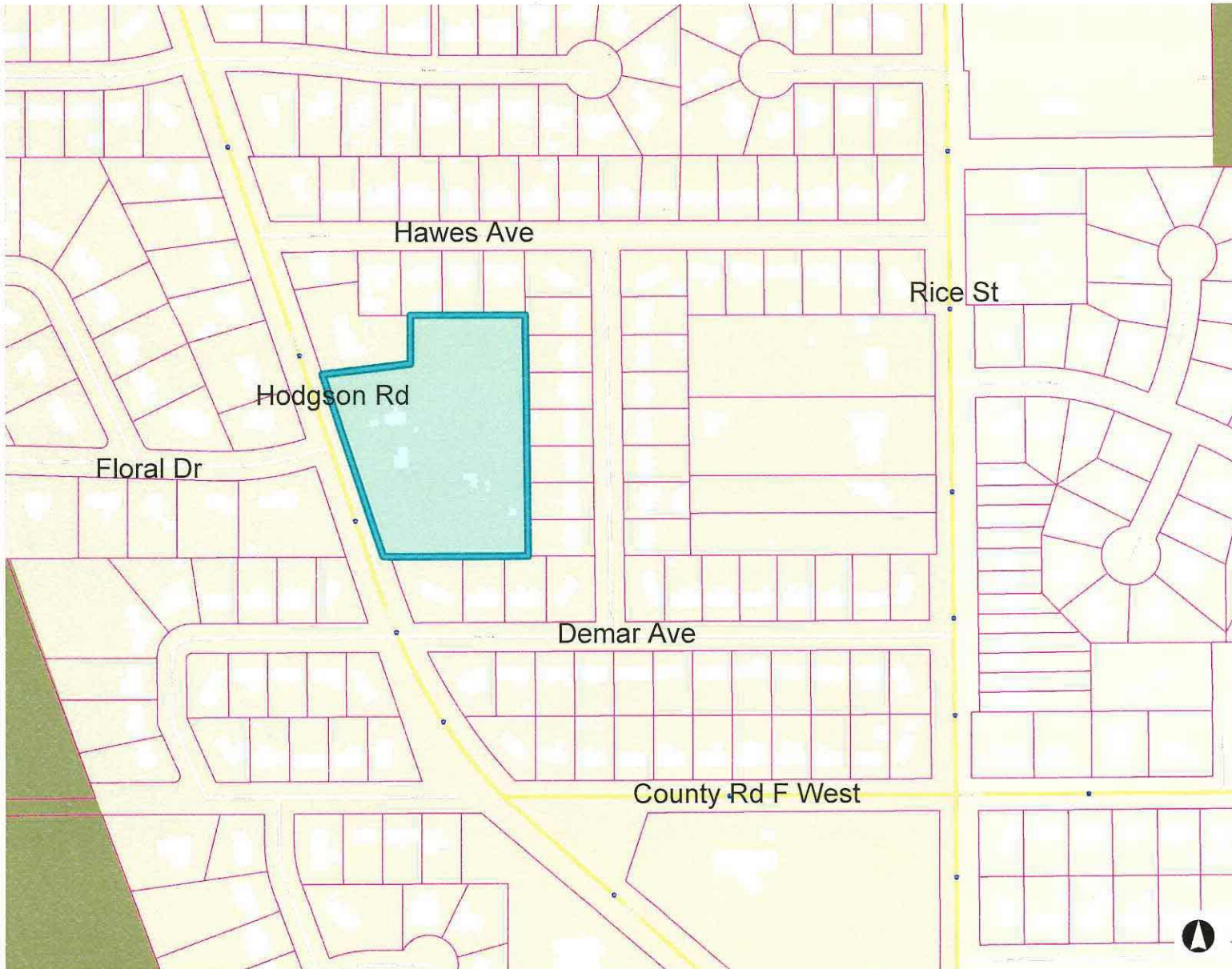
#### **Preliminary Plat**

1. The approval permits the development of a detached residential subdivision providing 8 lots for single family residential development.

2. Final grading, drainage and erosion control plans are subject to the review and approval by the Public Works Director prior to approval of any permits or the Final Plat. Concerns identified by the City Engineer shall be addressed with the Final Plat submittal.
3. Final utility plans are subject to review and approval by the Public Works Director.
4. The final street design is subject to review and approval of the Public Works Director.
5. A Development Agreement, Erosion Control Agreement shall be executed and related securities submitted prior to any work commencing on the site. A Grading Permit is required prior to commencing work on the site.
6. A Public Recreation Use Dedication fee shall be submitted as required by ordinance prior to release of the Final Plat.
7. The landscape/tree-replanting plan shall be provided in accordance with the City's Tree Protection Ordinance. Trees on the property, which are to remain, shall be protected with construction fencing placed at the tree driplines prior to grading and excavating. Said plan shall be submitted for review and approval by the City Planner prior to submittal of the final plat application.
8. The Final Plat shall include drainage and utility easements along all property lines. Drainage and utility easements along the roadways shall be 10 feet wide and 5 feet wide along the side and rear lot lines. Other drainage and utility easements shall be provided over the proposed bio-filtration area, future public infrastructure and as required by the Public Works Director.
9. The developer shall secure a permit from the Ramsey Washington Metro Watershed District prior to commencing any grading on the property.
10. The developer shall gain an easement for the storm pond outlet, prior to the City submittal of the final plat application. Said easement shall be submitted to the City Attorney for review and approval.
11. Lot 1 shall have a 30 foot setback on the eastern lot line as it is a rear yard and the access for the lot shall be on the cul-de-sac.
12. Landscaping plan be submitted prior to issuance of any permits, that shows species, arrangement of plantings to scale and takes soil type and topography into account. Landscaping shall be installed along the eastern boundary and along the northern lot lines of Lots 2, 3, and 4. Said plan shall be submitted for review and approval by the Natural Resources Coordinator prior to submittal of the final plat application.

Attachments:

1. Location map
2. Submitted plans
3. Comments (a) Public Comments (b) Tom Wesolowski, City Engineer
4. Motion to Recommend



**Legend**



- City Halls
- Schools
- Hospitals
- Fire Stations
- Police Stations
- Recreational Centers
- Parcel Points
- Parcel Boundaries



**Notes**

Enter Map Description

600.0 0 300.00 600.0 Feet

NAD\_1983\_HARN\_Adj\_MN\_Ramsey\_Feet  
 © Ramsey County Enterprise GIS Division

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

THIS MAP IS NOT TO BE USED FOR NAVIGATION

Date: May 14, 2018  
To: Aaron Sedey, Associate Planner  
From: Tom Wesolowski, City Engineer  
Subject: Preliminary Plat and Plan Set – Subdivision – Revised 05-08-2018  
4140 Hodgson

The City of Shoreview Engineering staff has reviewed the preliminary plat and engineering plans dated 05-08-2018, submitted for the planned residential development at 4140 Hodgson Road and has the following comments:

1. The developer has revised the stormwater management design to include additional underground infiltration along the west side of the site and also an underground outlet pipe from the proposed infiltration basin located on the north side of the property, that would connect to the existing City stormwater collection system on Hawes Avenue. The revisions to the design were based on a meeting between the developer, the developer's engineer, City staff, and staff from the Ramsey-Washington Metro Watershed District (RWMWD). The design does meet or exceed the requirements of the City's Surface Water Management Plan requirements. The design must also meet the requirements of the RWMWD and a permit is required.

Currently stormwater runoff from the backyards of the properties adjacent to the north and east sides of the development property drain to a low area located along the north portion of the development property. The proposed stormwater management design includes an infiltration basin that would be constructed in the low area that would continue to receive the runoff from the adjacent properties as well as runoff from the new development. The basin would be designed to store and infiltrate a 100-yr storm event, which meets the requirements of the City and RWMWD. The proposed outlet from the basin would serve as an emergency overflow and direct runoff in excess of a 100-yr event to the City's stormwater collection system on Hawes Avenue. Emergency overflows that direct excess runoff to City streets and stormwater collection systems are typical throughout the City.

Installation of the underground pipe would require the developer to obtain easements from the existing property owners.

As is typical with residential developments, the City would assume ownership of the public infrastructure once it is constructed and accepted by the City.

2. Staff supports the width and location of the proposed right of way for the road and cul-de-sac.
3. Street
  - a. The proposed street width of 29-feet from back of curb to back of curb and the diameter of the cul-de-sac is acceptable. The width and diameter is consistent with City standards and similar neighborhoods in the City.
  - b. Location of the access point is acceptable, is located in line with access point on the west side of Hodgson Road.

- c. Surmountable concrete curb gutter is an acceptable style and is consistent with similar neighborhoods in the City. A detail of the style of surmountable curb and gutter required by the City will be supplied to the engineer working with the developer.
  - d. A typical pavement cross-section will be supplied to the engineer working with the developer.
  - e. The City requires joints to be cut into the wear course of the asphalt and sealed. The specifications of the saw and seal will be supplied to the engineering working with the developer.
4. Water and Sanitary Sewer
    - a. City water and sanitary sewer is available to the site.
    - b. Materials and location shown for the water main is acceptable.
    - c. Materials and location shown for the sanitary sewer is acceptable. Clean-outs are required to be installed at the property line on all sanitary sewer services.
    - d. Standard details for water and sanitary sewer infrastructure will be supplied to the engineering working with the developer.
5. Two street lights with underground conduit and power will need to be installed as part of the project. One located at the intersection with Hodgson Road and the other located at the end of the cul-de-sac.

# STORMWATER DRAINAGE REPORT

## WHISTLER PINES

SHOREVIEW, MN  
(Plowe #18-1749)

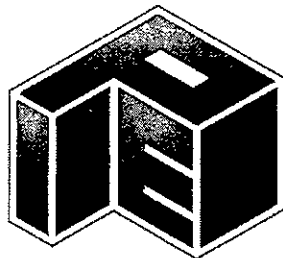
~~DATE: MAY 14, 2018~~

REV: MAY 14, 2018

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

---

ADAM GINKEL, P.E.  
MN LIC. NO. 43963



**PLOWE**  
**ENGINEERING, INC.**

6776 Lake Drive, Suite 110  
Lino Lakes, Minnesota 55014  
Office (651) 361-8210  
Fax (651) 361-8701

## 18-1749 WHISTLER PINES

### Site Drainage Narrative & Storm Water Calculations

~~DATE: March 28, 2018~~

REV.: May 14, 2018

This project proposes the subdivision of a 3.67-acre parcel into (8) single-family residential lots. The site is located at 4140 Hodgson Rd in Shoreview.

This project falls within Ramsey Washington Metro Watershed District (RWMWD).

#### Existing Conditions

The existing site has one single-family residence with several outbuildings and light tree coverage. The terrain is generally sloped internally to an isolated low area. This low area captures the run-off from many of the surrounding lots (backyards and rear-roof areas).

#### Proposed Conditions

The proposed development will include construction of a public street, installation of sanitary sewer and watermain (public), installation of storm sewer (public) and the preparation of eight (8) single-family residential lots.

Perforated pipes in a rock bed are proposed within the street to meet treatment requirements for the new impervious surface. This system outlets to an infiltration basin which in turn outlets into the public storm sewer within Hawes Avenue. A check valve is provided to ensure that backflow does not occur.

#### Wetlands

NWI maps indicate no wetlands on-site.

#### Geotechnical & Soils Info

The USDA NRCS website indicates the site is sandy, with the low area being Lino loamy fine sands and the upland areas being Zimmerman sands.

A geotechnical report was prepared by ITCO Allied Engineering Company (3-21-2018). The report included several penetration borings. The borings generally indicate varying thicknesses of topsoil over very fine sands, very fine sands with silt, and silty very fine sands.

Groundwater was not encountered in any of the borings (to 16-ft depth).

For this report, HSG "B" soils are assumed.

**RWMWD RULE C: STORMWATER MANAGEMENT**

1. *Runoff Rate: Runoff rates for the proposed activity shall not exceed existing runoff rates for the 2-year, 10-year, and 100-year critical storm events, using Atlas 14 precipitation depths and storm distributions or as approved by the District. Runoff rates may be restricted to less than the existing rates when the capacity of downstream conveyance systems is limited.*

The perforated pipes in rock and infiltration basin have zero-run off; thus, rate control is achieved for all analyzed storm events for areas draining to these BMPs.

For the site in aggregate, including the areas draining to Hodgson:

	<b>2-YEAR (CFS)</b>	<b>10-YEAR (CFS)</b>	<b>100-YEAR (CFS)</b>
<b>EXISTING</b>	<b>0.51</b>	<b>1.51</b>	<b>4.84</b>
<b>PROPOSED</b>	<b>0.54</b>	<b>1.40</b>	<b>4.19</b>

Rate control is within model tolerance.

2. *Runoff Volume: Stormwater runoff shall be retained onsite in the amount equivalent to 1.1 inches of runoff over the impervious surfaces of the development. The required stormwater runoff volume shall be calculated as follows:*

$$\begin{aligned} \text{Required Stormwater} \\ \text{Runoff Volume (CF)} &= \text{Impervious surfaces (SF)} \times 1.1 \text{ (IN)} \times 1/12 \text{ (FT/IN)} \end{aligned}$$

$$\text{Total new impervious surface} = 47,470 \text{ square feet}$$

$$\begin{aligned} \text{Required Stormwater Runoff Volume (CF)} \\ \text{Using infiltration} &= (47,470 \text{ sf}) \times (1.1) \times (1/12) \\ &= 4,351 \text{ cubic feet} \end{aligned}$$

$$\begin{aligned} \text{Provided Stormwater Runoff Volume (CF)} \\ \text{Perforated pipe in rock} &= 4,449 \text{ cubic feet} \\ &= \text{Volume within underground} \\ &\quad \text{system below outlet} \end{aligned}$$

The lowest soil classification in the BMP locations is SP-SM, which corresponds to an infiltration rate of 0.45 inches per hour (per the Minnesota Storm Water Manual).

The drawdown time for the required treatment volume is:



$$4,449 \text{ cf} \times \frac{1 \text{ hr}}{0.45 \text{ in}} \times \frac{12 \text{ in}}{1 \text{ ft}} \times \frac{1}{4,749 \text{ sf}} = 25.0 \text{ hours}$$

where 4,749 sf is the wetted surface area of the perforated pipe in rock.

Pre-treatment is provided using sump manholes: each manhole in the perforated pipe in rock system has a 4-ft sump to provide some sediment removal.

3. *Water Quality: Developments shall incorporate effective non-point source pollution reduction BMPs to achieve 90% total suspended solids removal from the runoff generated by a NURP water quality storm (2.5" rainfall). Runoff volume reduction BMPs may be considered and included in the calculations showing compliance with achieving the 90% TSS removal requirement. Water quality calculations, documentation and/or water quality modeling shall be submitted to verify compliance with the standard.*

The perforated pipes in rock and infiltration basin have zero outflow for the analyzed storm events and thus meets the water quality requirements.

The backyard areas that drain to Hodgson Road travel over extensive pervious surface prior to discharge into the public right-of-way.

#### **RWMWD RULE D: FLOOD CONTROL**

1. *Placement of fill within the 100-year floodplain is prohibited unless compensatory storage is provided. Compensatory storage must be provided on the development or immediately adjacent to the development within the affected floodplain.*

There is no floodplain on the site.

2. *All habitable buildings, roads, and underground parking structures on or adjacent to a project site shall comply with the following flood control and freeboard requirements: See Table 3 (of RWMWD Rules) for freeboard requirements.*

A piped outlet is provided for the infiltration basin.

Per the reference table, the infiltration basin is a "water body with a piped outlet".

<p><b>New Habitable Buildings</b></p>	<p>Low floor must be a minimum of 2 feet above the 100-year flood elevation</p>
<p><b>Existing Habitable Buildings Adjacent and Potentially Affected by Flood Waters</b></p>	<p>Low opening must be a minimum of 2 feet above the 100-year flood elevation</p>

The HWL of the underground pipes in rock is 913.58; the adjacent proposed homes have a low floor of 915.6 or higher, meeting the freeboard requirement.

The HWL of the infiltration basin is 912.00; the adjacent proposed homes have a low floor of 916.5 or higher, meeting the freeboard requirement. Per LIDAR topo, the majority of the existing homes adjacent to the infiltration basin have a low opening significantly above the basin HWL. The lowest existing opening has been field verified at 916.94 at Lot 8 Block 6 of Windward Heights No. 2.

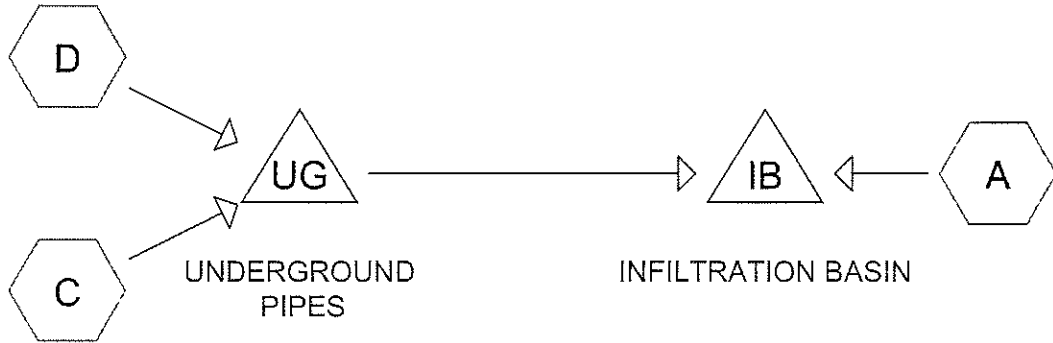
**STORM WATER MODELING**

Modeling uses HydroCAD with Atlas 14 rainfall events and MSE Type 3 storm distribution. HSG "B" type soils are assumed.

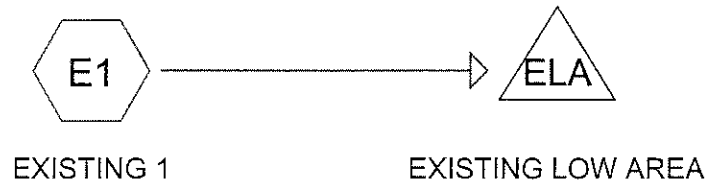
Times of concentration were based on TR-55 for both the Sheet Flow Method and Shallow Concentrated Flow Method.

**MAINTENANCE**

The proposed storm water management facilities will be public and will be maintained by the City of Shoreview.



B  
TO HODGSON



E2  
EXISTING 2



**Whistler Pines (5-XX-2018)**

Prepared by PLOWE ENGINEERING, INC.

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**Area Listing (all nodes)**

Area (sq-ft)	CN	Description (subcatchment-numbers)
81,000	98	IMPERVIOUS - EXISTING (A, B, E1, E2)
47,470	98	IMPERVIOUS - PROPOSED (A, B, C, D)
463,026	61	PERVIOUS (A, B, C, D, E1, E2)
591,496	69	TOTAL AREA

**Whistler Pines (5-XX-2018)**

Prepared by PLOWE ENGINEERING, INC.

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MSE 24-hr 3 2-Year Rainfall=2.81"

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**Summary for Subcatchment A:**

Runoff = 3.83 cfs @ 12.19 hrs, Volume= 11,749 cf, Depth= 0.86"

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-150.00 hrs, dt= 0.01 hrs  
MSE 24-hr 3 2-Year Rainfall=2.81"

	Area (sf)	CN	Description
*	34,500	98	IMPERVIOUS - EXISTING
*	6,000	98	IMPERVIOUS - PROPOSED
*	123,460	61	PERVIOUS
	163,960	70	Weighted Average
	123,460	61	75.30% Pervious Area
	40,500	98	24.70% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.6	140	0.0380	0.22		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.81"

**Summary for Subcatchment B: TO HODGSON**

Runoff = 0.54 cfs @ 12.43 hrs, Volume= 2,886 cf, Depth= 0.59"

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-150.00 hrs, dt= 0.01 hrs  
MSE 24-hr 3 2-Year Rainfall=2.81"

	Area (sf)	CN	Description
*	6,000	98	IMPERVIOUS - EXISTING
*	1,500	98	IMPERVIOUS - PROPOSED
*	51,653	61	PERVIOUS
	59,153	66	Weighted Average
	51,653	61	87.32% Pervious Area
	7,500	98	12.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.3	300	0.0150	0.18		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.81"

**Summary for Subcatchment C:**

Runoff = 2.98 cfs @ 12.17 hrs, Volume= 8,103 cf, Depth= 1.77"

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-150.00 hrs, dt= 0.01 hrs  
MSE 24-hr 3 2-Year Rainfall=2.81"

	Area (sf)	CN	Description
*	0	98	IMPERVIOUS - EXISTING
*	35,470	98	IMPERVIOUS - PROPOSED
*	19,448	61	PERVIOUS
	54,918	85	Weighted Average
	19,448	61	35.41% Pervious Area
	35,470	98	64.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					<b>Direct Entry,</b>

**Whistler Pines (5-XX-2018)**

Prepared by PLOWE ENGINEERING, INC.

