TMS Engineers, Inc.

Transportation Management Services

2112 Case Parkway South, #7 Twinsburg, Ohio 44087 www.TMSEngineers.com

August 28, 2015

Mr. John Walsh, P.E., P.S. GBC Design, Inc. 565 White Pond Drive Akron, Ohio 44320

Re:

Proposed Assisted Living / Senior Housing

City of Hudson, Ohio Trip Generation Analysis

TMS Engineers, Inc. has performed the following trip generation analysis for the proposed assisted living and senior housing development which will be located on Omni Lake Parkway north of Boston Mills Road in the City of Hudson, Ohio (see Location Map, Figure 1). The purpose of this trip generation analysis is to estimate the traffic generated by the completion of the assisted living facilities and provide a recommendation for a future traffic study. The analysis was completed based on the number of units in each of the three (3) proposed buildings. The site plan can be seen in Figure 2. The following are the results of our trip generation analysis.

Trip Generation

The calculation of future traffic requires an estimate of traffic the development will generate after construction is completed. The most widely accepted method of determining the amount of traffic that a proposed development will generate is to compare the proposed site with existing facilities of the same use. This estimate is typically expressed as a trip rate. In order to estimate traffic for the proposed entertainment center, a trip rate was calculated using data and procedures found in the Institute of Transportation Engineers (ITE) "Trip Generation" Manual, Ninth Edition. For the proposed site, the trip rate were calculated using the anticipated number of beds and dwelling units of the buildings being constructed. It should be noted that the facility for memory care was analyzed as part of the assisted living facility land use. A copy of the trip generation worksheets can be seen in the attached Figures 3 & 4.

Proposed Assisted Living / Senior Housing Analysis

The table on the following page shows the estimated generated traffic during the AM and PM peak hours for the proposed assisted living / senior housing based upon the national averages considering the number of beds and dwelling units in each of the buildings. AM and PM Peak hour trip generation volumes for the assisted living facility was calculated using national averages since equations are not available for this type of facility in the ITE manual. Equations were used for the senior housing facility.

Phone: (330) 686-6402 Fax: (330) 686-6417 E-Mail: Mail@TMSEngineers.com

ITE TRIP GENERATION			TRIP ENDS			
ITE Code	Description	SIZE	Weekday Peak Hour Between 7-9 AM (Enter/Exit)		Weekday Peak Ho Between 4-6 PM(Enter/Exit)	
252	Senior Adult Housing	62 Units	4	7	8	5
254	Assisted Living	150 Beds	14	7	15	18
Total New Trips			3	2	4	6

The previous table shows that the proposed assisted living / senior housing is expected to generate a total of 32 new trips in the AM peak hour and 46 new trips in the PM peak hour. It is our opinion that, when the anticipated changes in traffic volumes are at these levels, the traffic generated by the proposed development should not have an impact on the surrounding street network system.

This opinion is based upon the fact that traffic impact studies are recommended to be performed by the Institute of Transportation Engineers whenever an increase in trips in any peak hour is greater than 100 trips per hour. This recommendation is made because this is the point where a change in roadway capacity may be found and mitigation may or may not be needed. The anticipated levels of volume from this development are less than daily variations in the current volumes on Boston Mills Road and should not be perceived by the traveling public.

The Ohio Department of Transportation concedes that traffic impact studies are only necessary when the resulting trip increase is more than 100 trips per hour. This is stated in their State Highway Access Management Manual. Since this development is expected to generate less than 100 trips during the PM peak hour, it is our professional opinion that the change in the amount of generated traffic will not have an impact on the surrounding roadway network nor require a full traffic impact study.

The area, for which the assisted living / senior housing is being developed, was studied in 1999 by URS Greiner in an traffic impact study. Previously, this area was being proposed to be developed with four (4) office buildings totaling 170,000 square feet of floor space. These buildings were not constructed. Exhibit 9 in the study revealed that these four (4) building would generate the number of trips in the following chart.

