



# JAGUAR LAND ROVER JSP17-65

**JAGUAR LAND ROVER JSP17-65**

Public Hearing at the request of Erhard Motor Sales, Inc for Planning Commission’s recommendation to City Council for consideration of a Special Development Option Concept Plan in the GE, Gateway East zoning district. The subject property is comprised of two parcels totaling 9.48 acres. It is located on the southwest corner of Grand River Avenue and Meadowbrook Road (Section 23). The applicant is proposing to build a 58,663 square feet car sales facility for Jaguar Land Rover. The concept plan proposes 138 parking spaces and 287 parking spaces for storing cars for sale.

**REQUIRED ACTION**

Recommend to City Council approval or denial of the Special Development Option Concept Plan

REVIEW	RESULT	DATE	COMMENTS
Planning	Approval recommended	09-07-18	<ul style="list-style-type: none"> <li>• Revisions required to address minimum required Open Space Calculations;</li> <li>• Deviation for absence of sidewalk along Cherry Hill Road;</li> <li>• Items to be addressed on revised Concept Plan prior to City Council meeting.</li> </ul>
Engineering	Approval recommended	09-05-18	<ul style="list-style-type: none"> <li>• Items to be addressed on the Preliminary Site Plan</li> </ul>
Landscaping	Approval recommended	08-29-18	<ul style="list-style-type: none"> <li>• Deviation for lack of street trees along Grand River Avenue and Cherry Hill Road, lack of Green belt plantings along Cherry Hill Road frontage;</li> <li>• Items to be addressed on the Preliminary Site Plan</li> </ul>
Wetlands	Approval recommended	08-29-18	<ul style="list-style-type: none"> <li>• Wetland permit is not required</li> <li>• Items to be addressed on the Preliminary Site Plan</li> </ul>
Woodlands	Approval recommended	08-29-18	<ul style="list-style-type: none"> <li>• A City of Novi Woodlands permit is required at the time of Preliminary Site Plan.</li> </ul>
Traffic	Approval recommended	08-30-18	<ul style="list-style-type: none"> <li>• Deviation for not meeting the minimum requirements for same side driveway spacing along Grand River Avenue;</li> <li>• Allow to defer the submittal of Traffic Impact Study at the time of Preliminary Site Plan;</li> <li>• Items to be addressed on the Preliminary Site Plan</li> </ul>
Façade	Approval	08-29-18	<ul style="list-style-type: none"> <li>• Deviations got underage of brick,</li> </ul>

	recommended		overage of flat metal panels and overage of horizontal rib metal panels; <ul style="list-style-type: none"><li>• Does not meet the architectural building and massing requirements;</li></ul>
<b>Fire</b>	Approval recommended	08-16-18	<ul style="list-style-type: none"><li>• Items to be addressed on the Preliminary Site Plan</li></ul>

## MOTION SHEET

### Approval

In the matter of Jaguar JSP17-65 motion to **recommend approval** to the City Council of the Special Development Option Concept Plan:

1. The recommendation shall include the following ordinance deviations:
  - a. The applicant shall work with staff to provide acceptable amount of Open Space as defined in Section 3.11.7 GE District required conditions, prior to City Council's consideration of SDO Concept Plan;
  - b. Planning deviation from Section 3.11.8, for not meeting the architectural standards for street corner building (buildings should have greater massing and height);

**-OR-**

  - c. Planning deviation from Section 3.11.8 for absence of required sidewalk along Cherry Hill Road due to existing wetlands;
  - d. Deviations from Section 5.15. Exterior Building Wall Façade Materials for the following:
    - i. Underage of brick (30% minimum required, 25% on north façade and 28% on east façade proposed);
    - ii. Overage of flat metal panels (50% maximum allowed, 58% on north façade and 56% on east façade proposed);
    - iii. Overage of horizontal rib metal panels for roof top screening (0% allowed, 17% on north, 16% on east, 12% on south and 18% on west proposed);
  - e. Traffic deviation to waive the requirement for required Traffic Impact Study or defer it to the time of Preliminary Site Plan review, as the site falls under the study boundaries for the ongoing Comprehensive Traffic study by the City;
  - f. Traffic deviation for variance from Design and Construction Standards Section 11-216(d) for not meeting the minimum distance required for same-side commercial driveways along Grand River Avenue;
  - g. Landscape deviation from Section. 5.5.3.E.i.c for lack of street trees along Grand River Road frontage due to lack of space (8 trees required);
  - h. Landscape deviation from Section. 5.5.3.E.i.c for lack of street trees along Cherry Hill Road frontage due to lack of space (8 trees required);
  - i. Landscape deviation from Section 5.5.3.B.ii and iii for not providing greenbelt berm or plantings in area of wetland in order to preserve wetland along Cheery Hill Road frontage;
  - j. Landscape deviation from Section 5.5.3.B.ii and iii for not providing greenbelt berm or plantings between Cherry Hill and the parking lot area not behind the wetland;
2. The Applicant shall comply with the conditions and items listed in the staff and consultant review letters as a requirement noted in the Special Development Option Agreement.

This motion is made based on the following findings:

- a. The project results in a recognizable and substantial benefit to the ultimate users of the project and to the community, where such benefit would otherwise be unfeasible or unlikely to be achieved by a traditional development;
- b. In relation to a development otherwise permissible as a Principal Permitted Use under Section 3.1.16.B the proposed type and density of development does not result in an unreasonable increase in the use of public services, facilities and utilities,

- and does not place an unreasonable burden upon the subject and/or surrounding land and/or property owners and occupants and/or the natural environment;
- c. Based upon proposed uses, layout and design of the overall project, the proposed building facade treatment, the proposed landscaping treatment and the proposed signage, the Special Development Option project will result in a material enhancement to the area of the City in which it is situated;
  - d. The proposed development does not have a materially adverse impact upon the Master Plan for Land Use of the City, and is consistent with the intent and spirit of this Section;
  - e. In relation to a development otherwise permissible as a Principal Permitted Use under Section 3.1.16.B, the proposed development does not result in an unreasonable negative economic impact upon surrounding properties;
  - f. The proposed development contains at least as much usable open space as would be required in this Ordinance in relation to the most dominant use in the development (*provided the applicant makes the required revisions*);
  - g. Each particular proposed use in the development, as well as the size and location of such use, results in and contributes to a reasonable and mutually supportive mix of uses on the site, and a compatibility of uses in harmony with the surrounding area and other downtown areas of the City;
  - h. The proposed development is under single ownership and/or control such that there is a single person or entity having responsibility for completing the project in conformity with this Ordinance;
  - i. Relative to other feasible uses of the site, the proposed use will not cause any detrimental impact on existing thoroughfares in terms of overall volumes, capacity, safety, vehicular turning patterns, intersections, view obstructions, line of sight, ingress and egress, acceleration/deceleration lanes, off-street parking, off-street loading/unloading, travel times and thoroughfare level of service;
  - j. Relative to other feasible uses of the site, the proposed use will not cause any detrimental impact on the capabilities of public services and facilities, including water service, sanitary sewer service, storm water disposal and police and fire protection to service existing and planned uses in the area;
  - k. Relative to other feasible uses of the site, the proposed use is compatible with the natural features and characteristics of the land, including existing woodlands, wetlands, watercourses and wildlife habitats;
  - l. Relative to other feasible uses of the site, the proposed use is compatible with adjacent uses of land in terms of location, size, character, and impact on adjacent property or the surrounding neighborhood;
  - m. Relative to other feasible uses of the site, the proposed use is consistent with the goals, objectives and recommendations of the City's Master Plan for Land Use.
  - n. Relative to other feasible uses of the site, the proposed use will promote the use of land in a socially and economically desirable manner; and
  - o. Relative to other feasible uses of the site, the proposed use is (1) listed among the provision of uses requiring special land use review as set forth in the various zoning districts of this Ordinance, and (2) is in harmony with the purposes and conforms to the applicable site design regulations of the zoning district in which it is located.

**-OR-**

**Denial**

In the matter of Jaguar JSP17-65 motion to **recommend denial** to the City Council of the Special Development Option Concept Plan...*because the proposed Special Development Option Concept Plan would not satisfy the findings and conditions listed in Section 3.12 of the Zoning Ordinance.*

-OR-

**Postpone**

In the matter of Jaguar JSP17-65, motion to **postpone** making a recommendation on the proposed Special Development Option Concept Plan to allow the applicant time to provide additional information and to allow the City staff and consultants, and the Planning Commission, to evaluate all aspects of the Concept Plan as proposed. This recommendation is made for the following reasons:

1. To allow the applicant to address and/or reduce the number of deviations required, particularly the deviation from Open space requirement and the architectural massing for buildings located at the corner of Grand River Avenue and Meadowbrook area;
2. *Insert other reasons here, if any ....*

**MAPS**

Location

Zoning

Future Land Use

Natural Features

**SDO CONCEPT PLAN**

(Full plan set available for viewing at the Community Development Department.)

ELEVATIONS



FAÇADE BOARD

## COMMUNITY IMPACT STATEMENT

## NOISE IMPACT STATEMENT

## GEO-TECHNICAL STUDY

TRAFFIC STUDY

PLANNING REVIEW

## ENGINEERING REVIEW

## LANDSCAPE REVIEW



WETLANDS REVIEW

WOODLANDS REVIEW

TRAFFIC REVIEW

FAÇADE REVIEW

**FIRE REVIEW**

PREVIOUS PLANNING COMMISSION MEETING MINUTES

APPLICANT RESPONSE LETTER

**MAPS**

Location

Zoning

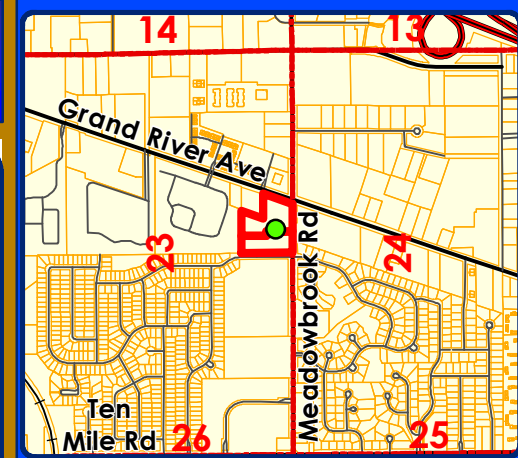
Future Land Use

Natural Features





# JSP 17-65: JAGUAR LANDROVER

Location



**LEGEND**


 Sections

**City of Novi**  
Dept. of Community Development  
City Hall / Civic Center  
45175 W Ten Mile Rd  
Novi, MI 48375  
cityofnovi.org

Map Author: Sri Komaragiri  
Date: 09/21/18  
Project: JSP 17-65: JAGUAR LANDROVER  
Version #: 1

0 37.5 75 150 225 Feet

1 inch = 169 feet

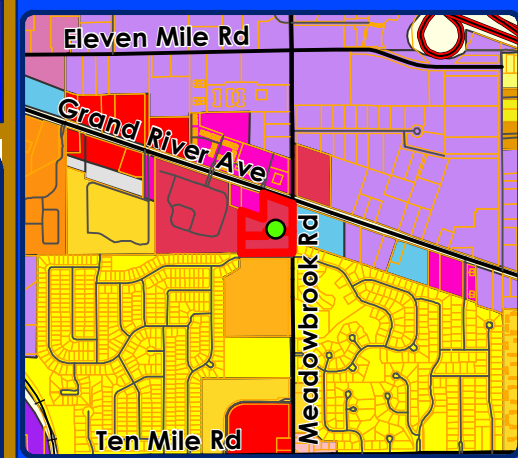
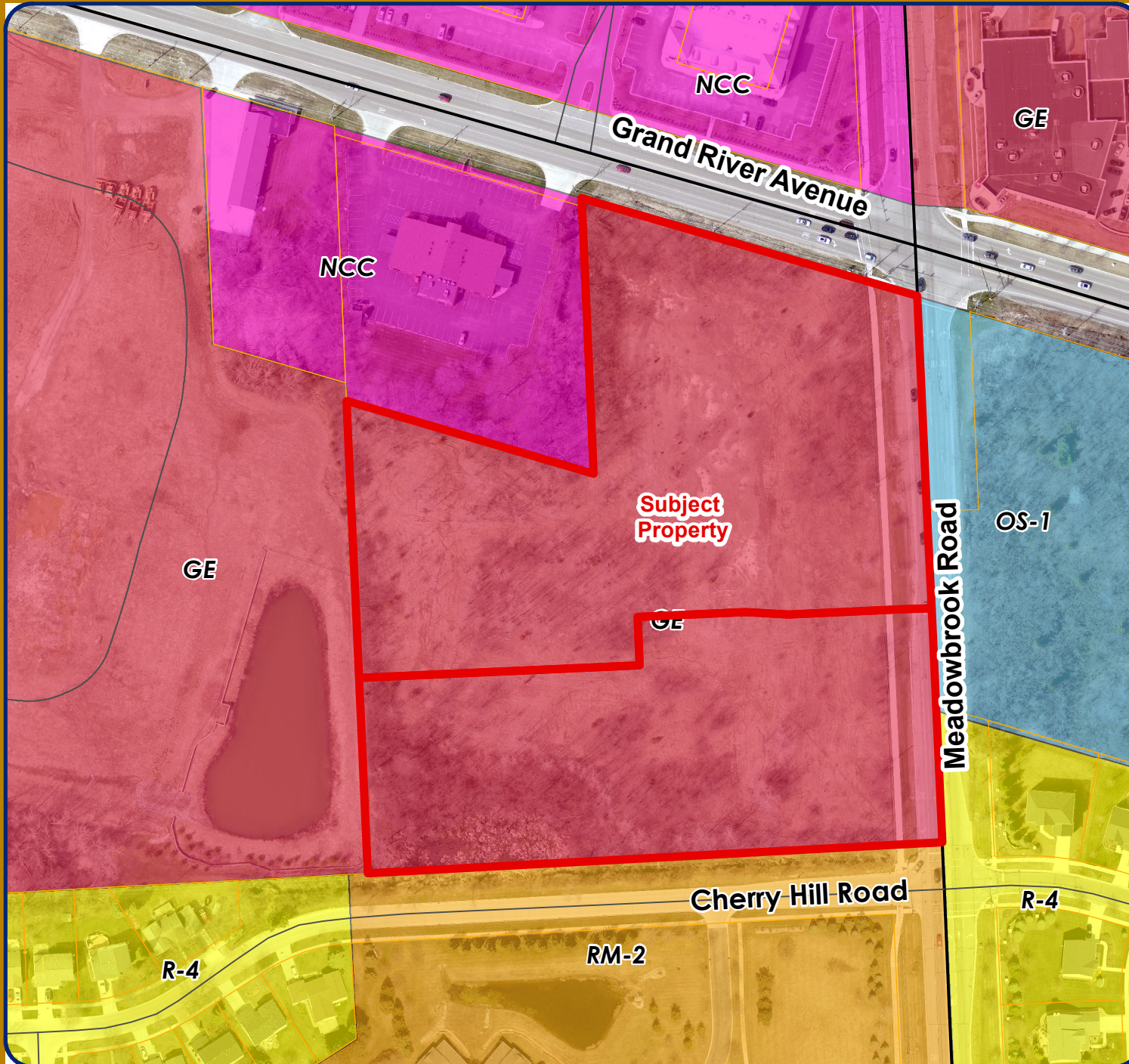


**MAP INTERPRETATION NOTICE**

Map information depicted is not intended to replace or substitute for any official or primary source. This map was intended to meet National Map Accuracy Standards and use the most recent, accurate sources available to the people of the City of Novi. Boundary measurements and area calculations are approximate and should not be construed as survey measurements performed by a licensed Michigan Surveyor as defined in Michigan Public Act 132 of 1970 as amended. Please contact the City GIS Manager to confirm source and accuracy information related to this map.

# JSP 17-65: JAGUAR LANDROVER

## Zoning



**LEGEND**


- R-1: One-Family Residential District
- R-2: One-Family Residential
- R-4: One-Family Residential District
- RM-1: Low-Density Multiple Family
- RM-2: High-Density Multiple Family
- MH: Mobile Home District
- B-1: Local Business District
- B-3: General Business District
- GE: Gateway East District
- I-1: Light Industrial District
- I-2: General Industrial District
- NCC: Non-Center Commercial District
- OS-1: Office Service District
- OSC: Office Service Commercial
- P-1: Vehicular Parking District
- TC-1: Town Center -1 District


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Feet  
 0 37.5 75 150 225

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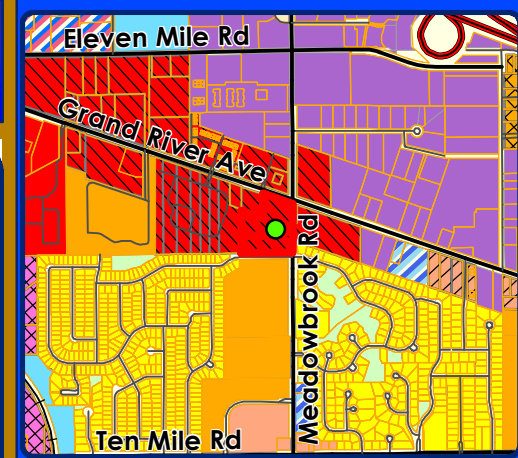
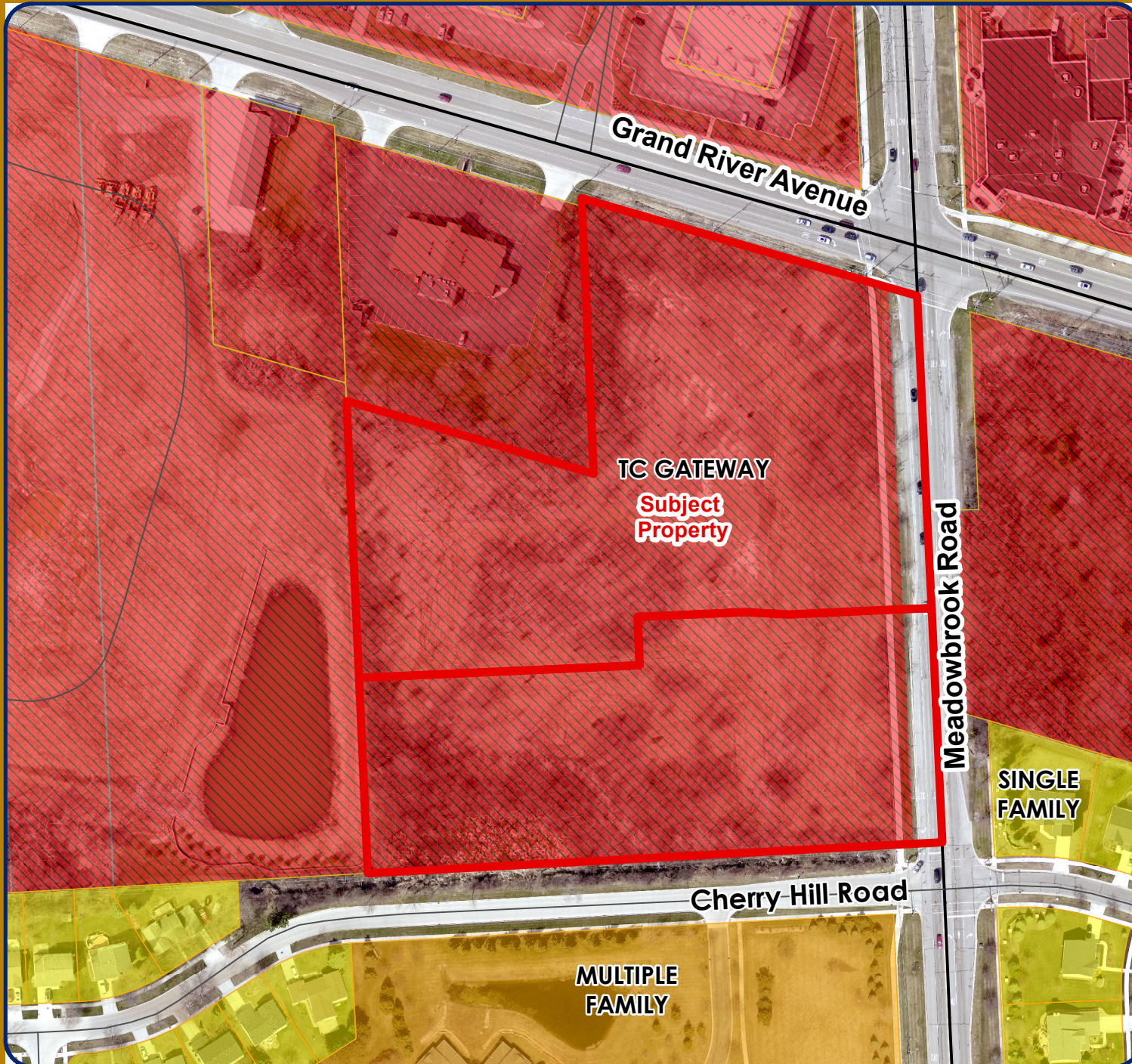


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# JSP 17-65: JAGUAR LANDROVER

Future Landuse



- LEGEND**
- FUTURE LAND USE
- Single Family
  - Multiple Family
  - Mobile Home Park
  - Community Office
  - Office Commercial
  - Industrial RD Tech
  - Heavy Industrial
  - Local Commercial
  - Community Commercial
  - TC Commercial
  - TC Gateway
  - Educational Facility
  - Public
  - Private Park


**CITY OF**  
  
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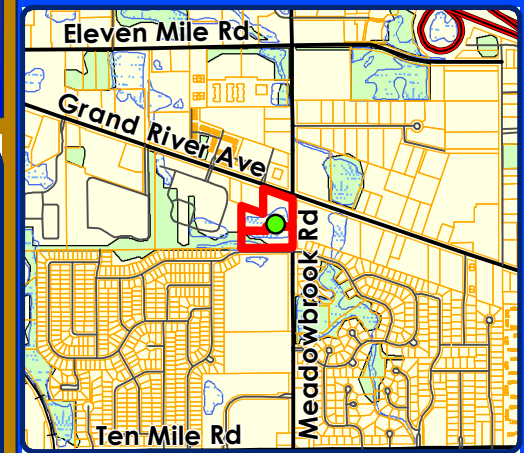


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
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# JSP 17-65: JAGUAR LANDROVER

## Natural Features



### LEGEND

-  WETLANDS
-  WOODLANDS



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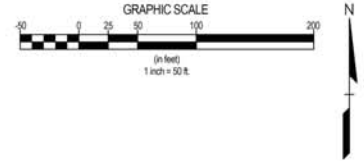
**SDO CONCEPT PLAN**

(Full plan set available for viewing at the Community Development Department.)



MEADOWBROOK ROAD  
(66' WIDE - PUBLIC)

CHERRY HILL ROAD  
(80' WIDE - PUBLIC)



# Jaguar Land Rover of Novi

Novi, Michigan

September, 2018

PEA, Inc.  
7927 Nemco Way, Ste 115  
Bingham, MI 48116  
t: 517.548.8593  
f: 517.548.8973  
www.peainc.com



**LEGAL DESCRIPTION**  
 (Per AIA National Title Group Commitment File No. 63-17532017-SOM, Effective date May 03, 2017)

The land referred to in this commitment is described as follows: City of Novi, County of Oakland, State of Michigan

**Parcel 1:**  
 Part of the Northeast 1/4 of Section 23, Town 1 North, Range 8 East, City of Novi, Oakland County, Michigan; Beginning at a point distant North 89 degrees 08 minutes 24 seconds West 669.86 feet and North 00 degrees 32 minutes 05 seconds East 227.42 feet from the East 1/4 corner, thence North 00 degrees 32 minutes 05 seconds East 321.43 feet; thence South 79 degrees 26 seconds East 300 feet; thence North 00 degrees 32 minutes 05 seconds West 321.43 feet; thence South 79 degrees 26 seconds East 407.28 feet; thence South 00 degrees 28 minutes 12 seconds West 302.37 feet; thence North 89 degrees 08 minutes 24 seconds West 187 feet; thence North 83 degrees 24 minutes 25 seconds West 302.37 feet; thence North 29 degrees 17 minutes 53 seconds West 125.65 feet; thence South 00 degrees 32 minutes 05 seconds West 58.43 feet; thence North 89 degrees 08 minutes 24 seconds West 327 feet to beginning.

**Parcel 2:**  
 Part of the Northeast 1/4, Section 23, Town 1 North, Range 8 East, City of Novi, Oakland County, Michigan, more particularly described as: Commencing at the East 1/4 corner of said Section 23 for a point of beginning, thence North 89 degrees 08 minutes 24 seconds West 669.86 feet along the East and West 1/4 line of said Section 23 and the Northernly line of Meadowbrook Drive Subdivision No. 3, as recorded in Liber 143 of Plats, Pages 1, 2, 3 and 4, Oakland County Records; thence North 00 degrees 32 minutes 05 seconds East, 227.42 feet; thence South 79 degrees 27 minutes 55 seconds East, 327.00 feet; thence North 00 degrees 32 minutes 05 seconds East, 58.43 feet; thence South 89 degrees 27 minutes 55 seconds East, 125.65 feet; thence North 83 degrees 24 minutes 25 seconds East, 50.27 feet; thence North 89 degrees 08 minutes 21 seconds East, 187.00 feet to the East line of said Section 23 and the centerline of Meadowbrook Road; thence South 00 degrees 28 minutes 39 seconds West, 272.63 feet, along the East line of said Section 23 and the centerline of said Meadowbrook Road to the point of beginning.

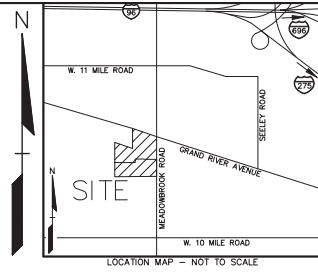
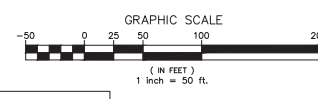
**SIGN LEGEND:**

- NO PARKING FIRE LANE SIGN (R7-22) 5 EA.
- 24"x24" STOP SIGN (R1-1) 2 EA.
- BARRED FREE PARKING SIGN (R7-6) 3 EA.
- VAN ACCESSIBLE SIGN (R7-BA) 1 EA.

**SIDEWALK RAMP LEGEND:**

- SIDEWALK RAMP TYPE R (R) 1

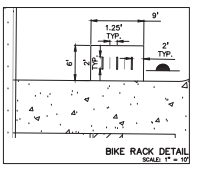
REFER TO SHEET SP-1.1 FOR MOOT STAIRS RAMP DETAILS



NO.	DATE	REVISIONS

**REQUIRED WAIVERS**

1. A SAME SIDE / OPPOSITE SIDE DRIVEWAY SPACING WAIVER IS REQUESTED FOR THE DRIVEWAY ON GRAND RIVER AVENUE.

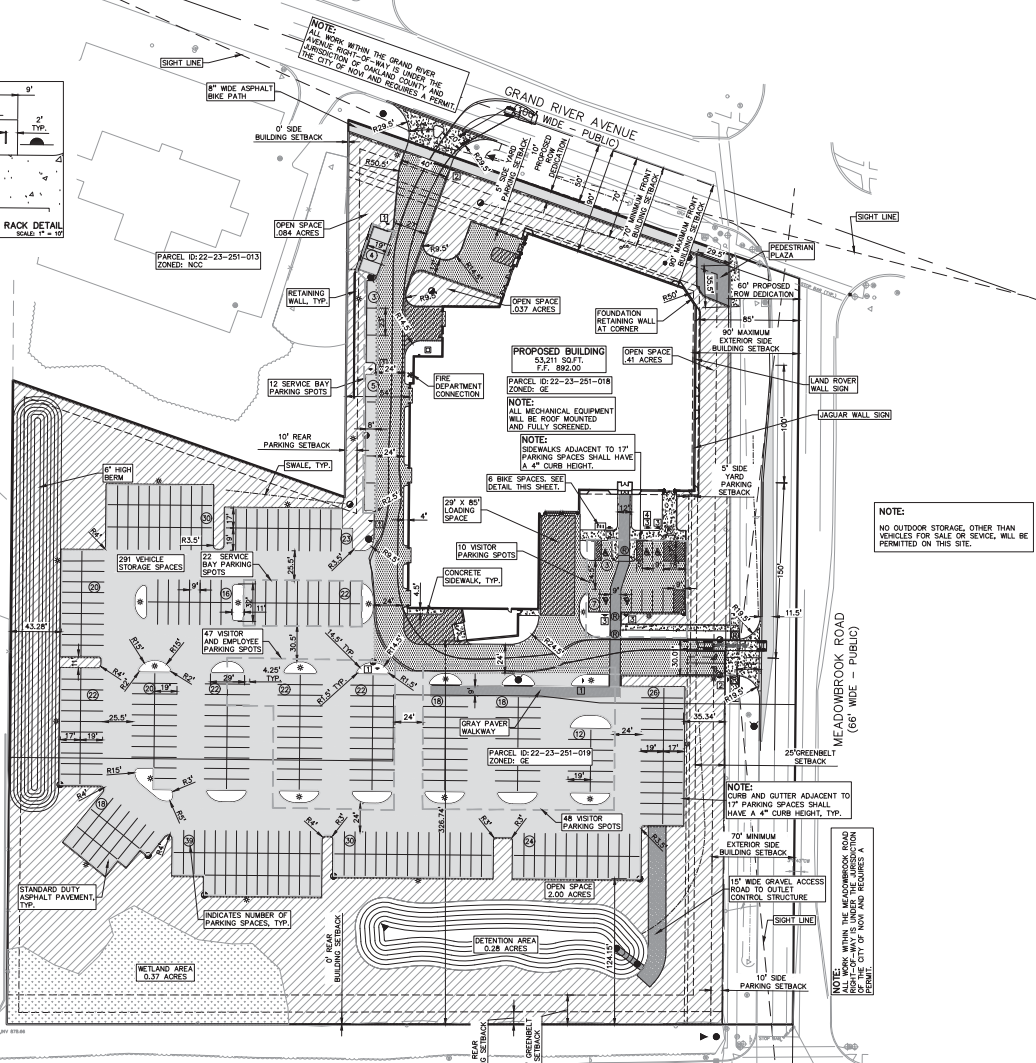
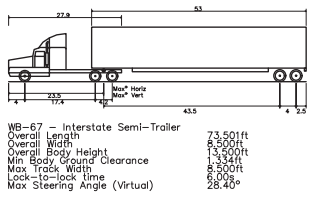


**CITY OF NOVI FIRE DEPARTMENT NOTES:**

1. ALL WEATHER ACCESS ROADS CAPABLE OF SUPPORTING 35 TONS ARE TO BE PROVIDED FOR FIRE APPARATUS PRIOR TO CONSTRUCTION ABOVE THE FOUNDATION.
2. ALL WATER MAINS AND FIRE HYDRANTS ARE TO BE INSTALLED AND BE IN SERVICE PRIOR TO CONSTRUCTION ABOVE THE FOUNDATION.
3. THE BUILDING ADDRESS IS TO BE POSTED FACING THE STREET THROUGHOUT THE CONSTRUCTION. THE ADDRESS IS TO BE AT LEAST 3 INCHES HIGH ON CONTRASTING BACKGROUND.

**CITY OF NOVI NOTES:**

1. THE OWNER OF THE PROPERTY SHALL REPORT ANY PROPOSED CHANGE IN USE OR OCCUPANCY FOR FURTHER EVALUATION.
2. UNLESS OTHERWISE PROVIDED, DEALING DIRECTLY WITH CONSUMER AT RETAIL IS PROHIBITED.
3. NO LONG TERM DELIVERY TRUCK PARKING IS ALLOWED ON SITE.
4. THE OCCUPANT SHALL COMPLY WITH ANY CITY ORDINANCES REGARDING TOXIC OR HAZARDOUS MATERIALS.



**GENERAL NOTES:**

THESE NOTES APPLY TO ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT.

1. ALL DIMENSIONS SHOWN ARE TO BACK OF CURB, FACE OF SIDEWALK, OUTSIDE FACE OF BUILDING, PROPERTY LINE, CENTER OF MANHOLE/CATCH BASIN OR CENTERLINE OF PIPE UNLESS OTHERWISE NOTED.
2. REFER TO SHEET SP-1.0.1 FOR ON-SITE PAVING DETAILS.
3. REFER TO SHEET SP-1.0.1 FOR ON-SITE SIDEWALK RAMP DETAILS.
4. "NO PARKING-FIRE LANE" SIGNS SHALL BE POSTED ALONG ALL FIRE LANES AT 100 FOOT INTERVALS OR AS DIRECTED BY THE FIRE OFFICIAL.
5. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF NOVI CURRENT STANDARDS AND REGULATIONS.
6. THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEER AND/OR THE AUTHORITY HAVING JURISDICTION 3 BUSINESS DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
7. ANY WORK WITHIN THE STREET OR HIGHWAY RIGHTS-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AGENCIES HAVING JURISDICTION AND SHALL NOT BEGIN UNTIL ALL NECESSARY PERMITS HAVE BEEN ISSUED FOR THE WORK.
8. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ADJUST THE TOP OF ALL EXISTING AND PROPOSED STRUCTURES (MANHOLES, CATCH BASINS, INLETS, GATE BELLS ETC.) WITHIN GRADED AND /OR PAVED AREAS TO FINAL GRADE SHOWN ON THE PLANS. ALL SUCH ADJUSTMENTS SHALL BE INCIDENTAL TO THE JOB AND WILL NOT BE PAID FOR SEPARATELY.

**SITE DATA TABLE:**

SITE AREA: 9.48 ACRES GROSS (8.51 NET)  
 CURRENT ZONING: GE  
 PROPOSED ZONING: GE

PARCEL ID: 22-23-251-018 (5.62 ACRES ±)  
 22-23-251-019 (3.86 ACRES ±)

PROPOSED USE: BMW MOTOR SALES FACILITY

**BUILDING INFORMATION:**  
 MAXIMUM ALLOWABLE BUILDING HEIGHT = 25 FEET (2 STORES)  
 PROPOSED BUILDING HEIGHT = 25 FEET

**BUILDING FOOTPRINT AREA:**  
 JAGUAR-LAND ROVER FACILITY: 58,663 S.F.  
 USABLE FLOOR AREA: 20,798 S.F.

**NUMBER OF SERVICE BAYS:** 34

**MAX FLOOR AREA RATIO = 27%**  
**FLOOR AREA RATIO = 158**  
**NUMBER OF EMPLOYEES: XX**

**SETBACK REQUIREMENTS:**

FRONT SETBACK (NORTH):	70 FEET MINIMUM REQUIRED	90.00' PROVIDED
FRONT SETBACK (EAST):	70 FEET MINIMUM REQUIRED	85.00' PROVIDED
FRONT SETBACK (WEST):	90 FEET MAXIMUM ALLOWED	54' PROVIDED
REAR SETBACK (SOUTH):	0 FEET REQUIRED	326.74' PROVIDED
SIDE YARD PARKING SETBACK (NORTH):	5 FEET REQUIRED	38.29' PROVIDED
SIDE YARD PARKING SETBACK (EAST):	5 FEET REQUIRED	35.34' PROVIDED
SIDE PARKING SETBACK (EAST):	10 FEET REQUIRED	35.34' PROVIDED
SIDE PARKING SETBACK (WEST):	10 FEET REQUIRED	43.28' PROVIDED
REAR PARKING SETBACK (SOUTH):	10 FEET REQUIRED	124.15' PROVIDED

**PARKING CALCULATIONS:**  
 MOTOR VEHICLE SALES & SERVICE ESTABLISHMENT:  
 1 SPACE/200 S.F. OF USABLE FLOOR AREA PLUS 1 SPACE/EACH AUTO SERVICE STALL

TOTAL REQUIRED PARKING = 20,798 / 200 + 34 SPACES = 138 SPACES

TOTAL PROPOSED PARKING SPACES = 445 SPACES

PROVIDED ADA SPACES = 5, INCLUDING 1 VAN SPACE

PROVIDED BICYCLE PARKING = 2 SPACES

PROVIDED BICYCLE PARKING = 6 SPACES

**PARKING SUMMARY:**  
 VISITOR: 58 SPACES  
 SERVICE BAY: 34 SPACES  
 EMPLOYEE/VISITOR: 47 SPACES  
 TOTAL: 139 SPACES

**STORAGE:**  
 287 SPACES  
 408 SPACES

**OPEN SPACE:**  
 25% OF TOTAL SITE AREA, UP TO 50% MAY BE COMPOSED OF PROTECTED WOODLANDS OR WETLANDS.  
 REQUIRED OPEN SPACE = (25% X 8.51 ±) = 2.13 ACRES  
 PROVIDED OPEN SPACE = 2.63 ACRES (EXCLUDING POND AND WETLANDS)

**SITE SOILS INFORMATION:**  
 ACCORDING TO THE USGS NATURAL RESOURCES CONSERVATION SERVICE WEB SOIL SURVEY FOR OAKLAND COUNTY, THE SITE CONSISTS OF THE FOLLOWING SOIL TYPES:  
 108 - MARLETTE SANDY LOAM, 0 TO 6 PERCENT SLOPES  
 118 - CAPAC SANDY LOAM, 0 TO 4 PERCENT SLOPES



**CAUTION!**  
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**811**  
 Know what's below  
 Call before you dig  
 MICHIGAN 811  
 1-800-482-7171 www.missidj.net



**ERHARD MOTOR SALES, INC.**  
 BLOOMFIELD HILLS, MICHIGAN 48302

**OVERALL PLAN OF JAGUAR LAND ROVER OF NOVI**  
 PART OF THE NORTHEAST 1/4 OF SECTION 23, TOWN 1 NORTH, RANGE 8 EAST, CITY OF NOVI, OAKLAND COUNTY, MICHIGAN

DRAWN BY: [Name]  
 CHECKED BY: [Name]  
 DATE: [Date]

ORIGINAL ISSUE DATE: AUGUST 6, 2018  
 PEA JOB NO. 2017-176  
 SCALE:  
 DRAWING NUMBER:  
**SP-2.0**

Tree Plant List: L-1.0

QTY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	SPEC	COMMENT	REPLACEMENT TREE	GENUS % SPECIES %
1	AK3	Red Maple	<i>Acer rubrum</i>	3" Cal.	B&S	Native	YES	7%
2	AS3	Sugar Maple	<i>Acer saccharum</i>	3" Cal.	B&S	Native	YES	7%
1	BS3	Bowhall Maple	<i>Acer rubrum</i> <i>Bowhallii</i>	3" Cal.	B&S	Native	YES	7%
7	AL8	Allegheny Serviceberry	<i>Amelanchier laevis</i>	8-10" Hl.	B&S	Native	YES	2%
12	BP8	Paperbark Birch	<i>Betula papyrifera</i>	3" Cal.	B&S	Native	YES	4%
12	CA3	American Hornbeam	<i>Carpinus caroliniana</i>	3" Cal.	B&S	Native	YES	4%
1	CC1	Eastern Redbud	<i>Cercis canadensis</i>	8-10" Hl.	B&S	Native	YES	1%
10	O0	Hackberry	<i>Celtis occidentalis</i>	3" Cal.	B&S	Native	YES	7%
22	FD3	American Beech	<i>Fagus grandifolia</i>	3" Cal.	B&S	Native	YES	7%
11	GT3	Skyline Honeylocust	<i>Gleditsia inaequalis</i>	3" Cal.	B&S	Native	YES	7%
23	LT	Tulip Tree	<i>Liriodendron tulipifera</i>	3" Cal.	B&S	Native	YES	7%
13	MR3	Royal Raindrops Crabapple Male	<i>Malus 'SPS-KWS'</i>	3" Cal.	B&S	Non-Native	YES	4%
4	SK3	Japanese Tree Lilac	<i>Syringa reticulata</i>	2-2" Cal.	B&S	Non-Native	YES	1%
12	NS3	Tupelo	<i>Nyssa sylvatica</i>	3" Cal.	B&S	Native	YES	4%
28	OV3	Hophornbeam	<i>Ostrya virginiana</i>	3" Cal.	B&S	Native	YES	8%
10	PD3	American Sycamore	<i>Platanus occidentalis</i>	3" Cal.	B&S	Native	YES	7%
13	OW3	Swamp White Oak	<i>Quercus bicolor</i>	3" Cal.	B&S	Native	YES	4%
1	OS3	Scarlet Oak	<i>Quercus scarlet</i>	3" Cal.	B&S	Native	YES	2%
11	OM3	Burr Oak	<i>Quercus macrocarpa</i>	3" Cal.	B&S	Native	YES	7%
15	OR3	Red Oak	<i>Quercus rubra</i>	3" Cal.	B&S	Native	YES	7%
12	TE3	American Basswood	<i>Tilia americana</i>	3" Cal.	B&S	Native	YES	4%
12	TR3	Crimean Linden	<i>Tilia evlana</i>	3" Cal.	B&S	Non-Native	YES	4%
248		TOTAL DECIDUOUS						27

EVERGREEN PLANT LIST:

QTY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	SPEC	COMMENT	REPLACEMENT TREE	GENUS % SPECIES %
4	ACS	Concolor Fir	<i>Abies concolor</i>	8" Hl.	B&S	Non-Native	YES	1%
10	PG8	White Spruce	<i>Picea glauca</i>	8" Hl.	B&S	Native	YES	7%
8	PS8	American White pine	<i>Pinus strobus</i>	8" Hl.	B&S	Native	YES	2%
33	TD8	Arbutus	<i>Thuja occidentalis</i>	8" Hl.	B&S	Native	YES	10%
330		TOTAL EVERGREEN						55

No more than 17% of one genus and 10% of one species > THAN 200 TREES

PLEASE SEE SHEET L-1.1 FOR PLANTING DETAILS, COST OPINION AND SEED MIX INFORMATION.

NOTE: PULL MULCH 3" BACK FROM TREE ROOT FLAKE. PLEASE SEE PLANTING DETAILS FOR MORE INFORMATION.

PLANT MATERIAL SHALL NOT BE PLANTED WITHIN 4' OF PROPERTY LINE, TYP.

IRRIGATED 500 LAWY MIN. 4" BORDER AROUND PARKING LOT

EXISTING TREE TO REMAIN, TYP.

25' CLEAR VISION ZONE, TYP. 44" AT HALFWAY POINT

PLANT MATERIAL SHALL NOT BE PLANTED WITHIN 4' OF PROPERTY LINE, TYP.

ECONOMY PREPARE SEED MIX, TYP.

25' CLEAR VISION ZONE, TYP. 42" AT HALFWAY POINT

25' CLEAR VISION ZONE, TYP.

25' CLEAR VISION ZONE, TYP. 42" AT HALFWAY POINT

25' CLEAR VISION ZONE, TYP.

25' CLEAR VISION ZONE, TYP.

25' CLEAR VISION ZONE, TYP.

25' CLEAR VISION ZONE, TYP.

25' CLEAR VISION ZONE, TYP.

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25' CLEAR VISION ZONE, TYP.

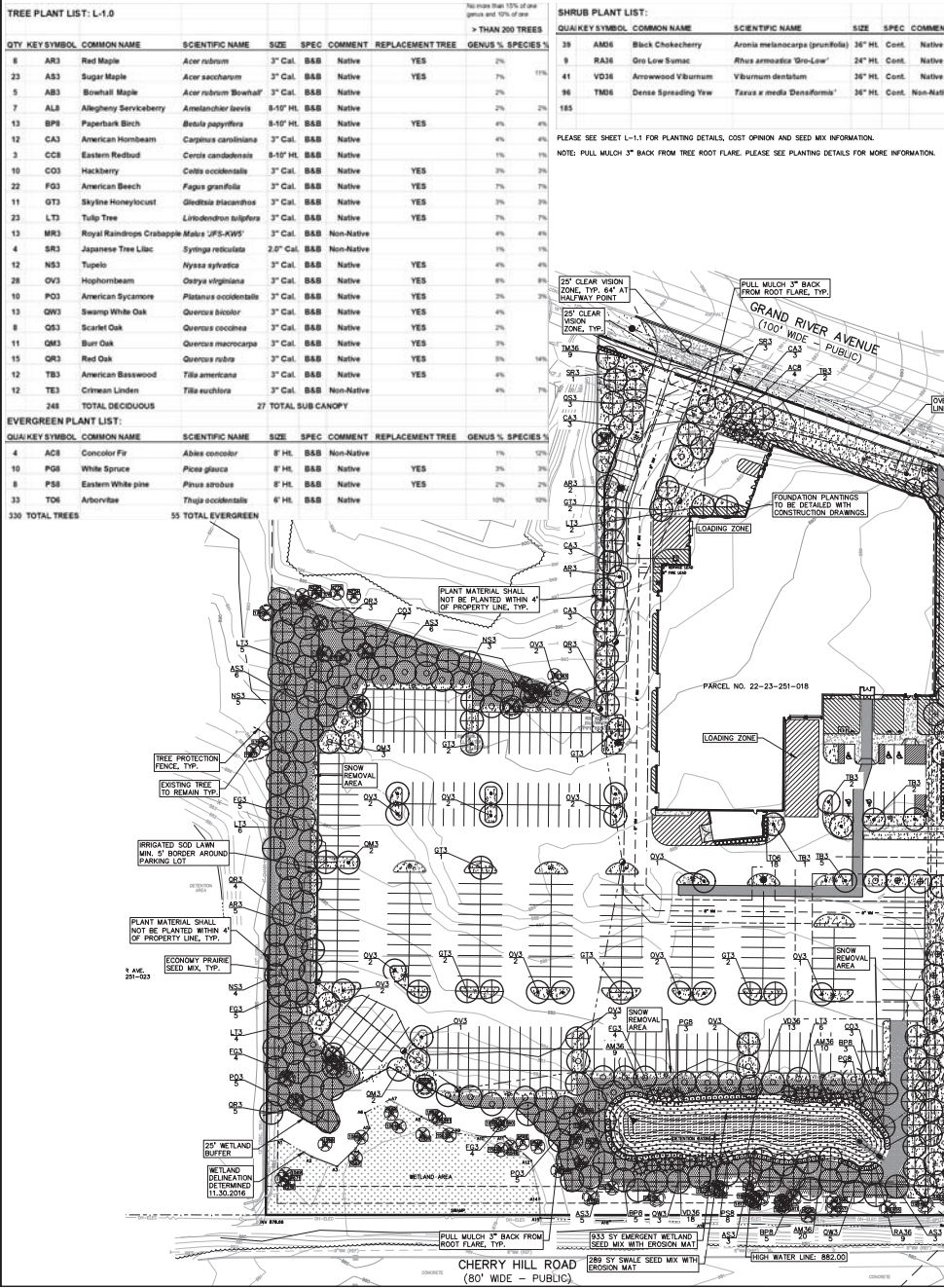
CHERRY HILL ROAD (80' WIDE - PUBLIC)

MEADOWBROOK ROAD (60' WIDE - PUBLIC)

GRAND RIVER AVENUE (100' WIDE - PUBLIC)

OVERHEAD UTILITY LINES

RESTORE DISTURBED AREA WITH LAWN, TYP. CONTRACTOR TO FIELD VERIFY LIMITS



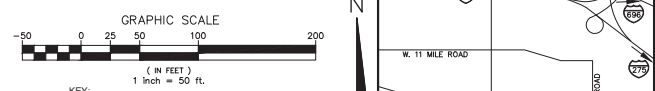
NOTES PER CITY OF NOVI: PLANT MATERIAL SHALL NOT BE PLANTED WITHIN 4' OF PROPERTY LINE.

