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Date: August 5, 2016

To: Ben Gonzola, Planning Consultant Re

Ben Gonzola, Planning Consultant

Stephen Wensman, Planning Director

From: Jack Griffin, P.E., City Engineer

Re: The Royal Golf Club at Lake Elmo

Concept Plan Review

An engineering review has been completed for The Royal Golf Club at Lake Elmo (Tartan Park) Concept Plan. The submittal consisted of the following documentation prepared by Carlson McCain.

- Preliminary Civil Site Plans, including residential development sketch plan and sketch grading plans, dated July 15, 2016.
- Project Narrative dated July 15, 2016.
- ALTA Survey dated January 13, 2016.

We have the following review comments:

All public improvements constructed to support the development must be designed and constructed in accordance with the City Engineering Design Standards Manual available on the City website.

TRANSPORTATION IMPROVEMENTS

- The Plat must dedicate right-of-way to the City of Lake Elmo along the entire length of 20th Street N. (40 feet R/W) and Manning Trail N. (50 feet R/W) to provide a minimum R/W from the existing roadway centerline. The concept plan shows R/W dedication, however the actual right-of-way width cannot be verified based on the plan scale provided.
- The Plat must dedicate sufficient right-of-way along CSAH 17 (Lake Elmo Avenue), CSAH 10 (10th Street North), and CSAH 15 (Manning Avenue) as required by Washington County. The concept plan shows this dedication, however the actual right-of-way widths must be reviewed and approved by the County.
- Access Management. Access to the development is proposed in four locations accessing Lake Elmo Avenue, 20th Street North (MSA collector street), and Manning Trail North. Additional development access points are strongly recommended (see the Secondary Access and Street Interconnections bullet under RESIDENTIAL STREETS). Prior to the City receiving and accepting a preliminary plat proposal it is recommended that all development access points be reviewed and approved by the City and Washington County to verify acceptable access management spacing and adequate sight triangles for each entrance.
- The proposed access locations and considerations for the development are as follows:
 - > 1) Street E access to Lake Elmo Avenue (CSAH 17). Location to be approved by Washington County.
 - ➤ 2) Street A access to 20th Street North (MSA collector roadway). Access is 550 feet east of Lake Elmo Avenue vs. the required spacing of 660 feet. Proposed access location aligns with the existing intersection for 20th Street Court N.

- ➤ 3) Street B access to 20th Street North (MSA collector roadway). Proposed access is located 350 feet offset from the existing intersection of Legion Avenue. Consideration should be given to relocating this access to align with the intersection of Legion Avenue or increase the offset to 660 feet.
- ➤ 4) Street J access to Manning Trail North. Access is 550 feet south of 20th Street N. Location needs to be reviewed in the field to verify access as an acceptable location.
- The applicant will be responsible to construct all intersection and turn lane improvements along CSAH 17 as required by Washington County. These improvements must be completed at the developer's cost.
- The applicant will be responsible to construct right and left turn lane improvements along 20th Street N. (both access locations) and long Manning Trail as required by the City. These improvements must be completed at the developer's cost.
- Pedestrian facilities: The City should review potential bituminous trail requirements to be incorporated along CSAH 17, 20th Street N. and/or Manning Trail N. to improve pedestrian safety and work toward future trail connectivity.

RESIDENTIAL STREETS

- The national Complete Streets Coalition states that well-designed, connected Street Networks are the backbone upon which communities are built. Good street network designs reduce land consumption, provide greater accessibility through more direct routes, and increase overall network efficiency and reliability through added redundancy. They also affect several factors that relate to building more sustainable communities such as travel patterns, road safety, and public health. Generally speaking, more compact and connected street networks tend to have significantly higher levels of people walking and biking and fewer vehicle miles traveled as compared to sparser, tree-like designs. Connected streets can reduce traffic congestion by dispersing traffic and offering travel options. Grid networks create a safer road system.
- Secondary Access and Street Interconnections: It is strongly recommended that additional access points and interconnections be thoroughly pursued to enhance the street network safety and accessibility. The proposed concept plan shows three separate neighborhoods all requiring direct access to a collector or County roadway without interconnection or secondary roadway connection. Area 1 proposes 170 lots with a single point of access to CSAH 17 (Lake Elmo Avenue). The 170 lots are placed along a dead end cul-desac over 4,500 feet long. The city standard cul-de-sac length is 600 feet while many communities have a maximum length of 1,000 feet. Area 2 proposes 57 lots with two points of access to 20th Street N. Area 3 proposes 76 lots with a single point of access to Manning Trail placed along a dead end cul-de-sac over 2,300 feet long.
 - An interconnection between Street A and Street E is extremely important to provide a secondary access for Area 1 to 20th Street N., and to provide a secondary access roadway connection for Area 2 to CSAH 17. A box culvert or bridge structure should be investigated.
 - ➤ The south end of Street E should be connected to 10th Street N. to eliminate a proposed cul-de-sac over 7.5 times the maximum allowed length. Staff recognizes that this connection may be difficult to make but all efforts should be pursued. If a connection cannot be physically made, any and all other emergency access options or future connection opportunities must be addressed (i.e. a trail connection to 10th Street to be used for emergency and future roadway construction purposes, right-of-way dedication to the edge of the plat for a future roadway connection, loop the south end of Street E to connect to Street H, etc).
 - > Street J should be align to connect to both 20th Street N. and Manning Trail to provide access to two separate collector roadways. If this is found to be unfeasible then two connections to Manning Trail should be made to eliminate the long dead end cul-de-sac.
- Private owned HOA streets have been proposed in areas of this development including Streets D, F, I and K. Privately owned HOA streets should not be allowed. Typically private streets are proposed for the purpose of decreasing street and boulevard design standards including setbacks for the structures. The City design standards have been established as "minimums" for the purpose of serving as public access, drainage, sanitary sewer, and municipal water service. The boulevard corridor also provides a dedicated location for small utilities such as gas, electric, cable, telephone and fiber optics. Reducing the R/W width