Mr. John Walsh, P.E., P.S. August 28, 2015 Page 3

	ITE TRIP GENERATION		TRIP ENDS			
ITE Code	Description	SIZE	Weekday Peak Hour Between 7-9 AM (Enter/Exit)		Weekday Peak Hour Beiween 4-6 PM(Enter/Exit)	
710	General Office Building (North)	120,000 sf	190	26	36	178
710	General Office Building (East)	50,000 sf	94	13	23	112
Total New Trips			32	23	3-	49

The URS study recommended certain roadway improvements to mitigate the impacts of the forecasted traffic from the office buildings. These improvements were constructed and since the assisted living / senior housing development is expected to generate far less traffic than that forecasted for the office buildings, it is expected these improvements would be able to accommodate the future traffic.

If you have any questions or need additional information, please do not hesitate to contact me.

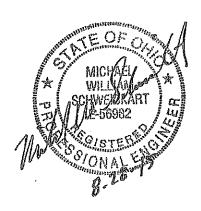
Very truly yours,

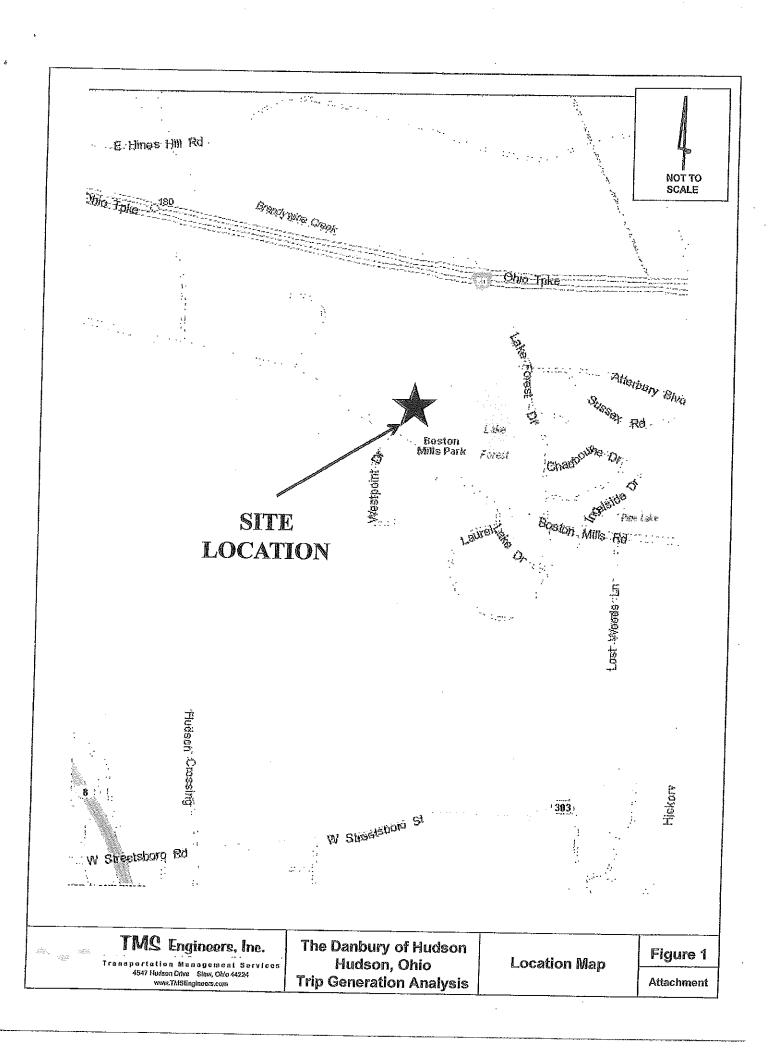
TMS Engineers, Inc.