NO TREES SHALL BE PLANTED CLOSER THAN 10' FROM OVERHEAD UTILITY, 10' FROM FIRE HYDRANT, CATCH BASIN OR MANHOLE, 5' FROM UNDERGROUND UTILITIES AND 3' OFF BACK OF CURB.

NO TREE TO BE LOCATED IN FRONT OF ANY SIGN OR BUILDING ADDRESS. FIELD ADJUST TREES AS NECESSARY.

ALL TRANSFORMER AND UTILITY BOXES TO BE SCREENED PER NOVI CITY DETAIL AND IN THE CASE ADDITIONAL NOTES ARE ADDED TO THE SITE AFTER PLAN APPROVAL. SEE LANDSCAPE DETAIL SHL-L-1.1.

EXISTING DISEASED TREES WILL BE REMOVED AND REPLACED WITH NEW PLANTINGS PER CITY'S APPROVAL AND INSTRUCTION.



LANDSCAPE CALCULATION:

PER CITY OF NOVI ZONING ORDINANCE - ZONED NCC AND OS-1, CHANGING TO GE ERHARD BMW, NOV: 2017-176

PER AMENDED LANDSCAPE ORDINANCE EFFECTIVE 6/22/17

INTERIOR PARKING LOT LANDSCAPE REQUIRED:

A. SF OF PAVED AREA UNDER 50,000 SF = 50,000 X 7.5% = 3,750 SF  
 B. SF OF ADDITIONAL PAVED AREA OVER 50,000 SF = 102,486 X 1% = 1,025 SF  
 A+B= 3,750 + 1,025 = 4,775 SF OF ISLANDS REQUIRED  
 E. (4,775/250) = 19.102 CANOPY TREES REQUIRED  
 NOTE: ALL PARKING LOT LANDSCAPE ISLANDS SHALL BE A MIN. OF 200 SF, A MIN. OF 10' WIDE AND MIN. 3' BETWEEN CURB AND TREE TRUNK.

PROVIDED: 11.612 SF OF INTERIOR LANDSCAPE ISLAND AREA  
 24 = 3" CAL DEC CANOPY TREES

PARKING LOT PERIMETER REQUIRED:

7 TREES PER 35 LF OF PAVED VEHICULAR PERIMETER  
 5,000 LF OF PARKING LOT / 35 LF = 142 TREES REQUIRED

PROVIDED: 46 3" CAL DEC TREES, 7 PERIMETER DECIDUOUS TREES THAT ALSO COUNT AS GREENBELT TREES & EXISTING TREES

RIGHT OF WAY ADJACENT TO PARKING REQUIRED:

1 LARGE DEC OR EVG / 35 LF OF FRONTAGE  
 1 SUB CANOPY DEC TREE / 35 LF OF FRONTAGE  
 MEADOWBROOK ROAD: (288-62) LF/75 = 4 LARGE DEC OR EVG REQUIRED  
 (288-62) LF/75 = 11 SUB CANOPY REQUIRED  
 GRAND RIVER AVENUE: (90-64) LF/75 = 4 LARGE DEC OR EVG REQUIRED  
 (90-64) LF/75 = 11 SUB CANOPY REQUIRED  
 (90-64) LF/75 = 11 CANOPY TREES BETWEEN WALK & CURB

PROVIDED: MEADOWBROOK ROAD: 11 SUB CANOPY TREES  
 1 EXISTING AND 6 CANOPY TREES BETWEEN WALK AND CURB  
 GRAND RIVER AVENUE: 1 LARGE DEC, 1 SUB CANOPY TREE  
 6 TREES BTWN SIDEWALK AND CURB, INSUFFICIENT SPACE DUE TO UNDERGROUND AND OVERHEAD UTILITIES.

RIGHT OF WAY ADJACENT TO PARKING REQUIRED:

1 SUB CANOPY DEC / 40 LF OF FRONTAGE  
 1 CANOPY DEC TREE / 35 LF BETWEEN SIDEWALK & CURB  
 MEADOWBROOK ROAD: 348 LF/75 = 6 LARGE DEC OR EVG REQUIRED  
 348 LF/75 = 9 SUB CANOPY REQUIRED  
 GRAND RIVER AVENUE: 348 LF/75 = 10 CANOPY TREES BTWN WALK & CURB  
 253 LF/75 = 4 LARGE DEC OR EVG REQUIRED  
 253 LF/75 = 6 SUB CANOPY REQUIRED  
 CHERRY HILL ROAD: 370 LF/75 = 4 TREES  
 370 LF/75 = 9 SUB CANOPY TREES  
 370 LF/75 = 11 LARGE DEC TREES

PROVIDED: MEADOWBROOK ROAD: 1 EXISTING AND 5 CANOPY TREES  
 9 SUB CANOPY TREES  
 6 TREES AND 4 EX. TREES BTWN SIDEWALK & CURB  
 GRAND RIVER AVENUE: 4 EVERGREEN TREES  
 6 TREES BTWN SIDEWALK AND CURB, INSUFFICIENT SPACE DUE TO UNDERGROUND AND OVERHEAD UTILITIES.  
 CHERRY HILL ROAD: 19 EXISTING TREES

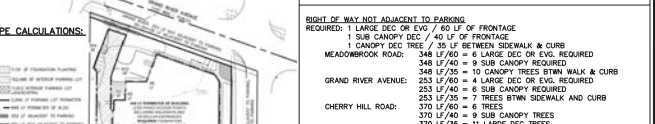
FOUNDATION PLANTINGS REQUIRED:

LF OF BUILDING LESS PAVED ACCESS POINTS X 8  
 845 LF BUILDING PERIMETER X 8 = 6,764 SF INTERIOR SITE LANDSCAPING  
 REQUIRED: 2,151 SF OF FOUNDATION LANDSCAPING ADJACENT TO BUILDING.

DETENTION BASIN LANDSCAPE REQUIRED:

CLUSTERS OF LARGE NATIVE SHRUBS IN A DENSE PLANTING AT AND ABOVE THE HIGH WATER ELEVATION OF THE BASIN COVERING 70-75% OF THE BASIN RIM AREA AT THE HIGH WATER ELEVATION USING A MINIMUM OF THREE SPECIES OF NATIVE SHRUBS. BOTTOM OF BASIN PLANTED IN NATIVE GRASSES/ GRASSOVER REACHING A MIN. 10" IN HT.

PROVIDED: NATIVE SHRUBS AND NATIVE SEED MIX



TREE REPLACEMENT CALCULATIONS

REQUIRED: 1 REPLACEMENT: 8"x11" = 126 (126) REPLACEMENT REQUIRED  
 2 REPLACEMENT: 12"x20" = 23 (46) REPLACEMENT REQUIRED  
 3 REPLACEMENT: 21"x20" = 8 (8) REPLACEMENT REQUIRED  
 TOTAL REGULATED TREES REMOVED = 144  
 TOTAL REGULATED REPLACEMENT TREES = 172

PROVIDED: 160 3" CAL. DECIDUOUS TREES & 18 (AT 1.5:1 r@) EVGREENS, SEE SHEET L-1.0

(EXISTING TREES THAT ARE DEAD, VERY POOR OR POOR CONDITION, ARE EXEMPT FROM REPLACEMENT)

PROVIDED: IF THERE IS NOT ADEQUATE SPACE FOR REPLACEMENT TREES ON SITE, TREE REPLACEMENT WILL BE DONE VIA CONTRIBUTION TO THE CITY OF NOVI TREE REPLACEMENT FUND.

SEE SHEET L-1.1 FOR EXISTING TREE LIST. SEE SHEET L-1.0 FOR REPLACEMENT TREES.

NO.	BY	DATE	REVISIONS
1			



CAUTION!  
 This drawing represents a proposed construction and is not a final construction drawing. It is subject to change without notice. The contractor is responsible for verifying the accuracy of all dimensions and specifications on this drawing. The City of Novi is not responsible for any errors or omissions on this drawing.

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811 Know what's below Call before you dig

MSO System Inc.  
 1-800-462-7171 www.msoinc.net

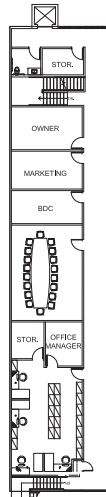
PEA  
 PEA, Inc.  
 2430 Rochester Ct Ste 100 Troy, MI 48063-1872  
 T: 248.689.9090 F: 248.689.1044  
 www.peainc.com

ERHARD MOTOR SALES INC.  
 1948 S. TELEGRAPH BLOOMFIELD HILLS, MICHIGAN 48307  
**PRELIMINARY LANDSCAPE PLAN JAGUAR - LAND ROVER OF NOVI**  
 PART OF NOVI AND COUNTY MICHIGAN ROSE CITY OF NOVI, OHIO AND COUNTY MICHIGAN, IN THE CITY OF NOVI, OHIO AND COUNTY MICHIGAN, IN THE

DES.	A.E.	DN.	LAVY	SUR.	AW	P.M.	ITS
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ORIGINAL ISSUE DATE: AUGUST 6, 2018  
 PEA JOB NO. 2017-176  
 SCALE: 1" = 50'  
 DRAWING NUMBER: L-1.0

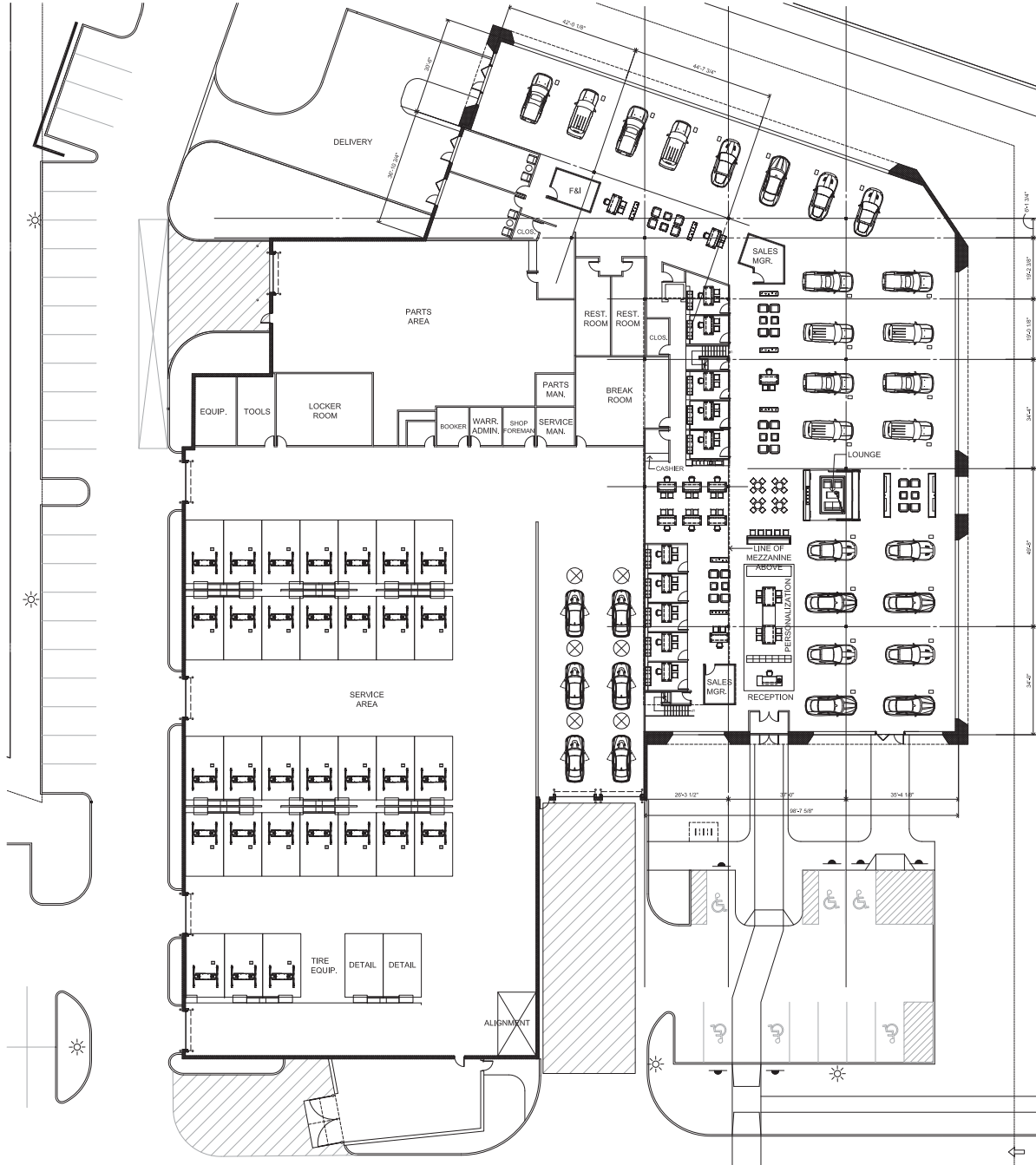




**North Mezzanine Plan**  
1/16" = 1'-0"

### PROPOSED JAGUAR LAND ROVER DEALERSHIP 58,663 S.F.

MAIN FLOOR : 55,247 S.F.  
MEZZANINE : 3,416 S.F.  
GROSS FLOOR AREA: 58,663 S.F.  
USABLE FLOOR AREA: 20,798 S.F.



Issued for:	
OWNER REVIEW:	21 MAY 18
OWNER REVIEW:	22 MAY 18
OWNER REVIEW:	15 JUN 18
OWNER REVIEW:	20 JUN 18
OWNER REVIEW:	22 JUN 18
OWNER REVIEW:	24 JUN 18
SUBMITTED FOR SITE PLAN REVIEW:	29 JUL 18

Project

**Proposed  
Jaguar Land Rover**  
8WC Grand River Ave. & Meadowbrook  
Novi, MI



2800 TELEGRAPH ROAD  
SUITE 200  
BIRMINGHAM, ALABAMA  
35203-1904  
PH 866.643.7700 FX 205.644.3370  
www.rogvoy.com



drawing:  
**Proposed  
Floor Plan**

DO NOT SCALE DRAWINGS

Issue date:  
drawn: KL/BDG  
checked: MD  
approved: MD

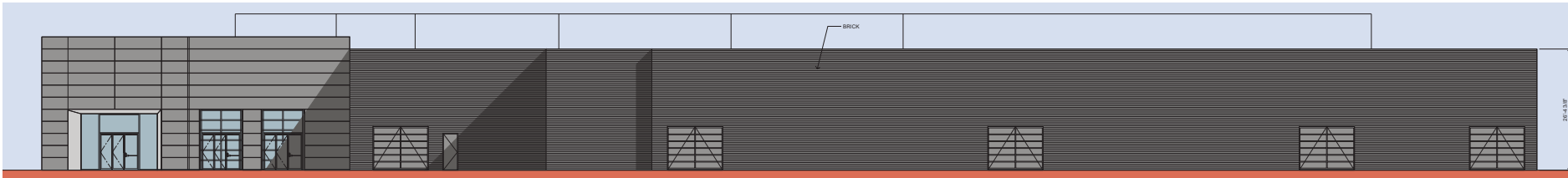
No. number: 17018  
sheet:

## FP-1

ELEVATIONS

**OVERALL BUILDING MATERIAL PERCENTAGES :**

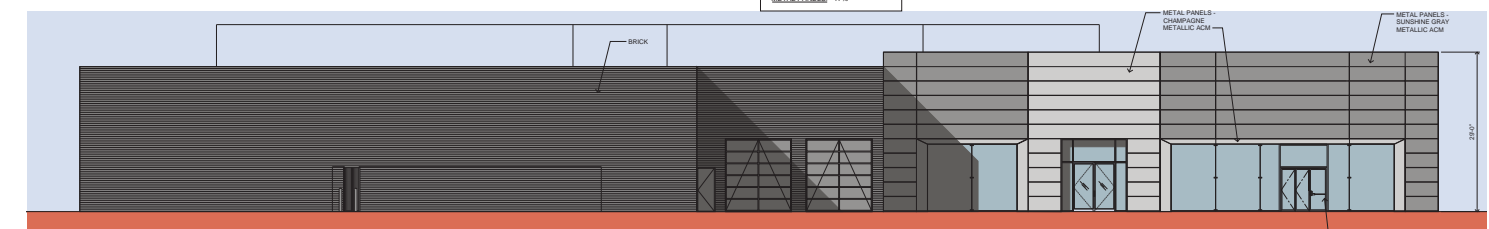
BRICK: 44.5%  
GLASS: 17%  
METAL PANELS: 38.5%



**WEST ELEVATION MATERIALS:**  
BRICK: 79%  
GLASS: 0%  
METAL PANELS: 17%

**West Elevation**

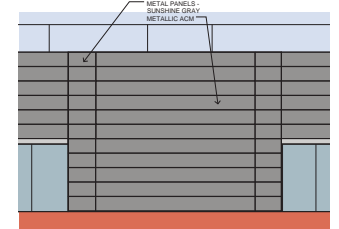
Scale: 3/32"=1'-0"



**SOUTH ELEVATION MATERIALS:**  
BRICK: 52%  
GLASS: 17.4%  
METAL PANELS: 30.6%

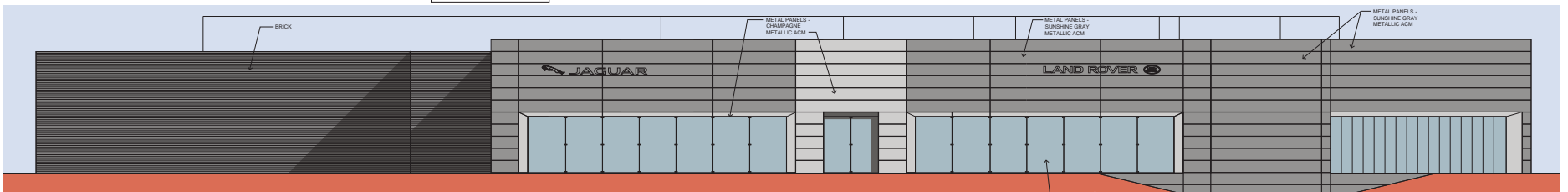
**South Elevation**

Scale: 3/32"=1'-0"



**Elevation at Corner**

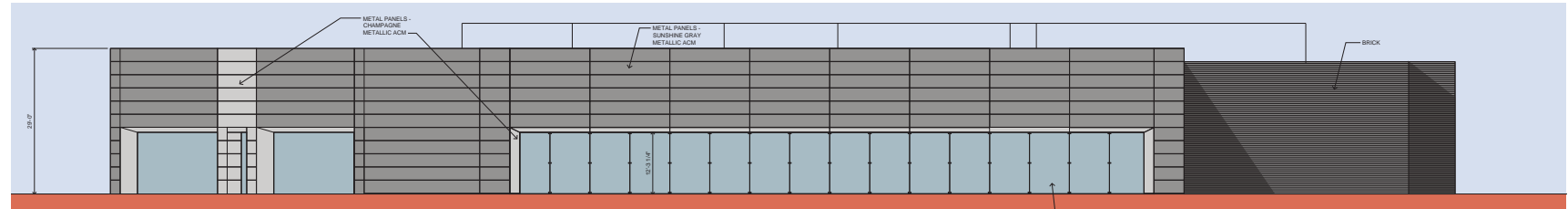
Scale: 3/32"=1'-0"



**EAST ELEVATION MATERIALS:**  
BRICK: 28.5%  
GLASS: 21.7%  
METAL PANELS: 49.8%

**East (Meadowbrook Rd.) Elevation**

Scale: 3/32"=1'-0"



**NORTH ELEVATION MATERIALS:**  
BRICK: 18.6%  
GLASS: 25.2%  
METAL PANELS: 56.2%

**North (Grand River Ave.) Elevation**

Scale: 3/32"=1'-0"

**Issued for:**

OWNER REVIEW:	21 MAY 18
REVISED:	19 JUL 18
REVISED:	19 JUL 18
REVISED:	31 JUL 18
SUBMITTED FOR SITE PLAN:	
REVIEW:	08 AUG 18

project:

**Proposed Jaguar Land Rover**  
SWC Grand River Ave. & Meadowbrook  
Novi, MI

**ROGVOY ARCHITECTS**  
3800 TELEGRAPH ROAD  
SUITE 200  
BIRMINGHAM, MICHIGAN  
48209-3004  
PH 248.945.0700 FX 248.945.3700  
www.rogvoynyc.com



drawing:  
**Proposed Elevations**

DO NOT SCALE DRAWING

Issue date:  
drawn: KL/SDB  
checked: MD  
approved: MD

No number: **17018**  
sheet:

**ELEV**

FAÇADE BOARD

FINAL PRODUCT MIGHT HAVE  
SLIGHT VARIANCE AS PER ACCEPTABLE  
INTERNATIONAL STANDARDS

0



## COMMUNITY IMPACT STATEMENT

**COMMUNITY IMPACT STATEMENT**

**JLR**

**NOVI, MICHIGAN**

**Jaguar  
Land Rover  
Novi, Michigan**

**Rogvoy Architects, P.C.**

**September 19, 2018**

- Impact on Police and Fire Services:

Zero police and fire responses per year based on an existing local BMW dealership.

- Employment Opportunities:

It is projected that 20 to 30 jobs will be created during the construction of the building and site improvements. Once the construction of the building is complete, it will employ approximately 65 to 70 persons.

- City Performance Standards:

A sound report has been provided from Kolano & Saha Engineers, Inc., there is no anticipated negative impact upon adjacent properties due to noise or emissions from the proposed development.

- Estimated Sewer & Water Taps:

There will be one (1) sewer tap and two (2) water taps. The demand level will carry on throughout the day and will have normal operating pressures. There will be minimal impact on available water capacity. The utility demand will be 1.8 REU's per acre. There will be no apparent impact on the sanitary capacity of the downstream sewer within the City's infrastructure.

- Surrounding Land Uses:

The proposed use is consistent with the current existing Cadillac dealership on the opposite corner. The Site was recently rezoned to GE Gateway East district and is in keeping with the Master Plan.

Adjacent Land Uses are as follows:

NW: Zoned NCC Non-Center Commercial, Funeral Home

W: Zoned GE Gateway East, Multi-Family

S: (Across Cherry Hill Rd.): Zoned RM-2 High Densite Residential, Condominiums

E: (Across Meadowbrook Rd.): Mostly zoned OS-1 Office Service

SE: Zoned R-4 One Family Residential

N: (Across Grand River Ave.): Zoned NCC, Retail Center

- Proposed Land Use:

The 9.5 acre site is at the southwest corner of Grand River Ave. and Meadowbrook Road, in Section 23, Novi, Michigan. Presently the site is vacant.

Erhard JLR takes pride in running a neat and quiet dealership. All business activities should have no impact on surrounding uses.



- Social Impacts:
  - Existing Users/Uses: Since the site is vacant, no residents, merchants or business owners will be displaced by the proposed development.
  - Traffic Impact: A traffic impact study is provided.
  - The development will be linked internally with the sidewalks and crosswalks. A bike path is planned along the north side of the development to connect the residential neighborhoods to the hospital and schools.
  - Population Projections: There will be little change in demand upon school or city recreational facilities except those individuals that relocate due to employment opportunities.
- Environmental Factors:
  - Existing natural site features: The proposed site layout preserves mixed wetland, woodland, on the property. Some of the trees will be removed and replaced. Existing wetlands will be preserved and the overall existing elevations will remain.
  - Storage of Hazardous or Toxic Materials: There will be no hazardous materials used. Storage of new and used motor oil will be within the building.
  - Underground Storage Tanks: There are no existing underground tanks, and there will not be any underground tanks installed.
  - Environmental History: Environmental testing was performed by G2 Consulting Group in September 2017 and there was no contamination on the site.  
Impact on Wildlife: Any impact on existing wildlife will be temporary.
- Proposed Site Amenities (i.e. Sidewalks, Public Parks, Bicycle Paths, Etc):

There will be a bike path installed along Grand River Avenue per City requirements, bike racks will be provided on site, and connecting sidewalks will also be used to connect the proposed building to public walkways.

REM: G:/2017/17018

NOISE IMPACT STATEMENT



2018-167  
August 7, 2018

Mr. Mark Drane  
Principal  
Rogvoy Architects  
32500 Telegraph Road, Suite 250  
Bingham Farms, Michigan 48025

Subject: **Automobile Dealership Community Impact Study of Noise Levels**  
re: Jaguar-Land Rover – SWC Grand River Ave. & Meadowbrook Rd.  
Novi, MI

Dear Mr. Drane:

At your request and authorization, Kolano and Saha Engineers, Inc. (K&SE) has conducted an investigation to predict the property line sound levels expected from the operation of the proposed referenced dealership. This includes service operations, vehicle deliveries, and building mechanical equipment. These sound levels were evaluated against the limits established by the City of Novi Ordinance.

### **Proposed Site**

The location of the proposed Jaguar-Land Rover dealership is at the southwest corner of Grand River Avenue and Meadowbrook Road. Most adjacent land uses the North, East and West are commercial. Property adjacent to the west of the southern half of the proposed site is zoned Gateway East (GE) and is currently undeveloped. The GE zoning has principal permitted uses that are commercial in function, though could include parks, mixed use or multi family. Property to the south is zoned residential. The City of Novi noise code limits for residential and commercial receiving land use apply at all respective property lines. **Exhibit 1** provides an aerial view of the site with the proposed building, drives and parking lot overlaid.

Sound level predictions were based on the location of property lines, mechanical equipment, location of service doors, and noise measurements conducted by K&SE for various elements that are expected to create noise at the proposed dealerships. The following documents were utilized for the predictions:

- Rogvoy Architects Drawings: Jaguar-Land Rover – Novi; Site Plan, Floor Plan, Elevations, Roof Plan, Rooftop Mechanical, and Site Grading.
- Sound power data provided for the proposed rooftop air makeup units as provided to us by Rogvoy Architects.

### **City of Novi Noise Code**

The City of Novi Code, Zoning Ordinance, *Section 5.14 Performance Standards, Subsection 10 Noise*, restricts property line noise levels to 75dB(A) daytime and a 70dB(A) nighttime for business and commercial zones. Furthermore, it restricts property line noise levels to 60dB(A) daytime and 55dB(A) nighttime for residential zones. Daytime is defined as 7AM – 10PM with Nighttime occupying 10PM – 7AM.

Most of the dealership operations are expected to take place during the day though some early deliveries may occur before 7AM. It is expected that the roof top mechanical equipment may operate 24 hours a day to maintain building environmental conditions.

Furthermore, in the Novi Code of Ordinances helps to help reduce the impact of trucks and other motor vehicles in *Section 22-100*. This ordinance regulates idling, standing and loading/unloading of motor vehicles. The purpose of this section is to limit *'exhaust and noise from standing, idling, and loading/unloading of motor vehicles'* which can present an *'unreasonable risk to the general health safety and welfare of the community and otherwise presents a nuisance to residents living in close proximity.'* Under this ordinance, the period of time between 8PM and 7AM is protected for residents to enjoy the use of their property without undue impact from idling, standing, loading/unloading of motor vehicles. In particular:

*(c)...(1) Between the hours of 8:00 p.m. and 7:00 a.m. (the following day), it shall be unlawful to permit, cause, or occupy any standing or idling motor vehicle or commercial vehicle within four hundred (400) feet of any residential structure, for more than fifteen (15) consecutive minutes or for a period or periods of time aggregating more than fifteen (15) minutes in any one (1) hour*

...

*(d)...(1) Between the hours of 8:00 p.m. and 7:00 a.m. (the following day), it shall be unlawful for any person to load/unload or permit the loading or unloading of any commercial vehicle within four hundred (400) feet of a residential structure, in any street, parking lot, or loading or unloading zone, dock, bay or area...*

This ordinance is expected to limit early morning deliveries to locations on the site where truck loading/unloading operations would be more than 400 feet from nearby residents.

### **Advanced Computer Modeling Noise Prediction**

Sound is a physical phenomenon that can be readily predicted with reasonable accuracy. In order to evaluate the sounds created from the proposed automobile dealership and determine what noise impact may occur at the site boundaries, we developed an advanced three dimensional acoustical model. This model allows accurate prediction of sound levels created by the operation of known building mechanical systems and related dealership operations. The computer program we use for this modeling relies on international standards (such as ISO 9613) to properly calculate and predict sound levels. The computer program relies on user inputs of terrain, structures, foliage, obstacles, sound reflective and absorptive surfaces, receiver positions, as well as the type of sound source, including point sources (small individual devices, such as small fans), line sources (numerous sources in a line, such as road traffic), and area sources (sources with large surface areas, such as transformers). By using this predictive tool we have constructed a virtual acoustic model of the proposed automobile dealership site and have developed sound level predictions for it.

### Building Rooftop Mechanical Equipment

Building mechanical systems primarily consist of roof top air handling units and ventilation fans and are located at various points on the roof of the dealership building. Sound level data used for these mechanical systems comes from the unit manufacturers. Our modeling assumes a worst case scenario with all units operating simultaneously at nighttime on a continuous basis. The predicted sound level contour plots with this equipment operating are shown in **Exhibit 2**. The predicted sound level for the rooftop mechanical equipment is expected to be below all applicable ordinance noise limits.

### Trash Compactor

A trash bin and compactor are planned to be located on the south side of the building. Sound level data used for the trash compactor comes from our measurement conducted at other commercial facilities that utilize similar equipment. The predicted sound level contour plots with the trash compactor operating are shown in **Exhibit 3**. This predicted sound is expected to be below all applicable ordinance noise limits.

### Delivery Trucks Traveling on Site

The dealership is expected to receive deliveries at various times during the day and early mornings, potentially prior to 7AM. Cargo vans, box trucks as well as an occasional semi-truck are expected make these periodic deliveries of vehicle parts and business supplies. Trucks are expected to enter from Meadowbrook Road, travel along the south of the building, turn right to then travel along the west side of the building, and finally exit the site onto Grand River Ave. Cargo vans and box trucks are expected to make deliveries at two locations; the south side of the building near the west corner, and the west side of the building at the Parts Storage Room access door. The semi-trucks are expected to park along the north side of the drive such that the back of the trailer is positioned near the Parts Storage Room access door. **Exhibit 4, 5 & 6** provide the modeled configurations for semi-trucks and box trucks making deliveries on the site.

Semi-trucks driving along the west side of the building, as shown in **Exhibit 4**, are expected to be 2 dB higher than the nighttime commercial noise limit at distances within 10 feet of the property line on the commercial property to the west (O'Brien-Sullivan Funeral Homes). This same level is 3dB less than the daytime noise limit. This minor nighttime excursion is not expected to have any significant impact to the funeral home as the excursion does not occur in areas where people would normally reside. Additionally, though not taken into account in our model, there is vegetation along the property line on the side of the funeral home property that will help buffer some of the sound from the dealership.

Semi-truck and Box Truck delivery operations, as shown in **Exhibits 5 & 6**, are expected to comply with daytime and nighttime ordinance limits.

### Car Carrier Loading/Unloading

The dealership is expected to receive vehicles to sell as well as to ship some vehicles off site. These deliveries are commonly made by car carrier trucks which produce similar sounds to other semi-trucks when being driven, though have a unique series of sounds while loading and unloading vehicles. We have conducted measurements of various sources of sound, including car carrier truck loading/unloading operations, from previous investigations and have compiled a database of sound sources. The car carrier operations contain multiple sound sources including the semi-truck idling, hydraulic pump operation, hydraulic actuators, shifting and setting of mechanical elements, and vehicles being driven onto and off the carrier. These operations have been compiled into a composite set of sound levels for the purpose of predictive modeling. The results of this model, as shown in **Exhibit 7**, are expected to comply with day and nighttime limits for adjacent commercial properties, though are expected to only comply with the daytime limits for adjacent residential properties.

### **Conclusions**

Based on the findings of our study and under proper management, we expect the proposed Jaguar-Land Rover Dealership to be largely in compliance with the City of Novi ordinance noise criteria. The only exception that we anticipate will be for semi-trucks traveling along the west side of the dealership building. The result is expected to be a relatively small exceedance of 2dB above the commercial nighttime noise limit along the western property line adjacent to the funeral home. This small exceedance is not expected to create adverse impact, as stated in our evaluation of delivery trucks above.

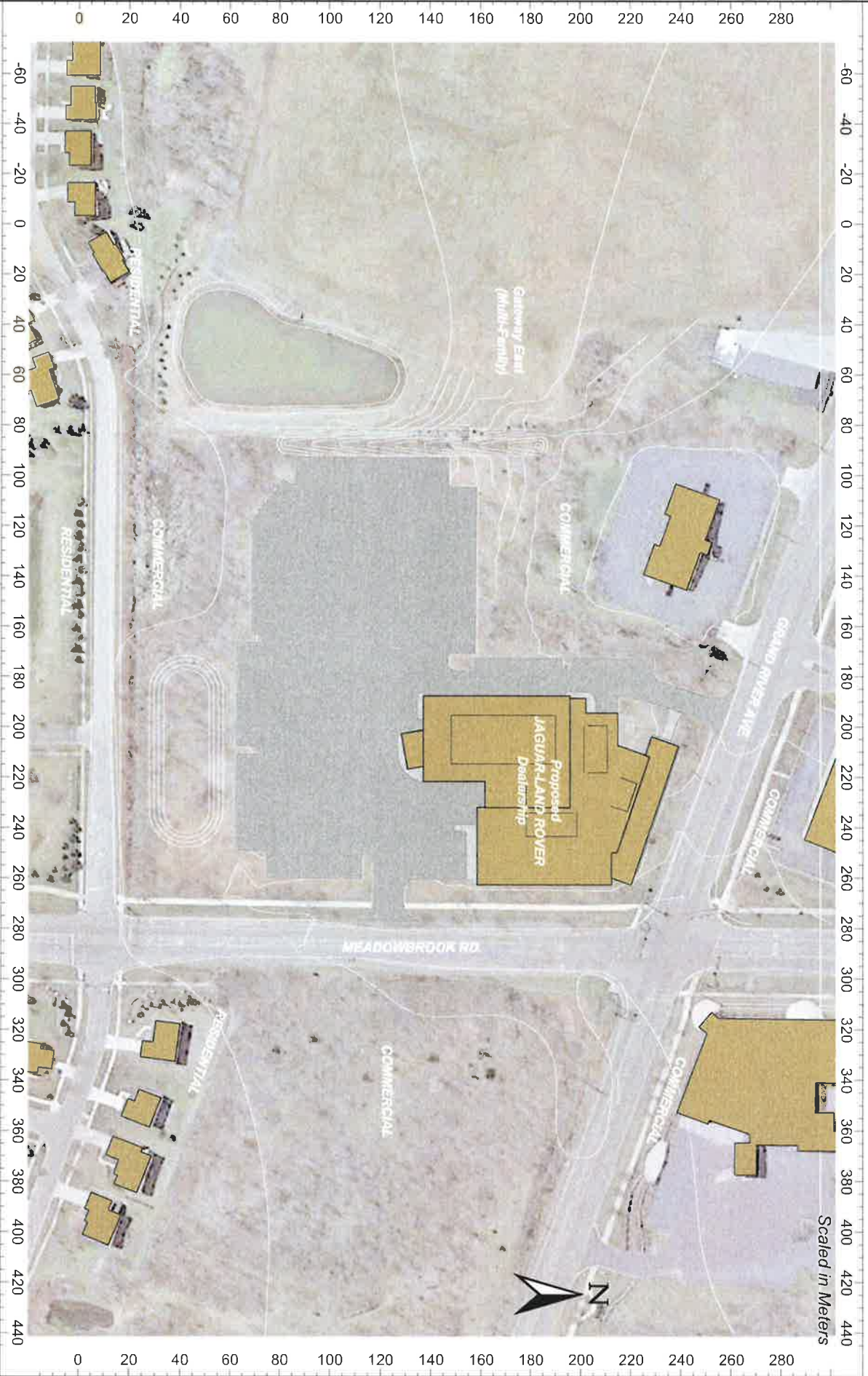
Mr. Drane, we hope this summary of our investigation is informative and helpful. Should you need additional information regarding this work or additional assistance, don't hesitate to ask.

Sincerely,  
**KOLANO AND SAHA ENGINEERS, INC.**



Darren Brown, P.E.  
INCE Board Certified  
Consultant

**EXHIBIT 1  
PROPOSED JAGUAR-LAND ROVER DEALERSHIP SITE PLAN MODEL WITH ADJACENT PROPERTIES**



**Kolano and Saha Engineers, Inc.**  
 3559 Sashabaw Road - Waterford, MI 48329  
 248-674-4100 www.kandse.com

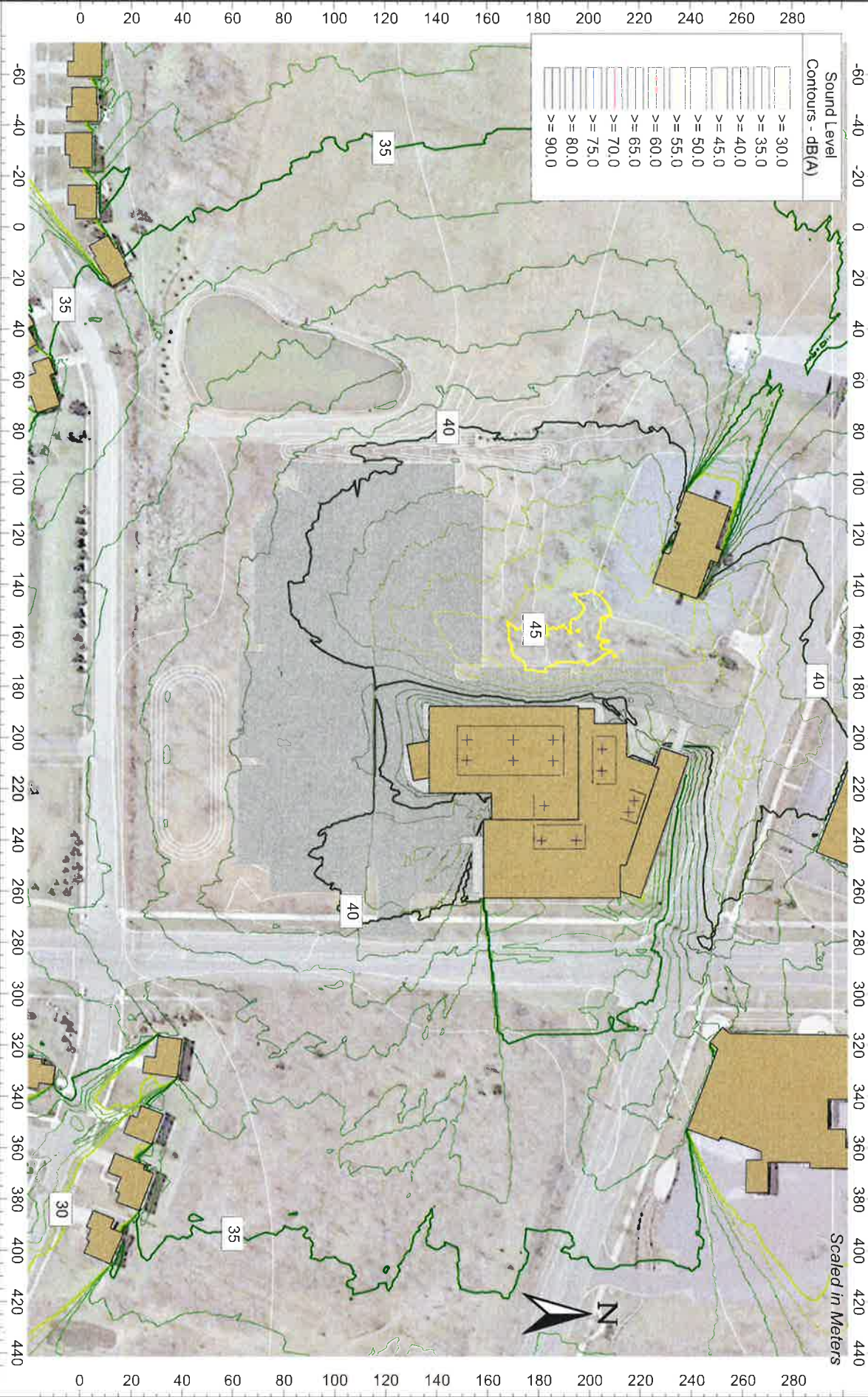
Project Name: **PROPOSED JAGUAR-LAND ROVER NOVI**  
 Study Conducted for: **ROGVOY ARCHITECTS**  
 Project No. : 2018-167

Analysis Date (day.mo.yr): 07.08.18



EXHIBIT 2

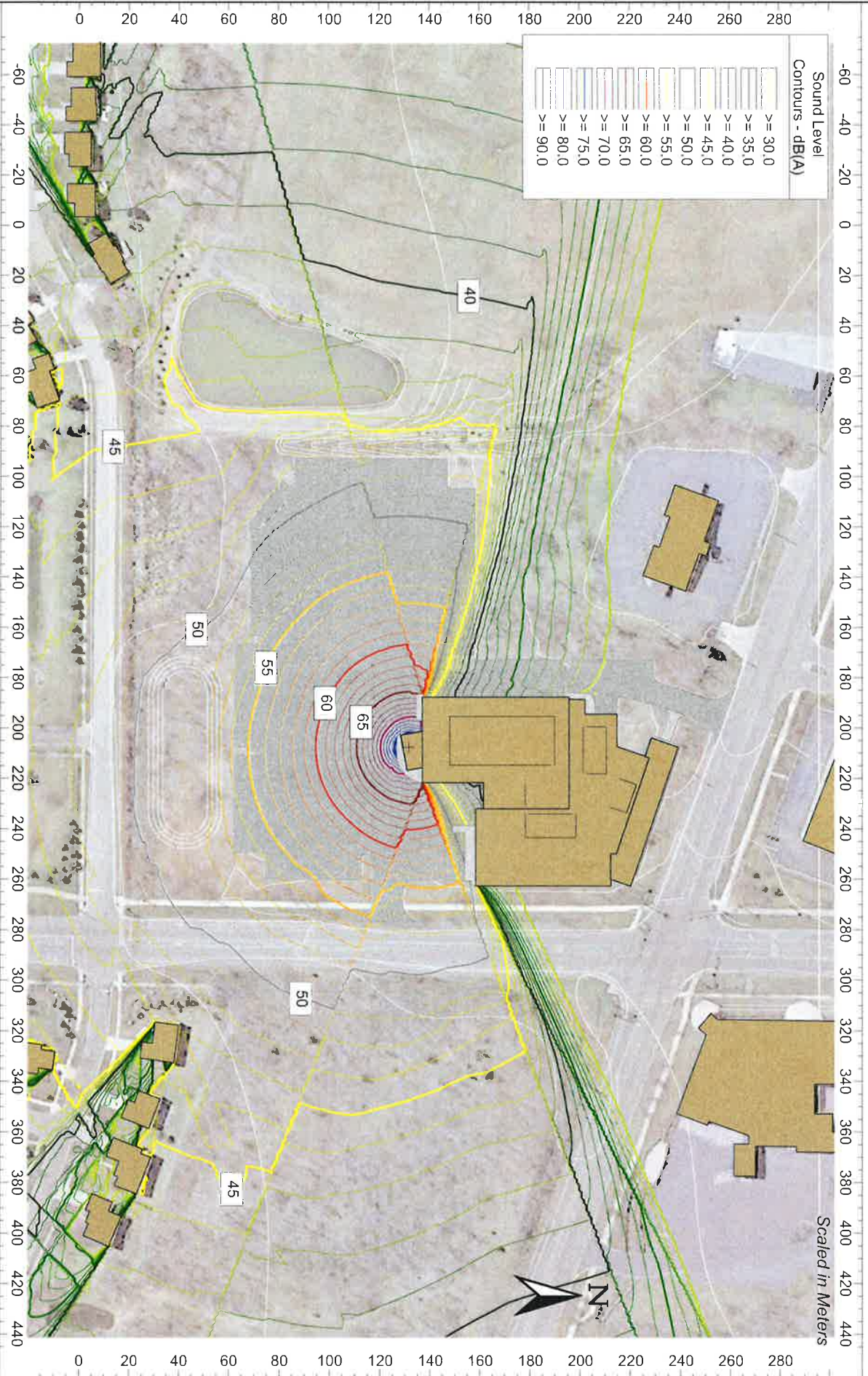
PROPOSED JAGUAR-LAND ROVER DEALERSHIP - PREDICTED ROOFTOP MECHANICAL EQUIPMENT SOUND LEVELS



**K&S**  
**Kolano and Saha Engineers, Inc.**  
 3559 Sashabaw Road - Waterford, MI 48329  
 248-674-4100 www.kandse.com

Project Name: **PROPOSED JAGUAR-LAND ROVER NOVI**  
 Study Conducted for: **ROGOVOY ARCHITECTS**  
 Project No. : 2018-167  
 Analysis Date (day.mo.yr): 07.08.18

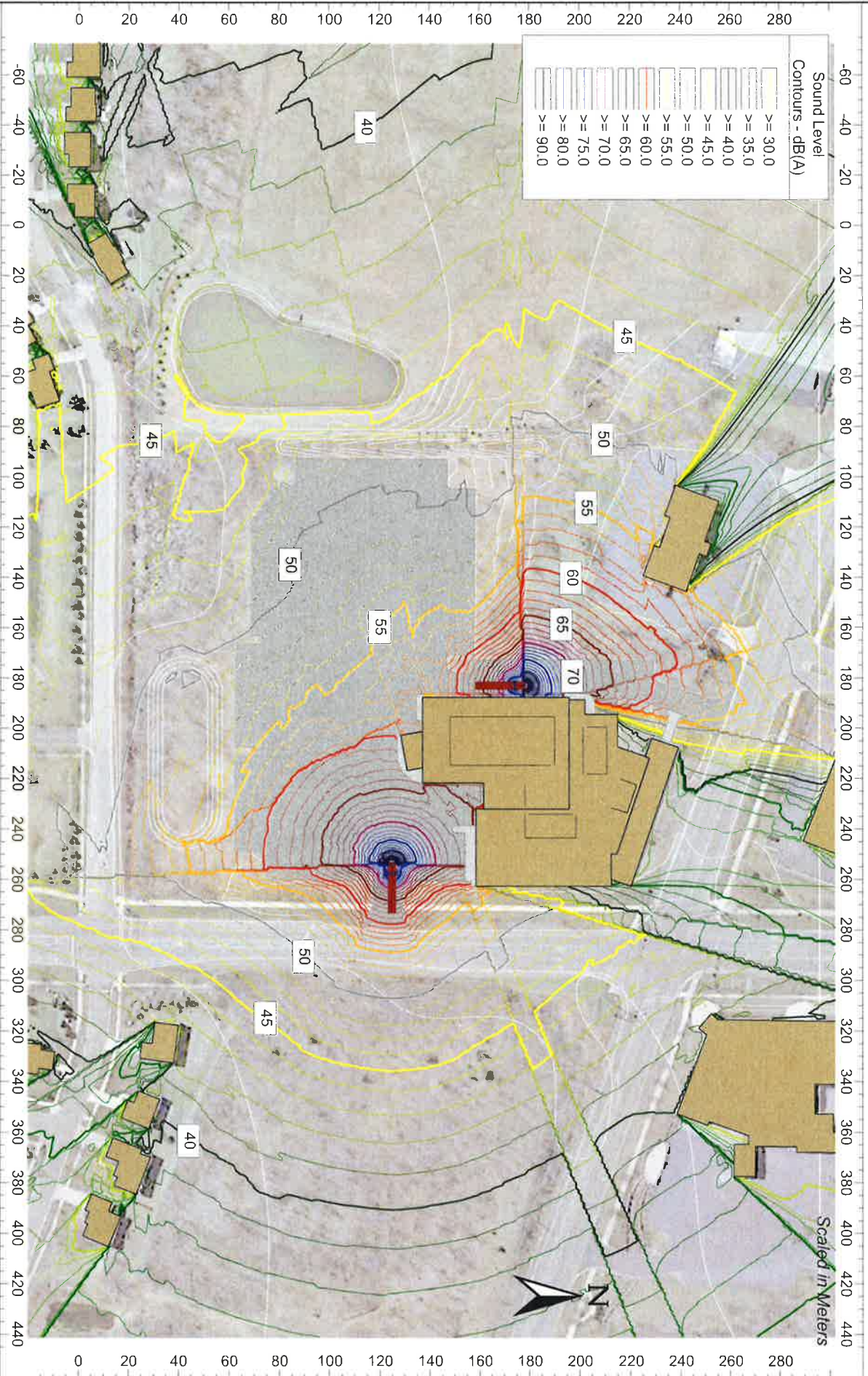
# EXHIBIT 3 PROPOSED JAGUAR-LAND ROVER DEALERSHIP - PREDICTED TRASH COMPACTOR SOUND LEVELS



