Agenda
Minnetonka City Council
Regular Meeting, Monday, July 23, 2018
6:30 p.m.
Council Chambers

1. Call to Order
2. Pledge of Allegiance
3. Roll Call: Happe-Calvert-Bergstedt-Ellingson-Acomb-Wiersum
4. Approval of Agenda
5. Approval of Minutes: None
6. Special Matters: None
7. Reports from City Manager & Council Members
8. Citizens Wishing to Discuss Matters Not on the Agenda
9. Bids and Purchases: None
10. Consent Agenda - Items Requiring a Majority Vote:
   A. Resolution appointing election judges and absentee ballot board for the August 14, 2018 State Primary
   B. Resolution approving an emergency polling place change
11. Consent Agenda - Items Requiring Five Votes:
   A. Resolution approving the final plat of ARUNDEL ADDITION, a three-lot subdivision at 15500 Minnetonka Blvd.
      Recommendation: Adopt the resolution approving the final plat
12. Introduction of Ordinances:
   A. Ordinances related to tobacco-related products
      Recommendation: Introduce the ordinances

Minnetonka City Council meetings are broadcast live on Comcast: channel 16 (SD), channel 859 (HD); CenturyLink Prism: 238 (SD), 1238 (HD).
Replays of this meeting can be seen during the following days and times: Mondays, 6:30 p.m., Wednesdays, 6:30 p.m., Fridays, 12 p.m., Saturdays, 12 p.m. The city’s website also offers video streaming of the council meeting.
For more information, please call 952.939.8200 or visit eminnetonka.com
B. Items concerning The Mariner, a multi-family residential development, at 10400, 10500 and 15500 Bren Road East.

Land Use Items
1) Ordinance rezoning the property from B-2, commercial, to PUD, planned unit development;
2) Master development plan;
3) Final site and building plan review; and
4) Preliminary and final plats.

Economic Development Items
1) Tax Increment Pooling
2) Contract for Private Development

Recommendation: Introduce the ordinance and refer it to the planning commission (4 votes)

13. Public Hearings:

A. Items concerning a multi-family residential development by Dominium, at 11001 Bren Road East

1) Ordinance rezoning the property from I-1, industrial, to PUD, planned unit development;
2) Resolution approving a master development plan and final site and building plans;
3) Resolution approving preliminary and final plats;
4) Resolution approving vacation of easements; and
5) Negative declaration on the need for an Environmental Impact Statement

Recommendation: Staff recommends the city council hold the public hearing and (4 votes):

1) Adopt the ordinance and resolutions approving the rezoning, master development plan, final site and building plans, preliminary and final plats and vacation easements;
2) Approve the resolution for a negative declaration on the need for an Environmental Impact Statement

B. Items concerning a multi-family residential development by Dominium, at 11001 Bren Road East

Recommendation: Recommend the city council adopt the following (4 votes):

1) Resolution Establishing the Dominium Tax Increment Financing District within the Opus Redevelopment Project by adopting a redevelopment plan, establishing a tax increment financing district and adopting a tax increment financing plan.
2) Resolutions approving the contracts for private redevelopment between the Economic Development Authority in and for the City of Minnetonka, the City of Minnetonka, and Minnetonka Leased Housing Associates II and III, LLLP for Senior and Workforce Housing.
3) Resolution authorizing a grant application through the Metropolitan Council Livable Communities Transit Oriented Design (TOD) Program.

14. Other Business:

A. Concept plan review for Hennepin County Medical Examiner’s Office at 14300 Co. Rd 62

   Recommendation: Discuss concept plan with the applicant. No formal action required.

15. Appointments and Reappointments:

A. Appointment of Chris LaBounty as Minnetonka representative to the Suburban Rate Authority

   Recommendation: Approve the appointment

16. Adjournment
City Council Agenda Item # 10A
Meeting of July 23, 2018

Brief Description: Resolution appointing election judges and absentee ballot board for the August 14, 2018 State Primary

Recommended Action: Adopt the resolution

Background

The city council is being asked to consider a resolution appointing election judges and the absentee ballot board for the August 14, 2018 State Primary.

Council is asked to approve the eligible election judges listed in the resolution. From this list, staff will make assignments to ensure the required party balance. These election judges will be used to staff polling places, assist with absentee voting and help with the absentee ballot board. Most polling places will be staffed with 5-6 election judges. The resolution also gives the city clerk authority to appoint emergency election judges to fill vacancies that may occur at the last minute.

In accordance with the approved 2018 budget, election judges will be paid $10.75/hour, assistant lead judges will be paid $11.25/hour and lead judges will receive $11.75/hour.

Recommendation

Staff recommends that the city council adopt a resolution appointing the election judges for the August 14, 2018 State General Election.

Submitted through:
Geralyn Barone, City Manager
Perry Vetter, Assistant City Manager

Originated by:
David Maeda City Clerk
Resolution No. 2018-
Resolution appointing election judges for the August 14, 2018 State Primary

Be it resolved by the City Council of the City of Minnetonka, Minnesota as follows:

Section 1. Background.

1.01. The State Primary will be held on August 14, 2018. The City Council is required by law to appoint election judges to serve at the polling places on Election Day.

1.02. Voting will occur at all 23 precincts in the city. Election judges will serve at the polling places and assist with absentee ballot processing.

Section 2. Council Action.

2.01. The City Council hereby authorizes the city clerk to select from the attached list of individuals to serve as election judges for the August 14, 2018 State Primary and as the city’s absentee ballot board.

2.02. The City Council also appoints all members appointed to the Hennepin County Absentee Ballot Board as authorized under M.S. 204B.21, subd 2 under the direction of the county election manager to serve as members of the Minnetonka Absentee Ballot Board.

2.03. The City Council also authorizes the city clerk to make emergency appointments of election judges to fill last-minute vacancies.

Adopted by the City Council of the City of Minnetonka, Minnesota, on July 23, 2018.

________________________________________
Brad Wiersum, Mayor

Attest:

________________________________________
David E. Maeda, City Clerk

Action on this resolution:

Motion for adoption:
Seconded by:
Voted in favor of:
Voted against:
Abstained:
Absent:
Resolution adopted.
I hereby certify that the foregoing is a true and correct copy of a resolution adopted by the City Council of the City of Minnetonka, Minnesota, at a duly authorized meeting held on July 23, 2018.

________________________________________
David E. Maeda, City Clerk
### List of Active Judges for Council

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City Council Agenda Item #10B
Meeting of July 23, 2018

Brief Description: Resolution approving an emergency polling place change

Recommended Action: Adopt the resolution

Background

A 2017 state law change requires the city council, by resolution, to annually designate polling places by December 31 for the following calendar year.

At its December 18, 2017 council meeting, the council adopted a resolution establishing polling places for the 2018 elections. At that time, staff was informed that the Hennepin County Ridgedale Library, which has served as a polling place for voters in Ward 2 Precinct D for many years, would be open in the summer of 2018 following an extensive remodel started in 2017. In 2017 the Ward 2 Precinct D polling place was changed to the neighboring YMCA building. The YMCA staff indicated they were willing to serve as a temporary polling place for one year.

Staff was told last month that the library building remodel will be complete, but the parking lot will not be ready in time for the State Primary. State election law prohibits changing polling places between the State Primary and State General Election. After reaching out to representatives of multiple potential polling sites to no avail, staff is now recommending designating the city’s public works facility at 11522 Minnetonka Blvd. as the polling place for Ward 2 Precinct D.

Although the public works facility falls outside the precinct borders, state law allows designating a location that is within one mile of the precinct. The public works site meets this criteria. Notices will be sent to all voters in the precinct twice before the State Primary and once again before the State General Election.

In December, staff will bring a resolution to the council establishing polling places for elections held in 2019. The plan is to designate the Hennepin County Ridgedale Library as the permanent polling place for voters in Ward 2 Precinct D.

Recommendation

Staff recommends that the city council approve the resolution changing the polling place for Ward 2 Precinct D from the Hennepin County Ridgedale Library to the Minnetonka Public Works Facility at 11522 Minnetonka Blvd.

Submitted through:
   Geralyn Barone, City Manager
   Perry Vetter, Assistant City Manager

Originated by:
   David Maeda City Clerk
Resolution No. 2018-ppp
Resolution establishing a new polling place location for Ward 2 Precinct D

BE IT RESOLVED by the City Council of the City of Minnetonka, Minnesota as follows:

Section 1. Background.

1.01. The Hennepin County Ridgedale Library has served as the polling place for voters in Ward 2 Precinct D for many years. In 2017 the library was closed for remodeling and was scheduled to reopen in the summer of 2018.

1.02. In 2017 the polling place was changed to the neighboring YMCA building. The YMCA staff indicated they were willing to serve as a temporary polling place for one year.

1.03. Staff was informed the library building remodel will be complete, but the parking lot will not be ready in time for the State Primary.

1.04. The city's public works facility is large enough and has enough parking to accommodate the voters in Ward 2 Precinct D for the 2018 State Primary and State General Election.

Section 2. Council Action.

2.01. The Minnetonka City Council hereby designates the Minnetonka Public Works Facility located at 11522 Minnetonka Blvd, Minnetonka, MN 55305, as the polling place for Ward 2, Precinct D.

Adopted by the City Council of the City of Minnetonka, Minnesota, on July 23, 2018.

Brad Wiersum, Mayor

ATTEST:

David Maeda, City Clerk

ACTION ON THIS RESOLUTION:

Motion for adoption: 
Seconded by: 
Voted in favor of: 
Voted against: 
Abstained: 
Absent: 
Resolution adopted.
I hereby certify that the foregoing is a true and correct copy of a resolution adopted by the City Council of the City of Minnetonka, Minnesota, at a duly authorized meeting held on July 23, 2018.

___________________________
David Maeda, City Clerk
Brief Description
Resolution approving the final plat of ARUNDEL ADDITION, a three-lot subdivision at 15500 Minnetonka Boulevard

Recommendation
Adopt the resolution approving the final plat

Request
In October 2016, the city council approved the preliminary plat of ARUNDEL ADDITION. The preliminary plat was approved with the following variances:

- **Lot Width at Right-of-Way Variance**: Two of the proposed lots would not have frontage onto a public right-of-way. A lot width at right-of-way variance was approved from 80 feet to 0 feet.

- **Wetland Setback and Buffer Variances**: The existing driveway on Lot 1 is 20-feet from the wetland edge. City code requires a 25-foot wetland setback and wetland buffer for driveways. Wetland setback and buffer variance were approved from 25 feet to 20 feet.

- **Building Setback Variance**: As proposed, the existing home (on proposed Lot 1) would not meet the lot-behind-lot setback requirement of 29 feet. A property setback variance was approved from 29 feet to 20 feet.

Dan Schmidt of Sathre-Bergquist, on behalf of the property owner, is now requesting approval of the final plat.

Staff Comment
Approval of the final plat is reasonable:

1. The submitted final plat is substantially consistent with the previously approved preliminary plat.

2. All required legal documents have been submitted. Staff will review these items and provide feedback to the applicant as needed.

Staff Recommendation
Adopt the resolution approving the final plat of ARUNDEL ADDITION.

Submitted through:
Geralyn Barone, City Manager
Julie Wischnack, AICP, Community Development Director
Loren Gordon, AICP, City Planner

Originated by:
Drew Ingvalson, Planner
Location Map
Project: Arundel Addition
Address: 15500 Minnetonka Blvd
ARUNDEL ADDITION

KNOW ALL PERSONS BY THESE PRESENTS. That David D. Arundel, a single person, owner of the following described property situated in the State of Minnesota, County of Hennepin, to wit:

The part of the West 1/2 of the Northeast 1/4 of Section 16, Township 117, Range 22, West Fifth Principal Meridian, lying North of the Mississippi River and South of Highway 70, being described as follows:

1. That the South Line of the West 1/2 of the Northeast 1/4 of Section 16, Township 117, Range 22, West Fifth Principal Meridian, lying North of the Mississippi River and South of Highway 70, being described as follows:

The same to be sold as personal and paid in ARUNDEL ADDITION and as hereinafter delineated for the public use for the planing and surveying on the lot.

in terms of said David D. Arundel, a single person, the undersigned and his heirs.

__________________________
David D. Arundel

STATE OF MINNESOTA, COUNTY OF

The foregoing instrument was acknowledged before me the day of 2016, by David D. Arundel.

________________________________________________________________________
Walter Hanson, Notary Public
Notary Public

SURVEYOR CERTIFICATE

I, David D. Arundel, do hereby certify that the plan was prepared by me and issued by me in the name of Minnesota Land Surveyor for the State of Minnesota, that this plan is a correct representation of the boundaries shown and that the true and legal description is given in the plan. The description and plan are true to scale and the plan has been prepared in correct form as required by the State of Minnesota, Section 99.979, Subdivision 1. I certify that all lines of the boundaries are shown and labeled on the plan, and that the property is described and labeled on the plan.

Dated this day of 2016.

________________________________________________________________________
David D. Arundel, Surveyor Public

STATE OF MINNESOTA, COUNTY OF MINNEAPOLIS

The foregoing instrument was acknowledged before me the day of 2016, by David D. Arundel.

________________________________________________________________________
Walter Hanson, Notary Public
Notary Public

MINNESOTA, MINNESOTA

The plan of ARUNDEL ADDITION was approved and accepted by the City Council of Minneapolis, Minnesota, on regular meeting held this day of 2016. It is applicable, as written contracts and requirements of the Commissioner of Transportation and the City Engineer, have been met by the plan and the plan is considered to be in compliance with all applicable codes and requirements, as provided by Minnesota Statutes, Section 116L.01, Subdivision 2.

________________________________________________________________________
By ____________________________
Affidavit

RECORD AND REAL ESTATE SERVICES

Hennepin County, Minnesota

I hereby certify that the property in the aforementioned and hereinafter described for the ARUNDEL ADDITION was deposited in my office on the day of 2016.

Mark V. Czajka, Hennepin County Auditor

________________________________________________________________________
By ____________________________
Affidavit


SATHRE-BERGQUIST, INC.

C.R. DOC. NO.

SUNNY DAY

Minneapolis County, Minnesota

Footnotes:

Sunny Day, this plan has been approved by the City Council of Minneapolis, Minnesota, on regular meeting held this day of 2016.

City Clerk, Hennepin County Surveyor

By ____________________________
Affidavit

COUNTY RECORDER

Minneapolis County, Minnesota

I hereby certify that the property in the ARUNDEL ADDITION was recorded hereon on the day of 2016, by ____________________________.

Mark M. Croon, County Recorder

By ____________________________
Affidavit

SECTIOII AND BOUNDARY BREAKDOWN

SECTION 16, TOWNSHIP 117, RANGE 22, NOT TO SCALE


THE LANDS BY THE AMERICAN LAND CO.

The land by the American Land Company is described as follows:

SW 1/4 OF

SE 1/4 OF

SW 1/4 OF

SW 1/4 OF

DESCRIPTION OF THE PROPERTY

The land by the American Land Company is described as follows:

SW 1/4 OF

SE 1/4 OF

SW 1/4 OF

SW 1/4 OF

DESCRIPTION OF THE PROPERTY

SHEET 1 OF 2 SHEETS
BASEMENT DESCRIPTION:
A conservation easement over, under and across that part of Lots 1, 2, and 3, Block 1, ARUNDELL ADDITION according to the recorded plat thereof, Hennepin County, Minnesota, described as follows:

Beginning at the northeast corner of said Lot 1, thence on an assumed bearing of North 89 degrees 43 minutes 56 seconds East along the north line of said Lot 1 a distance of 440.90 feet to the northeast corner of said Lot 1; thence South 01 degrees 35 minutes 10 seconds West along the east line of said Block 1 a distance of 1510.86 feet to an angle point of said Lot 3; thence westerly along a non-tangential curve concave to the north, having a radius of 3200.00 feet a central angle of 01 degrees 35 minutes 01 seconds and a chord that bears North 76 degrees 00 minutes 35 seconds West a distance of 86.58 feet; thence North 75 degrees 14 minutes 04 seconds West a distance of 188.10 feet to an angle point of said Lot 3; thence South 01 degrees 33 minutes 10 seconds West a distance of 146.12 feet to an angle point of said Lot 3, thence North 37 degrees 10 minutes 38 seconds West a distance of 55.19 feet; thence North 25 degrees 28 minutes 31 seconds West a distance of 66.62 feet; thence North 11 degrees 24 minutes 42 seconds East a distance of 75.68 feet; thence North 77 degrees 13 minutes 42 seconds East a distance of 55.89 feet; thence South 56 degrees 28 minutes 07 seconds East a distance of 18.47 feet; thence North 76 degrees 29 minutes 01 seconds East a distance of 60.00 feet; thence North 17 degrees 50 minutes 41 seconds East a distance of 31.95 feet; thence North 31 degrees 59 minutes 47 seconds East a distance of 78.93 feet; thence North 90 degrees 50 minutes 29 seconds East a distance of 101.43 feet; thence North 47 degrees 57 minutes 06 seconds East a distance of 86.23 feet; thence North 41 degrees 04 minutes 42 seconds East a distance of 194.86 feet; thence North 87 degrees 07 minutes 13 seconds East a distance of 59.69 feet; thence South 31 degrees 43 minutes 42 seconds West a distance of 97.64 feet to the west line of said Lot 1; thence North 01 degrees 01 minutes 12 seconds East a distance of 760.97 feet to the point of beginning.

Area: 465,170 sq.ft.

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

Dated this 12th day of June, 2018.

[Signature]

David B. Pemberton, PLS
Minnesota License No. 40344
pemberton@sathre.com
Resolution No. 2018-

Resolution approving the final plat of ARUNDEL ADDITION
at 15500 Minnetonka Boulevard

Be it resolved by the City Council of the City of Minnetonka, Minnesota, as follows:

Section 1. Background.

1.01 Dan Schmidt of Sather Bergquist, on behalf of the property owner, is requesting final plat approval of ARUNDEL ADDITION.

1.02 The property is located at 15500 Minnetonka Boulevard. It is legally described on Exhibit A.

1.03 On May 14, 2018, the city council approved the preliminary plat of ARUNDEL ADDITION. The three-lot subdivision included the following variances:

   1. Lot Width at Right-of-Way Variance from 80 feet to 0 feet (Lots 1 and 2).
   2. Wetland Setback and Buffer Variances from 25 feet to 20 feet (Lot 1).
   3. Building Setback Variance from 29 feet to 20 feet (Lot 1).

Section 2. Findings

2.01 With the exception of the variances described in Section 1.03, the final plat meets the requirements and standards outlined in the Subdivision Ordinance, City Code §400.

2.02 The final plat is consistent with the previously approved preliminary plat.

Section 3. Council Action.

3.01 The city council approves the final plat of ARUNDEL ADDITION. Approval is subject to the following conditions:

1. Prior to release of the final plat for recording:

   a) All conditions of the approved preliminary plat (Resolution No. 2018-056) must be met.
b) The applicant must provide an exhibit that shows the existing sanitary sewer line to confirm it is centered within 50-foot drainage and utility easement. Depending on review of this exhibit, additional easement area may be required.

c) The applicant must submit the following:

1) Two sets of mylars for city signatures.

2) An electronic CAD file of the plat in microstation or DXF.

3) Park dedication fee of $10,000.

4) Cash escrow in an amount equal to the cost of installing the required native vegetation wetland buffer on Lot 1.

2. Unless the city council approves a time extension, the final plat must be recorded by July 23, 2019.
EXHIBIT A

All that part of the West 1/2 of the Northeast 1/4 of the Southwest 1/4 of Section 16, Township 117, North Range 22, West Fifth Principal Meridian, lying North of the Minnetonka and Excelsior Road; EXCEPT The West 205 feet of that part of Northeast 1/4 of Southwest 1/4 of Section 16, Township 117, Range 22 lying North of Minnetonka Boulevard; ALSO EXCEPT The East 37 feet of the West 242 feet of that part of the Northeast 1/4 of the Southwest 1/4 of Section 16, Township 117, Range 22 lying North of Minnetonka Boulevard; ALSO EXCEPT That part of the West 1/2 of the Northeast 1/4 of the Southwest 1/4 of Section 16, Township 117, Range 22, described as follows: Commencing on the East line of said tract at its intersection with the Northerly line of Minnetonka Boulevard; thence Westerly along said Northerly line 145 feet; thence North parallel with the East line of said West 1/2 of Northeast 1/4 of Southwest 1/4 150 feet; thence Easterly parallel with the Northerly line of Minnetonka Boulevard 145 feet to the East line of said West 1/2; thence South 150 feet to beginning; ALSO EXCEPT That part of the West 1/2 of the Northeast 1/4 of the Southwest 1/4 of Section 16, Township 117, Range 22 described as follows: Commencing at a point on the Northerly line of Minnetonka Boulevard distant 145 feet Westerly of its intersection with the East line of said West 1/2 of Northeast 1/4 of the Southwest 1/4; thence Westerly along said Northerly line 130 feet; thence North parallel with said East line of West 1/2 of Northeast 1/4 of Southwest 1/4 150 feet; thence Easterly parallel with the Northerly line of Minnetonka Boulevard 130 feet; thence South 150 feet to beginning.
City Council Agenda Item #12A
Meeting of July 23, 2018

Brief Description
Ordinances related to tobacco-related products

Recommendation
Introduce the ordinances

Background
In January 2018, Tobacco 21 advocates asked the city council to consider adopting more restrictive standards for sales of tobacco-related products in Minnetonka. (Under city ordinance, “tobacco-related products” include all forms of tobacco, including cigarettes, chewing tobacco and cigars, as well as e-cigarettes.) At its June 11, 2018 study session, the city council considered several potential changes to city ordinances, including:

- increasing the minimum age for sales of tobacco-related product from 18 to 21;
- prohibiting sales of flavored tobacco-related products;
- regulating the packaging or pricing of tobacco-related products to prevent sales of smaller packages or multi-pack discounts; and
- regulating the number, density or location of retailers of tobacco-related products.

Based on the discussion at the study session, the council expressed a general interest in giving further consideration to the first three topics listed above: increasing the minimum age to 21, prohibiting sales of flavored tobacco-related products, and regulating packaging or pricing of products. The council did not express an interest in regulating the number, density or location of licensed retailers.

City staff has prepared ordinances for the city council’s consideration on the first two topics along with a housekeeping ordinance. On the third topic, samples from other cities have been provided because the options are varied and staff requests further direction before drafting a specific ordinance for Minnetonka.

Minimum Age 21 Ordinance
This ordinance raises the minimum age for customers who purchase tobacco-related products from 18 years to 21 years.

The ordinance also adds a concise statement of purpose section to the tobacco licensing regulations. The findings in the statement of purpose are supported by the information provided to the city by the Tobacco 21 advocates and Hennepin County Public Health. The findings are also supported by numerous studies including:

- “Public Health Implications of Raising the Minimum Age of Legal Access to Tobacco Products,” a 2015 report from the Institute of Medicine, which concluded that raising the minimum legal age to 21 would decrease the rate of initiation of smoking by persons in different age groups by an estimated 15 percent (under 15 yrs, 18 yrs, and 19-20 yrs) to 25 percent (15-17 yrs).

- U.S. Surgeon General reports, “E-cigarette Use Among Youth and Young Adults” (2016), “the Health Consequences of Smoking – 50 Years of Progress” (2014) and
“Preventing Tobacco Use Among Youth and Young Adults” (2012). Among the major conclusions of these reports are: among adults who become daily smokers, nearly all first use of cigarettes occurs by 18 years of age; if current rates continue, 5.6 million Americans younger than 18 years of age who were alive in 2014 are projected to die prematurely from smoking-related disease; e-cigarettes are the most commonly used tobacco products among youth and is strongly associated with use of other tobacco products among youth and young adults, including combustible tobacco products; e-cigarettes are marketed by promoting flavors.

- Center for Disease Control and Prevention studies: “Tobacco Use Among Middle and High School Students – United States, 211-2015,” and “Selected Cigarette Smoking Initiation and Quitting Behaviors Among High School Students, United States, 1997.”

Lastly, the ordinance removes provisions that make it illegal for a person under the age of 18 to possess, use, purchase or attempt to purchase tobacco-related products. Those changes are recommended for the following reasons: (1) because purchases by 18 year olds are allowed under state law and in neighboring cities, many 18 year olds may be unaware of Minnetonka’s higher age limit, and it would be unfair to criminalize their attempt to purchase tobacco-related products in the city; (2) the city does not have a history of issuing citations for underage purchases in any event.

Note: all three of the proposed ordinances involve amendments to section 625.040 of the City Code. Council members will note that each ordinance shows changes from the existing ordinance language, i.e., although the age-21 ordinance proposes to amend section 625.040 by changing “18” to “21”, the other two ordinances do not include the same revision. The ordinances were prepared to be considered independently. If the council adopts more than one of the ordinances, appropriate changes will be made to reflect the council intent is carried out.

Prohibiting Sale of Flavored Products
The proposed ordinance prohibits the sale of “flavored tobacco-related products,” except in establishments where persons younger than 21 years of age are not permitted to enter. The term “flavored tobacco-related products” is generally defined to include any tobacco-related product that contains a taste or aroma, other than the taste or aroma of tobacco, menthol, mint or wintergreen.

According to information provided by Hennepin County Public Health, eight other cities have approved ordinances prohibiting the sale of flavored products; five of the cities’ ordinances contain an exception for menthol, mint and wintergreen products.

According to the Centers for Disease Control and Prevention, flavorings in tobacco products can make the products more appealing to youth. In 2014, 73% of high school students and 56% of middle school students who used tobacco products in the past 30 days reported using a flavored tobacco product during that time. Centers for Disease Control and Prevention, *Flavored Tobacco Product Use Among Middle and High School Students – United States, 2014*, Morbidity and Mortality Weekly Report, 2015; 64 (38): 1066-70.

The exception for menthol, mint and wintergreen-flavored products is due to wide use of those flavors by adults. This contrasts with other flavored products that appear to be targeted at younger smokers, with flavors such as chocolate, vanilla, honey, and various candies.
“Housekeeping” Ordinance
The Public Health Law Center reviewed Minnetonka’s tobacco regulations and recommended several changes. Based on discussions with city staff, the city attorney has prepared a proposed ordinance that includes several changes to clarify or strengthen the existing regulations. A quick synopsis of those changes follows:

- Section 625.010 – amendment clarifies the existing wording.
- Section 625.015 – amendment clarifies that the section applies both to new licenses and renewals and also adds language to provide that a mistakenly issued license may be revoked.
- Section 625.025 – amendment adds a new requirement that licensed establishments post the legal sales age in a manner that is clearly visible to any potential purchaser. Regardless of whether the minimum age is increased to 21 years, the required signage serves a consumer protection function. If the minimum age is increased, this provision helps avoid potential embarrassment of persons between the ages of 18 and 21 who are not aware of the city’s ordinance.
- Section 625.040 – amendment adds language to expressly require licensees to comply with sales restrictions imposed by state and federal law. Sellers of tobacco products are already subject to those restrictions; inclusion in the city ordinance allows the city to take disciplinary action for violations of those laws.

Regulating Packaging or Pricing of Products

There are two examples of ordinances that relate to regulating the packaging of cigars and pricing. The examples are from the cities of Bloomington and Richfield.

Public Input

The city has notified license holders and anyone who has contacted the city about this issue that the city will be considering these changes. Any input the city received after the study session review is attached.

Recommendation

Staff recommends the council introduce the ordinances and provide any feedback prior to final adoption. Council is also requested to provide direction on a potential ordinance related to regulating packaging or pricing of products.

Submitted through:
- Geralyn Barone, City Manager
- Julie Wischnack, AICP, Community Development Director
- Kathy Leervig, Community Development Coordinator

Originated by:
- Corrine Heine, City Attorney
The City of Minnetonka Ordains:

Section 1. The Minnetonka City Code is amended by adding a new section 625.000 as follows:

625.000. Purpose.
The city finds that: smoking causes premature death, disability and chronic diseases, including cancer, heart disease and lung disease; smoking-related diseases result in excess medical care costs; and smoking initiation occurs primarily in adolescence. The city desires to prevent young people from starting to smoke, to encourage and assist smokers to quit, and to promote clean indoor air through the adoption of tobacco licensing regulations.

Section 2. Section 625.040 of the Minnetonka City Code is amended to read as follows:

A person must not sell, offer to sell, or give away any tobacco-related product to any person below the age of 21 years. A person must not sell, dispense, or give away any tobacco related product through the use of a vending machine or similar automated dispensing device. A person must not sell, dispense or give away any tobacco-related product through self-service merchandising, except in facilities where the retailer ensures that no person younger than 21 years of age is present, or permitted to enter, at any time. A person must not sell tobacco-related products outside the location or area covered by a license.

Section 3. Section 625.045 of the Minnetonka City Code is amended to read as follows:

625.045. Other Illegal Acts.

Unless otherwise provided, the following acts are a violation of this section.

1. Illegal Possession. A person under 18 years of age must not have in his or her possession, or use any tobacco-related product. A person under 18 years of age must not sell a tobacco-related product or otherwise come in contact with a tobacco-related product during the course of employment. This subdivision does not apply to minor lawfully involved in a compliance check. [repealed]
2. Illegal Procurement. A person under 18 years of age must not purchase or attempt to purchase or otherwise obtain any tobacco related product, and a person must not purchase, attempt to purchase, or otherwise obtain such items on behalf of a person under the age of 21 years. A person must not coerce or attempt to coerce a minor person under the age of 21 years to illegally purchase or otherwise obtain or use any tobacco related product. This subdivision does not apply to minors lawfully involved in a compliance check.

3. False Identification. A person under 18 years of age must not attempt to disguise his or her true age by the use of a false form of identification, nor possess a false form of identification, whether the identification is that of another person or one on which the age of the person has been modified or tampered with to represent an age older than the actual age of the person.

Section 4. A violation of this ordinance is subject to the penalties and provisions of Chapter XIII of the city code.

Section 5. This ordinance is effective 30 days after publication.

Adopted by the city council of the City of Minnetonka, Minnesota, on __________, 2018.

______________________________
Brad Wiersum, Mayor

Attest:

______________________________
David E. Maeda, City Clerk

Action on this Ordinance:

Date of introduction:
Date of adoption:
Motion for adoption:
Seconded by:
Voted in favor of:
Voted against:
Abstained:
Absent:
Ordinance adopted.

The stricken language is deleted; the underlined language is inserted.
Date of publication:

I certify that the foregoing is a true and correct copy of an ordinance adopted by the city council of the City of Minnetonka, Minnesota, at a meeting held on ____________, 2018.

______________________________________________
David E. Maeda, City Clerk
Ordinance No. 2018-

An Ordinance amending sections 625.005 and 625.040 of the Minnetonka City Code, relating to tobacco-related products

The City of Minnetonka Ordains:

Section 1. Section 625.005 of the Minnetonka City Code, relating to definitions, is amended by adding a new subdivision 2 to read as follows and by renumbering subsequent subdivisions accordingly:

2. “Flavored tobacco-related product” means any tobacco-related product that contains a taste or aroma, other than the taste or aroma of tobacco, menthol, mint or wintergreen, that is distinguishable by an ordinary consumer either prior to or during consumption of the licensed product, including, but not limited to, any taste or aroma of chocolate, vanilla, honey, cocoa, or any candy, dessert, alcoholic beverage, fruit, herb, or any spice. A public statement or claim, whether expressed or implied, made or disseminated by the manufacturer of a tobacco product, or by any person authorized or permitted by the manufacturer to make or disseminate such statements or claims, that a tobacco product has or produces taste or aroma other than tobacco, menthol, mint or wintergreen, may be one of the methods used to determine that the tobacco product is a flavored tobacco product, and shall to the extent permitted by law, create a rebuttable presumption that the tobacco product is a flavored tobacco product.

Section 2. Section 625.040 of the Minnetonka City Code is amended to read as follows:


1. A person must not sell or give away any tobacco-related product to any person below the age of 18 years.

2. A person must not sell, dispense, or give away any tobacco related product through the use of a vending machine or similar automated dispensing device.

3. A person must not sell, dispense or give away any tobacco-related product through self-service merchandising, except in facilities where the retailer ensures that no person younger than 18 years of age is present, or permitted to enter, at any time.

4. A person must not sell tobacco-related products outside the location or area covered by a license.

4.5. A person must not sell, offer for sale, give away, or otherwise deal in flavored tobacco-related products or samples of such products. This restriction does not

The stricken language is deleted; the underlined language is inserted.
apply to facilities where the retailer ensures that no person younger than 21 years of age is present, or permitted to enter, at any time.

Section 3. A violation of this ordinance is subject to the penalties and provisions of Chapter XIII of the city code.

Section 3. This ordinance is effective 30 days after publication.

Adopted by the city council of the City of Minnetonka, Minnesota, on __________, 2018.

Brad Wiersum, Mayor

Attest:

David E. Maeda, City Clerk

Action on this Ordinance:

Date of introduction:
Date of adoption:
Motion for adoption:
Seconded by:
Voted in favor of:
Voted against:
Abstained:
Absent:
Ordinance adopted.

Date of publication:

I certify that the foregoing is a true and correct copy of an ordinance adopted by the city council of the City of Minnetonka, Minnesota, at a meeting held on ____________, 2018.

David E. Maeda, City Clerk

The stricken language is deleted; the underlined language is inserted.
Ordinance No. 2018-

An Ordinance amending sections 625.010, 625.015, 625.025, and 625.040 of the Minnetonka City Code, relating to tobacco-related products

The City of Minnetonka Ordains:

Section 1. Section 625.010 of the Minnetonka City Code is amended to read as follows:

625.010. License Required.

No person shall must not directly or indirectly keep for retail sale, sell or offer to sell at retail, dispense, or give away in a retail setting any tobacco related product at any place in the city, without first obtaining a license from the city.

Section 2. Section 625.015 of the Minnetonka City Code is amended to read as follows:

625.015. Application and Issuance.

Application for a new license or license renewal must be made to the community development director on a form supplied by the city. The application must state the full name of the applicant, the location of the building and the part intended to be used by the applicant under the license, the kind of business conducted at the location, and the other information as required by the application form. The community development director has the authority to determine whether or not a license will be issued or renewed. An applicant may appeal the director's decision to the city council by submitting a written request to the city clerk within 10 days after the decision. A license may be denied or, if the license is mistakenly issued or renewed to a person, it shall be revoked upon the discovery that the person was ineligible for the license, for the following reasons:

1. the applicant is under the ages of 18 years;

2. the applicant has been convicted within the past five years of any violation of a federal, state, or local law, ordinance provision, or other regulation relating to tobacco-related products;

3. the applicant has had a license to sell tobacco-related products revoked within the preceding twelve months of the date of application;

4. the applicant fails to provide any information required on the application, or provides false or misleading information; or

5. The applicant is prohibited by federal, state, or other local law, ordinance, or other regulation, from holding such a license.

The stricken language is deleted; the underlined language is inserted.
Section 3. Section 625.025 of the Minnetonka City Code is amended to read as follows:

**625.025. License Display and Signage.**

1. Every license must be kept conspicuously posted at the place for which the license is issued and must be exhibited to any person upon request.

2. Notice of the legal sales age must be posted at each location where tobacco-related products are offered for sale. The required signage must be posted in a manner that is clearly visible to anyone who is or is considering making a purchase.

Section 4. Section 625.040 of the Minnetonka City Code is amended to read as follows:

**625.040. Prohibited Sales Acts.**

1. A person must not sell or give away any tobacco-related product to any person below the age of 18 years.

2. A person must not sell, dispense, or give away any tobacco related product through the use of a vending machine or similar automated dispensing device.

3. A person must not sell, dispense or give away any tobacco-related product through self-service merchandising, except in facilities where the retailer ensures that no person younger than 18 years of age is present, or permitted to enter, at any time.

4. A person must not sell tobacco-related products outside the location or area covered by a license.

5. A person must not sell, offer for sale, give away, or otherwise deal in flavored tobacco-related products or samples of such products. This restriction does not apply to facilities where the retailer ensures that no person younger than 21 years of age is present, or permitted to enter, at any time.

6. A person must not sell, offer to sell or distribute liquid, whether or not such liquid contains nicotine that is intended for human consumption and use, in an electronic delivery device that is not contained in child-resistant packaging as that term is defined in Code of Federal Regulations, title 16, section 1700.15(b)(1) as in effect on January 1, 2015.

2. A person must not sell, offer to sell, give away, distribute or display tobacco-related products in a manner prohibited by federal or state law.

Section 5. A violation of this ordinance is subject to the penalties and provisions of Chapter
XIII of the city code.

Section 6. This ordinance is effective 30 days after publication.

Adopted by the city council of the City of Minnetonka, Minnesota, on __________, 2018.

______________________________
Brad Wiersum, Mayor

Attest:

______________________________
David E. Maeda, City Clerk

Action on this Ordinance:

Date of introduction:
Date of adoption:
Motion for adoption:
Seconded by:
Voted in favor of:
Voted against:
Abstained:
Absent:
Ordinance adopted.

Date of publication:

I certify that the foregoing is a true and correct copy of an ordinance adopted by the city council of the City of Minnetonka, Minnesota, at a meeting held on __________, 2018.

______________________________
David E. Maeda, City Clerk

The stricken language is deleted; the underlined language is inserted.
Bloomington MN Ordinance:

14.439 PROHIBITED ACTS.
(a) No person shall sell or offer for sale any tobacco-related product to any person under the age of 21 years. No person shall sell, offer for sale or dispense any tobacco-related product through the use of vending machines. No person shall sell, offer for sale or dispense tobacco-related products in open displays which are accessible to the public without the intervention of a store employee. This restriction shall not apply to a license holder who derives at least 90% of their revenue from tobacco-related products, prohibits anyone under 21 years of age from entering the establishment at all times, and who conspicuously displays a notice prohibiting persons under 21 years of age from entering the establishment.
(b) Reserved.
(c) It shall be a violation of this chapter for any person to sell, offer to sell or distribute cigars in a package containing five or fewer cigars. However, this restriction shall not apply where the package has a retail sales price of at least $2.60 per cigar contained therein, after any price promotions or discounts are taken into account and before the imposition of sales tax, but after the imposition of excise tax. Packages containing more than five cigars shall be priced the same as, or more than, the minimum price established herein for a package containing five cigars.
   (1) This subsection (c) shall not apply to premium cigars as defined in M.S. § 297F.01, subd. 13a, as it may be amended from time to time, and to tobacco product shops only accessible to persons 21 years of age or older.
   (2) The minimum pricing established in this section shall be adjusted periodically for inflation at least every three years.

Richfield MN Ordinance

1146.09. - Prohibitions.

Subdivision 1. Prohibited Sales. It shall be a violation of this section for any person to sell or offer to sell any tobacco, tobacco product, tobacco-related device, or electronic cigarettes:

>>>>>>>

Subd. 3. Cigar Sales. No person shall sell, offer for sale, or otherwise distribute cigars in original packages containing three (3) or fewer cigars for a sale price, after any coupons, multipack or buy-one-get-one promotions, or any other discounts are applied and prior to applicable sales taxes being imposed, of less than two dollars and sixty cents ($2.60) per cigar contained within. In addition, no person shall sell, offer for sale, or otherwise distribute cigars in original packages of four (4) or more cigars for a sale price, after any coupons, multipack or buy-one-get-one promotions, or any other discounts are applied and prior to applicable sales taxes being imposed, of less than ten dollars and forty cents ($10.40) per package. This subdivision does not apply to premium cigars as defined in Minn. Stat. § 297F.01, subdivision 13a. This subdivision shall become effective January 1, 2016.

Subd. 4. Smoking and Sampling Prohibited.
(a) Smoking shall be prohibited, and no person shall smoke, in a public place, at a public meeting, or in a place of employment. This subdivision also prohibits the sampling of tobacco, tobacco products, electronic cigarettes and products used in electronic cigarettes.
Tuesday, July 17, 2018
City of Minnetonka
14600 Minnetonka Boulevard
Minnetonka, MN 55345
Dear Council Member Bergstedt,
I am writing on behalf of Partnership for Change, an organization comprised of youth, parents, schools, law enforcement, and community groups that are working together to reduce drug use among youth and young adults in northwest Hennepin County. Our focus is changing the community environment that leads to youth substance use by implementing strategies that will affect behavior around alcohol and other drugs. An effective strategy for reducing the burden of tobacco addiction would be to increase the tobacco age to 21.
Youth tobacco use is still a problem. E-cigarettes are particularly appealing to youth. They come in bright colors and an array of flavors like chocolate, cherry cola and grape. Increasing the gap between youth and those legally able to purchase tobacco products will help get e-cigarettes and other tobacco products out of the hands of our youth.
Smoking remains the leading preventable cause of death and disease in the state of Minnesota. In Minnesota, tobacco causes more than 6,000 deaths and costs more than $3 billion each year in healthcare and lost productivity. We are glad to hear that the City Council will be considering this ordinance. Thank you for your leadership and ensuring Minnetonka is a healthy place to live.
Sincerely,
Amber
Amber Smith, MPH, CPP
Coordinator, Partnership for Change
Direct: (763) 581-3739
From: Tony Wagner
Sent: Thursday, July 12, 2018 9:11 PM
To: [redacted]
Cc: Geralyn Barone
Subject: Re: Please raise the tobacco sales age to 21

Beverly -
First, my sincere apologies for the (unacceptable) delayed response.

Secondly, Thank you for your note expressing your feedback on the Tobacco 21 discussion
the council will be having. I truly appreciate the time you took to share your thoughts.

In addition, I also will be leaving the council effective Friday (July 13th), as my wife and I
have purchased a new home in Minnetonka outside of Ward 2 and we closed on the sale of our
old house today (July 12th). As a result, I won’t be on the council when this item finally
reaches the City Council.

I always appreciate and value the time and input our residents provide me as a council member
on items before us. Our passionate residents provide critical feedback on points to consider on
both sides of the issues.

So again, thank you for the time and care you took in reaching out. I have copied city staff so
your comments will be captured for the record and future council packet.

Tony
Tony Wagner
Minnetonka City Council, Ward 2
612-382-5212
Sent from my iPad

On Jun 11, 2018, at 9:06 AM, wrote:

Dear Council Member Wagner,

My name is Bev Gillen and I am a lifelong resident of Minnetonka. Professionally, I am a parent educator and adjunct professor specializing in family studies and leadership development. My husband and I chose to raise our family in Minnetonka because it is a community that values the health and well-being of its residents. I am writing to urge the City Council
to raise the tobacco sales age to 21.

Nicotine is dangerous for the developing brain and e-cigarette use is rampant. In fact, the 2016 Minnesota Student Survey shows Minnetonka School District 11th graders using electronic cigarettes at four times the rate of regular cigarettes and at much higher rates than neighboring school districts such as Wayzata, Hopkins, and Osseo. Increasing the age gap between those who can legally buy tobacco products will reduce youth access, remove these products from our high schools, and ensure Minnetonka youth don’t suffer from a lifetime of addiction to nicotine and tobacco products.

Just this month, four communities have raised the tobacco age: Shoreview, Falcon Heights, Minneapolis, and St. Peter. Minnetonka promotes itself as being a healthy community and one that wants to attract the next generation of families. Making this change now is a way to demonstrate that we are truly “walking the talk”.

This policy will have a positive impact on our young people and the health of our entire community. Thank you for your leadership!

Sincerely,

Beverly L. Gillen
5000 Mayview Road, Minnetonka
Ms. Leervig,

Please find attached a new letter from ClearWay Minnesota in support of raising the tobacco sale age to 21 in Minnetonka.

We would appreciate if you could kindly include it in the Council packet.

Thank you for your time and consideration. If you have questions, please let me know.

Thank you,
Laura Smith
--
Laura Smith
Public Affairs Manager
ClearWay Minnesota
952-767-1403 (office)
July 13, 2018

The Honorable Brad Wiersum and Members of the Minnetonka City Council
14600 Minnetonka Boulevard
Minnetonka MN 55345

Dear Mayor Wiersum and Council Members:

I am Vice President of ClearWay Minnesota, an independent nonprofit organization that works to reduce tobacco’s harm in our state. I am writing to urge you to support raising Minnetonka’s tobacco age to 21.

Raising the age to 21 is needed because for the first time in 17 years, youth tobacco use has risen in Minnesota. The 2017 Minnesota Youth Tobacco Survey found that more than 26 percent of high-school students report using tobacco products, up 7 percent since 2014. This frightening trend is driven largely by a sharp rise in e-cigarette use.

Tobacco 21 prevents youth smoking by creating barriers to getting tobacco products from social sources. Most kids get cigarettes from older friends. Raising the tobacco sale age to 21 will help get cigarettes out of high schools, where there are plenty of 18-year-olds but no 21-year-olds.

Five U.S. states and more than 300 municipalities across the country have already raised the age. To date, eleven Minnesota communities have passed Tobacco 21 policies. Minnetonka can join these leading localities to build momentum for state action. Already there are studies showing youth smoking reductions from Tobacco 21, and research projects 30,000 fewer Minnesota kids will become smokers over the next 15 years if these policies are adopted statewide here.

With those goals in mind, it bears repeating that increasing the tobacco age should not be about punishing our kids. Rather, it should be about protecting them from a lifetime of addiction. As you continue to discuss increasing the tobacco age in Minnetonka, please move forward with an ordinance that does not include penalties for underage purchase, use and/or possession of tobacco products (often called PUP penalties). These penalties have not been proven to reduce youth tobacco use and they open the door to selective enforcement against young persons of color. There is also broad consensus from national health organizations that Tobacco 21 policies should eliminate penalties on underage purchase, use and possession.

Stopping youth smoking doesn’t just prevent future disease and death, it also reduces excess medical costs, which are an enormous burden on individuals, families and taxpayers. I hope Minnetonka will pass this life-saving policy. Thank you for your consideration.

Sincerely,

Andrea Mowery
Vice President
ClearWay Minnesota™
Mayor Wiersum & Minnetonka City Council Members,
Attached is my letter in support of the Tobacco 21 rule.
Gary Berman, M.D,
Allergy & Asthma Specialists, P.A.
825 Nicollet Mall, Suite 1149
Minneapolis, MN 55402
Dear Mayor Wiersum and Minnetonka City Council Members:

I have lived in Minnetonka for 23 years and raised my three children in our community. I am writing to you today as a resident, a parent, and a physician to ask you to raise the tobacco sales age to 21, restrict flavored tobacco products to adult only tobacco stores, and set a minimum price for cheap cigars. Without local communities taking great steps to restrict youth access to tobacco, our tobacco use rates would be then where they are today in Minnesota. I am all too familiar with the long term impacts of tobacco-related diseases on adult patients who took up smoking early in life. To the average young person considering a disease that will not severely impact them for years does not seem like much of a threat but if they had seen my patient’s struggling on a ventilator or needing to stop a few times while walking short distances, I know they would reflect on the long term complications. I am an asthma specialist and daily counsel my patient’s to stop smoking. I also speak with my patient’s about secondhand smoke and avoidance of these triggers for their asthma. Anything that can help restrict access to tobacco products for my patient’s would help lessen their triggers for their asthma and prevent long term health concerns like COPD, cardiac risk factors and lung cancer.

Everyone knows that there is nothing good about smoking. It causes lung cancer and emphysema and leads to heart attacks and strokes. Despite this, I see an enormous increase in teens using vaping devices like JUUL, and flavored tobacco products like E-cigarettes, chewing tobacco, and cigars. Due to the ubiquitous flavored tobacco choices available today, children are using these products at an alarming rate. The flavor masks the harsh tobacco taste. They have no idea that the bubble gum flavored E-juice they vape or the grape cigar they smoke increases their risk for nicotine addiction and serious health problems that result from tobacco use. Further, adolescent cognitive reasoning is not fully developed; they frequently rely on emotion more than logic. This makes them more susceptible to trying these products.

I also want to note that E-cigarettes are not an FDA approved cessation device. We do not have enough evidence on their safety or efficacy to recommend them as a smoking cessation aid. We must continue to regulate them the same way as other tobacco products. For those that are looking to quit, there are a variety of methods with proven track records of aiding patient’s to stop smoking.
July 10, 2018
Page 2

I am proud to live in a community like Minnetonka that continues to make health and well-being a priority.

Sincerely,

Gary Berman, M.D.
GB:bk13 DS7027

cc: Kristen Warner Ackert, MPH
Association for Nonsmokers – Minnesota
2395 University Avenue West, Suite 310
St. Paul, MN 55114
July 12, 2018

The Honorable Brad Wiersum and Members of the Minnetonka City Council
14600 Minnetonka Boulevard
Minnetonka, MN 55345

Dear Mayor Wiersum and Members of the City Council,

As Minnetonka’s former police chief and proud supporter for this wonderful community, I am writing you to urge you to strengthen the City of Minnetonka’s tobacco ordinance. In particular, I have been tracking the statewide progress and momentum around increasing the tobacco sales age to 21, and I’m in full support of Minnetonka becoming the next Tobacco 21 city in Minnesota.

You will most likely hear from constituents and advocates about the importance of removing the possession, use and purchase (PUP) penalties from the ordinance, and I want to echo my strong support for removing them. These penalties have not been proven effective and in my personal experience, and are rarely used. Tobacco 21 is about preventing youth tobacco use. I have no doubt that this policy can be successfully implemented with collaboration between city staff and responsible retailers.

Tobacco use continues to be the number one cause of preventable death and disease in our country. As elected officials, you can help change this for future generations. I know firsthand how much Minnetonka residents care about and want to protect their kids from addiction. Strengthening the local tobacco ordinance is a meaningful step to ensure a healthier future for the community.

Thank you for your public service, and I hope that you vote in favor of this life-saving policy.

Sincerely,

Joy M. Rikala
Retired, Minnetonka Chief of Police

C: Geralyn Barone, City Manager
Mayor Wiersum and Minnetonka City Councilmembers,

Please find attached letter from our organization regarding your recent consideration on raising the age of sale on tobacco from 18 to 21.

We appreciate the opportunity for feedback and related input.

Thanks so much.

Respectfully, Jodi

Jodi L. Radke
Director, Rocky Mountain/Great Plains Region
Campaign for Tobacco-Free Kids
PO Box 784
Loveland, CO 80539
O - 202.481.9385/800.803.7178, ext 3085
July 16, 2018

Mayor Wiersum & Minnetonka City Councilmembers,

My name is Jodi Radke. I am the Regional Director with the Campaign for Tobacco-Free Kids. Our organization works within the United States and around the world to advocate for public policies proven to prevent kids from using tobacco, help tobacco users quit and protect everyone from secondhand smoke. For more information about our policy priorities, please visit our website, www.tobaccofreekids.org.

It is public health heroes, such as yourself, who help achieve the outcomes mentioned above. Thank you for leading the way in protecting Minnesota’s kids by considering raising the age of sale on tobacco in Minnetonka from 18 to 21.

About 95 percent of adult smokers began smoking before they turned 21. Policies, such as the one being considered, are a critical part of impacting the rate of initiation by kids, and will help to eliminate a point of access. This policy will have a positive impact on public health and will save lives.

The tobacco industry continues to target Minnesota kids with its deceptive marketing practices. We therefore must continue to be vigilant in protecting Minnesota’s kids from the tobacco industry’s outreach and efforts to addict them.

We understand part of your consideration is to include the penalization of kids for purchase, use or possession of tobacco. Penalizing children has not been proven to be an effective strategy for reducing youth smoking and could actually detract from more effective enforcement measures and tobacco control efforts.

We strongly oppose this approach and its stigmatization of children, many of whom become addicted at a young age as a result of aggressive marketing by the tobacco industry.

**Additional Concerns about PUP (Purchase, Use, Possession) Laws**

- Penalizing youth can divert enforcement officials’ attention from stopping retailers from illegally selling tobacco to kids in the first place. PUP laws are more difficult to systematically enforce than sanctions against retailers, especially since PUP laws rarely provide additional enforcement resources. It is easier and more effective to conduct compliance checks of retailers, who are fewer in number compared to youth and whose locations are both known and constant.

- The ease of discretely possessing and using some tobacco products makes PUP laws more challenging to enforce than laws restricting sales to minors. Similarly, the perceived risk among youth of getting caught and punished is likely too low to have a meaningful impact on deterring tobacco use. In fact, there is little evidence showing that PUP laws have been enforced well enough to reduce youth smoking.

- Tobacco companies and their allies have a history of supporting PUP laws as alternatives to other laws that would produce greater declines in youth smoking, such as increasing the price of cigarettes. Tobacco companies have also
promoted the passage of PUP laws to get additional provisions enacted that make implementing or enforcing additional tobacco control measures more difficult (e.g., preemption of strong local laws/ordinances).

- Despite the fact that many youth smokers are addicted, making it difficult for them to quit, few PUP laws include provisions ensuring that quit smoking resources are made available to them. Some research even suggests that penalizing youth could deter them from seeking support for cessation. Promoting interventions that provide cessation resources for youth interested in quitting could be a more beneficial alternative.

Thus far, five states, along with pending legislation in IL, and more than 310 localities across the United States have passed policies to raise the age of sale to 21. We strongly advise states and localities to exclude punishing youth for purchase, use or possession of tobacco products, and to keep the focus on establishing a higher age of sale for retailers and enforcing it, which has been proven to reduce use rates amongst kids.

If you have any questions, please feel free to contact me directly.

Thank you again for your leadership and partnership to protect Minnetonka’s kids.

In partnership, for Minnetonka’s kids,

Jodi L. Radke

Jodi L. Radke
Regional Director
Campaign for Tobacco-Free Kids
970-214-4808
Dear Mayor Wiersum and City Council Members,

Good morning. Attached, please find a letter from the Minnesota Medical Association in support of efforts by the City of Minnetonka to raise the minimum legal sale age for tobacco products to 21, and to restrict the sale of flavored tobacco products.

On behalf of the Minnesota Medical Association, thank you for the opportunity to provide this letter of support, and if there are any questions, please feel free to contact me.

Regards,

Juliana Milhofer, JD | Policy Analyst
Minnesota Medical Association
“The voice of medicine in Minnesota since 1853.”

mnmed.org | Twitter @mnmed
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July 16, 2018

Minnetonka City Council
14600 Minnetonka Boulevard
Minnetonka, MN 55345

Dear Mayor Wiersum and City Council Members:

I am pleased to provide this letter of support on behalf of the Minnesota Medical Association (MMA) for efforts by the City of Minnetonka to (1) raise the minimum legal sale age for tobacco products to 21; and (2) restrict the sale of flavored tobacco products to adult-only tobacco shops.

The MMA represents more than 10,000 physicians, medical residents, and medical students throughout Minnesota. In our efforts to help make Minnesotans the healthiest in the nation, preventing death and disease caused by tobacco and secondhand smoke has long been an MMA goal. The MMA proudly and actively supported passage of the Freedom to Breathe Act in 2007, and strongly supports efforts that will protect our youth from a lifetime of addiction.

As of July 9, 2018, five states (California, New Jersey, Oregon, Hawaii and Maine) and at least 340 localities in 22 states and the District of Columbia have raised the minimum legal sale age for tobacco products to 21.¹ The cities of Bloomington, Edina, Falcon Heights, Minneapolis, North Mankato, Plymouth, Richfield, Roseville, Shoreview, St. Louis Park, and St. Peter are now counted in the growing list of localities that have taken action to protect our youth from the harms of tobacco, and it is our hope that the City of Minnetonka and the rest of Minnesota will follow suit.

In regard to flavored tobacco products, cigarettes with specific characterizing flavors were prohibited in the U.S., as part of the Family Smoking Prevention and Tobacco Control Act.² Despite this ban, the market for flavored tobacco products continues to grow, and tobacco companies have increased their marketing of other flavored tobacco products (e.g., e-cigarettes, cigars, smokeless tobacco and hookah.) Colorful packaging and sweet flavors have

¹ Campaign for Tobacco Free Kids, States and Localities that Have Raised the Minimum Legal Sale Age for Tobacco Products to 21, available at: https://www.tobaccofreekids.org/content/what_we_do/state_local_issues/sales_21/states_localities_MLSA_21.pdf
enticed new users, particularly kids, and this new market for flavored tobacco products is hindering efforts to reduce youth tobacco use.

Cigarette smoking remains the leading preventable cause of death in the United States\(^3\), and while there are many strategies already in place to reduce the use of tobacco, strategies are still needed to ensure that adolescents and young adults do not start to smoke. Raising the minimum legal sale age for tobacco products, as well as placing restrictions on the sale of flavored tobacco products, will play a key role in delaying initiation rates of tobacco use by adolescents – and will help ensure that our progress in reducing youth tobacco use continues.

On behalf of the MMA, I urge you to acknowledge the long-term effects of tobacco use on the adolescent brain and adopt an ordinance to protect this community’s children.

Sincerely,

George Schoephoerster, MD
MMA President

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\(^3\) Centers for Disease Control and Prevention (CDC), Health Effects of Smoking, available at: [https://www.cdc.gov/tobacco/data_statistics/fact_sheets/health_effects/effects_cig_smoking/](https://www.cdc.gov/tobacco/data_statistics/fact_sheets/health_effects/effects_cig_smoking/)
July 10, 2018

Minnetonka City Council
14600 Minnetonka Blvd
Minnetonka, MN 55345

Dear Mayor Wiersum and Members of the City Council:

I am writing on behalf of Tonka CARES, an organization made up of 50+ members representing various sectors of the community. We are comprised of youth, parents, Minnetonka Public Schools, city government, pediatric health practitioners, local business, law enforcement and variety of community groups that are working together to create a healthier community and environment that support positive decision making, mental and physical health among young people. Our focus is to support healthy youth development by changing the community environment to effectively reduce youth substance use such as alcohol, tobacco and other drugs. Effective strategies for reducing the burden of tobacco and e-cigarette addiction have significant impact on our youth not only today but for the entirety of the life and future of our youth. Strategies that have been found to be effective in communities nationwide have included increasing the tobacco sales age to 21 and restricting flavored tobacco to adult-only tobacco stores.

Youth tobacco use is still a problem. E-cigarettes are particularly appealing to youth. They come in bright colors and an array of flavors like chocolate, cotton candy, sour patch candy flavor, and bubblegum. In the 2016 Minnesota Student Survey, 21% of Minnetonka 11th graders reported using e-cigarettes in the last 30 days. This is concerning considering the state average is 17%. Increasing the gap between youth and those legally able to purchase tobacco products will help get e-cigarettes and other tobacco products out of the hands of our youth. Moreover, the statewide youth tobacco survey of 2017 reported increases in overall tobacco product use among our youth for the first time since the survey's administration.

Smoking remains the leading preventable cause of death and disease in our state. In Minnesota, tobacco causes more than 6,000 deaths and costs more than $3 billion each year in health care and $4 billion in lost productivity.

Tonka CARES is grateful that that City Council will be considering this ordinance at an upcoming council meeting. Having grown up and having graduated from this amazing community and school district I thank you for your leadership and for ensuring Minnetonka is a healthy and safe community to live and to grow in.

Sincerely,

Kim Oelhafen MD, MPH
Director
Tonka CARES
Good afternoon,

On behalf of Allina Health I am submitting the attached letter of support for the Tobacco 21 ordinance in Minnetonka, which is scheduled to have a first reading and public hearing on July 23rd. Thank you in advance for your support of this important initiative! Please don’t hesitate to contact me with any questions.

Best,

Kristen McHenry

Legislative Analyst • Health Policy & Government Affairs • Allina Health
Phone: 612-262-1269 • **protected**
Mail Route 10105 • PO Box 43 • Minneapolis, MN 55440-0043

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July 16, 2018

The Honorable Brad Wiersum and Minnetonka City Councilmembers
Minnetonka Government Center
14600 Minnetonka Boulevard
Minnetonka, MN 55345

Sent electronically to: kleervig@minnetonka.com

Dear Mayor Wiersum:

On behalf of over 27,000 employees at Allina Health, we strongly support your consideration to raise the tobacco sales age to 21. Allina Health is a not-for-profit network of hospitals, clinics and other health care services, providing care throughout Minnesota and western Wisconsin. We are dedicated to the prevention and treatment of illness, as well as enhancing the greater health of individuals, families and communities.

We see first-hand the negative impact of tobacco use on the health of Minnesotans. Smoking costs Minnesota more than $3 billion annually in excess health care costs, and each year the tobacco industry spends millions of dollars marketing to youth and recruiting replacement customers. Besides premature death, many Americans who use tobacco live with chronic diseases such as lung, oral and pharyngeal cancer.

The tobacco industry actively markets to young people with fruit and candy flavored tobacco products. Increasing the tobacco sales age would reduce youth access to these harmful products and prevent a lifetime of addiction. Tobacco 21 also prevents youth smoking by creating barriers to getting tobacco products from social sources. Most kids get cigarettes from older friends. Raising the tobacco sale age to 21 will help get cigarettes out of high schools, where there are plenty of 18-year-olds but no 21-year-olds. Ultimately, a Minnesota-specific study found that if the age of sale was raised to 21, it would prevent at least 30,000 youth from smoking over the next 15 years.

We fully support increasing the age to purchase tobacco to 21 years in Minnetonka, and commend you for leading the state in this bold tobacco prevention initiative.

Sincerely,

Kerri Gordon
Director, Health Policy and Government Affairs
Allina Health
Dear Mayor Wiersum and City Council Members,

Please find attached a letter from Tobacco-Free Alliance in support of raising the tobacco sales age to 21 and restricting the sale of flavored tobacco products in Minnetonka.

Thank you for your time and consideration. Please let me know if you have any questions.

Thank you,
Melissa Mady

--
Melissa Mady
Community Engagement Specialist
Tobacco-Free Alliance MN
2395 University Ave W., Suite 304
St. Paul, MN 55114
651-379-0196
www.mntobaccofreealliance.org
July 17, 2018

Minnetonka City Hall
14600 Minnetonka Boulevard
Minnetonka, MN 55345

Dear Mayor Wiersum and Members of the Minnetonka City Council,

I am writing on behalf of Tobacco-Free Alliance to express our support for the City of Minnetonka increasing the tobacco sales age to 21 and regulating flavored tobacco products. The Tobacco-Free Alliance is a nonprofit organization working to reduce the harms of tobacco by engaging all segments of the community, particularly youth, through assessment, education and advocacy.

Tobacco products are still hooking our youth. E-cigarettes are particularly appealing to kids. They come in bright colors and an array of flavors like chocolate, cherry cola and fruit loops. In the 2016 Minnesota Student Survey, more than 17% of Minnesota 11th graders reported using e-cigarettes in the last 30 days. Increasing the gap between youth and those legally able to purchase tobacco products will help get e-cigarettes and other tobacco products out of the hands of our children.

Both of these policies are very important. They complement each other and deal with different parts of the tobacco market. Together these policies will have an enormous impact as they will help decrease the number of youth who start using tobacco, bringing us one step closer to a smoke-free generation. Thank you for doing everything you can to protect our community from the harms of tobacco.

Sincerely,

Elyse Levine Less
Executive Director
From: Tony Wagner  
Sent: Thursday, July 12, 2018 9:04 PM  
To: Molly Birkeland  
Cc: Geralyn Barone  
Subject: Re: MN 21  

Molly —
First, my sincere apologies for the (unacceptable) delayed response.

Secondly, Thank you for your note expressing your feedback on the Tobacco 21 discussion the council will be having. I truly appreciate the time you took to share your thoughts.

In addition, I also will be leaving the council effective Friday (July 13th), as my wife and I have purchased a new home in Minnetonka outside of Ward 2 and we closed on the sale of our old house today (July 12th). As a result, I won’t be on the council when this item finally reaches the City Council.

I always appreciate and value the time and input our residents provide me as a council member on items before us. Our passionate residents provide critical feedback on points to consider on both sides of the issues.

So again, thank you for the time and care you took in reaching out. I have copied city staff so your comments will be captured for the record and future council packet.

Tony  
Tony Wagner  
Minnetonka City Council, Ward 2  
612-382-5212  
Sent from my iPad

On Jun 11, 2018, at 1:19 PM, Molly Birkeland wrote:

Hello,
My name is Molly Birkeland and I am a lifelong resident of Minnetonka. Professionally, I am a Health and Wellness Coach. My husband and I are choosing to raise our future family in Minnetonka because it is a community that values the health and well-being of its residents and we would like to see this continue with additional policies. I am writing to urge the City Council to raise the tobacco sales
age to 21. This policy will have a positive impact on our young people and the health of our entire community.
Thank you for your leadership!
Molly
Hello Mayor Wiersum and City Council Members, Please see attached letter regarding MN 21.
Thank you,
Bev Gillen
952-564-7076
July 16, 2018

Dear Mayor Wiersum and Council Members:

Thank you for bringing up the ordinance to increase the tobacco sales age to 21 and restrict the sale of flavored tobacco products in Minnetonka.

I am a lifelong resident of Minnetonka. Professionally, I am a parent educator and college professor specializing in family studies and leadership development. My husband and I chose to raise our family in Minnetonka because it is a community that values the well-being of its residents. Minnetonka wants to attract the next generation of families and making this change is a visible way to demonstrate our commitment to health and wellness.

For the first time in 17 years, the youth tobacco use rates have increased, due to the popularity of flavored products and vaping. To reverse these trends policies must include e-cigarettes and flavored products and address the social sources that make tobacco products easy for youth to obtain. Increasing the legal sales age to 21 is an effective policy to deal with older teens suppling tobacco to younger teens. As a city council, you have an opportunity to reduce the appeal and accessibility of a deadly product.

The City of Minnetonka has the opportunity to make a real difference in our community. Our Minnetonka survey showed that 78% of Minnetonka residents support raising the tobacco sales age to 21. This ordinance will save lives which is not something you get to do every day!!

Thank you for your consideration.

Sincerely,

Beverly Gillen
5000 Mayview Road, Minnetonka
952-564-7076
Begin forwarded message:

From: "Freeman, Robert A"
Date: July 6, 2018 at 2:55:44 PM CDT
To: "bwiersum@eminnetonka.com" <bwiersum@eminnetonka.com>, "dcalvert@eminnetonka.com" <dcalvert@eminnetonka.com>, "pacomb@eminnetonka.com" <pacomb@eminnetonka.com>, "bellingson@eminnetonka.com" <bellingson@eminnetonka.com>, "twagner@eminnetonka.com" <twagner@eminnetonka.com>, "mhappe@eminnetonka.com" <mhappe@eminnetonka.com>, "tbergsteldt@eminnetonka.com" <tbergsteldt@eminnetonka.com>
Subject: HealthPartners Support for T21 Ordinance

Dear Mayor Wiersum and City Council Members:
Please find attached a letter of support for the proposed ordinances on Tobacco 21 from our medical director, Dr. Thomas Kottke, M.D. We would appreciate it if you would include this letter in any handouts when this issue is considered by the city council.
Thank you for your leadership on this important issue. If you have any questions, please do not hesitate to contact me.
Sincerely,
Robert Freeman
Government Relations Manager
HealthPartners
8170 33rd Avenue S, M/S 21106R
Bloomington, MN 55425
(952) 883-7240 - office
(952) 883-7202 - fax

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July 5, 2018

The Honorable Mayor Wiersum and Minnetonka City Council Members
Minnetonka City Hall
14600 Minnetonka Boulevard, Minnetonka MN 55345

Dear Mayor Wiersum and Members of the City Council:

On behalf of the nearly 26,000 employees at HealthPartners, over 500 of whom live in the city, we want to express our strong support for the proposed ordinance to raise the age for tobacco sales to 21 (T-21) in Minnetonka. As you may know, it is HealthPartners’ mission to improve health and well-being in partnership with our members, patients and the community.

Tobacco use disproportionately negatively impacts people of color. Approximately 95 percent of all adult smokers started before they were 21. For years, tobacco use has been the number one preventable cause of death in our country and our state. Smoking costs the state more than $3 billion annually in excess health care costs and each year more than 6,000 Minnesotans die from tobacco-related diseases. And as you know, increasing health care costs are frequently cited as a top concern by both businesses and citizens.

The age of 18-21 is a critical time when young people move from intermittent smoking to daily use. In addition to the countless long-term negative health effects of tobacco, nicotine itself is known to be particularly harmful to the development of the adolescent brain. Research suggests that nicotine interferes with brain maturation and can have long term effects on development and mental health. A recent report from the Institute of Medicine found that increasing the tobacco sales age to 21 would also mean that smoking initiation among 15-17-year-olds would be reduced by 25 percent.

Minnesota has been a leader in our state for many years on tobacco issues, such as the statewide smoking ban in bars and restaurants, and more recently passing T-21 ordinances in several neighboring cities. Thank you for taking this positive step towards keeping tobacco out of the hands of our children and saving lives.

Sincerely,

Dr. Thomas Kottke, M.D.
HealthPartners Medical Director, Well-being
Good evening Kathy:

Julie left a voice mail today stating we could have till tomorrow for comments but I don’t want to risk not sending something and not be heard. To this end, I have met the 16 July time requirement. Could you please forward anything I can review prior to next week regarding this matter and is there a process to follow for the opportunity to speak and be heard at the meeting? Please advice when able let me know if you have any questions.

Thanks and have a nice evening
Ms. Julie Wischnack  
City of Minnetonka  
Community Development  
14600 Minnetonka Blvd.  
Minnetonka MN 55345  

16 July 2018

RE: Proposed Age Limit Increase to 21

Dear Ms. Wischnack:

My name is Scott Stevens and I am the owner of the real estate and business located at 15114 Highway 7 in Minnetonka. Specifically, the Lucky’s Station. The nature of this note is to outline how the proposed 21 ordinance change will harm my business and place our organization at an uncompetitive advantage. As follows:

- The bottom line is the proposed actions will make the city and my business uncompetitive relative to all bordering towns.
  - Please note, people won’t quit smoking they will go to competition on the fringe of the city
  - Residual store sales will be lost as well (i.e. soda, gas, car wash, lottery, other grocery)
  - Our employees (if under 18) will be forced to buy products from our competition
  - Military members serving our country will not be allowed to buy products in Minnetonka but everyplace else in the surrounding area
- My business will be harmed significantly and may be forced to close down
  - I don’t have deep pockets like all the other oil companies
  - I bought this location dark and invested several hundred thousand dollars to get the site up and running, is the goal to have the site dark again (copies of before and after photos attached)
- Displacing and inconveniencing resident customers to bordering towns for business is wrong
- This proposed change is discriminatory both on businesses and minorities
- City Council implementing policy change that is uncompetitive places the government in a position whereby the city has interfered with and removed free trade

At the end of the day, I’m stunned the city could consider such and action. The proposed change accomplishes nothing other than make members feel good and push our customers down the road. The loss will not only be in cigarettes but will have other cascading consequences to other categories of our
business. The notion that military members may not be able to purchase products in our store but can
die for our company helps illustrate the absurdity of the amendment. Forcing residents to competitor
cities is fundamentally wrong and our employees who work for us can’t purchase products lacks sense
as well.

It is my hope that level heads will prevail and common-sense grounds the group to understand the
actions accomplish nothing beyond harming local business. The market is challenging enough. To the
point, we can’t afford financial blows that won’t benefit our business, especially given when the dagger
is delivered by the city.

I respectfully and strongly seek your consideration to remove this law and language that will
compromise our existence. Thanks for your consideration.

Respectfully,

Scott L. Stevens
President

Attachments
Dear Minnetonka City Council,

Please find a letter of support for Tobacco 21, flavored tobacco restrictions, and minimum cigar pricing attached. Thank you,

*Twin Cities Medical Society*

1300 Godward Street, NE Suite 2000

Minneapolis, MN 55413

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July 12, 2018

Members of the City Council
City of Minnetonka
14600 Minnetonka Boulevard
Minnetonka, MN 55345

Dear Members of the Minnetonka City Council,

I am writing on behalf of the Twin Cities Medical Society in support of raising the legal age for tobacco sales in Minnetonka from 18 to 21, restricting fruit and candy flavored tobacco to adult-only shops, and requiring minimum pricing for cigars. The Twin Cities Medical Society is an organization that represents approximately 4,500 physicians and medical students living and working in the seven-county Twin Cities metropolitan area. Our physician members share all too often that tobacco is still a problem for their patients. In fact, tobacco use remains the #1 cause of preventable disease and death in Minnesota.

E-cigarette use is increasing at an alarming rate among youth in our community, and flavored cigar use rose for the first time in decades last year. We know that flavored tobacco, such as mango or cotton candy, is marketed to attract youth. Fruit and candy flavors, which are often found in cheap cigars, mask the harshness of tobacco. Youth often begin using nicotine through flavored e-cigarettes and go on to smoke other tobacco products, including conventional cigarettes. In fact, studies show that 80% of youth who use tobacco use flavored products.

Restricting the sale of tobacco to those 21 and older is the next step in preventing Minnesota’s youth from beginning to use tobacco products. Almost 95% of adult smokers begin before age 21, and increasing the gap between those who can legally purchase tobacco will limit high schooler’s access to these products. Restricting flavored tobacco products further protects youth, by taking kid-friendly flavored products out of the stores youth visit daily. Youth often smoke flavored cigars—a pack of three often costs just 99 cents—and a policy raising cigar prices will further protect youth.

We know that exposure to nicotine while the adolescent brain is still developing increases the risk of mood disorders, permanently lowers impulse control, and increases the risk of other addictions later in life. These policies are a bold step toward protecting Minnetonka’s young people from a lifetime of tobacco addiction, and ultimately disease and premature death.

We stand behind this ordinance, and you. We hope you will consider this common-sense measure to protect the public health of Minnetonka residents.

Sincerely,

Tom Kottke, MD
President of the Twin Cities Medical Society
For the council packet.

From: Tony Wagner
Sent: Thursday, July 12, 2018 6:02 PM
To: Thomas Puzak
Cc: Geralyn Barone
Subject: Re: Tobacco is so yesterday

Tom —
Thank you for your note expressing your feedback on the potential tobacco policy change in the city.

I will be leaving the council effective Friday (July 13th), as my wife and I have purchased a new home in Minnetonka outside of Ward 2 and we close on the sale of our old house on July 12th. As a result, I won’t be on the council when this item finally reaches the City Council.

I always appreciate and value the time and input our residents provide me as a council member on items before us. Our passionate residents provide critical feedback on points to consider on both sides of the issues.

So again, thank you for the time and care you took in reaching out. I have copied city staff so your comments will be captured for the record and future council packet.

Tony
Tony Wagner
Minnetonka City Council, Ward 2
612-382-5212
Sent from my iPad

On Jul 9, 2018, at 4:24 PM, Thomas Puzak <tapuzak@gmail.com> wrote:

To Mayor Wiersum and the Council Members of my great city,

As a longtime resident I am writing to ask you to strengthen Minnetonka’s tobacco prevention policies. I grew up in Minnetonka and moved back here because I love this city’s great parks and trails. It is a fantastic place that should be a leader within our greater community.

As an entrepreneur, I am constantly looking for ways to innovate and save costs. Like others, I feel the squeeze of rising healthcare prices caused by disease and addiction. Part of these costs is tobacco use, and those is
preventable. I have read that every Minnesota resident pays $593 a year in tobacco-related costs. When I look at my bottom line – and the health of our community – that price is too high.

Strengthening our city’s tobacco prevention policies is a great way to send a message that we care about the health of our city, from our individual citizens to our schools, families, business, and hospitals. Raising the tobacco sale age to 21 while restricting flavored tobacco products and the availability of cheap cigars will go a long way to reducing youth access and addiction. If we can stop youth from starting, then we can save lives and lower healthcare costs.

Some businesses may claim these policies might cut into their profits, but reducing smoking rates will cut into the costs we all bear for tobacco use. It's big picture common sense.

I hope I can count on your support for strengthening our tobacco policies and standing up for health and costs felt by citizens and businesses like mine. Let’s send a message that Minnetonka is a leader on health and business.

Thank you,

Tom Puzak

304 Sunnyvale Lane

Minnetonka, MN 55305
Minnetonka City Council,

Thank you for taking the time to research the tobacco 21 issue and look at the topic from all sides. I would like to address the 4 areas under review by the city one at a time.

1). **minimum age to purchase (not consume) tobacco is changed from 18 to 21**

   On the surface this appears to be a good idea. However, there are a few concerns I would like to present. I would like to direct the council to Page 9 of the attached report titled, “Helping-Smokers-Quit-The-Science-Behind-Tobacco-Harm-Reduction.” The heading on Page 9 is Smokeless Tobacco is NOT a Gateway to Smoking. As stated in paragraph 2, “(THR stands for Tobacco Harm Reduction)

   “In the U.S., opponents of THR believe that it will encourage teenagers to use smokeless tobacco, which will lead to smoking. And, while some studies have reported that teenagers who use smokeless tobacco are more likely to become smokers, a close examination of the evidence suggests only that smokeless tobacco is one of several behaviors associated with smoking — not that it leads to smoking.”

   As our neighboring cities will be watching what we do as a community there is another concern: Minnetonka boarders Carver County we will be merely sending people to Chanhassen.

   Other communities like Eden Prairie will likely be looking to us for guidance. If we firmly back the science and let others know electronic vaping products are safer than smoking we will not only be helping Minnetonka but other cities as well.

2). **specialty flavored tobacco products are prohibited**

   Menthol and Wintergreen products have been around for decades. This issue of flavored tobacco products, in my opinion, is a backhanded way of reducing electronic vaping products from the market.

   We have over 50 flavors in our store, the majority of which are fruit flavors, as those sell the best.

   Eliminating flavored tobacco products puts me out of business.

   A little more on the science of electronic vaping:

   As the Department of England study (please see attached full report or summary page) scientifically concludes, electronic cigarettes are 95% safer than smoking.

   The science is telling us that electronic vaping products are not the same as cigarettes and should not be treated the same.

3). **size of packages and/or prices of tobacco are regulated**
As mentioned above, we have over 50 flavors, not all the flavors sell well which leaves us with excess inventory. If we don’t reduce the price we will be forced to take large losses. Therefore, we have a 90-day rotation. The bottom 5 to 10 flavors which sell the least we discount. If a flavor is on the list twice we then sell the inventory until all of it is gone and remove it from our store.

If we are forced to keep all products at full price we will have large losses that other stores in neighboring cities will not have, driving customers away and eventually reducing margins to where we will be forced to close our doors.

By our current business practice of discounting unpopular flavors, it helps our customers save money (especially our seniors as vaping is already significantly cheaper than smoking).

4). **number/density/location of retailers are regulated**
As stated in the City Council Study Session of June 11, 2018, “The summary from the county indicates that no cities have adopted these regulations.” Most cities agree that this is an overreach of policy.

**Summary**
As we discuss the possibility of Minnetonka increasing the age of tobacco products to 21 I hope they consider what the world of science is telling us; electronic cigarettes are not the same as smoking. The two products need to be looked at separately. Studies from Sweden to England and now the US are all giving us the same answer, electronic vaping products help people quit smoking. Their data is standing the test of time as others try to find flaws but are unsuccessful. Electronic vaping products are helping millions of people leave the world of cigarettes forever (my wife is one of them, our store has 100s of testimonials).

Tom Madden
Owner E-Cig POD
14645 Excelsior Blvd
Minnetonka, MN

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**E-Cig Pod USA LLC**
14645 Excelsior Blvd
Minnetonka, MN 55345
952-931-9900
Helping Smokers QUIT

The Science Behind Tobacco Harm Reduction

Presented by the
AMERICAN COUNCIL ON SCIENCE AND HEALTH

Based on a publication by Brad Rodu
ACSH accepts unrestricted grants on the condition that it is solely responsible for the conduct of its research and the dissemination of its work to the public. The organization does not perform proprietary research, nor does it accept support from individual corporations for specific research projects. All contributions to ACSH—a publicly funded organization under Section 501(c)(3) of the Internal Revenue Code—are tax deductible.

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Helping Smokers QUIT

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December 2011
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Introduction

In 2006, the American Council on Science and Health (ACSH) became the first organization in the United States to formally endorse tobacco harm reduction (THR). ACSH based its position on a comprehensive review of the existing scientific and medical literature, which showed that smokeless tobacco use:

(a) is at least 98 percent safer than smoking, even though most Americans are misinformed about the differences in risk

(b) among Swedish men, is a major factor in extremely low smoking rates

(c) is not a gateway to smoking cigarettes

Over the past 5 years the scientific literature supporting THR has grown considerably, and ACSH decided to sponsor another comprehensive review. This publication summarizes the major findings of that review.
Smokeless Tobacco, Small Risks

Unlike cigarettes, smokeless tobacco products are smoke-free. Users place small pouches between the upper lip and gum, thereby avoiding the thousands of toxic agents formed when tobacco is burned.

In the past five years, numerous epidemiological studies have confirmed that the use of smokeless tobacco is associated with minimal risks for cancer and heart disease and has no risk for gastrointestinal disorders or chronic inflammatory disease.

Gastrointestinal Disorders

Smokeless tobacco use inevitably results in swallowing saliva containing tobacco extract, but in 2010 a Swedish study found no increased risk of GI disorders in smokeless tobacco users. In fact, smokeless users reported GI symptoms with the same frequency as non-users. In contrast, smokers and dual users (those who both smoked and used smokeless tobacco) were more likely to experience dyspepsia.

Parkinson’s Disease and Multiple Sclerosis

Smokeless tobacco is not associated with the neurodegenerative diseases Parkinson’s and multiple sclerosis (MS). Intriguingly, smokeless tobacco users actually have lower rates of these diseases than do non-users of tobacco, but a biological mechanism for any possibly protective effect has yet to be explained.

Cardiovascular Diseases

At least 10 epidemiological studies, as well as two meta-analyses, have evaluated the risks for cardiovascular diseases among smokeless tobacco users. The majority of these studies found no significant risks. In one study that found slightly increased risks for stroke and heart attack, the results had been inadequately adjusted for smoking.

In 2010, the American Heart Association released a policy statement based on a review of the scientific literature, which confirmed that smokeless tobacco use confers low risks for cardiovascular diseases.

Chronic Inflammatory Disease

Smokeless tobacco is not associated with chronic inflammatory disease. A 2010 study that examined the incidence of these diseases among nearly 280,000 Swedish construction workers found that, compared with those who had never used tobacco, smokers were at significantly greater risk for rheumatoid arthritis, Crohn’s disease, and multiple sclerosis, while snus users were not at greater risk. The researchers also conjectured that the inhaled non-nicotinic components of cigarette smoke are more significant than nicotine itself in the etiology of these diseases.
Pregnancy Complications

One of the most challenging questions regarding THR is whether it is applicable to pregnant women who smoke. Our publication, *Cigarettes: What the Warning Label Doesn’t Tell You*, discusses the spectrum of smoking-related risks to the developing baby and mother thoroughly (pages 118-121). Officially, the Surgeon General has established that smoking during pregnancy is associated with increased risks for premature delivery, low-birth weight, and stillbirth, as well as a number of placental problems that can place both mother and fetus at risk. Can a pregnant smoker who switches to smokeless tobacco benefit the health of her developing baby?

The answer is that, while risks to a developing baby are not as great when a mother uses smokeless tobacco instead of cigarettes, risks do remain. Women who use smokeless tobacco are at risk for slightly smaller babies (an average of six ounces less at birth), as well as modestly elevated risks for premature delivery, stillbirth, and —possibly — preeclampsia. Although any form of nicotine should be avoided during pregnancy, the highest risks for the developing baby are associated with smoking.
Misperceptions About the Minimal Health Risks of Smokeless Tobacco

There is scientific consensus that smokeless tobacco use is vastly safer than smoking, but this is virtually unknown among the general public, and even among health professionals. Indeed, recent studies have revealed the extent of these misperceptions, as well as their potential impact on the implementation of THR.

A 2010 study documented the widespread misperception of smokeless tobacco risks among highly educated university faculty at the University of Louisville. The researchers found that over half of all faculty incorrectly believed that smokeless tobacco poses general health risks that are equal to or greater than smoking. And there was a more common misperception about the risk of cancer associated with smokeless tobacco: Health science faculty, too, were also misinformed about this risk. Overall, the survey demonstrates that most health professionals have a poor understanding of the benefits of smokeless tobacco and are not aware that using it is vastly safer than smoking cigarettes.

Misperception of the risks of smokeless tobacco use clearly stem from a campaign of misinformation by anti-tobacco activists who are more concerned with promoting nicotine abstinence than with a realistic approach to public health. They conflate the risks of smokeless tobacco with those associated with cigarettes, a message relayed via both direct statements and insinuation. Such misperceptions are deeply ingrained: A 2010 study found that even in Sweden, where THR has had a significant impact on smoking, the majority of smokers have an exaggerated perception of the harmfulness of pharmaceutical nicotine and snus.

Undoubtedly, given the actual benefits of switching from cigarettes to smokeless tobacco, greater effort needs to be made to promote accurate perception of the considerably lower health risks of smokeless tobacco.
Evidences from Sweden and Norway make a strong case for smokeless tobacco as a means to reduce smoking rates. A 2006 review of smokeless tobacco use in Sweden found that snus was the most common smoking cessation aid among men. The review also found that 58% of Swedish male smokers had used snus as a quit-smoking aid, and two-thirds of them were successful, which was significantly higher than any other aid such as nicotine gum or a nicotine patch.

Allaying fears that smokeless tobacco use was a gateway to smoking, the 2006 review reported that the odds of smoking were significantly lower for men who had used snus than for those who had not. Another study in 2008 found that the use of snus was the strongest indicator of former (versus current) smoking among Swedish men, and it concluded that “Swedes appear to be using snus as a form of nicotine replacement therapy despite a lack of clinical trials data to support its use as a smoking cessation aid.”

Recent reports from Norway have reached similar conclusions. The Norwegian Institute for Alcohol and Drug Research (SIRUS) reported that the prevalence of smoking in young Norwegian men had declined from 50 percent in 1985 to 30 percent in 2007, while the use of snus increased from 10 percent to 30 percent.

SIRUS reported on the popularity of snus as a smoking cessation aid among Norwegian men; it was used by 23 percent of the men who quit smoking in 2007, compared with use rates of 2 to 9 percent for nicotine gum, nicotine patch, the quit-smoking drug Zyban, or quit lines. In 2010 a SIRUS study found that Norwegian men prefer snus over all other methods to quit smoking.

Among Norwegian men who had tried snus as a smoking cessation aid, 74 percent reported to have “quit smoking altogether,” or to have experienced a “dramatic reduction in smoking intensity” — a success rate significantly higher than the 40 to 50 percent success rate of men who tried to quit using Zyban, a nicotine patch, or nicotine gum. According to these findings, snus was nearly three times more effective than nicotine gum, the second most popular means of trying to quit.
The Population Health Effects of THR

Two recent studies looked at the potential population health effects of snus use in populations where the products are not currently available, and they determined that the potential health benefits outweighed the risks.

A 2007 study assessed the potential health gains if snus was available in Australia, where it is currently banned. The researchers calculated the life expectancy among people with various histories of tobacco use, and then estimated the net effects at the population level. The results showed little difference in the life expectancy of smokers who quit all tobacco and smokers who switch to snus. The researchers concluded: “Current smokers who switch to using snus rather than continuing to smoke can realize substantial health gains. Snus could produce a net benefit to health at the population level if it is adopted in sufficient numbers by inveterate smokers.”

In another study, researchers looked at the difference between mortality from lung cancer (the sentinel disease of smoking and an indicator of a population’s smoking rate) in Sweden, where snus is widely used, and in other European Union countries, where snus is banned. In Sweden, lung cancer mortality was significantly lower among men than in the other EU countries. In fact, if all EU countries had the lung cancer mortality of men in Sweden, there would have been over 53 percent fewer lung cancer deaths in 2002 alone. The researchers found that the number of smoking-attributable deaths would have more than halved if EU smoking rates were similar to those of Swedish men.

A point that further reinforces the relative health benefits of snus is the disparity between smoking rates in Swedish men and women. For most of the last 50 years, lung cancer mortality among Swedish women has been the sixth highest in the EU, reflecting the fact that cigarettes are the dominant tobacco product among women in Sweden. This context is important, because it has been suggested that vigorous anti-smoking campaigns since the 1970s are largely responsible for the decline in the smoking rate among Swedish men. But it is implausible that these campaigns have been effective for Swedish men while having almost no impact on Swedish women. This is firm evidence that snus use — not anti-smoking campaigns — has played the primary role in the low lung cancer mortality among men in Sweden for over half a century.
What Clinical Trials Tell Us About THR

Prior to 2006, only one clinical trial relevant to THR had been conducted; during the last five years, several clinical trials have been completed. In the majority of these trials, researchers evaluated smokers’ preferences for a variety of smoking cessation aids, as well as rates of quitting, effects on withdrawal and craving, exhaled levels of carbon monoxide, and levels of tobacco-related metabolites.

In general, snus and dissolvable tobacco satisfied smokers’ cravings and helped smokers quit or decrease cigarette consumption, and these products typically were preferred or ranked on par with pharmaceutical nicotine.
American Survey Evidence of Smokeless Tobacco as an Effective Cigarette Substitute

Although the majority of evidence for smokeless tobacco’s efficacy comes from Sweden, where consumers are much more aware of smokeless products, there is evidence that it has been effective for small numbers of American smokers.

A 2008 study provided evidence that American men have quit smoking by switching to smokeless tobacco. Using data from the 2000 National Health Interview Survey, the researchers estimated that 359,000 American male smokers had tried to switch to smokeless tobacco during their most recent attempt to quit — and 73 percent of them were former smokers at the time of the survey. These numbers represent the highest proportion of successes among all methods. The researchers found that nicotine gum and the nicotine patch had helped only 34 to 45 percent of male users to quit, while only 28 percent of the men who had tried the nicotine inhaler were successful.

Despite these success rates, few smokers are aware that switching from cigarettes to smokeless tobacco provides almost all the health benefits of complete tobacco abstinence. As one research team reported, risk perception plays an important role in willingness to try snus. In a recent survey, respondents who were aware that smokeless tobacco is less harmful than cigarettes were nearly four times as likely to try snus than those who believed that the products were equally risky. Unfortunately, 88 percent of all respondents in this survey believed that smokeless tobacco was just as dangerous as cigarettes.

Dr. Lois Biener and Dr. Karen Bogen, who reported on this, the Indiana Adult Tobacco Survey, made the following observation:

Both marketing and health education messages should include the information that all tobacco products are harmful and that abstinence from all tobacco products is the most healthful choice. At the same time, simply saying that smokeless tobacco is “not safe” is not a sufficient stance for public health communications. There is a recognized continuum of risk along which various tobacco products can be placed, with low-nitrosamine smokeless tobacco products much lower on the risk continuum than combustible tobacco, although it is not harmless. Devising an effective way to inform the public about the continuum should be an important research priority, as currently consumers are woefully incorrect in their assessments of relative risk of various tobacco products. This state of affairs could result in people deciding not to give up smoking in favor of a product lower on the risk continuum because they assume that all tobacco products are equally harmful.
Smokeless Tobacco is Not a Gateway to Smoking

A common allegation is that smokeless tobacco is a gateway to smoking cigarettes, especially among youth. However, studies from Sweden and the U.S. discredit this claim.

There is virtually no evidence for a gateway effect in Sweden, where smokeless tobacco use is prevalent. A 2006 review of published studies turned up no evidence, and this was confirmed by a 2008 study of 3,000 adolescents from the Stockholm area: “The majority of tobacco users (70 percent) started by smoking cigarettes,” the authors noted. They concluded that the proportion of young people who progressed from smokeless tobacco to cigarettes is small. In addition, the European Commission’s Scientific Committee on Emerging and Newly Identified Health Risks concluded that “The Swedish data…do not support the hypothesis that…snus is a gateway to future smoking.”

In the U.S., opponents of THR believe that it will encourage teenagers to use smokeless tobacco, which will lead to smoking. And, while some studies have reported that teenagers who use smokeless tobacco are more likely to become smokers, a close examination of the evidence suggests only that smokeless tobacco is one of several behaviors associated with smoking — not that it leads to smoking.

The misconception that smokeless tobacco use leads to smoking is based largely on two long-range studies that compared subsequent smoking among adolescent smokeless tobacco users and non-users. While both studies found that young people who use smokeless tobacco were more likely than non-users to be smoking several years later, they neglected to take into account well-known psychological predictors of smoking. When these variables were taken into account, smokeless tobacco use was no longer a statistically significant predictor of developing a smoking habit.

Other recent studies discredited claims of causality. One study found that the association of smokeless tobacco use with smoking is most likely a reflection of experimenting with both substances — not a causal relationship. Another study found that, among white males ages sixteen and older — the group most likely to smoke tobacco — the prevalence of smoking among those who had first tried smokeless tobacco was significantly lower than among those who were cigarette initiators. The researchers concluded that “smokeless tobacco use has played virtually no role in smoking initiation among white men and boys.”

Claims of the gateway effect persist, prompting experts at Penn State’s tobacco addiction department to note, “Continued evasion of the [harm reduction] issue based on claims that smokeless tobacco can cause smoking seems, to us, to be an unethical violation of the human right to honest, health-relevant information.”
The dual use of smokeless tobacco and cigarettes is a major criticism by opponents of THR. Although studies suggest that dual use can benefit an otherwise exclusive smoker, critics complain about adverse consequences and assert that dual users will never quit cigarettes, that they are risking their health just as much as exclusive smokers. However, these assertions are unfounded.

In 2002, a study describing the theoretical adverse consequences of dual use acknowledge that “there are virtually no data that currently exist on the safety of such use or the degree to which such use will foster the perpetuation of smoking or contribute to reduced overall smoking.” The researchers concluded, “The issue warrants further study.” And indeed, further study has been done. The results are in favor of dual use.

Many smokers gradually begin using smokeless tobacco with the goal of eventually quitting tobacco altogether or, at least, cutting back on their cigarette consumption. Recent studies suggest such a course is not at all misguided.

First of all, the most recent studies suggest that dual users are not increasing their health risks. A 2010 analysis of 17 published research studies concluded that there are no “unique health risks associated with dual use... that are not anticipated or observed from cigarette smoking alone.” Furthermore, the authors observed that “some data indicate that the risks of dual use are lower than those of exclusive smoking.”

The 2010 analysis also found that dual users are more likely to quit smoking than are exclusive smokers. Longitudinal studies — those that follow their subjects over time — have found that dual users have a different trajectory of tobacco use and cessation than that of exclusive smokers. For instance, a 2002 study in the U.S. found that, after four years, 80 percent of smokers were still smoking, while only 27 percent of those who had been dual users were still smoking. Of the dual users, 44 percent remained dual users and 17 percent used only smokeless tobacco products. A 2003 study in Sweden found similar success rates for dual users; and it found that the rate at which dual users quit smoking entirely increased each year.

These studies made it clear that dual users are much more likely to successfully quit smoking than are exclusive smokers. And, although dual users are less likely than the exclusive smokers to become completely tobacco abstinent, they are much more likely to smoke fewer cigarettes.
Electronic Cigarettes: Another Low-Risk Alternative

E-cigarettes are battery-powered devices that vaporize a mixture of water, propylene glycol, nicotine, and flavorings. They are activated when the user inhales through the mouthpiece of the device, delivering a small dose of nicotine without any of the carcinogens derived from the combustion of tobacco that occurs in cigarettes. To date, all e-cigarettes and mixtures are manufactured in China — although this may change following a recent FDA decision.

In 2011, an appellate court confirmed that e-cigarettes are to be regulated by the FDA as tobacco products, which was a victory on several counts for American smokers and for public health. First, the decision guaranteed that e-cigarettes, which have helped many smokers quit, will remain on the market. Second, it assured that e-cigarettes would be subjected “to general controls, such as registration, product listing, ingredient listing, good manufacturing practice requirements, user fees for certain products, and the adulteration and misbranding provisions, as well as to the premarket review requirements for ‘new tobacco products’ and ‘modified risk tobacco products.’” These requirements will promote the marketing of safe and quality-controlled products. Finally, the decision could allow pharmaceutical companies to reposition more satisfying nicotine medicines as recreational (and low-risk) alternatives to cigarettes.
E-cigarettes: What Studies Tell Us

Clinical and laboratory studies have only begun to accumulate during the last 5 years, and most confirm that e-cigarettes are a safe and effective smoking cessation aid.

While cigarette smoke contains thousands of chemical agents in addition to nicotine, e-cigarettes produce a vapor comprised only of water, propylene glycol, nicotine, and flavorings. Unlike tobacco cigarettes, the ingredients in e-cigarettes do not pose any significant health risks. Nicotine is highly addictive, but it is not the primary cause of any of the diseases related to smoking. Propylene glycol is approved by the FDA for use in a large number of consumer products, and it is not associated with any adverse health effects, although there are currently no studies relating to long-term daily exposure.

Despite the relative safety and efficacy of e-cigarettes, tobacco-control activists have aggressively attacked these products. For instance, in 2009, Dr. Jack Henningfield, who is a scientific adviser on tobacco to the World Health Organization, as well as an adviser to GlaxosmithKline on pharmaceutical nicotine, called e-cigarettes “renegade products,” for which “we have no scientific information.” He then stated that e-cigarettes “are not benign” — although there was no explanation in his article as to how he came to that conclusion in the absence of any scientific information.

While it is true that there is a paucity of scientific studies on this new area, and that the discussion has become highly polarized, several reports have provided important information.

Clinical Studies

Studies that have addressed how the nicotine in e-cigarettes is absorbed suggest that it is largely taken up by the mucous membranes of the mouth and throat, and that this is typically achieved by shallow puffing instead of deep inhalation. Significantly, a study has also found that e-cigarette use results in much less frequent mouth and throat irritation, compared to the pharmaceutical nicotine inhaler. And, just as important, another study has found that, although the e-cigarette produces only modest elevations in peak blood levels of nicotine — much lower than that produced by cigarettes — users experienced both reduced cravings and withdrawal symptoms. Researchers believe that this reduction is due not solely to nicotine delivery but to the e-cigarettes’ successful mimicry of cigarette handling rituals and cues — a feature that is not part of pharmaceutical nicotine products.

Laboratory Studies

Although it is clear that the vapor produced by e-cigarettes is simply not comparable to the thousands of toxic agents formed when tobacco is burned, those opposed to e-cigarettes often target their safety. While laboratory studies have detected trace levels of some contaminants in these devices, this appears to be a small problem that could be solved with improvements to quality and manufacturing that will come with FDA regulation.

Unfortunately, media attention typically gravitates to a study released by the FDA in 2009, which stated that its laboratory tests of e-cigarettes “indicated that these products contained detectable levels of known
The Science Behind Tobacco Harm Reduction

carcinogens.” However, this study was flawed and not an accurate indicator of the safety of e-cigarettes.

The FDA examined only a small sample size of e-cigarette cartridges and did not conduct the testing in a systematic and scientific manner: All in all, the agency ended up testing only ten e-cigarette cartridges from only two different manufacturers. It would be difficult to conclude anything from such a tiny sampling of products.

To further complicate matters, the FDA tested e-cigarettes for carcinogens called tobacco-specific N-nitrosamines (TSNAs), but they did not report the levels they detected. Instead, the agency merely reported that TSNAs were either “detected” or “not detected,” which is uninformative. Many tobacco products, including smoking cessation aids such as nicotine medications, have TSNA levels in the single-digit parts per million range — a level at which there is no scientific evidence that they are harmful. What’s more, the FDA tested for TSNAs using a method that detects TSNAs at about one million times lower concentrations than are conceivably related to human health.

In sum, the FDA tested e-cigarettes for TSNAs using a questionable sampling regimen and using methods that were so sensitive that the results are highly unlikely to have any possible significance to users. Thus far, laboratory analysis suggests that e-cigarettes do not contain harmful levels of carcinogens. A much more comprehensive study, employing much more precise methods than those used by the FDA, would go a long way toward clarifying the relative safety of e-cigarettes.
The Growing Global Discussion About THR

There is growing global interest in THR. More and more studies are confirming the safety of smokeless products, leading to a greater awareness of the option, as well as more public discussion.

In addition to ACSH’s conclusion that “there is a strong scientific and medical foundation for THR, which shows great potential as a public health strategy,” many other experts are voicing their convictions in favor of harm reduction.

In 2007, the Royal College of Physicians, one of the oldest and most prestigious medical societies in the world, published a landmark report, concluding that, “if nicotine could be provided in a form that is acceptable as a cigarette substitute, millions of lives could be saved.”

Furthermore, in a variety of scientific journals, researchers are underscoring the relatively low risks of smokeless products and are calling for them to be incorporated into official strategies for helping smokers to quit.

Two Australian researchers, Coral Gartner and Wayne Hall, wrote in a 2007 Public Library of Science Medicine article that the health risk of smokeless tobacco are “comparable to those of regular alcohol use rather than cigarette smoking.” They called for a public health policy that would promote the use of smokeless products for inveterate smokers.

And, perhaps it’s best to close with the following summary of the global health implications of THR:

The relative safety of ST and other smokefree systems for delivering nicotine demolishes the claim that abstinence-only approaches to tobacco are rational public health campaigns...

Applying harm reduction principles to public health policies on tobacco/nicotine is more than simply a rational and humane policy. It is more than a pragmatic response to a market that is, anyway, already in the process of undergoing significant changes. It has the potential to lead to one of the greatest public health breakthroughs in human history by fundamentally changing the forecast of a billion cigarette-caused deaths this century.

— David T. Sweanor, former Senior Legal Counsel to the Smoking and Health Action Foundation et al., International Journal of Drug Policy (2007)
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The American Council on Science and Health (ACSH) was among the first organizations in the United States to formally endorse tobacco harm reduction (THR). ACSH bases its position on a comprehensive review of the existing scientific and medical literature, which shows that smokeless tobacco is at least 98 percent safer than smoking cigarettes and can serve as an effective cessation aid.

This publication summarizes the major findings of the most recent comprehensive overview of the scientific literature on THR, undertaken by Dr. Brad Rodu, professor of medicine and endowed chair in tobacco harm reduction at the University of Louisville.

It is ACSH’s belief that THR can significantly reduce the toll of addiction to cigarettes that remains a major public health concern. It is the intention of this publication to increase the number of people who are aware of THR as a beneficial alternative to smoking.

The American Council on Science and Health is a consumer education consortium concerned with issues related to food, nutrition, chemicals, pharmaceuticals, lifestyle, the environment and health. It was founded in 1978 by a group of scientists concerned that many important public policies related to health and the environment did not have a sound scientific basis. These scientists created the organization to add reason and balance to debates about public health issues and bring common sense views to the public.
E-cigarettes: an evidence update
A report commissioned by Public Health England

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About Public Health England

Public Health England exists to protect and improve the nation’s health and wellbeing, and reduce health inequalities. It does this through world-class science, knowledge and intelligence, advocacy, partnerships and the delivery of specialist public health services. PHE is an operationally autonomous executive agency of the Department of Health.

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Published August 2015
PHE publications gateway number: 2015260
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Foreword

The role and impact of electronic cigarettes has been one of the great debates in public health in recent years and we commissioned this independent review of the latest evidence to ensure that practitioners, policy makers and, most importantly of all, the public have the best evidence available.

Many people think the risks of e-cigarettes are the same as smoking tobacco and this report clarifies the truth of this.

In a nutshell, best estimates show e-cigarettes are 95% less harmful to your health than normal cigarettes, and when supported by a smoking cessation service, help most smokers to quit tobacco altogether.

We believe this review will prove a valuable resource, explaining the relative risks and benefits of e-cigarettes, in terms of harm reduction when compared with cigarettes and as an aid to quitting.

We will continue to monitor the position and will add to the evidence base and guidance going forward.

Duncan Selbie, Chief Executive, PHE
Key messages

1. Smokers who have tried other methods of quitting without success could be encouraged to try e-cigarettes (EC) to stop smoking and stop smoking services should support smokers using EC to quit by offering them behavioural support.

2. Encouraging smokers who cannot or do not want to stop smoking to switch to EC could help reduce smoking related disease, death and health inequalities.

3. There is no evidence that EC are undermining the long-term decline in cigarette smoking among adults and youth, and may in fact be contributing to it. Despite some experimentation with EC among never smokers, EC are attracting very few people who have never smoked into regular EC use.

4. Recent studies support the Cochrane Review findings that EC can help people to quit smoking and reduce their cigarette consumption. There is also evidence that EC can encourage quitting or cigarette consumption reduction even among those not intending to quit or rejecting other support. More research is needed in this area.

5. When used as intended, EC pose no risk of nicotine poisoning to users, but e-liquids should be in ‘childproof’ packaging. The accuracy of nicotine content labelling currently raises no major concerns.

6. There has been an overall shift towards the inaccurate perception of EC being as harmful as cigarettes over the last year in contrast to the current expert estimate that using EC is around 95% safer than smoking.

7. Whilst protecting non-smoking children and ensuring the products on the market are as safe and effective as possible are clearly important goals, new regulations currently planned should also maximise the public health opportunities of EC.

8. Continued vigilance and research in this area are needed.
Executive summary

Following two previous reports produced for Public Health England (PHE) on e-cigarettes (EC) in 2014, this report updates and expands on the evidence of the implications of EC for public health. It covers the EC policy framework, the prevalence of EC use, knowledge and attitudes towards EC, impact of EC use on smoking behaviour, as well as examining recent safety issues and nicotine content, emissions and delivery. Two literature reviews were carried out to update the evidence base since the 2014 reports and recent survey data from England were assessed.

EC use battery power to heat an element to disperse a solution of propylene glycol or glycerine, water, flavouring and usually nicotine, resulting in an aerosol that can be inhaled by the user (commonly termed vapour). EC do not contain tobacco, do not create smoke and do not rely on combustion. There is substantial heterogeneity between different types of EC on the market (such as cigalikes and tank models). Acknowledging that the evidence base on overall and relative risks of EC in comparison with smoking was still developing, experts recently identified them as having around 4% of the relative harm of cigarettes overall (including social harm) and 5% of the harm to users.

In England, EC first appeared on the market within the last 10 years and around 5% of the population report currently using them, the vast majority of these smokers or recent ex-smokers. Whilst there is some experimentation among never smokers, regular use among never smokers is rare. Cigarette smoking among youth and adults has continued to decline and there is no current evidence in England that EC are renormalising smoking or increasing smoking uptake. Instead, the evidence reviewed in this report point in the direction of an association between greater uptake of EC and reduced smoking, with emerging evidence that EC can be effective cessation and reduction aids.

Regulations have changed little in England since the previous PHE reports with EC being currently governed by general product safety regulations which do not require products to be tested before being put on the market. However, advertising of EC is now governed by a voluntary agreement and measures are being introduced to protect children from accessing EC from retailers. Manufacturers can apply for a medicinal licence through the Medicines and Healthcare products Regulatory Agency (MHRA) and from 2016, any EC not licensed by the MHRA will be governed by the revised European Union Tobacco Products Directive (TPD).

A summary of the main findings and policy implications from the data chapters now follows.
Summary of Chapter 3: UK policy framework

The revised TPD will introduce new regulations for EC or refill containers which are not licensed by the MHRA. The cap on nicotine concentrations introduced by the TPD will take high nicotine EC and refill liquids off the market, potentially affecting heavier smokers seeking higher nicotine delivery products.

The fact that no licensed EC are yet on the market suggests that the licensing route to market is not commercially attractive. The absence of non-tobacco industry products going through the MHRA licensing process suggests that the process is inadvertently favouring larger manufacturers including the tobacco industry, which is likely to inhibit innovation in the prescription market.

Policy implications

- From May 2016, following the introduction of the revised TPD, ECs will be more strictly regulated. As detailed elsewhere in the report, the information we present does not indicate widespread problems as a result of EC. Hence, the current regulatory structure appears broadly to have worked well although protecting non-smoking children and ensuring the products on the market are as safe and effective as possible are clearly important goals. New regulations currently planned should be implemented to maximise the benefits of EC whilst minimising these risks.

- An assessment of the impact of the TPD regulations on the UK EC market will be integral to its implementation. This should include the degree to which the availability of safe and effective products might be restricted.

- Much of England’s strategy of tobacco harm reduction is predicated on the availability of medicinally licensed products that smokers want to use. Licensed ECs are yet to appear. A review of the MHRA EC licensing process therefore seems appropriate, including manufacturers’ costs, and potential impact. This could include a requirement for MHRA to adapt the processes and their costs to enable smaller manufacturers to apply, and to speed up the licensing process. The review could also assess potential demand for the EC prescription market and what types of products would be most appropriate to meet that demand.

Summary of Chapter 4: Prevalence of e-cigarette use in England/Great Britain

Adults: Around one in 20 adults in England (and Great Britain) use EC. Current EC users are almost exclusively smokers (~60%) or ex-smokers (~40%), that is smokers who now use EC and have stopped smoking altogether. EC use among long-term ex-smokers is considerably lower than among recent ex-smokers. Current EC use among
never smokers is very low, estimated to be 0.2%. The prevalence of EC use plateaud between 2013-14, but appeared to be increasing again in 2015.

Youth: Regular EC use among youth is rare with around 2% using at least monthly and 0.5% weekly. EC use among young people remains lower than among adults: a minority of British youth report having tried EC (~13%). Whilst there was some experimentation with EC among never smoking youth, prevalence of use (at least monthly) among never smokers is 0.3% or less.

Overall, the adult and youth data suggest that, despite some experimentation with EC among never smokers, EC are attracting few people who have never smoked into regular use.

*Trends in EC use and smoking:* Since EC were introduced to the market, cigarette smoking among adults and youth has declined. In adults, overall nicotine use has also declined (not assessed for youth). These findings, to date, suggest that the advent of EC is not undermining, and may even be contributing to, the long-term decline in cigarette smoking.

**Policy implications**

- Trends in EC use among youth and adults should continue to be monitored using standardised definitions of use.
- Given that around two-thirds of EC users also smoke, data are needed on the natural trajectory of ‘dual use’, ie whether dual use is more likely to lead to smoking cessation later or to sustain smoking (see also Chapter 6).
- As per existing NICE guidance, all smokers should be supported to stop smoking completely, including ‘dual users’ who smoke and use EC.

**Summary of Chapter 5: Smoking, e-cigarettes and inequalities**

Smoking is increasingly concentrated in disadvantaged groups who tend to be more dependent. EC potentially offer a wide reach, low-cost intervention to reduce smoking and improve health in disadvantaged groups.

Some health trusts and prisons have banned the use of EC which may disproportionately affect more disadvantaged smokers.
Policy implications

- Consideration could be given to a proactive strategy to encourage disadvantaged smokers to quit smoking as quickly as possible including the use of EC, where appropriate, to help reduce health inequalities caused by smoking.

- EC should not routinely be treated in the same way as smoking. It is not appropriate to prohibit EC use in health trusts and prisons as part of smokefree policies unless there is a strong rationale to do so.

Summary of Chapter 6: E-cigarettes and smoking behaviour

Recent studies support the Cochrane Review findings that EC can help people to quit smoking and reduce their cigarette consumption. There is also evidence that EC can encourage quitting or cigarette consumption reduction even among those not intending to quit or rejecting other support. It is not known whether current EC products are more or less effective than licensed stop smoking medications, but they are much more popular, thereby providing an opportunity to expand the number of smokers stopping successfully. Some English stop smoking services and practitioners support the use of EC in quit attempts and provide behavioural support for EC users trying to quit smoking; self-reported quit rates are at least comparable to other treatments. The evidence on EC used alongside smoking on subsequent quitting of smoking is mixed.

Policy implications

- Smokers who have tried other methods of quitting without success could be encouraged to try EC to stop smoking and stop smoking services should support smokers using EC to quit by offering them behavioural support.

- Research should be commissioned in this area including:
  - longitudinal research on the use of EC, including smokers who have not used EC at the beginning of the study
  - the effects of using EC while smoking (temporary abstinence, cutting down) on quitting, and the effects of EC use among ex-smokers on relapse
  - research to clarify the factors that i) help smokers using EC to quit smoking and ii) deter smokers using EC from quitting smoking, including different EC products/types and frequency of use and the addition of behavioural support, and how EC compare with other methods of quitting which have a strong evidence base

- It would be helpful if emerging evidence on EC (including different types of EC) and how to use EC safely and effectively could be communicated to users and health professionals to maximise chances of successfully quitting smoking.
Summary of Chapter 7: Reasons for use and discontinuation

A number of surveys in different populations provide evidence that reducing the harm from smoking (such as through cutting down on their cigarette consumption or helping with withdrawal during temporary abstinence) and the desire to quit smoking cigarettes are the most important reasons for using EC. Curiosity appears to play a major role in experimentation. Most trial of EC does not lead to regular use and while there is less evidence on why trial does not become regular use, it appears that trial due to curiosity is less likely to lead to regular use than trial for reasons such as stopping smoking or reducing harm. Dissatisfaction with products and safety concerns may deter continued EC use.

Policy implications

- Smokers frequently state that they are using EC to give up smoking. They should therefore be provided with advice and support to encourage them to quit smoking completely.
- Other reasons for use include reducing the harm from smoking and such efforts should be supported but with a long-term goal of stopping smoking completely.

Summary of Chapter 8: Harm perceptions

Although the majority of adults and youth still correctly perceive EC to be less harmful than tobacco cigarettes, there has been an overall shift towards the inaccurate perception of EC being at least as harmful as cigarettes over the last year, for both groups. Intriguingly, there is also some evidence that people believe EC to be less harmful than medicinal nicotine replacement therapy (NRT).

Policy implications

- Clear and accurate information on relative harm of nicotine, EC and tobacco cigarettes is needed urgently (see also Chapter 10).
- Research is needed to explore how health perceptions of EC are developed, in relation to tobacco cigarettes and NRT, and how they can be influenced.

Summary of Chapter 9: E-cigarettes, nicotine content and delivery

The accuracy of labelling of nicotine content currently raises no major concerns. Poorly labelled e-liquid and e-cartridges mostly contained less nicotine than declared. EC used
as intended pose no risk of nicotine poisoning to users. However, e-liquids should be in ‘childproof’ packaging.

Duration and frequency of puffs and mechanical characteristics of EC play a major role in determining nicotine content in vapour. Across the middle range of nicotine levels, in machine tests using a standard puffing schedule, nicotine content of e-liquid is related to nicotine content in vapour only weakly. EC use releases negligible levels of nicotine into ambient air with no identified health risks to bystanders. Use of a cigalike EC can increase blood nicotine levels by around 5 ng/ml within five minutes of use. This is comparable to delivery from oral NRT. Experienced EC users using the tank EC can achieve much higher blood nicotine levels over a longer duration, similar to those associated with smoking. The speed of nicotine absorption is generally slower than from cigarettes but faster than from NRT.

Policy implications

- General labelling of the strength of e-liquids, along the lines used for example indicating coffee strength, provides sufficient guidance to consumers.

- Regulatory interventions should ensure optimal product safety but make sure EC are not regulated more strictly than cigarettes and can continue to evolve and improve their competitiveness against cigarettes.

Summary of Chapter 10: Safety of e-cigarettes in light of new evidence

Two recent worldwide media headlines asserted that EC use is dangerous. These were based on misinterpreted research findings. A high level of formaldehyde was found when e-liquid was over-heated to levels unpalatable to EC users, but there is no indication that EC users are exposed to dangerous levels of aldehydes; stressed mice poisoned with very high levels of nicotine twice daily for two weeks were more likely to lose weight and die when exposed to bacteria and viruses, but this has no relevance for human EC users. The ongoing negative media campaigns are a plausible explanation for the change in the perception of EC safety (see Chapter 8).

None of the studies reviewed above alter the conclusion of Professor Britton’s 2014 review for PHE. While vaping may not be 100% safe, most of the chemicals causing smoking-related disease are absent and the chemicals which are present pose limited danger. It has been previously estimated that EC are around 95% safer than smoking. This appears to remain a reasonable estimate.
Policy implications

- There is a need to publicise the current best estimate that using EC is around 95% safer than smoking.
- Encouraging smokers who cannot or do not want to stop smoking to switch to EC could be adopted as one of the key strategies to reduce smoking related disease and death.

Summary of Chapter 11: Other health and safety concerns

There is a risk of fire from the electrical elements of EC and a risk of poisoning from ingestion of e-liquids. These risks appear to be comparable to similar electrical goods and potentially poisonous household substances.

Policy implications

- The risks from fire or poisoning could be controlled through standard regulations for similar types of products, such as childproof containers (contained within the TPD but which are now emerging as an industry standard) and instructions about the importance of using the correct charger.
- Current products should comply with current British Standard operating standards.
- Records of EC incidents could be systematically recorded by fire services.

Summary of Chapter 12: International perspectives

Although EC use may be lower in countries with more restrictions, these restrictions have not prevented EC use. Overall, use is highest among current smokers, with low numbers of non-smokers reporting ever use. Current use of EC in other countries is associated with being a smoker or ex-smoker, similar to the findings in the UK. EC use is frequently misreported with experimentation presented as regular use. Increases in youth EC trial and use are associated with decreases in smoking prevalence in all countries, with the exception of one study from Poland.

Policy implications

- Future research should continue to monitor and evaluate whether different EC policies across countries are related to EC use and to smoking cessation and smoking prevalence.
- Consistent and agreed measures of trial, occasional and regular EC use among youth and adults are urgently needed to aid comparability.
1. Introduction

Despite the decline in smoking prevalence observed over the last few decades, there remain over eight million smokers in England. Most of these are from manual and more disadvantaged groups in society, including those with mental health problems, on low income, the unemployed and offenders. In some such population groups, the proportion who smoke is over two or three times higher than that in the general population, a level of smoking observed in the general population over 40 years ago. For those who continue to smoke regularly, much of their lives will be of lower quality and spent in poorer health than those who don’t smoke, and they will have a one in two chance of dying prematurely, by an average of 10 years, as a direct result of their smoking. Smoking is therefore the largest single contributor to health inequalities as well as remaining the largest single cause of preventable mortality and morbidity in England.

Moving forward, it is therefore important to maintain and enhance England's comprehensive tobacco control strategy in order to motivate and support all smokers in society to stop smoking as quickly as possible, and prevent the recruitment of new smokers. Harm reduction guidance, published by the National Institute for Health and Care Excellence in England in 2013, recognised that some smokers struggled to quit abruptly and that cigarettes were a lethal delivery system for nicotine [1]; it is widely accepted that most smokers smoke for the nicotine but die from the other smoke constituents. Harm reduction has been identified as one of the more promising policy options to reduce smoking induced inequalities in health [2]. All experts agree that a well-resourced comprehensive strategy, involving cessation, prevention and harm reduction should make the goal of a smoke-free society in England quickly achievable.

However, the advent of electronic cigarettes (EC) over recent years has caused controversy. In 1991, Professor Michael Russell, a leading English smoking cessation expert from the Institute of Psychiatry, argued that “it was not so much the efficacy of new nicotine delivery systems as temporary aids to cessation, but their potential as long-term alternatives to tobacco that makes the virtual elimination of tobacco a realistic future target”, and he recommended that “tobacco should be rapidly replaced by cleaner, less harmful, sources of nicotine” [3]. Professor Russell was one of the first to recognise the critical role that nicotine played in tobacco use and he identified that whilst there were good ethical and moral reasons not to promote nicotine addiction in society, the harm caused by nicotine was orders of magnitude lower than the harms caused by cigarette smoke. Professor Russell was also a pioneer of new treatments for smoking cessation, in particular, nicotine replacement therapies (NRT). Since then, the number of NRT products has proliferated such that there are now several different delivery routes and modes and countless different dosages and flavours. However, even with a relaxation of the licensing restrictions which increased their accessibility, NRT products have never become popular as an alternative to smoking.
In 2004, the first EC was marketed in China, and EC started to appear in England in 2006/7. The subsequent three years saw a rapid rise in their use. Whilst Professor Russell died in 2009, predating the arrival of these products in England, proponents of EC similarly recognised their potential to contribute towards making a smoke-free society more rapidly achievable [4]. Those against EC, however, believed that they were at best a distraction, at worst a means of undoing decades of progress in reducing smoking [5].

