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CITY of NOVI CITY COUNCIL

Agenda Item 1
January 11, 2016

SUBJECT: Consideration of tentative approval of the request of Hunter Pasteur Homes for Dunhill Park, JSP 15-13, with Zoning Map Amendment 18.711, to rezone property in Section 32, located at the northwest corner of Beck Road and Eight Mile Road from RA (Residential Acreage) to R-1 (One-Family Residential) with a Planned Rezoning Overlay (PRO); and corresponding concept plan. The property totals 23.76 acres and the applicant is proposing to construct a 31-unit single family residential development in a cluster arrangement with frontage on and access to Eight Mile Road.

SUBMITTING DEPARTMENT: Community Development Department - Planning *Bearly*

CITY MANAGER APPROVAL: 

BACKGROUND INFORMATION:

The petitioner is requesting a Zoning Map amendment for a 23.76-acre property at the northwest corner of Beck Road and Eight Mile Road from RA (Residential Acreage) to R-1 (One-Family Residential) using the City's Planned Rezoning Overlay (PRO) option. The applicant states that the rezoning request is necessary to allow the development of a 31-unit single family residential development in a cluster arrangement with frontage on and access to Eight Mile Road.

The PRO option creates a "floating district" with a conceptual plan attached to the rezoning of a parcel. As part of the PRO, the underlying zoning is proposed to be changed (in this case from RA to R-1) and the applicant enters into a PRO agreement with the City, whereby the City and the applicant agree to a conceptual plan for development of the site. Following final approval of the PRO concept plan and PRO agreement, the applicant will submit for Preliminary and Final Site Plan approval under standard site plan review procedures. The PRO runs with the land, so future owners, successors, or assignees are bound by the terms of the agreement, absent modification by the City of Novi. If the development has not begun within two (2) years, the rezoning and PRO concept plan expires and the agreement becomes void.

The subject parcel is 23.76 gross acres on the northwest corner of Beck Road and Eight Mile Road. The site includes 0.25 acres of land in the Eight Mile Road right-of-way; the net acreage is 23.51 acres. The concept PRO plan proposes 31 total lots in a cluster arrangement, with 7.76 acres, or 33 percent of the total site preserved as open space. The open space is primarily devoted to an on-site detention pond and wetland mitigation areas. An open park space is proposed next to lot 22. One boulevarded access point is proposed onto Eight Mile Road and one stub street is proposed.

This site was the former home to J.J. Zayti Trucking, Inc. The applicant has indicated that the previous use resulted in environmental contamination and that remediation efforts are planned for the entire site. At the Planning Commission meeting, the applicant said that there are two issues with the site: one is elevated levels of arsenic in the soil, and the other is buried debris on the site. Non-contaminated debris includes crushed concrete and

various fill material. Contaminated debris includes buried fuel oil tanks. The concept plan shows large circle areas that are the potential areas of debris; the smaller circles are the areas that are known to have debris. Any contamination found during excavation will be dug out and properly disposed.

Ordinance Deviations Requested

Section 7.13.2.D.i.c(2) permits deviations from the strict interpretation of the Zoning Ordinance within a PRO agreement. These deviations must be accompanied by a finding by City Council that "each Zoning Ordinance provision sought to be deviated would, if the deviation were not granted, prohibit an enhancement of the development that would be in the public interest, and that approving the deviation would be consistent with the Master Plan and compatible with the surrounding areas." Such deviations must be considered by City Council, who will make a finding of whether to include those deviations in a proposed PRO agreement. The proposed PRO agreement would be considered by City Council after tentative approval of the proposed concept plan and rezoning. Some of the deviations are supported by the staff.

The deviations requested are the following:

1. Lot Size and Width: Per Section 3.1.2 of the Zoning Ordinance, the R-1 One-Family Residential Zoning district requires a minimum lot size of 21,780 square feet and a minimum lot width of 120 feet. The applicant has proposed a minimum lot size of 13,860 square feet and a minimum width of 90 feet. These deviations should be included in the PRO Agreement. For reference, the proposed lot sizes more closely reflect the R-3 Zoning District, but the overall density at 1.32 units/acre more closely reflects the R-1 (requested) Zoning District. Staff supports this deviation.
2. Setbacks: The **minimum side yard setback** for a single-family dwelling in this district is 15 feet (with an aggregate of 40 feet). The applicant has proposed a minimum 10 foot side yard setback (with an aggregate of 30 feet). These deviations should be included in the PRO Agreement and should be updated on Sheet 2. Staff supports this deviation.
3. Woodland Replacement Trees: The applicant is **requesting a deviation from ordinance requirements that require the applicant to plant, or pay into the City's tree fund for the equivalent of 230 required woodland replacement trees**. The applicant has stated that the cost to remedy the existing soil remediation issues is significant enough to negate the City's requirements to provide a Woodland Replacement Guarantee for the remaining trees that will not be planted. Staff does **not** support this deviation.
4. Landscape waivers: **A number of deviations from the landscaping standards** are being proposed. Staff supports all the deviations.
 - a. No berm is proposed along Beck Road due to existing natural features.
 - b. Landscaping does not meet the minimum requirement for canopy and sub-canopy trees along the public right-of-way.
 - c. Landscaping does not meet street tree requirements along Eight Mile Road and Beck Road. The Applicant is seeking Road Commission for Oakland County approval for additional large-caliper trees.
 - d. The minimum requirements for landscaping around the storm basin landscape are not met.
5. Engineering deviations: **A number of deviations from the Design Construction standards** are being proposed. Staff supports all the deviations.
 - a. The required stub street to the west is not provided.

- b. The distance between the emergency access and 8 Mile Road exceeds the maximum (this variance is granted by the City Council).

Public Benefit

As part of the PRO, the applicant is required to offer a public benefit that would demonstrate more than just the usual benefits associated with the standard rezoning and development of the property. The applicant has offered the following benefits as part of their application materials that shall be included in the PRO Agreement (if the City Council tentatively approves the Concept Plan):

1. Tax benefits for the City including significant property taxes and potential Brownfield benefits from Oakland County.
2. Significant brownfield environmental cleanup.
3. Installation of a "Welcome to Novi" landmark feature.
4. \$25,000 donation to the Parks, Recreation and Cultural Services Department to be applied toward the construction of the nearby ITC Community Sports Park Trail, which is likely to be used by future residents of the development.
5. "High-end" (i.e., enhanced beyond ordinance requirements) landscaping.

As a part of the on-going discussion, the applicant has also offered to contribute to the Eight Mile Road sidewalk construction the City's contractor is now undertaking. The developer has offered a **\$75,000 financial contribution** to complete the construction of Eight Mile Road sidewalk along the subject site's frontage. **Please note the City's contractor's bid of \$175,506 to construct this portion of the sidewalk is \$100,000 more than is being offered by the developer** (see attached bid tab, alternate 1). Staff notes that there are a number of soils issues that have contributed to the higher bid price for this length of sidewalk than we would normally expect.

PRO Conditions

The applicant is required to submit a conceptual plan and a list of terms that they are willing to include with the PRO agreement. The applicant has submitted a conceptual plan showing the general layout of the internal roads units, the location of the proposed detention ponds, and location of the proposed pathways and the preservation of a large area of natural features. The only "terms" or "conditions" within the submittal are the design elements illustrated on the conceptual plan and the public benefits outlined in the corresponding letter.

Public Hearing and Planning Commission Recommendation

The first public hearing for the rezoning request was held by the Planning Commission on September 30, 2015. At that meeting, the Planning Commission postponed the recommendation and requested additional information and suggested that the rezoning request to be changed to R-1 from R-3 to more accurately reflect the overall density that is being proposed. Minutes from the Planning Commission meeting are attached.

A second public hearing for the rezoning request was held by the Planning Commission on December 9, 2015. At the meeting, Planning Commission recommended approval of JSP 15-13 with Zoning Map Amendment 18.711 to rezone property in Section 32, located at the northwest corner of Beck Road and Eight Mile Road from RA (Residential Acreage) to R-1 (One-Family Residential) with a Planned Rezoning Overlay (PRO). Relevant draft minutes from the December 9th Planning Commission meeting are attached.

City Council Action

If the City Council is inclined to approve the rezoning request with PRO at this time, the City Council's motion would be to direct the City Attorney to prepare a PRO Agreement to be brought back before the City Council for approval with specified PRO Conditions. Please note, the suggestion action below includes the statement that the applicant shall conform to the City's requirements for woodland replacement trees as the project moves forward.

RECOMMENDED ACTION:

Tentative indication that Council may **approve** the request of Hunter Pasteur Homes for Dunhill Park, JSP15-13 with Zoning Map Amendment 18.711 to rezone the subject property from RA (Residential Acreage) to R-1 (One-Family Residential) with a Planned Rezoning Overlay (PRO) Concept Plan and direction to the City Attorney to prepare a proposed PRO Agreement with the following ordinance deviations:

- a. Deviation in the minimum Ordinance standards to allow reduction in the required minimum lot size and minimum lot width for one-family detached dwellings reviewed against R-1 Zoning standards to allow for smaller lots (21,780 square feet and 120 feet required, 13,860 square feet and 90 feet provided);
- b. Deviation in the minimum Ordinance standards to allow reduction in minimum side yard setback and aggregate side yard setback for one-family detached dwellings reviewed against R-1 Zoning standards (15 feet with 40 feet aggregate required, 10 feet with 30 feet minimum aggregate provided);
- c. Landscape deviation from Section 5.5.3.B.ii and iii for absence of required berm and required greenbelt landscaping along the entire frontage of Beck Road Right of Way due to existing natural features (coverage along entire frontage required; approximately 40 percent coverage proposed);
- d. Landscape deviation from Section 5.5.3.B. iii for absence of required street trees within the right-of-way along Beck Road;
- e. Landscape deviation from Section 5.5.3.B.ii and iii for not meeting the minimum requirements of canopy and sub canopy trees in greenbelt along both Public Rights-of-way;
- f. Landscape deviation from Section 5.5.3.E.i.c for not meeting the street tree requirements along Eight Mile Road if the Road Commission for Oakland County does not allow some or all of the required street trees along Eight Mile Road;
- g. Landscape deviation from Section 5.5.3.E.iv for not meeting the minimum requirements for Storm Basin Landscape (Shrubs required; Canopy trees proposed);
- h. Landscape deviation from Landscape Design Manual Section 1.d.(1)(d) for not meeting the required diversity of tree species for a single family residential subdivision;
- i. Applicant shall provide modelling data showing sufficient fire flows at the water main dead end or applicant shall provide a loop connection approved by the City Engineer during Preliminary Site Plan. An offsite easement may be required for the loop connection;
- j. City Council variance from Appendix C Section 4.04(A) (1) of Novi City Code for not providing a stub street to the subdivision boundary along subdivision perimeter; and
- k. City Council variance from Section 11-194(a)(7) of the Novi City Code for exceeding the maximum distance between Eight Mile Road and the proposed emergency access.

If the City Council approves the rezoning, the Planning Commission recommends the following conditions be requirements of the Planned Rezoning Overlay Agreement:

- a. Acceptance of applicant's offer of Public benefits as proposed:

- i. Tax benefits for the City including significant property taxes and potential Brownfield benefits from Oakland County.
 - ii. Significant brownfield environmental cleanup.
 - iii. Installation of a "Welcome to Novi" landmark feature.
 - iv. \$25,000 donation to the Parks, Recreation and Cultural Services Department to be applied toward the construction of the nearby ITC Community Sports Park Trail.
 - v. High-end landscaping (i.e., exceeding ordinance requirements, as determined at the time of site plan approval).
 - vi. The developer's financial contribution to complete the construction of the sidewalk along the Eight Mile Road frontage. **The applicant has offered \$75,000.**
- b. Applicant complying with the conditions listed in the staff and consultant review letters, including satisfying the concerns in Wetlands and Woodlands review letters.
- c. The applicant shall conform with the City's Code requirements for the required woodland replacement trees, with an appropriate number of replacement trees being planted on site, (as determined at the time of Preliminary Site Plan), or the applicant shall pay into the City's tree fund, per the recommendation of the Planning Commission at the Public Hearing.

This motion is made for the following reasons:

- a. The applicant has presented a reasonable alternative to the proposed Master Plan designation of a maximum of 0.8 units/acre to an actual 1.32 units/acre, and which supports several objectives of the Master Plan for Land Use as noted in this review letter.
- b. The proposed density of 1.32 units/acre provides a reasonable transitional use between the lower density developments to the north and west, and the existing higher density developments to the east, in the City of Northville, and Maybury State Park on the south side of Eight Mile Road.
- c. The site will be adequately served by public utilities.
- d. The proposed zoning and proposed use represents only a nominal increase in expected site generated traffic relative to development permitted under existing zoning.
- e. Submittal of a concept plan, and any resulting PRO Agreement, provides assurances to the Planning Commission and to the City Council of the manner in which the property will be developed.
- f. The proposed concept plan shows the intent of the applicant to remediate environmental contamination of the site as a part of the development plan, which will improve the land through the removal of potential environmental hazards.

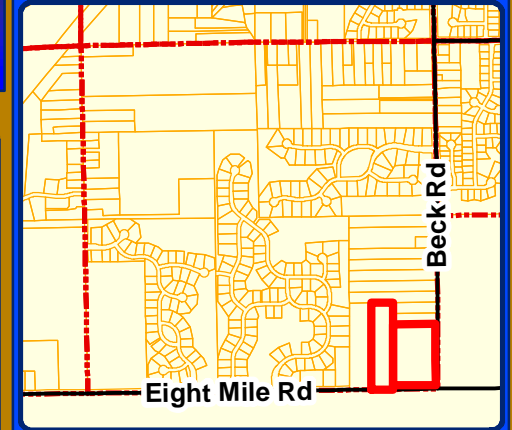
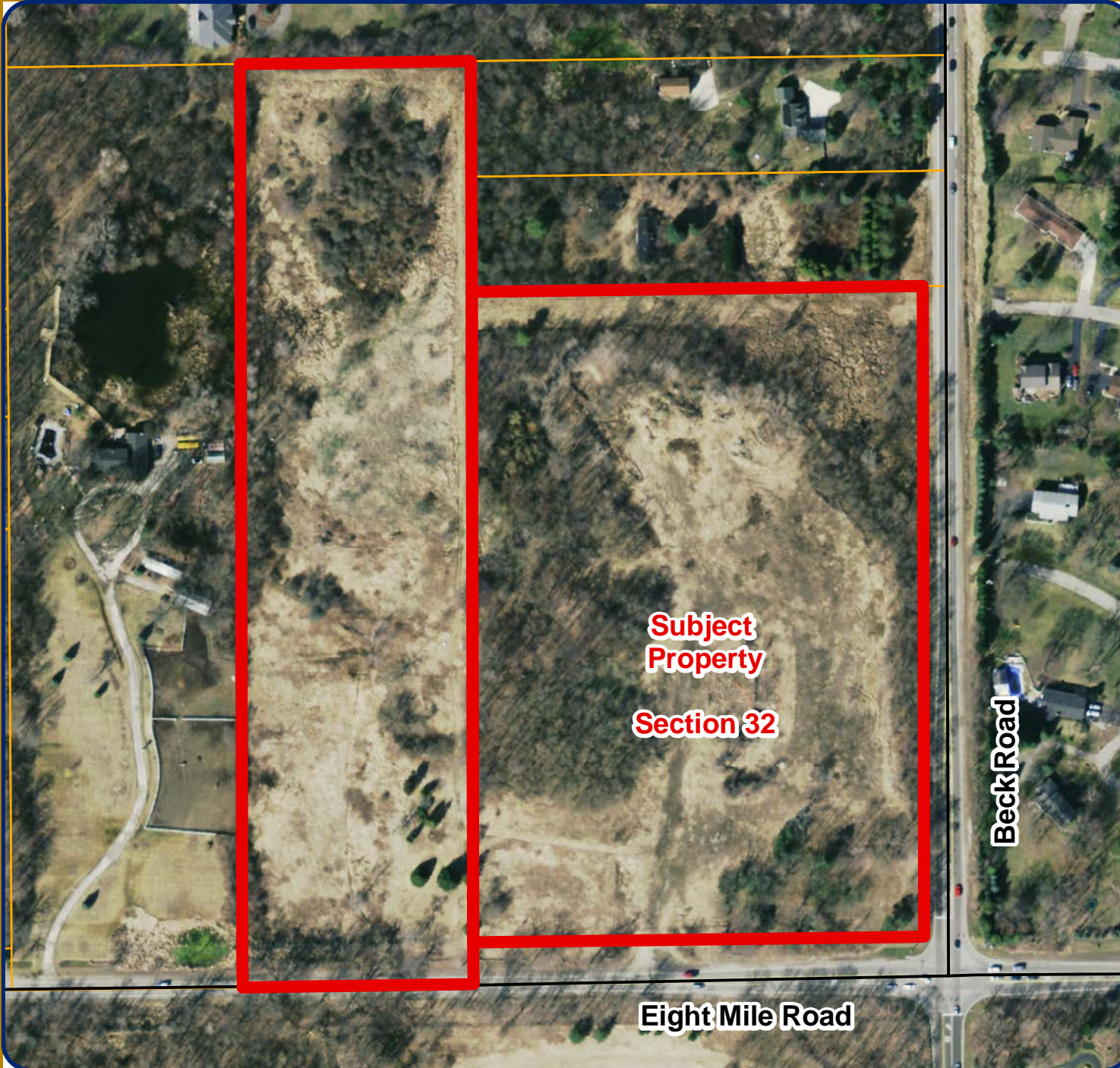
	1	2	Y	N
Mayor Gatt				
Mayor Pro Tem Staudt				
Council Member Burke				
Council Member Casey				

	1	2	Y	N
Council Member Markham				
Council Member Mutch				
Council Member Wrobel				

Maps
Location
Zoning
Future Land Use
Natural Features

JSP 15-13 Dunhill Park

Location



Legend

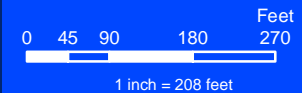
 Sections



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: 09/22/15
Project: JSP15-13 Dunhill Park
Version #: 1

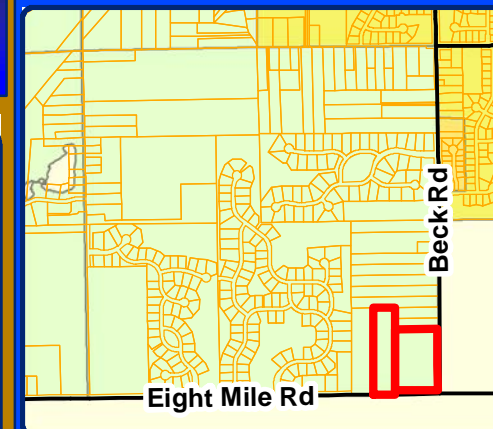
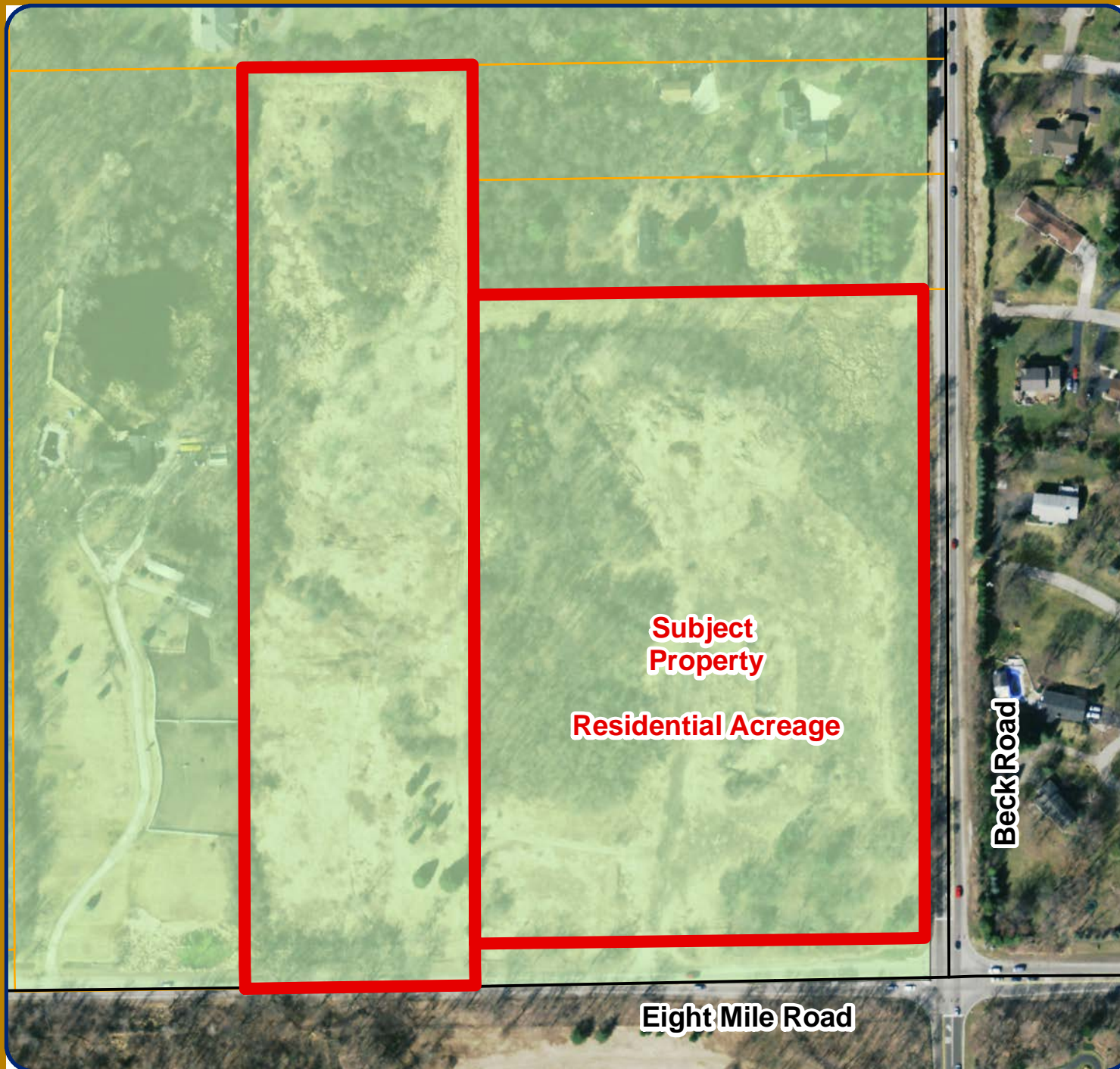


MAP INTERPRETATION NOTICE




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JSP 15-13 Dunhill Park

Zoning




Legend

-  R-A: Residential Acreage
-  R-1: One-Family Residential District
-  RM-1: Low-Density Multiple Family

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0 45 90 180 270 Feet
1 inch = 208 feet

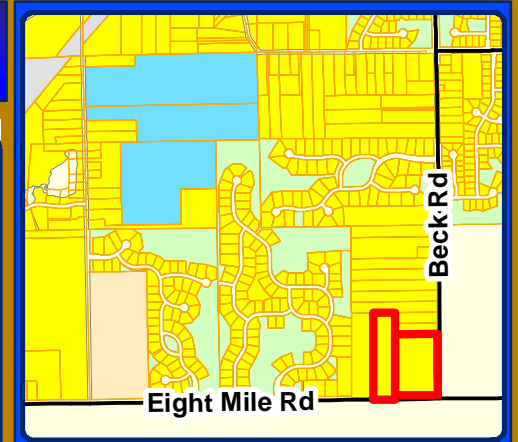
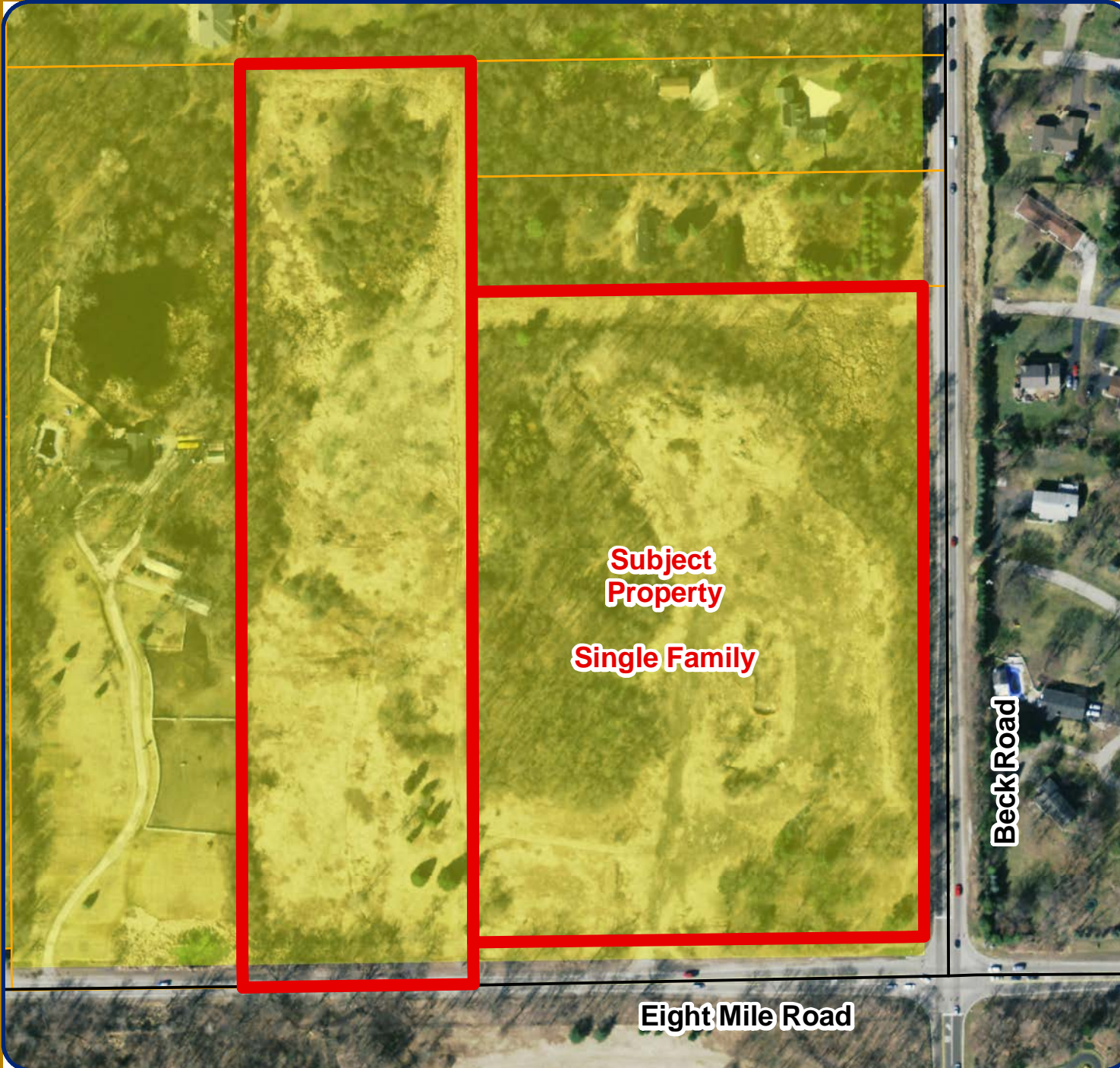


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JSP 15-13 Dunhill Park

Future Land Use



Legend


- SINGLE FAMILY
- EDUCATIONAL FACILITY
- PUBLIC
- PRIVATE PARK
- UTILITY



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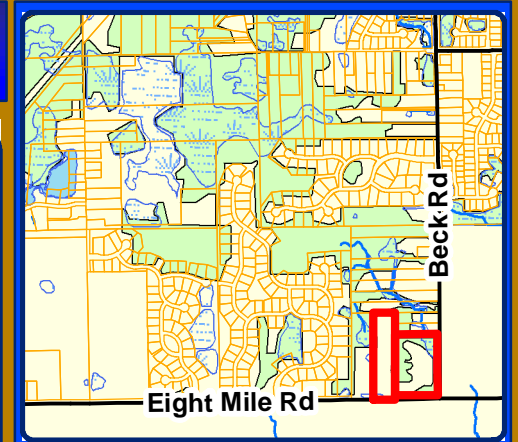
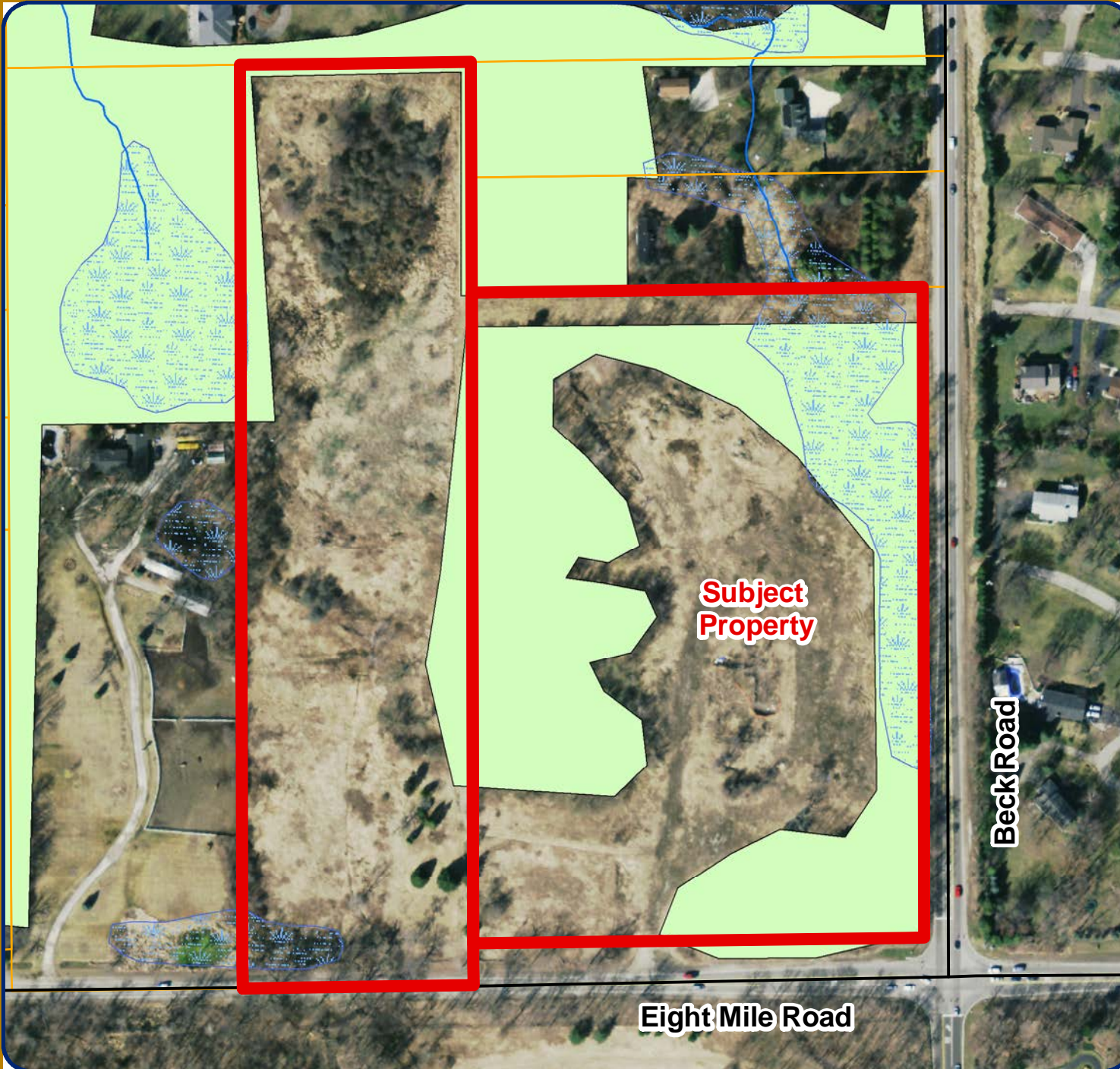


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JSP 15-13 Dunhill Park

Natural Features



Legend

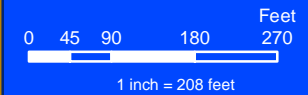
-  Wetlands
-  Woodlands



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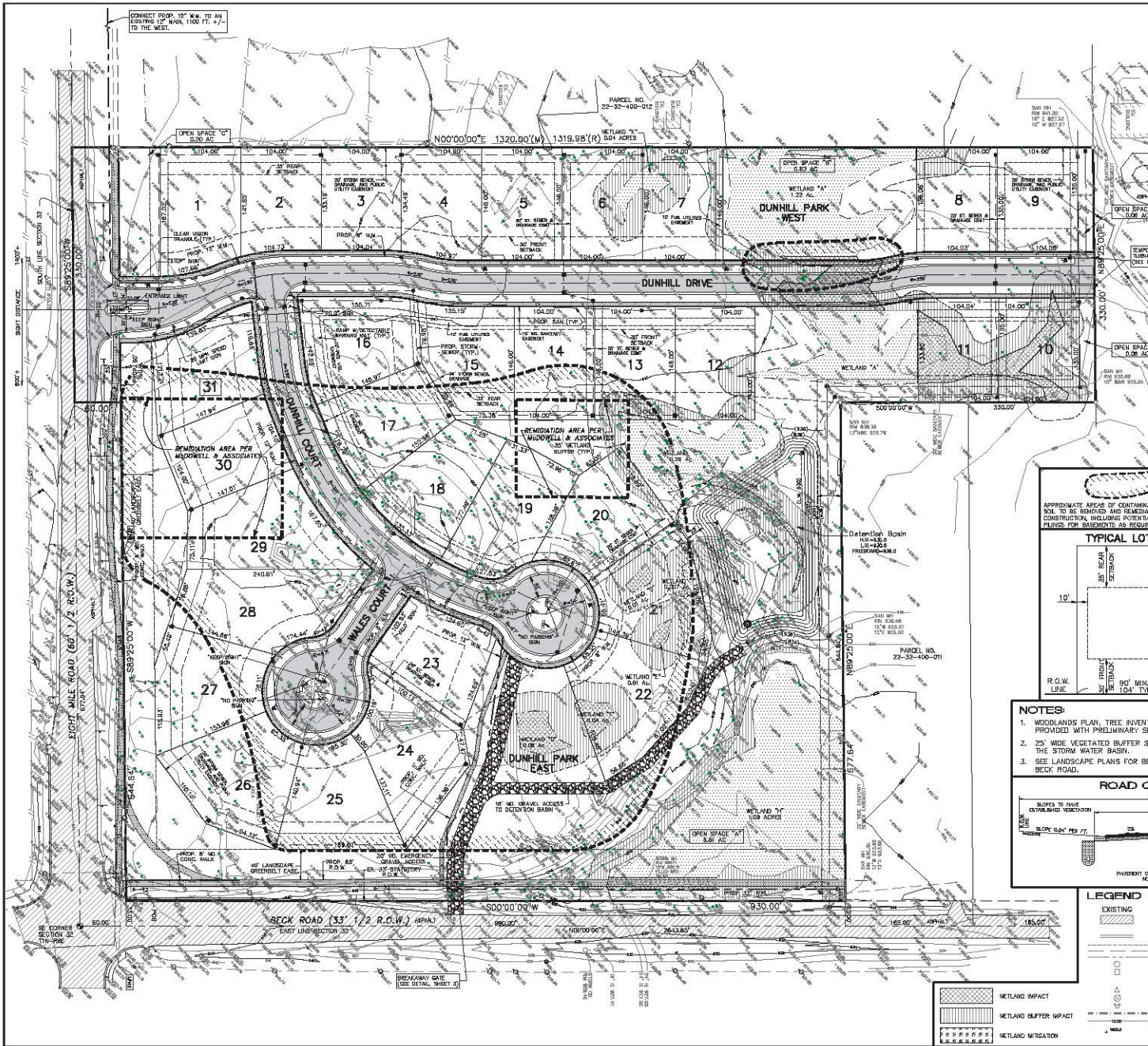


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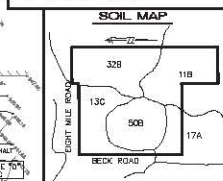
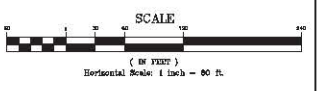
CONCEPT PLAN

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



SOIL CLASSIFICATION
 SOIL CLASSIFICATIONS WERE DETERMINED BY THE SOIL SURVEY OF OWENLAND COUNTY, MICHIGAN, PUBLISHED BY THE UNITED STATES DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE.

1B1 - CAPAC SANDY LOAM 8 TO 4% SLOPES
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WETLAND IMPACT

WETLAND	AREA (AC.)	IMPACT AREA (AC.)	25' BUFFER AREA (AC.)	25' BUFFER DISTURBANCE (AC.)
A	1.22	0.36	1.08	0.66
C	0.29	0.04	0.56	0.42
D	0.01	0.01	0.09	0.09
E	0.01	0.01	0.11	0.11
F	0.04	0.04	0.13	0.13
G	0.06	0.06	0.14	0.14
H	1.09	0.05	0.43	0.33
I	0.007	0.007	0.09	0.09
K	0.04	0.04	0.17	0.17
TOTAL:	2.767	0.617	2.90	2.14

TOTAL WETLAND FILL = 0.817 AC

UNIT TABLE

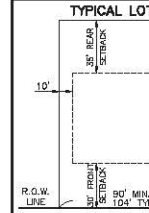
UNIT #	AREA (SF)	WIDTH (SF)
1	16,354	107.27
2	14,034	104.27
3	13,860	104.00
4	14,783	104.85
5	15,184	104.00
6	15,184	104.00
7	15,184	104.00
8	14,548	104.00
9	14,548	104.00
10	14,548	104.00
11	14,548	104.00
12	15,184	104.00
13	15,184	104.00
14	15,184	104.00
15	18,136	122.73
16	17,145	130.83
17	16,091	118.19
18	18,847	120.18
19	17,850	130.42
20	18,222	90.00
21	17,812	80.00
22	20,296	90.00
23	15,846	108.59
24	18,781	98.67
25	18,844	90.00
26	18,534	90.00
27	17,427	93.21
28	20,570	107.89
29	18,786	146.87
30	10,314	104.00
31	15,336	120.87

SITE DATA

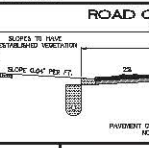
PROPOSED ONE-FAMILY RESIDENTIAL SITE CONDOMINIUM
 CURRENT ZONING: "R-A"
 AREA GROSS = 23.761 ACRES
 AREA NET = EXCLUDING STATUTORY R.O.W. ON EIGHT MILE ROAD (33') = 23.511 ACRES.