and structure setbacks greatly increases the public cost for maintaining underground utilities by constricting work zone areas when the infrastructure requires maintenance and/or replacement. Private streets should be considered only with public infrastructure is not installed below the private streets.

- All streets must be shown as public streets when submitting for preliminary plat. All public streets must be
 designed to meet the City's Engineering Design Standards including R/W width (60-feet), street width (28feet) and cul-de-sac radii.
- Surmountable concrete curb and gutter shall be installed in single family residential areas with future driveways and B618 curb installed along entrance roadways and roadway stretches with no lots.
- Street intersections must approximate 90 degrees and maintain 50 feet of tangent with maximum slopes of 2.5%. Residential maximum longitudinal grade is 8% with no sidewalks, 6% where there are sidewalks.
- Parkway or divided roadways must be a minimum of 18 feet wide from back or curb to back of curb. The
 development street plan indicates landscaped medians at two of the development entrance points.
- Six (6) foot sidewalks must be provided along all residential streets and as may be required for connectivity.
- Ten (10) foot utility easements are required on either side of all right-of-ways.

MUNICIPAL WATER SUPPLY

- The application and sketch plans do not address water supply. However, it is staff's understanding that it is intended for the development to be served by municipal water.
- Tartan Park, the proposed development area, is excluded from the 2030 Comprehensive Water System
 Plan, being identified as an area to not be served by municipal water. However, municipal water
 infrastructure exists immediately adjacent to Tartan Park (16-inch trunk watermain line has been
 constructed along Lake Elmo Avenue).
- If municipal water is extended to serve this development, a water service capacity and hydraulic study should be completed to verify system capacity, operating pressures and watermain pipe sizing and looping requirements. For example, it may be necessary to move up the construction timeframe for the new water tower to be located in the city's lower pressure zone. Also, given the varied topography of the site it may be necessary to identify acceptable water pressure operating conditions based on the varied elevations to establish areas that will require pressure regulating valves for individual homes.
- The applicant would be responsible to extend municipal water into the development at its cost and would be required to construct a looped watermain network based on the results of the water service hydraulic study.

MUNICIPAL SANITARY SEWER

- The applicant is responsible to provide wastewater infrastructure to support the proposed development. All sewer infrastructure must be provided at the developer's cost.
- The application and sketch plans do not address sanitary sewer service. However, it is staff's understanding that it is intended for the development to be served by municipal sewer.
- The proposed development is located outside of the City designated Municipal Urban Service Area (MUSA) for sanitary sewer service. In order to extend municipal sewer to serve this development, a Comprehensive Plan amendment is required to alter the sewer service boundaries for the City.
- Sewer service could be provided by constructing a lift station at the south end of Tartan Park with a forcemain constructed along 10th Street N. to connect to the existing 16-inch forcemain along Lake Elmo Avenue. The sewer system should be designed so that the 10th Street lift station can be eliminated in the future when gravity sanitary sewer is extended to serve Cimarron and Oakland Junior High School.
- Interior to the development multiple lift stations may be required due to the varied topography of the property. The sewer system must be designed City standards and must minimize lift stations and future ongoing operational costs.