Any new tobacco control strategy for England must therefore incorporate a nicotine strategy, which should include recommendations and an appropriate regulatory framework for EC. This report attempts to inform that strategy by reviewing recent evidence and surveys relating to the use of EC and how they impact smoking behaviour. The focus is England, although we also draw on evidence from elsewhere in the UK and internationally.

**Description of e-cigarettes**

EC use battery power to heat an element to disperse a solution that usually contains nicotine. The dispersion of the solution leads to the creation of an aerosol that can be inhaled by the user. The heated solution typically contains propylene glycol or glycerine, water, nicotine, and flavourings. EC do not contain tobacco, do not create smoke and do not rely on combustion. Whilst EC ‘smoke’ is technically an aerosol, throughout this report we use the established terminology of vapour, vaping and vaper.

There is substantial heterogeneity between different types of EC and the speed with which they are evolving making them difficult to categorise. ECs available in England can be classified into three basic types: (1) EC that are either (a) disposable or (b) use pre-filled cartridges that need to be replaced once emptied. We will refer to these using their most common name, ‘cigalikes’. Most cigalikes resemble cigarettes, although it is important to note that some do not; (2) EC that are designed to be refilled with liquid by the user. We will refer to these using their common name ‘tank systems’. (3) Finally, some EC products, mostly tank systems that allow users to regulate the power delivery from the batteries to the atomizer. These we refer to as mods or ‘variable power EC’.

In the UK, the most prominent brands of cigalikes are now owned by the tobacco industry. To the authors’ knowledge only one tobacco company sells a tank model in the UK, with the rest of the market consisting of non-tobacco industry companies. Some products have also been introduced by the tobacco industry that could be referred to as ‘hybrids’ such that they use pre-filled nicotine cartridges but look like tank models. Additionally, a few EC that are similar to cigalikes in function are also sold that use cartridges that can be refilled, and some users will puncture holes/remove the ends of cigalike cartridges to refill them instead of buying new cartridges.
Studies have validated the ability of EC to deliver nicotine to the user. Blood plasma nicotine concentrations increase after inhalation of EC aerosol [6, 7], and cotinine, a biomarker for nicotine, has been detected in the saliva of EC users [8, 9]. Information about the overall and relative risks of EC in comparison with smoking has also been developing. Using a multi-criteria decision analysis (MCDA) model, the Independent Scientific Committee on Drugs selected experts from several different countries to compare a variety of nicotine products on variables of harm identified by the UK Advisory Council on the Misuse of Drugs [10]. EC were identified as having 4% of the relative harm of cigarettes overall (including social harm) and 5% of the harm to users, although it was acknowledged that there was a lack of hard evidence for the harms of most of the nicotine products on most of the criteria.

**Structure of report**

Following Chapter 2 on methodology, Chapter 3 assesses the current and future policy framework for EC. Chapters 4 and 5 assess trial and usage in England among adults and youth as well as different socioeconomic groups where evidence permits. Chapter 6 examines the evidence for the impact of EC on smoking behaviour including the use of EC in quit attempts as well as alongside smoking. Chapter 7 assesses reasons for trying and discontinuing EC and Chapter 8 perceptions of relative harms of EC and smoking. Chapter 9 discusses nicotine content and emissions of EC as well as nicotine uptake in users. Chapters 10 and 11 assess different aspects of safety drawing on recent published studies as well as national statistics. Chapter 12 examines international perspectives of EC policies and usage.
2. Methodology

For the present report we have included: (1) a synthesis of recent evidence (published since the two PHE 2014 EC reports) with the earlier evidence in the earlier PHE reports drawing on both national and international literature; and (2) where feasible, an analysis of any relevant national unpublished data available to PHE, KCL and partner organisations from England, Great Britain or the UK, including: i) Smoking Toolkit Study (UCL); ii) Action on Smoking and Health (ASH) Smokefree GB (adult and youth) surveys; iii) Internet Cohort GB survey; iv) Smokers’ surveys 2014 commissioned by ASH from YouGov; and v) the International Tobacco Control (ITC) policy evaluation project.

For the evidence review (1) above, given the short timeframe for this report, a systematic review of the literature was not possible. However, we followed systematic review methods where possible and searched PubMed for studies from 2014 onwards using the following search terms: ((("2014/01/01"[Date-Publication] : "3000"[Date-Publication])) AND ((((((e-cigarette) OR Electronic cigarettes) OR e-cig*) OR electronic cig*) OR ENDS) OR electronic nicotine delivery systems) OR electronic nicotine delivery system) OR ((Nicotine) AND Vap*)).

The term ENDS was used as some studies have referred to e-cigarettes as Electronic Nicotine Delivery Systems (ENDS). This search returned 3,452 records. The titles of all records were screened and 798 articles were identified as potentially relevant to the report. The full papers of abstracts considered relevant by two reviewers were retrieved and reviewed as identified in Appendix A.

We wanted to ensure we included the most up-to-date information on EC use and impact in England. In order to do this we used routine national data sources to retrieve measures of EC use prevalence, fires, poisoning and other adverse events. Specifically for (2) above, we assessed, in addition to published papers, unpublished national survey data relevant to this work, identifying where findings are peer reviewed/published. The methods of the surveys that we have accessed are as follows:

**Smoking Toolkit Study (STS, University College London)**

The STS consists of monthly cross-sectional household interviews of adults (aged 16 and over) in England that has been running since November 2006. Each month involves a new nationally representative sample of about 1,800 respondents. Since 2009, all respondents who smoked in the last year have been asked questions on EC; since November 2013 all respondents complete questions on EC. For more information, see www.smokinginengland.info
ASH Smokefree GB (adult and youth) surveys

**Adult:** ASH has conducted **cross-sectional internet surveys** of adults (aged 18 and over) in Great Britain (GB) since 2007. These surveys cover a wide range of tobacco control policies and smoking behaviour and are carried out on ~12,000 adults each year. Questions on EC were included first in 2010, with new EC questions added in each subsequent survey (2012, 2013, 2014, 2015).

**Youth:** ASH has conducted **cross-sectional surveys of British youth** (aged 11-18) three times to date (2013, 2014, 2015). **Younger** participants are recruited, **online**, through the adult YouGov participants with **older** participants contacted **directly**. It has been used to give a more contemporaneous and comprehensive snapshot of youth attitudes towards smoking and their behaviours (and includes a breakdown of trial and more prolonged use of EC) than UK Government national surveys have been able to.

**Internet Cohort GB survey (King’s College London, University College London)**

A unique longitudinal internet survey of smokers and recent ex-smokers in GB (aged 16 and over) surveyed first in 2012 and then again in December 2013 and 2014. Of the 5,000 respondents in the initial sample, 1,031 respondents (20.7%) used EC at all at the time of the survey in 2012. The prevalence of past-year smoking in this baseline sample was similar to that identified through the STS (which, as stated above, recruited representative samples of the population in England), over a comparable period.

In 2013, 2,182 of the 5,000 were followed up and in 2014, 1,519 were followed up. EC use was 32.8% (n=717) in 2013 and 33.2% (n=505) in 2014. The study sample was recruited from an online panel managed by Ipsos MORI who were invited by email to participate in an online study and were screened for smoking status. The survey included questions on smoking and quitting behaviour and stress and general health as well as detailed questions on EC usage.

**ASH GB Smokers’ survey 2014**

This is an online survey carried out by YouGov for ASH specifically to assess more detailed attitudinal measures concerning nicotine containing products. The 2014 survey involved 1,203 adult smokers and recent ex-smokers selected from the ASH Smokefree adult survey to have roughly equal numbers of smokers who had (n=510) and had not (n=470) tried EC and a smaller number of ex-smokers who had tried EC (n=223).

**ITC Policy Evaluation project**

A longitudinal cohort survey of smokers and recent ex-smokers (aged 18 and over), surveyed by telephone and internet. The ITC UK survey started in 2002 and surveys
have been conducted approximately annually since that time. Probability sampling methods are utilised through telephone surveys using random digit dialling, but in more recent survey waves participants could opt to complete surveys on the internet. The ITC UK study benefits from parallel cohort surveys in Australia, Canada and the United States, enabling comparisons across countries with different tobacco and EC policies. Each wave of the survey includes approximately 1,500 UK respondents. EC questions were added to the last three waves. Data from the last wave (in 2014) were not available for inclusion in this report, but published papers from earlier waves are included. More details of the methodology are available at www.itcproject.org
3. UK policy framework

E-cigarette regulations in England: current and proposed

Regulations have changed little in England since the previous PHE reports. Currently EC are governed by general product safety regulations (UK and EU) which do not require that the products be tested before being put on the market. However, manufacturers can apply for a medicinal licence through the Medicines and Healthcare products Regulatory Agency (MHRA) [11] and from next year any EC not licensed by the MHRA will be governed by the revised European Union Tobacco Products Directive (TPD)[12]. Both the MHRA licensing and the TPD regulatory routes are described below. The TPD regulations are extensive and will have a significant impact on the EC market.

One change from the previous PHE report, which was introduced by the Advertising Standards Authority in October 2014, is that until the TPD comes into force, advertising of EC is governed by a voluntary agreement. This agreement indicates, inter alia, that advertising must be socially responsible, not promote any design, imagery or logo that might be associated with a tobacco brand or show the use of a tobacco product in a positive light, make clear that the product is an EC and not a tobacco product, not undermine quit tobacco messaging, and must not contain health or medicinal claims unless the product is licensed. These guidelines will be reviewed in October 2015 and when more is known about the application of the TPD the role of the Code will be clarified.

A further recent change is the introduction of measures to protect children from EC: an age of sale lower limit of 18 years of age (in line with tobacco cigarettes) is being introduced and a ban on proxy purchasing of EC.

EU Tobacco Products Directive (TPD) route

The revised TPD will introduce new regulations for EC or refill containers (referred to below as products) which are not licensed by the MHRA. We have listed these in detail below because they are wide-ranging and will impose a significant step change for manufacturers, importers and Member State (MS) authorities:

- **notification**: Manufacturers must inform competent authorities of the MS six months before placing new products on the market. For those already on the market by 20 May 2016, the notification needs to be submitted within six months of this date. Each substantial modification of the product requires a new notification
- **reporting obligations** (for which manufacturers/importers might be charged) include:
details (including quantification) on all the ingredients contained in, and emissions resulting from the use of, the product, by brand name
- toxicological data regarding ingredients and emissions, including when heated, with reference particularly to health of consumers when inhaled including any addictive effect
- information on nicotine doses and uptake when consumed under normal or reasonably foreseeable conditions
- description of the product components, including where appropriate opening and refill mechanisms of product or refill containers
- description of the production process and declaration that it conforms with the TPD
- declaration that manufacturer/importer bear full responsibility for the quality and safety of the product when placed on market and used under normal or reasonably foreseeable conditions

**nicotine-containing liquid** restrictions:
- EC must not contain more than 20 mg/ml of nicotine
- nicotine-containing liquid must be in dedicated refill containers not exceeding 10ml volume, and cartridges or tanks do not exceed a volume of 2ml
- additives are not prohibited but the nicotine-containing liquids cannot contain additives that are otherwise prohibited by the other Articles in the TPD
- high purity ingredients must be used and substances other than those declared should only be present in trace quantities which are unavoidable during manufacture
- ingredients must not pose a risk to health either when heated or not heated
- nicotine doses must be delivered at consistent levels under normal conditions of use

- products are required to be child and tamper proof, protected against breakage and leakage and have a mechanism that ensures refilling without leakage
- products must include a **leaflet with information** on:
  - instructions for use and storage of the product, including a reference that the product is not recommended for use by young people and non-smokers
  - contra-indications
  - warnings for specific groups
  - possible adverse effects
  - addictiveness and toxicity
  - contact details of manufacturer/importer and a legal or natural contact person within the EU

**outside packaging of products** must include:
- list of all ingredients contained in the product in descending order of the weight
- an indication of the nicotine content and delivery per dose
- batch number
- recommendation to keep the product out of reach of children
• no promotional element or feature or such that suggests the product is harm reducing (or other features described in Article 13 of the Directive)

• **health warnings:**
  • One of the following must be shown:
    ▪ ‘This product contains nicotine which is a highly addictive substance. It is not recommended for use by non-smokers’ or
    ▪ ‘This product contains nicotine which is a highly addictive substance’
  • Member States shall determine which health warning to use
  • health warnings must comply with regulations concerning specific provisions on position and size

• **cross-border advertising** and promotion, sponsorship etc of products will be prohibited (unless trade information)

• **cross-border sales** of products may be prohibited or subject to a registration scheme

• manufacturers/importers of products to submit an **annual submission** on their products to competent authorities in MS which should include:
  • comprehensive data on sales volumes, by brand name and product type
  • information on preferences of various consumer groups, including young people, non-smokers and the main types of current users
  • mode of sale of the products
  • executive summaries of any market surveys carried out in respect of the above, including an English translation thereof products

• MS shall monitor the market developments concerning products, including any evidence that their use is a gateway to nicotine addiction and ultimately traditional tobacco consumption among young people and non-smokers. This information to be made publicly available on a website although the need to protect trade secrets should be taken into account

• MS should on request, make all information relevant to this Article available to the Commission and other Member States who will respect confidential information

• MS shall require manufacturers, importers and distributors of products to establish and maintain a system for collecting information about all of the suspected adverse effects on human health

• **corrective action** should be taken immediately if economic operators consider or have reason to believe that products are not safe or of good quality or not conforming to the Directive, ensuring conformity or withdrawal or recall from the market. In such cases, operators are required to inform immediately market surveillance authorities of the MS giving details of risk to human health and safety, corrective action taken and results of such corrective action. MS may request additional information from the economic operators on safety and quality aspects or any adverse effect of products

• the Commission will submit a report to the European Parliament and the Council on potential risks to public health by 20 May 2016 and as appropriate thereafter
where a competent authority believes specific products could pose a serious risk to human health it should take appropriate provisional measures, immediately inform Commission and competent authorities of other MS of measures taken and communicate any supporting data. The Commission will determine whether provisional measure is justified informing the MS concerned of its conclusions to enable appropriate follow-up measures to be taken

- the Commission can extend any prohibition to other MS if such an extension is justified and proportionate
- the Commission is empowered to adapt wording of health warnings and ensure factual
- the Commission will give a common format for notification and technical standard for the refill mechanism outlined above

The exact date of implementation in England is yet to be specified but full compliance is likely to be necessary by 2017. One UK company, Totally Wicked, has challenged the UK’s intention to transpose the Directive into UK law. The case rests on whether the TPD was properly made and has been referred to the European Court of Justice for a preliminary ruling. This is expected in late 2015/early 2016.

During implementation, government will need to undertake an impact assessment for the UK market on the final proposals as set out in the Directive and this will be consulted upon. The TPD certainly raises the barrier for bringing EC products to market or continuing to market existing products, and will undoubtedly constrain the EC market. Understanding any unintended consequences of the EU TPD as well as intended ones will be important. For example, the cap on nicotine concentrations introduced by the TPD will take high nicotine EC and refill liquids off the market, potentially affecting heavier smokers seeking higher nicotine delivery products.

Medicines and Healthcare products Regulatory Agency (MHRA) licensing route

Following a consultation in 2010, the UK MHRA introduced a mechanism for the licensing of EC and other nicotine containing products as medicines requiring medicinal purity and delivery standards. Such a licence would be required for products to be prescribed on the NHS. As with other licensed nicotine containing products, advertising controls would be applied and VAT of 5% would be imposed.

The licensing process has been described by the MHRA [11]. This regulation was described initially as ‘light touch’ recognising a product that delivered nicotine could be effectively used for harm reduction or cessation purposes, thus implying a relatively speedy route to licensing. This was subsequently changed to ‘right touch’ as it was apparent that the process was more lengthy and costly than originally envisaged. We understand that the MHRA estimated costs for a one-off application of between £252K and £390K with an annually recurring cost of between £65K and £249K, for each
product. This does not include the costs of making manufacturing facilities and products MHRA compliant – estimated at several million pounds.

At the time of writing one non-EC nicotine inhaler product, Voke, developed by Kind Consumer, and to be marketed by British American Tobacco (BAT), had received a medicinal licence, although it is not yet being marketed in England. A further BAT product (an EC) is currently going through the application process. Other EC products are currently in the pipeline with the MHRA but it is not clear at what stage the applications are or what types of products, eg cigalikes or tank models, are involved.

The absence of a licensed product, five years after the MHRA’s consultation took place, suggests that this route to market is not commercially attractive. The fact that the only product at the application stage is a BAT product suggests that the process is very resource intensive. As well as cost, other possible reasons include complexity, a lack of desire to engage with medicinal licensing or the MHRA, the entrepreneurial nature of the EC manufacturers and a possible lack of perceived benefits to acquiring a licence. This could be problematic when the EU TPD is implemented, which is likely to constrain the over-the-counter market. Additionally, having a diverse range of EC on prescription is likely to be beneficial (similar to nicotine replacement tobacco (NRT) products – when new products are introduced, evidence suggests that they do not cannibalise the existing NRT product market but instead expand the use of medications). This means that small manufacturers, particularly non-tobacco industry manufacturers, who may be producing a greater variety or more satisfying EC, will not compete with larger corporations such as the tobacco industry in the prescriptions market. There are several consequences of this which should be explored. These could include an inhibition of innovation and damage public health. Alternatively, given the demand for prescribed EC products is as yet unknown, particularly in the population groups where smoking prevalence is elevated, the medicinal route may not impact public health. The appeal of EC may rest in the fact that they are not medicines. A review of the MHRA licensing process for EC, and its likely impact, is recommended.

**Summary of findings**

The revised TPD will introduce new regulations for EC or refill containers which are not licensed by the MHRA. The cap on nicotine concentrations introduced by the TPD will take high nicotine EC and refill liquids off the market, potentially affecting heavier smokers seeking higher nicotine delivery products.

The fact that no licensed EC are yet on the market suggests that the licensing route to market is not commercially attractive. The absence of non-tobacco industry products going through the MHRA licensing process suggests that the process is inadvertently favouring larger manufacturers including the tobacco industry, which is likely to inhibit innovation in the prescription market.
Policy implications

- From May 2016, following the introduction of the revised TPD, ECs will be more strictly regulated. As detailed elsewhere in the report, the information we present does not indicate widespread problems as a result of EC. Hence, the current regulatory structure appears broadly to have worked well although protecting non-smoking children and ensuring the products on the market are as safe and effective as possible are clearly important goals. New regulations currently planned should be implemented to maximise the benefits of EC whilst minimising these risks.

- An assessment of the impact of the TPD regulations on the UK EC market will be integral to its implementation. This should include the degree to which the availability of safe and effective products might be restricted.

- Much of England’s strategy of tobacco harm reduction is predicated on the availability of medicinally licensed products that smokers want to use. Licensed ECs are yet to appear. A review of the MHRA EC licensing process therefore seems appropriate, including manufacturers’ costs, and potential impact. This could include a requirement for MHRA to adapt the processes and their costs to enable smaller manufacturers to apply, and to speed up the licensing process. The review could also assess potential demand for the EC prescription market and what types of products would be most appropriate to meet that demand.

This chapter assesses the use of EC by adults and young people in England by drawing on recent surveys carried out in England and Great Britain (GB). A later chapter discusses EC prevalence internationally.

Measures used

One of the main issues in measuring EC use is the lack of consistent and appropriate terminology, for example some studies equate ever having used EC with current use of EC which is clearly inappropriate. We recommend that definitions of usage categories should be standardised similar to those used in smoking surveys. Appendix B lists the different measures used in surveys focused on in this report, and gives definitions used in the other studies included in this review.

Use of e-cigarettes by adults

First, we assess e-cigarette use in the adult population in England. We summarise various data sources to provide an overview of EC use among the general population, and then specifically smokers, recent and long-term ex-smokers, and never-smokers. The two main surveys used in this chapter are the Smoking Toolkit Study (STS) and the ASH Smokefree GB surveys. However, in addition to these surveys, findings from the Office for National Statistics Opinions and Lifestyle Survey (ONS survey), a randomised probability sample omnibus survey in GB, have also been included in this section although the exact question used is not available [13]; preliminary released data from Q1 2014 are reported here in advance of the complete data due for publication later in 2015.

Population use of e-cigarettes

Of the available datasets, just two – the Smoking Toolkit Study (STS, England) and the ASH Smokefree GB adult surveys – provide information on population prevalence (Table 1). Using the STS, it is estimated that 5.5% of the adult population of England used EC in the first quarter of 2015 indicating a marked rise from 0.5% in 2011. The measure of use in the STS is compiled from four survey questions and assesses current use for any reason (Appendix B). A very similar estimate is obtained for GB using the 2015 ASH survey, with 5.4% of the population estimated to be current (defined as tried EC and still use them, see Appendix B) EC users. This translates to about 2.6 million EC users in GB in 2015 [14](for comparison there are about nine million tobacco
smokers in GB and as discussed later, most EC users are smokers or ex-smokers). The ASH survey also assessed trial and about 17% of the adult GB population was estimated to have tried EC.

**Table 1: Adult EC current use**

<table>
<thead>
<tr>
<th>Source (date of data collection)</th>
<th>Population Prevalence (%)</th>
<th>Never smokers (%)</th>
<th>Ex-smokers (%)</th>
<th>Smokers (‘Dual users’) (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASH Smokefree GB adult survey (2015 - March)</td>
<td>5.4%</td>
<td>0.2%</td>
<td>6.7%</td>
<td>17.6%</td>
</tr>
<tr>
<td>Office for National Statistics (2014 - Q1)</td>
<td>N/A</td>
<td>0.1%</td>
<td>4.8%</td>
<td>11.8%</td>
</tr>
<tr>
<td>Smoking Toolkit Study (2015 – Q1)</td>
<td>5.5%</td>
<td>0.2%</td>
<td>3.3%</td>
<td>21.2%</td>
</tr>
</tbody>
</table>

1 For definitions of current use please see Appendix B. The ONS question is unavailable.
2 Figures for never and long-term ex-smokers are derived from n=22489 never and long-term ex-smokers surveyed between November 2013 and March 2015

**Never smokers and long-term ex-smokers**

All three surveys estimate current EC use among adult never smokers to be very rare at 0.2% or less, and between 3% and 7% among ex-smokers – the latter estimates may vary because in the STS recent ex-smokers (last-year) are not included in this category (Table 1). Prevalence of current EC use among recent ex-smokers in the STS was around 40% in the first quarter of 2015 [15].

The ASH survey estimated that around 1.5% of never smokers and 16% of ex-smokers had ever tried EC.

**Smokers**

Recent surveys estimate that current EC use among smokers, sometimes referred to as ‘dual users’ of cigarettes and e-cigarettes, is between 12 and 21% (Table 1). The prevalence of EC use among last-year smokers (defined as smokers and recent ex-smokers) using the STS in England is estimated at 22.9% for any use of EC and 14.9% for daily EC use. The ASH 2015 survey indicated that 17.6% of current smokers use EC currently (18% of occasional and 17% of daily smokers); the same survey indicated that a small majority of smokers (59%) have now tried EC.

The Q1 2014 ONS Survey data estimates for current use are considerably lower, suggesting that just under 12% of current smokers used EC in early 2014. The survey question/s used to determine this is/are not available to assess whether different ways of assessing use may be a reason for this discrepancy in findings.
The ASH survey indicates that about 60% of current EC users are current smokers, and about 40% are ex-smokers. The proportion of EC users among never smokers remains negligible.

**Summary**

Around one in 20 of the general adult population in England (and GB) use EC. Current EC users are almost exclusively smokers or ex-smokers. EC use among long-term ex-smokers is considerably lower than among recent ex-smokers.

**Trends in e-cigarette use among adults**

Both the STS and ASH surveys demonstrate that there was a steady increase in EC use in the population from 2011 to 2013.

**Smoking Toolkit Study (STS) data**

The STS data indicate that this increase slowed down, even declining at the end of 2014 from 5.3% in Q3 to 4.5% in Q4 (Figure 1). However, as Q1 data from 2015 show a recent upswing to 5.5%, this decline may have been temporary. The STS data show that alongside the increase in EC use, smoking of tobacco cigarettes declined. Overall nicotine use, ie any consumption via cigarette smoking, NRT use or EC use, has also declined.

**Figure 1: Prevalence of smoking and e-cigarette use among the adult English population (STS)**

![Graph showing prevalence of smoking and e-cigarette use](https://www.smokinginengland.info/latest-statistics/)
The overall pattern of EC use in the population is mirrored among last year smokers for whom EC prevalence increased from 2011, but declined from 22% for *any* use and 14% for *daily* use in Q3 2014, to 19% and 11% respectively in Q4 2014; however, any and daily use increased again to 23% and 15% respectively in Q1 2015 (Figure 2).

**Figure 2: Prevalence of e-cigarette use among last year smokers (STS)**

![Prevalence of e-cigarette use among last year smokers](image)

From <www.smokinginengland.info/latest-statistics/>

**ASH Smokefree GB adult survey**

The ASH surveys indicated a slowing down in the increase of EC use in the population between 2014 and 2015 and use among current smokers in 2015 remained at the 2014 level (17.6% of smokers in 2014 and 2015). Use among ex-smokers increased from 1.1% in 2012, to 4.5% in 2014 and 6.7% in 2015, whereas no increase in use was observed among never smokers over the last few years, remaining at 0.2% since 2013. **This means that the increase in EC use observed overall was accounted for by an increase in use by ex-smokers.** It is not clear to what extent this is due to smokers stopping smoking using EC or ex-smokers taking up ECs.

**Summary**

The prevalence of EC use among adults has plateaued. Most of the recent increase in use appears to be among ex-smokers. Cigarette smoking has declined over the period when EC use increased and overall nicotine use has also declined. These findings suggest that the advent of EC is not undermining and may be contributing to the long-term decline in cigarette smoking.
Types and flavours of e-cigarettes used among adults

When those who had tried EC in the 2015 ASH survey were asked about which EC they used first, 24% reported a disposable, 41% a rechargeable with replaceable pre-filled cartridges and 28% rechargeable with tank/reservoir filled with liquids (7% didn’t know/couldn’t remember). The different types were in the same order of popularity for first use regardless of smoking status (Figure 3).

For those still using EC from the same survey, only 5% were now mostly using a disposable, 26% a rechargeable with replaceable pre-filled cartridges and 66% rechargeable with tank/reservoir filled with liquids (2% didn’t know/couldn’t remember). This suggests that a considerable proportion of those who continue to use EC over time switch to the tank models. Among EC users, ex-smokers were particularly likely to use tank models mostly and very few ex-smokers were using disposables (Figure 3). This is in agreement with findings reported in Chapter 6 of this report, where tank models were found to be associated with having quit smoking [16].

Figure 3: Type of e-cigarettes first used and currently used (ASH Smokefree GB data 2015)

The ASH Smokefree GB 2015 adult survey also shows that the most popular flavour was tobacco flavour, followed by fruit and menthol flavours (Figure 4).
Use of e-cigarettes among young people

The main source for estimating smoking prevalence in England among youth is the 'Smoking, drinking and drug use among young people' surveys [17], however, EC use was first assessed in 2014 and these data are not yet available. This section therefore draws on the ASH Smokefree GB youth surveys to assess EC usage in young people, supplemented by a study in the North West of England, two cross-sectional national surveys in Wales and one national survey in Scotland. The measures used are detailed in Appendix B.

In 2015, the ASH survey found that 12.7% of 11 to 18-year olds reported having tried EC; of these, 80.9% had only used one once or twice (10.2% of all respondents). Current EC use was considerably lower: 0.7% had used an EC sometimes but not more than once a month; 1.2% more than once a month but not weekly; and 0.5% weekly (Table 2). The prevalence of EC use (2.4% overall) among people aged between 11 and 18 was therefore lower than among the general population. In comparison, 21% of all 11 to 18-year olds reported having tried cigarettes, of whom 54% only tried once (11.4% of all respondents). Current smoking was reported by a total of 6.7%; 2.7% smoked less than weekly and 4% at least weekly.
Experimentation increased with age: 2.9% of 11-year olds and 20.2% of 18-year olds had tried EC. In comparison, among 11-year olds, 3.9% had tried cigarettes (0.7% current smokers), whereas 40.9% of 18-year olds had tried cigarettes (14.3% current smokers).

Use of EC was very closely linked with smoking status. Among never smokers, 0.3% used EC monthly or more often, compared with 10.0% of ever smokers and 19.1% of current smokers. The majority of EC users had tried tobacco cigarettes first (Table 2).

### Table 2: E-cigarette use among young people

<table>
<thead>
<tr>
<th>Source</th>
<th>Ever tried</th>
<th>Use more than /at least once a month</th>
<th>Use more than once a week</th>
<th>Use (at least monthly) in never smokers</th>
<th>Those using e-cigarettes who had tried tobacco first</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASH Smokefree GB youth survey (11-18 years) (2015 – March)</td>
<td>12.7%</td>
<td>1.9%</td>
<td>0.5%</td>
<td>0.1%</td>
<td>63.7%</td>
</tr>
<tr>
<td>Health Behaviour in School-aged Children, Wales (11-16 years) (Nov 2013 – Feb 2014) [18]</td>
<td>12.3%</td>
<td>1.5%</td>
<td>Not reported</td>
<td>0.3%</td>
<td>Not reported</td>
</tr>
<tr>
<td>CHETS Wales survey (10—11 year olds) [19] 2014</td>
<td>5.8%</td>
<td>Not reported</td>
<td>Not reported</td>
<td>Not reported</td>
<td>Not reported</td>
</tr>
<tr>
<td>SALSUS Scotland survey (15 and 13 year olds)[20] 2013/2014</td>
<td>12%</td>
<td>0.4%</td>
<td>0%</td>
<td>0%</td>
<td>Not reported</td>
</tr>
</tbody>
</table>

1 For question on e-cigarette categories please see Appendix B. Use more than/ at least once a month excludes those using more than once a week who are reported separately

2 N=9055, use defined as at least monthly

Similar findings have been observed in Scotland. A national survey carried out in 283 schools across Scotland in late 2013/early 2014 involved more than 33,000 schoolchildren aged 13 and 15 years old [20]. Seven per cent of 13-year olds, and 17% of 15-year olds, had ever used an EC. Trial was associated with smoking status – 4% of never smokers had tried EC (3% trying them once and 1% having tried a few times) compared with 24% of ever smokers, 39% of ex-smokers, 46% of occasional smokers and 66% of regular smokers. Eleven per cent of regular smokers and 6% of occasional smokers reported using e-cigarettes at least monthly.

Very similar findings have been reported from a survey in Wales (Table 2). A survey of secondary schoolchildren was carried out under the auspices of the Health Behaviour of
School Children (HBSC) study and more than 9,000 participants aged 11–16 from 82 schools were included [18]. Overall, 12.3% had tried EC, 1.5% were monthly users, compared with 12.1% reporting ever having smoked and 5.4% current smokers (reported smoking less than once a week or more frequently). Whilst many experimental EC users had never smoked, most regular EC users had also smoked tobacco. The authors commented that “the very low prevalence of regular use…suggests that e-cigarettes are unlikely to be making a significant direct contribution to adolescent nicotine addiction”.

Additionally, around 1,500 10 to 11-year olds were surveyed in Wales, from 75 schools in the CHETS Wales study [18, 19] (Table 2). Overall, 5.8% (n=87) had ever used an EC; most reported only using once (3.7%, n=55 overall) and only 2.1% (n=32) reported using them more than once. Again, EC use was associated with smoking. Just under half (47.6%) of those who reported having used tobacco had ever used an EC compared with 5.3% of never smokers. Controlling for other variables associated with EC use, parental use of EC and peer smoking remained significantly associated with having ever used an EC. Having ever used an EC was associated with weaker anti-smoking intentions. Parental EC use was not associated with weakened anti-smoking intentions whereas parental smoking was [19]. This study, published prior to the one above, concluded that EC represented a new form of experimentation with nicotine that was more common than tobacco usage. It also commented that the findings added “some tentative support for the hypothesis that use of e-cigarettes may increase children’s susceptibility to smoking”. However, as this was a cross-sectional survey, causal connections cannot be inferred. It is possible that children who had used EC would have smoked cigarettes in their absence and this could explain the relationship between intentions and EC usage (see below).

An additional survey of schoolchildren has been carried out in England. Trading Standards in the North West of England have been running biennial surveys of schoolchildren since 2005. The 2013 findings on EC, smoking and alcohol were published [21]. The survey was not designed to be representative (no compliance or completion rates were collected) but instead “to provide a broad sample of students from a range of community types”. More than 100 schools participated and more than 16,000 participants aged 14–17 years of age were included in the analyses. It is important to acknowledge that the question about EC was “Have you ever bought or tried electronic cigarettes?”, and this study cannot therefore add to knowledge on current usage. Around one in five of the sample had accessed EC, with access being higher in those who had experience of smoking. Around 5% of those who had never smoked cigarettes reported accessing EC; around half of ex-smokers and over two thirds of regular smokers had accessed them. Parental smoking and alcohol use were also associated with EC access.
Summary

Regular use of EC among youth is rare with around 2% using at least monthly and 0.5% weekly. A minority of British youth report having tried EC (national estimates suggest around 12%). Whilst there was some experimentation with EC among never smokers, nearly all those using EC regularly were cigarette smokers.

Trends in e-cigarette use among young people (ASH Smokefree GB youth)

The ASH Smokefree GB youth surveys indicate that awareness of EC has increased markedly, with the proportion of individuals who had never heard of EC falling from 33.1% in 2013 to 7.0% in 2015. Ever having tried EC also increased, from 4.5% in 2013, to 8.1% in 2014, and to 12.7% in 2015. However, the proportion using an EC monthly or more frequently remained virtually unchanged from 2014 (1.6%) to 2015 (1.7%). Over the same period, the proportion of regular smokers (at least weekly) remained at around 4% (2013: 4%, 2014: 3.6%, 2015: 4%).

Type and flavour among youth

The proportion of youth reporting current use was too small to assess the most frequently used types or flavours in current users, so Figures 5 and 6 include everyone who had tried an EC. One third had first used a tank model and the most popular flavours among triers by far were fruit flavours. The responses for adults and youth are not directly comparable given flavours were assessed for adult current EC users, but in the latter group, fruit flavours were less popular than tobacco flavours.
Figure 5: First type of e-cigarette tried by youth, ASH Smokefree GB youth survey, 2015

Note: The proportion of youth reporting current use was too small to assess the most frequently used types.

Figure 6: Last flavour tried by youth, ASH Smokefree GB youth survey, 2015

Note: The proportion of youth reporting current use was too small to assess flavours in current users.
Concerns about impact of e-cigarette use on smoking

Three main concerns raised about EC use are that they might 1) renormalise smoking 2) reduce quitting and 3) act as a ‘gateway’ to smoking or nicotine uptake. An ultimate test for the first concern, and to some extent all three concerns, is the impact of EC use on smoking prevalence nationally which is explored first below. Evidence for effectiveness of EC on quitting smoking is explored in more detail in Chapter 6. Whilst other concerns have been raised such as renormalising the tobacco industry, we are only able to comment on issues pertaining to the objectives of our report.

Recent trends in smoking prevalence

Since EC arrived on the market in England, smoking prevalence has continued to decline among both adults and youth (Figures 1, 7 and 8). Evidence to date therefore conflicts with any suggestion that EC are renormalising smoking. Whilst other factors may be contributing to the decline in smoking, it is feasible that EC may be contributing to reductions in smoking over and above any underlying decline.

Figure 7: Adult smoking prevalence in England 1980–2013

1 General Lifestyle Survey aged 16+(1980-2010); Integrated Household Survey aged 18+ (2011). Diagram courtesy of ASH.
Gateway

The gateway theory or hypothesis is commonly invoked in addiction discourse, broadly to suggest that the use of one drug (sometimes a legal one such as tobacco or alcohol) leads to the use of another drug (sometimes an illegal one) but its definition is contested. No clear provenance exists and its origin appears to derive from lay, academic and political models [22]. It is apparent that discussions about the natural progression of drug use observed in longitudinal studies of young people appear to have morphed into implicit conclusions on causality without any evidential backing.

Some have argued that the effect could be causal if the use of one drug, biochemically or pharmacologically, sensitises the brains of users to the rewarding effects of other drugs [23] making the dependent use of these other drugs more likely. However, there are many plausible competing hypotheses for such a progression [24] including i) shared networks and opportunities to purchase the drugs; and ii) individual characteristics such as genetic predispositions or shared problematic environment. Academic experts have stated that the gateway concept “has been one of the most controversial hypotheses…in part because proponents and opponents of the hypothesis have not always been clear about what the hypothesis means and what policies it entails” [24]. Indeed, a recent analysis of gateway concluded “Although the concept of

Figure 8: Prevalence of regular smoking among 11–15 year olds in England 1980–2014

Please note: decimal places were not used in the published data.

the gateway theory is often treated as a straightforward scientific theory, its emergence is rather more complicated. In effect, it is a hybrid of popular, academic and media accounts – a construct retroactively assembled rather than one initially articulated as a coherent theory” [22].

Despite these serious and fatal flaws in the arguments, the use of the term ‘gateway’ is commonplace both in the academic literature and the lay press, particularly in relation to EC use and whether EC are a gateway to smoking. Some have suggested that if EC use increases at the same time as smoking increases then EC are acting as a gateway to smoking. Similarly, it’s been argued that if someone uses an EC first and then initiates smoking, EC are a gateway. These arguments are clearly erroneous. To give one example of the misuse of the gateway concept, a BMJ news item on the Moore et al., 2014 [18] cross-sectional study discussed above commented that “[EC} could be a gateway into smoking’ [25].

Kandel recently argued that evidence from mice offers a biological basis for the sequence of nicotine to cocaine use in people [26], but there is limited evidence for this. In reality, the gateway theory is extremely difficult to test in humans. For example, a clean test of the gateway hypothesis in relation to EC and smoking would require randomising people to an environment with EC and one without, and then following them up over a number of years to assess uptake of EC and smoking.

**We strongly suggest that use of the gateway terminology be abandoned until it is clear how the theory can be tested in this field.** Nevertheless, the use of EC and smoking requires careful surveillance in young people. The preferred option is that young people do not use EC but it would be preferable for a young person to use an EC instead of smoking, given the known relative risks of the EC and smoking cigarettes [10].

**Summary**

Since EC were introduced to the market, smoking prevalence among adults and youth has declined. Hence there is no evidence to date that EC are renormalising smoking, instead it’s possible that their presence has contributed to further declines in smoking, or denormalisation of smoking. The gateway theory is ill defined and we suggest its use be abandoned until it is clear how it can be tested in this field. Whilst never smokers are experimenting with EC, the vast majority of youth who regularly use EC are smokers. Regular EC use in youth is rare.

**Summary of findings**

*Adults:* Around one in 20 adults in England (and Great Britain) use EC. Current EC users are almost exclusively smokers (~60%) or ex-smokers (~40%), that is smokers
who now use EC and have stopped smoking altogether. EC use among long-term ex-smokers is considerably lower than among recent ex-smokers. Current EC use among never smokers is very low, estimated to be 0.2%. The prevalence of EC use plateaued between 2013-14, but appeared to be increasing again in 2015.

**Youth:** Regular EC use among youth is rare with around 2% using at least monthly and 0.5% weekly. EC use among young people remains lower than among adults: a minority of British youth report having tried EC (~13%). Whilst there was some experimentation with EC among never smoking youth, prevalence of use (at least monthly) among never smokers is 0.3% or less.

Overall, the adult and youth data suggest that, despite some experimentation with EC among never smokers, EC are attracting few people who have never smoked into regular use.

**Trends in EC use and smoking:** Since EC were introduced to the market, cigarette smoking among adults and youth has declined. In adults, overall nicotine use has also declined (not assessed for youth). These findings, to date, suggest that the advent of EC is not undermining, and may even be contributing to, the long-term decline in cigarette smoking.

**Policy implications**

- Trends in EC use among youth and adults should continue to be monitored using standardised definitions of use.
- Given that around two-thirds of EC users also smoke, data are needed on the natural trajectory of ‘dual use’, ie whether dual use is more likely to lead to smoking cessation later or to sustain smoking (see also Chapter 6).
- As per existing NICE guidance, all smokers should be supported to stop smoking completely, including ‘dual users’ who smoke and use EC.
5. Smoking, e-cigarettes and inequalities

Smoking and inequalities

Whilst smoking prevalence overall has been declining over the past 50 years, smoking has become increasingly concentrated in more disadvantaged groups in society. Over the last decade, the gap between smoking in the different social groups has not narrowed (Figure 9) and some of the most disadvantaged groups in society (such as people with serious mental illness or prisoners) have shown no change in smoking prevalence over time (e.g. Figure 10). Furthermore, among smokers, the level of nicotine dependence increases systematically as deprivation increases [2]. A key challenge in tobacco control is therefore how to encourage smokers from disadvantaged groups to stop smoking.

Whilst quitting cigarettes and all nicotine use should remain the main goal across all social groups, EC are of interest because, as with other cleaner nicotine delivery systems, they potentially offer a wide reach, low-cost, intervention to reduce smoking and improve health in these more deprived groups in society where smoking is elevated [2]. It is therefore important to examine the potential impact of EC on inequalities.

Figure 9: Smoking trends by socioeconomic group status (GHS data)
E-cigarette use and different social groups

Earlier surveys in GB and internationally suggested a social gradient in the use of EC, with smokers of higher income and education being more likely to have used and tried [28, 29]. However, the 2015 ASH Smokefree GB adult 2015 survey indicated only small differences across groups, with lower socioeconomic groups slightly more likely to have tried and be using EC. At the population level, 14.4% of ABC1 groups (‘non-manual’ occupational groups) had tried EC compared with 19.4% in C2DE groups (‘manual’ occupational groups); 4.6% of ABC1 were still using EC compared with 6.3% of C2DE groups. Nevertheless, given the higher prevalence of smoking in C2DE groups, when examined within the smoker population by social class, 20.0% of ABC1 smokers compared with 16.0% of C2DE smokers were EC current users.

The STS data surveys show an increase in EC use in all social groups between 2012 and 2014 (Figures 11 and 12) but at a relatively similar rate such that socioeconomic differences are still apparent both for current and daily use of EC.
Figure 11: *Current* use of e-cigarettes by social class among last year smokers (STS data)


Figure 12: *Daily* use of e-cigarettes by social class among last year smokers (STS data)

Nevertheless, EC are penetrating the lower socioeconomic groups. Figure 13 shows the social class breakdown of EC users by quarter over time, also derived from STS data.

**Figure 13: E-cigarette use by social class over time (STS data)**

![E-cigarette use by social class over time](image)


### E-cigarette use in other disadvantaged groups

There are no GB data, to our knowledge, on EC use among groups where smoking prevalence is known to be very high, such as offenders and people with serious mental illness. There is emerging evidence on the effectiveness of EC in people with mental illness (see Chapter 6). However, to some extent, usage among these groups will be dependent on EC policies being introduced in prisons and mental health settings.

Recent NICE guidance on smoking cessation in secondary care settings [30] recommended the implementation of smokefree policies in these settings, alongside advice to stop smoking and nicotine dependence treatment. Trusts are now implementing this guidance but many prohibit EC usage as well as cigarettes. The rationale for such prohibition is unclear.

The South London and Maudsley NHS Foundation Trust (SLaM) was the second NHS mental health trust to go comprehensively smoke free in England. It has developed an EC policy alongside the smokefree policy which allows EC to be used in private spaces or grounds, although EC are not to be offered as first line treatment or replace tobacco cigarette smoking and can only be used as part of a care treatment pathway [31]. Currently, the use of disposable products or rechargeable models with cartridges is allowed (the latter only under supervision), but tanks are prohibited because of fears...
that they might be used for new psychoactive substances (sometimes also known as ‘legal highs’). The basis for this fear is being assessed and the use of tank models may be assessed in a restricted pilot shortly. During the first six months of the policy, the EC policy has been implemented smoothly.

A more general concern has been raised that EC can be used as a vehicle for other drugs. This concern needs exploring and is not something that should be promoted. Nevertheless, if true, EC are likely to offer a less harmful delivery route for the drugs than smoking which could be the subject of research.

Prisons are likely to introduce comprehensive smokefree policies over the next few years [32]. Similar to mental health trusts, it would seem inappropriate to prohibit EC and disposable EC are currently being piloted in at least three prisons [33]. Consideration should also be given to the use of other models of EC in pilots. The use of EC in prisons has been considered in other jurisdictions which should also be informative [34].

Summary of findings

Smoking is increasingly concentrated in disadvantaged groups who tend to be more dependent. EC potentially offer a wide reach, low-cost, intervention to reduce smoking and improve health in disadvantaged groups.

Some health trusts and prisons have banned the use of EC which may disproportionately affect more disadvantaged smokers.

Policy implications

- Consideration could be given to a proactive strategy to encourage disadvantaged smokers to quit smoking as quickly as possible including the use of EC, where appropriate, to help reduce health inequalities caused by smoking.

- EC should not routinely be treated in the same way as smoking. It is not appropriate to prohibit EC use in health trusts and prisons as part of smokefree policies unless there is a strong rationale to do so.
6. E-cigarettes and smoking behaviour

Introduction

Studies examining the relationship between EC use and smoking behaviour have focused on two main questions to date: (1) do EC help people to quit when used on a quit attempt, and, (2) what is the effect of using EC while smoking, on reductions in smoke intake, cigarettes per day, quit attempts, and stopping smoking? Because EC use is a relatively new phenomenon and the products are constantly changing with technological innovation, the studies examining these questions to date are heterogeneous. As mentioned earlier, studies vary in their definitions of EC use, including ever use, which could include one puff, to studies that discriminate between daily and non-daily use. Additionally, it is evident that many of the studies were not originally designed to study the effects of EC use on smoking behaviour due to the absence of rigour and omitted/unmeasured variables.

Current recommendations for use of e-cigarettes to quit

The National Centre for Smoking Cessation and Training (NCSCT) has published current recommendations for practice regarding the use of EC for stopping smoking [35]. The NCSCT recommends that practitioners be open to EC use among smokers trying to quit, particularly if they have tried other methods of quitting and failed. The NCSCT also provides more detailed guidelines for smokers wanting to use EC to quit, including differences in puffing on EC versus regular cigarettes, the need to try different types of EC to find one that works for them, and that multi-sessional behavioural support is likely to improve their success of quitting. Some services have welcomed smokers who wish to stop with the help of EC [36].

The NICE guidelines for tobacco harm reduction cover recommendations for the use of licensed EC for quitting, cutting down (reduction in cigarettes per day), and temporary abstinence [1], similar to NRT. Use for both cutting down and temporary abstinence have been shown to be precursors to quitting among smokers using NRT. As discussed in Chapter 3, no licensed EC are currently available.

Use of e-cigarettes for stopping smoking

STS data have shown that EC have quickly become the most common aid that smokers in England use to help them stop smoking (Figure 14). The rise in the use of EC as a stop smoking aid is occurring despite the fact that no licensed EC are available. Although the most effective way for stopping smoking, currently supported by the research literature [37, 38] is a combination of behavioural support (NHS in Figure 14)
and medication (NRT on prescription or Champix), the problem is that few smokers access these services, limiting their impact on population health.

This section reviews the evidence regarding the use of EC for stopping smoking that has been published since the Cochrane Review [39] on the use of EC for smoking cessation and reduction (cutting down). The Cochrane Review is briefly summarised below.

**Figure 14: Support used in quit attempts**

![Graph showing support used in quit attempts](From: smokinginengland.info/latest-statistics)

N=10078 adults who smoke and tried to stop or who stopped in the past year

**Randomised controlled trials**

To date, two randomised controlled trials (RCTs) have tested the efficacy of EC for stopping smoking, one among smokers wanting to stop and the other among smokers not intending to quit within the next month [40, 41]. Both were among highly dependent smokers. A recent Cochrane Review of these RCTs [39] concluded that they demonstrated that EC with nicotine help smokers reduce their cigarette consumption and stop smoking compared with no nicotine EC (placebo). However, the authors cautioned that there was uncertainty in the findings, and gave their findings a 'low' confidence rating using GRADE standards. The Cochrane Review also considered observational studies of EC use and cessation. They concluded that these observational studies were generally consistent with the findings of RCTs. Since the Cochrane Review, one RCT[41], and a secondary analysis of one of the RCTs in the Cochrane Review[42] have been published and are discussed below.
O’Brien et al., 2015 [42] conducted a secondary analysis of the RCT data from Bullen et al., 2013 [43] to examine the effectiveness of EC with and without nicotine compared to the nicotine patch among individuals with mental illness (MI). They identified 86 participants among the original 657 participants (all motivated to quit) using secondary data from the trial on reported use of any medications associated with MI. Overall, when compared to participants without MI, there were no significant differences for those with MI on the primary outcomes of smoking reduction and smoking cessation. One exception was that the six-month quit rate was higher among participants with MI in the patch condition compared to those without MI. Although not a primary outcome, there was evidence of a greater rate of relapse among participants with MI. In the analysis that only included participants with MI, there were no significant differences in quit rates across the three conditions, however participants allocated to 16mg EC showed greater smoking reduction than those allocated to patch. The authors concluded that EC appear to be equally effective for smoking cessation among individuals with and without MI, building on other promising research involving EC and people with MI.

Adriaens et al., 2014 [41] conducted an eight-week RCT in Belgium with control where they randomised 48 smokers who did not want to quit to one of two conditions: (1) use of tank model EC, and training on how to use, with no encouragement to quit, and (2) no use of EC. Both groups attended similar periodic lab sessions over an eight-week period where measurements of craving, withdrawal, saliva cotinine, and expired-air CO levels were taken. Adriaens found that after eight weeks of use 34% of those given EC had quit smoking compared to 0% of those not given EC, the EC group also showed substantially greater cigarette reduction. After eight weeks, the group which did not receive EC at baseline was given EC, but no training on how to use the products. At the final eight-month follow-up, 19% of the original EC group and 25% of the control group (given EC at week eight) had quit smoking. Significant reductions in cigarette consumption were also found.

Population studies

One problem with RCTs is that because of the time taken to set up and implement trials, the EC used in the trials are often no longer available for sale by the time the research is published. This is problematic because many new EC enter onto the market and it is possible they may be more effective at delivering nicotine than the products used in the trial, and possibly more effective for smoking cessation. Additionally, the controlled environment of RCTs is unable to provide evidence of the effectiveness of EC in the real world where use is much more subject to external forces, such as availability, price and social norms around use. RCTs also reveal little about the attractiveness of the products and thus likely uptake of the products used and what happens after a successful or failed attempt to stop smoking with an EC in the long-term.
Observational and natural history studies are therefore important. Only one population-based survey has examined the effectiveness of EC used during quit attempts. A large cross-sectional study of 5,863 English smokers who attempted to quit in the past year without using professional support [29] found that those who used EC on their last quit attempt were more likely to quit than those who used over the counter NRT – (the most common help sought by smokers after EC, see Figure 14), or no quit aid, controlling for factors related to quitting. This study was, however, unable to explore prospective predictors of quitting, including pre-quit nicotine dependence. Still, this study offers some of the best evidence to date on the effectiveness of EC for use in quit attempts.

Other recent population studies [16, 44, 45] have also examined the association between EC use and quitting. However, because these studies (1) included smokers who were already using EC at baseline, and (2) did not examine the use of EC during a specific quit attempt, we discuss them below in the section on use of EC while smoking.

Pilot studies

Polosa et al., 2014 [46] conducted a six-month pilot study of tank-type EC users with no control group among 72 smokers who did not want to quit (smokers were enrolled after rejecting participation in smoking cessation program at a hospital). At six months, they found significant 50% and 80% reductions in cigarette consumption, and a quit rate of 36% [46]. Another study by Polosa et al., 2014 [47] followed 71 vape shop customers (seven different shops) after their first visit to the shop. The first visit included instructions on how to use EC and encouragement to use their EC of choice to reduce their smoking, along with a telephone number they could call for help. At six and twelve months after their initial visit they found that the smokers reported significant 50% and 80% reductions in cigarettes per day at six and twelve months, and that at six and twelve months, 42.2% and 40.8% had quit smoking.

E-cigarettes and stop smoking services

Some English stop smoking services and practitioners support the use of EC in quit attempts [48], and provide behavioural support for EC users trying to quit smoking. The most recent monitoring data from the stop smoking services show the self-reported success rates for different medications and nicotine-containing products used (Figure 15). Data are not given by validated success rates but overall, 69% of those who self-report stopping smoking are carbon-monoxide validated [49]. Hence, there are limitations with these data as they are self-reported success rates and it is possible that they may vary by treatment used. Additionally, the data are not adjusted for other factors, such as dependence, known to influence success rates, and it is likely that they emanate from a limited number of services who record unlicensed nicotine-containing products and who might therefore be more supportive of their use. Nevertheless, the
evidence is consistent with evidence from trials and other observational data that e-cigarettes are likely to support successful quitting.

Figure 15: Support used and stop smoking service self-reported quit rates

![Graph showing support used and stop smoking service self-reported quit rates.](image)

Note: Figures in brackets represent the number of quit attempts in which each type of support was used. The number of clients with recorded e-cigarette use is very small in comparison to those recorded to have used other types of support.

Use of e-cigarettes while smoking

Population studies

Two studies using data drawn from a longitudinal population sample of more than 1,500 smokers in GB recently examined the impact of EC use on quitting, considering the effects of frequency of EC used and type of EC. Brose et al., 2015 [45] found that respondents who used EC daily at baseline were more likely to make a quit attempt one year later, but were no more or less likely to quit than those who did not use EC. Daily EC use at follow-up was found to be associated with reduced cigarette consumption since baseline. No effects of non-daily EC use on quit attempts, quitting, or reduction in consumption were found. Using data from the same Internet Cohort GB study, Hitchman et al., 2015 [16] found differences in quitting between baseline and follow-up.
depending on the type and frequency of EC used at follow-up: compared to no EC use, non-daily cigalike users were less likely to have quit smoking since baseline, daily cigalike or non-daily tank users were no more or less likely to have quit, and daily tank users were more likely to have quit. Overall, the two studies showed that daily use of EC does not lead to lower cessation, and is associated with making quit attempts, cigarette reduction, and if tank-type EC is used, is associated with smoking cessation. Non-daily use of EC is not associated with quit-related outcomes, and may, if cigalike-type EC are used, be associated with lower cessation.

Supporting these findings, using data from a longitudinal population study of smokers in two metropolitan areas in the US, Biener et al., 2015 [44] measured use and intensity of EC use at follow-up in a longitudinal sample of smokers at baseline from two US cities. Biener also found that it was only intensive EC users (used daily for at least one month) that were more likely to quit, less intensive EC users were no more likely to quit than those not using EC.

There are limitations with these studies. For example, an unavoidable methodological problem is that only people who currently smoke are included in these studies meaning that smokers who switched completely to EC and stopped smoking are excluded. The efficacy of EC is thus invariably underestimated.

A longitudinal telephone survey reported by Al-Delaimy et al., 2015 [50] among a sample of 368 current smokers from California at baseline (2011) investigated the relation between ‘ever have used’ versus ‘never will use’ EC, and making a quit attempt, a 20% reduction in cigarettes per month, and quitting for more than one month at follow-up (2012). Al-Delaimy included smokers at baseline who at both baseline and follow-up reported the same EC status: never will use EC at both baseline and follow-up OR ever have used EC at both baseline and follow-up, excluding anyone who gave different responses. Also excluded were respondents who said they might use EC in the future at baseline or follow-up, and respondents who had never heard of EC, reducing sample size from n=980 to n=368. Al-Delaimy concluded that compared to smokers who reported they never will use EC, respondents who had ever used EC were significantly less likely to have reduced their cigarette consumption and quit at follow-up, with no differences reported of quit attempts at follow-up. This study has serious methodological problems that make its conclusions uninterpretable, first, the measure of EC use is ‘ever use’, which could include even a puff on an EC and second, they applied several exclusion criteria that are not clearly justified.

Studies of smokers enrolled in smoking cessation programs

Two recent studies have examined the use of EC among smokers enrolled in smoking cessation programmes in longitudinal studies [51, 52]. Pearson et al., 2015 [51] examined the relation between reporting using an EC for quitting at follow-up and
smoking cessation (30-day abstinence) in a sample of smokers enrolled in a web-based cessation programme in the US with three-month follow-up. Pearson illustrated how the relation between using EC to quit and successful smoking cessation depended on the factors that were adjusted for and how the data were analysed, finding that under some conditions EC use was related to being less likely to quit and in others there was no relationship. The authors concluded that caution needs to be exerted when interpreting observational studies of the effects of EC use on smoking cessation.

Borderud et al., 2014 [52] examined whether any use of EC in the past 30 days was related to smoking cessation outcomes in a group of cancer patients enrolled in a smoking cessation programme in the US. When treating all smokers who dropped out of the study as smoking cessation failures, the authors found that any use of EC in the last 30 days was related to being less likely to quit; however, this treatment of the data may have been problematic because more EC users than non-users dropped out of the study. No relationship between EC use in the last 30 days and smoking cessation was observed when drop-outs were excluded from the analyses. One potential problem with this study is the measure of any EC use in the last 30 days, as this could range from using an EC once in the last 30 days to using an EC daily for the past 30 days. As illustrated [16, 44, 45] and discussed in previous studies [51], measurements of EC use that do not fully capture frequency of use may influence the relation between EC use and smoking cessation. As with studies in the previous section, the Borderud study started with smokers who had tried EC but did not stop smoking. This, of course, seriously reduces the chance of detecting a positive effect.

Summary of findings

Recent studies support the Cochrane Review findings that EC can help people to quit smoking and reduce their cigarette consumption. There is also evidence that EC can encourage quitting or cigarette consumption reduction even among those not intending to quit or rejecting other support. It is not known whether current EC products are more or less effective than licensed stop-smoking medications, but they are much more popular, thereby providing an opportunity to expand the number of smokers stopping successfully. Some English stop smoking services and practitioners support the use of EC in quit attempts and provide behavioural support for EC users trying to quit smoking; self-reported quit rates are at least comparable to other treatments. The evidence on EC used alongside smoking on subsequent quitting of smoking is mixed.

Policy implications

- Smokers who have tried other methods of quitting without success could be encouraged to try EC to stop smoking and stop smoking services should support smokers using EC to quit by offering them behavioural support.
E-cigarettes: an evidence update

- Research should be commissioned in this area including:
  - longitudinal research on the use of EC, including smokers who have not used EC at the beginning of the study
  - the effects of using EC while smoking (temporary abstinence, cutting down) on quitting, and the effects of EC use among ex-smokers on relapse
  - research to clarify the factors that i) help smokers using EC to quit smoking and ii) deter smokers using EC from quitting smoking, including different EC products/types and frequency of use and the addition of behavioural support, and how EC compare with other methods of quitting which have a strong evidence base

- It would be helpful if emerging evidence on EC (including different types of EC) and how to use EC safely and effectively could be communicated to users and health professionals to maximise chances of successfully quitting smoking.
7. Reasons for use and discontinuation

Reasons for using e-cigarettes

Reasons for using EC have been assessed for adult smokers and ex-smokers in a number of different ways. Across different populations, help to quit smoking and harm reduction were the top reasons endorsed for using EC [44, 53-57].

In the Internet Cohort GB survey, the list of possible reasons for using EC was extended after the first year (the survey was carried out in 2012, 2013 and 2014). Nevertheless, the most frequently endorsed reasons were health, to cut down and to quit smoking. These were endorsed by approximately 80% of current users at all three time points. The biggest change over time was recorded for 'they are cheaper' which appeared to be more popular in 2014 than 2013 (Table 3). Because of the way the question is phrased, a user endorsing a reason does not indicate that current use is for this particular reason, for example, 80% of current users agree that e-cigarettes may help you quit, but this does not mean that 80% of all users were using them in a quit attempt.

Table 3: Internet cohort GB survey, reasons for using e-cigarettes (in order of frequency of endorsement in 2014)

<table>
<thead>
<tr>
<th>Which of the following were reasons for your using electronic cigarettes? (multiple responses possible)</th>
<th>2012 (n=1031)</th>
<th>2013 (n=717)</th>
<th>2014 (n=505)</th>
</tr>
</thead>
<tbody>
<tr>
<td>They may make it easier for you to cut down the number of cigarettes you smoke</td>
<td>81.0</td>
<td>78.1</td>
<td>79.4</td>
</tr>
<tr>
<td>They may not be as bad for your health</td>
<td>81.7</td>
<td>79.8</td>
<td>79.2</td>
</tr>
<tr>
<td>They might help you quit</td>
<td>81.8</td>
<td>79.9</td>
<td>79.0</td>
</tr>
<tr>
<td>No tobacco smoke</td>
<td>not asked</td>
<td>70.9</td>
<td>71.3</td>
</tr>
<tr>
<td>They are cheaper</td>
<td>not asked</td>
<td>36.1</td>
<td>65.5</td>
</tr>
<tr>
<td>The smell or cleanliness</td>
<td>not asked</td>
<td>65.4</td>
<td>65</td>
</tr>
<tr>
<td>So you can use them in places where smoking regular cigarettes is banned</td>
<td>67.2</td>
<td>66.5</td>
<td>61</td>
</tr>
<tr>
<td>They may be more socially acceptable</td>
<td>not asked</td>
<td>55.8</td>
<td>54.3</td>
</tr>
<tr>
<td>Because I enjoy it</td>
<td>not asked</td>
<td>38.6</td>
<td>48.7</td>
</tr>
<tr>
<td>They taste better</td>
<td>28.5</td>
<td>26.1</td>
<td>34.1</td>
</tr>
<tr>
<td>Friends or family use them</td>
<td>not asked</td>
<td>37.0</td>
<td>33.3</td>
</tr>
<tr>
<td>The technology</td>
<td>not asked</td>
<td>34.2</td>
<td>30.3</td>
</tr>
<tr>
<td>A health professional advised you to do so</td>
<td>not asked</td>
<td>16.7</td>
<td>16.4</td>
</tr>
</tbody>
</table>
The ASH Smokefree GB survey similarly found that EC users who were ex-smokers most frequently endorsed that they used or had used EC to help them stop smoking entirely (Table 4). Among smokers, this was the second most frequently endorsed reason, with curiosity being the most frequent reason. Smokers also often reported use to help them cut down on smoked tobacco, which was rarely reported by ex-smokers.

Table 4: Reasons for use, ASH Smokefree GB adult survey, 2015 (weighted)

<table>
<thead>
<tr>
<th>Reason</th>
<th>Smokers</th>
<th>Ex-smokers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Just to give it a try</td>
<td>35%</td>
<td>29%</td>
</tr>
<tr>
<td>To help me stop smoking tobacco entirely</td>
<td>30%</td>
<td>44%</td>
</tr>
<tr>
<td>To help me reduce the amount of tobacco I smoke, but not stop completely</td>
<td>29%</td>
<td>9%</td>
</tr>
<tr>
<td>Because I had made an attempt to quit smoking already and I wanted an aid to help me keep off tobacco</td>
<td>27%</td>
<td>35%</td>
</tr>
<tr>
<td>To save money compared with smoking tobacco</td>
<td>24%</td>
<td>22%</td>
</tr>
<tr>
<td>Because I felt I was addicted to smoking tobacco and could not stop using it even though I wanted to</td>
<td>16%</td>
<td>17%</td>
</tr>
<tr>
<td>Because I want to continue to smoke tobacco and I needed something to help deal with situations where I cannot smoke (e.g. workplaces, bars or restaurants)</td>
<td>15%</td>
<td>8%</td>
</tr>
<tr>
<td>To avoid putting those around me at risk due to second-hand tobacco smoke</td>
<td>12%</td>
<td>13%</td>
</tr>
<tr>
<td>Other</td>
<td>1%</td>
<td>3%</td>
</tr>
</tbody>
</table>

A smaller number of surveys specifically assessed reasons for trial and gave the option of selecting curiosity, which was frequently endorsed as an important reason for experimentation in US adults from the general population as well as in a sample of opioid-dependent smokers [58-60].

In youth, reasons for use has rarely been surveyed; one survey on reasons for experimentation among 1,175 students (middle school, high school and college) who had ever tried EC reported that the top three reasons for e-cigarette experimentation were curiosity (54.4%), the availability of appealing flavours (43.8%) and friends’ influence (31.6%). Compared with never smokers, however, ever cigarette smokers (OR=37.5, 95% CI: 5.0 to 283.3) and current cigarette smokers (OR=102.2, 95% CI: 13.8 to 755.9) were many times more likely to say they tried EC to stop smoking [61].
A national survey in New Zealand of 3,127 year 10 students (mostly aged 14 to 15) also showed that the most frequently given reason for first trying EC was curiosity, irrespective of smoking status (64.5% overall) [62].

Reasons not to use EC are rarely assessed. The ASH Smokers’ survey 2014 asked current and ex-smokers about advantages and disadvantages of EC. Among those who had never used EC, the three most important disadvantages were “They might be too expensive” (46%), “They might not be safe enough as a product” (39%) and “They might not satisfy my desire to smoke enough” (31%).

Reasons why trial does not become use

The rates of ever having tried an EC in the ASH GB Smokefree adult survey are more than three times those of current use; in the ASH GB Smokefree youth survey, about five times as many respondents had tried an EC as were currently using an EC, indicating that most of those who try EC do not progress to current use. A small number of surveys assessed why respondents who had tried an EC did not continue use.

In a national sample of 3,878 US adults who reported ever trying EC, two-thirds did not continue to use them and this was linked to the main reason for trying them. Trial turned into continued use for only a minority (19%) of those who did not know their main reason for trying them or whose main reasons were curiosity, friends or family members or advertising. Continued use was more common for those whose main reasons for trial included help to quit smoking or reduce harm. Those who did not continue use were asked for their reasons for stopping. The reason most often given was that they were just experimenting (49%) [58].

In the survey by Kong et al., reported previously, it appears that 98.5% of experimenting students did not continue use. Reasons for discontinuation were assessed but unfortunately the most commonly chosen response was ‘other’ (23.6%, open-ended responses included “I don’t like it”, “I just tried once”) followed by “uncool” (16.3%) and health risks (12.1%) [61].

Some surveys can be used to assess why smokers may not continue to use EC. The ASH Smokers’ survey in 2014 indicates that disappointment with the help EC provide in reducing smoking urges may be an important reason. Among smokers who had tried EC but did not continue using them, 44% said that a disadvantage of the products was that “They might not satisfy my desire to smoke enough”. No other reason got a higher rate of agreement in this group. A high proportion of smokers who were currently using EC also stated this reason (37%), but the proportion was significantly (p<0.05) lower in ex-smokers who had used (32%) or were currently using EC (7%), suggesting that satisfaction with the device/s may be a correlate of stopping smoking.
Of concern is that data suggest that some smokers may not continue to use EC instead of smoking because of a misguided belief that EC would be harmful to their health. In the ASH Smokers’ survey 2014, the second most frequently endorsed disadvantage was “They might not be safe enough as a product” (35%) among smokers who had tried an EC but were not using one anymore. Similarly, in a survey of US respondents, among 227 respondents who had tried EC in the past, were no longer using them but were still smoking cigarettes [44], the most frequently endorsed reason was that EC didn’t feel enough like smoking cigarettes, followed by dislike of the taste and that they were bad for health. It would appear therefore that these respondents stopped EC use in favour of continuing to smoke more deadly cigarettes.

Summary of findings

A number of surveys in different populations provide evidence that reducing the harm from smoking (such as through cutting down on their cigarette consumption or helping with withdrawal during temporary abstinence) and the desire to quit smoking cigarettes are the most important reasons for using EC. Curiosity appears to play a major role in experimentation. Most trial of EC does not lead to regular use and while there is less evidence on why trial does not become regular use, it appears that trial due to curiosity is less likely to lead to regular use than trial for reasons such as stopping smoking or reducing harm. Dissatisfaction with products and safety concerns may deter continued EC use.

Policy implications

- Smokers frequently state that they are using EC to give up smoking. They should therefore be provided with advice and support to encourage them to quit smoking completely.

- Other reasons for use include reducing the harm from smoking and such efforts should be supported but with a long-term goal of stopping smoking completely.
8. Harm perceptions

Perceptions of the harmfulness of EC are frequently assessed in surveys, most commonly relative to conventional tobacco cigarettes. However, a recent Eurobarometer survey [63] asked smokers in absolute terms whether EC were harmful to the health of those using them. Overall in Europe, 40.6% perceived EC as not harmful (UK: 48.6%), 28.5% as harmful (UK: 14.6%) and 30.9% did not know if they were or were not harmful (UK: 36.8%).

Harm perception relative to cigarettes

In GB, the ASH surveys and the Internet Cohort survey have included questions on the perceived relative harm of EC. These surveys consistently show that compared with conventional tobacco products, EC were perceived as less harmful by a small majority of respondents, but with a sizeable minority inaccurately judging them to be more harmful, about as harmful or being unsure about their relative risks. For example, in the 2015 ASH Smokefree GB adult survey, 2% thought that EC were more harmful than cigarettes, 20% equally harmful, 52% less harmful, 2% completely harmless and 23% did not know.

Harm perception differed by smoking status ($\chi^2=104.05$, $p<0.001$) and by EC use status ($\chi^2=453.4$, $p<0.001$) (Figure 15). Overall, smokers were more likely to judge EC to be less harmful compared with cigarettes (63.7%, including 'completely harmless') than ex-smokers (55.6%), whereas never-smokers were least likely to judge EC as less harmful (51.2%, all $p<0.05$). A higher proportion of current EC users (87.4%) thought that they were less harmful compared with cigarettes than those who had tried but were not using (68.8%) or never-users (50.4%), among whom the proportion was lowest (all differences $p<0.05$). Perceptions among youth were similar to adults. For example, in the 2015 ASH Smokefree GB youth survey, 2% thought that EC were more harmful than cigarettes, 21% equally harmful, 67% less harmful and 10% did not know.

In the STS, the proportion believing EC to be less harmful appears to be even lower. Only 44.1% of current smokers in England between November 2014 and March 2015 believed that EC were less harmful than cigarettes [15].
Figure 15: Perceptions of relative harmfulness of e-cigarettes in comparison with tobacco cigarettes by e-cigarette use and smoking status. ASH Smokefree GB adult surveys (weighted)

Trends in harm perceptions relative to cigarettes over time

Since 2013, perceptions of the relative harmfulness of EC have become less accurate. Significantly larger proportions perceived EC to be at least as harmful as cigarettes in 2014 than in 2013 both in the Internet Cohort GB surveys (Figure 16) and in the ASH youth surveys (Figure 17 [64]). In the Internet Cohort GB survey, there was no significant change from 2012 to 2013, but from 2013 to 2014 the proportion thinking that EC were less harmful decreased in favour of equally or more harmful (p<0.001). For youth, between 2013 and 2014, the decrease in the proportion endorsing ‘less harmful’ and the increase in the proportion endorsing ‘equally harmful’ were significant (p<0.01). There were no significant changes in the proportion endorsing ‘more harmful’ or ‘don’t know’.

In the ASH adult surveys, data on harm perception are available for 2013 to 2015 (Figure 17). In line with the other GB surveys, this survey found a steep increase in the proportion perceiving EC to be equally harmful as cigarettes (p<0.001).
Figure 16: Perceptions of relative harmfulness of e-cigarettes in comparison with tobacco cigarettes. Internet Cohort GB surveys (N=1,209 respondents with data at all three time points)

Figure 17: Perceptions of relative harmfulness of e-cigarettes in comparison with tobacco cigarettes. ASH Smokefree GB adult surveys (weighted)

Notes: “Less harmful” includes those saying “Electronic cigarettes are completely harmless”. “Not applicable – I do not think regular cigarettes are harmful” not shown (2013: 1.2%, 2014: 0.9%, 2015: 0.8%)
Surveys from the US also suggest that from 2010 to 2013, the proportion of current smokers aware of EC who believed that EC were less harmful than smoking cigarettes declined considerably [65]. Youth in the US appear to have a less realistic perception of the relative harm of EC compared with cigarettes than UK youth. In the 2012 National Youth Tobacco Survey, of those who were aware of EC, around one-third perceived them to be less harmful than cigarettes and around half were unsure [66, 67].

The ASH Smokefree GB youth survey in 2013 and 2014 further included a question on the harm of EC to persons around a user. Again, the proportion who thought them less harmful than traditional cigarettes decreased from 2013 to 2014 (p<0.05), and the proportion who thought they caused similar levels of harm increased (p<0.01) (Figure 19).
Harm perception relative to nicotine replacement therapy (NRT)

The ASH Smokers’ survey in 2014 asked respondents about their perception of EC compared with NRT (Table 20). The largest group of respondents thought EC were about as safe. Notably, a higher proportion thought that EC were safer than NRT than believed that NRT was safer than EC. This was particularly pronounced in current EC users.

Table 5: Relative harm perception by e-cigarette use status ASH Smokers’ survey 2014

<table>
<thead>
<tr>
<th>E-cigarette use status</th>
<th>Never (n=470)</th>
<th>Current (n=256)</th>
<th>Ex (n=477)</th>
<th>Total (n=1203)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Compared to NRT</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safer</td>
<td>14 (66)</td>
<td>28.1 (72)</td>
<td>22 (105)</td>
<td>20.2 (243)</td>
</tr>
<tr>
<td>About as safe</td>
<td>28.1 (132)</td>
<td>44.1 (113)</td>
<td>35.6 (170)</td>
<td>34.5 (415)</td>
</tr>
<tr>
<td>Less safe</td>
<td>16.2 (76)</td>
<td>6.3 (16)</td>
<td>13 (62)</td>
<td>12.8 (154)</td>
</tr>
<tr>
<td>Don’t know</td>
<td>41.7 (196)</td>
<td>21.5 (55)</td>
<td>29.4 (140)</td>
<td>32.5 (391)</td>
</tr>
</tbody>
</table>

One US survey of 1,400 current and former smokers also assessed expected outcomes of using EC compared with NRT [68]. EC were perceived to be less risky, cost less, cause fewer negative physical feelings, taste better, provide more satisfaction, and be better at reducing craving, negative affect, and stress.
Summary of findings

Although the majority of adults and youth still correctly perceive EC to be less harmful than tobacco cigarettes, there has been an overall shift towards the inaccurate perception of EC being at least as harmful as cigarettes over the last year, for both groups. Intriguingly, there is also some evidence that people believe EC to be less harmful than medicinal nicotine replacement therapy (NRT).

Policy implications

- Clear and accurate information on relative harm of nicotine, EC and tobacco cigarettes is needed urgently (see also Chapter 10).
- Research is needed to explore how health perceptions of EC are developed, in relation to tobacco cigarettes and NRT, and how they can be influenced.
9. E-cigarettes, nicotine content and delivery

Background

We have undertaken a review of available evidence concerning nicotine released by EC. The review is divided into four parts, covering nicotine that EC use (vaping) releases into ambient air, nicotine content of e-liquid, nicotine content in e-vapour, and nicotine delivery to EC users (vapers). The main concern with nicotine in EC relates to the question of whether EC use exposes users or bystanders to the risk of nicotine poisoning. For this reason, we start with a short introductory review of this topic.

Toxicity of nicotine

Nicotine in the form of tobacco and more recently NRT has been available to thousands of millions of people and large numbers of them, including small children, have ingested considerable doses of nicotine. Fatal nicotine poisoning, however, is extremely rare. This fact strongly contradicts the often-repeated claim that an ingestion of 30-60mg of nicotine is fatal. The source of this claim proved difficult to locate – textbooks just cite older textbooks. Eventually, the assertion was found to be based on dubious self-experiments conducted in the 1890s [69].

We are aware of one unconfirmed newspaper report of a fatal poisoning of a two-year old child [70] and of three published case studies of small children who drank e-liquid. A two-year old was admitted to hospital with vomiting, ataxia, and lethargy, and was discharged after 24 hours of observation [71]. In the second report, an 18-month old girl drank 24mg nicotine in e-liquid, vomited and was irritable, and recovered fully within an hour or so [72]. The third article presented a case of a 30-month old child suspected to have ingested e-liquid. The quantity of e-liquid was uncertain and the child was asymptomatic with all clinical observations reported to be normal [73].

With the increase in EC use, there has been an increase in calls to poison centres following accidental exposures but these remain lower than calls following such exposure from tobacco and none resulted in any serious harm [74] (see next chapter for UK data). Serious nicotine poisoning seems normally prevented by the fact that relatively low doses of nicotine cause nausea and vomiting, which stops users from further intake.

Apart from accidental poisoning, nicotine has also been used in suicide attempts. Suicide attempts with large amounts of pesticides containing nicotine sulphate often succeed [75] but completed suicides using e-liquids are extremely rare. Where adults
drank up to 1,500mg of nicotine in e-liquid, the result was vomiting and recovery within a few hours [76]. One fatal outcome was recorded with 3,950mg of nicotine found in gastric content. The victim seems to have drunk three vials of e-liquid totalling over 10,000mg of nicotine[76]. An intravenous injection of unknown quantity of e-liquid also resulted in death [77].

E-liquid normally comes in 10ml bottles containing up to 360mg of nicotine (see below). This poses no risk to vapers if used as intended. The liquid however should be in ‘childproof’ packaging to prevent small children, who may find the flavouring appealing, from drinking it. This seems to have been widely accepted by the EC industry. All e-liquids we have seen so far in the UK and globally were sold in child-resistant packaging.

Review methods

We searched the US National Library of Medicine (Pubmed) using the following search terms: ((cotinine OR nicotine) AND (blood OR plasma OR urine OR saliva OR liquid OR aerosol OR pharmacokinetic$)) AND (electronic cigarette$ OR e-cig$ OR ENDS). This search returned 161 records. The abstracts of all records were screened.

Papers were included if they were peer-reviewed and presented data regarding nicotine in e-liquid, aerosol, or body fluids (blood, saliva or urine). Studies that reported data on blood, salivary, or urine cotinine were also included.

A total of 112 records were excluded as they did not contain any relevant information, leaving 49 records. The full papers of these records were retrieved and reviewed.

From the full text review, 25 studies provided data regarding nicotine content of ambient air, e-liquid and vapour, and 16 provided data on nicotine delivery to users. The remaining eight papers did not contain any relevant information. Three further relevant papers were published during the writing of this report and were also included.

Nicotine in ambient air, e-liquid and e-vapour

We identified five studies of nicotine in ambient air, 14 studies of nicotine in e-liquid and nine studies of nicotine vapour. The results are summarised below. We tabulate the results where appropriate and provide a narrative summary where there are only a few studies available. Each section is concluded with a brief summary.

Passive vaping: Nicotine from e-cigarette use in ambient air

Four studies examined nicotine exposure from passive vaping. Long et al., 2014 measured nicotine content of EC exhalations. EC exhalations contained eight times less
nicotine than cigarette exhalations [78]. Estimating environmental nicotine exposure, however, has to take into account the fact that side-stream smoke (ie the smoke from the lighted end of the cigarette, which is produced regardless of whether the smoker is puffing or not) accounts for some 85% of passive smoking and there is no side-stream EC vapour. A study measuring nicotine residue on surfaces in houses of smokers and vapers reported only negligible levels from vaping, 169 times lower than from smoking [79].

Colard et al., 2015 describe a model for estimating environmental workplace exposure [80]. The model predicts much lower nicotine exposure from vaping than from smoking, at levels negligible in health terms.

Goniewicz and Lee 2014 found that nicotine from EC vapour gets deposited on surfaces, but at very low levels [81]. This poses no concerns regarding exposure to bystanders. At the highest concentration recorded (550 μg/m²), an infant would need to lick over 30 square metres of exposed surface to obtain 1mg of nicotine.

Ballbe et al., 2014 provide the most informative data collected to date as this study measured the actual levels of airborne nicotine in homes of ex-smokers who live either with smokers (N=25) or with vapers (N=5) and also in 24 control homes [82]. The study also measured salivary and urinary cotinine in partners of smokers and vapers. As expected, there was little nicotine in non-smokers’ homes. The air in the homes of vapers contained six times less nicotine than the air in the homes of smokers. There was less of a difference between cotinine levels of partners of vapers and smokers (1.4 to 2 fold difference), most likely due to some ‘ex-smokers’ still occasionally smoking, but even with this possible contamination, the nicotine levels absorbed via passive vaping were negligible. Partners of vapers had mean cotinine concentrations of 0.19 ng/ml in saliva and 1.75 ng/ml in urine, which is about 1,000 times less than the concentrations seen in smokers and similar to levels generated by eating a tomato [83].

Summary

EC release negligible levels of nicotine into ambient air with no identified health risks to bystanders.

Nicotine in e-liquids

Fourteen studies tested more than 400 different e-liquids, mainly to check the accuracy of product labelling. Their results are summarised in Table 6, updated from an earlier review by Cheng et al., 2014 [84].
Table 6: Nicotine in refill solutions, cartridges and aerosols of e-cigarette products
(Adjusted from Cheng et al. 2014)

<table>
<thead>
<tr>
<th>Study</th>
<th>Matrix</th>
<th>Units</th>
<th>Nicotine level</th>
<th>Maximum deviation from label*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Westenberger [85]</td>
<td>Cartridge</td>
<td>mg/cartridge</td>
<td>0.00 to 6.76</td>
<td>N.A.</td>
</tr>
<tr>
<td></td>
<td>Aerosol</td>
<td>μg/100mLpuff</td>
<td>0.35 to 43.2</td>
<td>N.A.</td>
</tr>
<tr>
<td></td>
<td>Refill solution</td>
<td>μg/mL</td>
<td>N.D. to 25.6</td>
<td>N.A.</td>
</tr>
<tr>
<td>Cobb et al [86]</td>
<td>Cartridge</td>
<td>mg/cartridge</td>
<td>3.23±0.5 to 4.07±0.54</td>
<td>–80 to −77%†</td>
</tr>
<tr>
<td></td>
<td>Aerosol</td>
<td>μg/35 mL puff</td>
<td>0.3 for puffs 11 to 10</td>
<td>N.A.</td>
</tr>
<tr>
<td>Trehy et al [87]</td>
<td>Refill solutions</td>
<td>mg/mL</td>
<td>0 to 25.6</td>
<td>−100 to 100%†</td>
</tr>
<tr>
<td></td>
<td>Cartridge</td>
<td>mg/cartridge</td>
<td>0 to 21.8</td>
<td>−100 to 100%†</td>
</tr>
<tr>
<td></td>
<td>Aerosol</td>
<td>μg/100 mL puff</td>
<td>0 to 43.2</td>
<td>N.A.</td>
</tr>
<tr>
<td>Cheah et al [88]</td>
<td>Cartridge</td>
<td>mg/cartridge</td>
<td>0.00 to 15.3</td>
<td>−89 to 105%†</td>
</tr>
<tr>
<td>Pellegrino et al [89]</td>
<td>Cartridge</td>
<td>% W/W</td>
<td>&lt;0.001 to 0.25</td>
<td>N.A.</td>
</tr>
<tr>
<td></td>
<td>Aerosol</td>
<td>mg/m³</td>
<td>&lt;0.01 to 6.21</td>
<td>N.A.</td>
</tr>
<tr>
<td>McAuley et al [90]</td>
<td>Indoor air</td>
<td>ng/L</td>
<td>538 to 8770</td>
<td>N.A.</td>
</tr>
<tr>
<td>Goniewicz et al [91]</td>
<td>Refill solution</td>
<td>mg</td>
<td>0±0.0 to 25±1.1</td>
<td>−75 to 28%</td>
</tr>
<tr>
<td></td>
<td>Cartridge</td>
<td>mg</td>
<td>0±0.0 to 19±0.5</td>
<td>−89 to 25%</td>
</tr>
<tr>
<td></td>
<td>Aerosol</td>
<td>mg/150 puffs</td>
<td>0.3±0.2 to 8.7±1.0</td>
<td>N.A.</td>
</tr>
<tr>
<td>Etter et al [92]</td>
<td>Refill solution</td>
<td>mg/mL</td>
<td>N.D. to 29.0</td>
<td>−15 to 21%†</td>
</tr>
<tr>
<td>Kirschner et al [93]</td>
<td>Refill solution</td>
<td>mg/mL</td>
<td>14.8±0.2 to 87.2±2.7</td>
<td>−50 to 40%†</td>
</tr>
<tr>
<td>Cameron et al [94]</td>
<td>Refill solution</td>
<td>mg/mL</td>
<td>8.5±0.16 to 22.2±0.62</td>
<td>−66 to 42%†</td>
</tr>
<tr>
<td>Goniewicz et al [95]</td>
<td>Liquids</td>
<td>mg/mL</td>
<td>N.D. to 36.6 (150.3 ‘pure nicotine’)</td>
<td>-92 to 104%</td>
</tr>
<tr>
<td>Geiss et al [96]</td>
<td>Liquids</td>
<td>mg/mL</td>
<td>N.D. to 20.8</td>
<td>-0 to 16%</td>
</tr>
<tr>
<td>Kavvalakis et al [97]</td>
<td>Liquids</td>
<td>%w/v</td>
<td>1.01 to 1.62</td>
<td>-17 to +6%</td>
</tr>
<tr>
<td>Farsalinos et al [98]</td>
<td>Liquids</td>
<td>mg/ml</td>
<td>Labelled 12-18</td>
<td>-21 to +22%</td>
</tr>
</tbody>
</table>

*Deviation from label = (measured value – labelled value) * 100/labelled value.

†Calculation performed by this analysis based on reported data in each study.

N.A. = not available; N.D. = none detected.
A range of analytical methods was used, which may have contributed some variation. There is no established standard and different studies use different approaches. Cheah et al., used gas chromatography coupled with flame ionization detector [88]; Etter et al., gas chromatography coupled with mass spectrometry and ultra high-performance liquid chromatography coupled with diode array detector [92]; McAuley et al., gas chromatography coupled with nitrogen-phosphorus detector [90]; Goniewicz et al., gas chromatography coupled with thermionic specific detector [95]; Trehy et al., high-performance liquid chromatography coupled with diode array detector [87]; Westenberger high-performance liquid chromatography coupled with ultraviolet/visible spectroscopic detector [85]; Kubica et al., liquid chromatography coupled with tandem mass spectrometry [99]; and Kirschner et al., liquid chromatography coupled with time-of-flight mass spectrometry [93].

The data generated so far provide answers to three questions:

**Do e-liquids pose a poisoning hazard?**

The vast majority of vapers use ‘ready-made’ liquids in 10ml bottles, but some aficionados, primarily in the US, buy high concentration nicotine solutions in larger quantities for DIY dilution. An e-liquid was identified labelled as containing 210mg/ml which in fact contained only 150mg/ml [95] but even this may pose risk if ingested in larger volume. DIY liquids are rarely used in Europe, but for spurious reasons, Europe is poised to prohibit sales of products with nicotine concentrations above 20mg/ml. When this happens, the popularity of DIY e-liquids among dependent vapers, who now cannot access the products they need but can mix them themselves at home at low cost, may increase.

‘Ready-made’ e-liquids come in strengths of up to 36mg/ml nicotine, with the highest concentration recorded of 36.6mg/ml. This poses no risk of nicotine poisoning if used as intended. An overenthusiastic vaper, like someone who is over-smoking, receives a reliable warning via nausea. If the 10ml bottle of e-liquid was drunk, it would cause nausea and vomiting but would be unlikely to inflict serious harm. To protect young children from accidental exposure though, e-liquids should be in ‘childproof’ packaging.

**How accurate is product labelling?**

The real content exceeded markedly the labelled concentration only in samples where the declared content was very low (6mg/ml) and the real concentrations ranged up to 12mg/ml (ie still low levels). The most striking examples of inaccurate labelling concerned much lower nicotine levels than those declared in e-liquids confiscated in Singapore where EC are banned, for example, a liquid labelled as containing 24mg of nicotine contained only 3mg [88]. This however was most likely due to samples being several years old. Market competition seems to have led to improved standards as
poorly labelled products are now less common and overall the labelling accuracy has improved. For instance in the latest study which sampled 263 liquids from 13 manufacturers, the correlation between the declared and measured concentrations was $r=0.94$ with the samples ranging from -17% to +6% of the declared value [85]. In another study testing the five most popular EC brands, the consistency of nicotine content across different batches of nicotine cartridges of the same products was found to be within the accuracy required from medicinal nebulisers [100]. Given the generally adequate labelling accuracy and the fact that the actual nicotine intake by vapers is dictated by a host of other factors discussed below, the accuracy of labelling of common e-liquids poses no major concerns.

Is there is a risk from e-liquids inaccurately labelled as containing 0 nicotine?

All samples labelled as containing 0 nicotine were nicotine free in the newer studies, but three early studies found nicotine in some samples of ‘0 nicotine’ e-liquids. One sample reported in 2011 was clearly mislabelled [87] but in all other cases, only trace contamination was detected (below 1mg/ml). This would have no central effect on users.

Summary

Poorly labelled e-liquid and e-cartridges mostly contained less nicotine than declared and so posed no risk to users. The accuracy of product labelling currently raises no major concerns.

Nicotine in e-vapour

A number of studies evaluated nicotine in EC vapour generated by puffing machines. A recent experiment [101] has shown that parameters of puffing topography, especially puff duration and puff frequency, have a major influence on nicotine delivery. This poses a serious problem in interpreting the existing studies. The key parameters used by puffing machines differ widely across studies, and may not correspond well or at all with vapers’ behaviour generally and especially with the way individual EC products are used. To illustrate the point, Table 7 below, from Cheng et al. 2014 [84], shows the wide range of settings used in different studies. (Table 7 includes some unpublished studies).

<table>
<thead>
<tr>
<th>Study</th>
<th>Puff volume (ml)</th>
<th>Puff interval (s)</th>
<th>Puff duration (s)</th>
<th>Puffs/session</th>
<th>Smoking machine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goniewicz et al [100]</td>
<td>70</td>
<td>10</td>
<td>1.8</td>
<td>15</td>
<td>Palaczbot*</td>
</tr>
<tr>
<td>Pellegrino et al [89]</td>
<td>498</td>
<td>8</td>
<td>3</td>
<td>16</td>
<td>Aspiration</td>
</tr>
</tbody>
</table>
For instance, the average puff duration in experienced vapers is 2.8 seconds [101], but some studies used puffs lasting for up to 4 seconds. This can overheat the e-liquid and provide unrealistically high readings (see Chapter 11).

Although it would be feasible to establish some empirical standards, eg of puff duration and frequency, by observing vapers, any general standard would have to average values across different products. As different products, and especially products from different ‘generations’, are used differently, such a blanket regimen would still provide inaccurate and potentially misleading information.

A recent study discovered another serious problem with trying to make sense of nicotine content in e-vapour. Across five common e-liquids with middle ranges of strength, the actual nicotine concentration in the e-liquid had almost no relationship with the nicotine content in vapour when the devices were puffed on by a machine at a standard rate [100]. The e-liquid of course had to contain a certain minimal level of nicotine as with little or no nicotine in e-liquid, there would be little or no nicotine in vapour. This finding concerning machine testing also does not mean that nicotine levels in e-liquids are irrelevant for EC users. Although EC technology is developing to maximise nicotine delivery, a vaper seeking high blood nicotine levels is likely to struggle to achieve them with a weak e-liquid. The reason for the low correlation between nicotine in e-liquid and in e-vapour is that the battery output, type of wicks, ventilation holes and other mechanical characteristics of each individual EC product determine how much vapour and nicotine is released – before the individual puffing style and preferences generate yet another key determinant of nicotine delivery to users.

<table>
<thead>
<tr>
<th>Study</th>
<th>Puff Duration</th>
<th>Strength</th>
<th>Voltage</th>
<th>Power</th>
<th>Device Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ingebrethsen [102]</td>
<td>55</td>
<td>30</td>
<td>2-4</td>
<td>10</td>
<td>Lab-built device</td>
</tr>
<tr>
<td>McAuley et al [90]</td>
<td>50</td>
<td>30</td>
<td>4</td>
<td>50</td>
<td>SCSM</td>
</tr>
<tr>
<td>Trehy et al [87]</td>
<td>100</td>
<td>60</td>
<td>2</td>
<td>30</td>
<td>Lab-built device</td>
</tr>
<tr>
<td>Williams &amp; Talbot [103]</td>
<td>N.A.</td>
<td>60</td>
<td>2.2</td>
<td>10/11</td>
<td>Lab-built device</td>
</tr>
<tr>
<td>Cobb et al[86]</td>
<td>35</td>
<td>60</td>
<td>2</td>
<td>≥50</td>
<td>Machine ISO</td>
</tr>
<tr>
<td>Trtchounian et al [104]</td>
<td>N.A.</td>
<td>60</td>
<td>2.2</td>
<td>10</td>
<td>Lab-built Puff box</td>
</tr>
<tr>
<td>Uchiyama et al [105]</td>
<td>N.A.</td>
<td>N.A.</td>
<td>N.A.</td>
<td>N.A.</td>
<td>Premium Smoker</td>
</tr>
<tr>
<td>Westenberger [85]</td>
<td>100</td>
<td>60</td>
<td>N.A.</td>
<td>N.A.</td>
<td>Lab-built device</td>
</tr>
<tr>
<td>Laugesen [106]</td>
<td>38, 58</td>
<td>N.A.</td>
<td>N.A.</td>
<td>N.A.</td>
<td>Syringe</td>
</tr>
</tbody>
</table>

N.A., not available.
These findings have an important implication. Above the necessary minimum level of nicotine, nicotine concentrations in e-liquid and even the concentrations in vapour, if measured by standard puffing schedules, are of limited relevance. For light smokers, 18mg/ml ‘mild’ e-liquid may be sufficient, but they may also prefer a stronger liquid and take shorter and less frequent puffs. A heavy smoker who would be expected to prefer a 28mg/ml ‘strong’ liquid may in fact chose a ‘moderate’ strength if they favour long and frequent puffs.

In real-life use, vapers have no way of knowing in advance what liquid strength and product characteristics they will prefer. As with other consumer products of this type, such as cigarettes, coffee and soft drinks, vapers have to try several EC models and different e-liquids before settling on a preferred product that matches their preferences.

For practical purposes, general labelling of the strength of e-liquid, along the lines used for indicating coffee strength (eg mild, medium and strong), is likely to provide sufficient information for consumers.

Translating these findings into regulatory recommendations, it would seem that regulation to enforce standard nicotine delivery may not be needed because nicotine delivery is influenced by a host of factors, including user puffing preferences, and because consumer preferences differ. EC products will hopefully continue to evolve guided by differential market success, with the result that more smokers find EC helpful and switch to them.

Summary

Across the middle range of nicotine levels, nicotine delivery to vapour is determined primarily by mechanical and electrical characteristics of EC products and by the duration and frequency of puffs. General labelling of the strength of e-liquids, along the lines used for indicating coffee strength (eg mild, medium and strong), is likely to provide sufficient information for consumers.

Nicotine delivery to e-cigarette users

To assess nicotine intake from EC, a number of studies took blood samples from smokers during and after vaping. Table 8 summarises data from 17 studies that investigated nicotine delivery from EC in humans. The narrative description of the studies and additional details concerning their findings are presented in Appendix C.

The two key questions in this field are:
   a) How much nicotine EC deliver compared to cigarettes, and
   b) How fast EC deliver nicotine compared to cigarettes.
As in every new field, methodological problems limit the usefulness of some of the data collected so far. Two problems in particular are prominent.

1) Almost all studies used prescribed puffing regimes, sometimes derived from observations of smokers rather than vapers. We described above the evidence that puffing schedules have a major influence on nicotine delivery to vapour. Puffing schedules that do not correspond with vapers’ behaviour are thus unlikely to provide realistic nicotine delivery data. Only three studies allowed vapers to puff ad-lib on first use.

2) Regarding the question of the speed of nicotine delivery, all existing studies started blood sampling only after five minutes of vaping. Cigarettes provide peak nicotine plasma levels very quickly (eg peak arterial nicotine concentrations of around 20ng/ml nicotine are reached within 20 seconds of starting to puff on an cigarette [107]). Data collected so far do not allow an appraisal of whether EC are approaching cigarettes in this key parameter.

Despite these limitations, the studies above have generated several strands of useful information on how much nicotine vapers obtain over time and how this compares with nicotine intake from cigarettes.

Cotinine is a metabolite of nicotine with a long half-life which shows nicotine exposure over time. Cotinine data are thus not influenced by the laboratory puffing schedules. Some studies suggest that experienced vapers can, over time, reach nicotine levels comparable to those obtained from smoking [108-110], although others have found plasma or salivary cotinine levels that are still lower than those observed in daily smokers [111-113].

Cigalike EC deliver lower levels of nicotine than cigarettes [114-116], especially to novice users [117-119]. Vapers obtain slightly more nicotine from them with practice, but nicotine delivery is comparatively low and slow [115]. Experienced users can obtain a rise in blood nicotine concentration of between 8 and 16ng/ml [120, 121]. Tank systems deliver nicotine more efficiently than cigalikes and somewhat faster [120, 122, 123].

Overall, the data indicate that within five minutes of use of a cigalike EC, blood nicotine levels can rise by approximately 5ng/ml. For comparison, after chewing a piece of 2mg nicotine chewing gum, peak plasma concentrations of 3–5ng/ml are observed within approximately 30 minutes [124, 125]. For experienced users of tank systems the increase in blood nicotine concentration within five minutes of use can be 3–4 times higher.
Speed of nicotine delivery seems important for smokers’ satisfaction. Cigarettes deliver nicotine very fast via the lungs. It is likely that to out-compete cigarettes, EC will need to provide nicotine via the lungs as well. Although some EC products may already provide a degree of lung absorption, most nicotine is probably delivered via a much slower route through buccal mucosa and upper airways, in a way that is closer to the delivery from nicotine replacement medications than to the delivery from cigarettes.

This tallies with two other observations. Vapers feel they are less dependent on EC than they were on cigarettes [126]; and non-smokers experimenting with EC do not find them attractive and almost none progress to daily vaping [127]. This contrasts with the fact that about half of adolescents who experiment with cigarettes progress to daily smoking [128].

In addition to mechanical characteristics of EC and user puffing behaviour discussed in previous sections, the composition of the chemicals used to produce the vapour, typically vegetable glycerol and/or propylene glycol (PG), may also influence nicotine delivery. E-liquid with a mix of vegetable glycerol/PG was associated with better nicotine delivery than a vegetable glycerol-only e-liquid with the same concentration of nicotine [129]. The presumed effect is that PG vaporises at a faster rate than vegetable glycerol when heated in the EC and so is able to carry more nicotine to the user.

If EC continue to improve in the speed of nicotine delivery, they are likely to appeal to more smokers, making the switch from smoking to vaping easier. It may be important in this context to note that if the smoking-associated risk is removed, nicotine use by itself, outside pregnancy, carries little health risk and in fact conveys some benefits.

Table 8: Studies examining nicotine intake in vapers

<table>
<thead>
<tr>
<th>Study</th>
<th>Participants</th>
<th>EC Device</th>
<th>Methods</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vansickel et al 2012</td>
<td>20 smokers</td>
<td>Vapor King (cigalike),</td>
<td>Overnight abstinence, baseline blood sample, after 5 mins 10 puffs,</td>
<td>At end of last puffing bout plasma nicotine</td>
</tr>
<tr>
<td>[119]</td>
<td>naïve to EC</td>
<td>18mg/ml nicotine</td>
<td>30 sec inter-puff interval, 5 mins after last puff blood sample,</td>
<td>increased from 2.2 ng/ml at baseline to 7.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Repeated 5x, 30 mins in between</td>
<td>ng/ml</td>
</tr>
<tr>
<td>Vansickel &amp; Eissenberg</td>
<td>8 vapers</td>
<td>Own EC</td>
<td>Overnight abstinence, Baseline blood, after 5 mins 10 EC puffs at 30</td>
<td>Increase in plasma nicotine from 2.0 ng/ml</td>
</tr>
<tr>
<td>2012 [121]</td>
<td>using EC for</td>
<td>1 used 9 mg/ml</td>
<td>sec intervals, 5 and 15 mins after first puff blood sample, 60 min</td>
<td>to 10.3 ng/ml in 5 mins. Cmax = 16.3 ng/ml at</td>
</tr>
<tr>
<td></td>
<td>average of</td>
<td>6 used 18 mg/ml</td>
<td>ad-lib vaping</td>
<td>end of ad lib period</td>
</tr>
<tr>
<td></td>
<td>12 months</td>
<td>1 used 24 mg/ml</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yan &amp; D'Ruiz 2014</td>
<td>23 smokers</td>
<td>4 types of Blu (cigalike) EC</td>
<td>Randomised 6 sessions 7-days get used to EC, 36 h abstinence. EC =</td>
<td>During controlled puffing Cmax (ng/ml): EC 10.3</td>
</tr>
<tr>
<td>[129]</td>
<td></td>
<td>(1.6% to 2.4%) Marlboro</td>
<td>50x5 sec puffs, 30 sec</td>
<td>to 18.9; cig 15.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>cigarette</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study</td>
<td>Participants</td>
<td>EC Device</td>
<td>Methods</td>
<td>Results</td>
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<tr>
<td>-------</td>
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<td>---------</td>
</tr>
<tr>
<td>Vansickle et al 2010 [118]</td>
<td>32 smokers</td>
<td>Own brand cig NJOY EC (18mg) Crown 7 EC (16mg) Sham (unlit cig) EC were cigalike</td>
<td>Randomised crossover, overnight abstinence. Baseline blood, EC – 10 puffs at 30 sec intervals, blood at 5, 15, 20, 25, 30, 45, 60 mins.</td>
<td>Only cig produced significant rise in nicotine (18.8 ng/ml at 5 mins)</td>
</tr>
<tr>
<td>Van Staden et al 2013 [113]</td>
<td>13 smokers</td>
<td>Twisp eGo (18mg/ml nicotine)</td>
<td>Provided with EC and asked to use this and stop smoking for two weeks</td>
<td>Cotinine ng/ml Baseline: 287, at 2 weeks 97 (p=0.0011)</td>
</tr>
<tr>
<td>Spindle et al 2015 [120]</td>
<td>13 vapers &gt; 3 months, e-liquid ≥12mg/ml</td>
<td>Own EC (all tank systems)</td>
<td>Overnight abstinence, two sessions. Baseline blood, EC – 10 puffs at 30 sec interval. Blood at 5 and 15 min.</td>
<td>Plasma nicotine at Baseline: 2.4 ng/ml 5 mins: 19.2 ng/ml 10 mins: 10.2 ng/ml</td>
</tr>
<tr>
<td>Bullen et al 2010 [117]</td>
<td>8 smokers</td>
<td>Ruyan V8 (cigalike) 16mg/ml (puff for 5 mins) Inhalator 10mg (puff for 20 mins) Own brand cig (puff for 5 mins)</td>
<td>Randomised crossover, overnight abstinence. Baseline blood, product use, blood at 5, 10, 15, 30, and 60 mins.</td>
<td>Cmax (ng/nl): EC=1.3; Inh=2.1; Cig=13.4 Tmax (mins): EC=19.6; Inh=32.0; Cig=14.3</td>
</tr>
<tr>
<td>Flouris et al 2013 [130]</td>
<td>15 smokers</td>
<td>Giant (cigalike) 11mg/ml</td>
<td>Smoked 2 cigs, puffed EC to match smoking. Cotinine immediately and 1 h after puffing</td>
<td>No difference between products</td>
</tr>
<tr>
<td>Caponnetto et al 2013 [40]</td>
<td>Sample size not stated</td>
<td>Categoria (cigalike) 7.2mg for 12 weeks 7.2mg/5.4mg for 12 weeks</td>
<td>RCT – 12 weeks of EC use</td>
<td>Salivary cotinine 6 weeks: 42 ng/ml; 12 weeks: 91 ng/ml 6 weeks: 68 ng/ml; 12 weeks: 70 ng/ml</td>
</tr>
<tr>
<td>Etter &amp; Bullen 2011 [110]</td>
<td>30 vapers Mean EC use 94 days</td>
<td>Own brand EC Mean nicotine content 18mg/ml</td>
<td>Ad libitum use</td>
<td>Salivary cotinine 322 ng/ml</td>
</tr>
<tr>
<td>Dawkins &amp; Corcoran 2014 [114]</td>
<td>14 vapers, 7 dual users,</td>
<td>Skycig (cigalike) 18mg/ml</td>
<td>10 puffs in 5 mins, then 1 hour ad lib</td>
<td>After 10 mins: 0.74 – 6.77 ng/ml After ad lib: 4.35-25.6 ng/ml</td>
</tr>
<tr>
<td>Study</td>
<td>Participants</td>
<td>EC Device</td>
<td>Methods</td>
<td>Results</td>
</tr>
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<td>-----------------------</td>
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<td>-------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Nides et al 2014 [116]</td>
<td>29 smokers, 55% used EC in past</td>
<td>NJOY®King Bold (cigalike) 26mg</td>
<td>EC ad lib 1 week, 12 h abstinence. 2x10 puffs (30 sec inter-puff interval) 60 mins apart Blood before and 5, 10, 15, 30 minutes after</td>
<td>N=16 had no baseline plasma nicotine Rise 5 min after first puffs: 3.5 ng/ml; after second puffs: 5.1 ng/ml</td>
</tr>
<tr>
<td>Norton et al 2014 [112]</td>
<td>16 smokers</td>
<td>Smoke 51 TRIO (cigalike) 11 mg/ml</td>
<td>Day 1: own brand, saliva sample Given EC and stopped smoking. Saliva at day 5. Analysis of 16 who abstained from smoking for 72 hours</td>
<td>Significant decrease in saliva cotinine between baseline (338.0 ng/ml) and day 5 (178.4 ng/ml), p&lt;0.001</td>
</tr>
<tr>
<td>Hecht et al 2014 [111]</td>
<td>28 vapers (median 9 months), 96% daily users</td>
<td>Average nicotine 12.5 +/- 7.0 mg/ml All tank system EC</td>
<td>Measured toxicants, carcinogens, nicotine and cotinine in urine</td>
<td>Nicotine: 869 ng/ml Cotinine: 1880 ng/ml Smokers normally Nicotine: 1380 ng/ml, cotinine: 3930 ng/ml</td>
</tr>
<tr>
<td>Hajek et al 2014 [115]</td>
<td>40 smokers,</td>
<td>Greensmoke (cigalike) EC (2.4% nicotine)</td>
<td>Overnight abstinence Baseline blood, first EC use ad-lib 5 mins, blood at 5, 10, 15, 20, 30 and 60 mins. Repeated after 4-weeks of ad lib use</td>
<td><strong>Baseline</strong>: Cmax: 4.6, Tmax: 5, AUC: 96 <strong>4-weeks</strong>: Cmax: 5.7, Tmax: 5, AUC: 142</td>
</tr>
<tr>
<td>Farsalinos et al 2014 [122]</td>
<td>N=23 vapers (19 months use)</td>
<td>A: V2 (cigalike) B: Tank system EVIC at 9 watts, EVOD Same 18mg/ml liquid</td>
<td>Abstained for 8 hrs Blood baseline and after 10 puffs over 5 mins, 1 h ad lib, blood every 15 mins</td>
<td>A:5 mins: 4.9 ng/ml 1h: 15.8 ng/ml B: 5 mins: 6.6 ng/ml 1h: 23.5 ng/ml</td>
</tr>
<tr>
<td>Oncken et al 2015 [123]</td>
<td>N=20 smokers given EC for 2 weeks</td>
<td>Menthol or non-menthol tank system with 18mg/ml liquid</td>
<td>Blood baseline, 5 min ad lib vaping, blood at 5,10,15,20,30 min</td>
<td>At 5 min nicotine increased by 4-5 ng/ml</td>
</tr>
</tbody>
</table>

**Summary of findings**

The accuracy of labelling of nicotine content currently raises no major concerns. Poorly labelled e-liquid and e-cartridges mostly contained less nicotine than declared. EC used as intended poses no risk of nicotine poisoning to users. However, e-liquids should be in ‘childproof’ packaging.
Duration and frequency of puffs and mechanical characteristics of EC play a major role in determining nicotine content in vapour. Across the middle range of nicotine levels, in machine tests using a standard puffing schedule, nicotine content of e-liquid is related to nicotine content in vapour only weakly. EC use releases negligible levels of nicotine into ambient air with no identified health risks to bystanders. Use of a cigalike EC can increase blood nicotine levels by around 5ng/ml within five minutes of use. This is comparable to delivery from oral NRT. Experienced EC users using the tank EC can achieve much higher blood nicotine levels over a longer duration, similar to those associated with smoking. The speed of nicotine absorption is generally slower than from cigarettes but faster than from NRT.

Policy implications

- General labelling of the strength of e-liquids, along the lines used for example indicating coffee strength, provides sufficient guidance to consumers.

- Regulatory interventions should ensure optimal product safety but make sure EC are not regulated more strictly than cigarettes and can continue to evolve and improve their competitiveness against cigarettes.
10. Safety of e-cigarettes in the light of new evidence

Introduction

PHE commissioned a review of EC in 2014, which covered EC safety [131]. The review found that the hazard associated with use of EC products currently on the market “is likely to be extremely low, and certainly much lower than smoking” and “the health risks of passive exposure to electronic cigarette vapour are likely to be extremely low”.

These conclusions tally with a review by an international team of experts, which estimated the risks of vaping at less than 5% of the risks of smoking [10] and a comprehensive review of relevant literature by another international team which concluded that “EC aerosol can contain some of the toxicants present in tobacco smoke, but at levels which are much lower. Long-term health effects of EC use are unknown but compared with cigarettes, EC are likely to be much less, if at all, harmful to users or bystanders” [132].

Over the past few months, however, several reports have suggested that EC may pose more risks than previously thought [133-137].

We were asked to review these studies to see if in the light of this new evidence, the conclusions of the PHE 2014 review need to be adjusted. We present below the details of these studies together with any additional data that may assist with their interpretation.

Aldehydes in vapour from e-cigarettes

Two recent reports raised a possibility that under certain conditions, EC may release high levels of aldehydes. Aldehydes, including formaldehyde, acrolein and acetaldehyde, are released in tobacco smoke and contribute to its toxicity. Aldehydes are also released with thermal degradation of propylene glycol and glycerol in e-liquids. Previous studies detected the presence of aldehydes, especially formaldehyde, in the vapour from some EC, but at levels much lower than in cigarette smoke [138]. Across brands, EC released 1/50th of the level of formaldehyde released by cigarettes. The highest level detected was six times lower than the level in cigarette smoke [138].

In November 2014, following a press release from Japan [136], major media around the world reported variations of a headline: “E-cigarettes contain 10 times the carcinogens of regular tobacco”. This was based on a Japanese researcher reporting at a press conference that during tests on a number of EC brands, one product was identified
which released 10 times more formaldehyde than cigarettes. The press release states that the formaldehyde was released when the e-liquid was over-heated. The study has not been published yet and so no further details are available, but the two experiments described below provide the explanation for this finding.

In January 2015, a similar report was published as a research letter to the New England Journal of Medicine (NEJM) [133]. In this study, negligible levels of formaldehyde were released at lower EC settings, but when a third generation EC (EC with variable power settings) was set to the maximum power and the apparatus was set to take puffs lasting 3–4 seconds, this generated levels of formaldehyde that, if inhaled in this way throughout the day, would exceed formaldehyde levels in cigarette smoke between five and 15 times.

The EC was puffed by the puffing machine at a higher power and longer puff duration than vapers normally use. It is therefore possible that the e-liquid was overheated to the extent that it was releasing novel thermal degradation chemicals. Such overheating can happen during vaping when the e-liquid level is low or the power too high for a given EC coil or puff duration. Vapers call this phenomenon ‘dry puff’ and it is instantly detected due to a distinctive harsh and acrid taste (it is detected by vapers, but not by puffing machines) [139]. This poses no danger to either experienced or novice vapers, because dry puffs are aversive and are avoided rather than inhaled.

A study has just been published testing the hypothesis that the NEJM report used dry puffs [140]. An equivalent EC product was set to the same or normal settings and used by seven vapers. The vapers found it usable at normal settings, but all received dry puffs and could not use the device at the settings used in the NEJM report [133]. The product was then machine tested. At the dry puff setting, formaldehyde was released at levels reported in the NEJM letter and the Japanese press release. At normal settings, there was no or negligible formaldehyde release.

We are aware of two studies that examined aldehyde levels in vapers. In a cross-sectional study, vapers had much lower levels of acrolein and crotonaldehyde in urine than smokers [111]. The other study, funded by the Medicines and Healthcare products Regulatory Agency (MHRA), examined changes in acrolein levels in smokers who switched to exclusive EC use and in those who continued to smoke while also using EC. As both EC and cigarettes release acrolein, there was a concern that ‘dual users’ may increase their acrolein intake compared to smoking only. The results showed a substantial decrease in acrolein intake in smokers who switched to EC, but it also found a significant decrease in acrolein intake in dual users (ie people that were both smoking and vaping). This was because they reduced their smoke intake as indexed by exhaled CO levels. Normal vaping generated negligible aldehyde levels [141].
Although e-liquid can be heated to a temperature which leads to a release of aldehydes, the resulting aerosol is aversive to vapers and so poses no health risk.

Summary

There is no indication that EC users are exposed to dangerous levels of aldehydes.

Effects of e-cigarette vapour on mice lungs

A paper published in February 2015 [135] generated worldwide media coverage with claims that it linked EC to lung inflammation, lung infection, and even lung cancer.

Groups of mice were put in a small container exposing them to vapour from six EC ('Menthol Bold' 1.8% nicotine) puffed on a rotating wheel at six puffs per minute for 1.5 hours, twice daily, over two weeks. The control mice were not exposed to this treatment.

Animals were infected with either streptococcus pneumonia via intranasal instillation and killed 24 hours later, or with tissue culture influenza virus and monitored for weight loss, mortality, and lung and airways inflammation. Compared to the control group, the experimental animals had an increase in pro-inflammatory cytokines, diminished lung glutathione levels, higher viral titre, and were more likely to lose weight and die. The study identified free radicals in EC vapour as the potential culprit.

There are several problems with the study and with the way its results have been interpreted.

EC vapour is inhaled as a replacement for tobacco smoke, but the study attempted no comparison of the effects on the lungs from smoke and vapour exposures. This makes a meaningful interpretation of the results difficult. A comparison was made, however, of the levels of free radicals. Even at the very high vapour density generated by the study procedure, the level of free radicals identified in vapour was “several orders of magnitude lower than in cigarette smoke”.

In addition to this, the mice in the experimental group were exposed to a much higher level of stress than the control group, and stress affects bacterial and viral response. Long and repeated containment in the small and crowded smoke chamber emitting an overpowering smell is a stressor in itself, but the animals also suffered repeated nicotine poisoning. The mice showed an average cotinine concentration of 267ng/ml. Cotinine is the primary metabolite of nicotine and in humans the amount of nicotine needed to give similar cotinine levels are tolerated by heavy smokers, but highly aversive to non-smokers, who would be expected to feel sick and vomit at this level of exposure. Mice are much more sensitive to nicotine than humans (LD50 in mice is 3mg/kg, in humans
6.5–13mg/kg [69]). Accelerated weight loss, reduced immunity and early death in the experimental group were much more likely the result of protracted stress and nicotine poisoning than the result of exposure to free radicals (which were in any case 1,000 times lower than from cigarettes).

A similar study from 2015 [134] reported oxidant reactivity (which is linked to free radicals) of e-liquid and cytokine release in exposed lung tissue and in mice exposed to EC vapour. Again, no comparison with exposure to smoke was reported.

Human studies do not corroborate any of the findings reported here. A case study of lipoid pneumonia, which could have been caused by EC flavouring, received worldwide attention in 2012 [142] but despite extensive interest in the phenomenon, no further cases were published. Adverse effects of vaping are primarily local irritation and dry mouth [132]. A study that monitored asthma patients who switched from smoking to vaping found significant improvements in symptoms and in respiratory function [143]. The recent Cochrane Review found no significant adverse effects associated with EC use for up to 1.5 years [39].

**Summary**

The mice model has little relevance for estimating human risk and it does not raise any new safety concerns.

**Particles in e-cigarette vapour**

For completeness we are including information on another recent report which was interpreted as showing that EC may be dangerous to bystanders. At an EC Summit conference in London in November 2014, Harrison and McFiggans reported on particles present in EC vapour. Their presentation was reported in the British Medical Journal under the title “E-cigarette vapour could damage health of non-smokers” [137]. McFiggans and Harrison requested a retraction of the piece because their findings did not concern any health risks. It is the content of the particles rather than their presence or size which has health implications [144].

**Impact of media reports that e-cigarettes are dangerous**

Together with previous health scares, the articles reviewed here may be having a significant impact on public perception of EC safety. In the US, 82% of responders believed that vaping is safer than smoking in 2010, but the figure has shrunk to 51% in 2014 [65]. A perception that EC pose as much risk as smoking is the most likely explanation of the recent decline in adoption of EC by smokers [145].
Summary of findings

Two recent worldwide media headlines asserted that EC use is dangerous. These were based on misinterpreted research findings. A high level of formaldehyde was found when e-liquid was over-heated to levels unpalatable to EC users, but there is no indication that EC users are exposed to dangerous levels of aldehydes; stressed mice poisoned with very high levels of nicotine twice daily for two weeks were more likely to lose weight and die when exposed to bacteria and viruses, but this has no relevance for human EC users. The ongoing negative media campaigns are a plausible explanation for the change in the perception of EC safety (see Chapter 8).

None of the studies reviewed above alter the conclusion of Professor Britton’s 2014 review for PHE. While vaping may not be 100% safe, most of the chemicals causing smoking-related disease are absent and the chemicals that are present pose limited danger. It had previously been estimated that EC are around 95% safer than smoking [10, 146]. This appears to remain a reasonable estimate.

Policy implications

- There is a need to publicise the current best estimate that using EC is around 95% safer than smoking.

- Encouraging smokers who cannot or do not want to stop smoking to switch to EC could be adopted as one of the key strategies to reduce smoking related disease and death.
11. Other health and safety concerns

There have been a number of newspaper reports about the hazards of EC use including e-liquid ingestion/poisonings, fires, battery explosions etc [147-149]. In this chapter we review available national data on these issues to endeavour to quantify the risk.

Poison reports

Data on e-liquid exposures in the UK are available from the National Poisons Information Service (NPIS)[150]. The NPIS provides information about poisoning to NHS staff and publishes data based on enquiries made by phone, using their online database TOXBASE, and by consultant referrals. The NPIS report for 2013/14 [150] details 204 enquiries related to the liquid content of EC and their refills, most of which reported accidental exposure, however 21 enquiries were related to intentional overdoses using e-liquids. Most incidences concerned ingestion of the liquid in EC or their refills (n=182) although small numbers of inhalation (n=17), eye contact (n=13) and skin contact (n=12) enquiries were also reported. The NPIS further reported that the number of enquiries about e-liquids has increased since 2007 (Figure 20) broadly reflecting the increasing popularity of EC.