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MSE 24-hr 3 2-Year Rainfall=2.81"

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Page 4

**Summary for Subcatchment D:**

Runoff = 0.38 cfs @ 12.22 hrs, Volume= 1,293 cf, Depth= 0.88"

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-150.00 hrs, dt= 0.01 hrs  
MSE 24-hr 3 2-Year Rainfall=2.81"

Area (sf)	CN	Description
* 0	98	IMPERVIOUS - EXISTING
* 4,500	98	IMPERVIOUS - PROPOSED
* 13,217	61	PERVIOUS
17,717	70	Weighted Average
13,217	61	74.60% Pervious Area
4,500	98	25.40% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.6	170	0.0300	0.21		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.81"

**Summary for Subcatchment E1: EXISTING 1**

Runoff = 3.71 cfs @ 12.19 hrs, Volume= 12,097 cf, Depth= 0.65"

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-150.00 hrs, dt= 0.01 hrs  
MSE 24-hr 3 2-Year Rainfall=2.81"

Area (sf)	CN	Description
* 34,500	98	IMPERVIOUS - EXISTING
* 189,866	61	PERVIOUS
224,366	67	Weighted Average
189,866	61	84.62% Pervious Area
34,500	98	15.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.6	140	0.0380	0.22		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.81"

**Summary for Subcatchment E2: EXISTING 2**

Runoff = 0.51 cfs @ 12.46 hrs, Volume= 2,902 cf, Depth= 0.49"

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-150.00 hrs, dt= 0.01 hrs  
MSE 24-hr 3 2-Year Rainfall=2.81"

Area (sf)	CN	Description
* 6,000	98	IMPERVIOUS - EXISTING
* 65,382	61	PERVIOUS
71,382	64	Weighted Average
65,382	61	91.59% Pervious Area
6,000	98	8.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.3	300	0.0150	0.18		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.81"

**Whistler Pines (5-XX-2018)**

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MSE 24-hr 3 2-Year Rainfall=2.81"

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**Summary for Pond ELA: EXISTING LOW AREA**

Inflow Area = 224,366 sf, 15.38% Impervious, Inflow Depth = 0.65" for 2-Year event  
 Inflow = 3.71 cfs @ 12.19 hrs, Volume= 12,097 cf  
 Outflow = 0.19 cfs @ 15.04 hrs, Volume= 12,097 cf, Atten= 95%, Lag= 170.6 min  
 Discarded = 0.19 cfs @ 15.04 hrs, Volume= 12,097 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-150.00 hrs, dt= 0.01 hrs  
 Peak Elev= 909.11' @ 15.04 hrs Surf.Area= 10,368 sf Storage= 6,831 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)  
 Center-of-Mass det. time= 419.7 min ( 1,228.2 - 808.5 )

Volume	Invert	Avail.Storage	Storage Description
#1	908.00'	157,779 cf	<b>Custom Stage Data (Prismatic)</b> Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
908.00	1,961	0	0
910.00	17,133	19,094	19,094
912.00	34,526	51,659	70,753
914.00	52,500	87,026	157,779

Device	Routing	Invert	Outlet Devices
#1	Discarded	908.00'	<b>0.800 in/hr Exfiltration over Surface area</b>

**Discarded OutFlow** Max=0.19 cfs @ 15.04 hrs HW=909.11' (Free Discharge)  
 1=Exfiltration (Exfiltration Controls 0.19 cfs)

**Summary for Pond IB: INFILTRATION BASIN**

Inflow Area = 236,595 sf, 34.01% Impervious, Inflow Depth = 0.77" for 2-Year event  
 Inflow = 4.82 cfs @ 12.28 hrs, Volume= 15,164 cf  
 Outflow = 0.15 cfs @ 15.30 hrs, Volume= 15,166 cf, Atten= 97%, Lag= 181.0 min  
 Discarded = 0.15 cfs @ 15.30 hrs, Volume= 15,166 cf  
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-150.00 hrs, dt= 0.01 hrs  
 Peak Elev= 908.71' @ 15.30 hrs Surf.Area= 14,116 sf Storage= 9,555 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)  
 Center-of-Mass det. time= 614.7 min ( 1,411.6 - 797.0 )

Volume	Invert	Avail.Storage	Storage Description		
#1	908.00'	115,359 cf	<b>BASIN STORAGE (Irregular)</b> Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
908.00	12,755	475.2	0	0	12,755
910.00	16,755	526.8	29,419	29,419	16,990
912.00	21,435	589.2	38,094	67,513	22,643
914.00	26,500	0.0	47,846	115,359	50,275

Device	Routing	Invert	Outlet Devices
#1	Discarded	908.00'	<b>0.450 in/hr INFILTRATION over Wetted area</b>
#2	Primary	912.00'	<b>10.0" Round PIPE TO HAWES AVE</b> L= 152.0' Ke= 0.500 Inlet / Outlet Invert= 912.00' / 911.60' S= 0.0026 '/ Cc= 0.900 n= 0.013, Flow Area= 0.55 sf

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MSE 24-hr 3 2-Year Rainfall=2.81"  
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**Discarded OutFlow** Max=0.15 cfs @ 15.30 hrs HW=908.71' (Free Discharge)  
 ↑1=INFILTRATION (Exfiltration Controls 0.15 cfs)

**Primary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=908.00' (Free Discharge)  
 ↑2=PIPE TO HAWES AVE ( Controls 0.00 cfs)

**Summary for Pond UG: UNDERGROUND PIPES**

Inflow Area = 72,635 sf, 55.03% Impervious, Inflow Depth = 1.55" for 2-Year event  
 Inflow = 3.32 cfs @ 12.18 hrs, Volume= 9,396 cf  
 Outflow = 2.08 cfs @ 12.29 hrs, Volume= 9,396 cf, Atten= 37%, Lag= 6.8 min  
 Discarded = 0.03 cfs @ 12.29 hrs, Volume= 5,981 cf  
 Primary = 2.06 cfs @ 12.29 hrs, Volume= 3,415 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-150.00 hrs, dt= 0.01 hrs  
 Peak Elev= 911.66' @ 12.29 hrs Surf.Area= 1,792 sf Storage= 4,523 cf  
 Flood Elev= 911.00' Surf.Area= 1,792 sf Storage= 4,449 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)  
 Center-of-Mass det. time= 1,134.4 min ( 1,903.7 - 769.3 )

Volume	Invert	Avail.Storage	Storage Description
#1	906.50'	2,074 cf	ROCK (Conic) Listed below (Recalc) 7,560 cf Overall - 2,375 cf Embedded = 5,185 cf x 40.0% Voids
#2	907.50'	2,375 cf	36.0" Round PERFORATED PIPE Inside #1 L= 336.0'
#3	911.00'	1,092 cf	CATCH BASINS (Conic) Listed below (Recalc) x 4
		5,541 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
906.50	1,680	0	0	1,680
911.00	1,680	7,560	7,560	2,334

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
911.00	28	0	0	28
920.75	28	273	273	211

Device	Routing	Invert	Outlet Devices
#1	Discarded	906.50'	0.450 in/hr INFILTRATION over Wetted area
#2	Primary	911.00'	18.0" Round PIPE TO INF BASIN l= 115.0' Ke= 0.500 Inlet / Outlet Invert= 911.00' / 909.00' S= 0.0174 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf

**Discarded OutFlow** Max=0.03 cfs @ 12.29 hrs HW=911.66' (Free Discharge)  
 ↑1=INFILTRATION (Exfiltration Controls 0.03 cfs)

**Primary OutFlow** Max=2.05 cfs @ 12.29 hrs HW=911.66' TW=908.30' (Dynamic Tailwater)  
 ↑2=PIPE TO INF BASIN (Inlet Controls 2.05 cfs @ 2.76 fps)



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MSE 24-hr 3 10-Year Rainfall=4.19"

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**Summary for Subcatchment A:**

Runoff = 8.25 cfs @ 12.19 hrs, Volume= 22,719 cf, Depth= 1.66"

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-150.00 hrs, dt= 0.01 hrs  
MSE 24-hr 3 10-Year Rainfall=4.19"

Area (sf)	CN	Description
* 34,500	98	IMPERVIOUS - EXISTING
* 6,000	98	IMPERVIOUS - PROPOSED
* 123,460	61	PERVIOUS
163,960	70	Weighted Average
123,460	61	75.30% Pervious Area
40,500	98	24.70% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.6	140	0.0380	0.22		<b>Sheet Flow,</b> Grass: Short n=0.150 P2= 2.81"

**Summary for Subcatchment B: TO HODGSON**

Runoff = 1.40 cfs @ 12.42 hrs, Volume= 6,393 cf, Depth= 1.30"

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-150.00 hrs, dt= 0.01 hrs  
MSE 24-hr 3 10-Year Rainfall=4.19"

Area (sf)	CN	Description
* 6,000	98	IMPERVIOUS - EXISTING
* 1,500	98	IMPERVIOUS - PROPOSED
* 51,653	61	PERVIOUS
59,153	66	Weighted Average
51,653	61	87.32% Pervious Area
7,500	98	12.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.3	300	0.0150	0.18		<b>Sheet Flow,</b> Grass: Short n=0.150 P2= 2.81"

**Summary for Subcatchment C:**

Runoff = 4.88 cfs @ 12.17 hrs, Volume= 13,166 cf, Depth= 2.88"

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-150.00 hrs, dt= 0.01 hrs  
MSE 24-hr 3 10-Year Rainfall=4.19"

Area (sf)	CN	Description
* 0	98	IMPERVIOUS - EXISTING
* 35,470	98	IMPERVIOUS - PROPOSED
* 19,448	61	PERVIOUS
54,918	85	Weighted Average
19,448	61	35.41% Pervious Area
35,470	98	64.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					<b>Direct Entry,</b>

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MSE 24-hr 3 10-Year Rainfall=4.19"

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**Summary for Subcatchment D:**

Runoff = 0.81 cfs @ 12.22 hrs, Volume= 2,486 cf, Depth= 1.68"

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-150.00 hrs, dt= 0.01 hrs  
MSE 24-hr 3 10-Year Rainfall=4.19"

Area (sf)	CN	Description
* 0	98	IMPERVIOUS - EXISTING
* 4,500	98	IMPERVIOUS - PROPOSED
* 13,217	61	PERVIOUS
17,717	70	Weighted Average
13,217	61	74.60% Pervious Area
4,500	98	25.40% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.6	170	0.0300	0.21		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.81"

**Summary for Subcatchment E1: EXISTING 1**

Runoff = 9.40 cfs @ 12.19 hrs, Volume= 25,782 cf, Depth= 1.38"

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-150.00 hrs, dt= 0.01 hrs  
MSE 24-hr 3 10-Year Rainfall=4.19"

Area (sf)	CN	Description
* 34,500	98	IMPERVIOUS - EXISTING
* 189,866	61	PERVIOUS
224,366	67	Weighted Average
189,866	61	84.62% Pervious Area
34,500	98	15.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.6	140	0.0380	0.22		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.81"

**Summary for Subcatchment E2: EXISTING 2**

Runoff = 1.51 cfs @ 12.43 hrs, Volume= 6,940 cf, Depth= 1.17"

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-150.00 hrs, dt= 0.01 hrs  
MSE 24-hr 3 10-Year Rainfall=4.19"

Area (sf)	CN	Description
* 6,000	98	IMPERVIOUS - EXISTING
* 65,382	61	PERVIOUS
71,382	64	Weighted Average
65,382	61	91.59% Pervious Area
6,000	98	8.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.3	300	0.0150	0.18		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.81"

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**Summary for Pond ELA: EXISTING LOW AREA**

Inflow Area = 224,366 sf, 15.38% Impervious, Inflow Depth = 1.38" for 10-Year event  
 Inflow = 9.40 cfs @ 12.19 hrs, Volume= 25,782 cf  
 Outflow = 0.30 cfs @ 15.18 hrs, Volume= 25,783 cf, Atten= 97%, Lag= 179.4 min  
 Discarded = 0.30 cfs @ 15.18 hrs, Volume= 25,783 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-150.00 hrs, dt= 0.01 hrs  
 Peak Elev= 909.85' @ 15.18 hrs Surf.Area= 16,029 sf Storage= 16,681 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)  
 Center-of-Mass det. time= 673.2 min ( 1,480.5 - 807.3 )

Volume	Invert	Avail.Storage	Storage Description
#1	908.00'	157,779 cf	<b>Custom Stage Data (Prismatic)</b> Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
908.00	1,961	0	0
910.00	17,133	19,094	19,094
912.00	34,526	51,659	70,753
914.00	52,500	87,026	157,779

Device	Routing	Invert	Outlet Devices
#1	Discarded	908.00'	<b>0.800 in/hr Exfiltration over Surface area</b>

**Discarded OutFlow** Max=0.30 cfs @ 15.18 hrs HW=909.85' (Free Discharge)  
 ↳1=Exfiltration (Exfiltration Controls 0.30 cfs)

**Summary for Pond IB: INFILTRATION BASIN**

Inflow Area = 236,595 sf, 34.01% Impervious, Inflow Depth = 1.64" for 10-Year event  
 Inflow = 13.83 cfs @ 12.19 hrs, Volume= 32,239 cf  
 Outflow = 0.17 cfs @ 19.10 hrs, Volume= 32,240 cf, Atten= 99%, Lag= 415.1 min  
 Discarded = 0.17 cfs @ 19.10 hrs, Volume= 32,240 cf  
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-150.00 hrs, dt= 0.01 hrs  
 Peak Elev= 909.67' @ 19.10 hrs Surf.Area= 16,067 sf Storage= 24,080 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)  
 Center-of-Mass det. time= 1,367.3 min ( 2,162.6 - 795.3 )

Volume	Invert	Avail.Storage	Storage Description		
#1	908.00'	115,359 cf	<b>BASIN STORAGE (Irregular)</b> Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
908.00	12,755	475.2	0	0	12,755
910.00	16,755	526.8	29,419	29,419	16,990
912.00	21,435	589.2	38,094	67,513	22,643
914.00	26,500	0.0	47,846	115,359	50,275

Device	Routing	Invert	Outlet Devices
#1	Discarded	908.00'	<b>0.450 in/hr INFILTRATION over Wetted area</b>
#2	Primary	912.00'	<b>10.0" Round PIPE TO HAWES AVE</b> L= 152.0' Ke= 0.500 Inlet / Outlet Invert= 912.00' / 911.60' S= 0.0026 '/' Cc= 0.900 n= 0.013, Flow Area= 0.55 sf

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MSE 24-hr 3 10-Year Rainfall=4.19"

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**Discarded OutFlow** Max=0.17 cfs @ 19.10 hrs HW=909.67' (Free Discharge)  
 ↑1=INFILTRATION (Exfiltration Controls 0.17 cfs)

**Primary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=908.00' (Free Discharge)  
 ↑2=PIPE TO HAWES AVE ( Controls 0.00 cfs)

**Summary for Pond UG: UNDERGROUND PIPES**

Inflow Area = 72,635 sf, 55.03% Impervious, Inflow Depth = 2.59" for 10-Year event  
 Inflow = 5.61 cfs @ 12.18 hrs, Volume= 15,652 cf  
 Outflow = 5.61 cfs @ 12.18 hrs, Volume= 15,652 cf, Atten= 0%, Lag= 0.3 min  
 Discarded = 0.03 cfs @ 12.18 hrs, Volume= 6,132 cf  
 Primary = 5.58 cfs @ 12.18 hrs, Volume= 9,520 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-150.00 hrs, dt= 0.01 hrs  
 Peak Elev= 912.19' @ 12.18 hrs Surf.Area= 1,792 sf Storage= 4,582 cf  
 Flood Elev= 911.00' Surf.Area= 1,792 sf Storage= 4,449 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)  
 Center-of-Mass det. time= 702.2 min ( 1,469.8 - 767.6 )

Volume	Invert	Avail.Storage	Storage Description
#1	906.50'	2,074 cf	<b>ROCK (Conic)</b> Listed below (Recalc) 7,560 cf Overall - 2,375 cf Embedded = 5,185 cf x 40.0% Voids
#2	907.50'	2,375 cf	<b>36.0" Round PERFORATED PIPE</b> Inside #1 L= 336.0'
#3	911.00'	1,092 cf	<b>CATCH BASINS (Conic)</b> Listed below (Recalc) x 4
		5,541 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
906.50	1,680	0	0	1,680
911.00	1,680	7,560	7,560	2,334

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
911.00	28	0	0	28
920.75	28	273	273	211

Device	Routing	Invert	Outlet Devices
#1	Discarded	906.50'	<b>0.450 in/hr INFILTRATION over Wetted area</b>
#2	Primary	911.00'	<b>18.0" Round PIPE TO INF BASIN</b> L= 115.0' Ke= 0.500 Inlet / Outlet Invert= 911.00' / 909.00' S= 0.0174 '/n Cc= 0.900 n= 0.013, Flow Area= 1.77 sf

**Discarded OutFlow** Max=0.03 cfs @ 12.18 hrs HW=912.19' (Free Discharge)  
 ↑1=INFILTRATION (Exfiltration Controls 0.03 cfs)

**Primary OutFlow** Max=5.57 cfs @ 12.18 hrs HW=912.19' TW=908.52' (Dynamic Tailwater)  
 ↑2=PIPE TO INF BASIN (inlet Controls 5.57 cfs @ 3.71 fps)

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MSE 24-hr 3 100-Year Rainfall=7.36"

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**Summary for Subcatchment A:**

Runoff = 21.17 cfs @ 12.18 hrs, Volume= 54,533 cf, Depth= 3.99"

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-150.00 hrs, dt= 0.01 hrs  
MSE 24-hr 3 100-Year Rainfall=7.36"

	Area (sf)	CN	Description
*	34,500	98	IMPERVIOUS - EXISTING
*	6,000	98	IMPERVIOUS - PROPOSED
*	123,460	61	PERVIOUS
	163,960	70	Weighted Average
	123,460	61	75.30% Pervious Area
	40,500	98	24.70% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.6	140	0.0380	0.22		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.81"

**Summary for Subcatchment B: TO HODGSON**

Runoff = 4.19 cfs @ 12.42 hrs, Volume= 17,211 cf, Depth= 3.49"

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-150.00 hrs, dt= 0.01 hrs  
MSE 24-hr 3 100-Year Rainfall=7.36"

	Area (sf)	CN	Description
*	6,000	98	IMPERVIOUS - EXISTING
*	1,500	98	IMPERVIOUS - PROPOSED
*	51,653	61	PERVIOUS
	59,153	66	Weighted Average
	51,653	61	87.32% Pervious Area
	7,500	98	12.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.3	300	0.0150	0.18		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.81"

**Summary for Subcatchment C:**

Runoff = 9.70 cfs @ 12.17 hrs, Volume= 25,852 cf, Depth= 5.65"

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-150.00 hrs, dt= 0.01 hrs  
MSE 24-hr 3 100-Year Rainfall=7.36"

	Area (sf)	CN	Description
*	0	98	IMPERVIOUS - EXISTING
*	35,470	98	IMPERVIOUS - PROPOSED
*	19,448	61	PERVIOUS
	54,918	85	Weighted Average
	19,448	61	35.41% Pervious Area
	35,470	98	64.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					<b>Direct Entry,</b>

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MSE 24-hr 3 100-Year Rainfall=7.36"

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**Summary for Subcatchment D:**

Runoff = 2.06 cfs @ 12.22 hrs, Volume= 5,935 cf, Depth= 4.02"

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-150.00 hrs, dt= 0.01 hrs  
 MSE 24-hr 3 100-Year Rainfall=7.36"

Area (sf)	CN	Description
* 0	98	IMPERVIOUS - EXISTING
* 4,500	98	IMPERVIOUS - PROPOSED
* 13,217	61	PERVIOUS
17,717	70	Weighted Average
13,217	61	74.60% Pervious Area
4,500	98	25.40% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.6	170	0.0300	0.21		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.81"

**Summary for Subcatchment E1: EXISTING 1**

Runoff = 26.73 cfs @ 12.19 hrs, Volume= 67,378 cf, Depth= 3.60"

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-150.00 hrs, dt= 0.01 hrs  
 MSE 24-hr 3 100-Year Rainfall=7.36"

Area (sf)	CN	Description
* 34,500	98	IMPERVIOUS - EXISTING
* 189,866	61	PERVIOUS
224,366	67	Weighted Average
189,866	61	84.62% Pervious Area
34,500	98	15.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.6	140	0.0380	0.22		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.81"

**Summary for Subcatchment E2: EXISTING 2**

Runoff = 4.84 cfs @ 12.42 hrs, Volume= 19,713 cf, Depth= 3.31"

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-150.00 hrs, dt= 0.01 hrs  
 MSE 24-hr 3 100-Year Rainfall=7.36"

Area (sf)	CN	Description
* 6,000	98	IMPERVIOUS - EXISTING
* 65,382	61	PERVIOUS
71,382	64	Weighted Average
65,382	61	91.59% Pervious Area
6,000	98	8.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.3	300	0.0150	0.18		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.81"

**Whistler Pines (5-XX-2018)**

Prepared by PLOWE ENGINEERING, INC.  
HydroCAD® 10.00-19 s/n 01574 © 2016 HydroCAD Software Solutions LLC

MSE 24-hr 3 100-Year Rainfall=7.36"

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**Summary for Pond ELA: EXISTING LOW AREA**

Inflow Area = 224,366 sf, 15.38% Impervious, Inflow Depth = 3.60" for 100-Year event  
 Inflow = 26.73 cfs @ 12.19 hrs, Volume= 67,378 cf  
 Outflow = 0.53 cfs @ 16.16 hrs, Volume= 67,378 cf, Atten= 98%, Lag= 238.4 min  
 Discarded = 0.53 cfs @ 16.16 hrs, Volume= 67,378 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-150.00 hrs, dt= 0.01 hrs  
 Peak Elev= 911.31' @ 16.16 hrs Surf.Area= 28,554 sf Storage= 49,093 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)  
 Center-of-Mass det. time= 1,131.2 min ( 1,930.2 - 799.0 )

Volume	Invert	Avail.Storage	Storage Description
#1	908.00'	157,779 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
908.00	1,961	0	0
910.00	17,133	19,094	19,094
912.00	34,526	51,659	70,753
914.00	52,500	87,026	157,779

Device	Routing	Invert	Outlet Devices
#1	Discarded	908.00'	0.800 in/hr Exfiltration over Surface area

Discarded Outflow Max=0.53 cfs @ 16.16 hrs HW=911.31' (Free Discharge)  
 1=Exfiltration (Exfiltration Controls 0.53 cfs)

**Summary for Pond IB: INFILTRATION BASIN**

Inflow Area = 236,595 sf, 34.01% Impervious, Inflow Depth = 4.05" for 100-Year event  
 Inflow = 32.68 cfs @ 12.19 hrs, Volume= 79,921 cf  
 Outflow = 0.24 cfs @ 21.47 hrs, Volume= 79,922 cf, Atten= 99%, Lag= 556.9 min  
 Discarded = 0.24 cfs @ 21.47 hrs, Volume= 79,922 cf  
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-150.00 hrs, dt= 0.01 hrs  
 Peak Elev= 912.00' @ 21.47 hrs Surf.Area= 21,431 sf Storage= 67,481 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)  
 Center-of-Mass det. time= 2,917.5 min ( 3,707.3 - 789.8 )

Volume	Invert	Avail.Storage	Storage Description		
#1	908.00'	115,359 cf	BASIN STORAGE (Irregular) Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
908.00	12,755	475.2	0	0	12,755
910.00	16,755	526.8	29,419	29,419	16,990
912.00	21,435	589.2	38,094	67,513	22,643
914.00	26,500	0.0	47,846	115,359	50,275

Device	Routing	Invert	Outlet Devices
#1	Discarded	908.00'	0.450 in/hr INFILTRATION over Wetted area
#2	Primary	912.00'	10.0" Round PIPE TO HAWES AVE L= 152.0' Ke= 0.500 Inlet / Outlet Invert= 912.00' / 911.60' S= 0.0026 '/' Cc= 0.900 n= 0.013, Flow Area= 0.55 sf

**Whistler Pines (5-XX-2018)**

Prepared by PLOWE ENGINEERING, INC.  
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MSE 24-hr 3 100-Year Rainfall=7.36"

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Page 14

Discarded OutFlow Max=0.24 cfs @ 21.47 hrs HW=912.00' (Free Discharge)  
 ↳1=INFILTRATION (Exfiltration Controls 0.24 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=908.00' (Free Discharge)  
 ↳2=PIPE TO HAWES AVE (Controls 0.00 cfs)

**Summary for Pond UG: UNDERGROUND PIPES**

Inflow Area = 72,635 sf, 55.03% Impervious, Inflow Depth = 5.25" for 100-Year event  
 Inflow = 11.60 cfs @ 12.18 hrs, Volume= 31,787 cf  
 Outflow = 11.54 cfs @ 12.19 hrs, Volume= 31,788 cf, Atten=1%, Lag= 0.6 min  
 Discarded = 0.03 cfs @ 12.19 hrs, Volume= 6,400 cf  
 Primary = 11.51 cfs @ 12.19 hrs, Volume= 25,388 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-150.00 hrs, dt= 0.01 hrs  
 Peak Elev= 913.58' @ 12.19 hrs Surf.Area= 1,792 sf Storage= 4,738 cf  
 Flood Elev= 911.00' Surf.Area= 1,792 sf Storage= 4,449 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)  
 Center-of-Mass det. time= 371.8 min ( 1,136.4 - 764.6 )

Volume	Invert	Avail.Storage	Storage Description
#1	906.50'	2,074 cf	<b>ROCK (Conic)</b> Listed below (Recalc) 7,560 cf Overall - 2,375 cf Embedded = 5,185 cf x 40.0% Voids
#2	907.50'	2,375 cf	<b>36.0" Round PERFORATED PIPE</b> Inside #1 L= 336.0'
#3	911.00'	1,092 cf	<b>CATCH BASINS (Conic)</b> Listed below (Recalc) x 4
		5,541 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
906.50	1,680	0	0	1,680
911.00	1,680	7,560	7,560	2,334

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
911.00	28	0	0	28
920.75	28	273	273	211