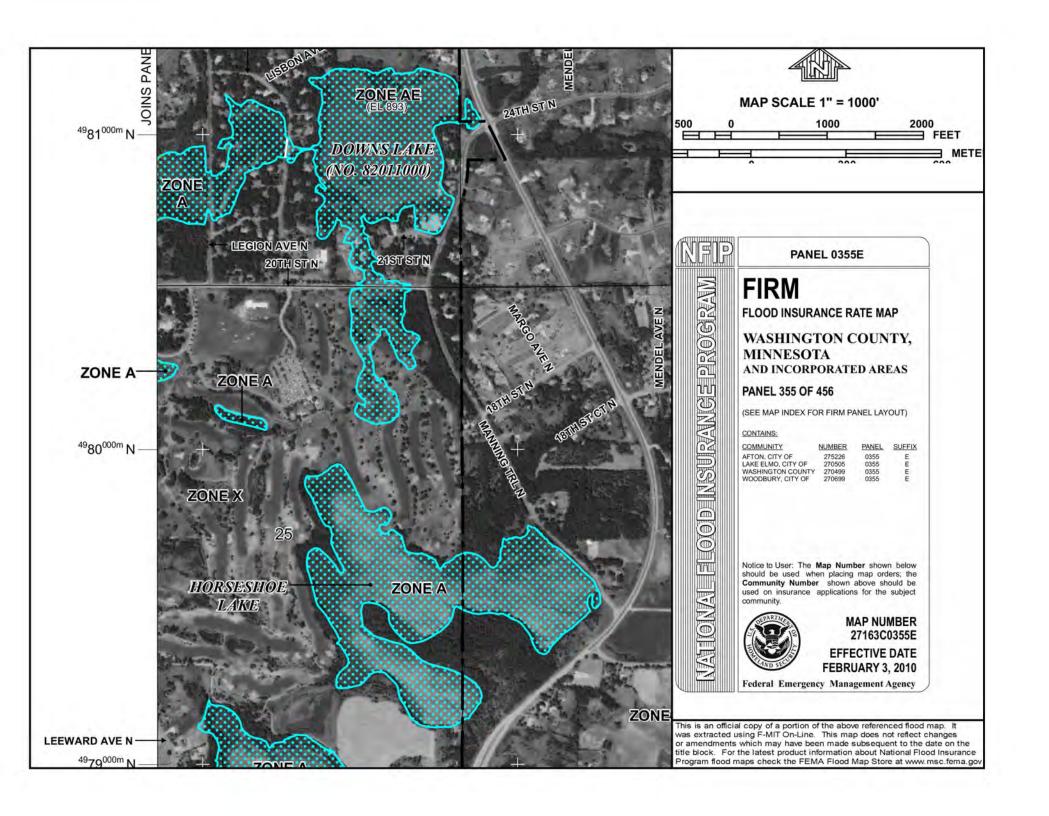
STORMWATER MANAGEMENT, DRAINAGE AND GRADING

- The site plan is subject to a storm water management plan meeting State, VBWD and City rules and regulations.
- Storm water and storm sewer facilities proposed as part of the site plan to meet State and VBWD permitting requirements must be constructed in accordance with the <u>City Engineering Design Standards Manual</u> available on the City website. The plans shown do not meet many of these requirements.
 - All storm water facilities, including infiltration basins, wetlands and wetland buffers, must be placed in Outlots deeded to the City for maintenance purposes. The Stormwater Facility Outlots must fully incorporate the 100-year HWL, 10 foot maintenance bench and all maintenance access roads. It appears that some of the proposed ponding facilities are located outside of the development limits.
 - > All storm water bonds must have both a 10:1 aquatic bench and a 10:1 maintenance bench.
 - Designated maintenance access roads, 20 feet in width, must be provided for all storm water facilities with slope no greater than 10%.
 - The maximum curb run prior to a catch basin is 350 feet.
 - All storm sewer pipe easements must be a **minimum** 30-feet in width. Additional width may be required to adjust for greater pipe depths.
 - The storm sewer system shall be designed to maintain the City standard **minimum** pipe cover of 3 feet.
 - > Drain tile is required as part of the City standard street section at all localized low points in the street.

 Drain tile considerations may impact the storm sewer design and depth requirements at low points.
- The general drainage system should mimic the natural topography of the site in order to ensure a drainage system that provides positive storm water drainage across the development.
- Overland emergency overflows or outlets will be required as part of the site plan.
- Storm water pond facilities should be combined together to the greatest extent possible to ensure adequate hydrology for efficient facility treatment operations.
- The ultimate discharge rate and location will be an important consideration to avoid negative impacts to downstream properties. The storm water management plan will need to address changes to the downstream drainage system to the extent alterations are proposed. To the extent adjacent properties are impacted, written permission from those properties must be submitted as part of the development applications.
- The grading plan indicates significant use of retaining walls. Retaining walls should be placed within private
 lots or Outlots to be owned and maintained by the HOA. Retaining walls should be placed on City R/W or
 Outlots dedicated to the City. Retaining walls should also not be placed within lot drainage and utility
 easements.