A large proportion of exposures to e-liquids were in children under five years old (Figure 21), a finding that is replicated in a US study on calls to poison centres [151]. However, the concentration of events concerning children is not unique to e-liquids. Children under five years old appear to be more vulnerable than adults to accidental poisoning in general (Figure 22).
Figure 20: Number of telephone enquiries to National Poisons Information Service (NPIS) about e-cigarettes over time

![Graph showing number of telephone enquiries to NPIS about e-cigarettes over time]

Figure 21: Number of enquiries about e-cigarettes to NPIS by age

![Bar chart showing number of enquiries about e-cigarettes to NPIS by age]

E-cigarettes: an evidence update
Exposures to poisonous liquid among children are of concern; however they should be taken in context. The same report from the NPIS recorded 208 exposures to liquid in reed diffusers, 1,168 exposures to pesticides and more than 600 to paracetamol. E-liquids seem to contribute towards domestic poisoning incidents but regulations, such as child safety caps, could limit this risk.

The clinical outcomes of exposures to e-liquids, as detailed in the NPIS report, were predominantly either ‘no toxicity’ or ‘mild toxicity’. There were two reported cases of ‘moderate toxicity’ and one ‘severe’ case that required treatment in an intensive care unit. Toxicity symptoms included conjunctivitis, irritation of the oral cavity, anxiety, vomiting, hyperventilation and changes in heart rate.

Fire

A number of news articles report the risk of fire and explosions from EC [147, 149, 152]. These reports suggest that faulty or incompatible chargers are the main causes of EC related fires along with faults relating to lithium batteries [152]. In order to assess the risks of fire we used the two data sources below:

1) In 2014, the BBC made Freedom of Information requests to UK fire services [153] and reported that there were 43 recorded call outs for fires related to EC in 2013 and 62 between 1 January 2014 and 15 November 2014. They added that call outs to EC related fires were rising in frequency. This report was based on responses from 43 out of 46 fire services in the UK [153, 154]
2) The official reporting statistics for the UK [155] do not specifically report EC as a cause of fire. There were 2,360 accidental fires between April 2013 and March 2014 where the source of ignition was “smokers’ materials” causing 80 fatalities and 673 non-fatal casualties. Additionally, there were 3,700 fires from faulty appliances and electrical leads causing 19 fatalities and 820 non-fatal casualties. It is not clear what proportion of these were caused by EC.

Regulations covering chargers and quality standards of production could help reduce the risk of fire and explosion in EC. An unpublished Department for Business, Innovation and Skills (BIS) funded market surveillance exercise in 2013/14 found that six out of 17 EC had no instructions for charging, and that eight out of 17 EC did not have a charging cut-off device and therefore did not meet the requirements of BS EN 62133:2013 ‘Safety requirements for portable sealed secondary cells and batteries for use in portable devices’\(^4\). It seems likely that the risk of fire and electrical fault is similar to other domestic electrical products, indicating that EC should be subject to the same guidelines and safety mechanisms.

**Summary of findings**

There is a risk of fire from the electrical elements of EC and a risk of poisoning from ingestion of e-liquids. These risks appear to be comparable to similar electrical goods and potentially poisonous household substances.

**Policy implications**

- The risks from fire or poisoning could be controlled through standard regulations for similar types of products, such as childproof containers (contained within the TPD but which are now emerging as an industry standard) and instructions about the importance of using the correct charger.

- Current products should comply with current British Standard operating standards.

- Records of EC incidents could be systematically recorded by fire services.

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12. International perspectives

Overview

Internationally, countries have taken a wide variety of approaches to regulating EC [156]. Current approaches range from complete bans on the sale of any EC, to applying existing laws on other products to EC (poison, nicotine, and/or tobacco laws), to allowing EC to be sold under general consumer product regulations. Similarly, within countries, different laws have also been applied at the state/provincial level, along with municipal by-laws, extending into areas including taxes on EC, and bans on use in places where smoking is banned. Furthermore, several nuances in laws exist, making it difficult to make broad statements about the regulations in a given country. This section focuses on presenting (1) studies that have compared the use of EC internationally across countries using representative samples and comparable methods, (2) a brief review of adolescent surveys internationally, and (3) the cases of Australia and Canada, two countries that have very similar tobacco control policies to the UK but very different policies relating to EC.

Use of e-cigarettes among adults internationally

Three studies have compared the use of EC internationally: (1) International Tobacco Control Project (described in the Methodology section), (2) Eurobarometer study and (3) Global Adult Tobacco Survey.

The International Tobacco Control Project compared EC use (use defined as less than monthly or more often) among smokers and ex-smokers across 10 countries [157]. Gravely et al., 2014 found significant variability in use across countries, but data were gathered across different years. Gravely et al., 2014 concluded that the study provided evidence of the rapid progression of EC use globally, and that variability was due partly to the year the survey was conducted, but also market factors, including different regulations on EC. Notably, EC use was highest in Malaysia at 14%, where a ban on EC was in place.

Two studies using secondary data from the 2012 Eurobarometer 385 survey have examined EC use. Vardavas, et al., 2014 [158] examined ever use (tried once or twice) of EC among smokers, ex-smokers and never smokers aged 15 years and over across 27 EU countries. The study found wide variation in ever EC use among smokers and non-smokers, with ever use varying from 20.3% among smokers, 4.4% among ex-smokers, and 1.1% among never smokers. Of those who had tried, 69.9% reported using EC once or twice, and 21.1% and 9% reported ever using or currently using occasionally or regularly (use or used regularly or occasionally). It is important to note that the question asked about ever using or currently using occasionally or regularly,
and thus would overestimate actual current use. Overall, being a smoker was the strongest predictor of ever using an EC, younger age was also predictive. Respondents who were uncertain about the harmfulness of EC were less likely to have tried an EC. Among current smokers, those who had a made a quit attempt in the past year were most likely to have ever used EC, along with heavier smokers. With regards to use as a smoking cessation aid, 7.1% of smokers who had ever made a quit attempt reported having used EC, compared to 65.7% who used no help, 22.5% who used nicotine replacement therapy, and 7.3% who received behavioural counselling. Geographical differences in EC use noted by the authors included higher ever use in Northern and Eastern Europe compared to Western Europe. The study did not go into detail on occasional or regular users of EC because the numbers were too low for any detailed analyses.

A 2012 study using the same Eurobarometer 385 survey data gave further detail on ever having used or currently using EC occasionally or regularly among smokers and non-smokers [63]. The study found that regular/occasional use was highest in Denmark at 4.2% and lowest in Lithuania and Portugal at 0.6%, and 2.5% in the UK [63].

The Global Adult Tobacco Survey [159] published findings on EC use in Indonesia (2011), Malaysia (2011), Qatar (2013) and Greece (2013) among smokers and non-smokers, the first countries with available data. Of those respondents who were aware of EC, they asked, “Do you currently use e-cigarettes on a daily basis, less than daily, or not at all?” and considered those who said they used ‘less than daily’ or ‘daily’ to be current EC users.

Overall, awareness of EC was highest in Greece (88.5%), followed by Qatar (49%), Malaysia (21%), and Indonesia (10.9%). Use of EC among smokers was highest in Malaysia (10.4%), followed by Qatar (7.6%), Indonesia (4.2%) and Greece (3.4%). Use of EC among non-smokers was highest in Greece (1.3%), followed by the other three countries, Malaysia (0.4%), Indonesia (0.4%) and Qatar (0.4%). Similar to findings from the ITC Project, these numbers are likely influenced by timing of the survey, due to the rapid progression of use of EC globally, and other market factors. Together with the findings from Gravely et al., 2014 [157] they show the rapid global progression of EC use across both high income and lower middle income countries.

Use of e-cigarettes among youth internationally

Whilst there are very few international or European studies which use consistent methodology, there is a rapidly growing body of research on the prevalence of EC use in young people at the country level, as well as reviews in this area [eg [160]]. However, much of this literature on EC use among adolescents is incomparable because of inconsistent measurements of use (confusing ever use, trial, current use), and different age ranges involved. In addition, many of the studies have been poorly reported. For
example, much has been made of the increase in EC observed in the US using the cross-sectional Centers for Disease Control & Prevention (CDC) National Youth Tobacco Surveys [161-163]. These reports and press coverage have been heavily criticised [164-166]. The most important feature of the NYTS data was the fall in smoking prevalence over the same period (as observed in the UK, France [167] and elsewhere).

The CDC findings indicated that past 30-day use of EC increased among middle and high school students. For example, the 2014 data indicated that among high school students use increased from 4.5% to 13.4% between 2013 and 2014. Among middle school students, current EC use increased from 1.1% in 2013 to 3.9% in 2014. However, cigarette smoking had continued to decline during this period (high school students: 15.8% to 9.2%; middle school students: 4.7% to 2.5%) such that smoking was at a 22-year low in the US. These findings strongly suggest that EC use is not encouraging uptake of cigarette smoking.

Whilst most of the recent studies examining youth EC use emanated from North America, the common pattern emerging worldwide is of a very high awareness of EC and an increase in trial of these products among young people [168-178]. Nevertheless, estimates of prevalence of current use of EC vary widely with the highest being reported in Poland at around 30% [174] and Hawaii (29% tried, 18% current) [178]. Most other estimates indicate that a very small minority of youth, less than 3%, currently or recently used EC. Whilst EC experimentation is increasing, regular or current use of EC appears to be largely concentrated in those already smoking conventional cigarettes. The most recent Europe-wide data indicated that 1.1% of never-smokers aged 15 and above had ever tried an EC [158]. Yet little research has focused on how EC are being used among young people, with limited qualitative research studies in this area [179, 180]. Other findings relate to the influence of parents who smoke on EC experimentation in youth [eg [170] and associations between EC experimentation and other substance use [eg [170, 181]. Several studies have also found an association between EC use and openness to cigarette smoking [eg [182] or intentions to smoke cigarettes [eg [168].

The cases of Australia and Canada

Australia has applied existing laws on poisons, therapeutic goods, and tobacco products to EC. Very broadly speaking, the current laws in Australia have resulted in a ban on the sale and importation of EC with nicotine (although there is a mechanism for legal import as an unapproved medicine with a doctor’s prescription). There are no national level prevalence data on EC use in Australia available at this time. One study comparing trends in awareness, trial, and use of EC among nationally representative samples of smokers and ex-smokers (use defined as less than monthly or more often) in Australia and the UK in 2010 and 2013 found reported EC use in Australia in 2013 at 6.6% and use in the UK at 18.8% [183]. Although the use of EC was found to be
significantly lower in Australia than in the UK in 2013, the use of EC increased at the same rate in Australia and the UK between 2010 and 2013 [183].

**Canada** took a similar approach to regulating EC as Australia by prohibiting the sale of EC with nicotine through existing laws. However, a recent House of Commons report stated that the current regulatory approach was not working to restrict access to EC with nicotine [184]. Canada has now put forward recommendations to develop a new legislative framework for EC that would most likely allow the sale of EC with nicotine [184]. There has been only one population-level survey of EC use in Canada. The 2013 Canadian Tobacco, Alcohol and Drugs Survey (CTADS) of Canadians 15 years and older found that 9% had ever tried an EC, with trial being higher among young people aged 15–19 years at 20% [185]. Use in the past 30 days was lower at 2%, with past 30 day use being higher among young people aged 15–19 years at 3%. Of those who tried an EC, 55% stated the EC did not contain nicotine, while 26% reported it did contain nicotine, with 19% reporting uncertainty. Whether the EC they tried contained nicotine is uncertain given (1) the ban on the sale of EC with nicotine, and (2) reports that many EC sold and bought in Canada are labelled as not containing nicotine but actually contain nicotine [184]. Although it is difficult to make comparisons due to different survey methods and questions, the percentage of young people (15–19 years) who have tried EC in Canada (20%) is roughly similar to the percentage who have tried EC in GB in 2014 (reported at 8%, 15%, 18%, and 19%, for ages 15 to 18, respectively).

**Summary of findings**

Although EC use may be lower in countries with more restrictions, these restrictions have not prevented EC use. Overall, use is highest among current smokers, with low numbers of non-smokers reporting ever use. Current use of EC in other countries is associated with being a smoker or ex-smoker, similar to the findings in the UK. EC use is frequently misreported, with experimentation presented as regular use. Increases in youth EC trial and use are associated with decreases in smoking prevalence in all countries, with the exception of one study from Poland.

**Policy implications**

- Future research should continue to monitor and evaluate whether different EC policies across countries are related to EC use and to smoking cessation and smoking prevalence.

- Consistent and agreed measures of trial, occasional and regular EC use among youth and adults are urgently needed to aid comparability.
Acknowledgements

We are grateful to Elle Wadsworth for her support in producing this document.
Declaration of interests

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Professor Peter Hajek is director of Health and Lifestyle Research Unit at Wolfson Institute of Preventive Medicine, Queen Mary University of London (QMUL). He provided consultancy to and received research funding from manufacturers of stop-smoking medications including Pfizer, GSK and Johnston and Johnston. His research into safety and effects of e-cigarettes was funded by MHRA and NIHR. He has no links with any tobacco or e-cigarette manufacturers.

Dr Hayden McRobbie is a researcher at QMUL and Director of the Dragon Institute for Innovation (New Zealand), which has no links with any tobacco or e-cigarette manufacturers. He contributed to educational sessions sponsored by Pfizer and Johnson & Johnson, manufacturers of stop-smoking medications, and received investigator-led research funding from Pfizer. He was an investigator on a study of e-cigarettes (EC) produced by Ruyan Group, Beijing and Hong Kong. Ruyan sponsored Health New Zealand Ltd. who provided funding to the University of Auckland to conduct the trial, independently of Ruyan. He was also an investigator on an EC trial funded by the Health Research Council of New Zealand that used EC supplied at no charge by PGM international, a retailer of EC.

The UK Centre for Tobacco and Alcohol Studies is a UKCRC Centre of Public Health Research Excellence funded by the British Heart Foundation, Cancer Research UK, the Economic and
Social Research Council, the Medical Research Council and the Department of Health, under the auspices of the UK Clinical Research Collaboration.
References

25. Wise, J., *Children are three times as likely to try e-cigarettes as tobacco products, study finds*. BMJ, 2014. 349: p. g7508.
E-cigarettes: an evidence update


71. Shawn, L. and L.S. Nelson, Smoking cessation can be toxic to your health. EMERGEnCy MEDICInE, 2013.


76. Christensen, L.B., T. van't Veen, and J. Bang. Three cases of attempted suicide by ingestion of nicotine liquid used in e-cigarettes. in Clinical Toxicology. 2013. INFORMA HEALTHCARE 52 VANDERBILT AVE, NEW YORK, NY 10017 USA.


E-cigarettes: an evidence update


E-cigarettes: an evidence update


126. Farsalinos, K.E., et al., Evaluating nicotine levels selection and patterns of electronic cigarette use in a group of “vapers” who had achieved complete substitution of smoking. Substance abuse: research and treatment, 2013. 7: p. 139.


140. Farsalinos, C., E-cigarette aerosols generates high levels of formaldehyde only in 'dry puff' conditions. Addiction, (in press).


E-cigarettes: an evidence update

167. Houezec, J., According to a new survey, youth smoking decreased during the last 4 years while e-cig used increased. 2014.


Please note that we did not carry out a full systematic review for this report but followed systematic review methods. We assessed 94 papers and 9 additional reports included those that were relevant to our objective of describing the use of e-cigarettes and how they impact smoking behaviour, with a particular focus on the UK.
APPENDIX B: Measures of e-cigarette use

Measures of EC use in studies referenced, in most cases respondents were only asked about EC use if they first answered yes to ever trying an EC/had heard of EC.

Surveys

These questions in all surveys below may have been slightly altered from year to year as the EC market evolved and awareness grew.

Smoking Toolkit Study (STS)

The following four questions are used to assess current use of e-cigarettes: (if already responded they are cutting down)

Q632e37. Which, if any, of the following are you currently using to help you cut down the amount you smoke?
Nicotine gum
Nicotine replacement lozenges\tablets
Nicotine replacement inhaler
Nicotine replacement nasal spray
Nicotine patch
Electronic cigarette
Nicotine mouthspray
Other (specify)

Q632e1. Do you regularly use any of the following in situations when you are not allowed to smoke?
Nicotine gum
Nicotine lozenge
Nicotine patch
Nicotine inhaler\inhalator
Another nicotine product
Electronic cigarette
Nicotine mouthspray
Other (specify)

NEWW53a. Can I check, are you using any of the following either to help you stop smoking, to help you cut down or for any other reason at all?

Nicotine gum
Nicotine lozenge
Nicotine patch
Nicotine inhaler\inhalator
Another nicotine product
Electronic cigarette
Nicotine mouthspray
Other (specify)

QIMW86_1. Can I check, are you using any of the following?
PROBE FULLY: Which others? PROBE UNTIL RESPONDENT SAYS ‘NO OTHERS’
PLEASE TYPE IN OTHER ANSWERS CAREFULLY AND USE CAPITAL LETTERS
Nicotine gum
Nicotine lozenge
Nicotine patch
Nicotine inhaler\inhalator
Another nicotine product
Electronic cigarette
Nicotine mouthspray
Other (specify)

ASH Smokefree GB adult survey

Which of the following statements BEST applies to you?
  □ I have heard of e-cigarettes and have never tried them
  □ I have heard of e-cigarettes but have never tried them
  □ I have tried e-cigarettes but do not use them (anymore)
  □ I have tried e-cigarettes and still use them
  □ Don’t know

The fourth option constitutes ‘current use’

ASH Smokefree GB youth survey

An e-cigarette is a tube that looks like a normal cigarette, has a glowing tip and puffs a
vaour that looks like smoke but unlike normal cigarettes, they don’t burn tobacco.
Have you ever heard of e-cigarettes?
  □ Yes, I have
  □ No, I haven’t

All those who have heard of e-cigarettes: Which one of the following is closest to
describing your experience of e-cigarettes?
  □ I have never used them
  □ I have tried them once or twice
  □ I use them sometimes (more than once a month)
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- I use them often (more than once a week)
- Don’t want to say

Internet cohort survey

Have you ever heard of electronic cigarettes or e-cigarettes? These are electronic devices that contain nicotine in a vapour and are designed to look like cigarettes, but contain no tobacco.

Yes/No/Don’t know

If Yes, Have you ever tried an electronic cigarettes?

Yes/No/Don’t know

If Yes, How often if at all, do you currently use an electronic cigarette? (PLEASE SELECT ONE OPTION)

1. Daily
2. Less than daily, but at least once a week
3. Less than weekly, but at least once a month
4. Less than monthly
5. Not at all
6. Don’t know

Other studies

Amrock et al., 2015 (US)

Which of the following tobacco products have you ever tried, even just one time?” to which they could select, “electronic cigarettes or e-cigarettes, such as Ruyan or NJOY” alongside other tobacco products. A related question asked if students used e-cigarettes on at least one of the past 30 days.

Biener & Hargraves, 2014 (US)

At baseline, three questions were asked about e-cigarettes: whether the respondent had “ever heard of electronic cigarettes, also known as e-cigarettes”; if so, whether he/she had ever used an e-cigarette even one time, and if so, on how many of the past 30 days the respondent had used an e-cigarette. To assess how intensively and for how long the respondent had used e-cigarettes during the period between interviews, the follow-up interviews included questions to describe e-cigarette usage. Those who were not aware of e-cigarettes at baseline were asked if they had heard of them at follow-up. Those who had not tried e-cigarettes at baseline were asked if they had done so by follow-up. All respondents who reported ever trying them by follow-up were asked
whether they currently used e-cigarettes every day, some days or not at all. If not at all, they were asked if they ever used e-cigarettes “fairly regularly.” If not, whether they had used only once or twice or more often than that. All who had used more than once or twice, were asked a series of questions about their patterns of use: for how long they had used e-cigarettes (less than a month, 1–6 months, more than 6 months); whether they had ever used e-cigarettes daily for at least one week; if so for how long they had used e-cigarettes daily. From these variables, a 3-level measure of intensity of e-cigarette usage was computed: 3 = intensive (used daily for at least 1 month); 2 = intermittent (more than once or twice but not daily for a month or more); 1 = non-use or at most once or twice.

**Borderud et al., 2014 (US)**

Patients were asked if they had used E-cigarettes within the past 30 days, with the response options being yes or no.

**Brose et al, 2015 and Hitchman et al., 2015 (GB)**

How often, if at all, do you currently use an electronic cigarette? [Asked of respondents who had ever heard of e-cigarettes and had ever tried one.]

1. Daily
2. Less than daily, but at least once a week
3. Less than weekly, but at least once a month
4. Less than monthly
5. Not at all
6. Don't know

What electronic cigarette equipment do you currently use the most?

1. A disposable electronic cigarette (non-rechargeable)
2. A commercial electronic cigarette kit which is refillable with pre-filled cartridges
3. A commercial electronic cigarette kit which is refillable with liquids
4. A modular system (I use my own combination of separate devices: batteries, atomizers, etc.)
5. Don't know

**Brown et al., 2014 (England)**

Which, if any, of the following did you try to help you stop smoking during the most recent serious quit attempt?

1. E-cigarettes
2. NRT bought over-the-counter
3. No aid
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Canadian Tobacco, Alcohol and Drugs Survey 2013 (CTADS)

Trial
Have you ever tried an electronic cigarette, also known as an e-cigarette?

1. Yes
2. No
3. Refused
4. Don’t know

Last 30 day use
In the past 30 days did you use an electronic cigarette, also known as an e-cigarette?

1. Yes
2. No
3. Refused
4. Don’t know

CDC/NYTS and Dutra and Glantz

During the past 30 days, on how many days did you use electronic cigarettes or e-cigarettes such as Blu, 21st Century Smoke, or NJOY?

Gravely et al., 2014 (Republic of Korea, US, UK, Canada, Australia, and Malaysia);
Yong et al., 2014 (UK and Australia)

How often, if at all, do you currently use an electronic cigarette? (dichotomised into current use and non-current by combining any use responses vs. not at all)

1. Daily, Less than daily but at least once a week
2. Less than weekly but at least once a month
3. Less than monthly
4. Not at all

Gravely et al., 2014 (Netherlands)

How often do you currently use an electronic cigarette? (dichotomised into current use and non-current by combining any use responses vs. have you stopped altogether)

1. Daily
2. Less than daily, but at least once a week
3. Less than weekly, but at least once a month
4. Less than monthly versus, or
5. Have you stopped altogether?
Gravely et al., 2014 (China)

Are you currently using an electronic cigarette at least weekly? (Yes vs. No)
   1. Yes
   2. No

Hughes et al., 2014 (Trading Standards NW Study)

“Have you ever bought or tried electronic cigarettes?”

Hummel et al., 2014 (Netherlands)

Respondents who had ever tried e-cigarettes were asked how often they currently used an e-cigarette (daily, at least once a week, at least once a month, less than monthly, or stopped altogether)

Lee et al., 2014 (US)

E-cigarette use questions were:

Have you ever used e-cigarettes?
   1. yes
   2. no

Have you used e-cigarettes in the past 30 days?
   1. yes
   2. no

Moore et al., 2014 (Welsh study 10-11 year olds)

“Have you heard of e-cigarettes before this survey?”
‘Have you ever used an e-cigarette? with response options of ‘no’, ‘yes, once’ or’ yes, more than once’

Moore et al., 2015 (Welsh study HBSC)

Asked whether they had ever used an e-cigarette with response options of:
   o I have never used or tried e-cigarettes
   o I have used e-cigarettes on a few occasions (1-5 times);
   o I regularly use e-cigarettes (at least once a month)’.
Palipudi et al., 2015 (Global Adult Tobacco Survey)

“Do you currently use e-cigarettes on a
  1. Daily basis,
  2. Less than daily,
  3. Or, not at all?”

Pearson et al., 2014 (US)

Participants were asked which methods they had used to quit in the past 3 months and were presented a list of common quit methods. Participants were considered e-cigarette users if they selected “e-cigarettes” in response to this question or if they entered terms like “vapers,” “vaping,” “vape,” or “ecigs” in the “other quit methods” open-ended response option.

Pepper et al., 2014 (US)

Have you ever used an e-cigarette, even one puff?
Do you now use e-cigarettes every day, some days, or not at all?

Richardson et al., 2014 (US)

Please indicate whether you have ever heard of these products, if you have ever tried them and if you have ever purchased them. Products included ENDS; dissolvables; chew, dip, or snuff (assessed in 1 question); and snus, each presented with brand names to increase validity of responses. Respondents could choose multiple options from the following choices: (1) heard of; (2) tried; (3) purchased; (4) never heard of, tried, or purchased (for those to whom options 1, 2, and 3 were not applicable); (5) refused; and (6) don’t know.

Rutten et al., 2014 (US)

Do you now use e-cigarettes (eg BluCig, NJoy, V2, Red Dragon, etc)? [Picture of three different e-cigarettes included]
  1. Every day
  2. Some days
  3. Not at all
Schmidt et al., 2014 (US)

Have you ever used an electronic cigarette, even just one time in your entire life?
Do you now use electronic cigarettes every day, some days, rarely, or not at all?

Vardavas et al., 2014 (Eurobarometer 27 countries), dichotomised into regularly, occasionally, tried once or twice vs. otherwise; Agaku et al., 2014 (Eurobarometer, 25 countries), dichotomised into regularly or occasionally vs. otherwise;

Have you ever tried any of the following products? (Electronic cigarettes)
1. Yes, you use or used it regularly.
2. Yes, you use or used it occasionally.
3. Yes, you tried it once or twice.
4. No.
5. Don’t Know.

White et al., 2015, New Zealand national youth tobacco use survey in 2012 and 2014

Ever use: Have you ever tried electronic cigarettes?
Appendix C: Narrative summary of studies on nicotine delivery from e-cigarettes

Early studies

Two studies, both published in 2010, examined nicotine delivery from cigalike EC.

Bullen et al., 2010 used a cross-over design to compare nicotine delivery of a 16mg/ml Ruyan V8 EC with a 0mg/ml EC, a nicotine inhalator (10mg) and a conventional cigarette among 8 smokers who abstained from smoking overnight [43]. Participants puffed on their cigarettes and EC ad libitum over 5 minutes, and on the inhalator over 20 minutes. The nicotine containing EC had similar pharmacokinetic parameters to the inhalator (Cmax: 1.3 vs. 2.1 ng/ml; Tmax: 19.6 vs. 32.0 mins), and both were outperformed by a conventional cigarette (Cmax 13.4 ng/ml; Tmax 14.3 mins).

Vansickel et al., 2010 also used a cross-over design and tested nicotine delivery of two EC (NJOY EC (18mg) and Crown 7 EC (16mg) and participants own brand cigarette[118]. Participants abstained overnight and then took 10 puffs on the EC with a 30 sec inter-puff interval. Only the conventional cigarette produced a significant rise in plasma nicotine, from baseline 2.1 ng/ml (SD 0.32) to a peak at 5 minutes 18.8 ng/ml (SD 11.8).

The poor nicotine delivery of these EC was likely to be due to several factors. The EC tested were some of the first to market. The EC used in the Bullen 2010 study were noted to leak and the vaporising component did not always function. Both of these early studies recruited EC naïve smokers, without opportunity to practice using the EC prior to experimentation.

There are other factors that are associated with nicotine delivery, which we have summarised below.

1) More intensive vaping regimens
Vansickel et al., examined nicotine delivery associated with the use of Vapor King (cigalike EC with 18mg/ml nicotine) in 20 smokers naïve to EC [119]. After overnight abstinence, participants used the EC for 5 minutes on a total of six occasions (10 puffs, 30 sec inter-puff interval) 30 minutes apart. A significant increase in plasma nicotine was observed after the fourth bout of puffing, and mean blood nicotine levels had increased from 2.2 ng/ml (SD 0.78) at baseline to 7.4 ng/ml (SD 5.1) at the end of the last bout of puffing.

2) Experience with EC
Vansickel & Eissenberg (2012) report nicotine pharmacokinetics in eight vapers who had been using EC for average of 11.5 (SD 5.2) months [7]. They used their own EC and e-liquid (the majority used an e-liquid with a concentration of 18 mg/ml).
Participants attended the laboratory after overnight abstinence and used their EC under a standardised vaping regimen (10 puffs with a 30 second inter-puff interval) and then a 60 minutes period of *ad lib* vaping. The PK analyses showed a significant increase in plasma nicotine from baseline 2.0 ng/ml to 0.3 ng/ml within five minutes of the first puff. At the end of the ad-lib vaping period the maximum plasma nicotine concentration was 16.3 ng/ml.

Dawkins and Corcoran (2014) examined nicotine delivery associated with the use of the Skycig 18 mg Crown tobacco bold cartridges in 14 vapers, who had been vaping for almost 5 months on average[6]. Using a similar methodology to Vansickle & Eissenberg (2012), the analysis of plasma nicotine from the seven participants that provided a full blood set, showed that levels had increased from 0.74 to 6.77 ng/ml in 10 minutes. However there was individual variation (2.5 ng/ml to 13.4 ng/ml). After an hour of *ad lib* use the maximum nicotine concentration reached was 13.91 ng/ml, again with a wide range of levels observed between individuals (4.35-25.6 ng/ml).

Spindle et al., 2015 studied 13 experienced EC users (> 3 months, with the majority 9/13 using e-liquid strength of 24mg/ml and all using tank systems)[120]. Taking 10 puffs over 5 minutes resulted in an increase in mean blood nicotine levels from 2.4 ng/ml baseline to 19.2 ng/ml at 5 minutes.

Practice in EC use also results in a modest increase in blood nicotine levels. Hajek et al., 2014 tested Greensmoke EC (a cigalike EC with 2.4% nicotine) in 40 smokers, naïve to EC[115]. Participants abstained from any nicotine use overnight and after a baseline blood sample was collected used the EC, *ad lib*, for 5 minutes. This procedure was undertaken twice, on first use and then again after 4 weeks of use. The maximum plasma concentrations increased from 4.6 ng/ml (range 0.9-9.0) to 5.7 ng/ml (range 1.9-11.0), although this increase was not significant. The area under the curve (AUC), however, did show a significant increase, from 96 (range 12-198) to 142 (range 56-234). The time to maximum plasma concentration (5 minutes) did not change.

Nides et al., 2014 provided EC to participants (29 smokers, mean cigarette consumption of 20 cpd, and of 55% of whom had used EC in past) but also allowed them to practice using the EC (NJOY®King Bold, a cigalike EC, with 26mg nicotine) for a week prior to undertaking a PK analysis [116]. Participants (who abstained from all nicotine products for at least 12 hours) then were asked to use EC (10 puffs with a 30 second inter-puff interval) on two occasions 60 minutes apart. Pharmacokinetic (PK) analyses were undertaken in 16 participants who had no detectable plasma nicotine at baseline. The mean rise in blood nicotine was 3.5 ng/ml (range 0.8-8.5 ng/ml) at 5 minutes after the first round of puffing and 5.1 ng/ml (range 1.1 – 7.1 ng/ml) at 10 minutes after the second.
3) Nicotine concentration and chemical composition of e-liquid
Yan & D’Ruiz (2014) examined nicotine delivery from Blu cigalike EC with differing levels of nicotine (2.4% and 1.6%), glycerin/propylene glycol (75% glycerin and 50% glycerin/20% propylene glycol), and flavours (classic tobacco and menthol)[129]. Participants (23 smokers) were randomized to 5 different EC conditions and smoking a regular cigarette in a cross over design. They were given 7 days to familiarize with EC use, and then abstain from all nicotine products for 36 hours prior to test days. On test days participants were asked to take 50 x 5 second puffs on EC at 30 sec intervals (in the cigarette arm they smoked 1 cigarette with usual puff duration at 30 sec intervals). After the controlled puffing testing ppts were allowed 60 minutes of ad lib use.

Peak plasma nicotine concentrations were reached sooner for cigarettes (5 minutes) than for EC (30 minutes). During the 30 minutes controlled puffing phase, within EC conditions the highest Cmax was seen with the 2.4% nicotine, 50% glycerin/20% PG (18.09 ng/ml, SD=6.47 ng/ml). The lowest Cmax was observed in the 1.6% nicotine, 75% glycerine (10.34 ng/ml SD=3.70 ng/ml). The Cmax associated with smoking one conventional cigarette was 15.84 ng/ml (SD = 8.64 ng/ml). At the end of the ad lib period, the highest Cmax was seen with the conventional cigarette (29.23 ng/ml SD = 10.86 ng/ml), followed by the 2.4% nicotine, 50% glycerin/20% PG EC (22.42 ng/ml; SD = 7.65ng/ml). The glycerine/PG mix resulted in better nicotine delivery than the 75% glycerine solution, which was confirmed in the bench top tests that measured nicotine content in vapour using the Canadian Intense regimen. The high nicotine content in vapour is a likely consequence of the lower boiling point of PG (187.6 degrees Celsius) compared with glycerine (290 degrees Celsius).

4) Type of EC device
Although many vapers start off with using a cigalike EC experienced vapers are more likely to be using tank systems or variable power EC. One of the reasons for this observation is that the tank systems and variable power ECs deliver nicotine more nicotine to the user.

Farsalinos et al., (2014) examined plasma nicotine levels in experienced vapers (n=23) who used a cigalike (V2 with cartomiser) and a new generation (EVIC set at 9 watts with EVOD atomizer) EC with standardized flavour and nicotine concentration (18mg/ml) in a cross-over design[129]. Participants’ abstained from EC use for at least 8 hours before completing a bout of 10 puffs over 5 minutes followed by one hour of ad lib use. Use of the cigalike EC was associated with an increase in blood nicotine from 2.80 ng/ml at baseline, to 4.87 ng/ml at 5 minutes and 15.75 ng/ml at the end of ad lib use. Significantly greater increases were observed with use of the new generation EC from 2.46 ng/ml to 6.59 ng/ml to 23.47 ng/ml at baseline, 5 minutes and at the end of the ad lib period.
Oncken et al., (2015) also examined nicotine delivery in a tank system EC (Joye eGo-C with 18 mg/ml nicotine e-liquid) in 20 smokers who were asked to use an EC for two weeks[123]. Participants were asked to use the EC for 5 minutes ad lib in two laboratory sessions where blood samples were taken for PK analysis. Blood nicotine concentrations increased, significantly, by 4 ng/ml (Cmax 8.2 ng/ml) at the first session and 5.1 ng/ml (Cmax 9.3 ng/ml) at the second session. These levels were reached at five minutes.

Studies that examine cotinine as a measure of nicotine replacement in vapers

We found eight studies that reported on cotinine in urine, blood or saliva as a marker of nicotine exposure in people using EC.

In an RCT of nicotine containing EC versus placebo Caponnetto and colleagues (2013) measured salivary cotinine in participants who had stopped smoking cigarettes, but were still vaping EC (Categoria 7.5mg/ml)[40]. After 12 weeks of use the mean salivary cotinine concentration was 67.8 ng/ml, which is at the lower end of what is typically observed in smokers (eg 66.9-283.7 ng/ml).

In a study that randomised 48 smokers unwilling to quit to one of two tank system EC (18mg/ml nicotine) or to continue to smoke found that at 8 month follow-up mean salivary cotinine did not significantly differ between those who had stopped smoking but were vaping (428.27 ng/ml), achieved a ≥50% reduction in cigarette consumption (356.49 ng/ml) and those who continued to smoke (545.23 ng/ml, SD = 46.32)[41].

Van Staden et al., (2013) examined the change in serum cotinine in 13 smokers who were asked to stop smoking and instead use a Twisp eGo (18mg/ml nicotine) tank system EC for two weeks[113]. There was a significant decrease in cotinine from baseline 287.25 ± 136.05 to two weeks 97.01 ± 80.91 ng/ml suggesting that the EC used did not provide as much nicotine as participants usual cigarettes.

Norton et al., (2014) observed a similar result in 16 abstinent smokers who used a cigalike EC (11 mg/ml) for five days, finding a significant decrease in saliva cotinine between baseline (338.0 ng/ml) and day five (178.4 ng/ml)[112].

Flouris et al., (2013) measured serum cotinine in 15 smokers, who had abstained overnight, after smoking two of their usual cigarettes over 30 minutes and after 30 minutes of vaping a cigalike EC (Giant, 11mg/ml)[130]. EC and cigarettes produced similar effects on serum cotinine levels (60.6 ± 34.3 versus 61.3 ± 36.6 ng/ml). However measurement of cotinine would not give an accurate indicator of exposure in an acute study such as this.
Experienced vapers, using their own devices, however obtain much better nicotine substitution. Etter and Bullen (2011) measured salivary cotinine concentrations in 30 vapers who had been using EC for approximately 3 months on average and no longer smoking[9]. The mean nicotine content of e-liquid was 18mg/ml. Mean salivary cotinine was found to be 322 ng/ml indicating a high level of nicotine replacement via EC.

Similarly Etter (2014) found mean cotinine levels of 374 ng/ml (95% CI: 318-429) in 62 vapers who had not used any other nicotine containing products in the last 5 days [8].

Hecht et al., 2014 measured nicotine and cotinine in urine of 28 EC users (median use of 9 months, using tank system EC with e-liquid containing, on average 12.5 ± 7.0 mg/ml)[111]. Nicotine and cotinine levels in urine were 869 ng/ml (95% CI: 604-1250) and 1880 ng/ml (95% CI: 1420-2480) respectively, although these levels are lower than what are typically observed in smokers (eg nicotine 1380 ng/ml 95% CI: 1190-1600 and cotinine 3930 ng/ml; 95% CI: 3500-4400).
cigarette users in their journey to quitting completely.”

Professor Ann McNeill, King’s College London and independent author of the review, said:

“ There is no evidence that e-cigarettes are undermining England’s falling smoking rates. Instead the evidence consistently finds that e-cigarettes are another tool for stopping smoking and in my view smokers should try vaping and vapers should stop smoking entirely.

E-cigarettes could be a game changer in public health in particular by reducing the enormous health inequalities caused by smoking.”

Professor Peter Hajek, Queen Mary University London and independent author of the review said:

“ My reading of the evidence is that smokers who switch to vaping remove almost all the risks smoking poses to their health. Smokers differ in their needs and I would advise them not to give up on e-cigarettes if they do not like the first one they try. It may take some experimentation with different products and e-liquids to find the right one.”

Professor Linda Bauld, Cancer Research UK’s expert in cancer prevention, said:

“ Fears that e-cigarettes have made smoking seem normal again or even led to people taking up tobacco smoking are not so far being realised based on the evidence assessed by this important independent review. In fact, the overall evidence points to e-cigarettes actually helping people to give up smoking tobacco.”

“ Free Stop Smoking Services remain the most effective way for people to quit but we recognise the potential benefits for e-cigarettes in helping large numbers of people move away from tobacco.

Cancer Research UK is funding more research to deal with the unanswered questions around these products including the longer-term impact.”

Lisa Surtees, acting director at Fresh Smoke Free North East, the first region where all local stop smoking services are actively promoted as e-cigarette friendly, said:

“ Despite making great strides to reduce smoking, tobacco is still our biggest killer. Our region has always kept an open mind towards using electronic cigarettes as we can see the massive potential health benefits from switching.

All of our local NHS Stop Smoking Services now proactively welcome anyone who wants to use these devices as part of their quit attempt and increase their chance of success.”

Ends

Public Health England press office
Email phe-pressoffice@phe.gov.uk

Telephone 020 7654 8400

Out of hours telephone 020 8200 4400

Please contact PHE press office for:

• interviews with PHE spokespeople or the review’s independent authors

• case studies of stop smoking services who work with e-cigarette users and smokers who have quit completely with a combination of e-cigarettes and attending a service

Notes to Editors:
Public Health England exists to protect and improve the nation’s health and wellbeing, and reduce health inequalities. It does this through world-class science, knowledge and intelligence, advocacy, partnerships and the delivery of specialist public health services. PHE is an operationally autonomous executive agency of the Department of Health. www.gov.uk/phe (http://www.gov.uk/phe), Twitter: @PHE_uk (https://twitter.com/PHE_uk), Facebook: www.facebook.com/PublicHealthEngland (http://www.facebook.com/PublicHealthEngland)

PHE’s remit letter for 2014 to 2015 requested an update of the evidence around e-cigarettes. PHE commissioned Professors Ann McNeill and Peter Hajek to review the available evidence. The review builds on previous evidence summaries published by PHE in 2014.

The full list of authors of the report are:

• McNeill A, Brose LS, Calder R, Hitchman SC: Institute of Psychiatry, Psychology & Neuroscience, National Addiction Centre, King’s College London and UK Centre for Tobacco & Alcohol Studies

• Hajek P, McRobbie H (Chapters 9 and 10): Wolfson Institute of Preventive Medicine, Barts and The London School of Medicine and Dentistry Queen Mary, University of London and UK Centre for Tobacco & Alcohol Studies

Implications of the evidence for policy and practice: Based on the findings of the evidence review PHE advises that:

• e-cigarettes have the potential to help smokers quit smoking, and the evidence indicates they carry a fraction of the risk of smoking cigarettes but are not risk free

• e-cigarettes potentially offer a wide reach, low-cost intervention to reduce smoking in more deprived groups in society where smoking is elevated, and we want to see this potential fully realised

• there is an opportunity for e-cigarettes to help tackle the high smoking rates among people with mental health problems, particularly in the context of creating smokefree mental health units

• the potential of e-cigarettes to help improve public health depends on the extent to which they can act as a route out of smoking for the country’s eight million tobacco users, without providing a route into smoking for children and non-smokers. Appropriate and proportionate regulation is essential if this goal is to be achieved

• local stop smoking services provide smokers with the best chance of quitting successfully and we want to see them engaging actively with smokers who want to quit with the help of e-cigarettes

• we want to see all health and social care professionals providing accurate advice on the relative risks of smoking and e-cigarette use, and providing effective referral routes into stop smoking services

• the best thing smokers can do for their health is to quit smoking completely and to quit for good. PHE is committed to ensure that smokers have a range of evidence-based, effective tools to help them to quit. We encourage smokers who want to use e-cigarettes as an aid to quit smoking to seek the support of local stop smoking services

• given the potential benefits as quitting aids, PHE looks forward to the arrival on the market of a choice of medicinally regulated products that can be made available to smokers by the NHS on prescription. This will provide assurance on the safety, quality and effectiveness to consumers who want to use these products as quitting aids
the latest evidence will be considered in the development of the next Tobacco Control Plan for England with a view to maximising the potential of e-cigarettes as a route out of smoking and minimising the risk of their acting as a route into smoking

From October this year it will be an offence to sell e-cigarettes to anyone under the age of 18 or to buy e-cigarettes for them. The government is consulting on a comprehensive array of regulations (https://www.gov.uk/government/consultations/draft-regulations-on-the-sale-and-manufacture-of-tobacco-products) under the European Tobacco Products Directive.

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City Council Agenda Item #12B  
Meeting of July 23, 2018

**Brief Description**  
Items concerning The Mariner, a multi-family residential development, at 10400, 10500 and 15500 Bren Road East.

**Land Use Items**

1) Ordinance rezoning the property from B-2, commercial, to PUD, planned unit development;
2) Master development plan;
3) Final site and building plan review; and
4) Preliminary and final plats.

**Economic Development Items**

1) Tax Increment Pooling
2) Contract for Private Development

**Action Requested**  
Introduce the ordinance and refer it the planning commission

**Background**

In 2017, Newport Midwest presented a concept plan for redevelopment of a 3.2-acre site at 10400, 10500, and 10550 Bren Road East. The plan contemplated removal of three existing office buildings and construction of a new apartment building, containing roughly 240 units. The city council indicated support for the general concept.

**Proposal**

Newport Midwest, LLC has now submitted formal applications for redevelopment of the site. As proposed, the existing buildings would be removed and two new apartment buildings would be constructed. The new building, with 194 market rate units and 55 affordable units, would be physically connected by common and amenity spaces. The buildings would be served by underground parking, as well as surface parking lots. The future Southwest Light Rail Transit Opus Station will be located roughly 700 feet north of the site.

The proposal requires approval of:

- **Rezoning.** To facilitate the proposed development, Newport Midwest is requesting that the property be rezoned to PUD.

- **Master Development Plan.** Under the zoning ordinance, a master development plan is required in conjunction with PUD zoning.
• **Final Site and Building Plans.** By city code, site and building plan review is required in conjunction with PUD zoning.

• **Preliminary and Final Plats.**

• **Tax Increment Pooling.** To assist with the production of affordable housing, Newport Midwest has requested Tax Increment Pooling funds in the amount of $556,179. The Economic Development Advisory Commission (EDAC) and city council previously reviewed this request for assistance and found the request reasonable.

• **Contract for Private Development.** A Contract for Private Development is required. The contract will outline the key points of the Tax Increment Pooling request, as well as expectations for the development.

**Issue Identification**

The purpose of introducing an ordinance is to give the city council the opportunity to review a new application before sending it to the planning commission for a recommendation. Introducing an ordinance does not constitute an approval. The tentative planning commission date is August 16, 2018.

Based on preliminary review of the proposal, staff has identified the following issues to be resolved.

• **Building Design.** The submitted plans include the use of a variety of materials in both neutral and very bold colors, including: brick, metal panels, and lap siding. As has been the case on other recent apartment proposals, staff will continue to discuss the proposed facade treatment with the applicant, advocating for high-quality materials and context-appropriate color palate.

• **Site Improvements.** The submitted plans show private site improvements – a dog run and 21 parking stalls within a large public utility easement on the northern portion of the site. The easement area is currently occupied by public watermain and pedestrian trail. The SWLRT office has indicated the need for relocation of utilities in conjunction with the SWLRT construction. Placing private improvements within the easement area would be contrary to: (1) city policy; and (2) staff direction to the applicant on this site and to applicants for other redevelopment projects within OPUS.

• **SWLRT Easements.** The submitted plans illustrate a conflict between temporary SWLRT construction easements and the actual location of the westerly building. Resolution to this major construction conflict is required.

**Staff Recommendation**

1) Introduce the attached rezoning ordinance and refer it to the planning commission.

2) Approve or modify the attached notification area. This is the same area used for the previous concept plan.
Submitted through:
  Geralyn Barone, City Manager
  Julie Wischnack, AICP, Community Development Director
  Loren Gordon, AICP, City Planner

Originated by:
  Susan Thomas, AICP, Assistant City Planner
Location Map

Project: Mariner
Address: 10400, 10500 & 10550 Bren Rd E
Newport Midwest, LLC (Newport Midwest) is seeking final zoning approval to PUD, master development plan approval, preliminary and final plat approval and site and building plan approval at 10400, 10500, and 10550 Bren Road E.

Newport Partners housing demonstrates our focus on a triple bottom line of environmental sustainability, social responsibility, and economic viability. All our developments are high-density infill products that epitomize smart growth and responsible land use. Our portfolio of high-quality affordable housing shows our ongoing commitment to working individuals and families, and seniors on fixed incomes. Our projects focus on social equity, health, sustainability, transit, and active transportation. Each of Newport’s developments is unique; design and development decisions are made after evaluating the individual needs of each site and its surrounding neighborhood. Using this approach, we are able to create buildings that not only serve the needs of our residents, but also act as a catalyst in revitalizing neighborhoods.

Newport Midwest has entered into a purchase agreement with the owners at 10400, 10500 and 10550 Bren Road and intends to build two residential apartment buildings, “The Mariner,” connected, that will provide 249 units of housing. Fifty-five of the 249 units will be permanent affordable housing targeted to families. Funding, including the scarce 9% tax credits, have been committed to the project by Minnesota Housing, Hennepin County, Metropolitan Council and the City of Minnetonka to make the units affordable to households earning 50% of the area median income or below. The Mariner’s units meet the Met Council definition of affordable rental housing according to the Livable Communities Act.

Construction of these 55 units will apply towards the City’s Met Council goal of creating 378 additional affordable housing units in Minnetonka between 2011 and 2020.

The Mariner’s affordable component includes four units (two 2-bedroom and two 3-bedroom) designated for families experiencing long-term homelessness, with supportive services provided by Simpson Housing Services ("Simpson"). Through a partnership with Simpson, families will find stability and support at The Mariner. Clients referred through Simpson will be assigned a case manager and will meet with them regularly (at least weekly) to set goals, address and identify needs, and work towards self-sufficiency.

Site and Development Description

The project site is bounded by Bren Road E to the south and west, a one story commercial building to the east and Minneapolis Mart to the north. The proposed Green Line light rail extension will be built along the eastern border of the site, with the Opus Station immediately adjacent. A city-maintained trail runs along the northern lot line. The site is currently zoned B-2 and contains three one-story buildings and surface parking lots. The buildings are being used as a daycare, property management company, and contracting services.

The two building will contain housing units, as well resident amenities. The eastern building will feature 55 units, 11 one-bedroom, 28 two-bedrooms and 16 three-bedroom units, ranging in size from a gross 764 square feet to 1402 square feet. The western building will contain 194 units, 17 studios, 116 one-bedroom, 46 two-bedroom and 15 three-bedroom units, ranging in size from a gross 485 square feet to 1368 square feet.

The two buildings will be connected on the second and third floor by an enclosed bridge over the drive entrance. Each building features common and amenity space, which can be accessed by residents in both
buildings. The eastern building features a common area and lobby, as well as a billiard room and offices for property management on the first floor. A large common area with a kitchen, a sauna, a fitness area and a large rooftop patio are located on the second floor. The western building includes a party room, a family game room, and office and meeting space for the service providers and property management.

The combined site is 3.89 acres. The proposed plat will place each building on a separate lot. The western building will have a 46,983 square foot building footprint and a total floor area of 200,543 square feet. The proposed lot for the western building is 2.68 acres. The eastern building will have an 15,385 square foot building footprint and a total floor area of 77,950 square feet. The proposed lot for the eastern building is 1.22 acres. The western building will be six stories, plus a level of underground parking. The eastern building will be five stories, plus a level of underground parking. Expected exterior materials on the building will be primarily brick, metal panels and fiber cement lap siding.

The site features a courtyard with a splash pad and a playground area as resident amenity. A dog run is also provided. The project includes massing of plantings and trees throughout the site to enhance the landscaping. Additional pedestrian walkways to the public sidewalk are planned.

**Setbacks.** The building setback from the building face and the back of curb is 51 feet along the western border of the site. Along the eastern border, the setback range between 41.5 feet, at the maximum between the building face and property line and 33 feet where the balconies project. Along the northern border, the setbacks range between 96 feet between the building face and property line to 51 feet at the minimum feet along the northern border. Along the southern border, MNDOT intends to realign the road to accommodate the proposed Green line light rail extention. Contracts to start the relocation work will be let this summer for a September 2018 start. Met Council’s contractor will also be relocating utilities and constructing a new retaining wall in the area where Bren Road will intersect with the LRT tracks. Gate arms will be installed at the intersection as well. The building setback from the building face to the current back of curb range between 95 feet and 22 feet. When the road is reconstructed, the building setback from the building face and back of curb will range between 46 feet and 27 feet. MNDOT staff confirmed that they do not have a recommended or required setback distance and that they are comfortable with 20.8 feet, which is the shortest distance of the building to Bren Road in current plans for the Development. with the presence of LRT traffic and gate arms, the LRT / Bren Road intersection just southwest of the Development will be busier and that traffic will move considerably more slowly as a result. MNDOT indicated that the relocated Bren Road will have an anticipated speed of 25 miles per hour as it turns as the southwest corner of the Development property. For reference, there is no traffic signal or other stopping mechanism at the intersection now and MNDOT confirmed that current average speeds are considerably higher than 25 miles per hour on Bren Road.

**Sustainability.** Newport Midwest delivers buildings that are environmentally sustainable in design and operation. The eastern building will meet the Minnesota Green Communities Overlay standards. The building will feature water conserving fixtures throughout, use energy star rated appliances and light fixtures, low VOC coatings and sealants, and dedicated areas for recycling. The building will be designed to exceed NC ASRAE 90.1energy standards by 5%, meaning the building will be more energy efficient than required by building code. The storm water management for the entire site will be improved. The existing property currently does not have any stormwater treatment or retention on site. Existing topography splits the site in half, with stormwater runoff typically directed to the northeast and northwest corners where it enters the city sewer system. The ultimate drainage discharge points are two city retention ponds a few parcels north of the site. The proposed plan includes an underground infiltration vault within the parking and drive aisle areas. On site stormwater runoff and roof drainage will be collected in a private stormwater sewer system which discharges to the vault.
Parking, traffic and transit. The primary entrance is accessed off Bren Road. The drive is “L” shaped and connects to the private drive along the eastern portion of the site. Per City Staff direction, the proposed plan assumes that the existing private driveway will be converted to a public street. The plan assumes that the future right-of-way will be 60 feet wide with 30 feet will be located on Newport Midwest’s property. Newport Midwest is prepared to dedicate 30 feet of the eastern portion of the lot to the City for the public right-of-way.

The bridge connecting the two buildings is above the access drive. At the lowest point, the distance between the drive and bridge is 12’ 6”, which exceeds the height of the tallest fire truck in the City’s fleet. Emergency vehicles may also access the site from the private drive on the east, and the public trail along the northern border.

The surface parking lot, as designed, has 47 parking stalls. The underground parking on the eastern building and western building has 46 and 247 stalls, respectively. The combined parking capacity of 340 stalls provide a parking ratio of 1.36. All the parking is accessed from the driveway. The plans show 21 parking spaces extending 18 feet into the easement, leaving over 30 unimproved feet in the easement. Though not required by City code, the City has indicated, from experience, the additional parking stalls are important to ensure there will be adequate parking for the residents and visitors. Newport Midwest will be responsible for the cost of demolition and restoration of the area should the City require the 18-foot space in the easement for future use.

Finally, the project includes 162 bicycle parking spots and indoor bicycle storage.

Consistency with Minnetonka’s Land Use and Housing Goals and Policies

The Opus business park was originally designed as a large mixed-use development providing the opportunity for people to live, work and play. The change of land use from B-2 to a PUD establishing housing as an allowed use is consistent with the vision for Opus and the need for additional housing near the Opus Station.

The comprehensive plan states, “The city is nearly 100 percent developed. Therefore, infill development and redevelopment activities will be the primary ways to add new housing in order to meet the goals for achieving the 383 new affordable units in the city by 2020.” (Chapter 5, Section F.2).

And, “The city had a significant number of new rental housing units built in the late 1990s. Due to the favorable conditions for purchasing a home, high vacancies existed within the rental housing market in the early 2000s, and therefore only three new general occupancy rental buildings have been constructed since 1997. It is anticipated that it will be difficult to construct new and larger rental housing buildings or complexes in the future because it will require redevelopment and few programs are available to cities for redevelopment activities.

Actions
1. Assist developers, to the extent allowed by law, who may want to construct rental housing. At a minimum, provide advice about desired areas and potential sites.
2. Continue to implement the EDA’s policy that 10 to 20 percent of new multi-family units should be affordable housing.
3. Promote the use of — green — technologies, sustainable building techniques and design, and energy efficient products in new construction and redevelopment projects.” (Chapter 5, Section F.3.b).

And, “The 2020 goal is for the addition of 383 new affordable units between 2011 and 2020. Since the city is fully developed, these units will likely be added to the city’s affordable housing supply through infill or redevelopment opportunities. Additionally, in order to make the units affordable, it is probable
that the units will be multi-family (either owner-occupied or rental) due to the high land values in the city.

Actions
a. Continue working with developers to include affordable housing in their developments, where appropriate.
b. Continue to work with developers in the development process to ensure the long-term affordability of units.
c. Work with Homes Within Reach and other affordable housing agencies and developers to add more affordable housing units in the city. Collaborate and support applications for grants or other funding sources for affordable housing. Provide information to these agencies on homes or areas of the city where affordable units could be located.
d. Locate new affordable and senior housing near access to the transit system, as appropriate…
g. Promote the use of green technologies, sustainable building techniques and design, and energy efficient products in new construction and redevelopment projects.” (Chapter 5, Section F.5)

And, “Access to transit in Minnetonka continues to be a challenge for all residents because of the lack of convenient routes. Linking affordable family and senior housing to transit services is important as many of these residents rely upon the transit system to reach work and service destinations…. With the lead of Hennepin County, the city and other communities and agencies are involved in studies pertaining to a future light rail transit (LRT) line from Minneapolis to the southwest metropolitan area, including Minnetonka. There are more studies, coordination and funding arrangements required before the LRT line could be constructed and construction is not anticipated before 2015.

Actions
a. Continue to collaborate with the transit providers in Minnetonka to ensure that as many residents are served as possible. Analyze and prioritize areas where more transit service may be necessary such as near locations with transit-dependent populations.
b. Continue to be involved in the LRT planning and station area studies and look for ways to add housing, services, and walkability around station areas.” (Chapter 5, Section F.6)

The development incorporates the objectives outlined in the Opus Station Area Plan. The site is listed as a potential redevelopment site in figure 13-9. The plan states, “The land use in the Opus station area include a mix of office, light industrial, commercial/retail, residential, hotel and park/open spaces uses. Several underutilized industrial sites present opportunities for future redevelopment in the area. The property directly east of and adjacent to the proposed station platform presents an opportunity for higher density and mixed land use…

Development potential for the Opus station area could include a mix of office, light industrial, residential, hotel, and retail uses.”

The guidance for built form and land uses state, “Design new buildings in the Bren Road loop to enhance pedestrian access by orientating them to the street and locating them as close to the street line as possible.”

In planning for the Green Line extension, a housing analysis was performed for each of the 15 stations to project market demand for housing within ½ mile of the stations within the next 15 years. The analysis projected the market would likely demand over 11,000 housing units for the entire line from Eden Prairie to Minneapolis, of which, 600 housing units were projected for the Opus Station.
Grading and Drainage

Proposed site grades are generally between 2% and 5% within drive aisles and parking areas. Pedestrian walkways and ADA routes are at a maximum of 5% longitudinally. The site generally falls to the northeast, dropping roughly 21 feet across the property. The parking lot and drive aisles will be bounded with curb and gutter to collect stormwater runoff and direct it to the onsite underground stormwater infiltration vault. Overall grades within greenspace areas are typically kept at 4:1, though some areas may steepen to a maximum of 3:1. The perimeter of the site will have swales to direct runoff to existing storm sewers in the northwest and southeast corners.

Stormwater Treatment

The City of Minnetonka and Nine Mile Creek Watershed District requires stormwater treatment to be provided for all redevelopment. A watershed permit will be secured prior to construction. The existing property currently does not have any stormwater treatment or retention on site. Existing topography splits the site in half, with stormwater runoff typically directed to the northeast and northwest corners where it enters the city sewer system. The ultimate drainage discharge points are two city retention ponds a few parcels north of the site.

The proposed development will install an underground infiltration vault within the parking and drive aisle areas. On site stormwater runoff and roof drainage will be collected in a private stormwater sewer system which discharges to the vault. The vault will provide 3” of water quality infiltration per the MN stormwater manual within clay (D) soils and will discharge runoff to the northeast of the property. Due to the low infiltration capability of the soil and other site constraints, the stormwater vault will not provide the total water quality abstraction volume required but is maximized to the extent practical. Approval from Nine Mile Creek Watershed to purchase bank credits in lieu of the required treatment volume will be secured prior to construction. The perimeter swales will be utilized as biofiltration swales to the extent practical with organic filtration media and underdrain for pollutant removal and additional volume abstraction where feasible. Manholes will be sumped and installed with SAFL Baffle’s to provide additional pollutant removal as well.

The stormwater design will be utilizing roof storage of the two buildings in conjunction with live storage within the stormwater vault for rate control on the property. Discharge rates will be less than existing runoff rates for all design storms through the existing stormwater connection points.

Utilities

The proposed facility will connect to existing City sanitary and water lines within the public utility easement on the north side of the property. The existing lines have capacity to serve the proposed development.

The 10” DIP watermain along the north side of the site will provide service connection points for both buildings and an additional hydrant along Bren Rd. Two existing hydrants in the northeast and northwest corners of the property, along with the proposed hydrant, provide sufficient coverage for the entire site. The water service connection points have been looped in accordance with City standards. The proposed 6” combined water services will tee off of the proposed watermain. The water services will split internally for domestic potable and fire service flows. Both buildings will be sprinklered in accordance with fire code.

The existing sanitary sewer connection for the site is within a public utility easement in the northwest corner. The proposed sanitary main for the site is a 6” PVC main that will run at 0.5% per City standard, with services run at 2% up to the building.
Site lighting will be provided via pole mounted fixtures around the south and east perimeter of the site and the internal parking and drive areas. Pole heights vary but are 20' tall or less. Additional decorative pole mounted fixtures at the building entrance and wall mounted fixtures around the building will be added as necessary as design progresses.
## THE MARINER APARTMENTS

**MINNETONKA, MINNESOTA**

### UNIT DATA  MARKET RATE

<table>
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<tr>
<th>UNIT</th>
<th>BEDROOMS</th>
<th>BATHS</th>
<th>AREA (GSF)</th>
<th>QUANTITY</th>
<th>TOTAL AREA (GSF)</th>
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**TOTALS**

|                | 55 | 61340 sf |

### UNIT DATA  AFFORDABLE HOUSING

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**TOTALS**

|                | 55 | 61340 sf |

**TOTAL AFFORDABLE UNITS: 55**

**TOTAL MARKET RATE UNITS: 194**
PRELIMINARY CIVIL CONSTRUCTION PLANS
FOR
THE MARINER
CITY OF MINNETONKA
HENNEPIN COUNTY, MINNESOTA
LOTS 1 AND 2, BLOCK 1
THE MARINER ADDITION

INDEX OF SHEETS
Sheet Number | Sheet Title
-------------|-------------
G-101        | COVER SHEET
G-102        | GENERAL NOTES
1 SHEET      | PRELIMINARY PLAT
1 SHEET      | EXISTING CONDITIONS
C-101        | TREE SURVEY
C-102        | REMOVAL & EROSION CONTROL PLAN
C-103        | SITE PLAN
C-104        | FUTURE SITE PLAN
C-105        | POST CONSTRUCTION EROSION CONTROL PLAN
C-301        | GRADING AND DRAINAGE PLAN
C-401        | UTILITY PLAN
C-501        | STORM SEWER PLAN
1 SHEET      | PHOTOMETRIC PLAN
C-800        | DETAILS
C-801        | DETAILS
C-802        | DETAILS
C-803        | DETAILS

NOTES:
1. IF REPRODUCED, THE SCALES SHOWN ON THESE PLANS ARE BASED ON A 22"x34" SHEET.
2. ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES
   SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSION AND THE FINAL CONNECTION OF SERVICES.
3. ALL GENERAL CONTRACTOR WORK TO BE COMPLETED (EARTHWORK, UTILITIES, AND FINAL GRADING) BY THE
   MILESTONE DATE IN PROJECT DOCUMENTS AND/OR PER OWNER'S DIRECTION.
4. CONTRACTOR SHALL CONFIRM THAT THE EXISTING CONDITIONS FOR THIS SITE MATCH WHAT IS SHOWN ON THE
   DRAWINGS INCLUDED PRIOR TO CONSTRUCTION.

WARNING:
THE CONTRACTOR SHALL BE RESPONSIBLE FOR CALLING FOR LOCATION OF ALL EXISTING UTILITIES. THEY SHALL
CONTACT GOPHER STATE ONE CALL AT LEAST 48 HOURS IN ADVANCE FOR THE LOCATION OF ALL UNDERGROUND WIRES, CABLES, CONDUITS, MANHOLES, VALVES OR OTHER BURIED STRUCTURES BEFORE DIGGING. THE CONTRACTOR SHALL REPAIR OR REPLACE THE ABOVE WHEN DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.

TWIN CITY AREA: 651-454-0002 TOLL FREE 1-800-252-1166
CALL BEFORE YOU DIG

ARCHITECT
COLLAGE ARCHITECTS
708 15TH AVE NE
MINNEAPOLIS, MN 55413
(P) - 651-642-9200
CONTACT: PETE KEELY, AIA

ENGINEER
WENCK ASSOCIATES, INC.
1800 PIONEER CREEK CENTER
MAPLE PLAIN, MN 55359
(P) - 763-479-5126
CONTACT: JARED WARD, P.E.

NOT TO SCALE

G-101  COVER SHEET
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M:\7265 Collage Architects\0001 - 10400 Bren Road E\3_DESIGN\CAD\3 Plansheets\G-102 GENERAL NOTES.dwg

21.

TEST REPORTS REQUIRED
1.

ALL COPIES OF COMPACTION, CONCRETE, AND OTHER TEST RESULTS ARE TO BE SENT TO THE
2.
OWNER DIRECTLY FROM THE TESTING AGENCY.
2. ALL SOIL TESTING SHALL BE COMPLETED BY THE OWNERS SOILS ENGINEER. THE CONTRACTOR
SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED SOIL TESTS AND INSPECTIONS WITH
THE SOILS ENGINEER.
3. TEST REPORTS REQUIRED FOR CLOSE OUT MAY INCLUDE, BUT ARE NOT LIMITED TO:
3.1.
DENSITY TEST REPORTS
3.2.
BACTERIOLOGICAL TESTS OF WATER SYSTEM
3.3.
PRESSURE TEST OF WATER / SEWER
3.4.
LEAK TESTS ON SEWER SYSTEM AND GREASE TRAPS
3.5.
ANY OTHER TESTING REQUIRED BY AGENCY / MUNICIPALITY HAVING JURISDICTION
1.
4. TESTING PERFORMED BY OWNER'S INDEPENDENT TESTING LABORATORY. ANY EXCAVATION /
RECOMPACTION (AND ANY
RETESTING OF FIELD DENSITY) DUE TO TEST FAILURE WILL BE
PERFORMED BY CONTRACTOR AT NO ADDITIONAL COST TO OWNER.

PERMITS REQUIRED

TYPICAL OWNER / ENGINEER OBSERVATIONS
1.

HORIZONTAL AND VERTICAL CONTROL

THE CONTRACTOR SHALL COORDINATE WITH PRIVATE UTILITY SERVICES FOR SMALL UTILITY
1.
INSTALLATION.
2.
2. CONTRACTOR SHALL COORDINATE WITH OWNERS CONTRACTORS AS NECESSARY FOR
CONSTRUCTION ITEMS NOT INCLUDED WITHIN THEIR SCOPE.
3. CONTRACTOR SHALL NOTIFY OWNER AND / OR ENGINEER WITHIN 48 HOURS IN ADVANCE OF THE
FOLLOWING ACTIVITIES:
3.1.
PRE-CONSTRUCTION MEETING
3.2.
SUBGRADE PREPARATION
3.3.
BASE INSTALLATION
3.4.
PAVEMENT INSTALLATION
3.5.
UNDERGROUND PIPING AND UTILITIES INSTALLATION
3.6.
INSTALLATION OF STRUCTURES AND APPURTENANCES

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REMOVAL NOTES
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35.

UNLESS OTHERWISE NOTED, CONTRACTOR IS RESPONSIBLE FOR REMOVAL/DEMOLITION WITHIN
ALL AREAS OF PROPOSED IMPROVEMENTS. REMOVAL LIMITS ARE IDENTIFIED ON THE DRAWINGS36.
IN ANTICIPATED LOCATIONS. CONTRACTOR RESPONSIBLE FOR REMOVALS AS NECESSARY TO
37.
CONSTRUCT NEW IMPROVEMENTS AND CONFORM TO DESIGN REQUIREMENTS.
38.
2. CONTRACTOR SHALL PROTECT ALL MANHOLE COVERS, VALVE COVERS, VAULT LIDS, FIRE
HYDRANTS, POWER POLES, GUY WIRES, AND TELEPHONE BOXES, ETC. THAT ARE TO REMAIN IN 39.
THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL CONSTRUCTION STAGING, ON
PLACE AND UNDISTURBED DURING CONSTRUCTION.
40.
OR OFFSITE, AS NECESSARY TO COMPLETE THE WORK AS SPECIFIED IN THE PROJECT DOCUMENTS.
3.
CONTRACTOR
SHALL
COORDINATE
ANY
PRIVATE
UTILITY
WORK
WITH
APPROPRIATE
UTILITY
CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL. ALL TRAFFIC CONTROL SHALL
COMPANIES.
CONFORM TO THE LATEST EDITION OF THE MINNESOTA MUTCD, INCLUDING THE LATEST FIELD
4.
COORDINATE WITH OWNER TO MAINTAIN NECESSARY ACCESS TO SITE AND FACILITIES.
MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS. A TRAFFIC CONTROL PLAN SHALL BE
5.
MATERIALS
DEMOLISHED/RMEMOVED BY CONTRACTOR WILL BECOME PROPERTY OF THE
SUBMITTED TO THE ENGINEER, AND CITY OR COUNTY FOR REVIEW AND APPROVAL PRIOR TO ANY
1.
CONTRACTOR,
UNLESS NOTED OTHERWISE. CONTRACTOR SHALL BE RESPONSIBLE FOR
CONSTRUCTION RELATED ACTIVITIES. PLANS SHALL COMPLY WITH ALL APPLICABLE PERMIT
HAULING
MATERIAL
OFF-SITE
AND
PROPERLY
DISPOSING
OF
MATERIALS.
REQUIREMENTS
6. PROTECT ALL EXISTING FEATURES WHICH ARE NOT IDENTIFIED FOR REMOVAL.
7. FEATURES NOT SPECIFICALLY IDENTIFIED ON PLAN FOR SALVAGE OR REMOVAL THAT CONFLICT 2.
WITH CONSTRUCTION ARE TO BE REVIEWED WITH ENGINEER.
3.
8. ALL RUBBISH, CONCRETE, STEEL, METAL, DEBRIS, EQUIPMENT, ETC., RESULTING FROM
DEMOLITION
WORK
SHALL
BE
REMOVED
FROM
THE
PREMISES
DURING,
AND/OR
UPON
THE
IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SECURE ANY AND ALL STATE, COUNTY, AND CITY
COMPLETION OF WORK, LEAVING THE SITE AREA ACCEPTABLE TO THE SATISFACTION OF THE
PERMITS NECESSARY FOR CONSTRUCTION.
4.
ENGINEER.
5.
9. CLEARING AND GRUBBING:
6.
9.1.
PROTECT ALL TREES AND PLANTS NOT DESIGNATED FOR REMOVAL.
9.2.
CONDUCT OPERATIONS IN SUCH A MANNER THAT DOES NOT DAMAGE PROTECTED TREES 7.
AND VEGETATION OUTSIDE OF LIMITS OF CONSTRUCTION.
THE HORIZONTAL CONTROL FOR THIS PLAN IS HENNEPIN COUNTY COORDINATE SYSTEM <SYSTEM>.
8.
9.3.
CUT AND REMOVE TREES, BRUSH, SHRUBS, WINDFALLS, LOGS, STUMPS, ROOTS, FALLEN
THE VERTICAL CONTROL FOR THIS PLAN IS NAVD88.
9.
TIMBER, AND OTHER VEGETATION.
9.4.
REMOVE AND DISPOSE OF STUMPS, ROOTS, AND OTHER REMAINS.
9.5.
BACKFILL DEPRESSIONS WITH NATIVE SOILS AND COMPACT BACKFILL AS DIRECTED.
10.
9.6.
DISPOSE OF ELM AND RED OAK DEBRIS IN ACCORDANCE APPLICABLE INVASIVE SPECIES
STANDARDS.
9.7.
CONSIDER BENEFICIAL USE DESIGNATIONS FOR UNADULTERATED WOOD, WOOD CHIPS,
BARK AND SAWDUST.
9.8.
BE PROHIBITED FROM BURYING OF CLEARED AND GRUBBED WASTE WITHIN LIMITS OF
11.
CONSTRUCTION.

TRAFFIC CONTROL
1.

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708 15TH AVENUE NE
MINNEAPOLIS, MN 55413

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4.

COLLAGE ARCHITECTS

6.

5.

3.

Prepared For:

5.

4.

2.

THE CONTRACTOR SHALL CONSTRUCT GRAVITY SEWER LATERALS, MANHOLES, GRAVITY SEWER LINES, AND DOMESTIC
WATER AND FIRE SUPPRESSION SYSTEMS AS SHOWN ON THESE PLANS. THE CONTRACTOR SHALL FURNISH ALL
NECESSARY MATERIALS, EQUIPMENT, MACHINERY, TOOLS, MEANS OF TRANSPORTATION AND LABOR NECESSARY TO
COMPLETE ALL WORK IN FULL AND IN COMPLETE ACCORDANCE WITH THE SHOWN, DESCRIBED, AND REASONABLY
INTENDED REQUIREMENTS OF THE CONTRACT DOCUMENTS AND JURISDICTIONAL AGENCY REQUIREMENTS. IN THE
EVENT THAT DISCREPANCIES OCCUR, THE MOST STRINGENT SHALL GOVERN.
BACKFILL FOR UTILITY LINES SHALL BE PLACED PER THE DETAILS, STANDARDS, AND SPECIFICATIONS SO THAT THE
UTILITY WILL BE STABLE. WHERE UTILITY LINES CROSS PAVED AREAS, THE TOP 6 INCHES SHALL BE COMPACTED
SIMILARLY TO THE REMAINDER OF THE AREA. UTILITY DITCHES SHALL BE VISUALLY INSPECTED DURING THE
EXCAVATION PROCESS TO ENSURE THAT UNDESIRABLE FILL IS NOT USED.
ALL EXISTING UNDERGROUND UTILITY LOCATIONS SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL COMPLY WITH
ALL REQUIREMENTS FOR UTILITY LOCATIONS AND COORDINATION AS DICTATED BY THE PROJECT DOCUMENTS. ANY
DAMAGE TO EXISTING UTILITIES TO REMAIN SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR WITHOUT
COMPENSATION.
ALL DRAINAGE STRUCTURES SHALL BE CLEANED OF DEBRIS AS REQUIRED DURING AND AT THE END OF CONSTRUCTION
UNTIL ACCEPTANCE BY THE OWNER.
DEFLECTION OF PIPE JOINTS AND CURVATURE OF PIPE SHALL NOT EXCEED THE MANUFACTURER'S SPECIFICATIONS.
SECURELY CLOSE ALL OPEN ENDS OF PIPE AND FITTINGS WITH A WATERTIGHT PLUG WHEN WORK IS NOT IN PROGRESS.
THE INTERIOR OF ALL PIPES SHALL BE CLEAN AND JOINT SURFACES WIPED CLEAN AND DRY AFTER THE PIPE HAS BEEN
LOWERED INTO THE TRENCH. VALVES SHALL BE PLUMB AND LOCATED ACCORDING TO THE PLANS.
CONTRACTOR SHALL INSTALL UNDERGROUND SEWER PIPING PER MANUFACTURER'S RECOMMENDATIONS AND PER THE
SPECIFICATIONS. CARE SHALL BE TAKEN TO AVOID DAMAGE TO THE COATING OR LINING OF ANY D.I.P. FITTINGS. ANY
PIPE OR FITTING WHICH IS DAMAGED OR WHICH HAS FLAWS OR IMPERFECTIONS WHICH, IN THE OPINION OF THE
ENGINEER OR OWNER, RENDERS IT UNFIT FOR USE, SHALL NOT BE USED. ANY PIPE NOT SATISFACTORY FOR USE SHALL
BE CLEARLY MARKED AND IMMEDIATELY REVOKED FROM THE JOB SITE, AND SHALL BE REPLACED AT THE
CONTRACTOR'S EXPENSE.
WATER FOR FIRE FIGHTING SHALL BE MADE AVAILABLE FOR USE BY THE CONTRACTOR PRIOR TO COMBUSTIBLES BEING
BROUGHT ON SITE.
UNDERGROUND LINES SHALL BE SURVEYED BY A STATE OF MINNESOTA PROFESSIONAL LAND SURVEYOR PRIOR TO
BACK FILLING.
CONTRACTOR SHALL PERFORM, AT THEIR OWN EXPENSE, ANY AND ALL TESTS REQUIRED BY THE SPECIFICATIONS
AND/OR ANY AGENCY HAVING JURISDICTION. THESE TESTS MAY INCLUDE BUT ARE NOT LIMITED TO, INFILTRATION AND
EXFILTRATION, TELEVISION INSPECTION, AND A MANDREL TEST ON GRAVITY SEWER. A COPY OF THE TEST RESULTS
SHALL BE PROVIDED TO THE OWNER, UTILITY PROVIDER, AND AGENCY HAVING JURISDICTION AS REQUIRED.
CONTRACTOR SHALL PROVIDE A MINIMUM OF 10' HORIZONTAL CLEARANCE AND 24" VERTICAL CLEARANCE BETWEEN
WATER AND SEWER MANHOLES AND LINES. OFFSET WATERMAIN AND SERVICES AS NECESSARY.
ALL STORM PIPE ENTERING STRUCTURES SHALL BE WATERTIGHT VIA EITHER GROUTING OR MANUFACTURED DEVICE.
ALL STORM MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH PAVEMENT, AND SHALL HAVE TRAFFIC BEARING RATED
CASTINGS AND COVERS. MANHOLES IN UNPAVED AREAS SHALL BE 6" ABOVE FINISHED GRADE. LIDS SHALL BE LABELED
"STORM SEWER".
ALL STORM SEWER STRUCTURES SHALL HAVE A SMOOTH UNIFORM POURED MORTAR FROM INVERT IN TO INVERT OUT.
ROOF DRAINS SHALL BE CONNECTED TO STORM SEWER BY PREFABRICATED WYES OR AT STORM STRUCTURES. ROOF
DRAINS AND TRUCK WELL DRAIN SHALL RUN AT A MINIMUM 1% SLOPE, UNLESS NOTED OTHERWISE, AND TIE IN AT THE
CENTERLINE OF THE STORM MAIN.
REFERENCE MECHANICAL / PLUMBING PLANS FOR ROOF DRAIN CONNECTIONS.
ALL ROOF AND SANITARY SEWER DRAINS SHALL BE INSULATED IF 5' OF COVER CANNOT BE ACHIEVED.
THE LOCATION OF EXISTING UTILITIES, STORM DRAINAGE STRUCTURES, AND OTHER ABOVE AND BELOW GRADE
IMPROVEMENTS ARE APPROXIMATE AS SHOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT
LOCATION, SIZE, AND INVERT ELEVATIONS OF EACH PRIOR TO THE START OF CONSTRUCTION.
A MINIMUM OF 5' OF SEPARATION IS REQUIRED BETWEEN UTILITIES AND TREES UNLESS A ROOT BARRIER IS UTILIZED.
GAS, PHONE, FIBER, AND ELECTRIC SERVICES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY. DRY UTILITY SERVICE
PROVIDERS MAY ALTER THE DESIGN LAYOUT DURING THEIR REVIEW. CONTRACTOR TO COORDINATE FINAL DESIGN AND
INSTALLATION WITH UTILITY COMPANIES.
COORDINATE UTILITY INSTALLATION WITH IRRIGATION DESIGN AND INSTALLATION.
REFERENCE ARCHITECTURAL PLANS BY OTHERS FOR EXACT BUILDING UTILITY CONNECTION LOCATIONS, DIMENSIONS,
MATERIALS, AND SPECIFICATIONS. REFERENCE M.E.P. PLANS BY OTHERS FOR EXACT BUILDING MECHANICAL EQUIPMENT
DIMENSIONS AND SPECIFICATIONS.
CONTRACTOR SHALL REFERENCE STRUCTURAL PLANS BY OTHERS AND GEOTECHNICAL REPORT FOR PAD
PREPARATION SPECIFICATIONS.
CONTRACTOR SHALL REFERENCE M.E.P. PLANS BY OTHERS FOR LIGHT POLE WIRING.
ALL UTILITY INSTALLATION SHALL BE CONDUCTED IN CONFORMANCE WITH MN PLUMBING CODE (MN RULES CHAPTER
4714)
ALL PIPE, JOINTS AND MANHOLES SUPPLIED ON SITE DEVELOPMENT MUST BE CONSTRUCTED WITH CODE APPROVED
MATERIALS IN ACCORDANCE WITH MN RULES CHAPTER 4714.
ALL STORM SEWER JOINTS MUST BE CERTIFIED BY THE MANUFACTURER TO BE ABLE TO PASS THE AIR TEST OR AN
INTERNAL HYDROSTATIC PRESSURE OF TEN POUNDS PER SQUARE INCH FOR TEN MINUTES WITH NO LEAKAGE.
ALL PORTIONS OF THE STORM SEWER SYSTEM WHICH PASS WITHIN 10 FT OF A WATER SERVICE LINE SHALL BE JOB SITE
PRESSURE TESTED IN ACCORDANCE WITH PLUMBING CODE STANDARDS AS SPECIFIED IN PART 4714.1109.
THE WATERMAIN WILL BE INSTALLED IN STRICT ACCORDANCE WITH THE MOST CURRENT EDITION OF THE CEAM
SPECIFICATIONS. DISINFECTION OF THE WATER SYSTEM SHALL MEET THE REQUIREMENTS OF CEAM AND MN PLUMBING
CODE SECTION 609.9, AND MINNESOTA DEPARTMENT OF HEALTH.
ALL WATERMAIN JOINTS MUST BE HEAT FUSED OR UTILIZE APPROVED INSERT FITTINGS WITH STAINLESS STEEL CLAMPS.
TRACER WIRE SHALL BE UL LISTED FOR USE IN DIRECT BURIAL APPLICATION. TRACER WIRE SHALL BE A MINIMUM
ACCESSIBLE BLUE 18 AWG COPPER CLAD STEEL RATED TO 30 VOLTS, HMWPE MEETING ASTM D 1248, WITH DESIGNATION
ON THE OUTSIDE OF THE WIRE CASING. TRACER WIRE SHALL BE INSTALLED ON ALL MAINLINE PIPES, LATERALS, AND
SERVICES WITH VERTICAL RISER TO THE SURFACE. TRACER WIRE SHOULD BE CONNECTED TO THE RISERS.
ALL SANITARY SEWER RISERS MUST EXTEND AT LEAST 4 INCHES ABOVE THE FINISHED GROUND ELEVATION.
A FLEXIBLE COMPRESSION JOINT MUST BE USED TO MAKE WATERTIGHT CONNECTIONS TO MANHOLES IN ACCORDANCE
WITH MINNESOTA RULES, CH. 4714, SEC. 719.6. RESILIENT RUBBER JOINTS MAY BE USED IF APPROVED BY AGENCY
HAVING JURISDICTION.
IN THE EVENT THAT SANITARY AND STORM SEWERS CROSS ABOVE A WATER MAIN OR SERVICE, THE SEWER MUST BE
CONSTRUCTED OF PVC COMPLYING WITH ASTM F891, F1488, D1785, OR D2665 OR POLYETHYLENE COMPLYING WITH
ASTM F714. NO JOINTS OR CONNECTIONS SHALL BE ALLOWED WITHIN 10' OF THE CROSSING FOR EITHER PIPE.
MINIMUM COVER FOR SANITARY SEWER AND SERVICES SHALL BE 7 FEET. MINIMUM COVER FOR WATERMAIN AND
SERVICES SHALL BE 7.5 FEET.
ALL WATERMAIN AND SERVICES REQUIRE THRUST BLOCKING.
PROVIDE DE-WATERING AS NEEDED DURING UTILITY CONSTRUCTION. CONTRACTOR TO APPLY FOR AND OBTAIN
NECESSARY PERMITS.
PROVIDE PIPE BEDDING PER PROJECT DETAILS AND SPECIFICATIONS.
PROVIDE JOINT RESTRAINT AT ALL BENDS, TEES, AND DEAD ENDS.
CONTRACTOR SHALL VERIFY PIPE SIZE AND MATERIAL FOR ALL CONNECTIONS AND SHALL BE RESPONSIBLE FOR ALL
PIPES AND FITTINGS REQUIRED TO MAKE CONNECTIONS TO EXISTING INFRASTRUCTURE AS VERIFIED IN THE FIELD.
PROVIDE 4" OF INSULATION AT SERVICE CROSSINGS THAT ARE LESS THAN 24" SEPARATION.
SEWER SERVICE RISERS SHALL BE GLUED JOINTS AT THE ELBOW TO THE SURFACE.

10400 BREN ROAD E, MINNETONKA, MN 55343

3.
4.

3.

UTILITY NOTES
1.

THE MARINER

2.

ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH MINNESTOA DEPARTMENT OF
TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" (LATEST EDITION) &
LATEST SUPPLEMENTS, AND APPLICABLE CITY AND COUNTY REGULATIONS. UNLESS
OTHERWISE NOTED, ALL WORK SHALL CONFORM AS APPLICABLE TO THESE STANDARDS AND
SPECIFICATIONS.
THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING ALL MATERIAL AND LABOR TO
CONSTRUCT THE FACILITY AS SHOWN AND DESCRIBED IN THE CONSTRUCTION DOCUMENTS IN
ACCORDANCE WITH THE APPROPRIATE APPROVING AUTHORITIES, SPECIFICATIONS, AND
REQUIREMENTS. CONTRACTOR SHALL CLEAR AND GRUB ALL AREAS UNLESS OTHERWISE
INDICATED, REMOVING TREES, STUMPS, ROOTS, MUCK, EXISTING PAVEMENT AND ALL OTHER
DELETERIOUS MATERIAL.
ALL QUANTITIES ARE APPROXIMATE AND MAY VARY TO ALLOW COMPLETION OF WORK.
EXISITNG UTILITIES SHOWN ARE LOCATED ACCORDING TO THE INFORMATION AVAILABLE TO
THE ENGINEER AT THE TIME OF THE TOPOGRAPHIC SURVEY AND HAVE NOT BEEN
INDEPENDENTLY VERIFIED BY THE OWNER OR THE ENGINEER. NO GUARANTEE IS MADE THAT
ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN OR THAT THE LOCATION OF THOSE
SHOWN ARE ENTIRELY ACCURATE. THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS
UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE
GUIDELINES OF CI/ASCE 38-2 ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND
DEPICTION OF EXISTING SUBSURFACE UTILITY DATA".
TOPOGRAPHIC INFORMATION IS TAKEN FROM A TOPOGRAPHIC SURVEY BY LAND SURVEYORS.
IF THE CONTRACTOR DOES NOT ACCEPT EXISTING TOPOGRAPHY AS SHOWN ON THE PLANS,
WITHOUT EXCEPTION, THEN THE CONTRACTOR SHALL SUPPLY AT THEIR OWN EXPENSE A
TOPOGRAPHIC SURVEY BY A REGISTERED LAND SURVEYOR TO THE OWNER FOR REVIEW.
EXACT LOCATION OF UNDERGROUND UTILITIES SUCH AS GAS, TELEPHONE, FIBER OPTIC,
PIPELINES, ELECTRICAL, AND CABLE TV ARE UNKNOWN. CONTRACTOR RESPONSIBLE FOR
LOCATING PRIOR TO STARTING WORK.
CONTRACTOR SHOULD ANTICIPATE PRIVATE UTILITY CONFLICTS THROUGHOUT THE PROJECT
SUB CUT AND TRENCH AREAS AND SHALL COORDINATE WITH PRIVATE UTILITY OWNERS IF
ENCOUNTERED. IT IS THE CONTRACTORS RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY
COMPANIES WHICH MAY HAVE BURIED OR AERIAL UTILITIES WITHIN OR NEAR THE
CONSTRUCTION AREA BEFORE COMMENCING WORK. THE CONTRACTOR SHALL PROVIDE 48
HOURS MINIMUM NOTICE TO ALL UTILITY COMPANIES PRIOR TO BEGINNING CONSTRUCTION.
THE RELOCATION AND OR PROTECTION OF ALL EXISTING UTILITIES MUST BE COORDINATED BY
THE CONTRACTOR AND ANY COSTS FOR SUCH WORK SHALL BE THE RESPONSIBILITY OF THE
CONTRACTOR. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR EXTRA TIME AND
EFFORT OF PROVISIONS NECESSARY TO WORK AROUND OR UNDER ANY UTILITIES.
PROTECT EXISTING PAVEMENT AND SITE FEATURES, EXCEPT AS NOTED.
CONTRACTOR TO COORDINATE AND MAINTAIN ACCESS TO ADJACENT PROPERTIES
THROUGHOUT CONSTRUCTION.
THE CONTRACTOR SHALL HAVE AVAILABLE AT THE JOB SITE AT ALL TIMES ONE COPY OF THE
CONSTRUCTION DOCUMENTS INCLUDING PLANS, SPECIFICATIONS, GEOTECHNICAL REPORT,
AND SPECIAL CONDITIONS AND COPIES OF ANY REQUIRED CONSTRUCTION PERMITS.
ANY DISCREPANCIES ON THE DRAWINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION
OF THE OWNER AND ENGINEER BEFORE COMMENCING WORK. NO FIELD CHANGES OR
DEVIATIONS FROM DESIGN ARE TO BE MADE WITHOUT PRIOR APPROVAL FROM THE OWNER
AND NOTIFICATION TO THE ENGINEER.
REFERENCE ARCHITECTURAL PLANS BY OTHERS FOR EXACT BUILDING DIMENSIONS,
MATERIALS, AND SPECIFICATIONS.
MAINTAIN DRAINAGE CONVEYANCE DURING CONSTRUCTION (BOTH PIPED AND OVERLAND).
THE EXISTING PAVEMENT CONDITIONS HAVE BEEN DOCUMENTED, AND ANY DAMAGE TO THE
EXISTING PAVEMENT, CURBING, AND STRIPING SHALL BE REPLACED BY THE CONTRACTOR, TO
THE OWNERS SATISFACTION, AT NO ADDITIONAL COST TO THE OWNER.
THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE
TO ADJACENT PROPERTIES DURING CONSTRUCTION PHASES OF THIS PROJECT. THE
CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR ANY DAMAGES TO THE ADJACENT
PROPERTIES OCCURRING DURING THE CONSTRUCTION PHASES OF THIS PROJECT.
SAFETY NOTICE TO CONTRACTORS: IN ACCORDANCE WITH GENERALLY ACCEPTED
CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY
RESPONSIBLE FOR CONDITIONS ON THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND
PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY
CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE DUTY OF THE
ENGINEER OR THE OWNER TO CONDUCT CONSTRUCTION REVIEW OF THE CONTRACTOR'S
PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE
CONTRACTOR'S SAFETY MEASURES IN, ON OR NEAR THE CONSTRUCTION SITE.
THE CONTRACTOR SHALL BE RESPONSIBLE FOR DOCUMENTING AND MAINTAINING AS-BUILT
INFORMATION WHICH SHALL BE RECORDED AS CONSTRUCTION PROGRESSES OR AT THE
COMPLETION OF APPROPRIATE CONSTRUCTION INTERVALS AND SHALL BE RESPONSIBLE FOR
PROVIDING AS-BUILT DRAWINGS TO THE OWNER FOR THE PURPOSE OF CERTIFICATION TO
JURISDICTIONAL AGENCIES REQUIRED. ALL AS-BUILT DATA SHALL BE COLLECTED BY A STATE
OF MINNESOTA PROFESSIONAL LAND SURVEYOR WHOSE SERVICES ARE ENGAGED BY THE
CONTRACTOR.
ANY WELLS DISCOVERED ON SITE THAT WILL HAVE NO USE MUST BE PLUGGED BY A LICENSED
WELL DRILLING CONTRACTOR IN A MANNER APPROVED BY ALL JURISDICTIONAL AGENCIES.
CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY WELL ABANDONMENT PERMITS
REQUIRED.
ANY WELL DISCOVERED DURING EARTH MOVING ACTIVITY OR EXCAVATION SHALL BE
REPORTED TO THE APPROPRIATE JURISDICTIONAL AGENCIES WITHIN 24 HOURS AFTER
DISCOVERY IS MADE.
THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT THE PROPOSED
IMPROVEMENTS SHOWN ON THE PLANS DO NOT CONFLICT WITH ANY KNOWN EXISTING OR
OTHER PROPOSED IMPROVEMENTS. IF ANY CONFLICTS ARE DISCOVERED, THE CONTRACTOR
SHALL NOTIFY THE OWNER PRIOR TO INSTALLATION OF ANY PORTION OF THE SITE WORK THAT
WOULD BE AFFECTED. FAILURE TO NOTIFY OWNER OF AN IDENTIFIABLE CONFLICT PRIOR TO
PROCEEDING WITH INSTALLATION RELIEVES OWNER OF ANY OBLIGATION TO PAY FOR A
RELATED CHANGE ORDER.

2.

GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL VERIFY THE SUITABILITY OF ALL
EXISTING AND PROPOSED SITE CONDITIONS INCLUDING GRADES AND DIMENSIONS BEFORE
START OF CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY
DISCREPANCIES.
CONTRACTOR SHALL SALVAGE ALL TOPSOIL PRIOR TO GRADING, AND STOCKPILE IT FOR
RESPREADING. TOPSOIL WASTED SHALL BE REPLACED AT NO ADDITIONAL COST TO OWNER.
RESPREAD TOPSOIL FOR FINAL GRADING.
THE CONTRACTOR SHALL RESTRICT ALL GRADING AND CONSTRUCTION ACTIVITIES TO
AREAS DESIGNATED ON THE PLANS.
CONTRACTOR SHALL GRADE THE SITE TO THE ELEVATIONS INDICATED AND ENSURE THERE
IS POSITIVE DRAINAGE FROM THE PROPOSED BUILDINGS AND/OR PADS AND NO PONDING IN
PAVED AREAS. CONTRACTOR TO NOTIFY ENGINEER IF ANY GRADING DISCREPANCIES ARE
FOUND IN THE EXISTING AND PROPOSED GRADES PRIOR TO PLACEMENT OF PAVEMENT OR
UTILITIES.
IT IS THE CONTRACTOR'S RESPONSIBILITY THAT ALL SURFACE VEGETATION AND ANY
TOPSOIL OR OTHER LOOSE, SOFT, OR OTHERWISE UNSUITABLE MATERIAL BE REMOVED
FROM THE STREET SECTION AND BUILDING PAD AREAS PRIOR TO PLACEMENT OF ANY
EMBANKMENT.
ALL ELEVATIONS SHOWN ON PLAN ARE TOP OF FINISHED SURFACE UNLESS OTHERWISE
NOTED. SPOT ELEVATIONS ARE TO FLOWLINE OF CURB UNLESS OTHERWISE NOTED.
AFTER PLACEMENT OF SUBGRADE AND PRIOR TO PLACEMENT OF PAVEMENT, CONTRACTOR
SHALL TEST AND OBSERVE PAVEMENT AREAS FOR EVIDENCE OF PONDING. ALL AREAS
SHALL ADEQUATELY DRAIN TOWARDS THE INTENDED STRUCTURE TO CONVEY STORM
RUNOFF. CONTRACTOR SHALL IMMEDIATELY NOTIFY OWNER AND ENGINEER IF ANY
DISCREPANCIES ARE DISCOVERED.
WHERE EXISTING PAVEMENT IS INDICATED TO BE REMOVED THE CONTRACTOR SHALL SAW
CUT FULL DEPTH FOR A SMOOTH AND STRAIGHT JOINT. REPLACEMENT OF REMOVED
PAVEMENT SHALL BE WITH THE SAME TYPE AND DEPTH OF MATERIAL AS EXISTING OR AS
INDICATED.
CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION WITH UTILITY COMPANIES.
CONTRACTOR SHALL STAGE WORK AROUND UTILITIES TO ALLOW FOR TRANSITION OF
UTILITY SERVICES FROM EXISTING INFRASTRUCTURE TO PROPOSED INFRASTRUCTURE
WITHOUT LACK OF SERVICE.
CONTRACTOR IS REQUIRED TO MEET ALL APPLICABLE OSHA STANDARDS.
IF DEWATERING IS REQUIRED, THE CONTRACTOR SHALL OBTAIN ANY APPLICABLE REQUIRED
PERMITS. THE CONTRACTOR IS TO COORDINATE WITH THE OWNER AND/OR ENGINEER PRIOR
TO ANY EXCAVATION.
FIELD DENSITY TESTS SHALL BE TAKEN AT INTERVALS IN ACCORDANCE WITH THE LOCAL
JURISDICTIONAL AGENCY OR TO MINNESOTA DOT STANDARDS. IN THE EVENT THAT THE
CONTRACT DOCUMENTS AND AHJ REQUIREMENTS ARE NOT IN AGREEMENT, THE MOST
STRINGENT SHALL GOVERN.
THE CONTRACTOR SHALL ENSURE THAT LANDSCAPE PLANTING AREAS AND INFILTRATION
AREAS ARE NOT COMPACTED AND DO NOT CONTAIN ROAD BASE MATERIALS. THE
CONTRACTOR SHALL EXCAVATE AND REMOVE ALL UNDESIRABLE MATERIAL FROM ALL
AREAS DESIGNATED FOR PLANTINGS AND PROPERLY DISPOSE OF THEM IN A LEGAL MANNER.
LIMITS OF CONSTRUCTION ARE TO THE PROPERTY LINE UNLESS OTHERWISE SPECIFIED ON
THE PLAN.
UNSUITABLE SOILS DISCOVERED ONSITE DURING GRADING OPERATIONS SHALL BE
EXCAVATED AND DISPOSED OF IN ACCORDANCE WITH APPLICABLE REGULATIONS AND BY
DIRECTION OF ENGINEER.
CONTRACTOR SHALL BLEND NEW EARTHWORK SMOOTHLY TO TRANSITION BACK TO
EXISTING GRADE.
ALL PROPOSED GRADES ON SITE SHALL BE 3:1 OR FLATTER UNLESS OTHERWISE NOTED ON
THE PLANS. ANY SLOPES STEEPER THAN 4:1 REQUIRE EROSION AND SEDIMENT CONTROL
BLANKET.
ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ENSURE A SMOOTH FIT AND
CONTINUOUS GRADE.
ALL CONCRETE / BITUMINOUS PAVEMENT SHALL BE INSTALLED PER THE GEOTECHNICAL
REPORT, MINNETONKA, AND MINNESOTA DOT SPECIFICATIONS.
MAXIMUM ALLOWABLE VARIATION IN SUBGRADE ELEVATION IS 0.25 FEET ABOVE OR BELOW
ELEVATION INDICATED ON DRAWINGS AT ANY ONE POINT A MEASUREMENT IS MADE.
SITE SHALL BE GRADED TO MAINTAIN POSITIVE DRAINAGE FROM THE SITE TO EXISTING AND
PROPOSED STORMWATER SYSTEMS AND AVOID PONDING WATER. SUBGRADE THAT
BECOMES SATURATED WITH WATER AND UNABLE TO MEET MOISTURE AND DENSITY
REQUIREMENTS WILL BE CORRECTED BY CONTRACTOR AT NO EXPENSE TO OWNER.
CONTRACTOR SHALL COMPLY WITH THE RECOMMENDATIONS GIVEN BY OWNER
GEOTECHNICAL REPRESENTATIVE. AT A MINIMUM, GRADING AND COMPACTION
REQUIREMENTS INCLUDE:
A. COMPACT BACKFILL, FILL AND SUBGRADE TO RELATIVE COMPACTION (ASTM D698) AS
FOLLOWS:
x GENERAL EMBANKMENT FILL - MIN. 95% STANDARD PROCTOR
x ENGINEERED FILL BELOW PAVED AREAS (MORE THAN 3 FEET BELOW SUBGRADE
ELEVATIONS) - MIN. 95% STANDARD PROCTOR
x ENGINEERED FILL BELOW PAVED AREAS (WITHIN 3 FEET OF SUBGRADE
ELEVATIONS) OR IN UTILITY TRENCHES - MIN. 100% STANDARD PROCTOR
x ENGINEERED FILL PLACED AS AGGREGATE BASE - MIN. 100% STANDARD
PROCTOR
B. COMPACT BACKFILL, FILL, AND SUBGRADE TO WITHIN ±3% OF OPTIMUM MOISTURE FOR
SANDS AND WITHIN +3% OF OPTIMUM MOISTURE FOR SILTY/CLAYEY SOILS.
C. BACKFILL AND FILL SHALL BE SPREAD IN LOOSE LIFTS OF 8 INCHES (MAX.)
D. SCARIFY, TEMPER FOR MOISTURE, AND RE-COMPACT NO LESS THAN 12 INCHES OF
NATIVE SOIL SUBGRADE PRIOR TO PLACEMENT OF ENGINEERED FILL OR AGGREGATE
BASE.
ONSITE EXCAVATED BOULDERS MEETING THE SIZE REQUIREMENTS FOR RIPRAP WILL BE
ALLOWED FOR USE AS RIPRAP. COORDINATE WITH OWNER.

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SITE AND BUILDING PLAN REVIEW

GENERAL NOTES

THE STORM WATER POLLUTION PREVENTION PLAN "(SWPPP)" IS COMPRISED OF THE EROSION
CONTROL PLAN, THE STANDARD DETAILS, THE PLAN NARRATIVE, SPECIFICATIONS, ATTACHMENTS,
IN ADDITION TO THE PERMIT AND ALL SUBSEQUENT REPORTS AND RELATED DOCUMENTS.
2. IF APPLICABLE, ALL CONTRACTORS AND SUBCONTRACTORS SHALL OBTAIN A COPY OF THE SWPPP
AND MINNESOTA NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT AND BE
FAMILIAR WITH THEIR CONTENTS.
3. BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR
LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE. THE CONTRACTOR SHALL
IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY THE PERMITTING AGENCY OR OWNER, OR AS
SITE CONDITIONS DICTATE.
4. ALL EROSION CONTROL DEVICES SHOWN ON THESE PLANS SHALL BE INSTALLED PRIOR TO THE
START OF LAND DISTURBING ACTIVITIES.
5. ALL MEASURES STATED ON THE EROSION AND SEDIMENT CONTROL PLAN, AND IN THE STORM
WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION
UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE
SITE. ALL EROSION CONTROL AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A
CERTIFIED INSPECTOR AT LEAST ONCE EVERY 7 CALENDAR DAYS AND WITHIN 24 HOURS OF THE
END OF A 0.5" RAINFALL EVENT, AND CLEANED AND REPAIRED IN ACCORDANCE WITH THE
FOLLOWING.
5.1.
INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW
SIGNS OF UNDERMINING OR DETERIORATION.
5.2.
ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS
MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED, AND RESEEDED AS NEEDED. FOR
MAINTENANCE REQUIREMENTS REFER TO THE STANDARD SPECIFICATIONS.
5.3.
SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT
SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-THIRD THE HEIGHT OF THE
SILT FENCE.
5.4.
THE CONSTRUCTION ENTRANCE(S) SHALL BE MAINTAINED IN CONDITION WHICH WILL PREVENT
TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP
DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND.
5.5.
THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE
FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF AS CONDITIONS
DEMAND.
5.6.
REMOVE TRACKED SEDIMENT FROM ALL PAVED SURFACES BOTH ON AND OFFSITE ON A DAILY
BASIS (INCIDENTAL).
5.7.
MINIMIZE DUST FROM CONSTRUCTION OPERATIONS BY PROVIDING WATER OR OTHER
APPROVED METHOD ON A DAILY BASIS (INCIDENTAL).
5.8.
ALL MAINTENANCE OPERATIONS SHALL BE DONE IN A TIMELY MANNER BUT IN NO CASE LATER
THAN 2 CALENDAR DAYS FOLLOWING THE INSPECTION.
6. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED DEPENDING ON SITE CONDITIONS
DURING CONSTRUCTION. COORDINATE WITH ENGINEER.
7. ALL EROSION CONTROL DEVICES TO BE INSTALLED PRIOR TO COMMENCEMENT OF WORK,
MAINTAINED IN ACCORDANCE WITH THE SWPPP, NPDES, AND SPECIFICATIONS THROUGHOUT
DURATION OF PROJECT, AND REMOVED UPON ESTABLISHMENT OF FINAL STABILIZATION AS
DIRECTED BY ENGINEER. EROSION CONTROL MEASURES USED FOR CONSTRUCTION SHALL NOT BE
REMOVED UNTIL AUTHORIZED BY OWNER OR ENGINEER.
8. FINAL STABILIZATION TO BE COMPLETED WITHIN ONE WEEK (7 DAYS) OF SITE GRADING. ALL
DISTURBED AREAS SHALL BE STABILIZED WITH SEED, SOD, OR ROCK BASE AS DETAILED ON THE
CONSTRUCTION DOCUMENTS.
9. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH
THE SWPPP.
10. ALL DISTURBED UNPAVED AREAS ARE TO IMMEDIATELY RECEIVE SALVAGED TOPSOIL, SEED AND
MULCH AND WATERED UNTIL A HEALTHY STAND OF GRASS IS OBTAINED.
11. TEMPORARY SEEDING OR OTHER APPROVED METHODS OF STABILIZATION SHALL BE INITIATED
WITHIN 7 DAYS OF THE LAST DISTURBANCE ON ANY AREA OF THE SITE.
12. CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED
BY THE GENERAL PERMIT.
13. SITE ENTRY AND EXIT LOCATIONS SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT THE
TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAYS. ALL SEDIMENT SPILLED, DROPPED,
WASHED, OR TRACKED ON A PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY. WHEN WASHING
IS REQUIRED IT SHALL BE DONE IN AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO
AN APPROVED SEDIMENT TRAP OR OTHER BMP. ALL FINES IMPOSED FOR DISCHARGING SEDIMENT
ONTO PUBLIC AREAS SHALL BE PAID BY THE CONTRACTOR.
14. CONTRACTOR SHALL DENOTE ON THE PLAN THE TEMPORARY PARKING, STORAGE AREAS,
EQUIPMENT MAINTENANCE AND CLEANING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES
SUCH AS TOILETS OR OFFICE TRAILER.
15. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE
DETAINED AND PROPERLY TREATED OR DISPOSED.
16. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS SHALL BE
MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLENA-UP FUEL OR CHEMICAL
SPILLS AND LEAKS.
17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL ON SITE. THE USE OF MOTOR OILS
AND OTHER PETROLEUM BASED OR TOXIC PRODUCTS FOR DUST SUPPRESSION OPERATIONS IS
PROHIBITED.
18. RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO
SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH
THE ACTION OF WIND OR STORM WATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE
STATE.
19. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THE PLAN SHALL BE
INITIATED AS SOON AS PRACTICABLE.
20. CONTRACTOR SHALL INCORPORATE APPROPRIATE BMP'S AS NECESSARY TO ENSURE THAT ALL
STAGING AREAS, STOCKPILES, SPOILS, ETC. SHALL BE LOCATED SUCH THAT THEY WILL NOT
ADVERSELY AFFECT STORM WATER QUALITY.
21. ALL EROSION CONTROL MEASURES ARE TO BE INSTALLED IN ACCORDANCE WITH THE APPROVED
PLANS AND SPECIFICATIONS FOR THIS PROJECT. CHANGES ARE TO BE APPROVED BEFORE
CONSTRUCTION BY THE DESIGN ENGINEER AND THE CITY OF MINNETONKA ENGINEERING DIVISION.
22. IF THE EROSION CONTROL PLAN AS APPROVED CANNOT CONTROL EROSION AND OFF-SITE
SEDIMENTATION FROM THE PROJECT, THE EROSION CONTROL PLAN WILL HAVE TO BE REVISED
AND/OR ADDITIONAL BMP'S AND MEASURES IMPLEMENTED. ANY REVISIONS TO THE EROSION
CONTROL PLAN MADE BY THE CONTRACTOR MUST BE APPROVED BY THE ENGINEER.

06/01/2018

1.

Issue #

THE CONTRACTOR SHALL COMPLETE ALL EROSION CONTROL, DEMOLITION, CLEARING AND
GRUBBING, GRADING, SANITARY SEWER MAIN, WATER MAIN, SERVICES, STORM SEWER, PAVING
AND RESTORATION TO ACHIEVE PROPOSED IMPROVEMENTS AS INDICATED ON THE DRAWINGS IN
CONFORMANCE WITH GOVERNING SPECIFICATIONS AND CODES.

GRADING NOTES

Description:

EROSION CONTROL NOTES AND MAINTENANCE

Date:

5/31/2018 1:31:41 PM

PROJECT SCOPE

PAVING AND STRIPING NOTES
ALL PAVING, CONSTRUCTION, MATERIALS, AND WORKMANSHIP WITHIN PUBLIC RIGHT-OF-WAY SHALL BE IN ACCORDANCE
WITH LOCAL OR COUNTY SPECIFICATIONS AND STANDARDS (LATEST EDITION) OR MINNESOTA DOT SPECIFICATIONS AND
STANDARDS (LATEST EDITION) IF NOT COVERED BY LOCAL OR COUNTY REGULATIONS.
ALL SIGNS, PAVEMENT MARKINGS, AND OTHER TRAFFIC CONTROL DEVICES SHALL CONFORM TO MANUAL ON UNIFORM
TRAFFIC CONTROL DEVICES (M.U.T.C.D) AND CITY STANDARDS.
CONTRACTOR SHALL FURNISH ALL PAVEMENT MARKINGS FOR FIRE LANES, ROADWAY LANES, PARKING STALLS,
ACCESSIBLE PARKING SYMBOLS, ACCESS AISLES, STOP BARS AND SIGNS, AND MISCELLANEOUS STRIPING WITHIN THE
PROJECT AREA AS SHOWN ON THE PLANS.
ALL JOINTS SHALL EXTEND THROUGH THE CURB.
THE MINIMUM LENGTH OF OFFSET JOINTS AT RADIUS POINTS SHALL BE 2 FEET.
ALL JOINTS, INCLUDING EXPANSION JOINTS WITH REMOVABLE TACK STRIPS, SHALL BE SEALED WITH JOINT SEALANT.
THE MATERIALS AND PROPERTIES OF ALL CONCRETE SHALL MEET THE APPLICABLE REQUIREMENTS IN THE A.C.I.
(AMERICAN CONCRETE INSTITUTE) MANUAL OF CONCRETE PRACTICE.
CONTRACTOR SHALL APPLY A SECOND COATING OF ALL PAVEMENT MARKINGS PRIOR TO ACCEPTANCE BY THE OWNER.
ANY EXISTING PAVEMENT, SIDEWALK, CURBS, OR OTHER SUCH ITEMS DESIGNATED TO REMAIN THAT ARE DAMAGED OR
REMOVED WILL BE REPAIRED BY THE CONTRACTOR AT THEIR EXPENSE TO THE SATISFACTION OF THE ENGINEER AND
OWNER.
BEFORE PLACING PAVEMENT, CONTRACTOR SHALL VERIFY SUITABLE ACCESSIBLE ROUTES (PER A.D.A). IN NO CASE
SHALL ACCESSIBLE RAMP SLOPES EXCEED 1 VERTICAL TO 12 HORIZONTAL. IN NO CASE SHALL ACCESSIBLE CROSS
SLOPES EXCEED 2%. IN NO CASE SHALL LONGITUDINAL SIDEWALK SLOPES EXCEED 5%. CONTRACTOR SHALL CONTACT
ENGINEER PRIOR TO PAVING IF ANY EXCESSIVE SLOPES ARE ENCOUNTERED. NO CONTRACTOR CHANGE ORDERS WILL
BE ACCEPTED FOR A.D.A. COMPLIANCE ISSUES.
MAXIMUM JOINT SPACING IS TWICE THE DEPTH OF THE CONCRETE PAVEMENT IN FEET.

PRELIMINARY
NOT FOR CONSTRUCTION

7265-01

Project #:

JRA

Drawn By:
Issue Date:

2018-0601
1

Issue #:
Sheet #:

G-102
Sheet Title:

GENERAL
NOTES


THE MARINER

PRELIMINARY PLAT OF

LOT 1
BLOCK 14
OPUS 2 FOURTH ADDITION

LEGAL DESCRIPTION OF PROPERTY TO BE PLATTED

The subject property comprises the following parcels:

1. LOT 1, BLOCK 1, BREN TRAIL, HENNEPIN COUNTY, MINNESOTA.
   Together with the interests contained in Declaration of Reciprocal Easements dated May 11, 2010, filed May 12, 2010, as Document Number 9511555.

2. LOT 2, BLOCK 1, BREN TRAIL, HENNEPIN COUNTY, MINNESOTA.
   Together with the interests contained in Declaration of Reciprocal Easements dated May 11, 2010, filed May 12, 2010, as Document Number 9511555.

PRESENT ADDRESSES

1. PARCEL A:
   LOT 1 AND 3, BLOCK 1, BREN TRAIL, HENNEPIN COUNTY, MINNESOTA.
   Together with the interests contained in Declaration of Reciprocal Easements dated May 11, 2010, filed May 12, 2010, as Document Number 9511555.

2. PARCEL B:
   LOT 2, BLOCK 1, BREN TRAIL, HENNEPIN COUNTY, MINNESOTA.
   Together with the interests contained in Declaration of Reciprocal Easements dated May 11, 2010, filed May 12, 2010, as Document Number 9511555.

(ABSTRACT PROPERTY)

LEGAL DESCRIPTION OF PROPERTY TO BE PLATTED

TOTAL AREA TO BE PLATTED = 169,576 ± SQUARE FEET OR 3.893 ACRES

AREAS

LOT AREAS TO BE PLATTED:
LOT 1, BLOCK 1 = 116,610 S.F. OR 2.677 ACRES
LOT 2, BLOCK 1 = 52,967 S.F. OR 1.216 ACRES

CURRENT LOT AREAS (INCLUDING RIGHTS OF WAY):
LOT 1, BLOCK 1 = 38,841 S.F. OR 0.892 ACRES
LOT 2, BLOCK 1 = 58,807 S.F. OR 1.350 ACRES
LOT 3, BLOCK 1 = 71,929 S.F. OR 1.651 ACRES

TAXPAYER / PROPERTY OWNER

LOT 1, BLOCK 1
CITYWIDE DEVELOPMENT INC / SAI INVESTMENT COMPANY
10500 BREN RD E #100
MINNETONKA MN 55343

LOT 2, BLOCK 1
CITYWIDE DEVELOPMENT INC.
10500 BREN RD E #100
MINNETONKA MN 55343

LOT 1, BLOCK 1
CITYWIDE DEVELOPMENT INC / SAI INVESTMENT COMPANY
10500 BREN RD E #100
MINNETONKA MN 55343

ZONING

PROPERTY IS ZONED I-1 INDUSTRIAL ACCORDING TO CITY OFFICIAL ZONING MAP

DATE OF PRELIMINARY PLAT
MAY 30, 2018

LAND SURVEYOR

WENCK ASSOCIATES
1800 PIONEER CREEK CENTER
MINNETONKA, MN
LICENSE NUMBER 46563

Drawn By:
WENCK ASSOCIATES
Issue Date:
MAY 30, 2018
Project #: 7265-01
JRA

PREPARED FOR:
COLLAGE ARCHITECTS
708 15TH AVENUE NE
MINNEAPOLIS, MN 55413

Issue #:

PRELIMINARY
NOT FOR CONSTRUCTION
NOTE: LIMITS OF DISTURBANCE AND SILT FENCE ARE SHOWN OFFSET FROM GRADING LIMITS FOR CLARITY. OFFSET ABOVE IS LIMITED TO ORDINARY CONNECTIONS. CONTRACTOR TO INSTALL AND MAINTAIN EROSION PROTECTION ON ALL AREAS RECEIVING STORMWATER RUNOFF FROM THE SITE.

NOTE: TEMPORARY EROSION CONTROL BMP'S TO BE IN PLACE AND STABILIZED PRIOR TO ANY SITEWORK. TEMPORARY CONTROLS TO BE CONSTRUCTED AS NECESSARY TO CONTROL STORMWATER RUNOFF UNTIL CONSTRUCTION HAS COMMENCED.

PRELIMINARY NOT FOR CONSTRUCTION

WARNING:
THE CONTRACTOR SHALL BE RESPONSIBLE FOR CALLING FOR LOCATIONS OF ALL EXISTING UTILITIES. THEY SHALL COOPERATE WITH ALL UTILITY COMPANIES IN MAINTAINING THEIR SERVICE AND/OR RELOCATION OF LINES. THE CONTRACTOR SHALL CONTACT GOPHER STATE ONE CALL AT 651-454-0002 AT LEAST 48 HOURS IN ADVANCE FOR THE LOCATIONS OF ALL UNDERGROUND WIRES, CABLES, CONDUITS, PIPES, MANHOLES, VALVES OR OTHER BURIED STRUCTURES BEFORE DIGGING. THE CONTRACTOR SHALL REPAIR OR REPLACE THE ABOVE WHEN DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.

TWIN CITY AREA: 651-454-0002 TOLL FREE 1-800-252-1166
CALL BEFORE YOU DIG

1. ALL PERMANENT Silt Fence and Rock Construction Entrances shall be installed prior to construction.
2. The Contractor shall install catch basin sediment control measures as necessary.
3. All disturbed areas shall be stabilized with sod or rock base. Stabilization must be initiated immediately upon finishing site grading and completed within twenty (20) days. Refer to landscape plans for materials.
4. All erosion control measures shall be installed and maintained in accordance with City, State, and Watershed District permits.
5. The Contractor shall maintain all erosion control measures throughout the construction. Segments shall be removed at regular intervals. Segment build up shall be removed when it reaches 1/3 the height of the silt fence above ground elevation.
6. Any excess sediment accumulated onsite shall be removed by the Contractor.
7. Remove all erosion control measures after site has been stabilized and vegetation is established.
8. Contractor shall remove all soils and sediment tracked onto existing streets and sidewalks.
9. If blowing dust becomes a nuisance, the Contractor shall apply water from a tank truck to all construction areas.
10. Spread adjacent street in accordance with City and Watershed Requirements.

NOTE: LIMITS OF DISTURBANCE AND SILT FENCE ARE SHOWN OFFSET FROM GRADING LIMITS FOR CLARITY. OFFSITE WORK IS LIMITED TO DRIVEWAY CONNECTIONS. CONTRACTOR TO INSTALL AND MAINTAIN EROSION PROTECTION ON ALL AREAS RECEIVING STORMWATER RUNOFF FROM THE SITE.

NOTE: TEMPORARY EROSION CONTROL BMP'S TO BE IN PLACE AND STABILIZED PRIOR TO ANY SITEWORK. TEMPORARY CONTROLS TO BE CONSTRUCTED AS NECESSARY TO CONTROL STORMWATER RUNOFF UNTIL CONSTRUCTION HAS COMMENCED.
SITE LEGEND

PROPERTY LINE
EASEMENT LINE
SITE ANALYSIS TABLE
LOT 1, LOT 2, BLOCK 1
THE MARINER ADDITION

LOT AREA
493,576 SF (11.84 AC)

GREENSPACE SUMMARY
PROPOSED

BIPURPOSE AREA (SILK ROAD)
333,802 SF

PREVIOUS AREA
461,314 SF

PARKING SUMMARY
PROPOSED

SOUNDING SURFACE PARKING
37 STALLS

COMPACT SURFACE PARKING
10 STALLS

TOTAL UNDERGROUND PARKING
263 STALLS

TOTAL PARKING COUNT
340 STALLS

SITE NOTES

1. ALL WORK AND MATERIALS SHALL COMPLY WITH ALL CITY / COUNTY REGULATIONS AND CODES, AND OSHA STANDARDS.

2. CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT LOCATIONS OF DOOR LOCATION / STRUCTURAL STOOP, SIDEWALKS, EXIT PORCHES, TRUCK DOCKS, PRECISE BUILDING DIMENSIONS, AND EXACT BUILDING LIMITS AND LOCATIONS OF VESTIBULES, DUMPSTER ENCLOSURE DESIGN, GROUND COVER, AND PLANTING SCHEDULE.