PROPOSED DESIGN CRITERIA

(CONSISTENT WITH "R-3 ZONING")
 MINIMUM LOT SIZE = 12,000 SQ. FT.
 MINIMUM LOT WIDTH = 80.00 FEET
 FRONT SETBACK = 30 FEET
 REAR SETBACK = 35 FEET
 SIDE YARD SETBACK = 10 FEET (MINIMUM)
 SIDE YARD SETBACK = 30 FEET (AGGREGATE)
 TOTAL OPEN SPACE = 6.81 AC.
 OPEN SPACE "A" = 0.81 AC.
 OPEN SPACE "B" = 0.83 AC.
 OPEN SPACE "C" = 0.20 AC.
 OPEN SPACE "D" = 0.08 AC.
 OPEN SPACE "E" = 0.08 AC.
 TOTAL OPEN SPACE = 7.78 ACRES
 = 33.02% OF NET SITE AREA



- NOTES:**
- WOODLANDS PLAN, TREE INVENTORY REMOVAL & REPLACEMENT PLAN WILL BE PROVIDED WITH PRELIMINARY SITE PLAN.
 - 25' WIDE VEGETATED BUFFER SHALL BE PROVIDED ALONG THE PERIMETER OF THE STORM WATER BASIN.
 - SEE LANDSCAPE PLAN FOR BERM DETAILS ALONG 8 MILE ROAD AND BECK ROAD.



PROPOSED IMPROVEMENTS

- MUNICIPAL WATER TO BE PROVIDED BY CONNECTING TO AN EXISTING 12" SANITARY SEWER LOCATED AT THE NORTHERLY PROPERTY LINE.
- MUNICIPAL WATER TO BE PROVIDED BY CONNECTING TO EXISTING 12" WATER MAIN LOCATED ON THE NORTH SIDE OF EIGHT MILE ROAD AND 1,100 FT. WEST OF THE WESTERLY PROPERTY LINE. ALL PROPOSED WATER MAIN SHALL BE 12" AND 8" DUCTILE IRON CL 54 AS SHOWN.
- STORM WATER DETENTION SHALL BE PROVIDED ON SITE.
- 5' WIDE CONCRETE SIDEWALKS SHALL BE CONSTRUCTED ON BOTH SIDES OF ALL INTERIOR ROADWAYS. AN 8'-FOOT WIDE CONCRETE WALK SHALL BE CONSTRUCTED ALONG EIGHT MILE ROAD AND BECK ROAD. ALL SIDEWALK STUBS SHALL BE PROVIDED WITH PAVERS & DETECTABLE WARNING SURFACES.
- ALL ROADWAYS TO BE PUBLIC.
- A CITY OF NOW RIGHT-OF-WAY PERMIT IS REQUIRED FOR WORK WITHIN ANY PUBLIC ROAD RIGHT-OF-WAY.

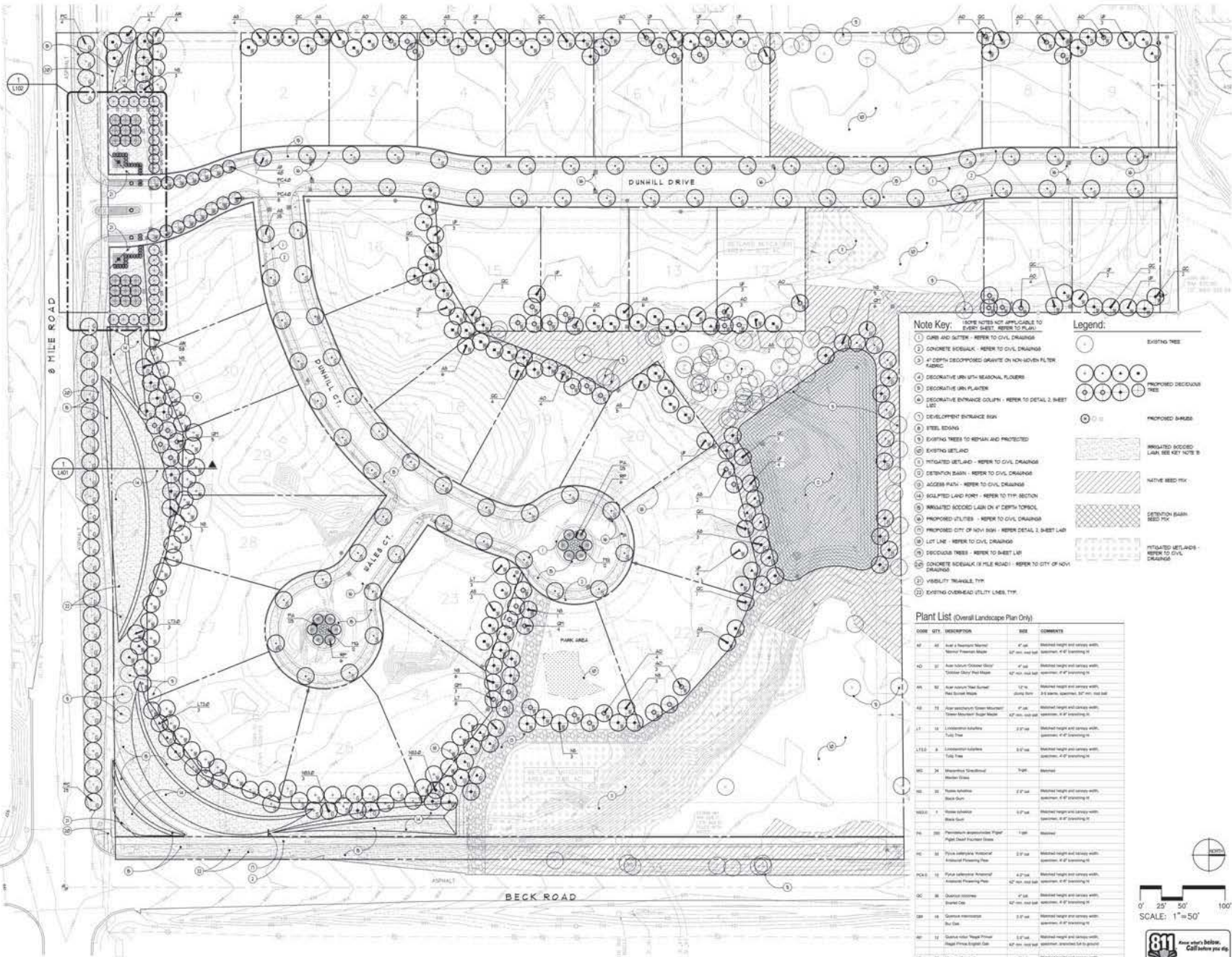
DUNHILL PARK
 SECTION 28, TOWN 1 NORTH, RANGE 8 EAST
 CITY OF NOVI, OAKLAND COUNTY, MICHIGAN

REVISIONS

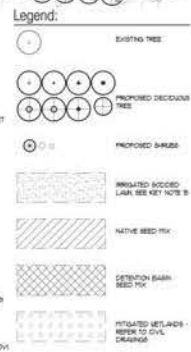
NO.	DATE	DESCRIPTION
1	11-11-18	REVISED PER PERMITS
2	11-11-18	REVISED PER PERMITS
3	11-11-18	REVISED PER PERMITS
4	11-11-18	REVISED PER PERMITS
5	11-11-18	REVISED PER PERMITS
6	11-11-18	REVISED PER PERMITS
7	11-11-18	REVISED PER PERMITS
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26	11-11-18	REVISED PER PERMITS
27	11-11-18	REVISED PER PERMITS
28	11-11-18	REVISED PER PERMITS
29	11-11-18	REVISED PER PERMITS
30	11-11-18	REVISED PER PERMITS
31	11-11-18	REVISED PER PERMITS

PLANNED REZONING OVERLAY (PRO) PLAN

SEIBER, KRASZ ENGINEERING, L.L.C.
 CONSULTING ENGINEERS
 100 MANICENTRE # SUITE 104 NORTHVILLE, MICHIGAN 48167
 PHONE: 248.306.3331 FAX: 248.306.3335



- Note Key:**
- (1) SORE NOTES NOT APPLICABLE TO SUBMIT SHEET. REFER TO PLAN.
 - (2) SORE NOTES NOT APPLICABLE TO SUBMIT SHEET. REFER TO PLAN.
 - (3) CONCRETE SIDEWALK - REFER TO CIVIL DRAWINGS
 - (4) DEPTH DECOMPOSED GRAVITY ON NON-NOVEN FILTER FABRIC
 - (5) DECORATIVE URN WITH SEASONAL FLOWERS
 - (6) DECORATIVE URN PLANTER
 - (7) DECORATIVE ENTRANCE COLUMN - REFER TO DETAIL 2, SHEET 107
 - (8) DEVELOPMENT ENTRANCE SIGN
 - (9) STEEL EDGING
 - (10) EXISTING TREES TO REMAIN AND PROTECTED
 - (11) EXISTING SETBACK
 - (12) MITIGATED SETBACK - REFER TO CIVIL DRAWINGS
 - (13) DETENTION BASIN - REFER TO CIVIL DRAWINGS
 - (14) ACCESS PATH - REFER TO CIVIL DRAWINGS
 - (15) SOLIDIFIED LAND FORT - REFER TO TYP. SECTION
 - (16) MITIGATED ACCOSED LAWN ON 4' DEPTH TOPSOIL
 - (17) PROPOSED UTILITIES - REFER TO CIVIL DRAWINGS
 - (18) PROPOSED CITY OF NOVI SIGN - REFER DETAIL 2, SHEET 107
 - (19) LOT LINE - REFER TO CIVIL DRAWING
 - (20) EXISTING TREES - REFER TO SHEET 107
 - (21) CONCRETE SIDEWALK (8' PILE ROAD) - REFER TO CITY OF NOVI DRAWING
 - (22) VISIBILITY TRIANGLE, TYP.
 - (23) EXISTING OVERHEAD UTILITY LINES, TYP.



Plant List (Overall Landscape Plan Only)

CODE	QTY	DESCRIPTION	SIZE	COMMENTS
PL 01	40	Red & Pinkish Blended	4" cal	Matched height and canopy width.
PL 02	40	Red & Pinkish Blended	4" cal	Matched height and canopy width.
PL 03	40	Red & Pinkish Blended	4" cal	Matched height and canopy width.
PL 04	40	Red & Pinkish Blended	4" cal	Matched height and canopy width.
PL 05	40	Red & Pinkish Blended	4" cal	Matched height and canopy width.
PL 06	40	Red & Pinkish Blended	4" cal	Matched height and canopy width.
PL 07	40	Red & Pinkish Blended	4" cal	Matched height and canopy width.
PL 08	40	Red & Pinkish Blended	4" cal	Matched height and canopy width.
PL 09	40	Red & Pinkish Blended	4" cal	Matched height and canopy width.
PL 10	40	Red & Pinkish Blended	4" cal	Matched height and canopy width.
PL 11	40	Red & Pinkish Blended	4" cal	Matched height and canopy width.
PL 12	40	Red & Pinkish Blended	4" cal	Matched height and canopy width.
PL 13	40	Red & Pinkish Blended	4" cal	Matched height and canopy width.
PL 14	40	Red & Pinkish Blended	4" cal	Matched height and canopy width.
PL 15	40	Red & Pinkish Blended	4" cal	Matched height and canopy width.
PL 16	40	Red & Pinkish Blended	4" cal	Matched height and canopy width.
PL 17	40	Red & Pinkish Blended	4" cal	Matched height and canopy width.
PL 18	40	Red & Pinkish Blended	4" cal	Matched height and canopy width.
PL 19	40	Red & Pinkish Blended	4" cal	Matched height and canopy width.
PL 20	40	Red & Pinkish Blended	4" cal	Matched height and canopy width.



Location Map
Scale: 1"=1/2"



Existing Soils Map
Scale: 1"=50'

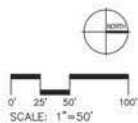
GRISSIM METZ ASSOCIATES ANDRIESE

300 East Cody Street
Northville, MI 48167
Ph: 248-347-7010

Project: Dunhill Park
Site: Northville, Michigan

Sheet: Overall Landscape Plan

Job Number: 735-151
Drawn: ATP
Checked: ATP/SMB
Title: 1"=50' 0"



Date: 07.29.2015 / 10.23.2015
 Issued For: Planned Rezoning Overlay (PRO) / PRO Submittal

Sheet Number: L101

**Planning Commission Meeting Minutes
Excerpt – September 30, 2015**

- b. Construction of an off-site pathway for public use to the Novi Dog Park commencing from the site's southeast corner along the rear property line of Novi Sport's Club and a connection to the existing according to approved Planned Rezoning Overlay Agreement as per the following conditions:
 - i. Pathway easements in a form acceptable to the City shall be provided to the City for dedication for public use of the pathways prior to the start of construction.
- c. All public pathway improvements to be completed prior to occupancy.
- d. Pedestrian Lighting will be located outside of Public Rights-of-Way, at locations to be reviewed and approved by the City Engineer.
- e. The findings of compliance with Ordinance standards in the staff and consultant review letters, and the conditions and items listed in those letters being addressed on the Final Site Plan.

This motion is made because the plan is otherwise in compliance with Article 3, Article 4 and Article 5 of the Zoning Ordinance and all other applicable provisions of the Ordinance. *Motion carried 6-0*

Moved by Member Greco and seconded by Member Baratta

ROLL CALL VOTE ON THE WETLAND PERMIT APPROVAL MADE BY MEMBER GRECO AND SECONDED BY MEMBER LYNCH:

In the matter of Novi Ten Townhomes, JSP 14-18, motion to approve the Wetland Permit based on and subject to the findings of compliance with Ordinance standards in the staff and consultant review letters, and the conditions and items listed in those letters being addressed on the Final Site Plan. This motion is made because the plan is otherwise in compliance with Chapter 12, Article V of the Code of Ordinances and all other applicable provisions of the Ordinance. *Motion carried 6-0*

Moved by Member Greco and seconded by Member Baratta

ROLL CALL VOTE ON THE WOODLAND PERMIT APPROVAL MADE BY MEMBER GRECO AND SECONDED BY MEMBER LYNCH:

In the matter of Novi Ten Townhomes, JSP 14-18, motion to approve the Woodland Permit based on and subject to the findings of compliance with Ordinance standards in the staff and consultant review letters, and the conditions and items listed in those letters to be addressed on the Final Site Plan. This motion is made because the plan is otherwise in compliance with Chapter 37 of the Code of Ordinances and all other applicable provisions of the Ordinance. *Motion carried 6-0*

Moved by Member Greco and seconded by Member Baratta

ROLL CALL VOTE ON THE STORMWATER MANAGEMENT PLAN APPROVAL MADE BY MEMBER GRECO AND SECONDED BY MEMBER LYNCH:

In the matter of Novi Ten Townhomes, JSP 14-18, motion to approve the Stormwater Management Plan, based on and subject to the findings of compliance with Ordinance standards in the staff and consultant review letters, and the conditions and items listed in those letters being addressed on the Final Site Plan. This motion is made because it otherwise in compliance with Chapter 11 of the Code of Ordinances and all other applicable provisions of the Ordinance. *Motion carried 6-0*

3. DUNHILL PARK JSP 15-13

Public hearing at the request of Hunter Pasteur Homes Dunhill Park LLC for Planning Commission's recommendation to the City Council for rezoning of property in Section 32, located at the northwest corner of Beck Road and Eight Mile Road from RA (Residential Acreage) TO R-3 (One-Family Residential)) with a Planned Rezoning Overlay (PRO). The subject property is approximately 23.76-acres and the applicant is proposing to construct a 32 unit single family residential development in a cluster arrangement with frontage on and access to Eight Mile Road.

Planner Komaragiri stated that the subject property is located Section 32, located at the northwest corner

of Beck Road and Eight Mile Road. The subject property is currently zoned Residential Acreage with the same on the north and to the west. It is abutted by residential in City of Northville on the east and single family residential in Northville township to the south.

The Future Land Use map indicates Single Family on all sides. The applicant is currently requesting Rezoning from RA Residential Acreage to R-3 One-Family Residential with a Planned Rezoning Overlay (PRO). The subject property has about 2.7 acres of regulated wetlands spread around 9 areas within the site. ECT was unable to confirm that the existing wetland boundaries are all accurately depicted on the Plan. There are regulated woodlands on site which includes 10 specimen trees. The City's planning consultant Rod Arroyo from Clearzoning reviewed the site plan for conformance with the Planning Ordinance. He is here tonight to present his findings. Planner Komaragiri said she will continue with the rest of the reviews after his presentation.

Mr. Arroyo summarized Clearzoning's review letter from August 19, 2015. This proposal is to develop 32 lots in a cluster arrangement by allowing development on smaller parcels than would otherwise be allowed within the zoning district. There is also a change in the zoning proposed. The current zoning is RA. The applicant is asking to change the zoning to R-3 along with approval of the overlay. The overlay concept works by first reviewing the concept plan review and the rezoning. The Planning Commission makes a recommendation to City Council for the final action.

This property is currently vacant. It is our understanding that there has been some environmental contamination on the site due to the trucking operation that was there. There were underground tanks as well as the ongoing maintenance of trucks in the area. There is some clean up that is necessary and the applicant has indicated that is one of the benefits of this project. Certainly this is an item that should be discussed in terms of what is involved: could you develop this site under the existing zoning and still do the clean up or is the change necessary in order to justify the development due to the cost of the cleanup. That is a question that might be worth getting some additional information on.

Under RA zoning you could potentially have the 18 single family homes with the density of .8 dwelling units per acre. This request is to allow 32 units. In terms of what could be permitted under R-3 you could go as high as 2.7 dwelling units per acre. We suggested that because the plan is within the allowed R-1 density, one possibility is the Planning Commissioners and Council would approve with an R-1 zoning rather than an R-3 zoning with modification of lot size, lot width and lot area. This would be as part of the overlay plan. In terms of Master Plan density what is being proposed is consistent with 1.65 dwelling units per acre which is equivalent to the R-1 density. The actual density of this project is just under 1.4 dwelling units per acre. Everything west of Beck Road and south of Nine Mile is at the 0.8 dwelling units per acre in terms of the planned density of the Master Plan for Land Use.

Since this is an Overlay it is specified that the use would be single family development at the maximum density of this plan. There are some issues with the proposed Infrastructure, particularly the need for a stub street to the west. There are single family homes located to the west. There is the potential that there could be some aggregating of lots and potential redevelopment to the west in the future. A stub street to the west could provide that option. This is something that should be discussed with the applicant to provide for a second point of access to those possible future properties. In terms of natural features, the Woodlands and Wetland Consultants have raised some issues particularly with the amount of the removal of trees and the impact on wetlands.

In terms of the major conditions of the planned rezoning overlay the applicant has specified that they will limit the maximum number of units to 32, replace street trees, and do wetland mitigation, as well as landscaping along Eight Mile and Beck Roads. Additional conditions are, the minimum width is limited to 90 feet, with a minimum square footage 13,860 (which does fall within R-3 lot size), do significant brownfield clean up with funds potentially coming back to the city, installation of Welcome to Novi landmark, and contribute to the ITC Community Sports Park.

There are some specific ordinance deviations regarding stub streets that would have to be granted in the plan as proposed. There is also specific applicant burden under the PRO Ordinance to demonstrate certain requirements and standards are met. We have identified some of the requirements. The Ordinance requirement states that the results should be an enhancement of the project area as

compared to existing zoning and such enhancement would be unlikely to be achieved or would not be assured in the absence in the use of the planned rezoning overlay. That is clearly a significant item that needs to be reviewed in terms of evaluating the merits of this proposal. The public benefits include tax benefit, brownfield redevelopment the Welcome to Novi sign, working with the ITC Sports Park, high-end quality home construction, and high-end landscaping.

In terms of options the Planning Commission has a number of options: recommending approval, recommending denial and what we are suggesting is postponing action, after having a discussion to allow the applicant to hear points of the discussion.

Planner Komaragiri continued her presentation to the Commission. Engineering is not currently recommending approval of the concept plan for various items noted in the review letter. The proposed water main dead-end exceeds 800 feet. Engineering is asking to provide additional modeling data for sufficient fire flows or provide a looped system. In his response letter, the applicant agreed to provide that information or provide a loop as needed. The site plan also did not provide adequate detail for storm water detention calculations. The site plan would require a City Council variance for absence of stub street. The applicant is asked to work with Engineering to provide the necessary detail.

Landscape is recommending approval of the concept plan noting a few deviations and requesting additional information to conform to the ordinance. Waivers are required for not meeting the minimum required street trees. Landscape staff is willing to support the waiver depending on the Oakland County Road Commission's approval to allow the street trees in their Right-of-way. Other waivers are required for not meeting the minimum requirements for Cu-de-sac planting and greenspace along the roads. Landscape believes that there is enough opportunity to meet the requirement. The exhibits display the landscaping that was provided along the Eight Mile Road right of way where they are proposing some berms, but the landscaping is not adequate.

The Plan includes some level of proposed impact to all of the on-site wetlands and the associated 25-foot wetland setbacks located on this property. Most of these impacts are for the purpose of lot development. The current Plan includes a total of 0.617-acre of proposed wetland impact and 2.01 acres of proposed wetland buffer impacts. The project as proposed will require a City of Novi Wetland Non-Minor Use Permit as well as an Authorization to encroach the 25-Foot Natural Features Setback. The Wetlands consultant does not currently recommend approval and asks the applicant to reconsider the design to minimize impacts.

Of the 10 specimen trees, two will be saved and eight are proposed for removal. The site plan is also proposing removal of 90 percent of the regulated woodlands. A total of 476 woodland trees are required. The Plan does not provide adequate information regarding the woodland tree calculations or the replacement trees. The Woodlands consultant does not currently recommend approval and asks for additional information.

Façade is not recommending approval as the proposed homes do not meet the PRO's requirement of achieving a "higher standard that would not otherwise be achieved under the current Ordinance Requirements" and that significant issues may exist with respect to compliance with the Similar / Dissimilar Ordinance Section 303. The applicant agreed to revise the elevations to meet the ordinance requirements.

Traffic and Fire are recommending approval with additional comments to be addressed with the revised submittal.

In his response letter, the applicant has mentioned the intent to provide information with the Preliminary Site Plan. Staff would like to see some of it to be provided with the revised submittal so that we can identify any deviations to be included in the Planned Rezoning Overlay agreement. The applicant Randy Wertheimer is here with his Engineer and would like to make a presentation and answer questions.

Randy Wertheimer with Hunter Pasteur Homes states that their goal is to take Eight Mile and Beck Roads, a gateway to Novi that is currently a vacant, contaminated piece of land, and turn it into a beautiful community. We are looking to build homes that are consistent with the homes in the area. We are going

to build homes that are going to be \$700,000 to \$1,000,000. The houses will be 3,500 to 6,000 square feet. We are looking to build a beautiful residential area.

Andy Milia introduced himself along with Pat Keast, Project Engineer, and Scott Black with Grissim Metz. Mr. Milia stated that one of the significant features of the site and of the PRO requirement is the brownfield clean up. The site is currently contaminated it was the site of a former trucking company. They dumped fill on the property. A portion of the property was an apple orchard which contained arsenic. What we would be doing is to totally clean up the property, removing all the contaminated materials from the property. We would be doing this through the Brownfield Development Authority. Our legal counsel has been talking to your City Manager and the County Brownfield representative. They are looking at a proposal where the city would get back some of the brownfield credits. In addition when the brownfield is paid back this will go on the tax rolls at approximately \$10,000 per house. Also it is understood that a proposed sidewalk along Eight Mile Road will be installed, although we realize that the Council might want to put that sidewalk in before anything being developed. We are favorable to working with the City to making the land available and contributing toward some of the cost.

One of the items mentioned was a potential stub street to the west of the property. To the west there is a shorter parcel and with our development there is a break in the number of lots because there is a wetland area. The wetland goes on to the neighboring property. There is not a need for a stub street there. We have allowed for a stub street north of the property.

We are requesting that this be rezoned with a PRO to the R-3 district. That is consistent with other changes in the community. The reason is because the setbacks and the lot sizes would be consistent with the R-3 zoning. It would not be consistent with the R-1 zoning. We are committed to a density of 32 units.

Chair Pehrson opened the Public Hearing.

Jeffery Lindsey and Christina Zayti, 48000 Eight Mile. The concern is the wetland impact and how it could affect their home. There are four natural wetlands on their property. The water basin has changed with the Maybury Park development. The southwest corner of our driveway used to be a natural wetland. It is now just a dried up parcel. There are a lot of wild animals on the property. Mr. Lindsey questioned if there is some way to change the configuration in the back area where there is such a natural nature preserve and has been for decades.

No one else in the audience wished to speak. Member Lynch read the correspondence:

John Dodge 47209 Dunsany Ct, Northville, MI states that this is the best proposal to date. The added traffic would be the only concern. He does not want to see Beck Road or Eight Mile expanded any more.

Robert Frush, 47325 Dunsany Ct, Northville, MI states that R-3 zoning doesn't fit the community; R-3 zoning will negatively affect RA home values. The amendment proposal benefits the developer and not existing home owners.

Chair Pehrson closed the Public Hearing and turned the matter over to the Planning Commission.

Member Lynch stated that he does like the development. He is concerned about all of the staff and consultants negative recommendations and he cannot recommend approval this at this time. He recommends tweaking the items regarding not approved with the city.

Member Baratta questioned the density of the proposal. He also questioned the traffic on Beck and Eight Mile. This would have a significant impact on the project.

Andy Milia responded that they have worked very closely with the Archdiocese of Detroit, the current land owner to make this work and with 18 lots the numbers just don't work. They didn't go for a product type that doesn't fit in the area. As the consultant mentioned we could get up to 60 lots but that is not what they are looking for here. With 32 lots the numbers work. They will have to make a significant investment on the land, and there is the environmental cleanup expense.

Member Baratta questioned what the minimum lot size could be.

Andy Milia responded that minimum is 105 feet except in the cul-de-sac.

Member Baratta asked if you can get an access off of Beck Road.

Pat Keast, Project Engineer responded that it would be very difficult because the majority of the frontage on Beck Road is wetlands.

Member Baratta stated that if they can straighten out the issues with the staff then he would be supportive of the project at that density.

Member Giacometti asked Mr. Arroyo about the density being consistent with R-1. Under the PRO could we zone it R-1 and approve this design.

Mr. Arroyo responded that the Master Plan refers to a density that is similar to the R-1 zoning. What it is asking for is a density that is equal to 1.65 which is the second highest from RA. I think that if someone ten years from now takes a look at your zoning map and even though it is a PRO and looks at that map and sees R-3 next to RA there will be long story that will have to be told as to why this happened. Since the density is consistent with R-1 zoning if you find that this density is acceptable I like the concept of having an R-1 zoning with a PRO and then grant the waivers and deviations necessary for smaller lots.

Member Greco stated that with this being the southwestern part of the city he is uncomfortable with the density. When this has occurred in other sections of the city the deviations have not been as great.

Chair Pehrson stated that he is in agreement with the other members that have spoken. He is not comfortable with this large of jump in the zoning. He asked what is the quality of the existing trees on this site.

Matt Carmer, with ETC stated that they have not done a thorough review because they are at a concept level. However, a site inspection was done to look at the general quality of wetlands and woodlands. The data on the plans looks old. Overall this is not a pristine area. As you get closer to the wetland edges there are higher quality areas. If more of the wetland with buffers were protected, then more of the higher quality trees would be protected. A good portion of this site that has been disturbed, and is well suited for development.

Member Zuchlewski asked Andy Milia if he has enough information that he needs to move forward to make this work.

Andy Milia stated that he understands the issues. He said they will address the issues and will look forward to coming back.

Motion to postpone a recommendation on JSP15-13 Concept Plan made by Member Greco, and seconded by Member Baratta.

ROLL CALL VOTE ON TO POSTPONE MAKING A RECOMMENDATION ON JSP15-13 CONCEPT PLAN MADE BY MEMBER GRECO AND SECONDED BY MEMBER BARATTA:

In the matter of the request of Hunter Pasteur Homes Dunhill Park LLC for Dunhill Park JSP15-13 with Zoning Map Amendment 18.711 motion to postpone making a recommendation on the proposed PRO and Concept Plan to allow the applicant time to consider further modifications to the Concept Plan that would preserve natural features, or provide additional usable open space on site, and to further substantiate the public benefits that are being offered. This recommendation is made for the following reasons:

- **Unlike other recent development plans submitted for review, the Concept Plan provides no parkland on the site, with the open space provided primarily devoted to an on-site detention ponds and wetland mitigation areas.**
- **Additional information is needed regarding the proposed environmental cleanup of the site,**

including a discussion of implications on future development, in order to supplement the information provided as a part of the response letter from the applicant and to support the assertion that the cleanup would be considered a significant public benefit.

- Contrary to the applicant's assertion, the proposed landscaping provided at the intersection and along Eight Mile Road and Beck Road frontages is not considered an enhancement over the ordinance standards.
- Further information is needed regarding the proposed contributions to the ITC Sports Park, which have been identified by the applicant as a PRO Condition supporting approval of the request.
- Further clarity is needed regarding whether the applicant will install the Eight foot wide concrete sidewalks along Eight Mile and Beck Roads, or whether the sidewalks will be installed by the City as a part of a public project.
- There are a number of outstanding issues noted in the woodland and wetland review letters, including reflagging and verification of the wetlands, review of alternate layouts to minimize impacts to the natural features, and clarification of calculations provided.
- There are a number of outstanding issues noted in the Engineering Review letter that need to be addressed on subsequent submittals.
- For the applicant to consider changing the requested rezoning from R-3 to R-1 as discussed at this public hearing.

Motion passes 6-0

MATTERS FOR CONSIDERATION

1. APPROVAL OF THE AUGUST 26, 2015 PLANNING COMMISSION MINUTES

Motion to approve by Member Baratta seconded by Member Greco

ROLL CALL VOTE TO APPROVE THE AUGUST 26, 2015 PLANNING COMMISSION MINUTES MADE BY MEMBER BARATTA AND SECONDED BY MEMBER LYNCH

Motion to approve the August 26, 2015 Planning Commission Minutes. *Motion passes 6-0*

MATTERS FOR DISCUSSION

There were no matters for discussion.

SUPPLEMENTAL ISSUES

There were no Supplemental Issues.

AUDIENCE PARTICIPATION

No one in the audience wished to speak.

ADJOURNMENT

Motion to adjourn by Member Lynch and seconded by Member Baratta:

Motion to adjourn the September 30, 2015 Planning Commission meeting. *Motion carried 6-0.*

The meeting was adjourned at 8:34 PM.

Transcribed by Richelle Leskun

Date Approved:

Richelle Leskun, Planning Assistant
Signature on File

**Planning Commission Draft Meeting Minutes
Excerpt – December 09, 2015**



PLANNING COMMISSION MINUTES

Regular Meeting

DECEMBER 9, 2015 7:00 PM

Council Chambers | Novi Civic Center | 45175 W. Ten
Mile (248) 347-0475

CALL TO ORDER

The meeting was called to order at 7:00 PM.

ROLL CALL

Present: Member Anthony, Member Baratta, Member Giacometti, Member Lynch,
Member Zuchlewski

Absent: Member Greco (excused), Chair Pehrson (excused)

Also Present: Barbara McBeth, Community Development Deputy Director; Sri Komaragiri, Planner;
Chris Gruba, Planner; Rick Meader, Landscape Architect; Brian Coburn, Engineer; Gary
Dovre, City Attorney; Maureen Peters, Traffic Consultant; Pete Hill, Environmental
Consultant; Matt Carmer, Environmental Consultant; Rod Arroyo, Planning Consultant.

APPROVAL OF AGENDA

Motion to approve the December 9, 2015 Planning Commission Agenda. *Motion carried. 5-0*

PUBLIC HEARINGS

3. DUNHILL PARK, JSP 15-13

Public hearing at the request of Hunter Pasteur Homes Dunhill Park LLC for Planning Commission's recommendation to the City Council for rezoning of property in Section 32, located at the northwest corner of Beck Road and Eight Mile Road from RA (Residential Acreage) to R-1 (One-Family Residential)) with a Planned Rezoning Overlay (PRO). The subject property is approximately 23.76-acres and the applicant is proposing to construct a 31 unit single family residential development in a cluster arrangement with frontage on and access to Eight Mile Road.

Planner Sri Komaragiri stated that, the subject property is located Section 32, located at the northwest corner of Beck Road and Eight Mile Road. The subject property is currently zoned Residential Acreage with the same zoning on the north and west. It is abutted by residential in City of Northville on east and single family residential in Northville Township on the south. The Future Land Use Map indicates Single Family on all sides. The applicant is currently requesting Rezoning from RA Residential Acreage to R-1 One-Family Residential with a Planned Rezoning Overlay (PRO).

The subject property has about 2.7 acres of regulated wetlands spread around 9 areas within the site. ECT was unable to confirm that the existing wetland boundaries are all accurately depicted on the plan. There are regulated woodlands on site which includes 10 specimen trees. Our planning consultant Rod Arroyo from Clearzoning has reviewed the site plan for conformance with the Planning Code. He is here tonight to present his findings. I will continue with the rest of the reviews after his presentation.

Mr. Arroyo stated that he will be going over the November 10, 2015 review letter. The applicant has revised the previous plan that was submitted. One lot has been removed from the previous plan. What is presented now is PRO with an R-1 Zoning. The density that is being requested actually falls within the R-1 zoning classification. In addition to that is the landscaping at the entrance to the development along Eight Mile Road has been substantially increased from what was previously submitted. The applicant has also confirmed that they will be contributing both land and funding to the construction of a pathway along Eight Mile Road.

Mr. Arroyo said that there is a list of public benefits that the applicant is proposing as part of this application. The actual project development is the site of a former trucking operation. There is some contamination on this property that is going to require some remediation. That happens to be one of the public benefits that is being offered by the applicant. As with any PRO this is an optional approval that requires a public hearing and then a final action as a rezoning and a PRO plan approval by the City Council. The Planning Commission is charged with holding the public hearing and then making a recommendation to the City Council on this application.

Under the existing RA zoning the project could be developed with up to 18 single family homes. Under the proposed zoning, if there was no specific plan tied to it, there could be up to 38 single family homes. The applicant is requesting somewhere in the neighborhood of 80% of what could be allowed under R-1 zoning. The Master Plan designates pretty much all the property west of Beck Road and south of Nine Mile as 0.8 dwelling units per acre, single family. This single family designation extends up north of Ten Mile. There other densities that surrounds the property. The density is higher within the City of Northville, located to the east, directly across Beck Road and Maybury Park to the south across Eight Mile Road. To the north and west is similar RA zoning.

This project would support the goals and objectives of the Master Plan, including providing for open space. Thirty three percent of this site is being preserved as open space. This is one of the advantages of this type of plan with the flexibility in lot size you get an increase of amount of open space of what would be accomplished through a traditional development plan. You also get a pathway system, connections to the external systems and further development in the pathway system along Eight Mile road and connection into the Beck road system as well. This is a development that is going to enhance the non-motorized transportation network within the city. The specific benefits that are part of the rezoning overlay plan, the applicant has identified the tax benefits for the city, the maximum number of units being limited to 31. High end landscaping, high end home construction, minimum unit lot width of 90 ft. and square footage of 13,860 and significant brownfield clean up with potential funds coming back to the city, the installation of a Welcome to Novi landmark feature and a 25,000 contribution to the ITC Sports Park trail that is going to be coordinated with the city. There are also some ordinance deviation's that come with this plan. One deviation is that there will not be a berm along Beck Road due to the existing natural features. The landscaping does not meet the minimum requirement for canopy and sub canopy trees along the public right of way. The applicant is purposing some larger trees than what would normally be required due to the type of design intent of the landscaping within the development does not meet the street tree requirements along Eight Mile and Beck. Again, there a larger caliber trees that are being purposed as part of this development to have a larger presence. Minimum requirements for storm basin and landscaping are not met. The required sub-street to the west is not provided. They are providing a stub street to the north. There is also an emergency access connection over to Beck Road. The distance between the emergency access and Eight Mile exceeds the maximum. That could be a variance that could be granted through an application to the City Council.

The Planning Commission has several options. They can recommend that the Council conditionally approve, recommending denial, recommending rezoning to a district other than R-1, postponing consideration. Clear Zoning recommends is that the Planning Commission should consider recommending this application as proposed with the appropriate conditions, including resolution and any remaining wetland and woodland items that need to be resolved.

Planner Komaragiri continued with her report. Engineering is currently recommending approval of the concept plan for various items noted in the review letter and also noting that the site plan would require City Council variances for exceeding the maximum length for street A and lack of stub-street along the subdivision perimeter.

Landscape is recommending approval of the concept plan noting multiple deviations and requesting additional information that is required to conform to the code. The deviations are for absence of required berm, and required green belt landscaping along the entire frontage on Beck Road right-a-way. For absence of required street trees within the right-a-way along Beck Road for not meeting the minimum requirements for canopy and sub-canopy trees in the greenbelt along both public the rights-of way; Also for not meeting the street tree requirements along Eight Mile, if the Oakland County Road Commission does not allow some or all of the required street trees along Eight Mile; For not meeting the

minimum requirements for storm-basin landscape and for not meeting the required diversity of tree species for a single residential subdivision. Landscape acknowledges that while the applicant is trying to provide larger trees for a better landscape design that they would not be counted as extra credit for woodlands.

The plan includes some level of proposed impact to all of the onsite wetlands and the associated 25 ft. wetland buffers that backs up to this property. Most of this impact is due to the lot development. The current plan includes a total .617 acre of wetland impact and 2.14 acres of purposed wetland buffer impact. This is slightly higher than the one that was purposed before. The project as proposed will require a City of Novi wetland non-minor use permit as well as authorization to encroach the 25 ft. Natural Features Setback.