**K&S**  
**Kolano and Saha Engineers, Inc.**  
 3559 Sashabaw Road - Waterford, MI 48329  
 248-674-4100 www.kandse.com

Project Name: **PROPOSED JAGUAR-LAND ROVER NOVI**  
 Study Conducted for: **ROGVOY ARCHITECTS**  
 Project No. : 2018-167  
 Analysis Date (day.mo.yr): 07.08.18

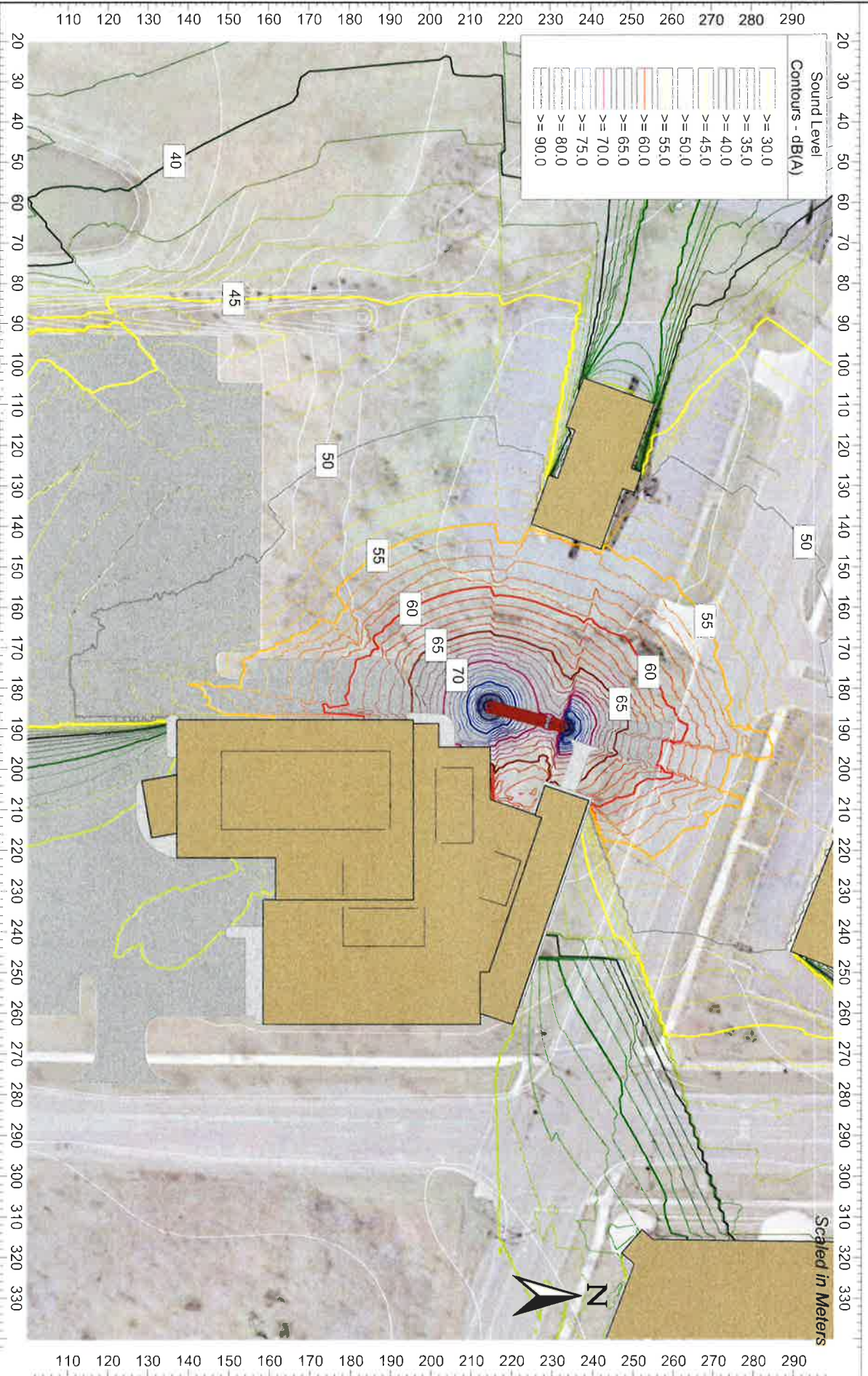
**EXHIBIT 4  
PROPOSED JAGUAR-LAND ROVER DEALERSHIP - PREDICTED DELIVERY TRUCK DRIVING SOUND LEVELS**



**K&S**  
**Kolano and Saha Engineers, Inc.**  
 3559 Sashabaw Road - Waterford, MI 48329  
 248-674-4100 www.kandse.com

Project Name: **PROPOSED JAGUAR-LAND ROVER NOVI**  
 Study Conducted for: **ROGVOY ARCHITECTS**  
 Project No. : 2018-167  
 Analysis Date (day.mo.yr): 07.08.18

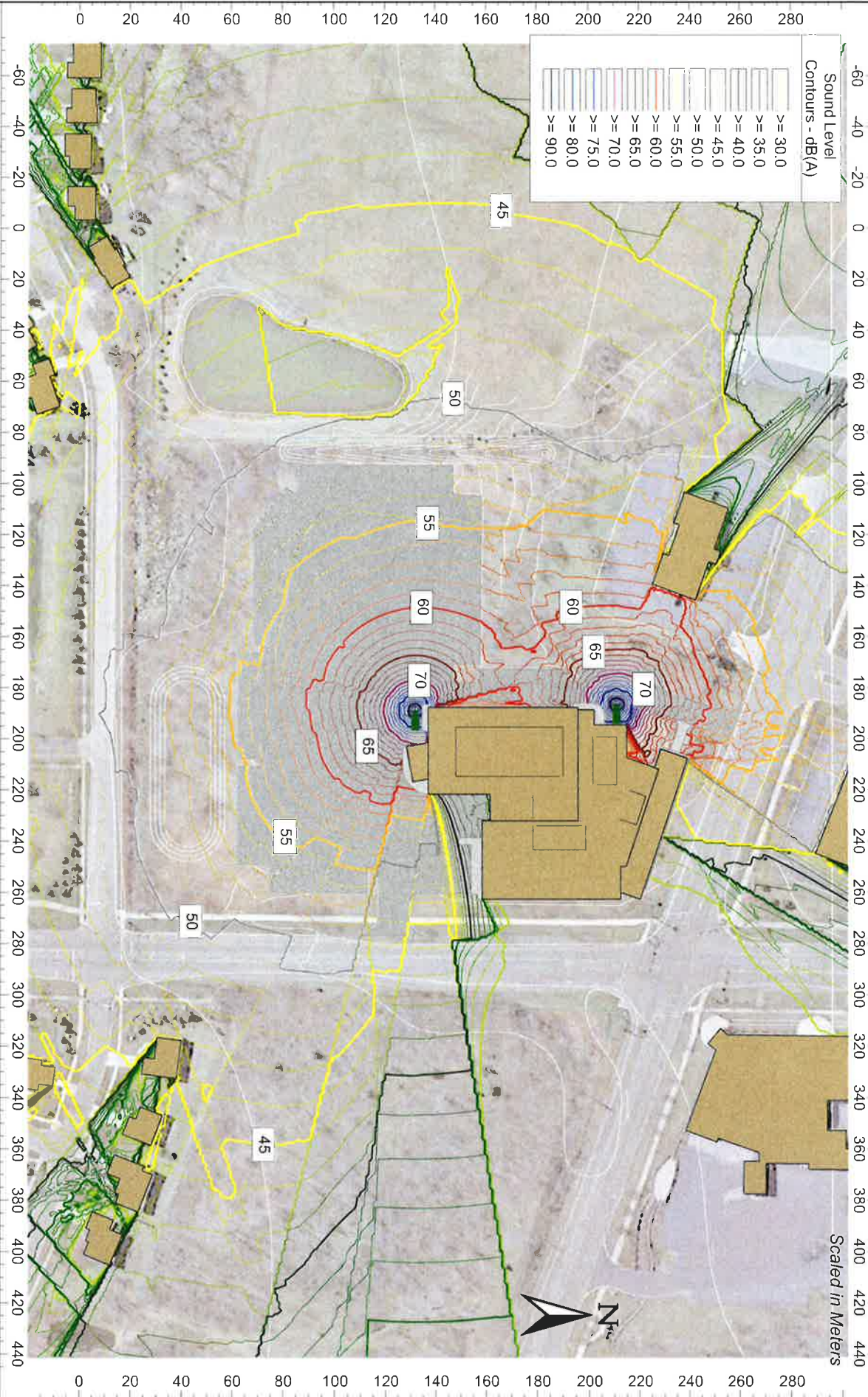
**EXHIBIT 5  
PROPOSED JAGUAR-LAND ROVER DEALERSHIP - PREDICTED DELIVERY TRUCK UNLOADING SOUND LEVELS**



**K&S**  
**Kolano and Saha Engineers, Inc.**  
 3559 Sashabaw Road - Waterford, MI 48329  
 248-674-4100 www.kandse.com

Project Name: **PROPOSED JAGUAR-LAND ROVER NOVI**  
 Study Conducted for: **ROGVOY ARCHITECTS**  
 Project No. : 2018-167  
 Analysis Date (day.mo.yr): 07.08.18

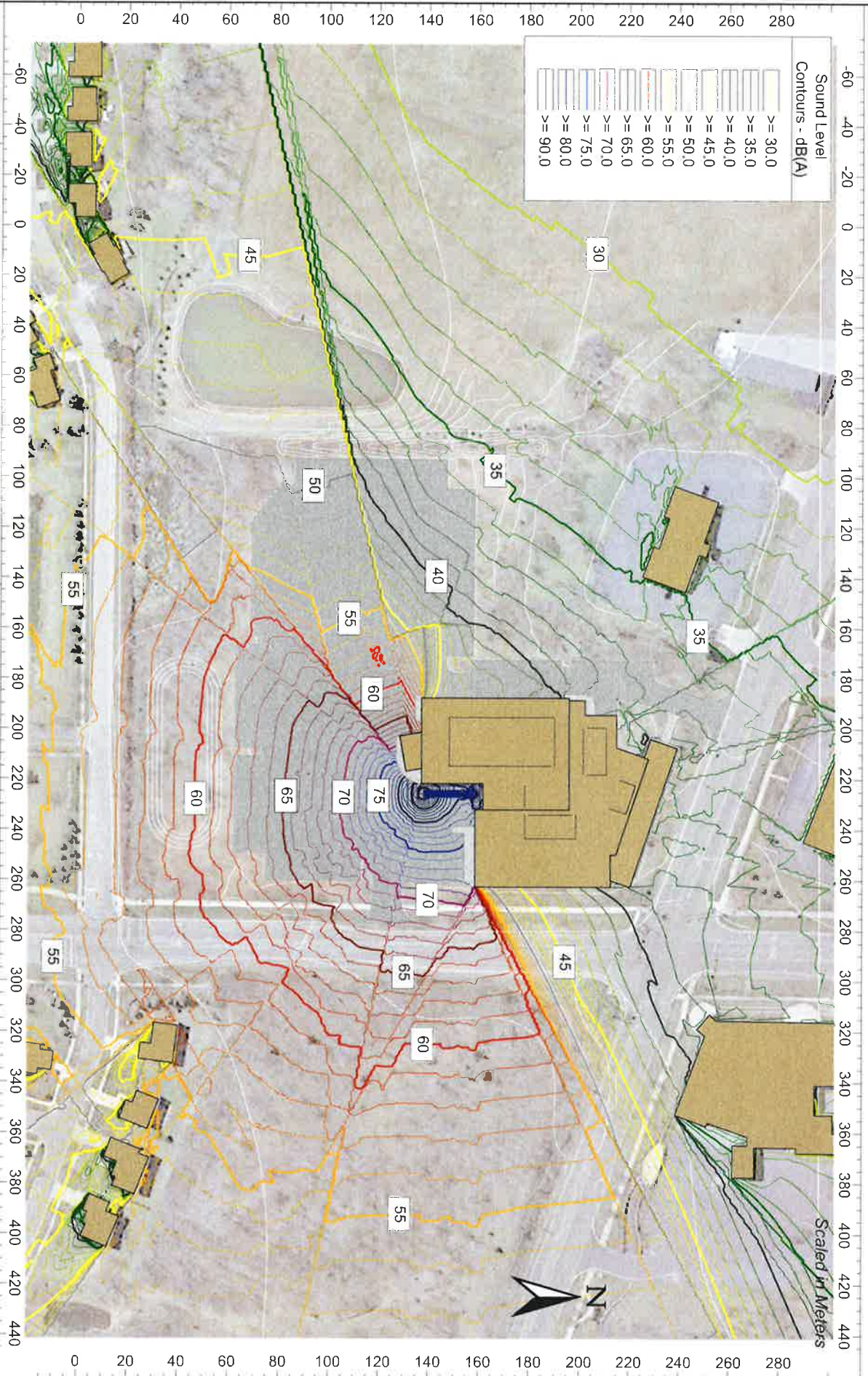
**EXHIBIT 6  
PROPOSED JAGUAR-LAND ROVER DEALERSHIP - PREDICTED BOX TRUCK DELIVERY SOUND LEVELS**



**K&S**  
**Kolano and Saha Engineers, Inc.**  
 3559 Sashabaw Road - Waterford, MI 48329  
 248-674-4100 www.kandse.com

**Project Name: PROPOSED JAGUAR-LAND ROVER NOVI**  
 Study Conducted for: ROGOVOY ARCHITECTS  
 Project No. : 2018-167  
 Analysis Date (day.mo.yr): 07.08.18

**EXHIBIT 7  
PROPOSED JAGUAR-LAND ROVER DEALERSHIP - PREDICTED CAR CARRIER UNLOADING SOUND LEVELS**



**K&S**

**Kolano and Saha Engineers, Inc.**  
3559 Sashabaw Road - Waterford, MI 48329  
248-674-4100 www.kandse.com

Project Name: **PROPOSED JAGUAR-LAND ROVER NOVI**  
Study Conducted for: **ROGVOY ARCHITECTS**  
Project No.: 2018-167  
Analysis Date (day.mo.yr): 07.08.18

TRAFFIC STUDY

# MEMO

VIA EMAIL

**To:** Mr. Mark Drane, AIA, LEED AP  
Rogvov Architects

**From:** Julie M. Kroll, PE, PTOE  
Fleis & VandenBrink

**Date:** Revised July 19, 2018

**Re:** Jaguar Land Rover Dealership  
City of Novi, Michigan  
Rezoning Traffic Impact Study

## INTRODUCTION

This memorandum presents the results of the Rezoning Traffic Impact Study (RTIS) for the proposed Jaguar Land Rover dealership in the City of Novi, Michigan. The project site is located in the southwest quadrant of the Grand River Avenue & Meadowbrook Road intersection and is currently undeveloped. In accordance with the City of Novi *Site Plan and Development Manual*, a RTIS is required for the proposed rezoning. Included in this RTIS are a description of existing conditions, current traffic data, land use planning and zoning information, and a vehicle trip generation comparison between the existing and proposed zoning classifications.

An RTIS was previously completed in October 2017 for an Erhard BMW car dealership on this site. Since then, the site plan has been updated to reflect a new car dealership, Jaguar Land Rover. This car dealership has a slightly larger showroom and thus generates marginally more trips in accordance with the methodologies in the *ITE Trip Generation, 10<sup>th</sup> Edition*, which generates trips for this land use based on building square footage. The trip generation comparison of the BMW land use from the previous study (October 2017) and the updated Land Rover study included herein are summarized in **Table 1**.

**Table 1: Trip Generation Comparison**

Land Use		ITE Code	Amount	Units	Average Daily Traffic (vpd)	AM Peak Hour (vph)			PM Peak Hour (vph)		
						In	Out	Total	In	Out	Total
BMW	Automobile Sales	841	53,211	SF	1,719	77	25	102	50	75	125
Land Rover	Automobile Sales	841	58,663	SF	1,895	85	28	113	54	82	136
<b>Difference</b>			<b>5,452</b>	<b>SF</b>	<b>176</b>	<b>8</b>	<b>3</b>	<b>11</b>	<b>4</b>	<b>7</b>	<b>11</b>

## EXISTING ROAD NETWORK

**Grand River Avenue** runs generally in the east and west directions along the north side of the subject site with a posted speed limit of 50 miles per hour (mph). The study section of Grand River Avenue is under the jurisdiction of the Road Commission for Oakland County (RCOC) and carries an Annual Average Daily Traffic (AADT) volume of approximately 19,100 vehicles per day. The study section of Grand River Avenue is a typical three lane cross section with one travel lane in each direction and a center lane for left turns.

**Meadowbrook Road** runs in the north and south directions along the east side of the subject site with a posted speed limit of 40 mph. The study section of Meadowbrook Road is under the jurisdiction of the City of Novi and carries an AADT of approximately 10,600 vehicles per day. The study section of Meadowbrook Road is a



typical three lane cross section with one travel lane in each direction and a center lane for left turns. The traffic volume data were obtained from the Southeast Michigan Council of Governments (SEMCOG).

#### EXISTING CONDITIONS

Approximately 3.5 acres of the overall 8.5 acre subject site is currently zoned as Office Service District (OS-1) and approximately 5.0 acres is zoned Non-Center Commercial (NCC). The subject site is proposed for rezoning to the Gateway East (GE) zoning district. The parcel is bound by NCC and GE zoning to the west and is occupied by the existing O'Brien Sullivan Funeral Home and Brooktown Apartments which are currently under construction. To the south of Cherry Hill Road is currently zoned High-Density Multiple-Family (RM-2) which is occupied by the Meadowbrook Commons Senior Living Apartments. To the north of Grand River Avenue is currently zoned NCC and is occupied by a strip commercial center with various retail and fast-food restaurant uses. To the east of Meadowbrook Road is currently zoned OS-1 and is undeveloped. The northeast corner of the Grand River Avenue & Meadowbrook Road intersection is zoned GE and is occupied by the Cadillac dealership.

#### TRIP GENERATION ANALYSIS

The City Zoning Ordinance describes the land uses permitted by-right under the existing OS-1 and NCC zoning classifications. In order to determine the maximum site trip generation potential under the existing and proposed zoning classifications, the principal uses permitted under each zoning classification must be matched to the land use categories described by the Institute of Transportation Engineers (ITE) in *Trip Generation, 10<sup>th</sup> Edition*. Furthermore, the maximum allowable building density for each land use scenario must be determined, where trip generation data by site acreage is not available.

- **OS-1 Zoning:** The Ordinance definition of uses permitted under OS-1 zoning includes professional office buildings, medical office buildings, places of worship, and other similar uses. Review of the ITE land use descriptions indicates that the General Office (#710) and Medical Office (#720) uses best match the uses defined by Ordinance. Other applicable ITE land uses such as Church (#560) were reviewed but have lesser trip generation rates.
- **NCC Zoning:** The Ordinance definition of uses permitted under NCC zoning includes retail, office buildings, medical office buildings, and sit-down restaurants. Review of the ITE land use descriptions indicates that the Shopping Center (#820), General Office (#710), and Medical Office (#720) uses best match the uses defined by Ordinance.
- **GE Zoning:** The 8.5 acre subject parcel is proposed for rezoning to the GE zoning classification. The Ordinance definition of uses permitted under GE zoning includes retail, restaurants, professional office buildings, and medical office buildings. Review of the ITE land use descriptions indicates that Shopping Center (#820) and High Turnover (Sit-Down) Restaurant (#932) uses best match the uses defined by Ordinance.

The maximum trip generation potential of the subject site was forecast for the existing OS-1 / NCC zoning and proposed GE zoning classifications. The number of weekday, AM peak hour, and PM peak hour vehicle trips was calculated based on the rates and equations published by ITE in *Trip Generation, 10<sup>th</sup> Edition*. The trip generation forecasts are shown in **Table 2**.

**Table 2: Rezoning Zoning Trip Generation Comparison**

Zoning	Land Use	ITE Code	Amount	Units	Average Daily Traffic (vpd)	AM Peak Hour (vph)			PM Peak Hour (vph)		
						In	Out	Total	In	Out	Total
Existing OS-1	Medical Office	720	24,500	SF	854	50	14	64	24	61	85
Existing NCC	Retail	820	40,000	SF	3,224	24	14	38	73	79	152
			Pass-By						25	27	52
			New		3,224	24	14	38	48	52	100
<b>Max for existing zoning</b>			Driveway		4,078	74	28	102	97	140	237
			Pass-By						25	27	52
			<b>New</b>		<b>4,078</b>	<b>74</b>	<b>28</b>	<b>102</b>	<b>72</b>	<b>113</b>	<b>185</b>
Proposed GE	Retail	820	35,000	SF	2,944	20	13	33	64	69	133
			Pass-By						22	23	45
			New		2,944	20	13	33	42	46	88
	High-Turnover (Sit-Down) Restaurant	932	200	Seats	874	50	46	96	48	36	84
			Pass-By						21	15	36
			New		874	50	46	96	27	21	48
<b>Max for proposed zoning</b>			Driveway		3,818	70	59	129	112	105	217
			Pass-By						43	38	81
			<b>New</b>		<b>3,818</b>	<b>70</b>	<b>59</b>	<b>129</b>	<b>69</b>	<b>67</b>	<b>136</b>
<b>Potential change in New Trips</b>					<b>-260</b>	<b>-4</b>	<b>31</b>	<b>27</b>	<b>-3</b>	<b>-46</b>	<b>-49</b>
Proposed Development	Automobile Sales	841	58,663	SF	1,895	85	28	113	54	82	136

Relative to the existing and proposed zoning classifications, ITE publishes trip generation data by square feet (SF) for retail, restaurant, and office uses. Therefore, the maximum allowable density for these uses was determined based on information provided by ROGVOY Architects.

As is typical with retail and restaurant land uses, a portion of the site-generated trips are already present on the adjacent road network and are interrupted to visit the site. These trips are known as “pass-by” trips and account for a percentage of the total site trip generation. Pass-by trips result in turning movements at the site driveways, but do not increase traffic volumes on the adjacent road network. New trips describe vehicle trips which are made for the specific purpose of visiting the site, and would not be on the adjacent road without the subject land use. The percentage of pass-by trips was obtained from the ITE *Trip Generation Handbook, 3<sup>rd</sup> Edition*.

The results of the trip generation comparison indicate that the proposed rezoning would result in an increase in new trips during the AM peak hour and a decrease in new daily trips and during the PM peak hour. Additionally, the proposed development associated with the rezoning would result in a similar number of new daily and peak hour trips as the uses permitted under the existing zoning classifications.

Any questions related to this memorandum should be addressed to Fleis & VandenBrink.

**Attached:** SEMCOG Data

SJR:jmk

## Crash and Road Data

### Road Segment Report

#### Grand River Ave, (PR Number 4104142)

<b>From:</b>	Town Center Dr 11.689 BMP
<b>To:</b>	Meadowbrook Rd 12.427 EMP
<b>FALINK ID:</b>	17218
<b>Community:</b>	City of Novi
<b>County:</b>	Oakland
<b>Functional Class:</b>	4 - Minor Arterial
<b>Direction:</b>	1 Way
<b>Length:</b>	0.738 miles
<b>Number of Lanes:</b>	3
<b>Posted Speed:</b>	50 (source: TCO)
<b>Route Classification:</b>	Not a route
<b>Annual Crash Average 2012-2016:</b>	<u>29</u>
<b>Traffic Volume (2016)*:</b>	19,100 (Default AADT)
<b>Pavement Type (2016):</b>	Asphalt
<b>Pavement Rating (2016):</b>	Poor
<b>Short Range (TIP) Projects:</b>	No TIP projects for this segment.
<b>Long Range (RTP) Projects:</b>	No long-range projects for this segment.

\* AADT values are derived from **Traffic Counts**

Street View



## Crash and Road Data

### Road Segment Report

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#### Meadowbrook Rd, (PR Number 656706)

<b>From:</b>	10 Mile Rd W 1.997 BMP
<b>To:</b>	Grand River Ave 2.629 EMP
<b>FALINK ID:</b>	2081
<b>Community:</b>	City of Novi
<b>County:</b>	Oakland
<b>Functional Class:</b>	4 - Minor Arterial
<b>Direction:</b>	1 Way
<b>Length:</b>	0.632 miles
<b>Number of Lanes:</b>	3
<b>Posted Speed:</b>	40 (source: MSP)
<b>Route Classification:</b>	Not a route
<b>Annual Crash Average 2012-2016:</b>	<u>10</u>
<b>Traffic Volume (2016)*:</b>	10,600 (Default AADT)
<b>Pavement Type (2016):</b>	Asphalt
<b>Pavement Rating (2016):</b>	Poor
<b>Short Range (TIP) Projects:</b>	No TIP projects for this segment.
<b>Long Range (RTP) Projects:</b>	(10589) Capacity Improvement

\* AADT values are derived from **Traffic Counts**

Street View



PLANNING REVIEW



# PLAN REVIEW CENTER REPORT

September 07, 2018

## Planning Review JAGUAR LAND ROVER

JSP 17-65

### PETITIONER

Erhard Motor Sales, Inc

### REVIEW TYPE

SDO Concept Plan

### PROPERTY CHARACTERISTICS

<b>Section</b>	23	
<b>Site Location</b>	southwest corner of Grand River Avenue and Meadowbrook Road 50-22-23-251-018 (5.62 acres) and 22-23-251-019(3.86 acres)	
<b>Site School District</b>	Novi Community School District	
<b>Site Zoning</b>	Gateway East (GE)	
<b>Adjoining Zoning</b>	North	GE with a consent judgment
	East	OS-1 Office Service R-4: One-family residential
	West	NCC: Non-Commercial Center GE with a SDO agreement
	South	RM-2: High-Density Multiple-Family
<b>Current Site Use</b>	Vacant	
<b>Adjoining Uses</b>	North	Gateway Village
	East	Vacant
	West	O'Brien-Sullivan Funeral Home
	South	Meadowbrook Commons: Novi Senior Center
<b>Site Size</b>	9.48 Acres	
<b>Plan Date</b>	August 08, 2018	

### RECOMMENDATION

Planning **does not recommend approval of the SDO Concept Plan at this time, due to missing information and deviations that have not been fully addressed by the applicant for consideration by the Planning Commission.** The public hearing has been set for the September 26 meeting, and the applicant is asked to respond to the comments in this, and the other review letters prior to that meeting.

The subject property is located at the "entry" area of the Gateway East District, since it is located on one of the four properties at the intersection of Grand River and Meadowbrook. Following a recommendation of the Planning Commission, Council may approve an SDO project which consists of a non-residential use permitted elsewhere in the ordinance, but not otherwise permitted in the GE district for these properties, subject to conditions listed in Section 3.12.2.A.ii

### PROJECT SUMMARY

The subject property is comprised of two parcels totaling 9.48 acres. It is located on the southwest corner of Grand River Avenue and Meadowbrook Road (Section 23). The applicant is proposing to build a 58,663 square feet car sales facility for Jaguar Land Rover. The proposed facility includes sales and service area. The concept plan proposes 138 parking spaces for employee and visitors and 287 parking spaces for storing cars for sale. A storm water pond is proposed on the south side that also acts a buffer

from the residential use on south side of Cherry Hill Road. It has access from both Meadowbrook Road and Grand River Avenue.

### **ORDINANCE REQUIREMENTS**

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This project was reviewed for conformance with the Zoning Ordinance with respect to Article 3 (Zoning Districts), Article 4 (Use Standards), Article 5 (Site Standards), and any other applicable provisions of the Zoning Ordinance. **Please see the attached chart for information pertaining to ordinance requirements.** Items in **bold** below must be addressed and incorporated as part of the response letter prior to Planning Commission meeting:

1. **SDO Eligibility:** **The applicant should address staff comments provided on page 4 with regards to SDO eligibility.**
2. **Site Plan Approval Process:** The concept plan will be reviewed by the Planning Commission and recommended for consideration to the City Council. Once reviewed by Planning Commission, the concept plan will be presented to City Council for review. SDO Agreement will need to be approved by the City Council. After the SDO agreement approval, the applicant would then require to apply for Preliminary Site Plan, Woodland Permit, Wetland Permit and Storm water Management Plan approval by City Council under SDO Option.
3. **Photometric Plan:** **Please refer to Planning Review Chart for additional comments that need to be addressed prior to approval of Photometric plan.**
4. **Plan Review Chart:** **Additional comments have been provided in Plan review chart that can be addressed at the time of site plan approval, unless any deviations are required.**
5. **Exterior Signage:** Exterior Signage is not regulated by the Planning Division or Planning Commission. Sign permit applications that relate to construction of a new building or an addition to an existing building may submitted, reviewed, and approved as part of a site plan application. In that case, the proposed signs shall be shown on the Preliminary Site Plan. Alternatively, an applicant may choose to submit a sign application to the Building Official for administrative review after Site plan approval. Following Preliminary Site Plan approval, any application to amend a sign permit or for a new or additional sign shall be submitted to the Building Official. Please contact the Ordinance Division 248.735.5678 for information regarding sign permits.
6. **Conservation Easements:** Draft conservation easements are required along with Final Site Plan submittal.

### **ORDINANCE DEVIATIONS**

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Per Section 3.12.6, consistent with the Special Development Option concept, and toward encouraging flexibility and creativity in development, departures from compliance with the standards provided for an SDO project, may be granted in the discretion of the City Council as part of the approval of an SDO project in a GE District. Such departures may be authorized on the condition that there are recognized and specific features or planning mechanisms deemed adequate by the City Council designed into the project for the purpose of achieving the objectives intended to be accomplished with respect to each of the regulations from which a departure is sought. The following are deviations from the Zoning Ordinance and other applicable ordinances shown on the concept plan and to be included in the draft SDO Agreement:

#### **Planning Deviations:**

- a. For not meeting the minimum requirements for usable open space (25% of gross area of the site required); **The applicant is asked to meet the minimum ordinance standards, and provide the updated calculations with an exhibit that included spaces designed as useable space. Additional revisions may be required for the proposed pedestrian plaza at the corner of Meadowbrook Road and Grand River Avenue.**

- b. Per Section 3.11.8, street corner building should have greater massing and height. **Proposed building refers to two stories, but the second story only includes a small mezzanine. It is not conforming to this requirement. The applicant may want to contact the City's Façade Consultant to determine alternatives that will meet the ordinance standards.**
- c. Per section 5.16, When 4 or more spaces are required for a building with multiple entrances, the spaces shall be provided in multiple locations. **The applicant is proposing all six spaces in one location. The applicant can consider relocating couple of locations at the pedestrian plaza.**
- d. Per Section 3.11.8, sidewalks are required for all developments which abut any street and shall comply with the City of Novi Design and Construction Standards. **The concept plan is not proposing a sidewalk along Cherry Hill Road. The applicant is asked to demonstrate whether a sidewalk and/or boardwalk can be provided with minimal impact to the existing natural features, or consider an alternative to the strict requirements of the City Code.**

#### Façade Deviations:

- e. Underage of brick (30% minimum required, 25% on north façade and 28% on east façade proposed);
- f. Overage of flat metal panels (50% maximum allowed, 58% on north façade and 56% on east façade proposed);
- g. Overage of horizontal rib metal panels for roof top screening (0% allowed, 17% on north, 16% on east, 12% on south and 18% on west proposed);

Section 3.11.8 of the Ordinance states that buildings located at the corner of two streets within the Gateway East District "... shall contain two stories or incorporate architectural features that provide additional massing." The proposed building exhibits no additional massing near the intersection of Grand River and Meadowbrook Rd., and is generally inconsistent with this requirement.

**The applicant should consider revising the design to add architectural features, specifically to the north east corner of the building that will meet the intent of this Section.**

Note: The Façade Ordinance prohibits the use of intense colors and / or neon lighting. This applies to interior surfaces of the showroom that may be visible through the vision glass areas. We mention this in the off chance that such materials or lighting may be proposed but not indicated on the drawings.

#### Traffic Deviations:

- h. Traffic deviation to waive the requirement for required Traffic Impact Study or defer it to the time of Preliminary Site Plan review, as the site falls under the study boundaries for the ongoing Comprehensive Traffic study by the City;
- i. Traffic deviation for variance from Design and Construction Standards Section 11-216(d) for not meeting the minimum distance required for same-side commercial driveways; **please provide an exhibit indicating the required distance and proposed to identify the deviation.**

#### Landscape Deviations:

- j. Landscape deviation from Section. 5.5.3.E.i.c for lack of street trees along Grand River Road frontage due to lack of space (8 trees)
- k. Landscape deviation from Section. 5.5.3.E.i.c for lack of street trees along Cherry Hill Road frontage due to lack of space (11trees)
- l. Landscape deviation from Section 5.5.3.B.ii and iii for not providing greenbelt berm or plantings in area of wetland in order to preserve wetland
- m. Landscape deviation from Section 5.5.3.B.ii and iii for not providing greenbelt berm or plantings between Cherry Hill and the parking lot area not behind the wetland. **This is currently not supported by staff.**

#### PLANNING COMMISSION CONSIDERATION

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*In making its recommendation to the City Council, the Planning Commission shall determine:*

- 1) *Consistency with the Master Plan;*
- 2) *Innovative planning and design excellence;*



- 3) *Relationship to adjacent land uses;*
- 4) *Compliance with this Ordinance;*
- 5) *Benefits to the community such as publicly dedicated parks and open areas, and public facilities;*
- 6) *Pedestrian and/or vehicular safety provisions;*
- 7) *Aesthetic beauty in terms of design, exterior materials and landscaping, including internal compatibility within the development as well as its relationship to surrounding properties;*
- 8) *Provisions for the users of the project; and*
- 9) *An evaluation of the standards in subsections 3.12.3 through 3.12.5.*

*The Planning Commission shall forward its findings to the City Council for consideration no later than the next scheduled regular meeting of the Planning Commission following the public hearing.*

#### **USES PERMITTED SUBJECT TO APPROVAL OF A SPECIAL DEVELOPMENT OPTION**

*Per section 3.12, for the limited purposes of the four properties situated at the "entry" of the area for which GE district permission is provided herein, i.e., the four properties at the intersection of Grand River Avenue and Meadowbrook Road (having frontage on both roads), the City Council following recommendation of the Planning Commission, shall be authorized to approve an SDO project which includes or consists of a non-residential use permitted elsewhere in this Zoning Ordinance but not otherwise permitted in the GE district, on the condition that such use meets all of the following criteria, as determined by the City Council:*

- a. *The proposed use exemplifies the intent of the GE district as stated in Section 3.1.16.A, and the intent of the SDO as stated in Section 3.1.16. (see below)*
- b. *The proposed use incorporates as a predominant physical component of the development that provides a unique entry feature along Grand River Avenue for the GE district, characterized by a distinct, high profile appearance.*
- c. *The proposed use is compatible with, and will promote, the uses permitted with the GE district and SDO.*
- d. *The proposed use will not create an inconsistency with the City's Master Plan for Land Use in terms of the general activities on the site and the impacts upon the surrounding area.*
- e. *The proposed use is designed in a manner that will result in traffic and pedestrian safety, consistent with the adjoining pedestrian and vehicular thoroughfares.*
- f. *The proposed use is designed with exceptional aesthetic quality, including building design, building materials and landscaping design, not likely to be achieved except based upon this authorization. Developments which include a single use, a mixed use building and/or a mixed use development may be proposed and approved as an SDO project.*

#### **Section 3.1.16.1. Intent of GE district**

*It is the intent of this Section to authorize the use of special development regulations in GE districts for the purpose of:*

- A. *Permitting quality residential development and facilitating mixed use developments, including multiple-family residential, office, and limited size commercial;*
- B. *Encouraging a mixture of uses in accordance with character and adaptability of the land;*
- C. *Conserving natural resources and natural features and energy; encouraging innovation in land use planning; providing enhanced housing, employment, shopping, traffic circulation and open space opportunities for the people of this City;*
- D. *Bringing about a greater compatibility of design and use between neighboring properties and the downtown district of Novi; and*
- E. *Making provision for unique "entry" developments at the intersection of Grand River and Meadowbrook, as specified in subsection 3.12.2.A.ii.*

#### **SDO ELIGIBILITY (SEC. 3.12.3)**

*The Planning Commission and City Council were asked to consider the following when evaluating the proposed SDO concept plan. **Staff comments are in bold.***

- i. *The project will result in a recognizable and substantial benefit to the ultimate users of the*

- project and to the community, where such benefit would otherwise be unfeasible or unlikely to be achieved by a traditional development.* **The applicant has proposed a pedestrian plaza for bicyclers or pedestrians to stop and rest. Additional information such as bike racks and seating etc. are not provided at this time.**
- ii. *In relation to a development otherwise permissible as a Principal Permitted Use under Section 3.1.16.B, the proposed type and density of development shall not result in an unreasonable increase in the use of public services, facilities and utilities, and shall not place an unreasonable burden upon the subject and/or surrounding land and/or property owners and occupants and/or the natural environment.* **A community impact statement or a narrative that would address this item is not included in the submittal. A noise impact statement was provided which indicates the noise levels for all uses will be kept under Ordinance minimum.**
  - iii. *Based upon proposed uses, layout and design of the overall project, the proposed building facade treatment, the proposed landscaping treatment and the proposed signage, the Special Development Option project will result in a material enhancement to the area of the City in which it is situated.* **Proposed building is not consistent with massing requirement for corner buildings. See the façade and landscape review letters for additional information.**
  - iv. *The proposed development shall not have a materially adverse impact upon the Master Plan for Land Use of the City, and shall be consistent with the intent and spirit of this Section.* **The plan is consistent with the Master Plan recommendations for the subject property.**
  - v. *In relation to a development otherwise permissible as a Principal Permitted Use under Section 3.1.16.B, the proposed development shall not result in an unreasonable negative economic impact upon surrounding properties.* **The proposed car dealership is similar to the existing car dealership located in the north eastern corner of Grand River Avenue and Meadowbrook Road. The plan proposes a storm water pond on the south side to act as buffer to existing residential uses.**
  - vi. *The proposed development shall contain at least as much useable open space as would be required in this Ordinance in relation to the most dominant use in the development.* **Substantially all of the total open space area must be designed as useable space. Additional information is required to verify conformance.**
  - vii. *Each particular proposed use in the development, as well as the size and location of such use, shall result in and contribute to a reasonable and mutually supportive mix of uses on the site, and a compatibility of uses in harmony with the surrounding area and other downtown areas of the City.* **A single use is proposed.**
  - viii. *The proposed development shall be under single ownership and/or control such that there is a single person or entity having responsibility for completing the project in conformity with this Ordinance.* **A single entity currently owns the site.**

*In addition to the provisions noted above, the Planning Commission and City Council should also consider the Special Land Use conditions noted in Section 6.1.2.C of the Zoning Ordinance:*

- *Whether, relative to other feasible uses of the site, the proposed use will cause any detrimental impact on existing thoroughfares in terms of overall volumes, capacity, safety, vehicular turning patterns, intersections, view obstructions, line of sight, ingress and egress, acceleration/deceleration lanes, off-street parking, off-street loading/unloading, travel times and thoroughfare level of service.*
- *Whether, relative to other feasible uses of the site, the proposed use will cause any detrimental impact on the capabilities of public services and facilities, including water service, sanitary sewer service, storm water disposal and police and fire protection to service existing and planned uses in the area.*
- *Whether, relative to other feasible uses of the site, the proposed use is compatible with the natural features and characteristics of the land, including existing woodlands, wetlands, watercourses and wildlife habitats.*
- *Whether, relative to other feasible uses of the site, the proposed use is compatible with adjacent uses of land in terms of location, size, character, and impact on adjacent property or the surrounding neighborhood.*

- *Whether, relative to other feasible uses of the site, the proposed use is consistent with the goals, objectives and recommendations of the City's Master Plan for Land Use.*
- *Whether, relative to other feasible uses of the site, the proposed use will promote the use of land in a socially and economically desirable manner.*
- *Whether, relative to other feasible uses of the site, the proposed use is (a) listed among the provision of uses requiring special land use review as set forth in the various zoning districts of this Ordinance, and (b) is in harmony with the purposes and conforms to the applicable site design regulations of the zoning district in which it is located.*

#### 7. Other Reviews

- a. Engineering Review (09-05-18): Additional comments to be addressed with Site Plan. Engineering is currently recommending approval.
- b. Landscape Review (08-29-18): Additional comments to be addressed with Preliminary Site Plan. Landscape recommends approval.
- c. Wetlands Review (08-29-18): A City of Novi Non-minor Wetland Permit and Buffer Authorization are required for the proposed impacts to wetlands and regulated wetland setbacks at the time of Preliminary Site Plan. Wetlands recommend approval.
- d. Woodlands Review (08-29-18): A City of Novi Woodland permit is required for the proposed impacts to regulated woodlands at the time of Preliminary Site Plan. Woodlands recommend approval.
- e. Traffic Review (08-30-18): Additional comments to be addressed with Preliminary Site Plan. Traffic recommends approval.
- f. Facade Review (08-29-18): Façade is recommending approval of Section 9 waiver. Please bring the samples to the Planning Commission meeting.
- g. Fire Review (08-16-18): Additional comments to be addressed with Preliminary Site Plan.. Fire recommends conditional approval.

#### NEXT STEP: PLANNING COMMISSION MEETING

All reviews are recommending approval except Planning. The site plan is scheduled for a Public hearing on September 26<sup>th</sup> meeting. Please provide the following **no later than 10 am on September 19, 2018.**

1. Original SDO Concept Plan submittal in PDF format dated August 08, 2018 (maximum of 10MB). **NO CHANGES MADE.**
2. A response letter addressing ALL the comments from ALL the review letters and **a request for waivers as you see fit.**
3. A color rendering of the Site Plan, if any.
4. A sample board of building materials as requested by our Façade Consultant.

**A revised concept plan will be required after the Planning Commission public hearing to address the concerns noted in this review letter.**

#### SITE ADDRESSING

**A new address is required for this project.** The applicant should contact the Building Division for an address prior to applying for a building permit. Building permit applications cannot be processed without a correct address. The address application can be found by clicking on this [link](#). Please contact the Ordinance Division 248.735.5678 in the Community Development Department with any specific questions regarding addressing of sites.