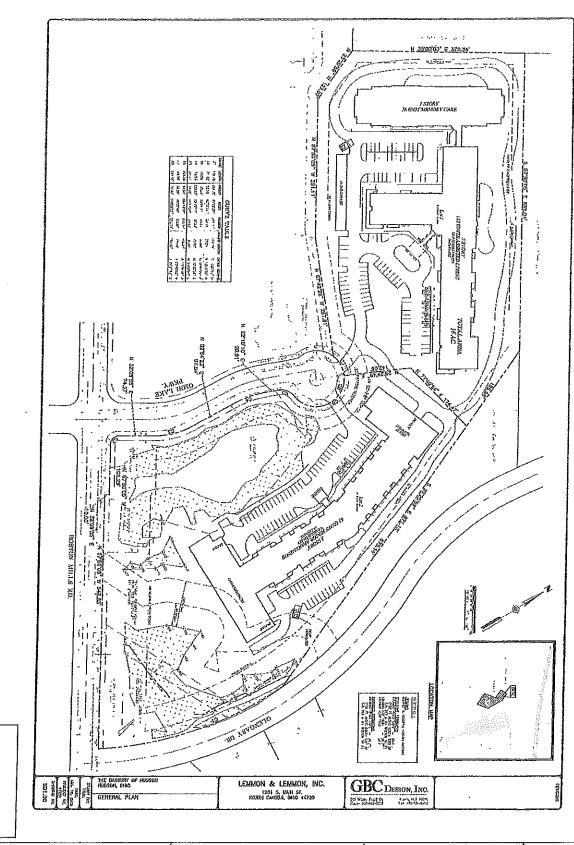
The

Michael W. Schweickart, P.E., PTOE President

attachments







NOT TO SCALE

TMS Engineers, Inc.

Transportation Management Services 4547 Hudson Drive Slow, Ohio 44224 www.TMSEngineers.com The Danbury of Hudson Hudson, Ohio Trip Generation Analysis

Site Plan

Figure 2

Attachment

Senior Adult Housing - Attached ITE Code = 252

Date: 0/27/2015

Trip Generation based on:	Size of An	Size of Analysis Area: 52 Units			
Occupied Dwelling Units	Average Rate	Standard Deviation	Adjustment fector	Driveway Volume	
Average Weekday 2-way Volume	3.32	1.93	1.00	206	
7-9 AM Peak Hour Enter	0.06	0.00	1.00	4	
7-9 AM Peak Hour Exit	0.11	0.00	1.00	7	
7-9 AM Peak Hour Total	0,17	0,44	1.00	11	
4-6 PM Peak Hour Enter	0.12	0.00	1.00	8	
4-6 PM Peak Hour Exit	0.08	0.00	1.00	5	
4-6 PM Peak Hour Total	0.21	0.48	1.00	13	
The above rates were calculated from the equ	utions shown below:	************************************			
Average Weekday 2-way Volume	T=2.98(X)+21.05				
7-9 AM Peak Hour Total	T=0.20(X)-1.66		Enter Exit	0.35 0.65	
4-6 PM Peak Hour Total	T = 0.24(X) - 2.11		Enter Exit	0.60 0.40	

Source:

Institute of Transportation Engineers Trip Generation, 9th Edition, 2012.

Assisted Living ITE Code = 254

Date: 0/27/2015

Trip Generation based on:

Size of Analysis Area:

150 Unit

Beds	Average Rațe	Standard Devlation	Adjustment factor	Driveway Volume
Average Weekday 2-way Volume	2.38	1.75	1.00	356
7-9 AM Peak Hour Enter	0.09	0.00	1.00	14
7-9 AM Peak Hour Exit	0.05	0.00	1.00	7
7-9 AM Peak Hour Total	0.14	0,00	1.00	21
4-6 PM Peak Hour Enter	0.10	0.00	1.00	15
I-6 PM Peak Hour Exit	0.12	0.00	1.00	18
1-6 PM Peak Hour Total	0.22	0.00	1.00	33

**The above rates were calculated from the equations shown below:

Average Weekday 2-way Volume

Ln(T) = 0.56 * Ln(X) + 3.07

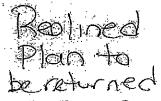
7-9 AM Peak Hour Total	Fitted Gurve Equation Not Given	Enter Exit	0.65 0.35
4-6 PM Peak Hour Total	Pitted Curve Equation Not Given	Enter Exit	0.44 0.56

Source:

Institute of Transportation Engineers Trip Generartion, 9th Edition, 2012.

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ENGINEERING • 115 Executive Parkway, Suite 400 • Hudson, Ohio 44236 • (330) 342-17



MEMORANDUM

Date:

9-29-2015

To: From: Greg Hannan, City Planner Thomas J. Sheridan P.E., P.S.

Re:

Danbury of Hudson - Senior Living

The City of Hudson Engineering Department has reviewed the plans submitted September 2, 2015. The City of Hudson Engineering Standards (Engineering Standards) and Land Development Code (LDC) are available online at the City of Hudson Website www.hudson.oh.us.under-the Engineering Dept. and Community Development Department respectively. The standards are also available in print for a fee. Please contact our office (330-342-1770) if you would like a cost for the printed version.