Wetlands review is not currently recommending approval and is currently asking the applicant to consider redesigning the design to minimize the impact to wetland C for reasons noted in the letter. Of the 10 specimen trees, two will be saved and eight are proposed for removal. The site plan is also proposing a removal of 83% of the regulated woodlands (a 7 percent decrease from the previous submittal). The notes on the site plan and the applicant's response letter are providing conflicting number for replacement trees provided and remaining required. According to the applicant's response letter, a remaining on 240 trees are not provided on site. The applicant is requesting the Planning Commission to waive the requirement to pay into City tree fund due to significant costs they incurred for the site cleanup. There is no precedent with the City for such a request to date. Staff does not prefer to allow this request. Due to conflict in the number for the remaining woodland trees required, staff would like to amend the remove the number 230 from the motion language.

Woodlands review is not currently recommending approval and asks for additional information. The applicant has chosen not to provide elevations prior to concept plan submittal. Façade did not review the project with the revised submittal. However, the applicant has been in discussion with the façade consultant and provided their letter of intent to meet the requirements of the Façade Ordinance during preliminary site plan submittal. They have provided sample elevations and sample boards to indicate the quality of construction.

Traffic and Fire are recommending approval with additional comments to be addressed with the revised submittal.

The Planning Commission is asked tonight to recommend to City Council an approval or denial of rezoning request from RA Residential Acreage to R-1 One Family Residential with a Planned Rezoning Overlay.

Applicant Randy Wertheimer addressed the Planning Commission. He stated that they did reduce a lot in order to create a park for the neighborhood. We also changed the zoning to be more in line with what the City was comfortable with to the R-1. We are making a contribution to the ITC Sports Park. Also they will be making a significant contribution toward the path that the city is installing on Eight Mile. The reason that we are not removing the trees along Eight Mile is because the existing trees present a beautiful natural feature. The landscape comment that we are short on trees is because we are planting much larger trees than are the minimum requirement. We are looking to have mature landscaping on day one. He stated that they are not trying to cut corners on landscaping.

Chairperson Lynch opened the public hearing for this agenda item and seeing that no one in the audience had any comments he closed the public hearing and turned the discussion over to the Planning Commission for comments.

Member Anthony questioned the applicant as to what type of contamination is there on this property? He also questioned some of the markings on the site plan.

Applicant Randy Wertheimer responded that the area is a former trucking site so there is some contaminated soil with arsenic on the site. Part of the site years ago there was an apple orchard on the site. We are committed to remediate the site and turn it in to a beautiful area.

Andy Bellia the Engineer for the Dunhill project addressed the markings on the site plan. There are two issues with the site. One is arsenic and there is also buried debris on the site. Non contaminated debris is the crushed concrete and various fill material contaminated debris which is fuel oil tanks. The large circle areas on the site plan are the potential areas of debris and the smaller circles are the areas that are known to have debris. As they are excavating the area they will remove any contaminated and take it to a land fill.

Member Anthony stated that they do not know if the wetlands are affected by any contamination. He wanted to know if any of this information had been shared with in house staff or the wetland consultants.

Matt Carmer and Pete Hill with ETC responded to Member Anthony's questions regarding the ECT report.

Member Anthony questioned the wetland areas A and area C. So wetland areas H and K which was identified as being regulated by the city you are not concerned with. H & K has minimal impact. With area C you were concerned about lots 12, 13 and 20. The actual remediation would remove the area of wetland on lot 20. Approximately 50% of the wetland will be removed with the remediation. Lot 13 appeared to have the same issues as lot 20. These wetlands are not regulated by the state and only regulated by the city the most cost effective solution will be removal.

Pete Hill responded to Member Anthony that they did not have any additional reports that had soil borings. During the review we wondered if soil borings had been done in the area with the road. The studies that the applicant submitted lead them to believe that remediation would be needed in that area.

Member Anthony stated that there is not enough information at this time for a solid conclusion. He stated that he feels that if there was additional information that ECT might have a different recommendation on the wetlands and woodlands.

Mr. Carmer agreed that with the additional information their recommendation might be changed. In the letter ETC recommended that wetland C is one to preserve. The reason is we suggested that is because it is a small vernal pool not regulated by the state due to the fact that it is not connected to a lake, stream or pond. It is not greater than 5 acres in size.

Member Anthony stated that when you look at their open area it looks like a majority of wetland C is in there. Then they are also adding a retention pond and to the south of that it ties in with wetland H. Considering what they are leaving now and the work that they are doing would that have any equivalency to mitigation that they are adding to replace what they are removing?

Mr. Carmer stated that initially there was a mitigation area shown along the edge of wetland H. In the latest mitigation plan of wetlands H there was not a lot of detail and not even labeled as wetland mitigation area. The assumption was that this was still the area that they would attempt to mitigate the wetlands. It wasn't clearly indicated on the plans. It is also very steep slope there. It seems a little bit difficult. I would like to see a little bit of engineering review of that by the applicant suggesting that it can be built there. There seems like a lot of earth would have to come out to create wetland H in that area.

Based on the grades that were observed on site it appears to be a very large undertaking.

Member Anthony asked Mr. Carmer about the area directly to the north where you end up having your storm water retention. That would seem logical to have that associated with mitigation.

Mr. Carmer stated that a lot of times what people do on these sites is to have their storm-water basin going and then have an outflow from your storm-water basin into an wetland mitigation area to kind of continue the hydrology.

Member Anthony states that he does not think that they have seen that level of detail here.

Mr. Carmer states that concern with wetland C just north of the basin it has some potential for wildlife with animals that rely on vernal pools. It is close enough where wetland H, detention basin and wetland

C are all in a line. There was quite a bit of buffer. For example wetland C being a small vernal pool that fills up with water every spring and dries up in late summer. If you develop houses and have lots backing up to it the hydrology that currently goes there probably doesn't continue to get in to the wetlands. So you are removing the buffer.

Member Anthony questioned that wouldn't it be that by constructing that retention pond right next to C that is where the water will collect as opposed to C thus rendering that little area of C not functioning as a wetland anymore. It has been shifted over so that you continue and end up with you connecting wetland A through H. With that concept at least in the area where we are concerned about lots 12, 13 and 20 it minimizes the impact that the development of those lots would have.

Member Anthony questioned Mr. Carmer about the wetlands on lots 10 and 11.

Mr. Carmer responded that wetland A is at the far north end and the additional 2 lots are pretty much all wetland. In the review letter it does suggest that maybe that is not a spot to build if it is almost entirely wetland. These lots could be avoided or repositioned. We would like to see that some alternatives have been considered. As you go through the language in the ordinance you are supposed to look at feasible alternatives for impacting the wetland and we would like to see that the design has considered wetlands and woodlands can be avoided and if not why?

Member Anthony questioned if Wetland A, lots 10 and 11 is connected to a wetland area off site of the development.

Mr. Carmer responded that to the west there is a pond located not too far to the west of that wetland.

Member Anthony again questioned that if lots 10 and 11 were developed would it impact the wetland off site hydraulically? Did the flow come on to the property or flow away from the property?

Mr. Carmer stated that wetland does continue off site to the east. To the north it did not appear so but did not investigate very far to the north.

Member Anthony asked that if lots 10 and 11 were developed would it damage the wetland that you saw off site to the east?

Mr. Carmer responded they did not do a whole lot of walking on the adjacent property as they did not have permission. It probably connects up through wetland H.

Applicant Randy Wertheimer wanted the Planning Commission to know that they have hired one of the most reputable wetland consultants in southeast Michigan, King & MacGregor Environmental, LLC. They have also hired McDowell and Associates. Mr. Wertheimer said we are happy to share any information with you so that you will feel comfortable with this plan.

Member Anthony stated that the report showed that 83% of the trees that would be removed that you would normally want protected.

Mr. Hill responded that it is 83% because there is a significant amount of trees that are coming down.

Mr. Carmer also stated that the site has been previously disturbed so the trees are smaller. There are a couple areas with significant size trees but for the most part the trees are smaller. So essentially we are asking the developer to provide an offset of trees that are removed. It is that number that is still in negotiations.

Applicant Randy Wertheimer stated that this site is a little different. They would be taking down ten large trees. The rest is scrub, brush already half down. We are replacing the site with not only a seven figure mediation but a beautiful landscaped entrance with trees that far exceed the minimum requirements.

Member Anthony stated that it appears that more data needs to be assessed and essentially the developer needs to work with staff and the staff consultants further.

Member Baratta question staff engineer Brian Coburn if the city had looked at the impact on the drainage on the adjacent properties?

Brian Coburn responded that with the purpose plan indicated that discharging wetland H from the detention pond. So they are accepting the drainage from the site and then discharging it over to the east. So it should not have impact on the adjacent properties. The ordinance requires that it should be self-contained so they have to collect all the storm water through the basin.

Member Baratta stated that after investigating the site he feels that access to Beck Road is not necessary. Eight Mile is far less traveled than Beck Road. When you look at the two subdivisions west of Beck the sites have half of an acre lots or more. The proposed plan is a lot less than that. It will have a higher utilized site. The tradeoff for the city is this project has higher density versus cleaning up the contaminated site. That is really where I see the value here. The City of Novi is already constructing the pathway. Do you need that much density versus paying for the cleanup?

Member Lynch said that he does like this project. He agreed with Member Baratta about the tradeoff. He feels that this fits well into the ordinance. He believes that this will be a good addition to Novi.

Member Anthony makes a motion to recommend approval to city Council and seconded by Member Baratta.

ROLL CALL VOTE TO RECOMMEND APPROVAL TO CITY COUNCIL MADE BY MEMBER ANTHONY AND SECONDED BY MEMBE BARATTA

In the matter of the request of Hunter Pasteur Homes Dunhill Park LLC for Dunhill Park JSP15-13 with Zoning Map Amendment 18.711 motion to recommend approval to the City Council to rezone the subject property from RA (Residential Acreage) to R-1 (One Family residential) with a Planned Rezoning Overlay. The recommendation shall include the following ordinance deviations for consideration by the City Council:

- a. Deviation in the minimum Ordinance standards to allow reduction in the required minimum lot size and minimum lot width for one-family detached dwellings reviewed against R-1 Zoning standards to allow for smaller lots (21,780 square feet and 120 feet required, 13,860 square feet and 90 feet provided);
- b. Deviation in the minimum Ordinance standards to allow reduction in minimum side yard setback and aggregate side yard setback for one-family detached dwellings reviewed against R-1 Zoning standards (15 feet with 40 feet aggregate required, 10 feet with 30 feet minimum aggregate provided);
- c. Landscape deviation from Section 5.5.3.B.ii and iii for absence of required berm and required greenbelt landscaping along the entire frontage of Beck Road Right of Way due to existing natural features. (coverage along entire frontage required; approximately 40 percent proposed);
- d. Landscape deviation from Section 5.5.3.B. iii for absence of required street trees within the right-of-way along Beck Road;
- e. Landscape deviation from Section 5.5.3.B.ii and iii for not meeting the minimum requirements of canopy and sub canopy trees in greenbelt along both Public Rights-of-way;
- f. Landscape deviation from Section 5.5.3.E.i.c for not meeting the street tree requirements along Eight Mile if the Oakland County Road Commission does not allow some or all of the required street trees along 8 Mile Road;
- g. Landscape deviation from Section 5.5.3.E.iv for not meeting the minimum requirements for Storm Basin Landscape (Shrubs required; Canopy trees proposed);
- h. Landscape deviation from Landscape Design Manual Section 1.d.(1)(d) for not meeting the required diversity of tree species for a single family residential subdivision;
- i. Applicant shall provide modelling data showing sufficient fire flows at the water main dead end or applicant shall provide a loop connection approved by the City Engineer during Preliminary Site Plan. An offsite easement may be required for the loop connection;
- j. City Council variance from Appendix C Section 4.04(A) (1) of Novi City Code for not providing a stub street to the subdivision boundary along subdivision perimeter;

- k. City Council variance from Section 11-194(a)(7) of the Novi City Code for exceeding the maximum distance between Eight Mile Road and the proposed emergency access;

If the City Council approves the rezoning, the Planning Commission recommends the following conditions be requirements of the Planned Rezoning Overlay Agreement:

- a. Acceptance of applicant's offer of Public benefits as proposed:
 - i. Tax benefits for the City including significant property taxes and potential Brownfield benefits from Oakland County.
 - ii. Significant brownfield environmental cleanup.
 - iii. Installation of a "Welcome to Novi" landmark feature.
 - iv. \$25,000 donation to the Parks, Recreation and Cultural Services Department to be applied toward the construction of the ITC Community Sports Park Trail.
 - v. High-end landscaping.
 - vi. Developers financial contribution to complete the construction of Eight Mile sidewalk, as determined by the City Council
- b. Applicant complying with the conditions listed in the staff and consultant review letters, including satisfying the concerns in Wetlands and Woodlands review letters.
- c. The applicant shall conform with the code requirements to provide additional information with regards to the required woodland replacement trees, with an appropriate number to be determined by staff, at the time of Preliminary Site Plan, or to pay into the City's tree fund, per staff's recommendation.

This motion is made because:

- a. The applicant has presented a reasonable alternative to the proposed Master Plan designation of a maximum of 0.8 units/acre to an actual 1.32 units/acre, and which supports several objectives of the Master Plan for Land Use as noted in this review letter.
- b. The proposed density of 1.32 units/acre provides a reasonable transitional use between the lower density developments to the north and west, and the existing higher density developments to the east, in the City of Northville, and Maybury State Park on the south side of Eight Mile Road.
- c. The site will be adequately served by public utilities.
- d. The proposed zoning and proposed use represents only a nominal increase in expected site generated traffic relative to development permitted under existing zoning.
- e. Submittal of a concept plan, and any resulting PRO Agreement, provides assurances to the Planning Commission and to the City Council of the manner in which the property will be developed.
- f. The proposed concept plan shows the intent of the applicant to remediate environmental contamination of the site as a part of the development plan, which will improve the land through the removal of potential environmental hazards.

Motion carried 5-0.

**CITY OF NOVI
BID AND PRICES
FOR EIGHT MILE ROAD PATHWAY
(GARFIELD ROAD TO BECK ROAD)**

BID
for
8 MILE ROAD PATHWAY
(GARFIELD ROAD TO BECK ROAD)

Bid of MELLO CONSTRUCTION CO. hereinafter called Bidder,
organized and existing under the laws of or a resident of the State of Michigan, doing business as
MELLO CONSTRUCTION CO. *

Insert as applicable: "a corporation", "a partnership" or "an individual".

TO THE CITY OF NOVI, MICHIGAN, hereinafter called OWNER:

The undersigned as Bidder hereby declares: that this Bid is made in good faith without fraud or collusion with any person or persons bidding on the same Contract; that the Bidder has read and examined the Advertisement for Bids, Instructions to Bidders, Bid, General Conditions, Supplementary Conditions, Agreement, Forms of Bond, Specifications and Drawings, as prepared by the ENGINEER, and understands all of the same; that the Bidder of its representative has made personal investigation at the site and has become fully familiar with regard to the conditions to be met in the execution of this Contract, and the undersigned proposes to furnish all labor, materials, tools, power, transportation, and construction equipment necessary for the construction of the Project and performing related work in full accordance with the aforesaid Contract Documents, including any and all Addenda officially issued, their receipt of which is hereby acknowledged:

Addendum No.	Addendum Date
_____	_____
_____	_____
_____	_____

The Contract will be awarded to the lowest responsive, responsible Bidder based on the unit prices for all Work specified.

The Bidder agrees to complete the Project for the following unit prices:

BASE BID: GARFIELD ROAD TO STA 198+42

Item No.	Ref Spec	Item Description	Qty	Unit	Unit Price	Total Price
1	02.02	Bonds, Insurance & Mobilization (5% max)	1	LS	22000.00	22000.00
2	02.02	Pre Construction Audio/Visual DVD Coverage	1	LS	1500.00	1500.00
3	30.13	Soil Erosion and Sedimentation Control Measures	1	LS	1000.00	1000.00
4	30.14	Temporary Traffic Control Devices	1	LS	3500.00	3500.00
5	30.15	Tree Protection Fencing (As Needed)	100	LF	15.00	1500.00



6	30.16	Construction Protection Fencing - Orange	415	LF	3.00	1245.00
7	30.17	Clearing and Grubbing	20	STA	575.00	11500.00
8	30.18	Remove Tree, (8"-18"), Complete	2	EA	300.00	600.00
9	30.18	Remove Tree, (19"-36"), Complete	1	EA	1000.00	1000.00
10	30.19	Sidewalk, Remove	365	SF	3.00	1095.00
11	30.20	Concrete Curb and Gutter, Remove	17	LF	16.00	272.00
12	30.21	HMA Driveway, Remove	92	SY	12.00	1104.00
13	M203	Culv, End, Rem, Less than 24 Inch	1	EA	175.00	175.00
14	M203	Sewer, Rem, Less than 24 Inch	208	LF	30.00	6240.00
15	M205	Excavation, Peat	1,850	CY	28.00	51800.00
16	30.22	Subgrade Undercut (As Needed)	600	CY	36.00 ^{6w} 37.00	21600.00 ^{6w} 21450.00
17	30.23	Pathway Grading	13	STA	1300.00	16900.00
18	M205	Backfill, Swamp	650	CY	33.00	21450.00
19	M205	Embankment, CIP	280	CY	12.00	3360.00
20	02.06	Regrade Ditch	820	LF	20.00	16400.00
21	30.24	Culv End Sect, Conc, 12 Inch, Complete	6	EA	600.00	3600.00
22	30.24	Culv End Sect, Conc, 18 Inch, Complete	1	EA	725.00	725.00
23	M402	Sewer C76 CL IV, 12 Inch, Tr A	328	LF	50.00	16400.00
24	30.25	Dr Structure, 48 Inch Dia, Low Head	2	EA	2300.00	4600.00
25	M403	Dr Structure Cover, EJ1040 Type N	2	EA	565.00	1130.00
26	30.26	Str Rehab Type 1: Point Up Structure	1	EA	125.00	125.00
27	30.27	Str Rehab Type 2: Structure Cover Adjust	1	EA	325.00	325.00
28	30.28	Str Rehab Type 3: Reconstruct Structure	1	EA	300.00	300.00
29	30.29	Capillary Break	1,190	SY	22.00	26180.00
30	30.30	Aggregate Base, 6 Inch, Limestone	2,430	SY	9.50	23085.00
31	30.31	HMA Driveway, Complete	194	SY	100.00	19400.00
32	30.32	Sidewalk, Conc, 4 Inch	16,395	SF	4.00	65580.00
33	30.33	Sidewalk, Conc, 4 Inch, Colored	480	SF	6.00	2880.00



34	30.34	ADA Ramp, Conc, 6 Inch	110	SF	4.50	495.00
35	30.35	ADA Detectable Warning Plate	14	SF	40.00	560.00
36	30.36	Concrete Curb and Gutter, Modified	17	LF	30.00	510.00
37	30.37	Composite Pedestrian Railing (As Needed)	50	LF	40.00	2000.00
38	30.38	Remove and Relocate Lamp Pole	1	EA	2000.00	2000.00
39	30.39	Modular Block Retaining Wall	825	FSF	39.00	32175.00
40	30.40	Shrub Planting - Ludwig Spaeth Lilac	20	EA	235.00	4700.00
41	30.40	Shrub Planting - Smooth Hydrangea	35	EA	210.00	7350.00
42	30.41	Wetland Edge Seed Mix and Mulch Blanket	1,230	SY	17.25	21217.50
43	2.00	Class "A" Sodding	355	SY	7.25	2573.75
44	30.42	Restoration	1	LS	11000.00	11000.00
45	30.11	Permit Allowance	1	LS	7000.00	7000.00
46	30.43	Inspection Crew Days	23	DAY	\$640.00	14720.00
					SUB-TOTAL BASE BID: \$ 454,872.25	

ALTERNATE 1: STA 153+50 TO GARFIELD ROAD

Item No.	Ref Spec	Item Description	Qty	Unit	Unit Price	Total Price
46	02.02	Bonds, Insurance & Mobilization (5% max)	1	LS	1000.00	1000.00
47	02.02	Pre Construction Audio/Visual DVD Coverage	1	LS	750.00	750.00
48	30.13	Soil Erosion and Sedimentation Control Measures	1	LS	2000.00	2000.00
49	30.14	Temporary Traffic Control Devices	1	LS	2500.00	2500.00
50	30.17	Clearing and Grubbing	1	STA	575.00	575.00
51	30.18	Remove Tree, (8"-18"), Complete	4	EA	300.00	1200.00
52	30.18	Remove Tree, (19"-36"), Complete	1	EA	1000.00	1000.00
53	30.20	Concrete Curb and Gutter, Remove	17	LF	16.00	272.00
54	30.23	Pathway Grading	1	STA	1300.00	1300.00
55	30.30	Aggregate Base, 6 Inch, Limestone	170	SY	9.50	1615.00
56	30.32	Sidewalk, Conc, 4 Inch	1,060	SF	4.00	4240.00
57	30.34	ADA Ramp, Conc, 6 Inch	110	SF	4.50	495.00



58	30.35	ADA Detectable Warning Plate	14	SF	40.00	560.00
59	30.36	Concrete Curb and Gutter, Modified	17	LF	30.00	510.00
60	30.42	Restoration	1	LS	2500.00	2500.00
61	30.43	Inspection Crew Days	4	DAY	\$640.00	2560.00
SUB-TOTAL ALTERNATE 1:					\$ 23,677.00	

ALTERNATE 2: STA 198+42 TO BECK ROAD

Item No.	Ref Spec	Item Description	Qty	Unit	Unit Price	Total Price
63	02.02	Bonds, Insurance & Mobilization (5% max)	1	LS	7000.00	7000.00
63	02.02	Pre Construction Audio/Visual DVD Coverage	1	LS	600.00	600.00
64	30.13	Soil Erosion and Sedimentation Control Measures	1	LS	1500.00	1500.00
65	30.14	Temporary Traffic Control Devices	1	LS	3200.00	3200.00
66	30.16	Construction Protection Fencing - Orange	165	LF	3.00	495.00
67	30.17	Clearing and Grubbing	9	STA	575.00	5175.00
68	30.18	Remove Tree, (8"-18"), Complete	9	EA	300.00	2700.00
69	30.18	Remove Tree, (19"-36"), Complete	5	EA	1000.00	5000.00
70	M204	Fence, Rem	80	LF	1.50	120.00
71	M203	Culv, End, Rem, Less than 24 Inch	1	EA	175.00	175.00
72	M205	Excavation, Peat	935	CY	28.00	26180.00
73	30.23	Pathway Grading	5	STA	1300.00	6500.00
74	M205	Backfill, Swamp	330	CY	33.00	10890.00
75	M205	Embankment, CIP	158	CY	12.00	1896.00
76	02.06	Regrade Ditch	265	LF	20.00	5300.00
77	30.24	Culv End Sect, Conc, 18 Inch, Complete	3	EA	775.00	2325.00
78	M402	Sewer C76 CL IV, 18 Inch, Tr A	301	LF	55.00	16555.00
79	30.25	Dr Structure, 48 Inch Dia, Low Head	1	EA	2300.00	2300.00
80	30.25	Dr Structure, 60 Inch Dia, Low Head	1	EA	2600.00	2600.00
81	M403	Dr Structure Cover, EJ1040 Type N	2	EA	565.00	1130.00
82	30.29	Capillary Break	665	SY	22.00	14630.00



83	30.30	Aggregate Base, 6 Inch, Limestone	1,080	SY	9.50	10260.00
84	30.32	Sidewalk, Conc, 4 Inch	7,555	SF	4.00	30220.00
85	30.41	Wetland Edge Seed Mix and Mulch Blanket	460	SY	17.25	7935.00
86	30.42	Restoration	1	LS	2500.00	2500.00
87	30.43	Inspection Crew Days	13	DAY	\$640.00	8320.00
SUB-TOTAL ALTERNATE 2:					\$	175,506.00

TOTAL BASE BID PLUS ALTERNATES 1 AND 2:	\$ 653,985.25
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If the foregoing Bid shall be accepted by the OWNER, the undersigned agrees to enter into the attached form of Agreement within ten (10) days after receiving notice of such acceptance, will furnish the OWNER satisfactory bonds and certificates of insurance coverage, and will complete the Project, at the price and within the time stated in this Bid.

The undersigned further agrees that if the foregoing Bid shall be accepted, work will commence immediately after the Contract has been awarded, the Agreement executed, and a Notice to Proceed received. **The undersigned shall complete the Work to Substantial Completion within 60 calendar days, and to Final Completion, including restoration and all punch list items, within 75 calendar days.**

The undersigned attaches hereto its Bid security, as required by the Advertisement for Bids and Instructions to Bidders. The undersigned agrees that in case it shall fail to fulfill its obligations under the foregoing Bid, and/or shall fail to furnish bonds, as specified, the OWNER may, at its option determine that the undersigned has abandoned its rights and interests in such Contract and that its Bid security accompanying its Bid; has been forfeited to the said OWNER, but otherwise the Bid security shall be returned to the undersigned upon the execution of the Contract and the acceptance of the bonds.

The undersigned also agrees that for each and every calendar day that he may be in default of Substantial Completion of the Work, within the time specified in this Bid, the OWNER will suffer a damage of Six Hundred Dollars (\$600.00) per day, and said OWNER shall be compensated therefore at the rate as liquidated damages in accordance with the Agreement.

In submitting this Bid, it is understood that the right is reserved by the OWNER to accept any bid, to reject any or all Bids, and to waive irregularities in bidding in the interest of the OWNER.

SUBMITTED on 9-16-15
Date*

Telephone Number*

248-714-5486 248-714-5429

MELLO CONSTRUCTION
Street*

Facsimile Number*

4964 TECHNICAL DR.
City, State, ZIP*

*Typed or printed in ink.

MILFORD, MI 48381



BY: MELLO CONSTRUCTION Co.

Name of Bidder*

Ray Mello

Signature

Ray Mello Vice President

Name and Title of Signatory*



BIDDER'S QUALIFICATION AND EXPERIENCE STATEMENT

The OWNER will require supporting evidence regarding Bidder's Qualifications and competency. The Bidder will be required to furnish all of the applicable information listed below, which must be submitted with the sealed Bid at the time of Bid Opening. The Qualifications and Experience Statement must be typewritten and signed in ink.

A fill-in-the blank version of this form is available for your convenience on the City of Novi's website (www.cityofnovi.org) under Forms & Permits/Engineering.

QUALIFICATIONS AND EXPERIENCE STATEMENT

The undersigned certifies under oath that the information provided herein is true and sufficiently complete so as not to be misleading.

Submitted to: CITY OF NOVI / DEPARTMENT OF PUBLIC SERVICES

Address: 26300 LEE BEGOLD DRIVE NOVI MICH. 48375

Submitted by: GARY WATERS

Name: MELLO CONSTRUCTION Co.

Address: 4964 TECHNICAL DR.

City, State, ZIP MILFORD MICH. 48381

Telephone Number: 248-714-5486 Fax Number: 248-714-5249

Principal Office: SAME

Corporation: Joint Venture:

Partnership: Other:

Individual:

Name of Project: 8 MILE PATHWAY GARFIELD TO BECK RD.

Type of Work (file separate form for each classification of work):

General: Underground:

HMA: Concrete:

Other: (Please Specify)



Organization

How many years has your organization been in business as a CONTRACTOR?

24 yes.

How many years has your organization been in business under its present business name?

24 yes.

Under what other business names has your organization operated?

If your organization is a corporation, answer the following:

Date of Incorporation: 1991

State of Incorporation: MICHIGAN

President's Name: Perry Mello

Vice President's Name: Ray Mello

Secretary's Name: Christine Koutouk

Treasurer's Name: Perry Mello

If your organization is a partnership, answer the following:

Date of Organization: _____

Type of Partnership: _____

Names of General Partners: _____

If your organization is individually owned, answer the following:

Date of Organization: _____

Name of OWNER: _____

If the form of your organization is other than those listed above, describe it and name the principals:



Licensing

List jurisdictional and trade categories in which your organization is legally qualified to do business, and indicate registration or license numbers, if applicable:

MICH. RESIDENTIAL BLD LICENSE
2102102302

List jurisdiction in which your organization's partnership or trade name is filed:

Experience

List the categories of work that your organization normally performs with its own forces:

UNDERGROUND UTILITIES
EXCAVATION
CONCRETE

On a separate sheet, list major construction projects your organization has in progress. List the name of project, owner, architect/engineer, contract amount, percent complete, and scheduled completion date.

On a separate sheet, list the major construction projects your organization has completed in the past five (5) years. List the name of the project, owner, architect/engineer, contract amount, date of completion, and percentage of the cost of the work performed with your own forces.

On a separate sheet, list the construction experience and present commitments of the key individuals of your organization who would be employed in the Work.

Claims and Suits

If the answer to any of the questions below is yes, please attach details.

Has your organizations ever failed to complete any work awarded to it? NO

Are there any judgments, claims, arbitration proceedings or suits pending or outstanding against your organization or officers? NO



Has the City of Novi filed a claim on any contract within the prior three years which asserted that your organization:

1) failed to perform as required by the contract?

YES NO

2) completed contracted work in an untimely manner causing delays and interference;

YES NO

3) lacked financial resources and the ability to satisfactorily perform the contract or provide the services or supplies;

YES NO

4) exhibited poor quality of performance or completed work under the contract;

YES NO

5) failed to comply with laws and ordinances relating to the contract performance;

YES NO

6) defaulted on its quotations or prices;

YES NO

References

Entity	Contact Name	Phone
<i>Trade References</i>		
1. HD SUPPLY	TY JOHNSON	734-398-5950
2. SUPERIOR MATERIALS	JOHN WALLEN	248-788-8000
3. PIEDMONT CONC	DAVE	248-474-7740
<i>Bank References</i>		
1. PNC BANK	DARA	248-932-0846
2.		
3.		
<i>Surety</i>		
GUY HURLEY		



Name of Bonding Company: GREAT American

Name of Bonding Agent: GUY HULLY

Address of Bonding Agent: 1080 KIRTS BLYD STE 500
Troy Mich. 48064 248-519-4400

SUBMITTED on 9-16-15
Date*

BY: MERLO CONSTRUCTION Co.
Name of Bidder*

[Signature]
Signature

RAY MERLO VICE PRESIDENT
Name and Title of Signatory*

*Typed or printed in ink.

Raymond Merlo being duly sworn deposes and says that the information provided herein is true and sufficiently complete so as not to be misleading.

Subscribed and sworn before me this 16 day of September 2015.

Notary Public: [Signature]

My Commission Expires: 3-6-17

IF THIS INFORMATION IS NOT SUBMITTED WITH THE SEALED BID AT THE TIME OF BID, THE BID WILL BE CONSIDERED INCOMPLETE.

CHRISTINE L. KOTOUCEK
NOTARY PUBLIC, STATE OF MI
COUNTY OF OAKLAND
MY COMMISSION EXPIRES Mar 6, 2017
ACTING IN COUNTY OF Oakland



Past Projects

Major Construction Projects Last Five Years

Project	Owner	Contract Amount	Completion Date	Percentage Performed
Fed EX	Fed Ex	\$4.5 Million	6/15/2013	100%
Plymouth Scholars Academy	Plymouth	\$1.2 Million	8/25/2013	100%
Fort Custer	US Govnt	\$ 800,000.00	9/20/2011	100%
Macomb Mall	Macomb	\$ 889,500.00	1/30/2015	100%

Current Projects

Major construction projects currently ongoing for 2015

<u>Project</u>	<u>Owner</u>	<u>Engineer</u>	<u>Contract Amount</u>	<u>Percentage we perform</u>
Eberspacher	Corrigan		\$958,500.00	100%
Dicks Sporting	Dicks	Kieft Eng.	\$414,500.00	100%
Charles Drew	DTC	Giffels Web	\$201,000.00	100%
M-1 Rail	MDOT	Mannik Smith	\$728,323.00	100%

This list consists of the "major" projects Merlo Construction has in progress.

Merlo Construction Key Individuals

Employee	Experience	Position
Ray Merlo	34 Years	Owner/Estimator
Gary Watters	41 Years	Estimator/PM
Brian Gustin	13 Years	Superntendant
David Crosby	36 Years	PM

PLANNING REVIEW

November 20, 2015

Barbara McBeth, AICP
Deputy Director of Community Development
City of Novi
45175 W. Ten Mile Rd.
Novi, MI 48375

**SUBJECT: 2nd Review of Dunhill Park
JSP15-13 Rezoning with a PRO**

Dear Ms. McBeth:

At your request, we have reviewed the resubmission of the request for rezoning with a Planned Rezoning Overlay referenced above and offer the following analysis:

Applicant

Hunter Pasteur Homes Dunhill Park, LLC

Review Type

Rezoning from RA Residential Acreage to R-1 One-Family Residential with a Planned Rezoning Overlay (PRO).

Property Characteristics

- Site Location: Northwest corner of Eight Mile Road and Beck Road (Section 32)
- Site Zoning: RA Residential Acreage
- Adjoining Zoning: North and west: RA Residential Acreage; East (City of Northville): R-1A First Density Residential; South (Northville Township): R-1 Single Family Residential
- Current Site Use: Vacant
- Adjoining Uses: North, east and west: single family homes; South: Maybury State Park
- School District: Northville Community
- Site Size: 23.76 gross acres/23.51 net acres

Summary of Amendments to the Plan since the First Submission

This is the second submission of this plan. In response to the Planning Commission's feedback on the last version of the plan, the applicant has made the following amendments to the plan:

- 32 lots have been reduced to 31, with the subtracted lot repurposed as open/park space. Leaving this lot open preserved some existing trees as well as a small area of wetland (the portion of the site preserved as open space is now 33%, up from 31%. The net density has changed from 1.36 to 1.32 units per acre.
- The landscaping at the entrance to the development, along 8 Mile Road, has been substantially increased.
- The applicant has confirmed that it will contribute land and funding to the construction of the pathway along 8 Mile.

- The applicant originally sought rezoning to R-3. The request has been revised to R-1. While R-3’s setback and lot size requirements were more similar to the applicant’s plan, R-1 provides for a lower maximum net density on the site.
- The list of public benefits has been modified slightly, and the more information on remediation efforts (*misspelled on the plan*) has been provided.

Project Summary

The petitioner is proposing a Zoning Map amendment for two parcels that total 23.76 acres located at the northwest corner of Beck Road and Eight Mile Road (Section 32) from RA (One-Family Residential, 0.8 DU’s per net acre) to R-1 (One-Family Residential, 2 DU’s per net acre) utilizing the City’s Planned Rezoning Overlay (PRO) option. This request amends the original request for rezoning to R-3 (*there is still a reference to R-3 on the second sheet of the plan that must be amended*).

The subject parcel is 23.76 gross acres on the northwest corner of Beck Road and Eight Mile Road. The site includes 0.25 acres of land in the Eight Mile Road right-of-way, and the net acreage is 23.51 acres. It is currently zoned RA. The applicant is proposing to rezone the property to R-1. The concept PRO plan proposes 31 total lots¹ in a cluster arrangement, with 7.76 acres, or 33% of the total site, preserved as open space. This is one fewer lot than originally proposed. The open space is primarily devoted to an on-site detention pond and wetland mitigation areas, though the letter accompanying the revised site plan indicates that removed lot will be available for park space. One boulevarded access point is proposed onto Eight Mile Road and one stub street is proposed.

This site was the former home to J.J. Zayti Trucking, Inc. The 1999 aerial photo at right shows the trucking operation, which public records show resulting in some environmental contamination on this site. *The Applicant has indicated that remediation efforts are planned for the entire site.*



Summary of PRO Agreements

The PRO option creates a “floating district” with a conceptual plan attached to the rezoning of a parcel. As part of the PRO, the underlying zoning is proposed to be changed (in this case from RA to R-1) and the applicant enters into a PRO agreement with the City, whereby the City and the applicant agree to tentative approval of a conceptual plan for development of the site. Following final approval of the PRO concept plan and PRO agreement, the applicant will submit for Preliminary and Final Site Plan approval under standard site plan review procedures. The PRO runs with the land, so future owners, successors, or assignees are bound by the terms of the agreement, absent modification by the City of Novi. If the development has not begun within two (2) years, the rezoning and PRO concept plan expires and the agreement becomes void.

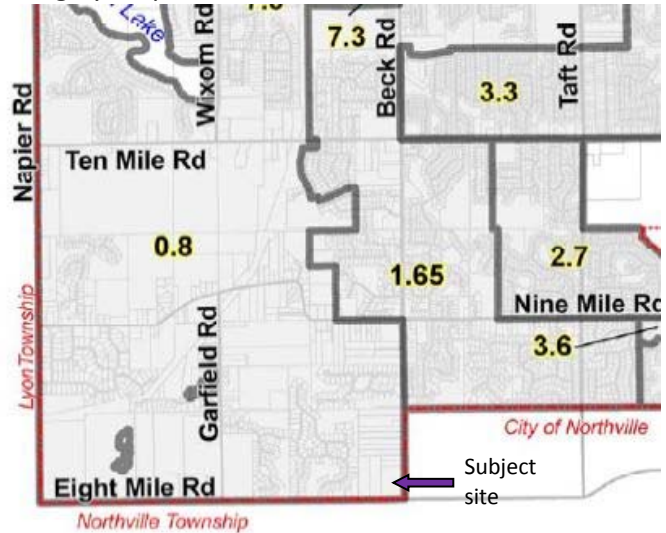
¹ 1.32 units per net acre.

Potential Development with Existing Zoning

The existing zoning, RA, permits 0.8 dwelling units per acre. Under current zoning, the 23.51 net acres of the site could be developed with 18 single family homes. Homes are proposed to be clustered; the open space preservation option, however, does not offer a density bonus for clustered homes. The site is currently vacant. R-1 zoning would permit a maximum density of 1.65 units per net acre, or a total of 38 single family homes. The applicant is requesting roughly 80 percent of the maximum allowable units under the proposed zoning.

Master Plan for Land Use

The Future Land Use Map of the 2010 City of Novi Master Plan for Land Use identifies this property and all adjacent land within the City as single family residential, with a density of 0.8 dwelling units per acre. This matches the existing zoning of the site. The City of Northville identifies land to the east as low density residential (3.63 units per acre), while Northville Township designates land to the south as single family residential; it is occupied by Maybury State Park and unlikely to be developed.