#### STREET AND PROJECT NAME

**This project does not require approval from the Street and Project Naming Committee.**





## PLANNING REVIEW CHART: GE Gateway East

**Review Date:** September 07, 2018  
**Review Type:** SDO Concept Plan  
**Project Name:** Jaguar Land Rover  
**Plan Date:** August 08, 2018  
**Prepared by:** Sri Ravali Komaragiri, Planner  
**Contact:** E-mail: skomaragiri@cityofnovi.org Phone: 248.735.5607

Items in **Bold** need to be addressed by the applicant with next submittal

Item	Required Code	Proposed	Meets Code	Comments
<b>Zoning and Use Requirements</b>				
<b>Master Plan</b> <i>(Adopted July 26, 2017)</i>	Town Center Gateway (Gateway East)	Gateway East (SDO)	Yes	
<b>Density</b> <i>(Adopted July 26, 2017)</i>	13.6 DUA	Not applicable	NA	
<b>Area Study</b>	Grand River Corridor Study as part of the 2017 Master plan update		NA	
<b>Zoning</b> <i>(Eff. Dec. 25, 2013)</i>	Gateway East (SDO)	GE: Gateway East with SDO	Yes	
<b>Uses Permitted</b> <i>(Sec 3.1.16.B &amp; C)</i>	Sec 3.1.16.B Principal Uses Permitted. Sec 3.1.16.C Special Land Uses 3.12 Special Development Option (SDO) for the GE district	Jaguar Land Rover Car dealership (See note below)	Yes	
<b>Phasing</b>	Indicate how many phases Show phase lines on the plans Tentative timeline for completion of all phases	Phasing is not proposed	NA	
<p><b>Note:</b> The subject property is located at the "entry" area of the Gateway East District, since it is located on one of the four properties at the intersection of Grand River and Meadowbrook. Following a recommendation of the Planning Commission, Council may approve an SDO project which consists of a non-residential use permitted elsewhere in the ordinance, but not otherwise permitted in the GE district for these properties, subject to conditions listed in Section 3.12.2.A.ii</p>				<p><b>Provide a narrative that responds to the requirements of Section 3.12.2.A.ii</b></p> <p><b>The proposed use is compatible with existing car dealership on the</b></p>
<p><b>SITE PLAN WITH SDO CONTRACT:</b></p> <ol style="list-style-type: none"> <li>Pre-application meeting (<u>current stage of review for these plans</u>)</li> <li>Planning Commission recommendation to City Council followed by 15-day public hearing</li> </ol>				

Item	Required Code	Proposed	Meets Code	Comments
3. City Council approval of <u>Concept plan</u> followed by a public hearing 4. City Council approval of <u>SDO contract</u> 5. City Council approval of <u>Preliminary Site Plan *</u> 6. Final Site Plan review and approval administratively unless otherwise requested by City Council				
<b>Development Standards (Sec 3.1.16.D)</b>				
<b>Lot Size</b>	Minimum Area: 2 acres Minimum Lot Width: 200 ft.	9.48 acres 407 ft.	Yes	
<b>Lot Coverage</b>	See Section 3.11			
<b>Setbacks</b>	See Section 3.11			
<b>Building Height</b>	35 ft. or 2 stories, whichever is less	25 ft.	Yes	
<b>Parking Setbacks</b>	See Section 3.11			
<b>Building Setbacks (Sec 3.11.5)</b>				
<i>Major Thoroughfare (Grand River Avenue)</i>				
Front (Grand River)	Min: 70 ft. from centerline Max: 90 ft. from centerline	90 ft. (Grand River Avenue)	Yes	
Exterior Side (Meadowbrook)		90 ft. (Meadowbrook Road)		
Side (west)	0 ft.	59.76 ft.	Yes	
Rear (south)	30 ft. Minimum	326.74 ft.	Yes	
<b>Parking Setback (Sec 3.11.6.A)</b>				
Front (Grand River)	No front yard parking allowed	None proposed	Yes	
Exterior Side (Meadowbrook)				
Side	10 ft. with 5 ft. from building facade	35.34 ft.	Yes	
Rear (south)	10 ft.	124.15 ft.	Yes	
<b>Notes To District Standards for GE/SDO Option (Sec 3.6.2)</b>				
<b>Maximum number of stories for SDO (Sec 3.6.2.G)</b>	3 stories max See Sec. 3.12.5.E.vi	2 stories proposed	Yes	
<b>Minimum lot size for SDO (Sec 3.6.2.I)</b>	Min: 5 acres Minimum lot width: 300 ft.	9.48 acres 407 ft.	Yes	
<b>Maximum building height for SDO (Sec 3.6.2.J)</b>	May be increased to 50 ft. Any structure within 300 ft. of one-family residential is 35 ft.	25 ft.	Yes	
<b>Parking setback</b>	Required parking setback area	Meets the minimum	Yes	<b>Refer to Landscape</b>

Item	Required Code	Proposed	Meets Code	Comments
screening (Sec. 3.6.2.P)	shall be landscaped per Sec. 5.5.3. Abutting residential requires a berm.	requirements		review for additional comments
<b>Modification of Parking Setback Requirements</b> (Sec. 3.6.2.Q)	Planning Commission may modify if determined modification will improve the use of the site and landscaping	None requested	NA	
<b>District Required Conditions for GE (Sec. 3.11)</b>				
<b>Maximum FAR</b> (Sec. 3.11.2.A)	Maximum floor area ratio shall be 0.275.	0.158	Yes	
<b>Max. Stories</b> (Sec. 3.11.2.B)	Maximum number of stories is limited to two.	NA See SDO Requirements	NA	
<b>Off-street Parking</b> (Sec. 3.11.3)	Off-street parking shall be provided within the building, parking structure, or designed parking area within 300 ft. Still parking is not allowed. All parking in a structure must be screened.	Parking lot within 300 feet.	Yes	
<b>Outdoor storage</b> (Sec. 3.11.4)	The outdoor storage of goods or material shall be prohibited.	Car for sale will be stored outside	Yes	
<b>Building Setbacks</b> (Sec. 3.11.5)	See Chart 3.11.5. See above.			
<b>Parking Lot Screening</b> (Sec. 3.11.6.B)	Parking lots shall be screened from all major thoroughfares by a 2.5 foot brick or stone wall or 3 foot planting screen or existing vegetation to achieve 80% winter opacity and 90% summer opacity.	Meets the minimum requirements	Yes	Refer to Landscape review for additional comments
<b>Open Space</b> (Sec. 3.11.7)	25% of gross area of each development site shall be comprised of open space. Areas less than 20 ft. wide shall not be considered. Additional conditions apply per Sec. 3.11.7  <b>Substantially all of the total open space area must be designed as useable space.</b>	2.37 acres required 2.63 acres provided per site data	Yes?	Is 8.51 acres after ROW dedication? Indicate how open space is calculated?  Areas less than 20 ft. wide shall not be considered.  <a href="#">This is considered a deviation as required useable open space is not provided</a>
<b>Building Façade</b>	Street corner buildings should	<b>Current elevations do</b>	No	<a href="#">This is considered a</a>

Item	Required Code	Proposed	Meets Code	Comments
<b>and Scale</b>	have greater massing and height. Additional height upto 40 ft. may be approved by Council to provide additional massing.	<b>not meet the massing requirement.</b>		<a href="#">deviation and can be supported if there are enhanced site elements proposed, as required by the corner sites in GE district</a>  <a href="#">Refer to Façade review letter for more comments</a>
<b>Sidewalks and Bicycle Paths</b> (Sec. 3.11.9)	8 ft. pathway along Grand River. 6 ft. sidewalk along Meadowbrook Road Bicycle Paths are required per the Master Plan.	Sidewalk on Meadowbrook existing  8 feet pathway on Grand River proposed	Yes	
<b>Streetscape Amenities</b> (Sec. 3.11.10)	Decorative pedestrian-scale parking lot lighting, public pathways, bicycle racks, etc. Grand River lighting, landscape plantings, etc.	A corner pedestrian plaza is proposed	Yes?	<b>Additional details are not provided such as landscape or hardscape amenities</b>
<b>Loading</b> (Sec. 3.11.12)	Located in rear yard or interior side yard, if fronting on more than one road	Loading proposed in rear yard	Yes	
<b>Adjacency</b> (Sec. 3.11.14)	City Council may impose additional conditions in order to ensure compatibility with and between adjacent properties	Will be determined at the time of Council meeting		
<b>Special Development Option (SDO) for the GE District</b> (Sec. 3.12)				
<b>Intent</b> (Sec. 3.12.1)	<ul style="list-style-type: none"> <li>- Mixed use developments</li> <li>- Quality residential development</li> <li>- Conserving natural resources</li> <li>- Compatibility between neighboring properties and downtown district</li> <li>- Unique "entry" developments at the intersection of Grand River and Meadowbrook</li> </ul>	Car dealership, compatible with existing car dealership use nearby	Yes?	<b>There is potential for making it "unique" development</b>
<b>Eligibility Criteria</b> (Sec. 3.12.3.A)	SDO uses can be proposed only for properties located in GE district, subject to City Council approval	It is zoned for SDO uses	<b>Yes</b>	
<b>Eligibility Criteria</b> (Sec. 3.12.3.B)	The proposed development should comply with the criteria	Required usable open space is not provided;	<b>No?</b>	<b>Refer to Planning Review letter for more</b>

Item	Required Code	Proposed	Meets Code	Comments
	listed in Section 3.12.3.B			<p>details.</p> <p>Please provide a narrative description as how the proposed use fist the criteria listed in Section 3.12.3.B</p>
<p><b>Project Design Standards: Non-Residential</b>  <i>(Sec. 3.12.4.B)</i></p>	The design standards listed in Section 3.12.4.B shall apply	A pedestrian plaza area is indicated, but details are not provided	No	<p>There is an opportunity to provide attractive streetscape by proposing creative building foundation landscape. Refer to landscape review for more details</p> <p>Please provide a narrative description and/or supporting exhibits as how the proposed use fist the criteria listed in Section 3.12.4.B</p>
<p><b>General Design Standards</b>  <i>(Sec. 3.12.4.C)</i></p>	Perimeter setback as determined by City Council	No setback provided near Grand River and Meadowbrook intersection		
	underground installation of utilities	None proposed??	NA	
	Safe pedestrian connectivity	Pathway along Grand River Avenue and sidewalk along Meadowbrook Road is proposed	Yes?	Sidewalk connection to proposed pathway on Grand River Avenue should be proposed
	The City's Grand River Corridor Plan and reasonably shall be incorporated in terms of design features and concepts applicable to the subject property.	More information on street lights, streetscape etc.	No	Provide additional amenities as required
	noise reduction and visual screening provisions when abutting residential uses	Abuts residential use to the south. The applicant provided a very detailed noise impact statement that address all kinds of noise that would be generated within the	Yes	



Item	Required Code	Proposed	Meets Code	Comments
		proposed site and all noise levels are under the maximum allowed		
	Reduce driveways and curb cuts along Grand River Avenue. Additional conditions apply	A new curb cut is proposed	No?	The applicant indicated in the response letter that discussion with the neighbor to have shared access weren't successful.
	On retail buildings, windows within areas of the premises to which the public is invited shall be made of materials which do not materially obstruct transparency	Glazed windows	Yes	
	The City Council shall resolve ambiguities in the interpretation of applicable regulations using the Zoning Ordinance, Master Plan, the intent of this Article and other City standards or policies as a guide.	Will be determined at the time of Council meeting		
<b>Plan Information</b> (Sec. 3.12.7.C.i.u)	Community impact statement is required.	Not Provided.	No	<b>Abbreviated community impact statement is provided which address Traffic and Noise.</b>
<b>Site Standards: Parking and Circulation</b>				
<b>Number of Parking Spaces</b> (Sec.5.2.12.C)  Motor vehicle sales and service establishments	1 space for each 200 square feet of usable floor area and 1 for each auto service stall in service room	Total parking for facility proposed: 105 spaces)@ 1 space for each 200 square feet of 20, 798 sf of usable floor area)  Service bay: 34 spaces (1 space for each of 34 service bays)		
<b>Parking Space Dimensions and Maneuvering Lanes</b> (Sec. 5.3.2)	- 90° Parking: 9 ft. x 19 ft. - 24 ft. two way drives - 9 ft. x 17 ft. parking spaces allowed along 7 ft. wide interior sidewalks as long as detail indicates a 4" curb at these locations and along	9 x 19 ft. proposed 24 ft. proposed 9 ft. x 17 ft. parking spaces along landscape islands  Some of the display	Yes	

Item	Required Code	Proposed	Meets Code	Comments
	landscaping.	spaces are double-stacked.		
<b>Parking stall located adjacent to a parking lot entrance</b> (public or private) <i>(Sec. 5.3.13)</i>	Shall not be located closer than twenty-five (25) feet from the street right-of-way (ROW) line, street easement or sidewalk, whichever is closer	None proposed	Yes	
<b>End Islands</b> <i>(Sec. 5.3.12)</i>	<ul style="list-style-type: none"> <li>- End Islands with landscaping and raised curbs are required at the end of all parking bays that abut traffic circulation aisles.</li> <li>- The end islands shall generally be at least 8 feet wide, have an outside radius of 15 feet, and be constructed 3' shorter than the adjacent parking stall as illustrated in the Zoning Ordinance</li> </ul>	End islands are proposed.	Yes?	<b>Refer to Traffic for more comments</b>
<b>Site Standards: Barrier Free (ADA)</b>				
<b>Barrier Free Spaces</b> <i>Michigan Building Code 2012 / Barrier Free Code</i>	5 barrier free parking spaces (for total 101-200); at least 1 van barrier free parking space	5 proposed including 1 van	Yes?	
<b>Barrier Free Space Dimensions</b> <i>Michigan Building Code 2012 / Barrier Free Code</i>	<ul style="list-style-type: none"> <li>- 8' wide with an 8' wide access aisle for van accessible spaces.</li> <li>- 5' wide with a 5' wide access aisle for regular accessible spaces.</li> </ul>	1 - 8' wide van accessible spaces provided.	Yes	
<b>Barrier Free Signs</b> <i>MMUTCD / Barrier Free Code</i>	One sign for each accessible parking space.	Provided	Yes	
<b>Site Standards: Bicycle Parking</b>				
<b>Minimum number of Bicycle Parking</b> <i>(Sec. 5.16.1)</i>	Minimum two spaces	6 spaces	Yes	
<b>Bicycle Parking General requirements</b> <i>(Sec. 5.16)</i>	<ul style="list-style-type: none"> <li>- No farther than 120 ft. from the entrance being served.</li> <li>- When 4 or more spaces are required for a building with</li> </ul>	All 6 spaces provided in one location	No?	<a href="#"><u>This is considered a deviation for having more than 4 spaces in one location.</u></a>

Item	Required Code	Proposed	Meets Code	Comments
	multiple entrances, the spaces shall be provided in multiple locations. - Spaces to be paved and the bike rack shall be inverted "U" design. - Shall be accessible via 6 ft. paved sidewalk.			<b>The applicant can consider relocating couple of locations at the pedestrian plaza.</b>
<b>Covered Bicycle Parking</b> <i>(Sec. 5.16.4)</i>	When 20 or more bicycle parking spaces are required, 25% shall be covered spaces.	Not applicable	NA	
<b>Bicycle Parking Lot layout</b> <i>(Sec 5.16.6)</i>	Parking space width: 6 ft. One tier width: 10 ft. Two tier width: 16 ft. Maneuvering lane width: 4 ft. Parking space depth: 2 ft. single, 2 ½ ft. double	Meets the standard	Yes	
<b>Site Standards: Loading and Dumpsters</b>				
<b>Loading Spaces</b> <i>(Sec. 5.4.2)</i>	<ul style="list-style-type: none"> <li>- Loading, unloading space shall be provided in the rear yard at a ratio of 10 sq. ft. for each front foot of building.</li> <li>- Except in the case of a double frontage lot, loading-unloading, as well as trash receptacles may be located in an interior side yard beyond the minimum side yard setback requirement of the district.</li> </ul>	Loading space proposed in side yard  2460 square feet space is provided. It appears to meet the requirement	Yes?	<b>Provide the required and proposed loading area calculation</b>
<b>Dumpster</b> <i>(Sec 4.19.2.F)</i>	<ul style="list-style-type: none"> <li>- Located in rear yard or interior side yard in case of double frontage</li> <li>- Attached to the building or</li> <li>- No closer than 10 ft. from building if not attached</li> <li>- Not located in parking setback</li> <li>- If no setback, then it cannot be any closer than 10 ft. from property line.</li> <li>- Away from Barrier free Spaces</li> </ul>	Appears to be located in the side yard Attached to the building	Yes?	<b>Label dumpster location on plans</b>

Item	Required Code	Proposed	Meets Code	Comments
<b>Dumpster Enclosure</b> (Sec. 21-145. (c))	<ul style="list-style-type: none"> <li>- Screened from public view</li> <li>- A wall or fence 1 ft. higher than height of refuse bin</li> <li>- And no less than 5 ft. on three sides</li> <li>- Posts or bumpers to protect the screening</li> <li>- Hard surface pad.</li> <li>- Screening Materials: Masonry, wood or evergreen shrubbery</li> </ul>	It appears to be brick as indicated on south building elevation	Yes?	Will be reviewed for conformance at the time of site plan review.
<b>Site Standards: Lighting and Rooftop</b>				
<b>Exterior lighting</b> (Sec. 5.7)	<ul style="list-style-type: none"> <li>- All residential developments shall provide lighting at each entrance intersecting with a major thoroughfare sufficient to illuminate the entrance of the development.</li> <li>- Minimum illumination shall be 0.2 fc</li> <li>- Fixtures shall not exceed 25 ft.</li> <li>- Lighting shall be subject to the requirements of this Section of the Zoning Ordinance.</li> </ul>	Lighting plan is provided.	Yes?	<u>Provide the missing information with the next submittal</u>
<b>Roof top equipment and wall mounted utility equipment</b> (Sec. 4.19.2.E.ii)	All roof top equipment must be screened and all wall mounted utility equipment must be enclosed and integrated into the design and color of the building.	Unknown	No	Provide location of utility equipment.
<b>Roof top appurtenances screening</b>	Roof top appurtenances shall be screened in accordance with applicable facade regulations, and shall not be visible from any street, road or adjacent property.	Unknown	No	<u>Will be reviewed for conformance at the time of site plan review.</u>
<b>Accessory Structures</b>	Additional regulations apply per Section 4.19	None proposed		
<b>Site Standards: Streets &amp; Sidewalks</b>				
<b>Frontage on a Public Street</b> (Sec. 5.12)	Frontage on a Public Street is required	Frontage on Grand River	Yes	
<b>Access to a Major Thoroughfare</b> (Sec. 5.13)	Vehicular access provided to an existing or planned major thoroughfare	Access to Grand River	Yes	

Item	Required Code	Proposed	Meets Code	Comments
<b>Off-Road Non-Motorized Facilities</b> <i>City Ordinance Ch. 11, Sec. 11-256</i>	<ul style="list-style-type: none"> <li>- New streets shall have a sidewalk on both sides of the proposed street.</li> <li>- Sidewalks identified by the master plan as arterials and collectors shall be 6 ft. or 8 ft. wide designated by the Bike/Ped Plan.</li> <li>- Local streets and private roads shall be 5 ft.</li> </ul>	<p>Sidewalk existing on Meadowbrook Road.</p> <p>8 feet wide asphalt path along Grand River Avenue</p> <p>None proposed along Cherry Hill Road</p>	No	<a href="#"><u>Absence of sidewalk is considered a deviation and can be supported due to existing natural features.</u></a>
<b>Pedestrian Connectivity</b>	Whether the traffic circulation features within the site and location of automobile parking areas are designed to assure safety and convenience of both vehicular and pedestrian traffic both within the site and in relation to access streets	<p>Connection to sidewalk along Meadowbrook is proposed</p> <p>Connection to sidewalk along Grand River Avenue is not proposed</p>	No	<b>Provide the required connections to public sidewalk along Grand River Avenue</b>
<b>Building Code and other design standard Requirements</b>				
<b>Building Exits</b> <i>Michigan Building Code 2012</i>	Building exits must be connected to sidewalk system or parking lot.	Some of the exits are not connected to a sidewalk system or parking lot.	No	
<b>Design and Construction Standards Manual</b>	Land description, Sidwell number (metes and bounds for acreage parcel, lot number(s), Liber, and page for subdivisions).	Provided	Yes	
<b>General layout and dimension of proposed physical improvements</b>	Location of all existing and proposed buildings, proposed building heights, building layouts, (floor area in square feet), location of proposed parking and parking layout, streets and drives, and indicate square footage of pavement area (indicate public or private).	Mostly provided	Yes?	<b>Refer to all review letters for additional dimensions requested</b>
<b>Economic Impact</b>	<ul style="list-style-type: none"> <li>- Total cost of the proposed building &amp; site improvements</li> <li>- Number of anticipated jobs created (during construction &amp; after building is occupied, if known)</li> </ul>	None provided	No	

Item	Required Code	Proposed	Meets Code	Comments
<b>Development/ Business Sign</b>	<ul style="list-style-type: none"> <li>- Signage if proposed requires a permit.</li> <li>- Exterior Signage is not regulated by the Planning Division or Planning Commission.</li> </ul>	One is not proposed at this time	<b>NA</b>	<p><b>Given the nature of business, staff recommends to indicate the location on the site plan to verify corner clearance etc. Façade proposes clear glass. Any display inside the building that can be seen through can be perceived as signage as well.</b></p> <p><u>For sign permit information contact Ordinance at 248-735-5678</u></p>
<b>Project and Street Naming</b>	Project and Street Names are to be approved for public safety concerns	Not applicable	NA	
<b>Legal Documents</b>	<ul style="list-style-type: none"> <li>- Special Development Agreement</li> <li>- Master Deed</li> <li>- Conservation Easement</li> </ul>	Not required at this time	<b>No</b>	<b>Work with planner to execute them as needed</b>
<b>Lighting and Photometric Plan (Sec. 5.7)</b>				
<b>Intent (Sec. 5.7.1)</b>	Establish appropriate minimum levels, prevent unnecessary glare, reduce spillover onto adjacent properties & reduce unnecessary transmission of light into the night sky	One is provided	Yes?	<b>Some information is missing</b>
<b>Lighting Plan (Sec. 5.7.A.i)</b>	Site plan showing location of all existing & proposed buildings, landscaping, streets, drives, parking areas & exterior lighting fixtures	Indicated as required	Yes?	
<b>Building Lighting (Sec. 5.7.2.A.iii)</b>	Relevant building elevation drawings showing all fixtures, the portions of the walls to be illuminated, illuminance levels of walls and the aiming points of any remote fixtures.	Not provided	No	<u>Will be reviewed for conformance at the time of site plan review.</u>
<b>Lighting Plan (Sec.5.7.2.A.ii)</b>	Specifications for all proposed & existing lighting fixtures	Provided	Yes	
	Photometric data	Provided	Yes?	
	Fixture height	25 feet	Yes	
	Mounting & design	Text provided	Yes?	

Item	Required Code	Proposed	Meets Code	Comments
	Glare control devices <i>(Also see Sec. 5.7.3.D)</i>	LED		
	Type & color rendition of lamps	LED	Yes	
	Hours of operation	Not included		
	Photometric plan illustrating all light sources that impact the subject site, including spill-over information from neighboring properties			
<b>Maximum Height</b> <i>(Sec. 5.7.3.A)</i>	Height not to exceed maximum height of zoning district (or 25 ft. where adjacent to residential districts or uses)	25 ft. maximum proposed	Yes	
<b>Standard Notes</b> <i>(Sec. 5.7.3.B)</i>	<ul style="list-style-type: none"> <li>- Electrical service to light fixtures shall be placed underground</li> <li>- Flashing light shall not be permitted</li> <li>- Only necessary lighting for security purposes &amp; limited operations shall be permitted after a site's hours of operation</li> </ul>	Unable to determine	Yes?	<b>Please add the notes to the sheet</b>
<b>Security Lighting</b> <i>(Sec. 5.7.3.H)</i>	<ul style="list-style-type: none"> <li>- All fixtures shall be located, shielded and aimed at the areas to be secured.</li> <li>- Fixtures mounted on the building and designed to illuminate the facade are preferred</li> </ul>	The plan indicates that all exterior lighting will be turned on at all times	Yes?	<b>The applicant should consider having reduced lighting for security purposes after hours due to proximity to residential uses</b>
<b>Lighting Ratio</b> <i>(Sec.5.7.3.E)</i>	Average light level of the surface being lit to the lowest light of the surface being lit shall not exceed 4:1	3.6:1	Yes	
<b>Type of Lighting</b> <i>(Sec. 5.7.3.F)</i>	Use of true color rendering lamps such as metal halide is preferred over high & low pressure sodium lamps	LED	Yes	
<b>Min. Illumination</b> <i>(Sec. 5.7.3.k)</i>	Parking areas: 0.2 min	0.2 min	Yes	
	Loading & unloading areas: 0.4 min	0.4 min	Yes	
	Walkways: 0.2 min	0.2 min	Yes	
	Building entrances, frequent use: 1.0 min	1.0 min	Yes	
	Building entrances, infrequent use: 0.2 min	0.2 mins	Yes	

Item	Required Code	Proposed	Meets Code	Comments
<b>Max. Illumination adjacent to Non-Residential</b> <i>(Sec. 5.7.3.K)</i>	When site abuts a non-residential district, maximum illumination at the property line shall not exceed 1 foot candle	Abuts non-residential on the south North West	Yes	<b>Spillover exceeds 1 along Grand River and Meadowbrook frontage near the entry drive</b>  <b>Spillover should be calculated at the future ROW line</b>
<b>Cut off Angles</b> <i>(Sec. 5.7.3.L)</i>	when adjacent to residential districts - All cut off angles of fixtures must be 90° - maximum illumination at the property line shall not exceed 0.5 foot candle	Does not exceed 0.5 along southwest boundary where it abuts residential	Yes	
<b>NOTES:</b> 1. This table is a working summary chart and not intended to substitute for any Ordinance or City of Novi requirements or standards. 2. The section of the applicable ordinance or standard is indicated in parenthesis. Please refer to those sections in Article 3, 4 and 5 of the zoning ordinance for further details 3. Please include a written response to any points requiring clarification or for any corresponding site plan modifications to the City of Novi Planning Department with future submittals.				



## ENGINEERING REVIEW



## PLAN REVIEW CENTER REPORT

September 5, 2018

### Engineering Review

Jaguar/Land Rover

JSP17-0065

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#### Applicant

Erhard Motor Sales Inc.

#### Review Type

Pre-Application

#### Property Characteristics

- Site Location: South of Grand River Avenue, East of Meadowbrook Road
- Site Size: 26 acres
- Plan Date: 08/06/2018
- Design Engineer: PEA, Inc.

#### Project Summary

- Proposed development of an approximate 53,211 square foot retail motor sales facility with associated parking.
- Water service would be provided by connection to existing 12-inch water main in Meadowbrook.
- Sanitary sewer service would be provided by connection to existing 8-inch sanitary sewer lead crossing Grand River Avenue
- Storm water would be collected on site and detained in the existing off-site Bishop regional detention basin.

#### Recommendation:

**The Concept site plan and Concept Storm Water Management can be recommended for approval with items to addressed during detailed design.**

#### Comments:

The Concept Plan meets the general requirements of Chapter 11 of the Code of Ordinances, the Storm Water Management Ordinance and/or the Engineering Design Manual, with the following review comments to be addressed with future submittals:

**Additional Comments (to be addressed with future submittals):**

General

1. A full engineering review was not performed due to the limited information provided in this submittal. Further information related to the utilities, easements, etc. will be required to provide a more detailed review.
2. Revise the plan set to tie in at least one city established benchmark. An interactive map of the City's established survey benchmarks can be found under the 'Map Gallery' tab on [www.cityofnovi.org](http://www.cityofnovi.org). City benchmark number 2411 is located southeast of the Grand River and Meadowbrook intersection.
3. Provide a note on the plans that all work shall conform to the current City of Novi standards and specifications.
4. A same-side/opposite-side driveway spacing waiver, granted by the Planning Commission, would be required for the proposed location of the entrance drive off Grand River Avenue with respect to the adjacent drive to the west. Consider a shared driveway with cross access easement to avoid the need for another curb cut and the spacing waiver.
5. A right-of-way permit will be required from the City of Novi for work in the Meadowbrook Road and Grand River Avenue rights-of-way.
6. A right-of-way permit will be required from the Road Commission for Oakland County for work in the Grand River Avenue right-of-way.
7. An 8-foot wide asphalt wide pathway along the frontage of Grand River is shown on the plans, in accordance with the Bicycle and Pedestrian Master Plan.
8. A 5-foot sidewalk may be required along the Cherry Hill frontage in accordance with the Zoning Ordinance. Refer to Planning review for additional discussion.
9. The dedication of the master-planned half width right-of-way of sixty (60) feet is requested with the project. The right-of-way width to be dedicated along Meadowbrook Road is labeled as "proposed" right-of-way on the plans.
10. The dedication of the additional right-of-way up to the master-planned 60 foot half-width is requested for the project. The additional right-of-way width to be dedicated along Grand River Avenue is labeled as "proposed" right-of-way on the plans.
11. Soil borings shall be provided for a preliminary review of the constructability of the proposed development (roads, basin, etc.). Borings identifying soil types, and groundwater elevation should be provided at the time of Preliminary Site plan.

12. A letter from either the applicant or the applicant's engineer must be submitted with the Preliminary Site Plan submittal highlighting the changes made to the plans addressing each of the comments in this review.

#### Utilities

13. The existing water main on the site is not considered acceptable for service. All existing water main should be removed and replaced as needed.
14. Note that a tapping sleeve, valve and well will be provided at the connections to the existing water main.
15. Confirm location of existing 8-inch sanitary crossing Grand River.
16. Provide a sanitary sewer monitoring manhole, unique to this site, within a dedicated access easement or within the road right-of-way or public sanitary sewer easement. If not in the right-of-way or public sewer main easement, provide a 20-foot wide access easement to the monitoring manhole from the right-of-way (rather than a public sanitary sewer easement).

#### Paving & Grading

17. Site grading shall be limited to 1V:4H (25-percent), excluding landscaping berms.
18. The end islands shall conform to the City standard island design, or variations of the standard design, while still conforming to the standards given in Section 2506 of Appendix A of the Zoning ordinance (i.e. 2' minor radius, 15' major radius, minimum 8' wide, 3' shorter than adjacent 19' stall).
19. Revise the entrance driveway from Meadowbrook to be consistent with the standard dimensions shown in Figure IX.1 and Section 11-216 of the Design and Construction Standards.
20. Curbing and walks adjacent to the end of 17-foot stalls shall be reduced to 4-inches high, rather than the standard 6-inch height to be provided adjacent to 19-foot stalls. Provide additional details as appropriate.

#### Storm Sewer & Storm Water Management Plan

21. Provide a four-foot deep sump and an oil/gas separator in the last storm structure prior to the storm water quality basin.
22. Storm sewer pipe material shall be Class IV RCP, or ADS-HP high performance polypropylene storm sewer. Plastic pipe is not permitted within the public right-of-way.
23. The Storm Water Management Plan (SWMP) shall comply with the Storm Water Ordinance and Chapter 5 of the Engineering Design Manual (refer to the runoff coefficients, 1V:4H allowable basin slopes, etc.).
24. Unrestricted discharge to an off-site regional storm water basin is proposed. Applicable storm sewer tap fees will be determined prior to final site plan approval.

Off-Site Easements

25. Off-site utility easements and agreements must be executed prior to final approval of the plans. Drafts shall be submitted at the time of the Preliminary Site Plan submittal.

Please contact Darcy Rechten at (248) 735-5695 with any questions.

  
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Darcy N. Rechten, P.E.

## LANDSCAPE REVIEW



# PLAN REVIEW CENTER REPORT

August 29, 2018

## SDO Concept Plan - Landscaping

Jaguar/Land Rover

### Review Type

SDO Concept Plan Landscape Review

### Job #

JSP17-0065

### Property Characteristics

- Site Location: Southwest Corner of Grand River and Meadowbrook
- Site Acreage: 8.2 acres
- Site Zoning: GE
- Adjacent Zoning: North: Grand River/NCC, East: Meadowbrook/OS-1, South: Cherry Hill/RM-2, West: GE(Multifamily) and NCC
- Plan Date: 8/8/2018

### Ordinance Considerations

This project was reviewed for conformance with Chapter 37: Woodland Protection, Zoning Article 5.5 Landscape Standards, the Landscape Design Manual and any other applicable provisions of the Zoning Ordinance. Items in **bold** below must be addressed and incorporated as part of the Preliminary Site Plan submittal. Underlined items must be addressed in Final Site Plans. Please follow guidelines of the Zoning Ordinance and Landscape Design Guidelines. This review and the accompanying Landscape Chart are summaries and are not intended to substitute for any Ordinance.

### Recommendation

**This project is recommended for approval. There are a number of corrections to be made, but none are significant enough that they can't move forward and make the corrections in the Preliminary and Final Site Plans.**

### **LANDSCAPE DEVIATIONS:**

1. Deviation to not provide street trees along Grand River (8 trees) – *supported by staff because there is no room for the trees*
2. Deviation to not provide street trees along Cherry Hill (11 trees) – *supported by staff because there is no room for the trees.*
3. Deviation to not provide greenbelt berm or plantings in area of wetland in order to preserve wetland – *supported by staff.*
4. Deviation to not provide greenbelt berm in greenbelt between Cherry Hill and the parking lot area not behind the wetland – *not supported by staff.*

**Please copy the above deviations, not including the support comments, to the Landscape Plans.**

### Ordinance Considerations

Existing Soils (Preliminary Site Plan checklist #10, #17)

Provided.

Existing and proposed overhead and underground utilities, including hydrants.(LDM 2.e.(4))

1. Provided.
2. The overhead utility lines in the vicinity of the project are clearly noted.

Existing Trees (Sec 37 Woodland Protection, Preliminary Site Plan checklist #17 and LDM 2.3 (2) )  
Provided.

Adjacent to Residential - Buffer (Zoning Sec. 5.5.3.B.ii and iii)

1. While the property is not adjacent to residentially zoned property, the property to the west is a multi-family project under construction.
2. The 5 foot tall berm provided meets the requirement for parking adjacent to residential and the west property line is heavily landscaped with a mix of woodland replacement deciduous canopy trees.
3. **Please extend the berm south to the edge of the critical root zone of tree #1573.** If the applicant is willing to plant or pay for one more woodland replacement tree, it would be preferable to extend the berm to the edge of the wetland buffer.

Adjacent to Public Rights-of-Way – Berm (Wall) & Buffer (Zoning Sec. 5.5.3.B.ii and iii)

1. The required greenbelt width is provided along both frontages.
2. There are some minor shortages in landscaping provided along the frontages that area outlined on the landscape chart, and **should be corrected with Preliminary Site Plans.**
3. No berms are provided as required. Evergreen hedges are proposed along Meadowbrook and a small section of Grand River frontage, but three foot tall berms or masonry walls are preferred as they provide more permanent screening than hedges do.
4. **Please provide berms or walls in place of the hedges. If the hedges are kept, please provide justification for the hedge in place of berms or walls.**
5. The applicant is not providing a berm or landscaping in the area of the wetland along Cherry Hill Road. *This deviation is supported by staff because adding those elements would damage the wetland.*
6. The applicant is not providing a berm or landscaping in the Cherry Hill Road greenbelt. *This deviation is not supported by staff at this time. Please provide justification for not providing the required 3 foot tall berm in that area.*

Street Tree Requirements (Zoning Sec. 5.5.3.E.i.c and LDM 1.d.)

1. Street trees are provided along Meadowbrook as required.
2. Street trees are not provided along either Grand River or Cherry Hill. *These deviations are supported by staff because a drainage ditch and utility lines do not provide room for the trees along Grand River, and a deep ditch along Cherry Hill does not allow room for street trees there.*

Parking Lot Landscaping (Zoning Sec. 5.5.3.C.)

1. Based on the vehicular use areas, 4,775 sf of islands and 24 trees are required. 11,612 sf of islands and 24 trees are provided.
2. Each interior island and endcap island must have at least one tree planted in it. There are 6 islands that do not have the required tree.
3. **Please add trees in those islands.**
4. Woodland replacement trees should not be planted in parking lot islands. **Please remove them.**
5. There must be at least 200sf of green space per tree planted in interior islands. Many of the islands with less than 400sf of area have 2 trees planted in them. **Please do not plant trees in situations with less than the required area.**

Parking Lot Perimeter Canopy Trees (Zoning Sec. 5.5.3.C.(3) Chart footnote)

1. Based on the 2,099lf of perimeter, 60 trees are required. 46 new trees, 7 greenbelt trees within 15 feet of the parking lot are being double-counted as perimeter trees, as is



allowed, and 7 existing trees being preserved that are within 15 feet of the parking lot are provided.

2. **Please move the western greenbelt tree along the Meadowbrook entry drive to the greenbelt.**

Loading Zone screening (Zoning Sec. 3.14, 3.15, 4.55, 4.56, 5.5)

**Please provide more solid screening between Meadowbrook Road and the loading area.**

Building Foundation Landscape (Zoning Sec 5.5.3.D.)

1. Based on the hatched areas and calculations it appears that sufficient building foundation landscaping will be provided.
2. **Please provide detailed foundation planting plans for the building frontages along Grand River and Meadowbrook to help assess how well the project meets the goals of the Gateway SDO.**
3. The remaining foundation planting detail drawings can be provided with Final Site Plans.

Woodland Replacement Trees

**Please do not locate woodland replacement trees in areas where they cannot be protected, such as in the greenbelt where utilities are nearby, in parking lot islands, etc.**

Plant List (LDM 2.h. and t.)

Provided.

Planting Notations and Details (LDM)

Provided.

Storm Basin Landscape (Zoning Sec 5.5.3.E.iv and LDM 1.d.(3))

Provided.

Irrigation (LDM 1.a.(1)(e) and 2.s)

1. The proposed landscaping must be provided with sufficient water to become established and survive over the long term.
2. Please note how this will be accomplished if an irrigation plan is not provided.

Proposed topography. 2' contour minimum (LDM 2.e.(1))

Provided.

Snow Deposit (LDM.2.q.)

Provided.

Proposed trees to be saved (Sec 37 Woodland Protection 37-9, LDM 2.e.(1))

Provided.

Corner Clearance (Zoning Sec 5.9)

Provided.

If the applicant has any questions concerning the above review or the process in general, do not hesitate to contact me at 248.735.5621 or meader [meader@cityofnovi.org](mailto:meader@cityofnovi.org).



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Rick Meader – Landscape Architect

## LANDSCAPE REVIEW SUMMARY CHART – SDO Concept Plan

**Review Date:** August 29, 2018  
**Project Name:** JSP17 – 0065: Jaguar/Land Rover  
**Plan Date:** August 18, 2017  
**Prepared by:** Rick Meader, Landscape Architect E-mail: [rmeader@cityofnovi.org](mailto:rmeader@cityofnovi.org);  
 Phone: (248) 735-5621

Items in **Bold** need to be addressed by the applicant before approval of the Preliminary Site Plan.  
Underlined items need to be addressed for Final Site Plan.

### LANDSCAPE DEVIATIONS:

1. Deviation to not provide street trees along Grand River (8 trees) – *supported by staff because there is no room for the trees*
2. Deviation to not provide street trees along Cherry Hill (11 trees) – *supported by staff because there is no room for the trees.*
3. Deviation to not provide greenbelt berm or plantings in area of wetland in order to preserve wetland – *supported by staff.*
4. Deviation to not provide greenbelt berm in greenbelt between Cherry Hill and the parking lot area not behind the wetland – *not supported by staff.*

Item	Required	Proposed	Meets Code	Comments
<b>Landscape Plan Requirements (LDM (2))</b>				
<b>Landscape Plan</b> (Zoning Sec 5.5.2, LDM 2.e.)	<ul style="list-style-type: none"> <li>▪ New commercial or residential developments</li> <li>▪ Addition to existing building greater than 25% increase in overall footage or 400 SF whichever is less.</li> <li>▪ 1" =20' minimum with proper North. Variations from this scale can be approved by LA</li> <li>▪ Consistent with plans throughout set</li> </ul>	Scale 1" =50'	Yes	<b>When building foundation planting designs are provided, please use a scale no less than 1" =20'.</b>
<b>Project Information</b> (LDM 2.d.)	Name and Address	Yes	Yes	
<b>Owner/Developer Contact Information</b> (LDM 2.a.)	Name, address and telephone number of the owner and developer or association	Yes	Yes	
<b>Landscape Architect contact information</b> (LDM 2.b.)	Name, Address and telephone number of RLA	Yes	Yes	
<b>Sealed by LA.</b> (LDM 2.g.)	Requires original signature	Yes	Yes	<u>Need for Final Site Plans</u>
<b>Miss Dig Note</b> (800) 482-7171	Show on all plan sheets	Yes	Yes	

Item	Required	Proposed	Meets Code	Comments
(LDM.3.a.(8))				
<b>Zoning</b> (LDM 2.f.)	Include all adjacent zoning	<u>Sheet SP-2.0</u> <u>Parcel:</u> GE <u>North:</u> Grand River <u>East:</u> Meadowbrook Rd <u>South:</u> Cherry Hill Rd <u>West:</u> GE & NCC	Yes	Please show zoning of adjacent parcels on landscape plan.
<b>Survey information</b> (LDM 2.c.)	<ul style="list-style-type: none"> <li>▪ Legal description or boundary line survey</li> <li>▪ Existing topography</li> </ul>	Topo, description on SP1.0	Yes	
<b>Existing plant material</b> <b>Existing woodlands or wetlands</b> (LDM 2.e.(2))	<ul style="list-style-type: none"> <li>▪ Show location type and size. Label to be saved or removed.</li> <li>▪ Plan shall state if none exists.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Existing trees shown on SP1.0</li> <li>▪ Proposed removals, calculations on T-1.0</li> <li>▪ Tree Chart on T-1.1</li> </ul>	Yes	<ol style="list-style-type: none"> <li>1. See ECT review for full analysis of Wetlands &amp; Woodlands.</li> <li>2. Please move the note stating "Provide Tree Protection Fence Around Existing Trees to Remain, Typ." At the brick plaza area down to point at preserved trees.</li> <li>3. Please remove trees #1573 and #1574 so the berm can be extended further southward.</li> </ol>
<b>Soil types</b> (LDM.2.r.)	<ul style="list-style-type: none"> <li>▪ As determined by Soils survey of Oakland county</li> <li>▪ Show types, boundaries</li> </ul>	Sheet SP-2.0	Yes	
<b>Existing and proposed improvements</b> (LDM 2.e.(4))	Existing and proposed buildings, easements, parking spaces, vehicular use areas, and R.O.W	Yes	Yes	
<b>Existing and proposed utilities</b> (LDM 2.e.(4))	<ul style="list-style-type: none"> <li>▪ Overhead and underground utilities, including hydrants</li> <li>▪ Show light posts</li> </ul>	Yes	Yes	
<b>Proposed grading. 2' contour minimum</b> (LDM 2.e.(1))	Provide proposed contours at 2' interval	Sheet SP-3.0	Yes	<ol style="list-style-type: none"> <li>1. Please provide required berms in greenbelts adjacent to parking.</li> <li>2. See below for berm requirements.</li> </ol>
<b>Snow deposit</b> (LDM.2.q.)	Show snow deposit areas on plan	Yes	Yes	

Item	Required	Proposed	Meets Code	Comments
<b>LANDSCAPING REQUIREMENTS</b>				
<b>Parking Area Landscape Requirements LDM 1.c. &amp; Calculations (LDM 2.o.)</b>				
<b>General requirements (LDM 1.c)</b>	<ul style="list-style-type: none"> <li>▪ Clear sight distance within parking islands</li> <li>▪ No evergreen trees</li> </ul>	25' clear vision zone shown for both Grand River and Meadowbrook Rd.	Yes/No	<ul style="list-style-type: none"> <li>• Please show RCOC sight clearance for Grand River entry.</li> <li>• Remove any shrubs taller than 30" or trees from the zone.</li> </ul>
<b>Name, type and number of ground cover (LDM 1.c.(5))</b>	As proposed on planting islands	Seed and/or sod are indicated on islands	Yes	<b>Please make seed/sod hatches more different for easier interpretation.</b>
<b>General (Zoning Sec 5.5.3.C.ii)</b>				
<b>Parking lot Islands (a, b, i)</b>	<ul style="list-style-type: none"> <li>▪ A minimum of 200 SF to qualify</li> <li>▪ A minimum of 200sf unpaved area per tree planted in an island</li> <li>▪ 6" curbs</li> <li>▪ Islands minimum width 10' BOC to BOC</li> </ul>	Yes	TBD	<ol style="list-style-type: none"> <li>1. It is difficult to determine where backs of curb are on plans. <b>Please dimension widths of islands at back of curb.</b></li> <li>2. <b>Please increase widths or areas of islands as necessary.</b></li> </ol>
<b>Curbs and Parking stall reduction (c)</b>	Parking stall can be reduced to 17' and the curb to 4" adjacent to a sidewalk of minimum 7 ft.	Yes	Yes	
<b>Contiguous space limit (j)</b>	<ul style="list-style-type: none"> <li>▪ Maximum of 15 contiguous spaces.</li> <li>▪ Maximum of 25 contiguous spaces in vehicular storage area</li> </ul>	15 is maximum bay length	Yes	<ol style="list-style-type: none"> <li>1. All endcap islands and islands used to break up bays must be landscaped with a deciduous canopy tree.</li> <li>2. There are 6 interior or endcap islands that need to have trees.</li> <li>3. <b>Please add trees as necessary and enlarge island planting area(s) if necessary to accommodate them.</b></li> </ol>
<b>Plantings around Fire Hydrant (d)</b>	No plantings with matured height greater than 12' within 10 ft. of fire hydrants	None are too close	Yes	
<b>Landscaped area (g)</b>	Areas not dedicated to parking use or driveways exceeding 100 sq. ft. shall be landscaped	Yes	Yes	

Item	Required	Proposed	Meets Code	Comments
Clear Zones (LDM 2.3.(5))	25 ft corner clearance required. Refer to Zoning Section 5.5.9	No	No	Please indicate clear vision zone per RCOC regulations for Haggerty Road entry and all entries to interior road.
<b>Category 1: For OS-1, OS-2, OSC, OST, B-1, B-2, B-3, NCC, EXPO, FS, TC, TC-1, RC, Special Land Use or non-residential use in any R district (Zoning Sec 5.5.3.C.iii)</b>				
A = Total square footage of vehicular use areas up to 50,000sf x 7.5%	<ul style="list-style-type: none"> <li>A = x sf * 7.5 % = A sf</li> <li>50,000 * 7.5% = 3750 sf</li> </ul>		Yes	
B = Total square footage of additional paved vehicular use areas (not including A or B) over 50,000 SF) x 1 %	<ul style="list-style-type: none"> <li>B = x sf * 1% = B sf</li> <li>(152,486 – 50000) * 1% = 1,025 sf</li> </ul>		Yes	
<b>Category 2: For: I-1 and I-2 (Zoning Sec 5.5.3.C.iii)</b>				
A. = Total square footage of vehicular use area up to 50,000 sf x 5%	A = x sf * 5% = A sf	NA		
B = Total square footage of additional paved vehicular use areas over 50,000 SF x 0.5%	B = 0.5% x 0 sf = B SF	NA		
<b>All Categories</b>				
C = A+B Total square footage of landscaped islands	3750 + 1025 = 4775 SF	11,612 sf	Yes	
D = C/200 Number of canopy trees required	<ul style="list-style-type: none"> <li>4775/200 = 24 Trees</li> </ul>	24 trees	Yes	<ol style="list-style-type: none"> <li>Woodland replacement trees should not be planted in parking lot islands.</li> <li>Woodland replacement trees should also not be placed in the greenbelt or other areas where they cannot be protected with an easement.</li> <li><b>Please move replacement trees out of those areas. If they cannot fit on the site in acceptable locations, a deposit</b></li> </ol>

Item	Required	Proposed	Meets Code	Comments
				for the trees that can't be planted can be made to the city's tree fund.
<b>Perimeter Green space</b>	<ul style="list-style-type: none"> <li>▪ 1 Canopy tree per 35 lf</li> <li>▪ 2099/35 = 60 trees</li> </ul>	46 new trees + 7 perimeter trees + 7 existing trees	Yes	<ol style="list-style-type: none"> <li>1. Please move the perimeter tree furthest in the Meadowbrook entry out to between the parking lot and Meadowbrook if it is to count as a greenbelt tree.</li> <li>2. If fewer replacement trees were placed in the greenbelt, there would be plenty of room for all of the required greenbelt trees.</li> </ol>
<b>Accessway perimeter</b>	1 canopy tree per 35 lf on each side of road, less widths of access drives.	Included in above		
<b>Parking land banked</b>	▪ NA	No		
<b>Berms, Walls and ROW Planting Requirements</b>				
<b>Berms</b>				
<ul style="list-style-type: none"> <li>▪ All berms shall have a maximum slope of 33%. Gradual slopes are encouraged. Show 1ft. contours</li> <li>▪ Berm should be located on lot line except in conflict with utilities.</li> <li>▪ Berms should be constructed with 6" of top soil.</li> </ul>				
<b>Residential Adjacent to Non-residential (Sec 5.5.3.A) &amp; (LDM 1.a)</b>				
<b>Berm requirements (Zoning Sec 5.5.A)</b>	Landscaped berm 4.5-6 feet high required abutting multi-family project west of site.	5-6 foot tall landscaped berm is provided along west property line	No	Please extend the berm further south, preferably to end at the wetland buffer but at least to the edge of the critical root zone of Tree #1573, to provide better screening of the parking lot from the residences southwest of the project.
<b>Planting requirements (LDM 1.a.)</b>	LDM Novi Street Tree List	Berm is heavily landscaped with deciduous canopy trees	Yes	
<b>Adjacent to Public Rights-of-Way (Sec 5.5.B) and (LDM 1.b)</b>				
<b>Berm requirements (Zoning Sec</b>	An undulating berm a minimum of 3 feet high	No berms are provided.	No	1. Please provide the required berms

Item	Required	Proposed	Meets Code	Comments
5.5.3.A.(5))	with a 3 foot wide crest is required between parking and right-of-way			<p><b>along Grand River and Meadowbrook.</b></p> <p>2. Due to the preservation of the wetland, a landscape waiver to not provide the required berm in that area of the Cherry Hill greenbelt is supported by staff.</p> <p>3. <b>Please provide the required berm along the eastern 350lf of Cherry Hill frontage.</b> Currently, the deviation is not supported by staff. <b>Please provide justification for this deviation.</b></p>
<b>Cross-Section of Berms (LDM 2.j)</b>				
Slope, height and width	<ul style="list-style-type: none"> <li>▪ Label contour lines</li> <li>▪ Maximum 33%</li> <li>▪ Min. 3 feet flat horizontal area</li> <li>▪ Minimum 3 feet high</li> <li>▪ Constructed of loam with 6' top layer of topsoil.</li> </ul>	No		<b>Please provide berm cross section that includes loam and topsoil callouts</b>
Type of Ground Cover		Seed		
Setbacks from Utilities	Overhead utility lines and 15 ft. setback from edge of utility or 20 ft. setback from closest pole	NA		
<b>Walls (LDM 2.k &amp; Zoning Sec 5.5.3.vi)</b>				
<b>Material, height and type of construction footing</b>	Freestanding walls should have brick or stone exterior with masonry or concrete interior		TBD	<b>Please indicate wall elevations and provide construction details.</b>
<b>Walls greater than 3 ½ ft. should be designed and sealed by an Engineer</b>		No details provided		
<b>ROW Landscape Screening Requirements(Sec 5.5.3.B. ii)</b>				
<b>Greenbelt width (2)(3) (5)</b>	Parking: 20 ft. No Pkg: 25 ft	36 ft to parking 27 ft to building	Yes	