ADDITIONAL CONSIDERATIONS

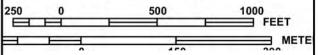
A detailed phasing plan should be provided with the preliminary plat application that clearly indicates the
phasing of the construction for each public infrastructure component and addresses both construction
access to the site and public access for new residents. Temporary cul-de-sacs should be part of the phasing
plans and are be required for any street with a platted lot with driveway access.







MAP SCALE 1" = 500'



NFIP

PANEL 0332E

FIRM FLOOD INSURANCE RATE MAP

WASHINGTON COUNTY,

MINNESOTA AND INCORPORATED AREAS

PANEL 332 OF 456

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY

SUFFIX

LAKE ELMO, CITY OF

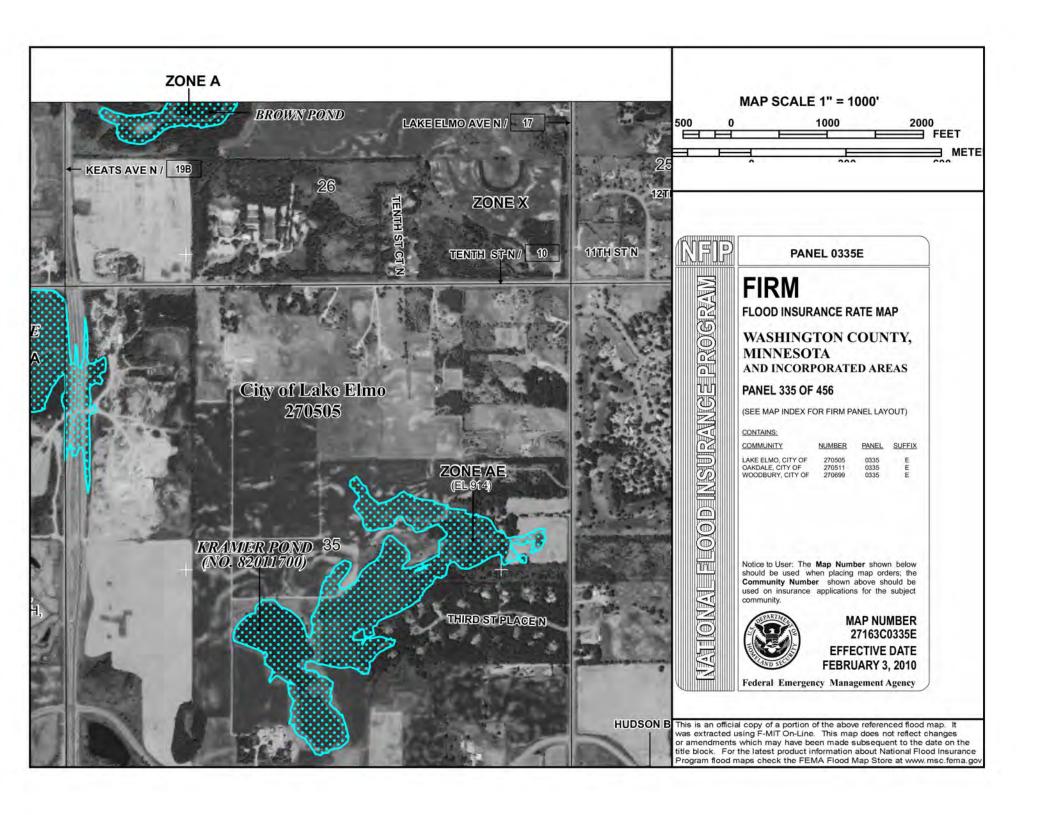
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MAP NUMBER 27163C0332E **EFFECTIVE DATE FEBRUARY 3, 2010**