Device	Routing	Invert	Outlet Devices
#1	Discarded	906.50'	<b>0.450 in/hr INFILTRATION over Wetted area</b>
#2	Primary	911.00'	<b>18.0" Round PIPE TO INF BASIN</b> L= 115.0' Ke= 0.500 Inlet / Outlet Invert= 911.00' / 909.00' S= 0.0174 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf

Discarded OutFlow Max=0.03 cfs @ 12.19 hrs HW=913.57' (Free Discharge)  
 ↳1=INFILTRATION (Exfiltration Controls 0.03 cfs)

Primary OutFlow Max=11.49 cfs @ 12.19 hrs HW=913.57' TW=909.71' (Dynamic Tailwater)  
 ↳2=PIPE TO INF BASIN (Inlet Controls 11.49 cfs @ 6.50 fps)

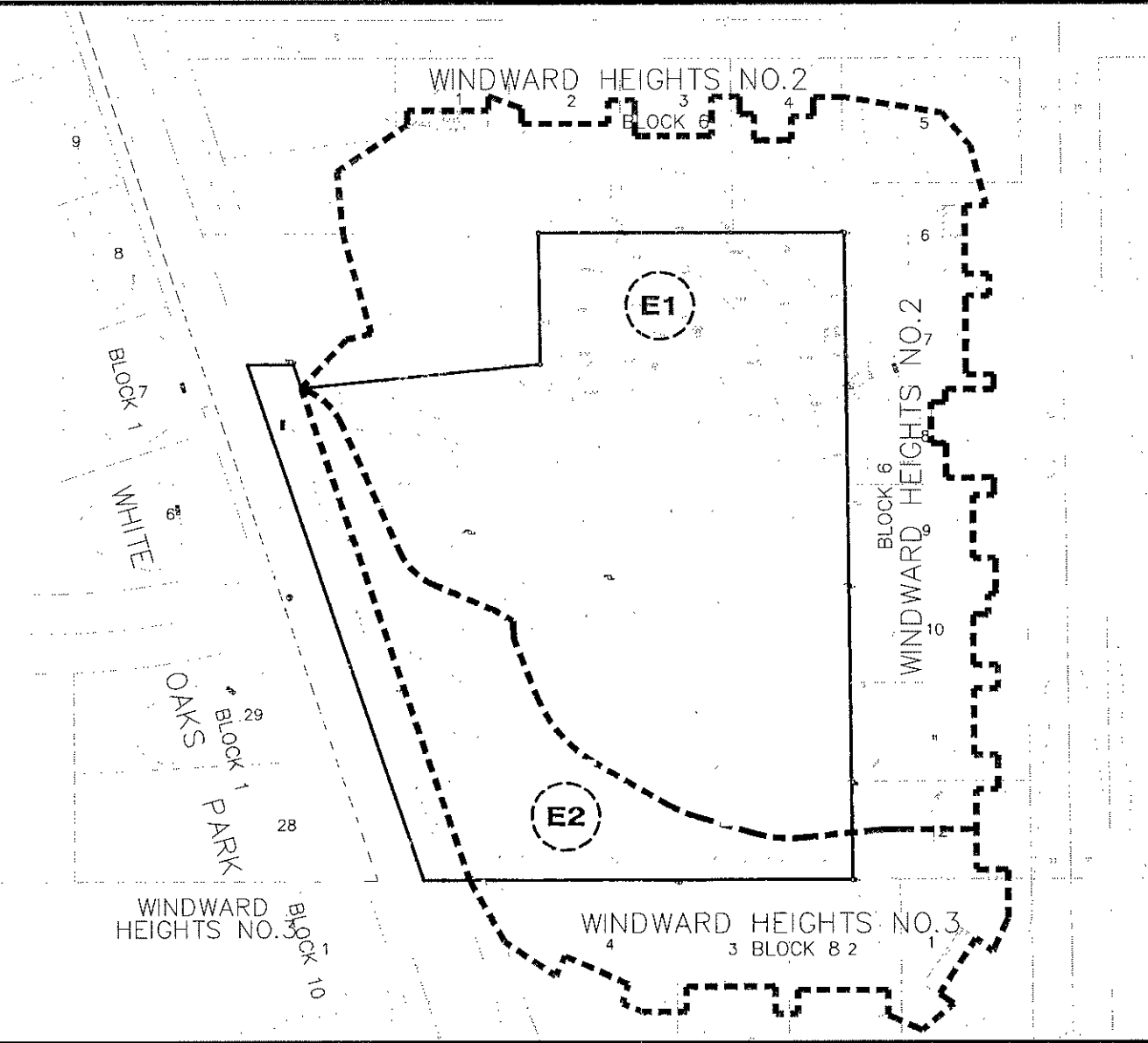


# WHISTLER PINES

## DRAINAGE AREAS

### EXISTING

MARCH 26, 2018



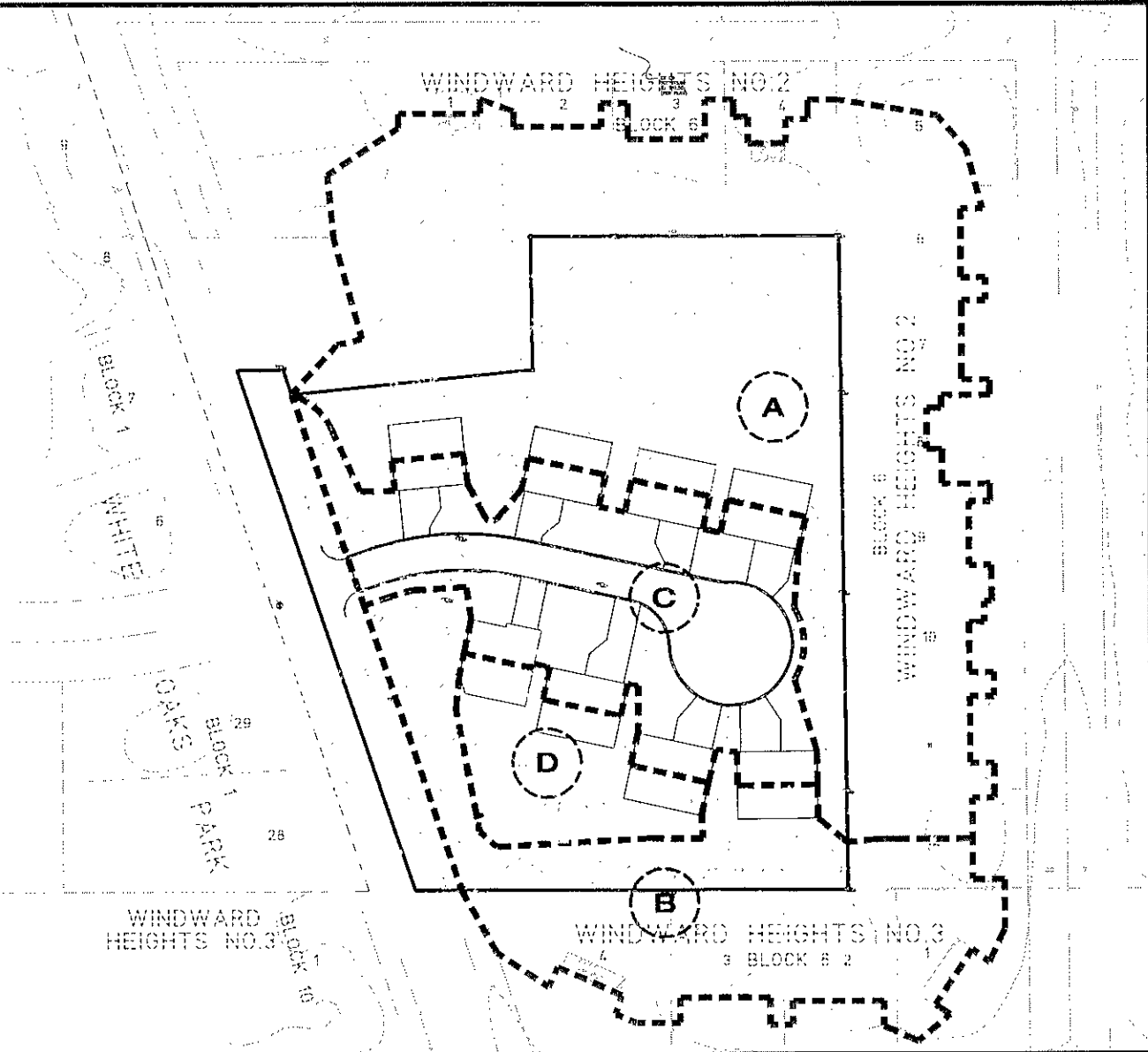
NORTH



1 INCH = 80 FEET  
(11" x 17")

# WHISTLER PINES DRAINAGE AREAS PROPOSED

MAY 14, 2018



NORTH



0 40 80  
1 INCH = 80 FEET  
(11" x 17")

# PRELIMINARY PLAT

~of~ WHISTLER PINES  
~for~ CARA BUILDERS, LLC

## VICINITY MAP

PART OF SEC. 24, TWP. 30, RNG. 23



RAMSEY COUNTY, MINNESOTA  
(NO SCALE)

## PROPERTY DESCRIPTION

(Description per Title Commitment File No. L17110345 Amendment No. 3 prepared by Stewart Title Guaranty Company)

That part of the South half of Southeast Quarter, Section 24, Township 30, Range 23, lying Easterly of center line of Hodgson Road; Bounded on the South by Windward Heights #3; on the East by lots 6, 7, 8, 9, 10, 11, 12, Block 6, Windward Heights #2 and on the North by the Southerly line of Lots 1, 2, 3 and 4, Block 6, Windward Heights No. 2 and said Southerly line, extended Westerly, to said Hodgson Road, except the northerly, 100 feet lying westerly of a line parallel to and distant 1095 feet west of east line of said Section 24, except that part described as follows. Beginning at a point 1095 feet West of and 426 feet South of the Northeast corner of said South half of Southeast quarter, Section 24, Township 30, Range 23; thence Westerly on a line parallel to and distant 426 feet south of North line of said South half of said Southeast quarter to the Easterly line of State Trunk Highway No. 49; thence Southerly along the Easterly line of said Trunk Highway No. 49 for a distance of 19 feet; thence Easterly to point of beginning; Ramsey County, Minnesota.

Abstract Property

## NOTES

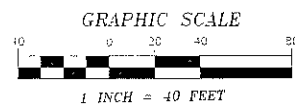
- Fee ownership is vested in Roger N. Dickinson Trust dated 6/16/92.
- Pin No. 24-30-23-44-0018.
- Address of the surveyed premises: 4140 Hodgson Road, Shoreview MN
- Field survey was completed by E.G. Rud and Sons, Inc. on 02/20/18
- Bearings shown are on Ramsey County Coordinate System.
- Boundary area of the surveyed premises: 174,258± sq. ft. (4.00 acres)
- This survey was based upon Title Commitment File No. L17110345 - Amendment No. 3 prepared by Stewart Title Guaranty Company dated 1-2-18.
- Surveyed premises shown on this survey map is in Flood Zone X (Areas determined to be outside the 0.2% annual chance floodplain.), according to Flood Insurance Rate Map No. 27123C0030G Community No. 270384 Panel No. 0030 Suffix G by the Federal Emergency Management Agency, effective date June 04, 2010.
- Due to field work being completed during the winter season there may be improvements in addition to those shown that were not visible due to snow and ice conditions characteristic of Minnesota winters.
- Contours shown on site was from field survey data. Off site contours were taken from MNCGeo Lido topography.
- Off site building locations are from aerial photography and are approximate in location.

I hereby certify that this survey, plan or report was prepared by me or under my direct supervision and that I am a duly Registered Land Surveyor under the laws of the State of Minnesota.

*Jason E. Rud*  
JASON E. RUD  
Date: 5/08/18 License No. 41578

**E.G. RUD & SONS, INC.**  
Professional Land Surveyors  
6776 Lake Drive NE, Suite 110  
Lino Lakes, MN 55014  
Tel. (651) 361-8200 Fax (651) 361-8701

## NORTH



## LEGEND

- DENOTES IRON MONUMENT FOUND AS LABELED
- DENOTES IRON MONUMENT SET, MARKED RLS# 41578
- DENOTES RAMSEY COUNTY CAST IRON MONUMENT
- DENOTES HYDRANT
- DENOTES GUY WIRE
- DENOTES POWER POLE
- DENOTES SANITARY SEWER MANHOLE
- DENOTES WATER VALVE
- DENOTES WOVEN WIRE FENCE
- DENOTES EXISTING CONTOURS
- DENOTES EXISTING SANITARY SEWER
- DENOTES EXISTING WATER MAIN
- DENOTES OVERHEAD WIRE
- DENOTES UNDERGROUND GAS LINE
- DENOTES BITUMINOUS SURFACE
- DENOTES STAKED SOIL BORING LOCATION

## BENCHMARK

RAMSEY COUNTY BENCHMARK #9068  
ELEVATION = 923.64 (NAVD88)

## AREA COMPUTATIONS

TOTAL SITE AREA: 4.00± ACRES  
TOTAL EXISTING AND PROPOSED RIGHT OF WAY: 0.91 ACRES  
DENSITY: 2.0± UNITS/ACRE

## ZONING AND SETBACKS

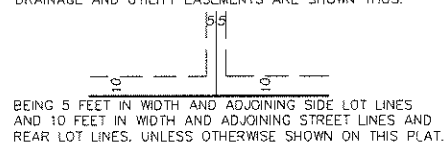
CURRENT ZONING IS R1 - DETACHED RESIDENTIAL DISTRICT

FRONT YARD 25 FEET (40 FEET HODGSON ROAD)  
HOUSE SIDE YARD 10 FEET  
GARAGE SIDE YARD 5 FEET  
REAR YARD 30 FEET  
SIDE STREET 25 FEET (40 FEET HODGSON ROAD)

MINIMUM AREA = 10,000 S.F.  
MINIMUM DEPTH = 125 FEET  
MINIMUM WIDTH = 75 FEET

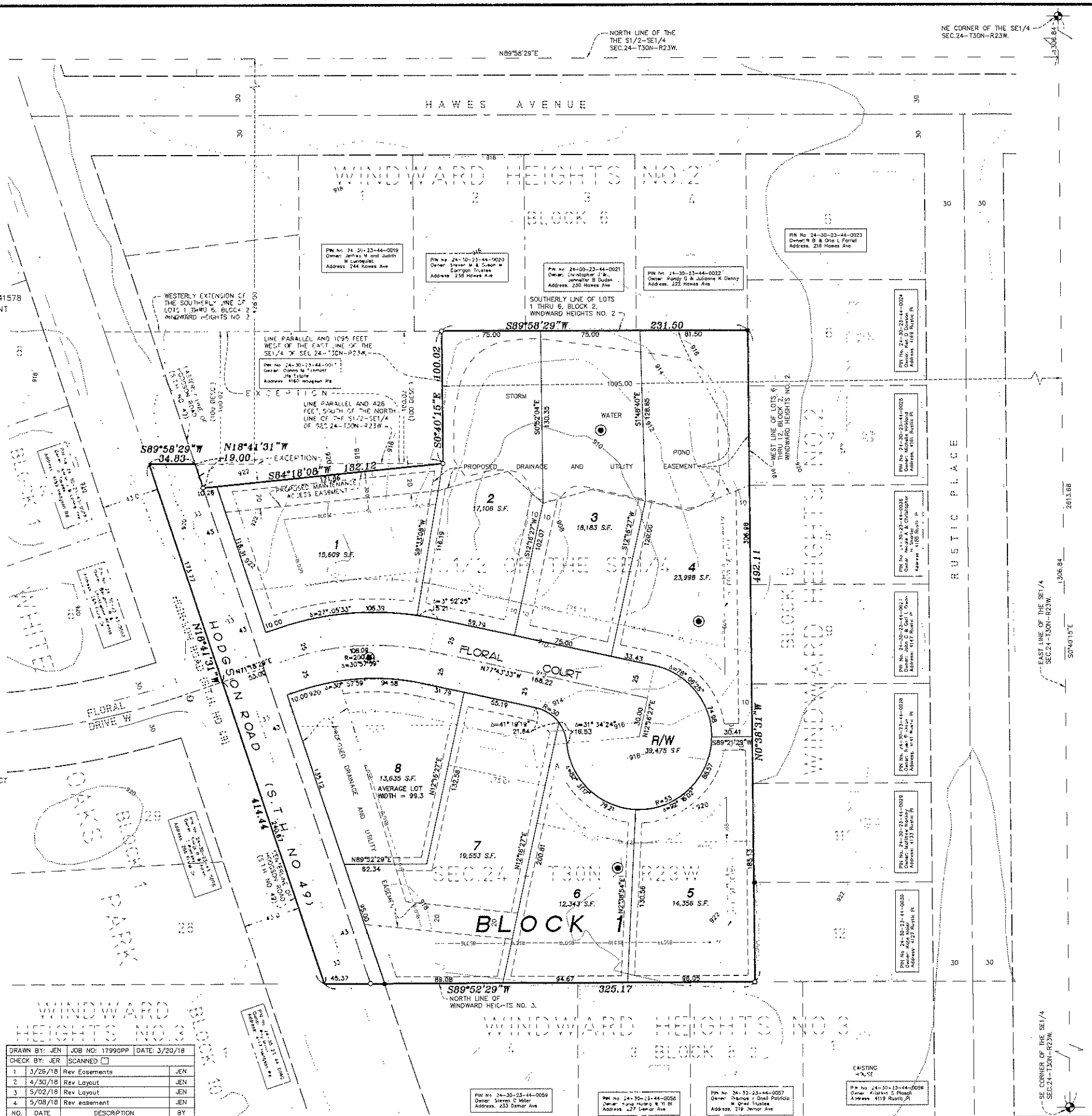
## EASEMENT DETAIL

DRAINAGE AND UTILITY EASEMENTS ARE SHOWN THUS:



BEING 5 FEET IN WIDTH AND ADJOINING SIDE LOT LINES AND 10 FEET IN WIDTH AND ADJOINING STREET LINES AND REAR LOT LINES, UNLESS OTHERWISE SHOWN ON THIS PLAT.

NO.	DATE	DESCRIPTION	BY
1	3/26/18	Rev Easements	JEN
2	4/30/18	Rev Layout	JEN
3	5/02/18	Rev Layout	JEN
4	5/08/18	Rev easement	JEN



**GENERAL NOTES**

1. THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF EXISTING UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO TYPE AND LOCATION OF UTILITIES AS NECESSARY TO AVOID DAMAGE TO THESE UTILITIES.
2. CALL "811" FOR EXISTING UTILITIES LOCATIONS PRIOR TO ANY EXCAVATIONS. THE CONTRACTOR SHALL FIELD VERIFY SIZE, ELEVATION, AND LOCATION OF EXISTING UTILITIES AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO THE START OF INSTALLATIONS.
3. INSTALLATIONS SHALL CONFORM TO THE CITY STANDARD SPECIFICATIONS AND DETAIL PLATES.
4. STORAGE OF MATERIALS OR EQUIPMENT SHALL NOT BE ALLOWED ON PUBLIC STREETS OR WITHIN PUBLIC RIGHT-OF-WAY.
5. NOTIFY CITY A MINIMUM OF 48 HOURS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
6. ALL ELECTRIC, TELEPHONE, AND GAS EXTENSIONS INCLUDING SERVICE LINES SHALL BE CONSTRUCTED TO THE APPROPRIATE UTILITY COMPANY SPECIFICATIONS. ALL UTILITY DISCONNECTIONS SHALL BE COORDINATED WITH THE APPROPRIATE UTILITY COMPANY.

**CURB & BITUMINOUS NOTES**

1. REMOVAL AND DISPOSAL OF EXISTING STREET MATERIALS AS REQUIRED FOR CONSTRUCTION IS CONSIDERED INCIDENTAL.
2. ALL MATCH POINTS AND PAVEMENT PATCHES TO BE SAU-OUT AT FULL DEPTH.
3. RESTORE DISTURBED STREET TO EXISTING OR BETTER SECTION.
4. BACKFILLING OF CURB IS INCIDENTAL TO CURB INSTALLATION.

**STORM SEWER NOTES**

1. PROPOSED STORM SEWER PIPE SHALL BE:  
1.1. REINFORCED CONCRETE PIPE (RCP) WITH R-4 GASKETS AND  
1.2. HIGH-DENSITY POLYETHYLENE PIPE (HDPE). HDPE PIPE SHALL MEET THE REQUIREMENTS OF AASHTO M294, TYPE 3 WITH WATERFRONT CONNECTIONS. USE SAND/FORMULAR MATERIAL FOR BACKFILLING AND COMPACTION OF HDPE PIPE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM 2321.
2. FIELD VERIFY SIZE, ELEVATION, AND LOCATION OF EXISTING STORM SEWER AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO ANY INSTALLATIONS.
3. STORM SEWER LENGTHS INCLUDE THE LAYING LENGTH OF THE FLARED-END SECTION. LAYING LENGTH OF APRON TO BE DEDUCTED FROM PAYMENT LENGTH OF PIPE.
4. ALL PORTIONS OF THE STORM SEWER SYSTEM LOCATED WITHIN 10 FEET OF THE BUILDING OR WATER SERVICE LINE MUST BE TESTED IN ACCORDANCE WITH MINNESOTA RULES, CHAPTER 4714, SECTION 1109.0.

**SANITARY SEWER NOTES**

1. PROPOSED SANITARY SEWER PIPE SHALL BE:  
1.1. 8" PVC SDR 35 (ASTM D3034)  
1.2. 4" PVC SCHEDULE 40 (ASTM D2068)
2. FIELD VERIFY SIZE, ELEVATION, AND LOCATION OF EXISTING SANITARY SEWER AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO ANY INSTALLATIONS.
3. CONTRACTOR TO CONTACT CITY ENGINEERING DEPARTMENT AT LEAST 48 HOURS PRIOR TO CONNECTION TO EXISTING PUBLIC SANITARY SEWER (763-785-8172)

**WATERMAIN NOTES**

1. PROPOSED WATERMAIN PIPE SHALL BE:  
1.1. 8" AND 6" PVC C-900 WITH OR 18  
1.2. 1" HDPE ENDO-PURE PC 4710-250 PSI SDR 7 (PS)
2. ALL WATERMAIN VALVES SHALL BE OPERATED ONLY BY SHOREVIEW PUBLIC WORKS FORCES (763-785-8172)
3. FIELD VERIFY SIZE, ELEVATION, AND LOCATION OF EXISTING WATERMAIN AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO ANY INSTALLATIONS.
4. MAINTAIN A MINIMUM OF 7.5 FEET OF COVER OVER ALL WATERMAIN PIPE.
5. PROVIDE PREFORMED INSULATION, PPG FOAMGLASS, OR APPROVED EQUAL WHERE SANITARY SEWER OR STORM SEWER CROSSES WITHIN 18" OF WATERMAIN.