Item	Required	Proposed	Meets Code	Comments
Min. berm crest width	None	No	No	<ol style="list-style-type: none"> <li>1. An evergreen hedge is provided in lieu of berm along Meadowbrook and a small part of the Grand River frontage. Masonry walls are an allowed substitution for the berm, but hedges are the least preferred option as they don't provide the same permanent blockage as berms or walls do.</li> <li>2. <b>Please provide justification for this alternative.</b></li> <li>3. <b>No berm is provided along the Cherry Hill frontage.</b> <i>This deviation is supported for the section in the wetland/wetland buffer to preserve them, but is currently not supported for the eastern 350 feet of frontage.</i></li> <li>4. <b>Please provide the required berm or provide justification for not providing it.</b></li> </ol>
Minimum berm height (9)	None	No	No	<ol style="list-style-type: none"> <li>1. See above.</li> <li>2. If hedge along Meadowbrook is permitted, it must be maintained in a continuous condition, at a height of at least 36".</li> </ol>
3' wall	(4)(7)	No		
<b>Canopy deciduous or large evergreen trees</b> Notes (1) (10)	<b>Parking: 1 tree per 35 lf</b> <ul style="list-style-type: none"> <li>▪ Meadowbrook: (288-30)/35 = 7 trees</li> <li>▪ Grand River: (90-40)/35 = 1 tree</li> </ul> <b>No Pkg: 1 per 60 ft</b> <ul style="list-style-type: none"> <li>▪ Meadowbrook: 348/60</li> </ul>	<u>Meadowbrook:</u> 11 new trees 1 existing tree <u>Grand River:</u> 1 deciduous canopy 4 large evergreens	No Yes Yes	<ol style="list-style-type: none"> <li>1. Please provide 1 more deciduous canopy or large evergreen tree along the Meadowbrook greenbelt.</li> <li>2. Please move the</li> </ol>

Item	Required	Proposed	Meets Code	Comments
	= 6 trees ▪ Grand River: $253/60= 4$ ▪ Cherry Hill: $370/60 = 6$ <b>Total Requirement</b> ▪ Meadowbrook: 13 ▪ Grand River: 5 ▪ Cherry Hill: 6	<u>Cherry Hill:</u> 6 existing trees (total of 19 existing trees saved in greenbelt)		western greenbelt/ perimeter tree on the Meadowbrook entry out to between the parking lot and Meadowbrook. 3. Please replace the Bowhall Maple with a variety that has a minimum mature canopy width of at least 20 feet.
Sub-canopy deciduous trees Notes (2)(10)	<b>Parking: 1 tree per 20 lf</b> ▪ Meadowbrook: $(288-30)/20 = 13$ trees ▪ Grand River: $(90-40)/20 = 3$ trees <b>No Pkg: 1 per 40 ft</b> ▪ Meadowbrook: $348/40 = 9$ trees ▪ Grand River: $253/40= 6$ ▪ Cherry Hill: $370/40 = 9$ <b>Total Requirement</b> ▪ Meadowbrook: 22 ▪ Grand River: 9 ▪ Cherry Hill: 9	<u>Meadowbrook:</u> 20 new trees <u>Grand River:</u> 7 new trees <u>Cherry Hill:</u> 9 existing trees	No No Yes	1. Please provide 2 more subcanopy trees along Meadowbrook 2. Please provide 2 more subcanopy trees along Grand River
Canopy deciduous trees in area between sidewalk and curb (Novi Street Tree List)	<b>Parking: 1 tree per 35 lf</b> ▪ Meadowbrook: $(288-62)/35 = 6$ trees ▪ Grand River: $(90-40)/35 = 1$ tree <b>No Pkg: 1 per 35 ft</b> ▪ Meadowbrook: $348/35 = 6$ trees ▪ Grand River: $253/35= 4$ ▪ Cherry Hill: $370/35 = 6$ <b>Total Requirement</b> ▪ Meadowbrook: 12 ▪ Grand River: 5 ▪ Cherry Hill: 6	<u>Meadowbrook:</u> 4 existing trees 12 new trees <u>Grand River:</u> 0 trees <u>Cherry Hill:</u> 0 trees	Yes No No	1. Due to the ditch and utilities in the Grand River right-of-way, the landscape deviation to not provide those trees is supported by staff. 2. Due to conflicts with the water main, ditch and wetland, there is no room for the street trees along Cherry Hill Road, so that deviation is supported by staff.
<b>Non-Residential Zoning Sec 5.5.3.E.iii &amp; LDM 1.d (2)</b> Refer to Planting in ROW, building foundation landscape, parking lot landscaping and LDM				
Interior Street to Industrial subdivision (LDM 1.d.(2))	▪ 1 canopy deciduous or 1 large evergreen per 35 l.f. along ROW ▪ No evergreen trees closer than 20 ft. ▪ 3 sub canopy trees per 40 l.f. of total linear frontage	NA		

Item	Required	Proposed	Meets Code	Comments
	<ul style="list-style-type: none"> <li>Plant massing for 25% of ROW</li> </ul>			
<b>Screening of outdoor storage, loading/unloading</b> <i>(Zoning Sec. 3.14, 3.15, 4.55, 4.56, 5.5)</i>		Loading zone is on the south side of the building, but exposed to Meadowbrook.	No	<b>Better screening of the loading zone from Meadowbrook should be provided.</b>
<b>Transformers/Utility boxes</b> <i>(LDM 1.e from 1 through 5)</i>	<ul style="list-style-type: none"> <li>A minimum of 2ft. separation between box and the plants</li> <li>Ground cover below 4" is allowed up to pad.</li> <li>No plant materials within 8 ft. from the doors</li> </ul>	No	No	<b>When transformer locations are finalized, screening shrubs per standard detail are required.</b>
<b>Building Foundation Landscape Requirements (Sec 5.5.3.D)</b>				
<b>Interior site landscaping SF</b>	<ul style="list-style-type: none"> <li>Equals to entire perimeter of the building x 8 with a minimum width of 4 ft.</li> <li>A= 848 lf x 8ft = 6784 SF</li> </ul>	A= 7151 sf	TBD	<ol style="list-style-type: none"> <li>Shaded areas indicate that sufficient area is provided.</li> <li><u>Please provide detailed planting plans for foundation planting with final site plans.</u></li> <li><u>Foundation plantings are to be included in cost estimate.</u></li> </ol>
<i>Zoning Sec 5.5.3.D.ii. All items from (b) to (e)</i>	If visible from public street a minimum of 60% of the exterior building perimeter should be covered in green space	It appears that 100% of the building frontages facing Grand River and Meadowbrook will be landscaped.	Yes	
<b>Detention/Retention Basin Requirements (Sec. 5.5.3.E.iv)</b>				
<b>Planting requirements</b> <i>(Sec. 5.5.3.E.iv)</i>	<ul style="list-style-type: none"> <li>Clusters shall cover 70-75% of the basin rim area</li> <li>10" to 14" tall grass along sides of basin</li> <li>Refer to wetland for basin mix</li> </ul>	It appears that at least 70% of the basin rims will be landscaped with large native shrubs.	Yes	<ol style="list-style-type: none"> <li><b>Please use straight species <i>Rhus aromatica</i>, not <i>Grow Low</i>.</b></li> <li><b>Please use a more equal split between the 3 species.</b></li> </ol>
<b>Phragmites Control</b> <i>(Sec 5.5.6.C)</i>	<ul style="list-style-type: none"> <li>Any and all populations of <i>Phragmites australis</i> on site shall be included on tree survey.</li> <li>Treat populations per MDEQ guidelines and</li> </ul>	None indicated	TBD	<ol style="list-style-type: none"> <li><b>Please survey the site for any populations of <i>Phragmites australis</i> and submit plans for its removal.</b></li> <li><b>If none is found, please indicate that</b></li> </ol>

Item	Required	Proposed	Meets Code	Comments
	requirements to eradicate the weed from the site.			on the survey.
<b>LANDSCAPING NOTES, DETAILS AND GENERAL REQUIREMENTS</b>				
<b>Landscape Notes – Utilize City of Novi Standard Notes</b>				
<b>Installation date</b> (LDM 2.i. & Zoning Sec 5.5.5.B)	Provide intended date	Between Mar 15 and Nov 15.	Yes	
<b>Maintenance &amp; Statement of intent</b> (LDM 2.m & Zoning Sec 5.5.6)	<ul style="list-style-type: none"> <li>▪ Include statement of intent to install and guarantee all materials for 2 years.</li> <li>▪ Include a minimum one cultivation in June, July and August for the 2-year warranty period.</li> </ul>	Yes	Yes	
<b>Plant source</b> (LDM 2.n & LDM 3.a.(2))	Shall be northern nursery grown, No.1 grade.	Yes	Yes	
<b>Irrigation plan</b> (LDM 2.s.)	A fully automatic irrigation system or a method of providing sufficient water for plant establishment and survival is required on Final Site Plans.	No	No	<ol style="list-style-type: none"> <li>1. <u>Please add irrigation plan or information as to how plants will be watered sufficiently for establishment and long- term survival.</u></li> <li>2. <u>If xeriscaping is used, please provide information about plantings included.</u></li> </ol>
<b>Other information</b> (LDM 2.u)	Required by Planning Commission	NA		<b>Please change note #13 from one(1) year to three (3) months.</b>
<b>Establishment period</b> (Zoning Sec 5.5.6.B)	<b>2 yr. Guarantee</b>	Yes	Yes	
<b>Approval of substitutions.</b> (Zoning Sec 5.5.5.E)	City must approve any substitutions in writing prior to installation.	Yes	Yes	
<b>Plant List (LDM 2.h.) – Include all cost estimates</b>				
Quantities and sizes	Refer to LDM suggested plant list	Yes	Yes	
Root type		Yes	Yes	
Botanical and common names		Yes	Yes	<ol style="list-style-type: none"> <li>1. Tree diversity is good.</li> <li>2. 24 of 30 species used are native to Michigan.</li> <li>3. <u>When foundation plantings are added, please ensure that at</u></li> </ol>

Item	Required	Proposed	Meets Code	Comments
				least 50% of all species used, not including those in seed mixes, are native to Michigan.
Type and amount of lawn		Yes	Yes	Please use hatches that are easier to differentiate from each other.
Cost estimate (LDM 2.t)	For all new plantings, mulch and sod as listed on the plan	Yes	Yes	1. Please add mulch to cost total at \$35/cyd 2. Please change sod unit cost to \$6/sy 3. All evergreen shrubs can be left at \$50 ea.
<b>Planting Details/Info (LDM 2.i) – Utilize City of Novi Standard Details</b>				
Canopy Deciduous Tree	Refer to LDM for detail drawings	Yes	Yes	
Evergreen Tree		Yes	Yes	
Shrub		Yes	Yes	
Perennial/ Ground Cover		Yes	Yes	
Tree stakes and guys. (Wood stakes, fabric guys)		Yes	Yes	
Tree protection fencing	Located at Critical Root Zone (1' outside of dripline)	Yes	Yes	
<b>Other Plant Material Requirements (LDM 3)</b>				
<b>General Conditions (LDM 3.a)</b>	Plant materials shall not be planted within 4 ft. of property line	Yes	Yes	
<b>Plant Materials &amp; Existing Plant Material (LDM 3.b)</b>	Clearly show trees to be removed and trees to be saved.	Yes	Yes	
<b>Landscape tree credit (LDM3.b.(d))</b>	Substitutions to landscape standards for preserved canopy trees outside woodlands/ wetlands should be approved by LA. Refer to Landscape tree Credit Chart in LDM	No		
<b>Plant Sizes for ROW, Woodland replacement and others (LDM 3.c)</b>	2.5" canopy trees 6' evergreen trees		Yes	

Item	Required	Proposed	Meets Code	Comments
<b>Plant size credit</b> (LDM3.c.(2))	NA	No		
<b>Prohibited Plants</b> (LDM 3.d)	No plants on City Invasive Species List	None		
<b>Recommended trees for planting under overhead utilities</b> (LDM 3.e)	Label the distance from the overhead utilities	Overhead lines are clearly marked.	Yes	
<b>Collected or Transplanted trees</b> (LDM 3.f)		No		
<b>Nonliving Durable Material: Mulch</b> (LDM 4)	<ul style="list-style-type: none"> <li>▪ Trees shall be mulched to 3" depth and shrubs, groundcovers to 2" depth</li> <li>▪ Specify natural color, finely shredded hardwood bark mulch. Include in cost estimate.</li> <li>▪ Refer to section for additional information</li> </ul>	Yes	Yes	

**NOTES:**

1. This table is a working summary chart and not intended to substitute for any Ordinance or City of Novi requirements or standards.
2. The section of the applicable ordinance or standard is indicated in parenthesis. For the landscape requirements, please see the Zoning Ordinance landscape section 5.5 and the Landscape Design Manual for the appropriate items under the applicable zoning classification.
3. Please include a written response to any points requiring clarification or for any corresponding site plan modifications to the City of Novi Planning Department with future submittals.

WETLANDS REVIEW

August 29, 2018  
ECT No. 180530-0100

Ms. Barbara McBeth, AICP  
City Planner  
Community Development Department  
City of Novi  
45175 W. Ten Mile Road  
Novi, Michigan 48375

Re: Jaguar/Land Rover (JSP17-0065)  
Wetland Review of the SDO Concept Plan (PSP18-0125)

Dear Ms. McBeth:

Environmental Consulting & Technology, Inc. (ECT) has reviewed the SDO Concept Plan for the proposed Jaguar/Land Rover project prepared by PEA, Inc. dated August 8, 2018 and stamped “Received” by the City of Novi Community Development Department on August 9, 2018 (Plan). The Plan was reviewed for conformance with the City of Novi Wetland and Watercourse Protection Ordinance and the natural features setback provisions in the Zoning Ordinance. In addition, ECT conducted an on-site wetland boundary verification inspection at this site on November 23, 2016.

**ECT recommends approval of the SDO Concept Plan for Wetlands; however, the Applicant should address the items noted in the *Wetland Comments* Section of this letter prior to receiving Wetland approval of the Final Site Plan.**

The following wetland related items are required for this project:

Item	Required/Not Required/Not Applicable
Wetland Permit (specify Non-Minor or Minor)	Not Required
Wetland Mitigation	Not Required
Wetland Buffer Authorization	Required
MDEQ Permit	Not Likely Required
Wetland Conservation Easement	Required

The proposed development is located west of Meadowbrook Road between Cherry Hill and Grand River Avenue in Section 23. The overall project site area is approximately 9.5 acres and is currently vacant (Parcels 22-23-251-018 and 22-23-251-019). Based on historic aerial photos, the majority of this site has been previously disturbed (cleared/graded) in the past. The project includes the construction of a 53,211 square foot automotive facility, associated parking areas and driveways, utilities as well as a storm water detention basin that appears to outlet to the City of Novi storm sewer system along Meadowbrook Road. Based on our review of the Plan, Novi aerial photos, Novi GIS, and the City of Novi Official Wetlands and Woodlands Maps (see Figure 1); it appears as if this proposed project site contains both City-Regulated Wetlands and Regulated Woodlands.



### **Wetland Evaluation**

ECT conducted a wetland evaluation for the proposed site on November 23, 2016. The focus of the site inspection was to review site conditions in order to determine whether any on-site wetlands are regulated by the City of Novi including whether wetlands meet the City of Novi's Wetland Essentiality Criteria. One (1) area of wetland (i.e., Wetland A) is indicated on the Wetland Location Map (i.e., Figure 2). This wetland area was marked in the field with survey tape flags at the time of our inspection. The Wetland Location Map (Figure 2) indicate the approximate location of Wetland A but does not indicate the 25-foot wetland buffer/setback boundary.

On August 11, 2016 Niswander Environmental conducted a wetland delineation on the property. It is Niswander's opinion that Wetland A is likely not regulated by MDEQ due to the fact that it is less than 5 acres in size and is not hydrologically connected to any nearby bodies of water. They state that the City of Novi would regulate Wetland A under the "essential to the preservation of the natural resources of the City" clause in the wetland protection ordinance.

Wetland A is a small emergent/scrub-shrub wetland located in the southern portion of the Property, along a drainage ditch that extends east/west along Cherry Hill Road (Figure 2). Northern portions of this 0.48-acre wetland extend into a section of wooded area that contains common buckthorn (*Rhamnus cathartica*), multiflora rose (*Rosa multiflora*), grapevine (*Vitis riparia*), and honeysuckle (*Lonicera tatarica*). The wetland is dominated primarily by invasive reed canary grass (*Phalaris arundinacea*), although other species such as sandbar willow (*Salix exigua*), cattail (*Typha angustifolia*), glossy buckthorn (*Frangula alnus*), swamp milkweed (*Asclepias incarnata*), joe pye weed (*Eupatorium maculatum*), and sapling ash (*Fraxinus pennsylvanica*) and elm (*Ulmus americana*) are also present).

The southern portion of Wetland A (i.e., ditch along north side of Cherry Hill Road) is a shallow, narrow roadside ditch. Much of the vegetation within this ditch consists of reed canary grass, buckthorn, grapevine, and rice cutgrass.

The adjacent upland area consists of what appears to be area that has been previously disturbed. Areas of fairly sparse trees and shrubs exist throughout this upland area.

ECT has verified that the Wetland A boundaries appear to be accurately flagged in the field and depicted on the Wetland Location Map. It can be noted that the City of Novi's Regulated Wetland Map (Figure 1) is not accurate in indicating the location of wetland on the subject property. The Wetland Location Map provided by Niswander Environmental (Figure 2) does appear to accurately portray the existing wetland location.

### **Proposed Wetland Impacts**

As noted above, the Plan indicates one (1) area of wetland on this site located along the southern boundary of the subject site. Portions of this wetland area appear to be included on the City of Novi *Regulated Wetlands and Watercourse Map* (see Figure 1, attached). **The current Plan does not appear to propose any impacts to the existing wetland.**

With regard to the 25-foot wetland setbacks, the Plan appears to propose encroachment into the 25-foot wetland buffer south of the proposed detention basin for the purpose of constructing the stormwater outlet pipe (30" diameter concrete pipe). These impacts have not been indicated or quantified on the current Plan. The Applicant shall indicate, quantify (square feet or acres of fill or excavation within the wetland buffer

limits, if applicable) on subsequent plan submittals. The City of Novi regulates a 25-foot buffer surrounding all wetland and watercourses.

**Regulatory Status - MDEQ**

ECT has evaluated the on-site wetlands and believes that they are considered to be essential/regulated by the City of Novi as they meet one or more of the essentiality criteria (i.e., functions and values) outlined in the City of Novi Wetland and Watercourse Protection Ordinance. As noted, the wetlands appear to accurately flagged in the field and appear to indicated accurately on the Plans however, the wetland flag numbers shall be provided on an appropriate sheet on the Plan (wetland plan or existing conditions plan, etc.).

The Michigan Department of Environmental Quality (MDEQ) generally regulates wetlands that are within 500 feet of an inland lake, pond, or stream, or within 1,000 feet of a Great Lake, Lake St. Clair, the St. Clair River, or the Detroit River. Isolated wetlands five (5) acres in size or greater are also regulated. The MDEQ may also exert regulatory control over isolated wetlands less than five acres in size "...if the department determines that protection of the area is essential to the preservation of the natural resources of the state from pollution, impairment, or destruction and the department has notified the owner".

Should the applicant propose impacts to the on-site wetlands, it will be their responsibility to contact MDEQ to determine the regulatory status of the on-site wetlands. If wetland impacts are proposed, the applicant shall provide correspondence with the MDEQ such as a wetland permit application, wetland permit, wetland assessment, or Letter of No Jurisdiction. It appears as if the on-site wetlands could be MDEQ-regulated. Subject to MDEQ concurrence, a MDEQ Wetland Use Permit will need to be on file prior to the issuance of a City Wetland Use Permit. A City of Novi Wetland Permit cannot be issued prior to receiving this information.

**Regulatory Status – City of Novi**

The City of Novi Wetland and Watercourse Protection Ordinance (City of Novi Code of Ordinances, Part II, Chapter 12, Article V.; Division 2.) describes the regulatory criteria for wetlands and review standards for wetland permit applications. The City of Novi regulates wetlands that are: (1) contiguous to a lake, pond, river or stream, as defined in Administrative Rule 281.921; (2) two (2) acres in size or greater; or (3) less than two (2) acres in size but deemed essential to the preservation of the natural resources of the city under the criteria set forth in subsection 12-174(b). Wetlands deemed regulated by the City of Novi require the approval of a use permit for any proposed impacts to the wetland.

ECT has evaluated the areas of on-site wetland and believes the wetlands are regulated by the City's Wetland and Watercourse Protection Ordinance because they meet one or more of the essentiality criteria in the Ordinance (i.e., stormwater storage and wildlife habitat).

It should be noted that in those cases where an activity results in the impact to wetland areas of 0.25-acre or greater that are deemed essential under City of Novi Ordinance subsection 12-174(b) mitigation shall be required. The applicant shall submit a mitigation plan which provides for the establishment of replacement wetlands at a ratio of 1:1 through 2:1 times the area of the natural wetland impaired or destroyed, if impacts meet or exceed the 0.25-acre threshold. In general, the MDEQ's threshold for the requirement of wetland mitigation is 0.3-acre of wetland impacts. The current Plan does not appear to propose wetland impacts and mitigation will not be a requirement for this project.

As noted above, any proposed use of the wetlands will require a City of Novi *Wetland Use Permit* as well as an *Authorization to Encroach the 25-Foot Natural Features Setback* for any proposed impacts to the 25-foot wetland buffers. The applicant is urged to minimize impacts to on-site wetlands and wetland setbacks to the greatest extent practicable. The City regulates wetland buffers/setbacks. Article 24, Schedule of Regulations, of the Zoning Ordinance states that:

*“There shall be maintained in all districts a wetland and watercourse setback, as provided herein, unless and to the extent, it is determined to be in the public interest not to maintain such a setback. The intent of this provision is to require a minimum setback from wetlands and watercourses”.*

### **Wetland Comments**

Please consider the following comments when preparing subsequent site plan submittals:

1. It does not appear as though a MDEQ Wetland Permit or City of Novi *Wetland Use Permit* would be required as there do not appear to be proposed wetland impacts.

A City of Novi *Authorization to Encroach the 25-Foot Natural Features Setback* would be required for any proposed impacts to on-site 25-foot wetland buffers. There appear to be wetland buffer impacts proposed for the construction of the outlet from the proposed stormwater detention basin.

2. ECT encourages the Applicant to minimize impacts to on-site wetlands and 25-foot wetland setbacks to the greatest extent practicable. The Applicant should consider modification of the proposed site design to preserve all wetland and wetland buffer areas. Specifically, the applicant shall work to avoid any proposed encroachment into the 25-foot wetland buffer for the purpose constructing the proposed stormwater detention basin. The City regulates wetland buffers/setbacks. Article 24, Schedule of Regulations, of the Zoning Ordinance states that:

*“There shall be maintained in all districts a wetland and watercourse setback, as provided herein, unless and to the extent, it is determined to be in the public interest not to maintain such a setback. The intent of this provision is to require a minimum setback from wetlands and watercourses”.*

3. The applicant should clearly show and label any wetland **and** 25-foot natural features setback (buffer) boundaries on all future plan submittals. In addition, please provide on the Plan, the date that the original wetland delineation was conducted.
4. The on-site acreages for all existing wetland areas and associated 25-foot wetland setback areas should be indicated on the Plan.
5. The areas (square feet or acres) of all proposed impacts to the 25-foot wetland buffer (both permanent and/or temporary) shall be clearly indicated on the Plan.
6. The Plan should address how any temporary impacts to wetland buffers shall be restored, if applicable. A proposed seed mix should be provided on the Plan for restoration of these wetland buffer areas. Sod or common grass seed will not be authorized in these areas.
7. The Applicant is encouraged to provide wetland conservation easements for any areas of remaining wetland or 25-foot wetland buffer. The Applicant shall provide wetland conservation easements as directed by the City of Novi Community Development Department for any areas of remaining wetland

as well as for any proposed wetland mitigation areas (if necessary). A Conservation Easement shall be executed covering all remaining wetland areas on site as shown on the approved plans. This language shall be submitted to the City Attorney for review. The executed easement must be returned to the City Attorney within 60 days of the issuance of the City of Novi Wetland and Watercourse permit.

8. Should impacts to the wetland area be proposed, the applicant shall provide correspondence from the MDEQ clarifying the regulatory status of Wetland A. A City of Novi Wetland Permit cannot be issued prior to receiving this information.

**Recommendation**

ECT recommends approval of the SDO Concept Plan for Wetlands; however, the Applicant should address the items noted in the *Wetland Comments* Section of this letter prior to receiving Wetland approval of the Final Site Plan.

If you have any questions regarding the contents of this letter, please contact us.

Sincerely,

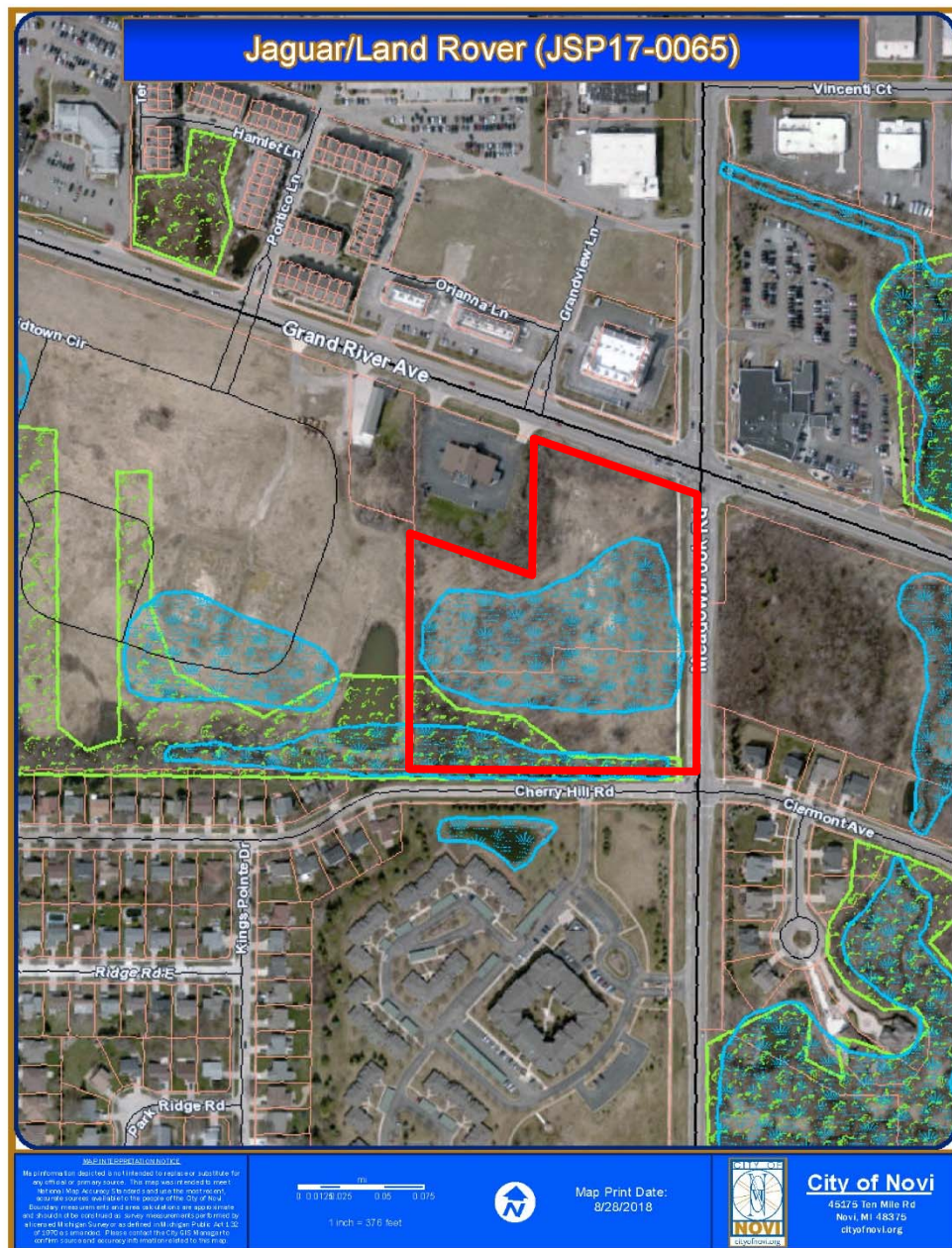
**ENVIRONMENTAL CONSULTING & TECHNOLOGY, INC.**



Peter Hill, P.E.  
Senior Associate Engineer

cc: Lindsay Bell, City of Novi Planner  
Sri Komaragiri, City of Novi Planner  
Rick Meader, City of Novi Landscape Architect  
Hannah Smith, City of Novi Planning Assistant

Attachments: Figure 1. City of Novi Regulated Wetland & Woodland Map  
Figure 2. Wetland Locations Map  
Site Photos



**Figure 1.** City of Novi Regulated Wetland & Woodland Map (approximate project boundary shown in red). Regulated Woodland areas are shown in green and Regulated Wetland areas are shown in blue.



Figure 2. Wetland Location Map (figure provided by Niswander Environmental).

*Site Photos*



**Photo 1.** Looking northeast towards Meadowbrook Road and Wetland Flags A-19 and A-20 (ECT, November 23, 2016).



**Photo 2.** Looking north at Wetland A near the southwest corner of the site (ECT, November 23, 2016).

WOODLANDS REVIEW



August 29, 2018  
ECT No. 180530-0200

Ms. Barbara McBeth, AICP  
City Planner  
Community Development Department  
City of Novi  
45175 West Ten Mile Road  
Novi, MI 48375

Re: Jaguar/Land Rover (JSP17-0065)  
Woodland Review of the SDO Concept Plan (PSP18-0125)

Dear Ms. McBeth:

Environmental Consulting & Technology, Inc. (ECT) has reviewed the SDO Concept Plan for the proposed Jaguar/Land Rover project prepared by PEA, Inc. dated August 8, 2018 and stamped "Received" by the City of Novi Community Development Department on August 9, 2018 (Plan). The Plan was reviewed for conformance with the City of Novi Woodland Protection Ordinance Chapter 37.

**ECT recommends approval of the SDO Concept Plan for Woodlands; however, the Applicant should address the items noted in the *Woodland Comments* Section of this letter prior to receiving Woodland approval of the Final Site Plan.**

The following woodland related items are required for this project:

Item	Required/Not Required/Not Applicable
Woodland Permit	Required
Woodland Fence	Required
Woodland Conservation Easement	Required

The proposed development is located west of Meadowbrook Road between Cherry Hill and Grand River Avenue in Section 23. The overall project site area is approximately 9.5 acres and is currently vacant (Parcels 22-23-251-018 and 22-23-251-019). Based on historic aerial photos, the majority of this site has been previously disturbed (cleared/graded) in the past. The project includes the construction of a 53,211 square foot automotive facility, associated parking areas and driveways, utilities as well as a storm water detention basin that appears to outlet to the City of Novi storm sewer system along Meadowbrook Road. Based on our review of the Plan, Novi aerial photos, Novi GIS, and the City of Novi Official Wetlands and Woodlands Maps (see Figure 1); it appears as if this proposed project site contains both City-Regulated Wetlands and Regulated Woodlands.

ECT recommends that we conduct a woodland field evaluation at the time of Preliminary Site Plan submittal in order to verify the existing on-site woodland information (tree sizes, species, conditions, etc.). A tree survey has been completed for the site and is included with the current Plan.

The purpose of the Woodlands Protection Ordinance is to:

- 1) *Provide for the protection, preservation, replacement, proper maintenance and use of trees and woodlands located in the city in order to minimize disturbance to them and to prevent damage from erosion and siltation, a loss of wildlife and vegetation, and/or from the destruction of the natural habitat. In this regard, it is the intent of this chapter to protect the integrity of woodland areas as a whole, in recognition that woodlands serve as part of an ecosystem, and to place priority on the preservation of woodlands, trees, similar woody vegetation, and related natural resources over development when there are no location alternatives;*
- 2) *Protect the woodlands, including trees and other forms of vegetation, of the city for their economic support of local property values when allowed to remain uncleared and/or unharvested and for their natural beauty, wilderness character of geological, ecological, or historical significance; and*
- 3) *Provide for the paramount public concern for these natural resources in the interest of health, safety and general welfare of the residents of the city.*

As noted in the City's Woodlands Ordinance (Section 37-4, Applicability):

Where uncertainty exists with respect to the boundaries of designated woodland areas shown on the regulated woodland map, the following rules shall apply:

- *Distances not specifically indicated on the map shall be determined by the scale on the map;*
- *Where physical or natural features existing on the ground are at variance with those shown on the regulated woodland map, or in other circumstances where uncertainty exists, the community development director or his or her designee shall interpret the woodland area boundaries;*
- *On any parcel containing any degree of regulated woodland, the applicant shall provide site plan documentation showing the locations, species, size and condition of all trees of eight-inch caliper or larger. Existing site understory trees, shrubs and ground cover conditions must be documented on the site plan or woodland use permit application plan in the form of a brief narrative. The woodland conditions narrative should include information regarding plant species, general quantities and condition of the woodland vegetation.*

It is ECT's assessment that the existing woodland areas located on the subject site should all be considered regulated.

It should be noted that the purpose of the City of Novi Woodland Protection Ordinance (Chapter 37) is to:

1. *Provide for the protection, preservation, replacement, proper maintenance and use of trees and woodlands located in the city in order to minimize disturbance to them and to prevent damage from erosion and siltation, a loss of wildlife and vegetation, and/or from the destruction of the natural habitat. In this regard, it is the intent of this chapter to protect the integrity of woodland areas as a whole, in recognition that woodlands serve as part of an ecosystem, and to place priority on the preservation of woodlands, trees, similar woody vegetation, and related natural resources over development when there are no location alternatives;*
2. *Protect the woodlands, including trees and other forms of vegetation, of the city for their economic support of local property values when allowed to remain uncleared and/or unharvested and for their natural beauty, wilderness character of geological, ecological, or historical significance; and*

3. *Provide for the paramount public concern for these natural resources in the interest of health, safety and general welfare of the residents of the city.*

What follows is a summary of our review of the woodland information provided on the Plan.

### **On-Site Woodland Evaluation**

ECT has reviewed the City of Novi Official Woodlands Map and previously completed an on site Woodland Evaluation on November 23, 2016. As noted above, ECT will conduct a woodland field evaluation at the time of Preliminary Site Plan submittal in order to verify the existing on-site wetland boundaries and any changes to the available woodland information (tree sizes, species, conditions, etc.). ECT's in-office review of available materials included the City of Novi Regulated Woodland map and other available mapping. The subject property includes area that is indicated as City-regulated woodland on the official City of Novi Regulated Wetland and Watercourse Map (see Figure 1). The areas designated as City Regulated Woodlands are located in the southwest section of the site.

An existing tree survey has been completed for the site and a *Tree Preservation List* is included as Sheet T-1.1. This sheet identifies tree tag numbers, diameter-at-breast-height (DBH), common/botanical name, condition, and removal status. The applicant should include a column for woodland replacements required for the proposed tree removals in this list. In general, the on-site trees consist of eastern cottonwood (*Populus deltoides*), black locust (*Robinia pseudoacacia*), box elder (*Acer negundo*), black walnut (*Juglans nigra*), white willow (*Salix alba*), American elm (*Ulmus americana*), green ash (*Fraxinus pennsylvanica*), and silver maple (*Acer saccharinum*).

In terms of habitat quality and diversity of tree species, the overall subject site consists of trees in good condition. In terms of a scenic asset, wildlife habitat, windblock, noise buffer or other environmental asset, the forested areas located on the subject site appear to be considered to be of fair to good quality. There are a significant number of trees to be removed for the proposed development.

### **Proposed Woodland Impacts and Replacements**

A review of the Plan (*Tree Preservation Plan & Tree Preservation List*) indicates the following:

- Total Trees Surveyed: 310
- Total Trees Removed: 149 (48% of total trees surveyed)

The *Tree Preservation Plan* (Sheet T-1.0) notes that **172** Woodland Replacement Tree credits are required and that a total of **172** on-site Woodland Replacement Tree credits are proposed with a mix of canopy (deciduous) trees and evergreen trees.

The Plan includes a *Tree Plant List* on Sheet T-1.0, that lists the species of the proposed Woodland Replacement Trees; however it does not currently appear to specify the quantity of each species that will be used as Woodland Replacement tree credits. The applicant should, for example, specify how many of the 28 hophornbeam listed in the list are Woodland Replacement Trees as opposed to Perimeter Parking Lot or Landscape trees, etc. All of the tree species proposed as Woodland Replacement Tree material appears to be acceptable per the City's Woodland Tree Replacement Chart, however, the applicant shall specify the thornless honeylocust (*Gleditsia triacanthos inermis*) on the Plan.

It is recommended that the applicant provide a table that specifically describes the species and quantities of proposed Woodland Replacement trees. It should also be noted that all deciduous replacement trees shall

be two and one-half (2 ½) inches caliper or greater and count at a 1-to-1 replacement ratio. All coniferous replacement trees shall be 6-feet in height (minimum) and provide 1.5 trees-to-1 replacement credit replacement ratio (i.e., each coniferous tree planted provides for 0.67 credits). The “upsizing” of Woodland Replacement trees for additional Woodland Replacement credit is not supported by the City of Novi. Finally, all proposed Woodland Replacement tree material shall meet the species requirements in the *Woodland Tree Replacement Chart* (attached).

The Woodland Replacement trees are proposed around the stormwater detention basin, along the west edge of the property, near the loading zone, and within several parking lot islands. The location of the trees in the parking lot islands and perhaps near the loading zone is not consistent with the intent of the Woodland Ordinance in mitigating for the loss of woodland tree canopy. In addition, it is not clear how these replacement trees will be protected in perpetuity through a landscape or woodland easement. ECT suggests that these proposed Woodland Replacement Trees be relocated to another area of the site that can more easily be placed into such an easement. The Ordinance states that the location of replacement trees shall be such as to provide the optimum enhancement, preservation and protection of woodland areas. Where woodland densities permit, tree relocation or replacement shall be within the same woodland areas as the removed trees. Such woodland replanting shall not be used for the landscaping requirements of the subdivision ordinance or the zoning landscaping, Section 2509. Where replacements are installed in a currently non-regulated woodland area on the project property, appropriate provision shall be made to guarantee that the replacement trees shall be preserved as planted, such as through a conservation or landscape easement to be granted to the city. Such easement or other provision shall be in a form acceptable to the city attorney and provide for the perpetual preservation of the replacement trees and related vegetation. The applicant shall demonstrate that all proposed Woodland Replacement Trees will be guaranteed to be preserved as planted within a conservation easement or landscape easement to be granted to the City.

**City of Novi Woodland Review Standards and Woodland Permit Requirements**

Based on Section 37-29 (*Application Review Standards*) of the City of Novi Woodland Ordinance, the following standards shall govern the grant or denial of an application for a use permit required by this article:

*No application shall be denied solely on the basis that some trees are growing on the property under consideration. However, the protection and conservation of irreplaceable natural resources from pollution, impairment, or destruction is of paramount concern. Therefore, the preservation of woodlands, trees, similar woody vegetation, and related natural resources shall have priority over development when there are location alternatives.*

In addition,

*“The removal or relocation of trees shall be limited to those instances when necessary for the location of a structure or site improvements and when no feasible and prudent alternative location for the structure or improvements can be had without causing undue hardship”.*

A Woodland Permit from the City of Novi would be required for proposed impacts to any trees 8-inch diameter-at-breast-height (DBH) or greater located within those areas designated as Regulated Woodland Areas or impacts to any tree 36” DBH or greater regardless of location. Such trees shall be relocated or replaced by the permit grantee.

**Woodland Comments**

Please consider the following comments when preparing subsequent site plan submittals:

1. ECT encourages the Applicant to minimize impacts to on-site woodlands to the greatest extent practicable. Currently, the Plan proposes to remove **149** of the **310** surveyed trees (48% of the on-site regulated trees). The current required Woodland Replacement Credit quantity is **172** Woodland Replacement Credits.
2. The Plan includes a *Tree Plant List* on Sheet T-1.0, that lists the species of the proposed Woodland Replacement Trees; however it does not currently appear to specify the quantity of each species that will be used as Woodland Replacement tree credits. The applicant should, for example, specify how many of the 28 hophornbeam listed in the list are Woodland Replacement Trees as opposed to Perimeter Parking Lot or Landscape trees, etc.
3. For trees proposed for removal, the Tree Plant List should include a column indicating the number of Woodland Replacement Credits Required.
4. All of the tree species proposed as Woodland Replacement Tree material appears to be acceptable per the City's Woodland Tree Replacement Chart, however, the applicant shall specify the thornless honeylocust (*Gleditsia triacanthos inermis*) on the Plan.
5. A Woodland Permit from the City of Novi would be required for proposed impacts to any trees 8-inch diameter-at-breast-height (DBH) or greater and located within an area designated as City Regulated Woodland, or any tree 36-inches DBH regardless of location on the site. Such trees shall be relocated or replaced by the permit grantee. All deciduous replacement trees shall be two and one-half (2 ½) inches caliper or greater and count at a 1-to-1 replacement ratio and all coniferous replacement trees shall be six (6) feet in height (minimum) and count at a 1.5-to-1 replacement ratio. All Woodland Replacement trees shall be species that are listed on the City's Woodland Tree Replacement Chart (attached).
6. A Woodland Replacement Performance financial guarantee for the planting of replacement trees will be required. This financial guarantee will be based on the number of on-site woodland replacement trees (credits) being provided at a per tree value of \$400. In this case, the Woodland Replacement Performance Guarantee would be \$68,800 (172 Woodland Replacement Credits Required x \$400/Credit). Based on a successful inspection of the installed on-site Woodland Replacement trees, the original Woodland Financial Guarantee shall be returned to the Applicant. Twenty-five percent (25%) of the value of the Woodland Replacement material shall be kept for a period of 2-years after the successful inspection of the tree replacement installation as a *Woodland Maintenance and Guarantee Bond*. This *Woodland Maintenance and Guarantee Bond* value is to be \$17,200.
7. If applicable, Woodland Replacement material should not be located 1) within 10' of built structures or the edges of utility easements and 2) over underground structures/utilities or within their associated easements. In addition, replacement tree spacing should follow the *Plant Material Spacing Relationship Chart for Landscape Purposes* found in the City of Novi *Landscape Design Manual*.

8. If applicable, the Applicant will be required to pay the City of Novi Tree Fund at a value of \$400/credit for any Woodland Replacement tree credits that are proposed on-site that cannot be placed on-site at the time of landscaping.
9. The applicant currently proposes to provide **172** Woodland Replacement Credits on site. The Applicant shall provide preservation/conservation easements as directed by the City of Novi Community Development Department for any areas of woodland replacement trees. The applicant shall demonstrate that the all proposed woodland replacement trees will be guaranteed to be preserved as planted with a conservation easement or landscape easement to be granted to the city. This language shall be submitted to the City Attorney for review. The executed easement must be returned to the City Attorney within 60 days of the issuance of the City of Novi Woodland permit. The applicant shall clearly indicate the proposed conservation easement boundaries on the Plan.
10. As noted, some of the proposed Woodland Replacement trees are within the parking lot or close to the proposed loading zone. The location of these trees is not consistent with the intent of the Woodland Ordinance in mitigating for the loss of woodland tree canopy. ECT suggests that these proposed Woodland Replacement Trees be relocated to another area of the site that can more easily be placed into a conservation easement.

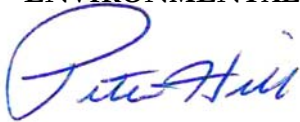
**Woodland Recommendation**

ECT recommends approval of the SDO Concept Plan for Woodlands; however, the Applicant should address the items noted in the *Woodland Comments* Section of this letter prior to receiving Woodland approval of the Final Site Plan.

If you have any questions regarding the contents of this letter, please contact us.

Respectfully submitted,

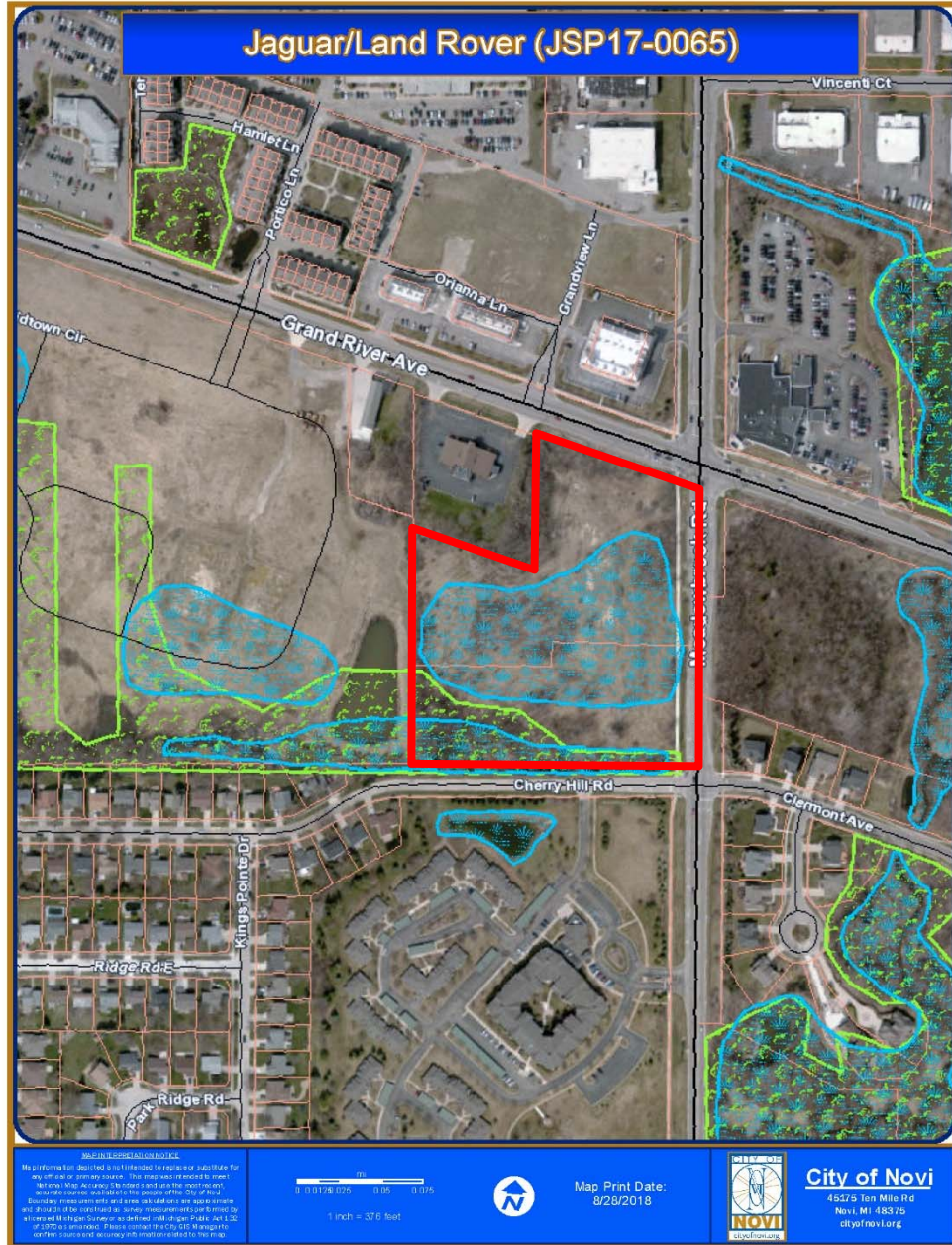
**ENVIRONMENTAL CONSULTING & TECHNOLOGY, INC.**



Pete Hill, P.E.  
Senior Associate Engineer

cc: Lindsay Bell, City of Novi Planner  
Sri Komaragiri, City of Novi Planner  
Rick Meader, City of Novi Landscape Architect  
Hannah Smith, City of Novi Planning Assistant

Attachments: Figure 1 – City of Novi Regulated Wetland & Woodland Map  
Woodland Tree Replacement Chart  
Site Photos



**Figure 1.** City of Novi Regulated Wetland & Woodland Map (approximate project boundary shown in red). Regulated Woodland areas are shown in green and Regulated Wetland areas are shown in blue.