Federal Emergency Management Agency

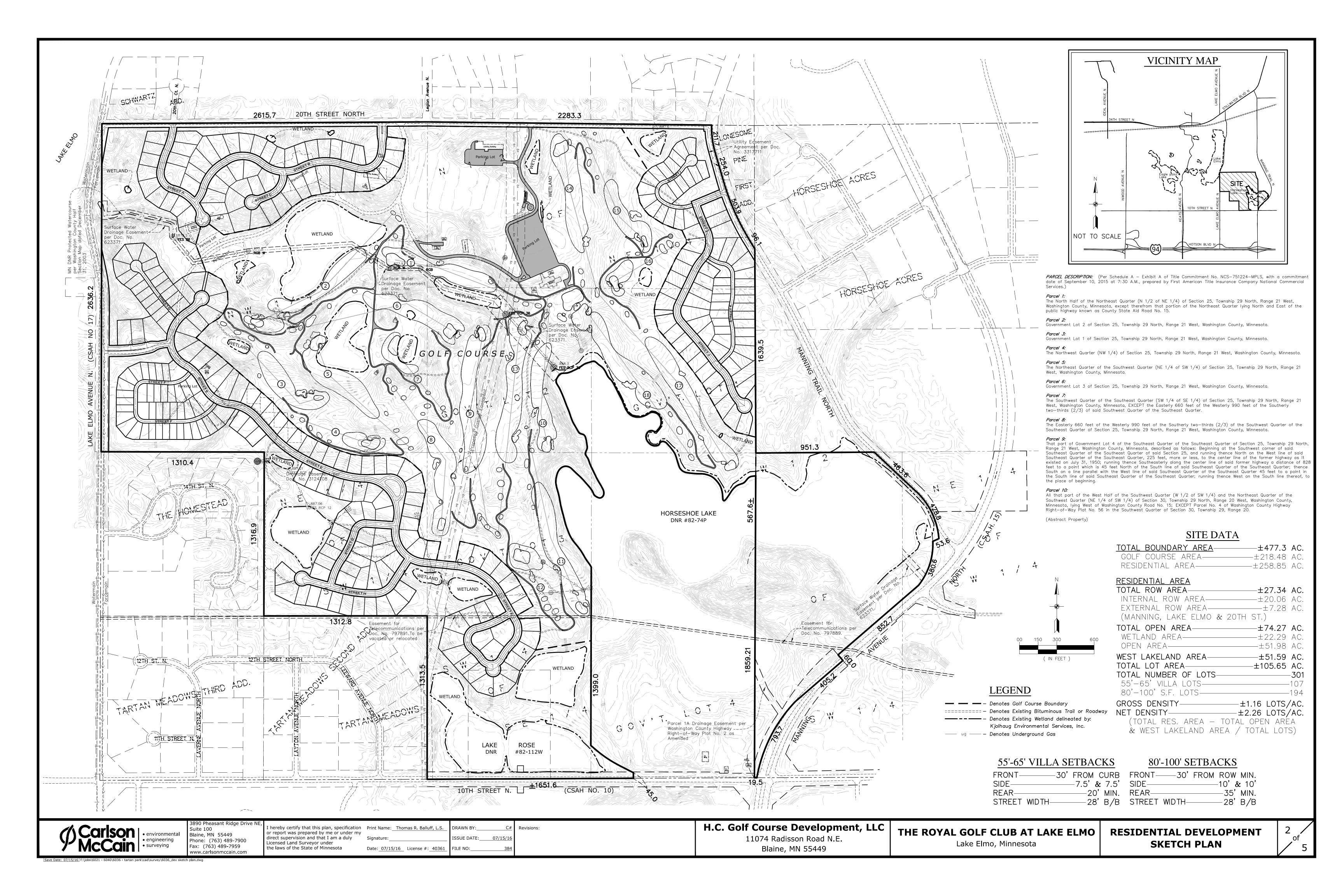