A complete set of plans, specification and calculations were not submitted with this submittal and therefore the City of Hudson reserves the right to make additional comments on future reviews to this review.

Please review the attached red-lined plans for additional comments to the items mentioned below. Please return the red-lined plans with your next submittal.

Please include the following:

- Include the City of Hudson General Construction Notes and applicable details. (Engineering Standards)
- Include the City of Hudson Water Notes and applicable details.
- Include the City of Hudson Electric Notes and applicable details
- Plans shall be submitted to the Summit County Soil and Water Conservation District for SWPPP review and approval.
- No Storm Water Management calculations were submitted for review. Please submit a signed, stamped and dated report.
- Please provide the traffic study from URS in 1999 referenced in the TMS report.
- Please review the sight distances at Boston Mills Road and Omni. It appears that the NW
 corner on private property has a hill that limits the sight distance. This is part of the
 Omni site.
- · Waterline sizes shall be labeled.
- Note on plans: CAUTION: AC Waterline along Boston Mills Road. Do not disturb.
- Note: Summit Co. Building Dept. requires the inspection of all fire lines to buildings
 prior to approval. Contact Summit Co. for this inspection.
- Commercial concrete apron detail to be added per Hudson Standards Section 7.
- Provide a sanitary sewer connection detail. Existing manhole shall be cored and connection made with core-n-seal boot.
- Sanitary sewer design and capacity report shall be submitted in order to determine the
 available capacity allowance from this site to the existing pump station on Executive
 Parkway.

- Ohio EPA permits for sanitary and waterline extensions on this project shall be approved and submitted with final submittal.
- An engineer's estimate will be required at the final submittal. Separate out the private work and the work within the right of way.
- Has the USACE approved of the wetland disturbance and impacts? Do these impacts
 comply with the Hudson Land Development Code Section 1207, available online under
 Community Development within the City of Hudson Website.
- A right of way bond will be required based on the final submittal.

Following the submittal of all required documents, the City Engineer will process final review comments.

If you have any questions, please advise.

Sincerely,

Thomas J. Sheridan, P.E., P.S.

Hudson City Engineer

C: T. Calabro - Inspector



SHAWN KASSON Fire Marshal

skasson@hudson.oh.us

(330) 342-1869

MEMORANDUM

DATE:

October 5, 2015

TO:

Greg Hannan, City Planner

FROM:

Shawn Kasson, Fire Marshal

SUBJECT:

Danbury of Hudson - MPC Case #2015-26

I have reviewed the site plan set for Danbury of Hudson dated 08/31/15. Upon review I have the following comments:

- Knox Boxes must be furnished and installed in an approved locations.
- Water mains must be sized to provide adequate fire suppression water supply.
- Fire department connection(s) (FDC) to supply the building sprinkler system(s) must be installed
 in approved locations.
- FDC must meet City of Hudson specifications.
- FDC must be located within 40' of a fire hydrant.
- FDC riser pipes must be painted red in color.
- FDC must be furnished with an approved means to identify the protected building.
- Fire hydrants must meet City of Hudson specifications.
- The following areas must be designated as fire lanes:
 - Access drives in front of the fire hydrants
 - Access drives in front of the fire department connections (FDC)
 - Access drives in front of the designated building entrances for emergency responders
 - o Access drives less than 24' in clear width
 - Fire apparatus turnaround locations
- Fire lane areas must be identified with approved signage stating Fire Lane No Parking.
- Curbs in fire lane areas must be painted red in color.
- The following equipment must be protected from vehicle impact in an approved manner (6" curb with setback or bollards):
 - On-site fire hydrants
 - o Fire department connections (FDC)
 - o Natural gas meters
 - o Ground mounted electrical transformers (If provided)
 - o Generators (If provided)
- The proposed canopies must have a minimum overhead clearance of 13' 6".
- A minimum 20' inside, 40' outside turning radius must be provided in all required areas of fire apparatus access.
- An approved fire apparatus turnaround must be provided within 150' of the dead end located at the southwest corner of the assisted living building. Interconnection to the main access driveway is recommended.
- Consideration should be given to the impact of the existing cul-de-sac island and its impact on site access and egress.