### Woodland Tree Replacement Chart

(from Chapter 37 Woodlands Protection)  
 (All canopy trees to be 2.5" cal or larger, evergreens as listed)

Common Name	Botanical Name
Black Maple	<i>Acer nigrum</i>
Striped Maple	<i>Acer pennsylvanicum</i>
Red Maple	<i>Acer rubrum</i>
Sugar Maple	<i>Acer saccharum</i>
Mountain Maple	<i>Acer spicatum</i>
Ohio Buckeye	<i>Aesculus glabra</i>
Downy Serviceberry	<i>Amelanchier arborea</i>
Smooth Shadbush	<i>Amelanchier laevis</i>
Yellow Birch	<i>Betula alleghaniensis</i>
Paper Birch	<i>Betula papyrifera</i>
American Hornbeam	<i>Carpinus caroliniana</i>
Bitternut Hickory	<i>Carya cordiformis</i>
Pignut Hickory	<i>Carya glabra</i>
Shagbark Hickory	<i>Carya ovata</i>
Northern Hackberry	<i>Celtis occidentalis</i>
Eastern Redbud	<i>Cercis canadensis</i>
Pagoda Dogwood	<i>Cornus alternifolia</i>
Flowering Dogwood	<i>Cornus florida</i>
American Beech	<i>Fagus grandifolia</i>
Thornless Honeylocust	<i>Gleditsia triacanthos inermis</i>
Kentucky Coffeetree	<i>Gymnocladus dioica</i>
Walnut	<i>Juglans nigra</i> or <i>Juglans cinerea</i>
Eastern Larch	<i>Larix laricina</i>
Tuliptree	<i>Liriodendron tulipifera</i>
Tupelo	<i>Nyssa sylvatica</i>
American Hophornbeam	<i>Ostrya virginiana</i>
White Spruce_(1.5:1 ratio) (6' ht.)	<i>Picea glauca</i>
Black Spruce_(1.5:1 ratio) (6' ht.)	<i>Picea mariana</i>
Red Pine_(1.5:1 ratio) (6' ht.)	<i>Pinus resinosa</i>
White Pine_(1.5:1 ratio) (6' ht.)	<i>Pinus strobus</i>
American Sycamore	<i>Platanus occidentalis</i>
Black Cherry	<i>Prunus serotina</i>
White Oak	<i>Quercus alba</i>
Swamp White Oak	<i>Quercus bicolor</i>
Scarlet Oak	<i>Quercus coccinea</i>
Shingle Oak	<i>Quercus imbricaria</i>
Burr Oak	<i>Quercus macrocarpa</i>
Chinkapin Oak	<i>Quercus muehlenbergii</i>
Red Oak	<i>Quercus rubra</i>
Black Oak	<i>Quercus velutina</i>
American Basswood	<i>Tilia americana</i>



***Site Photos***



**Photo 1.** Looking south at project site. Area of mapped Regulated Woodland is located along the southwest portion of the site (ECT, November 23, 2016).



**Photo 2.** Looking north at area of un-mapped woodland along the western portion of the project site (ECT, November 23, 2016).

TRAFFIC REVIEW



AECOM  
27777 Franklin Road  
Southfield  
MI, 48034  
USA  
aecom.com

**Project name:**  
JSP17-0065 Jaguar/Land Rover SDO Concept  
Traffic Review

**From:**  
AECOM

**Date:**  
August 30, 2018

**To:**  
Barbara McBeth, AICP  
City of Novi  
45175 10 Mile Road  
Novi, Michigan 48375

**CC:**  
Sri Komaragiri, Lindsay Bell, George Melistas,  
Darcy Rechten, Hannah Smith

# Memo

**Subject:** Jaguar/Land Rover SDO Concept Traffic Review

The SDO concept site plan was reviewed to the level of detail provided and AECOM **recommends approval** for the applicant to move forward with the condition that the comments provided below are adequately addressed to the satisfaction of the City.

## GENERAL COMMENTS

1. The applicant, Erhard Motor Sales Inc., is proposing a Jaguar/Land Rover motor sales facility on the southwest corner of Meadowbrook Road and Grand River Avenue. The applicant is proposing a 58,663 square foot building that will include both sales and service areas.
2. Meadowbrook Road is under the jurisdiction of the City of Novi and Grand River Avenue is under the jurisdiction of the Road Commission for Oakland County.
3. The parcel is currently under NCC (Non-Center Commercial) and OS-1 (Office Service) Zoning. The applicant is proposing to re-zone the parcel to GE (Gateway East) zoning via a special development overlay (SDO).
4. Summary of waivers/variances:
  - a. **The applicant has requested a waiver for driveway spacing along Grand River Avenue.**
  - b. **The applicant may choose to submit the required full TIS or may elect to request a City Council variance for lack of a TIS since the City and AECOM are studying the area simultaneously.**

## TRAFFIC IMPACTS

1. AECOM performed an initial trip generation estimate based on the ITE Trip Generation Manual, 10<sup>th</sup> Edition, as follows:

ITE Code: 840 (Automobile Sales)  
Development-specific Quantity: 58,663 square feet gross floor area  
Zoning Change: NCC/OS-1 to GE

Trip Generation Summary				
	City of Novi Threshold	Estimated Trips	Method	Above Threshold?

<b>AM Peak-Hour, Peak-Direction Trips</b>	100	80	Average Rate	No
<b>PM Peak-Hour, Peak-Direction Trips</b>	100	86	Average Rate	No
<b>Daily (One-Directional) Trips</b>	750	1,633	Average Rate	Yes

1. Based on the City thresholds and the expected trips to be generated, the applicant is required to provide a full traffic impact study, as was indicated in the pre-application letter. The applicant has consulted Fleis & VandenBrink to complete the traffic analyses associated with this development. Fleis & VandenBrink previously submitted a rezoning traffic impact study and have indicated that they have prepared a full traffic impact study, which has not been submitted since the site plan is not finalized. The development is also included as part of the region-wide traffic impact study that AECOM and the City are completing. **The applicant may choose to submit the required full TIS or may elect to request a City Council variance for lack of a TIS since the City and AECOM are studying the area simultaneously.** It should be noted that the applicant may be subject to certain off-site and/or on-site mitigation measures as a result of the region-wide traffic impact study.
2. The number of trips does exceed the City's threshold of more than 750 trips per day or 100 trips per either the AM or PM peak hour. The applicant provided a rezoning traffic impact study (RTIS) prepared by Fleis & VandenBrink in October 2017. Fleis & VandenBrink have revised the study to include a comparison of trips generated under the previously proposed BMW dealership to the currently proposed Jaguar Land Rover dealership. AECOM reviewed the revised submittal and has the following comments:
  - a. It appears as though some trip generation calculations were completed using the ITE Trip Generation Manual, 9<sup>th</sup> Edition, while some were completed using the 10<sup>th</sup> Edition. All calculations should use the same edition for comparative purposes. The study should be updated accordingly.
  - b. The ITE Trip Generation Manual, 10<sup>th</sup> Edition, was updated to include Land Use Codes 840 – Automobile Sales (New) and 841 – Automobile Sales (Used), whereas the 9<sup>th</sup> Edition only had one Land Use Code 841 – Automobile Sales. The study should use Land Use Code 840 from the 10<sup>th</sup> Edition for all car dealership trip generation calculations within this project.
  - c. In general, the trip generation impacts of the zoning change are expected to be less than what could be expected under the current zoning.

## EXTERNAL SITE ACCESS AND OPERATIONS

*The following comments relate to the external interface between the proposed development and the surrounding roadway(s).*

1. The applicant has proposed one entrance from Grand River Avenue and one entrance from Meadowbrook Road.
2. The Grand River Avenue driveway is a right-in/one-way-out driveway proposed to be within the existing right turn lane along eastbound Grand River Avenue.
  - a. The driveway dimensions for width are in compliance with the City standards for this particular type of driveway and meet fire department requirements.
  - b. The entering and exiting radii are within the allowable ranger per Figure IX.2 from the City's Code of Ordinances but could consider reducing to 20' to meet the standard. Alternatively, because of the right-in/right-out design, the entering and exiting radii may need to deviate from the standard dimensions.
  - c. The right-in/right-out island design should be modified to further emphasize the intended operation and discourage left turns.

3. The proposed Meadowbrook Road driveway is a two-way driveway. The applicant has reduced the width to 30 feet to meet City standards and although the turning radii dimensions are within the allowable range, the applicant should consider increasing to 20 feet.
4. The Meadowbrook Road driveway is proposed at the current location of a right turn lane taper. The applicant is extending the right turn lane north of the site driveway so that it also acts as a right turn lane for the development. The applicant provided dimensions for the taper and turn lane that are within range or Figure IX.11 in the City's Code of Ordinances. The applicant could consider reducing the right turn lane to be 25' instead of 150'. There is not an exiting taper due to the existing right turn lane for Cherry Hill Road.
5. The applicant provided sight lines at both driveways that appear to be in accordance with Figure VIII-E in the City's Code of Ordinances but dimensions shall be provided to ensure compliance.
6. The applicant should provide driveway spacing dimensions in accordance with Section 11-216.d.1.d and Figure IX.12 in the City's Code of Ordinances. The applicant is seeking a waiver for the driveway adjacent to the Grand River Avenue driveway.

## INTERNAL SITE OPERATIONS

*The following comments relate to the on-site design and traffic flow operations.*

1. General Traffic Flow
  - a. The applicant has provided large vehicle turning paths entering from Meadowbrook Road and exiting at Grand River Avenue. The applicant should also include large vehicle delivery truck patterns into and out of the proposed loading zone.
  - b. The City requires a loading zone totaling 10 square feet for each front foot of building. Reference section 5.4 of the City's Zoning Ordinance for more information.
    - i. The applicant has provided a 2,465 S.F. loading zone located adjacent to the 10 visitor and ADA accessible parking at the main entrance to the building. There is a note stating that no long term delivery truck parking is allowed on site but the applicant should consider revising that to not allow deliveries during normal business hours so that the trucks do not block those 10 parking spaces. Per Section 5.4.2 the loading zone should "not have a disruptive effect on the safe and efficient flow of pedestrian and vehicular traffic within the site". Alternatively, the parking space access and/or loading zone access may be revised.
  - c. The proposed trash enclosure area is not expected to interfere with parking operations.
  - d. The applicant has indicated that the intent of the proposed 13 foot wide access pathway near the Grand River Avenue driveway is to facilitate the movement of vehicles in and out of the showroom.
2. Parking Facilities
  - a. As per the City's Zoning Ordinance, the applicant is required to provide one parking space for each 200 square feet of usable floor area of sales room and one for every one auto service stall in the service room. The building information listed on sheet SP-2.0 (and in the revised RTIS) is 58,663 S.F. where the label on the building plan on sheet SP-2.0 is 53,211 S.F. The applicant should updated the facility size to be consistent across all records.
    - i. The applicant has indicated that 138 spaces are required based on the criteria above; however, the amount of parking proposed is 136.
  - b. The applicant has provided a total of 426 parking spaces.
    - i. It should be noted that the Novi City Council is currently reviewing an amendment to the Zoning Ordinance that limits the number of on-site parking spaces to 125 percent of the required parking. The amendment is expected to be approved prior to the Jaguar/Land Rover development being reviewed by the Planning Commission. Therefore, the applicant should accommodate for this amendment within their site plan or seek a special land use subject to Planning Commission approval.

- ii. The applicant has indicated, and should potentially designate, where customer, employee and new vehicle storage spaces will be provided throughout the site. The applicant should review the parking calculations to ensure they match what is shown on the plans. For example, there are 47 employee/visitor spaces in the parking calculations but only 44 are proposed on the plan.
    - iii. Of the total 426 spaces provided, 136 of those are for visitor, employee and service bay parking. The requirement is 138 spaces so the applicant should designate (2) more spaces or a waiver may be required.
    - iv. Five (5) barrier free parking spaces are required and five (5) are proposed with one (1) of those spaces being van accessible. The dimensions of these spaces are in compliance with ADA Standards for Accessible Design.
  - c. The applicant has provided parking space lengths for parking spaces throughout the development. The applicant has proposed four inch curbs around the perimeter of the development, which require a parking space length of 17 feet. Please reference Section 5.3.2 of the City's Zoning Ordinance for further clarification.
    - i. It should also be noted that the note on sheet SP-3.0 indicates four inch curbs while the detail on sheet SP-6.2 indicates 6" curbs.
    - ii. The applicant should indicate that 6" curbs are required at the parking end islands as well as the four (4) 19' long parking spaces on the west side of the site.
  - d. The applicant should provide the width of the maneuver aisle near the southwest corner of the site.
  - e. The applicant should provide width dimensions for the proposed landscape islands, or indicate that the dimensions provided are typical throughout the site unless otherwise noted. The applicant has indicated that the landscape islands are 4.25' shorter than the adjacent parking space, which does not meet the 3' requirement. Also the 1.5' radii does not meet the 2' requirement. In some locations, the exterior radii is less than 15' and should be increased to 15'. Please reference Section 5.3.12 for more information and update the plans to meet City standards.
  - f. The applicant is required to provide two (2) bicycle parking spaces for the service center section of the development and six (6) have been provided. A bicycle parking layout is shown on sheet SP-2.0 but a dimension for the width of the sidewalk should also be included.
- 3. Sidewalk Requirements
  - a. The applicant has proposed an 8' sidewalk adjacent to Grand River Avenue in order to be in compliance with the City's Non-Motorized Master Plan.
  - b. The proposed sidewalks throughout the site are generally in compliance with City standards; however, additional dimensions are required for the sidewalks on the southeast side of the building. The sidewalk near the trash receptacle area is labeled as 4.5' and does not meet the required 5 foot width.
  - c. The applicant has provided sidewalk connections from the site to the required sidewalks along Grand River Avenue and Meadowbrook Road.
  - d. The applicant has provided sidewalk ramp and detectable warning surface locations and details.
  - e. The applicant should indicate the need for and intent of the proposed gray paver walkway on the site. The placement of such walkway is not ideal in that it is placed between the parking spaces and the end islands. The end islands should be relocated to be adjacent to the parking spaces.
- 4. All on-site signing and pavement markings shall be in compliance with the Michigan Manual on Uniform Traffic Control Devices (MMUTCD). The following is a discussion of the proposed signing and striping. Additional comments will be provided with the preliminary site plan.
  - a. The applicant has provided a signing layout, quantities table, and details.
  - b. The applicant could consider adding a Keep Right (R4-7) and a No Left Turn (R3-2) sign in the island of the Grand River Avenue entrance.
  - c. The applicant has provided pavement marking details for the ADA accessible parking but should also indicate pavement marking details including color, dimensions and location throughout the site and entrances in future submittals.

Memo

- d. The applicant could consider signing and/or pavement markings for the pedestrian crossing at the Meadowbrook entrance.

Should the City or applicant have questions regarding this review, they should contact AECOM for further clarification.

Sincerely,

**AECOM**



Maureen N. Peters, PE  
Senior Traffic/ITS Engineer



Paula K. Johnson, PE  
Senior Traffic Engineer

FAÇADE REVIEW





August 29, 2018

*Façade Review Status Summary:*  
**Approved, Section 9 Waivers recommended**

City of Novi Planning Department  
 45175 W. 10 Mile Rd.  
 Novi, MI 48375- 3024

Re: **FACADE ORDINANCE REVIEW**  
**Jaguar / Land Rover, SDO Concept Plan, JSP17-65, PSP18-0125**  
 Façade Region: 1, Zoning District: B-3, GE

Dear Ms. McBeth;

The following is the Façade Review for the proposed Jaguar / land Rover Building. This review is based on the drawings prepared by Rogvoy Architects, dated 8/8/18. The percentage of materials on each elevation is shown in the table below. Materials in non-compliance, if any, are highlighted in bold. A sample board was not available at the time of this review. The applicant provided photographs of the selected brick and metal panels via emailed and indicated that the sample board would be provided prior to the Planning Commission meeting.

	North (Grand River)	East (Meadowbrook)	South	West	Façade Ordinance Section 2520 Maximum
Brick (Endicott, Manganese Ironspot)	<b>25%</b>	<b>28%</b>	65%	65%	100% (30% Minimum)
Flat Metal Panels (Alubond, Champaign Metalic and Sunshine Grey)	<b>58%</b>	<b>56%</b>	23%	17%	50% (Footnote 9)
Horizontal Rib Metal Panels (Roof Screens)	<b>17%</b>	<b>16%</b>	<b>12%</b>	<b>18%</b>	0%

**Section 5.15** - As shown above the north and east facades have an underage of Brick and an overage of Flat Metal Panels. The material proposed for the roof equipment screens is not labeled on the drawings. Kristen Lark of Rogvoy Architects indicated that the roof screens will be Horizontal Ribbed Metal Panels of a complementary color. Ribbed Metal Panels are not allowed by the Façade Ordinance in Façade Region 1; however in this case the material is proposed only for roof equipment screening.

**Section 3.11.8** – Section 3.11.8 of the Ordinance states that buildings located at the corner of two streets within the Gateway East District “... shall contain two stories or incorporate architectural features that provide additional massing.” The proposed building exhibits no additional massing near the intersection of Grand River and Meadowbrook Rd., and is generally inconsistent with this requirement.

The applicant should consider revising the design to add architectural features, specifically to the north east corner of the building that will meet the intent of this Section.

**Recommendation** – The design of the building exhibits simple geometric lines and is composed of high quality materials with carefully coordinated colors. The windows, although not regulated by the façade Ordinance, are proposed to be “Planar Glass”. This glazing system, which features site lines without mullions and utilizes specialized fittings will add interest and enhance the overall design of the building. Therefore, it is our recommendation that the design is consistent with the intent and purpose of the Façade Ordinance and the a Section 9 Waiver be granted for the following deviations;

1. The underage of brick on the north and east facades.
2. The overage of Flat Metal Panels on the north and east facades.
3. The overage of Horizontal Rib Metal Panels on all facades only for the use of roof equipment screens.

Display Glass – The Façade Ordinance prohibits the use of intense colors and / or neon lighting. This applies to interior surfaces of the showroom that may be visible through the vision glass areas. We mention this in the off chance that such materials or lighting may be proposed but not indicated on the drawings.

**Notes to the Applicant:**

1. It should be noted that all proposed signs are not regulated by the Façade Ordinance and must comply with the City’s Sign Ordinance.
2. Inspections – The Façade Ordinance requires inspection(s) for all projects. Materials displayed on the approved sample board (in this case the adjacent existing material) will be compared to materials to be installed. It is the applicant’s responsibility to request the inspection of each façade material at the appropriate time. Inspections may be requested using the Novi Building Department’s Online Inspection Portal with the following link. Please click on “Click here to Request an Inspection” under “Contractors”, then click “Façade”. <http://www.cityofnovi.org/Services/CommDev/OnlineInspectionPortal.asp>.

If you have any questions regarding this review, please do not hesitate to call.

Sincerely,  
DRN & Architects PC



Douglas R. Necci, AIA

**FIRE REVIEW**



August 16,2018

TO: Barbara McBeth- City Planner  
Sri Ravali Komaragiri- Plan Review Center  
Lindsay Bell-Plan Review Center  
Hannah Smith-Planning Assistant

RE: Jaguar/Land Rover

PSP# 18-0125

**CITY COUNCIL**

**Mayor**  
Bob Gatt

**Mayor Pro Tem**  
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**Director of EMS/Fire Operations**  
Jeffery R. Johnson

**Assistant Chief of Police**  
Erick W. Zinser

**Assistant Chief of Police**  
Scott R. Baetens

**Project Description:**

**Build 53,211 S.Q.F.T. single story structure on the south west corner of Grand River and Meadowbrook.**

**Comments:**

- **All** fire hydrants **MUST** in installed and operational prior to any building construction begins.
- A hazardous chemical survey is required to be submitted to the Planning & Community Development Department for distribution to the Fire Department at the time any Preliminary Site Plan is submitted for review and approval. Definitions of chemical types can be obtained from the Fire Department at (248) 735-5674.
- **All** roads **MUST** meet City of Novi weight requirements of 35 ton. (**Novi City Ordinance 15-17 503.2.3**).

**Recommendation:**

APPROVED WITH CONDITIONS

Sincerely,

Kevin S. Pierce-Fire Marshal  
City of Novi – Fire Dept.

cc: file

**Novi Public Safety Administration**  
45125 Ten Mile Road  
Novi, Michigan 48375  
248.348.7100  
248.347.0590 fax

cityofnovi.org

PREVIOUS PLANNING COMMISSION MEETING MINUTES

REGULAR MEETING - PLANNING COMMISSION

CITY OF NOVI

November 8, 2017

Proceedings taken in the matter of the PLANNING COMMISSION, at City of Novi, 45175 West Ten Mile Road, Novi, Michigan, on Wednesday, November 8, 2017.

BOARD MEMBERS

Mark Pehrson, Chairperson

David Greco

Tony Anthony

John Avdoulos

Michael Lynch

Ted Zuchlewski

ALSO PRESENT:

Barbara, McBeth, City Planner

Elizabeth Saarela, City Attorney

Rick Meader, Landscape Architect

Sri Komaragiri, Planner

Darcy Rechtien, Plan Review Engineer

Certified Shorthand Reporter, Diane Szach

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Novi, Michigan.  
Wednesday, November 8, 2017  
7:00 p.m.

\*\* \*\* \*

CHAIRPERSON PEHRSON: I'd like to call to order the regular Planning Commission meeting of November 8th 2017. Sri, can you call the roll, please.

MS. KOMARAGIRI: Good evening.  
Member Anthony?

MR. ANTHONY: Here.

MS. KOMARAGIRI: Member Avdoulos?

MR. AVDOULOS: Here.

MS. KOMARAGIRI: Member Greco?

MR. GRECO: Here.

MS. KOMARAGIRI: Member Lynch?

MR. LYNCH: Here.

MS. KOMARAGIRI: Chair Pehrson?

CHAIR PEHRSON: Here.

MS. KOMARAGIRI: Member Zuchlewski?

MR. ZUCHLEWSKI: Here.

CHAIR PEHRSON: With that, if we could rise for the Pledge of Allegiance.

(Pledge recited.)

CHAIR PEHRSON: Thank you. Look

1 for a motion to approve or amend the agenda.

2 MR. LYNCH: Motion to approve.

3 MR. ANTHONY: Second.

4 CHAIR PEHRSON: A motion and a  
5 second. All those in favor?

6 THE BOARD: Aye.

7 CHAIR PEHRSON: Anyone opposed?

8 We have an agenda.

9 We have several audience  
10 participations on the agenda today. We've come to the  
11 first one. If you're here and wish to speak to the  
12 Planning Commission on something other than one of the  
13 matters for public hearing, please step forward at  
14 this time.

15 Please come to the podium, state  
16 your name and address, and you'll have three minutes  
17 to be heard.

18 MR. MIGRIN: Good evening. My name  
19 is Karl, K-a-r-l, last name Migrin, M-i-g-r-i-n. I  
20 live at 49450 West Nine Mile Road, Novi, Michigan. I  
21 just have a question more than anything. I noticed in  
22 past public hearings when the residents submit their  
23 comment sheets, the secretary doesn't always have the  
24 time to read all the comments, and I can understand  
25 for time sake that would take a lot of your time to



1 read all the comments. They are public records once  
2 they are mailed to the Planning Commission and the  
3 City. I'm wondering if there's any way that they  
4 could be -- that the staff could scan in those  
5 documents and put them as an attachment to the meeting  
6 minutes, because when you read the meeting minutes,  
7 there is no comments or no -- from any of the  
8 residents on the response form, and it's pretty easy  
9 just to scan them all in and put them as an attachment  
10 to the meeting minutes.

11 CHAIR PEHRSON: Okay.

12 MR. MIGRIN: Thank you.

13 CHAIR PEHRSON: Ms. McBeth, can you  
14 maybe enlighten us? Is that --

15 MS. MCBETH: We will look into  
16 that. There are certain protocols for the minutes,  
17 and so we will see what we can do to share that  
18 information.

19 CHAIR PEHRSON: Thank you. Anyone  
20 else?

21 With that we'll close the first  
22 audience participation.

23 Correspondence?

24 MR. LYNCH: Just for the public  
25 hearings.

1 CHAIR PEHRSON: Committee reports?  
2 City Planner Report? Ms. McBeth.

3 MS. MCBETH: Thank you. Good  
4 Evening. Nothing to report.

5 CHAIR PEHRSON: Very well. We'll  
6 go to our first public hearing. Item Number 1 is  
7 Erhard BMW of Novi Zoning Map Amendment 18.719. It's  
8 a public hearing at the request of Rogvoy Architect,  
9 P.C., for Planning Commission's recommendation to City  
10 Council for a Zoning Map amendment from NCC  
11 (Non-Center Commercial) and OS-1 (Office Service) to  
12 GE (Gateway East). The subject property is comprised  
13 of two parcels totaling 9.48 acres and it is located  
14 on the southwest corner of Grand River Avenue and  
15 Meadowbrook Road in Section 23.

16 Sri, good evening.

17 MS. KOMARAGIRI: Thank you. The  
18 subject property is located at the southwest corner of  
19 Grand River Avenue and Meadowbrook Road. The  
20 development area is comprised of two parcels as  
21 mentioned earlier. The northern parcel is zoned NCC  
22 (Non-Center Commercial), and the southern parcel is  
23 zoned OS-1 (Office Service.) The property is  
24 identified as TC Gateway on our Future Land Use Map.  
25 The applicant is requesting to rezone the property to

1 Gateway East, which is supported by the future land  
2 use map recommendation.

3 A pre-application meeting was held  
4 for the proposed development on October 3, 2017. At  
5 that time staff recommended the applicant to apply for  
6 a straight rezoning. If the rezoning is approved, the  
7 applicant intends to propose an auto car dealership  
8 and a service center for BMW at that location, which  
9 could be considered as a Special Development Option in  
10 the GE District. As this is not a PRO (Planned  
11 Rezoning Overlay), the applicant is not bound to  
12 develop a specific plan until after the rezoning has  
13 been approved.

14 The property consists of some  
15 regulated wetlands and woodlands. The wetland is  
16 associated with a drain that runs from west to east  
17 along the south side of the site and appears to drain  
18 to Bishop Creek located east of Meadowbrook Road. The  
19 mapped regulated woodland areas are indicated along  
20 the southern section of the site. The applicant is  
21 working with the City staff to determine the exact  
22 boundaries for wetlands and provide an accurate tree  
23 survey at the time of preliminary site plan.

24 The City's traffic consultants  
25 reviewed rezoning traffic steady provided by the

1 applicant and indicated that the proposed use of an  
2 auto dealership is projected to produce 2,638 fewer  
3 trips than the existing zoning would allow per day.  
4 It also produces 11 and 15 additional peak-hour trips,  
5 respectively for A.M./P.M, than the maximum allowable  
6 density for land-uses under the existing zoning.  
7 Traffic requested that the applicant should perform a  
8 full-scale Traffic Impact Study at the time of  
9 Preliminary Site Plan submittal due to the projected  
10 increase in peak hour trips.

11 Staff recommends approval of the  
12 rezoning request for reasons stated in the review  
13 letter and also as it is consistent with Future Land  
14 Use map recommendations. Our traffic consultant  
15 Sterling Frazier and our wetland consultant Pete Hill  
16 are here if you have any questions in that regard.  
17 The Planning Commission is asked tonight to hold a  
18 public hearing and make a recommendation to City  
19 Council.

20 The applicant Ken Widerstedt is  
21 here with his architect Mark Drane if you have any  
22 questions for them. Thank you.

23 CHAIR PEHRSON: Thank you. Does  
24 the applicant wish to address the Planning Commission  
25 at this time?

1 MR. DRANE: Good evening. My name  
2 is Mark Drane. I'm with Rogvoy Architects. My  
3 address is 32500 Telegraph Road, Suite 250, Bingham  
4 Farms, Michigan. And I think Sri did a very nice job  
5 outlining our proposal and I'm here with Ken to answer  
6 any questions.

7 CHAIR PEHRSON: Very good. This is  
8 a public hearing. If there's anyone in the audience  
9 that wishes to address the Planning Commission at this  
10 time, please step forward on this matter.

11 Seeing no one, I think we have some  
12 correspondence.

13 MR. LYNCH: Yes, we do. I  
14 summarized all three of the objections, and they're  
15 primarily concerned about traffic and de-valuation of  
16 the property values. The first one is an objection  
17 from Jimmie Cranford, Jr., 24963 Bloomfield Court,  
18 Novi. Jacob C. Oommen, 41336 Clermont Avenue, Novi.  
19 And then Kristie J. Block, 41252 Clermont Avenue in  
20 Novi. I have one support from a Joe Haddad, 41490  
21 Grand River Avenue in Novi.

22 CHAIR PEHRSON: Thank you. With  
23 that we'll close the public hearing on this matter and  
24 turn it over to the Planning Commission for your  
25 consideration.

1 Member Anthony.

2 MR. ANTHONY: Thank you. You know,  
3 this is really two parcels when you look at this, and  
4 the top parcel, which is the corner of Grand River and  
5 Meadowbrook, you know, it makes sense being consistent  
6 with the Future Land Use Plan and there being a type  
7 of commercial or retail there. That portion of the  
8 property I really don't have a problem with this  
9 request on the rezoning. Where I really start to  
10 question it and I struggle with a little bit is on the  
11 portion that's the OS-1. And part of why I question  
12 that is when you take a look at that neighborhood, for  
13 instance the neighborhood for Cherryhill, you can see  
14 that -- you know, and we've run into this in some  
15 other projects as well, is that whenever we look at  
16 single-family neighborhoods, we like to have a buffer  
17 around us, and that buffer being a multi-family, being  
18 office, single-story office with similar roofs. And  
19 so when I look at this area and I see that we have on  
20 Cherryhill single family, and I look at how the buffer  
21 has been working, other than what really pre-existed  
22 quite a while ago over towards the railroad tracks  
23 where you have some industrial, we've done a good job  
24 of doing a buffering zone. If you were able to look  
25 at an aerial, you'd see towards the north of that

1 neighborhood we have multi-family, and we see that  
2 behind the main street area, again followed by  
3 multi-family, condo, apartments. We just approved  
4 another multi-family right on Grand River, which is a  
5 nice apartment complex, roofs are matching the theme,  
6 they're going with that. But now you take the next  
7 step over, and that OS-1 really provides a buffer and  
8 it continues that buffer for those neighborhoods, both  
9 the neighborhoods on the Cherryhill side and on the  
10 Clermont side. And with an office space, if you look  
11 at some of the single nearby offices that were  
12 approved near there, you know, they have similar  
13 roofs, they really do look like they conform.

14 When we look at -- when we look at  
15 a dealership, I think when we look at the front of it  
16 we think of it from Grand River and we think, okay,  
17 you know, from the front of, Grand River, it fits, it  
18 conforms with what we have on Grand River. But if you  
19 now go to the back side and you look at that,  
20 dealerships are traditionally a large parking lot that  
21 is filled with cars. That really seems to be a  
22 dramatic departure from what we're seeing. Even in  
23 Meadowbrook Commons you have common roof patterns that  
24 match the residential neighborhoods. The parking lot  
25 areas, and they're substantial parking lot, but yet

1 they're low intensity, they're integrated with a park  
2 like setting. It's not this high density area. And  
3 so you really see more of a -- you get the feeling of  
4 a mixed use that is walkable. And now when you  
5 integrate the high density parking lot that occurs on  
6 the OS-1 portion of the property, it really seems to  
7 be a dramatic departure and nonconforming from that  
8 area.

9                   And I also think back to about a  
10 month ago we were looking at trying to help a  
11 transition between industrial-zoned property and  
12 single-family residential, and we really looked at  
13 trying to grab on to what ordinances that the zoning  
14 allowed us to use when we created that buffer, and I  
15 think we did the best we could considering that. But  
16 that was because we were absent of any zoning buffer  
17 that would have been between a higher intense use and  
18 neighborhoods. And here my reluctance is that in  
19 removing the OS-1, we are removing that buffer and  
20 we're removing that transition zone. And when we do  
21 that, we're always talk about property rights. And we  
22 talk about property rights that we have to function  
23 within that. My concern is that if we remove that  
24 OS-1, we're not considering the rights and reasonable  
25 expectations of all of the people, whether they're the



1 people that live there in the multi-family or in the  
2 single-family. So I'm very hesitant in approving the  
3 change on the OS-1 portion.

4 CHAIR PEHRSON: Thank you. Anyone  
5 else?

6 Member Avdoulos.

7 MR. AVDOULOS: I had similar  
8 concerns, especially that piece of the property, the  
9 rear piece let's say, the OS-1, and then across the  
10 street where the residential, if you took that  
11 property line and you line it up, you know, it's at  
12 the halfway point. And I'm looking at an aerial I  
13 guess that a little better depicted. It's on one of  
14 the write-ups, I think it's Page 4 of 5, and it's  
15 right next to where it says Natural Features. But you  
16 could see the R-2 development below that.

17 And if I could ask a question of  
18 the architect. I know that there is no concept plan,  
19 but if you were to do a layout of this, would we  
20 basically have a building up front on Grand River, and  
21 the rear would be parking, and then do we know like  
22 that corner piece as it shows here, I don't know if  
23 that's a wetland that would also act as a buffer to  
24 the residential.

25 MR. DRANE: I think the answer to

1 all of those questions are yes. And we do have a  
2 concept plan. But I think the answer is that there is  
3 a wetland and a buffer, a natural buffer there  
4 already. The grade slopes down from high to low from  
5 Grand River down to, I'm sorry, I don't know what the  
6 back street there is.

7 CHAIR PEHRSON: Cherryhill.

8 MR. DRANE: Cherryhill. And our  
9 plan, our concept plan doesn't have any development  
10 within from the Cherryhill property line going north  
11 125 feet. We have all open area. It's going to be  
12 stormwater management, wetlands and landscape  
13 buffering.

14 MR. AVDOULOS: Okay.

15 MR. DRANE: So the land itself  
16 really has its own natural buffer. And I do  
17 understand about having that zoning buffer, but our  
18 plan doesn't have any buildings back there. Like you  
19 said, it's low intensity parking.

20 MR. AVDOULOS: And I thank you for  
21 that. I had the same concerns. I drove by there and  
22 then I saw that when I was there and then looking at  
23 the plan. And then transitioning from that piece of  
24 property to the, you know, multi-use property, you  
25 know, I don't feel it's going to be that detrimental.

1 I think it follows with the master plan, you know, for  
2 land use for the concept of what we're trying to do  
3 for that Gateway East area of the city.

4 So I do have the same concerns, but  
5 I think it's appropriate rezoning, and for the fact  
6 that when it comes in, we could look if the buffer  
7 there is going to be appropriate or if we need to  
8 enhance anything.

9 MR. DRANE: Yes. And I apologize,  
10 I didn't answer all of your questions. The building  
11 is at the corner with zero lot lines and landscape  
12 buffering, but it's very similar frontage as the  
13 Cadillac dealership.

14 MR. AVDOULOS: Right. Okay. Those  
15 are my questions.

16 CHAIR PEHRSON: Thank you, sir.

17 Member Lynch.

18 MR. LYNCH: Something very quick.  
19 You know, before we -- if we were to change this from  
20 OS-1 to what you're requesting, what guarantee do we  
21 have that, you know, you're going to maintain. I do  
22 agree that there really has to be a transition there,  
23 and since we're taking the office transition off,  
24 there has to be some sort of buffer to block the  
25 lights, block the view of the parking lot, things like

1 that. 125 feet, you know, sounds like a lot as long  
2 as it has foliage in it. I mean, I don't know that we  
3 have -- I mean, what right --

4 CHAIR PEHRSON: We would have a  
5 plan to review and approve at that point in time.

6 MR. LYNCH: So we would -- we're  
7 not under any --

8 CHAIR PEHRSON: No.

9 MR. ANTHONY: Is there a way to put  
10 in there an expectation so that it's known that  
11 when --

12 CHAIR PEHRSON: We're doing that  
13 right now. Absolutely.

14 MR. LYNCH: Okay. So by approving  
15 this, we're putting in the expectation that there is  
16 going to be a significant transition?

17 CHAIR PEHRSON: They still have to  
18 come before us for the plan.

19 MR. LYNCH: Thank you.

20 CHAIR PEHRSON: Member Zuchlewski.

21 MR. ZUCHLEWSKI: I have a question  
22 for Barb. Barb, the OS-1 that we're discussing now,  
23 what has been the development community? What kind of  
24 interest has there been in this property for the last  
25 30 years?

1 MS. MCBETH: So through the chair.

2 MR. ZUCHLEWSKI: I mean, has  
3 anybody come to us and said, well, we want that piece,  
4 that OS-1, and if it stays OS-1, and, you know,  
5 somehow Cadillac says, well, we can make or BMW says  
6 we can make this work just for conversation, doesn't  
7 that OS-1 property, doesn't that become more of a  
8 secondary site, and isn't that going to be kind of  
9 like the Peachtree site that we're struggling with now  
10 not having any exposure, you know, just being buried  
11 in effect? And the chance of us having anything else  
12 go there, you know, is the chance that great that we  
13 have people that want to go on a secondary site like  
14 that? Is that going to stay like that for -- I mean,  
15 in your opinion? Well, is there any interest in it?

16 MS. MCBETH: So through the chair.  
17 In my 16 years as being with the City of Novi, I've  
18 known the property owner who owns both parcels who has  
19 expressed various interest over the years, but never  
20 really taken any action. When the Huntley Manor  
21 project came in, at the beginning there was thought  
22 they might join forces and do a development together,  
23 and that didn't happen for whatever reason.

24 So I think with the property with  
25 the split zoning like that doesn't really offer a

1 substantial area for any particular development, and  
2 you're right, with the frontage on Meadowbrook Road it  
3 wouldn't be as attractive as something on Grand River.

4 MR. ZUCHLEWSKI: Thank you.

5 CHAIR PEHRSON: Just my two cents.  
6 I agree with everyone's thoughts, and I hope you get  
7 the sense of where we're leaning to. I have no issue  
8 taking both lots and changing the zoning, because it  
9 does fit exactly what I think the master plan was  
10 looking for. And I think the expectation of anything  
11 that comes back to us would be scrutinized very  
12 diligently relative to that buffer that's trying to be  
13 between Cherryhill and the dealership. So that's my  
14 two cents.

15 Member Greco.

16 MR. GRECO: Very good. With all of  
17 those comments, which I agree with for the most part,  
18 I would like to make a motion. In the matter of the  
19 request of Erhard BMW of Novi for Zoning Map Amendment  
20 18.719, motion to recommend approval to City Council  
21 to rezone the subject property from NCC, Non-Center  
22 Commercial, and OS-1, Office Service, to GE, Gateway  
23 East, for the reasons set forth on the motion sheet,  
24 with the understanding that the applicant will be  
25 submitting plans and will be going through a review

1 for what the Planning Commission will be expecting at  
2 that time.

3 MR. AVDOULOS: Second.

4 CHAIR PEHRSON: We have a motion by  
5 Member Greco, second by Member Avdoulos. Any other  
6 comments?

7 Sri, can you call the roll, please.

8 MS. KOMARAGIRI: Member Lynch?

9 MR. LYNCH: Yes.

10 MS. KOMARAGIRI: Chair Pehrson?

11 CHAIR PEHRSON: Yes.

12 MS. KOMARAGIRI: Member Zuchlewski?

13 MR. ZUCHLEWSKI: Yes.

14 MS. KOMARAGIRI: Member Anthony?

15 MR. ANTHONY: No.

16 MS. KOMARAGIRI: Member Avdoulos?

17 MR. AVDOULOS: Yes.

18 MS. KOMARAGIRI: Motion passes 4 to

19 1.

20 CHAIR PEHRSON: Thank you.

21 MS. KOMARAGIRI: Oh, Member Greco.

22 MR. GRECO: Yes.

23 CHAIR PEHRSON: Don't want to leave  
24 him out. He made a wonderful motion.

25 MS. KOMARAGIRI: Motion passes 5 to

## GEO-TECHNICAL STUDY



# Geotechnical Investigation

## Proposed BMW of Novi

SWC of Grand Rive Ave and Meadowbrook Road  
Novi, MI

Erhard BMW

Kenneth Widerstedt

4065 West Maple Road

Bloomfield Hills, MI 48301

June 23, 2017

PEA Project No. 2017-176



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June 23, 2017  
PEA Job No: 2017-176

Mr. Kenneth Widerstedt, Facility Manager  
Erhard BMW  
4065 West Maple Road  
Bloomfield Hills, Michigan 48301

**RE: Geotechnical Investigation  
Proposed BMW of Novi  
SWC of Grand River Avenue and Meadowbrook Road  
City of Novi, Oakland County, Michigan**

Dear Mr. Widerstedt:

**PEA, Inc. (PEA)** has performed a geotechnical investigation for the proposed new dealership of the BMW of Novi in Novi, Michigan. The purpose of our investigation was to determine the general subsurface conditions at planned location for the new building and parking areas in order to provide foundation and related site preparation recommendations.

Based on our investigation, the site soils over the whole site generally consist of black silty sand topsoil which overlies a medium stiff to hard silty clay, which is native to the site.

Groundwater was encountered in boring TB-7 during drilling at 7 feet below existing ground surface and is not expected to impact construction or operation of the building construction.

A minimal amount of earthwork will be needed to achieve final design grades. We anticipate cuts and fills of 1 to 2 feet. Following successful completion of earthwork operations, we recommend that the proposed building be supported by shallow foundations bearing on engineered fill or on the native soils. We caution that if site conditioning and earthwork operations are during wet or cold weather (i.e. any time other than late spring to early fall) significant difficulty should be anticipated.

The data obtained during this investigation along with our evaluations, analysis and recommendations are presented in the subsequent portions of this report.

### **Site Conditions and Proposed Construction**

The proposed BMW of Novi is located at the southwest corner of Grand River Avenue and Meadowbrook Road. The site is bordered by Grand River Avenue to the north, Meadowbrook Road to the east, Cherry Hill Road to the south, and O'Brein-Sullivan Funeral Home and trees to the west. The proposal calls for a new dealership building along with associated parking, drives and site work.

The site is irregularly shaped as shown on the Test Boring Location Plan with a frontage on Grand River Avenue of about 400 feet and on Meadowbrook Road of about 634 feet. The perimeter of the site is generally tree lined with a wetland located in the southwest corner of the site. The ground surface near the west side of the site at Grand River Avenue is about Elevation 898. The ground surface along Meadowbrook Road varies from about Elevation 889 to 883. In general, the site slopes to a swale flowing from the northeast corner to the wetland at about Elevation 886 to 879. Within the proposed building area, the ground surface varies from about 888 to 892.

In addition, most of the proposed building area appears to have been graded as part of an earlier site development that installed both water mains and hydrants on the site as well as sanitary sewer leads. Vegetation within this area is sparse.

Although no specific loading information was available for the proposed building, we anticipate slab-on-grade construction and loads will not exceed 150 kips for interior columns and 3,000 pounds per linear foot for walls. We anticipate a finish floor elevation of about 888 to 890. These elevations result in cuts and fills of 1 to 2 feet at the proposed building location. We also understand that any existing underground utilities would be reused, if applicable.

### **Regional Geology and Seismic Activity**

Based on Michigan Department of Environmental Quality Quaternary Geology Map of Michigan and the Oakland County Surficial Geology Map, the site soils were generally deposited as a moraine adjacent to glacial outwash sand and gravel and postglacial alluvium. Based on the Oakland County Bedrock Topography Map, bedrock is about elevation 600 or 290 feet below the surface.

Southern Michigan and Novi are considered to have a relatively low seismic risk. The appropriate geotechnical design considerations for seismic conditions should be applied based on the Michigan Building Code. Based on our interpretation of the test borings and understanding of the soil conditions below the depth of exploration, we recommend the site be classified as a Class D Site.

### **Field Investigation**

We investigated subsurface conditions at the existing facility site by drilling nine test borings designated TB-1 to TB-9, and are presented as Figures 1-9. Stock Drilling Company drilled the test borings on June 8 and 9, 2017. The boring locations are shown on the Test Boring Location Plan. Ground surface elevations were surveyed by PEA.

Test borings extended to depths of 20 feet and were advanced by 3 inch inside-diameter hollow-stem casings. Soil samples were taken at intervals of generally 2.5 feet within the upper 10 feet and at 5 foot intervals below 10 feet. These test boring samples were taken by the Standard Penetration Test method (ASTM D-1586). Geotechnical engineers generally accept that auto hammers are more efficient than the traditional manual hammer. Therefore, the "N" value obtained in the field by using the auto hammer will generally be lower than those found using the manual hammer. We consider the blows from the automatic hammer will be about 2/3 to 3/4 of the blows using a cathead and rope. The actual blows from the auto hammer and the "N" value are presented. However, the relative density description is based on both the actual auto hammer and an expected equivalent N from a manual hammer. Most published soil parameters utilizing the N value are based on the manual hammer.

The soil samples obtained with the split-barrel sampler were sealed in containers and transported to our laboratory for further classification and testing. We will retain these soil samples for 60 days after the date of this report. At that time, we will dispose of the samples unless otherwise instructed.

### **Presentation of Data**

We evaluated the soil and groundwater conditions encountered in the test borings and have presented these conditions in the form of individual Logs of Test Borings on Figure 1 through 9. The nomenclature used on the boring logs and elsewhere are presented on the Soil Terminology sheet, Figure 10. The stratification shown on the test boring logs represents the soil conditions at the actual boring locations. Variations may occur between the borings. The stratigraphic lines represent the approximate boundary

between the soil types, however, the transition may be more gradual than what is shown. We have prepared the logs included with this report on the basis of field classification supplemented by laboratory classification and testing.

## Laboratory Testing

The soil samples obtained from the test borings were also classified in our laboratory. Selected samples were tested to determine natural moisture contents. Testing was performed in general accordance with current ASTM standards. The results of these tests are presented on the individual Logs of Test Borings.

## Soil Conditions and Evaluations

From the information developed during this investigation, subsoil conditions are generally similar throughout the site. A topsoil overlies native soils consisting of medium stiff to hard brown or grey silty clay with varying amounts of sand and gravel. The stiffness of the clay generally increased from medium stiff to very stiff or hard. Small layers of medium stiff clay were encountered near the end of the boring in TB-5 and TB-8. Occasional sand seams were observed in borings TB-2, TB-3, TB-6 and TB-7. Cobbles were encountered in TB-2, TB-6 and TB-8. The moisture content of the top soil sample ranged from 11 to 19 percent and generally decreased with depth. The soil profile was generally consistent across the site.