3. ALL DISTURBED AREAS ARE TO RECEIVE SIX INCHES OF TOPSOIL, SEED OR SOD, AND WATER UNTIL GRASS IS FULLY ESTABLISHED. REFER TO GEOTECHNICAL REPORT FOR DETAILED LANDSCAPE DESIGN, GROUND COVER, AND PLANTING SCHEDULE.

4. ALL DIMENSIONS AND RADII ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.

5. SITE BOUNDARY TOPOGRAPHY, UTILITIES, AND ROAD INFORMATION TAKEN FROM A SURVEY BY JAMES R. HILL, INC. DATED 11/31/2016.

6. REFEREED ARCHITECTURAL PLANS FOR INTERNAL DUMPSTER ENCLOSURE DESIGN.

7. CONCRETE JOINT SPACING SHALL HAVE MAX ASPECT RATIO OF 1:5 AND SHALL BE AS FOLLOWS:
   - MINIMUM SETBACK 22.5' - MAX ASPECT RATIO 1:1
   - MAXIMUM SETBACK 39.0' - MAX ASPECT RATIO 1:2
   - AVERAGE SETBACK 36.0' - MAX ASPECT RATIO 1:1.5
   - SPACING DEPENDENT UPON THICKNESS. REFER TO GEOTECHNICAL REPORT.

WARNING:

THE CONTRACTOR SHALL CONTACT GOPHER STATE ONE CALL AT 651-454-0002 AT LEAST 48 HOURS IN ADVANCE FOR THE LOCATIONS OF ALL UNDERGROUND WIRES, CABLES, CONDUITS, PIPES, MANHOLES, VALVES OR OTHER BURIED STRUCTURES BEFORE DIGGING. THE CONTRACTOR SHALL REPAIR OR REPLACE THE ABOVE WHEN DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.

JRA
M:\7265 Collage Architects\0001 - 10400 Bren Road E\3_DESIGN\CAD\3 Plansheets\C-103 SITE PLAN.dwg
WARNING:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR CALLING FOR LOCATIONS OF ALL EXISTING UTILITIES. THEY SHALL COOPERATE WITH ALL UTILITY COMPANIES IN MAINTAINING THEIR SERVICE AND/OR RELOCATION OF LINES. THEY SHALL CONTACT GOPHER STATE ONE CALL AT 651-454-0002 AT LEAST 48 HOURS IN ADVANCE FOR THE LOCATIONS OF ALL UNDERGROUND WIRES, CABLES, CONDUITS, PIPES, MANHOLES, VALVES OR OTHER BURIED STRUCTURES BEFORE DIGGING. THE CONTRACTOR SHALL REPAIR OR REPLACE THE ABOVE WHEN DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.

NOTE: LIMITS OF DISTURBANCE AND SILT FENCE ARE SHOWN OFFSET FROM GRADING LIMITS FOR CLARITY. OFFSITE WORK IS LIMITED TO DRIVEWAY CONNECTIONS. CONTRACTOR TO INSTALL AND MAINTAIN EROSION PROTECTION ON ALL AREAS RECEIVING STORMWATER RUNOFF FROM THE SITE.

EROSION CONTROL NOTES

1. ALL PERIMETER SILT FENCE AND ROCK CONSTRUCTION ENTRANCES SHALL BE INSTALLED PRIOR TO CONSTRUCTION.

2. THE CONTRACTOR SHALL INSTALL CATCH Basin SEDIMENT CONTROL MEASURES PRIOR TO ANY CONSTRUCTION ACTIVITIES.

3. ALL DISTURBED AREAS SHALL BE STABILIZED WITH SOD, OR ROCK BASE. STABILIZATION MUST BE INITIATED IMMEDIATELY UPON FINISHING SITE GRADING AND COMPLETED WITHIN TWO WEEKS (14 DAYS). REFER TO LANDSCAPE PLANS FOR MATERIALS.

4. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH CITY, STATE, AND WATERSHED DISTRICT PERMITS.

5. THE CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL MEASURES THROUGHOUT CONSTRUCTION. SEDIMENT SHALL BE REMOVED AT REGULAR INTERVALS. SEDIMENT BUILD UP SHALL BE REMOVED WHEN IT REACHES THE HEIGHT OF THE SILT FENCE ABOVE GROUND ELEVATION.

6. ANY EXCESS SEDIMENT ACCUMULATED ON SITE SHALL BE REMOVED BY THE CONTRACTOR.

7. REMOVE ALL EROSION CONTROL MEASURES AFTER SITE HAS BEEN STABILIZED AND VEGETATION IS ESTABLISHED.

8. CONTRACTOR SHALL REMOVE ALL SOILS AND SEDIMENT TRACKED ONTO EXISTING STREETS AND PAVED AREAS.

9. IF BLOWING DUST BECOMES A NUISANCE, THE CONTRACTOR SHALL APPLY WATER FROM A TANK TRUCK TO ALL CONSTRUCTION AREAS.

10. SWEEP ADJACENT STREET IN ACCORDANCE WITH CITY AND WATERSHED REQUIREMENTS.

NOTE: PROPOSED MINOR CONTOUR

NOTE: PROPOSED MAJOR CONTOUR

NOTE: PROPERTY LINE

NOTE: BASEMENT LINE

NOTE: LIMITS OF CONSTRUCTION

NOTE: SILT FENCE

NOTE: TREE PROTECTION (ONLY USE SILT FENCE AS NECESSARY)
GRADING NOTES

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF MINNETONKA, MINNESOTA SPECIFICATIONS AND BUILDING PERMIT REQUIREMENTS.

2. CONTRACTOR TO CALL GOPHER STATE ONE CALL AT 1-800-252-1166 AT LEAST TWO WORKING DAYS PRIOR TO EXCAVATION FOR LOCATION OF ALL UNDERGROUND UTILITIES.

3. CONTRACTOR TO FIELD VERIFY THE LOCATIONS AND ELEVATIONS FOR EXISTING UTILITIES AND TOPOGRAPHIC FEATURES PRIOR TO THE START OF SITE GRADING. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE PROJECT ENGINEER OF ANY DEFICIENCIES OR VARIATIONS.

4. SUBGRADE EXCAVATION SHALL BE BACKFILLED IMMEDIATELY AFTER EXCAVATION TO HELP OFFSET ANY STABILITY PROBLEMS DUE TO WATER SEEPAGE OR STEEP SLOPES. WHEN PLACING NEW SURFACE MATERIAL ADJACENT TO EXISTING PAVEMENT, THE EXCAVATION SHALL BE BACKFILLED PROMPTLY TO AVOID UNDERMINING OF EXISTING PAVEMENT.

5. ALL EXCESS MATERIAL, BITUMINOUS SURFACING, CONCRETE ITEMS, ANY ABANDONED UTILITY ITEMS, AND OTHER UNSUITABLE MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF OFF THE CONSTRUCTION SITE.

6. REFERENCE C-501 STORM SEWER PLAN FOR STORM SEWER MAIN, LAYOUT, ELEVATIONS, CASTINGS, AND STRUCTURES.

7. REFERENCE C-401 UTILITY PLAN FOR SANITARY SEWER MAIN, WATER MAIN, SERVICE LAYOUT, ELEVATIONS, CASTINGS, AND STRUCTURES.

8. CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION OF PAVEMENTS AND CURB AND GUTTER WITH SMOOTH UNIFORM SLOPES TO PROVIDE POSITIVE DRAINAGE.

9. INSTALL A MINIMUM OF 6" CLASS 5 AGGREGATE BASE UNDER CURB AND GUTTER.

10. UPON COMPLETION OF EXCAVATION AND FILLING, CONTRACTOR SHALL RESTORE ALL STREETS AND DISTURBED AREAS ON SITE. ALL DISTURBED AREAS SHALL BE RE-VEGETATED WITH A MINIMUM OF 6" OF TOPSOIL.

11. MAINTAIN A MINIMUM OF 0.5% GUTTER SLOPE TOWARDS LOW POINTS.

12. GRADING FOR ALL SIDEWALKS AND ACCESSIBLE ROUTES INCLUDING CROSSING DRIVEWAYS SHALL CONFORM TO CURRENT ADA STATE/NATIONAL STANDARDS. SLOPES SHALL NOT EXCEED 1% LONGITUDINALLY OR EXCEED 2% CROSS SLOPE. SIDEWALK ACCESS TO EXTERNAL BUILDING DOORS SHALL BE ADA COMPLIANT. CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY IF ADA CRITERIA CANNOT BE MET IN ANY LOCATION.

13. MANTAIN A MINIMUM OF 0.5% GUTTER SLOPE TOWARDS LOW POINTS.
1. ALL FILL MATERIAL IS TO BE IN PLACE, AND COMPACTED BEFORE INSTALLATION OF PROPOSED UTILITIES.

2. SANITARY SEWER PIPE SHALL BE AS FOLLOWS:
   2.1. 8" PVC SDR35 PER ASTM D3034, PIPES LESS THAN 20' DEEP
   2.2. 8" PVC SDR26 PER ASTM D3034, PIPES GREATER THAN 20' DEEP

3. WATER LINES SHALL BE PVC AWWA C-900 PER ASTM D2241

4. ALL WATER JOINTS ARE TO BE MECHANICAL JOINTS WITH THRUST BLOCKING AS CALLED OUT IN DETAILS.

5. CONTRACTOR SHALL MAINTAIN A MINIMUM OF 7'-5" COVER ON ALL WATERLINES.

6. ALL UTILITIES SHOULD BE KEPT TEN FEET (10') APART (PARALLEL) OR WHEN CROSSING BY VERTICAL SEPARATION CLEARANCE (OUTSIDE EDGE OF PIPE TO OUTSIDE EDGE OF PIPE).

7. IN THE EVENT OF A VERTICAL CONFLICT BETWEEN WATER LINES, SANITARY LINES, STORM LINES AND GAS LINES (EXISTING AND PROPOSED), THE SANITARY LINE SHALL BE SCAFF 40 (OE C603) ASSIGNED OR AS STIPULATED BY CODE WITH MECHANICAL JOINTS AT LEAST 10 FEET ON BOTH SIDES OF CROSSING. THE WATER LINE SHALL HAVE MECHANICAL JOINTS WITH APPROPRIATE THRUST BLOCKING AS REQUIRED TO PROVIDE A MINIMUM OF 18" OF CLEARANCE.

8. ALL CONCRETE ENCASEMENTS SHALL HAVE A MINIMUM 28 DAY COMPRESSION STRENGTH AT 3000 P.S.I.

9. LINES UNDERGROUND SHALL BE INSTALLED, INSPECTED, AND APPROVED PRIOR TO ELEVATIONS, AND TO BE 0.25' ABOVE FINISHED GROUND ELEVATIONS, IN GREEN AREAS, WITH WATERTIGHT LIDS.

10. TOPS OF EXISTING MANHOLES SHALL BE SET BELOW PROPOSED PAYMENT 72 HOURS BEFORE ANY EXCAVATION TO REQUEST THE EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

11. CONTRACTOR IS RESPONSIBLE FOR ALL NECESSARY INSPECTIONS AND/or REQUIREMENTS AND SPECIFICATIONS.

12. CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

13. CONTRACTOR SHALL CONTACT GOPHER STATE ONE CALL AT 651-454-0002 AT LEAST 48 HOURS IN ADVANCE FOR THE LOCATIONS OF ALL UNDERGROUND WIRES, CABLES, CONDUITS, PIPES, MANHOLES, VALVES OR OTHER BURIED STRUCTURES BEFORE DIGGING. THE CONTRACTOR SHALL REPAIR OR REPLACE THE ABOVE WHEN DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.

14. ALL PIPE, JOINTS AND MANHOLES SUPPLIED ON SITE DEVELOPMENT MUST BE CLAD STEEL RATED TO 30 VOLTS, HMWPE MEETING ASTM D 1248, WITH DESIGNATION ON THE OUTSIDE OF THE WIRE CASING. TRACER WIRE SHALL BE INSTALLED ON ALL MAINLINE PIPES, LATERALS, AND SERVICES WITH VERTICAL RISER TO THE SURFACE.

15. CONTRACTOR SHALL CONTACT MINNEAPOLIS, MN 55413 THE MARINER 10400 BREN ROAD E, MINNETONKA, MN 55343 THE TOWNSHIP OF SHADY OAK

16. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES FOR INSTALLATION REQUIREMENTS AND SPECIFICATIONS.

17. BACKFLOW DEVICES (DDCV AND PRZ ASSEMBLIES) AND METERS ARE LOCATED IN THE INTERIOR OF THE BUILDING, REFERENCE AWWA C-901 PLUMBING CODE (MN RULES CHAPTER 4714) SPECIFIED IN PART 4714.1109.

18. CONTRACTOR SHALL BE RESPONSIBLE FOR CALLING FOR LOCATIONS OF ALL EXISTING UTILITIES. THEY SHALL COOPERATE WITH ALL UTILITY COMPANIES IN MAINTAINING THEIR SERVICE AND/OR RELOCATION OF LINES.

19. ENSURE TRACER WIRE IS INSTALLED IN ACCORDANCE WITH CITY / STATE STANDARDS.

20. TRACER WIRE IS INSTALLED AND CONNECTED TO EXISTING SANITARY ENTRY. REFERENCE MEP PLANS FOR CONTINUATION.

21. ALL UTILITY INSTALLATION SHALL BE CONDUCTED IN CONFORMANCE WITH MIN FLUORINUM CODE (MN RULES CHAPTER 4714).

22. ALL PIPE, JOINTS AND MANHOLES SUPPLIED ON SITE DEVELOPMENT MUST BE CONSTRUCTED WITH CODE APPROVED MATERIALS IN ACCORDANCE WITH MIN HISTORY CHART 4714.

23. ALL Storm sewer Joints must be certified by the manufacturer to be able to pass the air test or an internal hydrostatic pressure of ten pounds per square inch for ten minutes with no leakage. Resilient rubber joints may be used if approved by the agency having jurisdiction.

24. ALL STORM SEWER JOINTS MUST BE CERTIFIED BY THE MANUFACTURER TO BE ABLE TO PASS THE AIR TEST OR AN INTERNAL HYDROSTATIC PRESSURE OF TEN POUNDS PER SQUARE INCH FOR TEN MINUTES WITH NO LEAKAGE.

25. ALL PORTIONS OF THE STORM SEWER SYSTEM WHICH PASS WITHIN 10 FT OF A PRESSURE TESTED IN ACCORDANCE WITH PLUMBING CODE STANDARDS AS SPECIFIED IN PART 4714.1109.

26. THE WATERMAIN WILL BE INSTALLED IN STRICT ACCORDANCE WITH THE MOST CURRENT EDITION OF THE CEM SPECIFICATIONS. DISINFECTION OF THE WATER SYSTEM SHALL MEET THE REQUIREMENTS OF CEM AND MIN FLUORINUM CODE STANDARDS AS SPECIFIED IN PART 4714.1109.

27. A FLEXIBLE COMPRESSION JOINT MUST BE USED TO MAKE WATERTIGHT CONNECTIONS TO ALL MANHOLE RINGS. DISINFECTION OF THE WATER MAINLINE PIPES, LATERALS, AND SERVICES WITH VERTICAL RISER TO THE SURFACE. TRACER WIRE SHOULD BE CONNECTED TO THE RISER.

WARNING:
1. ALL FILL MATERIAL IS TO BE IN PLACE, AND COMPACTED BEFORE INSTALLATION OF PROPOSED UTILITIES.

2. STORM SEWER PIPE SHALL BE RCP.

3. ALL CATCH BASIN STRUCTURES SHALL BE CONSTRUCTED SO THAT THE CASTING IS INSTALLED INTEGRALLY WITH THE CONCRETE CURB AND GUTTER.

4. CONTRACTOR TO PROVIDE 3" INSULATION BY 4'x8' CENTERED ON STORM PIPE IF LESS THAN 4' OF COVER IN PAVEMENT AREAS AND LESS THAN 3' OF COVER IN LANDSCAPE AREAS.

5. ALL UTILITIES SHOULD BE KEPT TO TEN FEET (10') APART (PARALLEL) OR WHEN CROSSING 24" VERTICAL SEPARATION CLEARANCE (OUTSIDE EDGE OF PIPE TO OUTSIDE EDGE OF PIPE).

6. LINES UNDERGROUND SHALL BE INSTALLED, INSPECTED, AND APPROVED PRIOR TO BACKFILLING.

7. EXISTING UTILITIES SHALL BE VERIFIED IN FIELD PRIOR TO INSTALLATION OF ANY NEW LINES.

8. REFER TO INTERIOR PLUMBING DRAWINGS FOR TIE-IN OF ALL UTILITIES.

9. TOPS OF EXISTING MANHOLES SHALL BE RAISED AS NECESSARY TO BE FLUSH WITH PROPOSED PAVEMENT ELEVATIONS, AND TO BE FLUSH WITH FINISHED GROUND ELEVATIONS, IN GREEN AREAS, WITH WATERTIGHT LIDS.

10. CONTRACTOR IS RESPONSIBLE FOR COMPLYING TO THE SPECIFICATIONS OF THE LOCAL AUTHORITIES OF THE CITY OF MINNETONKA WITH REGARDS TO MATERIALS AND INSTALLATION OF ALL UTILITIES.

11. CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO Requests THE EXACT FIELD LOCATION OF UTILITIES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL EXISTING UTILITIES WHICH COMPARE WITH THE INFORMATION SHOWN ON THE PLAN.

12. CONTRACTOR IS RESPONSIBLE FOR ALL NECESSARY INSPECTIONS AND CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES.

13. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES FOR INSTALLATION REQUIREMENTS AND SPECIFICATIONS.

14. ALL STORM SEWER SHALL BE INSTALLED IN ACCORDANCE WITH MINNESOTA PLUMBING CODE.

15. ALL PORTIONS OF THE STORM SEWER LOCATED WITHIN 10 FEET OF THE BUILDING OR WATER SERVICE LINES MUST BE TESTED IN ACCORDANCE WITH MN RULES CHAPTER 4714, SECTION 719.6.

16. PIPE TO MANHOLE CONNECTIONS SHALL BE INSTALLED IN ACCORDANCE WITH MN RULES CHAPTER 4714, SECTION 7716.

17. CONCRETE PIPE TO MANHOLE CONNECTIONS SHALL BE INSTALLED WITH RESILIENT RUBBER CONNECTORS MEETING ASTM C-583.

18. CONCRETE PIPE SHALL CONFORM TO ASTM C-76.

19. NOTE: SEE C-301 GRADING AND DRAINAGE PLAN FOR DETAILED SURFACE ELEVATIONS.

20. NOTE: DRAINTILE TO BE INSTALLED UNDER ALL CURB LINES AND SIDEWALKS WHERE NOT SUPPLIED BY STRUCTURAL/ARCHITECTURAL PLANS. CONNECT TO NEAREST CATCH BASIN / STORM MANHOLE.

21. CONTRACTOR SHALL CONTACT GOPHER STATE ONE CALL AT LEAST 48 HOURS IN ADVANCE FOR THE LOCATIONS OF ALL UNDERGROUND WIRES, CABLES, CONDUITS, PIPES, MANHOLES, VALVES OR OTHER BURIED SERVICES AND A DETAILED SURFACE ELEVATION. CALL 651-454-0002.

22. WARNING: CONTRACTOR SHALL BE RESPONSIBLE FOR CALLING FOR LOCATIONS OF ALL EXISTING UTILITIES. THEY SHALL COOPERATE WITH ALL UTILITY COMPANIES IN MAINTAINING THEIR SERVICE AND/OR RELOCATION OF LINES.

23. CONTRACTOR SHALL CONTACT GOVERNMENAL STONE ONE CALL AT LEAST 48 HOURS IN ADVANCE FOR THE LOCATIONS OF ALL UNDERGROUND WIRES, CABLES, CONDUITS, PIPES, MANHOLES, VALVES OR OTHER BURIED SERVICES AND A DETAILED SURFACE ELEVATION. CALL 708-15TH AVENUE NE MINNEAPOLIS, MN 55413.
POURED CONC. HOT TUB WITH OVERHEAD ARBOR
SCALE: 1" = 4'-0" 1

CENTRAL ARBOR WITH GAS FIREPIT
SCALE: 1" = 4'-0" 2

42" HT ALUM FENCE AT CHILDREN'S PLAY AREA
SCALE: 1" = 4'-0" 3

POURED CONC. CURB AT PLAY EQUIP.
SCALE: 1" = 4'-0" 4

POURED CONC. HOT TUB WITH OVERHEAD ARBOR
SCALE: 1" = 4'-0" 1

CENTRAL ARBOR WITH GAS FIREPIT
SCALE: 1" = 4'-0" 2

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

BEN ERICKSON - LANDSCAPE ARCHITECT
REGISTRATION NO: 50130

DATE: 6-1-18

CITY SUBMISSION

POURED CONC. HOT TUB WITH OVERHEAD ARBOR
SCALE: 1" = 4'-0" 1

CENTRAL ARBOR WITH GAS FIREPIT
SCALE: 1" = 4'-0" 2

42" HT ALUM FENCE AT CHILDREN'S PLAY AREA
SCALE: 1" = 4'-0" 3

POURED CONC. CURB AT PLAY EQUIP.
SCALE: 1" = 4'-0" 4

1" CHAMFER 1
2" CAULK JNT
4" EXP. JNT
6" COMPACTED CLASS 5 BASE
4" POURED CONC. WALK
10" POURED CONC. CURB AT PLAY EQUIP.
42" HGT ALUM FENCE AT CHILDRENS PLAY AREA
CENTRAL ARBOR WITH GAS FIREPIT
POURED CONC. HOT TUB WITH OVERHEAD ARBOR

L400
1. GENERAL CONTRACTOR TO COORDINATE THIS PLAN WITH MECHANICAL, ELECTRICAL AND PLUMBING SUBCONTRACTORS AS TO NOTIFY ARCHITECT IMMEDIATELY OF ANY CONFLICTS BETWEEN ARCHITECTURAL DRAWINGS AND MEP SUBCONTRACTORS.

3. DIMENSIONS AT EXTERIOR WALLS ARE TO THE OUTSIDE FACE OF FRAMING UNLESS NOTED OTHERWISE. WHERE CLEAR DIMENSIONS ARE NOTED, THESE MUST BE MAINTAINED.

5. DIMENSIONS AT UNIT DEMISING WALLS ARE TO CENTERLINE OF UNIT Q.

8. VERIFY SLAB EDGE LOCATIONS, BRICK AND MASONRY FACE WITH MANUFACTURER.

10. ALL OPENINGS CUT, OPENINGS MADE OR EQUIPMENT INSTALLED IN THE GENERAL CONTRACTOR SHALL COORDINATE AND BE SATISFACTION OF THE ARCHITECT, ENGINEER AND BUILDING OFFICIAL.

12. THE BUILDING IS REQUIRED TO PASS AIR INFILTRATION TESTING PER THE MINNESOTA ENERGY CODE. ALL PENETRATIONS SHALL BE SEALED APPROPRIATELY TO MEET REQUIREMENTS. INSTALL ALL SEALED PENETRATIONS TO ACCOMMODATE WOOD SHRINKAGE.

13. TAPE AND SEAL JOINTS AT MOISTURE CONTROL MEMBRANES.

14. SEAL TOP SIDE OF PRECAST PLANK AND UNDERSIDE OF PRECAST PACKAGES.

15. INSTALL INSULATION IN ALL BEDROOM, BATHROOM AND LAUNDRY ROOM WALLS AND WALLS CONTAINING PLUMBING PIPES AS NOTED ON WALL TYPES (SHEET A001).

19. FINISH FLOOR ELEVATION CHANGE AT DOORS OR MATERIAL STOPS, CASEWORK AND ALL OTHER SPECIALTIES AND ACCESSORIES.

THE MARRINER
1401.01-1601.01
MINNEAPOLIS, MN 55343

PRELIMINARY
NOT FOR CONSTRUCTION

2000.01
1.01-1.03

PETER KEELY
ARCHITECT

CITY SUBMISSION

11/6/18 4:33:07 PM

www.collagearch.com

Pete Keely
Collage Architects
10500 Bren Rd E, Minnetonka, MN 55343
MECHANICAL, ELECTRICAL AND PLUMBING SUBCONTRACTORS AS TO LOCATIONS FOR EQUIPMENT, FIXTURES, METERS, DUCTWORK ETC.

NOTIFY ARCHITECT IMMEDIATELY OF ANY CONFLICTS BETWEEN LOCATIONS OF REQUIRED FIRE RATINGS. FIRE RATINGS NOTED ON WALL TYPES (SHEET A001) ARE MAXIMUM RATINGS AND MAY EXCEED THE RATINGS THAT ARE ACTUALLY REQUIRED FOR THIS PROJECT.

3. DIMENSIONS AT EXTERIOR WALLS ARE TO THE OUTSIDE FACE OF EXTERIOR SHEATHING OR OUTSIDE FACE OF MASONRY UNLESS NOTED OTHERWISE.

4. DIMENSIONS AT INTERIOR PARTITIONS AND CORRIDOR WALLS ARE TO CENTERLINE OF FRAMING UNLESS NOTED OTHERWISE. WHERE CLEAR DIMENSIONS ARE NOTED, THESE MUST BE MAINTAINED.

5. DIMENSIONS AT UNIT DEMISING WALLS ARE TO CENTERLINE OF WALL ASSEMBLY AIRSPACE UNLESS NOTED OTHERWISE.

7. IF ANY DIMENSION IS NOT CLEAR, NOT GIVEN, OR PRESENTS A CONFLICT, NOTIFY ARCHITECT IMMEDIATELY.

8. VERIFY...
1. GENERAL CONTRACTOR TO COORDINATE THIS PLAN WITH LOCATIONS FOR EQUIPMENT, FIXTURES, METERS, DUCTWORK ETC. NOTIFY ARCHITECT IMMEDIATELY OF ANY CONFLICTS BETWEEN ARCHITECTURAL DRAWINGS AND MEP SUBCONTRACTORS.

2. LOCATIONS OF REQUIRED FIRE RATINGS. FIRE RATINGS NOTED ON THE RATINGS THAT ARE ACTUALLY REQUIRED FOR THIS PROJECT.

3. www.collagearch.com

4. DIMENSIONS AT INTERIOR PARTITIONS AND CORRIDOR WALLS ARE TO CENTERLINE OF FRAMING UNLESS NOTED OTHERWISE. WHERE CLEAR

5. DIMENSIONS AT UNIT DEMISING WALLS ARE TO CENTERLINE OF WALL ASSEMBLY AIRSPACE UNLESS NOTED OTHERWISE.

6. DIMENSIONS FOR WINDOWS, DOORS, EQUIPMENT, AND FEATURES ARE TO CENTERLINES. VERIFY WINDOW ROUGH OPENINGS WITH MANUFACTURER.

7. IF ANY DIMENSION IS NOT CLEAR, NOT GIVEN, OR PRESENTS A CONFLICT, NOTIFY ARCHITECT IMMEDIATELY.

8. VERIFY ARCHITECTURAL AND STRUCTURAL DETAILS.

9. LOCATIONS AND SIZING.

10. ALL OPENINGS CUT, OPENINGS MADE OR EQUIPMENT INSTALLED IN FIRE RATED WALLS, PARTITIONS, FLOORS OR CEILINGS SHALL BE SATISFACTION OF THE ARCHITECT, ENGINEER AND BUILDING OFFICIAL. THE GENERAL CONTRACTOR SHALL COORDINATE AND BE RESPONSIBLE FOR THIS WORK.

11. REFER TO SHEET A001 FOR WALL TYPES AND ASSEMBLIES.

12. THE BUILDING IS REQUIRED TO PASS AIR INFILTRATION TESTING PER THE MINNESOTA ENERGY CODE. ALL PENETRATIONS SHALL BE MATCHLINE.

13. TAPE AND SEAL JOINTS AT MOISTURE CONTROL MEMBRANES.

14. INSTALL INSULATION IN ALL BEDROOM, BATHROOM AND LAUNDRY ROOM WALLS AND WALLS CONTAINING PLUMBING PIPES AS NOTED ON WALL TYPES (SHEET A001).

15. INSTALL PLANK AT ALL VERTICAL PENETRATIONS.

16. INSTALL ESCUTCHEONS.

17. WHERE ACCESS PANELS ARE REQUIRED FOR EQUIPMENT, UTILITIES OR DEVICES, THOSE PANELS SHALL BE INSTALLED WHETHER INSTALLED IN A FIRE RATED ASSEMBLY, ACCESS PANEL MUST BE FIRE RESISTANT (TYPE A). WITH ARCHITECT BEFORE INSTALLING.

18. PROVIDE BLOCKING IN WALLS FOR MOUNTING EQUIPMENT, RAILS, AND STORAGE

19. FINISH FLOOR ELEVATION CHANGE AT DOORS OR MATERIAL TRANSITIONS SHALL NOT EXCEED 1/2" UNLESS NOTED OTHERWISE.

20. EXTERIOR LANDINGS, STOOPS AND PORCHES SHALL BE LEVEL PER FOOT.

21. REFER TO SHEET A001 FOR WALL TYPES AND ASSEMBLIES.

22. REFER TO FINISH SCHEDULE FOR INTERIOR FINISH MATERIAL TYPES.

23. REFER TO DOOR SCHEDULE FOR INFORMATION ON DOORS AND ACCESS CONTROL SYSTEM.

24. REFER TO SHEET A001 FOR WALL TYPES AND ASSEMBLIES.

25. REFER TO SHEET A001 FOR WALL TYPES AND ASSEMBLIES.

26. REFER TO SHEET A001 FOR WALL TYPES AND ASSEMBLIES.
1. GENERAL CONTRACTOR TO COORDINATE THIS PLAN WITH MECHANICAL, ELECTRICAL AND PLUMBING SUBCONTRACTORS AS TO NOTIFY ARCHITECT IMMEDIATELY OF ANY CONFLICTS BETWEEN
2. REFER TO CODE ANALYSIS (SHEET T101) TO VERIFY TYPES AND LOCATIONS OF REQUIRED FIRE RATINGS. FIRE RATINGS NOTED ON WALL TYPES (SHEET A001) ARE MAXIMUM RATINGS AND MAY EXCEED
3. DIMENSIONS AT EXTERIOR WALLS ARE TO THE OUTSIDE FACE NOTED OTHERWISE.
4. DIMENSIONS AT INTERIOR PARTITIONS AND CORRIDOR WALLS ARE TO CENTERLINE OF FRAMING UNLESS NOTED OTHERWISE. WHERE CLEAR DIMENSIONS ARE NOTED, THESE MUST BE MAINTAINED.
5. DIMENSIONS AT UNIT DEMISING WALLS ARE TO CENTERLINE OF WALL ASSEMBLY AIRSPACE UNLESS NOTED OTHERWISE.
6. VERIFY SLAB EDGE LOCATIONS, BRICK AND MASONRY FACE WITH ARCHITECTURAL AND STRUCTURAL DETAILS.
7. PROVIDE BLOCKING IN WALLS FOR MOUNTING EQUIPMENT, RAILS, STOPS, CASEWORK AND ALL OTHER SPECIALTIES AND ACCESSORIES. REFER TO STANDARD MOUNTING HEIGHTS UNLESS OTHERWISE NOTED.
8. VERIFY CHANGES AT DOORS OR MATERIAL
9. ALL OPENINGS CUT, OPENINGS MADE OR EQUIPMENT INSTALLED IN FIRE RATED WALLS, PARTITIONS, FLOORS OR CEILINGS SHALL BE MAINTAIN THE INTEGRITY OF THE FIRE RATING TO THE FULL SATISFACTION OF THE ARCHITECT, ENGINEER AND BUILDING OFFICIAL.
10. PROVIDE AND INSULATE ALL EXPOSED PIPES, VENTS AND CONDUIT PENETRATING WALLS, FLOORS OR CEILINGS SHALL HAVE FINISHED TRIM RINGS (ESCUCHEONS).
11. PROVIDE INSULATION IN ALL BEDROOM, BATHROOM AND LAUNDRY ROOM WALLS AND WALLS CONTAINING PLUMBING PIPES AS NOTED ON WALL TYPES (SHEET A001).
12. PROVIDE BLOCKING IN WALLS FOR MOUNTING EQUIPMENT, RAILS, STOPS, CASEWORK AND ALL OTHER SPECIALTIES AND ACCESSORIES. REFER TO STANDARD MOUNTING HEIGHTS UNLESS OTHERWISE NOTED.
13. TAPE AND SEAL JOINTS AT MOISTURE CONTROL MEMBRANES.
14. SEAL TOP SIDE OF PRECAST PLANK AND UNDERSIDE OF PRECAST
15. INSTALL INSULATION IN ALL BEDROOM, BATHROOM AND LAUNDRY ROOM WALLS AND WALLS CONTAINING PLUMBING PIPES AS NOTED ON WALL TYPES (SHEET A001).
16. ALL EXPOSED PIPES, VENTS AND CONDUIT PENETRATING WALLS, FLOORS OR CEILINGS SHALL HAVE FINISHED TRIM RINGS (ESCUCHEONS).
17. PROVIDE INSULATION IN ALL BEDROOM, BATHROOM AND LAUNDRY ROOM WALLS AND WALLS CONTAINING PLUMBING PIPES AS NOTED ON WALL TYPES (SHEET A001).
18. PROVIDE BLOCKING IN WALLS FOR MOUNTING EQUIPMENT, RAILS, STOPS, CASEWORK AND ALL OTHER SPECIALTIES AND ACCESSORIES. REFER TO STANDARD MOUNTING HEIGHTS UNLESS OTHERWISE NOTED.
19. PROVIDE AND INSULATE ALL EXPOSED PIPES, VENTS AND CONDUIT PENETRATING WALLS, FLOORS OR CEILINGS SHALL HAVE FINISHED TRIM RINGS (ESCUCHEONS).
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1. GENERAL CONTRACTOR TO COORDINATE THIS PLAN WITH MECHANICAL, ELECTRICAL AND PLUMBING SUBCONTRACTORS AS TO LOCATIONS FOR EQUIPMENT, FIXTURES, METERS, DUCTWORK ETC.

2. NOTIFY ARCHITECT IMMEDIATELY OF ANY CONFLICTS BETWEEN ARCHITECTURAL DRAWINGS AND MEP SUBCONTRACTORS.

3. DIMENSIONS AT EXTERIOR WALLS ARE TO THE OUTSIDE FACE OF EXTERIOR SHEATHING OR OUTSIDE FACE OF MASONRY UNLESS NOTED OTHERWISE.

4. DIMENSIONS AT INTERIOR PARTITIONS AND CORRIDOR WALLS ARE TO CENTERLINE OF FRAMING UNLESS NOTED OTHERWISE. WHERE CLEAR DIMENSIONS ARE NOTED, THESE MUST BE MAINTAINED.

5. DIMENSIONS AT UNIT DEMISING WALLS ARE TO CENTERLINE OF WALL ASSEMBLY AIRSPACE UNLESS NOTED OTHERWISE.

6. VERIFY LOCATIONS AND SIZING.

7. IF ANY DIMENSION IS NOT CLEAR, NOT GIVEN, OR PRESENTS A PROBLEM, NOTIFY ARCHITECT.

8. VERIFY LOCATIONS AND SIZING.

9. VERIFY ALL OPENINGS CUT, OPENINGS MADE OR EQUIPMENT INSTALLED IN FIRE RATED WALLS, PARTITIONS, FLOORS OR CEILINGS SHALL BE RESTORED, SEALED FIRESTOPPED OR OTHERWISE CONSTRUCTED TO MAINTAIN THE INTEGRITY OF THE FIRE RATING TO THE FULL EXTENT.

10. ALL OPENINGS CUT, OPENINGS MADE OR EQUIPMENT INSTALLED IN FIRE RATED WALLS, PARTITIONS, FLOORS OR CEILINGS SHALL BE RESTORED, SEALED FIRESTOPPED OR OTHERWISE CONSTRUCTED TO MAINTAIN THE INTEGRITY OF THE FIRE RATING TO THE FULL EXTENT.

11. ALL SIDEWALL PENETRATIONS AND VENTING FOR LAUNDRY, BATH AND KITCHEN EXHAUST SHALL BE INSULATED TO PREVENT CONDENSATION. ALIGN ALL VENTS HORIZONTALLY AND VERTICALLY.

12. VERIFY LOCATIONS AND SIZING.

13. VERIFY LOCATIONS AND SIZING.

14. VERIFY LOCATIONS AND SIZING.

15. VERIFY LOCATIONS AND SIZING.

16. VERIFY LOCATIONS AND SIZING.

17. VERIFY LOCATIONS AND SIZING.

18. VERIFY LOCATIONS AND SIZING.

19. VERIFY LOCATIONS AND SIZING.

20. VERIFY LOCATIONS AND SIZING.

21. VERIFY LOCATIONS AND SIZING.

22. REFER TO SHEET A002 FOR BUILDING SYSTEMS AND ASSEMBLIES.

23. REFER TO SHEET A002 FOR BUILDING SYSTEMS AND ASSEMBLIES.

24. REFER TO SHEET A002 FOR BUILDING SYSTEMS AND ASSEMBLIES.

25. REFER TO SHEET A002 FOR BUILDING SYSTEMS AND ASSEMBLIES.

26. REFER TO DOOR SCHEDULE FOR INFORMATION ON DOORS AND OPENINGS. ALL DOORS ARE NUMBERED TO KEY WITH DOOR SCHEDULE. NOTIFY ARCHITECT OF ANY DISCREPANCIES.

27. REFER TO DOOR SCHEDULE FOR INFORMATION ON DOORS AND OPENINGS. ALL DOORS ARE NUMBERED TO KEY WITH DOOR SCHEDULE. NOTIFY ARCHITECT OF ANY DISCREPANCIES.

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30. REFER TO DOOR SCHEDULE FOR INFORMATION ON DOORS AND OPENINGS. ALL DOORS ARE NUMBERED TO KEY WITH DOOR SCHEDULE. NOTIFY ARCHITECT OF ANY DISCREPANCIES.
LOCATIONS FOR EQUIPMENT, FIXTURES, METERS, DUCTWORK ETC.

NOTIFY ARCHITECT IMMEDIATELY OF ANY CONFLICTS BETWEEN ARCHITECTURAL DRAWINGS AND MEP SUBCONTRACTORS.

LOCATIONS OF REQUIRED FIRE RATINGS. FIRE RATINGS NOTED ON X3A.

DIMENSIONS AT EXTERIOR WALLS ARE TO THE OUTSIDE FACE OF EXTERIOR SHEATHING OR OUTSIDE FACE OF MASONRY UNLESS NOTED OTHERWISE.

DIMENSIONS AT INTERIOR PARTITIONS AND CORRIDOR WALLS ARE TO DIMENSIONS NOTED; THESE MUST BE MAINTAINED.

6. DIMENSIONS FOR WINDOWS, DOORS, EQUIPMENT, AND FEATURES ARE TO CENTERLINES. VERIFY WINDOW ROUGH OPENINGS WITH LOCATIONS AND SIZING.

7. IF ANY DIMENSION IS NOT CLEAR, NOT GIVEN, OR PRESENTS A PROBLEM, NOTIFY ARCHITECT IMMEDIATELY.

8. VERIFY SLAB EDGE LOCATIONS, BRICK AND MASONRY FACE WITH STORAGE.

10. ALL OPENINGS CUT, OPENINGS MADE OR EQUIPMENT INSTALLED IN STORAGE, SHALL BE INSULATED TO PREVENT CONDENSATION. ALIGN ALL VENTS HORIZONTALLY AND VERTICALLY.

12. THE BUILDING IS REQUIRED TO PASS AIR INFILTRATION TESTING PER THE MINNESOTA ENERGY CODE. ALL PENETRATIONS SHALL BE SEALED PENETRATIONS TO ACCOMMODATE WOOD SHRINKAGE.

14. SEAL TOP SIDE OF PRECAST PLANK AND UNDERSIDE OF PRECAST PLANK AT ALL VERTICAL PENETRATIONS.

17. WHERE ACCESS PANELS ARE REQUIRED FOR EQUIPMENT, UTILITIES OR DEVICES, THOSE PANELS SHALL BE INSTALLED WHETHER INSTALLED IN A FIRE RATED ASSEMBLY, ACCESS PANEL MUST BE FIRE STOPS, CASEWORK AND ALL OTHER SPECIALTIES AND ACCESSORIES.

18. EXTERIOR LANDINGS, STOOPS AND PORCHES SHALL BE LEVEL ACROSS DOORWAYS AND SHALL SLOPE AWAY FROM BUILDING 1/4" UNLESS NOTED OTHERWISE.

20. EXTERIOR LANDINGS, STOOPS AND PORCHES SHALL BE LEVEL ACROSS DOORWAYS AND SHALL SLOPE AWAY FROM BUILDING 1/4" UNLESS NOTED OTHERWISE.
1ST LVL T.O. PC 100' - 0"
2ND LVL T.O. PC 111' - 8"
GARAGE LEVEL 89' - 4"
3RD LVL T.O. SF 122' - 1 7/8"
4TH LVL T.O. SF 132' - 7 3/4"
5TH LVL T.O. SF 143' - 1 5/8"
6TH LVL T.O. SF 153' - 7 1/2"

ROOF PLAN 164' - 0 5/8"

TRUSS BRG 162' - 8 3/4"
TRUSS BRG AH 152' - 3 1/2"

A311 10' - 5 1/8"
10' - 5 7/8"
10' - 5 7/8"
10' - 5 7/8"
10' - 5 7/8"
11' - 8"
10' - 8"

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A301
Ordinance No. 2018-

An ordinance rezoning the properties at 10400, 10500, and 10550 Bren Road East
From I-1, industrial, to PUD, planned unit development

The City Of Minnetonka Ordains:

Section 1.

1.01 The subject properties at 10400, 10500, and 10550 Bren Road East are hereby rezoned from B-2, commercial, to PUD, planned unit development.

1.02 The properties are legally described as:

Lots 1 and 2, Block 1, Opus 2 Eighth Addition.

Section 2.

2.01 This ordinance is based on the following findings:

1. The rezoning to PUD would result in the provision of workforce rental housing, which is a living option desirable to the city.

2. The rezoning would be consistent with the intent of the zoning ordinance and of the comprehensive guide plan.

3. The rezoning would be consistent with the public health, safety, and welfare.

2.02 This ordinance is subject to the following conditions:

1. The site must be developed and maintained in substantial conformance with the following plans:

   - Site Plan, dated June 1, 2018
   - Future Site Plan, dated June 1, 2018
   - Grading and Drainage Plan, dated June 1, 2018
   - Utility Plan, dated June 1, 2018
   - Stormsewer Plan, dated June 1, 2018
2. The development must further comply with all conditions outlined in City Council Resolution No. 2018-xx, adopted by the Minnetonka City Council on ________________, 2018.

Section 3. This ordinance is effective immediately.

Adopted by the city council of the City of Minnetonka, Minnesota, on ________________, 2018.

Brad Wiersum, Mayor

Attest:

David E. Maeda, City Clerk

Action on this ordinance:

Date of introduction: July 23, 2018
Date of adoption: 
Motion for adoption: 
Seconded by: 
Voted in favor of: 
Voted against: 
Abstained: 
Absent: 
Ordinance adopted.

Date of publication:

I certify that the foregoing is a true and correct copy of an ordinance adopted by the city council of the City of Minnetonka, Minnesota at a regular meeting held on ________________, 2018.

David E. Maeda, City Clerk
City Council Agenda Item #13A  
Meeting of July 23, 2018

**Brief Description**  
Items concerning a multi-family residential development by Dominium, at 11001 Bren Road East.

1) Ordinance rezoning the property from I-1, industrial, to PUD, planned unit development;

2) Resolution approving a master development plan and final site and building plans;

3) Resolution approving preliminary and final plats;

4) Resolution approving vacation of easements; and

5) Negative declaration on the need for an Environmental Impact Statement

**Recommendation**  
Staff recommends the city council hold the public hearing and:

1) Adopt the ordinance and resolutions approving the rezoning, master development plan, final site and building plans, preliminary and final plats, and vacation of easements;

2) Approve the resolution for a negative declaration on the need for an Environmental Impact Statement

**Background**

In 2017, Dominium presented a concept plan for redevelopment of the 9.4-acre property at 11001 Bren Road. The plan contemplated removal of an existing office building and construction of three buildings containing a total of 454 apartment units. Two of the buildings would be dedicated to workforce housing, while the third building would be affordable, independent senior housing. The city council generally indicated support for the concept, but suggested to city staff that pedestrian connections and broader park planning in OPUS be considered.

**Proposal**

Dominium has submitted formal applications for the redevelopment of the site. As proposed, the existing building and parking lot would be removed and three new apartment buildings would be constructed for a total of 482 units. The westerly building (Building A) is a proposed four-story, 83-unit, workforce housing building. The southerly building (Building B) would contain 137 workforce units. This building would have the above-grade appearance of two, five-story buildings. However, the building would share one foundation and underground garage. The northerly building (Building C) would be six-stories in height and contain 262 affordable, independent senior units. Unit mix within the buildings is generally proposed as follows:
All three buildings would include rooftop solar energy systems, capable of producing more than 562,000 kilowatts of energy per year. Dominium indicates that the solar energy system would cover roughly 20 percent of the residential development’s total electricity cost and would result in an annual power savings of over $50,000.

Planning Commission Review and Recommendation

The planning commission considered the redevelopment proposal on May 24, 2018. The commission report, associated plans, and meeting minutes are attached. Staff recommended approval of the proposal, finding:

1. The proposed residential use is consistent with both the past plans for OPUS and the future goals for the area.

2. The use of PUD zoning is appropriate, as it would promote a public benefit recognized by the ordinance. Specifically, the Dominium proposal would result in the provision of 220 workforce housing units and 262 affordable, independent senior units.

3. The proposed buildings have been attractively designed. The building articulation and variety of materials – including glass, smooth fiber cement panels, fiber cement siding, woodgrain aluminum panels, and masonry – would provide visual interest from both onsite and offsite views.

4. The level of site impact would be reasonable for full redevelopment of a site.

At the commission meeting, a public hearing was opened to take comment. No one appeared to speak. Following the public hearing, the commission discussed and expressed general support for the proposal. On a 6-0 vote, the commission recommended that the city council approve the redevelopment.

City Council Review

In addition to those land use items previously considered by the planning commission, the city council must consider two additional land use related items.

- **Preliminary and Final Plats.** Dominium proposes to divide the larger development site into two lots. The workforce housing buildings would be located on one lot and the senior building on the other. Staff finds the plats to be reasonable, as the subdivision is required simply for financing purposes; a plat is not required by city code.
Generally, the city requires payment of park dedication fees prior to release of a final plat for recording. In the case of Dominium, park dedication fees would be collected prior to issuance of the required grading permit. At $5,000 per dwelling unit, park dedication for the project equates to $2,410,000. As a condition of approval, the city may choose to credit verified costs for construction of a pedestrian underpass beneath Bren Road East and other pedestrian improvements. The details for cost verification and crediting will be outlined in the contracts for private development.

- **Vacation of Easement.** Dominium requests that a utility easement and small portion of roadway easement be vacated. Staff finds both vacations to be reasonable. As part of the platting of the site a new utility easement would be dedicated over a relocated sanitary main and the pre-existing easement would become obsolete. The roadway easement to be vacated is a roughly 1,400 sq.ft. remnant area not required for roadway purposes at this time.

**Environmental Assessment Worksheet and Comment Period**

An Environmental Assessment Worksheet (EAW) is a document prepared by a Responsible Government Unit (RGU), in this case the city, to generally evaluate the potential environmental impact of a proposed development. An EAW includes a series of 20 questions related to land use, geology, water resources, wildlife, emissions, and traffic among other things. If the answers to these questions suggest that a project will result in a significant environmental impact, the RGU may declare that an Environmental Impact Statement (EIS) is required. An EIS is a more in-depth environmental review.

While the preparation of some EAWs is discretionary, state law mandates an EAW for residential development containing over 375 attached living units. As the Dominium project would contain 482 units, a mandatory EAW was completed. The EAW, which is attached for reference, concluded that the proposal would not result in a significant environmental impact. The EAW was distributed for review by various state and local agencies and organizations. The comments received were generally consistent with those of city staff – as outlined in the planning commission staff report – and would be addressed by the conditions of approval contained in the staff-drafted resolutions. Two questions were received related to whether a more in-depth traffic impact study should be undertaken to understand the redevelopment’s potential impact on regional systems - Highways 169 and 62. Staff does not believe that further analysis is necessary, given that: (1) traffic in OPUS has been studied in depth over the last decade; (2) that the proposed redevelopment would be consistent with the city’s Opus Overlay District ordinance – which regulates development based on p.m. peak hour trips; and (3) the traffic generated by the development would generally be “reverse traffic” for the area, with the proposed development’s residents leaving OPUS in the a.m. and returning in the p.m. Though the traffic generated by the proposed residential development would be greater than that of the preexisting office development at the site, staff is confident that the traffic generated would not have significant negative impact on state roadways. A response letter was sent to those parties describing those reasons why the city does not anticipate any regional freeway system impact as a result of the proposed development.

**Summary Comments**

The proposed residential development would result in a considerable change to the aesthetic and activity on the west side of OPUS. From staff’s perspective this change is reasonable,
appropriate, and welcome. It would be consistent with both the past plans for OPUS and the future goals for the area.

**Staff Recommendation**

Staff recommends that the city council adopt the following related to the Bren Road Development, a multi-family residential development by Dominium, at 11001 Bren Road East:

1) Ordinance rezoning the property from I-1, industrial, to PUD, planned unit development, and adopting a master development plan;

2) Resolution approving final site and building plans;

3) Resolution approving preliminary and final plats;

4) Resolution approving vacation of easements;

5) Resolution making a negative declaration on the need for an Environmental Impact Statement.

Submitted through:
- Geralyn Barone, City Manager
- Julie Wischnack, AICP, Community Development Director
- Loren Gordon, AICP, City Planner

Originated by:
- Susan Thomas, AICP, Assistant City Planner
MINNETONKA PLANNING COMMISSION  
May 24, 2018

<table>
<thead>
<tr>
<th>Brief Description</th>
<th>Items concerning Bren Road Development, a multi-family residential development by Dominium, at 11001 Bren Road East.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1)</td>
<td>Ordinance rezoning the property from I-1, industrial, to PUD, planned unit development;</td>
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<tr>
<td>2)</td>
<td>Master development plan;</td>
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<tr>
<td>3)</td>
<td>Site and building plan review;</td>
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<tr>
<td>4)</td>
<td>Environmental Impact Statement declaration; and</td>
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<tr>
<th>Recommended Commission Recommendation</th>
<th>Recommend the city council:</th>
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<tbody>
<tr>
<td>1)</td>
<td>Adopt the ordinance and resolutions approving rezoning, master development plan and final site and building plans;</td>
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<tr>
<td>2)</td>
<td>Approve by motion a negative declaration on the need for an Environmental Impact Statement.</td>
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<tr>
<th>Recommended Planning Commission Action</th>
<th>Adopt a resolution declaring that proposal is consistent with the comprehensive plan</th>
</tr>
</thead>
</table>

Background

In 2017, Dominium presented a concept plan for redevelopment of the 9.4-acre property at 11001 Bren Road. The plan contemplated removal of an existing office building and construction of three buildings containing a total of 454 apartment units. Two of the buildings would be dedicated to workforce housing, while the third building would be affordable, independent senior housing. The city council generally indicated support for the concept, but suggested to city staff that pedestrian connections and broader park planning in OPUS be considered.

Formal Application

Dominium has now submitted formal applications for the redevelopment of the site. The proposal, it includes a total of 482 rental units constructed in three, new buildings. The city council introduced the proposal on April 30, 2018. The council generally reiterated its concept plan comments.
Proposal Summary

The following is intended to summarize the Dominium proposal. Additional information associated with the proposal can be found in the “Supporting Information” section of this report.

- **Existing Site Conditions.**

  The roughly 9.4-acres subject property is located near the west entrance to OPUS and directly west of the future Southwest Light Rail Transit (SWLRT) station. A roughly 133,000 square foot office building is centrally located on the property. The building is surrounded by parking on its south, east and west sides. Though the industrially-zoned property is considered fully developed, it does contain several noticeable natural features, including: (1) a roughly 50-foot change in elevation from the highest point on the west side of the site to the lowest point on the east side; (2) a Type-1 wetland located adjacent to Bren Road; and (3) 97 high-priority trees.

- **Proposed Buildings.**

  As proposed, the existing building and parking lot would be removed and three new apartment buildings would be constructed. The westerly building (Building A) is a proposed four-story, 83-unit, workforce housing building. The southerly building (Building B) would contain 137 workforce units. This building would have the above-grade appearance of two, five-story buildings. However, the building would share one foundation and underground garage. The northerly building (Building C) would be six-stories in height and contain 262 affordable, independent senior units. Unit mix within the building is generally proposed as follows:

<table>
<thead>
<tr>
<th></th>
<th>Building A</th>
<th>Building B</th>
<th>Building C</th>
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<tbody>
<tr>
<td></td>
<td>General Occupancy</td>
<td>General Occupancy</td>
<td>Senior Occupancy</td>
</tr>
<tr>
<td>1 Bedroom</td>
<td>14</td>
<td>41</td>
<td>59</td>
</tr>
<tr>
<td>2 Bedroom</td>
<td>45</td>
<td>75</td>
<td>149</td>
</tr>
<tr>
<td>3 Bedroom</td>
<td>24</td>
<td>21</td>
<td>54</td>
</tr>
<tr>
<td>TOTAL UNITS</td>
<td>83</td>
<td>137</td>
<td>262</td>
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  All three buildings would include rooftop solar energy systems, capable of producing more than 562,000 kilowatts of energy per year. Dominium indicates that the solar energy system would cover roughly 20 percent of the residential development’s total electricity cost and would result in an annual power saving of over $50,000.

- **Proposed Parking and Site Improvements.**

  The proposed buildings would be served by 552 parking stalls. The majority of parking would be located within underground garage space, with surface parking generally situated between the buildings. Vehicle access to the proposed development would be via two driveways to Bren Road East. One drive would generally be located on the north side of the site and the other located on the east, across from the LRT station. Other site
improvements are also proposed, including: an internal trail system, links to the existing OPUS trail system, outdoor patio areas, an outdoor pool, a bike café, and public art.

**Primary Questions and Analysis**

A land use proposal is comprised of many details. In evaluating a proposal, staff first reviews these details and then aggregates them into a few primary questions or issues. The following outlines both the primary questions and staff findings associated with the proposal.

- **Is the proposed residential land use appropriate?**
  
  Yes. The proposed residential use is consistent with both the past plans for OPUS and the future goals for the area. During its 1970s development, OPUS was envisioned to contain residential areas “convenient to the office, commercial and industrial portions … as well as to the surrounding services, communities, mass transportation systems, parks and recreational areas.”¹ Looking to the future, the 2030 Comprehensives Guide Plan generally emphasizes accommodating a variety of housing types within the community that will appeal to a variety of residents at a variety of ages and a variety of income levels. The plan specifically notes that redevelopment within the OPUS area should include the provision of additional residential uses.

- **Is the use of PUD zoning appropriate?**
  
  Yes. The city of Minnetonka uses PUD zoning to provide flexibility from certain ordinance regulations in order to achieve public benefits that may not otherwise be achieved. One of the specific public benefits recognized by the ordinance is the provision of affordable housing. The Dominium proposal would result in the provision of 220 workforce housing units and 262 affordable, independent senior units.

- **Is the proposed building design reasonable?**
  
  Yes. Representatives of Dominium and city staffs spent considerable time discussing the design and façade treatments proposed for each of the three buildings. In staff’s opinion the resulting plans are not only reasonable, but very attractive. The proposed building articulation and variety of materials – including glass, smooth fiber cement panels, fiber cement siding, woodgrain aluminum panels, and masonry – would provide visual interest from both onsite and offsite views.

- **Are the proposed site impacts reasonable?**
  
  Yes. Grading and tree impacts would occur to accommodate the proposed buildings, parking lots, and development amenities. Generally, the west half of the site would be lowered by roughly 15 feet, while the east side would be raised from 2 to 22 feet. The grading would likely result in the removal or impact to 76 high-priority trees. Staff finds this level of impact to be reasonable for full redevelopment of a site.

  The construction of SWLRT will require some associated changes to Bren Road East. If approved, construction on the Dominium project would occur well in advance of SWLRT/Bren Road East work. To address this, Dominium has provided a “phased” site plan for the east side of the property. The Phase I plan includes temporary curbing and

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bituminous paving at the site entrance. Phase 2 would be completed in conjunction with SWLRT completion – or by a certain negotiated date in the event SWLRT is further delayed or not completed. Phase 2 includes installation of concrete curbing and driveway entrance, landscaping, and public art.

- **Are pedestrian connections to SWLRT adequately addressed?**

  Generally, yes. With the assumed construction of SWLRT, the applicant and city staff have explored – at length – opportunities to connect the proposed residential development to the OPUS Station. To supplement the applicant/staff discussion, the city also commissioned WSB & Associates to review various connections.

  ✓ **Option #1. Grade Separated Crossing, East Side.** A grade separated crossing would be desirable from the east side of the subject property to the station area. Depending on its design, an overpass crossing would be cumbersome and costly. Moreover, anecdotally, pedestrians are less likely to go “up” to cross a roadway than they are to go “down.” Unfortunately, an underpass crossing is not viable for two reasons: (1) the existing high water table; and (2) challenges related to surface water drainage around the LRT station. Staff does not believe a grade separated crossing on the east would be appropriate at this time.

  ✓ **Option #2. Grade Separated Crossing, North Side.** While an underpass on the east side of the site has significant challenges, an underpass on the north side may be a feasible option. With a roughly 285-foot connection to the existing trail system, pedestrians could use existing trail system and underpasses to reach the LRT station. While certainly providing a viable route, many pedestrians may seek a more direct connection to the station. This connection is also discussed in the “Supporting Information” section of this report.

  ✓ **Options #3. Improved At Grade Crossing.** There is an existing, at grade crossing just south of the subject property. Improvements at this crossing could enhance the safety of what would be a nearly direct connection to LRT. Improvements could include a rectangular rapid flashing beacon (RRFB) or a high-intensity activated crosswalk beacon (HAWK). Both systems utilize pedestrian-activated lights. While an RRFB requires traffic to yield to pedestrians, a HAWK requires traffic to stop.

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It is staff’s opinion that, at this time, an improved at-grade crossing with the installation of strategically installed fencing on the east side of Bren Road East is the most appropriate option. WSB will be providing a recommendation as to which option – RRFB or HAWK – should be installed.

- **Should an Environmental Impact Statement (EIS) be required?**

No. An Environmental Assessment Worksheet (EAW) is a document prepared by a Responsible Government Unit (RGU) to generally evaluate the potential environmental impact of a proposed development. An EAW includes a series of 20 questions related to land use, geology, water resources, wildlife, emissions, and traffic among other things. If the answers to these questions suggest that a project will result in a significant environmental impact, the RGU may declare that an Environmental Impact Statement (EIS) is required. An EIS is a more in-depth environmental review.

While the preparation of some EAWs is discretionary, state law mandates an EAW for residential development containing over 375 attached living units. As the Dominium project would contain 482 units, a mandatory EAW was completed. The EAW, which is attached for reference, concluded that the proposal would not result in a significant environmental impact. By law, the city must make an official “declaration” on the need for an EIS. Staff recommends that the city make a negative declaration for the Dominium project.

**Summary Comments**

The proposed residential development would result in a considerable change to the aesthetic and activity on the west side of OPUS. From staff’s perspective this change is reasonable, appropriate, and welcome. It would be consistent with both the past plans for OPUS and the future goals for the area.

**Staff Recommendation**

Staff recommends that the commission recommend the city council adopt the following related to the Bren Road Development, a multi-family residential development by Dominium, at 11001 Bren Road East:

1) Ordinance rezoning the property from I-1, industrial, to PUD, planned unit development, and adopting a master development plan; and

2) Resolution approving final site and building plans.

3) A motion making a negative declaration on the need for an Environmental Impact Statement.

Staff further recommends the planning commission adopt the resolution declaring that proposal consistent with the comprehensive plan.

**Originator:** Susan Thomas, AICP, Assistant City Planner  
**Through:** Loren Gordon, AICP, City Planner
Supporting Information

**Surrounding Land Uses**
- North: charter school property, zoned industrial
- South: office/industrial property, zoned industrial
- East: retail/warehouse property, zoned commercial
- West: cemetery and medium-density residential development

**Planning**
- Guide Plan designation: mixed-use
- Existing Zoning: I-1, Industrial

**Required Actions**
The proposal requires the following:

**Land Use**

- **Rezoning.** To facilitate the proposed development, Dominium is requesting that the property be rezoned to PUD. The planning commission makes a recommendation to the city council, which has final authority to approve or deny the rezoning.

- **Master Development Plan.** Under the zoning ordinance, a master development plan is required in conjunction with PUD zoning. The planning commission makes a recommendation to the city council, which has final authority to approve or deny the master development plan.

- **Final Site and Building Plans.** By city code, site and building plan review is required in conjunction with PUD zoning. The planning commission makes a recommendation to the city council, which has final authority to approve or deny the final site and building plans.

- **Preliminary and Final Plats.** The city would not require individual buildings to be located on individual lots. In fact, within a PUD, multiple buildings are allowed on one lot. Nevertheless, Dominium has indicated that, for financing purposes, Buildings A and B should be located on one lot and Building C located on a separate lot. Plat applications, which staff would consider straight-forward items, will be considered by the planning commission and city council at a future date.

- **Easement Vacation.** The site includes several existing easements, some of which will become obsolete should the Dominium proposal be approved. Vacation applications, will be considered by the council in conjunction with the preliminary and final plats.

- **Environmental Impact Statement Declaration.** Based on the number of living units proposed, an Environmental Assessment Worksheet (EAW) is required under state statute. An EAW
includes a series of 20 questions, the answers to which suggest whether a proposal will have significant environmental impact. If the Responsible Government Unit (RGU), in this case the city, determines that a project will result in significant impact, the RGU may declare that an Environmental Impact Statement (EIS) is required. An EIS is a more in-depth environmental review. The planning commission makes a recommendation to the city council, which has final authority to make a positive or negative declaration on the need to conduct an EIS.

**Finance**

- **Tax Increment Financing.** To assist with the production of affordable housing, Dominium is requesting that the city provide Tax Increment Financing (TIF) assistance in the amount of $7,809,000 with a maximum term of 26 years. The Economic Development Advisory Commission (EDAC) and city council previously reviewed this request for assistance and found the request reasonable. While the actual use of TIF is not the purview of the planning commission, the planning commission is required to determine that the redevelopment of the property is consistent with the city’s comprehensive plan.

- **Contract for Private Development.** The EDAC reviewed a draft Contract for Private Development at its April 19 meeting. The contract outlines the key points of the TIF request as well as expectations for the development. The council will review the final contract at its June 4 meeting. This contract is not the purview of the planning commission.

**Grading**

The highest point of the subject property is situated in the northwest corner of the site. The property slopes significantly downward from this point to a wetland located in northeast corner of the site. The change in grade is roughly 50 feet. Much of the area west of the existing lot is “steep” as defined by the ordinance; it has grades of 23 to 24 percent.

Significant earthwork would be necessary to accommodate the proposed buildings, parking lots, and other site improvements. A two tier retaining wall, ranging in aggregate height from roughly 10 feet to 20 feet, would be constructed parallel to the west property line. Generally, excavation would occur on the western third of the site, while fill would be placed on the eastern two-thirds. At various areas, up to 15 feet of earth would be removed and up to 22 feet of earth would be placed.

**Tree Impact**

The property contains a total of 202 regulated trees. While the trees in and around the site’s wetland were naturally seeded, the majority of the trees on the site appear to have been planted as part of the original landscape plan for the existing building/site. These trees are, nevertheless, regulated by the tree ordinance. As proposed:
### Meeting of May 24, 2018

**Subject: Dominium, 11001 Bren Road East**

<table>
<thead>
<tr>
<th></th>
<th>Existing</th>
<th>Removed</th>
<th>% Removed</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Priority</td>
<td>97</td>
<td>76</td>
<td>78%</td>
</tr>
<tr>
<td>Significant</td>
<td>105</td>
<td>81</td>
<td>77%</td>
</tr>
</tbody>
</table>

*By city code, a tree is considered removed if 30 percent or more of the critical root zone of is compacted, cut, filled or paved.

As the proposal is for redevelopment of property, the level of tree removal/impact would be permitted under the tree protection ordinance.

### Stormwater

As proposed, stormwater runoff would be directed to several catch basins and directed via pipe to one of three stormwater facilities located under the proposed parking lot. One of the facilities would be a water reuse tank; water from this tank would be used for on-site irrigation. Two underground facilities would be more “typical” underground infiltration systems. The facilities would ultimately outlet to the public storm sewer system.

Engineering staff has reviewed the plans associated with the proposal and finds them to be generally acceptable. As a condition of approval, final plans must meet both the city's Water Resources Management Plan standards and Nine Mile Creek Watershed District rules.

### Utilities

Public water and sewer facilities are available at the site. Existing water mains are located east of the site in Bren Road East and running parallel to the south property line. An existing sanitary sewer main runs north-south through the subject property itself; there is also a sewer main within Bren Road East.

A new private watermain would be constructed from the public main at the south property line to the north. Building A and C would be connected to this new main, while Building B would take service from the existing main along the south property line.

As proposed, the sewer main on the site and its associated public easement must be relocated. The new buildings would be connected to this new line. While the proposed plans show the relocation of the main, staff are concerned with several private improvements the plans show within close proximity to the main and within the necessary easement. These improvements include patio and pool improvements. As a condition of approval, these items must be relocated outside of the easement.

### Parking

Dominium representatives and city staff spent considerable time discussing the provision of parking. From Dominium’s perspective, adequate parking must be provided to meet investor goals and resident demand. From city staff’s perspective, parking should certainly be provided to meet parking demand. However, assumed demand should take into consideration the availability of light rail.
transit and evolving transportation choices and options (Lyft, Uber, and the possibility of self-driving cars, etc.)

Ultimately, a plan generally satisfying both Dominium and staff goals was submitted. As proposed, parking would be constructed/supplied as follows:

<table>
<thead>
<tr>
<th>Building A</th>
<th>Building B</th>
<th>Building C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underground</td>
<td>54</td>
<td>95</td>
</tr>
<tr>
<td>Surface</td>
<td>178</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>552</td>
</tr>
</tbody>
</table>

The parking ratio proposed would be slightly less than at other apartment buildings in the community. However, it would be consistent with Institute of Transportation Engineers suggested parking demand.

<table>
<thead>
<tr>
<th></th>
<th>Stalls per Bedroom</th>
<th>Stalls per Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional City Code Standard</td>
<td>n/a</td>
<td>2</td>
</tr>
<tr>
<td>PROPOSED</td>
<td>General Occ.</td>
<td>0.64</td>
</tr>
<tr>
<td></td>
<td>Senior Occ.</td>
<td>0.54</td>
</tr>
<tr>
<td>ITE</td>
<td>General Occ.</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td>Senior Occ.</td>
<td>n/a</td>
</tr>
<tr>
<td>Tonka on the Creek</td>
<td>1.15</td>
<td>1.49</td>
</tr>
<tr>
<td>Carlson Island</td>
<td>1.03</td>
<td>1.55</td>
</tr>
<tr>
<td>The Ridge</td>
<td>.93</td>
<td>2</td>
</tr>
<tr>
<td>Highland Bank</td>
<td>1.2</td>
<td>1.78</td>
</tr>
</tbody>
</table>

** Institute of Transportation Engineers, Low/Mid-Rise Apts, within 1/3 mile of LRT station and more than 10 miles from Central Business District

Traffic

OPUS is sometimes maligned for its one-way road system, which casual visitors to the area can find confusing. However, from a traffic movement perspective, the roadway design is excellent.

As part of the EAW, daily traffic counts were taken on Bren Road East. The counts showed 2,497 vehicle trips per day on that stretch of roadway adjacent to the subject property. As designed, Bren Road East “can carry more than 10,000 vehicles a day at a very high level
of service.” The EAW notes that though the proposal would “substantially increase traffic on Bren Road East, the traffic volume would be well below capacity of this roadway.”

Pedestrian Improvements

In addition to exploring pedestrian connections to SWLRT, a city staff group – comprised of planning, engineering, legal, public works, and recreation staff – has spent time evaluating opportunities to enhance pedestrian connections in and around the area of the subject property in an effort to enhance the regional network with a connection to Shady Oak Road. Three primary routes have been identified. Aside from specific engineering factors – grade, drainage, etc. – each of these connections has positive and negative aspects and each has unknowns that would need be explored in further detail.

In staff’s opinion it would be appropriate to construct ROUTE 1A in conjunction with the Bren Road Development project. Together with public trails existing and proposed on the perimeter of the subject property, this route would provide a grade separated north/south link for pedestrians on the west side of Bren Road East. As a condition of approval, the final plat submitted by the applicant must be drafted to accommodate the underpass and short link portion of ROUTE 1A and an estimate of associated cost submitted to the city. These costs may be deducted from the required park dedication fee. The construction and cost responsibilities would be outlined through a Developer Agreement (a contract-type document signed by Dominium and the city), which is also included as a condition of approval.

Staff will continue to look at the viability of other connections to Shady Oak Road independent of this development proposal.

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4 Dominium EAW, 19.
The PUD ordinance contains no specific development standards relating to setbacks, lot coverage, etc. However, the following chart outlines these items for informational purposes:

<table>
<thead>
<tr>
<th>Setbacks*</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>North property line</td>
<td>35 ft</td>
</tr>
<tr>
<td>South property line</td>
<td>35 ft</td>
</tr>
<tr>
<td>East property line</td>
<td>40 ft</td>
</tr>
<tr>
<td>West property line</td>
<td>35 ft</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Height</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building A</td>
<td>43 ft</td>
</tr>
<tr>
<td>Building B</td>
<td>63 ft</td>
</tr>
<tr>
<td>Building C</td>
<td>81 ft</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Miscellaneous</th>
<th>60.7%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impervious Surface</td>
<td></td>
</tr>
</tbody>
</table>

Rounded down to nearest 5 ft

The proposal would meet the site and building standards as outlined in City Code §300.27 Subd.5:

1. Consistency with the elements and objectives of the city’s development guides, including the comprehensive plan and water resources management plan.

**Finding:** The proposed high-density residential development is consistent with the general housing goals of the 2030 Comprehensive Guide Plan and the specific Plan’s specific goal to provide additional housing in the OPUS area. Further, the proposal has been reviewed by city planning, engineering, and natural resources staff and found to be generally consistent with the city’s development guides, including the water resources management plan.

2. Consistency with this ordinance.

**Finding:** The proposal is consistent with the zoning ordinance.

3. Preservation of the site in its natural state to the extent practicable by keeping tree and soil removal and designing grade changes to
be in keeping with the general appearance of neighboring
developed or developing properties.

**Finding:** The proposal would result in tree and soil removal. The
subject property is a developed site, with the only "natural" area
being Type-1 wetland on the northeast corner. While the proposal
would result in tree and soil removal, the wetland area would not
be disturbed.

4. Creation of harmonious relationship of buildings and open spaces
with natural site features and with existing and future buildings
having a visual relationship to the development.

**Finding:** The proposal would result in a harmonious relationship
of buildings, with open space generally located at the perimeter of
the site.

5. Creation of a function and harmonious design for structures and
site features, with special attention to the following:

- An internal sense of order for the buildings and uses on the
  site and provision of a desirable environment for occupants,
  visitors, and the general community.

- The amount and location of open space and landscaping.

- Materials, textures, colors and details of construction as an
  expression of the design concept and compatibly of the same
  with the adjacent and neighboring structures and uses.

- Vehicular and pedestrian circulation, including walkways,
  interior drivees and parking in terms of location and number of
  access points to the public streets, width of interior drives and
  access points, general interior circulation, separation of
  pedestrian and vehicular traffic and arrangement and amount
  of parking.

**Finding:** The proposal would result in a unique and attractively-
designed neighborhood.

6. Promotion of energy conservation through design, location,
orientation and elevation of structures, the use and location of
glass in structures, and the use of landscape materials and site
grading.

**Finding:** The proposal includes installation of rooftop solar energy
systems, capable of producing more than 562,000 kilowatts of
energy per year new. As new construction, the building code
would require use of additional energy saving features within the
buildings themselves.
7. Protection of adjacent and neighboring properties through reasonable provision for surface water drainage, sound and site buffers, preservation of views, light and air and those aspects of design not adequately covered by other regulations which may have substantial effects on neighboring land uses.

**Finding:** The proposal would visually and physically alter the property and the immediate area. However, this change would occur with any redevelopment of the site, which the city has long anticipated.

**Pyramid of Discretion**

The planning commission has three options:

1. **Concur with the staff recommendation.** In this case a motion should be made recommending the city council adopt the resolution approving the request.

2. **Disagree with staff's recommendation.** In this case, a motion should be made recommending the city council deny the request. This motion must include a statement as to why denial is recommended.

3. **Table the requests.** In this case, a motion should be made to table the item. The motion should include a statement as to why the request is being tabled with direction to staff, the applicant, or both.

**Voting Requirement**
The planning commission will make a recommendation to the city council. The city council's final approval requires an affirmative vote of four members.

**Neighborhood Comments**
The city sent notices to 132 property owners and has received no written comments to date.

**Deadline for Action**
**July 23, 2018**
Location Map

Project: Dominium
Address: 11001 Bren Rd E
The Bren Road Development is a proposed multi-family development that will include 482 units of housing for senior and general occupancy population. The site is currently zoned as I-1 Industrial, occupied by Digi International Inc., and is being used as a commercial-office space. The proposed zoning of the project is a PUD (Planned Unit Development) and the intended use of the project is multi-family housing.
PROPOSED SITE
1. Monuments placed for reference purposes are shown for the correct location on all major corners of the property, unless marked or referenced by existing markers or reference monuments. See item 3.

2. The property is contained in Zone X (areas determined to be outside the 0.2% annual chance floodplain) per Flood Insurance Rate Map No. 27053C0343F, Community Panel No. 99009, Bed Sheet No. 5, effective date February 2, 2013.

3. This property is contained in Zone X (areas determined to be outside the 0.2% annual chance floodplain) per Flood Insurance Rate Map No. 27053C0343F, Community Panel No. 99009, Bed Sheet No. 5, effective date February 2, 2013.

4. The Gross land area is 409,223 +/- square feet or 9.39 +/- acres. (Per Schedule B, Part II of the herein referenced Title Commitment).

5. (a) Any current zoning classification, setback requirements, height and floor space area restrictions, and parking requirements, shown hereon, are per a report or letter provided to the following:

   • The City of Minnetonka, Zoning Officer

6. (i) Utility operators do not consistently respond to locate requests through the Gopher State One Call service for surveying purposes such as this. Those utility operators that do respond to locate requests, do so only if located at least 24 hours prior to survey activity. Additional caution is advised in the presence of underground utilities such as gas, water, or electric. The land locator may be contacted to investigate these utilities further, if requested by the client.

   (ii) Maps provided by those notified above, either along with a field location or in lieu of such a location, are very often inaccurate or inconclusive. EXTREME CAUTION MUST BE EXERCISED IN RELATING TO THE USE OF SUCH INFORMATION.

   (iii) Maps provided by those notified above, either along with a field location or in lieu of such a location, are very often inaccurate or inconclusive. EXTREME CAUTION MUST BE EXERCISED IN RELATING TO THE USE OF SUCH INFORMATION.

   (iv) Maps provided by those notified above, either along with a field location or in lieu of such a location, are very often inaccurate or inconclusive. EXTREME CAUTION MUST BE EXERCISED IN RELATING TO THE USE OF SUCH INFORMATION.

   (v) Maps provided by those notified above, either along with a field location or in lieu of such a location, are very often inaccurate or inconclusive. EXTREME CAUTION MUST BE EXERCISED IN RELATING TO THE USE OF SUCH INFORMATION.

7. Subject to a 30 foot sanitary sewer easement in favor of the City of Minnetonka as described in Parcel No. 25 in Township 139, Range 4, Section 11, as CR Document No. 3995823, filed May 12, 1973, as shown by recital on the Certificate of Title.

8. (a) Easements for utilities and drainage as shown on the recorded plat of Opus 2 Eighth Addition.

9. The location of wetland delineation markers, which have been determined by a qualified specialist, are shown hereon.

10. Vicinity Map shown on available maps, west of the property, Not Shown hereon.

11. Subject to a 30 foot sanitary sewer easement in favor of the City of Minnetonka as described in Parcel No. 25 in Township 139, Range 4, Section 11, as CR Document No. 3995823, filed May 12, 1973, as shown by recital on the Certificate of Title.

12. West, East and North lines shown on the recorded plat of Opus 2 Eighth Addition, as shown by recital on the Certificate of Title.

13. The Gross land area is 409,223 +/- square feet or 9.39 +/- acres. (Per Schedule B, Part II of the herein referenced Title Commitment).

14. 436 Total Parking Stalls.

15. 1-8 do not require comment.

16. The location of wetland delineation markers, which have been determined by a qualified specialist, are shown hereon.

17. We are not aware of any evidence of recent earth moving work, building construction or building additions observed in the process of conducting our field work.

18. The location of wetland delineation markers, which have been determined by a qualified specialist, are shown hereon.

19. Easements for utilities and drainage as shown on the recorded plat of Opus 2 Eighth Addition.

20. Vicinity Map shown on available maps, west of the property, Not Shown hereon.

21. Easements for utilities and drainage as shown on the recorded plat of Opus 2 Eighth Addition.

22. Vicinity Map shown on available maps, west of the property, Not Shown hereon.

23. Easements for utilities and drainage as shown on the recorded plat of Opus 2 Eighth Addition.

24. Vicinity Map shown on available maps, west of the property, Not Shown hereon.

25. Vicinity Map shown on available maps, west of the property, Not Shown hereon.

26. Easements for utilities and drainage as shown on the recorded plat of Opus 2 Eighth Addition.

27. Vicinity Map shown on available maps, west of the property, Not Shown hereon.

28. Easements for utilities and drainage as shown on the recorded plat of Opus 2 Eighth Addition.

29. Vicinity Map shown on available maps, west of the property, Not Shown hereon.

30. Easements for utilities and drainage as shown on the recorded plat of Opus 2 Eighth Addition.

31. Vicinity Map shown on available maps, west of the property, Not Shown hereon.

32. Easements for utilities and drainage as shown on the recorded plat of Opus 2 Eighth Addition.

33. Vicinity Map shown on available maps, west of the property, Not Shown hereon.

34. Easements for utilities and drainage as shown on the recorded plat of Opus 2 Eighth Addition.

35. Vicinity Map shown on available maps, west of the property, Not Shown hereon.

36. Easements for utilities and drainage as shown on the recorded plat of Opus 2 Eighth Addition.

37. Vicinity Map shown on available maps, west of the property, Not Shown hereon.

38. Easements for utilities and drainage as shown on the recorded plat of Opus 2 Eighth Addition.

39. Vicinity Map shown on available maps, west of the property, Not Shown hereon.

40. Easements for utilities and drainage as shown on the recorded plat of Opus 2 Eighth Addition.

41. Vicinity Map shown on available maps, west of the property, Not Shown hereon.
CADD files prepared by the Consultant for this project are instruments of the Consultant professional services for use solely with respect to this project. These CADD files shall not be used on other projects, for additions to this project, or for completion of this project by others without written approval by the Consultant. With the Consultant’s approval, others may be permitted to obtain copies of the CADD drawing files for information and reference only. All intentional or unintentional modifications, additions, or deletions to these CADD files shall be made at the full risk of that party making such revisions, additions or deletions and that party shall hold harmless and indemnify the Consultant from any & all responsibilities, claims, and liabilities.

CADD QUALIFICATION

07/14/17 SURVEY ISSUED
02/20/18 TREE HEIGHTS
02/23/18 ADDITIONAL TREES

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

Field Crew
Max L. Stanislowski - PLS

Project Lead

Drawn By

Checked By

Loucks Project No. 17298

Tree Note

1. The trees shown hereon were identified and field located to sub-meter accuracy by Stephen Nicholson, a Certified Arborist and Forester with TreeBiz on 07/06/2017.
2. Tree diameters are measured in inches.
3. Tree heights are measured to the nearest foot.

Survey Legend
WARNING:
The contractor shall be responsible for calling for locations of all existing utilities. They shall cooperate with all utility companies maintaining their service and/or relocation of lines. The contractor shall contact Gopher State One Call at 651-454-0002 at least 48 hours in advance for the locations of all underground utilities. The contractor shall repair or replace wires, cables, conduits, pipes, manholes, valves, or other buried structures before excavating. The contractor shall inform the owner in writing at least 48 hours in advance of any construction or excavation affecting the property and the owner. Owner/Developer.

EXISTING CONDITIONS

Gopher State One Call

BREN ROAD
MASTER SITE DEVELOPMENT

INDEX

C1-1
WARNING:

The contractor shall be responsible for calling for locations of all existing utilities. They shall cooperate with all utility companies in marking their service and/or relocation of lines.

The contractor shall make all necessary arrangements for locations of all underground utility lines and services before digging. The contractor shall be responsible for the placement of all existing utility lines and services before excavation.

The contractor shall contact Gopher State One Call at 651-454-0002 at least 48 hours in advance for the locations of all underground utility lines and services before digging. The contractor is responsible for the protection of all existing utility lines and services and will be held responsible for any damages caused during the excavation process.
OFF STREET PARKING CALCULATIONS

SURFACE ACCESSIBLE PARKING
REQUIRED SURFACE ACCESSIBLE PARKING: 6 STALLS
* REQUIRED NUMBER OF ACCESSIBLE SPACES FOR 301-400 STALLS

ACCESSIBLE PARKING
REQUIRED CANAL ACCESSIBLE PARKING: 6 STALLS

SITE DATA

COMPATIBLE ZONING: I-1 (INDUSTRIAL) PROPOSED ZONING: PUD

SITE NOTES

1. ALL PAVING, CONCRETE CURB, GUTTER AND SIDEWALK SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE DETAILS SHOWN PER THE DETAIL SHEET(S) AND STATE/LOCAL JURISDICTION REQUIREMENTS.

2. ACCESSIBLE PARKING AND ACCESSIBLE ROUTES SHALL BE PROVIDED PER CURRENT ADA STANDARDS AND LOCAL/STATE REQUIREMENTS.

3. ALL BUILDING DEMENSIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.

4. ALL BUILDING DIMENSIONS ARE TO THE OUTSIDE FACE OF WALL UNLESS OTHERWISE NOTED.

5. TYPICAL FULL SIZED PARKING STALL IS 8.5' X 18' WITH A 24' WIDE TWO WAY DRIVE UNLESS OTHERWISE NOTED.

6. ALL CURB RADII SHALL BE 3.0' UNLESS OTHERWISE NOTED.

7. BITUMINOUS IMPREGNATED FIBER BOARD TO BE PLACED AT FULL DEPTH OF CONCRETE ADJACENT TO EXISTING STRUCTURES AND BEHIND CURB ADJACENT TO DRIVEWAYS AND SIDEWALKS.

8. SEE SITE ELECTRICAL PLAN FOR SITE LIGHTING.

9. BITUMINOUS PARKING STALLS TO BE LIGHT DUTY BITUMINOUS. DRIVE ISLES TO BE HEAVY DUTY BITUMINOUS.

ACCESSIBLE PARKING
PROPOSED SURFACE PARKING PROVIDED: 180 STALLS
PROPOSED GARAGE PARKING PROVIDED: 365 STALLS
PROPOSED TOTAL PARKING PROVIDED: 545 STALLS

*REQUIRED MINIMUM NUMBER OF ACCESSIBLE SPACES FOR 151-200 STALLS
**REQUIRED MINIMUM NUMBER OF ACCESSIBLE SPACES FOR 301-400 STALLS

WARNING:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR CALLING FOR LOCATIONS OF ALL EXISTING UTILITIES. THEY SHALL COORDINATE WITH ALL UTILITY COMPANIES PRIOR TO DIGGING OR MOVING CONSTRUCTION TO AVOID DAMAGE TO THEIR FACILITIES. THE CONTRACTOR SHALL CALL GOPHER STATE ONE CALL AT 651-454-0002 AT LEAST 48 HOURS IN ADVANCE FOR THE LOCATIONS OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL CONTACT THE OWNER AND/or SURROUNDING NEIGHBORS TO INFORM THEM OF THE CONSTRUCTION PROGRESS BEFORE DIGGING. THE CONTRACTOR SHALL OBTAIN THE NEW USE OF THE UTILITIES AND ORIGINATE THE INSURANCE. THE OWNER SHALL PROVE TO THE CONTRACTOR THAT THE INSURANCE IS IN EFFECT PRIOR TO THE CONSTRUCTION STARTING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CALLING FOR THE LOCATION OF UTILITIES PRIOR TO BORING OR DRILLING AND ANY SUBSEQUENT CONSTRUCTION TO AVOID DAMAGE TO THEIR FACILITIES.
SITE NOTES:
1. All new walls, curbs, gutters, sidewalks, and driveways shall be furnished and installed in accordance with the plans and specifications. The contractor shall prepare a layout plan showing the exact location of the curbs, sidewalks, and driveways to be installed.
2. All grading, excavation, and backfilling shall be done in accordance with the plans and specifications.
3. All new structural concrete shall be furnished and installed in accordance with the plans and specifications.
4. All new electrical ducts and conduits shall be furnished and installed in accordance with the plans and specifications.
5. All new plumbing fixtures shall be furnished and installed in accordance with the plans and specifications.
6. All new mechanical systems shall be furnished and installed in accordance with the plans and specifications.
7. All new material shall be furnished and installed in accordance with the plans and specifications.

SITE PLAN LEGEND:
- CONCRETE SIDEWALK
- CONCRETE PAVEMENT
- HEAVY DUTY BITUMINOUS PAVEMENT
- TEMPORARY HEAVY-DUTY BITUMINOUS PAVEMENT
- Gopher State One Call

WARNING:
The contractor shall be responsible for calling the Gopher State One Call at least 48 hours in advance for the location of all underground utilities before starting any trenching or excavation work.

NOT FOR CONSTRUCTION:
The plans and specifications are not for construction.

CERTIFICATION:
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly licensed professional under the laws of the State of Minnesota.
WARNING:

The Contractor shall be responsible for calling for locations of all
existing utilities. They shall cooperate with all utility companies in
maintaining their service and/or relocation of lines. The Contractor
shall contact Gopher State One Call at 651-454-0002 to
cooperate with all utility companies in maintaining their service and/or
relocation of lines. The Contractor shall be responsible for calling for
locations of all existing utilities.

1. Spot Elevations represent finished surface grades, gutter/flow line,
   face of building, or edge of pavement unless otherwise noted.
2. Catch basins and manholes in paved areas shall be sumped 0.04
   feet. All catch basins in gutters shall be sumped 0.16 feet. Rim
   elevations shown on plans do not reflect sumped elevations.
3. All disturbed unpaved areas are to receive minimum of 4 inches of
   top soil and seed/mulch or sod. These areas shall be watered/maintained
   by the Contractor until vegetation is established.
4. Streets must be cleaned and swept whenever tracking of sediments
   occurs and before sites are left idle for weekends and holidays. A
   regular sweeping schedule must be established.
5. Dust must be adequately controlled.
6. See SWPPP for additional erosion control notes and requirements.
7. See utility plans for water, sewer and sanitary requirements.
8. See SWPPP for additional erosion control notes and requirements.
9. See site plan for curb and bituminous taper locations.
10. See landscape plan for final site stabilization.
WARNING:

The Contractor shall be responsible for calling for locations of all existing utilities. They shall cooperate with all utility companies in marking their service lines and for relocation of same. The Contractor shall contact Gopher State One Call at 651-454-0002 at least 48 hours in advance for the locations of all underground utility lines. The Contractor shall remove all temporary structures before grading. The Contractor shall ensure the repair of the above marks caused during construction at no cost to the Owner.

LEGEND

---

Owner/Developer: 104/06/2018 City Submittal

Future Entrance Plan

Bren Road Master Site Development

Commission Number: 1393.123

Issue Date: 03/30/2018

PLANNING CIVIL ENGINEERING LAND SURVEYING LANDSCAPE ARCHITECTURE ENVIRONMENTAL

Loucks Project No. 17298.0A

Sheets: 1 of 1

Not for Construction

Certification Date: 03/30/2018

PJ Disch, PE

7200 Hemlock Lane, Suite 300

Maple Grove, MN 55369

763.424.5505

www.loucksin.com

---

The plan, specification, or report is hereby certified by me or under my direct supervision and that I am a duly licensed professional under the laws of the State of Minnesota.

Bren Road Master Site Development

Commission Number: 1393.123

Issue Date: 03/30/2018

E OE

License Number

Copyright © 2018 BKV Group

Architecture

Interior Design

Landscape Architecture

Engineering

Boorman

Kroos

Voelk

Group

Inc.

222 North Second Street

Minneapolis MN 55401

Telephone: 612-319-7750

Facsimile: 612-339-8012

www.bkvgroup.com

EOE
1. All sanitary sewer, storm sewer and watermain utilities shall be furnished and installed per the requirements of the specifications, the Minnesota Plumbing Code, the local governing unit, and the Standard Utilities Specification of the City Engineers Association of Minnesota, 2013 Edition.

2. All utility pipe bedding shall be compacted sand or fine granular material. All compaction shall be performed per the requirements of the CEAM Specification.

3. All connections to existing utilities shall be performed per the requirements of the State and local jurisdictions. The city department of engineering and building inspections department and the construction engineer must be notified at least 48 hours prior to any work within the public right of way, or work impacting public utilities.

4. All storm sewer, sanitary sewer, and water services shall terminate 5’ from the building face unless otherwise noted.

5. A minimum of 18 inches of vertical separation and 10 feet of horizontal separation is required for all utilities unless otherwise noted.

6. All new watermain and services must have a minimum of 8.0 feet of cover. Extra depth may be required to maintain a minimum 18” vertical separation to sanitary or storm sewer lines. The contractor shall field adjust watermain to avoid conflicts with sanitary sewer, storm sewer, and services as required. Insulation of water and sanitary sewer lines shall be provided where 8.0 feet minimum depth cannot be attained.

7. All fire hydrants shall be located 5 feet behind back of curb or edge of pavement unless otherwise noted.

8. All sanitary sewer wyes, tees and services shall be Sch. 40 PVC.

9. All portions of the storm sewer system, including catch basins, located within 10 feet of the building or water service line must be tested in accordance with Minnesota Rules, Part 4715.2820.

10. All joints and connections in the storm sewer system shall be gastight or watertight (see Minnesota Rules, Part 4715.0700). Approved resilient rubber joints must be used to make watertight connections to manholes, catchbasins, and other structures.

11. High-density polyethylene (HDPE) storm drains must comply with Minnesota Rules, Part 4715.0540:
   a. Pipes 4-inch to 10-inch in size must comply with AASHTO M252.
   b. Pipes 12-inch to 60-inch in size must comply with ASTM F2306.
   c. All fittings must comply with ASTM D3212.
   d. Water-tight joints must be used at all connections including structures.
1. All structural steel, concrete masonry and other masonry shall conform to the requirements of the American Concrete Institute (ACI) publications. Special reinforcement shall be furnished and installed in accordance with the requirements of ACI 318, latest edition.

2. All structural steel shall be fabricated in accordance with the requirements of the American Institute of Steel Construction (AISC) Specification, latest edition.

3. All concrete masonry units shall be of the type specified by the manufacturer and shall conform to the requirements of the American Society for Testing and Materials (ASTM) Specification C 178, latest edition.

4. All concrete shall be placed in accordance with the requirements of the American Concrete Institute (ACI) publications.

5. All structural steel shall be painted in accordance with the requirements of the American Institute of Steel Construction (AISC) Specification, latest edition.

6. All concrete masonry units shall be painted in accordance with the requirements of the American Society for Testing and Materials (ASTM) Specification C 178, latest edition.

7. All concrete shall be cured in accordance with the requirements of the American Concrete Institute (ACI) publications.

8. All structural steel shall be stressed in accordance with the requirements of the American Institute of Steel Construction (AISC) Specification, latest edition.

9. All concrete masonry units shall be stressed in accordance with the requirements of the American Society for Testing and Materials (ASTM) Specification C 178, latest edition.

10. All concrete shall be tested in accordance with the requirements of the American Concrete Institute (ACI) publications.

11. All structural steel shall be tested in accordance with the requirements of the American Institute of Steel Construction (AISC) Specification, latest edition.

12. All concrete masonry units shall be tested in accordance with the requirements of the American Society for Testing and Materials (ASTM) Specification C 178, latest edition.

13. All concrete shall be cleaned in accordance with the requirements of the American Concrete Institute (ACI) publications.

14. All structural steel shall be cleaned in accordance with the requirements of the American Institute of Steel Construction (AISC) Specification, latest edition.

15. All concrete masonry units shall be cleaned in accordance with the requirements of the American Society for Testing and Materials (ASTM) Specification C 178, latest edition.

16. All concrete shall be painted in accordance with the requirements of the American Concrete Institute (ACI) publications.

17. All structural steel shall be painted in accordance with the requirements of the American Institute of Steel Construction (AISC) Specification, latest edition.
ITEMS TO BE SHOWN IN FUTURE PLANS:
- LOT SPLIT INTO 2 LOTS
- UTILITY EASEMENT FOR WATER, SANITARY SEWER AND STORM SEWER

ITEMS TO BE SHOWN IN FUTURE EASEMENT EXHIBITS:
- SHARED SURFACE PARKING EASEMENT
- INGRESS & EGRESS EASEMENT
- IRRIGATION EASEMENT

WARNING:
The contractor shall be responsible for calling for locations of all existing utilities. They shall coordinate with all utility companies maintaining their service and/or relocation of lines at no cost to the owner.

The contractor shall contact Gopher State One Call at least 48 hours in advance for the locations of all underground service before digging. The contractor shall bear all costs of replacement and/or relocation of lines to be excavated and shall be responsible for any damage to structures before digging. The contractor shall provide the above基本信息 to the owner at no cost to the owner.
WARNING:

The contractor shall be responsible for calling the locations of all existing utilities. They shall cooperate with all utility companies maintaining their service and/or relocation of lines. The contractor shall contact Gopher State One Call at 651-454-0002 at least 24 hours in advance for the locations of all underground utilities at the structures before digging. The contractor shall replace 24-in. main gas line damaged during construction at no cost to the owner.
BREN ROAD DEVELOPMENT
MINNETONKA, MN
CITY SUBMITTAL - APRIL 6, 2018
CONCEPT DESIGN
DESIGN EXAMPLES - EXTERIOR
UNION FLATS - ST PAUL, MN
DESIGN EXAMPLES - INTERIOR
UNION FLATS - ST PAUL, MN
DESIGN EXAMPLES - INTERIOR
WEYERHAUESER- ST. PAUL, MN
DESIGN EXAMPLES - EXTERIOR
GRAND CENTRAL FLATS - COLUMBIA HEIGHTS, MN
DESIGN EXAMPLES- INTERIOR
GRAND CENTRAL FLATS- COLUMBIA HEIGHTS, MN
DESIGN EXAMPLES - INTERIOR
THE CAMBRIC - ST. PAUL, MN
Parking Summary

After reviewing a number of comparable existing senior and general occupancy properties as well as new properties that are currently under construction we have come to the following conclusions. The table of this data is attached as Attachment 1.

1. **The Bren Road Development project will provide considerably less parking than existing Dominium comparable properties.**

For existing senior properties located in a mix of urban and suburban areas, the average total parking ratio is 1.18 parking stalls per unit. For existing general occupancy properties, the average total parking ratio is 1.85. Our proposed mix has a 1.03 ratio for the senior building and 1.28 for the general occupancy buildings which is considerably less than the existing properties.

2. **The Bren Road Development project will provide less parking than pending Dominium new construction properties.**

For senior new construction projects located in a mix of urban and suburban areas, the average parking ratio is 1.08 for seniors and 1.30 for general occupancy. It is important to note that two of the general occupancy properties are located in St. Paul in very urban areas where there are very limited parking options. Removing these St. Paul pending properties which are considerably more urban results in an average parking ratio of 1.13 for seniors and 1.62 for families.

On average, 83% of garage stalls are occupied in the existing general occupancy and senior properties. It is important to note that the effective occupancy of these properties is .77 stalls/unit (83% x .92 stalls/unit). Our project is proposing .78 stalls/unit of underground parking so the demand for parking based on this data, is essentially equal to the supply. We are comfortable with this ratio because of the proximity to the future LRT stop and expected surrounding mixed-use redevelopment.

**Conclusion:** Overall, the parking mix we are proposing is significantly less than what we have historically provided. There will be some time between the construction completion of our project and the light rail and our future residents will not have any options if there is an insufficient amount of parking in the interim. If driverless cars and the light rail do indeed significantly reduce the parking demand in the future, BKV has come up with some plans that show where we can remove some of the existing surface parking and provide some additional green space. Attachment 2 shows the 10 and 30 year parking plans where some of the additional surface parking can be converted to green space.
<table>
<thead>
<tr>
<th>Property</th>
<th>Address</th>
<th>City</th>
<th>Units</th>
<th>Surface Spots</th>
<th>Garage Spots</th>
<th>Surface Parking Ratio</th>
<th>Garage Parking Ratio</th>
<th>Total Parking Ratio</th>
<th>Parking Type</th>
<th># Occupied-Garage</th>
<th>% Occupied-Garage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building C</td>
<td>11001 Bren Road E</td>
<td>Minnetonka</td>
<td>262</td>
<td>45</td>
<td>225</td>
<td>0.17</td>
<td>0.86</td>
<td>1.03</td>
<td>Underground</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Buildings A &amp; B</td>
<td>11001 Bren Road E</td>
<td>Minnetonka</td>
<td>220</td>
<td>153</td>
<td>149</td>
<td>0.60</td>
<td>0.68</td>
<td>1.28</td>
<td>Underground</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td></td>
<td></td>
<td>482</td>
<td>178</td>
<td>374</td>
<td>0.37</td>
<td>0.78</td>
<td>1.15</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Senior Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Address</th>
<th>City</th>
<th>Units</th>
<th>Surface Spots</th>
<th>Garage Spots</th>
<th>Surface Parking Ratio</th>
<th>Garage Parking Ratio</th>
<th>Total Parking Ratio</th>
<th>Parking Type</th>
<th># Occupied-Garage</th>
<th>% Occupied-Garage</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Legends at Silver Lake Village</td>
<td>2500 38th Ave NE</td>
<td>St. Anthony</td>
<td>169</td>
<td>60</td>
<td>128</td>
<td>0.36</td>
<td>0.76</td>
<td>1.12</td>
<td>Underground</td>
<td>109</td>
<td>65%</td>
</tr>
<tr>
<td>River North</td>
<td>10940 Crooked Lake Blvd, NW</td>
<td>Coon Rapids</td>
<td>167</td>
<td>57</td>
<td>116</td>
<td>0.34</td>
<td>0.69</td>
<td>1.04</td>
<td>Underground</td>
<td>112</td>
<td>97%</td>
</tr>
<tr>
<td>The Granite Oak</td>
<td>5119 Gateway Street St</td>
<td>Prior Lake</td>
<td>168</td>
<td>49</td>
<td>111</td>
<td>0.29</td>
<td>0.66</td>
<td>0.95</td>
<td>Underground</td>
<td>111</td>
<td>100%</td>
</tr>
<tr>
<td>The Gravyn</td>
<td>5401 51st Ave North</td>
<td>Crystal</td>
<td>130</td>
<td>66</td>
<td>94</td>
<td>0.51</td>
<td>0.72</td>
<td>1.23</td>
<td>Underground</td>
<td>81</td>
<td>86%</td>
</tr>
<tr>
<td>The Cambridge</td>
<td>720 East 7th St</td>
<td>St. Paul</td>
<td>113</td>
<td>120</td>
<td>86</td>
<td>1.06</td>
<td>0.76</td>
<td>1.82</td>
<td>Underground</td>
<td>55</td>
<td>64%</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td></td>
<td></td>
<td>149</td>
<td>67</td>
<td>109</td>
<td>0.45</td>
<td>0.75</td>
<td>1.20</td>
<td></td>
<td>57</td>
<td>85%</td>
</tr>
</tbody>
</table>

### General Occupancy Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Address</th>
<th>City</th>
<th>Units</th>
<th>Surface Spots</th>
<th>Garage Spots</th>
<th>Surface Parking Ratio</th>
<th>Garage Parking Ratio</th>
<th>Total Parking Ratio</th>
<th>Parking Type</th>
<th># Occupied-Garage</th>
<th>% Occupied-Garage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Landings at Silver Lake Village</td>
<td>2551 38th Ave NE</td>
<td>St. Anthony</td>
<td>263</td>
<td>231</td>
<td>231</td>
<td>0.88</td>
<td>0.82</td>
<td>1.70</td>
<td>Underground</td>
<td>161</td>
<td>75%</td>
</tr>
<tr>
<td>808 Berry</td>
<td>808 Berry Street</td>
<td>St. Paul</td>
<td>267</td>
<td>0</td>
<td>405</td>
<td>0.00</td>
<td>1.52</td>
<td>1.52</td>
<td>Underground</td>
<td>304</td>
<td>75%</td>
</tr>
<tr>
<td>Stone Creek</td>
<td>1020 West Medicine Lake Dr</td>
<td>Plymouth</td>
<td>125</td>
<td>153</td>
<td>140</td>
<td>1.22</td>
<td>1.32</td>
<td>2.54</td>
<td>Underground</td>
<td>128</td>
<td>91%</td>
</tr>
<tr>
<td>Bluffs at Nine Mile Creek</td>
<td>7475 Flying Cloud Dr</td>
<td>Eden Prairie</td>
<td>188</td>
<td>118</td>
<td>241</td>
<td>N/A</td>
<td>1.28</td>
<td>1.95</td>
<td>Underground</td>
<td>196</td>
<td>81%</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td></td>
<td></td>
<td>211</td>
<td>121</td>
<td>270</td>
<td>0.57</td>
<td>1.28</td>
<td>1.85</td>
<td></td>
<td>209</td>
<td>78%</td>
</tr>
</tbody>
</table>

### General Occupancy Under Construction

<table>
<thead>
<tr>
<th>Property</th>
<th>Address</th>
<th>City</th>
<th>Units</th>
<th>Surface Spots</th>
<th>Garage Spots</th>
<th>Surface Parking Ratio</th>
<th>Garage Parking Ratio</th>
<th>Total Parking Ratio</th>
<th>Parking Type</th>
<th># Occupied-Garage</th>
<th>% Occupied-Garage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Union Flats</td>
<td>787 Hampden Avenue</td>
<td>St. Paul</td>
<td>217</td>
<td>50</td>
<td>182</td>
<td>0.23</td>
<td>0.84</td>
<td>1.07</td>
<td>Underground</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Grand Central Flats</td>
<td>4729 Grand Avenue NE</td>
<td>Columbia Heights</td>
<td>147</td>
<td>102</td>
<td>136</td>
<td>0.03</td>
<td>0.93</td>
<td>1.62</td>
<td>Underground</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>MB Berry Apartments</td>
<td>778 Berry Street</td>
<td>St. Paul</td>
<td>121</td>
<td>42</td>
<td>95</td>
<td>0.35</td>
<td>0.79</td>
<td>1.13</td>
<td>Underground</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td></td>
<td></td>
<td>162</td>
<td>54</td>
<td>146</td>
<td>0.39</td>
<td>0.91</td>
<td>1.30</td>
<td></td>
<td></td>
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</tbody>
</table>

### Senior Under Construction

<table>
<thead>
<tr>
<th>Property</th>
<th>Address</th>
<th>City</th>
<th>Units</th>
<th>Surface Spots</th>
<th>Garage Spots</th>
<th>Surface Parking Ratio</th>
<th>Garage Parking Ratio</th>
<th>Total Parking Ratio</th>
<th>Parking Type</th>
<th># Occupied-Garage</th>
<th>% Occupied-Garage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legends of Columbia Heights</td>
<td>3700 Huss Parkway</td>
<td>Columbia Heights</td>
<td>191</td>
<td>88</td>
<td>130</td>
<td>0.48</td>
<td>0.71</td>
<td>1.17</td>
<td>Underground</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Legends of Apple Valley</td>
<td>14090 Granite Ave</td>
<td>Apple Valley</td>
<td>163</td>
<td>42</td>
<td>143</td>
<td>0.26</td>
<td>0.88</td>
<td>1.13</td>
<td>Underground</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Legends at Berry</td>
<td>709 E Emerald Street</td>
<td>St. Paul</td>
<td>140</td>
<td>43</td>
<td>173</td>
<td>0.18</td>
<td>0.73</td>
<td>0.90</td>
<td>Underground</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Legends of Champlin</td>
<td>11615 Theatre Drive</td>
<td>Champlin</td>
<td>184</td>
<td>73</td>
<td>138</td>
<td>0.40</td>
<td>0.75</td>
<td>1.15</td>
<td>Underground</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Legends of Cottage Grove</td>
<td>6999 E Point Douglas Rd 1</td>
<td>Cottage Grove</td>
<td>184</td>
<td>65</td>
<td>129</td>
<td>0.35</td>
<td>0.70</td>
<td>1.05</td>
<td>Underground</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td></td>
<td></td>
<td>192</td>
<td>61</td>
<td>146</td>
<td>0.32</td>
<td>0.76</td>
<td>1.08</td>
<td></td>
<td></td>
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</tbody>
</table>

| TOTALS - All Property Types  |                          |               | 179   | 78            | 168          | 0.43                  | 0.92                 | 1.35                |              | 153             | 83%              |
Innovation Summary

Dominium is committed to providing many innovative features on the Bren Road Development project including an enhanced trail system, a green parkway entrance, public art plazas, and a bike café. In addition, this project will feature a state-of-the-art rooftop solar energy system.

**Solar Energy System:**

The proposed rooftop solar energy system will include over 1,500 Jinko 325-watt panels spread over all three buildings and is capable of producing more than 562,120 kWh per year. The system will be installed by Cedar Creek Energy, who have installed similar systems on past Dominium projects.

It is estimated that the system will be able to cover roughly 20% of the project’s total electricity cost (including tenant unit electricity use), which results in annual power savings of over $50,000. After accounting for the tax benefits and utility credits the project will be eligible for, the payback time is estimated to be less than seven years.
ENVIRONMENTAL ASSESSMENT WORKSHEET
This Environmental Assessment Worksheet (EAW) form and EAW Guidelines are available at the Environmental Quality Board’s website at: http://www.eqb.state.mn.us/EnvRevGuidanceDocuments.htm. The EAW form provides information about a project that may have the potential for significant environmental effects. The EAW Guidelines provide additional detail and resources for completing the EAW form.

Cumulative potential effects can either be addressed under each applicable EAW Item, or can be addresses collectively under EAW Item 19.

Note to reviewers: Comments must be submitted to the RGU during the 30-day comment period following notice of the EAW in the EQB Monitor. Comments should address the accuracy and completeness of information, potential impacts that warrant further investigation and the need for an EIS.

1. Project title: Dominium EAW

2. Proposer: Dominium Management
   Contact person: Ryan J. Lunderby
   Title: Vice President & Project Partner
   Address: 2905 Northwest Boulevard
   City, State, ZIP: Plymouth, MN 55441
   Phone: (763) 354-5500
   Fax:
   Email: RLunderby@Dominiuminc.com

3. RGU City of Minnetonka
   Contact person: Loren Gordon
   Title: City Planner
   Address: 14600 Minnetonka Boulevard
   City, State, ZIP: Minnetonka, MN 55345
   Phone: (952) 939-8296
   Fax:
   Email: lgordon@eminnetonka.com

4. Reason for EAW Preparation: (check one)
   Required:
   □ EIS Scoping
   X Mandatory EAW
   Discretionary:
   □ Citizen petition
   □ RGU discretion
   □ Proposer initiated

If EAW or EIS is mandatory give EQB rule category subpart number(s) and name(s):
Residential Development
MR 4410.4300 Subpart 19.D

5. Project Location:
   County: Hennepin
   City/Township: Minnetonka
   PLS Location (¼, ¼, Section, Township, Range): South portion of S36, T117N, R22W
   Watershed (81 major watershed scale): Lower Minnesota River (33)
   GPS Coordinates: Lat: 44.898491, Long: -93.415821
At a minimum attach each of the following to the EAW: See Figures 1-3

- County map showing the general location of the project;
- U.S. Geological Survey 7.5 minute, 1:24,000 scale map indicating project boundaries (photocopy acceptable); and
- Site plans showing all significant project and natural features. Pre-construction site plan and post-construction site plan.

Appendix A – Figures
Figure 1 – County Location
Figure 2 – USGS Map
Figure 3 – Project Location (aerial)
Figure 4 – Concept/Site Plan
Figure 5 – Existing Land Use
Figure 6 – Existing Zoning
Figure 7 – Parks and Trails
Figure 8 – Surficial Geology
Figure 9 – Bedrock Geology
Figure 10 – Soil Survey
Figure 11 – Surface Water Resources
Figure 12 – Well Locations
Figure 13 – Potential Contamination Areas
Figure 14 – MLCCS Land Cover

6. Project Description:
   a. Provide the brief project summary to be published in the EQB Monitor, (approximately 50 words).

Dominium proposes to redevelop an existing 9.4-acre commercial site in the City of Minnetonka to include 482 units of rental multi-family housing. The project is near the future Southwest Light Rail (SWLRT) and Opus Station and is located in the southwest corner of Bren Road East and Bren Road West (Figure 3).

b. Give a complete description of the proposed project and related new construction, including infrastructure needs. If the project is an expansion include a description of the existing facility. Emphasize: 1) construction, operation methods and features that will cause physical manipulation of the environment or will produce wastes, 2) modifications to existing equipment or industrial processes, 3) significant demolition, removal or remodeling of existing structures, and 4) timing and duration of construction activities.

Project Description

Dominium is proposing to redevelop an existing 9.4-acre commercial site located in the southwest corner of Bren Road East and Bren Road West. The site currently houses the approximately 409,000 square foot Digi International commercial development. The site is proposed to redevelop into 482 apartment units within four buildings. Three buildings would be four stories in height and one building would be six stories in height. The units are intended to service senior and workforce housing markets and will be priced at 60% of the area’s median income.
The site is located immediately west of the proposed SWLRT and adjacent to the future Opus Station. The development would include the four apartment buildings, 180 surface parking stalls, access onto Bren Road, and connect the existing trail system on the south and future trail system on the west to the Opus Light Rail Station. The proposed plan is shown on Figure 4.

Construction Staging/Project Schedule

Construction will consist of demolition of the current office building present on site, clearing and grubbing vegetation, grading the site, installing utilities, constructing the residential buildings, and constructing the internal roadways and parking lots. Prior to grading, erosion control and other Best Management Practices will be installed to minimize erosion and sedimentation from the site. The erosion control measures will remain in place through all phases of construction and site stabilization. The erosion control measures will be in conformance with the National Pollution Discharge Elimination System (NPDES) construction permit, Nine Mile Creek Watershed District (NMCWD) rules, and city ordinances.

The construction methods are anticipated to be conventional earthwork methods for site grading and will include scrapers, bulldozers, backhoes, and vibratory compactors. Public utilities will also be installed within trenches using this equipment. Project construction is expected to begin in 2018 and be completed in 2019.

c. Project magnitude:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Project Acreage</td>
<td>9.4 acres</td>
</tr>
<tr>
<td>Linear project length</td>
<td>NA</td>
</tr>
<tr>
<td>Number and type of residential units</td>
<td>482 multi-family units</td>
</tr>
<tr>
<td>Commercial building area (in square feet)</td>
<td>NA</td>
</tr>
<tr>
<td>Industrial building area (in square feet)</td>
<td>NA</td>
</tr>
<tr>
<td>Institutional building area (in square feet)</td>
<td>NA</td>
</tr>
<tr>
<td>Other uses – specify (in square feet)</td>
<td>NA</td>
</tr>
<tr>
<td>Structure height(s)</td>
<td>4-6 stories</td>
</tr>
</tbody>
</table>

d. Explain the project purpose; if the project will be carried out by a governmental unit, explain the need for the project and identify its beneficiaries.

The purpose of the project is to develop affordable housing to meet demand along the future SWLRT corridor. The project is being carried out by a developer.

e. Are future stages of this development including development on any other property planned or likely to happen? □ Yes  X No

If yes, briefly describe future stages, relationship to present project, timeline and plans for environmental review.

f. Is this project a subsequent stage of an earlier project? □ Yes  X No

If yes, briefly describe the past development, timeline and any past environmental review.
7. **Cover types**: Estimate the acreage of the site with each of the following cover types before and after development:

<table>
<thead>
<tr>
<th></th>
<th>Before</th>
<th>After</th>
<th>Before</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wetlands</td>
<td>0.9</td>
<td>0.9</td>
<td>Lawn/landscaping</td>
<td>1.8</td>
</tr>
<tr>
<td>Deep water/streams</td>
<td>0</td>
<td>0</td>
<td>Impervious surface</td>
<td>5.2</td>
</tr>
<tr>
<td>Wooded/forest</td>
<td>1.5</td>
<td>1.5</td>
<td>Stormwater Pond</td>
<td>0</td>
</tr>
<tr>
<td>Brush/Grassland</td>
<td>0</td>
<td>0</td>
<td>Other (describe)</td>
<td></td>
</tr>
<tr>
<td>Cropland</td>
<td>0</td>
<td>0</td>
<td>TOTAL</td>
<td>9.4</td>
</tr>
</tbody>
</table>

8. **Permits and approvals required**: List all known local, state and federal permits, approvals, certifications and financial assistance for the project. Include modifications of any existing permits, governmental review of plans and all direct and indirect forms of public financial assistance including bond guarantees, Tax Increment Financing and infrastructure. *All of these final decisions are prohibited until all appropriate environmental review has been completed. See Minnesota Rules, Chapter 4410.3100.*

<table>
<thead>
<tr>
<th>Unit of Government</th>
<th>Type of Application</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>US Army Corps of Engineers</td>
<td>Section 404 Permit</td>
<td>To Be Obtained, if needed</td>
</tr>
<tr>
<td>State</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Department of Natural Resources</td>
<td>Water Appropriation Permit</td>
<td>To Be Obtained, if needed</td>
</tr>
<tr>
<td>Pollution Control Agency</td>
<td>NPDES Construction Permit</td>
<td>To Be Obtained</td>
</tr>
<tr>
<td>Pollution Control Agency</td>
<td>Sanitary Sewer Extension</td>
<td>To Be Obtained, if needed</td>
</tr>
<tr>
<td>Pollution Control Agency</td>
<td>Section 401 Permit</td>
<td>To Be Obtained, if needed</td>
</tr>
<tr>
<td>Department of Health</td>
<td>Watermain Extension</td>
<td>To Be Obtained, if needed</td>
</tr>
<tr>
<td>Department of Health</td>
<td>Permit to abandon and seal private wells</td>
<td>To Be Obtained, if needed</td>
</tr>
<tr>
<td>Local</td>
<td></td>
<td></td>
</tr>
<tr>
<td>City of Minnetonka</td>
<td>Development Application/Land Disturbance Permit</td>
<td>To Be Obtained</td>
</tr>
<tr>
<td>City of Minnetonka</td>
<td>Building Permits</td>
<td>To Be Obtained</td>
</tr>
<tr>
<td>City of Minnetonka</td>
<td>Preliminary and Final Plat Approvals</td>
<td>To Be Obtained</td>
</tr>
<tr>
<td>City of Minnetonka</td>
<td>Wetland Conservation Act Approval</td>
<td>To Be Obtained, if needed</td>
</tr>
<tr>
<td>Nine Mile Creek Watershed District</td>
<td>Grading Permit</td>
<td>To Be Obtained</td>
</tr>
<tr>
<td>Nine Mile Creek Watershed District</td>
<td>Erosion and Sediment Control</td>
<td>To Be Obtained</td>
</tr>
<tr>
<td>Nine Mile Creek Watershed District</td>
<td>Stormwater Management</td>
<td>To Be Obtained</td>
</tr>
<tr>
<td>Metropolitan Council</td>
<td>Sanitary Sewer Connection Permit</td>
<td>To Be Obtained</td>
</tr>
</tbody>
</table>

Cumulative potential effects may be considered and addressed in response to individual EAW Item Nos. 9-18, or the RGU can address all cumulative potential effects in response to EAW Item No. 19. If addressing cumulative effect under individual items, make sure to include information requested in EAW Item No. 19.
9. Land use:
   a. Describe:
      i. Existing land use of the site, as well as areas adjacent to and near the site, including
         parks, trails, prime or unique farmlands.

         The existing land use is currently Industrial. There is an existing paved trail along on the
         southern portion of the project area (Figure 7). The existing land use map is shown on
         Figure 5.

         The project area is located in the southeast portion of the City. The closest major road is
         Shady Oak Road, located about 1,500 feet to the west. Trunk Highway 62 is located about
         2,000 feet south of the project area, and Trunk Highway 169 is located about 3,700 feet east
         of the project area. Much of the surrounding land use is either Industrial or Office. A few
         parcels to the north and east are listed as Open Space. St. Margaret Cemetery is located
         immediately adjacent to the west and is listed as Institutional (Figure 5).

      ii. Plans. Describe planned land use as identified in comprehensive plan (if available)
          and any other applicable plan for land use, water, or resources management by a
          local, regional, state, or federal agency.

          The current Comprehensive Plan designates the future land use as Mixed Use. Much of the
          surrounding parcels are designated as Mixed Use as well. Adjacent to the project area is the
          future SWLRT transit extension and future Opus Station. The Opus Station area plan
          identifies the site and other adjacent properties in close proximity to the station as
          candidates for redevelopment for new housing and employment.

      iii. Zoning, including special districts or overlays such as shoreland, floodplain, wild and
           scenic rivers, critical area, agricultural preserves, etc.

          The area is zoned as I-1, Industrial (Figure 6). There are no shoreland, floodplain, critical
          areas, or agricultural preserve areas.

   b. Discuss the project’s compatibility with nearby land uses, zoning, and plans listed in Item
      9a above, concentrating on implications for environmental effects.

      The adjacent land uses are Office, Industrial, Institutional, and Open Space. Eventually, much of
      the surrounding area will be zoned as Mixed Use as part of the planned Opus Station Area. The
      adjacent zones are I-1 Industrial, R-1 Low Density Residential, and PUD Planned Unit
      Development. The project is compatible with the surrounding land uses. Additionally, with the
      planned Opus Station and SWLRT Development, these uses are compatible with the future
      development in the area.

   c. Identify measures incorporated into the proposed project to mitigate any potential
      incompatibility as discussed in Item 9b above.

      The proposed development is compatible with the adjacent land use and zoning.
10. Geology, soils and topography/land forms:

a. Geology - Describe the geology underlying the project area and identify and map any susceptible geologic features such as sinkholes, shallow limestone formations, unconfined/shallow aquifers, or karst conditions. Discuss any limitations of these features for the project and any effects the project could have on these features. Identify any project designs or mitigation measures to address effects to geologic features.