**LEGEND**

—	EXISTING OVERHEAD ELECTRIC	—	PROPOSED WATER PIPE
—	EXISTING UNDERGROUND GAS	—	PROPOSED SANITARY SEWER PIPE
—	EXISTING TELEPHONE PEDESTAL	—	PROPOSED STORM SEWER PIPE
—	EXISTING CABLE PEDESTAL	—	PROPOSED STORM MANHOLE
—	EXISTING UTILITY POLE	—	PROPOSED CATCH BASIN
—	EXISTING LIGHT POLE	—	PROPOSED FLARED-END SECTION
—	EXISTING STORM SEWER	—	PROPOSED GATE VALVE
—	EXISTING WATER MAIN	—	PROPOSED HYDRANT
—	EXISTING SANITARY SEWER	—	PROPOSED SANITARY SEWER MANHOLE
—	EXISTING STORM MANHOLE	—	PROPOSED CONTOUR
—	EXISTING CATCH BASIN	—	PROPOSED SPOT ELEVATION
—	EXISTING FLARED-END SECTION	—	(SURFACE, BRUSHING SURFACE, OR 20.00 SURFACE UNLESS OTHERWISE INDICATED)
—	EXISTING GATE VALVE	—	PROPOSED SILT FENCE
—	EXISTING HYDRANT	—	PROPOSED DIRECTION OF DRAINAGE
—	EXISTING SANITARY SEWER MANHOLE	—	PROPOSED INLET PROTECTION
—	EXISTING CONTOUR	—	PROPOSED RIP-RAP
—	EXISTING SPOT ELEVATION		

**GENERAL GRADING NOTES**

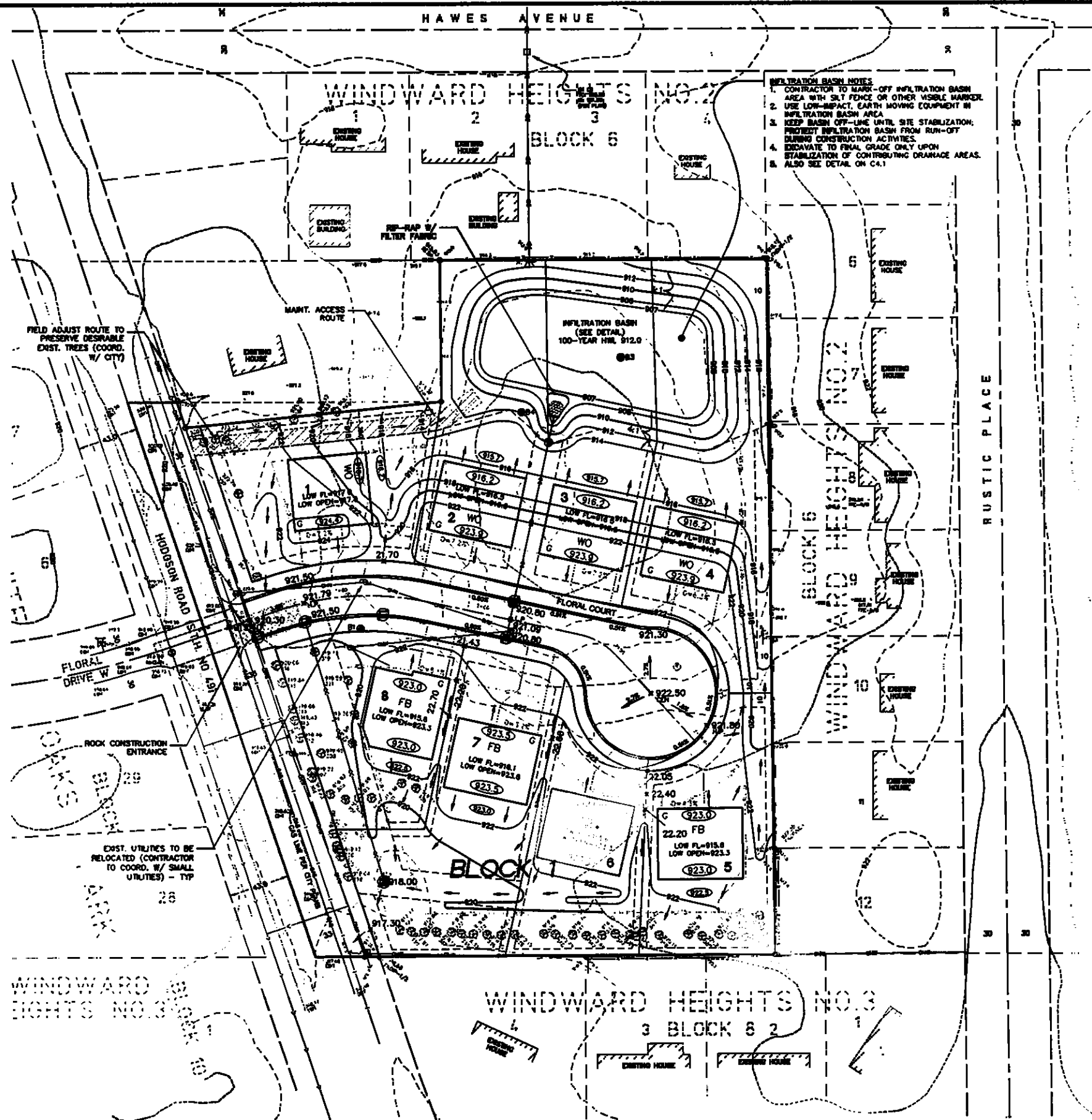
1. PRIOR TO ANY LAND-DISTURBING ACTIVITY, THE CONTRACTOR SHALL INSTALL ROCK CONSTRUCTION ENTRANCE AND SILT FENCE AS SHOWN ON PLAN. ADDITIONAL SILT FENCE MAY BE NECESSARY IF LOCAL CONDITIONS REQUIRE. SILT FENCE SHALL REMAIN IN-PLACE UNTIL THE FINAL STABILIZATION HAS BEEN ESTABLISHED.
2. CONTACT NICOLE SODERHOLM, RAMSEY WASHINGTON METRO WATERSHED DISTRICT, AT 651-792-7976 PRIOR TO BEGINNING ANY AND ALL CONSTRUCTION ACTIVITY FOR AN INITIAL SWPPP INSPECTION.
3. SPECIFIED EROSION & SEDIMENT CONTROL MEASURES ARE MINIMUM. ADDITIONAL PRACTICES MAY BE REQUIRED DURING THE COURSE OF CONSTRUCTION.
4. PROVIDE INLET SEDIMENT CONTROL FOR ALL PROPOSED STORM SEWER INLETS WITHIN 24 HOURS OF INSTALLATION - LEAVE IN-PLACE UNTIL SITE HAS BEEN STABILIZED (TYP)
5. INSTALL RIP-RAP W/ GEOTEXTILE FILTER FABRIC AT ALL PIPE OUTLETS WITHIN 24 HOURS OF APRON INSTALLATION (TYP)
6. NOTIFY NICOLE SODERHOLM, RAMSEY WASHINGTON METRO WATERSHED DISTRICT (RWMWD) AT (651)-792-7976 AT LEAST 48 HOURS PRIOR TO THE CONSTRUCTION OF PERMANENT STORM WATER BMPs



Know what's below.  
Call before you dig.

**NOTES:**

- 1) SEE SHEET TO FOR ADDITIONAL CONSTRUCTION NOTES
- 2) SEE STORM WATER POLLUTION PREVENTION PLAN FOR ADDITIONAL EROSION CONTROL NOTES, SITE SEQUENCING & EROSION AND SEDIMENT CONTROL DETAILS
- 3) TEMPORARY EROSION CONTROL DEVICES SHALL BE IN PLACE PRIOR TO START OF CONSTRUCTION
- 4) SPECIFIED EROSION & SEDIMENT CONTROL MEASURES ARE MINIMUM. ADDITIONAL PRACTICES MAY BE REQUIRED DURING THE COURSE OF CONSTRUCTION.



- INFILTRATION BASIN NOTES**
1. CONTRACTOR TO MARK-OFF INFILTRATION BASIN AREA WITH SILT FENCE OR OTHER VISIBLE MARKER.
  2. USE LOW-IMPACT, EARTH MOVING EQUIPMENT IN INFILTRATION BASIN AREA.
  3. KEEP BASIN OFF-LINE UNTIL SITE STABILIZATION. PROTECT INFILTRATION BASIN FROM RUN-OFF DURING CONSTRUCTION ACTIVITIES.
  4. EXCAVATE TO FINAL GRADE ONLY UPON STABILIZATION OF CONTRIBUTING DRAINAGE AREAS.
  5. ALSO SEE DETAIL ON C4.1

DRAWN BY:	A.G.	DESIGN BY:	A.G.
CHECKED BY:	C.W.P.	PROJ. NO.:	18-1749
ORIGINAL DATE:			
MARCH 28, 2018			

DATE	REVISION DESCRIPTION
8-8-18	CITY REVIEW COMMENTS
8-14-18	CITY & R/W/AVD COMMENTS

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

**PRELIMINARY**  
ADAM GRANEL  
DATE: 06.14.2018 LIC. NO. 45863

**WHISTLER PINES**  
SHOREVIEW, MN  
GRADING, DRAINAGE & ESC PLAN

PREPARED FOR:  
**CARA BUILDERS, LLC**



**PLOWE**  
ENGINEERING, INC.  
4778 LAKE DRIVE  
SUITE 110  
LINO LAKES, MN 55014  
PHONE: (951) 261-8610  
FAX: (951) 261-6701



**GRADING, DRAINAGE & ESC PLAN  
WHISTLER PINES C1.1**

**GENERAL NOTES**

1. THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF EXISTING UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO TYPE AND LOCATION OF UTILITIES AS NECESSARY TO AVOID DAMAGE TO THESE UTILITIES.
2. CALL "811" FOR EXISTING UTILITIES LOCATIONS PRIOR TO ANY EXCAVATIONS. THE CONTRACTOR SHALL FIELD VERIFY SIZE, ELEVATION, AND LOCATION OF EXISTING UTILITIES AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO THE START OF INSTALLATIONS.
3. INSTALLATIONS SHALL CONFORM TO THE CITY STANDARD SPECIFICATIONS AND DETAIL PLATES.
4. STORAGE OF MATERIALS OR EQUIPMENT SHALL NOT BE ALLOWED ON PUBLIC STREETS OR WITHIN PUBLIC RIGHT-OF-WAY.
5. NOTIFY CITY A MINIMUM OF 48 HOURS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
6. ALL ELECTRIC, TELEPHONE, AND GAS EXTENSIONS INCLUDING SERVICE LINES SHALL BE CONSTRUCTED TO THE APPROPRIATE UTILITY COMPANY SPECIFICATIONS. ALL UTILITY DISCONNECTIONS SHALL BE COORDINATED WITH THE APPROPRIATE UTILITY COMPANY.

**CURB & BITUMINOUS NOTES**

1. REMOVAL AND DISPOSAL OF EXISTING STREET MATERIALS AS REQUIRED FOR CONSTRUCTION IS CONSIDERED INCIDENTAL.
2. ALL MATCH POINTS AND PAVEMENT PATCHES TO BE SAW-CUT AT FULL DEPTH.
3. RESTORE DISTURBED STREET TO EXISTING OR BETTER SECTION.
4. BACKFILLING OF CURB IS INCIDENTAL TO CURB INSTALLATION.

**STORM SEWER NOTES**

1. PROPOSED STORM SEWER PIPE SHALL BE:
  - 1.1. REINFORCED CONCRETE PIPE (RCP) WITH R-4 GASKETS; AND,
  - 1.2. HIGH-DENSITY POLYETHYLENE PIPE (HDPE). HDPE PIPE SHALL MEET THE REQUIREMENTS OF AASHTO M294, TYPE S WITH WATERTIGHT CONNECTIONS. USE SAND/GRAVULAR MATERIAL FOR BACKFILLING AND COMPACTION OF HDPE PIPE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM 2321.
2. FIELD VERIFY SIZE, ELEVATION, AND LOCATION OF EXISTING STORM SEWER AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO ANY INSTALLATIONS.
3. STORM SEWER LENGTHS INCLUDE THE LAYING LENGTH OF THE FLARED-END SECTION. LAYING LENGTH OF APRON TO BE DEDUCTED FROM PAYMENT LENGTH OF PIPE.
4. ALL PORTIONS OF THE STORM SEWER SYSTEM LOCATED WITHIN 10 FEET OF THE BUILDING OR WATER SERVICE LINE MUST BE TESTED IN ACCORDANCE WITH MINNESOTA RULES, CHAPTER 4714, SECTION 1109.0.

**SANITARY SEWER NOTES**

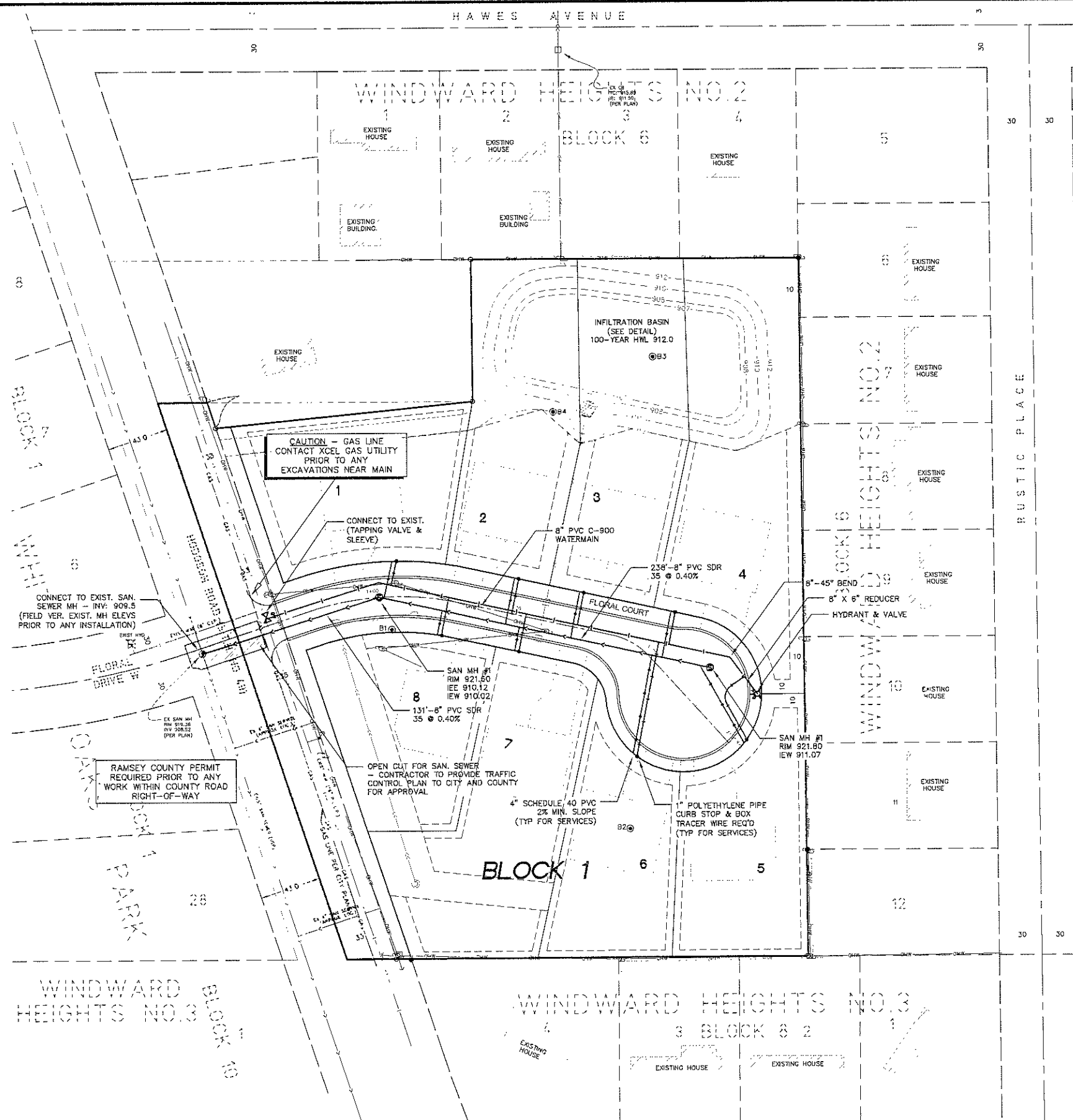
1. PROPOSED SANITARY SEWER PIPE SHALL BE:
  - 1.1. 8" PVC SDR 35 (ASTM D3034)
  - 1.2. 4" PVC SCHEDULE 40 (ASTM D2865)
2. FIELD VERIFY SIZE, ELEVATION AND LOCATION OF EXISTING SANITARY SEWER AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO ANY INSTALLATIONS.
3. CONTRACTOR TO CONTACT CITY ENGINEERING DEPARTMENT AT LEAST 48 HOURS PRIOR TO CONNECTION TO EXISTING PUBLIC SANITARY SEWER (763-785-6172)

**WATERMAIN NOTES**

1. PROPOSED WATERMAIN PIPE SHALL BE:
  - 1.1. 6" AND 8" PVC C-900 WITH DR 18
  - 1.2. 1" HDPE END-O-PURE PE 4710-250 PSI SDR 7 (PS)
2. ALL WATERMAIN VALVES SHALL BE OPERATED ONLY BY SHOREVIEW PUBLIC WORKS FORCES (763-785-6172)
3. FIELD VERIFY SIZE, ELEVATION, AND LOCATION OF EXISTING WATERMAIN AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO ANY INSTALLATIONS.
4. MAINTAIN A MINIMUM OF 7.5 FEET OF COVER OVER ALL WATERMAIN PIPE.
5. PROVIDE PREFORMED INSULATION, PPG FOAMGLASS, OR APPROVED EQUAL WHERE SANITARY SEWER OR STORM SEWER CROSSES WITHIN 18" OF WATERMAIN.

**LEGEND**

—O—O—	EXISTING OVERHEAD ELECTRIC	— — —	PROPOSED WATER PIPE
—G—G—	EXISTING UNDERGROUND GAS	—S—S—S—	PROPOSED SANITARY SEWER PIPE
—T—T—	EXISTING TELEPHONE PEDESTAL	—>—>—>	PROPOSED STORM SEWER PIPE
—C—C—	EXISTING CABLE PEDESTAL	⊙	PROPOSED STORM MANHOLE
—U—U—	EXISTING UTILITY POLE	□	PROPOSED CATCH BASIN
—L—L—	EXISTING LIGHT POLE	△	PROPOSED FLARED-END SECTION
—SS—SS—	EXISTING STORM SEWER	⊗	PROPOSED GATE VALVE
—WM—WM—	EXISTING WATER MAIN	⊕	PROPOSED HYDRANT
—SS—SS—	EXISTING SANITARY SEWER	⊙	PROPOSED SANITARY SEWER MANHOLE
—SM—SM—	EXISTING STORM MANHOLE	—	PROPOSED CONTOUR
—CB—CB—	EXISTING CATCH BASIN	925	PROPOSED SPOT ELEVATION
—FE—FE—	EXISTING FLARED-END SECTION	930	(OUTSIDE, BITUMINOUS SURFACE OR GROUND SURFACE UNLESS OTHERWISE INDICATED)
—GV—GV—	EXISTING GATE VALVE	X920.60	PROPOSED SILT FENCE
—H—H—	EXISTING HYDRANT	4.0%	PROPOSED DIRECTION OF DRAINAGE
—SM—SM—	EXISTING SANITARY SEWER MANHOLE	○	PROPOSED INLET PROTECTION
—C—C—	EXISTING CONTOUR	○	PROPOSED RIP-RAP
—SE—SE—	EXISTING SPOT ELEVATION		



DRAWN BY: A.G.  
 CHCKD BY: PROJ. NO. 18-1749  
 C.W.P.

ORIGINAL DATE:  
 MARCH 26, 2019

DATE	REVISION DESCRIPTION
5-8-18	CITY REVIEW COMMENTS
5-14-18	CITY & RHWWD COMMENTS

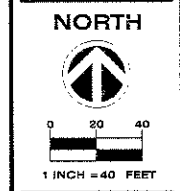
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
 ADAM GINKEL  
 DATE: 05.14.2018 LIC. NO. 43963

**WHISTLER PINES**  
 SHOREVIEW, MN  
 UTILITY PLAN  
 SAN. SEWER & WATERMAIN

PREPARED FOR:  
**CARA BUILDERS, LLC**

**PLOWE ENGINEERING, INC.**  
 8776 LAKE DRIVE  
 SUITE 110  
 LIND LAKES, MN 56014

PHONE: (651) 361-8210  
 FAX: (651) 361-8701



Know what's below.  
 Call before you dig.

- NOTES:**
1. SEE STORM WATER POLLUTION PREVENTION PLAN FOR ADDITIONAL EROSION CONTROL NOTES, SITE SEQUENCING & EROSION AND SEDIMENT CONTROL DETAILS
  2. TEMPORARY EROSION CONTROL DEVICES SHALL BE IN PLACE PRIOR TO START OF CONSTRUCTION
  3. SPECIFIED EROSION & SEDIMENT CONTROL MEASURES ARE MINIMUM. ADDITIONAL PRACTICES MAY BE REQUIRED DURING THE COURSE OF CONSTRUCTION.

**UTILITY PLAN  
 WHISTLER PINES C2.1**

**GENERAL NOTES**

1. THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF EXISTING UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO TYPE AND LOCATION OF UTILITIES AS NECESSARY TO AVOID DAMAGE TO THESE UTILITIES.
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3. INSTALLATIONS SHALL CONFORM TO THE CITY STANDARD SPECIFICATIONS AND DETAIL PLATES.
4. STORAGE OF MATERIALS OR EQUIPMENT SHALL NOT BE ALLOWED ON PUBLIC STREETS OR WITHIN PUBLIC RIGHT-OF-WAY.
5. NOTIFY CITY A MINIMUM OF 48 HOURS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
6. ALL ELECTRIC, TELEPHONE, AND GAS EXTENSIONS INCLUDING SERVICE LINES SHALL BE CONSTRUCTED TO THE APPROPRIATE UTILITY COMPANY SPECIFICATIONS. ALL UTILITY DISCONNECTIONS SHALL BE COORDINATED WITH THE APPROPRIATE UTILITY COMPANY.

**CURB & BITUMINOUS NOTES**

1. REMOVAL AND DISPOSAL OF EXISTING STREET MATERIALS AS REQUIRED FOR CONSTRUCTION IS CONSIDERED INCIDENTAL.
2. ALL MATCH POINTS AND PAVEMENT PATCHES TO BE SAW-CUT AT FULL DEPTH.
3. RESTORE DISTURBED STREET TO EXISTING OR BETTER SECTION.
4. BACKFILLING OF CURB IS INCIDENTAL TO CURB INSTALLATION.

**STORM SEWER NOTES**

1. PROPOSED STORM SEWER PIPE SHALL BE:
  - 1.1. REINFORCED CONCRETE PIPE (RCP) WITH R-4 GASKETS; AND
  - 1.2. HIGH-DENSITY POLYETHYLENE PIPE (HDPE). HDPE PIPE SHALL MEET THE REQUIREMENTS OF AASHTO M294, TYPE S WITH WATERTIGHT CONNECTIONS. USE SAND/GRAVULAR MATERIAL FOR BACKFILLING AND COMPACTION OF HDPE PIPE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM 2321.
2. FIELD VERIFY SIZE, ELEVATION, AND LOCATION OF EXISTING STORM SEWER AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO ANY INSTALLATIONS.
3. STORM SEWER LENGTHS INCLUDE THE LAYING LENGTH OF THE FLARED-END SECTION. LAYING LENGTH OF APRON TO BE DEDUCTED FROM PAYMENT LENGTH OF PIPE.
4. ALL PORTIONS OF THE STORM SEWER SYSTEM LOCATED WITHIN 10 FEET OF THE BUILDING OR WATER SERVICE LINE MUST BE TESTED IN ACCORDANCE WITH MINNESOTA RULES, CHAPTER 4714, SECTION 1109.0.