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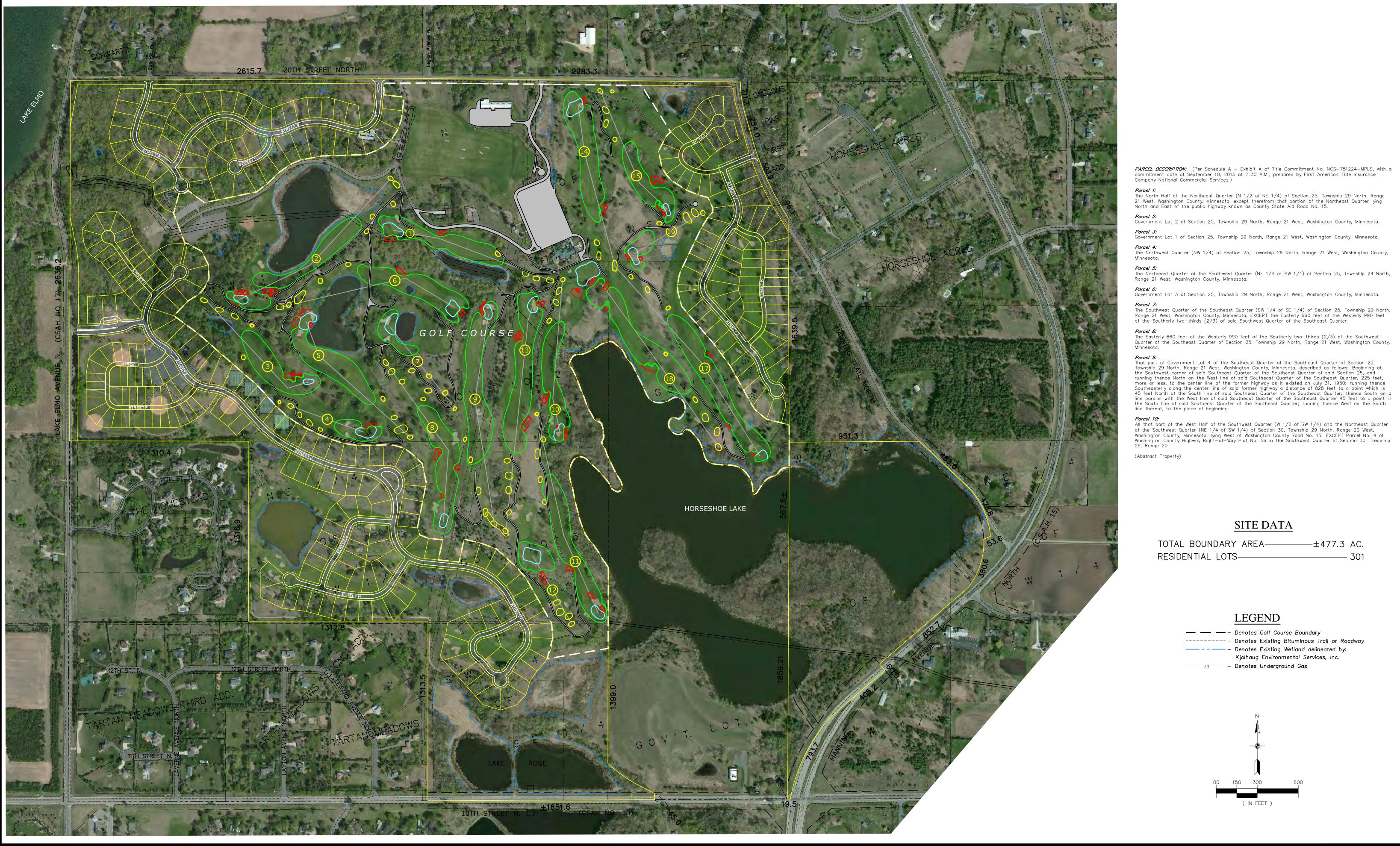