The project parcels are listed as being in New Ulm Formations and sandy till (Figure 8). For bedrock geology, the majority of the project is located in Platteville and Glenwood Formations, with a small part of the project area in St. Peter Sandstone. The project is surrounded by these same bedrock geologies as well (Figure 9). The Minnesota DNR Aggregate Resources Web Map shows that no gravel pits exist on the site. The site is not listed as a Primary or Secondary Source on the MGS 7-County Metro Sand and Gravel. The Minnesota Karst Lands maps the project within the Covered Karst region, which is an area underlain by carbonate bedrock but with more than 100 feet of sediment cover.

b. Soils and topography - Describe the soils on the site, giving NRCS (SCS) classifications and descriptions, including limitations of soils. Describe topography, any special site conditions relating to erosion potential, soil stability or other soils limitations, such as steep slopes, highly permeable soils. Provide estimated volume and acreage of soil excavation and/or grading. Discuss impacts from project activities (distinguish between construction and operational activities) related to soils and topography. Identify measures during and after project construction to address soil limitations including stabilization, soil corrections or other measures. Erosion/sedimentation control related to stormwater runoff should be addressed in response to Item 11.b.ii.

The soils on the Dominium site are Lester loam 10 to 22 percent slopes (L22E), Le Sueur loam 1 to 3 percent slopes (L25A), Angus loam 2 to 6 percent slopes (L37B), Angus-Moon complex 2 to 5 percent slopes (L60B), and Urban land-Udorthents wet substratum complex 0 to 2 percent slopes (U1A). The soils are well drained to somewhat poorly drained. The existing site topography is mostly flat, with very steep hills just beyond the project area to the west and north. Figure 10 shows the soils on the site.

The volume and acreage of soil moved has been estimated based on assuming approximately 1.5 feet of material will be graded over the development area (9.4 acres). This equates to approximately 22,750 cubic yards of material being moved during grading. Development within the project area will be designed to conform with applicable state and local standards, including National Pollution Discharge Elimination System (NPDES) Construction Stormwater General Permit requirements.

NOTE: For silica sand projects, the EAW must include a hydrogeologic investigation assessing the potential groundwater and surface water effects and geologic conditions that could create an increased risk of potentially significant effects on groundwater and surface water. Descriptions of water resources and potential effects from the project in EAW Item 11 must be consistent with the geology, soils and topography/land forms and potential effects described in EAW Item 10.
11. Water resources:
   a. Describe surface water and groundwater features on or near the site in a.i. and a.ii. below.
      i. Surface water - lakes, streams, wetlands, intermittent channels, and county/judicial
ditches. Include any special designations such as public waters, trout stream/lake,
wildlife lakes, migratory waterfowl feeding/resting lake, and outstanding resource value
water. Include water quality impairments or special designations listed on the current
MPCA 303d Impaired Waters List that are within 1 mile of the project. Include DNR
Public Waters Inventory number(s), if any.

One wetland exists on site. It is classified as PFO1A (Figure 11). No lakes, streams,
channels, or ditches exist on the project area. Several lakes, wetlands, and streams exist
within one mile of the project site. Lone Lake (50986), Shady Oak Lake (51027, 50759)
several Unnamed Lakes, and Nine Mile Creek (739) are within the one-mile buffer. Nine
Mile Creek is the only impaired water within the one-mile buffer. It is listed as impaired for
Chloride and Fishes Bioassessments. These impairments are considered to be construction
related parameters and require additional best management practices (BMPs).

ii. Groundwater – aquifers, springs, seeps. Include: 1) depth to groundwater; 2) if project
is within a MDH wellhead protection area; 3) identification of any onsite and/or nearby
wells, including unique numbers and well logs if available. If there are no wells known
on site or nearby, explain the methodology used to determine this.

The Minnesota Well Index was reviewed and no wells exist within the project area or within
the project area’s 500-foot buffer. Four wells exist outside the 500-foot buffer (Figure 12).

The entire project area is within a Low Vulnerability portion of the Edina Drinking Water
Supply Management Area (DWSMA).

b. Describe effects from project activities on water resources and measures to minimize or
mitigate the effects in Item b.i. through Item b.iv. below.

   i. Wastewater - For each of the following, describe the sources, quantities and
composition of all sanitary, municipal/domestic and industrial wastewater produced
or treated at the site.
   1) If the wastewater discharge is to a publicly owned treatment facility, identify
any pretreatment measures and the ability of the facility to handle the added
water and waste loadings, including any effects on, or required expansion of,
municipal wastewater infrastructure.
   2) If the wastewater discharge is to a subsurface sewage treatment systems (SSTS),
describe the system used, the design flow, and suitability of site conditions for
such a system.
   3) If the wastewater discharge is to surface water, identify the wastewater
treatment methods and identify discharge points and proposed effluent
limitations to mitigate impacts. Discuss any effects to surface or groundwater
from wastewater discharges.
The City of Minnetonka is working with the developer to reconfigure the sewer system in the area to split flows between the Opus Lift Station and the gravity system. However, to analyze the most impactful scenario for wastewater infrastructure, the EAW reviews wastewater generated by the project will be collected at Minnetonka’s sanitary sewer system and conveyed to Opus Lift Station. From there, wastewater will be conveyed to Metropolitan Council Environmental Services (MCES) meter M410 and gravity interceptor 6801, and ultimately to the Blue Lake Wastewater Treatment Plant (WWTP). The Blue Lake WWTP has a treatment capacity of 32 million gallons per day (MGD). Given the plant’s treatment capacity and the estimated wastewater that will be generated at the apartment complex, it is anticipated that the wastewater generated at the apartments will not have significant impacts on the plant’s ability to effectively treat wastewater. Additionally, given the nature of the wastewater flow, domestic wastewater, specific pretreatment measures will not be required. An estimation of the wastewater generated by the Bren Road Apartments can be seen below.

<table>
<thead>
<tr>
<th>Table 11a: Wastewater Flow Calculations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bren Road Apartments – Wastewater Flow Calculations</strong></td>
</tr>
<tr>
<td><strong>Unit</strong></td>
</tr>
<tr>
<td>1 Bedroom</td>
</tr>
<tr>
<td>2 Bedroom</td>
</tr>
<tr>
<td>3 Bedroom</td>
</tr>
<tr>
<td><strong>Average Daily Flow (GPD)</strong></td>
</tr>
<tr>
<td><strong>Peaking Factor</strong></td>
</tr>
<tr>
<td><strong>Peak Daily Flow (GPD)</strong></td>
</tr>
<tr>
<td><strong>Peak Design Flow (GPM)</strong></td>
</tr>
</tbody>
</table>

*Sanitary sewer peaking factor obtained from MCES Water Resources Policy Plan. This peaking factor can be further reviewed if historical wastewater data for the City of Minnetonka becomes available.

There is currently an office building located at the project site. This office building will be completely removed prior to the construction of the Dominium project. An estimation of the amount of wastewater generated by the office building was completed to obtain the existing wastewater flow generated on site (flow pre-apartment complex). Wastewater flow for pre-apartment complex conditions was estimated by counting the parking spaces of the office building and multiplying it by several assumptions. The assumptions were that each employee drives its own vehicle to work and that each employee generates 10 gallons of wastewater per day. In doing this, it was calculated that an average of 4,170 gallons of wastewater per day (gpd) are being generated by the office building. By taking this wastewater flow into consideration, the net average wastewater flow increase generated on site once the apartment complex is constructed will be 100,220 gpd.

Given the plant’s treatment capacity and the estimated wastewater that will be generated at the apartment complex, it is anticipated that the wastewater generated at the apartments will not have significant impacts on the plant’s ability to effectively treat wastewater. Additionally, given the nature of the wastewater flow, domestic wastewater, specific pretreatment measures will not be required.
ii. **Stormwater** - Describe the quantity and quality of stormwater runoff at the site prior to and post construction. Include the routes and receiving water bodies for runoff from the site (major downstream water bodies as well as the immediate receiving waters). Discuss any environmental effects from stormwater discharges. Describe stormwater pollution prevention plans including temporary and permanent runoff controls and potential BMP site locations to manage or treat stormwater runoff. Identify specific erosion control, sedimentation control or stabilization measures to address soil limitations during and after project construction.

**Existing Conditions**

Under existing conditions the site contains an office building and parking lot with 5.2 acres of impervious surface. Existing runoff drains to catch basins in the parking lot and to the wetland south of Bren Road East. The stormwater is then discharged into the City of Minnetonka system. Runoff from 1.8 acres of the property west of the site flows to the project site and is collected in the site’s existing stormwater system. A portion of Bren Road East road runoff is also tributary to the project site. There are no existing stormwater ponds or infiltration basins on the site.

A HydroCAD Version 10.00-16 model was created to compare the existing and proposed discharge rates leaving the site. The model was based on a preliminary development design. Existing drainage patterns will be maintained post-project. The rate control comparison was made for the site improvements only and does not account for the rate control that is provided in the existing wetland in the northeast corner of the site. Site runoff will continue to outlet into the existing wetland in the northeast corner of the site. The City of Minnetonka storm sewer system conveys the runoff to the northeast.

<table>
<thead>
<tr>
<th>Storm</th>
<th>Discharge Rate (cfs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Year</td>
<td>22.3 cfs</td>
</tr>
<tr>
<td>10-Year</td>
<td>39.8 cfs</td>
</tr>
<tr>
<td>100-Year</td>
<td>78.7 cfs</td>
</tr>
</tbody>
</table>

**Proposed Conditions**

Proposed conditions will consist of multi-family residences, a parking lot and sidewalks with 5.7 acres of impervious surface. There are 5.2 acres of impervious for existing conditions. There is an anticipated increase of 0.5 acres in proposed impervious surfaces from existing conditions.
Table 11c shows the modeled results for proposed conditions.

<table>
<thead>
<tr>
<th>Storm</th>
<th>Discharge Rate (cfs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Year</td>
<td>22.3 cfs</td>
</tr>
<tr>
<td>10-Year</td>
<td>39.8 cfs</td>
</tr>
<tr>
<td>100-Year</td>
<td>78.7 cfs</td>
</tr>
</tbody>
</table>

Relevant Regulations and Considerations

NMCWD and the City of Minnetonka regulate stormwater runoff rate, volume and treatment. The City of Minnetonka also has design standards for storm sewer conveyance systems.

Based on a review of NMCWD and City of Minnetonka rules for the type of development proposed (redevelopment of an existing parcel that disturbs over 50 percent of the existing impervious surfaces), stormwater treatment for the site must meet the following criteria:

- Runoff rate control: limit the peak runoff flow rates to that from existing conditions for the 2-, 10-, and 100-year storm events for all points where stormwater leaves the parcel
- Runoff volume control: provide on-site retention of 1-inch of runoff from all impervious surfaces. Infiltration is preferred unless site conditions prevent infiltration. Where below-ground infiltration facilities, practices or systems are proposed, pretreatment of runoff must be provided
- Water quality treatment: provide for all runoff to be treated to at least 60 percent annual removal efficiency for total phosphorus and 90 percent total annual removal efficiency from total suspended solids.

A stormwater facility will need to be designed to retain 1-inch of runoff from the site and to provide water quality treatment to meet NMCWD and the City of Minnetonka requirements. The developer plans to include underground infiltration and irrigation reuse to manage stormwater within the site.

A Stormwater Pollution Prevention Plan (SWPPP) will need to be prepared in accordance with NPDES guidelines and the City of Minnetonka’s Stormwater Management criteria, and will be required to be submitted and approved prior to construction. Grading, drainage, and erosion control measures must be consistent with NMCWD’s Rules and the City of Minnetonka’s Surface Water Management Plan.

There will be no anticipated downstream environmental effects from the proposed project based on the project needing to meet state and local requirements.

iii. Water appropriation - Describe if the project proposes to appropriate surface or groundwater (including dewatering). Describe the source, quantity, duration, use
and purpose of the water use and if a DNR water appropriation permit is required. Describe any well abandonment. If connecting to an existing municipal water supply, identify the wells to be used as a water source and any effects on, or required expansion of, municipal water infrastructure. Discuss environmental effects from water appropriation, including an assessment of the water resources available for appropriation. Identify any measures to avoid, minimize, or mitigate environmental effects from the water appropriation.

The Dominium project will be connecting to the City of Minnetonka’s existing distribution system. The existing system is made up of 16 production wells, and 260 miles of water mains. Groundwater pumped by production wells is chemically treated at 8 different plants and temporarily stored in 9 tanks (12 MG of total storage capacity). On average, the existing system delivers a daily flow of approximately 8 MG. Wells likely serving the apartment complex will be 13, and 13A due to their proximity with the project site. Specific appropriations for surface water and groundwater will not be needed since the apartment complex will be connecting to the existing distribution system.

It is important to note that the project area is located inside Edina’s Drinking Water Supply Management Area (DWSMA) (DWSMA ID# 546). In terms of vulnerability, the area surrounding the project site is classified as low vulnerability. In addition to Edina’s DWSMA, the project site borders Minnetonka’s 13 DWSMA (DWSMA ID# 215). This area of the DWSMA is also classified as low vulnerable. Due to the nature of the building to be constructed at the project site (apartment complex) and the types of vulnerabilities of both DWSMAs, it is not foreseen that the aquifer beneath the project site is in any danger from being contaminated from pollutants originated at the apartment complex.

An estimation of the water flows for the Bren Road Apartments can be seen below.

### Table 11d. Water Flow Calculations

<table>
<thead>
<tr>
<th>Unit</th>
<th>Unit Value (Gal/Day/Person)</th>
<th>Unit Type</th>
<th># of Units</th>
<th>People/Bedroom</th>
<th>Flow, GPD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Bedroom</td>
<td>95</td>
<td>Residential</td>
<td>114</td>
<td>1.3</td>
<td>14,079</td>
</tr>
<tr>
<td>2 Bedroom</td>
<td>95</td>
<td>Residential</td>
<td>269</td>
<td>1.3</td>
<td>66,443</td>
</tr>
<tr>
<td>3 Bedroom</td>
<td>95</td>
<td>Residential</td>
<td>99</td>
<td>1.3</td>
<td>36,680</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Average Daily Flow (GPD) 117,202</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Peaking Factor 3.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Peak Daily Flow (GPD) 351,605</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Peak Design Flow (GPM) 244</td>
</tr>
</tbody>
</table>

*A conservative peaking factor value was used when calculating peak daily flow. This peaking factor can be further reviewed if historical water data for the City of Minnetonka becomes available.

Similar to the wastewater flow calculations, the existing office building has daily water consumption that needs to be estimated. Water usage by the office building was estimated by multiplying the number of parking spaces by a water usage assumption per employee and per parking spot. It was assumed that each employee drives its own vehicle to work and that each employee uses 12 gallons of water per day. In doing this, it was calculated that an average of 5,004 gallons of water per day are being used by the office building. By taking this water usage estimation into consideration, the net average
water usage increase on site once the apartment complex is constructed will be of 112,198 gpd. Given the water usage estimated for the project site once the apartment complex is constructed, expansion of the local distribution system will not be required at this time.

iv. Surface Waters

a) Wetlands - Describe any anticipated physical effects or alterations to wetland features such as draining, filling, permanent inundation, dredging and vegetative removal. Discuss direct and indirect environmental effects from physical modification of wetlands, including the anticipated effects that any proposed wetland alterations may have to the host watershed. Identify measures to avoid (e.g., available alternatives that were considered), minimize, or mitigate environmental effects to wetlands. Discuss whether any required compensatory wetland mitigation for unavoidable wetland impacts will occur in the same minor or major watershed, and identify those probable locations.

A wetland delineation was completed for the project site. There is approximately 0.88 acres of wetland on site (Figure 11). This wetland is categorized as PFO1A. This wetland is within the Open Space of the proposed development. No wetland impacts are expected with the project. However, if as design progresses, wetland impacts are anticipated, wetland impacts will be minimized to the greatest extent possible and reviewed through the local and federal wetland permitting processes.

b) Other surface waters - Describe any anticipated physical effects or alterations to surface water features (lakes, streams, ponds, intermittent channels, county/judicial ditches) such as draining, filling, permanent inundation, dredging, dikeing, stream diversion, impoundment, aquatic plant removal and riparian alteration. Discuss direct and indirect environmental effects from physical modification of water features. Identify measures to avoid, minimize, or mitigate environmental effects to surface water features, including in-water Best Management Practices that are proposed to avoid or minimize turbidity/sedimentation while physically altering the water features. Discuss how the project will change the number or type of watercraft on any water body, including current and projected watercraft usage.

No other surface waters exist on the project site or are anticipated to be impacted by the project.

12. Contamination/Hazardous Materials/Wastes:

a. Pre-project site conditions - Describe existing contamination or potential environmental hazards on or in close proximity to the project site such as soil or ground water contamination, abandoned dumps, closed landfills, existing or abandoned storage tanks, and hazardous liquid or gas pipelines. Discuss any potential environmental effects from pre-project site conditions that would be caused or exacerbated by project construction and operation. Identify measures to avoid, minimize or mitigate adverse effects from existing contamination or potential environmental hazards. Include development of a Contingency Plan or Response Action Plan.
Publicly available data from the Minnesota Pollution Control Agency (MPCA) database were reviewed to identify verified or potentially contaminated sites that may be encountered during proposed development within the six parcels (Figure 13). The following databases were reviewed:

- MPCA “What’s in My Neighborhood?” website
- MPCA Storage Tank Leak Site website
- US Department of Agriculture “What’s in My Neighborhood?” website

Three listings exist within the project area, and several other listings exist within 500 feet of the project area. The listings on the project site include Multiple Listings (Site 1) and Hazardous Waste (Sites 2, 3, and 4). The Multiple Listings site consists of two Construction Stormwater Permits. Within 1,000 feet, the listings include Hazardous Waste, Industrial Stormwater, and Multiple Listings.

Inclusion on the Construction Stormwater Permit database indicates a permit is in place to limit erosion and pollution during and after construction at the site. Inclusion on the Small Quantity Hazardous Waste Generator database indicates that a site generates 1-1,000 kilograms of hazardous waste per year.

Based on this review, the potential to encounter contaminated soil and/or groundwater at the proposed project area is low. If any contaminated soil/groundwater or hazardous material is encountered, necessary steps to remediate will be taken.

b. Project related generation/storage of solid wastes - Describe solid wastes generated/stored during construction and/or operation of the project. Indicate method of disposal. Discuss potential environmental effects from solid waste handling, storage and disposal. Identify measures to avoid, minimize or mitigate adverse effects from the generation/storage of solid waste including source reduction and recycling.

Development within these parcels will generate solid waste and construction debris normal to construction. Solid waste and construction debris will be disposed of in conformance with state standards. The demolition of the existing building located in the middle portion of the site will generate solid waste. This activity will be completed in conformance with state requirements and materials will be either recycled or hauled to an appropriate demolition landfill site.

The proposed development includes residential uses with no manufacturing or light industrial users planned. As a result, the waste generated should be of a similar nature to household wastes. Users will be required to recycle consistent with the city’s policies, and all recycling and solid waste disposal will be removed from the site by licensed haulers.

c. Project related use/storage of hazardous materials - Describe chemicals/hazardous materials used/stored during construction and/or operation of the project including method of storage. Indicate the number, location and size of any above or below ground tanks to store petroleum or other materials. Discuss potential environmental effects from accidental spill or release of hazardous materials. Identify measures to avoid, minimize or mitigate adverse effects from the use/storage of chemicals/hazardous materials including source reduction and recycling. Include development of a spill prevention plan.
Small amounts of hazardous materials typical of a construction site (e.g., fuel oil) will be stored in approved containers. As required by the NPDES Construction Stormwater Permit, the fuel containers will be required to have secondary containment by either being bermed or stored in a truck or other facility. Fuel trucks and any other hazardous material are required to be locked when not in use to avoid vandalism.

d. Project related generation/storage of hazardous wastes - Describe hazardous wastes generated/stored during construction and/or operation of the project. Indicate method of disposal. Discuss potential environmental effects from hazardous waste handling, storage, and disposal. Identify measures to avoid, minimize or mitigate adverse effects from the generation/storage of hazardous waste including source reduction and recycling.

Construction within any of the subject parcels will not involve the generation of significant amounts of hazardous wastes.

Once construction is completed, it is anticipated that the waste generated will be of similar nature to household wastes and will be disposed of similarly. There are no gas stations proposed that would include storing of hazardous materials.

13. Fish, wildlife, plant communities, and sensitive ecological resources (rare features):
   a. Describe fish and wildlife resources as well as habitats and vegetation on or in near the site.

   Current land cover consists mostly of buildings and pavement with 91-100 percent impervious cover, and a small portion of short grasses and mixed trees with 4-10 percent impervious cover. The only notable wildlife resources on site consist of the wetland and wooded area that surrounds it, which could contain habitat for waterfowl. No suitable fish habitat exists on site. There are no designated trout streams, Wildlife Management Areas, Waterfowl Production Areas, Wildlife Refuges, Reinvest in Minnesota (RIM) easements, wild rice lakes, or Outstanding Resource Value Waters (ORVWs) within any of the parcels. The Minnesota Land Cover Classification System (MLCCS) land cover data is shown in Figure 14. There are no Minnesota County Biological Survey (MCBS) or Areas of Ecological Significance within or near the Dominium Development.

   b. Describe rare features such as state-listed (endangered, threatened or special concern) species, native plant communities, Minnesota County Biological Survey Sites of Biodiversity Significance, and other sensitive ecological resources on or within close proximity to the site. Provide the license agreement number (LA-____) and/or correspondence number (ERDB #20180308) from which the data were obtained and attach the Natural Heritage letter from the DNR. Indicate if any additional habitat or species survey work has been conducted within the site and describe the results.

   A request for data was sent to the DNR on January 18, 2018. The DNR response shows no NHIS records or listings within project area or a 1-mile buffer. Additionally, the project area is categorized as a low potential zone for rusty patched bumblebees. Based on this review and a review of the site in its current developed condition, the project is anticipated to have no impact on rare or threatened species.
c. Discuss how the identified fish, wildlife, plant communities, rare features and ecosystems may be affected by the project. Include a discussion on introduction and spread of invasive species from the project construction and operation. Separately discuss effects to known threatened and endangered species.

The site currently contains commercial development. The planned development will result in the limited removal of vegetation and subsequent habitat, primarily in areas planned for development. The current site already contains a significant amount of impervious surface. The development is expected to occur on areas that are currently buildings, impervious surface, and landscaping. None of the site provides significant habitat to wildlife. The wetland on site is anticipated to be avoided at this time. Minor impacts that may occur will be minimized per requirements of the Wetland Conservation Act and US Corps of Engineers and vetted through the regulatory permitting process. Mitigation for wetland impacts would occur at a 2:1 ratio.

Invasive Species

The site may contain some invasive species, although no site-specific information is currently available.

The US Department of Agriculture’s National Invasive Species Information Center provides information regarding Best Management Practices to prevent or mitigate invasive species establishment or movement. Guidance for implementation at all parcels can be referenced at https://www.invasivespeciesinfo.gov/toolkit/preventionbmp.shtml. Appropriate actions such as cleaning equipment, chipping/destroying invasive species, and limiting and securing soil disturbances will help prevent the spread of the invasive/noxious species. If necessary, herbicide application to pockets of weed growth could be implemented during and after construction, especially if soil particles are staged, or left for future phases.

d. Identify measures that will be taken to avoid, minimize, or mitigate adverse effects to fish, wildlife, plant communities, and sensitive ecological resources.

The site concept plan has been designed to mostly avoid the wetlands on site. The plan does not include significant park or open space development. It is expected that development will occur on areas that are currently mostly impervious surface; as such, these areas are not of significant plant or wildlife resources, or of any sensitive ecological resources.

14. Historic properties:
Describe any historic structures, archeological sites, and/or traditional cultural properties on or in close proximity to the site. Include: 1) historic designations, 2) known artifact areas, and 3) architectural features. Attach letter received from the State Historic Preservation Office (SHPO). Discuss any anticipated effects to historic properties during project construction and operation. Identify measures that will be taken to avoid, minimize, or mitigate adverse effects to historic properties.

The State Historic Preservation Office was contacted regarding historic resources in the area. The review concluded that three historic/architectural sites, Bridges 27545 and 27546, and a farmstead are located near the project area (Appendix B). The bridges are located eastbound and westbound on Shady Oak Road over Trunk Highway 62. The farmstead is located on Feltl Road just south of
Smetana Road. The bridges are southwest of the project and the farmstead is located north of the project. No impacts to these resources are anticipated as a result of development in the project area.

15. Visual:
Describe any scenic views or vistas on or near the project site. Describe any project related visual effects such as vapor plumes or glare from intense lights. Discuss the potential visual effects from the project. Identify any measures to avoid, minimize, or mitigate visual effects.

The Dominium Development is located north of Trunk Highway 62 and west of Trunk Highway 169 and is surrounded by developed area. Development within the project area will be similar in nature to existing development in the area. Therefore, no visual impacts are anticipated. No vapor plumes or intense lighting will result from development of the subject parcels.

16. Air:

a. Stationary source emissions - Describe the type, sources, quantities and compositions of any emissions from stationary sources such as boilers or exhaust stacks. Include any hazardous air pollutants, criteria pollutants, and any greenhouse gases. Discuss effects to air quality including any sensitive receptors, human health or applicable regulatory criteria. Include a discussion of any methods used assess the project’s effect on air quality and the results of that assessment. Identify pollution control equipment and other measures that will be taken to avoid, minimize, or mitigate adverse effects from stationary source emissions.

No stationary sources of emission such as boiler or stacks are anticipated with development in the area.

b. Vehicle emissions - Describe the effect of the project’s traffic generation on air emissions. Discuss the project’s vehicle-related emissions effect on air quality. Identify measures (e.g. traffic operational improvements, diesel idling minimization plan) that will be taken to minimize or mitigate vehicle-related emissions.

The Dominium Development project is not anticipated to significantly impact traffic in the area. Additionally, there will be less than 2,000 parking stalls for the development (545 parking stalls are planned). The project is not anticipated to impact air quality as a result of vehicle related emissions.

c. Dust and odors - Describe sources, characteristics, duration, quantities, and intensity of dust and odors generated during project construction and operation. (Fugitive dust may be discussed under item 16a). Discuss the effect of dust and odors in the vicinity of the project including nearby sensitive receptors and quality of life. Identify measures that will be taken to minimize or mitigate the effects of dust and odors.

During construction, particulate emissions will temporarily increase due to generation of fugitive dust. Construction dust control is required to be in conformance with City of Minnetonka ordinances and the NPDES Construction Stormwater permit.

The construction and operation of the proposed site redevelopment is not anticipated to involve processes that would generate odors.
17. Noise:
Describe sources, characteristics, duration, quantities, and intensity of noise generated during project construction and operation. Discuss the effect of noise in the vicinity of the project including 1) existing noise levels/sources in the area, 2) nearby sensitive receptors, 3) conformance to state noise standards, and 4) quality of life. Identify measures that will be taken to minimize or mitigate the effects of noise.

The project site is located within a suburban area and is surrounded by both Trunk Highway 62 and Trunk Highway 169 freeways, office, industrial, and institutional development. Existing noise sources consist mainly of traffic on the area freeways and roadways.

Construction noise levels and types typical of construction equipment will occur as a result of this project. Construction noise will be limited to daytime hours consistent with the City of Minnetonka’s construction and noise ordinances (7 a.m. to 10 p.m. Monday-Sunday). Construction equipment will be fitted with mufflers that would be maintained throughout the construction process. The table below summarizes the peak noise levels of common types of roadway construction equipment.

<table>
<thead>
<tr>
<th>Equipment Type</th>
<th>Manufacturers Sampled</th>
<th>Total Number of Models in Sample</th>
<th>Peak Noise Level Range</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Backhoe</td>
<td>5</td>
<td>6</td>
<td>74-92</td>
<td>83</td>
</tr>
<tr>
<td>Front Loader</td>
<td>5</td>
<td>30</td>
<td>75-96</td>
<td>85</td>
</tr>
<tr>
<td>Dozer</td>
<td>8</td>
<td>41</td>
<td>65-95</td>
<td>85</td>
</tr>
<tr>
<td>Grader</td>
<td>3</td>
<td>15</td>
<td>72-92</td>
<td>84</td>
</tr>
<tr>
<td>Scraper</td>
<td>2</td>
<td>27</td>
<td>76-98</td>
<td>87</td>
</tr>
<tr>
<td>Pile Driver</td>
<td>N/A</td>
<td>N/A</td>
<td>95-105</td>
<td>101</td>
</tr>
</tbody>
</table>

Source: United States Environmental Protection Agency and Federal Highway Administration

There are no sensitive receptors (such as hospitals) near the site which raise special concerns for further study.

18. Transportation
a. Describe traffic-related aspects of project construction and operation. Include: 1) existing and proposed additional parking spaces, 2) estimated total average daily traffic generated, 3) estimated maximum peak hour traffic generated and time of occurrence, 4) indicate source of trip generation rates used in the estimates, and 5) availability of transit and/or other alternative transportation modes.

The site is currently developed and the proposed development would remove the existing building and parking areas. The proposed development would have 545 parking spaces. The trip generation for the proposed development is shown in the table below.
Trip Generation Rates are for mid-rise multi-family dwelling units from the 10th Edition of the ITE Trip Generation Manual.

This site is located near the proposed Southwest LRT line and the Opus Station is less than 200 feet from the proposed site. There is currently limited transit service to the site.

b. Discuss the effect on traffic congestion on affected roads and describe any traffic improvements necessary. The analysis must discuss the project’s impact on the regional transportation system. If the peak hour traffic generated exceeds 250 vehicles or the total daily trips exceeds 2,500, a traffic impact study must be prepared as part of the EAW. Use the format and procedures described in the Minnesota Department of Transportation’s Access Management Manual, Chapter 5 (available at: http://www.dot.state.mn.us/accessmanagement/resources.html) or a similar local guidance.

This development is located in the Opus Industrial Park. This area is governed by the Opus Overlay District which establishes trip generation limits for development in the park based on a traffic analysis of the surrounding roadway system. The site where this development is located was allocated 47 trips to the Bren Road/TH 169 Interchange assuming it would develop as commercial property. The ordinance specifically excludes residential development from the trip generation limits since the peak direction of traffic is opposite of the commercial uses in this district.

The Bren Road/TH 169 Interchange was determined to be the critical capacity constraint for traffic into and out of the park. The peak direction for traffic is inbound in the AM peak hour and outbound in the PM peak hour. As a commercial use it was assumed that the site would have about 37 inbound trips using the Bren Road/TH 169 Interchange in the AM peak hour and 37 trips outbound at the Bren Road and TH 169 Interchange in the PM peak hour. The other 10 trips allocated to this site would be in the non-peak direction. The proposed use would only have 14 trips inbound in the AM peak hour and 26 outbound in the PM peak hour at the Bren Road and TH 169 Interchange.

<table>
<thead>
<tr>
<th>Dwelling Units = 482 Apartments</th>
<th>AM Peak Hour</th>
<th>PM Peak Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Daily</td>
<td>Total</td>
</tr>
<tr>
<td>Trips/DU</td>
<td>5.44</td>
<td>0.36</td>
</tr>
<tr>
<td>Total Trips</td>
<td>2622</td>
<td>174</td>
</tr>
<tr>
<td>External to Opus</td>
<td>80%</td>
<td>2098</td>
</tr>
<tr>
<td>To Bren/TH 169 Interchange</td>
<td>40%</td>
<td>839</td>
</tr>
</tbody>
</table>

Trip Generation of Proposed Development

This development is located in the Opus Industrial Park. This area is governed by the Opus Overlay District which establishes trip generation limits for development in the park based on a traffic analysis of the surrounding roadway system. The site where this development is located was allocated 47 trips to the Bren Road/TH 169 Interchange assuming it would develop as commercial property. The ordinance specifically excludes residential development from the trip generation limits since the peak direction of traffic is opposite of the commercial uses in this district.

The Bren Road/TH 169 Interchange was determined to be the critical capacity constraint for traffic into and out of the park. The peak direction for traffic is inbound in the AM peak hour and outbound in the PM peak hour. As a commercial use it was assumed that the site would have about 37 inbound trips using the Bren Road/TH 169 Interchange in the AM peak hour and 37 trips outbound at the Bren Road and TH 169 Interchange in the PM peak hour. The other 10 trips allocated to this site would be in the non-peak direction. The proposed use would only have 14 trips inbound in the AM peak hour and 26 outbound in the PM peak hour at the Bren Road and TH 169 Interchange.
WSB also collected daily traffic counts on Bren Road just west of TH 169 to verify that current traffic volumes are within the thresholds assumed for the ordinance. The ordinance is based on a traffic analysis that has a Level of service “D” capacity of 3779 AM peak hour trips at this location with 2818 inbound and 961 outbound. In the PM peak hour, the study determined the Level of service capacity, which is a Level of Service D to be 3747 PM peak hour trips with 2675 outbound and 1072 inbound. The traffic counts show that there are currently 3749 AM peak hour trips at this location with 2969 inbound and 780 outbound. In the PM peak hour, there are a total of 3668 trips with 3048 outbound and 620 inbound. The proposed development would create fewer peak direction trips than the assumed use for this site and would still fall within the threshold for the capacity of this interchange.

WSB also collected daily traffic counts on Eastbound Bren Road adjacent to the site to verify that there would not be capacity issues at the site access points. This count shows there are 2497 trips per day on Bren Road East next to the site. This road is a one-way road with two lanes. This road can carry more than 10000 vehicles a day at a very high level of service. While this development would substantially increase the traffic on Bren Road East the traffic volumes will still be well below the capacity of this roadway. There is currently an at-grade crossing of Bren Road East at the southern boundary of the site. In the future, this at-grade crossing would provide access to the Southwest LRT station. Based on the volumes on Bren Road East it would be desirable to grade separate this crossing in the future. An alternative would be to maintain the at-grade crossing and provide additional enhancements such as a rectangular rapid flashing beacon (RRFB) or a High-Intensity Activated cross walk beacon (HAWK). The development plan should incorporate accommodation for future pedestrian crossings in this area.

c. **Identify measures that will be taken to minimize or mitigate project related transportation effects.**

Based on the information in the previous section it was concluded that there are no measures required to mitigate the projects transportation related effects. If the Southwest LRT line is developed as expected the actual trip generation for this site will likely be less than shown in the table, since it is based on surveys of similar developments in generally suburban locations with limited transit use.

**19. Cumulative potential effects:** (Preparers can leave this item blank if cumulative potential effects are addressed under the applicable EAW Items)

a. **Describe the geographic scales and timeframes of the project related environmental effects that could combine with other environmental effects resulting in cumulative potential effects.**

Development is expected to begin in 2018 and be completed in 2019. Redevelopment is occurring in some areas of the City around the area. The proposed Southwest Line Light Rail (SWLRT) extension and light rail station will be located immediately east of the proposed Dominium development. The SWLRT is expected to be in operation by 2023. An Environmental Impact Statement (EIS) has been completed for the SWLRT project.
b. Describe any reasonably foreseeable future projects (for which a basis of expectation has been laid) that may interact with environmental effects of the proposed project within the geographic scales and timeframes identified above.

There are no past projects whose footprints overlap with the Dominium Development project. Future projects need to be considered if the project is likely to occur and sufficient information is available to understand the possible cumulative impact. As stated, the SWLRT project and light rail station are proposed immediately east of the Dominium Development site. The EIS for the SWLRT included the potential that the rail line would spur redevelopment. Additionally, the City of Minnetonka has planned for redevelopment in this area through their Comprehensive Plan process. No other specific future projects are known at this time.

c. Discuss the nature of the cumulative potential effects and summarize any other available information relevant to determining whether there is potential for significant environmental effects due to these cumulative effects.

The Dominium Development project site as well as the surrounding areas are developed. Redevelopment is anticipated in the area, but there are no specific future projects known at this time. The SWLRT is proposed and cumulative potential effects have been evaluated as part of the EIS for the SWLRT project. General development in the area has been planned for in the City’s Comprehensive Plan.

20. Other potential environmental effects: If the project may cause any additional environmental effects not addressed by items 1 to 19, describe the effects here, discuss the how the environment will be affected, and identify measures that will be taken to minimize and mitigate these effects.

No additional environmental effects have been identified.

RGU CERTIFICATION. (The Environmental Quality Board will only accept SIGNED Environmental Assessment Worksheets for public notice in the EQB Monitor.)

I hereby certify that:
- The information contained in this document is accurate and complete to the best of my knowledge.
- The EAW describes the complete project; there are no other projects, stages or components other than those described in this document, which are related to the project as connected actions or phased actions, as defined at Minnesota Rules, parts 4410.0200, subparts 9c and 60, respectively.
- Copies of this EAW are being sent to the entire EQB distribution list.

Signature: [Signature]  Date: April 26, 2018

Title: City Planner
Appendix A

Figures
Figure 1: Project Location
- County Location
Dominium EAW
Minnetonka, MN

1 inch = 25,000 feet
Figure 2: Project Location - USGS Topographic Map
Dominium EAW
Minnetonka, MN

Project Location
Figure 3: Project Location

Aerial

Dominium EAW
Minnetonka, MN
Figure 5 : Existing Land Use
Dominium EAW
Minnetonka, MN
Figure 6: Existing Zoning

Dominium EAW
Minnetonka, MN
Figure 7: Parks and Trails

Dominium EAW
Minnetonka, MN
Figure 8 : Surficial Geology
Dominium EAW
Minnetonka, MN
Figure 9: Bedrock Geology

Dominium EAW
Minnetonka, MN

Bedrock Geology

- Platteville and Glenwood Formations
- St. Peter Sandstone

Project Location

1 inch = 500 feet
Figure 10: Soil Survey of Hennepin County
Dominium EAW
Minnetonka, MN

<table>
<thead>
<tr>
<th>Map unit symbol</th>
<th>Map unit name</th>
<th>Drainage class</th>
</tr>
</thead>
<tbody>
<tr>
<td>L22E</td>
<td>Lester loam, 10 to 22% slopes</td>
<td>Well drained</td>
</tr>
<tr>
<td>L25A</td>
<td>Le Sueur loam, 1 to 3% slopes</td>
<td>Somewhat poorly drained</td>
</tr>
<tr>
<td>L37B</td>
<td>Angus loam, 2 to 6% slopes</td>
<td>Well drained</td>
</tr>
<tr>
<td>L60B</td>
<td>Angus-Moon complex, 2 to 5% slopes</td>
<td>Well drained</td>
</tr>
<tr>
<td>U1A</td>
<td>Urban land-Udorthents, wet substratum, complex 0 to 2% slopes</td>
<td>N/A</td>
</tr>
</tbody>
</table>

1 inch = 250 feet
Figure 11: Surface Water Resources
Dominium EAW
Minnetonka, MN

Legend:
- Project Location
- DNR Public Waters Inventory
- DNR National Wetlands Inventory
- FEMA Data
  - 100 Year Flood
  - 500 Year Flood
Figure 12: Well Locations and Groundwater Resources

Dominium EAW
Minnetonka, MN

1 inch = 500 feet

- Project Location
- 500 Ft Buffer
- Wells

DNR Depth to Water Table

<table>
<thead>
<tr>
<th>Depth (ft.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-10</td>
</tr>
<tr>
<td>&gt;10-20</td>
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<td>&gt;30-40</td>
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<tr>
<td>&gt;40-50</td>
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<td>&gt;50</td>
</tr>
</tbody>
</table>

- water
Figure 13: Potential Contamination Areas
Dominium EAW
Minnetonka, MN
Minnesota Land Cover Classification System

- 5-10% Impervious
- 11-25% Impervious
- 26-50% Impervious
- 51-75% Impervious
- 76-100% Impervious
- Short Grasses
- Maintained Tall Grass
- Forest
- Wetland Shrubs
- Tall Grasses
- Wetland Emergent Veg.
- Wetland Open Water
Dominium EAW
City of Minnetonka

July 12, 2018

Prepared by:
WSB
701 Xenia Avenue South – Suite 300
Minneapolis, MN 55416
Andi Moffatt amoffatt@wsbeng.com
763-287-7196
I. Administrative Background

Pursuant to Minnesota Rule 4410.4300, the City of Minnetonka has prepared an Environmental Assessment Worksheet (EAW) for the proposed Dominium Development. This Record of Decision addresses the State of Minnesota environmental review requirements as established in Minnesota Rule 4410.1700. Dominium Management is the project proposer for the EAW. The City of Minnetonka is the Responsible Governmental Unit (RGU).

The EAW was filed with the Minnesota Environmental Quality Board (EQB) and circulated for review and comments to the required EAW distribution list. A Notice of Availability for the initial EAW was published in the EQB Monitor on May 7, 2018. Notices of Availability and Press Releases were published in the Lakeshore Weekly News on May 10, 2018.

The public comment period ended June 6, 2018. Comments were received from the Department of Transportation (MnDOT), Metropolitan Council, Minnesota Pollution Control Agency (MPCA), and State Historic Preservation Office (SHPO). All comments were considered in determining the potential for significant environmental impacts. Summaries of the comments received and the City of Minnetonka’s responses to those comments are provided in Section III.

II. Findings of Fact and Conclusions

As to the need for an Environmental Impact Statement (EIS) on this project and based on the record in this matter, including the EAW and comments received, the City of Minnetonka makes the following Findings of Fact and Conclusions:

A. Project Description

Dominium proposes to redevelop an existing 9.4-acre commercial site in the City of Minnetonka to include 482 units of rental multi-family housing. The project is near the future Southwest Light Rail (SWLRT) and Opus Station and is located in the southwest corner of Bren Road East and Bren Road West.

B. Project History

- The project was subject to a mandatory EAW per Minnesota Rule 4410.4300 Subpt 19.D – Residential Development
- The EAW was distributed to the EQB and to the EQB mailing list on May 2, 2018.
- Public notices containing information about the availability of the EAW for public review were provided to the Lakeshore Weekly News on May 10, 2018.
- Hard copies of the EAW were provided for public review at Minnetonka City Hall and the Environmental Conservation Library. An electronic copy of the EAW was available on the City’s website.
- A notice was published for the EAW in the May 7, 2018 EQB Monitor. The public comment period ended June 6, 2018. Comments were received from the Department of Transportation (MnDOT), Metropolitan Council, Minnesota Pollution Control Agency (MPCA), and State Historic Preservation Office (SHPO). Copies of these comment letters are hereby incorporated for reference and included in Attachment A.

C. Criteria for Determining the Potential for Significant Environmental Effects.
Minnesota Rule 4410.1700, subp. 1, states “An EIS [Environmental Impact Statement] shall be ordered for projects that have the potential for significant environmental effects.” In deciding whether a project has the potential for significant environmental effects, the City of Minnetonka must consider the four factors set out in Minnesota Rule 4410.1700, subp. 7. With respect to each of these factors, the City of Minnetonka finds the following:

1. MINNESOTA RULE 4410.1700, SUBP. 7.A - TYPE, EXTENT, AND REVERSIBILITY OF ENVIRONMENTAL EFFECTS

   a. The type of environmental impacts and mitigation efforts anticipated as part of this project include:

      Land Use: The current Comprehensive Plan designates the future land use as Mixed Use. This land use is compatible with the project and with adjacent land uses.

      Soil Disturbance: The project will involve soil disturbance. A National Pollutant Discharge Elimination System (NPDES) permit will be required and erosion control best management practices (BMPs) such as silt fence, inlet protection, and a stabilized construction entrance will be in place during construction to reduce sedimentation and prevent erosion from the site. A permit from the Nine Mile Creek Watershed District (NMCWD) will also be needed.

      Wetlands: No wetland impacts are expected with the project. However, if as design progresses, wetland impacts are anticipated, wetland impacts will be minimized to the greatest extent possible and reviewed through the local and federal wetland permitting processes.

      Wastewater – Additional sewer will be installed within portions of the site to serve the new development. The City is working with the developer to reconfigure the sewer system in the area to split flows between the Opus Lift Station and the gravity station. However, given the plant’s treatment capacity and the estimated wastewater that will be generated at the apartment complex, it is anticipated that the wastewater generated at the apartments will not have significant impacts on the plant’s ability to effectively treat wastewater. Additionally, given the nature of the wastewater flow, domestic wastewater, specific pretreatment measures will not be required.

      Water Supply: Water to the Dominium development will be connecting to the City of Minnetonka’s existing distribution system. Similar to the wastewater flow calculations, the existing office building has daily water consumption that needs to be estimated. It was estimated that an average of 5,004 gallons of water per day are being used by the existing building. By taking this water usage estimation into consideration, the net average water usage increase on site one the apartment complex is constructed will be 112,198 gpd. Given the water usage estimated for the project site once the apartment complex is constructed, expansion of the local distribution system will not be required at this time.

      The project area is located inside Edina’s Drinking Water Supply Management Area (DWSMA) (DWSMA ID #546). In terms of vulnerability, the area surrounding the project site is classified as low vulnerability. In addition to Edina’s DWSMA, the project site borders Minnetonka’s DWSMA #215. This area of the DWSMA is also classified as low vulnerability.
**Stormwater:** A stormwater facility will need to be designed at the site to retain 1-inch of runoff from the site and to provide water quality treatment to meet NMCWD and the City of Minnetonka requirements. The development plans to include underground infiltration and irrigation reuse to manage stormwater within the site. There will be no anticipated downstream environmental effects from the proposed project based on the project needing to meet state and local requirements.

**Wildlife:** The DNR Natural Heritage Database has indicated that there are no records or listings within the project area or a 1-mile buffer. Based on this review and a review of the site in its current developed conditions, the project is anticipated to have no impact on rare or threatened species.

**Noise:** The project site is located within a suburban area and is surrounded by both Trunk Highway (TH) 62 and TH169 freeways, office, industrial, and institutional development. Existing noise sources consist mainly of traffic on the area freeways and roadways. There are no sensitive receptors (such as hospitals) near the site which raise special concerns for further study; however, construction noise will be limited consistent with the City of Minnetonka’s noise ordinance.

**Transportation:** The city has performed a number of studies to manage traffic within the Opus business park and the interchanges of the adjacent regional freeway systems at TH62 and TH169. The baseline for these studies are managing the Bren Road and TH169 interchange capacity. Prior to 2006, the Bren Road and TH169 interchange was essentially operating at PM peak hour capacity. Without improvements to increase that capacity, the city could not approve development projects that would decrease the level of service.

In 2006, United Health Group (UHG), the largest employer in Opus, proposed an expansion of its campus located just south and west of the Bren Road and TH169 interchange. The expansion would include two 10-story buildings comprising 650,000 sf and an additional 5,400 daily trips. As proposed, the expansion would have exceeded the PM peak hour capacity of the Bren Road and TH169 interchange. In addition to the UHG expansion, the city was also evaluating other pending development proposals which would also increase regional system trips.

In anticipation of those developments, the city prepared a traffic study for both phases of the United Health Group Data Park Expansion as part of the site master planning. This study also satisfied the transportation related questions for the project’s required EAW at the time. The following traffic studies helped inform this study:

- Minnetonka Mixed-Use Development Traffic Study - February 28, 2006 - 36,000 sf mixed use development
- American Medical Systems Traffic Study, March 22, 2006 - 50,000 sf office development
- Opus Traffic Study, May 1, 2006 - 238,000 sf office development
- UHG Expansion Traffic Study, October 16, 2006 - Phase I 360,000 sf office, Phase II 300,000 sf of office
To better plan for future redevelopment and growth in Opus, the city committed to improving the interchange in 2009. The improved interchange was designed to accommodate all future growth identified in the city’s 2030 Comprehensive Plan. After accounting for all approved and proposed development, there was a reserve capacity of 789 PM peak hour trips which was allocated to the parcels in the Opus Overlay District.

As a long-term management tool, the city developed the Opus Area Overlay Ordinance to control the distribution of the reserve PM peak hour capacity by parcel. The ordinance allots the 789 PM peak hour trips to the parcels within the Opus Overlay area. The potential traffic growth in the travel-shed for the interchange is limited to the area of the Overlay Ordinance and therefore the ordinance ensures that the capacity of the interchange will not be exceeded.

Copies of the different traffic studies and the ordinance are available from at the city. From all the past traffic study and subsequent ordinance that the city put in place to address traffic and development in this area, this information satisfies and replaces the need for an additional traffic study for the Dominium EAW.

The Dominium project is a redevelopment project. Based on the Opus Overlay ordinance, the proposed development would create fewer peak direction trips than the site is allocated within the ordinance and would still fall within the threshold for capacity at the Bren Road and TH169 interchange.

b. The extent and reversibility of environmental impacts for the proposed project are consistent with those of a typical residential development project. Impacts will be minimized to the extent practical, with mitigation provided for those impacts which cannot be avoided to resources.

2. MINNESOTA RULE 4410.1700, SUBP. 7.B - CUMULATIVE POTENTIAL EFFECTS OF RELATED OR ANTICIPATED FUTURE PROJECTS

Development is expected to begin in 2018 and be completed in 2019. Redevelopment is occurring in some areas of the city around the area. The proposed Southwest Line Light Rail (SWLRT) extension and light rail station will be located immediately east of the proposed Dominium development. The SWLRT is expected to be in operation by 2023. While redevelopment is likely to occur around the SWLRT, as identified in the SWLRT EIS, there are no specific known redevelopment occurring around the Dominium project that would interact with the project.

3. MINNESOTA RULE 4410.1700, SUBP. 7.C - THE EXTENT TO WHICH ENVIRONMENTAL AFFECTS ARE SUBJECT TO MITIGATION BY ONGOING PUBLIC REGULATORY AUTHORITY

a) The following permits or approvals will be required for the project:

<table>
<thead>
<tr>
<th>Unit of Government</th>
<th>Type of Application</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Federal</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>US Army Corps of Engineers</td>
<td>Section 404 Permit</td>
<td>To Be Obtained, if needed</td>
</tr>
<tr>
<td><strong>State</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Department of Natural Resources</td>
<td>Water Appropriation Permit</td>
<td>To Be Obtained, if needed</td>
</tr>
<tr>
<td>Pollution Control Agency</td>
<td>NPDES Construction Permit</td>
<td>To Be Obtained</td>
</tr>
</tbody>
</table>
b) The City of Minnetonka finds that the potential impacts identified as part of the proposed Dominium project are minimal and can be addressed through the regulatory agencies as part of the permitting process. As a result, additional analysis of these impacts is not required.

4. MINNESOTA RULE 4410.1700, SUBP. 7.D - THE EXTENT TO WHICH ENVIRONMENTAL EFFECTS CAN BE ANTICIPATED AND CONTROLLED AS A RESULT OF OTHER AVAILABLE ENVIRONMENTAL STUDIES UNDERTAKEN BY PUBLIC AGENCIES OR THE PROJECT PROPOSER, INCLUDING OTHER EISs.

The city finds:

1. The proposed project is reasonably similar to other mixed-use development projects.

2. The city is planning for development with its Comprehensive Plan process. Development is required to meet the city’s local planning and permitting requirements.

3. Development impacts within the city are subject to local, regional, state, and federal requirements.

4. Considering the results of environmental review and permitting processes for similar projects, the City of Minnetonka finds that the environmental effects of the project can be adequately anticipated, controlled, and mitigated.

D. CONCLUSIONS

The Dominium EAW and comments received have generated information adequate to
determine that the proposed project does not have the potential for significant environmental effects.

The EAW has identified areas where the potential for environmental effects exist, but appropriate mitigation measures can be incorporated into the project plans and the required approvals and permits to mitigate these effects will be obtained. The project will comply with all local, county, and federal review agency requirements.

Based on the criteria established in Minnesota Rule 4410.1700, the project does not have the potential for significant environmental effects.

Based on the Findings of Fact and Conclusions, the project does not have the potential for significant environmental impacts.

Therefore, an EIS is not required for the Dominium Area Development.

III. AGENCY COMMENTS AND CITY OF MINNETONKA’S RESPONSES

A 30-day comment period for the Dominium EAW ended on June 6, 2018. Comments were received from Department of Transportation (MnDOT), Metropolitan Council, Minnesota Pollution Control Agency (MPCA), and State Historic Preservation Office (SHPO). Responses are provided below. These letters are included in Attachment A.

Minnesota Department of Transportation

Comment 1: A traffic study is required, as the development is expected to generate more than 2,500 trips per day. The study should include the interchanges of US 169/Bren Rd and MN 62/Shady Oak Rd. MnDOT guidance on traffic impact studies can be found in Chapter 5 of the Access Management Manual.

Response 1: The city met with MnDOT and Met Council on June 11, 2018 to discuss the comments that a traffic study was needed. The City has completed numerous traffic studies for the larger regional area and has adopted an ordinance that allocates trips to development sites to stay within the range of the previous traffic studies. The city has provided a summary of the past traffic studies that were completed in the area to MnDOT and Met Council on July 12, 2018. Based on these studies, the city does not think that additional traffic studies will provide meaningful information to the city or to the agencies. The Dominium site meets the requirement of the overlay ordinance for the area and therefore a traffic study is not needed. The city will continue to work with and coordination with these agencies to address traffic concerns.

Comment 2: Permits: Any use of or work within or affecting MnDOT right of way requires a permit. Permit forms are available from MnDOT’s utility website.

Response 2: Work in MnDOT Right-of-Way is not expected for this project. If it is needed, a permit will be obtained.

Metropolitan Council

Comment 1: Item 18 – Transportation. The Met Council understands that the City is aware of the need to complete a traffic impact study as part of the EAW. EQB rules require such a study to be complete expected to generate more than 2,500 trips. In the
case of the Dominium project, the estimated total daily trips is 2,622. In
particular, the traffic impact study should analyze impacts on the interchanges of
Trunk Highway 62 and Shady Oak Road as well as U.S. 169 and Bren Road W.

**Response 1:** The city met with MnDOT and Met Council on June 11, 2018 to
discuss the comments that a traffic study was needed. The City has completed
numerous traffic studies for the larger regional area and has adopted an
ordinance that allocates trips to development sites to stay within the range of the
previous traffic studies. The city has provided a summary of the past traffic
studies that were completed in the area to MnDOT and Met Council on July 12,
2018. Based on these studies, the city does not think that additional traffic
studies will provide meaningful information to the city or to the agencies. The
Dominium site meets the requirement of the overlay ordinance for the area and
therefore a traffic study is not needed. The city will continue to work with and
coordination with these agencies to address traffic concerns.

**Comment 2:** Item 9, Land Use - Forecasts (Todd Graham, 651-602-1322)
The project site is located in transportation analysis zone (TAZ) #1022. The
Metropolitan Council's preliminary set of forecasts includes an increase of just 51
1 households from 2014 to 2040. Council staff expect that other housing
redevelopment will occur in this zone. We recommend that the City increase the
forecast allocation for TAZ #1022 by 400 additional households and 900
population. This can be balanced with redistribution from other TAZs. This can be
reflected in your comprehensive plan update.

**Response 2:** The city will review this as part of the Comprehensive Plan update.

**Comment 3:** Item 9 - Land Use (Michael Larson, 651-602-1407). The project site is located
immediately adjacent to the future Opus Station on the METRO Green Line. The
1/2-mile station area will be subject to density and activity level policies of the
2040 Transportation Policy Plan (TPP) during the Council's review of the City's
comprehensive plan update. Among all areas that are planned for residential
redevelopment in the Opus Station Area, the TPP requires an average minimum
guiding density of 20 dwelling units per acre (du/acre). Evaluated on its own, the
proposed project meets this minimum standard at approximately 51 du/acre.
Please refer to the fact sheet in the Local Planning Handbook, Density and
Activity Near Transit, for additional guidance.

The EAW correctly identifies the current guiding land use in Minnetonka's
comprehensive plan as Mixed Use. The Opus area is identified in the City's
comprehensive plan as a Major Change Site with a minimum density of 20
du/acre. No upper limit is identified. Please note that any new guiding land uses
proposed in the forthcoming comprehensive plan amendment should include an
upper limit. We encourage the City to adopt a density range that goes beyond the
minimum, one which implements the target densities identified in the TPP (40-
75+ units/acre).

**Response 3:** The city will take this comment under advisement and review this
within its Comprehensive Plan process.

**Comment 4:** Item 18 – Transportation (Russ Owen, 651-602-1724). The traffic information
provided in the table suggests that the development will only generate 14
inbound trips in the AM peak hour and 26 trips in the PM outbound peak hour.
This likely underestimates the trip generation for those periods.
Response 4: See response to Comment #1.

Minnesota Pollution Control Agency (MPCA)

Comment 1: Water Resources (Item 11). The EAW does not contain specifics on the best management practices (BMPs) to be implemented. Due to an impaired water located within 1 mile of the Project, the Project proposer will need to implement Appendix A, Part C. 1 and 2 of the National Pollutant Discharge Elimination System/State Disposal System (NPDES/SDS) Construction Stormwater Permit (CSW permit), including stabilizing soils within 7 days of temporarily or permanently ceasing soil disturbing activity on any portion of the site and utilizing temporary sediment basins to control runoff during construction if 5 acres of disturbed soils will drain to one location. The Project proposer will also need to ensure adequate BMPs are used to protect the wetland on the site from sedimentation.

Response 1: The developer will need to apply and meet all permit requirements, including the NPDES permit. The developer will also ensure adequate BMPs and wetland protection measures are in place at the site.

Comment 2: Low Impact Design. The MPCA advocates the use of Low Impact Design (LID) practices to aid in the minimization of stormwater impacts. LID is a stormwater management approach and site-design technique that emphasizes water infiltration, values water as a resource, and promotes the use of natural systems to treat water runoff. Examples include: special ditches arranged in a series that soak up more water, vegetated filter strips at the edges of paved surfaces, trees or swales between rows of cars, residential or commercial rain gardens designed to capture and soak in stormwater, porous pavers, concrete and asphalt for sidewalks and parking lots, narrower streets, rain barrels and cisterns, and green roofs.

LID concepts may be found in the State of Minnesota Stormwater Manual dated November 2005 located on the MPCA website at: http://www.pcastate.mn.us/water/stormwater/stormwater-manual.html. In addition, the MPCA LID webpage provides a description and examples of LID features such as permeable pavement, rain gardens, and green roofs. Links to other resources on LID are available as well. The website is located at: https://www.oca.state.mn.us/water/stormwater-management-lowimpact-development-and-green-infrastructure.

Response 2: The developer will consider the use of Low Impact Design practices to minimize stormwater impacts.

Comment 3: Contamination/Hazardous Materials/Wastes (Item 12). This section of the EAW should provide information regarding the historical uses of the actual Project site, including the potential for soil or groundwater contamination as a result of those uses. This information is usually gathered during Phase I and Phase II investigations of projects prior to site development. State law requires that persons properly manage contaminated soil and water they uncover or disturb - even if they are not the party responsible for the contamination. Developers considering construction on or near contaminated properties should begin working early in their planning process with the MPCA's Brownfields Program to receive necessary technical assistance in managing contamination. For some properties, special construction might be needed to prevent the further
spreading of the contamination and/or prevent vapors from entering buildings or utility corridors. Information regarding the Brownfields Program can be found at: https://www.pca.state.mn.us/waste/brownfields. If contamination is found, it must be reported immediately to the state duty officer at 651-649-5451 or 800-422-0798.

Response 3: The city is not aware of contamination in the area, but will take this comment under advisement as development occurs in the area. The city may require review of a Phase I Environmental Site Assessment from the developer.

Comment 4: Noise (Item 17) The MPCA appreciates that the Project proposer plans to use mufflers on all construction equipment, and that noise will be limited to the daytime hours of 7 a.m. to 10 p.m. The MPCA does, however, have some additional comments.

The MPCA treats the state noise standards as a total standard. Considering the number of residential units being planned and the development's relative proximity to major roadways (Highway 62, Highway 169, and Shady Oak Road) and local office/business uses, there is some concern about post-construction noise in the residential development. Residences are considered to be under the strictest state noise standards, under Noise Area Classification (NAC) 1. State noise standards are receptor-based and are applied independently of municipal zoning.

The MPCA would like the City to keep in mind Minn. R. ch. 7030.0030, "Noise Control Requirement," which states "[a]ny municipality having authority to regulate land use shall take all reasonable measures within its jurisdiction to prevent the establishment of land use activities listed in noise area classification (NAC) 1, 2, or 3 in any location where the standards established in part 7030.0040 will be violated immediately upon establishment of the land use."

Thus, the MPCA encourages the City to conduct a noise monitoring study (instead of or in addition to modeling) in the proposed Project area prior to any final planning activities. We suggest doing so to allow for the avoidance or mitigation of any potential noise exceedances prior to final Project planning, as traffic and residential-related noise may increase after development occurs. For noise related questions, please contact Christine Steinwand at 651-757-2327 or Christine.Steinwand@state.mn.us.

Response 4: The City will consider a noise analysis to determine if any mitigation measures may be warranted.

State Historic Preservation Office
Comment 1: Based on our review of the project information, we conclude that there are no properties listed in the National or State Registers of Historic Places, and no known or suspected archaeological properties in the area that will be affected by this project.

Response 1: No response is needed.
June 5, 2018

Loren Gordon, City Planner  
City of Minnetonka  
14600 Minnetonka Boulevard  
Minnetonka, MN  55343

RE: City of Minnetonka Dominiun Environmental Assessment Worksheet (EAW)  
Metropolitan Council Review No. 21940-1  
Metropolitan Council District No. 3

Dear Mr. Gordon:

The Metropolitan Council received the EAW for the Dominiun project in Minnetonka on May 4, 2018. The proposed project is located 11001 Bren Road E. The proposed development consists of 9.4 acres acres with 482 units of multi-family rental housing.

Staff finds this EAW to be incomplete. Consequently, we are unable to determine at this time whether the project fully conforms with regional system plans and policies. We encourage you to issue a supplemental EAW to address the missing data.

Item 18 – Transportation (Russ Owen, 651-602-1724)
We understand that the City is aware of the need to complete a traffic impact study as part of the EAW. EGB rules require such a study to be completed when a development is expected to generate more than 2,500 trips. In the case of the Dominiun project, the estimated total daily trips is 2,622. In particular, the traffic impact study should analyze impacts on the interchanges of of Trunk Highway 62 and Shady Oak Road as well as U.S. 169 and Bren Road W.

We also offer the following comments for your consideration.

Item 9. Land Use - Forecasts (Todd Graham, 651-602-1322)
The project site is located in transportation analysis zone (TAZ) #1022. The Metropolitan Council’s preliminary set of forecasts includes an increase of just 511 households from 2014 to 2040. Council staff expect that other housing redevelopment will occur in this zone. We recommend that the City increase the forecast allocation for TAZ #1022 by 400 additional households and 900 population. This can be balanced with redistribution from other TAZs. This can be reflected in your comprehensive plan update.

Item 9. Land Use - Plans (Michael Larson, 651-602-1407)
The project site is located immediately adjacent to the future Opus Station on the METRO Green Line. The ½-mile station area will be subject to density and activity level policies of the 2040 Transportation Policy Plan (TPP) during the Council’s review of the City’s comprehensive plan update. Among all areas that are planned for residential redevelopment in the Opus Station Area, the TPP requires an average minimum guiding density of 20 dwelling units per acre (du/acre). Evaluated on its own, the proposed project meets this minimum standard at approximately 51 du/acre. Please refer to the
fact sheet in the Local Planning Handbook, Density and Activity Near Transit, for additional guidance.

The EAW correctly identifies the current guiding land use in Minnetonka’s comprehensive plan as Mixed Use. The Opus area is identified in the City’s comprehensive plan as a Major Change Site with a minimum density of 20 du/acre. No upper limit is identified. Please note that any new guiding land uses proposed in the forthcoming comprehensive plan amendment should include an upper limit. We encourage the City to adopt a density range that goes beyond the minimum, one which implements the target densities identified in the TPP (40-75+ units/acre).

**Item 18 – Transportation** (Russ Owen, 651-602-1724)
The traffic information provided in the table suggests that the development will only generate 14 inbound trips in the AM peak hour and 26 trips in the PM outbound peak hour. This likely underestimates the trip generation for those periods.

This concludes the Council’s review of the EAW. The Council will not take formal action on the EAW. If you have any questions or need further information, please contact Michael Larson, Principal Reviewer, at 651-602-1407.

Sincerely,

LisaBeth Barajas, Manager
Local Planning Assistance

CC:  Tod Sherman, Development Reviews Coordinator, MnDOT - Metro Division
     Jennifer Munt, Metropolitan Council District 3
     Michael Larson, AICP, Sector Representative / Principal Reviewer
     Raya Esmaeili, Reviews Coordinator
March 23rd, 2018

Loren Gordon
City of Minnetonka
14600 Minnetonka Boulevard
Minnetonka, MN 55435

SUBJECT: EAW18-009
Dominium Management
WB Exit Ramp to Shady Oaks Rd CSAH 61
Minnetonka, Hennepin County
Control Section 2773

Dear Mr. Gordon:

Thank you for the opportunity to review the Dominium Management Environmental Assessment. Please note that MnDOT’s review of this EAW does not constitute approval of a regional traffic analysis and is not a specific approval for access or new roadway improvements. As plans are refined, we would like the opportunity to meet with our partners and to review the updated information. MnDOT’s staff has reviewed the document and has the following comments:

Traffic:
A traffic impact study is required, as the development is expected to generate more than 2,500 trips per day. The study should include the interchanges of US 169/Bren Rd and MN 62/Shady Oak Rd. MnDOT guidance on traffic impact studies can be found in Chapter 5 of the Access Management Manual, located here: http://www.dot.state.mn.us/accessmanagement/docs/pdf/manualchapters/chapter5.pdf

For questions regarding these comments please contact Jason Junge at 651-234-7875 or jason.junge@state.mn.us.

Permits:
Any use of or work within or affecting MnDOT right of way requires a permit. Permit forms are available from MnDOT’s utility website: http://www.dot.state.mn.us/utility/forms.html. Please include one 11x17 plan set and one full size plan set with each permit application.

Please direct any questions regarding permit requirements to Buck Craig (651-234-7911) of MnDOT’s Metro Permits Section.

Review Submittal Options:
MnDOT’s goal is to complete the review of plans within 30 days. Submittals sent in electronically can usually be turned around faster. There are four submittal options. Please submit either:

1. An electronic .pdf version of the plans. MnDOT can accept the plans via e-mail at metroddevreviews.dot@state.mn.us provided that each separate e-mail is less than 20 megabytes.
2. A compact disc with the plans in .pdf format. The disc can be sent to:

   MnDOT – Metro District Planning Section
   Development Reviews Coordinator
   1500 West County Road B-2
3. A .pdf version of the plans sent to MnDOT’s external shared workspace site located at: https://mft.dot.state.mn.us Please contact MnDOT development review staff gain access to the shared workspace site. Also, please send a note to metrodevreviews.dot@state.mn.us indicating the file name and stating that the plans have been submitted on the shared workspace site.

4. If you are unable to send the plans electronically, please submit a set of full size plans to the above address.

If you have any questions concerning this review, please contact me at 651-234-7788.

Sincerely,

Jennifer Wiltgen
MnDOT Principal Planner

Copy sent via E-Mail:
Buck Craig, Permits
Nancy Jacobson, Design
Shane Rowbotham, Design
Hailu Shekur, Water Resources
Cameron Muhic, Bike-Ped
Doug Nelson, Right-of-Way
Russ Owen, Metropolitan Council
Jason Junge, Traffic
Natalie Ries, Noise
Andrew Lutaya, Area Engineer
June 6, 2018

Loren Gordon
City of Minnetonka
14600 Minnetonka Boulevard
Minnetonka, MN 55345

Re: Dominium Environmental Assessment Worksheet

Dear Loren Gordon:

Thank you for the opportunity to review and comment on the Environmental Assessment Worksheet (EAW) for the Dominium project (Project) in the city of Minnetonka, Hennepin County, Minnesota. The Project consists of construction of a multi-family housing development. Regarding matters for which the Minnesota Pollution Control Agency (MPCA) has regulatory responsibility or other interests, the MPCA staff has the following comments for your consideration.

Water Resources (Item 11)

Stormwater
- The EAW does not contain specifics on the best management practices (BMPs) to be implemented. Due to an impaired water located within 1 mile of the Project, the Project proposer will need to implement Appendix A. Part C. 1 and 2 of the National Pollutant Discharge Elimination System/State Disposal System (NPDES/SDS) Construction Stormwater Permit (CSW permit), including stabilizing soils within 7 days of temporarily or permanently ceasing soil disturbing activity on any portion of the site and utilizing temporary sediment basins to control runoff during construction if 5 acres of disturbed soils will drain to one location.

- The Project proposer will also need to ensure adequate BMPs are used to protect the wetland on the site from sedimentation. Questions regarding CSW permit requirements should be directed to Roberta Getman at 507-206-2629 or Roberta.Getman@state.mn.

Low Impact Design
The MPCA advocates the use of Low Impact Design (LID) practices to aid in the minimization of stormwater impacts. LID is a stormwater management approach and site-design technique that emphasizes water infiltration, values water as a resource, and promotes the use of natural systems to treat water runoff. Examples include:

- Special ditches, arranged in a series, that soak up more water
- Vegetated filter strips at the edges of paved surfaces
- Trees or swales between rows of cars
- Residential or commercial rain gardens designed to capture and soak in stormwater
- Porous pavers, concrete and asphalt for sidewalks and parking lots
- Narrower streets
- Rain barrels and cisterns
- Green roofs

In addition, the MPCA LID webpage provides a description and examples of LID features such as permeable pavement, rain gardens, and green roofs. Links to other resources on LID are available as well. The website is located at: [https://www.pca.state.mn.us/water/stormwater-management-low-impact-development-and-green-infrastructure](https://www.pca.state.mn.us/water/stormwater-management-low-impact-development-and-green-infrastructure).

**Contamination/Hazardous Materials/Wastes (Item 12)**

- This section of the EAW should provide information regarding the historical uses of the actual Project site, including the potential for soil or groundwater contamination as a result of those uses. This information is usually gathered during Phase I and Phase II investigations of projects prior to site development. State law requires that persons properly manage contaminated soil and water they uncover or disturb - even if they are not the party responsible for the contamination. Developers considering construction on or near contaminated properties should begin working early in their planning process with the MPCA’s Brownfields Program to receive necessary technical assistance in managing contamination. For some properties, special construction might be needed to prevent the further spreading of the contamination and/or prevent vapors from entering buildings or utility corridors. Information regarding the Brownfields Program can be found at: [https://www.pca.state.mn.us/waste/brownfields](https://www.pca.state.mn.us/waste/brownfields). If contamination is found, it must be reported immediately to the state duty officer at 651-649-5451 or 800-422-0798.

**Noise (Item 17)**

The MPCA appreciates that the Project proposer plans to use mufflers on all construction equipment, and that noise will be limited to the daytime hours of 7 a.m. to 10 p.m. The MPCA does, however, have some additional comments:

- The MPCA treats the state noise standards as a total standard. Considering the number of residential units being planned and the development’s relative proximity to major roadways (Highway 62, Highway 169, and Shady Oak Road) and local office/business uses, there is some concern about post-construction noise in the residential development. Residences are considered to be under the strictest state noise standards, under Noise Area Classification (NAC) 1. State noise standards are receptor-based and are applied independently of municipal zoning.

- The MPCA would like the City to keep in mind Minn. R. ch. 7030.0030, “Noise Control Requirement,” which states “[a]ny municipality having authority to regulate land use shall take all reasonable measures within its jurisdiction to prevent the establishment of land use activities listed in noise area classification (NAC) 1, 2, or 3 in any location where the standards established in part 7030.0040 will be violated immediately upon establishment of the land use.” Thus, the MPCA encourages the City to conduct a noise monitoring study (instead of or in addition to modeling) in the proposed Project area prior to any final planning activities. We suggest doing so to allow for the avoidance or mitigation of any potential noise exceedances prior to final Project planning, as traffic and residential-related noise may increase after development occurs. For noise related questions, please contact Christine Steinwand at 651-757-2327 or chris.steinwand@state.mn.us.
We appreciate the opportunity to review this Project. Please provide your specific responses to our comments and notice of decision on the need for an Environmental Impact Statement. Please be aware that this letter does not constitute approval by the MPCA of any or all elements of the Project for the purpose of pending or future permit action(s) by the MPCA. Ultimately, it is the responsibility of the Project proposer to secure any required permits and to comply with any requisite permit conditions. If you have any questions concerning our review of this EAW, please contact me by email at Karen.kromar@state.mn.us or by telephone at 651-757-2508.

Sincerely,

Karen Kromar
Project Manager
Environmental Review Unit
Resource Management and Assistance Division

cc: Dan Card, MPCA, St. Paul
    Roberta Getman, MPCA, Rochester
    Christine Steinwand, MPCA, St. Paul
    Teresa McDill, MPCA, St. Paul
June 5, 2018

Mr. Loren Gordon
City of Minnetonka
14600 Minnetonka Blvd
Minnetonka, MN 55345

RE: EAW - Dominium Redevelopment at SW corner of Bren Road E and Bren Road W
T117 R22 S36
Minnetonka, Hennepin County
SHPO Number: 2018-1921

Dear Mr. Gordon:

Thank you for providing this office with a copy of the Environmental Assessment Worksheet (EAW) for the above-referenced project.

Based on our review of the project information, we conclude that there are no properties listed in the National or State Registers of Historic Places, and no known or suspected archaeological properties in the area that will be affected by this project.

Please note that this comment letter does not address the requirements of Section 106 of the National Historic Preservation Act of 1966 and 36 CFR § 800. If this project is considered for federal financial assistance, or requires a federal permit or license, then review and consultation with our office will need to be initiated by the lead federal agency. Be advised that comments and recommendations provided by our office for this state-level review may differ from findings and determinations made by the federal agency as part of review and consultation under Section 106.

Please contact our Environmental Review Program at (651) 201-3285 if you have any questions regarding our review of this project.

Sincerely,

Sarah J. Beimers
Environmental Review Program Manager

cc: Andi Moffatt, WSB & Associates
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<th>Twp</th>
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<th>Sec</th>
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Minnesota Department of Natural Resources
Division of Ecological & Water Resources
500 Lafayette Road, Box 25
St. Paul, MN 55155-4025

February 27, 2018
Correspondence # ERDB 20180308

Mr. Matt Unmacht
WSB & Associates, Inc.
701 Xenia Avenue South, Suite 300
Minneapolis, MN 55416

RE: Natural Heritage Review of the proposed Dominium Development,
T117N R22W Section 36; Hennepin County

Dear Mr. Unmacht,

As requested, the above project has been reviewed for potential effects to known occurrences of rare features. Given the project details provided with the data request form, I do not believe the proposed project will negatively affect any known occurrences of rare features.

The Natural Heritage Information System (NHIS), a collection of databases that contains information about Minnesota’s rare natural features, is maintained by the Division of Ecological and Water Resources, Department of Natural Resources. The NHIS is continually updated as new information becomes available, and is the most complete source of data on Minnesota’s rare or otherwise significant species, native plant communities, and other natural features. However, the NHIS is not an exhaustive inventory and thus does not represent all of the occurrences of rare features within the state. Therefore, ecologically significant features for which we have no records may exist within the project area. If additional information becomes available regarding rare features in the vicinity of the project, further review may be necessary.

For environmental review purposes, the results of this Natural Heritage Review are valid for one year; the results are only valid for the project location (noted above) and the project description provided on the NHIS Data Request Form. Please contact me if project details change or for an updated review if construction has not occurred within one year.

The Natural Heritage Review does not constitute review or approval by the Department of Natural Resources as a whole. Instead, it identifies issues regarding known occurrences of rare features and potential effects to these rare features. If needed, please contact your DNR Regional Environmental Assessment Ecologist to determine whether there are other natural resource concerns associated with the proposed project. Please be aware that additional site assessments or review may be required.
Thank you for consulting us on this matter, and for your interest in preserving Minnesota's rare natural resources. Please include a copy of this letter in any state or local license or permit application. An invoice will be mailed to you under separate cover.

Sincerely,

Samantha Bump
Natural Heritage Review Specialist
Samantha.Bump@state.mn.us

Links: DNR Regional Environmental Assessment Ecologist Contact Info
http://www.dnr.state.mn.us/eco/ereview/erp_regioncontacts.html
OPUS DEVELOPMENT
ORIGINAL CONCEPT
NEW LIFE IN THE RAW FRONTIER

In the early 1800's, Minnesota was a vast tract of land inhabited only by various bands of Chippewa and Sioux Indians. Around the middle of the century things started to change. Settlers arrived in increasing numbers at St. Paul Landing, the recently designated political capitol for the large expanse of land between the St. Croix and Missouri Rivers.

After a short stay in St. Paul, many of the settlers moved further up river to the smaller village of St. Anthony, the sawmill town by the falls. St. Paul and St. Anthony, both raw frontier communities, offered the excitement, hustle and bustle characteristic of newly created boom towns.

The trail to points west led from these fledgling cities past Lake Calhoun, Lake Harriet, paralleled Minnehaha Creek and eventually ended in the rich farm land surrounding Lake Minnetonka. Those here for the purpose of homesteading or farming followed this trail westward in search of fertile land.

The area comprising Hopkins, Minnetonka, Edina and Eden Prairie soon was settled with families. Civilization had come to this newly instituted Territory of Minnesota. The areas that were populated by these pioneers eventually became towns and villages that still exist today.
The Township of Eden Prairie and Minnetonka came into existence in 1858. Eden Prairie's name was bestowed on it by Elizabeth Ellet, an author of national fame. She was impressed with the beautiful rolling prairies and likened them to her conception of the Garden of Eden. Others must have agreed with her as the township was officially chartered under the name of Eden Prairie in 1858.

About the same time, the Township of Minnetonka was officially chartered, taking its name from the large lake close by. The lake was originally named Peninsula Lake by Calvin Tuttle and Simon Stevens, earlier pioneers. Governor Alexander Ramsey later renamed it Minnetonka, a Sioux word meaning big water.

Hopkins, then a part of Minnetonka Township, had its beginning roughly around 1870. The Minneapolis and St. Louis Railway purchased right-of-ways across farmers' land for their line to St. Louis, Missouri. Once the line was completed, a station was constructed opposite the home of Harley Hopkins and was given the name of Hopkins. With the added growth brought by the railroad, Hopkins became an entity in its own right and in 1887 the village was formally incorporated and separated from Minnetonka Township.

In 1888, Edina followed suit, electing to make their settlement a separate village from that of Richfield. Andrew and John Craik, immigrants from the Old World and pioneers in the new Territory, had come to Minnesota from Edinburgh, Scotland. They opened a flour mill and named it Edina in honor of their homeland. It is from the Craik brothers' Edina flour mill that the village of Edina took its name.

From their first perilous foothold, these four cities grew and prospered. Today, they offer Minnesota a heritage rich in determination, vision and progress, a history as much a part of the present and future as it is of the past.

At the convergence of these four progressive communities, a new pioneering effort has begun. 410 acres of small truck farms and private estates that once belonged to the Minnesota Pioneers has been acquired by Rauenhorst Corporation. The land, located in Minnetonka, Edina, and Eden Prairie, and bordered by Hopkins, will be the site of a new innovative community geared to our modern way of working and living.
OPUS 2

There has long been a need for a new approach to community planning, especially on a large scale. Major cities, unlike smaller communities, are decades behind in responding to our present needs, work habits and life styles. Traffic systems and patterns can no longer handle the growing number of commuters. Present day transportation is producing a pollution problem that was undreamed of back in the 1950's and early 60's. Today's major cities are no longer people oriented.

Mr. Rauenhurst, aware of the direction community planning has taken in the last twenty years and of the problems that have resulted, devised an entirely new approach, one that was people oriented. He called it Opus 2.

Opus 2 combines the history of the past, needs of the present and the projected requirements of the future into a self-contained working/living center offering 95% of what is essential to life. It coordinates office, industrial, commercial and residential areas into an integral working/living environment able to provide jobs, recreation, housing, shopping, medical and cultural facilities. It is self-sustaining, making it profitable for companies to locate there, and it is convenient for commuting. Opus, which means creation, is an appropriate name to apply to this unusual approach to community planning.
A SEARCH SPARKS THE BEGINNING

Opus 2 went from concept to reality when Data 100 approached Rauenhorst Corporation to build new Corporate Headquarters, an office and plant facility. Rauenhorst was asked to find a suitable site within a designated area. Twenty-five acres were eventually located west of the Twin Cities bordered by Shady Oak Road, County Road 18 and Crosstown Highway 62. While in the process of acquiring the land for Data 100, Rauenhorst noticed that the adjoining acreage was also available. The area was ideal for the Opus 2 concept. The most important criteria were there: Proximity to the surrounding communities, existing access through roads and freeways and over 400 acres of undeveloped land in a suburban location. Rauenhorst Corporation decided to use this opportunity to implement Opus 2.
PREPARATION AND CONSERVATION

Much in-depth research was required concerning the environmental aspects of Opus 2's impact on the area. Independent studies were initiated to determine the feasibility of the automobile primary road system and the pedestrian traffic secondary road system concept as it related to the land use pattern. An environmental assessment was performed. Informal meetings were held with several different agencies, councils, commissions, and governments at the staff level including: the Nine Mile Creek Watershed District, the Environmental Quality Control Council, the Metropolitan Council, the Hennepin County Highway Department, the planning and engineering staffs of Edina, Eden Prairie, Hopkins, and Minnetonka, the Hennepin County Conservation Department and the Metropolitan Transit Commission.

Input received from these groups helped to determine the strength of each element of the Opus 2 concept and how well it would work with other elements of the plan. One of the main elements Rauenhorst Corporation considered during planning was preservation of the area's natural amenities. Rather than redesign the topography to fit the needs of Opus 2, Opus 2 has been designed to coordinate with the environment that already exists. Great care is being taken to preserve ecosystems such as wooded sections, marshes, knolls, valleys and natural water retention areas that enrich and enhance the environmental setting. It is this care and concern for the unspoiled beauty of the land that makes Opus 2 unique.
WORKING IN OPUS 2

Opus 2 is a staged development, taking an estimated ten years for completion. The industrial and office portions of Opus 2, consisting of 2 million square feet, are presently being developed. These will be coordinated with the 55,000 square foot neighborhood convenience shopping center, some residential housing and the 300,000 square foot multi-purpose service center.

Designed to fit today's working/living needs, Opus 2 offers many advantages not found elsewhere. Opus 2's location is nearly perfect for the businessman. Services such as restaurants, hotels, shopping centers, and some of the Twin Cities' greatest recreational facilities are located either in Opus 2 or are just moments away. Opus 2 is serviced by one of the metropolitan area's major arteries, Crosstown Highway 62, which puts the office, commercial and industrial areas of downtown Minneapolis, downtown St. Paul, the suburbs that circle the metropolitan area and the Minneapolis/St. Paul International Airport within minutes of the busy executive. Opus 2 is situated in the heart of the blue and white collar labor markets and is surrounded by four executive residential communities. Added to this, buildings constructed in Opus 2 are architecturally designed to meld with the environment, avoiding visual congestion and enhancing the natural scenic amenities.

As Opus 2 was being engineered, much thought was given to controlling traffic peaks, thus avoiding rush hour traffic jams. The result is a dual roadway system
that intra-connects Opus 2. It consists of a one-way primary roadway for standard automobiles and a two-way secondary roadway for pedestrian, bicycle traffic and electric vehicles. The two systems are totally separate and are bridged wherever they intersect. Traffic from the primary system can’t cross over or interfere with traffic on the secondary system. Counter-rotating traffic circles and the use of one-way streets in the primary system enable 50,000 vehicles to move in and out of Opus 2 daily without ever encountering oncoming vehicles, traffic signals or stop signs. This transportation system permits easy employee and customer access to all areas of Opus 2 in a continuous and uninterrupted fashion.

Opus 2 is in an ideal location for eventually connecting with mass transportation systems of the surrounding communities of Hopkins, Edina, Eden Prairie, Minnetonka, Minneapolis and St. Paul. Although Opus 2 is presently only minutes from these office, commercial and industrial areas, interconnected mass transportation will further tie Opus 2 into the Metropolitan business community.
LIVING IN OPUS 2

The central feature that blends the office, commercial and industrial portion of Opus 2 with the residential areas is the focal point of the working/living community, the multi-purpose service center. This structure, intended to serve Opus 2 and the surrounding area, will combine a number of uses on the same site. Proposed are high-value specialty shops, cultural facilities such as a community theater, an ecumenical chapel, dining establishments, police, fire and medical auxiliary services, all combined and located in a uniquely designed building.

Situated within casual walking distance of the multi-purpose service center will be a number of neighborhoods, each with its own architectural style and individual characteristics. They will be serviced by the same primary and secondary roadway system that intra-connects the office, commercial and industrial portions of Opus 2.

The treatment of the residential areas will reflect the Raunhorst Corporation commitment to preserve and enhance the natural environment. Exquisitely manicured grounds will accent the aesthetically designed buildings. Each neighborhood will vary in density and will be convenient to the office, commercial and industrial portions of Opus 2, as well as to the surrounding services, communities, mass transportation systems, parks and recreational areas. The housing will range from rental units to condominiums, providing a way of life that is both distinctive and elegant. Residents will enjoy comfort, beauty, quality and peace of mind living.

Opus 2 living is designed for the discriminating. The over one thousand units planned will provide the ultimate in modern living, offering a new vista in housing experience.
EXCITING CHALLENGES

Numerous challenges are presented by the Opus 2 project; corporate headquarters with adjacent housing, mixed professional, commercial, office, and research facilities, industrial condominiums, preservation of natural amenities, aesthetically designed buildings, new techniques of crime prevention through internal security systems, experimentation with energy supply, the primary/secondary roadway concept, mass transit systems and people movers. These are just a few of the exciting developments planned for Opus 2.

Intense research is presently underway concerning the last category, people movers. Proposed are electric vehicles. They would be advantageous to residents as they would adapt to the dual roadway concept, would cost a fraction of the present sub-compact car, both to purchase and to operate, and they would be non-polluting.

RAUENHORST CORPORATION AND OPUS 2

Opus 2 originated from Mr. Rauenhorst’s deep-seated conviction that he and his firm have a responsibility to society to research and create new methods and ideas for living and working. These new ideas are then implemented through the Rauenhorst Corporation concept of Total Responsibility which includes: site selection, architectural design, financing, development, engineering, construction, leasing, management and maintenance—all under one unified contract. As applied to Opus 2, the Total Responsibility concept has played a major role in helping to create a compatible working/living environment, developed and maintained along stringent standards, that will provide 95% of what is essential to life as well as ensure steadily increasing property values for your firm’s investment. Therefore, Opus 2 isn’t just another development. It’s a singular working/living experience at the crossroad of what was, and what ought to be.

OPUS 2—CROSSROADS OF TOMORROW, TODAY.
THE CITY OF MINNETONKA

Critical to the development of an enterprise such as Opus 2 is the understanding, and support of local governmental bodies during the planning, programming, and construction phases. We have been fortunate indeed to have had a cooperative endeavor emerge with a number of such governmental groups, but especially with the City of Minnetonka. Even as we wrote our Opus 2 brochure, events were moving forward with gratifying rapidity. Zoning of our industrial park and commercial areas was obtained, concept plan approval for the housing area of the plan was granted, and an industrial revenue bond issue providing for the timely completion of the industrial/commercial areas was authorized by the City Council.

We at Rauenhorst Corporation extend special thanks and appreciation to the Council, Planning Commission, and Staff of Minnetonka for their assistance in making the promise of Opus 2 a reality today.

[Signature]
Opus Housing
November 2017

Claremont Apts.
- 319 units (market)

South Hampton
- 115 units (affordable)

Elmbrook
- 46 units (affordable)

Cloud 9 Condos
- 164 units (mix)

RiZe at Opus Park
- 332 units (market/affordable)

The Mariner
- 246 units (market/affordable)

Dominium
- 454 units (affordable)

Townhomes of Shady Oak
- 74 units

Green Circle Condos
- 312 units

1,030 existing units
332 units under construction
700 units proposed

YoYo Donuts
- Coffee + Ice Cream

Lone Lake Park

Shady Oak Lake

Lone Lake Park

Minneapolis Marriott Southwest

Caribou Coffee

Chasewood Gates

International

Google Optum Corporate
PC MINUTES
Powers appreciated the developer making revisions because it shows intent. Requiring a plan to be harmonious is too much of a burden on the applicant.

*Sewall moved, second by Hanson, to recommend that the city council adopt the attached resolution with revisions provided in the change memo dated May 24, 2018 denying rezoning, master development plan, and building plans for the Ridgedale Executive Apartments.*

*Sewall, Hanson, and Kirk voted yes. Knight, O’Connell, and Powers voted no. Schack was absent. Motion carried.*

This item is scheduled to be reviewed by the city council at its meeting on June 4, 2018.

C. **Items concerning Bren Road Development, a multi-family residential development by Dominium, at 11001 Bren Road East.**

Chair Kirk introduced the proposal and called for the staff report.

Gordon reported. He recommended approval of the application based on the findings and subject to the conditions listed in the staff report.

Sewall confirmed with Wischnack that the SWLRT is proceeding.

Ryan Lunderby, representing Dominium, the applicant, stated that he appreciated the commission’s consideration and he was available for questions.

In response to O’Connell’s question, Mr. Lunderby stated that the credits would have a 15-year compliance period and an additional 15-year-extended use. The whole property would be managed by Dominium, but owned by two entities because of the financing for the two buildings. Closing on the properties and construction would happen at the same time.

Wischnack provided that $1,000 is the typical rent for a one-bedroom affordable unit, for a qualifying tenant earning less than 60 percent of area median income. The rent is set annually by HUD.

The public hearing was opened. No testimony was submitted and the hearing was closed.

In response to Hanson’s question, Gordon reviewed a graphic illustrating proposed trails and walkways. Wischnack added that an underpass would not be possible due to engineering constraints. Chair Kirk noted that the SWLRT station would have planned controlled crossing areas.

Chair Kirk favored developers providing funding in addition to park dedication fees for improvements linked to the proposal. A crossing at a road would benefit the development and SWLRT.
Chair Kirk asked if the St. Margaret’s cemetery could become a cut-through area. Gordon answered that that could happen. There is a fence, wooded area, and steep slope. It would not be an easy path to Shady Oak Road. Chair Kirk supports having a larger park in the area because of the potential pets.

Chair Kirk confirmed with Gordon that the Opus Station would have a park-and-ride area. Chair Kirk did not foresee a problem. The controlled entrance to the complex and its current design would be easier to modify into a controlled parking area if that would become necessary.

_Powers moved, second by Hanson, to recommend that the city council adopt the following related to the Bren Road Development, a multi-family residential development by Dominium, at 11001 Bren Road East:_

1) Ordinance rezoning the property from I-1, industrial, to PUD, planned unit development, and adopting a master development plan.

2) The resolution approving final site and building plans.

3) A motion making a negative declaration on the need for an Environmental Impact Statement.

4) The resolution declaring the proposal consistent with the comprehensive plan.

_Sewall, Hanson, Knight, O’Connell, Powers, and Kirk voted yes. Schack was absent. Motion carried._

This item is scheduled to be reviewed by the city council at its meeting on June 18, 2018.

9. Adjournment

_Sewall moved, second by Knight, to adjourn the meeting at 9:20 p.m. Motion carried unanimously._

By:

Lois T. Mason
Planning Secretary
PLAT AND VACATION
CADD files prepared by the Consultant for this project are instruments of the Consultant professional services for use solely with respect to this project. These CADD files shall not be used on other projects, for additions to this project, or for completion of this project by others without written approval by the Consultant. With the Consultant's approval, others may be permitted to obtain copies of the CADD drawing files for information and reference only. All intentional or unauthorized additions, or deletions to these CADD files shall be made at the full risk of that party making such revisions, additions or deletions and that party shall hold harmless and indemnify the Consultant from any & all responsibilities, claims, and liabilities.
KNOW ALL PERSONS BY THESE PRESENTS: That Minnetonka Leased Housing Associates II, LLLP, a Minnesota limited liability limited partnership, fee owner of the following described property situated in the County of Hennepin, State of Minnesota, to wit:

Lots 1 and 2, Block 1, OPUS 2 EIGHTH ADDITION.

Has caused the same to be surveyed and platted as DOMINIUM 2ND ADDITION, and does hereby dedicate to the public for public use the drainage and utility easements and utility easements as created by this plat.

In witness whereof said Minnetonka Leased Housing Associates II, LLLP, a Minnesota limited liability limited partnership, has caused these presents to be signed by its General Partner this _______ day of _________________________, 20______.

Minnetonka Leased Housing Associates II, LLLP
By: Minnetonka Leased Housing Associates II, LLC, its General Partner
By:_____________________________________________
Ryan J. Lunerby, Vice President

STATE OF MINNESOTA
COUNTY OF ________________

The foregoing instrument was acknowledged before me this _______ day of _________________________, 20______, by Ryan J. Lunerby, Vice President of Minnetonka Leased Housing Associates II, LLC, General Partner of Minnetonka Leased Housing Associates II, LLLP, a Minnesota limited liability limited partnership, on behalf of the partnership.

_____________________________________________
(Signature)
_____________________________________________
(Printed Name, Title)
Notary Public, ________________ County, Minnesota
My Commission Expires ________________________

SURVEYORS CERTIFICATION

I, Paul J. McGinley, do hereby certify that this plat was prepared by me or under my direct supervision; that I am a duly Licensed Land Surveyor in the State of Minnesota; that this plat is a correct representation of the boundary survey; that all mathematical data and labels are correctly designated on this plat; that all monuments depicted on this plat have been, or will be correctly set within one year; that all water boundaries and wet lands, as defined in Minnesota Statutes, Section 505.01, Subd. 3, as of the date of this certificate are shown and labeled on this Plat; and all public ways are shown and labeled on this plat.

Dated this _______ day of _________________________, 20______.

______________________________________________
Paul J. McGinley, Licensed Land Surveyor,
Minnesota License No. 16099

STATE OF MINNESOTA
COUNTY OF ________________

The foregoing instrument was acknowledged before me this _______ day of _________________________, 20______, by Paul J. McGinley, a Licensed Land Surveyor.

______________________________________________
(Signature)
______________________________________________
(Printed Name)
Notary Public, ________________ County, Minnesota
My Commission Expires January 31, 2020

MINNETONKA, MINNESOTA

This plat of DOMINIUM 2ND ADDITION was approved and accepted by the City Council of Minnetonka, Minnesota, at a regular meeting thereof held this _______ day of _________________________, 20______ if applicable, the written comments and recommendations of the Commissioner of Transportation and the County Highway Engineer have been reviewed by the City or the amended 30-day period has elapsed without receipt of such comments and recommendations, as provided by Minnesota Statutes, Section 505.01, Subdivision 2.

City Council, Minnetonka, Minnesota
______________________________________________
Mayor
______________________________________________
Clerk

RESIDENT AND REAL ESTATE DEPARTMENT, Hennepin County, Minnesota

I hereby certify that taxes payable in 20______ and prior years have been paid for land described on this plat, dated this _______ day of _________________________, 20______.

______________________________________________
Mark V. Chapin, County Auditor
Deputy

SURVEY DIVISION, Hennepin County, Minnesota

Pursuant to Minnesota Statutes Section 383B.565 (1969), this plat has been approved this _______ day of _________________________, 20______.

______________________________________________
Chris F. Mavis, County Surveyor

REGISTRAR OF TITLES, Hennepin County, Minnesota

I hereby certify that the within plat of DOMINIUM 2ND ADDITION was filed in this office the _______ day of _________________________, 20______, or within the time allowed by law.

______________________________________________
Martin McCormick, Registrar of Titles
Deputy
DENOTES "PK NAIL" FOUND.EARINGS ARE BASED ON THE WEST LINE OF LOT 1, BLOCK 1, OPUS 2 EIGHTH ADDITION HAVING A BEARING OF N0°42'29"W. DENOTES 1/2 INCH IRON MONUMENT CAPPED "LS 48988", UNLESS OTHERWISE SHOWN.

DENOTES "PK NAIL" SET.
DENOTES 1/2 INCH X 14 INCH IRON MONUMENT SET, MARKED "LS 16099".

SCALE IN FEET

0 40 80
Portion of Easement for public right-of-way purposes per Doc. No. 1188617 to be vacated.

That part of Outlot D, The Townhouses of Shady Oak, according to the plat thereof on file or of record in the office of the Registrar of Titles, Hennepin County, Minnesota which lies northeasterly of a line described as follows:

Commencing at the northeast corner of said Outlot D; thence on an assumed bearing of North 88 degrees 11 minutes 18 seconds West, along the north line of said Outlot D, a distance of 55.86 feet to the beginning of the line to be described; thence South 55 degrees 11 minutes 18 seconds East a distance of 11.95 feet; thence southeasterly, along a tangential curve concave to the southwest having a radius of 271.76 feet, to the easterly line of said Outlot D and said line there terminating and which lies within Lot 1, Block 1, Opus 2 Eighth Addition, according to the plat thereof on file or of record in the office of the Registrar of Titles, Hennepin County, Minnesota.

Utility Easement in the Western area of Lots 1 and 2, Block 1, Opus 2 Eighth Addition and within The Townhouses of Shady Oak to be Vacated.

That part of the 30 foot wide utility easement over Outlot C, as dedicated in the plat of The Townhouses of Shady Oak, embraced within Lots 1 and 2, Block 1, Opus 2 Eighth Addition, and the 35 foot wide Utility Easement over said Lots 1 and 2, as dedicated in the plat of Opus 2 Eighth Addition, according to the recorded plats thereof on file in the office of the Registrar of Titles, Hennepin County, Minnesota, except those parts of said utility easements lying within the south 10 feet of said Lot 2 and the northerly 15 feet of said Lot 1.
Ordinance No. 2018-
An ordinance rezoning the property at 11001 Bren Road East
From I-1, industrial, to PUD, planned unit development

The City Of Minnetonka Ordains:

Section 1.

1.01 The subject property at 11001 Bren Road East is hereby rezoned from I-1, industrial, to PUD, planned unit development.

1.02 The property is legally described as: Lots 1 and 2, Block 1, Opus 2 Eighth Addition.

Section 2.

2.01 This ordinance is based on the following findings:

1. The rezoning to PUD would result in the provision of workforce rental housing, which is a living option desirable to the city.

2. The rezoning would be consistent with the intent of the zoning ordinance and of the comprehensive guide plan.

3. The rezoning would be consistent with the public health, safety, and welfare.

2.02 This ordinance is subject to the following conditions:

1. The site must be developed and maintained in substantial conformance with the following plans:

   • Site Plan, dated April 6, 2018
   • Temporary Site and Future Entrance Plans, dated April 6, 2018
   • Grading Plan, dated April 6, 2018
   • Sanitary Sewer and Watermain Plan, dated April 6, 2018
   • Stormsewer Plan, dated April 6, 2018
   • Landscape Plan, dated April 6, 2018
• Building Elevations, dated April 6, 2018


Section 3. This ordinance is effective immediately.

Adopted by the city council of the City of Minnetonka, Minnesota, on July 23, 2018.

______________________________________________
Brad Wiersum, Mayor

Attest:

______________________________________________
David E. Maeda, City Clerk

**Action on this ordinance:**

Date of introduction: April 30, 2018
Date of adoption: July 23, 2018
Motion for adoption: 
Seconded by: 
Voted in favor of: 
Voted against: 
Abstained: 
Absent: 
Ordinance adopted.

Date of publication:

I certify that the foregoing is a true and correct copy of an ordinance adopted by the city council of the City of Minnetonka, Minnesota at a regular meeting held on July 23, 2018.

______________________________________________
David E. Maeda, City Clerk
Resolution No. 2018-
Resolution approving final site and building plans for a multi-family residential development at 11001 Bren Road East

Be it resolved by the City Council of the City of Minnetonka, Minnesota, as follows:

Section 1. Background.

1.01 Dominium Acquisition, LLC. has requested approval of final site and building plans for a three building, 482-unit rental housing development at 11001 Bren Road East.

1.02 The subject property is legally described as Lots 1 and 2, Block 1, Opus 2 Eighth Addition.

1.03 On May 24, 2018 the planning commission held a hearing on the proposal. The applicant was provided the opportunity to present information to the commission. The commission considered all of the comments received and the staff report, which are incorporated by reference into this resolution. The commission recommended the city council approve the final site and building plans.

Section 2. Site and Building Plan Standards and Findings.

2.01 City Code §300.27, Subd.5 outlines several items that must be considered in evaluation of site and building plans. Those items are incorporated by reference into this resolution.

2.02 The proposal would meet site and building plan standards outlined in the City Code §300.27, Subd.5.

1. The proposed high-density residential development is consistent with the general housing goals of the 2030 Comprehensive Guide Plan and the Plan's specific goal to provide additional housing in the OPUS area. Further, the proposal has been reviewed by city planning, engineering, and natural resources staff and found to be generally consistent with the city’s development guides, including the water resources management plan.

2. The proposal is consistent with the zoning ordinance.
3. The subject property is a developed site. The only "natural" area is a Type-1 wetland on the northeast corner. While the proposal would result in tree and soil removal, the wetland area would not be disturbed.

4. The proposal would result in a harmonious relationship of buildings, with open space generally located at the perimeter of the site.

5. The proposal would result in a unique and attractively-designed neighborhood.

6. The proposal includes installation of rooftop solar energy systems, capable of producing more than 562,000 kilowatts of energy per year. As new construction, the building code would require use of additional energy saving features within the buildings themselves.

7. The proposal would visually and physically alter the property and the immediate area. However, this change would occur with any redevelopment of the site, which the city has long anticipated.


3.01 City Code §300.28, Subd.20, outlines several standards for construction within code-defined steep slopes. Those standards are incorporated by reference into this resolution.

3.02 The proposal would meet the standards outlined in the City Code §300.28, Subd.20.

1. The property is physically suitable for the design and siting of the proposed development. The proposal would preserve significant natural features by minimizing disturbance to existing topographical forms.
   a) Retaining walls would be used as an alternative to banks of cut-and-fill. Cuts would be less than 25 feet in depth.
   b) Off-site views of the proposed retaining walls would generally be minimized.

2. The development would not result in soil erosion, flooding, severe scarring, reduced water quality, inadequate drainage control, or other problems.
   a) Construction would occur at the base of the slope.
   b) The proposal would not be located on an existing slope that has an average grade of 30 percent or more.

3. The proposed development provides adequate measures to protect
public safety.

a) As a condition of this resolution a construction phasing plan is required. The plan must detail the construction process for the proposed retaining walls.

b) The slope of driveway access would be less than 10 percent.

Section 4. City Council Action.

4.01 The above described site and building plans are hereby approved based on the findings outlined in Sections 2 and 3 of this resolution. Approval is subject to the following conditions:

1. Subject to staff approval, the site must be developed and maintained in substantial conformance with the following plans, except as modified by the conditions below:

   • Site Plan, dated April 6, 2018
   • Temporary Site and Future Entrance Plans, dated April 6, 2018
   • Grading Plan, dated April 6, 2018
   • Sanitary Sewer and Watermain Plan, dated April 6, 2018
   • Stormsewer Plan, dated April 6, 2018
   • Landscape Plan, dated April 6, 2018
   • Building Elevations, dated April 6, 2018

2. A grading permit is required. This permit will cover grading and installation of sewer, water, stormwater facilities and construction of retaining walls. Unless authorized by appropriate staff, no site work may begin until a complete grading permit application has been submitted, reviewed by staff, and approved.

   a) The following must be submitted for the grading permit to be considered complete.

      1) An electronic PDF copy of all required plans and specifications.

      2) Final site, grading, utility, stormwater management, landscape, and tree mitigation plans, and a stormwater pollution prevention plan (SWPPP) for staff approval.

         a. Final site plan. The plan must:

            • Illustrate all existing and proposed easements. No structural improvements are allowed within the easements. This includes pool, pool deck,
fencing, ramps, stairs, playgrounds, or other elements as outlined in city policy.

- Illustrate city approved public trail improvements on the east and north side of the property as outlined in the development agreement.

- Note the required wetland setbacks, as follows:

<table>
<thead>
<tr>
<th></th>
<th>Required Setback</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structures</td>
<td>35 feet</td>
</tr>
<tr>
<td>Patios</td>
<td>25 feet</td>
</tr>
<tr>
<td>Trails</td>
<td>20 feet</td>
</tr>
</tbody>
</table>

b. Final grading plan must:

- Illustrate that trails and sidewalks meet Americans with Disability Act (ADA) standards.

- Reevaluate grading near the east driveway. Runoff must be captured onsite to the greatest extent possible, rather than draining, untreated, to the city storm sewer system.

c. Final utility plan. The plans must:

- Note unused services removed back to the main.

- Illustrate watermain looping.

- Consider the existing fire hydrant in the southeast corner of the site. If the retaining wall in that area remains as per grading plan dated April 4, 2018, the existing fire hydrant must be shown as removed and replaced with a new hydrant in a new location.

- Verify watermain crossings with other utilities. Provide insulation as necessary and maintain a minimum 18 inches of vertical separation.

- Indicate replacement of existing sanitary MH 1.

- Verify that Building A requires separate north and south sewer services. The city would
prefer that the service be combined, resulting in just one connection to the public sewer.

- Verify that Building C requires separate east and west sewer services. The city would prefer that the service be combined, resulting in just one connection to the public sewer on the west side of the building.

d. Final stormwater management plan is required for the entire site’s impervious surface. The plan must demonstrate conformance with the following criteria:

  • Rate. Limit peak runoff flow rates to that of existing conditions from the 2-, 10-, and 100-year events at all points where stormwater leaves the site.

  • Volume. Provide for onsite retention of 1-inch of runoff from the entire site’s impervious surface.

  • Quality. Provide for all runoff to be treated to at least 60 percent total phosphorus annual removal efficiency and 90 percent total suspended solid annual removal efficiency.

In addition:

- The plan must include confirmed Southwest Light Rail Transit plans for storm sewer and other improvements along the east side of the subject property.

- Review drainage atop the west retaining wall. Confirm with a structural engineer whether additional drainage considerations need to be implemented to protect the wall’s integrity given the large drainage area that flows toward the wall.

- Provide evidence that the underground system will be able to support 83,000 pounds and 10,800 pounds per square foot outrigger load.

- The underground facilities must be inspected by a qualified third party during installation and that
party must verify that the pressure requirements are adequately met.

e. Final landscaping plan must:

1. Illustrate restoration of the wetland area and include final plant specifications, including any seed mixes.

2. Not include Colorado spruce. Substitute with another species of evergreen.

3. Include notation of project value and demonstrating the value of the proposed landscaping will meet code requirements.

4. Illustrate all deciduous trees planted no closer than 15 feet behind the curb of Bren Road East or 10 feet from the edge of public trails and sidewalks. Evergreen trees may be no closer than 20 feet behind the curb of Bren Road or 15 feet from the edge of public trails and sidewalks.

3) Revised truck turning exhibits. The plans must include the truck dimensions and wheelbase used.

4) A utility exhibit. The exhibit must show only property lines, buildings, sewer, water, storm sewer and underground stormwater facilities. The exhibit must clearly note:

<table>
<thead>
<tr>
<th>North-South Sanitary Main</th>
<th>PUBLIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing East-West Watermain</td>
<td>PUBLIC</td>
</tr>
<tr>
<td>New North-South Watermain</td>
<td>PRIVATE</td>
</tr>
<tr>
<td>Storm sewer</td>
<td>PRIVATE</td>
</tr>
<tr>
<td>Fire Hydrants</td>
<td>PRIVATE</td>
</tr>
</tbody>
</table>

5) A sanitary sewer bypass plan to be implemented during relocation of the public sanitary sewer.

b) Prior to issuance of a grading permit:

1) This resolution must be recorded at Hennepin County.

2) Obsolete utility easements must be vacated.

3) One of the following must occur:
a. The following easements must be dedicated:

- A utility easement over the relocated sanitary sewer line must be dedicated. Prior to recording, the easement document must be submitted for review and approval of the city attorney. The easement must be 40-feet wide and centered over the line.

- Secondary roadway easements over perimeter trails and underpass. Prior to recording, the easement document must be submitted for review and approval of the city attorney.

b. Preliminary and final plats must be approved and the final plat must be released for recording.

4) Park dedication in the amount of $2,410,000 must be submitted. The city may credit verified costs for construction of the north underpass and connection trail. The details for cost verification and crediting will be outlined in the contract for private development.

5) Submit the following:

a. Execute the contract for private development

b. A stormwater maintenance agreement in a city approved format for review and approval of city staff.

c. A private hydrant maintenance agreement in a city approved format for review and approval of city staff.

d. A construction phasing plan for staff review and approval. The plan must include details regarding construction of proposed retaining walls.

e. A MPCA Sanitary Sewer Extension permit or documentation that a permit is not required.

f. A MDH permit for the proposed water main construction.

g. A construction management plan. The plan must be in a city approved format and must outline minimum
site management practices and penalties for non-compliance.

h. Financial guarantees in the amount of 125% of a bid cost or 150% of an estimated cost to comply with grading permit and landscaping requirements and to restore the site. Staff is authorized to negotiate the manner in which site work and landscaping guarantees will be provided. The city will not fully release guarantee until: (1) as-built drawings and tie-cards have been submitted; (2) a letter certifying that the underground facility has been completed according to the plans approved by the city; (3) vegetated ground cover has been established; and (4) required landscaping or vegetation has survived one full growing season.

i. Evidence that an erosion control inspector has been hired to monitor the site through the course of construction. This inspector must provide weekly reports to natural resource staff in a format acceptable to the city. At its sole discretion, the city may accept escrow dollars, in an amount to be determined by natural resources staff, to contract with an erosion control inspector to monitor the site throughout the course of construction.

j. Cash escrow in an amount to be determined by city staff. This escrow must be accompanied by a document prepared by the city attorney and signed by the builder and property owner. Through this document the builder and property owner will acknowledge:

- The property will be brought into compliance within 48 hours of notification of a violation of the construction management plan, other conditions of approval, or city code standards; and
- If compliance is not achieved, the city will use any or all of the escrow dollars to correct any erosion and/or grading problems.

6) Install erosion control, and tree protection fencing and any other measures identified on the SWPPP for staff inspection. These items must be maintained throughout the course of construction.
7) Hold a preconstruction meeting with site contractors and city planning, engineering, public works, and natural resources staff. The meeting may not be held until all items required under 2(a) and 2(b)(5) of this resolution have been submitted, reviewed by staff, and approved.

8) Permits may be required from other outside agencies including, Hennepin County, the Nine-Mile Creek Watershed District, and the MPCA. It is the applicant’s responsibility to obtain any necessary permits.

3. Prior to issuance of any building permit, submit the following documents:

   a) A snow removal and chloride management plan.

   b) A construction management plan. This plan must be in a city approved format and outline minimum site management practices and penalties for noncompliance. If the builder is the same entity doing grading work on the site, the construction management plan submitted at the time of grading permit may fulfill this requirement.

   1) Cash escrow in an amount to be determined by city staff. This escrow must be accompanied by a document prepared by the city attorney and signed by the builder and property owner. Through this document the builder and property owner will acknowledge:

      • The property will be brought into compliance within 48 hours of notification of a violation of the construction management plan, other conditions of approval, or city code standards; and

      • If compliance is not achieved, the city will use any or all of the escrow dollars to correct any erosion and/or grading problems.

       If the builder is the same entity doing grading work on the site, the escrow submitted at the time of grading permit may fulfill this requirement.

4. Prior to issuance of a certificate of occupancy, the existing at grade crossing must be enhanced with either a rectangular rapid flashing beacon or a high-intensity activated crosswalk beacon, as required by the city engineer.

5. The property owner is responsible for replacing any required landscaping that dies.
6. Construction must begin by December 31, 2019, unless the planning commission grants a time extension.

Adopted by the City Council of the City of Minnetonka, Minnesota, on July 23, 2018.

Brad Wiersum, Mayor

Attest:

David E. Maeda, City Clerk

Action on this resolution:

Motion for adoption:
Seconded by:
Voted in favor of:
Voted against:
Abstained:
Absent:
Resolution adopted.

I hereby certify that the foregoing is a true and correct copy of a resolution adopted by the City Council of the City of Minnetonka, Minnesota, at a duly authorized meeting held July 23, 2018.

David E. Maeda, City Clerk

SEAL
Resolution No. 2018-

Resolution approving the preliminary and final plat of DOMINIUM 2nd ADDITION

Be it resolved by the City Council of the City of Minnetonka, Minnesota, as follows:

Section 1. Background.

1.01 Dominium Acquisition, LLC. has requested approval of preliminary and final plats of DOMINIUM 2nd ADDITION at 11001 Bren Road East.

1.02 The property is legally described as:

Lots 1 and 2, Block 1, OPUS 2 EIGHTH ADDITION

Section 2. General Standards.

2.01 City Code §400.030 outlines general design requirements for residential subdivisions. These standards are incorporated by reference into this resolution.

Section 3. Findings.

3.01 The proposed plats would meet the design standards as outlined in City Code §400.030.


4.01 The above-described preliminary and final plats are hereby approved, subject to the following conditions:

1. Prior to release of the final plat for recording, submit the following:

   a) Title evidence that is current within thirty days before release of the final plat.

   b) An electronic CAD file of the plat in microstation or DXF.
c) Three sets of mylars for city signatures.

2. Additional easements may be required by the city following the installation of public utilities.

3. This approval will be void on July 23, 2019, if: (1) a final plat is not recorded; and (2) the city council has not received and approved a written application for a time extension.

Adopted by the City Council of the City of Minnetonka, Minnesota, on July 23, 2018.

Brad Wiersum, Mayor

Attest:

David E. Maeda, City Clerk

Action on this resolution:

Motion for adoption:
Seconded by:
Voted in favor of:
Voted against:
Abstained:
Absent:
Resolution adopted.

I hereby certify that the foregoing is a true and correct copy of a resolution adopted by the City Council of the City of Minnetonka, Minnesota, at a duly authorized meeting held on July 23, 2018.

David E. Maeda, City Clerk
Resolution No. 2018-
Resolution vacating public right-of-way and utility easements at 11001 Bren Road East

Be it resolved by the City Council of the City of Minnetonka, Minnesota, as follows:

Section 1. Background.

1.01 Dominium Acquisition, LLC. has requested vacation of public right-of-way and utility easements at 11001 Bren Road East.

1.02 The easements are legally described as follows, to wit:

That part of Outlot D, The Townhouses of Shady Oak, according to the plat thereof on file or of record in the office of the Registrar of Titles, Hennepin County, Minnesota which lies northeasterly of a line described as follows:

Commencing at the northeast corner of said Outlot D; thence on an assumed bearing of North 88 degrees 11 minutes 18 seconds West, along the north line of said Outlot D, a distance of 55.86 feet to the beginning of the line to be described; thence South 55 degrees 11 minutes 18 seconds East a distance of 11.95 feet; thence southeasterly, along a tangential curve concave to the southwest having a radius of 271.76 feet, to the easterly line of said Outlot D and said line there terminating and which lies within Lot 1, Block 1, Opus 2 Eighth Addition, according to the plat thereof on file or of record in the office of the Registrar of Titles, Hennepin County, Minnesota.

and

That part of the 30 foot wide utility easement over Outlot C, as dedicated in the plat of The Townhouses of Shady Oak, embraced within Lots 1 and 2, Block 1, Opus 2 Eighth Addition, and the 35 foot wide Utility Easement over said Lots 1 and 2, as dedicated in the plat of Opus 2 Eighth Addition, according to the recorded plats thereof on file in the office of the Registrar of Titles, Hennepin County, Minnesota, except those parts of said utility easements lying within the south 10 feet of said Lot 2 and the northerly 15 feet of said Lot 1.

1.03 As required by law, a hearing notice on this request was published in the City of Minnetonka’s official newspaper.
1.04 On July 23, 2018, the city council held a hearing on the request, at which time all persons for and against the granting of the request were heard.

Section 2. Standards.

2.01 Section 12.06 of the City Charter states that “No vacation shall be made unless it appears in the interest of the public to do so...”

Section 3. Findings.

3.01 The Minnetonka City Council finds that the vacations are not counter to the public interest.


4.01 The city council vacates the easements as above-described.

4.02 These vacations are effective only upon the proper filing of DOMINIUM 2nd ADDITION and the dedication of additional easements over public utilities, as necessary.

Adopted by the City Council of the City of Minnetonka, Minnesota, on July 23, 2018.

_________________________________.
Brad Wiersum, Mayor

Attest:

_________________________________.
David E. Maeda, City Clerk

**Action on this resolution:**

Motion for adoption:
Seconded by:
Voted in favor of:
Voted against:
Abstained:
Absent:

I hereby certify that the foregoing is a true and correct copy of a resolution adopted by the City Council of the City of Minnetonka, Minnesota, at a duly authorized meeting held on July 23, 2018.

_________________________________.
David E. Maeda, City Clerk
Resolution No. 2018-
Resolution issuing a negative declaration of need for EIS
for the Dominium development at 11001 Bren Road East

Be it resolved by the City Council of the City of Minnetonka, Minnesota, as follows:

Section 1. Background.

1.01 The City of Minnetonka prepared an Environmental Assessment Worksheet (EAW) for the Dominium development pursuant to Minnesota Rules 4410.

1.02 The EAW was distributed to the agencies and public for the required 30-day comment period on May 7, 2018.

1.03 The 30-day comment period ended on June 6, 2018.

1.04 The preparation of the Dominium EAW and comments received on the EAW have generated information adequate to determine whether the proposed project has the potential for significant environmental impacts.

1.05 The EAW has identified areas where the potential for significant environmental effects exist, but appropriate measures have or will be incorporated into the project plan and/or permits to reasonably mitigate these impacts.

1.06 The Dominium development is expected to comply with all the City of Minnetonka and review agency standards.

1.07 Based on the criteria established in Minnesota Rules 4410.1700, the project does not have the potential for significant environmental effects.

1.08 Based on the Findings of Fact and Conclusions, the project does not have the potential for significant environmental impacts.

Section 2. City Council Action

2.01 The City Council of the City of Minnetonka hereby determines that an Environmental Impact Statement (EIS) for the Dominium development at 11001 Bren Road East is not required.

Adopted by the City Council of the City of Minnetonka, Minnesota, on July 23, 2018.

_______________________________________
Brad Wiersum, Mayor

Attest:
Resolution No. 2018-

David E. Maeda, City Clerk

Action on this resolution:

Motion for adoption:
Seconded by:
Voted in favor of:
Voted against:
Abstained:
Absent:
Resolution adopted.

I hereby certify that the foregoing is a true and correct copy of a resolution adopted by the City Council of the City of Minnetonka, Minnesota, at a duly authorized meeting held June 23, 2018.

David E. Maeda, City Clerk

SEAL
City Council Agenda Item #13B
Meeting of July 23, 2018

Brief Description
Items concerning a multi-family residential development by Dominium, at 11001 Bren Road East.

Recommendation
Recommend the city council adopt the following:

1) Resolution Establishing the Dominium Tax Increment Financing (TIF) District within the Opus Redevelopment Project by adopting a redevelopment plan, establishing a tax increment financing district and adopting a tax increment financing plan.

2) Resolutions approving the contracts for private redevelopment between the Economic Development Authority in and for the City of Minnetonka, the City of Minnetonka, and Minnetonka Leased Housing Associates II and III, LLLP for Senior and Workforce Housing.

3) Resolution authorizing a grant application through the Metropolitan Council Livable Communities Transit Oriented Design (TOD) Program.