**SANITARY SEWER NOTES**

1. PROPOSED SANITARY SEWER PIPE SHALL BE:
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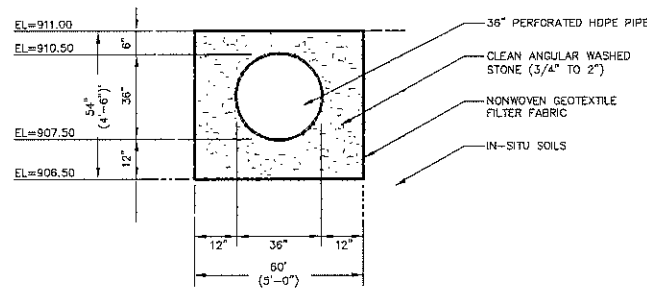
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5. PROVIDE PREFORMED INSULATION, PPG FOAMGLASS, OR APPROVED EQUAL WHERE SANITARY SEWER OR STORM SEWER CROSSES WITHIN 18" OF WATERMAIN.

**LEGEND**

—O—O—	EXISTING OVERHEAD ELECTRIC	— — —	PROPOSED WATER PIPE
—G—G—	EXISTING UNDERGROUND GAS	—S—S—	PROPOSED SANITARY SEWER PIPE
—T—T—	EXISTING TELEPHONE PEDESTAL	— — —	PROPOSED STORM SEWER PIPE
—C—C—	EXISTING CABLE PEDESTAL	⊙	PROPOSED STORM MANHOLE
—U—U—	EXISTING UTILITY POLE	□	PROPOSED CATCH BASIN
—L—L—	EXISTING LIGHT POLE	△	PROPOSED FLARED-END SECTION
—S—S—	EXISTING STORM SEWER	⊗	PROPOSED GATE VALVE
—W—W—	EXISTING WATER MAIN	⊗	PROPOSED HYDRANT
—S—S—	EXISTING SANITARY SEWER	⊗	PROPOSED SANITARY SEWER MANHOLE
—M—M—	EXISTING STORM MANHOLE	— — —	PROPOSED CONTOUR
—C—C—	EXISTING CATCH BASIN	X 920.60	PROPOSED SPOT ELEVATION (OUTLINE, BITUMINOUS SURFACE, OR GROUND SURFACE UNLESS OTHERWISE INDICATED)
—F—F—	EXISTING FLARED-END SECTION	— — —	PROPOSED SILT FENCE
—G—G—	EXISTING GATE VALVE	— — —	PROPOSED DIRECTION OF DRAINAGE
—H—H—	EXISTING HYDRANT	⊙	PROPOSED INLET PROTECTION
—S—S—	EXISTING SANITARY SEWER MANHOLE	— — —	PROPOSED RIP-RAP
—E—E—	EXISTING CONTOUR		
—920.99	EXISTING SPOT ELEVATION		

STORAGE PER L.F. (ROCK @ 40% VOIDS) = 6.17 CF  
 STORAGE PER L.F. (PIPE ONLY) = 7.07 CF  
 TOTAL STORAGE PER L.F. = 13.24 CF



**UNDERGROUND INFILTRATION**

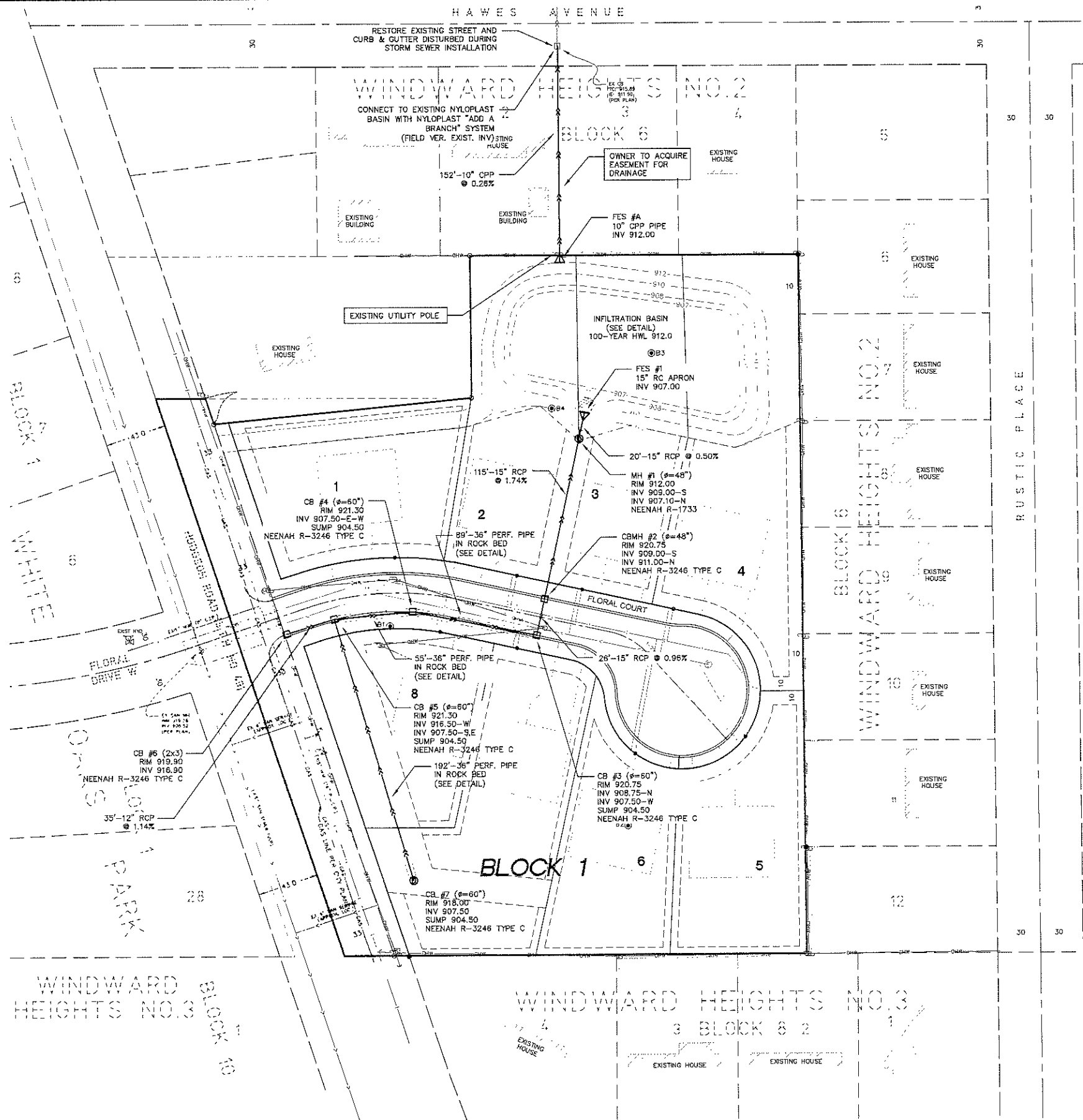
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DRAWN BY: A.G.  
 CHCKD BY: A.G.  
 C.W.P. PROJ. NO. 18-1749

ORIGINAL DATE:  
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DATE	REVISION DESCRIPTION
5-8-18	CITY REVIEW COMMENTS
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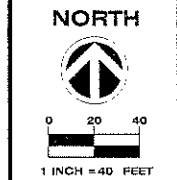
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 ADAM GINKEL  
 DATE: 05.14.2018 LIC. NO. 43963

**WHISTLER PINES**  
 SHOREVIEW, MN  
 UTILITY PLAN  
 STORM SEWER

PREPARED FOR:  
**CARA BUILDERS, LLC**

**PLOWE ENGINEERING, INC.**  
 8776 LAKE DRIVE  
 SUITE 110  
 LINDO LAKES, MN 55014  
 PHONE: (651) 361-8210  
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**UTILITY PLAN - STORM SEWER  
 WHISTLER PINES**

**C2.2**

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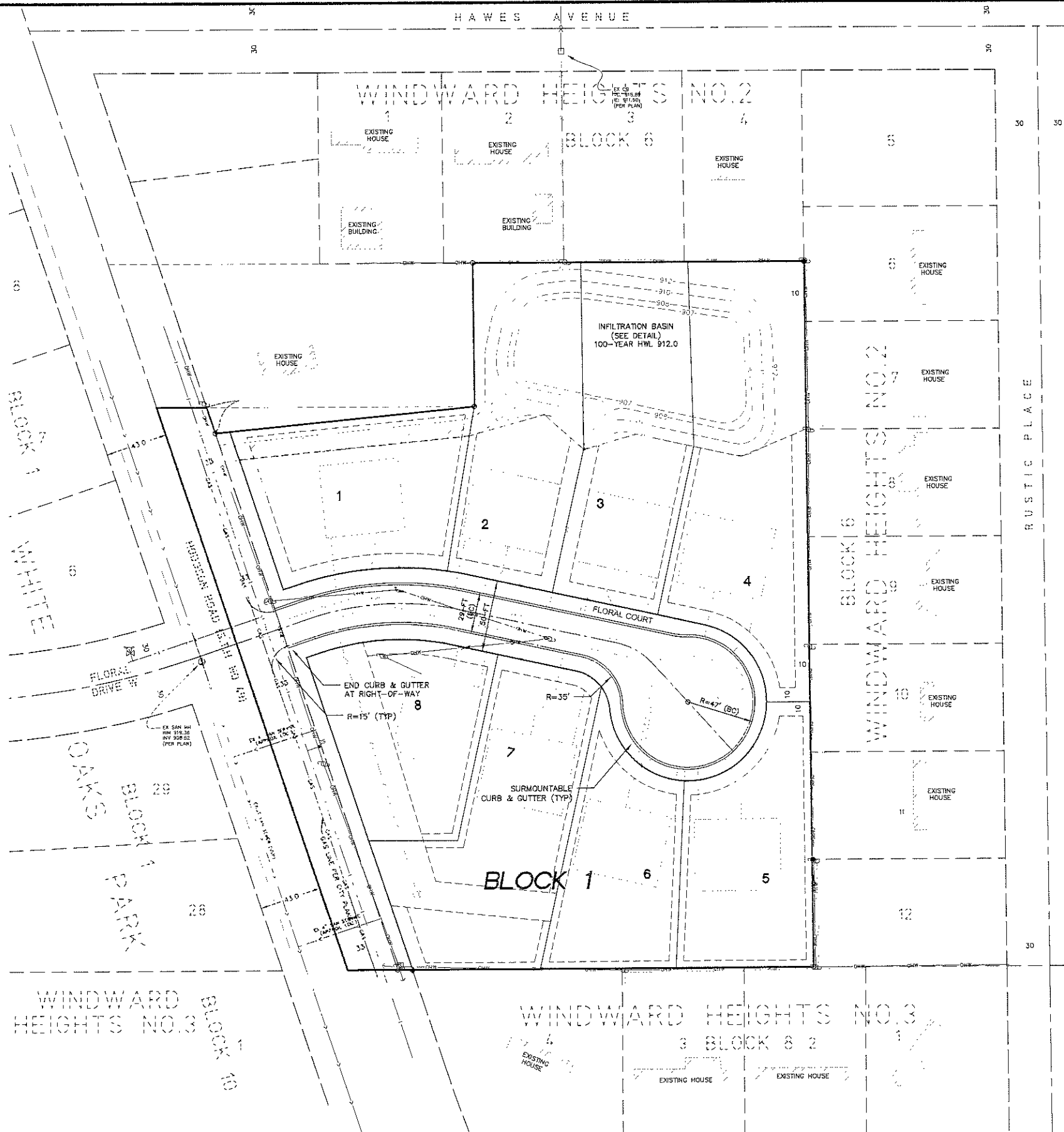
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	EXISTING UNDERGROUND GAS		PROPOSED SANITARY SEWER PIPE
	EXISTING TELEPHONE PEDESTAL		PROPOSED STORM SEWER PIPE
	EXISTING CABLE PEDESTAL		PROPOSED STORM MANHOLE
	EXISTING UTILITY POLE		PROPOSED CATCH BASIN
	EXISTING LIGHT POLE		PROPOSED FLARED-END SECTION
	EXISTING STORM SEWER		PROPOSED GATE VALVE
	EXISTING WATER MAIN		PROPOSED HYDRANT
	EXISTING SANITARY SEWER		PROPOSED SANITARY SEWER MANHOLE
	EXISTING STORM MANHOLE		PROPOSED CONTOUR
	EXISTING CATCH BASIN		PROPOSED SPOT ELEVATION
	EXISTING FLARED-END SECTION		GUTTERLINE (SURFACE OR GROUND SURFACE UNLESS OTHERWISE INDICATED)
	EXISTING GATE VALVE		PROPOSED SILT FENCE
	EXISTING HYDRANT		PROPOSED DIRECTION OF DRAINAGE
	EXISTING SANITARY SEWER MANHOLE		PROPOSED INLET PROTECTION
	EXISTING CONTOUR		PROPOSED RIP-RAP
	EXISTING SPOT ELEVATION		



- NOTES:**
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**CURBING & PAVING PLAN  
WHISTLER PINES**

DRAWN BY: A.G.  
DESIGN BY: A.G.  
CHKCD BY: C.W.P.  
PROJ. NO. 18-1749  
ORIGINAL DATE: MARCH 26, 2018

DATE	REVISION DESCRIPTION
5-9-18	CITY REVIEW COMMENTS
5-14-18	CITY & RMMWD COMMENTS

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

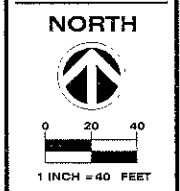
ADAM GINKEL  
DATE: 05.14.2018 LIC. NO. 43963

**WHISTLER PINES**  
SHOREVIEW, MN  
CURBING PLAN

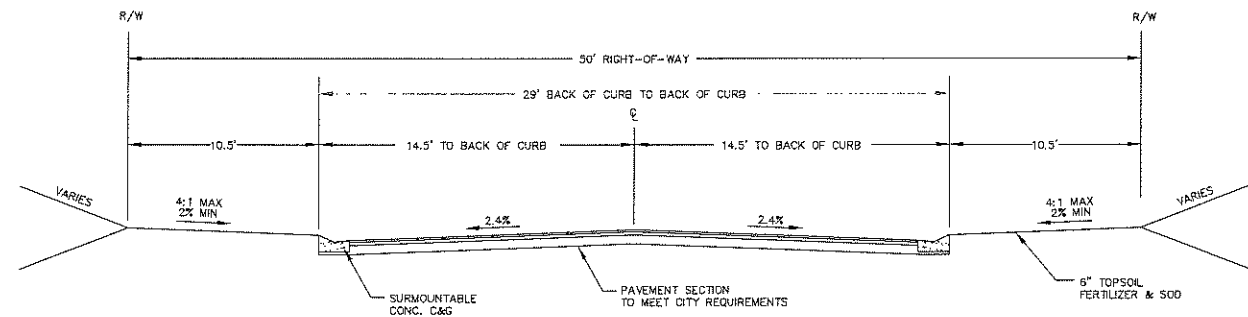
PREPARED FOR:  
CARA BUILDERS, LLC



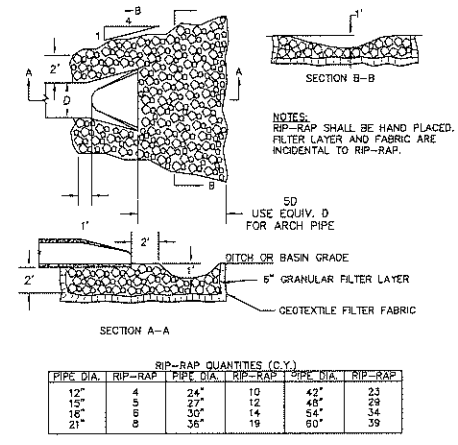
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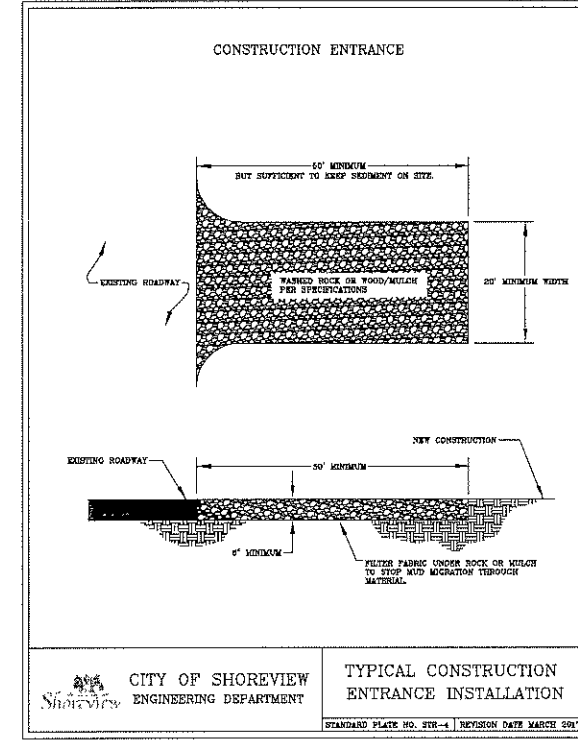
**C3.1**



**TYPICAL STREET SECTION**  
N.T.S.

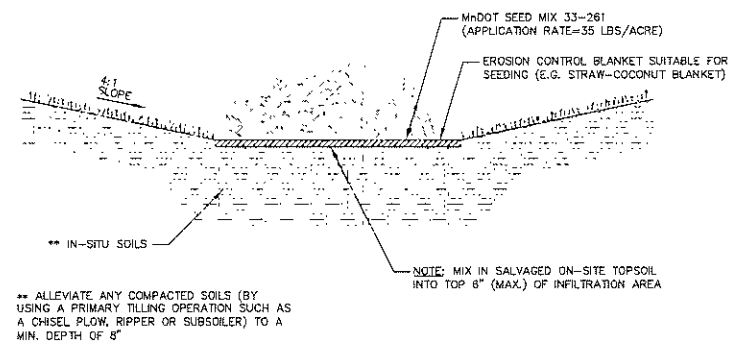


**RIP-RAP AT PIPE OUTLETS**  
N.T.S.

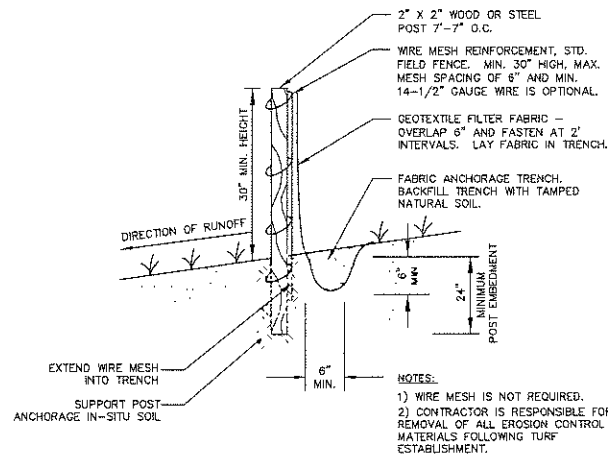


**TYPICAL CONSTRUCTION ENTRANCE INSTALLATION**  
CITY OF SHOREVIEW ENGINEERING DEPARTMENT  
STANDARD PLATE NO. STR-4 | REVISION DATE MARCH 2017

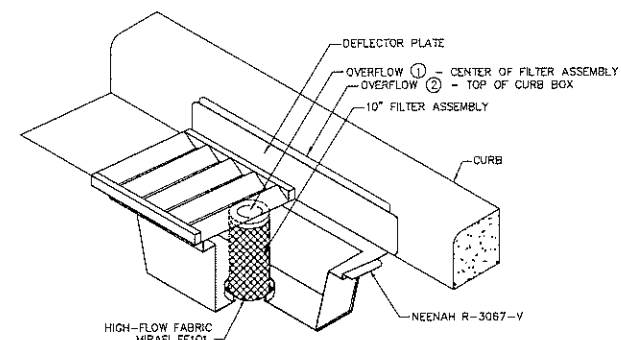
- CONTRACTOR TO MARK-OFF INFILTRATION BASIN AREA WITH SILT FENCE OR OTHER VISIBLE MARKER.
- USE LOW-IMPACT, EARTH MOVING EQUIPMENT SUCH AS WIDE TRACK OR MARSH TRACK EQUIPMENT, OR OTHER LIGHT-EQUIPMENT WITH TURF-TYPE TIRES, IN INFILTRATION BASIN AREA.
- NO MINING OR OVEREXCAVATION IN INFILTRATION BASIN.
- NO BURYING OF MATERIALS IN INFILTRATION BASIN.
- FINAL GRADE ONLY UPON STABILIZATION OF UPSTREAM AREAS.
- INFILTRATION BASIN TO REMAIN UNLINED.
- PROTECT INFILTRATION BASIN FROM RUN-OFF DURING CONSTRUCTION ACTIVITIES. EXCAVATE TO FINAL GRADE ONLY UPON STABILIZATION OF CONTRIBUTING DRAINAGE AREAS.



**INFILTRATION BASIN**  
N.T.S.



**SILT FENCE**  
N.T.S.



**WIMCO INLET PROTECTION**  
N.T.S.

DRAWN BY: A.G. DESIGN BY: A.G.  
 CHCKD BY: C.W.P. PROJ. NO. 18-1749  
 ORIGINAL DATE: MARCH 26, 2018

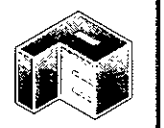
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ADAM GINKEL  
 DATE: 05.14.2018  
 LIC. NO. 43963

**WHISTLER PINES**  
 SHOREVIEW, MN  
 DETAILS

PREPARED FOR:  
**CARA BUILDERS, LLC**



**PLOWE**  
 ENGINEERING, INC.  
 6778 LAKE DRIVE  
 SUITE 110  
 LINO LAKES, MN 55014  
 PHONE: (651) 361-8210  
 FAX: (651) 361-8701





**SITE SPECIFIC INFORMATION**

**SITE NAME**  
WHISTLER PINES

**PROJECT LOCATION**  
4140 HODGSON RD  
SHOREVIEW, MN 55126

**LATITUDE: 45.0407**  
**LONGITUDE: -93.1107**  
**P.I.D. 24.50.23.44.0018**

**DEVELOPER**  
CARA BUILDERS  
1475 16TH AVE NW  
NEW BRONXTON, MN 55112

**SEAN HEATTS**  
(651) 466-5725  
heatts@pnet.com

**CONSTRUCTION ACTIVITY DESCRIPTION**  
THIS PROJECT PROPOSES THE SUBDIVISION OF A 3.67-ACRE PARCEL INTO (8) SINGLE-FAMILY RESIDENTIAL LOTS. THE SITE IS LOCATED AT 4140 HODGSON RD IN SHOREVIEW.

THIS PROJECT FALLS WITHIN RAMSEY WASHINGTON METRO WATERSHED DISTRICT (RWMD).

**EXISTING CONDITIONS**  
THE EXISTING SITE HAS ONE SINGLE-FAMILY RESIDENCE WITH SEVERAL OUTBUILDINGS AND LIGHT TREE COVERAGE. THE TERRAIN IS GENERALLY SLOPED INTERIALLY TO AN ISOLATED LOW AREA. THIS LOW AREA CAPTURES THE RUN-OFF FROM MANY OF THE SURROUNDING LOTS (BACKYARDS AND REAR-ROOF AREAS).

**PROPOSED CONDITIONS**  
THE PROPOSED DEVELOPMENT WILL INCLUDE CONSTRUCTION OF A PUBLIC STREET, INSTALLATION OF SANITARY SEWER AND WATERMAIN (PUBLIC), INSTALLATION OF STORM SEWER (PUBLIC) AND THE PREPARATION OF EIGHT (8) SINGLE-FAMILY RESIDENTIAL LOTS.