The scope of the review is preliminary. Further comments are probable as the design progresses. Please contact me with any questions.

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COMMUNITY DEVELOPMENT • 115 Executive Parkway, Suite 400 • Hudson, Ohio 44236 • (330) 342-1790

September 18, 2015

RE: PC 2015-26- Site Plan and Conditional Use review for the Danbury of Hudson

Mr. Costin-

Thank you for your submission of the site plan application for the proposed Danbury of Hudson at Boston Mills Road and Omni Lake Parkway. The application has been placed on the Planning Commission (PC) agenda for the October 12, 2015 meeting. In preparation for such, I am forwarding preliminary comments related to compliance with the Land Development Code (LDC). In addition to these comments, engineering design related comments will be forwarded under separate cover. Our goal is to provide you an opportunity to respond to the below comments by October 1, 2015. We will revise the comments accordingly for the staff report scheduled to be issued on October 7, 2015. Additionally I am available to meet and review the comments at your convenience.

Chapter 1205 - District Regulations

1205.09 District 6: Western Hudson Gateway

Use: The proposed continuing care retirement community is permitted as a conditional use within District 6. The Planning Commission request will include a public hearing for the proposed conditional use.

Minimum Lot Size: Required:

two acres (office uses)

Proposed:

acceptable

Setbacks

Recommended Minimums:

50 ft front, 25 ft front for parking, 25 ft side and rear, 100 ft from

Boston Mills Road

Proposed: The proposed setbacks are acceptable

Adjacent residential uses:

Required:

100 ft

Proposed:

200 ft+

Maximum Floor Area to Lot Area Ratio

Required:

0.4 to 1.0 (office use)

Proposed:

0.38

Maximum Structure Height:

Required:

50 ft

Proposed:

proposal appears acceptable; however, the height of each building

to the mid-point between the ridge and eave should be indicated.

Vehicular Access/Driveway Curb Cuts:

Required: Driveways shall be minimized through consolidation, shared driveways, or other means

Proposed: Staff is acceptable with the two proposed access points.

Parking

Required: parking in the front yard is limited to 25% or one bay unless screened with mounding and/or plantings in addition to perimeter landscaping requirements.

Proposed: The senior apartment building appropriately proposes one bay along the front. The assisted living building contains more than 25% of its parking within the front yard. Expanded landscaping is needed adjacent to the right of way in the form of trees and/or mounding in addition to the perimeter landscaping requirements.

Loading areas – Loading areas must be sited to the side or rear of the buildings.

Pedestrian Amenities

Required: Sidewalks are required abutting a public street, along the building façade featuring a customer entrance, and along a building façade abutting a parking area.

Proposed: The plans incorporate an eight foot multipurpose path within the Boston Mills Road right of way. Additionally, sidewalks have been proposed along all building facades with public entrances and adjacent to parking lots. Sidewalks need to be added at the following locations:

- Extend the existing sidewalk within the Omni Lake Pkwy right of way northward to connect to the western curb cut.
- Create a sidewalk connection between the assisted living and senior apartment buildings and a sidewalk connection from both building to the sidewalk along Omni Lake Parkway.

Linkages: Provision shall be made in the design for connection with existing and future trail systems. The plans should indicate the location of the existing trail network developed as part of the larger Omni Development and any proposed impacts.

Additionally the City of Hudson Connectivity Plan depicts a future trail running north/south to connect Boston Mills Road with an east/west rail to be constructed along the Turnpike eastward to Valley View Road. Staff is reviewing with the Parks Department to determine if the future routing would occur in the vicinity of the subject property or further west.

Section 1206 Use Regulations

The proposed continuing care retirement community is permitted as a conditional use within District 6.

- 1. Conditional use standards
 - Staff and PC will review the project to be physically and operationally compatible with surrounding land uses. Applicable conditions include hours of operation, loading/delivery zones, lighting, parking configuration, and onsite circulation.
- 2. Special conditions per Section 1206.2(c):
 - 4. Where applicable, certification or licensing by the sponsoring state or federal governmental agency shall be a prerequisite to issuance of a zoning certificate.
 - Adequate vehicle turning areas shall be provided on the site so that vehicles and equipment can be maneuvered on site without interrupting traffic flow or blocking public streets.
 - 11. The parking area for the use shall be a minimum of 50 feet from adjacent properties used for residential purposes.
 - 12. Safe areas for pick-up and discharge of persons shall be provided.
 - 14. Adequate provisions shall be made for emergency medical and fire vehicles on two sides of the building.
 - 22. Conditions related to Group Homes: Not Applicable

Comment: staff finds the submittal to be in general compliance with the applicable conditions.