Background
Dominium is proposing to redevelop the existing commercial property at 11001 Bren Road East. The concept plan contemplated redevelopment of the existing office building to construct a 6-story, 262-unit independent senior building and 220-units of affordable workforce rental housing within three 4 to 5-story buildings on a 9.8 acre site. The proposed 482 units would provide a housing density of 49 units per acre.

The concept plan included a mix of workforce and senior housing units ranging from one to three bedrooms. The developer is proposing that all units would consist entirely of affordable workforce and senior tenants (55+) earning up to 60% AMI (Area Median Income) (approximately $56,580 for a household of four or $45,300 for a two person household). The rents are structured to be capped at approximately 30% of the income level and are estimated to range from $1,062 for a one-bedroom, $1,273 for a two-bedroom, and $1,471 for a three-bedroom unit (before utility allowances).

Prior Meeting Review and Summary

EDAC (Economic Development Advisory Commission) Subcommittee Review – October 25, 2017

On October 25, EDAC Commissioners Isaacson, Yunker, and Jacobsohn met as a subcommittee to review the request using Council Policy 2.14, the council’s policy on TIF Financing as a guide for the assistance request. The EDAC subcommittee expressed that the
request for TIF assistance with 2% inflation was reasonable and concluded that it met the following criteria:

- The project is compatible with the Comprehensive Guide Plan as a proposed mixed-use development;
- The project would not occur “but for” the assistance;
- The project is in a high priority “village area” as identified in the Comprehensive Guide Plan;
  - Project is located in Opus and is a high priority “village area”
- The project includes affordable housing units, which meets the city’s affordable housing standards;
  - 100% of units with rents at 60% AMI.
- The proposed project amenities will benefit a larger area than identified in the development; and
- The project will maximize and leverage the use of other financial resources.
  - Developer is proposing a mix of financing sources.

In addition, the EDAC subcommittee provided feedback on items for the EDAC to consider at the November 27 meeting. The EDAC subcommittee requested the following additional information:

- The commissioners asked staff to prepare an analysis on the historical context of property value inflation on a sample of Minnetonka multifamily projects. Staff analyzed the historical property valuation on Belgrove (1988-2017), Boulevard Gardens (1998-2017), and Claremont (1988-2017). The Belgrove and Claremont both experienced a 14% cumulative increase in valuation while Boulevard Gardens experienced an 11% cumulative increase in valuation. Both the Belgrove and Claremont apartments experienced short timeframes with a decline in valuation year over year. However, the cumulative individual valuations for the three properties is positive.

- The commissioners requested information on the existing and proposed housing developments in OPUS. The attached map includes an overview of housing in Opus. There are currently 1,030 units of existing housing (red), 332 units under construction (yellow), and 700 proposed (blue). The Southwest LRT Housing Gaps Analysis recommended the following housing production in Opus in 2015-2030.
  - Rental
    - 120 units at 80-100% AMI
    - 340 units at 100%+ AMI
  - Ownership
    - 70 units entry-level
    - 70 units mid-market
  - Total of 600 rental and ownership units

In addition, Minnetonka has currently met 50% (122 units) of the city’s 2011-2020 Livable Communities Affordable housing goals for production of new affordable (rental and ownership) and 136% (509 units) of the new lifecycle housing as of 2017.

Lastly, recent housing data prepared for the 2040 comprehensive plan by Marquette Advisor’s indicated that Minnetonka lost approximately 2,200 units affordable to households earning <80% of the AMI between 2010 and 2015. It is anticipated that this trend will continue on
naturally occurring affordable housing (NOAH) properties as rents continue to rise, vacancy rates remain historically low, and new households enter the market.

**EDAC Review – November 27, 2017**

The EDAC reviewed the TIF financing request at the November 27 meeting. The EDAC generally concurred that the request for the 26-year TIF Housing District, with the inclusion of two-percent inflation, met the requirements of the TIF policy and that the request was consistent with the city’s treatment of similar projects. The commissioners did concur that the remaining $880,000 gap should be Dominium’s responsibility to solve. The attached unapproved minutes from the November 27, 2017 meeting cover the commissioner’s feedback in greater detail.

**City Council Review - December 4, 2017**

On Dec. 4, 2017, the city council discussed the initial concept plan and financing inquiry from Dominium. The discussion focused on the density, quality of construction, and height of the project, and the existing and proposed housing in Opus. The council expressed initial concern regarding the amount of affordable units in one project. However, the council members agreed that additional senior and workforce affordable housing would assist Minnetonka in meeting current and future housing demand. The council requested that staff research future trail, park planning, and retail opportunities in the area. Lastly, the council expressed the financial assistance request was reasonable for the size of the project and would further review the financial request as the project progresses.

**City Council Review of Bond Financing and MHFA Request - April 16, 2018**

- On Dec. 18, 2017, the council provided preliminary approval for the issuance of tax-exempt multifamily housing revenue bonds up to $120 Million to finance both the workforce units and the senior units. On Jan 9. 2018, the developer was awarded the bonding allocation from the state in the amount of $65 Million (which provided half of the financing for the project as anticipated) to finance the workforce and senior housing. The developer returned a portion of the workforce bond allocation and applied for a new bond allocation for the senior units in May 2018.

- On April 16, the developer requested that the city call a public hearing on the proposed tax-exempt multifamily revenue bonds in the amount of $36,500,000 for the senior housing. The developer also requested that the city issue a multifamily housing revenue note in the amount of $30,500,000 to provide short-term financing for the workforce housing (previously approved in December 2017). The council approved the issuance of the multifamily revenue bonds and issuance of the note at the April 16 meeting. Staff anticipates that bonds will be issued as permanent financing for the workforce project within one year (the bonds will refund the note and finance the remaining costs of the project). As part of this request, the city also adopted a housing program for workforce housing which is a requirement of the Federal Housing Act.

- On April 16, the developer also requested that the city council adopt supporting applications to Minnesota Housing Finance Agency (MHFA) for 4% Low Income Housing Tax Credits (LIHTC) in the amount of $35,623,000 to assist with financing both the workforce and senior housing. The council also approved the request to support the tax credit applications on April 16. The city’s finance director, Merrill King, recently reviewed
EDAC Feedback on the Contracts for Private Development – April 19, 2018

Ms. Eddington drafted the attached Contracts for Private Development that were developed based upon the requests for city assistance by the developer with feedback from the EDAC and city council. The workforce and senior contracts outline the major points associated with the TIF request as well as other expectations for the development.

TIF Assistance
- Commissioners inquired about the funding gap of approximately $880,000 that was indicated at the review on November 27, 2017. Staff confirmed that the additional gap (above the TIF request) was no longer an issue as the developer was able to secure additional sources to address the shortfall.

Declaration of Restrictive Covenants
- Commissioners inquired if the developer would be required to accept Section 8 vouchers/certificates.
  - Staff confirmed that language in the contracts specifically prohibits the developer from adopting policies prohibiting the acceptance of tenants with Section 8 housing vouchers/certificates.
  - Staff noted that other tax credit projects in the city have the same stipulation.
- Commissioners asked if both the senior and workforce housing would fall under the same income requirements.
  - Staff confirmed that all units in the senior and workforce housing would have the same 60% AMI requirements.
- The city’s EDA (Economic Development Authority) attorney, Julie Eddington of Kennedy and Graven, confirmed that the city typically requires 30 years of affordability even if the TIF district term is shorter. The proposed TIF district for Dominium is 26 years.

Events of Default
- Commissioners inquired about the status of the project if either the workforce housing or senior housing components were not constructed.
  - Ms. Eddington noted that language was added under the Events of Default section of each agreement to ensure both the workforce and senior housing components are constructed. If a default were to occur, the EDA could suspend TIF payments or terminate the agreement.

Commissioners unanimously recommended that the city council approve the contract for private development. Commissioner Johnson was absent from the meeting.

Final Contracts for Private Development Overview

Ms. Eddington drafted the attached Contracts for Private Development that were developed based upon the requests for city assistance by the developer with feedback from the EDAC and city council. The contract outlines the major points associated with the TIF request as well as other expectations for the development. Given that the workforce housing “Preserve at Shady
Oak” and the senior housing “Legends of Minnetonka” will have separate ownership entities, each project will have its own contract for private development.

Highlights of the Contracts for Private Development are listed below:

**Declaration of Restrictive Covenants**

- Given that the developer is requesting TIF assistance and utilizing tax credit financing through the MHFA, there are certain income and rent restriction requirements the developer must follow. The developer is proposing to make all 482 units affordable to those at 60% AMI or less. In addition, rent limits on those affordable units may not exceed 30% of the income calculated for that unit. Additionally, it has historically been the city’s position to require a minimum of 30 years of affordability.

  - Following the EDAC review of the contract on April 19, the developer requested adding a provision for “income averaging” as an option for determining household income of the overall mix of units. The provision allows the developer to rent to households with incomes up to 80% AMI as long as the total income calculation for all units in the project does not exceed 60% AMI. Recently, federal legislation introduced this option for the low-income housing tax credit program but MHFA did not include this provision for projects applying for tax credits in the 2018/2019 round. The developer may choose to use the income-averaging option if it is allowed in the future.

- Rents are anticipated to be $1,062 - $1,471 per month (depending on the size of the unit). At 60% AMI, the maximum estimated annual income allowable for one person is approximately $39,600 ($19.03/hourly). For a four-person household, the estimated annual income allowable is approximately $56,580 ($27.20/hourly). In similar developments in Minnetonka, residents indicated employment in retail, administrative, and health professional careers.

- The declaration also requires the developer to accept tenants who are recipients of Section 8 certificates/vouchers during the 30-year affordability period.

- The developer must provide the city with a 90-day notification in the event of a sale.

- The property management covenant outlines steps to be taken by management if a tenant or guest is disorderly, or engaged in illegal activities. If a third violation occurs within a continuous 12 month period after the first violation, the property manager shall terminate the tenancy of occupants in that unit.

**TIF and Other Funding Sources**

The developer has asked the city to consider a “pay-as-you-go” TIF Note in the amount of $7.809 million to assist with financing for the project. The TIF assistance would be split between the workforce housing ($3.648 million) and the senior housing ($4.161 million), each noted in a separate contract for private development. Mr. Lehnhoff, the city’s financial consultant with Ehlers, reviewed this request and prepared the attached memo that includes analysis of the request and a recommendation. The following is a summary of Ehlers’ recommendation that is included in the memo:
• Provide up to $7.809 million in TIF, structured as a pay-as-you-go-TIF note over a maximum term of 26 years, including a 2% inflationary factor.
  o Interest rate on the TIF Note will be set at the lesser of 5.15% or the developer’s actual interest rate.
  o The developer increased the first mortgage to accommodate the reduction in TIF assistance.

The assistance requested from the developer would result in a per unit cost of approximately $540 per year over a 30 year affordability period based on total assistance of $7.809 million. The per unit assistance on previously approved housing redevelopment projects ranges from $377 per unit/per year to $4,777 per unit/per year.

The EDAC reviewed the TIF financing request at the November 27 meeting and the Contract for Private Development at the April 19 meeting. The EDAC generally concurred that the request for the 26-year TIF Housing District, with the inclusion of two-percent inflation, met the requirements of the TIF policy and “but for” test and that the request was consistent with the city’s treatment of similar projects.

Other Grants

The developer is in the process of applying for grant funding through the Metropolitan Council’s Livable Communities Demonstration Account (LCDA) and is requesting that the council approve the attached resolution authorizing an application requesting up to $2 million to assist with the solar energy system, stormwater management, demolition, and site preparation. The developer applied for funding through the Hennepin County TOD (Transit Oriented Development) grant program in 2018 but was not awarded funding.

Minimum Improvements
• 262 affordable apartment units for seniors, 55 years of age or older (Legends of Minnetonka), with at least 262 parking spaces.
• 220 affordable workforce units (Preserve at Shady Oak), with at least 220 parking spaces.

Commencement and Completion of Construction
• Construction will commence by March 1, 2019
• Construction will be completed by December 31, 2020

Site Improvements Construction Addendum
• Site improvements required under the agreement including:
  o Relocation of public sewer line
  o Dynamic predication crossing safety improvements
  o Pedestrian underpass beneath Bren Rd
  o Other standard site improvements
  o There is a notation in the contract for a future construction addendum. The addendum would need to be approved by the city council and would further define public infrastructure projects and the costs or credits relating to the project.
Minimum Assessment Agreement
- The developer agrees to not cause a reduction on the Minimum Market Value assessed in respect to the minimum improvements as of January 2, 2020 for taxes payable beginning in 2021 through the repayment of the TIF note.
  - Minimum Market Value of $47,160,000 for Legends of Minnetonka
  - Minimum Market Value of $39,600,000 for Preserve at Shady Oak

Events of Default
- If the developer fails to construct the senior housing component of the project, the developer would be in default of the workforce housing agreement. Similar language was added to the contract for the senior housing component, noting default if the workforce housing is not constructed.

Both Ms. Eddington and Mr. Lehnhoff will be available at the city council meeting on July 23, 2018 to answer any questions regarding the Contracts for Private Development, TIF Documents, and to answer any additional questions related to the financial request.

Next Steps
If the two contracts for private development are approved on July 23, 2018, the developer plans to proceed with the financing for both of the projects. The tentative timeline for financing the two developments is as follows:

- Hold public hearing for refunding workforce housing note on August 27, 2018
- Hold public hearing for senior housing bonds on August 27, 2018
- Closing on senior housing bonds on or before September 15, 2018
- Closing on workforce housing bonds on or before October 31, 2018

Staff Recommendation
Staff recommends that the city council adopt the following related to the Bren Road Development, a multi-family residential development by Dominium, at 11001 Bren Road East; and authorize City officials to approve non-substantive changes to the related documents:

1. Resolution Establishing the Dominium Tax Increment Financing District within the Opus Redevelopment Project by adopting a redevelopment plan, establishing a tax increment financing district and adopting a tax increment financing plan.

2. Resolutions approving the contracts for private redevelopment between the Economic Development Authority in and for the City of Minnetonka, the City of Minnetonka, and Minnetonka Leased Housing Associates II and III, LLLP for Senior and Workforce Housing

3. Resolution authorizing a grant application through the Metropolitan Council Livable Communities Transit Oriented Design (TOD) Program.
Submitted through:

    Julie Wischnack, AICP, Community Development Director
    Merrill King, Finance Director

Originated by:

    Alisha Gray, EDFP, Economic Development and Housing Manager

**Supplemental Information:**

Memo from James Lehnhoff – Ehlers

Memo from Julie Eddington – Kennedy & Graven

TIF Policy 2.18

Opus Area Housing Map

Affordability Chart

Draft Contracts for Private Development

Tax Increment Financing District - Overview

Tax Increment Financing Plan

[EDAC Meeting- April 19, 2018](#)

[City Council Meeting – April 16, 2018](#)

[City Council Meeting – December 18, 2017](#)

[City Council Meeting– December 4, 2017](#)

[EDAC Meeting – November 27, 2017](#)
Resolution No. 2018-_____

Resolution adopting a redevelopment plan for the Opus Redevelopment Project and establishing the Dominium Housing Tax Increment Financing District therein and adopting a tax increment financing plan therefor

Be it resolved by the City Council (the “Council”) of the City of Minnetonka, Minnesota (the “City”) as follows:

Section 1. Background.

1.01. It has been proposed by the Economic Development Authority in and for the City of Minnetonka, Minnesota (the “Authority”) and the City that the City adopt a Redevelopment Plan (the “Redevelopment Plan”) for the Opus Redevelopment Project (the “Project Area”) and establish the Dominium Housing Tax Increment Financing District (the “District”) therein and adopt a Tax Increment Financing Plan (the “TIF Plan”) therefor (the Redevelopment Plan and the TIF Plan are referred to collectively herein as the “Plans”); all pursuant to and in conformity with applicable law, including Minnesota Statutes, Sections 469.090 to 469.1082 and Sections 469.174 to 469.1794, all inclusive, as amended, (the “Act”) all as reflected in the Plans, and presented for the Council’s consideration.

1.02. The Authority and City have investigated the facts relating to the Plans and have caused the Plans to be prepared.

1.03. The Authority and City have performed all actions required by law to be performed prior to the establishment of the District and the adoption and approval of the proposed Plans, including, but not limited to, notification of Hennepin County and Independent School District No. 270 having taxing jurisdiction over the property to be included in the District, a review of and written comment on the Plans by the City Planning Commission on May 24, 2018, approval of the Plans by the Authority on July 23, 2018, and the holding of a public hearing upon published notice as required by law.

1.04. Certain written reports (the “Reports”) relating to the Plans and to the activities contemplated therein have heretofore been prepared by staff and consultants and submitted to the Council and/or made a part of the City files and proceedings on the Plans. The Reports include data, information and/or substantiation constituting or relating to the basis for the other findings and determinations made in this resolution. The Council hereby confirms, ratifies and adopts the Reports, which are hereby incorporated into and made as fully a part of this resolution to the same extent as if set forth in full herein.

Section 2. Findings for the Adoption and Approval of the Redevelopment Plan.

2.01. The Council approves the Redevelopment Plan, and specifically finds that: (a) the land within the Project Area would not be available for redevelopment without the financial aid to be sought under this Redevelopment Plan; (b) the Redevelopment Plan will afford maximum opportunity, consistent with the needs of the City as a whole, for the development of the Project Area by private enterprise; and (c) that the Redevelopment Plan conforms to the general plan for the development of the City as a whole.
Section 3. Findings for the Establishment of the District.

3.01. The Council hereby finds that the District is in the public interest and is a “housing district” under Minnesota Statutes, Section 469.174, Subd. 11 of the Act.

3.02. The Council further finds that the proposed development would not occur solely through private investment within the reasonably foreseeable future, that the Plans conform to the general plan for the development or redevelopment of the City as a whole; and that the Plans will afford maximum opportunity consistent with the sound needs of the City as a whole, for the development or redevelopment of the District by private enterprise.

3.03. The Council further finds, declares and determines that the City made the above findings stated in this Section and has set forth the reasons and supporting facts for each determination in writing, attached hereto as Exhibit A.

Section 4. Public Purpose.

4.01. The adoption of the Plans conforms in all respects to the requirements of the Act and will help fulfill a need to develop an area of the City which is already built up, to provide housing opportunities, to improve the tax base and to improve the general economy of the State and thereby serves a public purpose. For the reasons described in Exhibit A, the City believes these benefits directly derive from the tax increment assistance provided under the TIF Plan. A private developer will receive only the assistance needed to make this development financially feasible. As such, any private benefits received by a developer are incidental and do not outweigh the primary public benefits.

Section 5. Approval and Adoption of the Plans.

5.01. The Plans, as presented to the Council on this date, including without limitation the findings and statements of objectives contained therein, are hereby approved, ratified, established, and adopted and shall be placed on file in the office of the Community Development Director.

5.02. The staff of the City, the City’s advisors and legal counsel are authorized and directed to proceed with the implementation of the Plans and to negotiate, draft, prepare and present to this Council for its consideration all further plans, resolutions, documents and contracts necessary for this purpose.

5.03 The Auditor of Hennepin County is requested to certify the original net tax capacity of the District, as described in the Plans, and to certify in each year thereafter the amount by which the original net tax capacity has increased or decreased; and the Authority is authorized and directed to forthwith transmit this request to the County Auditor in such form and content as the Auditor may specify, together with a list of all properties within the District, for which building permits have been issued during the 18 months immediately preceding the adoption of this resolution.

5.04. The Community Development Director is further authorized and directed to file a copy of the Plans with the Commissioner of the Minnesota Department of Revenue and the Office of the State Auditor pursuant to Minnesota Statutes 469.175, Subd. 4a.
Adopted by the City Council of the City of Minnetonka, Minnesota this 23rd day of July, 2018.

__________________________________________
Brad Wiersum, Mayor

ATTEST:

__________________________________________
David E. Maeda, City Clerk

ACTION ON THIS RESOLUTION:

Motion for adoption:
Seconded by:
Voted in favor of:
Voted against:
Abstained:
Absent:
Resolution adopted.

I hereby certify that the foregoing is a true and correct copy of a resolution adopted by the City Council of the City of Minnetonka, Minnesota, at a meeting held on July 23, 2018.

__________________________________________
David E. Maeda, City Clerk
EXHIBIT A
RESOLUTION NO. ___________

The reasons and facts supporting the findings for the adoption of the Tax Increment Financing Plan for Dominium Housing Tax Increment Financing District, as required pursuant to Minnesota Statutes, Section 469.175, Subdivision 3 are as follows:

1. **Finding that Dominium Housing Tax Increment Financing District is a housing district as defined in M.S., Section 469.174, Subd. 11.**

Dominium Housing TIF District consists of one parcel to be split into two parcels for the purposes of the development. The development includes 262 units of age-restricted apartments and 220 units of general occupancy workforce apartments. All or a portion of the units will receive tax increment assistance and will meet income restrictions described in M.S. 469.1761. All of the units receiving assistance will have incomes at or below 60 percent of statewide median income. Appendix F of the TIF Plan contains background for the above finding.

2. **Finding that the proposed development, in the opinion of the City Council, would not reasonably be expected to occur solely through private investment within the reasonably foreseeable future.**

The proposed development, in the opinion of the City, would not reasonably be expected to occur solely through private investment within the reasonably foreseeable future: This finding is supported by the fact that the development proposed in this plan is a housing district that meets the City’s objectives for development and redevelopment. The cost of land acquisition, site and public improvements, and construction makes this housing development infeasible without City assistance. The cost of land acquisition and construction are approximately the same for affordable workforce and affordable age-restricted housing developments as they are for market rate projects. However, with decreased rental income from affordable units, there is insufficient cash flow to provide a sufficient rate of return, pay operating expenses, and service the debt. This leaves a gap in the funding for the project and makes this housing development feasible only through assistance, in part, from tax increment financing. The developer evidenced this need by providing a letter and a detailed pro forma as justification that the project would not have gone forward without tax increment assistance.

The increased market value of the site that could reasonably be expected to occur without the use of tax increment financing would be less than the increase in market value estimated to result from the proposed development after subtracting the present value of the projected tax increments for the maximum duration of the TIF District permitted by the TIF Plan: This finding is justified on the grounds that the costs of acquisition, building demolition, site improvements, utility improvements and construction of affordable housing add to the total redevelopment cost. Historically, the costs of site and public improvements as well as reduced rents required for affordable workforce and affordable age-restricted housing in the City have made development infeasible without tax increment assistance. The City reasonably determines that no other development of similar scope is anticipated on this site without substantially similar assistance being provided to the development.
3. Finding that the TIF Plan for Dominium Housing Tax Increment Financing District conforms to the general plan for the development or redevelopment of the municipality as a whole.

The Planning Commission reviewed the TIF Plan on May 24, 2018, and found that the TIF Plan conforms to the general development plan of the City.

4. Finding that the TIF Plan for Dominium Housing Tax Increment Financing District will afford maximum opportunity, consistent with the sound needs of the City as a whole, for the development or redevelopment of Opus Redevelopment Project by private enterprise.

Through the implementation of the TIF Plan, the Authority or City will provide an impetus for residential development, which is desirable or necessary for increased population and an increased need for life-cycle housing within the City.
Resolution No. 2018-_______

Resolution approving contract for private development with Minnetonka Leased Housing Associates II, LLLP

Be it resolved by the City Council (the “Council”) of the City of Minnetonka, Minnesota (the “City”) as follows:

Section 1. Background.

1.01. The City and the Economic Development Authority in and for the City of Minnetonka, Minnesota (the “Authority”) have undertaken a program to promote economic development and job opportunities, promote the development and redevelopment of land which is underutilized within the City, and facilitate the development of affordable housing, and in this connection created a redevelopment project known as the Opus Redevelopment Project (the “Redevelopment Project”) in the City, pursuant to Minnesota Statutes, Sections 469.001 through 469.047, as amended.

1.02. The City and the Authority have established within the Redevelopment Project the Dominium Housing Tax Increment Financing District, a housing district (the “TIF District”), and have adopted a financing plan for the TIF District in order to facilitate development of certain property in the Redevelopment Project and promote the development of affordable housing within the City, all pursuant to Minnesota Statutes, Sections 469.174 through 469.1794, as amended.

1.03. Minnetonka Leased Housing Associates II, LLLP, a Minnesota limited liability limited partnership (the “Developer”), proposes to acquire certain property (the “Development Property”) within the TIF District and develop approximately 220 affordable multifamily housing apartment units, to be located at or about 11001 Bren Road East in the City, with one hundred percent (100%) of the apartment units made affordable to families at or below sixty percent (60%) of the area median income (the “Minimum Improvements”).

1.04. There has been presented before this City Council a Contract for Private Development (the “Agreement”) proposed to be entered into between the City, the Authority, and the Developer setting forth the terms of the development of the Minimum Improvements.

Section 2. The Agreement.

2.01. The City Council approves the Agreement in substantially the form on file in City Hall. The Mayor and City Manager are hereby authorized and directed to execute and deliver the Agreement. All of the provisions of the Agreement, when executed and delivered as authorized herein, shall be deemed to be a part of this resolution as fully and to the same extent as if incorporated verbatim herein and shall be in full force and effect from the date of execution and delivery thereof. The Agreement shall be substantially in the form on file with the City which is hereby approved, with such omissions and insertions as do not materially change the substance thereof, or as the Mayor and the City Manager, in their discretion, shall determine, and the execution thereof by the Mayor and the City Manager shall be conclusive evidence of such determination.
Adopted by the City Council of the City of Minnetonka, Minnesota this 23rd day of July, 2018.

Brad Wiersum, Mayor

ATTEST:

David E. Maeda, City Clerk

ACTION ON THIS RESOLUTION:

Motion for adoption:
Seconded by:
Voted in favor of:
Voted against:
Abstained:
Absent:
Resolution adopted.

I hereby certify that the foregoing is a true and correct copy of a resolution adopted by the City Council of the City of Minnetonka, Minnesota, at a meeting held on July 23, 2018.

David E. Maeda, City Clerk
Resolution No. 2018-________

Resolution approving contract for private development with Minnetonka Leased Housing Associates III, LLLP

Be it resolved by the City Council (the “Council”) of the City of Minnetonka, Minnesota (the “City”) as follows:

Section 1. Background.

1.01. The City and the Economic Development Authority in and for the City of Minnetonka, Minnesota (the “Authority”) have undertaken a program to promote economic development and job opportunities, promote the development and redevelopment of land which is underutilized within the City, and facilitate the development of affordable housing, and in this connection created a redevelopment project known as the Opus Redevelopment Project (the “Redevelopment Project”) in the City, pursuant to Minnesota Statutes, Sections 469.001 through 469.047, as amended.

1.02. The City and the Authority have established within the Redevelopment Project the Dominium Housing Tax Increment Financing District, a housing district (the “TIF District”), and have adopted a financing plan for the TIF District in order to facilitate development of certain property in the Redevelopment Project and promote the development of affordable housing within the City, all pursuant to Minnesota Statutes, Sections 469.174 through 469.1794, as amended.

1.03. Minnetonka Leased Housing Associates III, LLLP, a Minnesota limited liability limited partnership (the “Developer”), proposes to acquire certain property (the “Development Property”) within the TIF District and develop approximately 262 affordable apartment units for seniors, to be located at or about 11001 Bren Road East in the City, with one hundred percent (100%) of the apartment units made affordable to seniors at or below sixty percent (60%) of the area median income (the “Minimum Improvements”).

1.04. There has been presented before this City Council a Contract for Private Development (the “Agreement”) proposed to be entered into between the City, the Authority, and the Developer setting forth the terms of the development of the Minimum Improvements.

Section 2. The Agreement.

2.01. The City Council approves the Agreement in substantially the form on file in City Hall. The Mayor and City Manager are hereby authorized and directed to execute and deliver the Agreement. All of the provisions of the Agreement, when executed and delivered as authorized herein, shall be deemed to be a part of this resolution as fully and to the same extent as if incorporated verbatim herein and shall be in full force and effect from the date of execution and delivery thereof. The Agreement shall be substantially in the form on file with the City which is hereby approved, with such omissions and insertions as do not materially change the substance thereof, or as the Mayor and the City Manager, in their discretion, shall determine, and the execution thereof by the Mayor and the City Manager shall be conclusive evidence of such determination.
Adopted by the City Council of the City of Minnetonka, Minnesota this 23rd day of July, 2018.

Brad Wiersum, Mayor

ATTEST:

David E. Maeda, City Clerk

ACTION ON THIS RESOLUTION:

Motion for adoption:
Seconded by:
Voted in favor of:
Voted against:
Abstained:
Absent:
Resolution adopted.

I hereby certify that the foregoing is a true and correct copy of a resolution adopted by the City Council of the City of Minnetonka, Minnesota, at a meeting held on July 23, 2018.

David E. Maeda, City Clerk
Resolution No. 2018-

Resolution identifying the need for Livable Communities Demonstration Account – Transit Oriented Development (TOD) Funding and Authorizing an application for grant funds

Be it resolved by the city council of the city of Minnetonka, Minnesota as follows:

Section 1. Background.

1.01. The city of Minnetonka is a participant in the Livable Communities Act’s Housing Incentives Program for 2018 as determined by the Metropolitan Council, and is therefore eligible to apply for Livable Communities Demonstration Account – TOD funds.

1.02. The city has identified a proposed project within the city that meets the Demonstration Account’s purposes and criteria and is consistent with and promotes the purposes of the Metropolitan Livable Communities Act and the policies of the Metropolitan Council’s adopted metropolitan development guide.

1.03. The city has the institutional, managerial and financial capability to ensure adequate project administration.

1.04. The city certifies that it will comply with all applicable laws and regulations as stated in the grant agreement.

1.05. The city acknowledges Livable Communities Demonstration Account grants are intended to fund projects or project components that can serve as models, examples or prototypes for development or redevelopment projects elsewhere in the region, and therefore represents that the proposed project or key components of the proposed project can be replicated in other metropolitan-area communities.

1.06. Only a limited amount of grant funding is available through the Metropolitan Council’s Livable Communities Demonstration Account during each funding cycle and the Metropolitan Council has determined it is appropriate to allocate those scarce grant funds only to eligible projects that would not occur without the availability of Demonstration Account grant funding.

Section 2. Council action.

2.01. After appropriate examination and due consideration, the Minnetonka City Council:

1. Finds that it is in the best interests of the city’s development goals and priorities for the proposed project to occur at this particular site and at this particular time.

2. Finds that the project component(s) for which Livable Communities Demonstration Account – TOD funding is sought:

   (a) will not occur solely through private or other public investment within the reasonably foreseeable future; and
(b) will occur within three years after a grant award only if Livable Communities Demonstration Account funding is made available for this project at this time.

2.02. Represents that the city has undertaken reasonable and good faith efforts to procure funding for the project component for which Livable Communities Demonstration Account funding is sought but was not able to find or secure from other sources funding that is necessary for project component completion within three years and states that this representation is based on the following reasons and supporting facts:

1. LCDA-TOD is a primary funding source for the uses requested in the application. The requested elements may not be of the quality or demonstration value possible, without an award of LCDA funds.

2.03. Authorizes its Mayor and City Manager to submit on behalf of the City an application for Metropolitan Council Livable Communities TOD grant funds for the project component(s) identified in the application, and to execute such agreements as may be necessary to implement the TOD project on behalf of the City.

Adopted by the city council of the City of Minnetonka, Minnesota, on July 23, 2018.

________________________________________
Brad Wiersum, Mayor

ATTEST:

________________________________________
David E. Maeda, City Clerk

Action on this resolution:

Motion for adoption:  
Seconded by:  
Voted in favor of:  
Voted against:  
Abstained:  
Absent:

I hereby certify that the foregoing is a true and correct copy of a resolution adopted by the City Council of the City of Minnetonka, Minnesota, at a duly authorized meeting held on July 23, 2018.

________________________________________
David E. Maeda, City Clerk
Memo

To: Alisha Gray, Economic Development and Housing Manager
From: James Lehnhoff - Ehlers
Date: April 6, 2018
Subject: Dominium Project Proposal Review: Digi Site Redevelopment

In November 2017, the City of Minnetonka requested that Ehlers review the development pro forma and Tax Increment Financing (TIF) request from Dominium for their proposal to construct approximately 475 affordable apartments at 11001 Bren Road East. The original redevelopment concept included demolishing the existing office building and constructing 210 general occupancy affordable apartments and 265 age-restricted affordable apartments. To help close a nearly $8.5 million project financing gap, the Economic Development Advisory Commission (“EDAC”) and the City Council subsequently considered a $7.6 million TIF request from Dominium (includes a 2% inflationary factor). The remaining gap amount was to be addressed through a combination of project cost reductions and other funding sources.

Since last November, Dominium has conducted additional design work, revised the project budget, and submitted an updated development pro forma for analysis. The revised project proposes a total of 482 apartments—an increase of seven apartments. The “Legends of Minnetonka” includes 262 age-restricted affordable apartments and the “Preserve at Shady Oak” includes 220 general occupancy affordable apartments. As before, all the apartments would be affordable to households at or below 60% of area median income (AMI). The 2017 income limits as published by HUD:

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</table>

The project must comply with the statutory required income restrictions for the term of the Housing TIF District (statutes do not require rent restrictions). However, the City has extended the compliance period to 30 years and required rent restrictions in prior projects.

Analysis

We have reviewed the updated development pro forma based on general industry standards for construction, land, and project costs; affordable rental rates and operating
expenses; developer fees; available funding sources; underwriting criteria; and, project cash flow.

While the total development costs ("TDC") increased from approximately $240,000 per unit to $274,000 per unit, the development pro forma assumptions are generally reasonable and within industry standards in the current market. The cost increase is primarily due to three factors: 1) construction costs, 2) financing costs, and 3) the developer/contractor fee. In addition to construction costs generally increasing in this market, more detailed designs and design changes contributed to a majority of the overall cost increase (i.e. a large retaining wall to address grade changes, shallow groundwater issues, additional stormwater management, and a 5-6 story building instead of the original 4-story building).

The financing costs increased due to higher interest rates and a need to “park” their bond allocation, which adds to the carrying costs. Finally, while the developer/contractor fee increased from the prior analysis, the increase was entirely offset by an even larger deferred fee to help reduce the gap (this is a financing technique used in LIHTC projects that can result in additional tax credit proceeds that actually reduces the overall financing gap). The developer/contractor fees still conform to Minnesota Housing underwriting requirements. The updated summary sources and uses are as follows:

<table>
<thead>
<tr>
<th>Revised Sources and Uses</th>
<th>Amount</th>
<th>Per Unit</th>
<th>% of Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sources</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First Mortgage</td>
<td>$69,780,000</td>
<td>$144,772</td>
<td>53%</td>
</tr>
<tr>
<td>TIF Note Request (26 years with 2% Inflation)</td>
<td>$7,809,000</td>
<td>$16,201</td>
<td>6%</td>
</tr>
<tr>
<td>4% LIHTC</td>
<td>$35,623,000</td>
<td>$73,907</td>
<td>27%</td>
</tr>
<tr>
<td>Met Council/Hennepin County Grants</td>
<td>$1,500,000</td>
<td>$3,112</td>
<td>1%</td>
</tr>
<tr>
<td>Deferred Developer/Contractor Fee (83% of total fee)</td>
<td>$14,494,976</td>
<td>$30,073</td>
<td>11%</td>
</tr>
<tr>
<td>Cash from Operations</td>
<td>$3,071,523</td>
<td>$6,372</td>
<td>2%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$132,278,499</strong></td>
<td><strong>$274,437</strong></td>
<td><strong>100%</strong></td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Uses</th>
<th>Amount</th>
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<th>% of Cost</th>
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<tr>
<td>Acquisition Costs</td>
<td>$10,000,000</td>
<td>$20,747</td>
<td>8%</td>
</tr>
<tr>
<td>Construction Costs</td>
<td>$87,689,878</td>
<td>$181,929</td>
<td>66%</td>
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<tr>
<td>Professional Services</td>
<td>$4,622,578</td>
<td>$9,590</td>
<td>3%</td>
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<tr>
<td>Financing Costs</td>
<td>$10,684,951</td>
<td>$22,168</td>
<td>8%</td>
</tr>
<tr>
<td>Developer/Contractor Fee</td>
<td>$17,439,080</td>
<td>$36,181</td>
<td>13%</td>
</tr>
<tr>
<td>Reserves</td>
<td>$1,842,012</td>
<td>$3,822</td>
<td>1%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$132,278,499</strong></td>
<td><strong>$274,437</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Dominium has maximized the first mortgage and 4% low-income housing tax credit equity. They expect to apply for $1,500,000 in additional public resources from such entities as Hennepin County and the Metropolitan Council. Finally, Dominium will use future project cash flow from operations for the remaining project costs.

The TIF Note size increased from approximately $7.6 million in the prior analysis to $7.8 million in this analysis because of the additional units and applying the final 2018 property tax rates. However, this also means the property is paying more in annual property taxes than previously assumed. Other than this adjustment to the tax increment calculation, the project cost increases are addressed by Dominium through other sources.
Recommendation

Based upon our review of the developer’s pro forma and current market conditions, the proposed development will not reasonably be expected to occur solely through private investment within the reasonably near future. Due to the costs associated with redeveloping the property and constructing housing with affordable rents, this project is feasible only through assistance, in part, from the City’s contribution.

TIF assistance would be provided on a “pay-as-you-go” basis in the amount of $7,809,000 over a maximum 26-year term. As discussed at the November meeting, the TIF assistance includes a 2% inflationary factor. The interest rate on the TIF Note will be set at the lesser of 5.15% or the Developer’s actual interest rate.

With “pay-as-you-go” TIF assistance, the City does not provide any up-front funding. Instead, the City enters into an agreement to provide tax increment payments that are generated solely from a portion of the development’s actual increased property taxes for up to 26 years. The applicant uses those future tax increment payments to obtain additional financing from a private lender. If the tax increment is insufficient to pay the $7,809,000 TIF note in 26 years, the City does not make up the shortfall. Conversely, if the tax increment provides the $7,809,000 before the end of the 26-year term, the City may end the TIF district early.

Please contact me at 651-697-8552 with any questions.
July 16, 2018

Alisha Gray  
Economic Development and Housing Manager  
City of Minnetonka  
14600 Minnetonka Boulevard  
Minnetonka, MN  55345-1502

Re: Resolutions approving two contracts for private development related to a workforce housing development and senior housing development in the City of Minnetonka

Dear Alisha,

Minnetonka Leased Housing Associates II, LLLP, a Minnesota limited liability limited partnership (the “Workforce Housing Developer”), has proposed a development consisting of approximately 220 affordable multifamily housing apartment units, to be located at or about 11001 Bren Road East in the City of Minnetonka (the “Workforce Housing Development”). Minnetonka Leased Housing Associates III, LLLP, a Minnesota limited liability limited partnership (the “Senior Housing Developer”), has proposed a development consisting of approximately 262 affordable apartments for seniors to be located at or about 11001 Bren Road East in the City of Minnetonka (the “Senior Housing Development”). One hundred percent (100%) of the apartment units in both developments will be affordable to families or seniors (as applicable) at or below sixty percent (60%) of the area median income.

The Workforce Housing Developer and the Senior Housing Developer (together, the “Developers”) have requested that the two developments be treated as separate projects for financing purposes. For this reason, we have drafted a contract for private development for each of the two developments. Attached please find resolutions for consideration by both the City Council and Board of the Economic Development Authority in and for the City of Minnetonka (the “EDA”) to approve the two contracts for private development.

If the two contracts for private development are approved, the Developers plan to proceed with the financings for both of the projects. The tentative timeline for financing the two developments is as follows:

- Hold public hearing for refunding workforce housing Note on August 27, 2018
- Hold public hearing for senior housing bonds on August 27, 2018
- Closing on senior housing bonds on or before September 15, 2018
- Closing on workforce housing bonds on or before October 31, 2018
I will be attending the City Council meeting on July 23, 2018 and can answer any questions that may arise during the meeting. Please contact me with any questions you may have prior to the City Council meeting.

Sincerely,

Julie Eddington
Policy Number 2.18
Tax Increment Financing and Tax Abatement

Purpose of Policy: This policy establishes criteria which guide the economic development authority and the city council when considering the use of tax increment financing and tax abatement tools in conjunction with proposed development.

Introduction

Under the Minnesota Statutes Sections 469.152 to 469.1799, the city of Minnetonka has the authority to establish tax increment financing districts (TIF districts). Tax increment financing is a funding technique that takes advantage of the increases in tax capacity and property taxes from development or redevelopment to pay public development or redevelopment costs. The difference in the tax capacity and the tax revenues the property generates after new construction has occurred, compared with the tax capacity and tax revenues it generated before the construction, is the captured value, or increments. The increments then go to the economic development authority and are used to repay public indebtedness or current costs the development incurred in acquiring the property, removing existing structures or installing public services. The fundamental principle that makes tax increment financing viable is that it is designed to encourage development that would not otherwise occur.

Under Minnesota Statutes, Sections 469.1812 to 469.1815, the city of Minnetonka has the right to abate property taxes. A city may grant an abatement of some or all of the taxes or the increase in taxes it imposes on a parcel of property if the city expects the benefits of the proposed abatement agreement to at least equal the costs of the proposed agreement. Abatement would be considered a reallocation or rededication of taxes for specific improvements or costs associated with development rather than a “refund” of taxes.

It is the judgment of the city council that TIF and abatement are appropriate tools that may be used when specific criteria are met. The applicant is responsible for demonstrating the benefit of the assistance, particularly addressing the criteria below. The applicant should understand that although approval may have been granted previously by the city for a similar project or a similar mechanism, the council is not bound by that earlier approval. Each application will be judged on the merits of the project as it relates to the public purpose.

TAX INCREMENT FINANCING

The Economic Development Authority (EDA), as authorized by the city, will be responsible to determine that (1) a project would not occur “but for” the assistance provided through tax increment financing; and (2) no other development would occur on the relevant site without tax increment assistance that could create a larger market value increase than the increase expected from the proposed development (after adjusting for
Projects eligible for consideration of tax increment financing include but are not limited to the following:

- Projects must be compatible with the Comprehensive Guide Plan (or acquire an amendment) and the development and redevelopment objectives of the city.
- Priority will be given to those projects which:
  - are within the “village areas” identified in the city's most recently adopted Comprehensive Guide Plan;
  - are mixed use or residential in nature, and include affordable housing units which meet the city's affordable housing standards;
  - contain amenities or improvements which benefit a larger area than the identified development;
  - improve blighted or dilapidated properties, provide cohesive development patterns, or improve land use transitions; or
  - maximize and leverage the use of other financial resources.

**Costs Eligible for Tax Increment Financing Assistance**

The EDA will consider the use of tax increment financing to cover project costs as allowed for under Minnesota Statutes. The types of project costs that are eligible for tax increment financing are as follows:

<table>
<thead>
<tr>
<th>Utilities design</th>
<th>Site related permits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architectural and engineering fees directly attributable to site work</td>
<td>Soils correction</td>
</tr>
<tr>
<td>Earthwork/excavation</td>
<td>Utilities (sanitary sewer, storm sewer, and water)</td>
</tr>
<tr>
<td>Landscaping</td>
<td>Street/parking lot paving</td>
</tr>
<tr>
<td>Streets and roads</td>
<td>Curb and gutter</td>
</tr>
<tr>
<td>Street/parking lot lighting</td>
<td>Land acquisition</td>
</tr>
<tr>
<td>Sidewalks and trails</td>
<td>Legal (acquisition, financing, and closing fees)</td>
</tr>
<tr>
<td>Special assessments</td>
<td>Surveys</td>
</tr>
<tr>
<td>Soils test and environmental studies</td>
<td>Sewer Access Charges (SAC) and Water Access Charges (WAC)</td>
</tr>
</tbody>
</table>
Forms of Assistance

Tax increment financing will generally be provided on a “pay-as-you-go” basis wherein the EDA compensates the applicant for a predetermined amount for a stated number of years. The EDA will have the option to issue a TIF Note with or without interest, where the principal amount of the TIF Note is equal to the amount of eligible project costs incurred and proven by the developer. In all cases, semi-annual TIF payments will be based on available increment generated from the project. TIF payments will be made after collection of property taxes.

Fiscal Disparities

TIF Districts will generally be exempt from the contribution to fiscal disparities. Tax revenues for fiscal disparities, generated by the TIF project, will be the responsibility of properties inside the district. The exception to this policy is when MN Statutes require that fiscal disparities be paid from within a TIF District, as is the case with Economic Development Districts.

TAX ABATEMENT

The tax abatement tool provides the ability to capture and use all or a portion of the property tax revenues within a defined geographic area for a specific purpose. Unlike TIF, tax abatement must be approved by each major authority under which the area is taxed, and therefore, usually only city property taxes will be abated. In practice, it is a tax “rereallocation” rather than an exemption from paying property taxes. Tax abatement is an important economic development tool that, when used appropriately, can be useful to accomplish the city’s development and redevelopment goals and objectives. Requests for tax abatement must serve to accomplish the city’s targeted goals for development and redevelopment, particularly in the designated village center areas. At the time of any application for a Comprehensive Guide Plan amendment, rezoning or site plan approval for a project, whichever occurs first, the applicant must divulge that tax abatements will be requested.

Projects Eligible for Tax Abatement Assistance

Projects eligible for consideration of property tax abatement include but are not limited to the following:

- Projects must be compatible with the Comprehensive Guide Plan (or acquire an amendment) and the development and redevelopment objectives of the city; and
- Priority will be given to those projects which:
  - increase or preserve the tax base
  - provide employment opportunities in the City of Minnetonka;
City of Minnetonka

City Council Policy 2.18

- provide, help acquire or construct public facilities;
- finance or provide public infrastructure;
- improve blighted or dilapidated properties, provide cohesive development patterns, or improve land use transitions; or
- produce long-term affordable housing opportunities.

Fiscal Disparities

Tax revenues for fiscal disparities, generated by the abatement project, will be the responsibility of properties inside the district.

REVIEW PROCESS

All applications for TIF and tax abatement will be reviewed by city’s community development director. After review by the city’s financial consultant, the community development director may refer the request to the EDA. The EDA will hold appropriate public hearings and receive public input about the use of the financial tools. The EDA will provide a recommendation regarding the assistance to the city council.

The city council must consider, along with other development decisions, the request for assistance and will make the final decision as to the amount, length, and terms of the agreement.

Adopted by Resolution No. 2014-074
Council Meeting of July 21, 2014
Opus Housing

November 2017

- 1,030 existing units
- 332 units under construction
- 700 units proposed

- **Opus Housing**
  - **Claremont Apts.**
    - 319 units (market)
  - **South Hampton**
    - 115 units (affordable)
  - **Elmbrook**
    - 46 units (affordable)
  - **Cloud 9 Condos**
    - 164 units (mix)
  - **RiZe at Opus Park**
    - 332 units (market/affordable)
  - **The Mariner**
    - 246 units (market/affordable)
  - **Dominium**
    - 454 units (affordable)
  - **Green Circle Condos**
    - 312 units
  - **Townhomes of Shady Oak**
    - 74 units
<table>
<thead>
<tr>
<th>Name of Project</th>
<th>Number of Affordable Units</th>
<th>Total Assistance</th>
<th>Years of Affordability</th>
<th>Assistance per Unit, per Year</th>
<th>Affordability Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dominium Apartments</td>
<td>482</td>
<td>7,890,000 (est)</td>
<td>30</td>
<td>$540</td>
<td>60% AMI</td>
</tr>
<tr>
<td>Newport Partners (Mariner)</td>
<td>55</td>
<td>$556,179 (est)</td>
<td>30</td>
<td>$337</td>
<td>60% AMI</td>
</tr>
<tr>
<td>Homes Within Reach (2004-2012 grant years)</td>
<td>35</td>
<td>$1,740,000</td>
<td>99</td>
<td>$502</td>
<td>80% AMI</td>
</tr>
<tr>
<td>The Ridge</td>
<td>52</td>
<td>$1,050,000</td>
<td>30</td>
<td>$673</td>
<td>60% AMI</td>
</tr>
<tr>
<td>Shady Oak Redevelopment</td>
<td>49</td>
<td>$1,209,000 (est)</td>
<td>30</td>
<td>$822</td>
<td>60% AMI</td>
</tr>
<tr>
<td>West Ridge Market (Crown Ridge, Boulevard Gardens, Gables, West Ridge)</td>
<td>185</td>
<td>$8,514,000</td>
<td>30</td>
<td>$1,534</td>
<td>Crown Ridge—60% AMI Boulevard Gardens—60% AMI Gables—initially 80% AMI, now no income limit West Ridge—50% AMI</td>
</tr>
<tr>
<td>Beacon Hill (apartments)</td>
<td>62</td>
<td>$2,484,000</td>
<td>25</td>
<td>$1,602</td>
<td>50% AMI</td>
</tr>
<tr>
<td>Ridgebury</td>
<td>56</td>
<td>$3,243,000</td>
<td>30</td>
<td>$1,930</td>
<td>Initially—80% AMI</td>
</tr>
<tr>
<td>Glen Lake (St. Therese, Exchange)</td>
<td>43</td>
<td>$4,800,000</td>
<td>30</td>
<td>$3,721</td>
<td>Now no income limit</td>
</tr>
<tr>
<td>Cedar Point Townhomes</td>
<td>9</td>
<td>$512,000</td>
<td>15</td>
<td>$3,792</td>
<td>50% AMI</td>
</tr>
<tr>
<td>Tonka on the Creek</td>
<td>20</td>
<td>$2,283,000</td>
<td>30</td>
<td>$3,805</td>
<td>50% AMI</td>
</tr>
<tr>
<td>At Home (Rowland)</td>
<td>21</td>
<td>$2,500,000</td>
<td>30</td>
<td>$3,968</td>
<td>50% AMI</td>
</tr>
<tr>
<td>Applewood Pointe</td>
<td>9</td>
<td>$1,290,000</td>
<td>Initial Sale/Ongoing maximum %</td>
<td>$4,777</td>
<td>80% AMI</td>
</tr>
</tbody>
</table>
CONTRACT
FOR
PRIVATE DEVELOPMENT
between
ECONOMIC DEVELOPMENT AUTHORITY
IN AND FOR THE
CITY OF MINNETONKA, MINNESOTA,
CITY OF MINNETONKA, MINNESOTA,
and
MINNETONKA LEASED HOUSING ASSOCIATES II, LLLP

Dated _________________, 2018

This document was drafted by:
KENNEDY & GRAVEN, CHARTERED (JAE)
470 U.S. Bank Plaza
200 South Sixth Street
Minneapolis, Minnesota  55402
Telephone:  612-337-9300
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</tr>
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CONTRACT FOR PRIVATE DEVELOPMENT

THIS CONTRACT FOR PRIVATE DEVELOPMENT, made as of the _____ day of ____________ , 2018 (the “Agreement”), is between the ECONOMIC DEVELOPMENT AUTHORITY IN AND FOR THE CITY OF MINNETONKA, MINNESOTA, a public body corporate and politic under the laws of the State of Minnesota (the “Authority”), the CITY OF MINNETONKA, MINNESOTA, a home rule city organized under its Charter and the laws of the State of Minnesota (the “City”), and MINNETONKA LEASED HOUSING ASSOCIATES II, LLLP, a Minnesota limited liability limited partnership (the “Developer”).

WITNESSETH:

WHEREAS, the Authority was created pursuant to Minnesota Statutes, Sections 469.090 through 469.1082, as amended, and was authorized to transact business and exercise its powers by a resolution adopted by the City Council of the City; and

WHEREAS, the Authority and the City have undertaken a program to promote economic development and job opportunities, promote the development and redevelopment of land which is underutilized within the City, and facilitate the development of affordable housing, and in this connection created a redevelopment project known as the Opus Redevelopment Project (the “Redevelopment Project”) in the City, pursuant to Minnesota Statutes, Sections 469.001 through 469.047, as amended; and

WHEREAS, the City and the Authority have established within the Project the Dominium Housing Tax Increment Financing District, a housing district (the “TIF District”), and have adopted a financing plan (the “TIF Plan”) for the TIF District in order to facilitate development of certain property in the Redevelopment Project and promote the development of affordable housing within the City, all pursuant to Minnesota Statutes, Sections 469.174 through 469.1794, as amended; and

WHEREAS, the Developer proposes to acquire certain property described in EXHIBIT A attached hereto (the “Development Property”) within the TIF District and develop approximately 220 affordable multifamily housing apartment units, to be located at or about 11001 Bren Road East in the City, with one hundred percent (100%) of the apartment units made affordable to families at or below sixty percent (60%) of the area median income (the “Minimum Improvements”); and

WHEREAS, in order to make the Minimum Improvements economically feasible for the Developer to construct, the Authority is prepared to reimburse the Developer for certain land acquisition costs, site improvement costs, and costs of constructing housing related to the Minimum Improvements, which are eligible to be reimbursed with tax increment; and

WHEREAS, the Authority and the City believe that the development of the TIF District pursuant to this Agreement, and fulfillment generally of this Agreement, are in the vital and best interests of the City and the health, safety, morals, and welfare of its residents, and in accord with the public purposes and provisions of the applicable State of Minnesota and local laws and requirements under which the Redevelopment Project has been undertaken and is being assisted.

NOW, THEREFORE, in consideration of the premises and the mutual obligations of the parties hereto, each of them does hereby covenant and agree with the other as follows:
ARTICLE I

Definitions

Section 1.1. Definitions. In this Agreement, unless a different meaning clearly appears from the context, the following terms have the following defined meanings:

“Administrative Costs” means the costs described in Section 3.5 hereof.

“Agreement” means this Contract for Private Development, as the same may be from time to time modified, amended, or supplemented.

“Assessor” means the assessor of the City.

“Authority” means the Economic Development Authority in and for the City of Minnetonka, Minnesota, a public body corporate and politic under the laws of the State.

“Authority Representative” means the Executive Director of the Authority.

“Available Tax Increment” means, on each Payment Date, ninety percent (90%) of the Tax Increment attributable to the Development Property and paid to the Authority by the County in the six (6) months preceding the Payment Date. Available Tax Increment will not include any Tax Increment if, as of any Payment Date, there is an uncured Event of Default under this Agreement; provided, however, that once an Event of Default is cured, any Available Tax Increment withheld shall be deemed Available Tax Increment for the next Payment Date.

“Board” means the Board of Commissioners of the Authority.

“Certificate of Completion” means the certification provided to the Developer pursuant to Section 4.4 hereof.

“City” means the City of Minnetonka, Minnesota.

“Closing” means the date the Developer purchases the Development Property.


“Construction Plans” means the plans, specifications, drawings and related documents on the construction work to be performed by the Developer on the Development Property, including the Minimum Improvements, which (a) must be as detailed as the plans, specifications, drawings and related documents which are submitted to the appropriate building officials of the City, and (b) must include at least the following: (1) site plan; (2) foundation plan; (3) floor plan for each floor; (4) cross-sections of each floor plan (length and width); (5) elevations (all sides, including a building materials schedule); (6) landscape and grading plan; and (7) other plans or supplements to the foregoing plans as the City may reasonably request to allow it to ascertain the nature and quality of the proposed construction work.

“County” means Hennepin County, Minnesota.

“Declaration” means the Declaration of Restrictive Covenants attached as EXHIBIT D hereto.
“Developer” means Minnetonka Leased Housing Associates II, LLLP, a Minnesota limited liability limited partnership, or its permitted successors and assigns.

“Development Property” means the real property described in EXHIBIT A attached hereto.

“EDA Act” means Minnesota Statutes, Sections 469.090 through 469.1082, as amended.

“Event of Default” means an action by the Developer listed in Article IX hereof.

“Holder” means the owner of a Mortgage.

“HRA Act” means Minnesota Statutes, Sections 469.001 through 469.047, as amended.

“Material Change” means a change in construction plans that adversely affects generation of Tax Increment or changes the number of Rental Housing Units.

“Maturity Date” means the date that the TIF Note has been paid in full or terminated, whichever is earlier.

“Minimum Assessment Agreement” means the Minimum Assessment Agreement establishing a Minimum Market Value of the Development Property and the Minimum Improvements substantially in the form attached hereto as EXHIBIT G.

“Minimum Improvements” means the construction of a multifamily housing development consisting of two buildings with at least 220 parking spaces but no less than the parking spaces required by the applicable Planned Unit Development (or such lesser amount of parking spaces as may be permitted from time to time under this Agreement), on the Development Property.

“Minimum Market Value” means a minimum market value for real estate tax purposes of $39,600,000 with respect to the Development Property and Minimum Improvements as of January 2, 2020 for taxes payable beginning in 2021 through the Maturity Date.

“Mortgage” means any mortgage made by the Developer which is secured, in whole or in part, with the Development Property and which is a permitted encumbrance pursuant to the provisions of Article VII hereof.

“Payment Date” means each February 1 and August 1, commencing August 1, 2021, on which principal of the TIF Note is paid.

“Public Development Costs” has the meaning provided in Section 3.3 hereof.

“Redevelopment Plan” means the Redevelopment Plan for the Redevelopment Project approved and adopted by the Authority and the City Council of the City.

“Redevelopment Project” means the Opus Redevelopment Project.

“Redevelopment Project Area” means the real property located within the boundaries of the Redevelopment Project.
“Rental Housing Units” means the rental housing units constructed as part of the Minimum Improvements.

“Senior Housing Project” means the construction of approximately 262 affordable apartment units for seniors by Minnetonka Leased Housing Associates III, LLLP, a Minnesota limited liability limited partnership, on property adjacent to the Development Property.

“Site Improvements” has the meaning provided in Section 4.8 hereof.

“State” means the State of Minnesota.

“Tax Credit Law” means Section 42 of the Code.

“Tax Increment” means that portion of the real property taxes which is paid with respect to the TIF District and which is remitted to the Authority as tax increment pursuant to the Tax Increment Act.

“Tax Increment Act” or “TIF Act” means the Tax Increment Financing Act, Minnesota Statutes, Sections 469.174 through 469.1794, as amended.

“Tax Increment District” or “TIF District” means the Dominium Housing Tax Increment Financing District, a housing district.

“Tax Increment Plan” or “TIF Plan” means the Tax Increment Financing Plan for the Dominium Housing Tax Increment Financing District, as approved July 23, 2018, and as it may be amended from time to time.

“Tax Official” means the Assessor; County auditor; County or State board of equalization, the commissioner of revenue of the State, or any State or federal district court, the tax court of the State, or the State Supreme Court.

“TIF Note” means a Tax Increment Revenue Note, substantially in the form attached hereto as EXHIBIT B, to be delivered by the Authority to the Developer pursuant to Section 3.4 hereof, and any obligation issued to refund the TIF Note.

“Unavoidable Delays” means delays beyond the reasonable control of the party seeking to be excused as a result thereof which are the direct result of strikes, lockouts or other labor troubles, prolonged adverse weather or acts of God, fire or other casualty to the Minimum Improvements, litigation commenced by third parties which, by injunction or other similar judicial action, directly results in delays, or acts of any federal, state or local governmental unit (other than the Authority in properly exercising its rights under this Agreement) which directly result in delays. Unavoidable Delays shall not include delays experienced by the Developer in obtaining permits or governmental approvals necessary to enable construction of the Minimum Improvements by the dates such construction is required under Section 4.3 hereof, so long as the Construction Plans have been approved in accordance with Section 4.2 hereof. Unavoidable Delays shall include delays resulting from market conditions which make the Redevelopment Project financially infeasible.
ARTICLE II

Representations and Warranties

Section 2.1. Representations by the Authority. The Authority makes the following representations:

(a) The Authority is an economic development authority organized and existing under the laws of the State. Under the provisions of the EDA Act and the HRA Act, the Authority has the power to enter into this Agreement and carry out its obligations hereunder, and execution of this Agreement has been duly, properly and validly authorized by the Authority.

(b) The Authority proposes to assist in financing certain land acquisition costs, site improvement costs, and costs of constructing affordable housing necessary to facilitate the construction of the Minimum Improvements in accordance with the terms of this Agreement to further the objectives of the Redevelopment Plan.

(c) The Authority finds that the Minimum Improvements are necessary to alleviate a shortage of, and maintain existing supplies of, decent, safe, and sanitary housing for persons of low or moderate income and their families.

(d) The execution, delivery and performance of this Agreement and of any other documents or instruments required pursuant to this Agreement by the Authority, and consummation of the transactions contemplated therein and the fulfillment of the terms thereof, do not and will not conflict with or constitute a breach of or default under any existing (i) indenture, mortgage, deed of trust or other agreement or instrument to which the Authority is a party or by which the Authority or any of its property is or may be bound; or (ii) legislative act, constitution or other proceedings establishing or relating to the establishment of the Authority or its officers or its resolutions.

(e) There is not pending, nor to the best of the Authority’s knowledge is there threatened, any suit, action or proceeding against the Authority before any court, arbitrator, administrative agency or other governmental authority that materially and adversely affects the validity of any of the transactions contemplated hereby, the ability of the Authority to perform its obligations hereunder, or the validity or enforcement of this Agreement.

Section 2.2. Representations by the City. The City makes the following representations:

(a) The City is a home rule city duly organized and existing under its Charter and the laws of the State. Under the provisions of the TIF Act, the City has the power to enter into this Agreement and carry out its obligations hereunder.

(b) The City proposes to provide the Developer the ability to offset certain park dedication fees in exchange for the Developer constructing certain Site Improvements described in EXHIBIT H.

(c) The City finds that the Minimum Improvements are necessary to alleviate a shortage of, and maintain existing supplies of, decent, safe, and sanitary housing for persons of low or moderate income and their families.

(c) The execution, delivery and performance of this Agreement and of any other documents or instruments required pursuant to this Agreement by the City, and consummation of the transactions contemplated therein and the fulfillment of the terms thereof, do not and will not conflict with or constitute a
breach of or default under any existing (i) indenture, mortgage, deed of trust or other agreement or instrument to which the City is a party or by which the City or any of its property is or may be bound; or (ii) legislative act, constitution or other proceedings establishing or relating to the establishment of the City or its officers or its resolutions.

(d) There is not pending, nor to the best of the City’s knowledge is there threatened, any suit, action or proceeding against the City before any court, arbitrator, administrative agency or other governmental authority that materially and adversely affects the validity of any of the transactions contemplated hereby, the ability of the City to perform its obligations hereunder, or the validity or enforcement of this Agreement.

Section 2.3. Representations and Warranties by the Developer. The Developer represents and warrants that:

(a) The Developer is a limited liability limited partnership duly organized and in good standing under the laws of the State, is duly authorized to transact business within the State, and has the power to enter into this Agreement.

(b) The Developer will construct, operate and maintain the Minimum Improvements in accordance with the terms of this Agreement, the Redevelopment Plan, and all local, State, and federal laws and regulations (including, but not limited to, environmental, zoning, building code and public health laws and regulations).

(c) The Developer will construct the Minimum Improvements in accordance with all local, State, or federal laws or regulations.

(d) The Developer will obtain, in a timely manner, all required permits, licenses and approvals, and will meet, in a timely manner, all requirements of all applicable local, State, and federal laws and regulations which must be obtained or met before the Minimum Improvements may be lawfully constructed. The Developer did not obtain a building permit for any portion of the Minimum Improvements before July 23, 2018, the date of approval of the TIF Plan for the TIF District.

(e) The Developer has received no notice or communication from any local, State, or federal official that the activities of the Developer on the Development Property may be or will be in violation of any environmental law or regulation. The Developer is aware of no facts the existence of which would cause it to be in violation of or give any person a valid claim under any local, State, or federal environmental law, regulation or review procedure.

(f) Neither the execution and delivery of this Agreement, the consummation of the transactions contemplated hereby, nor the fulfillment of or compliance with the terms and conditions of this Agreement is prevented, limited by or conflicts with or results in a breach of, the terms, conditions or provisions of any corporate restriction or any evidences of indebtedness, agreement or instrument of whatever nature to which the Developer is now a party or by which it is bound, or constitutes a default under any of the foregoing.

(g) The proposed development by the Developer hereunder would not occur but for the tax increment financing assistance and other assistance being provided by the Authority hereunder.

(h) The Developer must promptly advise the City and the Authority in writing of all litigation or claims affecting any part of the Minimum Improvements and all written complaints and charges made by any governmental authority materially affecting the Minimum Improvements or materially affecting
Developer or its business which may delay or require changes in construction of the Minimum Improvements.

(i) The Developer represents that no more than twenty percent (20%) of the square footage of the Minimum Improvements will consist of commercial, retail or other nonresidential use. For purposes of this covenant, the underground parking constructed for use by the tenants of the Minimum Improvements constitutes a residential use.

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ARTICLE III

Property Acquisition; Financing

Section 3.1. Status of Development Property. As of the date of this Agreement, the Developer has entered into a purchase agreement to acquire the Development Property. The Developer shall acquire the Development Property pursuant to the terms of such purchase agreement. Neither the Authority nor the City has any obligation to acquire any portion of the Development Property.

Section 3.2. Environmental Conditions.

(a) The Developer acknowledges that the City and the Authority make no representations or warranties as to the condition of the soils on the Development Property or the fitness of the Development Property for construction of the Minimum Improvements or any other purpose for which the Developer may make use of such property, and that the assistance provided to the Developer under this Agreement neither implies any responsibility by the Authority or the City for any contamination of the Development Property or poor soil conditions nor imposes any obligation on such parties to participate in any cleanup of the Development Property or correction of any soil problems.

(b) Without limiting its obligations under Section 8.3 hereof, the Developer further agrees that it will indemnify, defend, and hold harmless the Authority, the City, and their respective governing body members, officers, and employees (the “Indemnitees”) from any claims or actions arising out of the presence, if any, of hazardous wastes or pollutants on the Development Property as a result of the actions or omissions of the Developer, unless and to the extent that such hazardous wastes or pollutants are present as a result of the actions or omissions of the Indemnitees. Nothing in this section will be construed to limit or affect any limitations on liability of the Authority under State or federal law, including without limitation Minnesota Statutes, Sections 466.04 and 604.02.

Section 3.3. Reimbursement of Certain Developer Costs. The Authority is authorized to acquire real property and convey real property to private entities at a price determined by the Authority in order to facilitate development of the property. The Authority has determined that, in order to make development of the Minimum Improvements financially feasible, it is necessary to reduce the costs of acquisition of the Development Property, site preparation costs, costs of constructing housing, or any other costs eligible to be reimbursed with tax increment (collectively, the “Public Development Costs”). The Authority has also determined that, in light of potential liability that could be incurred by the Authority if the Authority takes title to the Development Property, it is in the best interest of the Authority for the Developer to acquire the Development Property directly. The Authority will reimburse the Developer for a portion of the actual cost of acquiring the Development Property in accordance with the terms of this Agreement.

Section 3.4. Issuance of Pay-As-You-Go Note.

(a) In consideration of the Developer constructing the Minimum Improvements and to finance the reimbursement of Public Development Costs incurred by the Developer, the Authority will issue and the Developer will purchase the TIF Note in the principal amount of $3,648,000. The Authority and the Developer agree that the consideration from the Developer for the purchase of the TIF Note will consist of the Developer’s payment of the Public Development Costs incurred by the Developer in at least the principal amount of the TIF Note.

The Authority shall issue the TIF Note on the date of closing on the financing for the Minimum Improvements upon satisfaction of the following conditions:
(i) the Developer has submitted Construction Plans to the Authority and obtained approval for the Construction Plans by the Authority;

(ii) the Developer has submitted and obtained Authority approval of financing in accordance with Section 7.1 hereof;

(iii) the Developer has delivered to the Authority an investment letter in substantially the form set forth in EXHIBIT C attached hereto or another form reasonably satisfactory to the Authority; and

(iv) the Developer has executed and delivered to the Authority the Minimum Assessment Agreement substantially in the form attached hereto as EXHIBIT G.

With respect to the payment of principal of and interest on the TIF Note, however, the principal of the TIF Note shall not be payable and the interest on the TIF Note shall not accrue until the date upon which the Authority receives and approves written evidence that the Developer has paid Public Development Costs in at least the principal amount of $3,648,000.

(b) The Developer understands and acknowledges that the Authority makes no representations or warranties regarding the amount of Available Tax Increment, or that revenues pledged to the TIF Note will be sufficient to pay the principal of and interest on the TIF Note. Any estimates of Tax Increment prepared by the Authority or its municipal advisors in connection with the TIF District or this Agreement are for the benefit of the Authority and are not intended as representations on which the Developer may rely.

(c) The Authority acknowledges that the Developer may assign the TIF Note to a lender that provides the financing for the acquisition of the Development Property, the construction of the Minimum Improvements, and/or the permanent financing for the Development Property and the Minimum Improvements. The Authority acknowledges that the Developer may collaterally assign the TIF Note to the lender that provides the financing for the acquisition of the Development Property or the construction of the Minimum Improvements. Any assignment agreement must be approved by the Board of the Authority.

(d) If the TIF District is disqualified as described in Section 4.5 hereof, the Authority is required by the TIF Act to stop payments of Available Tax Increment to pay principal of and interest on the TIF Note.

Section 3.5. Payment of Administrative Costs.

(a) The Developer is responsible to pay “Administrative Costs,” which term means out-of-pocket-costs incurred by the Authority or the City from and after September 1, 2017 in connection with the negotiation and execution of this Agreement, creation of the Tax Increment Plan, and all other similar out-of-pocket expenses and fees of the City and the Authority arising from this Agreement that are of an administrative nature, including: (i) the Authority’s and the City’s municipal advisor in connection with the Authority’s financial participation in development of the Development Property; and (ii) the Authority’s and the City’s legal counsel in connection with negotiation and drafting of this Agreement.

(b) On and after the date of execution of this Agreement, but not more often than monthly, the City and the Authority may request payment of Administrative Costs, and the Developer agrees to pay all Administrative Costs within ten (10) days of the Authority’s or the City’s written request, supported by suitable billings, receipts or other evidence of the amount and nature of Administrative Costs incurred. At the Developer’s request, but no more often than monthly, the Authority will provide the Developer
Section 3.6. Records. The Authority and its representatives will have the right at all reasonable times after reasonable notice to inspect, examine and copy all books and records of Developer relating to the Minimum Improvements and the costs for which the Developer has been reimbursed with Available Tax Increment.

Section 3.7. Exemption from Business Subsidy Act. The parties agree and understand that the purpose of the Authority’s financial assistance to the Developer is to facilitate development of affordable residential rental housing for persons of low and moderate income, and is not a “business subsidy” within the meaning of Minnesota Statutes, Sections 116J.993 to 116J.995, as amended.

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ARTICLE IV

Construction and Maintenance of Minimum Improvements

Section 4.1. Construction of Improvements. The Developer agrees that it will construct the Minimum Improvements on the Development Property substantially in accordance with the approved Construction Plans. The Developer agrees that, at all times prior to the Maturity Date, it will operate and maintain, preserve and keep the Minimum Improvements or cause the improvements to be maintained, preserved and kept with the appurtenances and every part and parcel thereof, in good repair and condition. The Authority will have no obligation to operate or maintain the Minimum Improvements.

Section 4.2. Construction Plans.

(a) Before commencement of construction of the Minimum Improvements, the Developer will submit to the Authority the Construction Plans. The Construction Plans must provide for the construction of the Minimum Improvements and must be in substantial conformity with the Redevelopment Plan, this Agreement, and all applicable State and local laws and regulations. The Authority Representative will approve the Construction Plans in writing if: (i) the Construction Plans conform to the terms and conditions of this Agreement; (ii) the Construction Plans conform to the goals and objectives of the Redevelopment Plan; (iii) the Construction Plans conform to all applicable federal, State, and local laws, ordinances, rules and regulations; (iv) the Construction Plans are adequate to provide for construction of the Minimum Improvements; (v) the Construction Plans do not provide for expenditures in excess of the funds available to the Developer from all sources (including the Developer’s equity) for construction of the Minimum Improvements; and (vi) no Event of Default has occurred. Approval may be based upon a review by the City’s Building Official of the Construction Plans. No approval by the Authority Representative will relieve the Developer of the obligation to comply with the terms of this Agreement or of the Redevelopment Plan, applicable federal, State, and local laws, ordinances, rules and regulations, or to construct the Minimum Improvements in accordance therewith. No approval by the Authority Representative will constitute a waiver of an Event of Default. If approval of the Construction Plans is requested by the Developer in writing at the time of submission, the Construction Plans will be deemed approved unless rejected in writing by the Authority Representative, in whole or in part. The rejections must set forth in detail the reasons therefor, and must be made within twenty (20) days after the date of their receipt by the Authority. If the Authority Representative rejects any Construction Plans in whole or in part, the Developer must submit new or corrected Construction Plans within twenty (20) days after written notification to the Developer of the rejection. The provisions of this Section relating to approval, rejection and resubmission of corrected Construction Plans will continue to apply until the Construction Plans have been approved by the Authority. The Authority Representative’s approval will not be unreasonably withheld, delayed or conditioned. Said approval will constitute a conclusive determination that the Construction Plans (and the Minimum Improvements constructed in accordance with said plans) comply to the Authority’s satisfaction with the provisions of this Agreement relating thereto.

(b) If the Developer desires to make any Material Change in the Construction Plans after their approval by the Authority, the Developer must submit the proposed change to the Authority for its approval. If the Construction Plans, as modified by the proposed change, conform to the requirements of this Section 4.2 with respect to the previously approved Construction Plans, the Authority will approve the proposed change and notify the Developer in writing of its approval. Any change in the Construction Plans will, in any event, be deemed approved by the Authority unless rejected, in whole or in part, by written notice by the Authority to the Developer, setting forth in detail the reasons therefor. Any rejection must be made within twenty (20) days after receipt of the notice of such change. The Authority’s approval of any change in the Construction Plans will not be unreasonably withheld.
Section 4.3. Commencement and Completion of Construction.

(a) Subject to Unavoidable Delays, the Developer will commence the construction of the Minimum Improvements by March 1, 2019 and shall substantially complete the Minimum Improvements by December 31, 2020.

(b) Construction is considered to be commenced upon the beginning of physical improvements to the Development Property beyond grading.

(c) All work with respect to the Minimum Improvements to be constructed or provided by the Developer on the Development Property must be in substantial conformity with the Construction Plans as submitted by the Developer and approved by the Authority. The Developer agrees for itself, its successors and assigns, and every successor in interest to the Development Property, or any part thereof, that the Developer, and its successors and assigns, will promptly begin and diligently prosecute to completion the development of the Development Property through the construction of the Minimum Improvements thereon, and that the construction will in any event be commenced and completed within the period specified in Section 4.3(a) hereof. Until construction of the Minimum Improvements has been completed, the Developer will make reports, in the detail and at the times as may reasonably be requested by the Authority, as to the actual progress of the Developer with respect to the construction.

Section 4.4. Certificate of Completion.

(a) Promptly after substantial completion of the Minimum Improvements in accordance with those provisions of the Agreement, the Authority will furnish the Developer with a Certificate of Completion in substantially the form attached hereto as EXHIBIT E. The certification by the Authority will be a conclusive determination of satisfaction and termination of the agreements and covenants in the Agreement and in any deed with respect to the obligations of the Developer, and its successors and assigns, to construct the Minimum Improvements and the dates for the completion thereof. The certification and the determination will not constitute evidence of compliance with or satisfaction of any obligation of the Developer to any Holder of a Mortgage, or any insurer of a Mortgage, securing money loaned to finance the Minimum Improvements, or any part thereof.

(b) The Certificate of Completion provided for in this Section 4.4 will be in the form as will enable it to be recorded in the proper office for the recordation of deeds and other instruments pertaining to the Development Property. If the Authority refuses or fails to provide any certification in accordance with the provisions of this Section 4.4, the Authority will, within thirty (30) days after written request by the Developer, provide the Developer with a written statement, indicating in adequate detail in what respects the Developer has failed to complete the Minimum Improvements in accordance with the provisions of the Agreement, or is otherwise in default, and what measures or acts it will be necessary, in the opinion of the Authority, for the Developer to take or perform in order to obtain the certification.

(c) The construction of the Minimum Improvements will be considered substantially complete when the Developer has received a certificate of occupancy from the City for all Residential Housing Units.

Section 4.5. Affordability Covenants; Qualification of the TIF District. The Developer agrees that the Minimum Improvements are subject to the following affordability covenants:

(a) As of the date hereof, the Developer expects that the Minimum Improvements will include the mix of Rental Housing Units set forth in EXHIBIT F. The Developer will cause one hundred
percent (100%) of the Rental Housing Units in the Minimum Improvements to be affordable to families at or below sixty percent (60%) of the area median income and to be rent-restricted in accordance with the Tax Credit Law, all as further described in the Declaration attached hereto as EXHIBIT D. Notwithstanding anything to the contrary in the Tax Credit Law, the restrictions will remain in effect for the thirty (30) year period described in the Declaration. On or before the Closing, the Developer will deliver the executed Declaration to the Authority in recordable form.

(b) The Developer will initially provide at least 220 parking spaces for the Minimum Improvements. If, from time to time, the City gives its written permission to reduce the number of parking spaces, the number of parking spaces required by this Agreement shall be automatically reduced by such number without the need for a written amendment to this Agreement.

(c) The Authority and its representatives will have the right at all reasonable times while the covenants in this Section are in effect, after reasonable notice to inspect, examine and copy all books and records of the Developer and its successors and assigns relating to the covenants described in this Section and in the Declaration.

(d) On or before April 1 of each year during the term of the Declaration, commencing on the first April 1 after issuance of the Certificate of Completion for the Minimum Improvements, the Developer must submit evidence of tenant incomes and rents, showing that the Minimum Improvements meet the income and rent requirements set forth in the Declaration. The Authority will review the submitted evidence related to the income restrictions required by Section 469.1761 of the TIF Act to determine that the TIF District remains a housing district under the TIF Act.

(e) If the Authority determines, based on the reports submitted by the Developer or if the Authority receives notice from the State Department of Revenue, the State Auditor, any Tax Official or any court of competent jurisdiction that the TIF District does not qualify as a “housing district” due to action or inaction of the Developer, this type of event will be deemed an Event of Default of the Developer under this Agreement; provided, however, that the Authority may not exercise any remedy under this Agreement so long as the determination is being contested and has not been finally adjudicated. In addition to any remedies available to the Authority under Article IX hereof, the Developer will indemnify, defend and hold harmless the Authority for any damages or costs resulting therefrom.

(f) During the term of the Declaration, the Developer shall not adopt any policies specifically prohibiting or excluding rental to tenants holding certificates/vouchers under Section 8 of the United States Housing Act of 1937, as amended, codified as 42 U.S.C. Sections 1401 et seq., or its successor because of such prospective tenant’s status as such a certificate/voucher holder.

(g) The Developer will immediately notify the Authority if at any time during the term of the Declaration the dwelling units in the Minimum Improvements are not occupied or available for occupancy as required by the terms of the Declaration.

(h) In consideration for the issuance of the TIF Note, the Developer agrees to provide the Authority with at least ninety (90) days’ notice of any sale of the Minimum Improvements.

(i) This Agreement and the Declaration requires the Developer to cause one hundred percent (100%) of the Rental Housing Units in the Minimum Improvements to be affordable to families at or below sixty percent (60%) of the area median income, all as further described in the Declaration attached hereto as EXHIBIT D. Recent Federal legislation has introduced an income-averaging option for the low-income housing tax credit program. This legislation allows projects to accept residents with higher average median incomes as along as the overall average of the income of tenants in the project does not exceed 60% of the
area median income, which provides LIHTC projects the ability to serve tenants with a greater range of incomes. Minnesota Housing does not currently allow for income-averaging. However, if in the future Minnesota Housing allows the income-averaging option for the low-income housing tax credit program to be used for the Minimum Improvements, the Developer may opt to use the income-averaging methodology; provided, however, that the Developer must cause at least forty percent (40%) of the Rental Housing Units in the Minimum Improvements to be affordable to families at or below sixty percent (60%) of the area median income in order to comply with Section 469.1763, subdivision 3 of the TIF Act. The Developer must provide the Authority at least thirty (30) days’ notice before opting into the income-averaging methodology and will cooperate with the Authority to revise this Agreement and the Declaration, if necessary.

Section 4.6. Affordable Housing Reporting. At least annually, no later than April 1 of each year commencing on the April 1 first following the issuance of the Certificate of Completion for the Minimum Improvements, the Developer shall provide a report to the Authority evidencing that the Developer complied with the income affordability covenants set forth in Section 4.5 hereof during the previous calendar year. The income affordability reporting shall be on the form entitled “Tenant Income Certification” from the Minnesota Housing Finance Agency (MHFA HTC Form 14), or if unavailable, any similar form. The Authority may require the Developer to provide additional information reasonably necessary to assess the accuracy of such certification. Unless earlier excused by the Authority, the Developer shall send affordable housing reports to the Authority until the TIF District is decertified. If the Developer fails to provide the annual reporting required under this Section, the Authority may withhold payments of Available Tax Increment under the TIF Note.

Section 4.7. Property Management Covenant. The Developer shall cause its property manager to operate the Minimum Improvements in accordance with the policies described in this Section. For any documented disorderly violations by a tenant or guest, including but not limited to prostitution, gang-related activity, intimidating or assaultive behavior (not including domestic), unlawful discharge of firearms, illegal activity, or drug complaints (each a “Violation”), the Developer agrees and understands that the following procedures shall apply:

(a) After a first Violation regarding any unit in the Minimum Improvements, the City police department will send notice to the Developer and the property manager requiring the Developer and the property manager to take steps necessary to prevent further Violations.

(b) If a second Violation occurs regarding the same tenancy within twelve (12) months after the first Violation, the City police department will notify the Developer and the property manager of the second Violation. Within ten (10) days after receiving such notice, the Developer or the property manager must file a written action plan with the Authority and the City police department, describing steps to prevent further Violations.

(c) If a third Violation occurs regarding the same tenancy within twelve (12) continuous months after the first Violation, the City police department will notify the Developer and the property manager of the third Violation. Within ten (10) days after receiving such notice and subject to paragraph (f) below, the Developer to the property manager shall commence termination of the tenancy of all occupants of that unit. Subject to paragraph (f) below, neither the Developer nor the property manager shall enter into a new lease agreement with the evicted tenant(s) for at least one (1) year after the effective date of the eviction.

(d) If the Developer or the property manager fails to comply with any the requirements in this Section, then the Authority may provide at least ten (10) days’ written notice to the Developer and the property manager directing attendance at a meeting to determine the cause of the continuing Violations in
the Minimum Improvements and provide an opportunity for the Developer and the property manager to explain their failure to comply with the procedures in this Section.

(e) If the Developer and property manager fail to respond to the written notice under paragraph (d), then the Authority may direct the Developer to terminate the management agreement with the existing property manager and to replace that entity with a replacement property manager selected by the Developer but approved by the Authority. The parties agree and understand that appointment of any replacement manager may be subject to consent by the Tax Credit Investor (as defined in Section 8.2 hereof) and each Holder of a Mortgage on the Development Property.

(f) Notwithstanding anything to the contrary in this Section 4.7, neither the Developer nor the property manager shall be obligated to take any action if such party reasonably believes such action is contrary to or in violation of applicable law, including, without limitation, Section 42 of the Code, the Section 8 program, State and federal fair housing laws, and State landlord-tenant law.

Section 4.8. Construction of Site Improvements.

(a) In consideration of the assistance provided to the Developer by the City and the Authority, subject to the limitations set forth in Sections 4.9 and 4.10, the Developer agrees that it will install or cause to be installed, in conformance with City standards and specifications, the Site Improvements on the Development Property or adjacent to the Development Property, as applicable, as described in EXHIBIT H attached hereto.

(b) When constructing the Site Improvements, the Developer is responsible for compliance with all conditions outlined in Resolution No. 2018-____ and Resolution No. 2018-____.

(c) Building permits for the Site Improvements will be issued only in conformance with conditions in Resolution 2018-____. Unless otherwise authorized by the City in writing, no certificates of occupancy will be provided until the following is completed:

(i) Site grading is completed and approved by the City;
(ii) All public utilities have been tested, approved, and accepted by the City Engineer;
(iii) All curbing is installed and backfilled;
(iv) The first lift of bituminous is in place and approved by the City; and
(v) All required fees have been paid in full.

Upon completion of the Site Improvements, the City shall issue a certificate of occupancy. The receipt of a certificate of occupancy for one or more of the Site Improvements shall confirm that the conditions referred to in Section 4.8(c) have been met for the applicable Site Improvement unless so stated in the certificate of occupancy.

Section 4.9. Site Improvements Construction Addendum. Prior to the issuance of any permits, the City and the Developer shall enter into a mutually agreeable Construction Addendum containing (i) timeframes for the construction of the Site Improvements; (ii) the security to be provided by the Developer to the City to ensure the quality and completion of the Site Improvements; (iii) the methods of acceptance related to the Site Improvements; (iv) the process by which the security provided to the City may be reduced; (v) the process to obtain a certificate of occupancy from the City; (vi) final design details (including tunnels and trails); and (vii) the amount of credits provided by the City to offset the park dedication fees, as described in Section 4.10.
Section 4.10. Fees. The Developer must pay all water and sewer hook-up fees, SAC, WAC, and REC fees, Engineering Inspection Fees and park dedication fees in accordance with applicable City policies and ordinances. Based on the size of the Minimum Improvements, it is anticipated that the Developer will owe approximately $5,000 per unit in park dedication fees. However, the City will consider offsetting the park dedication fees with credits for the costs incurred by the Developer in designing, constructing and other related costs (e.g. engineering costs, surveying costs, and soil remediation) of certain Site Improvements described in EXHIBIT H attached hereto (specifically the pedestrian underpass beneath Bren Road East and the dynamic predication crossing safety improvements on the east side of the Development Property and adjacent to Bren Road East. The Developer must provide the Authority with the estimates for the cost of the work described in EXHIBIT H and must provide the Authority with the final invoices for the work as the work is completed. The Developer will not be required to pay the costs of the pedestrian underpass beneath Bren Road East and the dynamic predication crossing safety improvements on the east side of the Development Property and adjacent to Bren Road East that exceed the amount of the Developer’s park dedication fees.

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ARTICLE V

Insurance

Section 5.1. Insurance.

(a) The Developer or general contractor will provide and maintain at all times during the process of constructing the Minimum Improvements an All Risk Broad Form Basis Insurance Policy and, from time to time during that period, at the request of the Authority, furnish the Authority with proof of payment of premiums on policies covering the following:

(i) Builder’s risk insurance, written on the so-called “Builder’s Risk – Completed Value Basis,” in an amount equal to one hundred percent (100%) of the insurable value of the Minimum Improvements at the date of completion, and with coverage available in nonreporting form on the so-called “all risk” form of policy. The interest of the Authority must be protected in accordance with a clause in form and content satisfactory to the Authority;

(ii) Commercial general liability insurance (including operations, contingent liability, operations of subcontractors, completed operations and contractual liability insurance) together with a Protective Liability Policy with limits against bodily injury and property damage of not less than $2,000,000 for each occurrence (to accomplish the above-required limits, an umbrella excess liability policy may be used); the Authority must be listed as an additional insured on the policy; and

(iii) Workers’ compensation insurance, with statutory coverage.

(b) Upon completion of construction of the Minimum Improvements and prior to the Maturity Date, the Developer must maintain, or cause to be maintained, at its cost and expense, and from time to time at the request of the Authority will furnish proof of the payment of premiums on, insurance as follows:

(i) Insurance against loss and/or damage to the Minimum Improvements under a policy or policies covering the risks as are ordinarily insured against by similar businesses.

(ii) Comprehensive general public liability insurance, including personal injury liability (with employee exclusion deleted), against liability for injuries to persons and/or property, in the minimum amount for each occurrence and for each year of $2,000,000, and must be endorsed to show the Authority as an additional insured.

(iii) Other insurance, including workers’ compensation insurance respecting all employees, if any, of the Developer, in an amount as is customarily carried by like organizations engaged in like activities of comparable size and liability exposure; provided that the Developer may be self-insured with respect to all or any part of its liability for workers’ compensation.

(c) All insurance required in this Article V must be taken out and maintained in responsible insurance companies selected by the Developer which are authorized under the laws of the State to assume the risks covered thereby. Upon request, the Developer will deposit annually with the Authority policies evidencing all the insurance, or a certificate or certificates or binders of the respective insurers stating that the insurance is in force and effect. Unless otherwise provided in this Article V, each policy must contain a provision that the insurer will not cancel nor modify it in such a way as to reduce the coverage provided below the amounts required herein without giving written notice to the Developer and
the Authority at least thirty (30) days before the cancellation or modification becomes effective. In lieu of separate policies, the Developer may maintain a single policy, blanket or umbrella policies, or a combination thereof, having the coverage required herein, in which event the Developer will deposit with the Authority a certificate or certificates of the respective insurers as to the amount of coverage in force upon the Minimum Improvements.

(d) The Developer agrees to notify the Authority immediately in the case of damage exceeding $250,000 in amount to, or destruction of, the Minimum Improvements or any portion thereof resulting from fire or other casualty. In the event this type of damage or destruction occurs, the Developer will forthwith repair, reconstruct and restore the Minimum Improvements to substantially the same or an improved condition or value as it existed prior to the event causing the damage and, to the extent necessary to accomplish the repair, reconstruction and restoration, the Developer will apply the net proceeds of any insurance relating to the damage received by the Developer to the payment or reimbursement of the costs thereof.

The Developer will complete the repair, reconstruction and restoration of the Minimum Improvements, whether or not the net proceeds of insurance received by the Developer is sufficient to pay for the same. Any net proceeds remaining after completion of the repairs, construction and restoration will be the property of the Developer.

(e) Notwithstanding anything to the contrary contained in this Agreement, in the event of damage to the Minimum Improvements in excess of $250,000 and the Developer fails to complete any repair, reconstruction or restoration of the Minimum Improvements within eighteen (18) months from the date of damage, the Authority may, at its option, terminate the TIF Note as provided in Section 9.3(b) hereof. If the Authority terminates the TIF Note, the termination will constitute the Authority’s sole remedy under this Agreement as a result of the Developer’s failure to repair, reconstruct or restore the Minimum Improvements. Thereafter, the Authority will have no further obligations to make any payments under the TIF Note.

(f) The Developer and the Authority agree that all of the insurance provisions set forth in this Article V will terminate upon the termination of this Agreement.

Section 5.2. Subordination. Notwithstanding anything to the contrary contained in this Article V, the rights of the Authority with respect to the receipt and application of any proceeds of insurance will, in all respects, be subject and subordinate to the rights of any lender under a Mortgage approved pursuant to Article VII hereof.

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ARTICLE VI

Tax Increment; Taxes; Minimum Assessment Agreement

Section 6.1. Right to Collect Delinquent Taxes. The Developer acknowledges that the Authority is providing substantial aid and assistance in furtherance of the redevelopment through issuance of the TIF Note. The Developer understands that the Available Tax Increment pledged to payment of the TIF Note is derived from real estate taxes on the Development Property, which taxes must be promptly and timely paid. To that end, the Developer agrees for itself, its successors and assigns, in addition to the obligation pursuant to statute to pay real estate taxes, that it is also obligated by reason of this Agreement to pay before delinquency all real estate taxes assessed against the Development Property and the Minimum Improvements. The Developer acknowledges that this obligation creates a contractual right on behalf of the Authority to sue the Developer or its successors and assigns to collect delinquent real estate taxes and any penalty or interest thereon and to pay over the same as a tax payment to the county auditor. In any such suit, the Authority will also be entitled to recover its costs, expenses and reasonable attorney fees. The Developer further agrees that it was not cause a reduction in the Minimum Market Value assessed in respect of the Minimum Improvements or the Development Property below the Minimum Market Value described in Section 6.2(a) hereof through:

(a) willful destruction of the Minimum Improvements or any part thereof;

(b) failure to reconstruct damaged or destroyed property pursuant to Section 4.3 hereof;

(c) a request to the Assessor to reduce the Minimum Market Value of all or any portion of the Minimum Improvements or the Development Property;

(d) a petition to the board of equalization of the County to reduce the Minimum Market Value of all or any portion of the Minimum Improvements or the Development Property;

(e) a petition to the board of equalization of the State or the commissioner of revenue of the State to reduce the Minimum Market Value of all or any portion of the Minimum Improvements or the Development Property;

(f) an action in a district court of the State or the tax court of the State seeking a reduction in the Minimum Market Value of the Minimum Improvements or the Development Property;

(g) an application to the commissioner of revenue of the State or to any local taxing jurisdiction requesting an abatement or deferral of real estate taxes on the Minimum Improvements or the Development Property;

(h) a transfer of the Minimum Improvements or the Development Property, or any part thereof, to an entity exempt from the payment of real estate taxes under State law and that entity applies for tax exemption; or

(i) any other proceedings, whether administrative, legal or equitable, with any administrative body within the County or the State or with any court of the State or the federal government.
Section 6.2. Minimum Assessment Agreement.

(a) At the time of execution of this Agreement, the Authority and the Developer shall execute the Minimum Assessment Agreement for the Development Property and Minimum Improvements. The Assessment Agreement shall specify the Minimum Market Value, notwithstanding any failure to start or complete the Minimum Improvements on the Development Property by the Maturity Date or any failure to reconstruct the Minimum Improvements after damage or destruction before the Maturity Date.

(b) Nothing in the Minimum Assessment Agreement shall limit the discretion of the Assessor to assign a market value to the Minimum Improvements or the Development Property in excess of the Assessor’s Minimum Market Value or prohibit the Developer from seeking through the exercise of legal or administrative remedies a reduction in any increase in the market value established pursuant to subsection (a) above; provided, however, that the Developer shall not seek a reduction of such market value below the Assessor’s Minimum Market Value set forth in the Minimum Assessment Agreement in any year so long as such Minimum Assessment Agreement shall remain in effect. The Minimum Assessment Agreement shall remain in effect until the Maturity Date; provided that, if at any time before the Maturity Date, the Minimum Assessment Agreement is found to be terminated or unenforceable by any Tax Official or court of competent jurisdiction, the Minimum Market Value described in this Section 6.2 shall remain an obligation of the Developer or its successors and assigns (whether or not such value is binding on the Assessor), it being the intent of the parties that the obligation of the Developer to maintain, and not seek reduction of, the Minimum Market Value specified in this Section 6.2 shall remain in effect until the Maturity Date; provided that, if at any time before the Maturity Date, the Minimum Assessment Agreement is found to be terminated or unenforceable by any Tax Official or court of competent jurisdiction, the Minimum Market Value described in this Section 6.2 shall remain an obligation of the Developer or its successors and assigns, in accordance with the terms of this Agreement and the Minimum Assessment Agreement. Notwithstanding anything contained in this Agreement to the contrary, the Developer shall not be precluded from contesting the Minimum Market Value if the Minimum Improvements or the Development Property, or any substantial portion thereof, is acquired by a public entity through eminent domain prior to the Maturity Date.

Section 6.3. Reduction of Taxes. The Developer agrees that after the date of certification of the TIF District and prior to completion of the Minimum Improvements, it will not cause a reduction in the real property taxes paid in respect of the Development Property through: (A) willful destruction of the Development Property or any part thereof (except for the demolition of structures required for the construction of the Minimum Improvements); or (B) willful refusal to reconstruct damaged or destroyed property pursuant to Section 5.1 hereof.

The Developer also agrees that it will not, prior to the Maturity Date, (i) seek exemption from property tax for the Development Property; or (ii) convey or transfer or allow conveyance or transfer of the Development Property to any entity that is exempt from payment of real property taxes under State law (other than any portion thereof dedicated or conveyed to the Authority in accordance with this Agreement).

The Developer may, at any time following the issuance of the Certificate of Completion, seek through petition or other means to have the estimated market value for the Development Property reduced to not less than the Minimum Market Value. Prior to seeking a reduction in the estimated market value, the Developer must provide the Authority with written notice indicating its intention to do so. The Developer acknowledges and understands that this type of action will result in less Available Tax Increment being disbursed by the Authority for payment of the principal of and interest on the TIF Note.

Upon receiving notice from the Developer of its intention to cause the reduction of the estimated market value of the Development Property, or otherwise learning of the Developer’s intentions, the
Authority may partially suspend or reduce payments due under the TIF Note until the actual amount of the reduction in market value is determined, whereupon the Authority will make the partially suspended payments less any amount that the Authority is required to repay the County as a result of any retroactive reduction in market value of the Development Property; provided, however, during the period that the payments are subject to partial suspension, the Authority shall make partial payments on the TIF Note, based on, in its reasonable discretion, the Available Tax Increment generated by the portion of the assessed value that is not being challenged.

The Authority’s suspension of payments on the TIF Note pursuant to this Section will not be considered a default under Section 9.1 hereof.

Section 6.4. Qualifications. Notwithstanding anything herein to the contrary, the parties acknowledge and agree that upon the transfer of the Development Property to another person or entity, the Developer will no longer be obligated under Sections 6.1 and 6.3 hereof, unless the transfer is made in violation of the provisions of Section 8.2 hereof.

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ARTICLE VII

Financing

Section 7.1. Mortgage Financing.

(a) Before commencement of construction of the Minimum Improvements, the Developer must submit to the Authority evidence of one or more commitments or plan of finance for financing which, together with committed equity for the construction, is sufficient for payment of the Minimum Improvements. The commitments may be submitted as short term financing, long-term mortgage financing, a bridge loan with a long-term take-out financing commitment, or any combination of the foregoing.

(b) If the Authority finds that the financing is sufficiently committed and adequate in amount to pay the costs specified in subsection (a) then the Authority will notify the Developer in writing of its approval. The approval will not be unreasonably withheld and either approval or rejection will be given within twenty (20) days from the date when the Authority is provided the evidence of financing. A failure by the Authority to respond to the evidence of financing will be deemed to constitute an approval hereunder. If the Authority rejects the evidence of financing as inadequate, it will do so in writing specifying the basis for the rejection. In any event the Developer will submit adequate evidence of financing within ten (10) days after any rejection for reconsideration by the Authority. The approval and execution by Authority officials of a bond purchase contract or agreement secured by the Developer’s pledge of the TIF Note is deemed approval of such financing and approval of a mortgage on the Development Property.

Section 7.2. Authority’s Option to Cure Default on Mortgage. In the event that any portion of the Developer’s funds is provided through mortgage financing, and there occurs a default under any Mortgage authorized pursuant to this Article VII, the Developer will cause the Authority to receive copies of any notice of default received by the Developer from the Holder of the Mortgage. Thereafter, the Authority will have the right, but not the obligation, to cure any Mortgage default on behalf of the Developer within the cure periods as are available to the Developer under the Mortgage documents.

Section 7.3. Modification; Subordination. In order to facilitate the Developer obtaining financing for the development of the Minimum Improvements, the Authority and the City agree to subordinate their rights under this Agreement to the Holder of any Mortgage securing construction or permanent financing, under terms and conditions reasonably acceptable to the Authority. Any subordination agreement must be approved by the Board of the Authority and the City Council.

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ARTICLE VIII

Prohibitions Against Assignment and Transfer; Indemnification

Section 8.1. Representation as to Development. The Developer represents and agrees that its purchase of the Development Property, and its other undertakings pursuant to the Agreement, are, and will be used, for the purpose of development of the Development Property and not for speculation in land holding.

Section 8.2. Prohibition Against Developer’s Transfer of Property and Assignment of Agreement. The Developer represents and agrees that prior to issuance of the Certificate of Completion for the Minimum Improvements:

(a) Except only by way of security for, and only for, the purpose of obtaining financing necessary to enable the Developer or any successor in interest to the Development Property, or any part thereof, to perform its obligations with respect to making the Minimum Improvements under this Agreement, and any other purpose authorized by this Agreement, the Developer has not made or created and will not make or create or suffer to be made or created any total or partial sale, assignment, conveyance, or lease, or any trust or power, or transfer in any other mode or form of or with respect to this Agreement or the Development Property or any part thereof or any interest therein, or any contract or agreement to do any of the same (except a lease to a residential occupant), without the prior written approval of the City and the Authority unless the Developer remains liable and bound by this Agreement in which event the City and the Authority’s approval is not required. Any transfer of this type will be subject to the provisions of this Agreement.

(b) In the event the Developer, upon transfer or assignment of the Development Property seeks to be released from its obligations under this Agreement, the City and the Authority will be entitled to require, except as otherwise provided in this Agreement, as conditions to any release that:

(i) Any proposed transferee will have the qualifications and financial responsibility, in the reasonable judgment of the City and the Authority, necessary and adequate to fulfill the obligations undertaken in this Agreement by the Developer.

(ii) Any proposed transferee, by instrument in writing satisfactory to the City and the Authority and in form recordable among the land records, will, for itself and its successors and assigns, and expressly for the benefit of the City and the Authority, have expressly assumed all of the obligations of the Developer under this Agreement and agreed to be subject to all the conditions and restrictions to which the Developer is subject; provided, however, that the fact that any transferee of, or any other successor in interest whatsoever to, the Development Property, or any part thereof, will not, for whatever reason, have assumed these obligations or so agreed, and will not (unless and only to the extent otherwise specifically provided in this Agreement or agreed to in writing by the City and the Authority) deprive the City and the Authority of any rights or remedies or controls with respect to the Development Property or any part thereof or the construction of the Minimum Improvements; it being the intent of the parties as expressed in this Agreement that (to the fullest extent permitted at law and in equity and excepting only in the manner and to the extent specifically provided otherwise in this Agreement) no transfer of, or change with respect to, ownership in the Development Property or any part thereof, or any interest therein, however consummated or occurring, and whether voluntary or involuntary, will operate, legally or practically, to deprive or limit the City and the Authority of or with respect to any rights or remedies on controls provided in or resulting from this Agreement with respect to the Minimum Improvements that the City and the Authority would have had, had there been no transfer or change. In the absence of specific written
agreement by the City and the Authority to the contrary, no transfer or approval by the City and the Authority thereof will be deemed to relieve the Developer, or any other party bound in any way by this Agreement or otherwise with respect to the construction of the Minimum Improvements, from any of its obligations with respect thereto.

(iii) Any and all instruments and other legal documents involved in effecting the transfer of any interest in this Agreement or the Development Property governed by this Article VIII, must be in a form reasonably satisfactory to the City and the Authority.

In the event the foregoing conditions are satisfied then the Developer will be released from its obligation under this Agreement.

After issuance of the Certificate of Completion for the Minimum Improvements, the Developer may transfer or assign the Development Property or the Developer’s interest in this Agreement if it obtains the prior written consent of the City and the Authority (which consent will not be unreasonably withheld) and the transferee or assignee is bound by all the Developer’s obligations hereunder. The Developer must submit to the City and the Authority written evidence of any transfer or assignment, including the transferee or assignee’s express assumption of the Developer’s obligations under this Agreement. If the Developer fails to provide evidence of transfer and assumption, the Developer will remain bound by all its obligations under this Agreement.

Nothing contained in this Section shall prohibit the Developer, without the consent or approval of the City and the Authority, from (i) entering into leases with tenants in the ordinary course of business, (ii) entering into easement or other agreements necessary for the operation of the Minimum Improvements, (iii) admitting or removing limited partners or transferring limited partner interests in the Developer or admitting or removing members in accordance with the applicable organizational documents or any documents referenced therein or attached thereto, (iv) substituting and/or removing the general partner of the Developer for cause at the direction of its limited partner(s) (whether one or more, the “Tax Credit Investor”) in accordance with the Developer’s partnership agreement, (v) pledging and/or collaterally assigning partnership interests as collateral for financing, and the exercise of remedies in connection therewith, or (vi) transferring or allowing the transfer of direct or indirect ownership interests in any partner of the Developer.

Section 8.3. Release and Indemnification Covenants.

(a) The Developer releases from and covenants and agrees that the City and the Authority and their respective governing body members, officers, agents, servants and employees thereof will not be liable for and agrees to indemnify and hold harmless the City and the Authority and their respective governing body members, officers, agents, servants and employees thereof against any loss or damage to property or any injury to or death of any person occurring at or about or resulting from any defect in the Minimum Improvements.

(b) Except for any willful misrepresentation or any willful or wanton misconduct of the following named parties, the Developer agrees to protect and defend the City and the Authority and their respective governing body members, officers, agents, servants and employees thereof, now or forever, and further agrees to hold the aforesaid harmless from any claim, demand, suit, action or other proceeding whatsoever by any person or entity whatsoever arising or purportedly arising from this Agreement, or the transactions contemplated hereby or the acquisition, construction, installation, ownership, maintenance and operation of the Minimum Improvements.
(c) The City and the Authority and their respective governing body members, officers, agents, servants and employees thereof will not be liable for any damage or injury to the persons or property of the Developer or its officers, agents, servants or employees or any other person who may be about the Development Property or Minimum Improvements due to any act of negligence of any person, except if such damage or injury to persons or property is due to any act of negligence by the City and the Authority and their respective governing body members, officers, agents, servants and employees.

(d) All covenants, stipulations, promises, agreements and obligations of the City and the Authority contained herein will be deemed to be the covenants, stipulations, promises, agreements and obligations of the City and the Authority and not of any governing body member, officer, agent, servant or employee of the City and the Authority in the individual capacity thereof.

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ARTICLE IX

Events of Default

Section 9.1. Events of Default Defined. The following will be “Events of Default” under this Agreement and the term “Event of Default” means, whenever it is used in this Agreement, any one or more of the following events, after the non-defaulting party provides thirty (30) days’ written notice to the defaulting party of the event, but only if the event has not been cured within said thirty (30) days or, if the event is by its nature incurable within thirty (30) days, the defaulting party does not, within the thirty (30) day period, provide assurances reasonably satisfactory to the party providing notice of default that the event will be cured and will be cured as soon as reasonably possible:

(a) The Developer, the City, or the Authority fails to observe or perform any covenant, condition, obligation, or agreement on its part to be observed or performed under this Agreement; or

(b) The Developer:

(i) files any petition in bankruptcy or for any reorganization, arrangement, composition, readjustment, liquidation, dissolution, or similar relief under the United States Bankruptcy Act or under any similar federal or State law;

(ii) makes an assignment for benefit of its creditors;

(iii) admits in writing its inability to pay its debts generally as they become due; or

(iv) is adjudicated as bankrupt or insolvent; or

(c) The Senior Housing Project is not constructed; or

(d) Prior to the Maturity Date, the Developer appeals or challenges the Minimum Market Value of the Development Property or the Minimum Improvements under this Agreement or the Minimum Assessment Agreement, except as otherwise permitted in Article VI hereof.

Section 9.2. Remedies on Default. Whenever any Event of Default referred to in Section 9.1 hereof occurs, the non-defaulting party may exercise its rights under this Section 9.2 after providing thirty (30) days’ written notice to the defaulting party of the Event of Default, but only if the Event of Default has not been cured within said thirty (30) days or, if the Event of Default is by its nature incurable within thirty (30) days, the defaulting party does not provide assurances reasonably satisfactory to the non-defaulting party that the Event of Default will be cured and will be cured as soon as reasonably possible:

(a) Suspend its performance under the Agreement until it receives assurances that the defaulting party will cure its default and continue its performance under the Agreement.

(b) Cancel and rescind or terminate the Agreement.

(c) Upon a default by the Developer, the Authority may suspend payments under the TIF Note or terminate the TIF Note and the TIF District, subject to the provisions of Section 9.3 hereof.
(d) Take whatever action, including legal, equitable or administrative action, which may appear necessary or desirable to collect any payments due under this Agreement, or to enforce performance and observance of any obligation, agreement, or covenant under this Agreement.

Section 9.3. Termination or Suspension of TIF Note. After the Authority has issued the Certificate of Completion for the Minimum Improvements, the Authority and the City may exercise its rights under Section 9.2(c) hereof or any other right under this Agreement that operates to suspend, cancel, or terminate payments under the TIF Note only for the following Events of Default:

(a) the Developer fails to pay real estate taxes or assessments on the Development Property or any part thereof when due, and the taxes or assessments have not been paid, or provision satisfactory to the Authority made for their payment, within thirty (30) days after written demand by the Authority to do so;

(b) the Developer fails to comply with the Developer’s obligation to operate and maintain, preserve and keep the Minimum Improvements or cause the improvements to be maintained, preserved and kept with the appurtenances and every part and parcel thereof, in good repair and condition, pursuant to Sections 4.1 and 5.1(e) hereof; provided that, upon the Developer’s failure to comply with Developer’s obligations under Section 4.1 or 5.1(e) hereof, if uncured after thirty (30) days’ written notice to the Developer of the failure, the Authority may only suspend payments under the TIF Note until the Developer complies with said obligations; if the Developer fails to comply with said obligations for a period of eighteen (18) months, the Authority may terminate the TIF Note and the TIF District; or

(c) the Developer fails to comply with the rent and income restrictions or to deliver annual rent and income reports as provided in Section 4.5 hereof and the Declaration; provided that, upon the Developer’s failure to provide annual reports, if uncured after thirty (30) days’ written notice to the Developer of the failure, the Authority may only suspend payments under the TIF Note until the Developer delivers said reports. If the Developer fails to deliver rent and income reports for a period of six (6) months following the date the reports are due after written notice to the Developer of the failure, the Authority may terminate the TIF Note and the TIF District.

Section 9.4. No Remedy Exclusive. No remedy herein conferred upon or reserved to the Authority or the Developer is intended to be exclusive of any other available remedy or remedies, but each and every remedy will be cumulative and will be in addition to every other remedy given under this Agreement or now or hereafter existing at law or in equity or by statute. No delay or omission to exercise any right or power accruing upon any default will impair any right or power or will be construed to be a waiver thereof, but any right and power may be exercised from time to time and as often as may be deemed expedient. In order to entitle the Authority to exercise any remedy reserved to it, it will not be necessary to give notice, other than the notices already required in Sections 9.2 and 9.3 hereof.

Section 9.5. No Additional Waiver Implied by One Waiver. In the event any agreement contained in this Agreement should be breached by either party and thereafter waived by the other party, the waiver will be limited to the particular breach so waived and will not be deemed to waive any other concurrent, previous or subsequent breach hereunder.

Section 9.6. Attorneys’ Fees. Whenever any Event of Default occurs and if the City or the Authority employs attorneys or incurs other expenses for the collection of payments due or to become due or for the enforcement of performance or observance of any obligation or agreement on the part of the Developer under this Agreement, and the City or the Authority prevails in the action, the Developer agrees that it will, within ten (10) days of written demand by the City or the Authority, pay to the City or
the Authority the reasonable fees of the attorneys and the other expenses so incurred by the City or the Authority.

(The remainder of this page is intentionally left blank.)
ARTICLE X

Additional Provisions

Section 10.1. Conflict of Interests; Authority Representatives Not Individually Liable. The Authority and the Developer, to the best of their respective knowledge, represent and agree that no member, official, or employee of the Authority has any personal interest, direct or indirect, in the Agreement, nor has any member, official, or employee participated in any decision relating to the Agreement which affects his or her personal interests or the interests of any corporation, partnership, or association in which he or she is, directly or indirectly, interested. No member, official, or employee of the Authority will be personally liable to the Developer, or any successor in interest, in the event of any default or breach by the Authority or County or for any amount which may become due to the Developer or successor or on any obligations under the terms of the Agreement.

Section 10.2. Equal Employment Opportunity. The Developer, for itself and its successors and assigns, agrees that during the construction of the Minimum Improvements provided for in the Agreement it will comply with all applicable federal, State, and local equal employment and non-discrimination laws and regulations.

Section 10.3. Restrictions on Use. The Developer agrees that, prior to the Maturity Date, the Developer, and its successors and assigns, will use the Development Property solely for the development of residential rental housing in accordance with the terms of this Agreement, and will not discriminate upon the basis of race, color, creed, sex or national origin in the sale, lease, or rental or in the use or occupancy of the Development Property or any improvements erected or to be erected thereon, or any part thereof.

Section 10.4. Titles of Articles and Sections. Any titles of the several parts, Articles, and Sections of the Agreement are inserted for convenience of reference only and will be disregarded in construing or interpreting any of its provisions.

Section 10.5. Notices and Demands. Except as otherwise expressly provided in this Agreement, a notice, demand, or other communication under the Agreement by either party to the other will be sufficiently given or delivered if it is dispatched by registered or certified mail, postage prepaid, return receipt requested, or delivered personally; and

(a) in the case of the Developer, is addressed to or delivered personally to the Developer at 2905 Northwest Blvd. Suite 150, Plymouth, MN 55441-2644, Attn: Mark S. Moorhouse and Ryan J. Lunderby with a copy to John Stern, Winthrop & Weinstine, P.A., Capella Tower, Suite 3500, 225 South Sixth Street, Minneapolis, MN 55402-4629;

(b) in the case of the Authority, is addressed to or delivered personally to the Authority at 14600 Minnetonka Blvd, Minnetonka, Minnesota 55345-1502, Attn: Executive Director; and

(c) in the case of the City, is addressed to or delivered personally to the Authority at 14600 Minnetonka Blvd, Minnetonka, Minnesota 55345-1502, Attn: City Manager;

or at any other address with respect to any party as that party may, from time to time, designate in writing and forward to the other as provided in this Section.

Section 10.6. Counterparts. This Agreement may be executed in any number of counterparts, each of which will constitute one and the same instrument.
Section 10.7. **Recording.** The Authority may record this Agreement and any amendments thereto with the County Recorder or Registrar of Titles of the County. The Developer must pay all costs for recording.

Section 10.8. **Amendment.** Except as specifically provided in Section 4.5(b) hereof, this Agreement may be amended only by written agreement approved by the Authority, the City, and the Developer.

Section 10.9. **Authority Approvals.** Unless otherwise specified, any approval required by the Authority under this Agreement may be given by the Authority Representative.

Section 10.10. **Termination.** This Agreement terminates on the Maturity Date, except that termination of the Agreement does not terminate, limit or affect the rights of any party that arise before the Maturity Date.

(The remainder of this page is intentionally left blank.)
IN WITNESS WHEREOF, the Authority has caused this Contract for Private Development to be duly executed in its name and behalf and the Developer has caused this Contract for Private Development to be duly executed in its name and behalf, all as of the date and year first written above.

ECONOMIC DEVELOPMENT AUTHORITY IN AND FOR THE CITY OF MINNETONKA, MINNESOTA

By ________________________________
Its President

By ________________________________
Its Executive Director

STATE OF MINNESOTA               
)   
COUNTY OF HENNEPIN               ) SS.

The foregoing instrument was acknowledged before me this _____________, 2018, by Brad Wiersum, the President of the Economic Development Authority in and for the City of Minnetonka, Minnesota, a public body corporate and politic under the laws of the State of Minnesota, on behalf of the Authority.

Notary Public

STATE OF MINNESOTA               
)   
COUNTY OF HENNEPIN               ) SS.

The foregoing instrument was acknowledged before me this _____________, 2018, by Geralyn Barone, the Executive Director of the Economic Development Authority in and for the City of Minnetonka, Minnesota, a public body corporate and politic under the laws of the State of Minnesota, on behalf of the Authority.

Notary Public
MINNETONKA LEASED HOUSING ASSOCIATES II, LLLP, a Minnesota limited liability limited partnership

By: Minnetonka Leased Housing Associates II, LLC
Its: General Partner

By: ________________________________
Name: Ryan J. Lunderby
Its: Vice President

STATE OF MINNESOTA )
 ) SS.
COUNTY OF __________ )

The foregoing instrument was acknowledged before me this ___________, 2018, by Ryan J. Lunderby, the Vice President of Minnetonka Leased Housing Associates II, LLC, a Minnesota limited liability company, the general partner of Minnetonka Leased Housing Associates II, LLLP, a Minnesota limited liability limited partnership, on behalf of the Developer.

_____________________________________
Notary Public
EXHIBIT A

DESCRIPTION OF DEVELOPMENT PROPERTY

Lot 2, Block 1, DOMINIUM 2ND ADDITION, Hennepin County, Minnesota
EXHIBIT B

FORM OF TIF NOTE

UNITED STATE OF AMERICA
STATE OF MINNESOTA
HENNEPIN COUNTY
ECONOMIC DEVELOPMENT AUTHORITY IN AND FOR THE
CITY OF MINNETONKA

No. R-1 $______

TAX_INCREMENT REVENUE NOTE
SERIES 20__

Rate Accrual Date
[5.15% or the developer’s actual rate of financing, whichever is less]% (to be determined)

The Economic Development Authority in and for the City of Minnetonka, Minnesota (the
“Authority”), for value received, certifies that it is indebted and hereby promises to pay to Minnetonka
Leased Housing Associates II, LLLP, a Minnesota limited liability limited partnership, or registered assigns
(the “Owner”), the principal sum of $______ and to pay interest thereon at the annual interest rate set forth
above, as and to the extent set forth herein.

1. Payments. Principal and interest (the “Payments”) will be paid on August 1, 20___, and
each February 1 and August 1 thereafter to and including February 1, 20___ (the “Payment Dates”), in the
amounts and from the sources set forth in Section 3 herein. Payments will be applied first to accrued
interest, and then to unpaid principal.

Payments are payable by mail to the address of the Owner or any other address as the Owner may
designate upon thirty (30) days’ written notice to the Authority. Payments on this Note are payable in any
coin or currency of the United States of America which, on the Payment Date, is legal tender for the
payment of public and private debts.

2. Interest. Interest at the rate stated herein will accrue on the unpaid principal,
commencing on the date the Authority receives and approves written evidence of the Owner’s
expenditures related to land acquisition, site preparation, constructions of constructing housing, and other
costs eligible to be reimbursed with tax increment related to the Minimum Improvements in an amount at
least equal to $__________ (the “Accrual Date”), all in accordance with Section 3.4 of the Agreement
(hereinafter defined). Interest accruing from and after the Accrual Date shall accrue on a simple basis and
will not be added to principal. Interest will be computed on the basis of a year of three hundred sixty
(360) days comprised of twelve (12) months of thirty (30) days.

3. Available Tax Increment. Payments on this Note are payable on each Payment Date in
the amount of and solely payable from “Available Tax Increment,” which will mean, on each Payment
Date, ninety percent (90%) of the Tax Increment attributable to the Development and paid to the
Authority by Hennepin County in the six (6) months preceding the Payment Date, all as the terms are
defined in the Contract for Private Development, dated _____________, 2018 (the “Agreement”),
between the Authority, the City of Minnetonka, Minnesota, and Owner. Available Tax Increment will not
include any Tax Increment if, as of any Payment Date, there is an uncured Event of Default under the
Agreement; provided, however, that once an Event of Default is cured, any Available Tax Increment
withheld shall be deemed Available Tax Increment for the next Payment Date.

The Authority will have no obligation to pay principal of and interest on this Note on each
Payment Date from any source other than Available Tax Increment, and the failure of the Authority to
pay the entire amount of principal of or interest on this Note on any Payment Date will not constitute a
default hereunder as long as the Authority pays principal of and interest hereon to the extent of Available
Tax Increment. The Authority will have no obligation to pay unpaid balance of principal or accrued
interest that may remain after the final Payment on February 1, 20__.

4. Optional Prepayment. The principal sum and all accrued interest payable under this Note
is prepayable in whole or in part at any time by the Authority without premium or penalty. No partial
prepayment will affect the amount or timing of any other regular payment otherwise required to be made
under this Note.

5. Termination. At the Authority’s option, this Note will terminate and the Authority’s
obligation to make any payments under this Note will be discharged upon the occurrence of an Event of
Default on the part of the Developer as defined in Section 9.1 of the Agreement, but only if the Event of
Default has not been cured in accordance with Section 9.2 of the Agreement.