PERFORATED PIPES IN A ROCK BED ARE PROPOSED WITHIN THE STREET TO MEET TREATMENT REQUIREMENTS FOR THE NEW IMPERVIOUS SURFACE. THIS SYSTEM OUTLETS TO AN INFILTRATION BASIN WHICH IN TURN OUTLETS INTO THE PUBLIC STORM SEWER WITHIN HANES AVENUE. A CHECK VALVE IS PROVIDED TO ENSURE THAT BACKFLOW DOES NOT OCCUR.

SEE "STORM WATER DRAINAGE REPORT" FOR ADDITIONAL INFORMATION, HYDROLOGIC AND WATER QUALITY CALCULATIONS.

**SITE AREAS**

	BEFORE CONSTRUCTION	AFTER CONSTRUCTION
TOTAL SITE AREA		3.68 ACRES
TOTAL ESTIMATED IMPERVIOUS	0.13 ACRES	1.09 ACRES
TOTAL ESTIMATED POREVIOUS	3.55 ACRES	2.59 ACRES

APPROX. 0.96 ACRE INCREASE IN IMPERVIOUS

**TOTAL DISTURBED AREA**  
3.75 ACRES

**ADJACENT WATERS WITHIN ONE MILE**

NAME OF WATER BODY	TYPE OF WATER BODY	SPECIAL WATER	IMPAIRED WATER
CITY PONDS	POND	NO	NO
SHAL LAKE	LAKE	NO	NO
CRASS LAKE	LAKE	NO	NO

THERE ARE NO IMPAIRED/SPECIAL WATERS WITHIN ONE MILE

**SITE MAP AND DESIGN CALCULATIONS**  
SEE "STORM WATER DRAINAGE REPORT" FOR QUANTIFICATION OF STORM WATER MANAGEMENT REQUIREMENTS AND DRAINAGE AREA MAPS.

**SOILS, SLOPES, VEGETATION**  
**SOIL TYPES:**  
A GEOTECHNICAL REPORT WAS PREPARED BY ITCO ALLED ENGINEERING COMPANY (51-71-2018). THE BORINGS GENERALLY INDICATE VARYING THICKNESSES OF TOPSOIL OVER VERY FINE SANDS, VERY FINE SANDS WITH SILT, AND SILTY VERY FINE SANDS. GROUNDWATER WAS NOT ENCOUNTERED IN ANY OF THE BORINGS (TO 16-FT DEPTH).

**SLOPES:**  
THE SITE HAS SIGNIFICANT MODERATE TOPOGRAPHY CHANGE BUT PROPOSED SLOPES WILL BE GENERALLY MODERATE AND ARE NOT EXPECTED TO EXCEED 3:1.

**VEGETATION:**  
DISTURBED AREAS WILL BE RESTORED WITH SEED & MULCH AND SOO.

**PERSON WHO PREPARED SHEET (DESIGNER)**  
ADAM GINKEL, FLORE ENGINEERING, INC.  
6778 LAKE DRIVE  
LINO LAKE, MN 55014  
(651) 361-8200

**PERSON WHO WILL OVERSEE IMPLEMENTATION OF SWPPP (CONTRACTOR)**  
TBD - WHEN AVAILABLE PROVIDE CONTACT INFORMATION TO NICOLE SODERHOLM (RWMD) AT 651-792-7976, AND CITY OF SHOREVIEW.

**PERSON(S) WHO WILL INSPECT ON-SITE ESC MEASURES (INSPECTOR)**  
TBD - WHEN AVAILABLE PROVIDE CONTACT INFORMATION TO NICOLE SODERHOLM (RWMD) AT 651-792-7976, AND CITY OF SHOREVIEW.

**TRAINING DOCUMENTATION**  
DOCUMENTATION MUST ACCOMPANY THE SWPPP INDICATING THAT THE INDIVIDUALS IDENTIFIED IN PART 8.F. HAVE BEEN TRAINED IN ACCORDANCE WITH THE REQUIREMENTS OF PART 8.F. DOCUMENTATION SHALL INCLUDE:  
A. NAMES OF THE PERSONNEL ASSOCIATED WITH THIS PROJECT THAT ARE REQUIRED TO BE TRAINED PER PART 8.F.1. OF THIS PERMIT.  
B. DATES OF TRAINING AND NAME OF INSTRUCTOR(S) AND ENTITY PROVIDING TRAINING.  
C. CONTENT OF TRAINING COURSE OR WORKSHOP INCLUDING THE NUMBER OF HOURS OF TRAINING.

**SITE SEQUENCING & ESC NOTES**

PRIOR TO ANY LAND-DISTURBING ACTIVITY, THE CONTRACTOR SHALL INSTALL SILT FENCE AS SHOWN ON PLAN. ADDITIONAL SILT FENCE MAY BE NECESSARY IF LOCAL CONDITIONS REQUIRE. SILT FENCE SHALL REMAIN IN-PLACE UNTIL THE FINAL STABILIZATION HAS BEEN ESTABLISHED IN ACCORDANCE WITH PART IV.G.

THE CONTRACTOR SHALL PERFORM SITE GRADING ON AN AREA-BY-AREA BASIS TO MINIMIZE UNSTABILIZED AREAS. AS EACH AREA IS COMPLETED, ALL EXPOSED SOILS MUST HAVE TEMPORARY EROSION CONTROL PROTECTION OR PERMANENT COVER WITHIN SEVEN (7) DAYS.

**SPECIFIED EROSION & SEDIMENT CONTROL MEASURES ARE MINIMUM. ADDITIONAL PRACTICES MAY BE REQUIRED DURING THE COURSE OF CONSTRUCTION.**

THE CONTRACTOR SHALL PROVIDE ALL SOO, SEED, MULCH AND FERTILIZER WHICH SHALL CONFORM WITH THE FOLLOWING MNDOT SPECIFICATIONS AS MODIFIED BELOW.

ITEM	MNDOT SPECIFICATION/NOTES
SOO	307B
SEED	307B
FOR TURF ESTABLISHMENT	
COMMERCIAL TURF	MNDOT MIX 25-131 (220 LBS/ACRE)
RESIDENTIAL TURF	MNDOT MIX 25-131 (120 LBS/ACRE)
TEMPORARY FALL COVER	MNDOT MIX 21-112 (100 LBS/ACRE)
SPRING/SUMMER	MNDOT MIX 21-111 (100 LBS/ACRE)
SOO-BUILDING COVER	MNDOT MIX 21-113 (110 LBS/ACRE)
1-2 YEARS COVER	MNDOT MIX 22-111 (30.5 LBS/ACRE)
2-5 YEARS COVER	MNDOT MIX 22-112 (40 LBS/ACRE)
MULCH	308Z (TYPE 1 - ESC ANCHORED)
FERTILIZER	309H
WOOD FIBER BLANKET	3086 (CATEGORY 2)

\* SHOW A MINIMUM OF:  
RESIDENTIAL TURF - ONCE PER 2 WEEKS  
COMMERCIAL TURF - ONCE PER 4 WEEKS

\*\* SEEDING AREAS SHALL BE EITHER MULCHED OR COVERED BY PERVIOUS BLANKETS TO PROTECT SEEDS AND LIMIT EROSION.

TEMPORARY OR PERMANENT MULCH MUST BE UNIFORMLY APPLIED BY MECHANICAL OR HYDRAULIC MEANS AND STABILIZED BY DISC-ANCHORING OR USE OF HYDRAULIC SOIL STABILIZERS.

ALL EROSION AND SEDIMENT CONTROL MEASURES SHOWN ON THE PLANS OR IMPLEMENTED IN THE FIELD SHALL BE IN ACCORDANCE WITH THE CITY AND MPDES PHASE 4 PERMIT REQUIREMENTS, AND THE MPCA'S "PROTECTING WATER QUALITY IN URBAN AREAS BEST MANAGEMENT PRACTICES FOR MINNESOTA."

THE CONTRACTOR SHALL PAY SPECIAL ATTENTION TO ALL ADJACENT PROPERTY LINES AND MAKE SURE THE EROSION CONTROL PRACTICES IN PLACE IN THOSE AREAS PREVENT MIGRATION OF SEDIMENT ONTO ADJACENT PROPERTIES.

THE CONTRACTOR SHALL MAINTAIN SILT FENCE, INCLUDING THE REMOVAL OF ACCUMULATED SEDIMENT, THROUGH COMPLETION OF BUILDING CONSTRUCTION. SILT FENCE TO BE REMOVED ONLY AFTER COMPLETION OF BUILDING CONSTRUCTION AND UPON ESTABLISHMENT OF VEGETATION.

THE CONTRACTOR SHALL PROVIDE WOOD FIBER BLANKET FOR ALL AREAS OF CONCENTRATED FLOW AND FOR ALL SLOPES 3:1 OR GREATER.

PROTECT ALL STORM WATER MANAGEMENT FACILITIES FROM CONSTRUCTION RUN-OFF. CONTRACTOR TO INSTALL AND CONSTRUCT SAND FACILITIES ONCE SITE HAS BEEN STABILIZED.

IF ANY SLOPES APPEAR TO BE FAILING, THE CONTRACTOR SHALL PROVIDE ADDITIONAL SILT FENCE, BIOROLLS AND EROSION CONTROL BLANKET AS NEEDED.

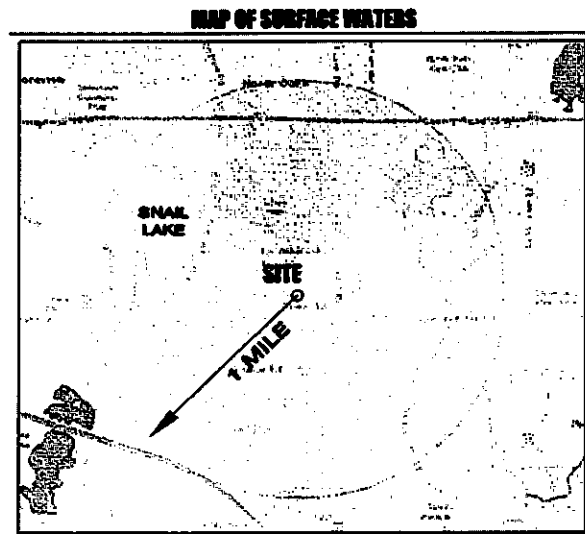
THE CONTRACTOR SHALL FINAL GRADE SWALE AREAS UPON STABILIZATION OF UPSTREAM AREAS.

UPON GRADING COMPLETION THE CONTRACTOR SHALL PROVIDE NATIVE TOPSOIL, SEED, AND MULCH ANCHORED WITH A STRAIGHT SET DISC WITHIN 48 HOURS OF FINAL GRADING.

EXCESS SOIL SHOULD BE TREATED LIKE OTHER EXPOSED SOIL AND STABILIZED WITHIN SEVEN (7) DAYS. ANY SOIL STOCKPILES ARE TO HAVE SILT FENCE PLACED ON DOWNSTREAM SIDES AND SHALL NOT BE PLACED IN SURFACE WATERS.

ADJACENT STREETS SHALL BE KEPT CLEAN OF CONSTRUCTION MATERIALS, DIRT, AND OTHER UNDESIRABLE MATERIALS. WHEN MATERIALS OR DEBRIS HAVE WASHED/FLOWED ONTO ADJACENT STREETS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO SWEEP/SCRAPE STREETS AS NECESSARY OR AS DIRECTED BY THE CITY.

COORDINATE SMALL UTILITIES INSTALLATIONS (GAS, PHONE, ELECTRIC, GAS, ETC.) AFTER CURB & GUTTER INSTALLATION.



THERE ARE NO IMPAIRED/SPECIAL WATERS WITHIN ONE MILE

**CONTACT NICOLE SODERHOLM, RAMSEY WASHINGTON METRO WATERSHED DISTRICT, AT 651-792-7976 PRIOR TO BEGINNING ANY AND ALL CONSTRUCTION ACTIVITY FOR AN INITIAL SWPPP INSPECTION.**

**NOTIFY NICOLE SODERHOLM, RAMSEY WASHINGTON METRO WATERSHED DISTRICT (RWMD) AT (651)-792-7976 AT LEAST 48 HOURS PRIOR TO THE CONSTRUCTION OF THE STORMWATER BASINS**

UNIVERSITY OF MINNESOTA

**Adam Ginkel**

Design of Construction SWPPP (May 31 2020)

**Erosion and Stormwater Management**

The banner of this card has been tested and is certified in the area(s) shown on the reverse of this card. Certification expiration dates appear after each certification area.

*Adam Ginkel*

Staff Geotechnical Engineer  
Department of Transportation and Management Engineering  
University of Minnesota

10/20/2018 08/1/2019

**ESTIMATED EROSION & SEDIMENT CONTROL QUANTITIES**

TYPE	QTY	UNIT
SILT FENCE	X	LINEAR FEET
RP-RAP W. GEO-FABRIC	X	CUBIC YARDS
SEDIMENT CONTROL LOGS	X	LINEAR FEET
CATCH BASIN INLET PROTECTION	X	EACH
STABILIZED (SCOOED) OVERTFLOW	X	EACH
SEED & MULCH (GENERAL)	X	ACRE

DESIGNED BY: DESIGN BY: A.G.  
CHECKED BY: PROJ. NO. 18-1749  
C.W.P.  
ORIGINAL DATE: MARCH 29, 2018

DATE REVISION DESCRIPTION  
5-14-18 CITY & RWMD COMMENTS

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

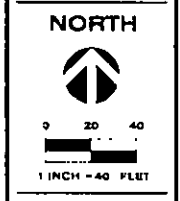
**PRELIMINARY**  
ADAM GINKEL  
DATE: 05-14-2018 LIC. NO. 43863

**WHISTLER PINES**  
SHOREVIEW, MN  
STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

PREPARED FOR:  
**CARA BUILDERS, LLC**



**PLOWE**  
ENGINEERING, INC.  
6778 LAKE DRIVE  
SUITE 110  
LINO LAKE, MN 55014  
PHONE: (651) 361-8210  
FAX: (651) 361-8701





Aaron Sedey &lt;asedey@shoreviewmn.gov&gt;

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**Comments regarding 4140 Hodgson Rd subdivision**

2 messages

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**Amanda Kohorst** <agkohorst@gmail.com>

Thu, May 17, 2018 at 2:11 PM

To: asedey@shoreviewmn.gov

Dear Aaron,

I am writing to provide public comment on the proposed subdivision of 4140 Hodgson Rd. As a member of the community who grew up in Shoreview I have greatly valued the attention that city planning puts voter feedback. After reviewing the proposal, I do have two primary concerns.

The first concern is that of the size of homes proposed. Although the plans meet the threshold for a low density residential neighborhood, the model of home being suggested does not appear to be in keeping with that of the adjoining properties. I can appreciate that the city would like to diversify housing options, but I would caution that other communities like Shoreview are slowly seeing the availability of modest homes decrease as a result of attracting contrast between older and newer homes in a small radius. I believe that Shoreview embodies the value of being inclusive of all economic levels, and that the city planning committee can support ensuring that established neighborhoods, such as ours, are maintained as reasonable homes for first time home buyers.

My second concern relates to the environment. Shoreview is a beautiful place to live on account of the careful balancing of environment, community and economic considerations in matters such as these. At present, we have significant flooding on in the Snail Lake area, including the trail system. It appears to me that development on this scale could escalate those concerns.

Along with that, I was unable to find any consumer reviews of Cara Builders, LLC. I verified that their builder's license was just issued in January 2018. I have concerns that this company does not have a long history in the building industry and that this could result in increased risk to the environment and future costs to the community.

Thank you for your time and consideration of these comments.

Amanda Kohorst  
4128 Rustic Place

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**Aaron Sedey** <asedey@shoreviewmn.gov>

Thu, May 17, 2018 at 2:14 PM

To: agkohorst@gmail.com

Hi Amanda,

Thank you for the comments, I will include them with Planning Commission packet for the May 22 meeting.

Thanks  
Aaron

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Aaron Sedey  
Associate Planner  
City of Shoreview

## SHOREVIEW PLANNING COMMISSION

### Public notice - request for comments

I have lived here for over 40 years and have seen all the problems we have had with water getting into houses and flooding our streets. When the pipe from Hawes Ave drained into the holding area behind my house the water would get about 15 to 20 feet deep and the water table would rise so high that we would get water in our basements. Then the city closed the pipe and put a new drainage pipe system in the street and that does not work when we get heavy rain and the Hawes Ave would get 2+ feet of water in front of my driveway. My neighbors across the street gets water in there basement and garage because the system does not handle big rain storms. Now you want to put the same thing back in the new housing area in the middle of our back yards . The other problem with this it the bugs this water will draw and the smell of the sitting water and the ducks and geese using it to lay there eggs and that makes the area a pile of crap. The geese will do there shitting all over the area and stinks it up. This is not good for the area to have these problems coming back just to put one or two more houses in that area. The other problem I see is how is the contractor going to fill that hole? it will take hundreds of dump trucks to fill in that area to level it out and make it usable.

Jeffrey M. Lundquist

244 Hawes Ave.

Shoreview MN, 55126



Aaron Sedey &lt;asedey@shoreviewmn.gov&gt;

**4140 Hodgson Road File # 2689-18-09**

2 messages

Ryan Olson <olsondavidryan@yahoo.com>  
To: asedey@shoreviewmn.gov

Thu, May 17, 2018 at 1:59 PM

Dear Shoreview Planning Commission,

We are emailing you with concern of the proposed development at 4140 Hodgson Road. The current homeowners on Demar, Rustic, and Hawes are very concerned regarding the proposed plans we received in the mail. Many households are not at ease.

We are concerned of water drainage issues related to this project. When our neighborhood had its road and storm sewer replaced, we quickly saw afterward that our current drainage could barely handle heavy rain fall for our neighborhood. Our neighborhood is in no way able to accommodate the proposed development's drainage, in addition to our neighborhood, nor was it designed for that. Neighbors on Hawes are worried that they would see water damage to basements and homes, should things be changed in the name of development.

We are concerned about the size of the homes planning to be built. They are very large, as well as very high not to mention the fact the foundations will be elevated above the elevations of surrounding homes adding to the already enormous height of the houses. Not only would this create an odd, distasteful appearance, but it would make current residents feel they have lost all privacy in their backgrounds, with high towering homes looking down on them like fish in a bowl.

Other concerns include the proposed holding pond. We have noticed other similar developments with holding ponds that produce an awful smell during the summer months, as well as mosquito control issues.

Last, but certainly not least, is our concern for the 30 landmark trees the developer has planned to cut down, one of which is a perfectly shaped, majestic looking oak, that has to be at least a century in age.

The loss of such mature beautiful arbor would be tragic. Although there are 3.67 acres of land does not mean it can fit a subdivision.

Thank you for considering our concerns on these matters. Please respectfully advocate for the families whose homes and neighborhood would be directly impacted by this development.

Ryan and Julie Olson

Sent from my iPhone

Aaron Sedey <asedey@shoreviewmn.gov>  
To: Ryan Olson <olsondavidryan@yahoo.com>

Thu, May 17, 2018 at 2:07 PM

Hi Ryan

Thank you for the comments, I will add them to the Planning Commission packet for May 22, 2018.

Thanks  
Aaron

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Aaron Sedey  
Associate Planner  
City of Shoreview  
651-490-4681



Aaron Sedey &lt;asedey@shoreviewmn.gov&gt;

## comments regarding 4140 Hodgson Rd

2 messages

Jennifer Duden &lt;brooksy@visi.com&gt;

Thu, May 17, 2018 at 1:27 PM

To: asedey@shoreviewmn.gov

Dear Aaron Sedey & the Shoreview Planning Commission,

My husband, Chris Duden, and I live at 230 Hawes Ave. and we have multiple concerns about the proposed development to the plot at 4140 Hodgson Road.

Primarily we are concerned with the storm water pond/ infiltration basin proposed for the area behind our home.

- 1) Who will be designing and building the pond area? Will it be concrete or natural?
- 2) Will an outside Hydrology Engineer be consulted? What about the DNR?
- 3) We are concerned that raising the area of the current natural basin and trying to re-route the water will be disastrous. Previous water remediation issues have not gone well on our street. In 2011, after Hawes, Rustic & Demar were re-constructed, the city wanted to install rain gardens. A rain garden was installed in our front yard and it flooded our yard and the street 4 times in under 90 days. At first we were told these were "100 year" rains, and then that it was a filter problem, and yet flooding still kept happening. The rain garden was finally filled back in that fall, and we've had no problems since. We are concerned that raising so much of the land at 4140 Hodgson will make our lot, and the lot next door (236 Hawes Ave), as well as the lot across the street, an even lower point in the area and that we will all be flooded when it rains. Furthermore, relying on old data for "100 year water levels" is unreliable and dangerous. See this research:

<https://fivethirtyeight.com/features/the-midwest-is-getting-drenched-and-its-causing-big-problems/>

- 4) What happens to excess water in the pond? Will there be a pump? Is there a drainage point for the pond?
- 5) Who will be responsible for ongoing maintenance of the pond and surrounding area?
- 6) Will mosquito control be applied to the pond? Who will cover that cost?
- 7) Will we still have access to our rear yard area? With the previous owner, we were allowed occasional access for large tree/yard maintenance.

We are also concerned about the height and size of the proposed houses. It sounds like they will be very large and loom over our neighborhood. We'd like to avoid what happened to the Mackubin/Suzanne area of Shoreview when the Snail Lake Landing addition was built. Those houses are quite large in comparison to the neighborhood, and they block and diminish many of the older homes on those streets. We understand wanting to develop this large lot, but suggest that any development should fit in better with the current homes in the neighborhood.

We do plan to attend the Planning Commission Meeting on May 22nd, and look forward to any more information that you can provide.

Thank you.

Jen and Chris Duden  
230 Hawes Ave



Aaron Sedey &lt;asedey@shoreviewmn.gov&gt;

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**Concerns regarding new Cara Builders subdivision/Hodgson Road**

2 messages

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**Julianne Denny** <JKDenny@yahoo.com>

Thu, May 17, 2018 at 11:17 AM

To: asedey@shoreviewmn.gov

I live at 222 Hawes Ave, so my yard backs up to the proposed project. Specifically, directly behind my house will be the infiltration basin. This concerns me for reasons such as how it will look (will my chain link fence be bordered by waist high weeds?), the mosquito population that will definitely grow mere feet from my home and the potential for flooding. I didn't purchase my property with a pond directly behind it and I shouldn't be expected to suffer a man-made one 20 years later.

Also of concern is the value of these future homes. The builder's website says they will be in the six hundred thousands, which is two-three times the value of the homes all around it. What size will homes be at this price point? The surrounding homes are 1960 ramblers. Are we going to have to look at sky-high houses in our backyards? And I'm sure we can all expect to pay for this project in our own property taxes as this development increases our home values. Many of the home owners on these three blocks are near original owners, ie Retirees, likely not able to afford this increase in costs we did nothing to invite.

I've learned many mature trees will be cut down for the project. Homeowners in this neighborhood purchased homes surrounded by mature trees. To cut down nearly all these trees in one section of land will drastically alter the aesthetics of the neighborhood. Adding several new small trees will not make up for these losses.

I understand this land will likely be developed in some way, but I feel homes more in line with the value and size of homes around it would be better. After all, all recent sub divisions in Shoreview and the Mounds View school district have likely eliminated middle class families.

Thank you for your time,  
Julianne Denny

Sent from my iPad

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**Aaron Sedey** <asedey@shoreviewmn.gov>

Thu, May 17, 2018 at 12:07 PM

To: JKDenny@yahoo.com

Hi Julianne,

Thank you for your comments, I will add them to the Planning Commission Report.