## Site Preparation

On the basis of available data, we anticipate a minimal amount of earthwork will be required to achieve final design grades. We recommend that all earthwork operations be performed under adequate specifications and be properly monitored in the field. We expect the earthwork to consist of minimal cuts and fills to bring the site to grade; preparing for floor slabs and pavement. We recommend the following earthwork operations be performed.

- Any surface vegetation should be cleared. Topsoil or any other organic soils, if encountered, should be removed in their entirety from the building and parking areas.
- Abandoned utilities inside the proposed building should be removed in their entirety. Outside the building, the abandoned utilities should either be removed or plugged.
- Following removal of the topsoil the exposed surface should be thoroughly examined for the presence of unsuitable fill. Any unsuitable fill should be removed.
- Where cohesive soils are present prior to fill placement in fill areas, and after rough grade has been achieved in cut areas, the cohesive subgrade should be thoroughly proof-rolled. A heavy rubber-tired vehicle such a loaded dump truck should be used for proof-rolling.
- We expect that some areas of the site will not proof-roll satisfactorily. Any areas that exhibit excessive pumping and yielding during proof-rolling and compaction should be stabilized by aeration, drying, and compaction if weather conditions are favorable or removal and replacement with engineered fill (undercutting).
- Undercutting also can include the use of geotextiles and geogrids.
- Following proof-rolling and repair of unsuitable areas, the upper foot of the subgrade should be compacted to 90 percent of the maximum dry density as determined by the Modified Proctor Compaction Test, (ASTM D-1557) prior to placement of fill.

We recommend materials meeting the following criteria be used for backfill or engineered fill to achieve design grades:

- The material should be non-organic and free of debris.
- The on-site soils may be used for engineered fill provided that they are approximately at the optimum moisture content. The silty clay soils may require aeration and drying before they can be properly compacted.
- Free-draining granular soils should be used for trench backfill and in confined spaces.
- Common Fill: The on-site soils may be used for common fill material. Common fill should be used in large areas that can be compacted by large earth moving equipment.
- Granular Fill: Granular fill should be used in confined areas such as trenches and backfill around foundations. Granular fill should meet the following gradation:

<u>Sieve Size</u>	<u>Percent Passing</u>
6 inch	100
3 inch	95-100
Loss by Wash	0-15

*MDOT Class III meets the requirements for Granular Fill.*

Alternately the following also can be used:

<u>Sieve Size</u>	<u>Percent Passing</u>
3 inch	100
1 inch	60-100
No. 30	0-30
Loss by Wash	0-10

*MDOT Class II meets the requirements for Granular Fill. Some restrictions apply to some applications*

- Sand-Gravel Fill: Sand-gravel fill should be used where free-draining material is required. Free-draining material is recommended for underfloor fill and retaining wall backfill. Sand and gravel fill should meet the following gradation:

<u>Sieve Size</u>	<u>Percent Passing</u>
2 inch	100
1/2 inch	45-85
No. 4	20-85
No. 30	5-30
Loss by Wash	0-5

*MDOT Class I material meets the requirements for sand and gravel.*

- Crushed Stone Fill: Crushed stone fill should be used for aggregate base and for any over-excavated foundations. Crushed stone should meet the following gradations:

<u>Sieve Size</u>	<u>Percent Passing</u>
1-1/2 inch	100
1 inch	85-100
1/2 inch	50-75
No. 8	20-45
Loss by Wash	0-10

*MDOT 21AA meets the gradation.*

We recommend placing fill in accordance with the following:

The fill should be placed in uniform horizontal layers. The thickness of each layer should be in accordance with the following:

<u>Compaction Method</u>	<u>Maximum Loose Lift Thickness</u>
Hand-operated vibratory plate or light roller In confined areas	4 inches
Hand-operated vibratory roller weighing at Least 1,000 pounds	6 inches
Vibratory roller drum roller, minimum dynamic Force, 2,000 pounds	9 inches
Vibratory drum roller, minimum dynamic force, 30,000 pounds	12 inches
Sheep's-foot roller	8 inches

The vibrating roller thicknesses are for compacting granular soils. If vibrating drum rollers are used for cohesive soils, the recommended lift thickness is one-third the tabulated value. The lift thicknesses may be increased if field compaction testing demonstrate the specified compaction is achieved throughout the lift.

The fill should be compacted to achieve the specified maximum dry density as determined by the Modified Proctor compaction test (ASTM D-1557). The specified compaction for fill placed in various area should be as follows:

<u>Area</u>	<u>Percent Compaction</u>
Within building	95
Below foundations	95
Pavement base	95
Within one foot of pavement subgrade	95
Below one foot of pavement subgrade	92
Landscaped area	88

- Trench backfill shall be compacted to above standards. The building is considered to extend 10 feet beyond the foundations of the structure. Pavement is considered to extend 5 feet beyond the edge plus a one-on-one slope to the original grade.
- Frozen material should not be used as fill nor should fill be placed on a frozen subgrade.

The site conditioning procedures discussed above are expected to result in fairly stable subgrade conditions throughout most of the site. However, the on-site silty cohesive soils are sensitive to softening when wet or disturbed by construction traffic, depending on weather conditions and the type of equipment and construction procedures used, surface instability may develop in parts of the site. If this occurs, additional corrective procedures may be required as in-place stabilization or undercutting. Surface instability for pavement preparation commonly results from poor surface water management as the building is constructed and underground utilities installed. Also, sensitive subgrades are not protected from excessive construction traffic. Corrective procedures can be limited by careful attention to water management and construction traffic.

### **Foundation Recommendations**

Based on an evaluation of the subsurface data developed and successful completion of the earthwork procedures previously outlined, we recommend that the proposed building addition be supported on shallow spread and/or strip footings.

Exterior footings should be founded at a depth of at least 3.5 feet below the exposed finished grade for protection against frost penetration. Additionally exterior footings should be finished "neat", vertical side walls having equal width-throughout the footing depth and length, to aid in preventing frost heave. Interior footings not exposed to frost penetration during or after construction can be installed at shallower depths provided that suitable bearing soils are present.

We recommend a uniform net allowable soil bearing pressure of 3,000 pounds per square foot (psf) be used for the design of footings founded on native cohesive deposits below any existing fill or on engineered fill known to extend to the native granular soils. In addition, the bearing capacity can be increased by one third for transient loads, i.e. wind and earthquake.

In using a net allowable soil pressure, the weight of the footing, backfill over the footing, or floor slabs need not be included in the structural loads for sizing footings. However, strip footings should be at least 12 inches in width, and isolated spread footings should be at least 18 inches in their dimension, regardless of the resulting bearing pressure. We recommend that all strip footings be suitably reinforced to minimize the effects of differential settlements associated with local variations in subsoil conditions. All foundation excavations should be observed and tested to verify that adequate in-situ bearing pressures, compatible with the design value, are achieved.

### **Groundwater Conditions and Control**

Water level observations were made at each of the test borings during and following the completion of drilling operations. During drilling, groundwater was observed at 7 feet bgs in boring TB-3. At completion, groundwater was not observed in any of the borings. The results of the individual water level measurements are shown on the respective Logs of Test Borings. Fluctuations in groundwater levels should be anticipated due to seasonal variations, and following periods of prolonged precipitation or drought.

Groundwater observations during drilling operations in predominantly cohesive soils are not necessarily indicative of the static groundwater level. This is due to the low permeability of such soils and the tendency of drilling operations to seal off the natural paths of groundwater flow. Considering the predominantly cohesive character of the subsoils and groundwater levels observed in one boring at 7 feet below the ground surface, no significant groundwater accumulations are anticipated in construction excavations. We expect that accumulations of groundwater or surface runoff water in such excavations should be controllable with normal pumping from properly constructed sumps.

### **Floor Slabs**

The subgrade resulting from the satisfactory completion of site preparation operations can be used for the support of concrete floor slabs. Based on the anticipated finish floor grades, the slab may be supported by engineered fill and native soils. A modulus of subgrade reaction,  $k$ , of 125 pounds per cubic inch may be used for design. We recommend that all concrete floor slabs be suitably reinforced and separated from the foundation system to allow for independent movement. If floor settlement is to be virtually eliminated, the existing fill deposits would have to be removed in their entirety and replaced with engineered backfill.

We recommend a porous granular blanket consisting of MDOT Class I sand at least 4 inches thick under the floor slab. We also recommend a vapor barrier for floor covering materials affected by moisture from the subgrade.

### **Pavement Considerations**

The subgrade resulting from the satisfactory completion of site preparation operations can also be used for the support of pavements. The cohesive subgrade soils consist of low plasticity silty/sandy clays which can be classified as CL or CL-ML, according to the Unified Soil Classification System (USCS). Soils of these types tend to have poor drainage characteristics, are frost susceptible, and are generally unstable under repeated loading. Based on the results of our investigation and the anticipated frost and moisture conditions, these soils may be assigned an estimated California Bearing Ratio (CBR) value of 4 for the design of pavements.

Criteria for an engineered design has not been furnished. In addition to traffic loads, criteria also includes the design life, reliability and defining the condition at the end of the design period. We anticipate that both a light and heavy duty conventional pavement of asphalt with aggregate base will be used. In addition, a concrete pavement may be used for parking and truck traffic areas.

Typical pavements for similar projects have included:

#### **Conventional Asphalt on Aggregate Base**

Parking:	3 ½ inches of Asphalt Surface Course 8 inches of Aggregate Base
Heavy Duty Drive Areas:	4 inches of Asphalt Surface Course 12 inches of Aggregate Base

We recommend that the asphalt meet Michigan Department of Transportation (MDOT) specifications for MDOT 13A or a commercial mix similar to the 1990 MDOT 1100. The aggregate base should meet criteria for MDOT 21AA.



For pavements, we recommend that “stub” or “finger” drains be provided around catch basins and other low parts of the site to minimize the accumulation of water above and within the frost susceptible subgrade soils. We also recommend edge drains along parking perimeters where upgrade surface water can flow onto or under pavement. Consideration should also be given to providing subdrains around the perimeter of any proposed landscaped islands within the parking area since they can become a source of water infiltration into the pavement. Such subdrains could be connected to nearby catch basins. The pavement should be properly sloped to promote effective surface drainage and prevent water ponding.

The pavement recommendations provided in this report are intended to provide serviceable pavement for about 20 years. However, all pavements require regular maintenance and occasional repairs. The need for such maintenance is not necessarily indicative of premature pavement failure. If such activities are not performed in a timely manner, the service life of the pavement can be substantially reduced. Most pavements require preservation treatments about 15 years into their life from environmental causes.

In truck loading zones, truck trailer parking areas, and trash dumpster pick-up areas within the asphalt pavement areas, heavy concentrated wheel loads will be subjected upon the pavement. This type of activity frequently results in rutting of asphalt pavement and ultimately can lead to premature failure. Therefore, we recommend that suitably reinforced concrete pavement at least 8 inches in thickness be given consideration in these areas.

### **Field Monitoring**

Soil conditions at the site could vary from those generalized on the basis of test borings made at specific locations. We recommend that a qualified geotechnical engineer be retained to provide soil engineering services during the site preparation, excavation, and foundation phases of the proposed project. This is to observe compliance with the design concepts, specifications, and recommendations. Also, this allows modifications to be made in the event that subsurface conditions differ from those anticipated prior to the start of construction.

### **General Comments**

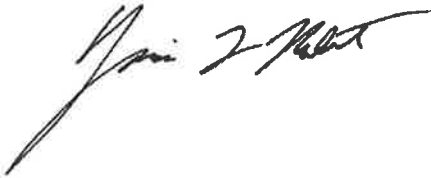
We have formulated the evaluations and recommendations presented in this report, relative to site preparation and building foundations, on the basis of data provided to us relating to the location of the proposed buildings. Any significant change in this data should be brought to our attention for review and evaluation with respect to the prevailing subsurface conditions.

The scope of the present investigation was limited to evaluation of subsurface conditions for the support of building foundations, and other related aspects of development. No chemical, environmental, or hydrogeological testing or analysis was included in the scope of this investigation.

If you have any questions regarding this report, or if we may be of further assistance to you in any respect, please feel free to contact us. We appreciate the opportunity to have been of service to you.

Sincerely,

**PEA, INC.**



Jessica Nibert, EIT  
Staff Engineer



Jack Sattelmeier, PE  
Senior Project Manager

Attachments:    Log of Test Boring  
                      Soil Terminology  
                      Location Plan



## LOG OF TEST BORING NO. TB-1

**PROJECT NAME:** *Proposed BMW Dealership*  
**LOCATION:** *Grand River and Meadowbrook Roads*  
*Novi, Michigan*

**PEA Job No.:** *2017-176*  
**Reviewed by:** *DJS*

SUBSURFACE PROFILE		SOIL SAMPLE DATA							
GROUND SURFACE ELEVATION	888.4	DEPTH FEET	SAMPLE TYPE	BLOWS /6"	SPT "N"	Moisture Content (%)	Dry Density (pcf)	Unconf. Comp. Str. (psf)	Failure Strain (%)
888	0.5	0	TOPSOIL: Dark Brown CLAYEY SILT						
			1-S	3 2 3	5	19.3			
		4	Medium to Stiff Brown SILTY CLAY, Some Sand with Silty Sand and Trace Clay Seams						
884			2-S	2 3 6	9	11.6		*3000	
		8	Hard Brown SILTY CLAY, Trace to Little Sand and Gravel, Occasional Silt Partings						
880			3-S	6 14 23	37	13.9		*8000	
876		12	Hard Gray SILTY CLAY, Trace to Little Sand and Gravel						
872			4-S	11 19 26	45	8.4		*8000	
		16	Hard Gray SILTY CLAY, Trace to Little Sand and Gravel						
868		20	5-S	7 8 13	21			*9000	
		24	End Of Boring						
864			6-S	7 9 13	22			*9000	
<b>Total Depth:</b> 20 <b>Drilling Date:</b> 6/9/17 <b>Inspector:</b> JMS <b>Contractor:</b> Stock Drilling Company			<b>Drilling Method:</b> 3-1/4 In. Dia. Hollow-stem Auger Autohammer <b>Plugging procedure:</b> Excavated Soil			<b>Water Level Observation:</b> <i>Dry At Completion</i>  <b>Notes:</b> * Penetrometer			



## LOG OF TEST BORING NO. TB-2

**PROJECT NAME:** *Proposed BMW Dealership*  
**LOCATION:** *Grand River and Meadowbrook Roads*  
*Novi, Michigan*

**PEA Job No.:** *2017-176*  
**Reviewed by:** *DJS*

SUBSURFACE PROFILE		SOIL SAMPLE DATA						
GROUND SURFACE ELEVATION 889.5	DEPTH FEET	SAMPLE TYPE	BLOWS /6"	SPT "N"	Moisture Content (%)	Dry Density (pcf)	Unconf. Comp. Str. (psf)	Failure Strain (%)
<div style="display: flex; align-items: center;"> <div style="width: 20px; text-align: center;">888</div> <div style="width: 10px; border-left: 1px solid black; border-right: 1px solid black; height: 100px; margin-right: 5px;"></div> <div style="width: 10px; border-left: 1px solid black; border-right: 1px solid black; height: 100px; margin-right: 5px;"></div> <div style="flex-grow: 1;"> <p style="margin: 0;">Medium to Stiff Brown SILTY CLAY, Some Sand, Trace Gravel, Occasional Cobble, Occasional Sand Seam</p> </div> </div>	0	1-S	2 3 5	8	11.5		*3000	
<div style="display: flex; align-items: center;"> <div style="width: 20px; text-align: center;">884</div> <div style="width: 10px; border-left: 1px solid black; border-right: 1px solid black; height: 100px; margin-right: 5px;"></div> <div style="width: 10px; border-left: 1px solid black; border-right: 1px solid black; height: 100px; margin-right: 5px;"></div> <div style="flex-grow: 1;"> <p style="margin: 0;">Hard Brown SILTY CLAY, Trace Sand and Gravel</p> </div> </div>	4	2-S	2 3 5	8	11.4		*3000	
<div style="display: flex; align-items: center;"> <div style="width: 20px; text-align: center;">880</div> <div style="width: 10px; border-left: 1px solid black; border-right: 1px solid black; height: 100px; margin-right: 5px;"></div> <div style="width: 10px; border-left: 1px solid black; border-right: 1px solid black; height: 100px; margin-right: 5px;"></div> <div style="flex-grow: 1;"> <p style="margin: 0;">Hard Gray SILTY CLAY Trace Sand and Gravel, Occasional Silty Sand Seams and Occasional Cobble</p> </div> </div>	8	3-S	6 11 18	29	9.1		*9000	
<div style="display: flex; align-items: center;"> <div style="width: 20px; text-align: center;">876</div> <div style="width: 10px; border-left: 1px solid black; border-right: 1px solid black; height: 100px; margin-right: 5px;"></div> <div style="width: 10px; border-left: 1px solid black; border-right: 1px solid black; height: 100px; margin-right: 5px;"></div> <div style="flex-grow: 1;"> <p style="margin: 0;">Hard Gray SILTY CLAY Trace Sand and Gravel, Occasional Silty Sand Seams and Occasional Cobble</p> </div> </div>	12	4-S	5 8 10	18			*9000	
<div style="display: flex; align-items: center;"> <div style="width: 20px; text-align: center;">872</div> <div style="width: 10px; border-left: 1px solid black; border-right: 1px solid black; height: 100px; margin-right: 5px;"></div> <div style="width: 10px; border-left: 1px solid black; border-right: 1px solid black; height: 100px; margin-right: 5px;"></div> <div style="flex-grow: 1;"> <p style="margin: 0;">Very Stiff Gray SILTY CLAY, Trace Sand</p> </div> </div>	16	5-S	4 8 10	18	9.2		*9000	
<div style="display: flex; align-items: center;"> <div style="width: 20px; text-align: center;">868</div> <div style="width: 10px; border-left: 1px solid black; border-right: 1px solid black; height: 100px; margin-right: 5px;"></div> <div style="width: 10px; border-left: 1px solid black; border-right: 1px solid black; height: 100px; margin-right: 5px;"></div> <div style="flex-grow: 1;"> <p style="margin: 0;">End Of Boring</p> </div> </div>	20	6-S	3 5 10	15			*6000	
<div style="display: flex; align-items: center;"> <div style="width: 20px; text-align: center;">864</div> <div style="width: 10px; border-left: 1px solid black; border-right: 1px solid black; height: 100px; margin-right: 5px;"></div> <div style="width: 10px; border-left: 1px solid black; border-right: 1px solid black; height: 100px; margin-right: 5px;"></div> <div style="flex-grow: 1;"></div> </div>	24							

**Total Depth:** 20      **Drilling Method:** *3-1/4 In. Dia. Hollow-stem Auger*  
*Autohammer*

**Drilling Date:** *6/9/17*

**Inspector:** *JMS*      **Plugging procedure:** *Excavated Soil*

**Contractor:** *Stock Drilling Company*

**Water Level Observation:** *Dry At Completion*

**Notes:** \* *Penetrometer*



## LOG OF TEST BORING NO. TB-3

**PROJECT NAME:** *Proposed BMW Dealership*  
**LOCATION:** *Grand River and Meadowbrook Roads*  
*Novi, Michigan*

**PEA Job No.:** *2017-176*  
**Reviewed by:** *DJS*

SUBSURFACE PROFILE		SOIL SAMPLE DATA							
GROUND SURFACE ELEVATION	888.3	DEPTH FEET	SAMPLE TYPE	BLOWS /6"	SPT "N"	Moisture Content (%)	Dry Density (pcf)	Unconf. Comp. Str. (psf)	Failure Strain (%)
888	Medium to Stiff Brown SILTY CLAY, Some Sand. Occasional Sand Seam	0							
			1-S	2 3 4	7	16.2		*4000	
884	Hard Brown SILTY CLAY Little Sand, Occasional Sand Seam	4							
			2-S	3 3 6	9	12.1		*4000	
880	Hard Gray SILTY CLAY, Trace to Little Sand, Occasional Sand Seam, Occasional Fine Sandy Silt Layer	8							
			3-S	8 9 25	36	10.3		*8000	
876	Hard Gray SILTY CLAY, Trace to Little Sand, Occasional Sand Seam, Occasional Fine Sandy Silt Layer	12							
			4-S	15 12 13	25			*8000	
872	Hard Gray SILTY CLAY, Trace to Little Sand, Occasional Sand Seam, Occasional Fine Sandy Silt Layer	16							
			5-S	8 12 16	28				
868	End Of Boring	20							
864		24							
864									
<b>Total Depth:</b> 20 <b>Drilling Date:</b> 6/9/17 <b>Inspector:</b> JMS <b>Contractor:</b> Stock Drilling Company		<b>Drilling Method:</b> 3-1/4 In. Dia. Hollow-stem Auger Autohammer <b>Plugging procedure:</b> Excavated Soil		<b>Water Level Observation:</b> 7 Ft. During Drilling Dry At Completion  <b>Notes:</b> * Penetrometer					



## LOG OF TEST BORING NO. TB-4

**PROJECT NAME:** *Proposed BMW Dealership*  
**LOCATION:** *Grand River and Meadowbrook Roads*  
*Novi, Michigan*

**PEA Job No.:** *2017-176*  
**Reviewed by:** *DJS*

SUBSURFACE PROFILE		SOIL SAMPLE DATA						
GROUND SURFACE ELEVATION 888.4	DEPTH FEET	SAMPLE TYPE	BLOWS /6"	SPT "N"	Moisture Content (%)	Dry Density (pcf)	Unconf. Comp. Str. (psf)	Failure Strain (%)
888	0							
		1-S	5 5 3	8			*8000	
	4							
884		2-S	2 4 7	11	10.8		*5000	
	8							
		3-S	9 17 19	36			*8000	
880								
		4-S	12 17 17	34	9.1		*8000	
	12							
876		5-S	4 5 5	10			*7000	
	16							
872		6-S	28 18 17	35			*8000	
868	20	End Of Boring						
864	24							
<b>Total Depth:</b> 20 <b>Drilling Method:</b> 3 In. Driven Closed End Casing Autohammer <b>Drilling Date:</b> 6/8/17 <b>Inspector:</b> JMS <b>Plugging procedure:</b> Excavated Soil <b>Contractor:</b> Stock Drilling Company					<b>Water Level Observation:</b> <i>Dry At Completion</i>  <b>Notes:</b> * Penetrometer			



## LOG OF TEST BORING NO. TB-5

**PROJECT NAME:** *Proposed BMW Dealership*  
**LOCATION:** *Grand River and Meadowbrook Roads*  
*Novi, Michigan*

**PEA Job No.:** *2017-176*  
**Reviewed by:** *DJS*

SUBSURFACE PROFILE		SOIL SAMPLE DATA							
GROUND SURFACE ELEVATION 889.9		DEPTH FEET	SAMPLE TYPE	BLOWS /6"	SPT "N"	Moisture Content (%)	Dry Density (pcf)	Unconf. Comp. Str. (psf)	Failure Strain (%)
888	Hard Brown SILTY CLAY, Trace to Little Sand, Trace Gravel	0							
		1-S	4 6 9	15				*8000	
		4							
		2-S	3 8 25	33				*8000	
884									
		3-S	3 4 5	9	7.9			*6000	
	Very Stiff to Hard Gray SILTY CLAY Little Sand, Trace Gravel	8							
		4-S	3 5 7	12				*8000	
880									
		5-S	2 3 6	9	11.4			*5400	
	Medium Gray SILTY CLAY, Trace Sand Hard Gray SILTY CLAY, Trace Sand End Of Boring	12							
876									
		6-S	2 2 13	15	14.2			*2000	
872		16							
		20							
868		24							
864									
<b>Total Depth:</b> 20 <b>Drilling Method:</b> <i>3-1/4 In. Dia. Hollow-stem Auger</i> <b>Drilling Date:</b> <i>6/9/17</i> <i>Autohammer</i> <b>Inspector:</b> <i>JMS</i> <b>Plugging procedure:</b> <i>Excavated Soil</i> <b>Contractor:</b> <i>Stock Drilling Company</i>		<b>Water Level Observation:</b> <i>Dry At Completion</i>  <b>Notes:</b> <i>* Penetrometer</i>							



## LOG OF TEST BORING NO. TB-6

**PROJECT NAME:** *Proposed BMW Dealership*  
**LOCATION:** *Grand River and Meadowbrook Roads*  
*Novi, Michigan*

**PEA Job No.:** *2017-176*  
**Reviewed by:** *DJS*

SUBSURFACE PROFILE		SOIL SAMPLE DATA								
GROUND SURFACE ELEVATION 889.0		DEPTH FEET	SAMPLE TYPE	BLOWS /6"	SPT "N"	Moisture Content (%)	Dry Density (pcf)	Unconf. Comp. Str. (psf)	Failure Strain (%)	
888	<div style="border-left: 1px dashed black; border-right: 1px dashed black; height: 100%;"></div>	0								
		1	1-S	15 9 4	13			*8000		
		4		2-S	3 5 9	14	10.1		*4000	
884		8		3-S	1 6 7	13			*5000	
880		12		4-S	2 5 6	11	8.9		*6000	
876		16		5-S	3 7 10	17			*8000	
872		19.7	6-S	3 5 20/3				*6000		
868	End Of Boring									
864		24								
<b>Total Depth:</b> <i>19.7</i> <b>Drilling Method:</b> <i>3 In Driven Casing to 13.5 Ft. Hollow-stem Auger Below Autohammer</i> <b>Drilling Date:</b> <i>6/8/17</i> <b>Inspector:</b> <i>JMS</i> <b>Plugging procedure:</b> <i>Excavated Soil</i> <b>Contractor:</b> <i>Stock Drilling Company</i>			<b>Water Level Observation:</b> <i>Dry At Completion</i>  <b>Notes:</b> <i>* Penetrometer</i>							





## LOG OF TEST BORING NO. TB-7

**PROJECT NAME:** *Proposed BMW Dealership*  
**LOCATION:** *Grand River and Meadowbrook Roads*  
*Novi, Michigan*

**PEA Job No.:** *2017-176*  
**Reviewed by:** *DJS*

SUBSURFACE PROFILE		SOIL SAMPLE DATA							
GROUND SURFACE ELEVATION 891.8		DEPTH FEET	SAMPLE TYPE	BLOWS /6"	SPT "N"	Moisture Content (%)	Dry Density (pcf)	Unconf. Comp. Str. (psf)	Failure Strain (%)
888	Hard to Very Stiff Brown SILTY CLAY, Trace Sand and Gravel, Occasional Sand Seam	0							
		1-S	3 6 9	15				*9000	
		2-S	3 7 10	17	9.8		*6000		
		3-S	1 2 3	5	9.9		*1400		
884		Medium To Stiff Gray SILTY CLAY, Trace Sand and Gravel	4						
			4-S	2 3 7	10	9.6		*3000	
	5-S		5 6 9	15	9.9		*7000		
880	Very Stiff Gray SILTY CLAY, Little Sand, Trace Gravel	8							
		6-S	4 6 7	13			*6000		
876		12							
872	16	20	End Of Boring						
868		24							
<b>Total Depth:</b> 20 <b>Drilling Method:</b> <i>3-1/4 In. Dia. Hollow-stem Auger Autohammer</i> <b>Drilling Date:</b> <i>6/9/17</i> <b>Inspector:</b> <i>JMS</i> <b>Plugging procedure:</b> <i>Excavated Soil</i> <b>Contractor:</b> <i>Stock Drilling Company</i>					<b>Water Level Observation:</b> <i>Dry At Completion</i>  <b>Notes:</b> * <i>Penetrometer</i>				



## LOG OF TEST BORING NO. TB-8

**PROJECT NAME:** *Proposed BMW Dealership*  
**LOCATION:** *Grand River and Meadowbrook Roads*  
*Novi, Michigan*

**PEA Job No.:** *2017-176*  
**Reviewed by:** *DJS*

SUBSURFACE PROFILE		SOIL SAMPLE DATA							
GROUND SURFACE ELEVATION 891.1		DEPTH FEET	SAMPLE TYPE	BLOWS /6"	SPT "N"	Moisture Content (%)	Dry Density (pcf)	Unconf. Comp. Str. (psf)	Failure Strain (%)
888	Hard Brown SILTY CLAY Trace to Little Sand , Trace to Some Gravel, Occasional Gravel Seam, Occasional Cobble	0							
		1-S	3 6 6	12				*8000	
		4							
		2-S	15 21 28	49	3.1				
884			8						
	Very Stiff Gray SILTY CLAY, Trace to Little Sand, Trace Gravel	3-S	3 4 7	11				*7000	
880			12						
		4-S	2 4 5	9				*5000	
876	Medium To Stiff Gray SILTY CLAY, Trace Sand and Gravel								
		5-S	1 2 4	6	14.2			*2000	
872			20						
	End Of Boring								
868		24							
<b>Total Depth:</b> 20 <b>Drilling Method:</b> <i>3-1/4 In. Dia. Hollow-stem Auger Autohammer</i> <b>Drilling Date:</b> <i>6/9/17</i> <b>Inspector:</b> <i>JMS</i> <b>Plugging procedure:</b> <i>Excavated Soil</i> <b>Contractor:</b> <i>Stock Drilling Company</i>		<b>Water Level Observation:</b> <i>Dry At Completion</i>  <b>Notes:</b> <i>* Penetrometer</i>							



## LOG OF TEST BORING NO. TB-9

**PROJECT NAME:** *Proposed BMW Dealership*  
**LOCATION:** *Grand River and Meadowbrook Roads*  
*Novi, Michigan*

**PEA Job No.:** *2017-176*  
**Reviewed by:** *DJS*

SUBSURFACE PROFILE		SOIL SAMPLE DATA						
GROUND SURFACE ELEVATION 889.2	DEPTH FEET	SAMPLE TYPE	BLOWS /6"	SPT "N"	Moisture Content (%)	Dry Density (pcf)	Unconf. Comp. Str. (psf)	Failure Strain (%)
888	0							
		1-S	4 9 5	14				
884	4	2-S	3 5 8	13	10.7		*6000	
		3-S	7 10 12	22			*8000	
880	8	4-S	3 4 5	9			*7000	
876	12	5-S	3 4 6	10	10.1		*7000	
872	16							
868	19	6-S	5 26 28	54				
864	20							
	24							
<b>Total Depth:</b> 20 <b>Drilling Date:</b> 6/9/17 <b>Inspector:</b> JMS <b>Contractor:</b> Stock Drilling Company		<b>Drilling Method:</b> 3-1/4 In. Dia. Hollow-stem Auger Autohammer <b>Plugging procedure:</b> Excavated Soil		<b>Water Level Observation:</b> Dry At Completion  <b>Notes:</b> * Penetrometer				

# SOIL TERMINOLOGY

Unless otherwise noted, all terms utilized herein refer to the Standard Definitions presented in ASTM D-653.

## PARTICLE SIZES

Boulders - Greater than 12 inches (305 mm)

Cobbles - 3 inches (76.2 mm) to 12 inches (305 mm)

Gravel:

< Coarse - 3/4 inches (9.05 mm) to 3 inches (76.2 mm)

< Fine - No. 4 (4.75 mm) to 3/4 inches (19.05 mm)

Sand:

< Coarse - No. 10 (2.00 mm) to No. 4 (4.74 mm)

< Medium - No. 40 (0.425 mm) to No. 10 (2.00 mm)

< Fine - No. 200 (0.074 mm) to No. 40 (0.425 mm)

Silt - 0.005 mm to 0.074 mm

Clay - Less than 0.005 mm

## CLASSIFICATION

The major soil constituent is the principal noun (i.e., clay, silt, sand, gravel). The minor constituents are reported as follows:

### Modifiers to Main Constituent (Percent by Weight)

Trace	-	01 to 10%
Little	-	10 to 20%
Some	-	20 to 30%
Adjective	-	Over 30%

## COHESIVE SOILS

If clay content is sufficient so that clay dominates soil properties, clay becomes the principal noun with the other major soil constituent as modifier (i.e., silty clay). Other minor soil constituents may be included in accordance with the classification breakdown for cohesionless soils (i.e., silty clay, trace of sand, little gravel).

<u>Consistency</u>	<u>Unconfined Compressive Strength (PSF)</u>	<u>Approximate Range of N</u>
Very Soft	Below 500	0 to 2
Soft	500 to 1,000	3 to 4
Medium	1,000 to 2,000	5 to 8
Stiff	2,000 to 4,000	9 to 15
Very Stiff	4,000 to 8,000	16 to 30
Hard	8,000 to 16,000	31 to 50
Very Hard	Over 16,000	Over 50

Consistency of cohesive soils is based upon as elevation of the observed resistance to deformation under load and not upon the Standard Penetration Resistance (N).

## COHESIONLESS SOILS

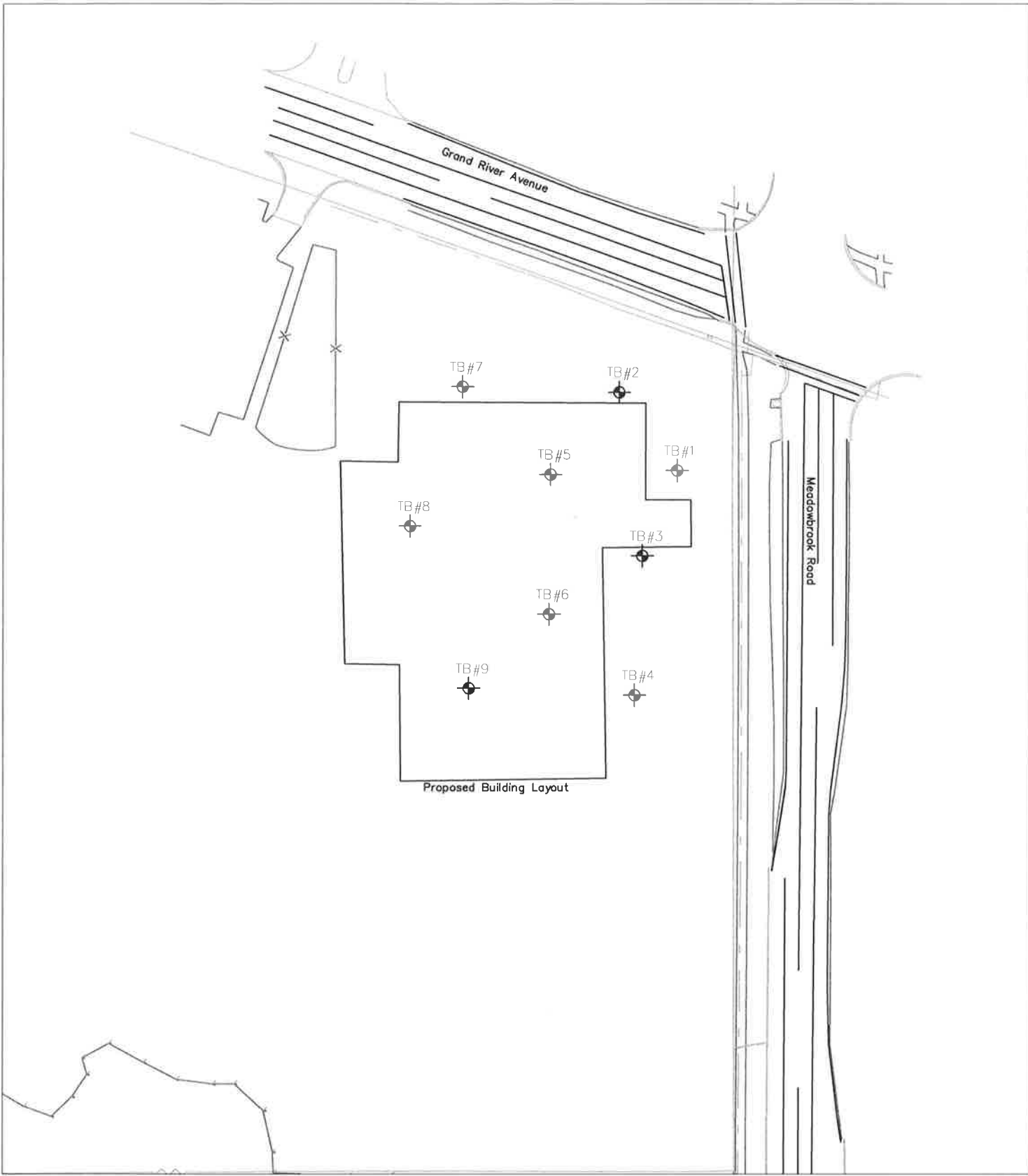
<u>Density Classification</u>	<u>Relative Density %</u>	<u>Approximate Range of N</u>
Very Loose	0 to 15	0 to 4
Loose	16 to 35	5 to 10
Medium Compact	36 to 65	11 to 30
Compact	66 to 85	31 to 50
Very Compact	86 to 100	Over 50

Relative Density of Cohesionless Soils is based upon the evaluation of the Standard Penetration Resistance (N), modified as required for depth effects, sampling effects, etc.

## SAMPLE DESIGNATIONS

- C - Core
- D - Directly from Auger Flight or Miscellaneous Sample
- S - Split Spoon Sample - ASTM D-1586
- LS - S - Sample with liner insert
- ST - Shelby Tube Sample - 3 inch diameter unless otherwise noted
- PS - Piston Sample - 3 inch diameter unless otherwise noted
- RC - Rock Core - NX core unless otherwise noted

**STANDARD PENETRATION TEST (ASTM D-1586)** - a 2.0-inch outside diameter, 1-3/8-inch inside diameter split barrel sampler is driven into undisturbed soil by means of a 140-pound weight falling freely.



**NOTES:**

1. LOCATIONS AND ELEVATIONS OF UTILITIES SHOWN ON THIS DRAWING ARE ONLY AS SHOWN ON THE DRAWING AND ARE NOT TO BE CONSIDERED AS A GUARANTEE OF ACCURACY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION.

CONTRACTOR CONTRACTOR AGREES THAT IN ACCORDANCE WITH STANDARD PRACTICES OF THE CONSTRUCTION INDUSTRY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION.

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**BORING LOCATION MAP**

PROJECTS 2017-2017-178 BAW OF NOW-FIELD SERVICES 2017-2017-178 Test Boring Location Map.dwg

APPLICANT RESPONSE LETTER



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September 18, 2018

PEA Project No: 2017-176

Ms. Sri Ravi Komaragiri, Planner  
City of Novi  
45175 Ten Mile Road  
Novi, MI 48375

**RE: Planning Review Report  
Jaguar Land Rover of Novi  
South of Grand River Avenue, East of Meadowbrook Road  
Novi Project Number: JSP 17-65**

Dear Ms. Komaragiri:

This office is in receipt of your review letter dated September 7, 2018, regarding the subject development. We have reviewed the plans in accordance with Staff comments and provided our responses below, for Preliminary Site Plan submittal. We are including the following:

- Preliminary Site Plan Package with no changes made
- This response letter addressing all comments
- Color Landscape Plan
- Community Impact Statement

#### **ORDINANCE DEVIATIONS**

**Per Section 3.12.6, consistent with the Special Development Option concept, and toward encouraging flexibility and creativity in development, departures from compliance with the standards provided for an SDO project, may be granted in the discretion of the City Council as part of the approval of an SDO project in a GE District. Such departures may be authorized on the condition that there are recognized and specific features or planning mechanisms deemed adequate by the City Council designed into the project for the purpose of achieving the objectives intended to be accomplished with respect to each of the regulations from which a departure is sought. The following are deviations from the Zoning Ordinance and other applicable ordinances shown on the concept plan and to be included in the draft SDO Agreement:**

#### **Planning Deviations:**

- a. For not meeting the minimum requirements for usable open space (25% of gross area of the site required); **The applicant is asked to meet the minimum ordinance standards, and provide the updated calculations with an exhibit that included spaces designed as useable space. Additional revisions may be required for the proposed pedestrian plaza at the corner of Meadowbrook Road and Grand River Avenue.**

Updated calculations demonstrating compliance with the Open Space requirements will be added to sheet SP-2.0.

Enhancements for the Pedestrian Plaza on Grand River and Meadowbrook will be provided.

- b. Per Section 3.11.8, street corner building should have greater massing and height. **Proposed building refers to two stories, but the second story only includes a small mezzanine. It is not conforming to this requirement. The applicant may want to contact the City's Façade Consultant to determine alternatives that will meet the ordinance standards.**

The building height at the corner is 35 feet. It should be noted that 2-story buildings can be as low 24-28 feet. It would not be aesthetically appealing to add a higher vertical element that would disrupt the design and character of the JLR building architecture. A deviation is requested for this requirement.

- c. **Per section 5.16, When 4 or more spaces are required for a building with multiple entrances, the spaces shall be provided in multiple locations. The applicant is proposing all six spaces in one location. The applicant can consider relocating couple of locations at the pedestrian plaza.**

Bike racks will be relocated to limit the number of racks at any one entrance on sheet SP-2.0.

- d. Per Section 3.11.8, sidewalks are required for all developments which abut any street and shall comply with the City of Novi Design and Construction Standards. The concept plan is not proposing a sidewalk along Cherry Hill Road. **The applicant is asked to demonstrate whether a sidewalk and/or boardwalk can be provided with minimal impact to the existing natural features, or consider an alternative to the strict requirements of the City Code.**

Per landscaping review "Absence of sidewalk is considered a deviation and can be supported due to existing natural features." Per discussions during preliminary meeting with City, Cherry Hill is adequately served by existing walkway on the south side, and adding a Boardwalk along the north side would disrupt the wetland habitat without real benefit to the community. A deviation is requested from this requirement.

#### **Façade Deviations:**

- e. Underage of brick (30% minimum required, 25% on north façade and 28% on east façade proposed);
- f. Overage of flat metal panels (50% maximum allowed, 58% on north façade and 56% on east façade proposed);
- g. Overage of horizontal rib metal panels for roof top screening (0% allowed, 17% on north, 16% on east, 12% on south and 18% on west proposed);

Section 3.11.8 of the Ordinance states that buildings located at the corner of two streets within the Gateway East District "... shall contain two stories or incorporate architectural features that provide additional massing." The proposed building exhibits no additional massing near the intersection of Grand River and Meadowbrook Rd., and is generally inconsistent with this requirement.

**The applicant should consider revising the design to add architectural features, specifically to the north-east corner of the building that will meet the intent of this Section.**



The building is aesthetically pleasing, having simple, modern lines, per Jaguar design standards. Adding an added architectural corner element would be a detraction. A deviation is requested for this requirement.

**Note: The Façade Ordinance prohibits the use of intense colors and / or neon lighting. This applies to interior surfaces of the showroom that may be visible through the vision glass areas. We mention this in the off chance that such materials or lighting may be proposed but not indicated on the drawings.**

No intense colors or neon lighting will be used on the interior or exterior of the proposed building.

#### Traffic Deviations:

- h. Traffic deviation to waive the requirement for required Traffic Impact Study or defer it to the time of Preliminary Site Plan review, as the site falls under the study boundaries for the ongoing Comprehensive Traffic study by the City;
- i. Traffic deviation for variance from Design and Construction Standards Section 11-216(d) for not meeting the minimum distance required for same-side commercial driveways; **please provide an exhibit indicating the required distance and proposed to identify the deviation.**

The required and proposed distances between drives will be shown on SP-2.0 in the next resubmittal.

#### Landscape Deviations:

- j. Landscape deviation from Section. 5.5.3.E.i.c for lack of street trees along Grand River Road frontage due to lack of space (8 trees)
- k. Landscape deviation from Section. 5.5.3.E.i.c for lack of street trees along Cherry Hill Road frontage due to lack of space (11trees)
- l. Landscape deviation from Section 5.5.3.B.ii and iii for not providing greenbelt berm or plantings in area of wetland in order to preserve wetland
- m. Landscape deviation from Section 5.5.3.B.ii and iii for not providing greenbelt berm or plantings between Cherry Hill and the parking lot area not behind the wetland. **This is currently not supported by staff.**

Installing a berm along Cherry hill would require work in the 25-foot wetland setback and removal of existing trees that are currently slated to be preserved. A deviation from this requirement is requested.

#### SDO ELIGIBILITY (SEC. 3.12.3)

**The Planning Commission and City Council were asked to consider the following when evaluating the proposed SDO concept plan. Staff comments are in bold.**

- i. The project will result in a recognizable and substantial benefit to the ultimate users of the project and to the community, where such benefit would otherwise be unfeasible or unlikely to be achieved by a traditional development. **The applicant has proposed a pedestrian plaza for bicyclers or pedestrians to stop and rest. Additional information such as bike racks and seating etc. are not provided at this time.**

Additional details for the pedestrian plaza will be provided in the resubmittal.

- ii. In relation to a development otherwise permissible as a Principal Permitted Use under Section 3.1.16.B, the proposed type and density of development shall not result in an unreasonable increase in the use of public services, facilities and utilities, and shall not place an unreasonable burden upon the subject and/or surrounding land and/or property owners and occupants and/or

the natural environment. **A community impact statement or a narrative that would address this item is not included in the submittal. A noise impact statement was provided which indicates the noise levels for all uses will be kept under Ordinance minimum.**

See attached Community Impact Statement.

- iii. Based upon proposed uses, layout and design of the overall project, the proposed building facade treatment, the proposed landscaping treatment and the proposed signage, the Special Development Option project will result in a material enhancement to the area of the City in which it is situated. **Proposed building is not consistent with massing requirement for corner buildings. See the façade and landscape review letters for additional information.**

A deviation is requested for this requirement.

- iv. The proposed development shall not have a materially adverse impact upon the Master Plan for Land Use of the City, and shall be consistent with the intent and spirit of this Section. **The plan is consistent with the Master Plan recommendations for the subject property.**

Noted.

- v. In relation to a development otherwise permissible as a Principal Permitted Use under Section 3.1.16.B, the proposed development shall not result in an unreasonable negative economic impact upon surrounding properties. **The proposed car dealership is similar to the existing car dealership located in the north-eastern corner of Grand River Avenue and Meadowbrook Road. The plan proposes a storm water pond on the south side to act as buffer to existing residential uses.**

Noted.

- vi. The proposed development shall contain at least as much useable open space as would be required in this Ordinance in relation to the most dominant use in the development. **Substantially all of the total open space area must be designed as useable space. Additional information is required to verify conformance.**

Additional calculations will be added to SP-2.0 to demonstrate conformance with open space requirements.

- vii. Each particular proposed use in the development, as well as the size and location of such use, shall result in and contribute to a reasonable and mutually supportive mix of uses on the site, and a compatibility of uses in harmony with the surrounding area and other downtown areas of the City. **A single use is proposed.**

Noted.

- viii. The proposed development shall be under single ownership and/or control such that there is a single person or entity having responsibility for completing the project in conformity with this Ordinance. **A single entity currently owns the site.**

Noted.

## SITE ADDRESSING

**A new address is required for this project. The applicant should contact the Building Division for an address prior to applying for a building permit. Building permit applications cannot be processed without a correct address.**

An address will be obtained from the Building Division for the site, prior to application for a Building permit.

## **PLANNING REVIEW CHART**

### **Zoning and Use Requirements**

Note: The subject property is located at the “entry” area of the Gateway East District, since it is located on one of the four properties at the intersection of Grand River and Meadowbrook. Following a recommendation of the Planning Commission, Council may approve an SDO project which consists of a non-residential use permitted elsewhere in the ordinance, but not otherwise permitted in the GE district for these properties, subject to conditions listed in Section 3.12.2.A.ii. **Provide a narrative that responds to the requirements of Section 3.12.2.A.ii**

The proposed Erhard JLR dealership is consistent with the intent of the GE district, it is compatible with the existing Cadillac dealership on the opposite corner and will feature a distinctive, upscale architecture with high quality materials, and a 2-story building height. Pedestrian access and safety will be improved by adding connecting walkways and bike racks. A unique entry focal point at the corner will include 2-story building façade, decorative paving, walls, bench seating, bike racks and landscaping which will provide interest to the Gateway East District entry.