6. Nature of Obligation. This Note is one of an issue in the total principal amount of
$____ all issued to aid in financing certain public development costs and administrative costs of a
Redevelopment Project undertaken by the Authority pursuant to Minnesota Statutes, Sections 469.001
through 469.047, as amended, and is issued pursuant to an authorizing resolution (the “Resolution”) duly
adopted by the Authority on July 23, 2018, and pursuant to and in full conformity with the Constitution
and laws of the State of Minnesota, including Minnesota Statutes, Sections 469.174 through 469.1794, as
amended. This Note is a limited obligation of the Authority which is payable solely from Available Tax
Increment pledged to the payment hereof under the Resolution. This Note and the interest hereon will not
be deemed to constitute a general obligation of the State of Minnesota or any political subdivision thereof,
including, without limitation, the Authority. Neither the State of Minnesota nor any political subdivision
thereof will be obligated to pay the principal of or interest on this Note or other costs incident hereto
except out of Available Tax Increment, and neither the full faith and credit nor the taxing power of the
State of Minnesota or any political subdivision thereof is pledged to the payment of the principal of or
interest on this Note or other costs incident hereto.

7. Estimated Tax Increment Payments. Any estimates of Tax Increment prepared by the
Authority or its municipal advisors in connection with the TIF District or the Agreement are for the
benefit of the Authority, and are not intended as representations on which the Developer may rely.

THE AUTHORITY MAKES NO REPRESENTATION OR WARRANTY THAT THE
AVAILABLE TAX INCREMENT WILL BE SUFFICIENT TO PAY THE PRINCIPAL OF AND
INTEREST ON THIS NOTE.

8. Registration and Transfer. This Note is issuable only as a fully registered note without
coupons. As provided in the Resolution, and subject to certain limitations set forth therein, this Note is
transferable upon the books of the Authority kept for that purpose at the principal office of the Executive
Director of the Authority, by the Owner hereof in person or by the Owner’s attorney duly authorized in
writing, upon surrender of this Note together with a written instrument of transfer satisfactory to the
Authority, duly executed by the Owner. Upon the transfer or exchange and the payment by the Owner of any tax, fee, or governmental charge required to be paid by the Authority with respect to the transfer or exchange, there will be issued in the name of the transferee a new Note of the same aggregate principal amount, bearing interest at the same rate and maturing on the same dates.

This Note will not be transferred to any person other than an affiliate, or other related entity, of the Owner unless the Authority has been provided with an investment letter in a form substantially similar to the investment letter attached to the Agreement or, in a form satisfactory to the Authority, that the transfer is exempt from registration and prospectus delivery requirements of federal and applicable state securities laws.

IT IS HEREBY CERTIFIED AND RECITED that all acts, conditions, and things required by the Constitution and laws of the State of Minnesota to be done, to exist, to happen, and to be performed in order to make this Note a valid and binding limited obligation of the Authority according to its terms, have been done, do exist, have happened, and have been performed in due form, time and manner as so required.

IN WITNESS WHEREOF, the Board of Commissioners of the Economic Development Authority in and for the City of Minnetonka, Minnesota, has caused this Note to be executed with the manual signatures of its President and Executive Director, all as of ___________________, 20___.

ECONOMIC DEVELOPMENT AUTHORITY IN AND FOR THE CITY OF MINNETONKA, MINNESOTA

_____________________________________________________________________________

Executive Director

President

REGISTRATION PROVISIONS

The ownership of the unpaid balance of the within Note is registered in the bond register of the Authority’s Executive Director, in the name of the person last listed below.

<table>
<thead>
<tr>
<th>Date of Registration</th>
<th>Registered Owner</th>
<th>Signature of Executive Director</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Minnetonka Leased Housing Associates II, LLLP</td>
<td>Federal ID #82-2656566</td>
</tr>
</tbody>
</table>
EXHIBIT C

INVESTMENT LETTER

To: Economic Development Authority in and for the City of Minnetonka, Minnesota (the “Authority”)  
Attention: Executive Director

Re: Tax Increment Revenue Note, Series 20__, in the original aggregate principal amount of $________

The undersigned, as Owner of $__________ in principal amount of the above-captioned Note (the “Note”) pursuant to a resolution of the Authority adopted on July 23, 2018 (the “Resolution”), hereby represents to you as follows:

1. We understand and acknowledge that the TIF Note is delivered to the Owner as of this date pursuant to the Resolution and the Contract for Private Development, dated ______________, 2018 (the “Contract”), between the Authority, the City of Minnetonka, Minnesota, and the Owner.

2. We understand that the TIF Note is payable as to principal and interest solely from Available Tax Increment as defined in the TIF Note and the provisions of the Contract.

3. We understand that the TIF Note does not accrue interest until the “Accrual Date,” as defined in the TIF Note.

4. We further understand that any estimates of Tax Increment prepared by the Authority or its municipal advisors in connection with the TIF District, the Contract or the TIF Note are for the benefit of the Authority, and are not intended as representations on which the Owner may rely.

5. We acknowledge and understand that, if at any time, the Owner fails to meet the housing income restrictions required for a housing tax increment district as set forth in Minnesota Statutes, Section 469.174, subdivision 11 and Section 469.1761, and therefore, the tax increment district will no longer qualify as a housing tax increment district, no further payments will be made under the TIF Note.

6. We have sufficient knowledge and experience in financial and business matters, including purchase and ownership of municipal obligations, to be able to evaluate the risks and merits of the investment represented by the purchase of the above-stated principal amount of the TIF Note.

7. We acknowledge that no offering statement, prospectus, offering circular or other comprehensive offering statement containing material information with respect to the Authority and the TIF Note has been issued or prepared by the Authority, and that, in due diligence, we have made our own inquiry and analysis with respect to the Authority, the TIF Note and the security therefor, and other material factors affecting the security and payment of the TIF Note.

8. We acknowledge that we have either been supplied with or have access to information, including financial statements and other financial information, to which a reasonable investor would attach significance in making investment decisions, and we have had the opportunity to ask questions and receive answers from knowledgeable individuals concerning the Authority, the TIF Note and the security therefor, and that as a reasonable investor we have been able to make our decision to purchase the above-stated principal amount of the TIF Note.
9. We have been informed that the TIF Note (i) is not being registered or otherwise qualified for sale under the “Blue Sky” laws and regulations of any state, or under federal securities laws or regulations, (ii) will not be listed on any stock or other securities exchange, and (iii) will carry no rating from any rating service.

10. We acknowledge that neither the Authority nor Kennedy & Graven, Chartered has made any representations as to the status of interest on the TIF Note for state or federal income tax purposes.

11. All capitalized terms used herein have the meaning provided in the Contract unless the context clearly requires otherwise.

12. The Owner’s federal tax identification number is ______________.

13. We acknowledge receipt of the TIF Note as of the date hereof.

(The remainder of this page intentionally left blank.)
MINNETONKA LEASED HOUSING ASSOCIATES II, LLLP, a Minnesota limited liability limited partnership

By: Minnetonka Leased Housing Associates II, LLC
Its: General Partner

By: ______________________________
Name: Ryan J. Lunderby
Its: Vice President

Dated: ___________________________
EXHIBIT D

FORM OF DECLARATION OF RESTRICTIVE COVENANTS

THIS DECLARATION OF RESTRICTIVE COVENANTS (the “Declaration”), dated __________, 2018, by MINNETONKA LEASED HOUSING ASSOCIATES II, LLLP, a Minnesota limited liability limited partnership (the “Developer”), is given to the ECONOMIC DEVELOPMENT AUTHORITY IN AND FOR THE CITY OF MINNETONKA, a public body corporate and politic under the laws of the State of Minnesota (the “Authority”).

RECITALS

WHEREAS, the Authority entered into that certain Contract for Private Development, dated __________, 2018 (the “Contract”), filed __________, 2018 in the Office of the [Recorder] [Registrar of Titles] for Hennepin County, Minnesota as Document No. __________, between the Authority and the Developer; and

WHEREAS, pursuant to the Contract, the Developer is obligated to cause construction of 220 housing units of rental housing on the property described in Exhibit A hereto (the “Property”), and to cause compliance with certain affordability covenants described in Section 4.5 of the Contract; and

WHEREAS, Section 4.5 of the Contract requires that the Developer cause to be executed an instrument in recordable form substantially reflecting the covenants set forth in Section 4.5 of the Contract; and

WHEREAS, the Developer intends, declares, and covenants that the restrictive covenants set forth herein will be and are covenants running with the Property for the term described herein and binding upon all subsequent owners of the Property for the term described herein, and are not merely personal covenants of the Developer; and

WHEREAS, capitalized terms in this Declaration have the meaning provided in the Contract unless otherwise defined herein.

NOW, THEREFORE, in consideration of the promises and covenants hereinafter set forth, and of other valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Developer agrees as follows:

1. Term of Restrictions.

   (a) Occupancy and Rental Restrictions. The term of the Occupancy Restrictions set forth in Section 3 and the Rental Restriction set forth in Section 4 of this Declaration will commence on the date a certificate of occupancy is received from the City of Minnetonka, Minnesota for all rental units on the Property. The period from commencement to termination is the “Qualified Project Period.”

   (b) Termination of Declaration. This Declaration will terminate upon the date that is thirty (30) years after the commencement of the Qualified Project Period.

   (c) Removal from Real Estate Records. Upon termination of this Declaration, the Authority will, upon request by the Developer or its assigns, file any document appropriate to remove this Declaration from the real estate records of Hennepin County, Minnesota.
2. **Project Restrictions.** The Developer represents, warrants, and covenants that:

(a) All leases of units to Qualifying Tenants (as defined in Section 3(a)(i) hereof) will contain clauses, among others, wherein each individual lessee:

   (i) Certifies the accuracy of the statements made in its application and Eligibility Certification (as defined in Section 3(a)(ii) hereof); and

   (ii) Agrees that the family income at the time the lease is executed will be deemed substantial and material obligation of the lessee’s tenancy; that the lessee will comply promptly with all requests for income and other information relevant to determining low or moderate income status from the Developer or the Authority, and that the lessee’s failure or refusal to comply with a request for information with respect thereto will be deemed a violation of a substantial obligation of the lessee’s tenancy.

(b) The Developer will permit any duly authorized representative of the Authority to inspect the books and records of the Developer pertaining to the income of Qualifying Tenants residing in the Project.

3. **Occupancy Restrictions.**

(a) **Tenant Income Provisions.** The Developer represents, warrants, and covenants that:

   (i) Qualifying Tenants. From the commencement of the Qualified Project Period, one hundred percent (100%) of the Rental Housing Units will be occupied (or treated as occupied as provided herein) or held vacant and available for occupancy by Qualifying Tenants. Qualifying Tenants means those persons and families who are determined from time to time by the Developer to have combined adjusted income that does not exceed sixty percent (60%) of the Minneapolis-St. Paul metropolitan statistical area (the “Metro Area”) median income for the applicable calendar year. For purposes of this definition, the occupants of a residential unit will not be deemed to be Qualifying Tenants if all the occupants of such residential unit at any time are “students,” as defined in Section 151(c)(4) of the Internal Revenue Code of 1986, as amended (the “Code”), not entitled to an exemption under the Code. The determination of whether an individual or family is of low or moderate income will be made at the time the tenancy commences and on an ongoing basis thereafter, determined at least annually. If, during their tenancy, a Qualifying Tenant’s income exceeds one hundred forty percent (140%) of the maximum income qualifying as low or moderate income for a family of its size, the next available unit of comparable or smaller size (determined in accordance with the Code and applicable regulations) (the “Next Available Unit Rule”) must be leased to a Qualifying Tenant or held vacant and available for occupancy by a Qualifying Tenant. If the Next Available Unit Rule is violated, the Unit will not continue to be treated as a Qualifying Unit. The annual recertification and Next Available Unit Rule requirements of this paragraph 3(a)(i) shall not apply to a given year if, during such year, no residential unit in the Project is occupied by a new resident whose income exceeds the applicable income limit for Low Income Tenants.

   (ii) Certification of Tenant Eligibility. As a condition to initial and continuing occupancy, each person who is intended to be a Qualifying Tenant will be required annually to sign and deliver to the Developer a Certification of Tenant Eligibility substantially in (A) the form attached as Exhibit B hereto,(B) the form of tenant income certification used by the Minnesota Housing Finance Agency, or (C) any other form as may be approved by the Authority.
(the “Eligibility Certification”), in which the prospective Qualifying Tenant certifies as to qualifying as low or moderate income. In addition, the person will be required to provide whatever other information, documents, or certifications are deemed necessary by the Authority to substantiate the Eligibility Certification, on an ongoing annual basis, and to verify that the tenant continues to be a Qualifying Tenant within the meaning of Section 3(a) hereof. Eligibility Certifications will be maintained on file by the Developer with respect to each Qualifying Tenant who resides in a Project unit or resided therein during the immediately preceding calendar year. The requirement of this paragraph 3(a)(ii) to perform annual Eligibility Certifications shall not apply to a given year if, during such year, no residential unit in the Project is occupied by a new resident whose income exceeds the applicable income limit for Low Income Tenants. The preceding sentence shall not affect the Developer’s obligation to obtain an initial Eligibility Certification from each person who is intended to be a Qualifying Tenant.

(iii) Lease. The form of lease to be utilized by the Developer in renting any units in the Project to any person who is intended to be a Qualifying Tenant will provide for termination of the lease and consent by the person to immediate eviction for failure to qualify as a Qualifying Tenant as a result of any material misrepresentation made by the person with respect to the Eligibility Certification.

(iv) Annual Report. The Developer covenants and agrees that during the term of this Declaration, it will prepare and submit to the Authority on or before January 31 of each year, a certificate substantially in the form of Exhibit C hereto (or a similar report produced by Yardi Property Management Software or another property management software acceptable to the Authority), executed by the Developer, (a) identifying the tenancies and the dates of occupancy (or vacancy) for all Qualifying Tenants in the Project, including the percentage of the dwelling units of the Project which were occupied by Qualifying Tenants (or held vacant and available for occupancy by Qualifying Tenants) at all times during the year preceding the date of the certificate; (b) describing all transfers or other changes in ownership of the Project or any interest therein which causes a change in control of the Developer; and (c) stating, that to the best knowledge of the person executing the certificate after due inquiry, all the units were rented or available for rental on a continuous basis during the year to members of the general public and that the Developer was not otherwise in default under this Declaration during the year.

(v) Notice of Non-Compliance. The Developer will immediately notify the Authority if at any time during the term of this Declaration the dwelling units in the Project are not occupied or available for occupancy as required by the terms of this Declaration.

(b) Section 8 Housing. During the term of this Declaration, the Developer shall not adopt any policies specifically prohibiting or excluding rental to tenants holding certificates/vouchers under Section 8 of the United States Housing Act of 1937, as amended, codified as 42 U.S.C. Sections 1401 et seq., or its successor, because of such prospective tenant’s status as such a certificate/voucher holder.

4. Rental Restrictions. The Developer represents, warrants and covenants that the maximum gross rent for all units occupied by Qualifying Tenants must not exceed thirty percent (30%) of the imputed income limitation applicable to the unit, all in accordance with Section 42 of the Internal Revenue Code of 1986, as amended (the “Tax Credit Law”).

5. Transfer Restrictions. The Developer covenants and agrees that the Developer will cause or require as a condition precedent to any conveyance, transfer, assignment, or any other disposition of the Project prior to the termination of the Rental Restrictions and Occupancy Restrictions provided herein (the “Transfer”) that the transferee of the Project pursuant to the Transfer assume in writing, in a form
acceptable to the Authority, all duties and obligations of the Developer under this Declaration, including
this Section 5, in the event of a subsequent Transfer by the transferee prior to expiration of the Rental
Restrictions and Occupancy Restrictions provided herein (the “Assumption Agreement”). The Developer
will deliver the Assumption Agreement to the Authority prior to the Transfer.

6. [Intentionally omitted.]

7. Enforcement.

(a) The Developer will permit, during normal business hours and upon reasonable notice,
any duly authorized representative of the Authority to inspect any books and records of the Developer
regarding the Project with respect to the incomes of Qualifying Tenants.

(b) The Developer will submit any other information, documents or certifications requested
by the Authority which the Authority deems reasonably necessary to substantial the Developer’s
continuing compliance with the provisions specified in this Declaration.

(c) The Developer acknowledges that the primary purpose for requiring compliance by the
Developer with the restrictions provided in this Declaration is to ensure compliance of the property with
the housing affordability covenants set forth in Section 4.5 of the Contract, and by reason thereof, the
Developer, in consideration for assistance provided by the Authority under the Contract that makes
possible the construction of the Minimum Improvements (as defined in the Contract) on the Property,
hereby agrees and consents that the Authority will be entitled, for any breach of the provisions of this
Declaration, and in addition to all other remedies provided by law or in equity, to enforce specific
performance by the Developer of its obligations under this Declaration in a state court of competent
jurisdiction. The Developer hereby further specifically acknowledges that the Authority cannot be
adequately compensated by monetary damages in the event of any default hereunder.

(d) The Developer understands and acknowledges that, in addition to any remedy set forth
herein for failure to comply with the restrictions set forth in this Declaration, the Authority may exercise
any remedy available to it under Article IX of the Contract.

8. Indemnification. The Developer hereby indemnifies, and agrees to defend and hold
harmless, the Authority from and against all liabilities, losses, damages, costs, expenses (including
attorneys’ fees and expenses), causes of action, suits, allegations, demands, and judgments of any nature
arising from the consequences of a legal or administrative proceeding or action brought against them, or
any of them, on account of any failure by the Developer to comply with the terms of this Declaration, or
on account of any representation or warranty of the Developer contained herein being untrue.

9. Agent of the Authority. The Authority will have the right to appoint an agent to carry out
any of its duties and obligations hereunder, and will inform the Developer of any agency appointment by
written notice.

10. Severability. The invalidity of any clause, part or provision of this Declaration will not
affect the validity of the remaining portions thereof.

11. Notices. All notices to be given pursuant to this Declaration must be in writing and will
be deemed given when mailed by certified or registered mail, return receipt requested, to the parties
hereof at the addresses set forth below, or to any other place as a party may from time to time designate in
writing. The Developer and the Authority may, by notice given hereunder, designate any further or
different addresses to which subsequent notices, certificates, or other communications are sent. The initial addresses for notices and other communications are as follows:

To the Authority: Economic Development Authority in and for the City of
Minnetonka
14600 Minnetonka Boulevard
Minnetonka, MN 55345
Attention: Community Development Director

To the Developer: Minnetonka Leased Housing Associates II, LLLP
2905 Northwest Blvd. Suite 150
Plymouth, MN 55441-2644
Attention: Mark S. Moorhouse and Ryan J. Lunderby

With copy to: Winthrop & Weinstine, P.A.
Capella Tower, Suite 3500
225 South Sixth Street
Minneapolis, MN 55402-4629
Attention: John Stern

12. **Governing Law.** This Declaration is governed by the laws of the State of Minnesota and, where applicable, the laws of the United States of America.

13. **Attorneys’ Fees.** In case any action at law or in equity, including an action for declaratory relief, is brought against the Developer to enforce the provisions of this Declaration, the Developer agrees to pay the reasonable attorneys’ fees and other reasonable expenses paid or incurred by the Authority in connection with the action.

14. **Declaration Binding.** This Declaration and the covenants contained herein will run with the real property comprising the Project and will bind the Developer and its successors and assigns and all subsequent owners of the Project or any interest therein, and the benefits will inure to the Authority and its successors and assigns for the term of this Declaration as provided in Section 1(b).

15. **Relationship to Tax Credit Law Requirements.** Notwithstanding anything to the contrary, during any period while one hundred percent (100%) of the units in the Property are subject to income and rent limitations under the Tax Credit Law, evidence of compliance with the Tax Credit Law requirements filed with the Authority at least annually will satisfy any requirements otherwise imposed under this Declaration. During any portion of the Qualified Project Period as defined herein when the Tax Credit Law income and rent restrictions do not apply to the Property, this Declaration controls.

16. **Notice of Sale.** In consideration for the issuance of the TIF Note, the Developer agrees to provide the Authority with at least ninety (90) days’ notice of any sale of the Project.

17. **Foreclosure.** In the event of foreclosure (or deed in lieu of foreclosure) of the [Construction Mortgage or Freddie Mac Mortgage], dated ______________, 2018 which was executed by the Developer to secure repayment of the ____________________________ (the “Bonds”), issued by the City of Minnetonka in the original aggregate principal amount of $ ____________, this Declaration (including without limitation, any and all land use covenants and/or restrictions contained herein) shall automatically terminate.

(The remainder of this page is intentionally left blank.)
IN WITNESS WHEREOF, the Developer has caused this Declaration of Restrictive Covenants to be signed by its respective duly authorized representatives, as of the day and year first written above.

MINNETONKA LEASED HOUSING ASSOCIATES II, LLLP, a Minnesota limited liability limited partnership

By: Minnetonka Leased Housing Associates II, LLC
Its: General Partner

By: ________________________________
Name: Ryan J. Lunderby
Its: Vice President

STATE OF MINNESOTA )
) SS.
COUNTY OF HENNEPIN )

The foregoing instrument was acknowledged before me this ________________, 2018, by Ryan J. Lunderby, the Vice President of Minnetonka Leased Housing Associates II, LLC, a Minnesota limited liability company, the general partner of Minnetonka Leased Housing Associates II, LLLP, a Minnesota limited liability limited partnership, on behalf of the Developer.

____________________________________
Notary Public

This document drafted by:

Kennedy & Graven Chartered (JAE)
470 U.S. Bank Plaza
200 South Sixth Street
Minneapolis, MN 55402
This Declaration is acknowledged and consented to by:

ECONOMIC DEVELOPMENT AUTHORITY IN 
AND FOR THE CITY OF MINNETONKA, 
MINNESOTA

By ________________________________
Its President

By ________________________________
Its Executive Director

STATE OF MINNESOTA        )
    ) SS.
COUNTY OF HENNEPIN         )

The foregoing instrument was acknowledged before me this _____________, 20___, by ________________________________, the President of the Economic Development Authority in and for the City of Minnetonka, Minnesota, a public body corporate and politic under the laws of the State of Minnesota, on behalf of the Authority.

________________________________________
Notary Public

STATE OF MINNESOTA        )
    ) SS.
COUNTY OF HENNEPIN         )

The foregoing instrument was acknowledged before me this _____________, 20___, by ________________________________, the Executive Director of the Economic Development Authority in and for the City of Minnetonka, Minnesota, a public body corporate and politic under the laws of the State of Minnesota, on behalf of the Authority.

________________________________________
Notary Public
EXHIBIT A

Legal Description

The land referred to is situated in the State of Minnesota, County of Hennepin, and is described as follows:

Lot 2, Block 1, DOMINIUM 2ND ADDITION, Hennepin County, Minnesota
EXHIBIT B

Certification of Tenant Eligibility

(INCOME COMPUTATION AND CERTIFICATION)

Project: [Address]

Owner:

Unit Type: _____ 1 BR _____ 2 BR _____ 3 BR

1. I/We, the undersigned, being first duly sworn, state that I/we have read and answered fully, frankly and personally each of the following questions for all persons (including minors) who are to occupy the unit in the above apartment development for which application is made, all of whom are listed below:

<table>
<thead>
<tr>
<th>Name of Members of the Household</th>
<th>Relationship To Head of Household</th>
<th>Age</th>
<th>Place of Employment</th>
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Income Computation

2. The anticipated income of all the above persons during the twelve (12) month period beginning this date,

(a) including all wages and salaries, overtime pay, commissions, fees, tips and bonuses before payroll deductions; net income from the operation of a business or profession or from the rental of real or personal property (without deducting expenditures for business expansion or amortization of capital indebtedness); interest and dividends; the full amount of periodic payments received from social security, annuities, insurance policies, retirement funds, pensions, disability or death benefits and other similar types of periodic receipts; payments in lieu of earnings, such as unemployment and disability compensation, worker’s compensation and severance pay; the maximum amount of public assistance available to the above persons; periodic and determinable allowances, such as alimony and child support payments and regular contributions and gifts received from persons not residing in the dwelling; and all regular pay, special pay and allowances of a member of the Armed Forces (whether or not living in the dwelling) who is the head of the household or spouse; but

(b) excluding casual, sporadic or irregular gifts; amounts which are specifically for or in reimbursement of medical expenses; lump sum additions to family assets, such as inheritances, insurance payments (including payments under health and accident insurance and workmen’s compensation), capital gains and settlement for personal or property losses; amounts of educational scholarships paid directly to the student or the educational institution, and amounts paid by the government to a veteran for use in meeting the costs of tuition, fees, books and
equipment, but in either case only to the extent used for these types of purposes; special pay to a serviceman head of a family who is away from home and exposed to hostile fire; relocation payments under Title II of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970; foster child care payments; the value of coupon allotments for the purchase of food pursuant to the Food Stamp Act of 1964 which is in excess of the amount actually charged for the allotments; and payments received pursuant to participation in ACTION volunteer programs, is as follows: $____________.

3. If any of the persons described above (or whose income or contributions was included in item 2) has any savings, bonds, equity in real property or other form of capital investment, provide:

   (a) the total value of all such assets owned by all such persons: $____________;

   (b) the amount of income expected to be derived from such assets in the twelve (12) month period commencing this date: $____________; and

   (c) the amount of such income which is included in income listed in item 2: $__________.

4. (a) Will all of the persons listed in item 1 above be or have they been full-time students during five calendar months of this calendar year at an educational institution (other than a correspondence school) with regular faculty and students?

   Yes ________________   No ________________

   (b) Is any such person (other than nonresident aliens) married and eligible to file a joint federal income tax return?

   Yes ________________   No ________________
THE UNDERSIGNED HEREBY CERTIFY THAT THE INFORMATION SET FORTH ABOVE IS TRUE AND CORRECT. THE UNDERSIGNED ACKNOWLEDGE THAT THE LEASE FOR THE UNIT TO BE OCCUPIED BY THE UNDERSIGNED WILL BE CANCELLED UPON 10 DAYS WRITTEN NOTICE IF ANY OF THE INFORMATION ABOVE IS NOT TRUE AND CORRECT.

__________________________
Head of Household

__________________________
Spouse
FOR COMPLETION BY OWNER
(OR ITS MANAGER) ONLY

1. Calculation of Eligible Tenant Income:

   (a) Enter amount entered for entire household in 2 above: $__________

   (b) If the amount entered in 3(a) above is greater than $5,000, enter the greater of
       (i) the amount entered in 3(b) less the amount entered in 3(c) or
       (ii) 10% of the amount entered in

   (c) TOTAL ELIGIBLE INCOME (Line 1(a) plus Line 1(b)): $__________

2. The amount entered in 1(c) is less than or equal to 60% of median income for the area in
which the Project is located, as defined in the Declaration. 60% is necessary for status as a “Qualifying
Tenant” under Section 3(a) of the Declaration.

3. Rent:

   (a) The rent for the unit is $______________.

   (b) The amount entered in 3(a) is less than or equal to the maximum rent permitted
under the Declaration.

4. Number of apartment unit assigned: ____________.

5. This apartment unit was ____ was not ____ last occupied for a period of at least
31 consecutive days by persons whose aggregate anticipated annual income as certified in the above
manner upon their initial occupancy of the apartment unit was less than or equal to 60% of median
Income in the area.

6. Check as applicable: _______ Applicant qualifies as a Qualifying Tenant (tenants of at
least ____ units must meet), or ____ Applicant otherwise qualifies to rent a unit.

THE UNDERSIGNED HEREBY CERTIFIES THAT HE/SHE HAS NO KNOWLEDGE OF ANY
FACTS WHICH WOULD CAUSE HIM/HER TO BELIEVE THAT ANY OF THE INFORMATION
PROVIDED BY THE TENANT MAY BE UNTURE OR INCORRECT.

MINNETONKA LEASED HOUSING ASSOCIATES
II, LLLP, a Minnesota limited liability limited
partnership

By ____________________________
Its ____________________________
EXHIBIT C

Certificate of
Continuing Program Compliance

Date: ___________________

The following information with respect to the Project located at __________________, Minnetonka, Minnesota (the “Project”), is being provided by Minnetonka Leased Housing Associates II, LLP (the “Owner”) to the Economic Development Authority in and for the City of Minnetonka, Minnesota (the “Authority”), pursuant to that certain Declaration of Restrictive Covenants, dated ________, 2018 (the “Declaration”), with respect to the Project:

(A) The total number of residential units which are available for occupancy is 220. The total number of these units occupied is ________________.

(B) The following residential units (identified by unit number) are currently occupied by “Qualifying Tenants,” as the term is defined in the Declaration (for a total of ____ units):

1 BR Units:

2 BR Units:

3 BR Units:

(C) The following residential units which are included in (B) above, have been re-designated as units for Qualifying Tenants since ________________ , 20___, the date on which the last “Certificate of Continuing Program Compliance” was filed with the Authority by the Owner:

<table>
<thead>
<tr>
<th>Unit Number</th>
<th>Previous Designation of Unit (if any)</th>
<th>Replacing Unit Number</th>
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<tr>
<td>___________</td>
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</table>
(D) The following residential units are considered to be occupied by Qualifying Tenants based on the information set forth below:

<table>
<thead>
<tr>
<th>Unit Number</th>
<th>Name of Tenant</th>
<th>Number of Persons Residing in the Unit</th>
<th>Number of Bedrooms</th>
<th>Total Adjusted Gross Income</th>
<th>Date of Initial Occupancy</th>
<th>Rent</th>
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(E) The Owner has obtained a “Certification of Tenant Eligibility,” in the form required by the Declaration, from each Tenant named in (D) above (to the extent required by the Declaration), and each such Certificate is being maintained by the Owner in its records with respect to the Project. Attached hereto is the most recent “Certification of Tenant Eligibility” for each Tenant named in (D) above who signed such a Certification since ______________, the date on which the last “Certificate of Continuing Program Compliance” was filed with the Authority by the Owner.
(F) In renting the residential units in the Project, the Owner has not given preference to any particular group or class of persons (except for persons who qualify as Qualifying Tenants); and none of the units listed in (D) above have been rented for occupancy entirely by students, no one of which is entitled to file a joint return for federal income tax purposes. All of the residential units in the Project have been rented pursuant to a written lease, and the term of each lease is at least twelve (12) months.

(G) The information provided in this “Certificate of Continuing Program Compliance” is accurate and complete, and no matters have come to the attention of the Owner which would indicate that any of the information provided herein, or in any “Certification of Tenant Eligibility” obtained from the Tenants named herein, is inaccurate or incomplete in any respect.

(H) The Project is in continuing compliance with the Declaration.

(I) The Owner certifies that as of the date hereof one hundred percent (100%) of the residential dwelling units in the Project are occupied or held open for occupancy by Qualifying Tenants, as defined and provided in the Declaration.

(J) The rental levels for each Qualifying Tenant comply with the maximum permitted under the Declaration.
IN WITNESS WHEREOF, I have hereunto affixed my signature, on behalf of the Owner, on ____________________, 2018.

MINNETONKA LEASED HOUSING ASSOCIATES II, LLP, a Minnesota limited liability limited partnership

By: Minnetonka Leased Housing Associates II, LLC
Its: General Partner

By: ______________________________________
Name: Ryan J. Lunderby
Its: Vice President
EXHIBIT E

CERTIFICATE OF COMPLETION

The undersigned hereby certifies that Minnetonka Leased Housing Associates II, LLLLP (the “Developer”), has fully complied with its obligations under Article IV of that document titled “Contract for Private Development,” dated ____________, 2018 (the “Agreement”), between the Economic Development Authority in and for the City of Minnetonka, Minnesota and the Developer, with respect to construction of the Minimum Improvements in accordance with Article IV of the Agreement, and that the Developer is released and forever discharged from its obligations with respect to construction of the Minimum Improvements under Articles III and IV of the Agreement.

Dated: ________________, 20__.  

ECONOMIC DEVELOPMENT AUTHORITY IN  
AND FOR THE CITY OF MINNETONKA,  
MINNESOTA

By ________________________________________  
Its President

By ________________________________________  
Its Executive Director

STATE OF MINNESOTA    )
) SS.
COUNTY OF HENNEPIN    )

The foregoing instrument was acknowledged before me this ________________, 20__, by ________________________________________, the President of the Economic Development Authority in and for the City of Minnetonka, Minnesota, a public body corporate and politic under the laws of the State of Minnesota, on behalf of the Authority.

Notary Public

STATE OF MINNESOTA    )
) SS.
COUNTY OF HENNEPIN    )

The foregoing instrument was acknowledged before me this ________________, 20__, by ________________________________________, the Executive Director of the Economic Development Authority in and for the City of Minnetonka, Minnesota, a public body corporate and politic under the laws of the State of Minnesota, on behalf of the Authority.

Notary Public
This document was drafted by:
KENNEDY & GRAVEN, CHARTERED (JAE)
470 U.S. Bank Plaza
200 South Sixth Street
Minneapolis, Minnesota  55402
# EXHIBIT F

## RENTAL HOUSING UNITS BY UNIT TYPE

<table>
<thead>
<tr>
<th>Unit Type</th>
<th>Number of Units in Minimum Improvements</th>
</tr>
</thead>
<tbody>
<tr>
<td>One Bedroom</td>
<td>55 units</td>
</tr>
<tr>
<td>Two Bedroom</td>
<td>120 units</td>
</tr>
<tr>
<td>Three Bedroom</td>
<td>45 units</td>
</tr>
</tbody>
</table>
EXHIBIT G

FORM OF MINIMUM ASSESSMENT AGREEMENT

MINIMUM ASSESSMENT AGREEMENT

and

ASSESSOR’S CERTIFICATION

between

ECONOMIC DEVELOPMENT AUTHORITY
IN AND FOR THE
CITY OF MINNETONKA, MINNESOTA,

MINNETONKA LEASED HOUSING ASSOCIATES II, LLLP,

and

CITY ASSESSOR FOR THE CITY OF MINNETONKA, MINNESOTA

This Document was drafted by:

KENNEDY & GRAVEN, Chartered (JAE)
470 U.S. Bank Plaza
200 South Sixth Street
Minneapolis, MN 55402
(612) 337-9300
THIS MINIMUM ASSESSMENT AGREEMENT, dated as of this ___ day of __________, 2018 (the “Minimum Assessment Agreement”), is between the ECONOMIC DEVELOPMENT AUTHORITY IN AND FOR THE CITY OF MINNETONKA, MINNESOTA, a public body corporate and politic under the laws of the State of Minnesota (the “Authority”), and MINNETONKA LEASED HOUSING ASSOCIATES II, LLLP, a Minnesota limited liability limited partnership, its successors and assigns (the “Owner”).

WITNESSETH:

WHEREAS, the Authority and the Owner have entered into a Contract for Private Development, dated ________________, 2018 (the “Agreement”), concerning the property legally described on EXHIBIT A attached hereto (the “Development Property”); and

WHEREAS, pursuant to the Agreement, the Owner will construct approximately 220 affordable multifamily housing apartment units, with one hundred percent (100%) of the apartment units made affordable to families at or below sixty percent (60%) of the area median income, on the Development Property (the “Minimum Improvements”); and

WHEREAS, the Authority and the Owner desires to establish a minimum market value for the Development Property and the Minimum Improvements to be constructed thereon, pursuant to Minnesota Statutes, Section 469.177, subdivision 8; and

WHEREAS, the Authority and the City Assessor for the City of Minnetonka, Minnesota have reviewed the Plans for the Minimum Improvements which the Owner has agreed to construct on the Development Property pursuant to the Agreement; and

NOW, THEREFORE, the parties to this Minimum Assessment Agreement, in consideration of the promises, covenants and agreements made herein and in the Agreement by each to the other, do hereby agree as follows:

1. The Minimum Market Value for the Development Property with the Minimum Improvements shall be $39,600,000. The parties agree that this Minimum Market Value shall be placed against the Development Property as of January 2, 2020, for taxes payable beginning in 2021, notwithstanding any failure to start or complete construction of such Minimum Improvements by that date.

2. The Minimum Market Value herein established shall be of no further force and effect and this Minimum Assessment Agreement shall terminate on the Maturity Date. The Maturity Date has the meaning given to it under the Agreement.

3. This Minimum Assessment Agreement shall be promptly recorded by the Owner with a copy of Minnesota Statutes, Section 469.177, subdivision 8 set forth in EXHIBIT B attached hereto. The Owner shall pay all costs of recording this Minimum Assessment Agreement.

4. Neither the preambles nor the provisions of this Minimum Assessment Agreement are intended to, nor shall they be construed as, modifying the terms of the Agreement. Unless the context indicates clearly to the contrary, the terms used in this Minimum Assessment Agreement shall have the same meaning as the terms used in the Agreement.

5. This Minimum Assessment Agreement shall inure to the benefit of and be binding upon the parties and their successors and assigns.
6. Each of the parties has authority to enter into this Minimum Assessment Agreement and to take all actions required of it and has taken all actions necessary to authorize the execution and delivery of this Minimum Assessment Agreement.

7. In the event any provision of this Minimum Assessment Agreement shall be held invalid or unenforceable by any court of competent jurisdiction, such holding shall not invalidate or render unenforceable any other provision hereof.

8. The parties hereto agree that they will, from time to time, execute, acknowledge and deliver, or cause to be executed, acknowledged and delivered, such supplements, amendments and modifications hereto, and such further instruments as may reasonably be required for correcting any inadequate, or incorrect, or amended description of the Development Property, or for carrying out the expressed intention of this Minimum Assessment Agreement.

9. Except as provided in Section 8 hereof, this Minimum Assessment Agreement may not be amended nor any of its terms modified except by a writing authorized and executed by all parties hereto.

10. This Minimum Assessment Agreement may be simultaneously executed in several counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument.

11. This Minimum Assessment Agreement shall be governed by and construed in accordance with the laws of the State of Minnesota.
IN WITNESS WHEREOF, the Authority and the Owner have executed this Minimum Assessment Agreement as of the date and year first written above.

ECONOMIC DEVELOPMENT AUTHORITY IN AND FOR THE CITY OF MINNETONKA, MINNESOTA

By ________________________________
Its President

By ________________________________
Its Executive Director

STATE OF MINNESOTA )
COUNTY OF HENNEPIN ) SS.

The foregoing instrument was acknowledged before me this _____________, 2018, by Brad Wiersum, the President of the Economic Development Authority in and for the City of Minnetonka, Minnesota, a public body corporate and politic under the laws of the State of Minnesota, on behalf of the Authority.

_________________________________________________________________
Notary Public

STATE OF MINNESOTA )
COUNTY OF HENNEPIN ) SS.

The foregoing instrument was acknowledged before me this _____________, 2018, by Geralyn Barone, the Executive Director of the Economic Development Authority in and for the City of Minnetonka, Minnesota, a public body corporate and politic under the laws of the State of Minnesota, on behalf of the Authority.

_________________________________________________________________
Notary Public
MINNETONKA LEASED HOUSING ASSOCIATES II, LLLP, a Minnesota limited liability limited partnership

By: Minnetonka Leased Housing Associates II, LLC
Its: General Partner

By: ________________________________
Name: Ryan J. Lunderby
Its: Vice President

STATE OF MINNESOTA
) SS.
COUNTY OF HENNEPIN

The foregoing instrument was acknowledged before me this ______________, 2018, by Ryan J. Lunderby, the Vice President of Minnetonka Leased Housing Associates II, LLC, a Minnesota limited liability company, the general partner of Minnetonka Leased Housing Associates II, LLLP, a Minnesota limited liability limited partnership, on behalf of the Developer.

______________________________
Notary Public
CERTIFICATION BY ASSESSOR

The undersigned, having reviewed the plans and specifications for the improvements to be constructed and the market value assigned to the land upon which the improvements are to be constructed, and being of the opinion that the minimum market value contained in the foregoing Agreement appears reasonable, hereby certify as follows: The undersigned Assessor being legally responsible for the assessment of the described property, hereby certifies that the market value assigned to such land and improvements at the property, legally described on EXHIBIT A attached hereto, shall be not less than $39,600,000 as of January 2, 2020, for taxes payable beginning in 2021, until termination of this Agreement.

______________________________
City Assessor for Minnetonka, Minnesota

STATE OF MINNESOTA )
 ) ss.
COUNTY OF HENNEPIN )

The foregoing instrument was acknowledged before me this ____ day of ________, 2018, by __________________________, the City Assessor, City of Minnetonka, Hennepin County, Minnesota.

______________________________
Notary Public
EXHIBIT A
TO ASSESSMENT AGREEMENT

The Development Property is legally described as follows:

Lot 2, Block 1, DOMINIUM 2ND ADDITION, Hennepin County, Minnesota
Section 469.177, subd. 8. Assessment Agreements. An authority may enter into a written assessment agreement with any person establishing a minimum market value of land, existing improvements, or improvements to be constructed in a district, if the property is owned or will be owned by the person. The minimum market value established by an assessment agreement may be fixed, or increase or decrease in later years from the initial minimum market value. If an agreement is fully executed before July 1 of an assessment year, the market value as provided under the agreement must be used by the county or local assessor as the taxable market value of the property for that assessment. Agreements executed on or after July 1 of an assessment year become effective for assessment purposes in the following assessment year. An assessment agreement terminates on the earliest of the date on which conditions in the assessment agreement for termination are satisfied, the Maturity Date specified in the agreement, or the date when tax increment is no longer paid to the authority under section 469.176, subdivision 1. The assessment agreement shall be presented to the county assessor, or city assessor having the powers of the county assessor, of the jurisdiction in which the tax increment financing district and the property that is the subject of the agreement is located. The assessor shall review the plans and specifications for the improvements to be constructed, review the market value previously assigned to the land upon which the improvements are to be constructed and, so long as the minimum market value contained in the assessment agreement appears, in the judgment of the assessor, to be a reasonable estimate, shall execute the following certification upon the agreement:

The undersigned assessor, being legally responsible for the assessment of the above described property, certifies that the market values assigned to the land and improvements are reasonable

The assessment agreement shall be filed for record and recorded in the office of the county recorder or the registrar of titles of each county where the real estate or any part thereof is situated. After the agreement becomes effective for assessment purposes, the assessor shall value the property under Section 273.11, except that the market value assigned shall not be less than the minimum market value established by the assessment agreement. The assessor may assign a market value to the property in excess of the minimum market value established by the assessment agreement. The owner of the property may seek, through the exercise of administrative and legal remedies, a reduction in market value for property tax purposes, but no city assessor, county assessor, county auditor, board of review, board of equalization, commissioner of revenue, or court of this state shall grant a reduction of the market value below the minimum market value established by the assessment agreement during the term of the agreement filed of record regardless of actual market values which may result from incomplete construction of improvements, destruction, or diminution by any cause, insured or uninsured, except in the case of acquisition or reacquisition of the property by a public entity. Recording an assessment agreement constitutes notice of the agreement to anyone who acquires any interest in the land or improvements that is subject to the assessment agreement, and the agreement is binding upon them.

An assessment agreement may be modified or terminated by mutual consent of the current parties to the agreement. Modification or termination of an assessment agreement must be approved by the governing body of the municipality. If the estimated market value for the property for the most recently available assessment is less than the minimum market value established by the assessment agreement for that or any later year and if bond counsel does not conclude that termination of the agreement is necessary to preserve the tax exempt status of outstanding bonds or refunding bonds to be issued, the modification or termination of the assessment agreement also must be approved by the governing bodies of the county and the school district. A document modifying or terminating an agreement, including records of the municipality, county, and school district approval, must be filed for record. The assessor’s review and certification is not required if the document terminates an agreement. A change to an agreement not fully
executed before July 1 of an assessment year is not effective for assessment purposes for that assessment year. If an assessment agreement has been modified or prematurely terminated, a person may seek a reduction in market value or tax through the exercise of any administrative or legal remedy. The remedy may not provide for reduction of the market value below the minimum provided under a modified assessment agreement that remains in effect. In no event may a reduction be sought for a year other than the current taxes payable year.
The following improvements are the Site Improvements required under this Agreement:

- Surveying and staking;
- Surface improvements, including but not limited to streets, curbs, sidewalks and trails;
- Water main;
- Sanitary sewer;
- Storm sewer and stormwater management facilities;
- Lot and block monuments;
- Gas, electric, telephone and cable lines;
- Site grading;
- Landscaping;
- Street lighting;
- Street signs;
- Relocation of the public sewer line in the western portion of the Development Property;
- Pedestrian underpass beneath Bren Road East;
- Dynamic predication crossing safety improvements on the east side of the Development Property, adjacent to Bren Road East; and
- All other items as necessary to complete the Project as stipulated in Resolution Nos. 2018-____, 2018-____ and this Agreement.
CONTRACT

FOR

PRIVATE DEVELOPMENT

between

ECONOMIC DEVELOPMENT AUTHORITY
IN AND FOR THE
CITY OF MINNETONKA, MINNESOTA,
CITY OF MINNETONKA, MINNESOTA,

and

MINNETONKA LEASED HOUSING ASSOCIATES III, LLLP

Dated _________________, 2018

This document was drafted by:
KENNEDY & GRAVEN, CHARTERED (JAE)
470 U.S. Bank Plaza
200 South Sixth Street
Minneapolis, Minnesota  55402
Telephone:  612-337-9300
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CONTRACT FOR PRIVATE DEVELOPMENT

THIS CONTRACT FOR PRIVATE DEVELOPMENT, made as of the _____ day of __________, 2018 (the “Agreement”), is between the ECONOMIC DEVELOPMENT AUTHORITY IN AND FOR THE CITY OF MINNETONKA, MINNESOTA, a public body corporate and politic under the laws of the State of Minnesota (the “Authority”), the CITY OF MINNETONKA, MINNESOTA (the “City”), and MINNETONKA LEASED HOUSING ASSOCIATES III, LLLP, a Minnesota limited liability limited partnership (the “Developer”).

WITNESSETH:

WHEREAS, the Authority was created pursuant to Minnesota Statutes, Sections 469.090 through 469.1082, as amended, and was authorized to transact business and exercise its powers by a resolution adopted by the City Council of the City; and

WHEREAS, the Authority and the City have undertaken a program to promote economic development and job opportunities, promote the development and redevelopment of land which is underutilized within the City, and facilitate the development of affordable housing, and in this connection created a redevelopment project known as the Opus Redevelopment Project (the “Redevelopment Project”) in the City, pursuant to Minnesota Statutes, Sections 469.001 through 469.047, as amended; and

WHEREAS, the City and the Authority have established within the Project the Domini um Housing Tax Increment Financing District, a housing district (the “TIF District”), and have adopted a financing plan (the “TIF Plan”) for the TIF District in order to facilitate development of certain property in the Redevelopment Project and promote the development of affordable housing within the City, all pursuant to Minnesota Statutes, Sections 469.174 through 469.1794, as amended; and

WHEREAS, the Developer proposes to acquire certain property described in EXHIBIT A attached hereto (the “Development Property”) within the TIF District and develop approximately 262 affordable apartment units intended to be occupied by at least one individual who, at the time of initial occupancy of such unit, is 55 years of age or older, to be located at or about 11001 Bren Road East in the City, with one hundred percent (100%) of the apartment units made affordable to such tenants at or below sixty percent (60%) of the area median income (the “Minimum Improvements”); and

WHEREAS, in order to make the Minimum Improvements economically feasible for the Developer to construct, the Authority is prepared to reimburse the Developer for certain land acquisition costs, site improvement costs, and costs of constructing housing related to the Minimum Improvements, which are eligible to be reimbursed with tax increment; and

WHEREAS, the Authority and the City believe that the development of the TIF District pursuant to this Agreement, and fulfillment generally of this Agreement, are in the vital and best interests of the City and the health, safety, morals, and welfare of its residents, and in accord with the public purposes and provisions of the applicable State of Minnesota and local laws and requirements under which the Redevelopment Project has been undertaken and is being assisted.

NOW, THEREFORE, in consideration of the premises and the mutual obligations of the parties hereto, each of them does hereby covenant and agree with the other as follows:
ARTICLE I

Definitions

Section 1.1. Definitions. In this Agreement, unless a different meaning clearly appears from the context, the following terms have the following defined meanings:

“Administrative Costs” means the costs described in Section 3.5 hereof.

“Agreement” means this Contract for Private Development, as the same may be from time to time modified, amended, or supplemented.

“Assessor” means the assessor of the City.

“Authority” means the Economic Development Authority in and for the City of Minnetonka, Minnesota, a public body corporate and politic under the laws of the State.

“Authority Representative” means the Executive Director of the Authority.

“Available Tax Increment” means, on each Payment Date, ninety percent (90%) of the Tax Increment attributable to the Development Property and paid to the Authority by the County in the six (6) months preceding the Payment Date. Available Tax Increment will not include any Tax Increment if, as of any Payment Date, there is an uncured Event of Default under this Agreement; provided, however, that once an Event of Default is cured, any Available Tax Increment withheld shall be deemed Available Tax Increment for the next Payment Date.

“Board” means the Board of Commissioners of the Authority.

“Certificate of Completion” means the certification provided to the Developer pursuant to Section 4.4 hereof.

“City” means the City of Minnetonka, Minnesota.

“Closing” means the date the Developer purchases the Development Property.


“Construction Plans” means the plans, specifications, drawings and related documents on the construction work to be performed by the Developer on the Development Property, including the Minimum Improvements, which (a) must be as detailed as the plans, specifications, drawings and related documents which are submitted to the appropriate building officials of the City, and (b) must include at least the following: (1) site plan; (2) foundation plan; (3) floor plan for each floor; (4) cross-sections of each floor plan (length and width); (5) elevations (all sides, including a building materials schedule); (6) landscape and grading plan; and (7) other plans or supplements to the foregoing plans as the City may reasonably request to allow it to ascertain the nature and quality of the proposed construction work.

“County” means Hennepin County, Minnesota.

“Declaration” means the Declaration of Restrictive Covenants attached as EXHIBIT D hereto.
“Developer” means Minnetonka Leased Housing Associates III, LLLP, a Minnesota limited liability limited partnership, or its permitted successors and assigns.

“Development Property” means the real property described in EXHIBIT A attached hereto.

“EDA Act” means Minnesota Statutes, Sections 469.090 through 469.1082, as amended.

“Event of Default” means an action by the Developer listed in Article IX hereof.

“Holder” means the owner of a Mortgage.

“HRA Act” means Minnesota Statutes, Sections 469.001 through 469.047, as amended.

“Material Change” means a change in construction plans that adversely affects generation of Tax Increment or changes the number of Rental Housing Units.

“Maturity Date” means the date that the TIF Note has been paid in full or terminated, whichever is earlier.

“Minimum Assessment Agreement” means the Minimum Assessment Agreement establishing a Minimum Market Value of the Development Property and the Minimum Improvements substantially in the form attached hereto as EXHIBIT G.

“Minimum Improvements” means the construction of a multifamily housing development consisting of one building with approximately 262 affordable apartment units, intended to be occupied by at least one individual who at the time of initial occupancy of such unit, is 55 years of age or older, with at least 262 parking spaces but no less than the parking spaces required by the applicable Planned Unit Development (or such lesser amount of parking spaces as may be permitted from time to time under this Agreement) on the Development Property.

“Minimum Market Value” means a minimum market value for real estate tax purposes of $47,160,000 with respect to the Development Property and Minimum Improvements as of January 2, 2020 for taxes payable beginning in 2021 through the Maturity Date.

“Mortgage” means any mortgage made by the Developer which is secured, in whole or in part, with the Development Property and which is a permitted encumbrance pursuant to the provisions of Article VII hereof.

“Payment Date” means each February 1 and August 1, commencing August 1, 2021, on which principal of the TIF Note is paid.

“Public Development Costs” has the meaning provided in Section 3.3 hereof.

“Qualifying Tenants” means one or more occupants of a unit within the Minimum Improvements, so long as at least one of the occupants of the unit, at the time of initial occupancy of such unit, is 55 years of age or older; provided, however, if one or more of the occupants that qualifies as a Qualifying Tenant dies, the then current tenant of the until shall be deemed a Qualifying Tenant.

“Redevelopment Plan” means the Redevelopment Plan for the Redevelopment Project approved and adopted by the Authority and the City Council of the City.
“Redevelopment Project” means the Opus Redevelopment Project.

“Redevelopment Project Area” means the real property located within the boundaries of the Redevelopment Project.

“Rental Housing Units” means the rental housing units constructed as part of the Minimum Improvements.

“Site Improvements” has the meaning provided in Section 4.8 hereof.

“State” means the State of Minnesota.

“Tax Credit Law” means Section 42 of the Code.

“Tax Increment” means that portion of the real property taxes which is paid with respect to the TIF District and which is remitted to the Authority as tax increment pursuant to the Tax Increment Act.

“Tax Increment Act” or “TIF Act” means the Tax Increment Financing Act, Minnesota Statutes, Sections 469.174 through 469.1794, as amended.

“Tax Increment District” or “TIF District” means the Dominium Housing Tax Increment Financing District, a housing district.

“Tax Increment Plan” or “TIF Plan” means the Tax Increment Financing Plan for the Dominium Housing Tax Increment Financing District, as approved July 23, 2018, and as it may be amended from time to time.

“Tax Official” means the Assessor; County auditor; County or State board of equalization, the commissioner of revenue of the State, or any State or federal district court, the tax court of the State, or the State Supreme Court.

“TIF Note” means a Tax Increment Revenue Note, substantially in the form attached hereto as EXHIBIT B, to be delivered by the Authority to the Developer pursuant to Section 3.4 hereof, and any obligation issued to refund the TIF Note.

“Unavoidable Delays” means delays beyond the reasonable control of the party seeking to be excused as a result thereof which are the direct result of strikes, lockouts or other labor troubles, prolonged adverse weather or acts of God, fire or other casualty to the Minimum Improvements, litigation commenced by third parties which, by injunction or other similar judicial action, directly results in delays, or acts of any federal, state or local governmental unit (other than the Authority in properly exercising its rights under this Agreement) which directly result in delays. Unavoidable Delays shall not include delays experienced by the Developer in obtaining permits or governmental approvals necessary to enable construction of the Minimum Improvements by the dates such construction is required under Section 4.3 hereof, so long as the Construction Plans have been approved in accordance with Section 4.2 hereof. Unavoidable Delays shall include delays resulting from market conditions which make the Redevelopment Project financially infeasible.

“Workforce Housing Project” means the construction of approximately 220 affordable multifamily housing apartment units by Minnetonka Leased Housing Associates II, LLLP, a Minnesota limited liability limited partnership, on property adjacent to the Development Property.
ARTICLE II

Representations and Warranties

Section 2.1. Representations by the Authority. The Authority makes the following representations:

(a) The Authority is an economic development authority organized and existing under the laws of the State. Under the provisions of the EDA Act and the HRA Act, the Authority has the power to enter into this Agreement and carry out its obligations hereunder, and execution of this Agreement has been duly, properly and validly authorized by the Authority.

(b) The Authority proposes to assist in financing certain land acquisition costs, site improvement costs, and costs of constructing affordable housing necessary to facilitate the construction of the Minimum Improvements in accordance with the terms of this Agreement to further the objectives of the Redevelopment Plan.

(c) The Authority finds that the Minimum Improvements are necessary to alleviate a shortage of, and maintain existing supplies of, decent, safe, and sanitary housing for Qualifying Tenants of low or moderate income.

(d) The execution, delivery and performance of this Agreement and of any other documents or instruments required pursuant to this Agreement by the Authority, and consummation of the transactions contemplated therein and the fulfillment of the terms thereof, do not and will not conflict with or constitute a breach of or default under any existing (i) indenture, mortgage, deed of trust or other agreement or instrument to which the Authority is a party or by which the Authority or any of its property is or may be bound; or (ii) legislative act, constitution or other proceedings establishing or relating to the establishment of the Authority or its officers or its resolutions.

(e) There is not pending, nor to the best of the Authority’s knowledge is there threatened, any suit, action or proceeding against the Authority before any court, arbitrator, administrative agency or other governmental authority that materially and adversely affects the validity of any of the transactions contemplated hereby, the ability of the Authority to perform its obligations hereunder, or the validity or enforcement of this Agreement.

Section 2.2. Representations by the City. The City makes the following representations:

(a) The City is a home rule city duly organized and existing under its Charter and the laws of the State. Under the provisions of the TIF Act, the City has the power to enter into this Agreement and carry out its obligations hereunder.

(b) The City proposes to provide the Developer the ability to offset certain park dedication fees in exchange for the Developer constructing certain Site Improvements described in EXHIBIT H.

(c) The City finds that the Minimum Improvements are necessary to alleviate a shortage of, and maintain existing supplies of, decent, safe, and sanitary housing for Qualifying Tenants of low or moderate income and their families.

(c) The execution, delivery and performance of this Agreement and of any other documents or instruments required pursuant to this Agreement by the City, and consummation of the transactions contemplated therein and the fulfillment of the terms thereof, do not and will not conflict with or constitute a
breach of or default under any existing (i) indenture, mortgage, deed of trust or other agreement or instrument to which the City is a party or by which the City or any of its property is or may be bound; or (ii) legislative act, constitution or other proceedings establishing or relating to the establishment of the City or its officers or its resolutions.

(d) There is not pending, nor to the best of the City’s knowledge is there threatened, any suit, action or proceeding against the City before any court, arbitrator, administrative agency or other governmental authority that materially and adversely affects the validity of any of the transactions contemplated hereby, the ability of the City to perform its obligations hereunder, or the validity or enforcement of this Agreement.

Section 2.3. Representations and Warranties by the Developer. The Developer represents and warrants that:

(a) The Developer is a limited liability limited partnership duly organized and in good standing under the laws of the State, is duly authorized to transact business within the State, and has the power to enter into this Agreement.

(b) The Developer will construct, operate and maintain the Minimum Improvements in accordance with the terms of this Agreement, the Redevelopment Plan, and all local, State, and federal laws and regulations (including, but not limited to, environmental, zoning, building code and public health laws and regulations).

(c) The Developer will construct the Minimum Improvements in accordance with all local, State, or federal laws or regulations.

(d) The Developer will obtain, in a timely manner, all required permits, licenses and approvals, and will meet, in a timely manner, all requirements of all applicable local, State, and federal laws and regulations which must be obtained or met before the Minimum Improvements may be lawfully constructed. The Developer did not obtain a building permit for any portion of the Minimum Improvements before July 23, 2018, the date of approval of the TIF Plan for the TIF District.

(e) The Developer has received no notice or communication from any local, State, or federal official that the activities of the Developer on the Development Property may be or will be in violation of any environmental law or regulation. The Developer is aware of no facts the existence of which would cause it to be in violation of or give any person a valid claim under any local, State, or federal environmental law, regulation or review procedure.

(f) Neither the execution and delivery of this Agreement, the consummation of the transactions contemplated hereby, nor the fulfillment of or compliance with the terms and conditions of this Agreement is prevented, limited by or conflicts with or results in a breach of, the terms, conditions or provisions of any corporate restriction or any evidences of indebtedness, agreement or instrument of whatever nature to which the Developer is now a party or by which it is bound, or constitutes a default under any of the foregoing.

(g) The proposed development by the Developer hereunder would not occur but for the tax increment financing assistance and other assistance being provided by the Authority hereunder.

(h) The Developer must promptly advise the City and the Authority in writing of all litigation or claims affecting any part of the Minimum Improvements and all written complaints and charges made by any governmental authority materially affecting the Minimum Improvements or materially affecting
Developer or its business which may delay or require changes in construction of the Minimum Improvements.

(i) The Developer represents that no more than twenty percent (20%) of the square footage of the Minimum Improvements will consist of commercial, retail or other nonresidential use. For purposes of this covenant, the underground parking constructed for use by the tenants of the Minimum Improvements constitutes a residential use.

(The remainder of this page is intentionally left blank.)
ARTICLE III

Property Acquisition; Financing

Section 3.1. Status of Development Property. As of the date of this Agreement, the Developer has entered into a purchase agreement to acquire the Development Property. The Developer shall acquire the Development Property pursuant to the terms of such purchase agreement. Neither the Authority nor the City has any obligation to acquire any portion of the Development Property.

Section 3.2. Environmental Conditions.

(a) The Developer acknowledges that the City and the Authority make no representations or warranties as to the condition of the soils on the Development Property or the fitness of the Development Property for construction of the Minimum Improvements or any other purpose for which the Developer may make use of such property, and that the assistance provided to the Developer under this Agreement neither implies any responsibility by the Authority or the City for any contamination of the Development Property or poor soil conditions nor imposes any obligation on such parties to participate in any cleanup of the Development Property or correction of any soil problems.

(b) Without limiting its obligations under Section 8.3 hereof, the Developer further agrees that it will indemnify, defend, and hold harmless the Authority, the City, and their respective governing body members, officers, and employees (the “Indemnites”) from any claims or actions arising out of the presence, if any, of hazardous wastes or pollutants on the Development Property as a result of the actions or omissions of the Developer, unless and to the extent that such hazardous wastes or pollutants are present as a result of the actions or omissions of the Indemnites. Nothing in this section will be construed to limit or affect any limitations on liability of the Authority under State or federal law, including without limitation Minnesota Statutes, Sections 466.04 and 604.02.

Section 3.3. Reimbursement of Certain Developer Costs. The Authority is authorized to acquire real property and convey real property to private entities at a price determined by the Authority in order to facilitate development of the property. The Authority has determined that, in order to make development of the Minimum Improvements financially feasible, it is necessary to reduce the costs of acquisition of the Development Property, site preparation costs, costs of constructing housing, or any other costs eligible to reimbursed with tax increment (collectively, the “Public Development Costs”). The Authority has also determined that, in light of potential liability that could be incurred by the Authority if the Authority takes title to the Development Property, it is in the best interest of the Authority for the Developer to acquire the Development Property directly. The Authority will reimburse the Developer for a portion of the actual cost of acquiring the Development Property in accordance with the terms of this Agreement.

Section 3.4. Issuance of Pay-As-You-Go Note.

(a) In consideration of the Developer constructing the Minimum Improvements and to finance the reimbursement of Public Development Costs incurred by the Developer, the Authority will issue and the Developer will purchase the TIF Note in the principal amount of $4,161,000. The Authority and the Developer agree that the consideration from the Developer for the purchase of the TIF Note will consist of the Developer’s payment of the Public Development Costs incurred by the Developer in at least the principal amount of the TIF Note.

The Authority shall issue the TIF Note on the date of closing on the financing for the Minimum Improvements upon satisfaction of the following conditions:
(i) the Developer has submitted Construction Plans to the Authority and obtained approval for the Construction Plans by the Authority;

(ii) the Developer has submitted and obtained Authority approval of financing in accordance with Section 7.1 hereof;

(iii) the Developer has delivered to the Authority an investment letter in substantially the form set forth in EXHIBIT C attached hereto or another form reasonably satisfactory to the Authority; and

(iv) the Developer has executed and delivered to the Authority the Minimum Assessment Agreement substantially in the form attached hereto as EXHIBIT G.

With respect to the payment of principal of and interest on the TIF Note, however, the principal of the TIF Note shall not be payable and the interest on the TIF Note shall not accrue until the date upon which the Authority receives and approves written evidence that the Developer has paid Public Development Costs in at least the principal amount of $4,161,000.

(b) The Developer understands and acknowledges that the Authority makes no representations or warranties regarding the amount of Available Tax Increment, or that revenues pledged to the TIF Note will be sufficient to pay the principal of and interest on the TIF Note. Any estimates of Tax Increment prepared by the Authority or its municipal advisors in connection with the TIF District or this Agreement are for the benefit of the Authority and are not intended as representations on which the Developer may rely.

(c) The Authority acknowledges that the Developer may assign the TIF Note to a lender that provides the financing for the acquisition of the Development Property, the construction of the Minimum Improvements, and/or the permanent financing for the Development Property and the Minimum Improvements. The Authority acknowledges that the Developer may collaterally assign the TIF Note to the lender that provides the financing for the acquisition of the Development Property or the construction of the Minimum Improvements. Any assignment agreement must be approved by the Board of the Authority.

(d) If the TIF District is disqualified as described in Section 4.5 hereof, the Authority is required by the TIF Act to stop payments of Available Tax Increment to pay principal of and interest on the TIF Note.

Section 3.5. Payment of Administrative Costs.

(a) The Developer is responsible to pay “Administrative Costs,” which term means out-of-pocket-costs incurred by the Authority or the City from and after September 1, 2017 in connection with the negotiation and execution of this Agreement, creation of the Tax Increment Plan, and all other similar out-of-pocket expenses and fees of the City and the Authority arising from this Agreement that are of an administrative nature, including: (i) the Authority’s and the City’s municipal advisor in connection with the Authority’s financial participation in development of the Development Property; and (ii) the Authority’s and the City’s legal counsel in connection with negotiation and drafting of this Agreement.

(b) On and after the date of execution of this Agreement, but not more often than monthly, the City and the Authority may request payment of Administrative Costs, and the Developer agrees to pay all Administrative Costs within ten (10) days of the Authority’s or the City’s written request, supported by suitable billings, receipts or other evidence of the amount and nature of Administrative Costs incurred. At the Developer’s request, but no more often than monthly, the Authority will provide the Developer
with a written report on current and anticipated expenditures for Administrative Costs, including invoices or other comparable evidence.

Section 3.6. Records. The Authority and its representatives will have the right at all reasonable times after reasonable notice to inspect, examine and copy all books and records of Developer relating to the Minimum Improvements and the costs for which the Developer has been reimbursed with Available Tax Increment.

Section 3.7. Exemption from Business Subsidy Act. The parties agree and understand that the purpose of the Authority’s financial assistance to the Developer is to facilitate development of affordable residential rental housing for Qualifying Tenants of low and moderate income, and is not a “business subsidy” within the meaning of Minnesota Statutes, Sections 116J.993 to 116J.995, as amended.

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ARTICLE IV

Construction and Maintenance of Minimum Improvements

Section 4.1. Construction of Improvements. The Developer agrees that it will construct the Minimum Improvements on the Development Property substantially in accordance with the approved Construction Plans. The Developer agrees that, at all times prior to the Maturity Date, it will operate and maintain, preserve and keep the Minimum Improvements or cause the improvements to be maintained, preserved and kept with the appurtenances and every part and parcel thereof, in good repair and condition. The Authority will have no obligation to operate or maintain the Minimum Improvements.

Section 4.2. Construction Plans.

(a) Before commencement of construction of the Minimum Improvements, the Developer will submit to the Authority the Construction Plans. The Construction Plans must provide for the construction of the Minimum Improvements and must be in substantial conformity with the Redevelopment Plan, this Agreement, and all applicable State and local laws and regulations. The Authority Representative will approve the Construction Plans in writing if: (i) the Construction Plans conform to the terms and conditions of this Agreement; (ii) the Construction Plans conform to the goals and objectives of the Redevelopment Plan; (iii) the Construction Plans conform to all applicable federal, State, and local laws, ordinances, rules and regulations; (iv) the Construction Plans are adequate to provide for construction of the Minimum Improvements; (v) the Construction Plans do not provide for expenditures in excess of the funds available to the Developer from all sources (including the Developer’s equity) for construction of the Minimum Improvements; and (vi) no Event of Default has occurred. Approval may be based upon a review by the City’s Building Official of the Construction Plans. No approval by the Authority Representative will relieve the Developer of the obligation to comply with the terms of this Agreement or of the Redevelopment Plan, applicable federal, State, and local laws, ordinances, rules and regulations, or to construct the Minimum Improvements in accordance therewith. No approval by the Authority Representative will constitute a waiver of an Event of Default. If approval of the Construction Plans is requested by the Developer in writing at the time of submission, the Construction Plans will be deemed approved unless rejected in writing by the Authority Representative, in whole or in part. The rejections must set forth in detail the reasons therefor, and must be made within twenty (20) days after the date of their receipt by the Authority. If the Authority Representative rejects any Construction Plans in whole or in part, the Developer must submit new or corrected Construction Plans within twenty (20) days after written notification to the Developer of the rejection. The provisions of this Section relating to approval, rejection and resubmission of corrected Construction Plans will continue to apply until the Construction Plans have been approved by the Authority. The Authority Representative’s approval will not be unreasonably withheld, delayed or conditioned. Said approval will constitute a conclusive determination that the Construction Plans (and the Minimum Improvements constructed in accordance with said plans) comply to the Authority’s satisfaction with the provisions of this Agreement relating thereto.

(b) If the Developer desires to make any Material Change in the Construction Plans after their approval by the Authority, the Developer must submit the proposed change to the Authority for its approval. If the Construction Plans, as modified by the proposed change, conform to the requirements of this Section 4.2 with respect to the previously approved Construction Plans, the Authority will approve the proposed change and notify the Developer in writing of its approval. Any change in the Construction Plans will, in any event, be deemed approved by the Authority unless rejected, in whole or in part, by written notice by the Authority to the Developer, setting forth in detail the reasons therefor. Any rejection must be made within twenty (20) days after receipt of the notice of such change. The Authority’s approval of any change in the Construction Plans will not be unreasonably withheld.
Section 4.3. **Commencement and Completion of Construction.**

(a) Subject to Unavoidable Delays, the Developer will commence the construction of the Minimum Improvements by March 1, 2019 and shall substantially complete the Minimum Improvements by December 31, 2020.

(b) Construction is considered to be commenced upon the beginning of physical improvements to the Development Property beyond grading.

(c) All work with respect to the Minimum Improvements to be constructed or provided by the Developer on the Development Property must be in substantial conformity with the Construction Plans as submitted by the Developer and approved by the Authority. The Developer agrees for itself, its successors and assigns, and every successor in interest to the Development Property, or any part thereof, that the Developer, and its successors and assigns, will promptly begin and diligently prosecute to completion the development of the Development Property through the construction of the Minimum Improvements thereon, and that the construction will in any event be commenced and completed within the period specified in Section 4.3(a) hereof. Until construction of the Minimum Improvements has been completed, the Developer will make reports, in the detail and at the times as may reasonably be requested by the Authority, as to the actual progress of the Developer with respect to the construction.

Section 4.4. **Certificate of Completion.**

(a) Promptly after substantial completion of the Minimum Improvements in accordance with those provisions of the Agreement, the Authority will furnish the Developer with a Certificate of Completion in substantially the form attached hereto as EXHIBIT E. The certification by the Authority will be a conclusive determination of satisfaction and termination of the agreements and covenants in the Agreement and in any deed with respect to the obligations of the Developer, and its successors and assigns, to construct the Minimum Improvements and the dates for the completion thereof. The certification and the determination will not constitute evidence of compliance with or satisfaction of any obligation of the Developer to any Holder of a Mortgage, or any insurer of a Mortgage, securing money loaned to finance the Minimum Improvements, or any part thereof.

(b) The Certificate of Completion provided for in this Section 4.4 will be in the form as will enable it to be recorded in the proper office for the recordation of deeds and other instruments pertaining to the Development Property. If the Authority refuses or fails to provide any certification in accordance with the provisions of this Section 4.4, the Authority will, within thirty (30) days after written request by the Developer, provide the Developer with a written statement, indicating in adequate detail in what respects the Developer has failed to complete the Minimum Improvements in accordance with the provisions of the Agreement, or is otherwise in default, and what measures or acts it will be necessary, in the opinion of the Authority, for the Developer to take or perform in order to obtain the certification.

(c) The construction of the Minimum Improvements will be considered substantially complete when the Developer has received a certificate of occupancy from the City for all Residential Housing Units.

Section 4.5. **Affordability Covenants; Qualification of the TIF District.** The Developer agrees that the Minimum Improvements are subject to the following affordability covenants:

(a) As of the date hereof, the Developer expects that the Minimum Improvements will include the mix of Rental Housing Units set forth in EXHIBIT F. The Developer will cause one hundred
percent (100%) of the Rental Housing Units in the Minimum Improvements to be affordable to Qualifying Tenants at or below sixty percent (60%) of the area median income and to be rent-restricted in accordance with the Tax Credit Law, all as further described in the Declaration attached hereto as EXHIBIT D. Notwithstanding anything to the contrary in the Tax Credit Law, the restrictions will remain in effect for the thirty (30) year period described in the Declaration. On or before the Closing, the Developer will deliver the executed Declaration to the Authority in recordable form.

(b) The Developer will initially provide at least 262 parking spaces for the Minimum Improvements. If, from time to time, the City gives its written permission to reduce the number of parking spaces, the number of parking spaces required by this Agreement shall be automatically reduced by such number without the need for a written amendment to this Agreement.

(c) The Authority and its representatives will have the right at all reasonable times while the covenants in this Section are in effect, after reasonable notice to inspect, examine and copy all books and records of the Developer and its successors and assigns relating to the covenants described in this Section and in the Declaration.

(d) On or before April 1 of each year during the term of the Declaration, commencing on the first April 1 after issuance of the Certificate of Completion for the Minimum Improvements, the Developer must submit evidence of tenant incomes and rents, showing that the Minimum Improvements meet the income and rent requirements set forth in the Declaration. The Authority will review the submitted evidence related to the income restrictions required by Section 469.1761 of the TIF Act to determine that the TIF District remains a housing district under the TIF Act.

(e) If the Authority determines, based on the reports submitted by the Developer or if the Authority receives notice from the State Department of Revenue, the State Auditor, any Tax Official or any court of competent jurisdiction that the TIF District does not qualify as a “housing district” due to action or inaction of the Developer, this type of event will be deemed an Event of Default of the Developer under this Agreement; provided, however, that the Authority may not exercise any remedy under this Agreement so long as the determination is being contested and has not been finally adjudicated. In addition to any remedies available to the Authority under Article IX hereof, the Developer will indemnify, defend and hold harmless the Authority for any damages or costs resulting therefrom.

(f) During the term of the Declaration, the Developer shall not adopt any policies specifically prohibiting or excluding rental to tenants holding certificates/vouchers under Section 8 of the United States Housing Act of 1937, as amended, codified as 42 U.S.C. Sections 1401 et seq., or its successor because of such prospective tenant’s status as such a certificate/voucher holder.

(g) The Developer will immediately notify the Authority if at any time during the term of the Declaration the dwelling units in the Minimum Improvements are not occupied or available for occupancy as required by the terms of the Declaration.

(h) In consideration for the issuance of the TIF Note, the Developer agrees to provide the Authority with at least ninety (90) days’ notice of any sale of the Minimum Improvements.

(i) This Agreement and the Declaration requires the Developer to cause one hundred percent (100%) of the Rental Housing Units in the Minimum Improvements to be affordable to families at or below sixty percent (60%) of the area median income, all as further described in the Declaration attached hereto as EXHIBIT D. Recent Federal legislation has introduced an income-averaging option for the low-income housing tax credit program. This legislation allows projects to accept residents with higher average median incomes as along as the overall average of the income of tenants in the project does not exceed 60% of the
area median income, which provides LIHTC projects the ability to serve tenants with a greater range of incomes. Minnesota Housing does not currently allow for income-averaging. However, if in the future Minnesota Housing allows the income-averaging option for the low-income housing tax credit program to be used for the Minimum Improvements, the Developer may opt to use the income-averaging methodology; provided, however, that the Developer must cause at least forty percent (40%) of the Rental Housing Units in the Minimum Improvements to be affordable to families at or below sixty percent (60%) of the area median income in order to comply with Section 469.1763, subdivision 3 of the TIF Act. The Developer must provide the Authority at least thirty (30) days’ notice before opting into the income-averaging methodology and will cooperate with the Authority to revise this Agreement and the Declaration, if necessary.

Section 4.6. Affordable Housing Reporting. At least annually, no later than April 1 of each year commencing on the April 1 first following the issuance of the Certificate of Completion for the Minimum Improvements, the Developer shall provide a report to the Authority evidencing that the Developer complied with the income affordability covenants set forth in Section 4.5 hereof during the previous calendar year. The income affordability reporting shall be on the form entitled “Tenant Income Certification” from the Minnesota Housing Finance Agency (MHFA HTC Form 14), or if unavailable, any similar form. The Authority may require the Developer to provide additional information reasonably necessary to assess the accuracy of such certification. Unless earlier excused by the Authority, the Developer shall send affordable housing reports to the Authority until the TIF District is decertified. If the Developer fails to provide the annual reporting required under this Section, the Authority may withhold payments of Available Tax Increment under the TIF Note.

Section 4.7. Property Management Covenant. The Developer shall cause its property manager to operate the Minimum Improvements in accordance with the policies described in this Section. For any documented disorderly violations by a tenant or guest, including but not limited to prostitution, gang-related activity, intimidating or assaultive behavior (not including domestic), unlawful discharge of firearms, illegal activity, or drug complaints (each a “Violation”), the Developer agrees and understands that the following procedures shall apply:

(a) After a first Violation regarding any unit in the Minimum Improvements, the City police department will send notice to the Developer and the property manager requiring the Developer and the property manager to take steps necessary to prevent further Violations.

(b) If a second Violation occurs regarding the same tenancy within twelve (12) months after the first Violation, the City police department will notify the Developer and the property manager of the second Violation. Within ten (10) days after receiving such notice, the Developer or the property manager must file a written action plan with the Authority and the City police department, describing steps to prevent further Violations.

(c) If a third Violation occurs regarding the same tenancy within twelve (12) continuous months after the first Violation, the City police department will notify the Developer and the property manager of the third Violation. Within ten (10) days after receiving such notice and subject to paragraph (f) below, the Developer to the property manager shall commence termination of the tenancy of all occupants of that unit. Subject to paragraph (f) below, neither the Developer nor the property manager shall enter into a new lease agreement with the evicted tenant(s) for at least one (1) year after the effective date of the eviction.

(d) If the Developer or the property manager fails to comply with any the requirements in this Section, then the Authority may provide at least ten (10) days’ written notice to the Developer and the property manager directing attendance at a meeting to determine the cause of the continuing Violations in
the Minimum Improvements and provide an opportunity for the Developer and the property manager to explain their failure to comply with the procedures in this Section.

(e) If the Developer and property manager fail to respond to the written notice under paragraph (d), then the Authority may direct the Developer to terminate the management agreement with the existing property manager and to replace that entity with a replacement property manager selected by the Developer but approved by the Authority. The parties agree and understand that appointment of any replacement manager may be subject to consent by the Tax Credit Investor (as defined in Section 8.2 hereof) and each Holder of a Mortgage on the Development Property.

(f) Notwithstanding anything to the contrary in this Section 4.7, neither the Developer nor the property manager shall be obligated to take any action if such party reasonably believes such action is contrary to or in violation of applicable law, including, without limitation, Section 42 of the Code, the Section 8 program, State and federal fair housing laws, and State landlord-tenant law.

Section 4.8. Construction of Site Improvements.

(a) In consideration of the assistance provided to the Developer by the City and the Authority, subject to the limitations set forth in Sections 4.9 and 4.10, the Developer agrees that it will install or cause to be installed, in conformance with City standards and specifications, the Site Improvements on the Development Property or adjacent to the Development Property, as applicable, as described in EXHIBIT H attached hereto.

(b) When constructing the Site Improvements, the Developer is responsible for compliance with all conditions outlined in Resolution No. 2018-_____ and Resolution No. 2018-_____.

(c) Building permits for the Site Improvements will be issued only in conformance with conditions in Resolution 2018-_____. Unless otherwise authorized by the City in writing, no certificates of occupancy will be provided until the following is completed:

(i) Site grading is completed and approved by the City;
(ii) All public utilities have been tested, approved, and accepted by the City Engineer;
(iii) All curbing is installed and backfilled;
(iv) The first lift of bituminous is in place and approved by the City; and
(v) All required fees have been paid in full.

Upon completion of the Site Improvements, the City shall issue a certificate of occupancy. The receipt of a certificate of occupancy for one or more of the Site Improvements shall confirm that the conditions referred to in this Section 4.8(c) have been met for the applicable Site Improvement unless so stated in the certificate of occupancy.

Section 4.9. Site Improvements Construction Addendum. Prior to the issuance of any permits, the City and the Developer shall enter into a mutually agreeable Construction Addendum containing (i) timeframes for the construction of the Site Improvements; (ii) the security to be provided by the Developer to the City to ensure the quality and completion of the Site Improvements; (iii) the methods of acceptance related to the Site Improvements; (iv) the process by which the security provided to the City may be reduced; (v) the process to obtain a certificate of occupancy from the City; (vi) final design details (including tunnels and trails); and (vii) the amount of credits provided by the City to offset the park dedication fees, as described in Section 4.10.

Section 4.10. Fees. The Developer must pay all water and sewer hook-up fees, SAC, WAC, and
REC fees, Engineering Inspection Fees and park dedication fees in accordance with applicable City policies and ordinances. Based on the size of the Minimum Improvements, it is anticipated that the Developer will owe approximately $5,000 per unit in park dedication fees. However, the City will consider offsetting the park dedication fees with credits for the costs incurred by the Developer in designing, constructing and other related costs (e.g. engineering costs, surveying costs, and soil remediation) of certain Site Improvements described in EXHIBIT H attached hereto (specifically the pedestrian underpass beneath Bren Road East and the dynamic predication crossing safety improvements on the east side of the Development Property and adjacent to Bren Road East. The Developer must provide the Authority with the estimates for the cost of the work described in EXHIBIT H and must provide the Authority with the final invoices for the work as the work is completed. The Developer will not be required to pay the costs of the pedestrian underpass beneath Bren Road East and the dynamic predication crossing safety improvements on the east side of the Development Property and adjacent to Bren Road East that exceed the amount of the Developer’s park dedication fees.

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ARTICLE V

Insurance

Section 5.1. Insurance.

(a) The Developer or general contractor will provide and maintain at all times during the process of constructing the Minimum Improvements an All Risk Broad Form Basis Insurance Policy and, from time to time during that period, at the request of the Authority, furnish the Authority with proof of payment of premiums on policies covering the following:

(i) Builder’s risk insurance, written on the so-called “Builder’s Risk – Completed Value Basis,” in an amount equal to one hundred percent (100%) of the insurable value of the Minimum Improvements at the date of completion, and with coverage available in nonreporting form on the so-called “all risk” form of policy. The interest of the Authority must be protected in accordance with a clause in form and content satisfactory to the Authority;

(ii) Commercial general liability insurance (including operations, contingent liability, operations of subcontractors, completed operations and contractual liability insurance) together with a Protective Liability Policy with limits against bodily injury and property damage of not less than $2,000,000 for each occurrence (to accomplish the above-required limits, an umbrella excess liability policy may be used); the Authority must be listed as an additional insured on the policy; and

(iii) Workers’ compensation insurance, with statutory coverage.

(b) Upon completion of construction of the Minimum Improvements and prior to the Maturity Date, the Developer must maintain, or cause to be maintained, at its cost and expense, and from time to time at the request of the Authority will furnish proof of the payment of premiums on, insurance as follows:

(i) Insurance against loss and/or damage to the Minimum Improvements under a policy or policies covering the risks as are ordinarily insured against by similar businesses.

(ii) Comprehensive general public liability insurance, including personal injury liability (with employee exclusion deleted), against liability for injuries to persons and/or property, in the minimum amount for each occurrence and for each year of $2,000,000, and must be endorsed to show the Authority as an additional insured.

(iii) Other insurance, including workers’ compensation insurance respecting all employees, if any, of the Developer, in an amount as is customarily carried by like organizations engaged in like activities of comparable size and liability exposure; provided that the Developer may be self-insured with respect to all or any part of its liability for workers’ compensation.

(c) All insurance required in this Article V must be taken out and maintained in responsible insurance companies selected by the Developer which are authorized under the laws of the State to assume the risks covered thereby. Upon request, the Developer will deposit annually with the Authority policies evidencing all the insurance, or a certificate or certificates or binders of the respective insurers stating that the insurance is in force and effect. Unless otherwise provided in this Article V, each policy must contain a provision that the insurer will not cancel nor modify it in such a way as to reduce the coverage provided below the amounts required herein without giving written notice to the Developer and
the Authority at least thirty (30) days before the cancellation or modification becomes effective. In lieu of separate policies, the Developer may maintain a single policy, blanket or umbrella policies, or a combination thereof, having the coverage required herein, in which event the Developer will deposit with the Authority a certificate or certificates of the respective insurers as to the amount of coverage in force upon the Minimum Improvements.

(d) The Developer agrees to notify the Authority immediately in the case of damage exceeding $250,000 in amount to, or destruction of, the Minimum Improvements or any portion thereof resulting from fire or other casualty. In the event this type of damage or destruction occurs, the Developer will forthwith repair, reconstruct and restore the Minimum Improvements to substantially the same or an improved condition or value as it existed prior to the event causing the damage and, to the extent necessary to accomplish the repair, reconstruction and restoration, the Developer will apply the net proceeds of any insurance relating to the damage received by the Developer to the payment or reimbursement of the costs thereof.

The Developer will complete the repair, reconstruction and restoration of the Minimum Improvements, whether or not the net proceeds of insurance received by the Developer is sufficient to pay for the same. Any net proceeds remaining after completion of the repairs, construction and restoration will be the property of the Developer.

(e) Notwithstanding anything to the contrary contained in this Agreement, in the event of damage to the Minimum Improvements in excess of $250,000 and the Developer fails to complete any repair, reconstruction or restoration of the Minimum Improvements within eighteen (18) months from the date of damage, the Authority may, at its option, terminate the TIF Note as provided in Section 9.3(b) hereof. If the Authority terminates the TIF Note, the termination will constitute the Authority’s sole remedy under this Agreement as a result of the Developer’s failure to repair, reconstruct or restore the Minimum Improvements. Thereafter, the Authority will have no further obligations to make any payments under the TIF Note.

(f) The Developer and the Authority agree that all of the insurance provisions set forth in this Article V will terminate upon the termination of this Agreement.

Section 5.2. Subordination. Notwithstanding anything to the contrary contained in this Article V, the rights of the Authority with respect to the receipt and application of any proceeds of insurance will, in all respects, be subject and subordinate to the rights of any lender under a Mortgage approved pursuant to Article VII hereof.

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ARTICLE VI

Tax Increment; Taxes; Minimum Assessment Agreement

Section 6.1. Right to Collect Delinquent Taxes. The Developer acknowledges that the Authority is providing substantial aid and assistance in furtherance of the redevelopment through issuance of the TIF Note. The Developer understands that the Available Tax Increment pledged to payment of the TIF Note is derived from real estate taxes on the Development Property, which taxes must be promptly and timely paid. To that end, the Developer agrees for itself, its successors and assigns, in addition to the obligation pursuant to statute to pay real estate taxes, that it is also obligated by reason of this Agreement to pay before delinquency all real estate taxes assessed against the Development Property and the Minimum Improvements. The Developer acknowledges that this obligation creates a contractual right on behalf of the Authority to sue the Developer or its successors and assigns to collect delinquent real estate taxes and any penalty or interest thereon and to pay over the same as a tax payment to the county auditor. In any such suit, the Authority will also be entitled to recover its costs, expenses and reasonable attorney fees. The Developer further agrees that it was not cause a reduction in the Minimum Market Value assessed in respect of the Minimum Improvements or the Development Property below the Minimum Market Value described in Section 6.2(a) hereof through:

(a) willful destruction of the Minimum Improvements or any part thereof;

(b) failure to reconstruct damaged or destroyed property pursuant to Section 4.3 hereof;

(c) a request to the Assessor to reduce the Minimum Market Value of all or any portion of the Minimum Improvements or the Development Property;

(d) a petition to the board of equalization of the County to reduce the Minimum Market Value of all or any portion of the Minimum Improvements or the Development Property;

(e) a petition to the board of equalization of the State or the commissioner of revenue of the State to reduce the Minimum Market Value of all or any portion of the Minimum Improvements or the Development Property;

(f) an action in a district court of the State or the tax court of the State seeking a reduction in the Minimum Market Value of the Minimum Improvements or the Development Property;

(g) an application to the commissioner of revenue of the State or to any local taxing jurisdiction requesting an abatement or deferral of real estate taxes on the Minimum Improvements or the Development Property;

(h) a transfer of the Minimum Improvements or the Development Property, or any part thereof, to an entity exempt from the payment of real estate taxes under State law and that entity applies for tax exemption; or

(i) any other proceedings, whether administrative, legal or equitable, with any administrative body within the County or the State or with any court of the State or the federal government.
Section 6.2. Minimum Assessment Agreement.

(a) At the time of execution of this Agreement, the Authority and the Developer shall execute the Minimum Assessment Agreement for the Development Property and Minimum Improvements. The Assessment Agreement shall specify the Minimum Market Value, notwithstanding any failure to start or complete the Minimum Improvements on the Development Property by the Maturity Date or any failure to reconstruct the Minimum Improvements after damage or destruction before the Maturity Date.

(b) Nothing in the Minimum Assessment Agreement shall limit the discretion of the Assessor to assign a market value to the Minimum Improvements or the Development Property in excess of the Assessor’s Minimum Market Value or prohibit the Developer from seeking through the exercise of legal or administrative remedies a reduction in any increase in the market value established pursuant to subsection (a) above; provided, however, that the Developer shall not seek a reduction of such market value below the Assessor’s Minimum Market Value set forth in the Minimum Assessment Agreement in any year so long as such Minimum Assessment Agreement shall remain in effect. The Minimum Assessment Agreement shall remain in effect until the Maturity Date; provided that, if at any time before the Maturity Date, the Minimum Assessment Agreement is found to be terminated or unenforceable by any Tax Official or court of competent jurisdiction, the Minimum Market Value described in this Section 6.2 shall remain an obligation of the Developer or its successors and assigns (whether or not such value is binding on the Assessor), it being the intent of the parties that the obligation of the Developer to maintain, and not seek reduction of, the Minimum Market Value specified in this Section 6.2 is an obligation under this Agreement as well as under the Minimum Assessment Agreement, and is enforceable by the Authority against the Developer, its successors and assigns, in accordance with the terms of this Agreement and the Minimum Assessment Agreement. Notwithstanding anything contained in this Agreement to the contrary, the Developer shall not be precluded from contesting the Minimum Market Value if the Minimum Improvements or the Development Property, or any substantial portion thereof, is acquired by a public entity through eminent domain prior to the Maturity Date.

Section 6.3. Reduction of Taxes. The Developer agrees that after the date of certification of the TIF District and prior to completion of the Minimum Improvements, it will not cause a reduction in the real property taxes paid in respect of the Development Property through: (A) willful destruction of the Development Property or any part thereof (except for the demolition of structures required for the construction of the Minimum Improvements); or (B) willful refusal to reconstruct damaged or destroyed property pursuant to Section 5.1 hereof.

The Developer also agrees that it will not, prior to the Maturity Date, (i) seek exemption from property tax for the Development Property; or (ii) convey or transfer or allow conveyance or transfer of the Development Property to any entity that is exempt from payment of real property taxes under State law (other than any portion thereof dedicated or conveyed to the Authority in accordance with this Agreement).

The Developer may, at any time following the issuance of the Certificate of Completion, seek through petition or other means to have the estimated market value for the Development Property reduced to not less than the Minimum Market Value. Prior to seeking a reduction in the estimated market value, the Developer must provide the Authority with written notice indicating its intention to do so. The Developer acknowledges and understands that this type of action will result in less Available Tax Increment being disbursed by the Authority for payment of the principal of and interest on the TIF Note.

Upon receiving notice from the Developer of its intention to cause the reduction of the estimated market value of the Development Property, or otherwise learning of the Developer’s intentions, the
Authority may partially suspend or reduce payments due under the TIF Note until the actual amount of the reduction in market value is determined, whereupon the Authority will make the partially suspended payments less any amount that the Authority is required to repay the County as a result of any retroactive reduction in market value of the Development Property; provided, however, during the period that the payments are subject to partial suspension, the Authority shall make partial payments on the TIF Note, based on, in its reasonable discretion, the Available Tax Increment generated by the portion of the assessed value that is not being challenged.

The Authority’s suspension of payments on the TIF Note pursuant to this Section will not be considered a default under Section 9.1 hereof.

Section 6.4. **Qualifications.** Notwithstanding anything herein to the contrary, the parties acknowledge and agree that upon the transfer of the Development Property to another person or entity, the Developer will no longer be obligated under Sections 6.1 and 6.3 hereof, unless the transfer is made in violation of the provisions of Section 8.2 hereof.

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ARTICLE VII

Financing

Section 7.1. Mortgage Financing.

(a) Before commencement of construction of the Minimum Improvements, the Developer must submit to the Authority evidence of one or more commitments or plan of finance for financing which, together with committed equity for the construction, is sufficient for payment of the Minimum Improvements. The commitments may be submitted as short term financing, long-term mortgage financing, a bridge loan with a long-term take-out financing commitment, or any combination of the foregoing.

(b) If the Authority finds that the financing is sufficiently committed and adequate in amount to pay the costs specified in subsection (a) then the Authority will notify the Developer in writing of its approval. The approval will not be unreasonably withheld and either approval or rejection will be given within twenty (20) days from the date when the Authority is provided the evidence of financing. A failure by the Authority to respond to the evidence of financing will be deemed to constitute an approval hereunder. If the Authority rejects the evidence of financing as inadequate, it will do so in writing specifying the basis for the rejection. In any event the Developer will submit adequate evidence of financing within ten (10) days after any rejection for reconsideration by the Authority. The approval and execution by Authority officials of a bond purchase contract or agreement secured by the Developer’s pledge of the TIF Note is deemed approval of such financing and approval of a mortgage on the Development Property.

Section 7.2. Authority’s Option to Cure Default on Mortgage. In the event that any portion of the Developer’s funds is provided through mortgage financing, and there occurs a default under any Mortgage authorized pursuant to this Article VII, the Developer will cause the Authority to receive copies of any notice of default received by the Developer from the Holder of the Mortgage. Thereafter, the Authority will have the right, but not the obligation, to cure any Mortgage default on behalf of the Developer within the cure periods as are available to the Developer under the Mortgage documents.

Section 7.3. Modification; Subordination. In order to facilitate the Developer obtaining financing for the development of the Minimum Improvements, the Authority and the City agree to subordinate their rights under this Agreement to the Holder of any Mortgage securing construction or permanent financing, under terms and conditions reasonably acceptable to the Authority. Any subordination agreement must be approved by the Board of the Authority and the City Council.

(The remainder of this page is intentionally left blank.)
ARTICLE VIII

Prohibitions Against Assignment and Transfer; Indemnification

Section 8.1. Representation as to Development. The Developer represents and agrees that its purchase of the Development Property, and its other undertakings pursuant to the Agreement, are, and will be used, for the purpose of development of the Development Property and not for speculation in land holding.

Section 8.2. Prohibition Against Developer’s Transfer of Property and Assignment of Agreement. The Developer represents and agrees that prior to issuance of the Certificate of Completion for the Minimum Improvements:

(a) Except only by way of security for, and only for, the purpose of obtaining financing necessary to enable the Developer or any successor in interest to the Development Property, or any part thereof, to perform its obligations with respect to making the Minimum Improvements under this Agreement, and any other purpose authorized by this Agreement, the Developer has not made or created and will not make or create or suffer to be made or created any total or partial sale, assignment, conveyance, or lease, or any trust or power, or transfer in any other mode or form of or with respect to this Agreement or the Development Property or any part thereof or any interest therein, or any contract or agreement to do any of the same (except a lease to a residential occupant), without the prior written approval of the City and the Authority unless the Developer remains liable and bound by this Agreement in which event the City and the Authority’s approval is not required. Any transfer of this type will be subject to the provisions of this Agreement.

(b) In the event the Developer, upon transfer or assignment of the Development Property seeks to be released from its obligations under this Agreement, the City and the Authority will be entitled to require, except as otherwise provided in this Agreement, as conditions to any release that:

(i) Any proposed transferee will have the qualifications and financial responsibility, in the reasonable judgment of the City and the Authority, necessary and adequate to fulfill the obligations undertaken in this Agreement by the Developer.

(ii) Any proposed transferee, by instrument in writing satisfactory to the City and the Authority and in form recordable among the land records, will, for itself and its successors and assigns, and expressly for the benefit of the City and the Authority, have expressly assumed all of the obligations of the Developer under this Agreement and agreed to be subject to all the conditions and restrictions to which the Developer is subject; provided, however, that the fact that any transferee of, or any other successor in interest whatsoever to, the Development Property, or any part thereof, will not, for whatever reason, have assumed these obligations or so agreed, and will not (unless and only to the extent otherwise specifically provided in this Agreement or agreed to in writing by the City and the Authority) deprive the City and the Authority of any rights or remedies or controls with respect to the Development Property or any part thereof or the construction of the Minimum Improvements; it being the intent of the parties as expressed in this Agreement that (to the fullest extent permitted at law and in equity and excepting only in the manner and to the extent specifically provided otherwise in this Agreement) no transfer of, or change with respect to, ownership in the Development Property or any part thereof, or any interest therein, however consummated or occurring, and whether voluntary or involuntary, will operate, legally or practically, to deprive or limit the City and the Authority of or with respect to any rights or remedies on controls provided in or resulting from this Agreement with respect to the Minimum Improvements that the City and the Authority would have had, had there been no transfer or change. In the absence of specific written
agreement by the City and the Authority to the contrary, no transfer or approval by the City and the Authority thereof will be deemed to relieve the Developer, or any other party bound in any way by this Agreement or otherwise with respect to the construction of the Minimum Improvements, from any of its obligations with respect thereto.

(iii) Any and all instruments and other legal documents involved in effecting the transfer of any interest in this Agreement or the Development Property governed by this Article VIII, must be in a form reasonably satisfactory to the City and the Authority.

In the event the foregoing conditions are satisfied then the Developer will be released from its obligation under this Agreement.

After issuance of the Certificate of Completion for the Minimum Improvements, the Developer may transfer or assign the Development Property or the Developer’s interest in this Agreement if it obtains the prior written consent of the City and the Authority (which consent will not be unreasonably withheld) and the transferee or assignee is bound by all the Developer’s obligations hereunder. The Developer must submit to the City and the Authority written evidence of any transfer or assignment, including the transferee or assignee’s express assumption of the Developer’s obligations under this Agreement. If the Developer fails to provide evidence of transfer and assumption, the Developer will remain bound by all its obligations under this Agreement.

Nothing contained in this Section shall prohibit the Developer, without the consent or approval of the City and the Authority, from (i) entering into leases with tenants in the ordinary course of business, (ii) entering into easement or other agreements necessary for the operation of the Minimum Improvements, (iii) admitting or removing limited partners or transferring limited partner interests in the Developer or admitting or removing members in accordance with the applicable organizational documents or any documents referenced therein or attached thereto, (iv) substituting and/or removing the general partner of the Developer for cause at the direction of its limited partner(s) (whether one or more, the “Tax Credit Investor”) in accordance with the Developer’s partnership agreement, (v) pledging and/or collaterally assigning partnership interests as collateral for financing, and the exercise of remedies in connection therewith, or (vi) transferring or allowing the transfer of direct or indirect ownership interests in any partner of the Developer.

Section 8.3. Release and Indemnification Covenants.

(a) The Developer releases from and covenants and agrees that the City and the Authority and their respective governing body members, officers, agents, servants and employees thereof will not be liable for and agrees to indemnify and hold harmless the City and the Authority and their respective governing body members, officers, agents, servants and employees thereof against any loss or damage to property or any injury to or death of any person occurring at or about or resulting from any defect in the Minimum Improvements.

(b) Except for any willful misrepresentation or any willful or wanton misconduct of the following named parties, the Developer agrees to protect and defend the City and the Authority and their respective governing body members, officers, agents, servants and employees thereof, now or forever, and further agrees to hold the aforesaid harmless from any claim, demand, suit, action or other proceeding whatsoever by any person or entity whatsoever arising or purportedly arising from this Agreement, or the transactions contemplated hereby or the acquisition, construction, installation, ownership, maintenance and operation of the Minimum Improvements.
(c) The City and the Authority and their respective governing body members, officers, agents, servants and employees thereof will not be liable for any damage or injury to the persons or property of the Developer or its officers, agents, servants or employees or any other person who may be about the Development Property or Minimum Improvements due to any act of negligence of any person, except if such damage or injury to persons or property is due to any act of negligence by the City and the Authority and their respective governing body members, officers, agents, servants and employees.

(d) All covenants, stipulations, promises, agreements and obligations of the City and the Authority contained herein will be deemed to be the covenants, stipulations, promises, agreements and obligations of the City and the Authority and not of any governing body member, officer, agent, servant or employee of the City and the Authority in the individual capacity thereof.

(The remainder of this page is intentionally left blank.)
ARTICLE IX

Events of Default

Section 9.1. Events of Default Defined. The following will be “Events of Default” under this Agreement and the term “Event of Default” means, whenever it is used in this Agreement, any one or more of the following events, after the non-defaulting party provides thirty (30) days’ written notice to the defaulting party of the event, but only if the event has not been cured within said thirty (30) days or, if the event is by its nature incurable within thirty (30) days, the defaulting party does not, within the thirty (30) day period, provide assurances reasonably satisfactory to the party providing notice of default that the event will be cured and will be cured as soon as reasonably possible:

(a) The Developer, the City, or the Authority fails to observe or perform any covenant, condition, obligation, or agreement on its part to be observed or performed under this Agreement; or

(b) The Developer:

   (i) files any petition in bankruptcy or for any reorganization, arrangement, composition, readjustment, liquidation, dissolution, or similar relief under the United States Bankruptcy Act or under any similar federal or State law;

   (ii) makes an assignment for benefit of its creditors;

   (iii) admits in writing its inability to pay its debts generally as they become due; or

   (iv) is adjudicated as bankrupt or insolvent; or

(c) The Workforce Housing Project is not constructed; or

(d) Prior to the Maturity Date, the Developer appeals or challenges the Minimum Market Value of the Development Property or the Minimum Improvements under this Agreement or the Minimum Assessment Agreement, except as otherwise permitted in Article VI hereof.

Section 9.2. Remedies on Default. Whenever any Event of Default referred to in Section 9.1 hereof occurs, the non-defaulting party may exercise its rights under this Section 9.2 after providing thirty (30) days’ written notice to the defaulting party of the Event of Default, but only if the Event of Default has not been cured within said thirty (30) days or, if the Event of Default is by its nature incurable within thirty (30) days, the defaulting party does not provide assurances reasonably satisfactory to the non-defaulting party that the Event of Default will be cured and will be cured as soon as reasonably possible:

(a) Suspend its performance under the Agreement until it receives assurances that the defaulting party will cure its default and continue its performance under the Agreement.

(b) Cancel and rescind or terminate the Agreement.

(c) Upon a default by the Developer, the Authority may suspend payments under the TIF Note or terminate the TIF Note and the TIF District, subject to the provisions of Section 9.3 hereof.
(d) Take whatever action, including legal, equitable or administrative action, which may appear necessary or desirable to collect any payments due under this Agreement, or to enforce performance and observance of any obligation, agreement, or covenant under this Agreement.

Section 9.3. Termination or Suspension of TIF Note. After the Authority has issued the Certificate of Completion for the Minimum Improvements, the Authority and the City may exercise its rights under Section 9.2(c) hereof or any other right under this Agreement that operates to suspend, cancel, or terminate payments under the TIF Note only for the following Events of Default:

(a) the Developer fails to pay real estate taxes or assessments on the Development Property or any part thereof when due, and the taxes or assessments have not been paid, or provision satisfactory to the Authority made for their payment, within thirty (30) days after written demand by the Authority to do so;

(b) the Developer fails to comply with the Developer’s obligation to operate and maintain, preserve and keep the Minimum Improvements or cause the improvements to be maintained, preserved and kept with the appurtenances and every part and parcel thereof, in good repair and condition, pursuant to Sections 4.1 and 5.1(e) hereof; provided that, upon the Developer’s failure to comply with Developer’s obligations under Section 4.1 or 5.1(e) hereof, if uncured after thirty (30) days’ written notice to the Developer of the failure, the Authority may only suspend payments under the TIF Note until the Developer complies with said obligations; if the Developer fails to comply with said obligations for a period of eighteen (18) months, the Authority may terminate the TIF Note and the TIF District; or

(c) the Developer fails to comply with the rent and income restrictions or to deliver annual rent and income reports as provided in Section 4.5 hereof and the Declaration; provided that, upon the Developer’s failure to provide annual reports, if uncured after thirty (30) days’ written notice to the Developer of the failure, the Authority may only suspend payments under the TIF Note until the Developer delivers said reports. If the Developer fails to deliver rent and income reports for a period of six (6) months following the date the reports are due after written notice to the Developer of the failure, the Authority may terminate the TIF Note and the TIF District.

Section 9.4. No Remedy Exclusive. No remedy herein conferred upon or reserved to the Authority or the Developer is intended to be exclusive of any other available remedy or remedies, but each and every remedy will be cumulative and will be in addition to every other remedy given under this Agreement or now or hereafter existing at law or in equity or by statute. No delay or omission to exercise any right or power accruing upon any default will impair any right or power or will be construed to be a waiver thereof, but any right and power may be exercised from time to time and as often as may be deemed expedient. In order to entitle the Authority to exercise any remedy reserved to it, it will not be necessary to give notice, other than the notices already required in Sections 9.2 and 9.3 hereof.

Section 9.5. No Additional Waiver Implied by One Waiver. In the event any agreement contained in this Agreement should be breached by either party and thereafter waived by the other party, the waiver will be limited to the particular breach so waived and will not be deemed to waive any other concurrent, previous or subsequent breach hereunder.

Section 9.6. Attorneys’ Fees. Whenever any Event of Default occurs and if the City or the Authority employs attorneys or incurs other expenses for the collection of payments due or to become due or for the enforcement of performance or observance of any obligation or agreement on the part of the Developer under this Agreement, and the City or the Authority prevails in the action, the Developer agrees that it will, within ten (10) days of written demand by the City or the Authority, pay to the City or
the Authority the reasonable fees of the attorneys and the other expenses so incurred by the City or the
Authority.

(The remainder of this page is intentionally left blank.)
ARTICLE X

Additional Provisions

Section 10.1. Conflict of Interests; Authority Representatives Not Individually Liable. The Authority and the Developer, to the best of their respective knowledge, represent and agree that no member, official, or employee of the Authority has any personal interest, direct or indirect, in the Agreement, nor has any member, official, or employee participated in any decision relating to the Agreement which affects his or her personal interests or the interests of any corporation, partnership, or association in which he or she is, directly or indirectly, interested. No member, official, or employee of the Authority will be personally liable to the Developer, or any successor in interest, in the event of any default or breach by the Authority or County or for any amount which may become due to the Developer or successor or on any obligations under the terms of the Agreement.

Section 10.2. Equal Employment Opportunity. The Developer, for itself and its successors and assigns, agrees that during the construction of the Minimum Improvements provided for in the Agreement it will comply with all applicable federal, State, and local equal employment and non-discrimination laws and regulations.

Section 10.3. Restrictions on Use. The Developer agrees that, prior to the Maturity Date, the Developer, and its successors and assigns, will use the Development Property solely for the development of residential rental housing in accordance with the terms of this Agreement, and will not discriminate upon the basis of race, color, creed, sex or national origin in the sale, lease, or rental or in the use or occupancy of the Development Property or any improvements erected or to be erected thereon, or any part thereof.

Section 10.4. Titles of Articles and Sections. Any titles of the several parts, Articles, and Sections of the Agreement are inserted for convenience of reference only and will be disregarded in construing or interpreting any of its provisions.

Section 10.5. Notices and Demands. Except as otherwise expressly provided in this Agreement, a notice, demand, or other communication under the Agreement by either party to the other will be sufficiently given or delivered if it is dispatched by registered or certified mail, postage prepaid, return receipt requested, or delivered personally; and

(a) in the case of the Developer, is addressed to or delivered personally to the Developer at 2905 Northwest Blvd. Suite 150, Plymouth, MN 55441-2644, Attn: Mark S. Moorhouse and Ryan J. Lunderby with a copy to John Stern, Winthrop & Weinstine, P.A., Capella Tower, Suite 3500, 225 South Sixth Street, Minneapolis, MN 55402-4629;

(b) in the case of the Authority, is addressed to or delivered personally to the Authority at 14600 Minnetonka Blvd, Minnetonka, Minnesota 55345-1502, Attn: Executive Director; and

(c) in the case of the City, is addressed to or delivered personally to the Authority at 14600 Minnetonka Blvd, Minnetonka, Minnesota 55345-1502, Attn: City Manager;

or at any other address with respect to any party as that party may, from time to time, designate in writing and forward to the other as provided in this Section.

Section 10.6. Counterparts. This Agreement may be executed in any number of counterparts, each of which will constitute one and the same instrument.
Section 10.7. **Recording.** The Authority may record this Agreement and any amendments thereto with the County Recorder or Registrar of Titles of the County. The Developer must pay all costs for recording.

Section 10.8. **Amendment.** Except as specifically provided in Section 4.5(b) hereof, this Agreement may be amended only by written agreement approved by the Authority, the City, and the Developer.

Section 10.9. **Authority Approvals.** Unless otherwise specified, any approval required by the Authority under this Agreement may be given by the Authority Representative.

Section 10.10. **Termination.** This Agreement terminates on the Maturity Date, except that termination of the Agreement does not terminate, limit or affect the rights of any party that arise before the Maturity Date.

(The remainder of this page is intentionally left blank.)
IN WITNESS WHEREOF, the Authority has caused this Contract for Private Development to be duly executed in its name and behalf and the Developer has caused this Contract for Private Development to be duly executed in its name and behalf, all as of the date and year first written above.

ECONOMIC DEVELOPMENT AUTHORITY IN AND FOR THE CITY OF MINNETONKA, MINNESOTA

By _______________________________
Its President

By _______________________________
Its Executive Director

STATE OF MINNESOTA )
) SS.
COUNTY OF HENNEPIN )

The foregoing instrument was acknowledged before me this _____________, 2018, by Brad Wiersum, the President of the Economic Development Authority in and for the City of Minnetonka, Minnesota, a public body corporate and politic under the laws of the State of Minnesota, on behalf of the Authority.

________________________________________
Notary Public

STATE OF MINNESOTA )
) SS.
COUNTY OF HENNEPIN )

The foregoing instrument was acknowledged before me this _____________, 2018, by Geralyn Barone, the Executive Director of the Economic Development Authority in and for the City of Minnetonka, Minnesota, a public body corporate and politic under the laws of the State of Minnesota, on behalf of the Authority.

________________________________________
Notary Public
MINNETONKA LEASED HOUSING ASSOCIATES III, LLLP, a Minnesota limited liability limited partnership

By: Minnetonka Leased Housing Associates III, LLC
Its: General Partner

By: ________________________________
Name: Ryan J. Lunderby
Its: Vice President

STATE OF MINNESOTA )
) SS.
COUNTY OF __________ )

The foregoing instrument was acknowledged before me this ______________, 2018, by Ryan J. Lunderby, the Vice President of Minnetonka Leased Housing Associates III, LLC, a Minnesota limited liability company, the general partner of Minnetonka Leased Housing Associates III, LLLP, a Minnesota limited liability limited partnership, on behalf of the Developer.

__________________________________
Notary Public
EXHIBIT A

DESCRIPTION OF DEVELOPMENT PROPERTY

Lot 1, Block 1, DOMINIUM 2ND ADDITION, Hennepin County, Minnesota
EXHIBIT B

FORM OF TIF NOTE

UNITED STATE OF AMERICA
STATE OF MINNESOTA
HENNEPIN COUNTY
ECONOMIC DEVELOPMENT AUTHORITY IN AND FOR THE
CITY OF MINNETONKA

No. R-1 $______

TAX INCREMENT REVENUE NOTE
SERIES 20__

Rate Accrual Date

[5.15% or the developer’s actual rate of financing, whichever is less]% (to be determined)

The Economic Development Authority in and for the City of Minnetonka, Minnesota (the “Authority”), for value received, certifies that it is indebted and hereby promises to pay to Minnetonka Leased Housing Associates III, LLLP, a Minnesota limited liability limited partnership, or registered assigns (the “Owner”), the principal sum of $_______ and to pay interest thereon at the annual interest rate set forth above, as and to the extent set forth herein.

1. Payments. Principal and interest (the “Payments”) will be paid on August 1, 20___, and each February 1 and August 1 thereafter to and including February 1, 20___ (the “Payment Dates”), in the amounts and from the sources set forth in Section 3 herein. Payments will be applied first to accrued interest, and then to unpaid principal.

Payments are payable by mail to the address of the Owner or any other address as the Owner may designate upon thirty (30) days’ written notice to the Authority. Payments on this Note are payable in any coin or currency of the United States of America which, on the Payment Date, is legal tender for the payment of public and private debts.

2. Interest. Interest at the rate stated herein will accrue on the unpaid principal, commencing on the date the Authority receives and approves written evidence of the Owner’s expenditures related to land acquisition, site preparation, constructions of constructing housing, and other costs eligible to be reimbursed with tax increment related to the Minimum Improvements in an amount at least equal to $_______ (the “Accrual Date”), all in accordance with Section 3.4 of the Agreement (hereinafter defined). Interest accruing from and after the Accrual Date shall accrue on a simple basis and will not be added to principal. Interest will be computed on the basis of a year of three hundred sixty (360) days comprised of twelve (12) months of thirty (30) days.

3. Available Tax Increment. Payments on this Note are payable on each Payment Date in the amount of and solely payable from “Available Tax Increment,” which will mean, on each Payment Date, ninety percent (90%) of the Tax Increment attributable to the Development and paid to the Authority by Hennepin County in the six (6) months preceding the Payment Date, all as the terms are
defined in the Contract for Private Development, dated ____________, 2018 (the “Agreement”),
between the Authority, the City of Minnetonka, Minnesota, and Owner. Available Tax Increment will not
include any Tax Increment if, as of any Payment Date, there is an uncured Event of Default under the
Agreement; provided, however, that once an Event of Default is cured, any Available Tax Increment
withheld shall be deemed Available Tax Increment for the next Payment Date.

The Authority will have no obligation to pay principal of and interest on this Note on each
Payment Date from any source other than Available Tax Increment, and the failure of the Authority to
pay the entire amount of principal of or interest on this Note on any Payment Date will not constitute a
default hereunder as long as the Authority pays principal of and interest hereon to the extent of Available
Tax Increment. The Authority will have no obligation to pay unpaid balance of principal or accrued
interest that may remain after the final Payment on February 1, 20__.

4. Optional Prepayment. The principal sum and all accrued interest payable under this Note
is prepayable in whole or in part at any time by the Authority without premium or penalty. No partial
prepayment will affect the amount or timing of any other regular payment otherwise required to be made
under this Note.

5. Termination. At the Authority’s option, this Note will terminate and the Authority’s
obligation to make any payments under this Note will be discharged upon the occurrence of an Event of
Default on the part of the Developer as defined in Section 9.1 of the Agreement, but only if the Event of
Default has not been cured in accordance with Section 9.2 of the Agreement.

6. Nature of Obligation. This Note is one of an issue in the total principal amount of
$_____ all issued to aid in financing certain public development costs and administrative costs of a
Redevelopment Project undertaken by the Authority pursuant to Minnesota Statutes, Sections 469.001
through 469.047, as amended, and is issued pursuant to an authorizing resolution (the “Resolution”) duly
adopted by the Authority on July 23, 2018, and pursuant to and in full conformity with the Constitution
and laws of the State of Minnesota, including Minnesota Statutes, Sections 469.174 through 469.1794, as
amended. This Note is a limited obligation of the Authority which is payable solely from Available Tax
Increment pledged to the payment hereof under the Resolution. This Note and the interest hereon will not
be deemed to constitute a general obligation of the State of Minnesota or any political subdivision thereof,
including, without limitation, the Authority. Neither the State of Minnesota nor any political subdivision
thereof will be obligated to pay the principal of or interest on this Note or other costs incident hereto
except out of Available Tax Increment, and neither the full faith and credit nor the taxing power of the
State of Minnesota or any political subdivision thereof is pledged to the payment of the principal of or
interest on this Note or other costs incident hereto.

7. Estimated Tax Increment Payments. Any estimates of Tax Increment prepared by the
Authority or its municipal advisors in connection with the TIF District or the Agreement are for the
benefit of the Authority, and are not intended as representations on which the Developer may rely.

THE AUTHORITY MAKES NO REPRESENTATION OR WARRANTY THAT THE
AVAILABLE TAX INCREMENT WILL BE SUFFICIENT TO PAY THE PRINCIPAL OF AND
INTEREST ON THIS NOTE.

8. Registration and Transfer. This Note is issuable only as a fully registered note without
coupons. As provided in the Resolution, and subject to certain limitations set forth therein, this Note is
transferable upon the books of the Authority kept for that purpose at the principal office of the Executive
Director of the Authority, by the Owner hereof in person or by the Owner’s attorney duly authorized in
writing, upon surrender of this Note together with a written instrument of transfer satisfactory to the
Authority, duly executed by the Owner. Upon the transfer or exchange and the payment by the Owner of any tax, fee, or governmental charge required to be paid by the Authority with respect to the transfer or exchange, there will be issued in the name of the transferee a new Note of the same aggregate principal amount, bearing interest at the same rate and maturing on the same dates.

This Note will not be transferred to any person other than an affiliate, or other related entity, of the Owner unless the Authority has been provided with an investment letter in a form substantially similar to the investment letter attached to the Agreement or, in a form satisfactory to the Authority, that the transfer is exempt from registration and prospectus delivery requirements of federal and applicable state securities laws.

IT IS HEREBY CERTIFIED AND RECITED that all acts, conditions, and things required by the Constitution and laws of the State of Minnesota to be done, to exist, to happen, and to be performed in order to make this Note a valid and binding limited obligation of the Authority according to its terms, have been done, do exist, have happened, and have been performed in due form, time and manner as so required.

IN WITNESS WHEREOF, the Board of Commissioners of the Economic Development Authority in and for the City of Minnetonka, Minnesota, has caused this Note to be executed with the manual signatures of its President and Executive Director, all as of ___________________, 20___.

ECONOMIC DEVELOPMENT
AUTHORITY IN AND FOR THE CITY OF
MINNETONKA, MINNESOTA

________________________________  ______________________________________
Executive Director                    President

REGISTRATION PROVISIONS

The ownership of the unpaid balance of the within Note is registered in the bond register of the Authority’s Executive Director, in the name of the person last listed below.

<table>
<thead>
<tr>
<th>Date of Registration</th>
<th>Registered Owner</th>
<th>Signature of Executive Director</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Minnetonka Leased Housing Associates III, LLLP</td>
<td>(Federal ID #82-5073497)</td>
</tr>
</tbody>
</table>
EXHIBIT C

INVESTMENT LETTER

To: Economic Development Authority in and for the City of Minnetonka, Minnesota (the “Authority”)
Attention: Executive Director

Re: Tax Increment Revenue Note, Series 20__, in the original aggregate principal amount of
$________

The undersigned, as Owner of $________ in principal amount of the above-captioned Note
(the “Note”) pursuant to a resolution of the Authority adopted on July 23, 2018 (the “Resolution”), hereby
represents to you as follows:

1. We understand and acknowledge that the TIF Note is delivered to the Owner as of this
date pursuant to the Resolution and the Contract for Private Development, dated ______________, 2018
(the “Contract”), between the Authority, the City of Minnetonka, Minnesota, and the Owner.

2. We understand that the TIF Note is payable as to principal and interest solely from
Available Tax Increment as defined in the TIF Note and the provisions of the Contract.