COVER



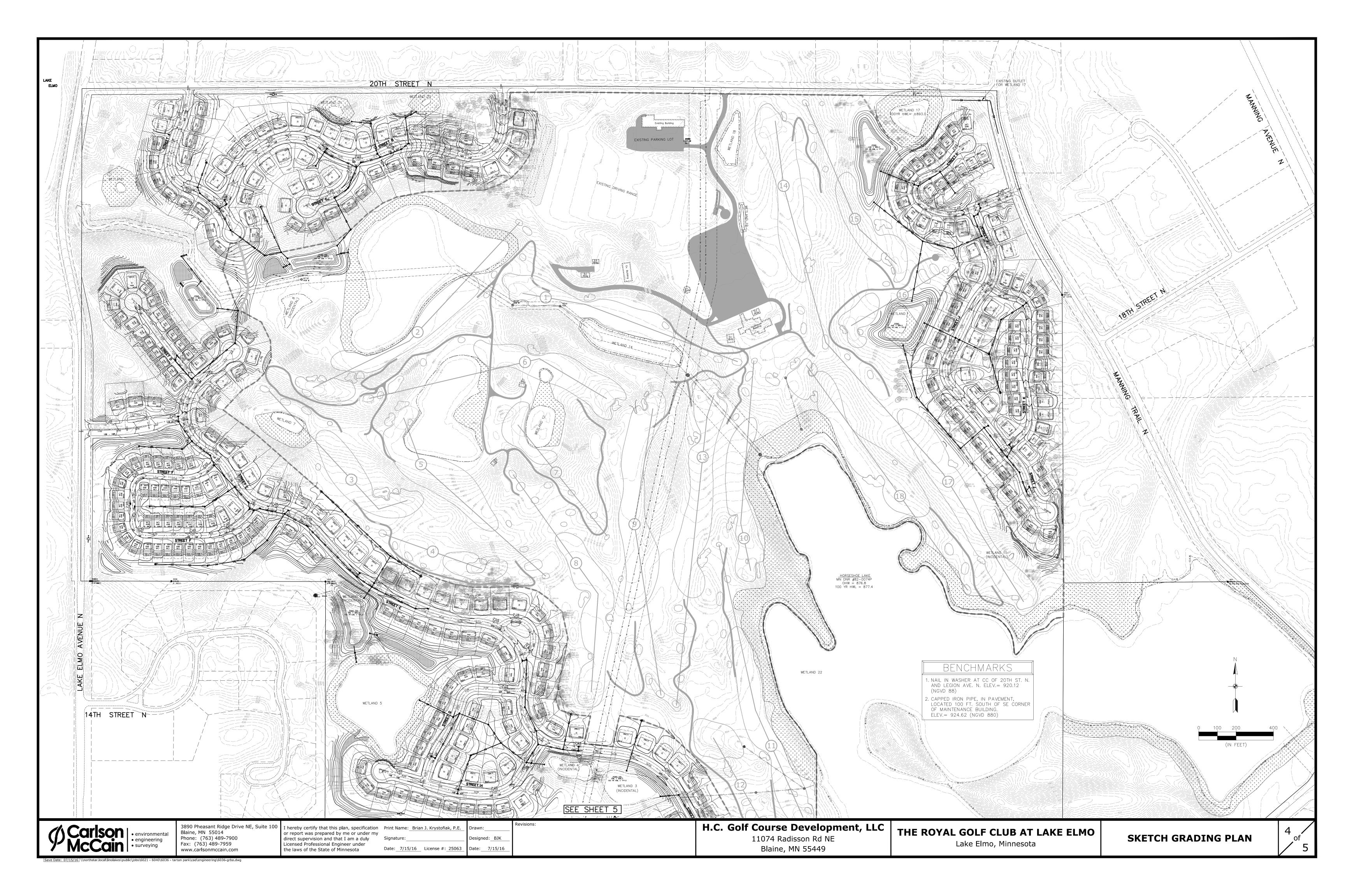


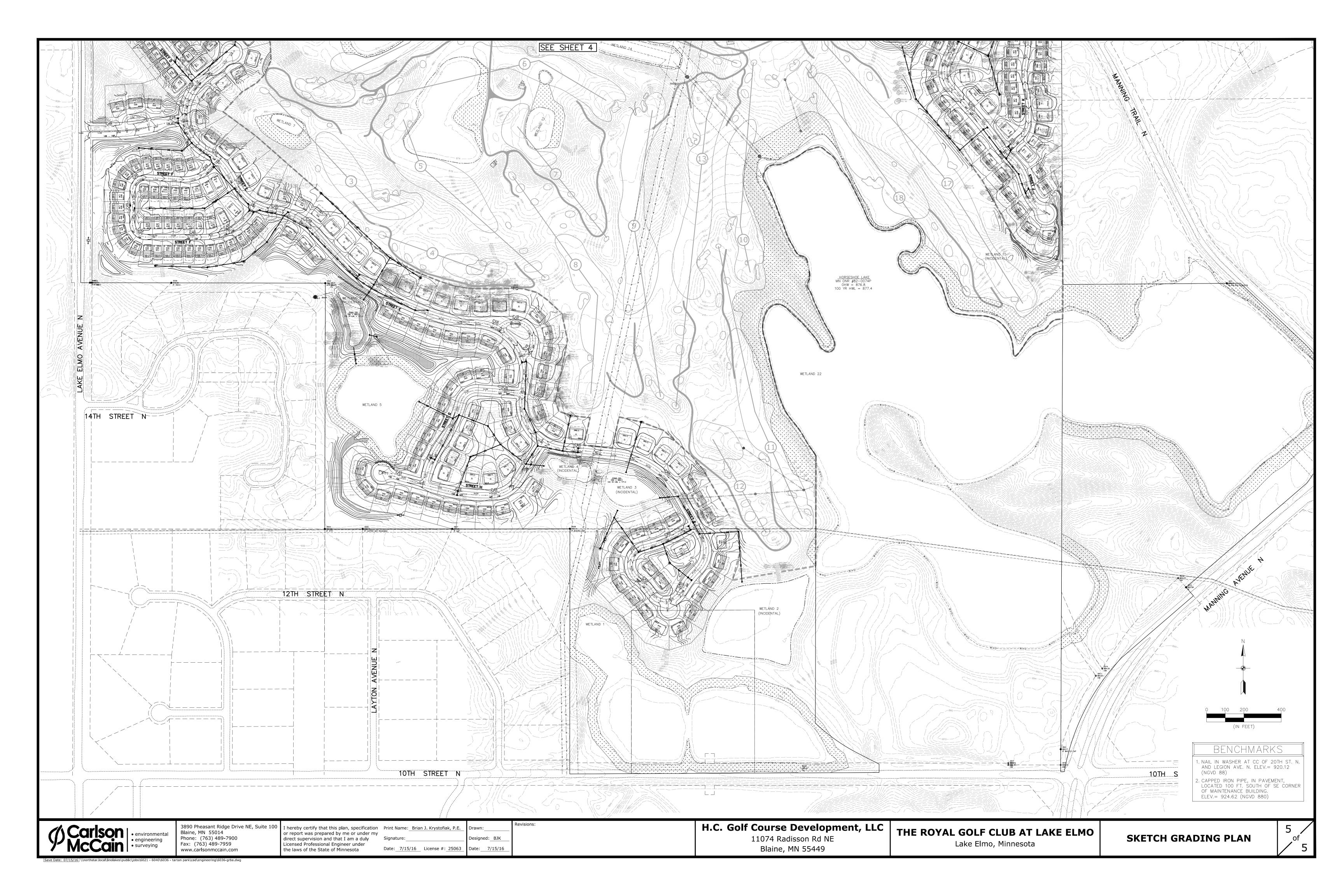


H.C. Golf Course Development, LLC 11074 Radisson Road N.E. Blaine, MN 55449

THE ROYAL GOLF CLUB AT LAKE ELMO Lake Elmo, Minnesota

RESIDENTIAL DEVELOPMENT SKETCH PLAN W/AERIAL





From: Bonnie Moris
To: Stephen Wensman

Subject: 20th Street Bike and Walking Path

Date: Monday, April 25, 2016 6:09:23 PM

Good afternoon Stephen,

Our neighbors, Mike and Jo Tate have given us your information.

We, too, would like to make the request for a path along the south side of <u>20th Street</u> for all the pedestrian traffic between Manning Trail & Lake Elmo Avenue.

We were told that now is the time to discuss this safety consideration with the new Tartan ownership.

Thank you for your consideration and help to move this idea forward.

Kind regards,

Bonnie and Joe Moris 11612 20th Street North

Best number for contact: 651-260-6041

P.S. Kindly just jot me a note back so I know you have received.

Sent from my iPhone

From: Gwen Welch
To: Stephen Wensman
Subject: Walking/bike path

Date: Tuesday, April 26, 2016 9:36:23 AM

Hi Stephen,

With the future Increased traffic on 20th St. N. due to the development of Tarten Park, we would like the developer to consider a walking/ biking path on the south side of 20th for the safety of pedestrians going between Manning Trail and Lake Elmo Avenue.

Thank you, Bob and Gwen Welch From: <u>Jim Burns</u>

To: <u>Stephen Wensman</u>

Subject: Walking path along 20th Street

Date: Monday, April 25, 2016 10:14:08 AM

Hello,

We have lived on 20th St. Ct. N. for over 40 years. We have always wished for better walking/biking conditions along 20th Street. When our boys were young, it was some time before we allowed them to ride their bikes to friends' homes on Legion Avenue, and even then, I watched from the end of our street until they were safely around the corner on Legion. We walk with our grandchildren down to our shared lake frontage during the summer. Each time 20th Street was repaved, we hoped for a paved shoulder. Now, with the purchase and anticipated construction of new homes on the former Tartan Park property, might be the time to consider a walking path along 20th St., with the new owners perhaps funding it.