Thanks

Aaron

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Aaron Sedey  
Associate Planner  
City of Shoreview  
651-490-4681  
asedey@shoreviewmn.gov



Aaron Sedey &lt;asedey@shoreviewmn.gov&gt;

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**File #2689-18-09, 4140 Hodgson Road subdivision**

2 messages

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**Kate Maier** <maierke@yahoo.com>

Mon, May 14, 2018 at 3:49 PM

To: "asedey@shoreviewmn.gov" &lt;asedey@shoreviewmn.gov&gt;

Hello Aaron,

I am writing to provide a comment about the proposed major subdivision for the 4140 Road parcel. As a neighbor who would be directly affected by the division, I would respectfully request the Council consider not allowing the parcel's division into 8 new homes. One of the reasons I purchased my home, and continue to enjoy its location, is that I can look out of my back window or sit on my back porch and not look directly into another home. I enjoy the fact that, even though I am surrounded by neighbors on both sides and am near a major road in the city, I still have a little oasis of trees and a small field behind my home that gives me the feeling of having open space even within the city. This will be ruined if I end up with a house situated directly across my back property line.

Additionally, I can't help but wonder who will reimburse those of us who will likely see a drop in our property values when we suddenly find ourselves with 8 additional homes in our back yards. Since having an open field behind the house is one of the reasons I chose it over similar homes in the area, it's reasonable to assume that the loss of this open space, along with the additional noise we would likely experience with so many new, closely-situated neighbors, would negatively affect people's decisions as to whether or not to purchase any of our homes should we choose to sell.

Seeing as the Council rejected a similar proposal on Rice Street a few years ago that would have had a similar affect on my neighbors across the street, even when the plot size for that proposal was somewhat larger than the one in this proposal, I hope that the Council will apply the same analysis to the 4140 Hodgson Road application as that previously applied to the Rice Street application.

Thank you,  
Kate Maier  
4127 Rustic Place

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**Aaron Sedey** <asedey@shoreviewmn.gov>

Mon, May 14, 2018 at 4:00 PM

To: maierke@yahoo.com

Hi Kate,

Thanks for submitting your comments for the Planning Commission Meeting. I will get those included in the meeting packet.

Thanks

Aaron

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Aaron Sedey  
Associate Planner  
City of Shoreview  
651-490-4681  
asedey@shoreviewmn.gov

[Quoted text hidden]



Preliminary Plat - Major Subdivision  
4140 Hodgson Road  
File No. 2689-18-09

Comments:

The proposed development fits the character of the neighborhood & will be a nice addition. It appears lot sizes, drainage & other concerns have been addressed.

It is to bad the access to this development couldn't have been from an interior road as Hodgson does it need another road access. But like many infill developments not everything is perfect - legal to code, but not "perfect."

Name:

She [Signature]

Address:

275 Demar



**Steve Carrigan**

**From:** Steve Carrigan  
**Sent:** Wednesday, May 16, 2018 2:42 PM  
**To:** Aaron Sedey  
**Subject:** 4140 Hodgson project - concerns of property owners at 238 Hawes Ave

Dear Aaron and Planning Commission,

Aaron, I sent you an email earlier requesting to meet with you but a bounce back email says you are out today. I will try you again tomorrow.

I am Steve Carrigan along with my wife Susan Carrigan we are the owners of 238 Hawes Ave. We have owned the property for 10 years and it is our intention to retire in this home.

This email voices my concerns and comments regarding the project:

-I would like to know "Who represents whom here?". Do the city employees and the planning commission represent the developer, the surrounding homeowners, or the city or? So where does the fiduciary relationship lie? Should I be hiring an attorney?

-Has anyone from the planning commission been out to see this property from the viewpoint of my lot?

-I would also like to know if the Department of Natural Resources would have a concern here? Have they been contacted? There is a low area in the middle that I have observed to hold water from time to time over the years.

-In addition I have 3 general areas of concern about this proposal and how will they affect the value and enjoyment of my property:

1) Water and where will it go 2) The water basin area proposed 3) The tremendous amount of fill that will be brought in.

- 1) Water: This proposal doesn't account for any water exit from what I can see. This was brought up at the last planning commission meeting and I would like to be sure this is considered. It only allows for seepage back into the ground via a basin. As I mentioned in my previous comments; my property is at the lowest level of all the properties that abut this project. Over the years there have been issues with flooding and water back up in front of my property at 238 Hawes Ave. The subject property is the only area lower than my property. The current low point is not where the basin proposal is. The low point is about 80 to 100 feet south of where the proposed basin is. With filling up this low area will I be subject to further and more frequent water issues?
- 2) The basin: This proposed area is right behind my home and the 2 neighbors to the east of me. A basin hole right behind us could lead to safety concerns, insects, odors and not attractive.
- 3) The amount of fill: In my opinion this will change the integrity of all the existing houses. The plan shows that they want to build up the lowest area to 922 feet at the proposed curb. The height of the low area is not given but they do provide the low point of my back yard. This area is in the southeast corner of my yard and the plan shows it at 913.9. The low point of this lot is approximately at the south portion of lot 3 in the proposal. It appears to be at least 5 feet below the low point of my lot. That would bring that elevation to approximately 909. So they are proposing to bring in at least 13 vertical feet of fill (Proposed curb of 922 minus 909 = 13 feet). This doesn't account for building up the lot and the height of a new house. This could be a very intimidating block of the existing neighboring properties.

-My thoughts for an alternative: What I would like to see is to keep the level of the property approximately where it is now, don't use a basin at all and install a lift station to pump the water to the street drain on Hodgson Road.

-To Aaron or anyone of the planning commission: Please feel free to reach out to me by phone (651-402-2121) or email ( [Steve@CAREandCARRIGAN.com](mailto:Steve@CAREandCARRIGAN.com) ). In addition I would be happy to meet at the property to see things from this point of view.

Respectfully submitted,  
Steve Carrigan  
Owner of 238 Hawes Ave  
651-402-2121

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Below are my concerns sent before the last meeting:  
To Aaron Sedey and Shoreview Planning Commission,

Dear Aaron and Planning Commission,

I am Steve Carrigan along with my wife Susan Carrigan we are the owners of 238 Hawes Ave. We have owned the property for 10 years and it is our intention to retire in this home.  
Here are my concerns for the proposed 4140 Hodgson project,

- Are they platted for detached single family homes only? Aaron Cedey (Associate Planner for City of Shoreview) told me over the phone "yes". Is there a way to see this in writing?
- Is the basin going to be adequate? 238 Hawes (our property) is the lowest property on this side of the street. We have had street flooding in front of our home at least three times since the new street was put in. Before that I understand that there was drainage to the lot behind us.
- Does the basin drain out anywhere? Or does it end there and seep back to the ground?
- Currently this property to me seems like a low natural drainage area. The plat shows a basin planned behind my house and the 2 houses east of me. Right now that area is much higher than the current low point of this lot. The low point now is further south by at least a 100 feet or so. To do this plan I know there will need to be a lot of excavating. Meaning this property is really going to change and how will this affect the flow of water. Is this a major excavating project? How much of changing nature's flow after all these years
- Dealing with a basin. Is this a habitat for insects. Is it dangerous? Is there an odor? Will it be fenced and secure?
- Elevations: The back of our back yard is currently 914.3. The plans for the house that could be built behind us (lot 2) is 923.9. This is way higher than what is there now. This is a difference of 9.6 feet between the back of our lot plus whatever the height of what the new house would be. How much light blockage will there be? To get it to this height is also going to take a lot of excavating. Our property will then really be in a hole and other than the basin will be the lowest point.
- Is there a plan for buffer landscaping between existing properties and the potential new properties?

I wanted to make the deadline and get this into the planning commissions agenda packet. I will be at the meeting on 24-April and may voice further concerns.

Respectfully submitted,  
Steve Carrigan  
Owner of 238 Hawes Ave  
651-402-2121

Date: May 22, 2018  
To: Aaron Sedey, Associate Planner  
From: Tom Wesolowski, City Engineer  
Subject: Proposed Development 4140 Hodgson – Resident Drainage Comments

The City of Shoreview Engineering staff has reviewed the comments provided by residents adjacent to the proposed development and has the following comments:

The stormwater collection and infiltration system in the Hawes, Demar, Rustic area was designed to handle the run-off from a 10-year storm event. This is the design standard for stormwater collection systems throughout the City of Shoreview as well as Cities throughout the metro area. Since the installation of the system in 2010 there have been storm events with rain intensities in excess of a 10-year event, which could have caused localized flooding in the roadway in the Hawes, Demar, Rustic area as well as other areas in the City.

The stormwater collection system for the proposed development would also be designed to handle the run-off from a 10-year storm event, but the infiltration basin would be designed to handle the run-off volume from a 100-year storm event with no outflow of water from the basin. This is the typical design standard for ponds and also required by the Ramsey-Washington Metro Watershed District (RWMWD). What that means is with a rain event in excess of a 10-year storm event there may be localized flooding in the street of the proposed development, which would drain down over time into the infiltration basin but no water would discharge from the pond unless the run-off volume exceeded the volume of a 100-year storm event.

The infiltration basin will not only collect run-off from the proposed development, but also the run-off from the rear yards of the adjacent properties on Hawes and Rustic. These properties currently drain to the low area on the property, so the historic drainage pattern will not change.

The pond is an infiltration basin and is designed and required by the RWMWD to infiltrate all of the water in the basin within 48-hours, so the basin will not permanently hold water. It will be dry a majority of time. Plants will be installed within the pond to help treat and infiltrate/bio-infiltrate the run-off.

The only outlet from the pond would be an emergency overflow and as stated above will not discharge water from the pond unless the 100-year storage level is exceeded. Emergency overflows are required by the RWMWD and are typical on storm ponds throughout the City and metro area and in many cases the emergency overflow is directed toward the street.

The stormwater infiltration basin will be designed by a professional engineering from the state of Minnesota, will need to meet the requirements of the City and the RWMWD, would be inspected by the City and RWMWD during construction, and once constructed be owned and maintained by the City of Shoreview. The DNR is not involved in the permitting process for this type of stormwater collection and treatment system.

Based on the stormwater management report submitted by the developer, the stormwater collection and treatment system meets the requirements of the City and the RWMWD.

## PROPOSED MOTION

**MOVED BY COMMISSION MEMBER \_\_\_\_\_**

**SECONDED BY COMMISSION MEMBER \_\_\_\_\_**

To recommend the City Council approve preliminary plat submitted by Sean Keatts of Cara Builders LLC to subdivide and develop the property at 4140 Hodgson Road into eight lots for single-family detached homes. Said recommendation for approval is subject to the following conditions:

### **Preliminary Plat**

1. The approval permits the development of a detached residential subdivision providing 8 lots for single family residential development.
2. Final grading, drainage and erosion control plans are subject to the review and approval by the Public Works Director prior to approval of any permits or the Final Plat. Concerns identified by the City Engineer shall be addressed with the Final Plat submittal.
3. Final utility plans are subject to review and approval by the Public Works Director.
4. The final street design is subject to review and approval of the Public Works Director.
5. A Development Agreement, Erosion Control Agreement shall be executed and related securities submitted prior to any work commencing on the site. A Grading Permit is required prior to commencing work on the site.
6. A Public Recreation Use Dedication fee shall be submitted as required by ordinance prior to release of the Final Plat.
7. The landscape/tree-replanting plan shall be provided in accordance with the City's Tree Protection Ordinance. Trees on the property, which are to remain, shall be protected with construction fencing placed at the tree driplines prior to grading and excavating. Said plan shall be submitted for review and approval by the City Planner prior to submittal of the final plat application.
8. The Final Plat shall include drainage and utility easements along all property lines. Drainage and utility easements along the roadways shall be 10 feet wide and 5 feet wide along the side and rear lot lines. Other drainage and utility easements shall be provided over the proposed bio-filtration area, future public infrastructure and as required by the Public Works Director.
9. The developer shall secure a permit from the Ramsey Washington Metro Watershed District prior to commencing any grading on the property.

10. The developer shall gain an easement for the storm pond outlet, prior to the City submittal of the final plat application. Said easement shall be submitted to the City Attorney for review and approval.
11. Lot 1 shall have a 30 foot setback on the eastern lot line as it is a rear yard and the access for the lot shall be on the cul-de-sac.
12. Landscaping plan be submitted prior to issuance of any permits, that shows species, arrangement of plantings to scale and takes soil type and topography into account. Landscaping shall be installed along the eastern boundary and along the northern lot lines of Lots 2, 3, and 4. Said plan shall be submitted for review and approval by the Natural Resources Coordinator prior to submittal of the final plat application.

This approval is based on the following findings:

1. The proposed development plan supports the policies stated in the Comprehensive Plan related to land use and housing.
2. The proposed development plan carries out the recommendations as set forth in the Housing Action Plan
3. The proposed development plan will not adversely impact the planned land use of the surrounding property.
4. The lots comply with the size standards in the Development Code.

**VOTE:**

**AYES:**

**NAYS:**

Regular Planning Commission Meeting  
May 22, 2018

**TO:** Planning Commission  
**FROM:** Aaron Sedey, Associate Planner  
**DATE:** May 17, 2018  
**SUBJECT:** File No. 2691-18-11; Scott Deming, Minor Subdivision and Variances, 821 Tanglewood Drive

### **INTRODUCTION**

Scott and Jane Deming have submitted a minor subdivision application to adjust the property boundary between his property located at 821 Tanglewood Dr. and the neighboring property to the south at 831 Tanglewood Dr. also owned by the Deming family. The boundary adjustment will be effected by transferring the middle track of land highlighted in the plans. The boundary adjustment will transfer just over 3 acres from Parcel A (831 Tanglewood) to Parcel B (821 Tanglewood). No additional lots will be created, no trees will be removed, no buildings will be constructed, and no private driveways will be changed.

Both of the properties are developed with detached single-family uses with access off of Tanglewood Drive through a private road easement. This easement serves the six properties, 841, 825, 831, 819, 817, and 821 Tanglewood Dr. All are developed with single family dwellings with and garages.

### **DEVELOPMENT ORDINANCE REQUIREMENTS**

Minor subdivisions require review by the Planning Commission and approval by the City Council. Minor subdivisions must be reviewed in accordance with subdivision and zoning district standards in the Development Regulations.

The City's subdivision standards require all lots to front on a publicly dedicated right-of-way. Municipal sanitary sewer and water must be provided to the resulting lots. These standards also require 5-foot public drainage and 10-foot utility easements along property lines where necessary. The lots are accessed via a private roadway easement and have no public street frontage. As such, the applicants have applied for a variance to waive the public street frontage requirement.

The City requires riparian lots to have 100 feet at the water, building pad and street access. As such 821 lacks the 100 feet at the water and having already requested a variance for the street access.

The property is located in the R-1 Detached Residential, and the Shoreland Management Overlay District on the 821 Tanglewood parcel. In the R-1 district, properties must be at least 10,000 square feet in size and have a minimum width of 75'. Riparian properties in the Shoreland District of Turtle Lake must be at least 15,000 square feet in size and have a width of at least 100' as measured at the front property line, building setback, and OHW.

### **VARIANCE CRITERIA**

When considering a variance request, the Commission must determine whether the ordinance causes the property owner practical difficulty and find that granting the variances is in keeping with the spirit and intent of the ordinance. Practical difficulty is defined as:

1. *Reasonable Manner.* The property owner proposes to use the property in a reasonable manner not permitted by the Shoreview Development Regulations.
2. *Unique Circumstances.* The plight of the property owner is due to circumstances unique to the property not created by the property owner.
3. *Character of Neighborhood.* The variance, if granted, will not alter the essential character of the neighborhood.

### **APPLICANTS' STATEMENTS**

The applicant states that the purpose of the subdivision request is to transfer approximately 3 acres of land from Parcel A (831) to Parcel B (821). This request will not create any new lots. The reasons for this request are outlined below:

The applicants have occupied the property for 37 years and have reached an age whereby they find it necessary as aging homeowners and are planning for the future in case anything were to happen to them. This is to lessen the burden off their children if anything would happen. They have purchased 831 Tanglewood with the idea of gaining access for a future development if desired by future owners; however at this time the Demings' have no desire to develop the land as such. It is in the Applicants' desire to maintain the pristine appearance of the land. No new lots will be created.

The applicant states that the variance is requested to waive the street frontage requirements for 821 Tanglewood Dr as they do not meet the frontage requirements. Also a variance for a reduction in the shoreline is under the allowed 100' minimum. There are unique circumstances because of the property's creation as a lot with only 81 feet on the water and the lot was created with a driveway easement for the properties on a public road is only 20 feet. The shift in property will not alter changes in physical character of the neighborhood as nothing is to be changed. No new home sites will be created. A private driveway easement would still be in place for all properties that currently use it.

### **STAFF REVIEW**

#### ***Variance***

The variance request to waive the street frontage requirement for Parcel A (831 Tanglewood) of the submitted Minor Subdivision application was reviewed by staff in accordance with the variance criteria. Also requested is a variance for width required of a 100' for a standard riparian lot. In staff's opinion, practical difficulty is present based on historical and unique circumstances.



Staff believes practical difficulty is present, based on the following findings:

1. *Reasonable Manner.* The property owner proposes to use the property in a reasonable manner not permitted by the Shoreview Development Regulations. The applicant is proposing to use the property in a reasonable manner. Access to the current homes on the properties is via Tanglewood Drive – through a private road easement – and that will not change with this subdivision. Additionally the lot was created with the current 81 feet at the water and no changes are being proposed to this width. The lot will continue to use the property in reasonable manner of a single family home.
2. *Unique Circumstances.* The plight of the property owner is due to circumstances unique to the property not created by the property owner. Staff believes that unique circumstances are present due to the historical creation of the lots and several properties using one driveway easement. Keeping access via a private road easement is reasonable due to the property's characteristics of frontage on a Tanglewood Drive. It is not reasonable to require frontage on a public street at this time due to the area's characteristic and potential for future development.
3. *Character of Neighborhood.* The variance, if granted, will not alter the essential character of the neighborhood. The character of the neighborhood will not be altered at all. The existing homes and access to them will not be changed with the minor subdivision nor will any new lots be created and the minor subdivision and variances will just be noticeable on paper rather than affect the character of the neighborhood.

### **Minor Subdivision**

The proposal to transfer approximately 3 acres and adjust the lot lines of 821 Tanglewood and 831 Tanglewood increase the area of 821 Tanglewood by 208,141 square feet. The increased area will be to keep the land in the Deming Family as they own 831 Tanglewood. As well as assist in the future owner's development if ever sold. No new lots or further subdivision is being proposed as this time. Any future subdivision of either lot, is subject to a new application and future public review by the City.

The proposed lot line adjustment and resulting lots shown in the following table:

	Width	Area
821 Tanglewood Dr.	81 feet Lakeside	37,072 sq. ft.* (.85 acre)
831 Tanglewood Dr.	123.63 feet at street 328.63 feet in the middle of the additional land	167,323 sq. ft. (3.84 acre)

City Requirement Riparian	100 feet	15,000 sq. ft.*
City Requirement R-1	75 feet	10,000 sq. ft

\* Area is measured above the Ordinary High Water of Turtle Lake

Both of the existing homes would remain. A new private road easement will be executed for 821 Tanglewood. New drainage and utility easements are proposed for the new lot boundaries. The existing setbacks of structures on each existing lot are not affected by the boundary adjustment.

Municipal sanitary sewer and water service are provided to both existing parcels and both of the dwellings are connected to these municipal services.

The proposed subdivision complies with City requirements. No Public Recreation Use Dedication fee is required for this property boundary adjustment since no new homesites will be created as a result of this approval.

### **SHORELAND MITIGATION**

In accordance with the Development Code, Shoreland Mitigation is required of property owners who are seeking certain land use approvals through the City. The applicant at 821 Tanglewood has identified two practices, Architectural Mass and Impervious Surface Reduction. This proposal complies with the City's requirements. The use of Impervious Reduction will remove a patio from the lake side allowing for less runoff into the lake.

### **PUBLIC COMMENT**

Property owners within 350 feet were notified of the applicant's request. No comments have been received.

### **STAFF RECOMMENDATION**

The minor subdivision application has been reviewed in accordance with the standards of the Development Regulations and found to be in compliance with these standards. Staff recommends that the Planning Commission approve Resolution 18-34, approving the variances to waive the street frontage requirement, the minimum shoreland lot width and to also recommend approval of the minor subdivision to the City Council, subject to the following conditions:

#### **Variances**

1. This approval is subject to approval of the Minor Subdivision application by the City Council.
2. This approval will expire after one year if the subdivision has not been recorded with Ramsey County.

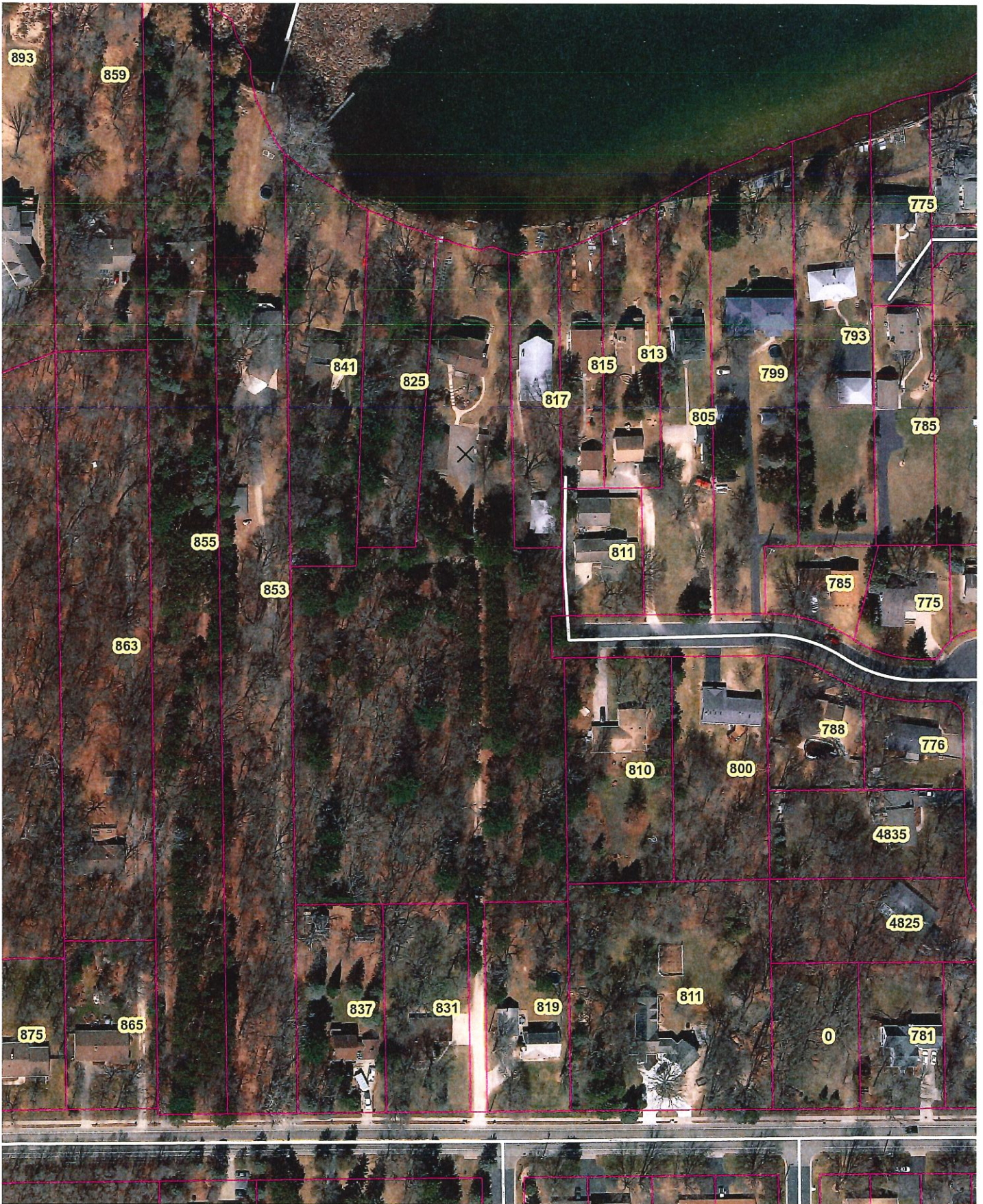
3. The approval is subject to a 5 day appeal period.