The Master Plan establishes numerous goals and supporting objectives for the City. This concept plan supports several objectives and conflicts with others.

Objective: Attract new residents to the City by providing a full range of quality housing opportunities that meet the housing needs of all demographic groups, including but not limited to singles, couples, first time home buyers, families, and the elderly. *The development would provide medium-lot single family dwelling units, an intermediate size between the City’s existing large-lot and small-lot developments.*

Objective: Encourage residential developments that promote healthy lifestyles. *The concept plan’s inclusion of pathways and connection to the City’s larger pathway system enables walking and bicycling.*

Objective: Protect and maintain open space throughout the community. *33% of the site is preserved as open space, primarily for the purpose of stormwater detention and wetland mitigation.*

Objective: Continue to strive toward making the City of Novi a more bikeable and more walkable community. *The development is proposed to be linked to the City’s developing pathway system.*

The proposal calls for a departure from the vision of the Master Plan, which is to provide for 0.8 du/acre in this location (see below for addition density discussion). *Neighborhood compatibility with existing large lot RA properties in the area should be considered.*

Proposed Residential Density

The applicant is proposing 31 units on 23.51 net acres for a net density of 1.32 units per acre. As mentioned above, the Master Plan calls for a density of 0.8 dwelling units per acre on this land and surrounding sites. The proposed density is 1.65 times the Master Plan recommendation for the site. Proposed density is most consistent with the R-1 One-Family Residential District (maximum density of 1.65 units per acre). This is the proposed new zoning classification for the site.

Lot Requirements

The minimum lot size in R-1 is 21,780 square feet. The minimum lot size shown on the plan is 13,860 square feet. The minimum lot width in R-1 is 120 feet. The minimum lot width on the plan, shown for five of the cul de sac lots, is 90 feet; all lots less than 104 feet wide are on cul de sacs. Setbacks are similarly not met—the aggregate side setback for the district is 40 feet, while the average aggregate side setback shown on the plan is 30 feet.

Under the PRO option, the Planning Commission may approve deviations from the dimensional standards of the district in order to facilitate a more innovative design that preserves open space.

Compatibility with Surrounding Land Use

Summary of Land Use and Zoning of Subject and Adjacent Properties			
	Existing Zoning	Existing Land Use	Master Plan Designation
Subject Property	RA Residential Acreage	Vacant	Single Family, 0.8/acre
To the North	RA Residential Acreage	Single Family Homes	Single Family, 0.8/acre
To the East	R1-A (Northville)	Single Family Homes	Single Family, 3.63/acre
To the South	R-2 (Northville Twp)	Maybury State Park	Single Family, 1.0/acre
To the West	RA Residential Acreage	Single Family Home	Single Family, 0.8/acre

The surrounding land uses are detailed in the table above. In making its recommendation to City Council, the Planning Commission should consider the compatibility of the PRO concept plan with existing adjacent land uses and zoning.

In general, standard construction noise during development and increased traffic after development are the most likely negative effects of this development on surrounding properties.

Directly to the **north** of the subject property are several properties zoned RA, One-Family Residential, containing single-family homes. Casa Loma, a 10-unit residential development, is located one half mile north of Eight Mile Road on the west side of Beck Road.

Directly to the **west** of the subject property is an existing single-family home. Maybury Park Estates is a bit further to the west. Maybury Park Estates contains 106 units on roughly 133 acres for a gross density of roughly 0.8 units per acre. These properties would experience greater traffic volumes on Beck Road and Eight Mile Road under the proposed development than under the maximum currently permissible density.

Directly to the **south** of the subject property in Northville Township is property zoned R-1, Single-Family Residential. The R-1 Zoning District allows one unit per acre. However, the site is part of Maybury State Park and unlikely ever to be developed. Impacts from the proposed development would be negligible.

The properties to the **east** of the subject property are in the City of Northville in the R-1A, First Density Residential district and contain single-family homes. The existing residential development would experience greater traffic volumes along Beck and Eight Mile Roads than it would if the site was developed within the limits of current zoning.

Comparison of Zoning Districts

	RA Zoning (Existing)	R-1 Zoning (Proposed)
Principal Permitted Uses	<ol style="list-style-type: none"> 1. One-family dwellings 2. Farms and greenhouses 3. Publicly owned and operated parks 4. Cemeteries 5. Schools 6. Home occupations 7. Accessory buildings and uses 8. Family day care homes 	<ol style="list-style-type: none"> 1. One-family detached dwellings 2. Farms and greenhouses 3. Publicly owned and operated parks, parkways and outdoor recreational facilities 4. Home occupations 5. Keeping of horses and ponies 6. Family day care homes 7. Accessory buildings and uses
Special Land Uses	<ol style="list-style-type: none"> 1. Raising of nursery plant materials 2. Dairies 3. Keeping and raising of livestock 4. Places of worship 5. Utility and public service buildings (no storage yards) 6. Group day care, day care centers, adult day care 7. Private noncommercial recreation areas 8. Golf courses 9. Colleges and universities 10. Private pools 11. Cemeteries 12. Mortuary establishments 13. Limited nonresidential uses of historic structures 14. Bed and breakfasts 15. Accessory buildings and uses 	<ol style="list-style-type: none"> 1. Places of worship 2. Schools 3. Utility and public service buildings (no storage yards) 4. Group day care, day care centers, adult day care 5. Private noncommercial recreation areas 6. Golf courses 7. Colleges and universities 8. Private pools 9. Cemeteries 10. Mortuary establishments 11. Bed and breakfasts 12. Accessory buildings and uses
Minimum Lot Size	43,560 sq ft (1 acre)	21,780 sq ft (0.5 acres)
Minimum Lot Width	150 ft	120 ft
Building Height	2.5 stories or 35 ft	2.5 stories or 35 ft
Building Setbacks	Front: 45 ft Side: 20 ft (aggregate 50 ft) Rear: 50 ft	Front: 30 ft Side: 15 ft (aggregate 40 ft) Rear: 35 ft

Infrastructure

Water and sanitary sewer are available at the site. We defer to the engineer regarding the adequacy of proposed stormwater management.

The applicant proposes one primary access street (Dunhill Drive on the concept plan) with a boulevard at the entrance. This street runs straight north and south through the western portion of the site and stubs to a temporary T turnaround at the northern property line. Two additional courts (Dunhill Court and Wales Court on the concept plan) are proposed, each ending in a cul de sac with a center island. Secondary access is proposed from Beck Road via a gravel access path secured with a breakaway gate.

The plan illustrates an eight-foot-wide concrete sidewalk along Eight Mile and Beck Roads. The narrative provided by the applicant indicates that the applicant is collaborating with the City to either install the path at its own expense or contribute funds for the installation by the City at a later date.

The applicant has submitted a traffic study for the site showing likely volumes at the proposed density. The traffic study appears to overestimate the number of homes that could be located on the site under RA zoning, however, assuming 32 homes when the maximum would be 18. The applicant had previously submitted a traffic study that included an accurate projection for the RA district. Combining the two studies, we see a projection that the proposed development will likely generate about 130 more trips per day than the maximum allowable development under current zoning.

Natural Features

There is a significant area of City-regulated woodlands on the site, including trees that could be considered specimen trees. The applicant has proposed woodland impacts and will need to plant woodland replacement trees and contribute money to the tree fund to account for said impacts. The applicant has submitted the required tree survey. Based on the woodlands consultant's review, consideration should be given to modifying lots and/or lot boundaries to provide as little impact on woodlands as possible. The applicant contends that this is primarily low quality scrub forest and notes that it is not pristine woodland. 9 additional trees are saved on the revised plan due to the relocation of a storm sewer.

The applicant proposes to replace 231 of the 471 total trees removed from the site at an increased caliper; in general, the applicant argues that the full number of replacement trees will not fit on the site and that environmental remediation efforts adequately compensate for the loss of the unreplaced trees.

There are ten on-site City-regulated wetlands totaling 2.767 acres and the concept plan proposes 0.557 acres of impact to the wetlands. An impact of 2.01 acres on the 25 foot natural features setback is anticipated as well. The applicant has proposed 0.98 acres of wetland mitigation. See wetlands consultant review regarding recommendations to consider alternative lot arrangements to reduce impacts on higher quality wetlands.

Major Conditions of Planned Rezoning Overlay Agreement

The Planned Rezoning Overlay process involves a PRO concept plan and specific PRO conditions in conjunction with a rezoning request. The submittal requirements and the process are codified under the PRO ordinance (Section 7.13.2). Within the process, which is completely voluntary by the applicant, the applicant and City Council can agree on a series of conditions to be included as part of the approval.

The applicant is required to submit a conceptual plan and a list of terms that they are willing to include with the PRO agreement. The applicant has submitted a conceptual plan showing the general layout of the internal roads and lots, the location of the proposed detention ponds, location of the proposed open space, and proposed landscaping throughout the development. The applicant has also provided conceptual home elevations and 3-D renderings of extensive landscaping at the development entrance. The applicant has described conditions for the rezoning, summarized as such:

1. Tax benefits for the City.
2. Maximum number of units shall be 31 single family detached dwelling units (80% of the density permitted by the proposed zoning)
3. High-end landscaping
4. High-end home construction
5. Minimum unit width shall be 90 feet and minimum square footage of 13,860 square feet.
6. Significant brownfield environmental cleanup with funds potentially coming back to the City.
7. Installation of a “Welcome to Novi” landmark feature
8. \$25,000 contribution to the ITC Community Sports Park Trail (to be coordinated with Parks, Recreation and Cultural Services).

Ordinance Deviations

Section 7.13.2.D.i.c(2) permits deviations from the strict interpretation of the Zoning Ordinance within a PRO agreement. These deviations must be accompanied by a finding by City Council that *“each Zoning Ordinance provision sought to be deviated would, if the deviation were not granted, prohibit an enhancement of the development that would be in the public interest, and that approving the deviation would be consistent with the Master Plan and compatible with the surrounding areas.”* Such deviations must be considered by City Council, who will make a finding of whether to include those deviations in a proposed PRO agreement. The proposed PRO agreement would be considered by City Council after tentative approval of the proposed concept plan and rezoning.

The Applicant and City staff have identified 6 variances that will be needed:

1. No berm along Beck Road due to existing natural features.
2. Landscaping does not meet the minimum requirement for canopy and sub-canopy trees along the public right-of-way.
3. Landscaping does not meet street tree requirements along 8 Mile and Beck—the Applicant is seeking Road Commission for Oakland County approval for additional large-caliper trees.
4. The minimum requirements for storm basin landscape are not met.
5. The required stub street to the west is not provided.
6. The distance between the emergency access and 8 Mile Road exceeds the maximum (this variance is granted by the City Council).

Additional Deviations noted due to change in requested zoning designation (R-1 proposed currently, R-3 proposed previously) and other changes to the plan:

The concept plan submitted with an application for a rezoning with a PRO is not required to contain the same level of detail as a preliminary site plan. Staff has reviewed the concept plan inasmuch detail as possible to determine what deviations from the Zoning Ordinance are currently shown. The applicant may choose to revise the concept plan to better comply with the standards of the Zoning Ordinance, or may proceed with the plan as submitted with the understanding that those deviations would have to be approved by City Council in a proposed PRO agreement. The following are deviations from the Zoning Ordinance (Section 3.1.2) and other applicable ordinances shown on the concept plan (sheet 2 needs to be updated to reflect R-1 zoning requirements):

1. Lot Size and Width: Per Section 3.1.2 of the Zoning Ordinance, **the R-1 One-Family Residential Zoning district requires a minimum lot size of 21,780 square feet and a minimum lot width of 120 feet. The applicant has proposed a minimum lot size of 13,860 square feet and a minimum width of 90 feet. These deviations should be included in the**

PRO Agreement. For reference, the proposed lot sizes more closely reflect the R-3 Zoning District, but the overall density at 1.32 units/acre more closely reflects the R-1 (requested) Zoning District.

2. **Setbacks:** The minimum side yard setback for a single-family dwelling in this district is 15 feet with an aggregate of 40 feet. The applicant has proposed a minimum 10 foot side yard setback (with an aggregate of 30 feet). These deviations should be included in the PRO Agreement and should be updated on Sheet 2.
3. **Woodland Replacement Trees:** The applicant is requesting a deviation from ordinance requirements that require the applicant to plant, or pay into the City's tree fund for the equivalent of 230 required woodland replacement trees. The applicant has stated that the cost to remedy the existing soil remediation issues is significant enough to negate the City's requirements to provide a Woodland Replacement Guarantee for the remaining trees that will not be planted.
4. **Landscape waivers:** A number of deviations from the landscaping standards are being proposed. See the landscape review letter for additional details.

Applicant Burden under PRO Ordinance

The Planned Rezoning Overlay ordinance requires the applicant to demonstrate that certain requirements and standards are met. The applicant should be prepared to discuss these items. Section 7.13.2.D.ii states the following:

1. *(Sec. 7.13.2.D.ii.a) Approval of the application shall accomplish, among other things, and as determined in the discretion of the City Council, the integration of the proposed land development project with the characteristics of the project area, and result in an enhancement of the project area as compared to the existing zoning, and such enhancement would be unlikely to be achieved or would not be assured in the absence of the use of a Planned Rezoning Overlay.*
2. *(Sec. 7.13.2.D.ii.b) Sufficient conditions shall be included on and in the PRO Plan and PRO Agreement on the basis of which the City Council concludes, in its discretion, that, as compared to the existing zoning and considering the site specific land use proposed by the applicant, it would be in the public interest to grant the Rezoning with Planned Rezoning Overlay; provided, in determining whether approval of a proposed application would be in the public interest, the benefits which would reasonably be expected to accrue from the proposal shall be balanced against, and be found to clearly outweigh the reasonably foreseeable detriments thereof, taking into consideration reasonably accepted planning, engineering, environmental and other principles, as presented to the City Council, following recommendation by the Planning Commission, and also taking into consideration the special knowledge and understanding of the City by the City Council and Planning Commission.*

Public Benefit under PRO Ordinance

Section 7.13.2.D.ii states that the City Council must determine that the proposed PRO rezoning would be in the public interest and the public benefits of the proposed PRO rezoning would clearly outweigh the detriments. The applicant has identified the public benefits listed below at this time. These proposed benefits will be weighed against the proposal to determine if they clearly outweigh any detriments of the proposed rezoning.

1. Tax benefits for the City including significant property taxes and potential Brownfield benefits from Oakland County.
2. Significant brownfield environmental cleanup.
3. Installation of a “Welcome to Novi” landmark feature.
4. \$25,000 donation to the Parks, Recreation and Cultural Services Department to be applied toward the construction of the ITC Community Sports Park Trail.
5. High-end landscaping.

Submittal Requirements

- Rezoning signs must be erected along the property’s frontage in accordance with submittal requirements and in accordance with the public hearing requirements for the rezoning request. The signs should be erected no later than 15 days prior to the scheduled public hearing. The concept plan does not show the proposed locations of the two required rezoning signs.

Planning Commission Options

The Planning Commission has the following options for its recommendation to City Council:

1. Recommend City Council conditionally approve the request to rezone the parcel to R-1, One-- Family Residential with a Planned Rezoning Overlay (APPLICANT REQUEST); OR
2. Recommend City Council deny the request to rezone the parcel to R-1 with a PRO, with the zoning of the property to remain RA; OR
3. Recommend City Council rezone the parcel to a zoning district other than R-1 (an additional public hearing may be required); OR
4. Postpone consideration of the request for further study or consideration of another alternative.

Recommendation

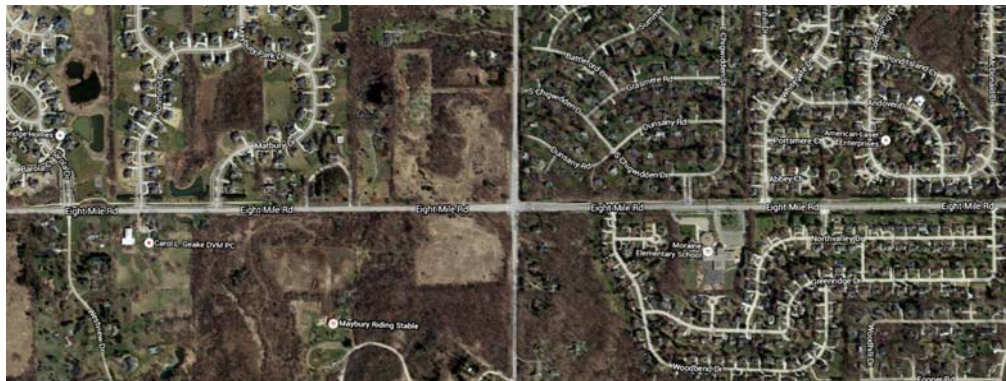
Clearzoning **recommends approval** of the proposed PRO and concept plan (JSP14-18 and Rezoning 18.707 for the 31-unit detached residential development to rezone property at the northwest corner of Eight Mile Road and Beck Road, from RA, Residential Acreage to R-1 One Family Residential with a Planned Rezoning Overlay for the following reasons:

- The applicant has presented a reasonable alternative to the proposed Master Plan designation of a maximum of 0.8 units/acre to an actual 1.32 units/acre, and which supports several objectives of the Master Plan for Land Use as noted in this review letter.
- The proposed density of 1.32 units/acre provides a reasonable transitional use between the lower density developments to the north and west, and the existing higher density developments to the east, in the City of Northville, and Maybury State Park on the south side of Eight Mile Road.
- The site will be adequately served by public utilities.
- The proposed zoning and proposed use represents only a nominal increase in expected site-generated traffic relative to development permitted under existing zoning.
- Submittal of a concept plan, and any resulting PRO Agreement, provides assurances to the Planning Commission and to the City Council of the manner in which the property will be developed.
- The proposed concept plan shows the intent of the applicant to remediate environmental contamination of the site as a part of the development plan, which will improve the land through the removal of potential environmental hazards.

Sincerely,
CLEARZONING, INC.

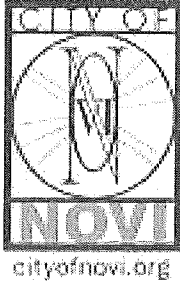


Rodney L. Arroyo, AICP
President



2015 Aerial – Google

ENGINEERING REVIEW



PLAN REVIEW CENTER REPORT

11/13/2015

Engineering Review

DUNHILL PARK
JSP15-0013

Applicant

HUNTER PASTEUR HOMES DUNHILL PARK

Review Type

PRO Revised Concept Plan

Property Characteristics

- Site Location: N. of 8 Mile Rd. and W. of Beck Rd.
- Site Size: 23.76 acres
- Plan Date: 10/20/15

Project Summary

- Construction of a 31 lot subdivision. Site access would be provided by a single curb cut on 8 Mile Rd. to internal roadways.
- Water service would be provided by 12-inch and 8-inch extension from the existing 12-inch water main along the north side of 8 Mile Rd. approximately 1,100 feet to the west, along with 8 additional hydrants.
- Sanitary sewer service would be provided by an extension of the existing 10-inch sanitary sewer running along the north property line.
- Storm water would be collected by a single storm sewer collection system and detained in an on-site basin.

Recommendation

Approval of the Revised Concept Plan and Preliminary Storm Water Management Plan is recommended.

Comments:

The revised Concept Plan meets the general requirements of Chapter 11, the Storm Water Management Ordinance and the Engineering Design Manual with the following items to be addressed at the time of Preliminary Site Plan submittal (further engineering detail will be required at the time of the final site plan submittal):

Additional Comments (to be addressed prior to the Final Site Plan submittal):

General

1. A right-of-way permit will be required from the City of Novi and Oakland County.
2. Provide a traffic control sign table listing the quantities of each sign type proposed for the development. Provide a note along with the table stating all traffic signage will comply with the current MMUTCD standards.
3. Traffic signs in the RCOC right-of-way will be installed by RCOC.
4. Provide a note stating if dewatering is anticipated or encountered during construction a dewatering plan must be submitted to the Engineering Department for review.
5. 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.
6. The City standard detail sheets are not required for the Final Site Plan submittal. They will be required with the Stamping Set submittal. They can be found on the City website (www.cityofnovi.org/DesignManual).

Water Main

7. **The proposed water main dead end exceeds 800-feet, provided modeling data showing sufficient fire flows at the dead end or provide a loop connection approved by the City Engineer. An offsite easement may be required for the loop connection.**
8. Provide a plan and profile for the off-site water main construction.
9. The water main stubs shall terminate with a hydrant followed by a valve in well. If the hydrant is not a requirement of the development for another reason the hydrant can be labeled as temporary allowing it to be relocated in the future.
10. Three (3) sealed sets of revised utility plans along with the MDEQ permit application (1/07 rev.) for water main construction and the Streamlined Water Main Permit Checklist should be submitted to the Engineering Department for review, assuming no further design changes are anticipated. Utility plan sets shall include only the cover sheet, any applicable utility sheets and the standard detail sheets.

Sanitary Sewer

11. Provide a basis of design.
12. Provide size and material for proposed sanitary sewer.
13. Seven (7) sealed sets of revised utility plans along with the MDEQ permit application (04/14 rev.) for sanitary sewer construction and the Streamlined Sanitary Sewer Permit Certification Checklist should be submitted to the Engineering Department for review, assuming no further design changes are anticipated. Utility plan sets shall include only the cover sheet, any applicable utility sheets and the standard detail sheets. Also, the MDEQ can be contacted for an expedited review by their office.

Storm Sewer

14. A minimum cover depth of 3 feet shall be maintained over all storm sewers. Currently, a few pipe sections do not meet this standard. Grades shall be elevated and minimum pipe slopes shall be used to maximize the cover depth. In situations where the minimum cover cannot be achieved, Class V pipe must be used with an absolute minimum cover depth of 2 feet. An explanation shall be provided where the cover depth cannot be provided.
15. Provide a 0.1-foot drop in the downstream invert of all storm structures where a change in direction of 30 degrees or greater occurs.
16. Match the 0.80 diameter depth above invert for pipe size increases.
17. Storm manholes with differences in invert elevations exceeding two feet shall contain a 2-foot deep plunge pool.
18. Provide a four-foot deep sump and an oil/gas separator in the last storm structure prior to discharge to the storm water basin.
19. Label all inlet storm structures on the profiles. Inlets are only permitted in paved areas and when followed by a catch basin within 50 feet.
20. Label the 10-year HGL on the storm sewer profiles, and ensure the HGL remains at least 1-foot below the rim of each structure.

Storm Water Management Plan

21. The Storm Water Management Plan for this development shall be designed in accordance with the Storm Water Ordinance and Chapter 5 of the new Engineering Design Manual.
22. Provide detention time calculations for the bankfull volume. The bankfull volume must be detained for 24 to 40 hours.
23. Provide a soil boring in the vicinity of the storm water basin to determine soil conditions and to establish the high water elevation of the groundwater table.

Paving & Grading

24. The length of Street A exceeds the maximum of 1,000 feet and would require a variance unless an emergency access is provided. The access could be temporary until adjacent development occurs to provide secondary access.

Or provided a DCS Variance request to wave this requirement, staff would support this request.

25. A stub street shall be provided to the west for future connection or a variance would be required. **Or provided a DCS Variance request to wave this requirement, staff would support this request.**
26. Provide detailed grading for the hammer head turn around at the north property line.
27. The emergency access must be paved or grass pavers.
28. Clarify if the streets are to be public or private.
29. Provide a pathway connection to the west. If a stub street is provided to the west, the sidewalk adjacent to the street would provide that connection.
30. Add a note to the plan stating that the emergency access gate is to be installed and closed prior to the issuance of the first TCO in the subdivision.

Please contact Jeremy Miller at (248) 735-5694 with any questions.



cc: Adam Wayne, Engineering
Brian Coburn, Engineering
Sri Komaragiri, Community Development
Becky Arold, Water & Sewer

LANDSCAPE REVIEW



PLAN REVIEW CENTER REPORT

November 12, 2015

Revised PRO Conceptual Site Plan

Dunhill Park

Review Type

Conceptual Landscape Review

Job

JSP15-0013

Property Characteristics

- Site Location: Northwest corner of Beck and Eight Mile Roads
- Site Zoning: RA
- Adjacent Zoning: RA to north and west, Northville to east, Maybury State Park to south
- Plan Date: 10/20/2015

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. Please follow guidelines of the Zoning Ordinance and Landscape Design Guidelines. This review is a summary and not intended to substitute for any Ordinance.

Recommendation:

This concept is **recommended for approval**. The basic concept and layout indicate that there is sufficient room provided to meet city requirements, but it still proposes significant variations from the current landscape ordinance provisions.

General comments:

- The concept for right-of-way landscaping does not meet the goals of the landscape ordinance for landscaping along Beck and Eight Mile roads and will need to be revised to more closely meet those goals.
- The landscape design manual (page 10) specifically lists areas where credits can be gained for using larger trees. Street trees, right-of-way landscaping and woodland replacement trees are listed as tree requirements that cannot be reduced through the use of larger trees. Larger trees can be used, but no reduction in tree quantities provided can be achieved through this use.
- The diversity of trees along the frontages.

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

Soil information is provided.

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

1. The overhead power line along Beck Road has been added, and street trees have been located along the rear lot lines instead of along the right-of-way line because of an existing, low-hanging property line. **It is preferable to have the street trees along the right-of-way line. If that power line can be raised, it should be, and subcanopy trees should be placed within the right-of-way line as are proposed along 8 Mile Road. If it can't be, the street trees should be located as close to the right-of-way line as possible**

without causing a conflict with the wires. A waiver can be sought for street trees that cannot be planted in the right-of-way due to existing natural conditions that are to be preserved.

2. Trees should be located at least 10' away from all utility structures. It appears that some internal street trees are closer than that and should be shifted over in preliminary and final site plans.

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

Existing trees, proposed removals and removal/replacement calculations are shown on Sheets W-1 through W-3.

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

1. Tree fencing has been added to the plans. It should also appear on the removal/demolition plan when that sheet is added to the set.
2. Please modify the tree fence detail to show it is to be placed at 1' outside the dripline.
3. Please include the tree labels of trees to be saved on sheets L-101 and L-102.

Woodland Replacement Trees

1. While the applicant is no longer specifically requesting credit for larger replacement trees, they are requesting as part of the PRO that the 230 remaining trees they are not planting not be required in recognition of the significant cost of remediation of the site. This has not been granted on other projects currently under consideration that have required site remediation and is not recommended in this case. If the applicant wishes to plant smaller trees (i.e. 2.5" caliper deciduous canopy trees and 6' height evergreen trees) to help save costs, they may do so as those are the minimum size trees required for woodland replacements. The applicant may also contribute to the city tree fund for trees they cannot place on the site.
2. *Ulmus x* Frontier elms are not on the Woodland Replacement Chart so they can't be planted as replacement trees for credit. Valley Forge Elm or other *Ulmus americana* selections may be used.
3. Woodland replacement trees have been uniquely marked on the plans per request.

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

1. Calculations have been provided for the landscaping in the greenbelts along Beck and 8 Mile Roads. Waivers for the extent of frontage occupied by natural areas that would be negatively impacted by the construction and planting of the required berms and landscaping can be sought. Staff would support the waiver for the section of Beck Road that is wetland and the waiver for the wetland mitigation area since screening of homes adjacent to it has been provided with woodland replacement trees. **Calculations showing the number of canopy/large evergreen and sub-canopy trees not being planted due to the waiver should be added to the plans.**
2. Three additional canopy tree species have been added to the curving landscape along the rear lot property lines which increases the diversity of the plantings, as requested. However, contrary to the statement in the response letter, staff doesn't support using canopy trees to meet the subcanopy tree requirement of the greenbelt plantings. Two tight clusters of crabapples have been provided near the entrance, but the count is still far below what the calculations show are required. The applicant has used just canopy trees along the rear property lines and has maintained the wide expanse of bermed lawn between the right-of-way and the line of canopy trees. Please note the spacing guidelines for various tree and shrub types on second page of the Landscape Design Manual.
3. While the berms are fairly geometric in nature, they do have variations in height and width, and do have a 2' crest so they are acceptable.

4. Plants have been labeled uniquely per the requirement they're fulfilling as requested.
5. **Please add proposed contours to the landscape plan for the entire site when they are available.**

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

1. **Calculations for street trees have been provided and a line of street trees along Eight Mile Road has been proposed. If the Oakland County Road Commission prohibits any or all of those trees, a waiver for the prohibited trees will be supported but all allowed trees need to be planted.**
2. **Please consider changing those street trees from flowering pears to some other subcanopy species. Unfortunately, we are seeing a number of flowering pears self-seeding and growing wild in open spaces. It is not currently on our list of invasive species, but it is acting invasively, and cooperation toward reducing the numbers of it on the plan would be appreciated.**
3. **Street trees have been proposed for Beck Road, but not within the Right-of-Way. A low-hanging utility wire is a reasonable cause for locating the trees elsewhere, but they should be located as close to the right-of-way line as possible, not along the rear lot lines. A waiver can be sought to avoid planting street trees altogether in the area to remain natural if there is insufficient room for those trees along the right-of-way. This waiver would be supported by staff. The number of trees not planted would need to be provided on the plan.**
4. Staff would accept the reduction in street trees in favor of larger trees as part of the PRO, since the roads will be private roads in a gated community.
5. Additional landscaping has been added to the cul-de-sac islands, per the ordinance.

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

Large, native shrubs planted in clusters around 70-75% of the rim are required by the ordinance. Instead, the applicant is proposing canopy trees as part of the PRO. This is acceptable in that the trees may provide shading of the pond, which is desirable. No fertilizers should be used on the grassy areas in the basin in order to promote better water quality within the pond.

Transformer/Utility Box Screening (Zoning Sec 5.5.3.D.)

When proposed transformers/utilities/fire hydrants are available, add to landscape plan and adjust plant spacing accordingly.

Plant List (LDM 1.d.(1).(d) and LDM 2.h. and t.)

1. Plant lists have been provided that meet the city requirements.
2. **Note the requirements for species diversity in the Landscape Design Manual (Section 1.d.(1).(d). The overall diversity of the development needs to conform to these guidelines. The large number of just a few types of trees (especially maples) does not appear to be in conformance with this requirement.**

Planting Notations and Details (LDM)

1. Details provided meet City of Novi requirements.
2. City of Novi landscape notes have been provided.
3. For final site plans, costs per the City of Novi Community Development Fee Schedule need to be provided for all plants, including seed and sod, and mulch proposed to be used on the site.

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

An Irrigation plan for landscaped areas is required for Final Site Plan.

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

Please show contours for entire site – not just berms and detention basin, on preliminary and final site plans.

Snow Deposit (LDM.2.q.)

Please indicate areas to be used for snow plowing that won't harm existing or proposed landscaping.

Corner Clearance (Zoning Sec 5.9)

Indicate Corner Clearance triangles for interior roads as well as intersection at Eight Mile Road.

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 rmeader rmeader@cityofnovi.org.



Rick Meader – Landscape Architect

WETLANDS REVIEW

November 12, 2015

Ms. Barbara McBeth
Deputy Director of Community Development
City of Novi
45175 W. Ten Mile Road
Novi, Michigan 48375

Re: Dunhill Park (JSP15-0013)
Wetland Review of the Revised Concept/PRO Plan (PSP15-0159)

Dear Ms. McBeth:

Environmental Consulting & Technology, Inc. (ECT) has reviewed the Revised Concept/PRO Plan for the proposed Dunhill Park single-family residential condominium project located at the northwest corner of Eight Mile Road and Beck Road in Section 32. This included the review of the Planned Rezoning Overlay Plan (PRO) prepared by Seiber, Keast Engineering, L.L.C. dated October 20, 2015 (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. ECT conducted a preliminary wetland evaluation for the property on August 12, 2015 and reviewed re-flagged wetland boundaries on Tuesday, October 27, 2015.

ECT does not currently recommend approval of the Revised Concept/PRO Plan for Wetlands. ECT recommends that the applicant consider and implement the Wetland Comments noted in this letter prior to receiving Wetland approval of the Plan.

The Plan proposes the construction of a 31-unit single-family development on approximately 23 acres. The property is currently zoned RA (Residential Acreage) and is proposed to be rezoned to a Planned Rezoning Overlay (PRO). The applicant states that the property has not been developed in the past due to known environmental issues that significantly impact the site.

The proposed project site contains several areas of City-Regulated Wetlands (see Figure 1).

City of Novi Ordinance Requirements

The City of Novi Wetland and Watercourse Protection Ordinance (City of Novi Code of Ordinances, Part II, Chapter 12, and Article V.) describes the regulatory criteria for wetlands and review standards for wetland permit applications.

As stated in the Ordinance, it is the policy of the city to prevent a further net loss of those 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).

The wetland essentiality criteria as described in the Wetland and Watercourse Protection Ordinance are included below. Wetlands deemed essential by the City of Novi require the approval of a use permit for any proposed impacts to the wetland.

All noncontiguous wetland areas of less than two (2) acres which appear on the wetlands inventory map, or which are otherwise identified during a field inspection by the city, shall be analyzed for the purpose of determining whether such areas are essential to the preservation of the natural resources of the city....In making the determination, the city shall find that one (1) or more of the following exist at the particular site:

- (1) The site supports state or federal endangered or threatened plants, fish or wildlife appearing on a list specified in Section 36505 of the Natural Resources Environmental Protection Act (Act 451 of 1994) [previously section 6 of the endangered species act of 1974, Act No. 203 of the Public Acts of 1974, being section 229.226 of the Michigan Compiled Laws].*
- (2) The site represents what is identified as a locally rare or unique ecosystem.*
- (3) The site supports plants or animals of an identified local importance.*
- (4) The site provides groundwater recharge documented by a public agency.*
- (5) The site provides flood and storm control by the hydrologic absorption and storage capacity of the wetland.*
- (6) The site provides wildlife habitat by providing breeding, nesting or feeding grounds or cover for forms of wildlife, waterfowl, including migratory waterfowl, and rare, threatened or endangered wildlife species.*
- (7) The site provides protection of subsurface water resources and provision of valuable watersheds and recharging groundwater supplies.*
- (8) The site provides pollution treatment by serving as a biological and chemical oxidation basin.*
- (9) The site provides erosion control by serving as a sedimentation area and filtering basin, absorbing silt and organic matter.*
- (10) The site provides sources of nutrients in water food cycles and nursery grounds and sanctuaries for fish.*

After determining that a wetland less than two (2) acres in size is essential to the preservation of the natural resources of the city, the wetland use permit application shall be reviewed according to the standards in subsection 12-174(a).

The site was reviewed for the presence of regulated wetlands as defined in the City of Novi Wetland and Watercourse Protection Ordinance. ECT staff met on-site with the Applicant's wetland consultant (King and MacGregor Environmental, Inc. - KME), most-recently on Tuesday, October 27, 2015.

ECT's in-office review of available materials included the City of Novi Regulated Wetland and Watercourse map, USGS topographic quadrangle map, NRCS soils map, USFWS National Wetland Inventory map, and historical aerial photographs dating back to the 1940's.

Onsite Wetland Evaluation

ECT visited the site on August 12, 2015 for the purpose of a preliminary wetland boundary verification. In addition, ECT visited the site again on Tuesday, October 27, 2015 in order to review the recently-reflagged wetland boundaries completed by the applicant's wetland consultant, KME. The focus of the site inspection was to review site conditions in order to determine whether the on-site wetlands meet the City of Novi's Wetland Essentiality Criteria. Wetland boundary flagging was in place at the time of this site inspection. ECT reviewed the flagging and agrees that the wetland boundaries were accurately flagged in the field. It should be noted that the wetland boundaries as shown on the current Plan do not appear to represent the most recent wetland boundary information flagged most-recently by KME. The applicant's wetland consultant appeared to have updated wetland boundary information at the time of our site visit, including having had flagged an additional small wetland area (Wetland L) that does not appear to be shown on the current Plan.

The Plan indicates nine (9) total areas of on-site wetland (Wetlands A through K). The wetlands include:

- Wetland "A" – 1.22 acre;
- Wetland "C" – 0.29-acre;
- Wetland "D" – 0.01-acre;
- Wetland "E" – 0.01-acre;
- Wetland "F" – 0.04-acre;
- Wetland "G" – 0.06-acre;
- Wetland "H" – 1.09 acre;
- Wetland "I" – 0.007-acre;
- Wetland "K" – 0.04-acre;

Total Wetland – 2.767 acres

Wetland C is a forested wetland area and the other wetland areas are emergent and/or scrub shrub wetlands. The forested wetland areas (Wetland C) contain mainly black willow (*Salix nigra*), and box elder (*Acer negundo*). Wetland C appears to be the higher quality wetland on-site.

Many of the on-site wetlands (Wetlands D, E, F, G, I and K) are dominated by invasive species. The vegetation consists of mainly reed-canary grass (*Phalaris arundinacea*) or common reed (*Phragmites australis*). These wetlands are emergent/wet meadow wetland types and all except Wetland K appear to be located within areas of the site that have been previously-disturbed. These areas are not depicted as wetlands on the available mapping materials or the official City of Novi Regulated Wetland and Watercourse map. Wetlands D, E, F, G and I appear to be the result of previous man-made site disturbances.

What follows is a summary of the wetland impacts associated with the proposed site design.

Wetland Impact Review

The Plan includes some level of proposed impact to all of the on-site wetlands and the associated 25-foot wetland setbacks located on this property. Most of these impacts are for the purpose of lot development. The current Plan indicates a total of 0.617-acre of proposed impact to the 2.767 acres of existing on-site wetlands, as well as 2.14 acres of proposed wetland buffer impacts. It should be noted that the amount of proposed impacts to wetlands remains unchanged from the previous plan submittal. The proposed impact to 25-foot wetland setbacks has increased, only slightly, from 2.01 acres.