We have been chatting about this possibility with neighbors, including Mike Tate and Chris and Karen Cook, and we agree that with the already heavy walking and jogging use of 20th St. and most likely, greater use in the future, that a walking path would be a wonderful safety feature in this area. We hope that the planning department and planning commission will look into this.

Thank you for your attention to this matter.

Beth and Jim Burns

Sent from my iPad

From: <u>Karen Cook</u>
To: <u>Stephen Wensman</u>

Subject: Biking/walking path along 20th St Date: Tuesday, April 26, 2016 9:46:18 PM

Dear Steve,

I am writing to you in regards to the need for a biking/walking path along 20th Street in Lake Elmo, I have lived on this street for the past 25 years and it has amazed me that the street has no shoulder, is hilly, and the speed limit is 45 MPH. My husband, three young daughters, dog, and I have walked, run and biked on this street, but always with the danger of being hit by a motorist. Many motorists would move into the opposite lane to allow us space, but with the hills on that road, the chance of a head on collision are great.

Now we live here with young grandchildren, and the same safety issues are present.

With the sale of Tartan Park to Arnold Palmer and Annika Sorenstam, it seems like prime time to request a biking/walking path along 20th Street (and along Lake Elmo Ave South of 20th and also along Manning Trail) so that we can keep people safe that are walking/biking along those roads. With the development of the park and the addition of 350 homes, the traffic is only going to increase along these roads.

Please consider this biking/walking path for the safety of our residents as you proceed with city planning.

Thank you.

Sincerely,

Karen Cook

From: Mike Tate

To: Stephen Wensman

Cc: Bonnie Moris; Jo Tate

Subject: Walking/ Bike path on 20th

Date: Monday, April 25, 2016 3:59:34 PM

Hi Stephen.

I am following up our visit at your office earlier this spring with our request for a path along the south side of 20th Street for all the pedestrian traffic between Manning Trail & Lake Elmo Avenue.

You had mentioned now is the time to discuss this safety consideration with the new Tartan ownership. It is already an "adventure" running, walking, & biking on this street.

Thank you for moving this idea forward.

Mike and Jo Tate

Sent from my iPhone



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