### **Notes to District Standards for GE/SDO Option (Sec 3.6.2)**

**Parking setback screening (Sec 3.6.2.P): Refer to Landscape review for additional comments.**

See landscape section for responses.

### **District Required Conditions for GE (Sec. 3.11)**

**Parking Lot Screening (Sec. 3.11.6.B): Refer to Landscape review for additional comments.**

See landscape section for responses

**Open Space (Sec. 3.11.7): Is 8.51 acres after ROW dedication? Indicate how open space is calculated? Areas less than 20 ft. wide shall not be considered. This is considered a deviation as required useable open space is not provided.**

The 8.51-acre site size is post-dedication. This and the Open space calculations will be clarified on SP-2.0 in the resubmittal.

**Building Façade: Current elevations do not meet the massing requirement. This is considered a deviation and can be supported if there are enhanced site elements proposed, as required by the corner sites in GE district. Refer to Façade review letter for more comments.**

Additional amenities such as benches and bike racks will be added at the corner. A deviation is requested for the massing requirement.

**Streetscape Amenities (Sec. 3.11.10): Additional details are not provided such as landscape or hardscape amenities.**

Additional details for the pedestrian plaza will be provided in the resubmittal.

**Special Development Option (SDO) for the GE District (Sec. 3.12)**

**Intent (Sec. 3.12.1): There is potential for making it “unique” development.**

Noted. Additional information will be provided in the resubmittal.

**Eligibility Criteria (Sec. 3.12.3.B): Refer to Planning Review letter for more details. Please provide a narrative description as how the proposed use fits the criteria listed in Section 3.12.3.B**

The proposed Erhard JLR dealership will benefit the community and building users in many ways: abundance of open space, pedestrian connections, bicycle parking, high quality building materials & landscape features focused at the ‘entry’ corner at Grand River and Meadowbrook. There will not be excessive or unreasonable use of existing public utilities or storm water facilities and will therefore not add burden to adjacent properties. This project is consistent with the Master Plan & GE district, and will be compatible with the existing dealership at the opposite corner. The proposed development will remain under one single ownership entity.

**Project Design Standards: Non-Residential (Sec. 3.12.4.B): There is an opportunity to provide attractive streetscape by proposing creative building foundation landscape. Refer to landscape review for more details. Please provide a narrative description and/or supporting exhibits as how the proposed use fits the criteria listed in Section 3.12.4.B.**

Additional foundation landscaping details will be provided for the next submittal. A narrative will be provided showing how the site meets the criteria in 3.12.4.B.

**General Design Standards (Sec. 3.12.4.C)**

**Sidewalk connection to proposed pathway on Grand River Avenue should be proposed.**

The customer entrance is at the rear of the building, and a connection to Cherry Hill provides pedestrian connectivity. Due to steep grade differentials, it is not possible to provide a walkway between the parking area and the west property line. Creating a marked walkway through the asphalt and encouraging pedestrians past the service bay doors would create unsafe conditions. A waiver is requested for this requirement.

**The City's Grand River Corridor Plan and reasonably shall be incorporated in terms of design features and concepts applicable to the subject property. Street lights, streetscape etc. Provide additional amenities as required.**

Additional streetscape elements will be provided in the resubmittal package.

**Reduce driveways and curb cuts along Grand River Avenue. Additional conditions apply. The applicant indicated in the response letter that discussion with the neighbor to have shared access weren't successful.**

A shared access drive with the funeral home is not feasible for the project. A waiver is requested on the driveway spacing requirement.

**Plan Information (Sec. 3.12.7.C.i.u): Community impact statement is required. Abbreviated community impact statement is provided which address Traffic and Noise.**

A Community Impact Statement is attached to this letter.

**End Islands (Sec. 5.3.12): Refer to Traffic for more comments.**

See traffic comments for response.

**Site Standards: Bicycle Parking**

**Bicycle Parking General requirements (Sec. 5.16): This is considered a deviation for having more than 4 spaces in one location. The applicant can consider relocating couple of locations at the pedestrian plaza.**

Bicycle racks will be redistributed per requirements in the next submittal.

**Site Standards: Loading and Dumpsters**

**Loading Spaces (Sec. 5.4.2): Provide the required and proposed loading area calculation.**

Loading space calculations will be provided on SP-2.0 in the next resubmittal.

**Dumpster (Sec 4.19.2.F): Label dumpster location on plans**

The trash compactor will be labeled on SP-2.0 in the next resubmittal.

**Site Standards: Streets & Sidewalks**

**Off-Road Non- Motorized Facilities City Ordinance Ch. 11, Sec. 11-256: None proposed along Cherry Hill Road. Absence of sidewalk is considered a deviation and can be supported due to existing natural features.**

Per landscaping review "Absence of sidewalk is considered a deviation and can be supported due to existing natural features." Per discussions during preliminary meeting with City, Cherry Hill is adequately served by existing walkway on the south side, and adding a Boardwalk along the north side would disrupt the wetland habitat without real benefit to the community. A deviation is requested from this requirement.

**Pedestrian Connectivity: Provide the required connections to public sidewalk along Grand River Avenue.**

The customer entrance is at the rear of the building, and a connection to Cherry Hill provides pedestrian connectivity. Due to steep grade differentials, it is not possible to provide a walkway between the parking area and the west property line. Creating a marked walkway through the asphalt and encouraging pedestrians past the service bay doors would create unsafe conditions. A waiver is requested for this requirement.

**Building Code and other design standard Requirements**

**General layout and dimension of proposed physical improvements: Refer to all review letters for additional dimensions requested.**

Noted. See review letter sections for response.

**Development/Business Sign:** Given the nature of business, staff recommends to indicate the location on the site plan to verify corner clearance etc. Façade proposes clear glass. Any display inside the building that can be seen through can be perceived as signage as well.

Corner clearance zones will be added to SP-2.0 to the next resubmittal.

**Legal Documents: Special Development Agreement--** Work with planner to execute them as needed.

The required legal documents will be prepared and submitted.

### **Lighting and Photometric Plan (Sec. 5.7)**

**Intent (Sec. 5.7.1):** Some information is missing.

Missing information will be added for the next submittal.

**Standard Notes (Sec. 5.7.3.B):** Please add the notes to the sheet:

- Electrical service to light fixtures shall be placed underground
- Flashing light shall not be permitted
- Only necessary lighting for security purposes & limited operations shall be permitted after a site's hours of operation

The required notes will be added to the photometric for the next submittal.

**Security Lighting (Sec. 5.7.3.H):** The applicant should consider having reduced lighting for security purposes after hours due to proximity to residential uses.

A note specifying minimal lighting will be added for the next submittal.

**Max. Illumination adjacent to Non-Residential (Sec. 5.7.3.K):** Spillover exceeds 1 along Grand River and Meadowbrook frontage near the entry drive. Spillover should be calculated at the future ROW line.

The future property line will be used as the photometric boundary. Plan will be updated to correct spillover on Grand River Avenue for future submittals.

## **Engineering Review**

### **General**

1. A full engineering review was not performed due to the limited information provided in this submittal. Further information related to the utilities, easements, etc. will be required to provide a more detailed review.

Noted. Additional information will be provided in the resubmittal.

2. Revise the plan set to tie in at least one city established benchmark. An interactive map of the City's established survey benchmarks can be found under the 'Map Gallery' tab on [www.cityofnovi.org](http://www.cityofnovi.org). City benchmark number 2411 is located southeast of the Grand River and Meadowbrook intersection.

The required benchmark will be added to the topographic survey.

**3. Provide a note on the plans that all work shall conform to the current City of Novi standards and specifications.**

The required note will be added to the plans.

**4. A same-side/opposite-side driveway spacing waiver, granted by the Planning Commission, would be required for the proposed location of the entrance drive off Grand River Avenue with respect to the adjacent drive to the west. Consider a shared driveway with cross access easement to avoid the need for another curb cut and the spacing waiver.**

A shared access drive with the funeral home is not feasible for the project. A waiver is requested on the driveway spacing requirement.

**5. A right-of-way permit will be required from the City of Novi for work in the Meadowbrook Road and Grand River Avenue rights-of-way.**

Noted.

**6. A right-of-way permit will be required from the Road Commission for Oakland County for work in the Grand River Avenue right-of-way.**

Noted.

**7. An 8-foot wide asphalt wide pathway along the frontage of Grand River is shown on the plans, in accordance with the Bicycle and Pedestrian Master Plan.**

Noted.

**8. A 5-foot sidewalk may be required along the Cherry Hill frontage in accordance with the Zoning Ordinance. Refer to Planning review for additional discussion.**

Per landscaping review "Absence of sidewalk is considered a deviation and can be supported due to existing natural features." Per discussions during preliminary meeting with City, Cherry Hill is adequately served by existing walkway on the south side, and adding a Boardwalk along the north side would disrupt the wetland habitat without real benefit to the community. A deviation is requested from this requirement.

**9. The dedication of the master-planned half width right-of-way of sixty (60) feet is requested with the project. The right-of-way width to be dedicated along Meadowbrook Road is labeled as "proposed" right-of-way on the plans.**

Noted.

**10. The dedication of the additional right-of-way up to the master-planned 60-foot half-width is requested for the project. The additional right-of-way width to be dedicated along Grand River Avenue is labeled as "proposed" right-of-way on the plans.**

Noted.

**11. Soil borings shall be provided for a preliminary review of the constructability of the proposed development (roads, basin, etc.). Borings identifying soil types, and groundwater elevation should be provided at the time of Preliminary Site plan.**

Geotechnical information will be provided with the next submittal.

- 12. A letter from either the applicant or the applicant's engineer must be submitted with the Preliminary Site Plan submittal highlighting the changes made to the plans addressing each of the comments in this review.**

A response letter will be provided with the resubmittal set, detailing all changes.

## Utilities

- 13. The existing water main on the site is not considered acceptable for service. All existing water main should be removed and replaced as needed.**

The existing water main on the site will be completely removed. New water main will be installed to service the project.

- 14. Note that a tapping sleeve, valve and well will be provided at the connections to the existing water main.**

Notes will be added to indicate the TSV at the connections to the existing main.

- 15. Confirm location of existing 8-inch sanitary crossing Grand River.**

The location of the existing sanitary will be confirmed with the next submittal.

- 16. Provide a sanitary sewer monitoring manhole, unique to this site, within a dedicated access easement or within the road right-of-way or public sanitary sewer easement. If not in the right-of-way or public sewer main easement, provide a 20-foot wide access easement to the monitoring manhole from the right-of-way (rather than a public sanitary sewer easement).**

An access easement will be provided to the sanitary monitoring manhole.

## Paving & Grading

- 17. Site grading shall be limited to 1V:4H (25-percent), excluding landscaping berms.**

Noted. All onsite grading will be compliant with Novi requirements.

- 18. The end islands shall conform to the City standard island design, or variations of the standard design, while still conforming to the standards given in Section 2506 of Appendix A of the Zoning ordinance (i.e. 2' minor radius, 15' major radius, minimum 8' wide, 3' shorter than adjacent 19' stall).**

End islands will be dimensioned to demonstrate compliance with requirements in the resubmittal set.

- 19. Revise the entrance driveway from Meadowbrook to be consistent with the standard dimensions shown in Figure IX.1 and Section 11-216 of the Design and Construction Standards.**

Compliance with Figure IX.1 and Section 11-216 will be demonstrated in the resubmittal set.

- 20. Curbing and walks adjacent to the end of 17-foot stalls shall be reduced to 4-inches high, rather than the standard 6-inch height to be provided adjacent to 19-foot stalls. Provide additional details as appropriate.**



Curb will be revised to be in compliance with City of Novi Standards.

### **Storm Sewer & Storm Water Management Plan**

- 21. Provide a four-foot deep sump and an oil/gas separator in the last storm structure prior to the storm water quality basin.**

The required sump and separator will be provided in the resubmittal set.

- 22. Storm sewer pipe material shall be Class IV RCP, or ADS-HP high performance polypropylene storm sewer. Plastic pipe is not permitted within the public right-of-way.**

Storm pipe will comply with City of Novi standards.

- 23. The Storm Water Management Plan (SWMP) shall comply with the Storm Water Ordinance and Chapter 5 of the Engineering Design Manual (refer to the runoff coefficients, 1V:4H allowable basin slopes, etc.).**

The storm water management plan will comply with City of Novi Standards.

- 24. Unrestricted discharge to an off-site regional storm water basin is proposed. Applicable storm sewer tap fees will be determined prior to final site plan approval.**

Required tap fees will be paid.

### **Off-Site Easements**

- 25. Off-site utility easements and agreements must be executed prior to final approval of the plans. Drafts shall be submitted at the time of the Preliminary Site Plan submittal.**

Draft easements will be provided with the resubmittal set.

## **Landscaping Review**

### **LANDSCAPE DEVIATIONS:**

- 1. Deviation to not provide street trees along Grand River (8 trees) – supported by staff because there is no room for the trees.**

Noted.

- 1. Deviation to not provide street trees along Cherry Hill (11 trees) – supported by staff because there is no room for the trees.**

Noted.

- 2. Deviation to not provide greenbelt berm or plantings in area of wetland in order to preserve wetland – supported by staff.**

Noted.

- 3. Deviation to not provide greenbelt berm in greenbelt between Cherry Hill and the parking lot area not behind the wetland – not supported by staff.**

A landscape buffer along Cherry Hill would require removal of trees that are currently being saved as well as impacting the existing wetland area and wetland buffer. Due to the density of the existing trees and the existing wetland, a waiver is requested.

**Adjacent to Residential - Buffer (Zoning Sec. 5.5.3.B.ii and iii)**

- 1. While the property is not adjacent to residentially zoned property, the property to the west is a multi-family project under construction.**

Noted. Proposed berm will be extended to wetland buffer.

- 2. The 5-foot-tall berm provided meets the requirement for parking adjacent to residential and the west property line is heavily landscaped with a mix of woodland replacement deciduous canopy trees.**

Noted.

- 3. Please extend the berm south to the edge of the critical root zone of tree #1573. If the applicant is willing to plant or pay for one more woodland replacement tree, it would be preferable to extend the berm to the edge of the wetland buffer.**

Trees 1573 and 1574 will be removed, and the berm along the west property line will be extended to the edge of the natural features buffer.

**Adjacent to Public Rights-of-Way – Berm (Wall) & Buffer (Zoning Sec. 5.5.3.B.ii and iii)**

- 1. The required greenbelt width is provided along both frontages.**

Noted.

- 2. There are some minor shortages in landscaping provided along the frontages that area outlined on the landscape chart, and should be corrected with Preliminary Site Plans.**

One more deciduous tree will be added along Meadowbrook and the parking lot tree locations will be adjusted as requested.

- 3. No berms are provided as required. Evergreen hedges are proposed along Meadowbrook and a small section of Grand River frontage, but three-foot-tall berms or masonry walls are preferred as they provide more permanent screening than hedges do.**

Berms will be provided along Meadowbrook to screen the parking area.

- 4. Please provide berms or walls in place of the hedges. If the hedges are kept, please provide justification for the hedge in place of berms or walls.**

Berms will be provided along Meadowbrook to screen the parking area.

- 5. The applicant is not providing a berm or landscaping in the area of the wetland along Cherry Hill Road. This deviation is supported by staff because adding those elements would damage the wetland.**

Noted.

- 6. The applicant is not providing a berm or landscaping in the Cherry Hill Road greenbelt. This deviation is not supported by staff at this time. Please provide justification for not providing the required 3-foot-tall berm in that area.**

Installing a berm along Cherry hill would require work in the 25-foot wetland setback and removal of existing trees that are currently slated to be preserved. A waiver from this requirement is requested.

#### **Street Tree Requirements (Zoning Sec. 5.5.3.E.i.c and LDM 1.d.)**

- 1. Street trees are provided along Meadowbrook as required.**

Noted.

- 2. Street trees are not provided along either Grand River or Cherry Hill. These deviations are supported by staff because a drainage ditch and utility lines do not provide room for the trees along Grand River, and a deep ditch along Cherry Hill does not allow room for street trees there.**

Noted.

#### **Parking Lot Landscaping (Zoning Sec. 5.5.3.C.)**

- 1. Based on the vehicular use areas, 4,775 sf of islands and 24 trees are required. 11,612 sf of islands and 24 trees are provided.**

Noted.

- 2. Each interior island and endcap island must have at least one tree planted in it. There are 6 islands that do not have the required tree.**

Utility locations will be adjusted as needed to provide for trees in the required islands.

- 3. Please add trees in those islands.**

Utility locations will be adjusted as needed to provide for trees in the required islands.

- 4. Woodland replacement trees should not be planted in parking lot islands. Please remove them.**

Noted. Trees will be relocated as needed.

- 5. There must be at least 200sf of green space per tree planted in interior islands. Many of the islands with less than 400sf of area have 2 trees planted in them. Please do not plant trees in situations with less than the required area.**

Islands will be evaluated to ensure that they have sufficient area for the proposed trees.

#### **Parking Lot Perimeter Canopy Trees (Zoning Sec. 5.5.3.C.(3) Chart footnote)**

- 1. Based on the 2,099lf of perimeter, 60 trees are required. 46 new trees, 7 greenbelt trees within 15 feet of the parking lot are being double-counted as perimeter trees, as is allowed, and 7 existing trees being preserved that are within 15 feet of the parking lot are provided.**

Noted.

- 2. Please move the western greenbelt tree along the Meadowbrook entry drive to the greenbelt.**

This will be done for resubmittal.

#### **Loading Zone screening (Zoning Sec. 3.14, 3.15, 4.55, 4.56, 5.5)**

- 1. Please provide more solid screening between Meadowbrook Road and the loading area.**

A 3-foot berm will be added along the Meadowbrook frontage in front of the parking area and loading zone. The roadway along Meadowbrook is 5 feet lower than the planned elevation of the loading area. Together with the 3-foot berm, this will provide an effective 8-foot opaque screen between the roadway and the loading zone.

#### **Building Foundation Landscape (Zoning Sec 5.5.3.D.)**

- 1. Based on the hatched areas and calculations it appears that sufficient building foundation landscaping will be provided.**

Noted. Detailed foundation plans will be provided with next submittal.

- 2. Please provide detailed foundation planting plans for the building frontages along Grand River and Meadowbrook to help assess how well the project meets the goals of the Gateway SDO.**

Noted. Detailed foundation plans and Gateway feature plan will be provided with next submittal.

- 3. The remaining foundation planting detail drawings can be provided with Final Site Plans.**

Noted.

#### **Woodland Replacement Trees**

- 1. Please do not locate woodland replacement trees in areas where they cannot be protected, such as in the greenbelt where utilities are nearby, in parking lot islands, etc.**

Noted. Trees will be relocated as required.

#### **Irrigation (LDM 1.a.(1)(e) and 2.s)**

- 1. The proposed landscaping must be provided with sufficient water to become established and survive over the long term.**

Noted.

- 2. Please note how this will be accomplished if an irrigation plan is not provided.**

An irrigation plan will be submitted with the resubmittal set.

#### **LANDSCAPE REVIEW SUMMARY CHART**

**Landscape Plan (Zoning Sec 5.5.2, LDM 2.e.): When building foundation planting designs are provided, please use a scale no less than 1" = 20'.**

Noted.

**Zoning (LDM 2.f.): Please show zoning of adjacent parcels on landscape plan.**

Noted.

**Existing plant material Existing woodlands or wetlands (LDM 2.e.(2)):**

1. See ECT review for full analysis of Wetlands & Woodlands.

Noted.

2. Please move the note stating "Provide Tree Protection Fence Around Existing Trees to Remain, Typ." At the brick plaza area, down to point at preserved trees.

The note will be relocated.

3. Please remove trees #1573 and #1574 so the berm can be extended further southward.

Trees 1573 and 1574 will be removed, and the berm along the west property line will be extended to the edge of the natural features buffer.

**Proposed grading. 2' contour minimum (LDM 2.e.(1)):**

1. Please provide required berms in greenbelts adjacent to parking.
2. See below for berm requirements.

A berm will be added along Meadowbrook where it does not interfere with the existing wetland. A waiver is requested for the berm at Cherry Hill as this would require work within the 25' wetland setback and removal of existing trees that are currently slated to be preserved.

**Parking Area Landscape Requirements LDM 1.c. & Calculations (LDM 2.o.)**

**General requirements (LDM 1.c):**

- Please show RCOC sight clearance for Grand River entry.
- Remove any shrubs taller than 30" or trees from the zone.

The RCOC sight clearance will be added for the Grand River entry, and no plantings taller than 30" will be placed in the zone.

**Name, type and number of ground cover (LDM 1.c.(5)): Please make seed/sod hatches more different for easier interpretation.**

Seed and sod hatches will be updated to provide greater contrast in future submittals.

**General (Zoning Sec 5.5.3.C.ii)**

**Parking lot Islands (a, b. i):**

1. It is difficult to determine where backs of curb are on plans. Please dimension widths of islands at back of curb.

Dimensions will be clarified to be to back of curb.

**2. Please increase widths or areas of islands as necessary.**

Islands will be sized appropriately to support the planned trees in future submittals.

**Contiguous space limit (i):**

- 1. All endcap islands and islands used to break up bays must be landscaped with a deciduous canopy tree.**
- 2. There are 6 interior or endcap islands that need to have trees.**
- 3. Please add trees as necessary and enlarge island planting area(s) if necessary to accommodate them.**

Islands will be sized appropriately to support the planned trees in future submittals.

**Clear Zones (LDM 2.3.(5)): Please indicate clear vision zone per RCOC regulations for Haggerty Road entry and all entries to interior road.**

The RCOC sight clearance will be added for the Grand River entry, and no plantings taller than 30" will be placed in the zone.

**All Categories**

**D = C/200 Number of canopy trees required:**

- 1. Woodland replacement trees should not be planted in parking lot islands.**
- 2. Woodland replacement trees should also not be placed in the greenbelt or other areas where they cannot be protected with an easement.**
- 3. Please move replacement trees out of those areas. If they cannot fit on the site in acceptable locations, a deposit for the trees that can't be planted can be made to the city's tree fund.**

Noted. Woodland replacement trees will be relocated as specified.

**Perimeter Green space**

- 1. Please move the perimeter tree furthest in the Meadowbrook entry out to between the parking lot and Meadowbrook if it is to count as a greenbelt tree.**
- 2. If fewer replacement trees were placed in the greenbelt, there would be plenty of room for all of the required greenbelt trees.**

The tree will be relocated as specified.

**Residential Adjacent to Non-residential (Sec 5.5.3.A) & (LDM 1.a)**

**Berm requirements (Zoning Sec 5.5.A): 5-6-foot-tall landscaped berm is provided along west property line. Please extend the berm further south, preferably to end at the wetland buffer but at least to the edge of the critical root zone of Tree #1573, to provide better screening of the parking lot from the residences southwest of the project.**

Trees 1573 and 1574 will be removed, and the berm along the west property line will be extended to the edge of the natural features buffer.

**Adjacent to Public Rights-of-Way (Sec 5.5.B) and (LDM 1.b)**

**Berm requirements (Zoning Sec 5.5.3.A.(5)): An undulating berm a minimum of 3 feet high with a 3-foot-wide crest is required between parking and right-of-way:**

- 1. Please provide the required berms along Grand River and Meadowbrook.**

Berms will be provided as required along Grand River and Meadowbrook.

- 2. Due to the preservation of the wetland, a landscape waiver to not provide the required berm in that area of the Cherry Hill greenbelt is supported by staff.**

Noted.

- 3. Please provide the required berm along the eastern 350lf of Cherry Hill frontage. Currently, the deviation is not supported by staff. Please provide justification for this deviation.**

Installing a berm along Cherry hill would require work in the 25-foot wetland setback and removal of existing trees that are currently slated to be preserved. A deviation from this requirement is requested.

#### **Cross-Section of Berms (LDM 2.j)**

**Slope, height and width: Please provide berm cross section that includes loam and topsoil callouts**

Cross section details of the berms will be provided in the next submittal.

#### **Walls (LDM 2.k & Zoning Sec 5.5.3.vi)**

**Material, height and type of construction footing: Please indicate wall elevations and provide construction details.**

Wall details will be provided in the next submittal.

**Walls greater than 3½ ft. should be designed and sealed by an Engineer**

Any wall larger than 3.5 feet will have design and seal from a structural engineer.

#### **ROW Landscape Screening Requirements (Sec 5.5.3.B. ii)**

**Greenbelt width (2)(3) (5): Min. berm crest width:**

- 1. An evergreen hedge is provided in lieu of berm along Meadowbrook and a small part of the Grand River frontage. Masonry walls are an allowed substitution for the berm, but hedges are the least preferred option as they don't provide the same permanent blockage as berms or walls do.**
- 2. Please provide justification for this alternative.**

A 3-foot berm will be added along the Meadowbrook frontage in front of the parking area and loading zone. The roadway along Meadowbrook is 5 feet lower than the planned elevation of the loading area. Together with the 3-foot berm, this will provide an effective 8-foot opaque screen between the roadway and the loading zone.

- 3. No berm is provided along the Cherry Hill frontage. This deviation is supported for the section in the wetland/wetland buffer to preserve them, but is currently not supported for the eastern 350 feet of frontage.**

**4. Please provide the required berm or provide justification for not providing it.**

Installing a berm along Cherry hill would require work in the 25-foot wetland setback and removal of existing trees that are currently slated to be preserved. A waiver from this requirement is requested.

**Minimum berm height (9)**

1. See above.
2. **If hedge along Meadowbrook is permitted, it must be maintained in a continuous condition, at a height of at least 36”.**

A 3-foot berm will be added along the Meadowbrook frontage in front of the parking area and loading zone. The roadway along Meadowbrook is 5 feet lower than the planned elevation of the loading area. Together with the 3-foot berm, this will provide an effective 8-foot opaque screen between the roadway and the loading zone.

**Canopy deciduous or large evergreen trees Notes (1) (10):**

1. **Please provide 1 more deciduous canopy or large evergreen tree along the Meadowbrook greenbelt.**

An additional tree will be provided for the next resubmittal.

2. **Please move the western greenbelt/ perimeter tree on the Meadowbrook entry out to between the parking lot and Meadowbrook.**

The tree will be relocated as specified.

3. **Please replace the Bowhall Maple with a variety that has a minimum mature canopy width of at least 20 feet.**

The Bowhall Maples will be replaced with sub canopy trees at a ratio of 1.5 canopy trees to 1 large deciduous or evergreen tree due to their proximity to powerlines.

**Sub-canopy deciduous trees Notes (2)(10):**

1. **Please provide 2 more sub canopy trees along Meadowbrook**

Trees will be added for the next submittal.

2. **Please provide 2 more sub canopy trees along Grand River**

Trees will be added for the next submittal.

**Non-Residential Zoning Sec 5.5.3.E.iii & LDM 1.d (2) Refer to Planting in ROW, building foundation landscape, parking lot landscaping and LDM**

**Screening of outdoor storage, loading/unloading (Zoning Sec. 3.14, 3.15, 4.55, 4.56, 5.5): Better screening of the loading zone from Meadowbrook should be provided.**

A 3-foot berm will be added along the Meadowbrook frontage in front of the parking area and loading zone. The roadway along Meadowbrook is 5 feet lower than the planned elevation of the loading area. Together



with the 3-foot berm, this will provide an effective 8-foot opaque screen between the roadway and the loading zone.

**Transformers/Utility boxes (LDM 1.e from 1 through 5): When transformer locations are finalized, screening shrubs per standard detail are required.**

Screening will be provided around transformers in the resubmittal.

**Detention/Retention Basin Requirements (Sec. 5.5.3.E.iv)**

**Planting requirements (Sec. 5.5.3.E.iv):**

- 1. Please use straight species *Rhus aromatica*, not Grow Low.**

Noted. Variety will be updated for next submittal.

- 2. Please use a more equal split between the 3 species.**

Noted. Quantities will be updated for next submittal.

**Phragmites Control (Sec 5.5.6.C):**

- 1. Please survey the site for any populations of *Phragmites australis* and submit plans for its removal.**

A Phragmites survey will be conducted, and appropriate remediation plan prepared as required.

- 2. If none is found, please indicate that on the survey.**

Appropriate notes will be added as to the existence, or lack thereof.

## **LANDSCAPING NOTES, DETAILS AND GENERAL REQUIREMENTS**

**Other information (LDM 2.u): Please change note #13 from one (1) year to three (3) months.**

Noted. Planting notes will be updated for next submittal.

**Plant List (LDM 2.h.) – Include all cost estimates: Please use hatches that are easier to differentiate from each other.**

Hatches will be updated for next submittal.

## **Wetland Comments**

**Please consider the following comments when preparing subsequent site plan submittals:**

- 1. It does not appear as though a MDEQ Wetland Permit or City of Novi Wetland Use Permit would be required as there do not appear to be proposed wetland impacts.**

No wetland impacts are planned for this project.

- 2. A City of Novi Authorization to Encroach the 25-Foot Natural Features Setback would be required for any proposed impacts to on-site 25-foot wetland buffers. There appear to be**

**wetland buffer impacts proposed for the construction of the outlet from the proposed storm water detention basin.**

Noted. Authorization will be obtained for work in the natural features setback.

- 3. ECT encourages the Applicant to minimize impacts to on-site wetlands and 25-foot wetland setbacks to the greatest extent practicable. The Applicant should consider modification of the proposed site design to preserve all wetland and wetland buffer areas. Specifically, the applicant shall work to avoid any proposed encroachment into the 25-foot wetland buffer for the purpose constructing the proposed storm water detention basin. The City regulates wetland buffers/setbacks. Article 24, Schedule of Regulations, of the Zoning Ordinance states that:**

**“There shall be maintained in all districts a wetland and watercourse setback, as provided herein, unless and to the extent, it is determined to be in the public interest not to maintain such a setback. The intent of this provision is to require a minimum setback from wetlands and watercourses”.**

Construction practices will minimize intrusion into the wetland buffer.

- 4. The applicant should clearly show and label any wetland and 25-foot natural features setback (buffer) boundaries on all future plan submittals. In addition, please provide on the Plan, the date that the original wetland delineation was conducted.**

The 25' natural features setback will be labeled on future submittals.

- 5. The on-site acreages for all existing wetland areas and associated 25-foot wetland setback areas should be indicated on the Plan.**

The areas for the wetland and natural features setback will be labeled on future submittals.

- 6. The areas (square feet or acres) of all proposed impacts to the 25-foot wetland buffer (both permanent and/or temporary) shall be clearly indicated on the Plan.**

Areas of impact will be delineated and labeled on the plans for future submittals.

- 7. The Plan should address how any temporary impacts to wetland buffers shall be restored, if applicable. A proposed seed mix should be provided on the Plan for restoration of these wetland buffer areas. Sod or common grass seed will not be authorized in these areas.**

There is a 5' lawn buffer around the parking lot on the west and south sides. Between the 5' lawn strip and the wetland buffer and the west property line, a native prairie mix is specified. Restoration notes for impacted buffer areas will be clarified for the next resubmittal.

- 8. The Applicant is encouraged to provide wetland conservation easements for any areas of remaining wetland or 25-foot wetland buffer. The Applicant shall provide wetland conservation easements as directed by the City of Novi Community Development Department for any areas of remaining wetland as well as for any proposed wetland mitigation areas (if necessary). A Conservation Easement shall be executed covering all remaining wetland areas on site as shown on the approved plans. This language shall be submitted to the City Attorney for review. The executed easement must be returned to the City Attorney within 60 days of the issuance of the City of Novi Wetland and Watercourse permit.**

A conservation easement will be provided for the existing wetland area.

- 9. Should impacts to the wetland area be proposed, the applicant shall provide correspondence from the MDEQ clarifying the regulatory status of Wetland A. A City of Novi Wetland Permit cannot be issued prior to receiving this information.**

A copy of any MDEQ permit will be provided as required.

## Woodland Comments

Please consider the following comments when preparing subsequent site plan submittals:

- 1. ECT encourages the Applicant to minimize impacts to on-site woodlands to the greatest extent practicable. Currently, the Plan proposes to remove 149 of the 310 surveyed trees (48% of the on-site regulated trees). The current required Woodland Replacement Credit quantity is 172 Woodland Replacement Credits.**

Noted.

- 2. The Plan includes a Tree Plant List on Sheet T-1.0, that lists the species of the proposed Woodland Replacement Trees; however, it does not currently appear to specify the quantity of each species that will be used as Woodland Replacement tree credits. The applicant should, for example, specify how many of the 28 hophornbeam listed in the list are Woodland Replacement Trees as opposed to Perimeter Parking Lot or Landscape trees, etc.**

Noted. Tree list will be broken into two separate lists for the next submittal.

- 3. For trees proposed for removal, the Tree Plant List should include a column indicating the number of Woodland Replacement Credits Required.**

Noted. The Woodland Replacement Credits will be tabulated on future resubmittals.

- 4. All of the tree species proposed as Woodland Replacement Tree material appears to be acceptable per the City's Woodland Tree Replacement Chart, however, the applicant shall specify the thornless honeylocust (*Gleditsia triacanthos inermis*) on the Plan.**

Tree variety will be updated for next submittal.

- 5. A Woodland Permit from the City of Novi would be required for proposed impacts to any trees 8-inch diameter-at-breast-height (DBH) or greater and located within an area designated as City Regulated Woodland, or any tree 36-inches DBH regardless of location on the site. Such trees shall be relocated or replaced by the permit grantee. All deciduous replacement trees shall be two and one-half (2 ½) inches caliper or greater and count at a 1-to-1 replacement ratio and all coniferous replacement trees shall be six (6) feet in height (minimum) and count at a 1.5-to-1 replacement ratio. All Woodland Replacement trees shall be species that are listed on the City's Woodland Tree Replacement Chart (attached).**

Noted. Permits will be obtained as required, and all woodland replacement trees will meet the City requirements.

- 6. A Woodland Replacement Performance financial guarantee for the planting of replacement trees will be required. This financial guarantee will be based on the number of on-site woodland replacement trees (credits) being provided at a per tree value of \$400. In this case,**

**the Woodland Replacement Performance Guarantee would be \$68,800 (172 Woodland Replacement Credits Required x \$400/Credit). Based on a successful inspection of the installed on-site Woodland Replacement trees, the original Woodland Financial Guarantee shall be returned to the Applicant. Twenty-five percent (25%) of the value of the Woodland Replacement material shall be kept for a period of 2-years after the successful inspection of the tree replacement installation as a Woodland Maintenance and Guarantee Bond. This Woodland Maintenance and Guarantee Bond value is to be \$17,200.**

Noted.

- 7. If applicable, Woodland Replacement material should not be located 1) within 10' of built structures or the edges of utility easements and 2) over underground structures/utilities or within their associated easements. In addition, replacement tree spacing should follow the Plant Material Spacing Relationship Chart for Landscape Purposes found in the City of Novi Landscape Design Manual.**

Noted.

- 8. If applicable, the Applicant will be required to pay the City of Novi Tree Fund at a value of \$400/credit for any Woodland Replacement tree credits that are proposed on-site that cannot be placed on-site at the time of landscaping.**

Noted.

- 9. The applicant currently proposes to provide 172 Woodland Replacement Credits on site. The Applicant shall provide preservation/conservation easements as directed by the City of Novi Community Development Department for any areas of woodland replacement trees. The applicant shall demonstrate that the all proposed woodland replacement trees will be guaranteed to be preserved as planted with a conservation easement or landscape easement to be granted to the city. This language shall be submitted to the City Attorney for review. The executed easement must be returned to the City Attorney within 60 days of the issuance of the City of Novi Woodland permit. The applicant shall clearly indicate the proposed conservation easement boundaries on the Plan.**

The conservation easement will be delineated on the plan, and submitted as required for review to the City.

- 10. As noted, some of the proposed Woodland Replacement trees are within the parking lot or close to the proposed loading zone. The location of these trees is not consistent with the intent of the Woodland Ordinance in mitigating for the loss of woodland tree canopy. ECT suggests that these proposed Woodland Replacement Trees be relocated to another area of the site that can more easily be placed into a conservation easement.**

Woodland Replacement Trees will be relocated out of the parking lot for future resubmittal.

#### **Traffic Review Comments**

##### **EXTERNAL SITE ACCESS AND OPERATIONS**

The following comments relate to the external interface between the proposed development and the surrounding roadway(s).

- 1. The applicant has proposed one entrance from Grand River Avenue and one entrance from Meadowbrook Road.**

Noted.

2. **The Grand River Avenue driveway is a right-in/one-way-out driveway proposed to be within the existing right turn lane along eastbound Grand River Avenue.**
  - a. **The driveway dimensions for width are in compliance with the City standards for this particular type of driveway and meet fire department requirements.**

Noted.

- b. **The entering and exiting radii are within the allowable range per Figure IX.2 from the City's Code of Ordinances but could consider reducing to 20' to meet the standard. Alternatively, because of the right- in/right-out design, the entering and exiting radii may need to deviate from the standard dimensions.**

The radii are per the instructions received from the Fire Marshall as minimums to allow fire truck access to the site.

- c. **The right-in/right-out island design should be modified to further emphasize the intended operation and discourage left turns.**

The divided island design will be detailed in future resubmittals.

3. **The proposed Meadowbrook Road driveway is a two-way driveway. The applicant has reduced the width to 30 feet to meet City standards and although the turning radii dimensions are within the allowable range, the applicant should consider increasing to 20 feet.**

The radii will be adjusted to 20 feet in the resubmittal.

4. **The Meadowbrook Road driveway is proposed at the current location of a right turn lane taper. The applicant is extending the right turn lane north of the site driveway so that it also acts as a right turn lane for the development. The applicant provided dimensions for the taper and turn lane that are within range of Figure IX.11 in the City's Code of Ordinances. The applicant could consider reducing the right turn lane to be 25' instead of 150'. There is not an existing taper due to the existing right turn lane for Cherry Hill Road.**

The taper lane will be adjusted to 25' in the resubmittal.

5. **The applicant provided sight lines at both driveways that appear to be in accordance with Figure VIII-E in the City's Code of Ordinances but dimensions shall be provided to ensure compliance.**

Dimensions will be added to all sight lines.

6. **The applicant should provide driveway spacing dimensions in accordance with Section 11-216.d.1.d and Figure IX.12 in the City's Code of Ordinances. The applicant is seeking a waiver for the driveway adjacent to the Grand River Avenue driveway.**

Dimensions will be added to clarify driveway spacing along Grand River.

#### **INTERNAL SITE OPERATIONS**

**The following comments relate to the on-site design and traffic flow operations.**

## 1. General Traffic Flow

- a. **The applicant has provided large vehicle turning paths entering from Meadowbrook Road and exiting at Grand River Avenue. The applicant should also include large vehicle delivery truck patterns into and out of the proposed loading zone.**

Truck turn models will be added to show access to the loading zone.

- b. **The City requires a loading zone totaling 10 square feet for each front foot of building. Reference section of the City's Zoning Ordinance for more information.**
  - i. **The applicant has provided a 2,465 S.F. loading zone located adjacent to the 10 visitor and ADA accessible parking at the main entrance to the building. There is a note stating that no long-term delivery truck parking is allowed on site but the applicant should consider revising that to not allow deliveries during normal business hours so that the trucks do not block those 10 parking spaces. Per Section 5.4.2 the loading zone should "not have a disruptive effect on the safe and efficient flow of pedestrian and vehicular traffic within the site". Alternatively, the parking space access and/or loading zone access may be revised.**

The required note will be added to the plan set for future resubmittals.

- c. **The proposed trash enclosure area is not expected to interfere with parking operations.**

Noted.

- d. **The applicant has indicated that the intent of the proposed 13-foot-wide access pathway near the Grand River Avenue driveway is to facilitate the movement of vehicles in and out of the showroom.**

Noted.

## 2. Parking Facilities

- a. **As per the City's Zoning Ordinance, the applicant is required to provide one parking space for each 200 square feet of usable floor area of sales room and one for every one auto service stall in the service room. The building information listed on sheet SP-2.0 (and in the revised RTIS) is 58,663 S.F. where the label on the building plan on sheet SP-2.0 is 53,211 S.F. The applicant should update the facility size to be consistent across all records.**

The building areas will be updated to be consistent on all plans for future submittals.

- i. **The applicant has indicated that 138 spaces are required based on the criteria above; however, the amount of parking proposed is 136.**

Parking counts will be verified and updated to be in compliance with requirements for future resubmittals.

- b. **The applicant has provided a total of 426 parking spaces.**
  - i. **It should be noted that the Novi City Council is currently reviewing an amendment to the Zoning Ordinance that limits the number of on-site parking spaces to 125 percent of the required parking. The amendment is expected to be approved prior to the Jaguar/Land Rover development being reviewed by the Planning Commission. Therefore, the applicant should accommodate for this**

**amendment within their site plan or seek a special land use subject to Planning Commission approval.**

Per conversation with Planning, the Zoning Amendment should not be passed prior to approval of this project. If for some reason, the Amendment is implemented prior to approval, a Special Land Use application will be made.

- ii. **The applicant has indicated, and should potentially designate, where customer, employee and new vehicle storage spaces will be provided throughout the site. The applicant should review the parking calculations to ensure they match what is shown on the plans. For example, there are 47 employee/visitor spaces in the parking calculations but only 44 are proposed on the plan.**

Parking counts will be verified and updated to be in compliance with requirements for future resubmittals.

- iii. **Of the total 426 spaces provided, 136 of those are for visitor, employee and service bay parking. The requirement is 138 spaces so the applicant should designate (2) more spaces or a waiver may be required.**

Parking counts will be verified and updated to be in compliance with requirements for future resubmittals.

- iv. **Five (5) barrier free parking spaces are required and five (5) are proposed with one (1) of those spaces being van accessible. The dimensions of these spaces are in compliance with ADA Standards for Accessible Design.**

Noted.

- c. **The applicant has provided parking space lengths for parking spaces throughout the development. The applicant has proposed four-inch curbs around the perimeter of the development, which require a parking space length of 17 feet. Please reference Section 5.3.2 of the City's Zoning Ordinance for further clarification.**

Curb heights and parking space dimensions will be revised to be in compliance with Novi standards.

- i. **It should also be noted that the note on sheet SP-3.0 indicates four-inch curbs while the detail on sheet SP-6.2 indicates 6" curbs.**

Details will be revised to be in compliance with plan notes.

- ii. **The applicant should indicate that 6" curbs are required at the parking end islands as well as the four (4) 19' long parking spaces on the west side of the site.**

Curb heights and parking space dimensions will be revised to be in compliance with Novi standards.

- d. **The applicant should provide the width of the maneuver aisle near the southwest corner of the site.**

Dimensions will be added to clarify aisle widths.

- e. **The applicant should provide width dimensions for the proposed landscape islands, or indicate that the dimensions provided are typical throughout the site unless otherwise noted. The applicant has indicated that the landscape islands are 4.25' shorter than the adjacent parking space, which does not meet the 3' requirement. Also, the 1.5' radii do not meet the 2' requirement. In some locations, the exterior radii are less than 15' and should be increased to 15'. Please reference Section 5.3.12 for more information and update the plans to meet City standards.**

Islands will be revised to be in compliance with City Standards.

- f. **The applicant is required to provide two (2) bicycle parking spaces for the service center section of the development and six (6) have been provided. A bicycle parking layout is shown on sheet SP-2.0 but a dimension for the width of the sidewalk should also be included.**

Bicycle spaces will be revised and dimensions added as required in future submittals.

### 3. Sidewalk Requirements

- a. **The applicant has proposed an 8' sidewalk adjacent to Grand River Avenue in order to be in compliance with the City's Non-Motorized Master Plan.**

Noted.

- b. **The proposed sidewalks throughout the site are generally in compliance with City standards; however, additional dimensions are required for the sidewalks on the southeast side of the building. The sidewalk near the trash receptacle area is labeled as 4.5' and does not meet the required 5-foot width.**

Dimensions will be added throughout the site. Sidewalks will be revised to be in compliance with Novi standards.

- c. **The applicant has provided sidewalk connections from the site to the required sidewalks along Grand River Avenue and Meadowbrook Road.**

Noted.

- d. **The applicant has provided sidewalk ramp and detectable warning surface locations and details.**

Noted.

- e. **The applicant should indicate the need for and intent of the proposed gray paver walkway on the site. The placement of such walkway is not ideal in that it is placed between the parking spaces and the end islands. The end islands should be relocated to be adjacent to the parking spaces.**

The gray paver walkway is intended to provide connectivity between the extended visitor parking area and the building entry. Placing it behind the end islands provides separation and safety between traffic in the drive aisles and pedestrians.



4. **All on-site signing and pavement markings shall be in compliance with the Michigan Manual on Uniform Traffic Control Devices (MMUTCD). The following is a discussion of the proposed signing and striping. Additional comments will be provided with the preliminary site plan.**
- a. **The applicant has provided a signing layout, quantities table, and details.**

Noted.

- b. **The applicant could consider adding a Keep Right (R4-7) and a No Left Turn (R3-2) sign in the island of the Grand River Avenue entrance.**

The requested signage will be added to the island.

- c. **The applicant has provided pavement marking details for the ADA accessible parking but should also indicate pavement marking details including color, dimensions and location throughout the site and entrances in future submittals.**

Notes and dimensions will be added to clarify pavement striping in future submittals

- d. **The applicant could consider signing and/or pavement markings for the pedestrian crossing at the Meadowbrook entrance.**

Signage will be added for the pedestrian crossing.

## **Façade Review**

**Section 5.15 - As shown above the north and east facades have an underage of Brick and an overage of Flat Metal Panels. The material proposed for the roof equipment screens is not labeled on the drawings. Kristen Lark of Rogvoy Architects indicated that the roof screens will be Horizontal Ribbed Metal Panels of a complementary color. Ribbed Metal Panels are not allowed by the Façade Ordinance in Façade Region 1; however, in this case the material is proposed only for roof equipment screening.**

A deviation is requested to allow for the use of decorative, horizontal, ribbed metal panels to be used for rooftop equipment screening only.

**Section 3.11.8 – Section 3.11.8 of the Ordinance states that buildings located at the corner of two streets within the Gateway East District “... shall contain two stories or incorporate architectural features that provide additional massing.” The proposed building exhibits no additional massing near the intersection of Grand River and Meadowbrook Rd., and is generally inconsistent with this requirement. The applicant should consider revising the design to add architectural features, specifically to the north-east corner of the building that will meet the intent of this Section.**

The proposed building is already 35 feet at the corner. It would not be aesthetically appealing to add a higher vertical element that would disrupt the design and character of the JLR building architecture. A deviation is requested from this requirement.

## **Fire Review**

**All fire hydrants MUST be installed and operational prior to any building construction begins.**

All hydrants will be installed and operational prior to building construction.

**A hazardous chemical survey is required to be submitted to the Planning & Community Development Department for distribution to the Fire Department at the time any Preliminary Site Plan is submitted for review and approval. Definitions of chemical types can be obtained from the Fire Department at (248) 735-5674.**

A hazardous chemical survey will be provided with the next submittal.

**All roads MUST meet City of Novi weight requirements of 35 ton. (Novi City Ordinance 15-17 503.2.3).**

Pavement will meet the City of Novi requirements.

We trust these revisions meet requirements. If you should have any questions or require any additional information, please feel free to contact this office.

Sincerely,

**PEA, Inc.**



Becky Klein, PE, LEED AP BD+C  
Project Manager

Attachment:

Cc