The following table summarizes the existing wetlands and the proposed wetland impacts as listed on the *Planned Rezoning Overlay Plan* (Sheet 2):

Table 1. Proposed Wetland Impacts

Wetland Area	City Regulated?	MDEQ Regulated?	Wetland Area (acres)	Impact Area (acre)	Estimated Impact Volume (cubic yards)
A	Yes	Not Likely	1.22	0.36	Not Provided
C	Yes	Not Likely	0.29	0.04	Not Provided
D	No	Not Likely	0.01	0.01	Not Provided
E	No	Not Likely	0.01	0.01	Not Provided
F	No	Not Likely	0.04	0.04	Not Provided
G	No	Not Likely	0.06	0.06	Not Provided
H	Yes	Not Likely	1.09	0.05	Not Provided
I	No	Not Likely	0.007	0.007	Not Provided
K	Yes	Not Likely	0.04	0.04	Not Provided
TOTAL	--	--	2.767	0.617	Not Provided

It should be noted that during our most-recent site assessment, ECT has confirmed that Wetlands D, E, F, G, and I do not appear to be considered essential wetlands based on the requirements in the City's Wetland Ordinance.

The currently-proposed impacts to essential/City-regulated wetlands (i.e., Wetlands A, C, H, and K) appear to total 0.49-acre. These impacts are above the City of Novi 0.25-acre impact area threshold for compensatory wetland mitigation. Previously-submitted plans proposed two (2) areas of on-site wetland mitigation, totaling 0.98-acre. The proposed wetland mitigation areas shown on the previous plan appear to have been (perhaps unintentionally) omitted from the current Plan.

In a response letter dated October 23, 2015, the applicant states that no changes have been made to the proposed wetland impacts or mitigation from the previous plan submittal. However, this response

letter also states that the plans no longer propose to fill the small wetland (Wetland G, 0.06-acre) where Lot 23 was located. The letter also states that wetland mitigation is provided for all city regulated wetlands on the site at a ratio of 1.5 (mitigation) to 1 (fill). This information does not appear to be consistent with what has been indicated on the current Plan (including the *Wetland Impact* table on Sheet 2). Based on the current Plan, 0.735-acre of wetland mitigation would be required.

Subsequent plans should clearly indicate all areas of wetland (and wetland buffer) impacts and graphically indicate all areas of proposed wetland mitigation. In addition, all impacts to City-regulated wetlands shall be mitigated at a 1.5-to-1 ratio.

In addition to wetland impacts, the Plan also specifies impacts to the 25-foot natural features setbacks. The following table summarizes the existing wetland setbacks and the proposed wetland setback impacts as listed on the *Planned Rezoning Overlay Plan*, Sheet 2):

Table 2. Proposed Wetland Buffer Impacts

Wetland Area	Wetland Buffer Area (acres)	Wetland Buffer Impact Area (acre)
A	1.08	0.66
C	0.56	0.42
D	0.09	0.09
E	0.11	0.11
F	0.13	0.13
G	0.14	0.14
H	0.43	0.33
I	0.09	0.09
K	0.17	0.17
TOTAL	2.80	2.14

Permits & Regulatory Status

The on-site wetlands do not appear to be regulated by the Michigan Department of Environmental Quality (MDEQ) as they do not appear to be within 500 feet of a watercourse/regulated drain. In addition, none of the wetlands appear to be greater than 5 acres in size. The Applicant should provide any associated information with respect to the regulatory status of the on-site wetlands by MDEQ to the City for review. It is the applicant's responsibility to contact the MDEQ in order to determine if a wetland permit will be required for the proposed wetland impacts. The City of Novi requires this clarification prior to issuing a City of Novi Wetland Permit.

The project as proposed will require a City of Novi *Wetland Non-Minor Use Permit* as well as an *Authorization to Encroach the 25-Foot Natural Features Setback*. This permit and authorization are

required for the proposed impacts to wetlands and regulated wetland setbacks. Several of the on-site wetlands (Wetlands A, C, H, and K) appear to be considered essential by the City as they appear to meet one or more of the essentiality criteria set forth in the City's Wetland and Watercourse Protection Ordinance (i.e., storm water storage/flood control, wildlife habitat, etc.). As discussed above, during our most-recent site assessment, ECT has confirmed that Wetlands D, E, F, G, and I do not appear to be considered essential wetlands based on the requirements in the City's Wetland Ordinance, and therefore are not regulated by the City. Based on the size, location, and history of previous site disturbance, Wetlands D, E, F, G, I, and K do not significantly provide any of the functions included in the essentiality criteria. These wetlands should therefore not be considered regulated by the City's Wetland and Watercourse Protection Ordinance as they are not contiguous, are less than two acres in size, and are not found to be essential wetlands as defined in the City's wetland ordinance. Impacts to these wetlands will not require compensatory mitigation. Impacts to Wetlands A, C, H, and K will require mitigation.

Wetland Comments

The following are repeat comments from our Wetland Review of the Concept/PRO Plan dated August 19, 2015. The current status of each follows in ***bold italics***:

1. Wetland boundary flagging was not apparent in all areas of the site at the time of our preliminary site walk. ECT recommends that the applicant's wetland consultant re-flag/re-fresh the wetland delineation flags and submit to the City of Novi's Community Development Department for a Wetland Boundary Evaluation.

This comment has been addressed. The applicant's wetland consultant has re-flagged the on-site wetlands and our office confirmed the wetland boundaries on October 27, 2015. It should be noted that the current Plan does not appear to contain the most recent wetland boundary information. The applicant should review and revise the Plan as necessary.

2. ECT encourages the Applicant to minimize impacts to on-site wetlands and wetland setbacks to the greatest extent practicable. The Applicant should consider modification of the proposed lot boundaries and/or site design in order to preserve wetland and wetland buffer areas. 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".

This is especially true in the case of Wetland C, which appear to be the highest-quality on-site wetland. As noted above, most of these impacts are for the purpose of lot development. The

current Plan includes a total of 0.617-acre of proposed wetland impact and 2.01 acres of proposed wetland buffer impacts.

This comment has not been addressed. Proposed impacts to wetlands and wetland buffers essentially remain unchanged from the previous Plan submittal.

ECT suggests that efforts should be made in order to avoid impacts to Wetlands C. In addition, while the necessity to impact Wetland A in order to construct an access drive to the buildable upland area located in the northwest portion of the site is understood, it is ECT's opinion that the impacts to Wetland A for the purpose of constructing Lots 10 and 11 is not warranted.

With regard to the preservation of 25-foot wetland buffers, the applicant should work in order to preserve the buffer of Wetland C. The Plan currently includes an impact to 0.42-acre of the 0.56-acre setback (75%). The majority of this proposed impact appears to be for the purpose of development of individual lots (Lots 12, 13, and 20). It is ECT's opinion that the preservation of this 25-foot buffer area is important to the overall health of Wetland C, especially after site development. The existing buffer serves to filter pollutants and nutrients from storm water before entering the wetland, as well as provide additional wildlife habitat. These buffer areas may also currently have a positive slope towards Wetland C, therefore providing storm water runoff and hydrology to this wetland. As a detailed utility plan has not been provided, it is unclear if backyards will slope to Wetland C or if backyard drains will be installed to collect and route storm water to the wetland. This information should be clarified on subsequent site plan submittals.

2. The Applicant should demonstrate that alternative site layouts that would reduce the overall impacts to wetlands and wetland setbacks have been reviewed and considered.

This comment has not been addressed. See Comment #1, above.

3. Subsequent plans should indicate what wetland mitigation ratios have been used for each area of wetland impact (i.e., 1.5-to-1 or 2-to-1 for forested wetland areas, etc.).

This comment has been partially addressed. The proposed mitigation information appears to have been omitted from the Plan. The applicant should review and revise the Plan as necessary.

In addition, it should be noted that the previously-proposed wetland mitigation scenario was not ideal. The majority of the wetland mitigation was to be constructed south of Wetland H, near the east side of the site/Beck Road. In addition to being located within close proximity to a major road, a very large amount of earthwork/grading would be required in order to achieve the necessary grades/elevations to support the creation of a constructed wetland. The applicant should consider proposing wetland mitigation areas adjacent to some of the other existing wetland areas to remain (such as Wetland A, etc.).

4. The Applicant is encouraged to provide wetland conservation easements for any areas of remaining wetland or 25-foot wetland buffer. The Applicant should consider modification of the proposed lot boundaries and/or site design in order to preserve all wetland and wetland buffer areas.

This comment still applies.

5. The overall areas of the existing wetland and wetland buffer should be indicated on the Plan. The Plan indicates the acreage of proposed permanent disturbance to the wetland and wetland buffer but does not list the acreage of the wetland buffer areas themselves. The Plan should be reviewed and revised as necessary.

This comment has been partially addressed. While the areas of existing wetland and wetland buffer, as well as proposed impact areas, have been indicated on the Plan, it is our understanding that the wetland boundary information shown on the Plan does not represent the most current wetland delineation. The applicant should review and revise the Plan as necessary.

6. A plan to replace or mitigate for any permanent impacts to existing wetland buffers should be provided by the Applicant. In addition, the Plan should address how any temporary impacts to wetland buffers shall be restored, if applicable.

This comment has not been adequately addressed. The PRO Plan (Sheet 2) does not appear to clearly indicate the quantity or the location of any proposed wetland mitigation areas. In a response letter dated October 23, 2015, the applicant states that no changes have been made to the proposed wetland impacts or mitigation from the previous plan submittal. However, this response letter also states that the plans no longer propose to fill the small wetland (Wetland G, 0.06-acre) where Lot 23 was located. The letter also states that wetland mitigation is provided for all city regulated wetlands on the site at a ratio of 1.5 (mitigation) to 1 (fill). This information does not appear to be consistent with what has been indicated on the current Plan (including the Wetland Impact table on Sheet 2). Based on the current Plan, 0.735-acre of wetland mitigation would be required. The applicant is encouraged to review and revise the Plan as necessary.

Recommendation

ECT does not currently recommend approval of the Revised Concept/PRO Plan for Wetlands. ECT recommends that the applicant consider and implement the Wetland Comments noted in this letter prior to receiving Wetland approval of the Plan.

Dunhill Park (JSP15-0013)
Wetland Review of the Revised Concept/PRO Plan (PSP15-0159)
November 12, 2015
Page 9 of 10

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

Respectfully submitted,

ENVIRONMENTAL CONSULTING & TECHNOLOGY, INC.



Peter Hill, P.E.
Senior Associate Engineer



Matthew Carmer
Senior Scientist
Professional Wetland Scientist #1746

cc: Christopher Gruba, City of Novi Planner
Sri Komaragiri, City of Novi Planner
Richelle Leskun, City of Novi Planning Assistant
Rick Meader, City of Novi Landscape Architect

Attachments: Figure 1



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

TRAFFIC REVIEW



AECOM
27777 Franklin Road
Suite 2000
Southfield, MI 48034
www.aecom.com

248.204.5900 tel
248.204.5901 fax

November 16, 2015

Barbara McBeth, AICP
Deputy Director of Community Development
City of Novi
45175 W. 10 Mile Road
Novi, MI 48375

SUBJECT: Dunhill Park, Traffic Review of Revised Concept Planned Rezoning Overlay (PRO) Site Plan JSP15-0013

Dear Ms. McBeth,

The concept/PRO 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.

1. General Comments

- a. The applicant, Hunter Pasteur Homes Dunhill Park, LLC, is proposing the development of a 23-acre, 31-unit single-family residential development in the northwest quadrant of Eight Mile Road and Beck Road. The development provides site access through one (1) roadway intersecting Eight Mile Road.
- b. The site is currently zoned as RA Residential Acreage and the developer is proposing a PRO with R-1 overlay zoning.
- c. Beck Road is within the City of Novi's jurisdiction and Eight Mile Road is within the Road Commission for Oakland County's jurisdiction. All site roadways are proposed to be public.

2. Potential Traffic Impacts

- a. The applicant provided a revised rezoning traffic impact study which reviews the effects the proposed development may have on the existing roadway for R-1 zoning. The impacts on traffic due to a rezoning can be considered minimal. The PM peak hour can be expected to see the highest increase in traffic volumes throughout the day. A summary of the rezoning traffic impact study can be found in section 6 of this letter.
- b. The trips generated by the development are not expected produce traffic volumes in excess of the City's thresholds; therefore, further traffic impact studies are not recommended at this time.

3. General Plan Comments – Review of the plan generally shows compliance with City standards; however, the following items at minimum may require further detail in the Preliminary Plan submittal.

- a. Access to the proposed development is provided by one driveway that intersects with Eight Mile Road. The applicant is also proposing an emergency access road onto Beck Road.
- b. Proposed Roadways - Provide additional details for the intersection of the proposed Street "A" with Eight Mile Road, including but not limited to:
 - i. Nose offset of center island

- ii. Other details as necessary to convey design intent and the meeting of applicable City standards
- c. The MDOT Standard Plan R-28-F on sheet 3 should be updated with the latest version R-28-I.
- 4. Signing and Pavement Marking** – Review of the plan generally shows compliance with the Signing and Pavement Marking Master Plan.
 - a. The applicant should consider adding a sign table showing the proposed signs and their quantities.
- 5. Bicycle and Pedestrian** – The proposed pathway and sidewalk widths are in compliance with the City of Novi Bicycle and Pedestrian Master Plan.
- 6. Traffic Impact Studies**
 - a. The applicant provided a revised rezoning traffic impact study, dated November 16, 2015, which reviews the effects the proposed development may have on the existing roadway for R-1 zoning (proposed) in comparison to RA zoning (existing).
 - b. Under RA Residential ordinances, the 23.8-acre site can accommodate 19 single-family homes, based on the maximum density of 0.8 units per site. Under R-1 Residential ordinances, the 23.8-acre site can accommodate up to 39 single-family homes, based on a maximum density of 1.65 units per site. The proposed development includes 31 single-family homes, which falls within the R-1 zoning requirements. The traffic impacts associated with the different zoning scenarios is summarized in the table below.

Zoning Comparison	Number of Units	Traffic Generated from Site (veh/hr)	
		AM Peak Hour	PM Peak Hour
R-A Residential Acreage	19	23	24
R-1 Residential	39	37	45
Proposed Development	31	31	37
<i>Proposed Development vs. RA</i>	+12	+8	+13
<i>Proposed Development vs. R-1</i>	-8	-6	-8

- c. The proposed development is estimated to produce 31 trips in the AM peak hour and 37 trips in the PM peak hour, which is 8 more trips during the AM peak hour (13 more in the PM peak hour) than if the zoning were to remain at an RA designation.
- d. The overall impacts of the site-generated traffic can be considered nominal in comparison to the existing Eight Mile Road volumes.
- e. Similarly, the overall proposed site-generated traffic volumes do not meet the City's threshold of 100 trips per hour.

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

Sincerely,

AECOM





Sterling J. Frazier, E.I.T.
Reviewer, Traffic/ITS Engineer

A handwritten signature in blue ink, appearing to read 'Matthew G. Klawon'.

Matthew G. Klawon, PE
Manager, Traffic Engineering and ITS Engineering Services

FIRE REVIEW



November 2, 2015

TO: Barbara McBeth- Deputy Director of Community Development
Sri Komaragiri- Plan Review Center

RE: Dunhill Park
PSP#15-0159

CITY COUNCIL

Mayor
Bob Gatt

Mayor Pro Tem
Dave Staudt

Gwen Markham

Andrew Mutch

Doreen Poupard

Wayne Wrobel

Laura Marie Casey

City Manager
Pete Auger

**Director of Public Safety
Chief of Police**
David E. Molloy

Director of EMS/Fire Operations
Jeffery R. Johnson

Assistant Chief of Police
Victor C.M. Lauria

Assistant Chief of Police
Jerrod S. Hart

Project Description: A 31 single family home development on the Northwest corner of Eight Mile and Beck.

Comments:

- 1) Proposed water main exceeds maximum length without looping. **Provide water flow data for 12" main to meet flow requirements**
- 2) The single point entry exceeds maximum length. Site plan shall provide more than one point of external access to the site. A boulevard entranceway shall not be considered as providing multiple points of access. Multiple access points shall be as remote from one another as is feasible. The requirement for secondary access may be satisfied by access through adjacent property where an easement for such access is provided. Secondary access shall not be required. Provide a 20' wide and all weather secondary access for emergency vehicles. **11/2/15 Item Corrected**
- 3) Fire hydrants exceed maximum distance. In single family residential areas, hydrants shall be spaced a maximum of 500 feet apart. It is recommended that a hydrant be located at every intersection on the same corner with the street sign. This will help with locating the fire hydrants in winter when they are covered with snow. **Item corrected 8/13/15**

Recommendation: Recommended for approval

Sincerely,

Joseph Shelton- Fire Marshal
City of Novi – Fire Dept.
cc: file

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

cityofnovi.org

LETTER OF INTENT TO CONFORM TO THE FAÇADE ORDINANCE
DURING PRELIMINARY SITE PLAN



November 24, 2015

Ms. Sri Komaragiri, Planner
City of Novi
Community Planning Department
45175 W. Ten Mile Road
Novi, MI 48375

**Re: Dunhill Park PRO - JSP15-13
Rezoning R-1 with a PRO**

Dear Ms. Komaragiri:

Pursuant to your request and our previous e-mail correspondence on the facade review of Dunhill Park, the Applicant agrees to meet the following requirement as it relates to the elevations of the homes that will be offered at Dunhill Park. The additional elevations will be submitted at the time of preliminary site plan review.


There will be as many as six (6) or seven (7) different floor plans and elevations offered at the time of construction which will ensure diversity within the development. It is our intent to satisfy the requirements of the Similar/Dissimilar Ordinance which includes:

- Side and rear elevations with brick or stone to the second floor belt line as a minimum.
- An approximately equal number of each model will be used as required to comply with the Similar Dissimilar Ordinance. including a difference in the roof lines and basic building envelope geometry; typically at least two gables difference.

Please contact me should you have any questions.

Sincerely,

**FRANKLIN CONSTRUCTION COMPANY, L.L.C.
On Behalf of Hunter Pasteur Homes Dunhill Park, LLC**


Whitney Findlay
Project Manager

Cc: Randy Wertheimer, Hunter Pasteur Homes Dunhill Park, LLC
Seth Herkowitz, Hunter Pasteur Homes Dunhill Park, LLC
Jeff Sakwa, Hunter Pasteur Homes Dunhill Park, LLC
Andy Milia, Franklin Construction Company, L.L.C.
Karen Brown, Franklin Construction Company, L.L.C.

**SAMPLE ELEVATIONS
SUBJECT TO CHANGE DURING PRELIMINARY SITE PLAN**

THE CAMBRIDGE

HP HUNTER PASTEUR *Homes*



ELEVATION C



ELEVATION B



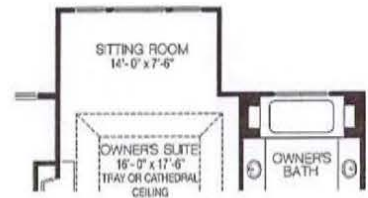
ELEVATION A



THE CAMBRIDGE



Optional
GUEST ROOM



Optional
SITTING ROOM

1st
FLOOR

The CAMBRIDGE

BEDROOMS.....	4
FULL BATHS.....	3
HALF BATHS.....	2
SQUARE FEET.....	4,150



2nd
FLOOR

MANY OPTIONS
AVAILABLE

Please Ask Your Sales Manager

We reserve the right to make changes to plans, prices, specifications & materials or to change or discontinue models without prior notice or obligation. Floorplan shown is Elevation A. Elevation A square footage may change. Rathmor Estates: 10' first floor ceilings and 9' second floor ceilings may result in specific room heights to change and may vary plan to plan.

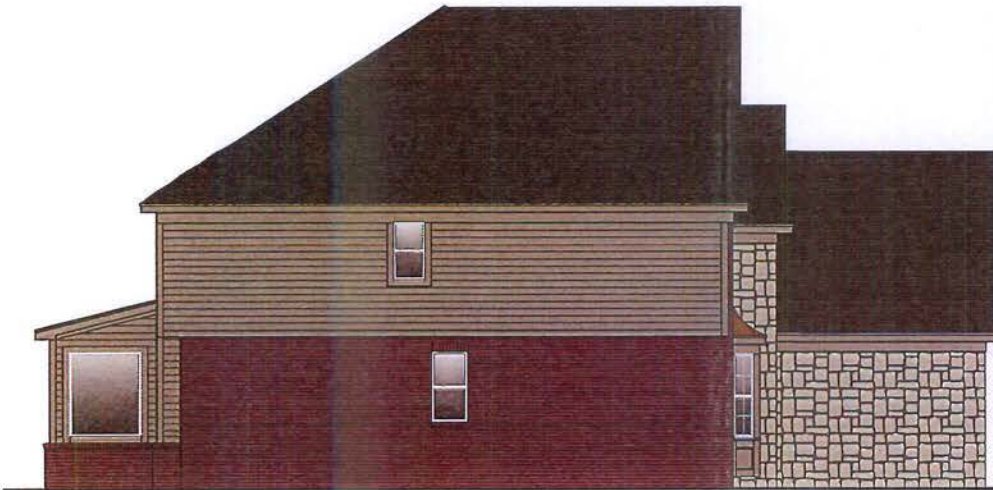




CAMBRIDGE - RIGHT ELEVATION
SCALE: 1/4" = 1'-0"



CAMBRIDGE - REAR ELEVATION
SCALE: 1/4" = 1'-0"



CAMBRIDGE - LEFT ELEVATION
SCALE: 1/4" = 1'-0"



CAMBRIDGE - FRONT ELEVATION
SCALE: 1/4" = 1'-0"

THE MADISON

HP HUNTER PASTEUR *Homes*

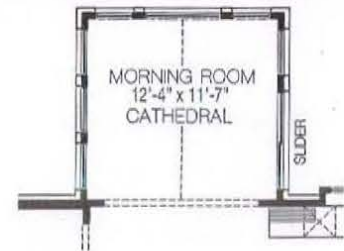
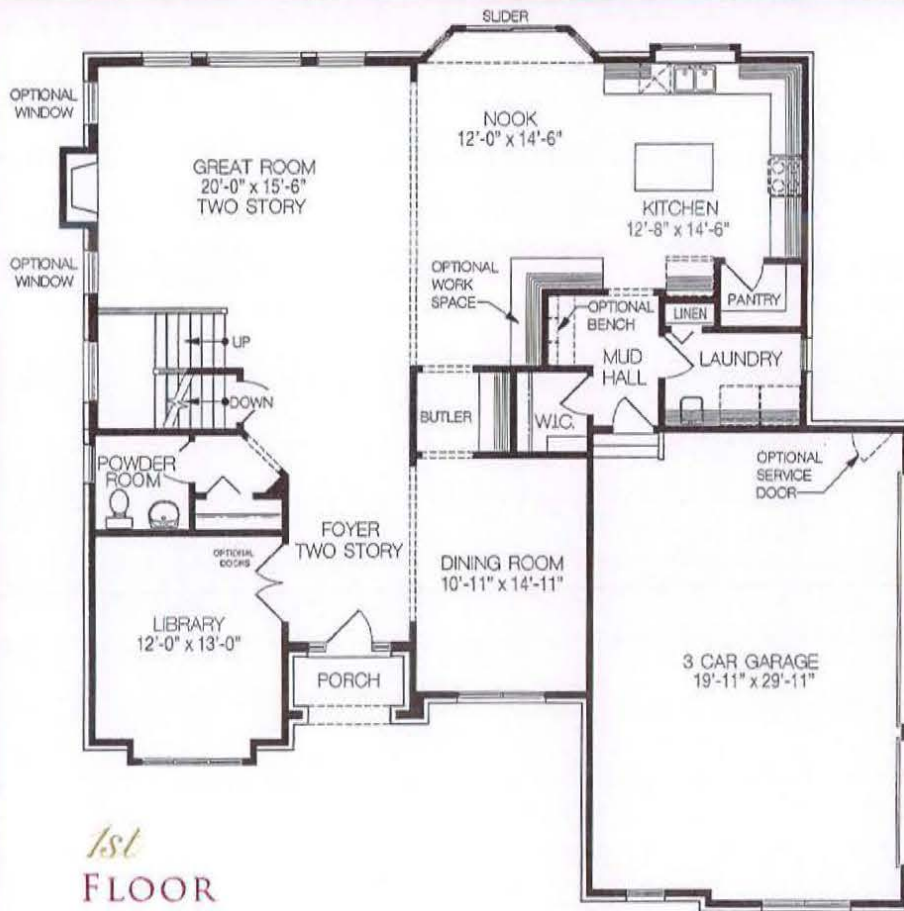


ELEVATION C

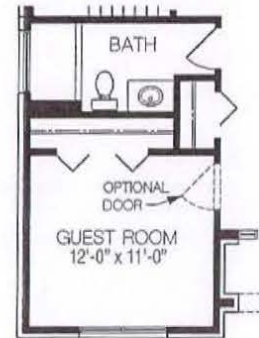


www.visitHPHomes.com

THE MADISON



Optional
MORNING ROOM - 158 SQ. FT.



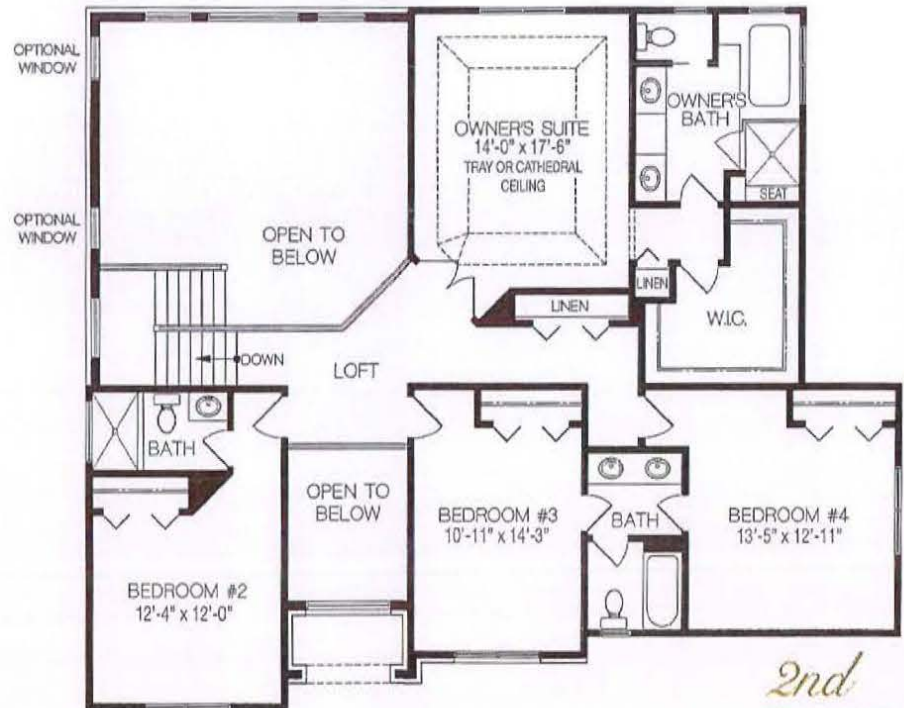
Optional
GUEST ROOM

The MADISON

BEDROOMS.....	4
BATHS.....	3.5
SQUARE FEET.....	3,200

MANY OPTIONS AVAILABLE

Please Ask Your Sales Manager



We reserve the right to make changes to plans, prices, specifications & materials or to change or discontinue models without prior notice or obligation. Floorplan shown is Elevation A. Elevation A square footage may change. Rathmor Estates: 10' first floor ceilings and 9' second floor ceilings may result in specific room heights to change and may vary plan to plan.

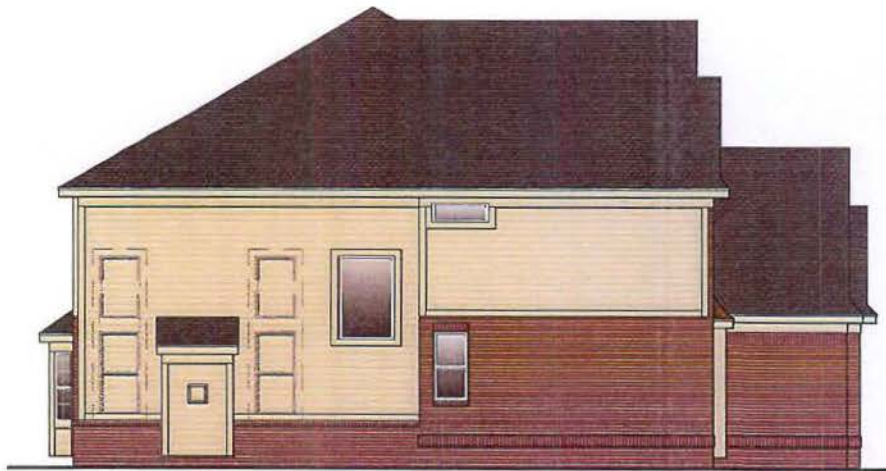




MADISON - RIGHT SIDE ELEVATION
SCALE: 1/4" = 1'-0"



MADISON - REAR ELEVATION
SCALE: 1/4" = 1'-0"



MADISON - LEFT SIDE ELEVATION
SCALE: 1/4" = 1'-0"



MADISON - FRONT ELEVATION
SCALE: 1/4" = 1'-0"

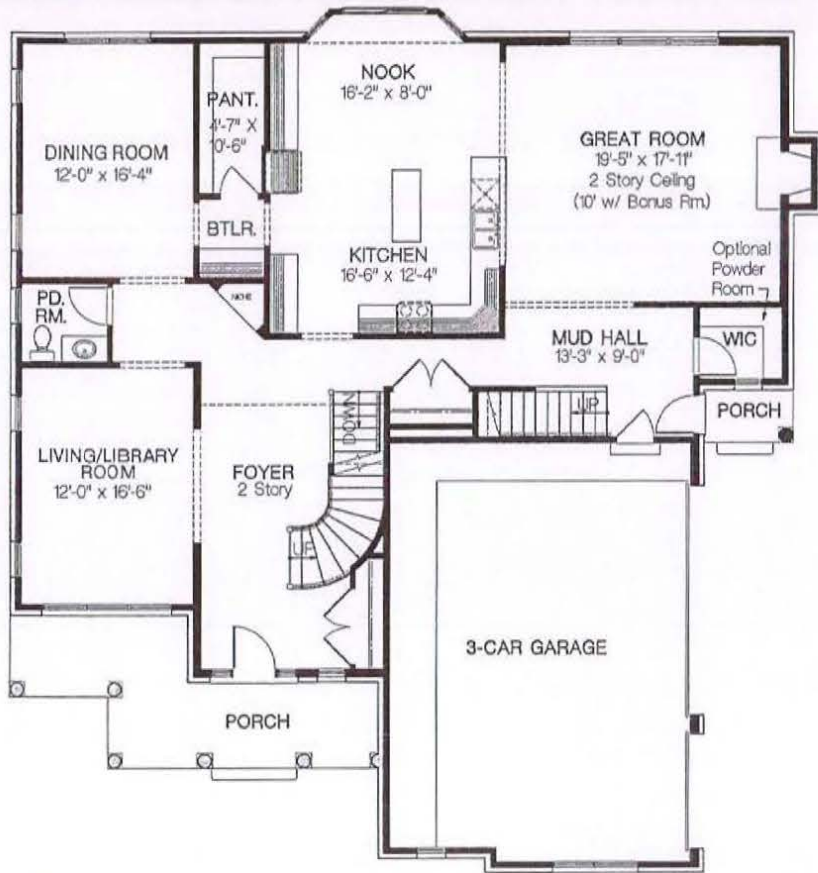
THE GABRIELLA GRAND **HP** HUNTER PASTEUR *Homes*



ELEVATION A



THE GABRIELLA GRAND



Optional
BONUS ROOM - 370 SQ. FT



Optional
MUDHALL POWDER ROOM



2nd
FLOOR

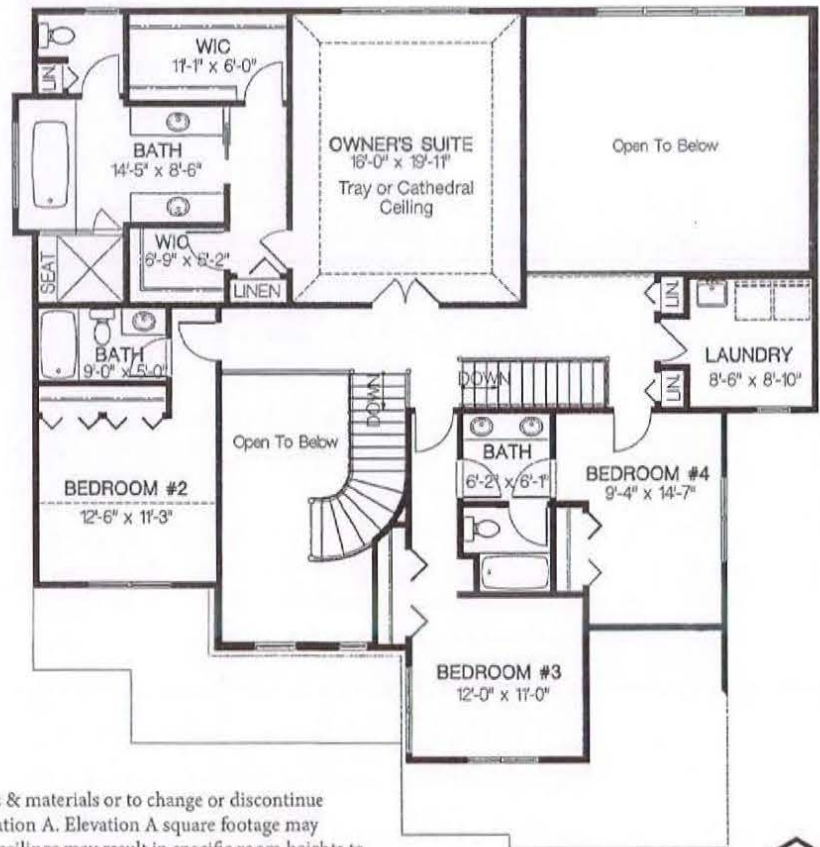
1st
FLOOR

The GABRIELLA GRAND

BEDROOMS..... 4
BATHS..... 3.5
SQUARE FEET..... 3,750

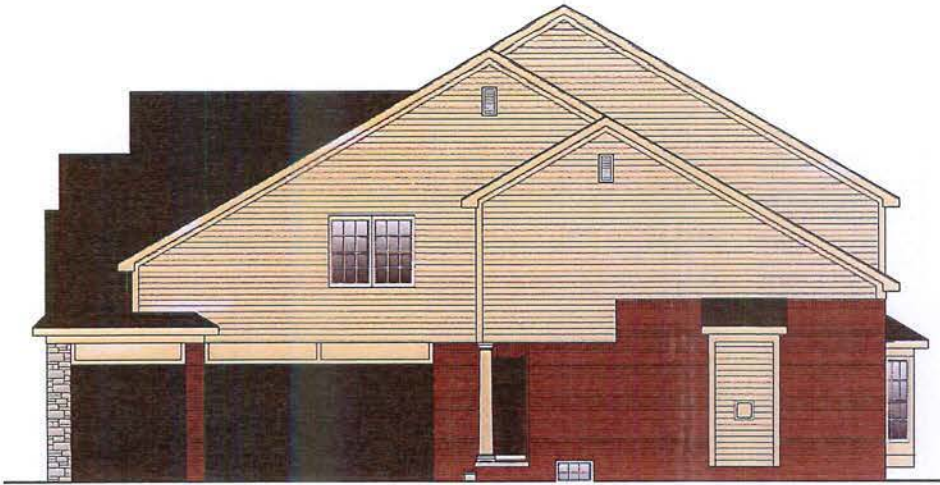
MANY OPTIONS
AVAILABLE

Please Ask Your Sales Manager



We reserve the right to make changes to plans, prices, specifications & materials or to change or discontinue models without prior notice or obligation. Floorplan shown is Elevation A. Elevation A square footage may change. Rathmor Estates: 10' first floor ceilings and 9' second floor ceilings may result in specific room heights to change and may vary plan to plan.