Section 1207 Zoning Development and Site Plan Standards

Section 1207.18 Zoning Development and Site Plan Standards for Districts 6 and 8

Impervious Surface Coverage

Maximum:

75%

Proposed:

A summary table should be added to the plans; however, the proposed

impervious coverage is well below the permitted maximum.

Limits of Disturbance: The proposed limits have been depicted on the plans.

Wetland/Stream Corridor Protection

Stream Corridor – a 50 ft riparian setback is applicable to the stream located at the southeast portion of the site. The proposal does not appear to impact the corridor; however, the stream and the required 50 ft setback should be clearly labeled on the plans.

Please note the following comments related to the wetlands area present on the subject property:

- 1. Submit a copy of the wetland delineation with the category of each wetland area indicated.
- 2. Revise the wetland impact map (sheet C2.0) to note the following:
 - a. Wetland boundary
 - b. Applicable setback for each wetland area 100 feet for Category II and III No setback is required for Category I.
 - c. Stream and 50 ft corridor setback on each side.
 - d. Proposed grading design
 - e. Identification of locations where a wetland modification is requested.
- 3. The summary table on the wetland impact plan indicates the proposed fill of 0.46 acres of jurisdictional wetlands, the fill of 0.09 acres of isolated wetland (not regulated by Army Corp of Engineers (ACOE)), and the excavation of 1.00 acres of wetland adjacent to the existing wetland basin. Provide additional information related to the impacts related to the wetland areas which are labeled as wetland to be excavated and how this disturbance is regulated by the ACOE.
- 4. The proposed grading design proposes significant alteration to the existing wetland basin area. An expanded landscaping design is needed at this area to incorporate native plantings and to reestablish the natural buffer removed as part of the grading work.

Landscaping/Buffering

- 1. Bufferyards –No bufferyards are applicable as the property abuts non-residential uses at the side and rear.
- 2. Street trees must be incorporated along Boston Mills Road.
- 3. Front yard: A minimum of 10 % of the front yard setback shall be developed with a mix of trees, shrubs, and plantings.
- 4. Perimeter parking lot landscaping (10 ft depth) is required to screen parking lots from Boston Mills Road and Omni Lake Pkwy. The submitted landscaping must be expanded to meet this requirement.
- 5. Interior island landscaping is required at a ratio of 160 sq ft per 10 parking spaces. Appropriate islands have been proposed; however, the planting areas must be revised to incorporate at least one tree and four shrubs per peninsula area.
- 6. Dumpster enclosure: Proposed dumpster locations and plantings are acceptable.

Off-Street Parking and Loading Requirements

1. Count: Assisted Living/Convalescent care facilities are required to provide one space for each six beds plus one space for every two employees. Multifamily residential is required to provide two spaces per dwelling unit. Staff notes the following proposed parking:

a. 62 unit apartment building: 138 spaces proposed

b. 112 unit assisted living & 38 unit memory care: 117 spaces proposed

Information should be submitted regarding the number of employees for the assisted living and memory care facilities and information related to the number of beds within the assisted living and memory core facilities.

2. Stall dimensions: parking stalls of 9ft by 19ft, parking aisle width of 24ft, and drive aisles of 20ft width are applicable. Stall depth may be reduced to 16.5 feet provided these are at least four feet from the vehicles and the vehicles don not otherwise interfere with the landscaping. Staff suggested considering such where sidewalks are not abutting the parking stalls.

3. Continuous curbs (or wheel stops) shall be provided at all parking areas and within in all drive areas adjacent to all landscaping areas

- 4. Exterior lighting: Lighting plan including photometrics is not required at this time: however, will be requested prior to issuance of a zoning certificate.
- 5. Loading spaces: One loading space (12ft by 35ft) shall be provided for each 20,000 sq ft of facility for the assisted living and memory care facilities. Spaces should not be located within the front yard.