3. We understand that the TIF Note does not accrue interest until the “Accrual Date,” as
defined in the TIF Note.

4. We further understand that any estimates of Tax Increment prepared by the Authority or
its municipal advisors in connection with the TIF District, the Contract or the TIF Note are for the benefit
of the Authority, and are not intended as representations on which the Owner may rely.

5. We acknowledge and understand that, if at any time, the Owner fails to meet the housing
income restrictions required for a housing tax increment district as set forth in Minnesota Statutes,
Section 469.174, subdivision 11 and Section 469.1761, and therefore, the tax increment district will no
longer qualify as a housing tax increment district, no further payments will be made under the TIF Note.

6. We have sufficient knowledge and experience in financial and business matters,
including purchase and ownership of municipal obligations, to be able to evaluate the risks and merits of
the investment represented by the purchase of the above-stated principal amount of the TIF Note.

7. We acknowledge that no offering statement, prospectus, offering circular or other
comprehensive offering statement containing material information with respect to the Authority and the
TIF Note has been issued or prepared by the Authority, and that, in due diligence, we have made our own
inquiry and analysis with respect to the Authority, the TIF Note and the security therefor, and other
material factors affecting the security and payment of the TIF Note.

8. We acknowledge that we have either been supplied with or have access to information,
including financial statements and other financial information, to which a reasonable investor would
attach significance in making investment decisions, and we have had the opportunity to ask questions and
receive answers from knowledgeable individuals concerning the Authority, the TIF Note and the security
therefor, and that as a reasonable investor we have been able to make our decision to purchase the
above-stated principal amount of the TIF Note.
9. We have been informed that the TIF Note (i) is not being registered or otherwise qualified for sale under the “Blue Sky” laws and regulations of any state, or under federal securities laws or regulations, (ii) will not be listed on any stock or other securities exchange, and (iii) will carry no rating from any rating service.

10. We acknowledge that neither the Authority nor Kennedy & Graven, Chartered has made any representations as to the status of interest on the TIF Note for state or federal income tax purposes.

11. All capitalized terms used herein have the meaning provided in the Contract unless the context clearly requires otherwise.

12. The Owner’s federal tax identification number is ______________.

13. We acknowledge receipt of the TIF Note as of the date hereof.

(The remainder of this page intentionally left blank.)
MINNETONKA LEASED HOUSING ASSOCIATES III, LLLP, a Minnesota limited liability limited partnership

By: Minnetonka Leased Housing Associates III, LLC
Its: General Partner

By: _______________________________________
Name: Ryan J. Lunderby
Its: Vice President

Dated: _______________________________
EXHIBIT D

FORM OF DECLARATION OF RESTRICTIVE COVENANTS

THIS DECLARATION OF RESTRICTIVE COVENANTS (the “Declaration”), dated ______________, 2018, by MINNETONKA LEASED HOUSING ASSOCIATES III, LLLP, a Minnesota limited liability limited partnership (the “Developer”), is given to the ECONOMIC DEVELOPMENT AUTHORITY IN AND FOR THE CITY OF MINNETONKA, a public body corporate and politic under the laws of the State of Minnesota (the “Authority”).

RECITALS

WHEREAS, the Authority entered into that certain Contract for Private Development, dated ______________, 2018 (the “Contract”), filed ______________, 2018 in the Office of the [Recorder] [Registrar of Titles] for Hennepin County, Minnesota as Document No. __________, between the Authority and the Developer; and

WHEREAS, pursuant to the Contract, the Developer is obligated to cause construction of 262 housing units intended to be occupied by at least one individual who, at the time of initial occupancy of such unit, is 55 years of age or older on the property described in Exhibit A hereto (the “Property”), and to cause compliance with certain affordability covenants described in Section 4.5 of the Contract; and

WHEREAS, Section 4.5 of the Contract requires that the Developer cause to be executed an instrument in recordable form substantially reflecting the covenants set forth in Section 4.5 of the Contract; and

WHEREAS, the Developer intends, declares, and covenants that the restrictive covenants set forth herein will be and are covenants running with the Property for the term described herein and binding upon all subsequent owners of the Property for the term described herein, and are not merely personal covenants of the Developer; and

WHEREAS, capitalized terms in this Declaration have the meaning provided in the Contract unless otherwise defined herein.

NOW, THEREFORE, in consideration of the promises and covenants hereinafter set forth, and of other valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Developer agrees as follows:

1. Term of Restrictions.

   (a) Occupancy and Rental Restrictions. The term of the Occupancy Restrictions set forth in Section 3 and the Rental Restriction set forth in Section 4 of this Declaration will commence on the date a certificate of occupancy is received from the City of Minnetonka, Minnesota for all rental units on the Property. The period from commencement to termination is the “Qualified Project Period.”

   (b) Termination of Declaration. This Declaration will terminate upon the date that is thirty (30) years after the commencement of the Qualified Project Period.
(c) **Removal from Real Estate Records.** Upon termination of this Declaration, the Authority will, upon request by the Developer or its assigns, file any document appropriate to remove this Declaration from the real estate records of Hennepin County, Minnesota.

2. **Project Restrictions.** The Developer represents, warrants, and covenants that:

(a) All leases of units to Qualifying Tenants (as defined in Section 3(a)(i) hereof) will contain clauses, among others, wherein each individual lessee:

(i) Certifies the accuracy of the statements made in its application and Eligibility Certification (as defined in Section 3(a)(ii) hereof); and

(ii) Agrees that the family income at the time the lease is executed will be deemed substantial and material obligation of the lessee’s tenancy; that the lessee will comply promptly with all requests for income and other information relevant to determining low or moderate income status from the Developer or the Authority, and that the lessee’s failure or refusal to comply with a request for information with respect thereto will be deemed a violation of a substantial obligation of the lessee’s tenancy.

(b) The Developer will permit any duly authorized representative of the Authority to inspect the books and records of the Developer pertaining to the income of Qualifying Tenants residing in the Project.

3. **Occupancy Restrictions.**

(a) **Tenant Income Provisions.** The Developer represents, warrants, and covenants that:

(i) **Qualifying Tenants.** From the commencement of the Qualified Project Period, one hundred percent (100%) of the Rental Housing Units will be occupied (or treated as occupied as provided herein) or held vacant and available for occupancy by Qualifying Tenants. Qualifying Tenants means one or more occupants of a unit, so long as at least one of the occupants of the unit, at the time of initial occupancy of such unit, is 55 years of age or older and who are determined from time to time by the Developer to have combined adjusted income that does not exceed sixty percent (60%) of the Minneapolis-St. Paul metropolitan statistical area (the “Metro Area”) median income for the applicable calendar year. For purposes of this definition, the occupants of a residential unit will not be deemed to be Qualifying Tenants if all the occupants of such residential unit at any time are “students,” as defined in Section 151(c)(4) of the Internal Revenue Code of 1986, as amended (the “Code”), not entitled to an exemption under the Code. The determination of whether an individual or family is of low or moderate income will be made at the time the tenancy commences and on an ongoing basis thereafter, determined at least annually. If during their tenancy, a Qualifying Tenant’s income exceeds one hundred forty percent (140%) of the maximum income qualifying as low or moderate income for a family of its size, the next available unit of comparable or smaller size (determined in accordance with the Code and applicable regulations) (the “Next Available Unit Rule”) must be leased to a Qualifying Tenant or held vacant and available for occupancy by a Qualifying Tenant. If the Next Available Unit Rule is violated, the Unit will not continue to be treated as a Qualifying Unit. The annual recertification and Next Available Unit Rule requirements of this paragraph 3(a)(i) shall not apply to a given year if, during such year, no residential unit in the Project is occupied by a new resident whose income exceeds the applicable income limit for Low Income Tenants.
(ii) Certification of Tenant Eligibility. As a condition to initial and continuing occupancy, each person who is intended to be a Qualifying Tenant will be required annually to sign and deliver to the Developer a Certification of Tenant Eligibility substantially in (A) the form attached as Exhibit B hereto, (B) the form of tenant income certification used by the Minnesota Housing Finance Agency, or (C) any other form as may be approved by the Authority (the “Eligibility Certification”), in which the prospective Qualifying Tenant certifies as to qualifying as low or moderate income. In addition, the person will be required to provide whatever other information, documents, or certifications are deemed necessary by the Authority to substantiate the Eligibility Certification, on an ongoing annual basis, and to verify that the tenant continues to be a Qualifying Tenant within the meaning of Section 3(a) hereof. Eligibility Certifications will be maintained on file by the Developer with respect to each Qualifying Tenant who resides in a Project unit or resided therein during the immediately preceding calendar year. The requirement of this paragraph 3(a)(ii) to perform annual Eligibility Certifications shall not apply to a given year if, during such year, no residential unit in the Project is occupied by a new resident whose income exceeds the applicable income limit for Low Income Tenants. The preceding sentence shall not affect the Developer’s obligation to obtain an initial Eligibility Certification from each person who is intended to be a Qualifying Tenant.

(iii) Lease. The form of lease to be utilized by the Developer in renting any units in the Project to any person who is intended to be a Qualifying Tenant will provide for termination of the lease and consent by the person to immediate eviction for failure to qualify as a Qualifying Tenant as a result of any material misrepresentation made by the person with respect to the Eligibility Certification.

(iv) Annual Report. The Developer covenants and agrees that during the term of this Declaration, it will prepare and submit to the Authority on or before January 31 of each year, a certificate substantially in the form of Exhibit C hereto (or a similar report produced by Yardi Property Management Software or another property management software acceptable to the Authority), executed by the Developer, (a) identifying the tenancies and the dates of occupancy (or vacancy) for all Qualifying Tenants in the Project, including the percentage of the dwelling units of the Project which were occupied by Qualifying Tenants (or held vacant and available for occupancy by Qualifying Tenants) at all times during the year preceding the date of the certificate; (b) describing all transfers or other changes in ownership of the Project or any interest therein which causes a change in control of the Developer; and (c) stating, that to the best knowledge of the person executing the certificate after due inquiry, all the units were rented or available for rental on a continuous basis during the year to members of the general public and that the Developer was not otherwise in default under this Declaration during the year.

(v) Notice of Non-Compliance. The Developer will immediately notify the Authority if at any time during the term of this Declaration the dwelling units in the Project are not occupied or available for occupancy as required by the terms of this Declaration.

(b) Section 8 Housing. During the term of this Declaration, the Developer shall not adopt any policies specifically prohibiting or excluding rental to tenants holding certificates/vouchers under Section 8 of the United States Housing Act of 1937, as amended, codified as 42 U.S.C. Sections 1401 et seq., or its successor, because of such prospective tenant’s status as such a certificate/voucher holder.

4. Rental Restrictions. The Developer represents, warrants and covenants that the maximum gross rent for all units occupied by Qualifying Tenants must not exceed thirty percent (30%) of the imputed income limitation applicable to the unit, all in accordance with Section 42 of the Internal Revenue Code of 1986, as amended (the “Tax Credit Law”).
5. **Transfer Restrictions.** The Developer covenants and agrees that the Developer will cause or require as a condition precedent to any conveyance, transfer, assignment, or any other disposition of the Project prior to the termination of the Rental Restrictions and Occupancy Restrictions provided herein (the “Transfer”) that the transferee of the Project pursuant to the Transfer assume in writing, in a form acceptable to the Authority, all duties and obligations of the Developer under this Declaration, including this Section 5, in the event of a subsequent Transfer by the transferee prior to expiration of the Rental Restrictions and Occupancy Restrictions provided herein (the “Assumption Agreement”). The Developer will deliver the Assumption Agreement to the Authority prior to the Transfer.

6. [Intentionally omitted.]

7. **Enforcement.**

   (a) The Developer will permit, during normal business hours and upon reasonable notice, any duly authorized representative of the Authority to inspect any books and records of the Developer regarding the Project with respect to the incomes of Qualifying Tenants.

   (b) The Developer will submit any other information, documents or certifications requested by the Authority which the Authority deems reasonably necessary to substantially the Developer’s continuing compliance with the provisions specified in this Declaration.

   (c) The Developer acknowledges that the primary purpose for requiring compliance by the Developer with the restrictions provided in this Declaration is to ensure compliance of the property with the housing affordability covenants set forth in Section 4.5 of the Contract, and by reason thereof, the Developer, in consideration for assistance provided by the Authority under the Contract that makes possible the construction of the Minimum Improvements (as defined in the Contract) on the Property, hereby agrees and consents that the Authority will be entitled, for any breach of the provisions of this Declaration, and in addition to all other remedies provided by law or in equity, to enforce specific performance by the Developer of its obligations under this Declaration in a state court of competent jurisdiction. The Developer hereby further specifically acknowledges that the Authority cannot be adequately compensated by monetary damages in the event of any default hereunder.

   (d) The Developer understands and acknowledges that, in addition to any remedy set forth herein for failure to comply with the restrictions set forth in this Declaration, the Authority may exercise any remedy available to it under Article IX of the Contract.

8. **Indemnification.** The Developer hereby indemnifies, and agrees to defend and hold harmless, the Authority from and against all liabilities, losses, damages, costs, expenses (including attorneys’ fees and expenses), causes of action, suits, allegations, demands, and judgments of any nature arising from the consequences of a legal or administrative proceeding or action brought against them, or any of them, on account of any failure by the Developer to comply with the terms of this Declaration, or on account of any representation or warranty of the Developer contained herein being untrue.

9. **Agent of the Authority.** The Authority will have the right to appoint an agent to carry out any of its duties and obligations hereunder, and will inform the Developer of any agency appointment by written notice.

10. **Severability.** The invalidity of any clause, part or provision of this Declaration will not affect the validity of the remaining portions thereof.
11. Notices. All notices to be given pursuant to this Declaration must be in writing and will be deemed given when mailed by certified or registered mail, return receipt requested, to the parties hereto at the addresses set forth below, or to any other place as a party may from time to time designate in writing. The Developer and the Authority may, by notice given hereunder, designate any further or different addresses to which subsequent notices, certificates, or other communications are sent. The initial addresses for notices and other communications are as follows:

To the Authority: Economic Development Authority in and for the City of Minnetonka
14600 Minnetonka Boulevard
Minnetonka, MN 55345
Attention: Community Development Director

To the Developer: Minnetonka Leased Housing Associates III, LLLP
2905 Northwest Blvd. Suite 150
Plymouth, MN 55441-2644
Attention: Mark S. Moorhouse and Ryan J. Lunderby

With copy to: Winthrop & Weinstine, P.A.
Capella Tower, Suite 3500
225 South Sixth Street
Minneapolis, MN 55402-4629
Attention: John Stern

12. Governing Law. This Declaration is governed by the laws of the State of Minnesota and, where applicable, the laws of the United States of America.

13. Attorneys’ Fees. In case any action at law or in equity, including an action for declaratory relief, is brought against the Developer to enforce the provisions of this Declaration, the Developer agrees to pay the reasonable attorneys’ fees and other reasonable expenses paid or incurred by the Authority in connection with the action.

14. Declaration Binding. This Declaration and the covenants contained herein will run with the real property comprising the Project and will bind the Developer and its successors and assigns and all subsequent owners of the Project or any interest therein, and the benefits will inure to the Authority and its successors and assigns for the term of this Declaration as provided in Section 1(b).

15. Relationship to Tax Credit Law Requirements. Notwithstanding anything to the contrary, during any period while one hundred percent (100%) of the units in the Property are subject to income and rent limitations under the Tax Credit Law, evidence of compliance with the Tax Credit Law requirements filed with the Authority at least annually will satisfy any requirements otherwise imposed under this Declaration. During any portion of the Qualified Project Period as defined herein when the Tax Credit Law income and rent restrictions do not apply to the Property, this Declaration controls.

16. Notice of Sale. In consideration for the issuance of the TIF Note, the Developer agrees to provide the Authority with at least ninety (90) days’ notice of any sale of the Project.

17. Foreclosure. In the event of foreclosure (or deed in lieu of foreclosure) of the [Construction Mortgage or Freddie Mac Mortgage], dated ________________, 2018 which was executed by the Developer to secure repayment of the ________________________________ (the “Bonds”), issued by the City of Minnetonka in the original aggregate principal amount of $______________, this
Declaration (including without limitation, any and all land use covenants and/or restrictions contained herein) shall automatically terminate.

(The remainder of this page is intentionally left blank.)
IN WITNESS WHEREOF, the Developer has caused this Declaration of Restrictive Covenants to be signed by its respective duly authorized representatives, as of the day and year first written above.

MINNETONKA LEASED HOUSING ASSOCIATES III, LLLP, a Minnesota limited liability limited partnership

By: Minnetonka Leased Housing Associates III, LLC
Its: General Partner

By: ____________________________
Name: Ryan J. Lunderby
Its: Vice President

STATE OF MINNESOTA )
) SS.
COUNTY OF HENNEPIN )

The foregoing instrument was acknowledged before me this ____________, 2018, by Ryan J. Lunderby, the Vice President of Minnetonka Leased Housing Associates III, LLC, a Minnesota limited liability company, the general partner of Minnetonka Leased Housing Associates III, LLLP, a Minnesota limited liability limited partnership, on behalf of the Developer.

__________________________________________
Notary Public

This document drafted by:

Kennedy & Graven Chartered (JAE)
470 U.S. Bank Plaza
200 South Sixth Street
Minneapolis, MN 55402
This Declaration is acknowledged and consented to by:

ECONOMIC DEVELOPMENT AUTHORITY IN
AND FOR THE CITY OF MINNETONKA,
MINNESOTA

By ______________________________
Its President

By ______________________________
Its Executive Director

STATE OF MINNESOTA       )
   ) SS.
COUNTY OF HENNEPIN        )

The foregoing instrument was acknowledged before me this _____________, 20__, by
___________________________, the President of the Economic Development Authority in and for
the City of Minnetonka, Minnesota, a public body corporate and politic under the laws of the State of
Minnesota, on behalf of the Authority.

_____________________________________
Notary Public

STATE OF MINNESOTA       )
   ) SS.
COUNTY OF HENNEPIN        )

The foregoing instrument was acknowledged before me this _____________, 20__, by
___________________________, the Executive Director of the Economic Development Authority in
and for the City of Minnetonka, Minnesota, a public body corporate and politic under the laws of the State
of Minnesota, on behalf of the Authority.

_____________________________________
Notary Public
EXHIBIT A

Legal Description

The land referred to is situated in the State of Minnesota, County of Hennepin, and is described as follows:

Lot 1, Block 1, DOMINIUM 2ND ADDITION, Hennepin County, Minnesota
EXHIBIT B

Certification of Tenant Eligibility

(INCOME COMPUTATION AND CERTIFICATION)

Project: [Address]

Owner:

Unit Type: ______ 1 BR _____ 2 BR _____ 3 BR

1. I/We, the undersigned, being first duly sworn, state that I/we have read and answered fully, frankly and personally each of the following questions for all persons (including minors) who are to occupy the unit in the above apartment development for which application is made, all of whom are listed below:

<table>
<thead>
<tr>
<th>Name of Members of the Household</th>
<th>Relationship To Head of Household</th>
<th>Age</th>
<th>Place of Employment</th>
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Income Computation

2. The anticipated income of all the above persons during the twelve (12) month period beginning this date,

   (a) including all wages and salaries, overtime pay, commissions, fees, tips and bonuses before payroll deductions; net income from the operation of a business or profession or from the rental of real or personal property (without deducting expenditures for business expansion or amortization of capital indebtedness); interest and dividends; the full amount of periodic payments received from social security, annuities, insurance policies, retirement funds, pensions, disability or death benefits and other similar types of periodic receipts; payments in lieu of earnings, such as unemployment and disability compensation, worker’s compensation and severance pay; the maximum amount of public assistance available to the above persons; periodic and determinable allowances, such as alimony and child support payments and regular contributions and gifts received from persons not residing in the dwelling; and all regular pay, special pay and allowances of a member of the Armed Forces (whether or not living in the dwelling) who is the head of the household or spouse; but

   (b) excluding casual, sporadic or irregular gifts; amounts which are specifically for or in reimbursement of medical expenses; lump sum additions to family assets, such as inheritances, insurance payments (including payments under health and accident insurance and workmen’s compensation), capital gains and settlement for personal or property losses; amounts of educational scholarships paid directly to the student or the educational institution, and amounts paid by the government to a veteran for use in meeting the costs of tuition, fees, books and
equipment, but in either case only to the extent used for these types of purposes; special pay to a
serviceman head of a family who is away from home and exposed to hostile fire; relocation
payments under Title II of the Uniform Relocation Assistance and Real Property Acquisition
Policies Act of 1970; foster child care payments; the value of coupon allotments for the purchase
of food pursuant to the Food Stamp Act of 1964 which is in excess of the amount actually
charged for the allotments; and payments received pursuant to participation in ACTION volunteer
programs, is as follows: $_____________.

3. If any of the persons described above (or whose income or contributions was included in
item 2) has any savings, bonds, equity in real property or other form of capital investment, provide:
   (a) the total value of all such assets owned by all such persons: $___________;
   (b) the amount of income expected to be derived from such assets in the twelve (12)
       month period commencing this date: $______________; and
   (c) the amount of such income which is included in income listed in item 2: $__________.

4. (a) Will all of the persons listed in item 1 above be or have they been full-time
    students during five calendar months of this calendar year at an educational institution (other than a
correspondence school) with regular faculty and students?
    Yes ___________________       No ___________________

    (b) Is any such person (other than nonresident aliens) married and eligible to file a
        joint federal income tax return?
    Yes ___________________       No ___________________
THE UNDERSIGNED HEREBY CERTIFY THAT THE INFORMATION SET FORTH ABOVE IS TRUE AND CORRECT. THE UNDERSIGNED ACKNOWLEDGE THAT THE LEASE FOR THE UNIT TO BE OCCUPIED BY THE UNDERSIGNED WILL BE CANCELLED UPON 10 DAYS WRITTEN NOTICE IF ANY OF THE INFORMATION ABOVE IS NOT TRUE AND CORRECT.

________________________________________
Head of Household

________________________________________
Spouse
FOR COMPLETION BY OWNER
(OR ITS MANAGER) ONLY

1. Calculation of Eligible Tenant Income:
   (a) Enter amount entered for entire household in 2 above: $__________
   (b) If the amount entered in 3(a) above is greater than $5,000, enter the greater of
       (i) the amount entered in 3(b) less the amount entered in 3(c) or (ii) 10% of the amount entered in
       3(a): $__________
   (c) TOTAL ELIGIBLE INCOME (Line 1(a) plus Line 1(b)): $__________

2. The amount entered in 1(c) is less than or equal to 60% of median income for the area in
   which the Project is located, as defined in the Declaration. 60% is necessary for status as a “Qualifying
   Tenant” under Section 3(a) of the Declaration.

3. Rent:
   (a) The rent for the unit is $________________.
   (b) The amount entered in 3(a) is less than or equal to the maximum rent permitted
       under the Declaration.

4. Number of apartment unit assigned: ___________.

5. This apartment unit was ____ was not ____ last occupied for a period of at least
   31 consecutive days by persons whose aggregate anticipated annual income as certified in the above
   manner upon their initial occupancy of the apartment unit was less than or equal to 60% of median
   Income in the area.

6. Check as applicable: _______ Applicant qualifies as a Qualifying Tenant (tenants of at
   least ____ units must meet), or ____ Applicant otherwise qualifies to rent a unit.

THE UNDERSIGNED HEREBY CERTIFIES THAT HE/SHE HAS NO KNOWLEDGE OF ANY
FACTS WHICH WOULD CAUSE HIM/HER TO BELIEVE THAT ANY OF THE INFORMATION
PROVIDED BY THE TENANT MAY BE UNTURE OR INCORRECT.

MINNETONKA LEASED HOUSING ASSOCIATES
III, LLLP, a Minnesota limited liability limited
partnership

By ____________________________________________
Its ____________________________________________
EXHIBIT C

Certificate of
Continuing Program Compliance

Date: ___________________

The following information with respect to the Project located at __________________, Minnetonka, Minnesota (the “Project”), is being provided by Minnetonka Leased Housing Associates III, LLLP (the “Owner”) to the Economic Development Authority in and for the City of Minnetonka, Minnesota (the “Authority”), pursuant to that certain Declaration of Restrictive Covenants, dated ______, 2018 (the “Declaration”), with respect to the Project:

(A) The total number of residential units which are available for occupancy is 262. The total number of these units occupied is ________________.

(B) The following residential units (identified by unit number) are currently occupied by “Qualifying Tenants,” as the term is defined in the Declaration (for a total of ____ units):

1 BR Units:

2 BR Units:

3 BR Units:

(C) The following residential units which are included in (B) above, have been re-designated as units for Qualifying Tenants since _______________, 20___, the date on which the last “Certificate of Continuing Program Compliance” was filed with the Authority by the Owner:

<table>
<thead>
<tr>
<th>Unit Number</th>
<th>Previous Designation of Unit (if any)</th>
<th>Replacing Unit Number</th>
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(D) The following residential units are considered to be occupied by Qualifying Tenants based on the information set forth below:

<table>
<thead>
<tr>
<th>Unit Number</th>
<th>Name of Tenant</th>
<th>Number of Persons Residing in the Unit</th>
<th>Number of Bedrooms</th>
<th>Total Adjusted Gross Income</th>
<th>Date of Initial Occupancy</th>
<th>Rent</th>
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(E) The Owner has obtained a "Certification of Tenant Eligibility," in the form required by the Declaration, from each Tenant named in (D) above (to the extent required by the Declaration), and each such Certificate is being maintained by the Owner in its records with respect to the Project. Attached hereto is the most recent "Certification of Tenant Eligibility" for each Tenant named in (D) above who signed such a Certification since _____________, the date on which the last "Certificate of Continuing Program Compliance" was filed with the Authority by the Owner.
(F) In renting the residential units in the Project, the Owner has not given preference to any particular group or class of persons (except for persons who qualify as Qualifying Tenants); and none of the units listed in (D) above have been rented for occupancy entirely by students, no one of which is entitled to file a joint return for federal income tax purposes. All of the residential units in the Project have been rented pursuant to a written lease, and the term of each lease is at least twelve (12) months.

(G) The information provided in this “Certificate of Continuing Program Compliance” is accurate and complete, and no matters have come to the attention of the Owner which would indicate that any of the information provided herein, or in any “Certification of Tenant Eligibility” obtained from the Tenants named herein, is inaccurate or incomplete in any respect.

(H) The Project is in continuing compliance with the Declaration.

(I) The Owner certifies that as of the date hereof one hundred percent (100%) of the residential dwelling units in the Project are occupied or held open for occupancy by Qualifying Tenants, as defined and provided in the Declaration.

(J) The rental levels for each Qualifying Tenant comply with the maximum permitted under the Declaration.
IN WITNESS WHEREOF, I have hereunto affixed my signature, on behalf of the Owner, on ______________________, 2018.

MINNETONKA LEASED HOUSING ASSOCIATES III, LLLP, a Minnesota limited liability limited partnership

By: Minnetonka Leased Housing Associates III, LLC
Its: General Partner

By: ______________________________________
Name: Ryan J. Lunderby
Its: Vice President
EXHIBIT E

CERTIFICATE OF COMPLETION

The undersigned hereby certifies that Minnetonka Leased Housing Associates III, LLLP (the “Developer”), has fully complied with its obligations under Article IV of that document titled “Contract for Private Development,” dated ___________, 2018 (the “Agreement”), between the Economic Development Authority in and for the City of Minnetonka, Minnesota and the Developer, with respect to construction of the Minimum Improvements in accordance with Article IV of the Agreement, and that the Developer is released and forever discharged from its obligations with respect to construction of the Minimum Improvements under Articles III and IV of the Agreement.

Dated: ______________, 20__.

ECONOMIC DEVELOPMENT AUTHORITY IN AND FOR THE CITY OF MINNETONKA, MINNESOTA

By ______________________________
Its President

By ______________________________
Its Executive Director

STATE OF MINNESOTA )
) SS.
COUNTY OF HENNEPIN )

The foregoing instrument was acknowledged before me this ______________, 20__, by ______________________________, the President of the Economic Development Authority in and for the City of Minnetonka, Minnesota, a public body corporate and politic under the laws of the State of Minnesota, on behalf of the Authority.

____________________________________
Notary Public

STATE OF MINNESOTA )
) SS.
COUNTY OF HENNEPIN )

The foregoing instrument was acknowledged before me this ______________, 20__, by ______________________________, the Executive Director of the Economic Development Authority in and for the City of Minnetonka, Minnesota, a public body corporate and politic under the laws of the State of Minnesota, on behalf of the Authority.

____________________________________
Notary Public
This document was drafted by:
KENNEDY & GRAVEN, CHARTERED (JAE)
470 U.S. Bank Plaza
200 South Sixth Street
Minneapolis, Minnesota  55402
EXHIBIT F

RENTAL HOUSING UNITS BY UNIT TYPE

<table>
<thead>
<tr>
<th>Unit Type</th>
<th>Number of Units in Minimum Improvements</th>
</tr>
</thead>
<tbody>
<tr>
<td>One Bedroom</td>
<td>59 units</td>
</tr>
<tr>
<td>Two Bedroom</td>
<td>149 units</td>
</tr>
<tr>
<td>Three Bedroom</td>
<td>54 units</td>
</tr>
</tbody>
</table>
EXHIBIT G
FORM OF MINIMUM ASSESSMENT AGREEMENT

MINIMUM ASSESSMENT AGREEMENT

and

ASSESSOR’S CERTIFICATION

between

ECONOMIC DEVELOPMENT AUTHORITY
IN AND FOR THE
CITY OF MINNETONKA, MINNESOTA,

MINNETONKA LEASED HOUSING ASSOCIATES III, LLLP,

and

CITY ASSESSOR FOR THE CITY OF MINNETONKA, MINNESOTA

This Document was drafted by:

KENNEDY & GRAVEN, Chartered (JAE)
470 U.S. Bank Plaza
200 South Sixth Street
Minneapolis, MN 55402
(612) 337-9300
THIS MINIMUM ASSESSMENT AGREEMENT, dated as of this ___ day of
____________, 2018 (the “Minimum Assessment Agreement”), is between the ECONOMIC
DEVELOPMENT AUTHORITY IN AND FOR THE CITY OF MINNETONKA, MINNESOTA, a
public body corporate and politic under the laws of the State of Minnesota (the “Authority”), and
MINNETONKA LEASED HOUSING ASSOCIATES III, LLLP, a Minnesota limited liability limited
partnership, its successors and assigns (the “Owner”).

WITNESSETH:

WHEREAS, the Authority and the Owner have entered into a Contract for Private Development,
dated ________________, 2018 (the “Agreement”), concerning the property legally described on
EXHIBIT A attached hereto (the “Development Property”); and

WHEREAS, pursuant to the Agreement, the Owner will construct approximately 262 affordable
apartment units intended to be occupied by at least one individual who, at the time of initial occupancy of
such unit, is 55 years of age or older, with one hundred percent (100%) of the apartment units made
affordable such tenants at or below sixty percent (60%) of the area median income, on the Development
Property (the “Minimum Improvements”); and

WHEREAS, the Authority and the Owner desires to establish a minimum market value for the
Development Property and the Minimum Improvements to be constructed thereon, pursuant to Minnesota
Statutes, Section 469.177, subdivision 8; and

WHEREAS, the Authority and the City Assessor for the City of Minnetonka, Minnesota have
reviewed the Plans for the Minimum Improvements which the Owner has agreed to construct on the
Development Property pursuant to the Agreement; and

NOW, THEREFORE, the parties to this Minimum Assessment Agreement, in consideration of
the promises, covenants and agreements made herein and in the Agreement by each to the other, do
hereby agree as follows:

1. The Minimum Market Value for the Development Property with the Minimum
Improvements shall be $47,160,000. The parties agree that this Minimum Market Value shall be placed
against the Development Property as of January 2, 2020, for taxes payable beginning in 2021,
notwithstanding any failure to start or complete construction of such Minimum Improvements by that
date.

2. The Minimum Market Value herein established shall be of no further force and effect and
this Minimum Assessment Agreement shall terminate on the Maturity Date. The Maturity Date has the
meaning given to it under the Agreement.

3. This Minimum Assessment Agreement shall be promptly recorded by the Owner with a
copy of Minnesota Statutes, Section 469.177, subdivision 8 set forth in EXHIBIT B attached hereto. The
Owner shall pay all costs of recording this Minimum Assessment Agreement.

4. Neither the preambles nor the provisions of this Minimum Assessment Agreement are
intended to, nor shall they be construed as, modifying the terms of the Agreement. Unless the context
indicates clearly to the contrary, the terms used in this Minimum Assessment Agreement shall have the
same meaning as the terms used in the Agreement.

5. This Minimum Assessment Agreement shall inure to the benefit of and be binding upon
the parties and their successors and assigns.

6. Each of the parties has authority to enter into this Minimum Assessment Agreement and to take all actions required of it and has taken all actions necessary to authorize the execution and delivery of this Minimum Assessment Agreement.

7. In the event any provision of this Minimum Assessment Agreement shall be held invalid or unenforceable by any court of competent jurisdiction, such holding shall not invalidate or render unenforceable any other provision hereof.

8. The parties hereto agree that they will, from time to time, execute, acknowledge and deliver, or cause to be executed, acknowledged and delivered, such supplements, amendments and modifications hereto, and such further instruments as may reasonably be required for correcting any inadequate, or incorrect, or amended description of the Development Property, or for carrying out the expressed intention of this Minimum Assessment Agreement.

9. Except as provided in Section 8 hereof, this Minimum Assessment Agreement may not be amended nor any of its terms modified except by a writing authorized and executed by all parties hereto.

10. This Minimum Assessment Agreement may be simultaneously executed in several counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument.

11. This Minimum Assessment Agreement shall be governed by and construed in accordance with the laws of the State of Minnesota.
IN WITNESS WHEREOF, the Authority and the Owner have executed this Minimum Assessment Agreement as of the date and year first written above.

ECONOMIC DEVELOPMENT AUTHORITY IN
AND FOR THE CITY OF MINNETONKA,
MINNESOTA

By ________________________________
Its President

By ________________________________
Its Executive Director

STATE OF MINNESOTA )
) SS.
COUNTY OF HENNEPIN )

The foregoing instrument was acknowledged before me this _____________, 2018, by Brad Wiersum, the President of the Economic Development Authority in and for the City of Minnetonka, Minnesota, a public body corporate and politic under the laws of the State of Minnesota, on behalf of the Authority.

___________________________________________
Notary Public

STATE OF MINNESOTA )
) SS.
COUNTY OF HENNEPIN )

The foregoing instrument was acknowledged before me this _____________, 2018, by Geralyn Barone, the Executive Director of the Economic Development Authority in and for the City of Minnetonka, Minnesota, a public body corporate and politic under the laws of the State of Minnesota, on behalf of the Authority.

___________________________________________
Notary Public
MINNETONKA LEASED HOUSING ASSOCIATES III, LLLP, a Minnesota limited liability limited partnership

By: Minnetonka Leased Housing Associates III, LLC
Its: General Partner

By: _________________________________
Name: Ryan J. Lunderby
Its: Vice President

STATE OF MINNESOTA )
COUNTY OF HENNEPIN ) SS.

The foregoing instrument was acknowledged before me this ______________, 2018, by Ryan J. Lunderby, the Vice President of Minnetonka Leased Housing Associates III, LLC, a Minnesota limited liability company, the general partner of Minnetonka Leased Housing Associates III, LLLP, a Minnesota limited liability limited partnership, on behalf of the Developer.

__________________________________
Notary Public
CERTIFICATION BY ASSESSOR

The undersigned, having reviewed the plans and specifications for the improvements to be constructed and the market value assigned to the land upon which the improvements are to be constructed, and being of the opinion that the minimum market value contained in the foregoing Agreement appears reasonable, hereby certify as follows: The undersigned Assessor being legally responsible for the assessment of the described property, hereby certifies that the market value assigned to such land and improvements at the property, legally described on EXHIBIT A attached hereto, shall be not less than $47,160,000 as of January 2, 2020, for taxes payable beginning in 2021, until termination of this Agreement.

__________________________________________
City Assessor for Minnetonka, Minnesota

STATE OF MINNESOTA   )
COUNTY OF HENNEPIN   ) ss.

The foregoing instrument was acknowledged before me this _____ day of ________, 2018, by __________________________, the City Assessor, City of Minnetonka, Hennepin County, Minnesota.

__________________________________________
Notary Public
EXHIBIT A
TO ASSESSMENT AGREEMENT

The Development Property is legally described as follows:

Lot 1, Block 1, DOMINIUM 2ND ADDITION, Hennepin County, Minnesota
Section 469.177, subd. 8. Assessment Agreements. An authority may enter into a written assessment agreement with any person establishing a minimum market value of land, existing improvements, or improvements to be constructed in a district, if the property is owned or will be owned by the person. The minimum market value established by an assessment agreement may be fixed, or increase or decrease in later years from the initial minimum market value. If an agreement is fully executed before July 1 of an assessment year, the market value as provided under the agreement must be used by the county or local assessor as the taxable market value of the property for that assessment. Agreements executed on or after July 1 of an assessment year become effective for assessment purposes in the following assessment year. An assessment agreement terminates on the earliest of the date on which conditions in the assessment agreement for termination are satisfied, the Maturity Date specified in the agreement, or the date when tax increment is no longer paid to the authority under section 469.176, subdivision 1. The assessment agreement shall be presented to the county assessor, or city assessor having the powers of the county assessor, of the jurisdiction in which the tax increment financing district and the property that is the subject of the agreement is located. The assessor shall review the plans and specifications for the improvements to be constructed, review the market value previously assigned to the land upon which the improvements are to be constructed and, so long as the minimum market value contained in the assessment agreement appears, in the judgment of the assessor, to be a reasonable estimate, shall execute the following certification upon the agreement:

The undersigned assessor, being legally responsible for the assessment of the above described property, certifies that the market values assigned to the land and improvements are reasonable.

The assessment agreement shall be filed for record and recorded in the office of the county recorder or the registrar of titles of each county where the real estate or any part thereof is situated. After the agreement becomes effective for assessment purposes, the assessor shall value the property under Section 273.11, except that the market value assigned shall not be less than the minimum market value established by the assessment agreement. The assessor may assign a market value to the property in excess of the minimum market value established by the assessment agreement. The owner of the property may seek, through the exercise of administrative and legal remedies, a reduction in market value for property tax purposes, but no city assessor, county assessor, county auditor, board of review, board of equalization, commissioner of revenue, or court of this state shall grant a reduction of the market value below the minimum market value established by the assessment agreement during the term of the agreement filed of record regardless of actual market values which may result from incomplete construction of improvements, destruction, or diminution by any cause, insured or uninsured, except in the case of acquisition or reacquisition of the property by a public entity. Recording an assessment agreement constitutes notice of the agreement to anyone who acquires any interest in the land or improvements that is subject to the assessment agreement, and the agreement is binding upon them.

An assessment agreement may be modified or terminated by mutual consent of the current parties to the agreement. Modification or termination of an assessment agreement must be approved by the governing body of the municipality. If the estimated market value for the property for the most recently available assessment is less than the minimum market value established by the assessment agreement for that or any later year and if bond counsel does not conclude that termination of the agreement is necessary to preserve the tax exempt status of outstanding bonds or refunding bonds to be issued, the modification or termination of the assessment agreement also must be approved by the governing bodies of the county and the school district. A document modifying or terminating an agreement, including records of the municipality, county, and school district approval, must be filed for record. The assessor’s review and certification is not required if the document terminates an agreement. A change to an agreement not fully
executed before July 1 of an assessment year is not effective for assessment purposes for that assessment year. If an assessment agreement has been modified or prematurely terminated, a person may seek a reduction in market value or tax through the exercise of any administrative or legal remedy. The remedy may not provide for reduction of the market value below the minimum provided under a modified assessment agreement that remains in effect. In no event may a reduction be sought for a year other than the current taxes payable year.
EXHIBIT H

SITE IMPROVEMENTS

The following improvements are the Site Improvements required under this Agreement:

- Surveying and staking;
- Surface improvements, including but not limited to streets, curbs, sidewalks and trails;
- Water main;
- Sanitary sewer;
- Storm sewer and stormwater management facilities;
- Lot and block monuments;
- Gas, electric, telephone and cable lines;
- Site grading;
- Landscaping;
- Street lighting;
- Street signs;
- Relocation of the public sewer line in the western portion of the Development Property;
- Pedestrian underpass beneath Bren Road East;
- Dynamic predication crossing safety improvements on the east side of the Development Property, adjacent to Bren Road East; and
- All other items as necessary to complete the Project as stipulated in Resolution Nos. 2018-____, 2018-____ and this Agreement.
**Tax Increment Financing District Overview**

**City of Minnetonka**

**Dominium Housing Tax Increment Financing District**

The following summary contains an overview of the basic elements of the Tax Increment Financing Plan for the Dominium Housing Tax Increment Financing District. More detailed information on each of these topics can be found in the complete Tax Increment Financing Plan.

<table>
<thead>
<tr>
<th>Proposed action:</th>
<th>Establishment of the Dominium Tax Increment Financing District (the &quot;District&quot;) within the Opus Redevelopment Project and the adoption of a Tax Increment Financing Plan (the &quot;TIF Plan&quot;). Establishment of the Opus Redevelopment Project and the adoption of a Redevelopment Plan therefor.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of TIF District:</td>
<td>A housing district</td>
</tr>
</tbody>
</table>
| Parcel Number: | 36-117-22-31-0015*  
*The City anticipates splitting the existing parcel into two separate parcels during the land use review process. Each parcel will have its own unique parcel number. |
| Proposed Development: | The District is being created to facilitate the construction of approximately 482 affordable apartment units in the City. Please see Appendix A of the TIF Plan for a more detailed project description. |
| Maximum duration: | The duration of the District will be 25 years from the date of receipt of the first increment (26 years of increment). The City expects the date of first tax increment to be 2020. It is estimated that the District, including any modifications of the TIF Plan for subsequent phases or other changes, would terminate after December 31, 2045, or when the TIF Plan is satisfied. |
| Estimated annual tax increment: | Up to $1,135,294 |
Authorized uses: The TIF Plan contains a budget that authorizes the maximum amount that may be expended:

<table>
<thead>
<tr>
<th>Authorized use</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land/Building Acquisition</td>
<td>$10,000,000</td>
</tr>
<tr>
<td>Site Improvements/Preparation</td>
<td>$250,000</td>
</tr>
<tr>
<td>Utilities</td>
<td>$250,000</td>
</tr>
<tr>
<td>Affordable Housing</td>
<td>$1,200,000</td>
</tr>
<tr>
<td>Other Qualifying Improvements</td>
<td>$363,936</td>
</tr>
<tr>
<td>Administrative Costs (up to 10%)</td>
<td>$1,981,165</td>
</tr>
<tr>
<td>PROJECT COSTS TOTAL</td>
<td>$14,045,101</td>
</tr>
<tr>
<td>Interest</td>
<td>$7,747,717</td>
</tr>
<tr>
<td>PROJECT COSTS TOTAL</td>
<td>$21,792,818</td>
</tr>
</tbody>
</table>

See Subsection 1-10, on page 1-6 of the TIF Plan for the full budget authorization.

Form of financing: The project is proposed to be financed by a pay-as-you-go note and interfund loan.

Administrative fee: Up to 10% of annual increment, if costs are justified.

Interfund Loan Requirement: If the City wants to pay for administrative expenditures from a tax increment fund, it is recommended that a resolution authorizing a loan from another fund be passed PRIOR to, or within 60 days of, the issuance of the check.

4 Year Activity Rule (§ 469.176 Subd. 6) After four years from the date of certification of the District one of the following activities must have been commenced on each parcel in the District:

- Demolition
- Rehabilitation
- Renovation
- Other site preparation (not including utility services such as sewer and water)

If the activity has not been started by approximately June 2022, no additional tax increment may be taken from that parcel until the commencement of a qualifying activity.

The reasons and facts supporting the findings for the adoption of the TIF Plan for the District, as required pursuant to M.S., Section 469.175, Subd. 3, are included in Exhibit A of the City resolution.
Tax Increment Financing Plan

for the establishment of

the Dominium Housing Tax Increment Financing District
(a housing district)

within

the Opus Redevelopment Project

Minnetonka Economic Development Authority
City of Minnetonka
Hennepin County
State of Minnesota

Public Hearing: July 23, 2018
Adopted:
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(for reference purposes only)

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Section 1 - Tax Increment Financing Plan for the Dominium Housing Tax Increment Financing District

Subsection 1-1. Foreword

The Minnetonka Economic Development Authority (the "EDA"), the City of Minnetonka (the "City"), staff and consultants have prepared the following information to expedite the establishment of the Dominium Housing Tax Increment Financing District (the "District"), a housing tax increment financing district, located in the Opus Redevelopment Project.

Subsection 1-2. Statutory Authority

Within the City, there exist areas where public involvement is necessary to cause development or redevelopment to occur. To this end, the EDA and City have certain statutory powers pursuant to Minnesota Statutes ("M.S.") Sections 469.090 to 469.1082, inclusive, as amended, and M.S., Sections 469.174 to 469.1794, inclusive, as amended (the "Tax Increment Financing Act" or "TIF Act"), to assist in financing public costs related to this project.

This section contains the Tax Increment Financing Plan (the "TIF Plan") for the District. Other relevant information is contained in the Redevelopment Plan for the Opus Redevelopment Project.

Subsection 1-3. Statement of Objectives

The District currently consists of one parcel of land and adjacent and internal rights-of-way. The District is being created to facilitate the construction of approximately 482 affordable apartment units in the City. Please see Appendix A for further District information. The EDA has not entered into an agreement but anticipates entering into an agreement with Minnetonka Leased Housing Associates II, Limited Liability Limited Partnership ("LLLP") and another LLLP or Limited Partnership that will be formed by Dominium. Development is anticipated to start by the end of 2018 and be completed in 2020. This TIF Plan is expected to achieve many of the objectives outlined in the Redevelopment Plan for the Opus Redevelopment Project.

The activities contemplated in the Redevelopment Plan and the TIF Plan do not preclude the undertaking of other qualified development or redevelopment activities. These activities are anticipated to occur over the life of the Opus Redevelopment Project and the District.

Subsection 1-4. Redevelopment Plan Overview

1. Property to be Acquired - Selected property located within the District may be acquired by the EDA or City and is further described in this TIF Plan.

2. Relocation - Relocation services, to the extent required by law, are available pursuant to M.S., Chapter 117 and other relevant state and federal laws.

3. Upon approval of a developer's plan relating to the project and completion of the necessary legal requirements, the EDA or City may sell to a developer selected properties that it may acquire within the District or may lease land or facilities to a developer.

4. The EDA or City may perform or provide for some or all necessary acquisition, construction, relocation, demolition, and required utilities and public street work within the District.
Subsection 1-5. Description of Property in the District and Property To Be Acquired

The District encompasses all property and adjacent rights-of-way and abutting roadways identified by the parcels listed in Appendix C of this TIF Plan. Please also see the map in Appendix B for further information on the location of the District.

The EDA or City may acquire any parcel within the District including interior and adjacent street rights of way. Any properties identified for acquisition will be acquired by the EDA or City only in order to accomplish one or more of the following: storm sewer improvements; provide land for needed public streets, utilities and facilities; carry out land acquisition, site improvements, clearance and/or development to accomplish the uses and objectives set forth in this plan. The EDA or City may acquire property by gift, dedication, condemnation or direct purchase from willing sellers in order to achieve the objectives of this TIF Plan. Such acquisitions will be undertaken only when there is assurance of funding to finance the acquisition and related costs.

Subsection 1-6. Classification of the District

The EDA and City, in determining the need to create a tax increment financing district in accordance with M.S., Sections 469.174 to 469.1794, as amended, inclusive, find that the District, to be established, is a housing district pursuant to M.S., Section 469.174, Subd. 11 and M.S., Section 469.1761 as defined below:

M.S., Section 469.174, Subd. 11:

"Housing district" means a type of tax increment financing district which consists of a project, or a portion of a project, intended for occupancy, in part, by persons or families of low and moderate income, as defined in chapter 462A, Title II of the National Housing Act of 1934, the National Housing Act of 1959, the United States Housing Act of 1937, as amended, Title V of the Housing Act of 1949, as amended, any other similar present or future federal, state, or municipal legislation, or the regulations promulgated under any of those acts, and that satisfies the requirements of M.S., Section 469.1761. Housing project means a project, or portion of a project, that meets all the qualifications of a housing district under this subdivision, whether or not actually established as a housing district.

M.S., Section 469.1761:

Subd. 1. Requirement imposed.

(a) In order for a tax increment financing district to qualify as a housing district:

(1) the income limitations provided in this section must be satisfied; and

(2) no more than 20 percent of the square footage of buildings that receive assistance from tax increments may consist of commercial, retail, or other nonresidential uses.

(b) The requirements imposed by this section apply to property receiving assistance financed with tax increments, including interest reduction, land transfers at less than the authority’s cost of acquisition, utility service or connections, roads, parking facilities, or other subsidies. The provisions of this section do not apply to districts located within a targeted area as defined in Section 462C.02 Subd 9, clause (e).

© For purposes of the requirements of paragraph (a), the authority may elect to treat an addition
to an existing structure as a separate building if:

(1) construction of the addition begins more than three years after construction of the existing structure was completed; and

(2) for an addition that does not meet the requirements of paragraph (a), clause (2), if it is treated as a separate building, the addition was not contemplated by the tax increment financing plan which includes the existing structure.

Subd. 2. Owner occupied housing.
For owner occupied residential property, 95 percent of the housing units must be initially purchased and occupied by individuals whose family income is less than or equal to the income requirements for qualified mortgage bond projects under section 143(f) of the Internal Revenue Code.

Subd. 3. Rental property.
For residential rental property, the property must satisfy the income requirements for a qualified residential rental project as defined in section 142(d) of the Internal Revenue Code. The requirements of this subdivision apply for the duration of the tax increment financing district.

Subd. 4. Noncompliance; enforcement.
Failure to comply with the requirements of this section is subject to M.S., Section 469.1771.

In meeting the statutory criteria the EDA and City rely on the following facts and findings:

- The District currently consists of one parcel, which the City expects to divide into two separate parcels, each of which will be developed into multi-family rental housing.
- The development will consist of approximately 482 units of multi-family rental housing.
- At least 40% of the units will be occupied by persons with incomes less than 60% of median income.

Pursuant to M.S., Section 469.176, Subd. 7, the District does not contain any parcel or part of a parcel that qualified under the provisions of M.S., Sections 273.111, 273.112, or 273.114 or Chapter 473H for taxes payable in any of the five calendar years before the filing of the request for certification of the District.

Subsection 1-7. Duration and First Year of Tax Increment of the District

Pursuant to M.S., Section 469.175, Subd. 1, and Section 469.176, Subd. 1, the duration and first year of tax increment of the District must be indicated within the TIF Plan. Pursuant to M.S., Section 469.176, Subd. 1b., the duration of the District will be 25 years after receipt of the first increment by the EDA or City (a total of 26 years of tax increment). The EDA or City elects to receive the first tax increment in 2020, which is no later than four years following the year of approval of the District. Thus, it is estimated that the District, including any modifications of the TIF Plan for subsequent phases or other changes, would terminate after 2045, or when the TIF Plan is satisfied. The EDA or City reserves the right to decertify the District prior to the legally required date.
Subsection 1-8. Original Tax Capacity, Tax Rate and Estimated Captured Net Tax Capacity Value/Increment and Notification of Prior Planned Improvements

Pursuant to M.S., Section 469.174, Subd. 7 and M.S., Section 469.177, Subd. 1, the Original Net Tax Capacity (ONTC) as certified for the District will be based on the market values placed on the property by the assessor in 2017 for taxes payable 2018.

Pursuant to M.S., Section 469.177, Subds. 1 and 2, the County Auditor shall certify in each year (beginning in the payment year 2020) the amount by which the original value has increased or decreased as a result of:

1. Change in tax exempt status of property;
2. Reduction or enlargement of the geographic boundaries of the district;
3. Change due to adjustments, negotiated or court-ordered abatements;
4. Change in the use of the property and classification;
5. Change in state law governing class rates; or
6. Change in previously issued building permits.

In any year in which the current Net Tax Capacity (NTC) value of the District declines below the ONTC, no value will be captured and no tax increment will be payable to the EDA or City.

The original local tax rate for the District will be the local tax rate for taxes payable 2019, assuming the request for certification is made before June 30, 2019. The ONTC and the Original Local Tax Rate for the District appear in the table below.

Pursuant to M.S., Section 469.174 Subd. 4 and M.S., Section 469.177, Subd. 1, 2, and 4, the estimated Captured Net Tax Capacity (CTC) of the District, within the Opus Redevelopment Project, upon completion of the projects within the District, will annually approximate tax increment revenues as shown in the table below. The EDA and City request 100 percent of the available increase in tax capacity for repayment of its obligations and current expenditures, beginning in the tax year payable 2020. The Project Tax Capacity (PTC) listed is an estimate of values when the projects within the District are completed.

<table>
<thead>
<tr>
<th>Project Estimated Tax Capacity upon Completion (PTC)</th>
<th>$1,017,331</th>
</tr>
</thead>
<tbody>
<tr>
<td>Original Estimated Net Tax Capacity (ONTC)</td>
<td>$55,095</td>
</tr>
<tr>
<td>Estimated Captured Tax Capacity (CTC)</td>
<td>$962,236</td>
</tr>
<tr>
<td>Original Local Tax Rate</td>
<td>1.17985</td>
</tr>
<tr>
<td>Pay 2018</td>
<td></td>
</tr>
<tr>
<td>Estimated Annual Tax Increment (CTC x Local Tax Rate)</td>
<td>$1,135,294</td>
</tr>
<tr>
<td>Percent Retained by the EDA</td>
<td>100%</td>
</tr>
</tbody>
</table>

Tax capacity includes a 3% inflation factor for the duration of the District. The tax capacity included in this chart is the estimated tax capacity of the District in year 25. The tax capacity of the District in year one is estimated to be $99,487.

Pursuant to M.S., Section 469.177, Subd. 4, the EDA shall, after a due and diligent search, accompany its request for certification to the County Auditor or its notice of the District enlargement pursuant to M.S., Section 469.175, Subd. 4, with a listing of all properties within the District or area of enlargement for which building permits have been issued during the eighteen (18) months immediately preceding approval of the TIF Plan by the municipality pursuant to M.S., Section 469.175, Subd. 3. The County Auditor shall increase the original net tax capacity of the District by the net tax capacity of improvements for which a building

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permit was issued.

The City has reviewed the area to be included in the District and found no parcels for which building permits have been issued during the 18 months immediately preceding approval of the TIF Plan by the City.

**Subsection 1-9. Sources of Revenue/Bonds to be Issued**

The costs outlined in the Uses of Funds will be financed primarily through the annual collection of tax increments. The EDA or City reserves the right to incur bonds or other indebtedness as a result of the TIF Plan. As presently proposed, the projects within the District will be financed by a pay-as-you-go note and interfund loan. Any refunding amounts will be deemed a budgeted cost without a formal TIF Plan Modification. This provision does not obligate the EDA or City to incur debt. The EDA or City will issue bonds or incur other debt only upon the determination that such action is in the best interest of the City.

The total estimated tax increment revenues for the District are shown in the table below:

<table>
<thead>
<tr>
<th>SOURCES OF FUNDS</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tax Increment</td>
<td>$19,811,654</td>
</tr>
<tr>
<td>Interest</td>
<td>$1,981,165</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$21,792,819</strong></td>
</tr>
</tbody>
</table>

The EDA or City may issue bonds (as defined in the TIF Act) secured in whole or in part with tax increments from the District in a maximum principal amount of $14,045,101. Such bonds may be in the form of pay-as-you-go notes, revenue bonds or notes, general obligation bonds, or interfund loans. This estimate of total bonded indebtedness is a cumulative statement of authority under this TIF Plan as of the date of approval.

**Subsection 1-10. Uses of Funds**

Currently under consideration for the District is a proposal to facilitate the construction of approximately 482 affordable apartment units. The EDA and City have determined that it will be necessary to provide assistance to the project(s) for certain District costs, as described. The EDA has studied the feasibility of the development or redevelopment of property in and around the District. To facilitate the establishment and development or redevelopment of the District, this TIF Plan authorizes the use of tax increment financing to pay for the cost of certain eligible expenses. The estimate of public costs and uses of funds associated with the District is outlined in the table on the following page.
The total project cost, including financing costs (interest) listed in the table above does not exceed the total projected tax increments for the District as shown in Subsection 2-9.

Estimated costs associated with the District are subject to change among categories without a modification to this TIF Plan. The cost of all activities to be considered for tax increment financing will not exceed, without formal modification, the budget above pursuant to the applicable statutory requirements. The EDA may expend funds for qualified housing activities outside of the District boundaries.

**Subsection 1-11. Fiscal Disparities Election**

Pursuant to *M.S., Section 469.177, Subd. 3*, the City may elect one of two methods to calculate fiscal disparities. If the calculations pursuant to *M.S., Section 469.177, Subd. 3, clause b*, (inside the District) are followed, the following method of computation shall apply:

1. The original net tax capacity shall be determined before the application of the fiscal disparity provisions of Chapter 276A or 473F. The current net tax capacity shall exclude any fiscal disparity commercial-industrial net tax capacity increase between the original year and the current year multiplied by the fiscal disparity ratio determined pursuant to *M.S., Section 276A.06, subdivision 7* or *M.S., Section 473F.08, subdivision 6*. Where the original net tax capacity is equal to or greater than the current net tax capacity, there is no captured tax capacity and no tax increment determination. Where the original tax capacity is less than the current tax capacity, the difference between the original net tax capacity and the current net tax capacity is the captured net tax capacity. This amount less any portion thereof which the authority has designated, in its tax increment financing plan, to share with the local taxing districts is the retained captured net tax capacity of the authority.

2. The county auditor shall exclude the retained captured net tax capacity of the authority from the net tax capacity of the local taxing districts in determining local taxing district tax rates. The local tax rates so determined are to be extended against the retained captured net tax capacity of the authority as well as the net tax capacity of the local taxing districts. The tax generated by the extension of the less of (A) the local taxing district tax rates or (B) the original local tax rate to the retained captured net tax capacity of the authority is the tax increment of the authority.
The City will choose to calculate fiscal disparities by clause b. It is not anticipated that the District will contain commercial/industrial property. As a result, there should be no impact due to the fiscal disparities provision on the District.

According to M.S., Section 469.177, Subd. 3:

(c) The method of computation of tax increment applied to a district pursuant to paragraph (a) or (b) shall remain the same for the duration of the district, except that the governing body may elect to change its election from the method of computation in paragraph (a) to the method in paragraph (b).

Subsection 1-12. Business Subsidies

Pursuant to M.S., Section 116J.993, Subd. 3, the following forms of financial assistance are not considered a business subsidy:

(1) A business subsidy of less than $150,000;
(2) Assistance that is generally available to all businesses or to a general class of similar businesses, such as a line of business, size, location, or similar general criteria;
(3) Public improvements to buildings or lands owned by the state or local government that serve a public purpose and do not principally benefit a single business or defined group of businesses at the time the improvements are made;
(4) Redevelopment property polluted by contaminants as defined in M.S., Section 116J.552, Subd. 3;
(5) Assistance provided for the sole purpose of renovating old or decaying building stock or bringing it up to code and assistance provided for designated historic preservation districts, provided that the assistance is equal to or less than 50% of the total cost;
(6) Assistance to provide job readiness and training services if the sole purpose of the assistance is to provide those services;
(7) Assistance for housing;
(8) Assistance for pollution control or abatement, including assistance for a tax increment financing hazardous substance subdistrict as defined under M.S., Section 469.174, Subd. 23;
(9) Assistance for energy conservation;
(10) Tax reductions resulting from conformity with federal tax law;
(11) Workers' compensation and unemployment compensation;
(12) Benefits derived from regulation;
(13) Indirect benefits derived from assistance to educational institutions;
(14) Funds from bonds allocated under chapter 474A, bonds issued to refund outstanding bonds, and bonds issued for the benefit of an organization described in section 501 © (3) of the Internal Revenue Code of 1986, as amended through December 31, 1999;
(15) Assistance for a collaboration between a Minnesota higher education institution and a business;
(16) Assistance for a tax increment financing soils condition district as defined under M.S., Section 469.174, Subd. 19;
(17) Redevelopment when the recipient's investment in the purchase of the site and in site preparation is 70 percent or more of the assessor's current year's estimated market value;
(18) General changes in tax increment financing law and other general tax law changes of a principally technical nature;
(19) Federal assistance until the assistance has been repaid to, and reinvested by, the state or local government agency;
(20) Funds from dock and wharf bonds issued by a seaway port authority;
(21) Business loans and loan guarantees of $150,000 or less;
(22) Federal loan funds provided through the United States Department of Commerce, Economic Development Administration; and
(23) Property tax abatements granted under M.S., Section 469.1813 to property that is subject to valuation under Minnesota Rules, chapter 8100.

The EDA will comply with M.S., Sections 116J.993 to 116J.995 to the extent the tax increment assistance under this TIF Plan does not fall under any of the above exemptions.

**Subsection 1-13. County Road Costs**

Pursuant to M.S., Section 469.175, Subd. 1a, the county board may require the EDA or City to pay for all or part of the cost of county road improvements if the proposed development to be assisted by tax increment will, in the judgment of the county, substantially increase the use of county roads requiring construction of road improvements or other road costs and if the road improvements are not scheduled within the next five years under a capital improvement plan or within five years under another county plan.

If the county elects to use increments to improve county roads, it must notify the EDA or City within forty-five days of receipt of this TIF Plan. In the opinion of the EDA and City and consultants, the proposed development outlined in this TIF Plan will have little or no impact upon county roads, therefore the TIF Plan was not forwarded to the county 45 days prior to the public hearing. The EDA and City are aware that the county could claim that tax increment should be used for county roads, even after the public hearing.

**Subsection 1-14. Estimated Impact on Other Taxing Jurisdictions**

The estimated impact on other taxing jurisdictions assumes that the redevelopment contemplated by the TIF Plan would occur without the creation of the District. However, the EDA or City has determined that such development or redevelopment would not occur "but for" tax increment financing and that, therefore, the fiscal impact on other taxing jurisdictions is $0. The estimated fiscal impact of the District would be as follows if the "but for" test was not met:

<table>
<thead>
<tr>
<th>IMPACT ON TAX BASE</th>
<th>2017/Pay 2018 Total Net Tax Capacity</th>
<th>Estimated Captured Tax Capacity (CTC) Upon Completion</th>
<th>Percent of CTC to Entity Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hennepin County</td>
<td>1,685,924,784</td>
<td>962,236</td>
<td>0.0571%</td>
</tr>
<tr>
<td>City of Minnetonka</td>
<td>95,091,802</td>
<td>962,236</td>
<td>1.0119%</td>
</tr>
<tr>
<td>Hopkins ISD No. 270</td>
<td>112,892,334</td>
<td>962,236</td>
<td>0.8523%</td>
</tr>
</tbody>
</table>
**IMPACT ON TAX RATES**

<table>
<thead>
<tr>
<th></th>
<th>Pay 2018 Extension Rates</th>
<th>Percent of Total</th>
<th>CTC</th>
<th>Potential Taxes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hennepin County</td>
<td>0.428080</td>
<td>36.28%</td>
<td>962,236</td>
<td>411,914</td>
</tr>
<tr>
<td>City of Minnetonka</td>
<td>0.359650</td>
<td>30.48%</td>
<td>962,236</td>
<td>346,068</td>
</tr>
<tr>
<td>Hopkins ISD No. 270</td>
<td>0.290350</td>
<td>24.61%</td>
<td>962,236</td>
<td>279,385</td>
</tr>
<tr>
<td>Other</td>
<td>0.101770</td>
<td>8.63%</td>
<td>962,236</td>
<td>97,927</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1.179850</td>
<td>100.00%</td>
<td></td>
<td>1,135,294</td>
</tr>
</tbody>
</table>

The estimates listed above display the captured tax capacity when all construction is completed. The tax rate used for calculations is the actual Pay 2018 rate. The total net capacity for the entities listed above are based on actual Pay 2018 figures. The District will be certified under the actual Pay 2019 rates, which were unavailable at the time this TIF Plan was prepared.

Pursuant to *M.S. Section 469.175 Subd. 2(b):*

1. **Estimate of total tax increment.** It is estimated that the total amount of tax increment that will be generated over the life of the District is $19,811,654;

2. **Probable impact of the District on city provided services and ability to issue debt.** An impact of the District on police protection is not expected. The City police department does track all calls for service including property-type calls and crimes. With any addition of new residents or businesses, police calls for service will be increased. New developments add an increase in traffic, and additional overall demands to the call load. The City does not expect that the proposed development, in and of itself, will necessitate new capital investment.

   The probable impact of the District on fire protection is not expected to be significant. Typically new buildings generate few calls, if any, and are of superior construction.

   The impact of the District on public infrastructure is expected to be minimal. The development is not expected to significantly impact any traffic movements in the area. The current infrastructure for sanitary sewer, storm sewer and water will be able to handle the additional volume generated from the proposed development. Based on the development plans, there are no additional costs associated with street maintenance, sweeping, plowing, lighting and sidewalks. The development in the District is expected to contribute to sanitary sewer (SAC) and water (WAC) connection fees.

   The probable impact of any District general obligation tax increment bonds on the ability to issue debt for general fund purposes is expected to be minimal. It is not anticipated that there will be any general obligation debt issued in relation to this project, therefore there will be no impact on the City's ability to issue future debt or on the City's debt limit.

3. **Estimated amount of tax increment attributable to school district levies.** It is estimated that the amount of tax increments over the life of the District that would be attributable to school district levies, assuming the school district's share of the total local tax rate for all taxing jurisdictions remained the same, is $4,875,648;

4. **Estimated amount of tax increment attributable to county levies.** It is estimated that the amount of
tax increments over the life of the District that would be attributable to county levies, assuming the county's share of the total local tax rate for all taxing jurisdictions remained the same, is $7,187,668;

(5) Additional information requested by the county or school district. The City is not aware of any standard questions in a county or school district written policy regarding tax increment districts and impact on county or school district services. The county or school district must request additional information pursuant to M.S. Section 469.175 Subd. 2(b) within 15 days after receipt of the tax increment financing plan.

No requests for additional information from the county or school district regarding the proposed development for the District have been received.

Subsection 1-15. Supporting Documentation

Pursuant to M.S. Section 469.175, Subd. 1 (a), clause 7 the TIF Plan must contain identification and description of studies and analyses used to make the findings are required in the resolution approving the District. Following is a list of reports and studies on file at the City that support the EDA and City's findings:

- 2030 Comprehensive Plan Guide
- SWLRT Housing Gaps Analysis (2014)

Subsection 1-16. Definition of Tax Increment Revenues

Pursuant to M.S., Section 469.174, Subd. 25, tax increment revenues derived from a tax increment financing district include all of the following potential revenue sources:

1. Taxes paid by the captured net tax capacity, but excluding any excess taxes, as computed under M.S., Section 469.177;
2. The proceeds from the sale or lease of property, tangible or intangible, to the extent the property was purchased by the authority with tax increments;
3. Principal and interest received on loans or other advances made by the authority with tax increments;
4. Interest or other investment earnings on or from tax increments;
5. Repayments or return of tax increments made to the Authority under agreements for districts for which the request for certification was made after August 1, 1993; and
6. The market value homestead credit paid to the Authority under M.S., Section 273.1384.

Subsection 1-17. Modifications to the District

In accordance with M.S., Section 469.175, Subd. 4, any:

1. Reduction or enlargement of the geographic area of the District, if the reduction does not meet the requirements of M.S., Section 469.175, Subd. 4(e);
2. Increase in amount of bonded indebtedness to be incurred;
3. A determination to capitalize interest on debt if that determination was not a part of the original TIF Plan;
4. Increase in the portion of the captured net tax capacity to be retained by the EDA or City;
5. Increase in the estimate of the cost of the District, including administrative expenses, that will be paid or financed with tax increment from the District; or
6. Designation of additional property to be acquired by the EDA or City,
shall be approved upon the notice and after the discussion, public hearing and findings required for approval of the original TIF Plan.

Pursuant to M.S. Section 469.175 Subd. 4(f), the geographic area of the District may be reduced, but shall not be enlarged after five years following the date of certification of the original net tax capacity by the county auditor. If a housing district is enlarged, the reasons and supporting facts for the determination that the addition to the district meets the criteria of M.S., Section 469.174, Subd. 11 must be documented. The requirements of this paragraph do not apply if (1) the only modification is elimination of parcel(s) from the District and (2) (A) the current net tax capacity of the parcel(s) eliminated from the District equals or exceeds the net tax capacity of those parcel(s) in the District's original net tax capacity or (B) the EDA agrees that, notwithstanding M.S., Section 469.177, Subd. 1, the original net tax capacity will be reduced by no more than the current net tax capacity of the parcel(s) eliminated from the District.

The EDA or City must notify the County Auditor of any modification to the District. Modifications to the District in the form of a budget modification or an expansion of the boundaries will be recorded in the TIF Plan.

**Subsection 1-18. Administrative Expenses**

In accordance with M.S., Section 469.174, Subd. 14, administrative expenses means all expenditures of the EDA or City, other than:

1. Amounts paid for the purchase of land;
2. Amounts paid to contractors or others providing materials and services, including architectural and engineering services, directly connected with the physical development of the real property in the District;
3. Relocation benefits paid to or services provided for persons residing or businesses located in the District;
4. Amounts used to pay principal or interest on, fund a reserve for, or sell at a discount bonds issued pursuant to M.S., Section 469.178; or
5. Amounts used to pay other financial obligations to the extent those obligations were used to finance costs described in clauses (1) to (3).

For districts for which the request for certification were made before August 1, 1979, or after June 30, 1982, and before August 1, 2001, administrative expenses also include amounts paid for services provided by bond counsel, fiscal consultants, and planning or economic development consultants. Pursuant to M.S., Section 469.176, Subd. 3, tax increment may be used to pay any authorized and documented administrative expenses for the District up to but not to exceed 10 percent of the total estimated tax increment expenditures authorized by the TIF Plan or the total tax increments, as defined by M.S., Section 469.174, Subd. 25, clause (1), from the District, whichever is less.

For districts for which certification was requested after July 31, 2001, no tax increment may be used to pay any administrative expenses for District costs which exceed ten percent of total estimated tax increment expenditures authorized by the TIF Plan or the total tax increments, as defined in M.S., Section 469.174, Subd. 25, clause (1), from the District, whichever is less.

Pursuant to M.S., Section 469.176, Subd. 4h, tax increments may be used to pay for the County's actual administrative expenses incurred in connection with the District and are not subject to the percentage limits of M.S., Section 469.176, Subd. 3. The county may require payment of those expenses by February 15 of the year following the year the expenses were incurred.

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Pursuant to *M.S., Section 469. 177, Subd. 11*, the County Treasurer shall deduct an amount (currently .36 percent) of any increment distributed to the EDA or City and the County Treasurer shall pay the amount deducted to the State Commissioner of Management and Budget for deposit in the state general fund to be appropriated to the State Auditor for the cost of financial reporting of tax increment financing information and the cost of examining and auditing authorities' use of tax increment financing. This amount may be adjusted annually by the Commissioner of Revenue.

**Subsection 1-19. Limitation of Increment**

The tax increment pledged to the payment of bonds and interest thereon may be discharged and the District may be terminated if sufficient funds have been irrevocably deposited in the debt service fund or other escrow account held in trust for all outstanding bonds to provide for the payment of the bonds at maturity or redemption date.

Pursuant to *M.S., Section 469.176, Subd. 6*:

> if, after four years from the date of certification of the original net tax capacity of the tax increment financing district pursuant to *M.S., Section 469.177*, no demolition, rehabilitation or renovation of property or other site preparation, including qualified improvement of a street adjacent to a parcel but not installation of utility service including sewer or water systems, has been commenced on a parcel located within a tax increment financing district by the authority or by the owner of the parcel in accordance with the tax increment financing plan, no additional tax increment may be taken from that parcel, and the original net tax capacity of that parcel shall be excluded from the original net tax capacity of the tax increment financing district. If the authority or the owner of the parcel subsequently commences demolition, rehabilitation or renovation or other site preparation on that parcel including qualified improvement of a street adjacent to that parcel, in accordance with the tax increment financing plan, the authority shall certify to the county auditor that the activity has commenced and the county auditor shall certify the net tax capacity thereof as most recently certified by the commissioner of revenue and add it to the original net tax capacity of the tax increment financing district. The county auditor must enforce the provisions of this subdivision. The authority must submit to the county auditor evidence that the required activity has taken place for each parcel in the district. The evidence for a parcel must be submitted by February 1 of the fifth year following the year in which the parcel was certified as included in the district. For purposes of this subdivision, qualified improvements of a street are limited to (1) construction or opening of a new street, (2) relocation of a street, and (3) substantial reconstruction or rebuilding of an existing street.

The EDA or City or a property owner must improve parcels within the District by approximately June 2022 and report such actions to the County Auditor.

**Subsection 1-20. Use of Tax Increment**

The EDA or City hereby determines that it will use 100 percent of the captured net tax capacity of taxable property located in the District for the following purposes:

1. To pay the principal of and interest on bonds issued to finance a project;
2. To finance, or otherwise pay the cost of redevelopment of the Opus Redevelopment Project pursuant to *M.S., Sections 469.090 to 469.1082*;
3. To pay for project costs as identified in the budget set forth in the TIF Plan;
4. To finance, or otherwise pay for other purposes as provided in M.S., Section 469.176, Subd. 4;
5. To pay principal and interest on any loans, advances or other payments made to or on behalf of the EDA or City or for the benefit of the Opus Redevelopment Project by a developer;
6. To finance or otherwise pay premiums and other costs for insurance or other security guaranteeing the payment when due of principal of and interest on bonds pursuant to the TIF Plan or pursuant to M.S., Chapter 462C, M.S., Sections 469.152 through 469.165; and/or M.S., Sections 469.178; and
7. To accumulate or maintain a reserve securing the payment when due of the principal and interest on the tax increment bonds or bonds issued pursuant to M.S., Chapter 462C, M.S., Sections 469.152 through 469.165, and/or M.S., Sections 469.178.

Revenues derived from tax increment from a housing district must be used solely to finance the cost of housing projects as defined in M.S., Sections 469.174, Subd. 11 and 469.1761. The cost of public improvements directly related to the housing projects and the allocated administrative expenses of the EDA or City may be included in the cost of a housing project.

These revenues shall not be used to circumvent any levy limitations applicable to the City nor for other purposes prohibited by M.S., Section 469.176, Subd. 4.

Tax increments generated in the District will be paid by Hennepin County to the EDA for the Tax Increment Fund of said District. The EDA or City will pay to the developer(s) annually an amount not to exceed an amount as specified in a developer's agreement to reimburse the costs of land acquisition, public improvements, demolition and relocation, site preparation, and administration. Remaining increment funds will be used for EDA or City administration (up to 10 percent) and for the costs of public improvement activities outside the District.

Subsection 1-21. Excess Increments

Excess increments, as defined in M.S., Section 469.176, Subd. 2, shall be used only to do one or more of the following:

1. Prepay any outstanding bonds;
2. Discharge the pledge of tax increment for any outstanding bonds;
3. Pay into an escrow account dedicated to the payment of any outstanding bonds; or
4. Return the excess to the County Auditor for redistribution to the respective taxing jurisdictions in proportion to their local tax rates.

The EDA or City must spend or return the excess increments under paragraph © within nine months after the end of the year. In addition, the EDA or City may, subject to the limitations set forth herein, choose to modify the TIF Plan in order to finance additional public costs in the Opus Redevelopment Project or the District.

Subsection 1-22. Requirements for Agreements with the Developer

The EDA or City will review any proposal for private development to determine its conformance with the Redevelopment Plan and with applicable municipal ordinances and codes. To facilitate this effort, the following documents may be requested for review and approval: site plan, construction, mechanical, and electrical system drawings, landscaping plan, grading and storm drainage plan, signage system plan, and any other drawings or narrative deemed necessary by the EDA or City to demonstrate the conformance of the development with City plans and ordinances. The EDA or City may also use the Agreements to address other issues related to the development.
Pursuant to *M.S., Section 469.176, Subd. 5*, no more than 10 percent, by acreage, of the property to be acquired in the project area as set forth in the TIF Plan shall at any time be owned by the EDA or City as a result of acquisition with the proceeds of bonds issued pursuant to *M.S., Section 469.178* to which tax increments from property acquired is pledged, unless prior to acquisition in excess of 10 percent of the acreage, the EDA or City concluded an agreement for the development of the property acquired and which provides recourse for the EDA or City should the development not be completed.

**Subsection 1-23. Assessment Agreements**

Pursuant to *M.S., Section 469.177, Subd. 8*, the EDA or City may enter into a written assessment agreement in recordable form with the developer of property within the District which establishes a minimum market value of the land and completed improvements for the duration of the District. The assessment agreement shall be presented to the County Assessor who shall review the plans and specifications for the improvements to be constructed, review the market value previously assigned to the land upon which the improvements are to be constructed and, so long as the minimum market value contained in the assessment agreement appears, in the judgment of the assessor, to be a reasonable estimate, the County Assessor shall also certify the minimum market value agreement.

**Subsection 1-24. Administration of the District**

Administration of the District will be handled by the Community Development Director.

**Subsection 1-25. Annual Disclosure Requirements**

Pursuant to *M.S., Section 469.175, Subds. 5, 6, and 6b* the EDA or City must undertake financial reporting for all tax increment financing districts to the Office of the State Auditor, County Board and County Auditor on or before August 1 of each year. *M.S., Section 469.175, Subd. 5* also provides that an annual statement shall be published in a newspaper of general circulation in the City on or before August 15.

If the City fails to make a disclosure or submit a report containing the information required by *M.S., Section 469.175 Subd. 5 and Subd. 6*, the Office of the State Auditor will direct the County Auditor to withhold the distribution of tax increment from the District.

**Subsection 1-26. Reasonable Expectations**

As required by the TIF Act, in establishing the District, the determination has been made that the anticipated development would not reasonably be expected to occur solely through private investment within the reasonably foreseeable future. In making said determination, reliance has been placed upon written representation made by the developer to such effects and upon EDA and City staff awareness of the feasibility of developing the project site(s) within the District.

**Subsection 1-27. Other Limitations on the Use of Tax Increment**

1. **General Limitations.** All revenue derived from tax increment shall be used in accordance with the TIF Plan. The revenues shall be used to finance, or otherwise pay the cost of redevelopment of the Opus Redevelopment Project pursuant to *M.S., Sections 469.090 to 469.1082*. Tax increments may not be used to circumvent existing levy limit law. No tax increment may be used for the acquisition, construction, renovation, operation, or maintenance of a building to be used primarily and regularly for conducting the business of a municipality, county, school district, or any other local unit of government or the state or federal government. This provision does not prohibit the use of revenues derived from tax increments.
for the construction or renovation of a parking structure.

2. **Housing District Exceptions to Restriction on Pooling; Five Year Limit.** Pursuant to *M.S., Section 469.1763, Subd. 2*, at least 80% of revenues derived from tax increments paid by properties in the District must be expended on Public Costs incurred within said district, and up to 20% of said tax increments may be spent on public costs incurred outside of the District but within the Opus Redevelopment Project; provided that in the case of a housing district, a housing project, as defined in *M.S., Section 469.174, Subd. 11*, is deemed to be an activity in the District, even if the expenditure occurred after five years.

**Subsection 1-28. Summary**

The Minnetonka Economic Development Authority is establishing the District to provide an impetus for residential development and provide safe and decent life cycle housing in the City. The TIF Plan for the District was prepared by Ehlers & Associates, Inc., 3060 Centre Pointe Drive, Roseville, Minnesota 55113-1105, telephone (651) 697-8500.
Appendix A

Project Description

Dominium intends to construct approximately 482 apartments in two separate projects. The existing parcel will be split into two parcels for the purposes of the development. One parcel will host approximately 262 age-restricted apartments. The second parcel will host approximately 220 general occupancy apartments. At least 40% of the apartments will be reserved for households with incomes at or below 60% of the area median income. Both buildings will include one level of underground parking.

The EDA intends to issue two PAYGO TIF Notes, one for each building to offset qualified costs related to the redevelopment of the site.
Appendix B

Map of the Opus Redevelopment Project and the District
Dominium Housing TIF District

- Dominium Housing TIF District
- Opus Redevelopment Project Area
Appendix C

Description of Property to be Included in the District

The District encompasses all property and adjacent rights-of-way and abutting roadways identified by the parcel listed below.

<table>
<thead>
<tr>
<th>Parcel Numbers</th>
<th>Address</th>
<th>Owner</th>
</tr>
</thead>
<tbody>
<tr>
<td>36-117-22-31-0015*</td>
<td>11001 Bren Rd E</td>
<td>Digi International Inc</td>
</tr>
</tbody>
</table>

*The City anticipates splitting the existing parcel into two separate parcels during the land use review process. Each parcel will have its own unique parcel number. The anticipated legal description for the age restricted apartment development is Lot 1, Block 1, DOMINIUM 2ND ADDITION, Hennepin County, Minnesota. The anticipated legal description for the general occupancy apartment development is Lot 2, Block 1, DOMINIUM 2ND ADDITION, Hennepin County, Minnesota. The final plat was not available when this TIF Plan was prepared.
Appendix D

Estimated Cash Flow for the District
# Dominium Housing
## City of Minnetonka
### 482 Affordable Apartments

**ASSUMPTIONS AND RATES**

<table>
<thead>
<tr>
<th>Exempt Class Rate (Exempt)</th>
<th>0.00%</th>
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</thead>
<tbody>
<tr>
<td>Commercial Industrial Preferred Class Rate (C/I Pref.)</td>
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<tr>
<td>First $150,000 Over $150,000</td>
<td>1.50% 2.00%</td>
</tr>
<tr>
<td>Commercial Industrial Class Rate (C/I)</td>
<td>2.00%</td>
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<tr>
<td>Over $150,000 Over $200,000</td>
<td>2.00% 2.50%</td>
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<tr>
<td>Rental Housing Class Rate (Rental)</td>
<td>1.25%</td>
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<tr>
<td>Affordable Rental Housing Class Rate (Aff. Rental)</td>
<td></td>
</tr>
<tr>
<td>First $121,000 Over $121,000</td>
<td>0.75% 0.25%</td>
</tr>
<tr>
<td>Non-Homestead Residential (Non-H Res. 1 Unit)</td>
<td></td>
</tr>
<tr>
<td>First $500,000 Over $500,000</td>
<td>1.00% 1.25%</td>
</tr>
<tr>
<td>Homestead Residential Class Rate (Hmstd. Res.)</td>
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</tr>
<tr>
<td>First $500,000 Over $500,000</td>
<td>1.00% 1.25%</td>
</tr>
<tr>
<td>Incremental or Total Fiscal Disparities</td>
<td></td>
</tr>
<tr>
<td>Incremental</td>
<td></td>
</tr>
<tr>
<td>Fiscal Disparities Contribution Ratio</td>
<td>36.5530%</td>
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<tr>
<td>Fiscal Disparities Metro-Wide Tax Rate</td>
<td>145.0950%</td>
</tr>
<tr>
<td>Maximum/Frozen Local Tax Rate</td>
<td>117.985% Pay 2018</td>
</tr>
<tr>
<td>Current Local Tax Rate: (Use lesser of Current or Max.)</td>
<td>117.985% Pay 2018</td>
</tr>
<tr>
<td>State-wide Tax Rate (Comm./Ind. only used for total taxes)</td>
<td>43.8650% Pay 2018</td>
</tr>
<tr>
<td>Market Value Tax Rate (Used for total taxes)</td>
<td>0.16587% Pay 2018</td>
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</table>

**BASE VALUE INFORMATION**

<table>
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<tr>
<th>Map ID</th>
<th>PID</th>
<th>Owner</th>
<th>Address</th>
<th>Land Market Value</th>
<th>Building Market Value</th>
<th>Total Market Value</th>
<th>Percentage Of Value Used for District</th>
<th>Original Market Value</th>
<th>Tax Year</th>
<th>Property Tax</th>
<th>Current Original Tax Capacity</th>
<th>Class After Conversion</th>
<th>After Conversion Orig. Tax Cap.</th>
<th>Area/Phase</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>35117223100015</td>
<td>Digi International</td>
<td>11001 Bren Road</td>
<td>2,485,000</td>
<td>2,495,000</td>
<td>4,981,000</td>
<td>7,346,000</td>
<td>100%</td>
<td>7,346,000</td>
<td>Pay 2019</td>
<td>C/I Pref</td>
<td>146,170</td>
<td>Aff. Rental</td>
<td>55,095</td>
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**Note:**

1. Base values are pay 2019 from Hennepin County website on 7-10-18. School District #270; Watershed District #1.
## PROJECT INFORMATION (Project Tax Capacity)

<table>
<thead>
<tr>
<th>Area/Phase</th>
<th>New Use</th>
<th>Estimated Market Value Per Sq. Ft./Unit</th>
<th>Taxable Market Value Per Sq. Ft./Unit</th>
<th>Total Sq. Ft./Units</th>
<th>Total Taxable Property Class Total</th>
<th>Project Tax Capacity per Sq. Ft./Units</th>
<th>Project Tax Capacity per Unit</th>
<th>Percentage Completed 2018</th>
<th>Percentage Completed 2019</th>
<th>Percentage Completed 2020</th>
<th>Percentage Completed 2021</th>
<th>First Year Full Taxes Payable</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Aff - Workforce</td>
<td>180,000</td>
<td>180,000</td>
<td>220</td>
<td>39,600,000</td>
<td>Aff. Rental</td>
<td>232,100</td>
<td>1,055</td>
<td>25%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>B</td>
<td>Aff - Senior</td>
<td>180,000</td>
<td>180,000</td>
<td>262</td>
<td>47,160,000</td>
<td>Aff. Rental</td>
<td>276,410</td>
<td>1,055</td>
<td>15%</td>
<td>75%</td>
<td>100%</td>
<td>100%</td>
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<tr>
<td>TOTAL</td>
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**Note:**
Estimated market value based on data provided by City Assessor on 3-21-18

## TAX CALCULATIONS

<table>
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<tr>
<th>New Use</th>
<th>Total Tax Capacity</th>
<th>Fiscal Disparities Tax Capacity</th>
<th>Local Property Tax</th>
<th>Fiscal Disparities Taxes</th>
<th>State-wide Property Taxes</th>
<th>Market Value Taxes</th>
<th>Total Taxes</th>
<th>Taxes Per Sq. Ft./Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aff - Workforce</td>
<td>232,100</td>
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<td>232,100</td>
<td>273,843</td>
<td>0</td>
<td>0</td>
<td>65,665</td>
<td>339,528</td>
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<tr>
<td>Aff - Senior</td>
<td>276,410</td>
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<td>276,410</td>
<td>326,122</td>
<td>0</td>
<td>0</td>
<td>78,224</td>
<td>404,347</td>
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<tr>
<td>TOTAL</td>
<td>508,510</td>
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<td>508,510</td>
<td>599,966</td>
<td>0</td>
<td>0</td>
<td>143,909</td>
<td>743,874</td>
</tr>
</tbody>
</table>

**Note:**
1. Taxes and tax increment will vary significantly from year to year depending upon values, rates, state law, fiscal disparities and other factors which cannot be predicted.

## WHAT IS EXCLUDED FROM TIF?

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Property Taxes</td>
<td>743,874</td>
</tr>
<tr>
<td>less State-wide Taxes</td>
<td>0</td>
</tr>
<tr>
<td>less Fiscal Disp. Adj.</td>
<td>0</td>
</tr>
<tr>
<td>less Market Value Taxes</td>
<td>(143,909)</td>
</tr>
<tr>
<td>less Base Value Taxes</td>
<td>(65,094)</td>
</tr>
<tr>
<td>Annual Gross TIF</td>
<td>534,982</td>
</tr>
</tbody>
</table>
7/10/2018

Tax Increment Cashflow - Page 3

Dominium Housing
City of Minnetonka
482 Affordable Apartments
TAX INCREMENT CASH FLOW
% of
OTC
100%
100%
100%
100%
100%
100%
100%
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Project
Original
Fiscal
Tax
Tax
Disparities
Capacity
Capacity
Incremental
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99,487
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Total
Present Value From 02/01/2020

Prepared by Ehlers & Associates, Inc. - Estimates Only

Captured
Tax
Capacity
44,392
44,392
384,313
384,313
460,378
460,378
475,842
475,842
491,770
491,770
508,176
508,176
525,074
525,074
542,479
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560,407
560,407
578,872
578,872
597,891
597,891
617,480
617,480
637,658
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679,846
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701,894
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724,604
747,995
747,995
772,088
772,088
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796,903
822,463
822,463
848,790
848,790
875,907
875,907
903,837
903,837
932,605
932,605
962,236
962,236
Present Value Rate

Local
Tax
Rate
117.985%
117.985%
117.985%
117.985%
117.985%
117.985%
117.985%
117.985%
117.985%
117.985%
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Annual
Gross Tax
Increment
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453,431
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543,177
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561,422
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580,215
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619,509
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682,982
705,421
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1,135,294

Semi-Annual
Gross Tax
Increment
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226,716
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280,711
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290,108
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299,786
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309,755
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Semi-Annual
Net Tax
Increment
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203,309
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243,550
251,731
251,731
260,157
260,157
268,836
268,836
277,775
277,775
286,983
286,983
296,467
296,467
306,235
306,235
316,297
316,297
326,660
326,660
337,334
337,334
348,329
348,329
359,653
359,653
371,317
371,317
383,331
383,331
395,705
395,705
408,451
408,451
421,579
421,579
435,100
435,100
449,028
449,028
463,373
463,373
478,149
478,149
493,368
493,368
509,043
509,043
17,830,488
10,082,771

Semi-Annual
Present
Value
23,024
45,596
237,179
425,005
645,596
861,861
1,081,007
1,295,857
1,513,545
1,726,964
1,943,179
2,155,154
2,369,884
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25.5
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Tax
Payment
Year
Date
2020 08/01/20
2020 02/01/21
2021 08/01/21
2021 02/01/22
2022 08/01/22
2022 02/01/23
2023 08/01/23
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2036 08/01/36
2036 02/01/37
2037 08/01/37
2037 02/01/38
2038 08/01/38
2038 02/01/39
2039 08/01/39
2039 02/01/40
2040 08/01/40
2040 02/01/41
2041 08/01/41
2041 02/01/42
2042 08/01/42
2042 02/01/43
2043 08/01/43
2043 02/01/44
2044 08/01/44
2044 02/01/45
2045 08/01/45
2045 02/01/46

N:\Minnsota\Minnetonka\Housing - Economic - Redevelopment\TIF\TIF Districts\Dominium Housing TIF District\TIF Plan Run


Appendix E

Housing Qualifications for the District

<table>
<thead>
<tr>
<th>No. of Persons</th>
<th>50% of Median Income</th>
<th>60% of Median Income</th>
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</thead>
<tbody>
<tr>
<td>1-person</td>
<td>$33,050</td>
<td>$39,660</td>
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<td>2-person</td>
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<td>4-person</td>
<td>$47,150</td>
<td>$56,580</td>
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Source: Department of Housing and Urban Development and Minnesota Housing Finance Agency

The two options for income limits on a standard housing district are 20% of the units at 50% of median income or 40% of the units at 60% of median income. There are no rent restrictions for a housing district.

***PLEASE NOTE: THESE NUMBERS ARE ADJUSTED ANNUALLY. ALL INCOME FIGURES REPORTED ON THIS PAGE ARE FOR 2018***
Appendix F

Findings for the District

The reasons and facts supporting the findings for the adoption of the Tax Increment Financing Plan for Dominium Housing Tax Increment Financing District, as required pursuant to Minnesota Statutes, Section 469.175, Subdivision 3 are as follows:

1. Finding that Dominium Housing Tax Increment Financing District is a housing district as defined in M.S., Section 469.174, Subd. 11.

Dominium Housing TIF District consists of one parcel to be split into two parcels for the purposes of the development. The development includes 262 units of age-restricted apartments and 220 units of general occupancy workforce apartments. All or a portion of the units will receive tax increment assistance and will meet income restrictions described in M.S. 469.1761. All of the units receiving assistance will have incomes at or below 60 percent of statewide median income.

2. Finding that the proposed development, in the opinion of the City Council, would not reasonably be expected to occur solely through private investment within the reasonably foreseeable future.

The proposed development, in the opinion of the City, would not reasonably be expected to occur solely through private investment within the reasonably foreseeable future: This finding is supported by the fact that the development proposed in this plan is a housing district that meets the City's objectives for development and redevelopment. The cost of land acquisition, site and public improvements, and construction makes this housing development infeasible without City assistance. The cost of land acquisition and construction are approximately the same for affordable workforce and affordable age-restricted housing developments as they are for market rate projects. However, with decreased rental income from affordable units, there is insufficient cash flow to provide a sufficient rate of return, pay operating expenses, and service the debt. This leaves a gap in the funding for the project and makes this housing development feasible only through assistance, in part, from tax increment financing. The developer evidenced this need by providing a letter and a detailed pro forma as justification that the project would not have gone forward without tax increment assistance.

The increased market value of the site that could reasonably be expected to occur without the use of tax increment financing would be less than the increase in market value estimated to result from the proposed development after subtracting the present value of the projected tax increments for the maximum duration of the TIF District permitted by the TIF Plan: This finding is justified on the grounds that the costs of acquisition, building demolition, site improvements, utility improvements and construction of affordable housing add to the total redevelopment cost. Historically, the costs of site and public improvements as well as reduced rents required for affordable workforce and affordable age-restricted housing in the City have made such development infeasible without tax increment assistance. The City reasonably determines that no other development of similar scope is anticipated on this site without substantially similar assistance being provided to the development.

3. Finding that the TIF Plan for Dominium Housing Tax Increment Financing District conforms to the general plan for the development or redevelopment of the municipality as a whole.

The Planning Commission reviewed the TIF Plan on May 24, 2018, and found that the TIF Plan conforms to the general development plan of the City.

4. Finding that the TIF Plan for Dominium Housing Tax Increment Financing District will afford
maximum opportunity, consistent with the sound needs of the City as a whole, for the development or redevelopment of Opus Redevelopment Project by private enterprise.

Through the implementation of the TIF Plan, the EDA or City will provide an impetus for residential development, which is desirable or necessary for increased population and an increased need for life-cycle housing within the City.
City Council Agenda Item #14A  
Meeting of July 23, 2018

Brief Description
Concept plan review for Hennepin County Medical Examiner’s Office at 14300 Co. Rd 62.

Action Requested
Discuss concept plan with the applicant. No formal action required.

Background

Hennepin County is proposing to build a new Medical Examiner’s Office on the County Home School property located at 14300 Co. Rd 62. The current office is located in downtown Minneapolis. All operations from the downtown location would be moved to the Minnetonka site. The Medical Examiner’s Office also serves Dakota and Scott Counties.

As proposed, the 68,510 square-foot building would be sited on the eastern portion of the 161-acre Home School site. The building, parking and access road would occupy approximately 10 acres of the property. A new roadway would be constructed at the southwestern site access at County Road 62, but separated from the access to the Home School.

The building would include office, autopsy and conference spaces. The county anticipates the facility would also serve as a teaching and training facility for students, university faculty and practitioners. There would not be a crematorium in the building.

The immediate area has a mix of existing land uses. Glen Lake Golf Course, also owned by Hennepin County, is located to the west. Single family neighborhoods and Glen Lake are located to the north. To the east and south are industrial uses. Major transportation corridors also define the eastern and southern borders - County Road 62, the Minnesota River Bluffs LRT Regional trail and Soo Line railroad.

The site is zoned Planned Unit Development District and guided as Institutional use in the 2030 comprehensive plan.

Key Issues

City staff has identified the following considerations for any development of the property:

- **Site Plan:** The proposed building location on the undeveloped eastern portion of the site would require construction of a number of roadway, utility and building pad area improvements. These improvements will likely result in tree removals, large amounts of grading and large retaining walls for the roadway.

- **Impact to Site Character:** The eastern upland area of the site contains valued woodland and prairie natural resources. A tamarack wetland is also located east of this upland area along the regional trail. The proposed facility would introduce development of this natural area. Minimizing site impacts should be a goal of the project. Additional plan perspectives of the proposed office will be needed to evaluate building siting and character.
- **Planned Unit Development**: The zoning of the site is planned unit development. Further site development will need to demonstrate public purpose.

**Review Process**

Staff has outlined the following review process for the proposal. At this time, a formal application has not been submitted.

- **Neighborhood Meeting**: The developer held a neighborhood meeting on June 7, 2018. Five people attended the meeting raising a few questions about the project schedule, uses within the building and if future housing development was planned for the site.

- **Planning Commission Concept Plan Review**: The planning commission reviewed the concept plan at the June 14, 2018 meeting. The objective of this meeting was to identify major issues and challenges in order to inform the subsequent review and discussion. The meeting included a presentation by the developer of conceptual sketches and ideas, but not detailed engineering or architectural drawings. No staff recommendations were provided, the public was invited to offer comments, and planning commissioners were
afforded the opportunity to ask questions and provide feedback without any formal motions or votes.

The planning commission provided the following input during its review:

- The facility would be a good use of county property.
- Questioned the facility location on the eastern portion of the property.
- Concerns about piecemeal development of the property.
- Liked the treatment of parking lots into smaller meandering pieces.
- The planning commission would like to tour the site.

One resident asked about the city’s review authority and number of attendees at possible conferences within the proposed building.

- **City Council Concept Plan Review.** The city council Concept Plan Review is intended as a follow-up to the planning commission meeting and follows the same format as the planning commission Concept Plan Review. No staff recommendations are provided, the public is invited to offer comments, and council members are afforded the opportunity to ask questions and provide feedback without any formal motions or votes.

**Staff Recommendation**

Staff recommends the city council provide comment and feedback on the identified key issues and others the council deems appropriate. The discussion is intended to assist the applicant with future direction that may lead to the preparation of more detailed development plans.

**Through:** Geralyn Barone, City Manager

   Julie Wischnack, AICP, Community Development Director

**Originator:** Loren Gordon, AICP, City Planner
ADDENDUM INFORMATION

Next Steps

- **Formal Application.** If the developer chooses to file a formal application, notification of the application would be mailed to area property owners. Property owners are encouraged to view plans and provide feedback via the city’s website. Through recent website updates: (1) staff can provide residents with ongoing project updates, (2) residents can “follow” projects they are particularly interested in by signing up for automatic notification of project updates; (3) residents may provide project feedback on project; and (4) and staff can review resident comments.

- **Neighborhood Meeting.** Prior to the planning commission meeting and official public hearing, an additional public meeting could be held with neighbors to discuss specific engineering, architectural and other details of the project, and to solicit feedback. This extends the timing that has historically been provided in advance of the planning commission review to allow more public consideration of the project specifics.

- **Council Introduction.** The proposal would be introduced at a city council meeting. At that time, the council would be provided another opportunity to review the issues identified during the initial concept plan review meeting, and to provide direction about any refinements or additional issues they wish to be researched, and for which staff recommendations should be prepared.

- **Planning Commission Review.** The planning commission would hold an official public hearing for the development review and would subsequently recommend action to the city council.

- **City Council Action.** Based on input from the planning commission, professional staff and general public, the city council would take final action.

Roles and Responsibilities

- **Applicants.** Applicants are responsible for providing clear, complete and timely information throughout the review process. They are expected to be accessible to both the city and to the public, and to respect the integrity of the public process.

- **Public.** Neighbors and the general public will be encouraged and enabled to participate in the review process to the extent they are interested. However, effective public participation involves shared responsibilities. While the city has an obligation to provide information and feedback opportunities, interested residents are expected to accept the responsibility to educate themselves about the project and review process, to provide constructive, timely and germane feedback, and to stay informed and involved throughout the entire process.

- **Planning Commission.** The planning commission hosts the primary forum for public input and provides clear and definitive recommendations to the city council. To serve in that role, the commission identifies and attempts to resolve development issues and
concerns prior to the council’s consideration by carefully balancing the interests of applicants, neighbors, and the general public.

- **City Council.** As the ultimate decision maker, the city council must be in a position to equitably and consistently weigh all input from their staff, the general public, planning commissioners, applicants and other advisors. Accordingly, council members traditionally keep an open mind until all the facts are received. The council ensures that residents have an opportunity to effectively participate in the process.

- **City Staff.** City staff is neither an advocate for the public nor the applicant. Rather, staff provides professional advice and recommendations to all interested parties, including the city council, planning commission, applicant and residents. Staff advocates for its professional position, not a project. Staff recommendations consider neighborhood concerns, but necessarily reflect professional standards, legal requirements and broader community interests.
Location Map

Project: Hennepin County Medical Examiner's Office
Address: 14300 Co Rd 62
NEW REGIONAL MEDICAL EXAMINER’S

SITE HISTORY

1937

1916 - GLEN LAKE SANATORIUM BUILT

1947 - SITE ACQUIRED BY HENNEPIN COUNTY
NEW REGIONAL MEDICAL EXAMINER’S

SITE HISTORY

1967

1961 - OAK TERRACE NURSING HOME JOINS GLEN LAKE SANATORIUM
1968 - PINE TREE STAND PLANTED
1976 - GLEN LAKE SANATORIUM CLOSES
NEW REGIONAL MEDICAL EXAMINER’S

SITE HISTORY

1992

1991 - OAK TERRACE NURSING HOME CLOSES

1993 - SANATORIUM AND NURSING HOME DEMOLISHED

1997 - GLEN LAKE GOLF COURSE BUILT

GLEN LAKE

SANATORIUM

COUNTY HOME SCHOOL

TAMARACK BOG

CONIFEROUS TREES

RAIN ROAD

N
NEW REGIONAL MEDICAL EXAMINER'S

VIEW TWO TO SITE

SITE IS BEHIND TREES
NEW REGIONAL MEDICAL EXAMINER'S VIEW THREE TO SITE
# New Regional Medical Examiner’s Projects Facts

## Building Size:

<table>
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<th>Area</th>
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<tr>
<td>Autopsy Wing Including Sally Port</td>
<td>35,570 GSF</td>
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<tr>
<td>Administration Wing/Conference Center</td>
<td>25,600 GSF</td>
</tr>
<tr>
<td>Second Level</td>
<td>7,340 GSF</td>
</tr>
<tr>
<td><strong>Total Area</strong></td>
<td><strong>68,510 GSF</strong></td>
</tr>
</tbody>
</table>

**Building Includes:**
- Autopsy Tables: 10
- Isolation/BSL-3 Autopsy Tables: 2
- Offices: 21
- Open Workstations: 37

## Building Site:

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<tr>
<td>CHS Campus</td>
<td>161 Acres</td>
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<tr>
<td>Medical Examiner Building Site</td>
<td>8 Acres</td>
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<tr>
<td>Medical Examiner Site Access</td>
<td>2 Acres</td>
</tr>
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<td><strong>Medical Examiner Site Total</strong></td>
<td><strong>10 Acres</strong></td>
</tr>
</tbody>
</table>

**Site Includes:**
- Staff Parking: 55 Stalls
- Visitor/Conference Parking: 29 Stalls
- Conference Overflow Parking: 13 Stalls
- **Total Parking**: 94 Stalls
QUESTIONS
Minnetonka Planning Commission
Minutes
June 14, 2018

A. Concept plan review for Hennepin County Medical Examiner's Office at 14300 County Road 62.

Chair Kirk introduced the proposal and called for the staff report.

Gordon reported. Staff recommends that planning commissioners provide comments and feedback on the identified key issues and other issues commissioners deem appropriate. The discussion is intended to assist the applicant with future direction that may lead to the preparation of more detailed development plans.

John Rode, senior facility planner with Hennepin County Facility Services Planning and Project Development, representing the applicant, stated that the site has 160 acres. He provided a history of the site.

Zach Essig, engineer with Leo A. Daly, stated that:

- He pointed out what wetland area and trees would be protected. The Tamarack bog would be protected and preserved up to the slope.
- There would be 24.5 acres of buildable space.
- He compared possible building locations considering access, impact to trees, wetlands, and slopes.
- The proposed building location would provide a nice approach through the south side of the wetland between the woodland preserve and wetland area using retaining walls to reach the road. The road would have a typical width with retaining walls that would not have any permanent impact on the wetland or woodland preserve.
- As many coniferous trees would be preserved as possible.

Mr. Rode stated that:

- The autopsy wing would be 3,500 square feet. There is a second level that would house mechanical equipment and building services. There would be 10 autopsy tables and two isolation autopsy tables.
- There would be 21 offices and 37 work stations.
- The site pad would be located on eight acres. Access uses another two acres. There would be 55 secure parking stalls for staff. There would be 29 visitor stalls and 13 additional overflow stalls to accommodate the conference center.

Melissa Lallak, department administrator for the medical examiner’s office, stated that:

- The medical examiner’s office investigates deaths that meet statutory requirements in a forensic manner.
• The facility would operate 24 hours a day, seven days a week.

• The facility is a collaboration of Hennepin, Dakota, and Scott Counties. There are a number of highly educated staff in the field of forensic science.

• They are an accredited site to train forensic scientists.

Sewall asked if there would be an environmental impact. Ms. Lallak said that the environmental impact would be minimal. There would be no crematorium. Specimens would be collected in containers that would be sent to outside testing labs. The ventilation in the building would be set up to be respectful to the outside.

Sewall asked how many vehicle trips the site would generate. Ms. Lallak stated that 16 employees would travel to and from the site. The investigative staff operate 24/7, but that would create a minimal number of trips. Funeral homes and the transport agency typically use white vans. The facility has two rigs that investigators drive to scenes that are silver and have the Hennepin County Medical Examiner’s Office logo on the outside.

Powers asked if other sites are being considered. Mr. Rode stated that three other sites were considered in Bloomington, but they did not work out. The applicant will receive state bonding for the project and is looking for help from Dakota and Scott Counties for funding.

Chair Kirk thought it looked like the north part of the site is less wooded. Mr. Rode said that having the building further south minimizes the access road length.

Gordon noted that city requirements would allow for a larger buildable area on the site than the applicant’s determination.

Chair Kirk asked about the type of planted trees on the site. Gordon answered that the trees are mostly red pines and some scotch pines.

Chair Kirk recommended requesting permission for commissioners to visit the site. Gordon agreed. Mr. Rode stated that a minimal background check would have to be done for each visitor, but that would be possible.

Powers asked for the size of the current operating site. Mr. Rode stated that the facility takes up half of a city block. The existing building is 62,000 square feet in size. It also has a functional crime lab. The medical examiner utilizes 40,000 square feet with the crime lab using 22,000 square feet. The proposed building would have approximately 68,500 square feet. That would provide the anticipated capacity requirements for the next 30 years. The proposed parking is projected to be adequate until 2047.

Chair Kirk asked if anyone in the audience wanted to provide comments.

Anne Hossfeld, 14616 Glendale Street, asked for the level of approval the city has over the site and questioned the number of attendees at the conferences.
Gordon explained that the city’s land use ordinances apply to a public-ally-owned property the same as a privately-owned property. Schack provided the example of a restroom facility that was approved for the Hopkins High School site. An application submitted by a school district is treated the same as an application submitted by a private-property owner.

Ms. Lallak explained that Hennepin County currently sponsors a MN Coroners and Medical Examiners three-day conference which is held at a hotel in St. Louis Park. A two-day conference may be held at the proposed facility. Transportation and lodging options would need to be researched.

Schack thought the proposal would be a good use of county-owned property. She wished more trees could be saved. She understood there would be a trade-off to move the building further north. She is less concerned with the pines than if it was an oak forest. The county figures the buildable area as 24 acres, but the city’s parameters would allow a lot more development on the site.

Sewall liked the idea of visiting the site as a group. He would like to see how far north the building could be moved and compare the increase in hard surface coverage to the number of trees that could be saved. He would like to see a rendering of the proposed building. The building would be relatively central. It is a very large site. It would be an appropriate land use.

Chair Kirk struggled with the land use. He understood that it may seem like an appropriate use to be adjacent to the county home school. The property is beautiful and has so much potential.

Powers thought something special could be built on the 161 acres. He was worried that it would be developed in pieces.

Schack appreciate the value of the property. She saw it evolving into a county campus. The public use is of value. It would be a loss to provide an opportunity for housing, but the site is not zoned residential.

Sewall stated that individual property owners have rights. He agreed this would be a great spot for housing and the county may decide to split up the property, but the use would be appropriate for the current situation.

Powers saw it as an educational facility.

Schack made a correlation to Carlson Companies proposing to add a building to its campus on McGinty Road West. There is a lot of land that would make great residential housing, but she did not think that would happen in her lifetime. She would be hard pressed to deny Carlson the ability to develop their land within the city’s ordinance requirements.
Sewall asked commissioners to consider if the proposal would limit the ability of the property to be subdivided and used for housing in the future.

Wischnack said that commissioners could request a possible build-out scenario from the applicant.

Powers would not want a 10-acre development to define the entire 161-acre parcel.

Knight was concerned with locating the building in the middle of the property to site area to the north. The building could be moved further north without adding too much more driveway.

Chair Kirk likes how the parking areas meander through the site to break-up the parking instead of having one massive parking lot. The site would be respectful of the tree canopy.

The city council is tentatively scheduled to review this item at its meeting on July 9, 2018.
Brief Description: Appointment of Chris LaBounty as Minnetonka representative to the Suburban Rate Authority

Recommended Action: Approve the appointment

Background

On Jan. 8, 2018, the city council approved the appointments of the representatives to various outside boards, commissions and committees. These appointments are indicated on the attached listing by a single asterisk next to the committee name. The appointments that are not made on an annual basis are indicated by a single spade next to the committee name.

Chris LaBounty, Engineering Project Manager, has agreed to be the City of Minnetonka representative on the Suburban Rate Authority in place of City Attorney Corrine Heine. Perry Vetter, Assistant City Manager, will remain the alternate representative. The updated list is attached.

Recommendation

Approve the following appointment:

- Chris LaBounty as the Minnetonka representative to the Suburban Rate Authority.

Submitted through:
  Brad Wiersum, Mayor  
  Geralyn Barone, City Manager

Originated by:
  Pat Schutrop, Administrative Assistant
<table>
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<tr>
<th>Committee</th>
<th>Council Representative</th>
<th>Staff Participant/Contact</th>
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<tr>
<td></td>
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<td>* - official participant ** - alternate *1 - liaison</td>
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<td>Mike Fruen &amp; Bill Monk</td>
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<td>*I-494 Joint Powers Organization</td>
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<td>Sue Shuff</td>
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<td>♠Economic Development Advisory Comm (EDAC)</td>
<td>** Deb Calvert</td>
<td>Alisha Gray; Julie Wischnack</td>
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<td>Hopkins SD Schools/Cities</td>
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<tr>
<td>Minnetonka Fire Fighters Relief Association</td>
<td>Brad Wiersum</td>
<td>John Vance &amp; Merrill King</td>
</tr>
<tr>
<td>*Minnetonka SD Community Ed Advisory Council</td>
<td>None</td>
<td>Sara Woeste</td>
</tr>
<tr>
<td>Minnetonka SD Schools/Cities</td>
<td>Brad Wiersum</td>
<td>Geralyn Barone</td>
</tr>
<tr>
<td>Minnetonka SD Tonka Cares</td>
<td>Patty Acomb</td>
<td>Vacant</td>
</tr>
<tr>
<td>*Music Association of Minnetonka (MAM)</td>
<td>None</td>
<td>Kelly O’Dea</td>
</tr>
<tr>
<td>SW Twin Cities Beyond the Yellow Ribbon</td>
<td>None</td>
<td>Kari Spreeman</td>
</tr>
<tr>
<td>*West Hennepin Affordable Housing Land Trust</td>
<td>Brad Wiersum</td>
<td>Julie Wischnack; Alisha Gray</td>
</tr>
<tr>
<td>*Wayzata Schools Cmty Collaboration Council</td>
<td>None</td>
<td>Alisha Gray</td>
</tr>
</tbody>
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Revised July 2018
12A Ordinances related to tobacco-related products.

The attached letter was received after the council packet was distributed.

14A Concept plan review for Hennepin County Medical Examiner’s Office at 14300 Co. Rd 62.

The county has asked that the item be pulled from tonight’s agenda.
ITEM 12A – Ordinances related to tobacco-related products

The attached feedback was received following distribution of the agenda packet.

ITEM 14A – Concept plan for Hennepin County Medical Examiner’s Office at 14300 Co Rd 62

This item has been pulled from the agenda at the applicant’s request.
July 23, 2018

Council Member Tim Bergstedt
City of Minnetonka
14600 Minnetonka Blvd.
Minnetonka, MN 55345

Dear Honorable Council Member Bergstedt:

I am writing to urge you to support the proposed ordinance to raise the minimum sale age for tobacco products, including e-cigarettes, from 18 to 21.

As the largest health plan in Minnesota, Blue Cross and Blue Shield of Minnesota is committed to improving the health of all Minnesotans, which is why we strongly support local policy change to keep youth away from the harms of tobacco.

We know that almost 95 percent of addicted smokers started smoking by the age of 21. The tobacco industry also knows this and heavily targets 18-to-21-year-olds. By using tactics like menthol and candy flavoring, magazine advertisements and event sponsorships to attract young people, the tobacco industry aggressively markets to youth and young adults to recruit replacement smokers and guarantee profits.

This year, youth tobacco use in Minnesota increased for the first time in 17 years and much of that is due to a 50 percent increase in the use of e-cigarettes or vaping products. This ordinance will have a direct impact on reducing youth access to these products.

I know you have heard about the potential economic losses that the retailers claim to face because of this ordinance. However, I would like to remind you that, in addition to the yearly $3.2 billion it costs Minnesotans to treat diseases caused by smoking, it costs Minnesota businesses and $4.3 billion in lost productivity because of the loss of earnings due to premature death. The staggering costs of tobacco in both health care costs and loss of life cannot be compared to the loss of profits for those who want to continue to sell these lethal products.

I hope you will take this positive step toward making a smoke-free generation for Minnetonka youth.

Sincerely,

[Signature]

Vice President, Community Health and Health Equity
Blue Cross and Blue Shield of Minnesota
Co-chair, Minnesotans for a Smoke-free Generation

bluecrossmn.com
Comments on the proposed ordinance relating to minimum age for sales of tobacco-related products

1. It seems the city is very interested in removing the purchase, use, and possession (PUP) elements. This is very much in line with equity and best public policy practices. However, it seems possible that the revised language in Section 625.045 could be interpreted by readers (including law enforcement) as allowing penalties for underage purchase, attempted purchase, and procurement.
   a. The revised language reads: “A person must not purchase, attempt to purchase, or otherwise obtain any tobacco-related product on behalf of a person under the age of 21 years…”
      i. At first glance, I thought it was intended to mean that it prohibits a person from purchasing/attempting to purchase/procuring tobacco products on behalf of someone else that is underage. But realized “on behalf of” could also pertain to “on behalf of oneself” - who might be someone underage attempting to purchase for themselves.
      ii. To clarify your intent, we would suggest it be change to read: “…on behalf of another person under the age of 21 years.”

2. The city did not revise the age for tobacco retail license applicants from 18 to 21 (Section 625.015, subd. 1).
   a. Most, if not all, MN cities adopting T21 are making this change in their ordinances as well, as it aligns with the purpose of the change; and it is critically important if there is any PUP language in the ordinance because underage retailers could be penalized for purchasing/attempting to purchase/obtain tobacco products for their own shop in light of the potential interpretation of the revised language (explained above).

Comments on the proposed ordinance relating to flavored tobacco products

1. The memo explains the city's reasoning for the exception of menthol, mint and wintergreen flavored products, stating it is an adult product and not targeted to youth. We disagree with the information relied upon for that reasoning.
   a. Menthol cigarette smoking is prevalent among youth. Minnetonka and Hopkins MSS data indicates 24% of 9th graders and 25% of 11th graders who use tobacco use a menthol product. National data shared in the city’s memo (Centers for Disease Control and Prevention, Flavored Tobacco Product Use Among Middle and High School Students – United States, 2014, Morbidity and Mortality Weekly Report, 2015; 64 (38): 1066-70) also showed that 48% of middle school and 55% of high school students who currently use tobacco products report using flavored cigarettes, i.e., menthol cigarettes. This does not include other tobacco products flavored with menthol or mint (e-cigarettes, chew, hookah and cigars).
   b. Including menthol and mint flavoring in any flavored tobacco sales restriction will have the most impact on public health.
   c. Menthol, a mint-based additive that has a cooling effect on the mouth and throat, reduces the harshness of smoke and suppresses coughing reflexes, which makes inhaling smoke more tolerable. This appeals to young, inexperienced users. The cooling effect also causes more breath holding, leading to increased lung exposure to nicotine and increased addiction. Once addicted, menthol smokers are less likely to successfully quit smoking.
   d. Tobacco industry marketing, through music and community events, magazine advertising in publications with high youth readership, and the use of youth imagery make these products appealing to young people. Female smokers, racial minorities, sexual minorities, and smokers with mental illness have an increased prevalence for smoking menthol cigarettes and have been specifically targeted with marketing. Including menthol in Minnetonka’s flavor prohibition would be a significant step in reversing the targeting of and marketing to young people from these populations.

For further information: MN Department of Health page on menthol tobacco use; Campaign for Tobacco-Free Kids – Impact of Menthol Cigarettes on Youth Smoking Initiation and Health Disparities.
2. The proposed ordinance limits sales of flavored tobacco products to retailers that only admit persons over age 21 (Section 625.040, subd. 5).
   a. That is an important limitation and will help reduce youth access to the flavored products. However, going one step further to limit sales of flavored tobacco products to adult-only retailers that primarily sell tobacco products (at least 90% of their sales are from licensed products) would be a more impactful step toward reducing youth access to these harmful products.
   b. As it is currently written, individuals could go to tobacco shops, liquor stores, and bars to purchase flavored tobacco products.

Comments on the proposed “housekeeping” items

1. Regardless of which policy(ies) the city chooses to adopt, it could consider removing PUP language. The revisions that the city attorney has made to Section 624.045 in the proposed T21 ordinance would suffice, along with the change suggested in the first comment. PUP laws have not been identified as an effective method of reducing youth tobacco use; divert attention from more effective tobacco control strategies; and relieve the tobacco industry of responsibility for its marketing practices. Some communities are concerned that PUP provisions may be enforced inconsistently with respect to youth from certain racial and ethnic groups, resulting in their introduction into the criminal justice system.

2. The city does not have a definition or provision to require compliance checks. Under state law, at least one compliance check per year, and is an important component of licensing regulations. It is especially important to require compliance checks when adopting a new licensing requirement like increasing the minimum legal sales age or prohibiting the sale of certain flavored products.

3. The city might consider removing the first sentence of 625.030 (“No license may be issued to a person not of good moral character.”) Vague language and ambiguity raise the likelihood of a legal challenge, especially if it is discriminatorily applied. This emphasizes the importance of adding a severability clause to the ordinance, which is pretty standard and protects/upholds other components of the ordinance if a legal challenge prevails against one particular part of the ordinance. Possible language the city may want to include could be: “Severability. If any section or provision of this ordinance is held invalid, such invalidity will not affect other sections or provisions that can be given force and effect without the invalidated section or provision.”