**Minor Subdivision**

1. The minor subdivision shall be in accordance with the plans submitted.
2. Public drainage and utility easements with a width of 5-feet on each side of the new common property line shall be conveyed to the City. The applicant shall be responsible for providing legal descriptions for all required easements. The easements shall be conveyed before the City will endorse deeds for recording.
3. A private driveway easement shall be updated to reflect the 821 Tanglewood having access, shall be conveyed before the City will endorse deeds for recording.
4. The applicant shall enter into a Subdivision Agreement with the City. This agreement shall be executed before the City will endorse deeds for recording.
5. A Mitigation Affidavit is required for 821 Tanglewood Dr, this Affidavit shall be executed prior to the City's release of the deed for recording.
6. Approval of the Minor Subdivision is contingent upon the approval of a variance permitting waiving public street frontage requirement for 821 Tanglewood and waving of the minimum 100 feet of shoreland for 821 Tanglewood.
7. This approval shall expire after one year if the subdivision has not been recorded with Ramsey County.

**Attachments**

- 1) Location Map
- 2) Submitted Statement and Plans
- 3) Resolution 18-34
- 4) Motions



April 10, 2018

Department of Community Development

Shoreview, Minnesota

RE: The intended use for subdivision of 821 Tanglewood Drive:

TO WHOM IT MAY CONCERN,

We are Jane and Scott Deming. We own and live at 821 Tanglewood Drive. We have owned 821 Tanglewood Drive since 1981. Recently we purchased an adjacent property at 831 Tanglewood Drive.

Currently we are seeking a subdivision of land for 821 Tanglewood Drive. The subdivision we are requesting would separate the existing parcel of land which is known as 821 Tanglewood Drive into two parcels, noted on the attached survey as Parcel A and Parcel B. The vacant land separated from 821 Tanglewood Drive would then be attached to 831 Tanglewood Drive (known as proposed Parcel B).

Parcel A would be the lot upon which our home at 821 Tanglewood currently is situated.

Parcel B is 831 Tanglewood Drive including the remainder of the subdivided land which currently comprises the property known as 821 Tanglewood Drive.

The immediate intended use is for the land to remain the same. We will continue to own both 821 Tanglewood and 831 Tanglewood and maintain them the same.

However, this subdivision would allow for potential future development of the land. As it stands now, development is not possible with the current lot lines. This could finally connect Tanglewood Drive with Lakeview Drive and still leave the option open for additional future development moving west.

The reason for the timing now is due to us, as owners are aging. We are future planning in case anything was to happen to us in the coming years. Having this completed would take the burden off our children.

Thank you for your consideration.

Scott and Jane Deming

Home: 651.483.3016

Cell: 651.338.8390

Email: [Deming48@comcast.net](mailto:Deming48@comcast.net)

Application for Variances:

We are seeking two variances to go along with the subdivision application for 821 Tanglewood Drive and 831 Tanglewood Drive.

The first variance is regarding the easement for 821 Tanglewood Drive. The current easement is a 20' wide dirt road that provides access from Tanglewood Drive to 6 separate residences (817, 819, 821, 825, 831, and 841 Tanglewood Drive). The dirt road easement is currently the only access for these owners to get to their respective properties. As the owners of 821 Tanglewood, we maintain the road as well as arrange for snow removal for the entire dirt road (and have done so since 1981).

If the subdivision and land transfer is approved, we are looking to have the current easement stay in place to provide access, not only for 821 Tanglewood Drive, but the other 5 properties listed above all affected by the easement.

If/when there is future development of the land, the current dirt road easement would be replaced by a paved city road and the 6 total properties referenced above would have direct access to public roads.

The second variance request is for a width variance because the shoreline is under 100' for proposed Parcel A. If the subdivision is approved, the structures on this lot are to remain the same. There is no future development plan for proposed Parcel A, nor are we looking to make any changes to current structures on proposed Parcel A.

Along with the width variance, it is our understanding there needs to be two acceptable options for Shoreline Mitigation action. Of the 5 options provided, the two that can be completed are 1) Architectural Mass and 2) Reduction of Impervious Surface Coverage.

Architectural Mass can be completed as the structures are earth tones and natural colors.

Reduction of Impervious Surface Coverage could also be completed. There is a patio by the lake that is approximately 300 square feet. It is a class 5 gravel base patio with a paver stone top. Removing said surface should allow water to soak into the ground better.

Thank you for your consideration on these two variance requests.

Scott and Jane Deming

Home: 651.483.3016

Cell: 651.338.8390

Email: [Deming48@comcast.net](mailto:Deming48@comcast.net)



# CERTIFICATE OF SURVEY

~for~ SCOTT & JANE DEMING  
 ~of~ 821 and 831 Tanglewood Drive  
 Shoreview, MN

## EXISTING LEGAL DESCRIPTIONS

**821 TANGLEWOOD:** (Per warranty deed dated February 20th, 1987, William and Corral Frick to Scott and Jane Deming)

The East 328.63 feet of the West 492.94 feet of Government Lot 3, Section 14, Township 30, Range 23, excepting therefrom, the following 6 parcels:

(1) The East 105 feet of the West 269.31 feet of the South 283 feet of Government Lot 3, Section 14, Township 30, Range 23, Ramsey County, Minnesota, and (2) The Easterly 100 feet of the Westerly 492.94 feet of the Southerly 283 feet of Government Lot 3, Section 14, Township 30 North, Range 23 West, Ramsey County, Minnesota, and (3) The Easterly 103.63 feet of the Westerly 372.94 feet of the Southerly 283 feet of Government Lot 3, Section 14, Township 30, Range 23, Ramsey County, Minnesota, and (4) That part of Government Lot 3, Section 14, Township 30 North, Range 23 West, lying Westerly of a line described as follows: Beginning at a point 683 feet North and 244.31 feet East of the South and West lines respectively of said Lot 3; thence Northerly to a point 1,078 feet North and 264.31 feet East of the South and West lines respectively of said Lot 3; thence continuing Northerly on the prolongation of said described line to the shore of Turtle Lake and there terminating, except the Southerly 683 feet of said Lot 3, and except the Westerly 164.31 feet thereof, Ramsey County, Minnesota; and (5) That part of Government Lot 3, Section 14, Township 30 North, Range 23 West, lying Easterly of a line described as follows: Beginning at a point 683 feet North and 244.31 feet East of the South and West lines respectively of said Lot 3; thence Northerly to a point 1,078 feet North and 264.31 feet East of the South and West lines respectively of said Lot 3; thence continuing Northerly on the prolongation of said described line to the shore of Turtle Lake and there terminating, except the Southerly 683 feet of said Lot 3, and except the Westerly 164.31 feet thereof, Ramsey County, Minnesota; and (6) The Easterly 66 feet of the Westerly 492.94 feet of Government Lot 3, Section 14, Township 30 North, Range 23 West, except the Southerly 703 feet thereof.

**831 TANGLEWOOD:** (Per title commitment prepared by Stewart Title Guaranty Co., Policy No. 0-9301-004159869, File No. G52256)

The easterly 103.63 feet of the westerly 372.94 feet of the southerly 283 feet of Government Lot 3, Section 14, Township 30, Range 23, Ramsey County, Minnesota. Subject to County Road G2 and subject to and together with a private road easement over the East 20 feet of the West 392.74 feet of the South 283 feet of said Government Lot 3, Ramsey County, Minnesota.

## PROPOSED LEGAL DESCRIPTIONS

### PROPOSED PARCEL A:

All that part of the west 426.94 feet of Government Lot 3, Section 14, Township 30 North, Range 23 West, Ramsey County, Minnesota which lies north of the south 703.00 feet thereof, and east of the following described line:

Beginning at a point 703.00 feet north and 314.31 feet east of the south and west lines respectively of said Government Lot 3; thence northerly to a point 346.31 feet east and 1078.00 feet north of the west and south lines respectively of said Government Lot 3; thence continuing on prolongation of said described line to the shore of Turtle Lake and there terminating.

Together with a road easement for ingress and egress over and across the east 20.00 feet of the west 392.94 feet of the south 703.00 feet of said Government Lot 3.

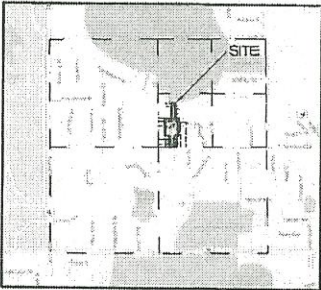
### PROPOSED PARCEL B:

The East 328.63 feet of the West 492.94 feet of the South 703.00 feet of Government Lot 3, Section 14, Township 30, Range 23, excepting therefrom, the following 3 parcels:

(1) The East 105 feet of the West 269.31 feet of the South 283 feet of Government Lot 3, Section 14, Township 30, Range 23, Ramsey County, Minnesota, and (2) The Easterly 100 feet of the Westerly 492.94 feet of the Southerly 283 feet of Government Lot 3, Section 14, Township 30 North, Range 23 West, Ramsey County, Minnesota, and (3) That part of the North 20 feet of the South 703 feet of Government Lot 3, Section 14, Township 30 North, Range 23 West, lying Westerly of a line described as follows: Beginning at a point 683 feet North and 244.31 feet East of the South and West lines respectively of said Lot 3; thence Northerly to a point 1,078 feet North and 264.31 feet East of the South and West lines respectively of said Lot 3; thence continuing Northerly on the prolongation of said described line to the shore of Turtle Lake and there terminating, Ramsey County, Minnesota.

## VICINITY MAP

PART OF SEC. 14, TWP. 30, RNS. 23



RAMSEY COUNTY, MINNESOTA  
(NO SCALE)

## NOTES

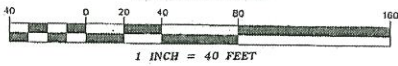
- Field survey was completed by E.G. Rud and Sons, Inc. on 3/7/18.
- Bearings shown are on Ramsey County datum.
- Due to field work being completed during the winter season there may be improvements in addition to those shown that were not visible due to snow and ice conditions characteristic of Minnesota winters.
- Contours are shown through a combination of LIDAR mapping and field survey data.

## LEGEND

- DENOTES IRON MONUMENT FOUND AS LABELED
- DENOTES IRON MONUMENT SET, MARKED RLS# 41578
- DENOTES ELECTRICAL BOX
- DENOTES EXISTING SPOT ELEVATION
- DENOTES GAS METER
- DENOTES GUY WIRE
- DENOTES POWER POLE
- DENOTES WOVEN WIRE FENCE
- DENOTES RETAINING WALL
- DENOTES EXISTING CONTOURS
- DENOTES OVERHEAD WIRE
- DENOTES CONCRETE SURFACE

NORTH

GRAPHIC SCALE



**E.G. RUD & SONS, INC.**  
 EST. 1977 Professional Land Surveyors  
 6776 Lake Drive NE, Suite 110  
 Lino Lakes, MN 55014  
 Tel. (651) 361-8200 Fax (651) 361-8701

## BENCHMARK

RAMSEY COUNTY BENCHMARK #9153  
 ELEVATION = 898.765 (NAVD88)

I hereby certify that this survey, plan or report was prepared by me or under my direct supervision and that I am a duly Registered Land Surveyor under the laws of the State of Minnesota.

JASON E. RUD  
 Date: 3/27/18 License No. 41578

DRAWN BY: CHD	JOB NO. 18094BT	DATE: 3/12/18
CHECK BY: JER	SCANNED <input type="checkbox"/>	
NO.	DATE	DESCRIPTION
1		
2		
3		
BY		

18094BT





Aaron Sedey &lt;asedey@shoreviewmn.gov&gt;

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**comment on Deming property variance**

1 message

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**oliviake@gmail.com** <oliviake@gmail.com>

Fri, May 18, 2018 at 10:12 AM

To: kcastle@shoreviewmn.gov, asedey@shoreviewmn.gov

Hi Kathleen and Aaron,

I hope it is okay to use email to reach you since I am out of town, snail mail would be unreliable and too slow.

Below are our comments and our major concern is to preserve the character of adjacent areas of our property and our way of living in the area.

1. We do not want the new lot or lots in the neighborhood to have access to the Lake. We are against the new lot or lots to having deeded lake access.
2. We like entering from Tanglewood and we are against building an L shape road from Lakeview through to Tanglewood. We are very concerned about additional connection of Lakeview to Tanglewood because it would bring in unnecessary traffic and cost related to road construction and maintenance.
3. We want the city to preserve the wooded character of the area.
4. We do not want to increase housing density because we notice that crime rate is related to density.

Thank you very much for your service to the community.

Matthew & Olivia Ke  
817 Tanglewood Dr.  
Shoreview, MN

## MOTION TO APPROVE

MOVED BY COMMISSION MEMBER \_\_\_\_\_

SECONDED BY COMMISSION MEMBER \_\_\_\_\_

To approve the variance request submitted by Scott and Jane Deming for their property at 821 Tanglewood Drive, waiving the public street frontage requirement and waiving the required width of a lake shore lot and also adopting Resolution No. 18-34 subject to the following conditions:

### Variance

1. This approval is subject to approval of the Minor Subdivision application by the City Council.
2. This approval will expire after one year if the subdivision has not been recorded with Ramsey County.
3. The approval is subject to a 5 day appeal period.

This motion is based on the following findings:

1. The applicant is proposing to use the property in a reasonable manner through a road easement. Access to the current homes on the properties is via Tanglewood Drive – through a private road easement – and that will not change with this subdivision. Additionally the lot was created with the current 81 feet at the water and no proposed changes are being propose and will continue to use the property in reasonable manner of a single family home.
2. Unique circumstances are present due to the historical and unique circumstances. Keeping access via a private road easement is reasonable due to the property's creation characteristics of frontage on Tanglewood Dr. Keeping access via a private road easement is reasonable due to the property's characteristics of frontage on a Tanglewood Drive. It is not reasonable to require frontage on a public street at this time due to the area's characteristic and potential for future development.
3. The character of the neighborhood will not be altered at all. The existing homes and access to them will not be changed with the minor subdivision nor will any new lots be created and the minor subdivision and variances will just be noticeable on paper rather than affect the character of the neighborhood.

**VOTE:**

**AYES:**

**NAYS:**

**MOTION TO RECOMMEND MINOR SUBDIVISION**

**MOVED BY COMMISSION MEMBER** \_\_\_\_\_

**SECONDED BY COMMISSION MEMBER** \_\_\_\_\_

To recommend approval to the City Council of the Minor Subdivision request submitted by Scott and Jane Deming for their property at 821 Tanglewood Drive, subject to the following conditions:

**Minor Subdivision**

1. The minor subdivision shall be in accordance with the plans submitted.
2. Public drainage and utility easements with a width of 5-feet on each side of the new common property line shall be conveyed to the City. The applicant shall be responsible for providing legal descriptions for all required easements. The easements shall be conveyed before the City will endorse deeds for recording.
3. A private driveway easement shall be updated to reflect the 821 Tanglewood having access, shall be conveyed before the City will endorse deeds for recording.
4. The applicant shall enter into a Subdivision Agreement with the City. This agreement shall be executed before the City will endorse deeds for recording.
5. A Mitigation Affidavit is required for 821 Tanglewood Dr, this Affidavit shall be executed prior to the City's release of the deed for recording.
6. Approval of the Minor Subdivision is contingent upon the approval of a variance permitting waiving public street frontage requirement for 821 Tanglewood and waving of the minimum 100 feet of shoreland for 821 Tanglewood.
7. This approval shall expire after one year if the subdivision has not been recorded with Ramsey County.

**VOTE:**

**AYES:**

**NAYS:**

**EXTRACT OF MINUTES OF MEETING OF THE  
PLANNING COMMISSION OF SHOREVIEW, MINNESOTA  
HELD MAY 22, 2018**

\* \* \* \* \*

Pursuant to due call and notice thereof, a meeting of the Planning Commission of the City of Shoreview, Minnesota was duly called and held at the Shoreview City Hall in said City at 7:00 PM.

The following members were present:

And the following members were absent:

Member \_\_\_\_\_ introduced the following resolution and moved its adoption.

**RESOLUTION NO. 18-34 FOR A VARIANCE TO WAIVE THE STREET FRONTAGE  
REQUIREMENT AND WAIVE THE MINIMUM 100 FEET NEEDED AT THE  
SHORELINE**

WHEREAS, Scott and Jane Deming submitted a variance application for the following described property:

All that part of the west 426.94 of Government Lot 3 Section 14, Township 30 North, Range 23 West, Ramsey County, Minnesota which lies north of the south 703.00 feet thereof, and east of the following described line: Beginning at a point 703.00 feet north and 314.31 east of the south and west lines respectively of said Government Lot 3: thence northerly to a point 346.31 feet east and 1078.00 feet north of the west and south lines respectively of said Government Lot 3; thence continuing on prolongation of said described line to the shore of Turtle Lake and there terminating. Together with a road easement for ingress and egress over and across the east 20.00 feet of the west 392.94 feet of the south 703.00 feet of said Government Lot 3.

*(This property is more commonly known as 821 Tanglewood Dr. and as Parcel A in the  
Certificate of Survey dated 3/27/18)*

WHEREAS, pursuant to the Development Code Section 204.030 (C)(2), the Development Regulations require all newly created parcels to have frontage on a public road; and

WHEREAS, pursuant to the Development Code Section 209.080 (D), the Development Regulations require parcels on general development waters to have 100 feet at the ordinary high, building setback and front lot line; and

WHEREAS, the applicant proposed to waive the frontage on a public road; and

WHEREAS, the applicant proposed a 81 foot width on the shoreline at the ordinary high water level; and

WHEREAS, the applicants have requested a variance to this requirement in order to subdivide their property to adjust the boundary lines of the two parcels; and

WHEREAS, the Shoreview Planning Commission is authorized by state law and the City of Shoreview Development Regulations to make final decisions on variance requests; and

WHEREAS, on May 22<sup>nd</sup>, 2018 the Shoreview Planning Commission made the following findings of fact:

1. *Reasonable Manner. The property owner proposes to use the property in a reasonable manner not permitted by the Shoreview Development Regulations.*

The applicant is proposing to use the property in a reasonable manner. Access to the current homes on the properties is via Tanglewood Drive – through a private road easement – and that will not change with this subdivision. Additionally the lot was created with the current 81 feet at the water and no changes are being proposed to this width. The lot will continue to use the property in reasonable manner of a single family home.

2. *Unique Circumstances. The plight of the property owner is due to circumstances unique to the property not created by the property owner.*

Staff believes that unique circumstances are present due to the historical creation of the lots and several properties using one driveway easement. Keeping access via a private road easement is reasonable due to the property's characteristics of frontage on a Tanglewood Drive. It is not reasonable to require frontage on a public street at this time due to the area's characteristic and potential for future development.

3. *Character of Neighborhood. The variance, if granted, will not alter the essential character of the neighborhood.*

The character of the neighborhood will not be altered at all. The existing homes and access to them will not be changed with the minor subdivision nor will any new lots be created and the minor subdivision and variances will just be noticeable on paper rather than affect the character of the neighborhood.

NOW, THEREFORE, BE IT RESOLVED BY THE SHOREVIEW PLANNING COMMISSION, that the variances requested for property described above, 821 Tangewood Dr, be approved, subject to the following conditions:

1. This approval is subject to approval of the Minor Subdivision application by the City Council.
2. This approval will expire after one year if the subdivision has not been recorded with Ramsey County.
3. The approval is subject to a 5-day appeal period.

The motion was duly seconded by Member \_\_\_\_\_ and upon a vote being taken thereon, the following voted in favor thereof:

And the following voted against the same:

Adopted this 22<sup>nd</sup> day of May, 2018

\_\_\_\_\_  
John Doan, Chair  
Shoreview Planning Commission

ATTEST:

\_\_\_\_\_  
Aaron Sedey, Associate Planner

ACCEPTANCE OF CONDITIONS:

\_\_\_\_\_  
Scott P Deming

\_\_\_\_\_  
Jane M Deming



**TO:** Planning Commission  
**FROM:** Kathleen Castle, City Planner  
**DATE:** May 15, 2018  
**SUBJECT:** Pet Boarding and Daycare Facilities

The City staff has been approached by a few business owners who are interested in converting existing industrial buildings into a pet boarding and daycare facility. While this type of use is currently not allowed in the City's I, Industrial Zoning District, other nearby communities have allowed or permit this use in industrial areas. It appears that trends for pet boarding are changing and this type of use requires "industrial" type buildings with large open spaces. Prior to initiating a text amendment to the Development Code to potentially allow this type of use in the I District, Staff is interested in discussing this matter with the Planning Commission to determine if there could be support for this use in industrial areas.

### **Industrial Zoning District**

The intent of the Industrial Zoning District is to establish appropriate locations for the manufacturing, distribution, wholesaling, or storage of raw material, partially finished products or finished products and research and development. Industrial land uses tend to have shipping facilities and require access to arterial roads or rail lines for the shipment, transfer or delivery of goods via truck or rail. These areas tend to be separated from residential uses as conflicts may occur due to air emissions, odor, noise and traffic. There are three areas in the City zoned for industrial uses; Highway 96 Industrial area (east of Milton Street), Cardigan Road Industrial Area and the Shoreview Park Road Industrial area.

There are a few uses permitted in the Industrial Zoning District that are not industrial in nature. These include clubs and lodges and gymnastic training centers, both of which require a conditional use permit. In the past, the City has also permitted school facilities through the Site and Building Plan review process.

### **Current Zoning Regulations**

The Development Code does have a definition of kennels in Section 202, "Any place where four (4) or more dogs over six (6) months of age are kept for private or commercial purposes". Veterinary Clinics are also defined as "a commercial activity catering to the medical needs of animals and having no outside runs or shelters for the keeping of animals". The Code does not define pet boarding or daycare facilities

In the C1, Retail Service District, (Section 205.042), pet shops and grooming are a permitted use. Kennels are also allowed with a conditional use permit. Pet Shops and grooming are also a permitted use in the C2, General Commercial District (Section 205.043).



Veterinary clinics are permitted in the C1A, Limited Retail Service District (Section 205.041), the C1, Retail Service District, (Section 205.042), the C2, General Commercial District (Section 205.043) and the O, Office District (Section 205.044). Indoor kennels accessory to a veterinary office are permitted in the O District with a Conditional Use Permit.

### **Pet Boarding and Daycare Use**

Again, staff has received a couple of inquiries from businesses interested in operating a pet boarding and daycare facility in our industrial zoned areas. This type of use tends to have pet boarding (overnight), doggie daycare, pet grooming and the retail sales of pet products. Facilities tend to include indoor kennel areas, indoor and outdoor play areas, a grooming salon and retail shop. Training classes may also be provided. Industrial buildings are suitable for this use because they have large indoor spaces. Examples of similar facilities include:

<http://www.campbowwow.com/burnsville>

<http://stonemountainpetlodge.com/>

At this time, Staff is seeking feedback from the Commission on whether or not the Commission may be supportive of this type of use in an I District. If the Commission is supportive, Staff would research this use further and potentially develop regulations for the Commission to consider.