Access, Circulation, and Traffic Analysis – A traffic impact analysis has been submitted for review. Comments will be issued under separate cover by the City Engineering Department.

Stormwater Basin: The proposed senior apartment building appropriately contains a significant setback of 180 feet from Boston Mills Road; however, the proposed stormwater improvements will require clearing a significant area of the frontage and impact to the wetlands. Staff requests consideration of a reduced basin size to lessen the disturbed area. Additional basin(s) could be incorporated adjacent to the assisted living facility parking area and/or north of the building. Maintaining a 100 foot depth area from Boston Mills Road in a largely natural state with enhanced plantings would improve the buffer to adjacent residential uses and lessen the impact to the existing wetlands.

Department Comments

We have incorporated some of Public Works Superintendent Tom Munn's comments above. Please be aware of his other comments:

- 1. Red maples should be replaced with Autumn Blaze Freeman type maple or equivalent that are more upright than round, and also more drought tolerant. Other species listed in Plant Schedule are acceptable.
- 2. Suggest additional screening vegetation west of 38 unit memory care building to screen Allstate parking lot

Architectural Design

The architectural design will be reviewed by the Design Subcommittee for development in Districts 6 and 8. Staff has forwarded the plan submittal to the design committee and will forward preliminary comments under separate cover.

Summary:

Please address the following items:

- 1. Label the height of each building to the mid-point between the ridge and eave should be indicated.
- 2. Incorporate sidewalks at the following locations:
 - a. Extend the existing sidewalk within the Omni Lake Pkwy right of way northward to connect to the western curb cut.
 - b. Create a sidewalk connection between the assisted living and senior apartment buildings and the public right of way.
- 3. Indicate the location of the existing trail network as part of the larger Omni Development and any proposed impacts. Indicate the proposed impervious coverage on the plan submittal.
- 4. Stream Corridor/Wetlands:
 - a. Submit a copy of the wetland delineation
 - b. Revise the wetland impact map (sheet C2.0) to note the following:
 - i. Wetland boundary
 - ii. Applicable setback 100 feet for Category II and III.
 - iii. Stream corridor and 50 ft corridor setback on each side.
 - iv. Proposed grading design
 - v. Identification of the locations where a wetland modification is requested.
 - c. The proposed grading design proposes significant alteration to the existing wetland basin area. An expanded landscaping design is needed at this area to demonstrate the use of native plantings and to reestablish the natural buffer removed as part of the grading work.
 - d. Provide additional information related to the impacts related to the wetland areas which are labeled as *wetland to be excavated* and how this disturbance is regulated by the ACOE.
- 5. Revise the Landscaping/Buffering plan to incorporate the following:
 - a. Expanded landscaping adjacent to the right of way in the form of trees and/or mounding in addition to the perimeter landscaping requirements to screen the assisted living facility parking.
 - b. Street trees must be incorporated on the landscaping plans
 - c. Expanded landscaping is needed at this location in the form trees and/or mounding in addition to the perimeter landscaping requirements.
 - d. Front yard a minimum of 10% of the front yard setback must be landscaped with a mix of trees, shrubs, and planting beds.
 - e. Perimeter parking lot landscaping (10 ft depth) to screen parking lots from Boston Mills Road and Omni Lake Pkwy.
 - f. Interior parking lot island shall incorporate at least one shade tree and four shrubs

- g. Red maples should be replaced with Autumn Blaze Freeman type maple or equivalent that are more upright than round, and also more drought tolerant. Other species listed in Plant Schedule are acceptable.
- 6. Parking:
 - a. Information should be submitted regarding the number of employees for the assisted living and memory care facilities and information related to the number of beds within the assisted living and memory core facilities.
 - b. Indicate the location of applicable off-street loading areas.
 - c. Stall depth may be reduced to 16.5 feet provided vehicles have a clear spacing of four feet for vehicle overhang.
- 7. Maintain a 100 foot depth area from Boston Mills Road in a largely natural state with enhanced plantings to improve the buffer to adjacent residential uses and reduce the impact to the existing wetlands.

Please contact me for any assistance I can provide.

Sincerely,

Gregory P. Hannan, AICP

City Planner

CC: Mark Richardson, Community Development Director Thom Sheridan, City Engineer

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