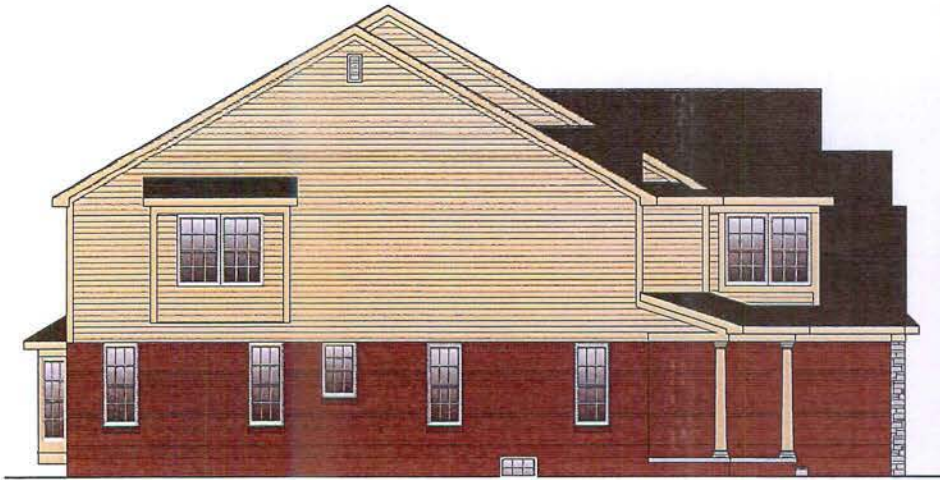




GABRIELLA GRAND - RIGHT ELEVATION
SCALE: 1/4" = 1'-0"



GABRIELLA GRAND - REAR ELEVATION
SCALE: 1/4" = 1'-0"



GABRIELLA GRAND - LEFT ELEVATION
SCALE: 1/4" = 1'-0"



GABRIELLA GRAND - FRONT ELEVATION
SCALE: 1/4" = 1'-0"

THE CHESHIRE GRAND

HP HUNTER PASTEUR *Homes*

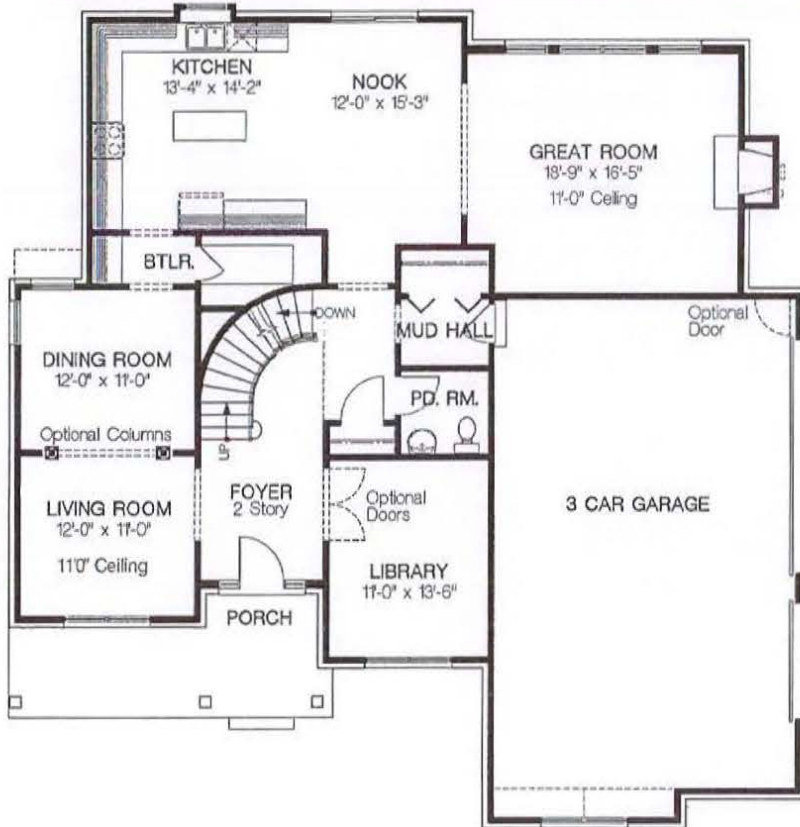


ELEVATION D



www.visitHPHomes.com

THE CHESHIRE GRAND



1st
FLOOR

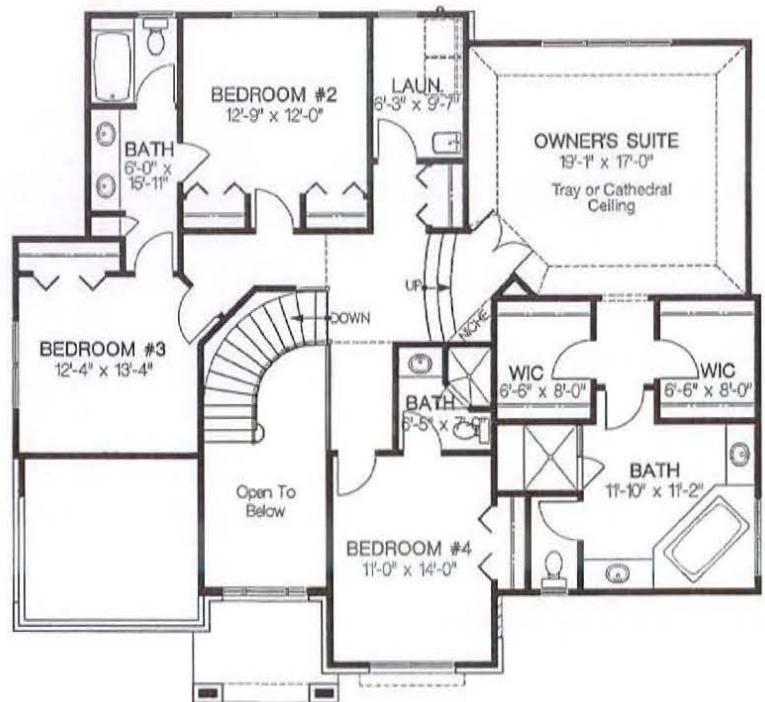
2nd
FLOOR

The CHESHIRE GRAND

BEDROOMS..... 4
BATHS..... 3.5
SQUARE FEET..... 3,340

MANY OPTIONS
AVAILABLE

Please Ask Your Sales Manager



We reserve the right to make changes to plans, prices, specifications & materials or to change or discontinue models without prior notice or obligation. Floorplan shown is Elevation A. Elevation A square footage may change. Rathmor Estates: 10' first floor ceilings and 9' second floor ceilings may result in specific room heights to change and may vary plan to plan.

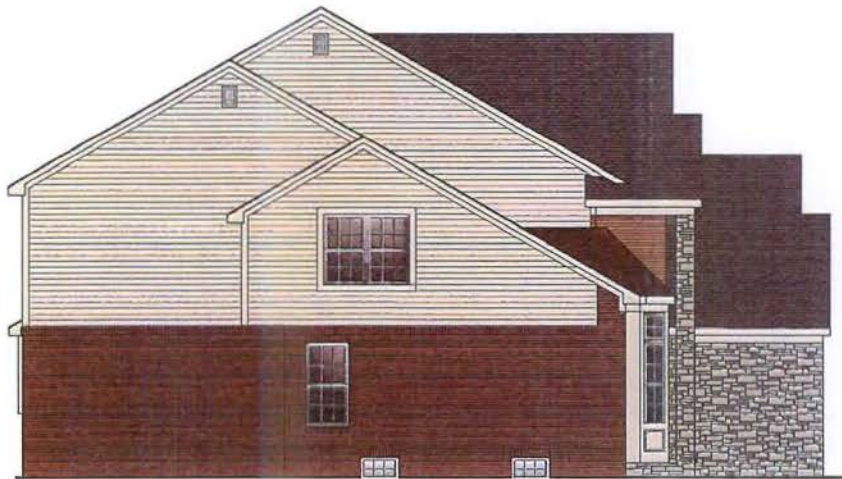




CHESHIRE GRAND - RIGHT SIDE ELEVATION
SCALE: 1/4" = 1'-0"



CHESHIRE GRAND - REAR ELEVATION
SCALE: 1/4" = 1'-0"



CHESHIRE GRAND - LEFT SIDE ELEVATION
SCALE: 1/4" = 1'-0"



CHESHIRE GRAND - FRONT ELEVATION
SCALE: 1/4" = 1'-0"

APPLICANTS RESPONSE LETTER



November 24, 2015

Ms. Sri Komaragiri, Planner
City of Novi
Community Planning Department
45175 W. Ten Mile Road
Novi, MI 48375

**Re: Dunhill Park PRO - JSP15-13
Rezoning to R-1 with a PRO**

Dear Ms. Komaragiri:

The City of Novi and its consultants completed a review of the revised Dunhill Park PRO plans dated October 23, 2015 and we offer the following in response.

PLANNING

Clearzoning, Inc., issued a review letter dated November 20, 2015 which recommends approval but also identified the following items which we have addressed below.

Rezoning Signs

The required rezoning sign locations were approved by the City Planner via e-mail on September 8, 2015 and the signs were installed to reflect the R-1 zoning request on October 16, 2015.

Eight Mile Road Pathway Installation

The City of Novi is currently constructing the 10-foot wide concrete pathway along Eight Mile Road. The Applicant has provided a Temporary Grading Permit and Wood Disposal License to the City of Novi Engineering Department for the portion of the pathway that is on the Dunhill Park property. The Applicant is also working with the Community Development Department to make a financial contribution to the cost of the installation for the portion of the pathway that is on the Dunhill Park site.

PRO Conditions

1. Tax benefits for the City.
2. Maximum number of units shall be 31 single family detached dwelling units (80% of the density permitted by the proposed zoning).
3. High-end landscaping.
4. Minimum unit width shall be 90 feet and minimum square footage of 13,860 square feet.
5. Significant Brownfield environmental cleanup with funds potentially coming back to the City.

6. Installation of a "Welcome to Novi" landmark feature.
7. \$25,000 contribution to the ITC Community Sports Park Trail (to be coordinated with Parks, Recreation and Cultural Services).
8. A Woodland Replacement Guarantee will not be provided by the Applicant (see woodlands section below).
9. A Conservation Easement will not be provided by the Applicant (see woodlands section below).

The PRO Conditions should be written into the proposed PRO Agreement with consideration of the following Public Benefits.

Public Benefits

We believe that the density bonus is warranted due to the following public benefits which are unique to this property and will greatly enhance the entire Novi community due to its "gateway" location.

1. Tax benefits for the City including significant property taxes and potential Brownfield benefits from Oakland County.
2. Significant Brownfield environmental cleanup.
3. Installation of a "Welcome to Novi" landmark feature.
4. \$25,000 donation to the Parks, Recreation and Cultural Services Department to be applied towards the construction of the ITC Community Sports Park Trail.
5. High-end landscaping.

Ordinance Deviations

1. No berm along Beck Road due to existing natural features.
2. Landscaping does not meet the minimum requirement for canopy and sub-canopy trees along the public right-of-way.
3. Landscaping does not meet street tree requirements along 8 Mile and Beck—the Applicant is seeking Road Commission for Oakland County approval for additional large-caliper trees.
4. The minimum requirements for storm basin landscape are not met.
5. The required stub street to the west is not provided.
6. The distance between the emergency access and 8 Mile Road exceeds the maximum (this variance is granted by the City Council).

Additional Deviations as a result of the change to R-1 zoning instead of the originally requested R-3, per Mr. Arroyo's recommendation:

7. Lot Size and Width: Per Section 3.1.2 of the Zoning Ordinance, the R-1 One-Family Residential Zoning district requires a minimum lot size of 21,780 square feet and a minimum lot width of 120 feet. The applicant has proposed a minimum lot size of 13,860 square feet and a minimum width of 90 feet. These deviations should be included in the PRO Agreement.
8. Setbacks: The minimum side yard setback for a single-family dwelling in this district is 15 feet with an aggregate of 40 feet. The applicant has proposed a minimum 10 foot side

yard setback (with an aggregate of 30 feet). These deviations should be included in the PRO Agreement and should be updated on Sheet 2.

9. Woodland Replacement Trees: The Applicant is requesting a deviation from ordinance requirements that require the applicant to plant, or pay into the City's tree fund for the equivalent of 230 required woodland replacement trees. The Applicant has stated that the cost to remedy the existing soil remediation issues is significant enough to negate the City's requirements to provide a Woodland Replacement Guarantee for the remaining trees that will not be planted.

ENGINEERING

The City of Novi Engineering Department provided a review letter dated November 13, 2015 that recommends approval. The letter also outlines the need for a DCS Variance for the absence of the stub street to the west and Dunhill Drive exceeding the maximum length, as identified in the Ordinance Deviations above. The remainder of the comments will be addressed prior to Final Site Plan submittal as requested.

LANDSCAPE

The City of Novi Landscape Architect, Rick Meader, issued a review letter dated November 12, 2015 recommending approval. All comments will be addressed at the time of preliminary and final site plan review, as required, however the Applicant has addressed the comments that require further discussion at the this time:

- **Woodland Replacement Trees, Comment 1:** The total amount of trees that are to be replaced per ordinance will not physically fit on this site. The Applicant feels that the cost that they will incur to remedy the existing environmental issues is significant enough to negate the city's requirement to provide a Woodland Replacement Guarantee for the remaining 240 trees that will not be planted. *A Woodland Replacement Guarantee will not be provided and is therefore requested as a PRO Condition and Ordinance Deviation.*
- **Plant List, Comment 2:** The Applicant and its landscape consultant will work closely with the city on the overall diversity of species used throughout the development however we do not intend to meet the requirement for species diversity in the Landscape Design Manual (Section 1.d.(1).(d) as it would take away from the intended design and feel of the overall development. *An Ordinance Deviation has been requested above.*

NATURAL FEATURES

Environmental Consulting & Technology, Inc., (ECT) issued review letters dated November 12, 2015 which did not recommend approval. Our wetland consultant, Woody Held of King & MacGregor, and our woodlands consultant, Jim Allen of Allen Design, walked the site with Matt Carner of ECT on October 27, 2015.

Regarding the onsite wetlands, there are details to be worked out with ECT and the City staff in effort to protect and if possible enhance the existing wetlands to remain onsite. This may

include, for example, invasive species treatment or native plant installation. It should be emphasized that our mitigation plan meets the 1.5 to 1 standard, we will continue to maintain the current hydrology in the remaining and newly created wetlands areas and we will monitor and manage the invasive species vegetation in the remaining and newly created wetland areas.

As it relates to the woodlands onsite, woodland replacement is proposed as a condition for the PRO Agreement. A comprehensive woodland replacement plan has been submitted and the following should be noted:

- Many of the replacement trees will be located on individual units to provide road screening. Such trees will not be in a Conservation Easement however there is language in the Master Deed which requires proper maintenance, forbids removal of these trees and also requires the homeowner to replace the tree's should they die. *A Conservation Easement will not be provided and therefore is requested as a PRO Condition.*
- This site requires a total of 471 replacement trees of which we are providing 231 at an increased caliper and quality, as shown on sheet L101. The total amount of trees that are to be replaced per ordinance will not physically fit on this site. The Applicant feels that the cost that they will incur to remedy the existing environmental issues is significant enough to negate the city's requirement to provide a Woodland Replacement Guarantee for the remaining 240 trees that will not be planted. *A Woodland Replacement Guarantee will not be provided and is therefore requested as a PRO Condition.*

TRAFFIC

The Rezoning Traffic Study was revised on October 16, 2015 to reflect R-1 zoning instead of the previously requested R-3 zoning. AECOM issued a review letter dated November 16, 2015 which recommends approval. If additional details are required as noted under item three (3) the information will be provided at the time of preliminary site plan review.

FACADE

A Facade review was not completed at this time. Please reference the letter addressed to the City of Novi stating the Applicant's intent to meet the facade requirements at the preliminary site plan review phase, per the city's request.

FIRE

The Fire Marshall, Joseph Shelton, issued a review letter dated November 2, 2015 which recommends approval. In response to his comment regarding fire flow testing, fire flow testing will be completed and the modeling data will be provided upon completion during the preliminary site plan approval process. If the modeling demonstrates insufficient fire flows at the dead end of the water main, the Applicant will provide a secondary connection (loop).

Ms. Sri Komaragiri
November 24, 2015
Page 5 of 5

We look forward to receiving approval at the December 9, 2015 Planning Commission Meeting.
Please contact us should you have any questions.

Sincerely,

FRANKLIN CONSTRUCTION COMPANY, L.L.C.
On Behalf of Hunter Pasteur Homes Dunhill Park, LLC


Whitney Findlay
Project Manager

Cc: Randy Wertheimer, Hunter Pasteur Homes Dunhill Park, LLC
Seth Herkowitz, Hunter Pasteur Homes Dunhill Park, LLC
Jeff Sakwa, Hunter Pasteur Homes Dunhill Park, LLC
Andy Milia, Franklin Construction Company, L.L.C.
Karen Brown, Franklin Construction Company, L.L.C.
Pat Keast, P.E., Seiber Keast Engineering, L.L.C.
Scott Black, LLA, ASLA, Grissim Metz Andriese Associates
Woody Held, King & MacGregor
Jim Allen, Allen Design

SOILS INVESTIGATION
PROPOSED 24.6-ACRE SUBDIVISION
EIGHT MILE AND BECK ROADS
NOVI, MICHIGAN

ARCHDIOCESE OF DETROIT
1234 WASHINGTON BOULEVARD
C3
DETROIT, MICHIGAN 48226

AUGUST 27, 2014
BY
McDOWELL & ASSOCIATES

McDowell & Associates

Geotechnical, Environmental & Hydrogeological Services • Materials Testing & Inspection

21355 Hatcher Avenue, Ferndale, MI 48220
Phone: (248) 399-2066 • Fax: (248) 399-2157
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August 27, 2014

Archdiocese of Detroit
1234 Washington Boulevard
C3
Detroit, Michigan 48226

Job No. 14-279

Attention: Mr. Mike McInerny

Subject: Soils Investigation
Proposed 24.6-Acre Subdivision
Eight Mile and Beck Roads
Novi, Michigan

Gentlemen:

In accordance with your request, we have performed a Soils Investigation at the subject project.

Fourteen (14) Soil Test Borings, designated as 14-1 through 14-14, were performed at the site. The approximate locations of the borings are shown on the Soil Boring Location Plan which accompanies this report. Portions of the site are heavily wooded with trees and brush, necessitating the use of our truck-mounted drill rig and track-mounted, all-terrain drill rig to perform the borings. The borings were advanced to a depth of twenty feet six inches (20'6") below the existing ground surface at the boring locations.

Soil descriptions, groundwater observations and the results of field and laboratory tests are to be found on the accompanying Logs of Soil Test Borings and summary sheet of Partial Sieve Analysis results.

The borings encountered either somewhat shallow fill soils or rather deep fill soils over native soils. Borings 14-1, 14-5, 14-6, 14-7, 14-9, 14-10, 14-11 and 14-14 encountered somewhat shallow fill and possible fill soils extending down to depths of two feet six inches (2'6") to six feet eight inches (6'8"). Borings 14-2, 14-3, 14-4, 14-8, 14-12 and 14-13 encountered rather deep fill and possible fill soils extending down to depths of nine feet two inches (9'2") to nineteen feet (19'). The fill and possible fill soils found in all the borings consist of surficial topsoil, buried topsoil, soft to extremely stiff brown, discolored brown, dark brown and blue silty clay to gravelly clay and slightly compact to extremely compact brown, discolored brown, dark brown and gray silty clayey fine sand to sand and gravel. Our drillers described the fill soils as containing varying amounts of concrete, bricks, glass, slag, cinders, crushed stone, wood, roots, vegetation, gravel, stones, peat seams and pockets, and topsoil seams and pockets. Buried topsoil was found in Boring 14-8 between the depths of six feet three inches (6'3") and nine feet two inches (9'2"). Peat seams and pockets were noted in Boring 14-14 between the depths of

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four feet three inches (4'3") and six feet six inches (6'6"). The underlying native soils consist of firm to extremely stiff brown to blue silty clay to sandy clay and compact to extremely compact brown to gray fine sandy silt to sand and gravel.

Soil descriptions and depths shown on the boring logs are approximate indications of change from one soil type to another and are not intended to represent an area of exact geological change or stratification. Also, the site shows signs of modification which could indicate fill and soil conditions different from those encountered at the boring locations.

Water was encountered in the borings at depths ranging from five feet six inches (5'6") to eighteen feet six inches (18'6") below the existing ground surface. Water was measured upon completion of the drilling operation in borings 14-2 through 14-9 and 14-11 through 14-14 at depths ranging from six feet seven inches (6'7") to nineteen feet six inches (19'6"). Borings 14-1 and 14-10 were found to cave in upon completion at depths of eight feet eleven inches (8'11") and twelve feet three inches (12'3"). It should be noted that short-term groundwater observations may not provide a reliable indication of the depth of the water table. In clay soils this is due to the slow rate of infiltration of water into the borehole as well as the potential for water to become trapped in overlying layers of coarser granular soils during periods of heavy rainfall. Water levels in granular soils fluctuate with seasonal and climatic changes as well as the amount of rainfall in the area immediately prior to the measurements.

Standard Penetration Tests made during sampling indicate that the fill and possible fill soils have highly variable densities while the underlying native soils have generally fair to very good strengths. Tests taken in the fill and possible fill soils ranged from four (4) blows per foot to fifty-five (55) blows per six inches (6"). Tests taken in the native soils gave results ranging from five (5) to fifty-seven (57) blows per foot.

Based on Google Earth satellite images of the site area, a building existed near the center of the site until about 2002. It appears that fill soils were placed over much of the site. The building appears to have been demolished in about 2002. Some continued filling and fill stockpiling can be seen through 2007. A swamp area can be seen in the northwest corner of the site.

Present plans call for constructing a residential subdivision with one- to two-story houses with attached garages and basements at the site. It is assumed that the structures will transmit relatively light loads to the supporting soils, basements will be about eight feet (8') to ten feet (10') deep, and no significant additional fill will be added to raise existing grades at the site.

As noted above, fill and possible fill soils were found in the borings down to depths ranging from two feet six inches (2'6") to nineteen feet (19'). Blow counts on these soils ranged from four (4) blows per foot to fifty-five (55) blows per six inches (6"). Blow counts do not give a direct indication whether fill soils were properly compacted to support structural loads. However, they do give a general indication. Based on previous experience with engineered fill soils, we would expect blow counts on the order of twenty (20) blows per foot or greater. Thus, it appears that the fill and possible fill soils at Borings 14-1, 14-7, 14-10 and 14-14 may have been placed as engineered fill. Upper fill soils at Borings 14-2, 14-3, 14-6, 14-8, 14-12 and 14-13 may have been placed with good densities; however, the relatively low blow counts at deeper levels in these borings would indicate that the lower soils are not engineered fill soils. Relatively low

blow counts throughout the fill soils in Borings 14-5, 14-9 and 14-11 would also indicate that these soils are not engineered fill. The presence of building rubble and organic soils would indicate that these soils are not suitable engineered fill soils. Buried topsoil and peat seams and pockets were found at Borings 14-8 and 14-14. Based on this discussion, it would appear that properly installed and compacted engineered fill may exist only at Borings 14-1, 14-7, 14-10 and 14-14. No documentation of the fill placement was provided to us. The limits of any existing engineered fill at the site are not known. It should be noted that poor soil could exist between boring locations and would not necessarily be recognized with field tests in the new footing excavations.

Based on the above discussion, project information provided, and the results of field and laboratory tests, it is believed that structures could be supported by conventional spread and/or strip footings founded on native non-organic soils or properly installed and compacted engineered fill. There may be a possibility that some engineered fill exists at the site but the limits and locations of the engineered fill are not known. Additional borings and/or test pits could be performed to better ascertain the locations of the possible engineered fill soils. Some dewatering may be necessary to install deeper footings or new engineered fill soils at Borings 14-2, 14-4, 14-6 and 14-7. If groundwater conditions or limited excavation areas make installing deeper footings or engineered fill difficult, then the structures could be supported on deep foundations consisting of driven piles, auger cast piles, mini piles, helical piles, or possibly "stone" geopiers. If you wish to support structures on relatively deep conventional footings or piles in the vicinity of Borings 14-2, 14-3 and 14-4, then additional deeper borings should be performed.

If conventional footings for the structures are installed to rest on native non-organic soils at the site, then all exterior footings should be constructed at or below a minimum frost penetration depth of three feet six inches (3'6") below finished grade. All footings should extend through non-engineered fill soils, soils containing a significant amount of organic substances or excessively weak soils. All strip footings should be continuously reinforced in order to minimize the noticeable effects of differential settlement.

Footings could be proportioned for the design soil pressures listed below provided this results in the footings bearing on native non-organic soils.

<u>Boring</u>	<u>Depth</u>	<u>Soil Pressure (psf)</u>
14-1	1'6" to 5'0"	4,000*
	5'6" to 12'0"	4,000
14-2	18'6" to 20'0"	3,000**
14-3	14'0" to 17'0"	1,500
14-4	19'0" to 20'0"	4,000**
14-5	1'6" to 4'2"	3,000*
	4'6" to 12'0"	4,000

<u>Boring</u>	<u>Depth</u>	<u>Soils Pressure (psf)</u>
14-6	2'0" to 5'6"	3,000*
	6'0" to 9'0"	3,000
	9'6" to 12'0"	4,000
14-7	1'6" to 6'0"	4,000*
	6'6" to 12'0"	4,000
14-8	9'6" to 12'6"	3,000*
	13'0" to 15'0"	4,000
14-9	7'0" to 12'0"	4,000
14-10	5'0" to 12'0"	4,000
14-11	4'6" to 12'0"	4,000
14-12	13'6" to 15'0"	4,000
14-13	14'6" to 18'0"	3,000
14-14	6'6" to 12'0"	4,000

*Soils at these locations were described by our drillers as possible fill or containing some organic matter. During footing excavation if it is determined that these soils contain significant amounts of organic matter or are indeed fill soils, then the footings should be located at or below approximate depths of five feet (5') at the location of Boring 14-1, four feet two inches (4'2") at the location of Boring 14-5, five feet six inches (5'6") at the location of Boring 14-6, six feet (6') at the location of Boring 14-7, and twelve feet six inches (12'6") at the location of Boring 14-8.

**If conventional footings are planned to be installed at these depths at Borings 14-2 and 14-4, then additional deeper borings should be performed.

Based on the above chart, it appears that lower strength soils may be encountered in the vicinity of Boring 14-3 which may necessitate larger than normal footing sizes.

Higher design soil pressures are available in some of the borings and could be provided, if requested.

It should be noted that footing and basement excavations may be near or below the level at which water was encountered in Borings 14-2 and 14-4 through 14-7. Depending upon the depth of the footings relative to the existing ground surface and the actual conditions at the time of construction, it may be necessary to depress the water table in these locations to allow for footings to be constructed. Water seepage in sand seams in clay soils or sands above clay in the vicinity of Boring 14-5 should be manageable with construction pumping and sumps. However,

this is not known for certain. If large volumes of water or saturated granular soils are encountered, special dewatering techniques may be required. Wet silt and sand soils were encountered in Borings 14-2, 14-4, 14-6 and 14-7. It is sometimes possible to construct strip footings a foot or so below the water table in coarse granular soils using a rapid sequence of excavation and placement of concrete. If this is not possible, it may be necessary to use special dewatering techniques to depress the water table in the vicinity of these borings. It is very difficult to dewater silt soils. Extreme care must be exercised during any dewatering operation if any nearby structures or utilities are sensitive to settlement. Care must be taken to minimize the removal of soil fines during any pumping operation.

As an alternative to relatively deep footings, the buildings' spread or strip footings could be supported on engineered fill in the vicinity of Borings 14-2, 14-3, 14-4, 14-12 and 14-13 and possibly in the vicinity of Boring 14-8. All existing non-engineered fill, highly organic soils, soft soils and very loose granular soils should be excavated and removed from the proposed building areas. The excavations should extend beyond the edge of the structures' footings one foot (1') for every foot below the footing. Groundwater flow into the excavation may require special dewatering techniques in order to facilitate the excavation of the unsuitable soils, especially in the vicinity of Borings 14-2, 14-4, 14-6 and 14-7. Extreme caution should be practiced during the dewatering operation if nearby buildings, utilities or other structures are sensitive to settlement. The removal of the unsuitable soils should be done in the presence of a qualified soils engineer to ensure that no uncontrolled fill or highly organic soils are left behind before the placement of the engineered fill. After the unsuitable soils have been removed, the excavation should be backfilled with compacted bank run sand similar to MDOT Type I or II granular soils. If the bottom of the excavation is not sufficiently stable to install the bank run sand, then a layer of coarse stone fill such as MDOT 6AA could be installed. Geotextile fabric should be placed between the coarse stone engineered fill material and lower native granular soils and upper granular engineered fill materials to minimize the amount of fines infiltrating into the aggregate material. The granular MDOT Type I or II soils should be deposited in horizontal lifts not to exceed nine inches (9") in thickness with each lift being compacted uniformly to a minimum density of ninety-five percent (95%) of its maximum value as determined by the Modified Proctor Test (AASHTO T-180 or ASTM D-1557). Engineered fill should be placed and compacted up to footing and floor invert elevations.

One-inch to three-inch (1" – 3") size crushed stone or crushed concrete could be used in lieu of the MDOT Type 6AA aggregate and bank run sand that we recommended above. The crushed material would need to be placed and compacted in lifts not exceeding nine inches (9") up to about one foot (1') below the planned buildings' footings and floor slabs. About a one-foot (1') thick layer of MDOT 21AA dense aggregate could then be placed above the crushed material in an effort to choke off the stone. The crushed stone or crushed concrete material should not contain significant amounts of brick and should be relatively clean of lime or cement dust which could potentially foul up or clog drain tiles. We suggest that the brick content should be less than five percent (5%) and cement/lime dust should be less than three percent (3%). The large crushed material will need to be separated from the existing site granular soils by a geotextile fabric. We suggest that a Mirafi 500 type fabric or equivalent be placed along the bottom and sides of the engineered fill excavation in an effort to minimize fines from migrating into the voids within the crushed material. It should be noted that the use of crushed concrete could

cause problems for basements drains and sump pumps. When water percolates through crushed concrete, the pH of the water can increase and minerals can precipitate out of the solution (mostly calcium salts and in some cases calcium hydroxide). Mineral deposits precipitating from the solution can shorten the life of sump pumps and plug drain tiles. High pH water can also corrode metal pipes. See AASHTO M 319-02 for discussion of these problems. Since the new structures will have a slab-on-grade, precipitating mineral deposits should not be a major concern.

Foundations placed on the engineered fill material can be proportioned for a design soil pressure of three thousand pounds per square foot (3,000 psf) provided the design soil pressure is not limited by the strength of the underlying soils. All exterior footings should be constructed at or below a minimum frost penetration depth of three feet six inches (3'6") below finished grade. It may be necessary to provide properly designed and installed shoring to protect nearby existing buildings or others' property. All excavations should conform to MIOSHA requirements.

If you wish to support some of the structures on pile foundations, then it is anticipated that a typical Class B wood pile would realize the following approximate supporting capacities per foot of penetration:

<u>Boring</u>	<u>Depth</u>	<u>Allowable Supporting Capacity Per Foot of Penetration</u>
14-2	18'6" to 20'0"	1¼ Tons/Foot
14-3	14'0" to 19'0"	¼ Ton/Foot
	19'6" to 20'0"	1¼ Tons/Foot
14-4	19'0" to 20'0"	3 Tons/Foot + Point Resistance
14-8	9'6" to 12'6"	¾ Ton/Foot
	13'0" to 17'6"	2½ Tons/Foot
	18'0" to 20'0"	1¼ Tons/Foot
14-12	13'6" to 18'6"	2½ Tons/Foot
	19'0" to 20'0"	2 Tons/Foot
14-13	14'6" to 18'6"	¾ Ton/Foot
	19'0" to 20'0"	2 Tons/Foot

Additional deeper borings should be performed if you plan to support the structures on piles in the vicinity of Borings 14-2, 14-3, 14-4 and 14-13. Actual pile capacities must be evaluated in the field either through the use of a dynamic pile driving formula or static load test. Any resistance in the upper fill soils should be subtracted when evaluating pile capacities as the soils should not be counted on to provide long-term support. If the existing fill is less than 10 years old or if additional fill is to be placed over the present grade, then the estimated pile capacities should be reduced by a suitable negative friction allowance which could be quite large. It should

be understood that vibrations during pile driving could damage nearby structures and utilities. Pilot holes may be required in the high blow count fill areas. It is suggested that you discuss these issues with a pile driving contractor.

As noted earlier, additional deep foundation systems could consist of auger cast piles, mini piles or helical-type piles. We understand that manufacturers and contractors who install these piles have qualified engineering staff who could help you. We understand that specialty contractors such as AA Spartan Specialties or Argus Pressure Grouting have experience in installing mini piles. Hardman Construction out of Ludington, Michigan installs auger cast piles. Kent Concrete Lifting installs helical piles. Finally, GeoPier Foundation Company installs rammed aggregate "stone" geopiers. We have a concern that helical or mini piles could buckle in the soft soils found at Boring 14-2.

It appears that excavating and installing basements may be difficult in the vicinity of Borings 14-6 and 14-7 where water was encountered below depths of six feet (6') and seven feet (7'). It is suggested that consideration be given to using auxiliary drains around or between houses with gravity flow into existing storm sewers if they are sufficiently deep enough in the vicinity of these borings to help depress the water table. It would be prudent to gravity drain the footing drains to daylight if lot grading permits it. Consideration should also be given to raising the grades for houses in these areas several feet above existing grade to facilitate the installation of basements. Also, raising the basement floors and lowering the brick ledges may be possible.

We typically recommend that basement levels be kept at least one foot (1') above these long-term groundwater levels. If the basements are constructed in close proximity to the groundwater level, then it is suggested that a fairly elaborate drainage system be provided. We suggest the following:

1. In order to lessen the possibility of soil fines affecting the perimeter drain system, it is recommended that exterior footing drains would be nominally four-inch (4") diameter slotted or perforated pipe wrapped with a filter sock. These would be embedded in at least four inches (4"), and preferably six inches (6"), of MDOT Specification 2NS sand. The 2NS sand should be extended vertically over the drain to within about one foot (1') to two feet (2') of the final grade. The 2NS sand should be maintained at a width of at least twelve inches (12") measured perpendicular to the walls and footings. The accompanying Figure 1 depicts the recommended minimum cross section requirements for the exterior drains. The accompanying Figure 2 depicts the gradation requirements for MDOT Specification 2NS sand.
2. Interior underfloor drains should be provided and should be nominally four-inch (4") diameter slotted or perforated pipe wrapped with a filter sock. These should be placed at ten-foot (10') to fifteen-foot (15') centers and along the inside of the footing. The drain tiles should be surrounded by about three inches (3") or four inches (4") of clean pea gravel. The pea gravel and wrapped drain tile should be underlain and enclosed by a punched non-woven geotextile such as Mirafi 140 or equivalent. Cleanouts should be provided for

the underfloor drains. A good moisture barrier should be placed between the floor slab and pea gravel. A fabric should be placed between the silt soils at Boring 14-7 and the pea gravel.

3. Note that under no circumstances are crushed materials allowed since they have a tendency to clog/plug drain tiles and ruin sump pumps.
4. The drain tiles should be pitched downward toward the sumps so that standing water will not collect in the pipes.
5. The interior drain tiles should be connected to a second sump and pump which is capable of operating on backup power in case of power outages.
6. It would be preferable to provide an overflow connection between the two sumps as an additional precaution.

Silt soils were found at or near possible basement invert and footing elevations at Boring 14-7. Pure silt soils with relatively low blow counts above the site groundwater table could become unstable if water is allowed to saturate the silt, causing possible loss of bearing strength. It appears the silt soils found in this boring contain a significant amount of fine sand and have very good blow counts and are already saturated. Thus, these soils probably will not become unstable. However, this is not known for certain. The invert soils of excavations in the vicinity of this boring should be inspected by our field technicians to determine if pure silt soils are present. If moist silt is found in the excavations, then the silt should be protected from wetting even after the footings have been installed. Perimeter footing drain tiles should be installed and made operational immediately after the footings have been installed. Construction pumps and/or field drain tiles may be required before, during and after the installation of the footings to minimize any water collection in these excavations.

If the new structures are supported on deep foundations or on conventional footings extended to the underlying native soils with non-engineered fill soils kept in place, and if more than normal differential movement can be tolerated, then concrete floors or floor supporting backfill could be placed at or near the present grade. Any topsoil, soft or loose soil or other obviously objectionable material should be removed and the subgrade thoroughly proof-compacted with heavy, rubber-tired equipment. Buried peat and topsoil materials found at Borings 14-8 and 14-14 should be removed in their entirety from planned areas of houses, patios, driveways, walkways and roads. If, during the proof-compaction operation, areas are found where the soils yield excessively, the yielding materials should be scarified, dried and recompacted or removed and replaced with engineered fill as outlined above.

If the possibility of more than normal differential movement cannot be tolerated, then all existing non-engineered fill materials should be removed and replaced with engineered fill meeting the requirements outlined above or the floor slab should be structurally supported.

Experience indicates that the actual subsoil conditions at the site could vary from those found at the test borings made at specific locations. It is, therefore, essential that McDowell & Associates

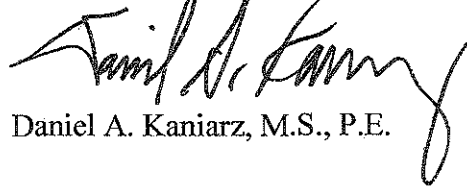
be notified of any variation of soil conditions to determine their effects on the recommendations presented in this report. The evaluations and recommendations presented in this report have been formulated on the basis of reported or assumed data relating to the proposed project. Any significant change in this data in the final design plans should be brought to our attention for review and evaluation with respect to the prevailing subsoil conditions.

It is recommended that the services of McDowell & Associates be engaged to observe the soils in the footing excavations prior to concreting in order to test the soils for the required bearing capacities. Testing should also be performed to check that suitable materials are being used for controlled fills and that they are properly placed and compacted. If piles are used to support the structures, then it is recommended that the services of McDowell & Associates be engaged to monitor the pile driving operation to estimate the field load capacity of the piles using a dynamic pile driving formula.

If we can be of any further service, please feel free to call.

Very truly yours,

McDOWELL & ASSOCIATES



Daniel A. Kaniarz, M.S., P.E.

DAK/nm



McDOWELL & ASSOCIATES
 Geotechnical, Environmental, & Hydrogeologic Services
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 Phone: (248) 399-2066 • Fax: (248) 399-2157

LOG OF SOIL BORING NO. 14-1

PROJECT Soils Investigation

JOB NO. 14-279

LOCATION 24.65-Acre Subdivision
Eight Mile and Beck Roads
Novi, Michigan

SURFACE ELEV. _____ **DATE** 8-7-14

Sample & Type	Depth	Legend	SOIL DESCRIPTION	Penetration Blows for 6"	Moisture %	Natural Wt. P.C.F.	Dry Den Wt. P.C.F.	Unc. Comp. Strength PSF.	Str. %				
			0'3"										
	1		Moist dark brown sandy TOPSOIL, fill										
A	2		Very stiff moist brown sandy CLAY with pebbles and trace roots, possible fill	9	14.8								
UL	3			10									
	4			11							*	(6000)	
B	5		5'0"	20	9.6								
UL	6			15									
	7			18							*	(9000+)	
C	8		Extremely stiff moist brown silty CLAY with sand and pebbles and moist sand seams	12									
UL	9			24									
	10			18									
D	11			12									
UL	12			20									
	13			15									
	14		12'3"										
E	15			9									
UL	16			6									
	17		Compact wet gray SAND	8									
	18												
	19												
F	20		19'3"	10									
UL	21			12									
	22		20'0"	17									
	23												
	24												
	25												

TYPE OF SAMPLE
 D. - DISTURBED
 U.L. - UNDIST. LINER
 S.T. - SHELBY TUBE
 S.S. - SPLIT SPOON
 R.C. - ROCK CORE
 () - PENETROMETER

REMARKS: *Calibrated Penetrometer

GROUND WATER OBSERVATIONS

Standard Penetration Test - Driving 2" OD Sampler 1' With
 140# Hammer Falling 30"; Count Made at 6" Intervals

G.W. ENCOUNTERED AT 12 FT. 3 INS.
 G.W. ENCOUNTERED AT FT. INS.
 G.W. AFTER COMPLETION 12 FT. 3 INS.
 G.W. AFTER HRS. FT. INS.
 G.W. VOLUMES Light Cave-In at 12'3"



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LOG OF SOIL BORING NO. 14-2

PROJECT Soils Investigation

JOB NO. 14-279

LOCATION 24.65-Acre Subdivision
Eight Mile and Beck Roads
Novi, Michigan

SURFACE ELEV. _____ DATE 8-6-14

Sample & Type	Depth	Legend	SOIL DESCRIPTION	Penetration Blows for 6"	Moisture %	Natural Wt. P.C.F.	Dry Den Wt. P.C.F.	Unc. Comp. Strength PSF.	Str. %
			0'3"						
	1		Moist dark brown sandy TOPSOIL, fill						
A	2			30					
UL				40					
	3			---					
	4		Extremely stiff moist discolored brown sandy CLAY with bricks, glass, vegetation and pebbles, fill						
B	5			10					
UL				17					
	6			22					
	7		6'6"						
C	8		Firm moist discolored brown sandy CLAY with pebbles, fill	3					
UL				3					
	9			3					
	10		8'6"						
D	11		Firm moist discolored brown sandy CLAY with topsoil and wood, fill	4					
UL				5	17.2	132			
	12			7			*	(3500)	
	13								
	14		9'10"						
	15		Stiff moist brown silty CLAY with sand and pebbles, trace roots and topsoil streaks, fill						
E	16								
UL			14'3"	2					
	17		Slightly compact wet brown gravelly SAND with sand seams, fill	2	18.7	124			
	18			2			*	(1500)	
	19		15'0"						
	20		Soft moist brown gravelly CLAY with discolored streaks, fill						
F	21								
UL			18'6"	9					
	22		Very compact wet gray fine to medium SAND	10					
	23			7					
	24		20'0"						
	25								

TYPE OF SAMPLE
 D. - DISTURBED
 U.L. - UNDIST. LINER
 S.T. - SHELBY TUBE
 S.S. - SPLIT SPOON
 R.C. - ROCK CORE
 () - PENETROMETER

REMARKS: *Calibrated Penetrometer

GROUND WATER OBSERVATIONS

G.W. ENCOUNTERED AT 14 FT. 3 INS.
 G.W. ENCOUNTERED AT _____ FT. _____ INS.
 G.W. AFTER COMPLETION 15 FT. 0 INS.
 G.W. AFTER _____ HRS. _____ FT. _____ INS.
 G.W. VOLUMES Light

Standard Penetration Test - Driving 2" OD Sampler 1' With
 140# Hammer Falling 30"; Count Made at 6" Intervals



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LOG OF SOIL BORING NO. 14-3

PROJECT Soils Investigation

JOB NO. 14-279

LOCATION 24.65-Acre Subdivision
Eight Mile and Beck Roads
Novi, Michigan

SURFACE ELEV. _____ DATE 8-6-14

Sample & Type	Depth	Legend	SOIL DESCRIPTION	Penetration Blows for 6"	Moisture %	Natural Wt. P.C.F.	Dry Den Wt. P.C.F.	Unc. Comp. Strength PSF.	Str. %
			0'2"						
	1		Moist dark brown sandy TOPSOIL, fill						
	2		Moist brown sandy CLAY, fill						
A				9					
UL				10					
	3		Extremely stiff moist brown silty CLAY with sand and pebbles, bricks and discolored clay seams, fill	16					
	4								
B				30					
UL				40					
	6			—					
	7		Extremely compact moist discolored brown clayey SAND with pebbles, sand seams and occasional roots, fill	28					
C				14	10.5				
UL				11					
	9								
D				3					
UL				3	17.2	121			
	11			3			*	(2500)	
	12		Firm moist discolored brown and blue silty CLAY with pebbles and wood, fill						
	13								
	14								
E				3					
UL				3	17.3	123			
	16			2			*	(1500)	
	17		Firm moist greenish blue sandy CLAY with pebbles and wet sand seams						
	18								
	19								
F				7					
UL				7					
	20		Very compact wet gray fine to medium SAND	10					
	21								
	22								
	23								
	24								
	25								

TYPE OF SAMPLE
 D. - DISTURBED
 U.L. - UNDIST. LINER
 S.T. - SHELBY TUBE
 S.S. - SPLIT SPOON
 R.C. - ROCK CORE
 () - PENETROMETER

REMARKS: *Calibrated Penetrometer

GROUND WATER OBSERVATIONS

G.W. ENCOUNTERED AT 17 FT. 6 INS.
 G.W. ENCOUNTERED AT _____ FT. _____ INS.
 G.W. AFTER COMPLETION 14 FT. 3 INS.
 G.W. AFTER _____ HRS. _____ FT. _____ INS.
 G.W. VOLUMES Light

Standard Penetration Test - Driving 2" OD Sampler 1' With
 140# Hammer Falling 30": Count Made at 6" Intervals



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LOG OF SOIL
 BORING NO. 14-4

PROJECT Soils Investigation

JOB NO. 14-279

LOCATION 24.65-Acre Subdivision
Eight Mile and Beck Roads
Novi, Michigan

SURFACE ELEV. _____ DATE 8-8-14

Sample & Type	Depth	Legend	SOIL DESCRIPTION	Penetration Blows for 6"	Moisture %	Natural Wt. P.C.F.	Dry Den Wt. P.C.F.	Unc. Comp. Strength PSF.	Sr. %
	1		0'3" Moist dark brown clayey TOPSOIL, fill						
A	2		1'6" Moist brown sandy CLAY with sand and pebbles, fill	9					
UL	3		Stiff moist brown sandy CLAY with pebbles and discolored brown sand and gravel seams, fill	5					
	4			7					
B	5		4'0" Extremely stiff moist discolored brown sandy CLAY with sand, pebbles, concrete pieces and sand seams, fill	13					
UL	6			12	10.7				
	7			16					
C	8		6'0" Stiff moist discolored brown and blue silty CLAY with sand and pebbles, fill	5					
UL	9			4	12.8	131			
	10			5			*	(2500)	
D	11			4					
UL	12			4					
	13			5					
E	14		14'0" Compact wet dark brown fine SAND with roots and wet sand layers, possible fill	3					
UL	15			5	17.2	122			
	16			9					
	17								
	18								
	19								
F	20		19'0" Extremely stiff moist brown silty CLAY with sand and pebbles	13					
UL	21		20'0"	17					
	22			22					
	23								
	24								
	25								

TYPE OF SAMPLE
 D. - DISTURBED
 U.L. - UNDIST. LINER
 S.T. - SHELBY TUBE
 S.S. - SPLIT SPOON
 R.C. - ROCK CORE
 () - PENETROMETER

REMARKS:
 Standard Penetration Test - Driving 2" OD Sampler 1' With
 140# Hammer Falling 30": Count Made at 6" Intervals

GROUND WATER OBSERVATIONS
 G.W. ENCOUNTERED AT 14 FT. 0 INS.
 G.W. ENCOUNTERED AT _____ FT. _____ INS.
 G.W. AFTER COMPLETION 14 FT. 6 INS.
 G.W. AFTER _____ HRS. _____ FT. _____ INS.
 G.W. VOLUMES Moderate



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LOG OF SOIL BORING NO. 14-5

PROJECT Soils Investigation

JOB NO. 14-279

LOCATION 24.65-Acre Subdivision
Eight Mile and Beck Roads
Novi, Michigan

SURFACE ELEV. _____ **DATE** 8-7-14

Sample & Type	Depth	Legend	SOIL DESCRIPTION	Penetration Blows for 6"	Moisture %	Natural Wt. P.C.F.	Dry Den Wt. P.C.F.	Unc. Comp. Strength PSF.	Str. %
	1		0'4" Moist dark brown clayey TOPSOIL, fill						
A	2		Stiff moist brown silty CLAY with sand and pebbles, possible fill	4					
UL	3			5	14.1				
	4			6			*	(3000)	
B	5		4'2" Very compact moist to wet brown silty fine to medium SAND with trace of gravel	10					
UL	6			11	13.0	130			
	7			11					
C	8		6'3" Very stiff moist brown silty CLAY with sand and pebbles	8					
UL	9			9	13.6				
	10			10			*	(6000)	
D	11		9'4" Very compact wet brown fine to medium SAND	10					
UL	12			13					
	13			13					
	14								
E	15		14'2" Extremely stiff moist blue silty CLAY with sand and pebbles	11					
UL	16			9					
	17			16					
	18								
F	19		20'0"	10					
UL	20			14					
	21			15					
	22								
	23								
	24								
	25								

TYPE OF SAMPLE
 D. - DISTURBED
 U.L. - UNDIST. LINER
 S.T. - SHELBY TUBE
 S.S. - SPLIT SPOON
 R.C. - ROCK CORE
 () - PENETROMETER

REMARKS: *Calibrated Penetrometer

Standard Penetration Test - Driving 2" OD Sampler 1' With
 140# Hammer Falling 30"; Count Made at 6" Intervals

GROUND WATER OBSERVATIONS

G.W. ENCOUNTERED AT 5 FT. 6 INS.
 G.W. ENCOUNTERED AT 6 FT. INS.
 G.W. AFTER COMPLETION 6 FT. 7 INS.
 G.W. AFTER HRS. FT. INS.
 G.W. VOLUMES Heavy



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LOG OF SOIL
 BORING NO. 14-6

PROJECT Soils Investigation

JOB NO. 14-279

LOCATION 24.65-Acre Subdivision
 Eight Mile and Beck Roads
 Novi, Michigan

SURFACE ELEV. DATE 8-7-14

Sample & Type	Depth	Legend	SOIL DESCRIPTION	Penetration Blows for 6"	Moisture %	Natural Wt. P.C.F.	Dry Den Wt. P.C.F.	Unc. Comp. Strength PSF.	Str. %
	1		0'10" Moist dark brown sandy TOPSOIL with roots, fill						
A	2		1'9" Moist discolored brown sandy CLAY, fill	10					
UL	3			12	10.1	125			
	4		Very stiff moist brown silty CLAY with sand and pebbles and occasional roots, possible fill	12			*	(7500)	
B	5			10					
UL	6			8	10.3	111			
	7		5'6" Compact moist to wet brown silty fine to medium SAND with trace of gravel	10			*	(5000)	
C	8			5					
UL	9			4	11.6				
	10		9'0" Extremely stiff moist variegated silty CLAY with sand partings	6					
D	11			12					
UL	12			13					
	13			14					
	14		14'0" Extremely compact wet gray silty fine SAND						
E	15			10					
UL	16			13					
	17			14					
	18		18'0" Extremely compact moist gray clayey SILT						
F	19			14					
UL	20			27					
	21		20'0"	30					
	22								
	23								
	24								
	25								

TYPE OF SAMPLE
 D. - DISTURBED
 U.L. - UNDIST. LINER
 S.T. - SHELBY TUBE
 S.S. - SPLIT SPOON
 R.C. - ROCK CORE
 () - PENETROMETER

REMARKS: *Calibrated Penetrometer

GROUND WATER OBSERVATIONS

Standard Penetration Test - Driving 2" OD Sampler 1' With
 140# Hammer Falling 30". Count Made at 6" Intervals

G.W. ENCOUNTERED AT 7 FT. 0 INS.
 G.W. ENCOUNTERED AT FT. INS.
 G.W. AFTER COMPLETION 9 FT. 8 INS.
 G.W. AFTER HRS. FT. INS.
 G.W. VOLUMES Heavy



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LOG OF SOIL
 BORING NO. 14-7

PROJECT Soils Investigation

JOB NO. 14-279

LOCATION 24.65-Acre Subdivision
 Eight Mile and Beck Roads
 Novi, Michigan

SURFACE ELEV. _____ DATE 8-7-14

Sample & Type	Depth	Legend	SOIL DESCRIPTION	Penetration Blows for 6"	Moisture %	Natural Wt. P.C.F.	Dry Den Wt. P.C.F.	Unc. Comp. Strength PSF.	Str. %
	1		0'3" Moist dark brown clayey TOPSOIL, fill						
A	2		Very stiff moist brown silty CLAY with sand and pebbles, possible fill	9					
UL	3	2'6"		11	11.9				
	4			20			*	(7000)	
B	5		Extremely stiff moist brown silty CLAY with sand and pebbles and trace of roots	13					
UL	6			14	10.8	140			
	7			15			*	(9000+)	
C	8		6'0" Extremely compact wet brown fine sandy SILT with trace of gravel and clay seams	11					
UL	9			10	16.2	127			
	10			17					
D	11		Extremely compact wet brown fine sandy SILT with trace of gravel and clay seams	15					
UL	12			16					
	13			18					
	14		13'3" Extremely compact wet gray fine SAND						
E	15		14'0" Extremely stiff moist blue silty CLAY with sand and pebbles	10					
UL	16			10					
	17			20					
	18		18'6" Extremely compact wet gray SAND & GRAVEL						
F	19			9					
UL	20			14					
	21		20'0"	17					
	22								
	23								
	24								
	25								

TYPE OF SAMPLE
 D. - DISTURBED
 U.L. - UNDIST. LINER
 S.T. - SHELBY TUBE
 S.S. - SPLIT SPOON
 R.C. - ROCK CORE
 () - PENETROMETER

REMARKS: *Calibrated Penetrometer

GROUND WATER OBSERVATIONS

G.W. ENCOUNTERED AT 6 FT. 0 INS.
 G.W. ENCOUNTERED AT 7 FT. 1 INS.
 G.W. AFTER COMPLETION 7 FT. 1 INS.
 G.W. AFTER HRS. FT. INS.
 G.W. VOLUMES Heavy

Standard Penetration Test - Driving 2" OD Sampler 1' With
 140# Hammer Falling 30"; Count Made at 6" Intervals



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LOG OF SOIL BORING NO. 14-8

PROJECT Soils Investigation

JOB NO. 14-279

LOCATION 24.65-Acre Subdivision
Eight Mile and Beck Roads
Novi, Michigan

SURFACE ELEV. _____ DATE 8-6-14

Sample & Type	Depth	Legend	SOIL DESCRIPTION	Penetration Blows for 6"	Moisture %	Natural Wt. P.C.F.	Dry-Den Wt. P.C.F.	Unc. Comp. Strength PSF.	Str. %
	1		Moist dark brown sandy TOPSOIL with traces of crushed stone and slag, fill						
			0'7" ←						
			1'2" ←						
A	2		Moist brown fine SAND with some gravel, fill	19					
UL	3		Very stiff moist brown silty CLAY with sand and pebbles, organics and wood, fill	18					
			3'6" ←	11					
B	4								
UL	5		Stiff moist discolored brown silty CLAY with sand, cinders, pebbles, organics and trace of brick, fill	4					
				5	14.9	123			
				9			*	(6500)	
	6								
C	7								
UL	8		Stiff moist dark brown clayey TOPSOIL with some organics and trace of gravel, fill	3					
				3	13.8	121			
				5			*	(2500)	
	9								
D	10								
UL	11		Stiff moist brown silty CLAY with traces of sand and pebbles and organics	7					
				6	18.0	119			
				4			*	(3000)	
	12								
	13								
	14								
E	15								
UL	16		Extremely stiff moist brown silty CLAY with sand and pebbles	8					
				10					
				20					
	17								
	18								
	19								
F	20		Compact wet brown SAND & GRAVEL	8					
UL	21			8					
				8					
	22								
	23								
	24								
	25								

TYPE OF SAMPLE
 D. - DISTURBED
 U.L. - UNDIST. LINER
 S.T. - SHELBY TUBE
 S.S. - SPLIT SPOON
 R.C. - ROCK CORE
 () - PENETROMETER

REMARKS: *Calibrated Penetrometer

GROUND WATER OBSERVATIONS

G.W. ENCOUNTERED AT 17 FT. 6 INS.
 G.W. ENCOUNTERED AT _____ FT. _____ INS.
 G.W. AFTER COMPLETION 17 FT. 6 INS.
 G.W. AFTER _____ HRS. _____ FT. _____ INS.
 G.W. VOLUMES Medium

Standard Penetration Test - Driving 2" OD Sampler 1' With
 140# Hammer Falling 30". Count Made at 6" Intervals



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LOG OF SOIL BORING NO. 14-9

PROJECT Soils Investigation

JOB NO. 14-279

LOCATION 24.65-Acre Subdivision
Eight Mile and Beck Roads
Novi, Michigan

SURFACE ELEV. _____ **DATE** 8-7-14

Sample & Type	Depth	Legend	SOIL DESCRIPTION	Penetration Blows for 6"	Moisture %	Natural Wt. P.C.F.	Dry Den Wt. P.C.F.	Unc. Comp. Strength PSF.	Str. %
	1		0'9" Moist dark brown sandy TOPSOIL, fill						
			Moist discolored brown fine SAND, fill						
A	2		1'6"	5					
UL				5					
	3			4					
	4		Compact moist brown and dark brown silty fine SAND, fill						
B				5					
UL	5			6					
	6			9					
	7		6'8"	15					
C			Extremely compact moist brown SILT & fine SAND with trace of gravel	19					
UL	8			23					
	9								
D				19					
UL	10			19					
	11		Extremely compact moist brown fine sandy SILT	18					
	12								
	13								
	14								
E			14'3"	15					
UL	15			20					
	16			20					
	17								
	18		Extremely compact wet gray silty fine SAND						
	19								
F			20'0"	18					
UL	20			18					
	21			20					
	22								
	23								
	24								
	25								

TYPE OF SAMPLE
 D. - DISTURBED
 U.L. - UNDIST. LINER
 S.T. - SHELBY TUBE
 S.S. - SPLIT SPOON
 R.C. - ROCK CORE
 () - PENETROMETER

REMARKS:

Standard Penetration Test - Driving 2" OD Sampler 1' With
 140# Hammer Falling 30"; Count Made at 6" Intervals

GROUND WATER OBSERVATIONS

G.W. ENCOUNTERED AT 14 FT. 3 INS.
 G.W. ENCOUNTERED AT _____ FT. _____ INS.
 G.W. AFTER COMPLETION 19 FT. 6 INS.
 G.W. AFTER _____ HRS. _____ FT. _____ INS.
 G.W. VOLUMES Light



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LOG OF SOIL
 BORING NO. 14-10

PROJECT Soils Investigation

JOB NO. 14-279

LOCATION 24.65-Acre Subdivision
 Eight Mile and Beck Roads
 Novi, Michigan

SURFACE ELEV. _____ DATE 8-6-14

Sample & Type	Depth	Legend	SOIL DESCRIPTION	Penetration Blows for 6"	Moisture %	Natural Wt. P.C.F.	Dry Den Wt. P.C.F.	Unc. Comp. Strength PSF.	Str. %
	1		0'3" Moist dark brown sandy TOPSOIL, fill						
A	2		Moist brown clayey fine SAND with gravel and silt, fill						
UL	3		1'8" Extremely moist brown silty CLAY with sand and pebbles, traces of brick and cinders, fill	12	11.9		*	(9000+)	
	4			21					
	5			25					
B	6		4'11" Extremely compact moist brown SAND & GRAVEL	6					
UL	7			15	9.9				
	8			19			*	(9000+)	
	9		Extremely compact moist brown SAND & GRAVEL with stones and occasional cobbles						
C	10		7'0" Extremely compact moist brown fine to Medium SAND with trace of gravel	12					
UL	11			16					
	12			17					
	13		Very compact wet brown gravelly SAND with little silt						
	14								
D	15		13'6" Very stiff moist blue silty CLAY with occasional silt seams	10					
UL	16			11	12.1	137			
	17			11					
	18		Very compact wet brown fine SAND with traces of gravel and silt and occasional silt lenses						
	19								
E	20		18'6" Extremely compact wet SAND & GRAVEL	6					
UL	21			9					
	22			14					
	23								
	24								
	25		20'0"						
F				10					
UL				16					
				21					

TYPE OF SAMPLE
 D. - DISTURBED
 U.L. - UNDIST. LINER
 S.T. - SHELBY TUBE
 S.S. - SPLIT SPOON
 R.C. - ROCK CORE
 () - PENETROMETER

REMARKS: *Calibrated Penetrometer

Standard Penetration Test - Driving 2" OD Sampler 1' With
 140# Hammer Falling 30": Count Made at 6" Intervals

GROUND WATER OBSERVATIONS

G.W. ENCOUNTERED AT 9 FT. 3 INS.
 G.W. ENCOUNTERED AT 8 FT. 11 INS.
 G.W. AFTER COMPLETION 8 FT. 11 INS.
 G.W. AFTER HRS. FT. INS.
 G.W. VOLUMES Medium Cave In at 8'11"



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LOG OF SOIL BORING NO. 14-11

PROJECT Soils Investigation

JOB NO. 14-279

LOCATION 24.65-Acre Subdivision

SURFACE ELEV. _____ DATE 8-6-14

Eight Mile and Beck Roads
Novi, Michigan

Sample & Type	Depth	Legend	SOIL DESCRIPTION	Penetration Blows for 6"	Moisture %	Natural Wt. P.C.F.	Dry Den Wt. P.C.F.	Unc. Comp. Strength PSF.	Str. %
			0'4"						
	1		Moist dark brown sandy TOPSOIL with traces of gravel, stones and crushed concrete, fill						
A	2		1'0"						
UL	3		Moist brown fine SAND with crushed stone, fill	7					
	4		Stiff moist discolored brown silty CLAY with organics and traces of sand, fill	6	17.7	118	*	(3500)	
B	5		4'6"						
UL	6		Very stiff moist brown silty CLAY with sand and pebbles and occasional moist sand partings	4					
	7		6'0"	8	13.8	132	*	(6000)	
C	8			11					
UL	9		Extremely stiff moist brown silty CLAY with sand and pebbles	7					
	10		8'8"	12	11.2	137	*	(7000)	
D	11			15					
UL	12		Extremely stiff moist brown silty CLAY with some sand and pebbles	10					
	13		12'0"	16					
	14		Very stiff moist blue silty CLAY with traces of sand and pebbles	17					
E	15		13'4"						
UL	16		Very compact wet gray fine SAND with trace of gravel	9					
	17		14'6"	10					
	18		Very compact wet brown SAND & GRAVEL	12					
	19		17'10"						
F	20		Extremely compact wet brown SAND & GRAVEL	23					
UL	21		20'0"	21					
	22			18					
	23								
	24								
	25								

TYPE OF SAMPLE
 D. - DISTURBED
 U.L. - UNDIST. LINER
 S.T. - SHELBY TUBE
 S.S. - SPLIT SPOON
 R.C. - ROCK CORE
 () - PENETROMETER

REMARKS: *Calibrated Penetrometer

GROUND WATER OBSERVATIONS

Standard Penetration Test - Driving 2" OD Sampler 1' With
 140# Hammer Falling 30": Count Made at 6" Intervals

G.W. ENCOUNTERED AT 13 FT. 4 INS.
 G.W. ENCOUNTERED AT _____ FT. _____ INS.
 G.W. AFTER COMPLETION 11 FT. 5 INS.
 G.W. AFTER _____ HRS. _____ FT. _____ INS.
 G.W. VOLUMES Heavy



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LOG OF SOIL BORING NO. 14-12

PROJECT Soils Investigation

JOB NO. 14-279

LOCATION 24.65-Acre Subdivision
Eight Mile and Beck Roads
Novi, Michigan

SURFACE ELEV. _____ DATE 8-8-14

Sample & Type	Depth	Legend	SOIL DESCRIPTION	Penetration Blows for 6"	Moisture %	Natural Wt. P.C.F.	Dry Den Wt. P.C.F.	Unc. Comp. Strength PSF.	Str. %
	1		0'3" Moist dark brown clayey sandy TOPSOIL, fill						
A	2		Extremely stiff moist blue silty CLAY with sand and pebbles, fill	30					
UL	3			19					
	4			15					
B	5		5'0" Extremely compact moist brown SAND & GRAVEL with concrete, fill	55					
UL	6			---					
	7		5'6" Stiff moist dark brown sandy CLAY with sand and pebbles and trace of roots, fill	4					
C	8			3					
UL	9			5					
	10		10'4" Stiff moist blue silty CLAY with trace of roots, fill	3					
D	11			3	22.2	115			
UL	12			5			*	(2500)	
	13		13'6" Extremely stiff moist variegated silty CLAY with sand and pebbles and sand partings						
E	14			12					
UL	15			14	10.4	140			
	16		16			*	(7500)		
	17		18'6" Extremely compact brown fine to medium SAND with trace of clay						
F	18			16					
UL	19			12					
	20		20'0"	13					
	21								
	22								
	23								
	24								
	25								

TYPE OF SAMPLE
 D. - DISTURBED
 U.L. - UNDIST. LINER
 S.T. - SHELBY TUBE
 S.S. - SPLIT SPOON
 R.C. - ROCK CORE
 () - PENETROMETER

REMARKS: *Calibrated Penetrometer

GROUND WATER OBSERVATIONS

G.W. ENCOUNTERED AT 18 FT. 6 INS.
 G.W. ENCOUNTERED AT _____ FT. _____ INS.
 G.W. AFTER COMPLETION 18 FT. 3 INS.
 G.W. AFTER _____ HRS. _____ FT. _____ INS.
 G.W. VOLUMES Light

Standard Penetration Test - Driving 2" OD Sampler 1' With
 140# Hammer Falling 30": Count Made at 6" Intervals



McDOWELL & ASSOCIATES
 Geotechnical, Environmental, & Hydrogeologic Services
 21355 Hatcher Avenue • Ferndale, MI 48220
 Phone: (248) 399-2066 • Fax: (248) 399-2157

LOG OF SOIL
 BORING NO. 14-13

PROJECT Soils Investigation

JOB NO. 14-279

LOCATION 24.65-Acre Subdivision

SURFACE ELEV. _____ DATE 8-8-14

Eight Mile and Beck Roads
 Novi, Michigan

Sample & Type	Depth	Legend	SOIL DESCRIPTION	Penetration Blows for 6"	Moisture %	Natural Wt. P.C.F.	Dry Den. Wt. P.C.F.	Unc. Comp. Strength PSF.	Str. %
	1		0'3" Moist brown sandy gravelly TOPSOIL, fill						
A	2		Extremely compact moist brown gravelly SAND with trace of clay, fill	26					
UL	3	16							
	4	20							
B	5		4'3" Extremely compact moist brown and gray SAND & GRAVEL with discolored sandy clay seams and occasional stones, fill	30					
UL	6	14							
	7	13							
C	8		8'6" Stiff to very stiff moist discolored brown silty CLAY with sand and pebbles, gravelly sand seams and occasional stones, fill	9					
UL	9	8		6.8					
	10	4							
D	11		14'6" Compact wet brown gravelly SAND with little silt and sand partings	5					
UL	12	7		9.9	128				
	13	10		*	(6000)				
E	14		18'6" Very stiff moist blue silty CLAY with sand and pebbles	11					
UL	15	5		6.2	125				
	16	5							
	17		20'0" (Empty)						
	18								
	19								
F	20			9					
UL	21			11					
	22			13					
	23								
	24								
	25								

TYPE OF SAMPLE
 D. - DISTURBED
 U.L. - UNDIST. LINER
 S.T. - SHELBY TUBE
 S.S. - SPLIT SPOON
 R.C. - ROCK CORE
 () - PENETROMETER

REMARKS: *Calibrated Penetrometer

GROUND WATER OBSERVATIONS

G.W. ENCOUNTERED AT 16 FT. 0 INS.
 G.W. ENCOUNTERED AT _____ FT. _____ INS.
 G.W. AFTER COMPLETION 15 FT. 6 INS.
 G.W. AFTER _____ HRS. _____ FT. _____ INS.
 G.W. VOLUMES Light

Standard Penetration Test - Driving 2" OD Sampler 1' With
 140# Hammer Falling 30". Count Made at 6" Intervals



McDOWELL & ASSOCIATES
 Geotechnical, Environmental, & Hydrogeologic Services
 21355 Hatcher Avenue • Ferndale, MI 48220
 Phone: (248) 399-2066 • Fax: (248) 399-2157

LOG OF SOIL
 BORING NO. 14-14

PROJECT Soils Investigation

JOB NO. 14-279

LOCATION 24.65-Acre Subdivision
 Eight Mile and Beck Roads
 Novi, Michigan

SURFACE ELEV. _____ DATE 8-6-14

Sample & Type	Depth	Legend	SOIL DESCRIPTION	Penetration Blows for 6"	Moisture %	Natural Wt. P.C.F.	Dry Den. Wt. P.C.F.	Unc. Comp. Strength PSF.	Str. %
	1		0'2" Moist dark brown sandy gravelly TOPSOIL, fill						
A	2	[Diagonal Hatching]	Very stiff moist discolored brown silty CLAY with sand and pebbles, trace of bricks and topsoil pockets	14					
UL	3			10					
	4			11					
B	5			4					
UL	6	[Diagonal Hatching]	4'3" Very stiff moist discolored brown silty CLAY with bricks and peat seams and pockets, fill	5	12.0		*	(5000)	
	7			15					
C	8			6					
UL	9	[Diagonal Hatching]	6'6" Very stiff moist greenish brown silty CLAY with sand and pebbles	8	15.6	133	*	(5500)	
	10			13					
D	11			7					
UL	12	[Diagonal Hatching]	8'6" Very stiff moist variegated silty CLAY with sand and pebbles and silty sand partings	9					
	13			11	12.6		*	(6000)	
	14								
E	15	[Diagonal Hatching]	14'0" Extremely stiff moist brown silty CLAY with sand and pebbles	25					
UL	16			23					
	17			20					
	18	[Stippled]	17'3" Very compact wet brown SAND & GRAVEL with occasional stones						
F	19			8					
UL	20			10					
	21	[Blank]	20'0"	9					
	22								
	23								
	24								
	25								

TYPE OF SAMPLE
 D. - DISTURBED
 U.L. - UNDIST. LINER
 S.T. - SHELBY TUBE
 S.S. - SPLIT SPOON
 R.C. - ROCK CORE
 () - PENETROMETER

REMARKS: Calibrated Penetrometer

GROUND WATER OBSERVATIONS

G.W. ENCOUNTERED AT 14 FT. 6 INS.
 G.W. ENCOUNTERED AT _____ FT. _____ INS.
 G.W. AFTER COMPLETION 16 FT. 2 INS.
 G.W. AFTER _____ HRS. _____ FT. _____ INS.
 G.W. VOLUMES Light

Standard Penetration Test - Driving 2" OD Sampler 1' With
 140# Hammer Falling 30". Count Made at 6" Intervals

PARTIAL SIEVE ANALYSIS

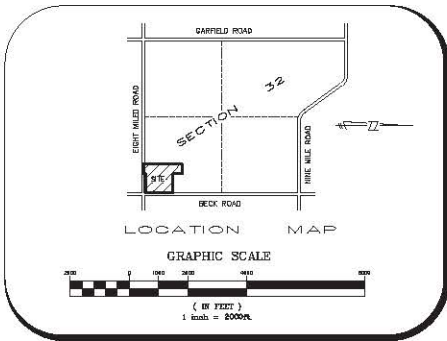
Boring	Sample	% Passing #4 Sieve	% Passing #10 Sieve	% Passing #40 Sieve	% Passing #100 Sieve	% Passing #200 Sieve
14-5	B	98.8	93.4	72.0	30.2	17.5
14-6	C	98.7	94.0	65.5	37.1	27.2
14-7	C	98.0	96.9	93.9	81.3	66.0
14-9	A	99.8	98.6	93.8	49.1	21.4
	B	99.4	98.1	92.1	55.8	24.1
	C	100.0	100.0	99.5	86.5	60.3
	D	100.0	100.0	99.9	94.9	70.1
14-10	D	84.3	67.2	38.8	19.3	12.6
14-13	E	79.1	65.7	26.3	15.6	12.4

PLANNED REZONING OVERLAY (PRO) PLAN

DUNHILL PARK

SECTION 32, TOWN 1 NORTH,
RANGE 8 EAST, CITY OF NOVI,
OAKLAND COUNTY, MICHIGAN

PREPARED FOR:
HUNTER PASTEUR HOMES
DUNHILL PARK, L.L.C.
32300 NORTHWESTERN HWY., STE. 125
FARMINGTON HILLS, MI 48334
248.539.5511



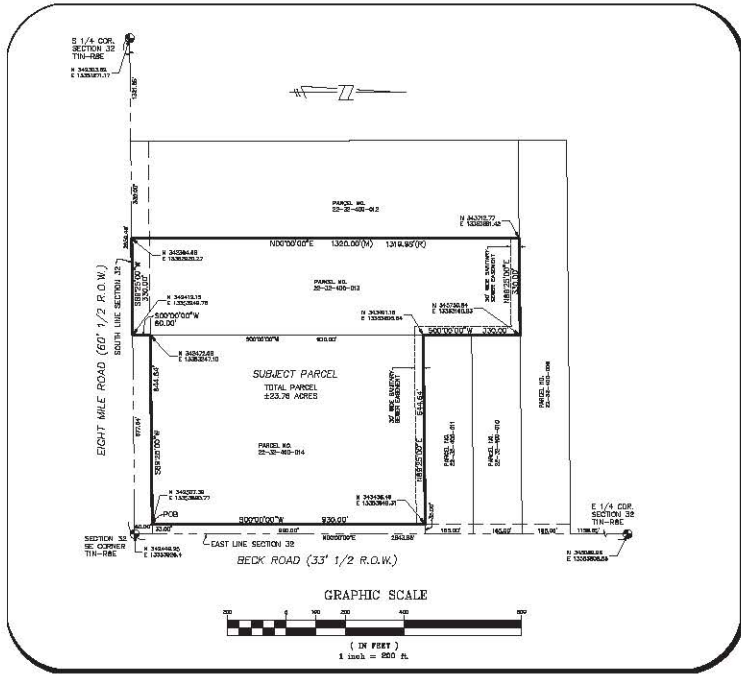
LEGAL DESCRIPTION

PART OF THE SOUTHEAST 1/4 OF SECTION 32, T1N-18E, CITY OF NOVI, DESCRIBED AS: COMMENCING AT THE SOUTHEAST CORNER OF SAID SECTION 32; THENCE N00°00'00"E 80.00 FEET ALONG THE EAST LINE OF SAID SECTION 32 AND THE CENTERLINE OF BECK ROAD; THENCE S89°25'00"W 33.00 FEET TO THE POINT OF BEGINNING; THENCE CONTINUING S89°25'00"W 644.64 FEET ALONG THE NORTH RIGHT-OF-WAY LINE OF EIGHT MILE ROAD; THENCE S00°00'00"W 80.00 FEET; THENCE S89°25'00"W 330.00 FEET ALONG THE SOUTH LINE OF SAID SECTION 32 AND THE CENTERLINE OF EIGHT MILE ROAD; THENCE N00°00'00"E 1320.00 FEET; THENCE N89°25'00"E 330.00 FEET; THENCE S00°00'00"W 330.00 FEET TO THE POINT OF BEGINNING, CONTAINING 23.79 ACRES OF LAND, MORE OR LESS.

BENCHMARKS

BM#1 - (CITY OF NOVI, BM 32-8) RAILROAD SPIKE IN SOUTH FACE OF POWER POLE AT NORTHEAST CORNER OF B MILE RD. AND BECK RD. ELEVATION 644.63 (CITY OF NOVI DATUM)

BM#2 - RAILROAD SPIKE IN NORTH FACE OF 4TH POWER POLE WEST OF BECK RD. ON THE NORTH SIDE OF B MILE RD. ELEVATION 644.65 (CITY OF NOVI DATUM)



- SHEET INDEX**
- ENGINEERING PLANS:**
- COVER SHEET
 - SITE PLAN
 - STORM WATER MANAGEMENT PLAN
- WOODLAND PLANS:**
- W-1 WOODLAND PLAN
W-2 TREE LIST
W-3 TREE LIST
- LANDSCAPE PLANS:**
- L101, L102, L401, L501

- NOTES**
- ALL WORK SHALL CONFORM TO THE CITY OF NOVI'S CURRENT STANDARDS AND SPECIFICATIONS.
 - THE CONTRACTOR MUST OBTAIN A PERMIT FROM THE CITY OF NOVI FOR ANY WORK WITHIN THE RIGHT-OF-WAY OF 8 MILE ROAD AND BECK ROAD. THE CONTRACTOR MUST OBTAIN A PERMIT FROM THE ROAD COMMISSION FOR OAKLAND COUNTY FOR ANY WORK WITHIN THE RIGHT-OF-WAY OF 8 MILE ROAD.
 - ALL PAVEMENT MARKINGS, TRAFFIC CONTROL SIGNS, AND PARKING SIGNS SHALL COMPLY WITH THE DESIGN AND PLACEMENT REQUIREMENTS OF THE 2011 MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

- FIRE DEPARTMENT NOTES**
- All fire hydrants and water mains shall be installed and in service prior to above foundation building construction on each phase is built.
 - All roads shall be paved and capable of supporting 35 tons prior to construction above foundation.
 - Building addresses shall be posted facing the street during all phases of construction. Addresses shall be a minimum of three inches in height on a contrasting background.
 - Provide 4-6" diameter concrete filled steel posts 48" above finish grade of each hydrant as required.
 - Fire lanes shall be posted with "Fire Lane - No Parking" signs in accordance with Ordinance #85.99.02.

SEIBER, KEAST ENGINEERING, L.L.C.
CONSULTING ENGINEERS
100 MAINCENTRE • SUITE 10 • NORTHVILLE, MICHIGAN • 48167
PHONE: 248.308.3331 FAX: 248.308.3335

LANDSCAPE PLANS PREPARED BY:
GRISSIM METZ ANDRIESE ASSOCIATES
300 EAST CADY STREET
NORTHVILLE, MICHIGAN 48167
PHONE: 248.347.7010

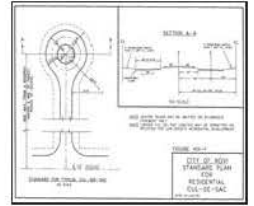
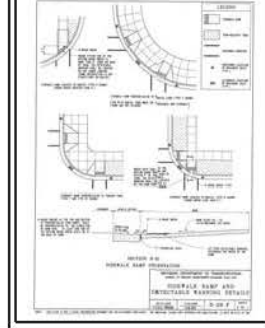
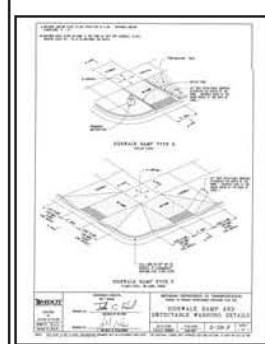
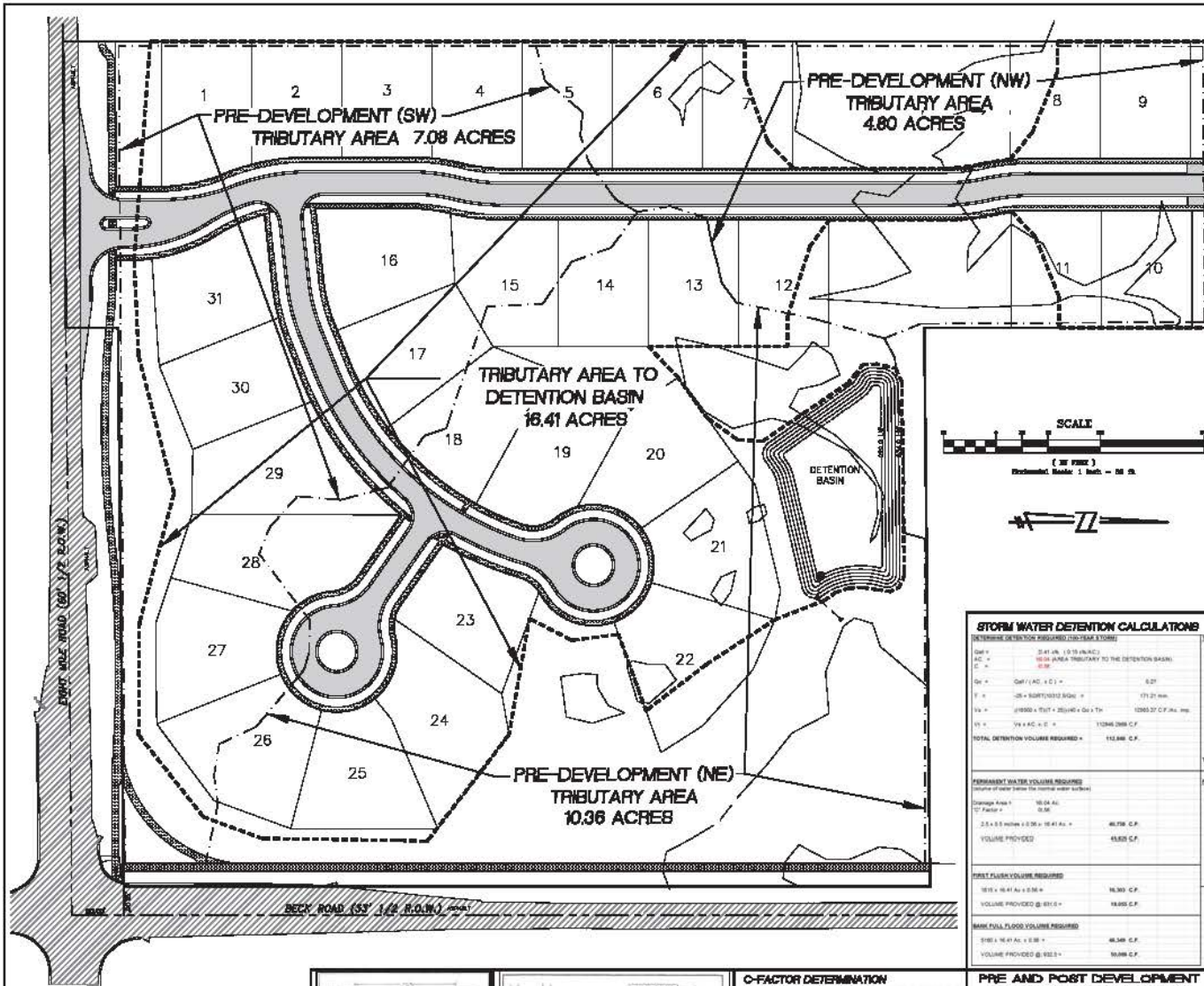
WOODLAND PLANS PREPARED BY:
ALLEN DESIGN
557 CARPENTER
NORTHVILLE, MICHIGAN 48167
PHONE: 248.467.4668

SURVEY PROVIDED BY:
ALPINE SURVEYING, INC.
46890 WEST ROAD, SUITE 109
NOVI, MICHIGAN 48377
PHONE: 248.926.3701

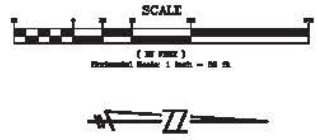
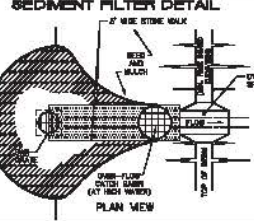
WETLAND INFORMATION PROVIDED BY:
KING & MACGREGOR ENVIRONMENTAL, INC.
43050 FORD ROAD, SUITE 130
CANTON, MICHIGAN 48187
PHONE: 734.354.0594

REVISIONS			ENGINEER'S SEAL
NO.	DATE	DESCRIPTION	
1	8-12-16	REV FOR CITY PRELIM LETTER	
2	7-28-16	REV FOR CITY PRELIM LETTER	
3	10-20-16	REV FOR CITY / GLENN DE LOT	

DATE: 08-10-16 DRAWN BY: J.A. FOR STAMPING: 16-011
CHECKED BY: P.S. LICENSE #226-14-01100-00

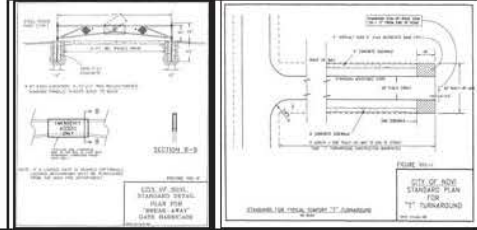
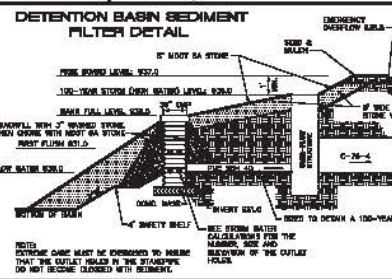


- ### MAINTENANCE SCHEDULE
- THE PROPERTY OWNER IS RESPONSIBLE FOR THE MAINTENANCE OF THE DETENTION BASIN. MAINTENANCE SHOULD BE PERFORMED FOLLOWING ANY OF THE FOLLOWING SCHEDULES:
- CHECKED THE DEPTH OF ANY STORMWATER DETENTION TO ENSURE THE CAPACITY OF THE BASIN IS MAINTAINED FOR STORMWATER AND SEDIMENTATION, AND FOR THE PROTECTION OF PROPERTIES.
 - CHECKED THE BASIN FOR SPILLAGE, DAMAGE, OR OTHER MECHANICAL DAMAGE.
 - CHECKED FOR THE PRESENCE OF ANY WEED GROWTH, WHICH SHOULD BE REMOVED IMMEDIATELY FROM THE BASIN.
 - CHECKED THE WEEDS TO PREVENT DAMAGE TO THE BASIN. WEEDS SHOULD BE REMOVED IMMEDIATELY.
 - ANY WEEDS REMOVED DURING THE MAINTENANCE CHECKS SHOULD BE DISPOSED OF PROPERLY.
 - SEDIMENT REMOVED DURING CLEANING SHOULD BE PLACED AT AN UPWARD AREA AND STABILIZED SO THAT IT DOES NOT RE-ENTER THE DRAINAGE COURSE.



STORM WATER DETENTION CALCULATIONS

DETENTION DETAIL (PRE-DEVELOPMENT)		TOTAL DETENTION PROVIDED (PRE-DEVELOPMENT)	
ELEVATION	VOLUME	ELEVATION	VOLUME
100	1000	100	1000
101	1000	101	1000
102	1000	102	1000
103	1000	103	1000
104	1000	104	1000
105	1000	105	1000
106	1000	106	1000
107	1000	107	1000
108	1000	108	1000
109	1000	109	1000
110	1000	110	1000
111	1000	111	1000
112	1000	112	1000
113	1000	113	1000
114	1000	114	1000
115	1000	115	1000
116	1000	116	1000
117	1000	117	1000
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124	1000	124	1000
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137	1000	137	1000
138	1000	138	1000
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140	1000	140	1000
141	1000	141	1000
142	1000	142	1000
143	1000	143	1000
144	1000	144	1000
145	1000	145	1000
146	1000	146	1000
147	1000	147	1000
148	1000	148	1000
149	1000	149	1000
150	1000	150	1000



C-FACTOR DETERMINATION

Category	Area (Ac)	C-Factor
Impervious Areas		
Roofs	0.51	0.15
Pavement and Driveways	1.46	0.15
Other	3.23	0.15
Total	5.20	0.15
Permeable Areas		
Lawns	9.31	0.35
Park Areas	0.97	0.35
Group B	0.74	0.25
Group C	0.23	0.30
Total	11.25	0.30
Net Area	16.41	0.25

PRE AND POST DEVELOPMENT STORM WATER DISCHARGE

Category	Area (Ac)	Volume (CU FT)
PRE-DEVELOPMENT		
Area	16.41	16.41
Volume	16.41	16.41
POST-DEVELOPMENT		
Area	16.41	16.41
Volume	16.41	16.41

DUNHILL PARK

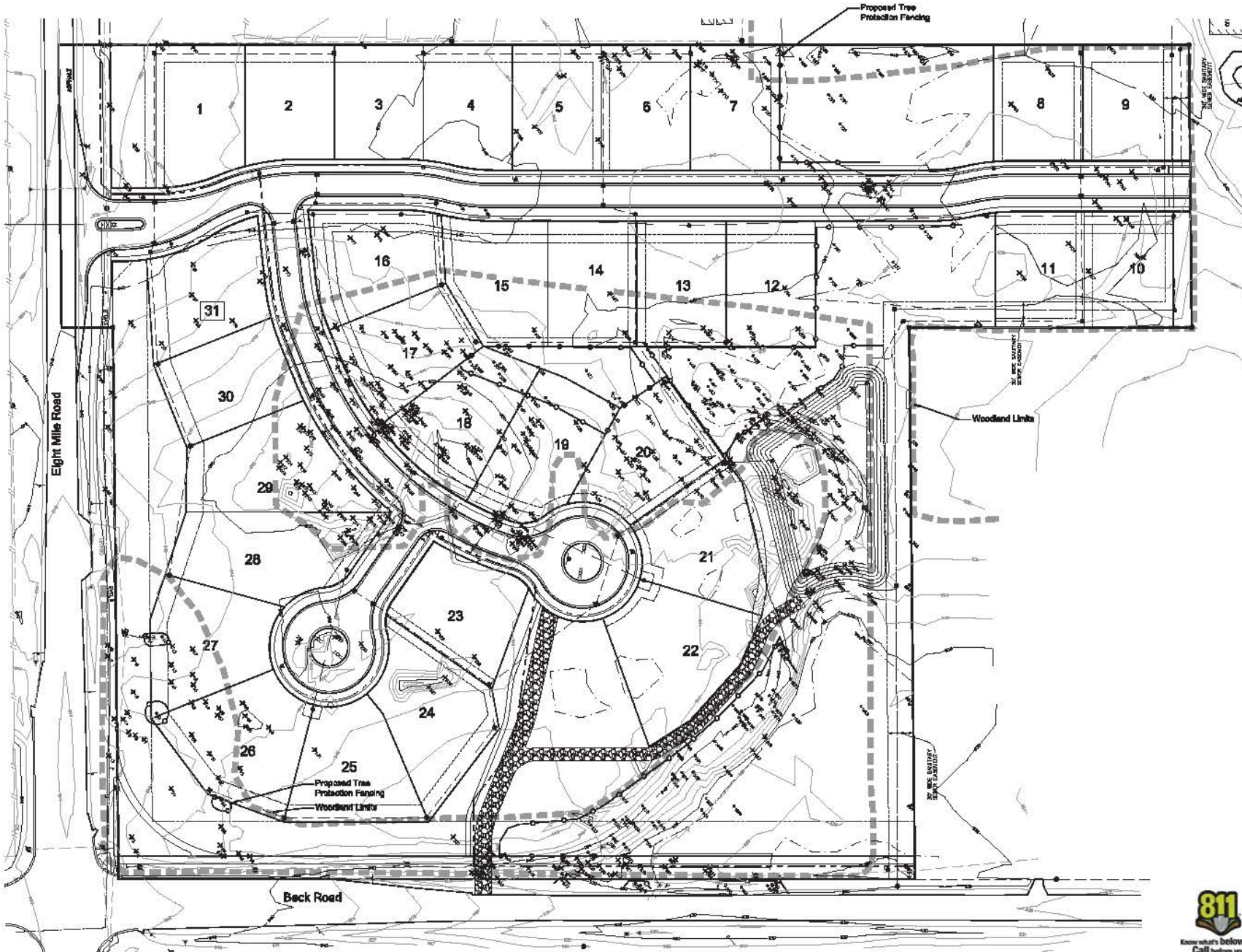
REZONING DISTRICT 1, ZONING 1, PARCEL 1, DUNHILL PARK, CITY OF HOVA, GARLAND COUNTY, ARKANSAS

REVISIONS

NO.	DATE	DESCRIPTION
1	08-09-10	ISSUE FOR SETTING
2	08-09-10	ISSUE FOR SETTING
3	08-09-10	ISSUE FOR SETTING

PLANNED REZONING OVERLAY (PRO) PLAN

SHIBER, KRST ENGINEERING, L.L.C.
 100 MANHATTAN • SUITE 10 • NORTHVILLE, MICHIGAN • 48861
 PHONE: 248.363.3333 FAX: 248.363.3333



Seal: _____



Title: **Woodland Plan**

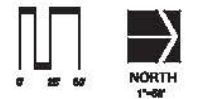
Project: **Dunhill Park
 Novi, Michigan**

Prepared for:
 Hunter Pastour Homes -
 Dunhill Park, LLC
 32525 Westlanders Highway, Suite 125
 Farmington Hills, Michigan 48334
 248.858.6911

Revision:	Issued:
Review	February 4, 2016
Revised	February 15, 2016
Revised	February 18, 2016
Revised	February 17, 2016
Revised	October 21, 2016
Revised	October 22, 2016

Job Number:
 15-009

Drawn By: _____ Checked By: _____
 jay jay



Sheet No. _____



See Sheet W-3 for Replacement Information
 See Sheets W-2 and W-3 for Tree List

W-1

Tree List

Table with columns: Tag No., DBH, Common Name, Botanical Name, Condition, Remarks, Required Replacement. Multiple columns of data listing tree inventory details.

Remarks Key:

- Blank Tree to be saved
Credit Tree is located outside of a woodland area and will be saved.
Remove Tree is located in a registered woodland and will be removed.
Remove/Exempt Tree is dead or located outside of a woodland area.



Seal:



Title:

Tree List

Project:

Dunhill Park
Novi, Michigan

Prepared by:

Hunter Pasteur Homes-
Dunhill Park, LLC
32300 Northwestern Highway, Suite 125
Farmington Hills, Michigan 48334
248.539.5511

Revision:

Issued:

Table with 2 columns: Revision, Issued. Shows revision history with dates from February 4, 2015 to October 22, 2015.

Job Number:

15-009

Drawn By:

Checked By:

Joe

Joe



NORTH



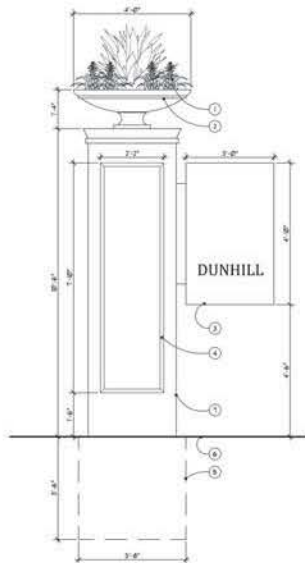
Know what's Below.
Call before you dig.

Sheet No.

W-2

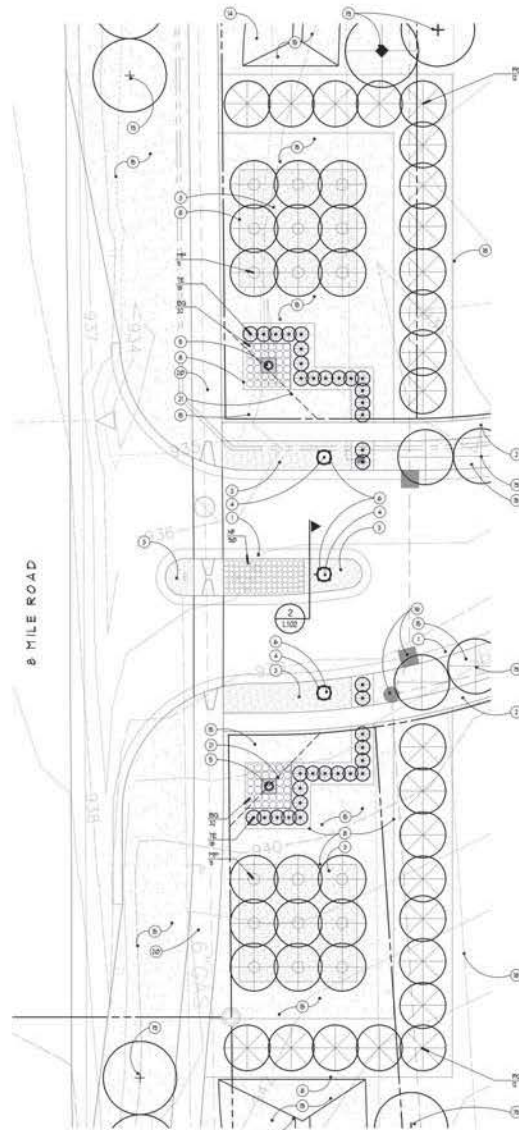
City of Novi Landscape Requirements, Calculations, Proposed PRO Condition, and PRO Consideration Notes:

Right-of-Way Landscape Screening (Sec. 5.5.3.B.1.5)	Required	Proposed PRO Condition	Proposed PRO Consideration Notes	Addressed Landscape Provided
8 Mile Road Sub-Canopy Trees (403' cal.) - 1 tree per 20 ft. 3475' x 20' = 69,500 sq. ft. trees =	(24) Trees # 23' cal.	(25) Trees	(1) 3 Sub-Canopy # 347' cal. (5) Canopy # 330' cal. (1 tree per (2) sub-canopy required)	(1) Existing trees at rear (6) 12' Hg. upright evergreen trees (6) 12' Hg. evergreen shrubs (6) 1' Hg. perennials
Area between sidewalk and curb (403' cal.) - 1 tree per 20 ft. 3475' x 20' = 69,500 sq. ft. trees =	(21) Trees # 23' cal.	(23) Trees # 23' cal.		
Back Road Sub-Canopy Trees (403' cal.) - 1 tree per 20 ft. 4254' x 20' = 85,080 sq. ft. trees =	(22) Trees # 23' cal.	(1) Trees	(1) Canopy # 291' cal. (1 tree per (2) sub-canopy required)	
Area between sidewalk and curb (403' cal.) - 1 tree per 20 ft. 4254' x 20' = 85,080 sq. ft. trees =	(23) Trees # 23' cal.	(1) Trees # 4' cal.		
Street Tree Requirements (Sec. 5.5.3.E.1.c and LDM 1.4)				
8 Mile Road Canopy (4' 37' cal.) or Large Evergreen Trees (4' 37' cal.) - 1 tree per 20 ft. 3475' x 20' = 69,500 sq. ft. trees =	(21) Trees # 37' cal.	(22) Trees	(2) 12' Hg. Evergreen Trees (2) 3' 12' Hg. Multi-trunk Canopy Trees	
Back Road Canopy (4' 37' cal.) or Large Evergreen Trees (4' 37' cal.) - 1 tree per 20 ft. 4254' x 20' = 85,080 sq. ft. trees =	(21) Trees # 37' cal.	(23) Trees	(2) 12' Hg. Multi-trunk Canopy Trees	
Interior Streets Canopy (4' 37' cal.) or Large Evergreen Trees (4' 37' cal.) - 1 tree per 20 ft. 242' x 20' = 4,840 sq. ft. trees =	(21) Trees # 37' cal.	(23) Trees # 4' cal.		
Woodland Replacement Trees				
Per Street (2' 3' Tree x 4)	(24) Trees # 23' cal.	(23) Trees	(2) 6' Hg. Multi-trunk Canopy Trees (2) 4' Hg. Canopy Trees (4) 2' 3' cal. Canopy Trees	
Storm Wash Landscape (Sec. 5.5.3.E.1.v and LDM 1.4. (8))				
Clusters of large native shrubs (75% - 75% coverage along top of bank) 18' x 7' x 30' = 3,780 sq. ft. (1) shrub along 18' x 30' or 24'	(25) Shrubs	(25) Trees	(2) 4' cal. Canopy Trees (2) 12' cal. Canopy Trees	
Out-of-site Landscape (Sec. 5.5.3.E.1.c and LDM 1.4)				
5% of area to be landscaped 85425 sq. ft. = 84928 sq. ft. (1) out-of-site = 1226 sq. ft.	(226) of (unspecified)	(20) 4' cal. Canopy Trees (2) 12' cal. Canopy Trees		



- 1 BEARNAUL FLUORESC
- 2 DECORATIVE FIBERGLASS JRN
- 3 PAINTED ALUMINUM PANEL WITH APPLIED TEXT
- 4 RECESSED PANEL AND TRIM
- 5 CONCRETE FOOTING TO PROST DEPTH
- 6 FRESH GRADE OF DECOMPOSED GRANITE AROUND COLUMN
- 7 FIBER CEMENT PANELS HANG-UP BOARD AND TRIM. PRESURE TREATED SOOD FRAME WITH GYPA PAINTED VENEER

2 Entrance Column with Sign Elevation
SCALE: 1/2" = 1'-0"



1 Main Entrance Landscape Enlargement
SCALE: 1/8" = 1'-0"

- Note Key:** NOTE NOTES NOT APPLICABLE TO EVERY CASE. REFER TO PLAN.
- 1 CURB AND GUTTER - REFER TO CIVIL DRAWING
 - 2 CONCRETE SIDEWALK - REFER TO CIVIL DRAWING
 - 3 4" DEPTH DECOMPOSED GRANITE ON NON-SLOVEN FILTER FABRIC
 - 4 DECORATIVE JRN WITH BEARNAUL FLUORESC
 - 5 DECORATIVE JRN PLANTER
 - 6 DECORATIVE ENTRANCE COLUMN - REFER TO DETAIL 2 SHEET L01
 - 7 DEVELOPMENT ENTRANCE SIGN
 - 8 STEEL EDGING
 - 9 EXISTING TREES TO REMAIN AND PROTECTED
 - 10 EXISTING WETLAND
 - 11 PAVED WETLAND - REFER TO CIVIL DRAWING
 - 12 DETENTION BASIN - REFER TO CIVIL DRAWING
 - 13 ACCESS PATH - REFER TO CIVIL DRAWING
 - 14 SOLIDIFIED LAND FORTH - REFER TO TYP. SECTION
 - 15 IRRIGATED WOODED LAWN ON 4" DEPTH TOPSOIL
 - 16 PROPOSED UTILITIES - REFER TO CIVIL DRAWING
 - 17 PROPOSED CITY OF NOVI SIGN - REFER DETAIL 2 SHEET L01
 - 18 LOT LINE - REFER TO CIVIL DRAWING
 - 19 DECORATIVE TREES - REFER TO SHEET L01
 - 20 CONCRETE SIDEWALK (8' FILE ROAD) - REFER TO CITY OF NOVI DRAWING
 - 21 VISIBILITY TRIANGLE TYP.
 - 22 EXISTING OVERHEAD UTILITY LINES TYP.

Plant List (Main Entrance Landscape Enlargement Only)

Tree	CODE	QTY	DESCRIPTION	SIZE	COMMENTS
1	10	18	Male Pinyon	2' cal.	Minimum Specimen
2	20	20	Tree Spine Oriental Bunch Palm	12' - 14' Hg.	Minimum Specimen. Specimen 14' Hg. (10' cal.)
Shrub:					
3	30	34	Round Green Muehlenberg	24" Dia.	MIN. 20% 24" Dia.
4	30	30	Green Muehlenberg	24" Dia.	Minimum 10% of min. diameter of Landscape Element
5	30	30	Flora & Tripartite Shrub	12' - 14' Hg.	Minimum Specimen
6	30	30	Shrub Green Anemone	12' - 14' Hg.	Minimum Specimen
Perennial:					
7	30	30	Hearts Baseline Cuckoo Bird	1' tall	plant 1/2" cal.
8	30	30	Cuckoo Bird (10' cal.)		



Location Map
Scale: 1/4" = 1'-0"



Existing Soils Map
Scale: 1/4" = 1'-0"

GRISSIM METZ ASSOCIATES ANDRIESE
300 East Cady Street
Northville, MI 48167
Ph: 248-347-7010

Project: Dunhill Park
Site: Novi, Michigan

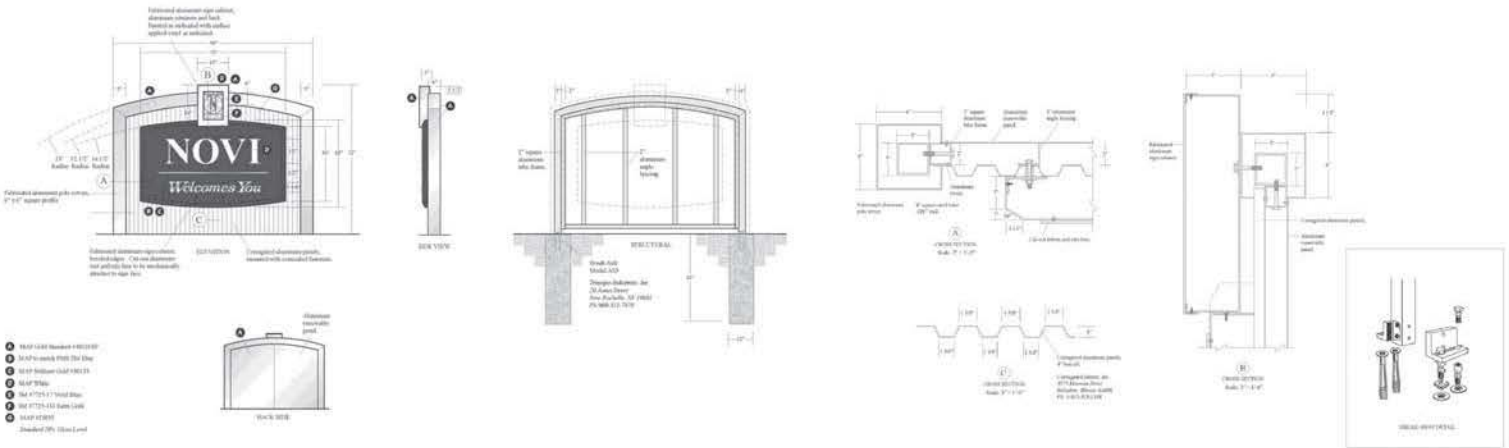
Sheet: Main Entrance Landscape Plan Enlargement

Job Number: F35-151
Drawn: ATP
Checked: ATP/PMB
Title: as noted

Date: 07.29.2015 Issue: Final
10.23.2015 Planned Reopening Overlay (PRO)
10.23.2015 PRO Submittal

Sheet Number: L102
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2 City of Novi Sign Details
NOT TO SCALE



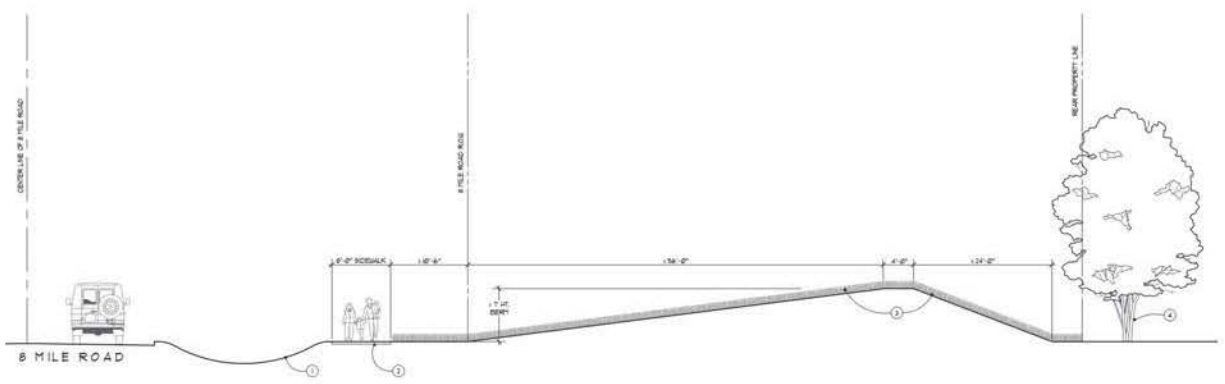
Location Map
Scale: 1/4" = 10'-0"



Existing Soils Map
Not to Scale

**GRISSIM
METZ ASSOCIATES
ANDRIESE**
300 East Cody Street
Northville, MI 48167
Ph: 248-347-7010

Project:	Dunhill Park Novi, Michigan
Sheet:	Site Details
Job Number:	F35-151
Drawn:	ATP
Checked:	ATP/PMB
Title:	as noted
Date:	Issued for: 07.29.2015 Planned Rezoning Overlay (PZO) 10.23.2015 PZO Submittal

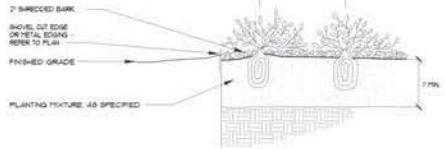


- 1 EXISTING BUILT IN RIGHT OF WAY TO REMAIN
- 2 PROPOSED 8\"/>

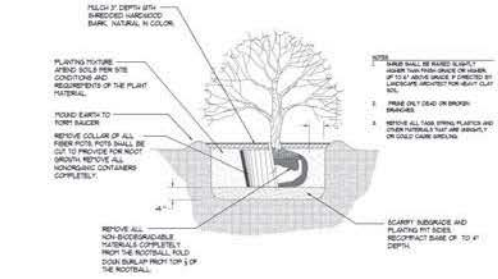
1 Section Through Berm Along 8 Mile Road
SCALE: 1/8" = 1'-0"

CITY OF NOVI LANDSCAPE NOTES:

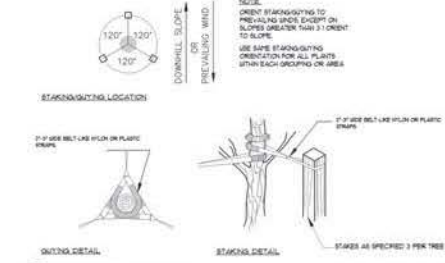
1. ALL PLANT MATERIALS ARE TO BE INSTALLED IN A SOUND, WORKMAN-LIKE MANNER AND IN ACCORDANCE WITH THE CURRENT CITY OF NOVI PLANTING REQUIREMENTS.
2. ALL PLANT MATERIALS SHALL BE INSTALLED BETWEEN MARCH 8th AND NOVEMBER 30th.
3. ALL PLANT MATERIALS ARE TO BE NORTHERN HARDY (GROWN IN) GRADES AND INSTALLED ACCORDING TO ACCEPTED PLANTING PROCEDURES. ALL PLANT MATERIALS SHALL CONFORM TO THE CURRENT LAY STANDARDS FOR HARDY STOCK. THEY SHALL BE PLANTED ACCORDING TO THE CITY OF NOVI PLANTING DETAILS AND SPECIFICATIONS. THE CITY SHALL HAVE THE RIGHT TO INSPECT THE PLANT MATERIALS PRIOR TO PLANTING AND TO SELECT ANY PLANT MATERIALS DEEMED NOT TO MEET THE STANDARDS OF THE ZONING ORDINANCE.
4. ALL TREES SHALL HAVE A CENTRAL LEADER AND A RADIAL BRANCHING PATTERN. BARK GRADES TREES ARE NOT ACCEPTABLE. ALL TREES SHALL BE BALLED AND UNLIMBED (LINES).
5. ANY DECIDUOUS CANOPY TREES WITH BRANCHES THAT TEND TO DEVELOP INTO "Y" SHAPES SHALL BE SUBDIAMETERED SO AS NOT TO RECORD COPIRIGHT BRANCHES.
6. FELCH SHALL BE NATURAL, COLOR FINELY SHREDED HARDWOOD BARK FOR ALL PLANTING. IF "TUCKER" TREES IN ROOT QUARTER CIRCLES WITH 1" PULLED AWAY FROM TRUNK, 3" TUCKER BARKERS AND SHREDS AND 7" THICK DARK PUR FIBERWALS.
7. ALL PLANT MATERIALS SHALL BE GUARANTEED FOR TWO (2) FULL YEARS AFTER DATE OF ACCEPTANCE BY THE CITY FROM ALL UNHEALTHY AND DEAD MATERIAL SHALL BE REPLACED WITHIN ONE (1) YEAR OR THE NEXT APPROPRIATE PLANTING PERIOD (SAID EVER COPES FIRST).
8. ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY GROWING CONDITION INCLUDING WATERING, CULTIVATION, WEED CONTROL, AND SOIL IMPROVEMENTS AS MAY BE NECESSARY.
9. ALL LANDSCAPE AREAS ARE TO BE MAINTAINED IN HEALTHY GROWING CONDITION FREE OF WEEDS AND RUBUS AND IN CONFORMANCE WITH THE APPROVED LANDSCAPE PLAN.
10. CONTRACTOR TO REMOVE ALL CONSTRUCTION DEBRIS AND EXCESS MATERIALS FROM THE SITE PRIOR TO FINAL ACCEPTANCE.
11. PLANT MATERIALS EXCEPT SOIL, GROUND COVERS, AND CREEPING VINE TYPE PLANTING SHALL NOT BE LOCATED WITHIN FOUR (4) FEET OF THE PROPERTY LINE.
12. ALL TREANSFORMERS ARE TO BE SCREENED ON THREE SIDES (PIVOT) IN ACCORDANCE WITH THE CITY OF NOVI ORDINANCE AND SO AS TO NOT COLLECT WITH THE RESTRICTIONS (SEE LANDSCAPE PLAN FOR PLANT LAYOUT).
13. ALL TREES MUST BE PLANTED WITH A GUARANTEE OF TREES, BRUSHES, AND OR OTHER PLANTING GROUND COVERS.
14. THE OWNER IS RESPONSIBLE FOR REQUEST OF FINAL INSPECTION AND ACCEPTANCE OF THE LANDSCAPE AT THE END OF THE 1-YEAR GUARANTEE PERIOD.
15. THE PROVIDER OF THE FINANCIAL GUARANTEE FOR THE LANDSCAPE INSTALLATION SHALL BE FULLY RESPONSIBLE FOR COMPLETION OF THE LANDSCAPE INSTALLATION AND MAINTENANCE PER THE APPROVED LANDSCAPE PLAN AND APPLICABLE CITY ORDINANCES.
 - a. THIS COST MUST BE NOTIFIED TO LOCATE ALL UNDERGROUND BEFORE PLANTING BEGINS.
16. THE CONTRACTOR SHALL INSTALL AND GUARANTEE ALL PLANT MATERIALS FOR 1 YEAR AND MAINTAIN ALL NON-LANDSCAPE AREAS IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY OF NOVI ZONING ORDINANCE.
 - a. THIS COST MUST BE NOTIFIED TO LOCATE ALL UNDERGROUND BEFORE PLANTING BEGINS.
17. THE CITY MUST APPROVE ANY SUBSTITUTION OF PLANT MATERIAL IN WRITING PRIOR TO INSTALLATION.



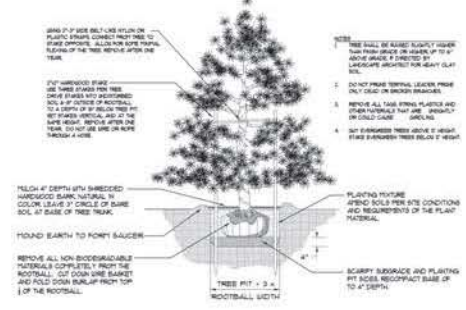
6 Groundcover / Perennial Planting Detail (City of Novi Standard)
L201 NOT TO SCALE



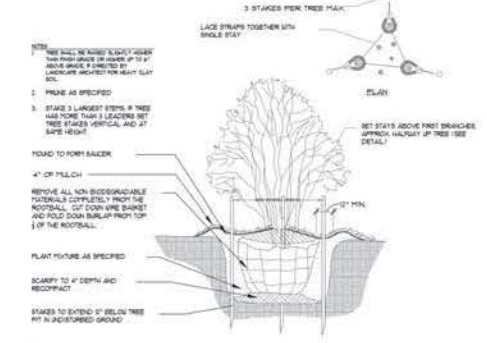
5 Shrub Planting Detail (City of Novi Standard)
L201 NOT TO SCALE



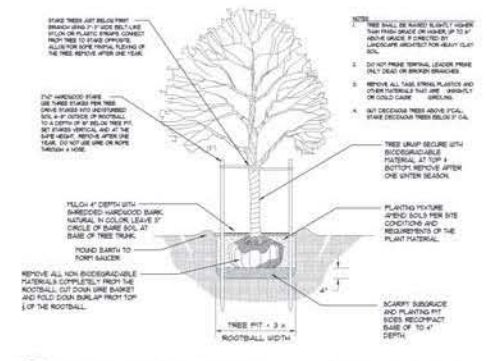
4 Tree Staking Detail (City of Novi Standard)
L201 NOT TO SCALE



3 Evergreen Tree Planting Detail (City of Novi Standard)
L201 NOT TO SCALE



2 Multi-stem Tree Planting Detail (City of Novi Standard)
L201 NOT TO SCALE



1 Deciduous Tree Planting Detail (City of Novi Standard)
L201 NOT TO SCALE



Location Map
Scale: 1/4\"/>



Existing Soils Map
Not to Scale

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Page:	Dunkirk Park
Rev:	Rev. 04/2019
Sheet:	City of Novi Landscape Standards
Scale:	
Job Number:	F33-151
Drawn:	ATP
Checked:	ATP/JMB
Date:	01/2018
Rev:	
07.29.2015	Final Review Overlay (PRO)
10.23.2015	PRO Submittal