



TAFT KNOLLS III JSP19-34

TAFT KNOLLS III JSP 19-34

Public hearing at the request of Trowbridge Land Development for Preliminary Site Plan, Site Condominium, Wetland Permit, Woodland Permit and Stormwater Management Plan Approval. The Subject Property is located in Section 22, South of Eleven Mile Road and East of Taft Road and is zoned R-4 (One Family Residential). The applicant is proposing to construct a 13-unit single-family residential development (Site Condominium) off of an extension of Danya's Way.

Required Action

Approval of the Preliminary Site Plan, Site Condominium, Wetland Permit, Woodland Permit, and Stormwater Management Plan.

| REVIEW | RESULT | DATE | COMMENTS |
|-------------|----------------------------------|----------|---|
| Planning | Conditional Approval recommended | 4-24-20 | <ul style="list-style-type: none"> • Conservation Easements to be placed on wetland and woodland areas outside of unit lots. • City Council approval of modification of existing conservation easement. • Items to be addressed on the Final Site Plan submittal. |
| Engineering | Approval recommended | 4-23-20 | <ul style="list-style-type: none"> • City Council variance for not meeting the dimensional requirements for streets longer than 1,000 feet • Administrative variance for not providing a stub street at 1300 feet intervals along property line (Supported) • Administrative variance for sidewalk placement as shown on the plan (Supported) • Items to be addressed by the applicant prior to Final Site Plan approval |
| Landscaping | Approval recommended | 11-18-19 | <ul style="list-style-type: none"> • Landscape waivers for not providing the berm along Taft Road and street tree requirements (Supported) • Waiver for no greenbelt canopy/evergreen trees or subcanopy trees provided in north 166 lf of frontage (Supported) • Items to be addressed by the applicant prior to Final Site Plan approval |
| Wetlands | Approval recommended | 3-5-20 | <ul style="list-style-type: none"> • Requires a City of Novi Non-Minor Wetland Permit and an Authorization to encroach the 25-Foot Natural Features Setback. • Items to be addressed on the final site plan submittal |
| Woodlands | Approval recommended | 3-5-20 | <ul style="list-style-type: none"> • Requires a City of Novi Woodland Permit • Items to be addressed by the applicant prior to Final Site Plan approval |

| | | | |
|---------|----------------------|---------|--|
| Traffic | Approval recommended | 4-24-20 | <ul style="list-style-type: none">• Items addressed in Engineering section above• Items to be addressed by the applicant prior to Final Site Plan approval |
| Façade | NA | | <ul style="list-style-type: none">• Single family homes are reviewed at the time of building permit submittal |
| Fire | Approval recommended | 2-28-20 | Meets Fire Department standards |

MOTION SHEET

Approve – Preliminary Site Plan

In the matter of Taft Knolls III JSP 19-34, motion to **approve** the Preliminary Site Plan and Site Condominium based on and subject to the following:

- a. A Landscape waiver for absence of required berm along the Taft Road frontage, as required by Section 5.5.3.B.ii and iii, *due to the presence of wetlands between the road and lots that are being preserved, which is hereby granted;*
- b. A Landscape waiver for absence of five required street trees along the Taft Road frontage, as required by Section 5.5.3.E.i.c and LDM 1.d., *due to lack of space caused by presence of wetlands, which is hereby granted;*
- c. A Landscape waiver for absence of greenbelt canopy, evergreen or subcanopy trees provided along north 166 linear feet of frontage (4 canopy and 6 subcanopy trees required) *because wetland to be preserved occupies that section, which is hereby granted;*
- d. City Council approval of proposed modifications to the existing conservation easement;
- e. City Council approval of a variance from Chapter 11, Figure VIII-G of the City Code for not meeting the required radii and right-of-way dimensions of the proposed eyebrow *in order to prevent further encroachment into the wetland buffer;*
- f. Administrative variance for not providing a stub street at 1300 feet intervals along property line, as listed in Section 4.04 A.i.b of the Subdivision Ordinance, *due to presence of existing regulated woodlands and wetlands;*
- g. Administrative variance for placement of the sidewalk greater than 1 foot inside the right-of-way in various locations, *due to the presence of existing regulated woodlands and wetlands;*
- h. 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; and
- i. *(additional conditions here if any)*

(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.)

-AND-

Approval – Wetland Permit

In the matter of Taft Knolls III JSP 19-34, motion to **approve** the Wetland Permit based on and subject to the following:

- a. 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; and
- b. *(additional conditions here if any)*

(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.)

-AND-

Approval – Woodland Permit

In the matter of Taft Knolls III JSP 19-34, motion to **approve** the Woodland Permit based on and subject to the following:

- a. 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; and
- b. *(additional conditions here if any)*

(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.)

Approval – Stormwater Management Plan

In the matter of Taft Knolls III JSP 19-34, motion to **approve** the Stormwater Management Plan, based on and subject to:

- a. 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; and
- b. *(additional conditions here if any)*

(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.)

-OR-

Denial – Preliminary Site Plan with Site Condominium

In the matter of Taft Knolls III JSP 19-34, motion to **deny** the Preliminary Site Plan Open Space Preservation with Site Condominium... *(because the plan is not in compliance with Article 3, Article 4 and Article 5 of the Zoning Ordinance and all other applicable provisions of the Ordinance.)*

-AND-

Denial- Wetland Permit

In the matter of Taft Knolls III JSP 19-34, motion to **deny** the Wetland Permit... *(because the plan is not in compliance with Chapter 12, Article V of the Code of Ordinances and all other applicable provisions of the Ordinance.)*

-AND-

Denial- Woodland Permit

In the matter of Taft Knolls III JSP 19-34, motion to **deny** the Woodland Permit... *(because the plan is not in compliance with Chapter 37 of the Code of Ordinances and all other applicable provisions of the Ordinance.)*

-AND-

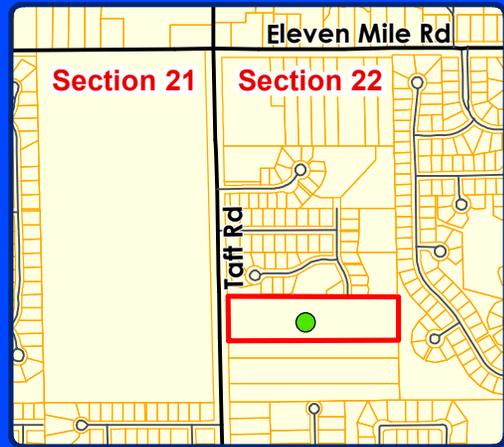
Denial – Stormwater Management Plan

In the matter of Taft Knolls III JSP 19-34, motion to **deny** the Stormwater Management Plan... *(because the plan is not in compliance with Chapter 11 of the Code of Ordinances and all other applicable provisions of the Ordinance.)*

MAPS
Location
Zoning
Future Land Use
Natural Features

JSP 19-34 TAFT KNOLLS III

LOCATION



LEGEND
 Subject Property



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

Map Author: Lindsay Bell
Date: 6/5/20
Project: TAFT KNOLLS III
Version #: 1



1 inch = 278 feet

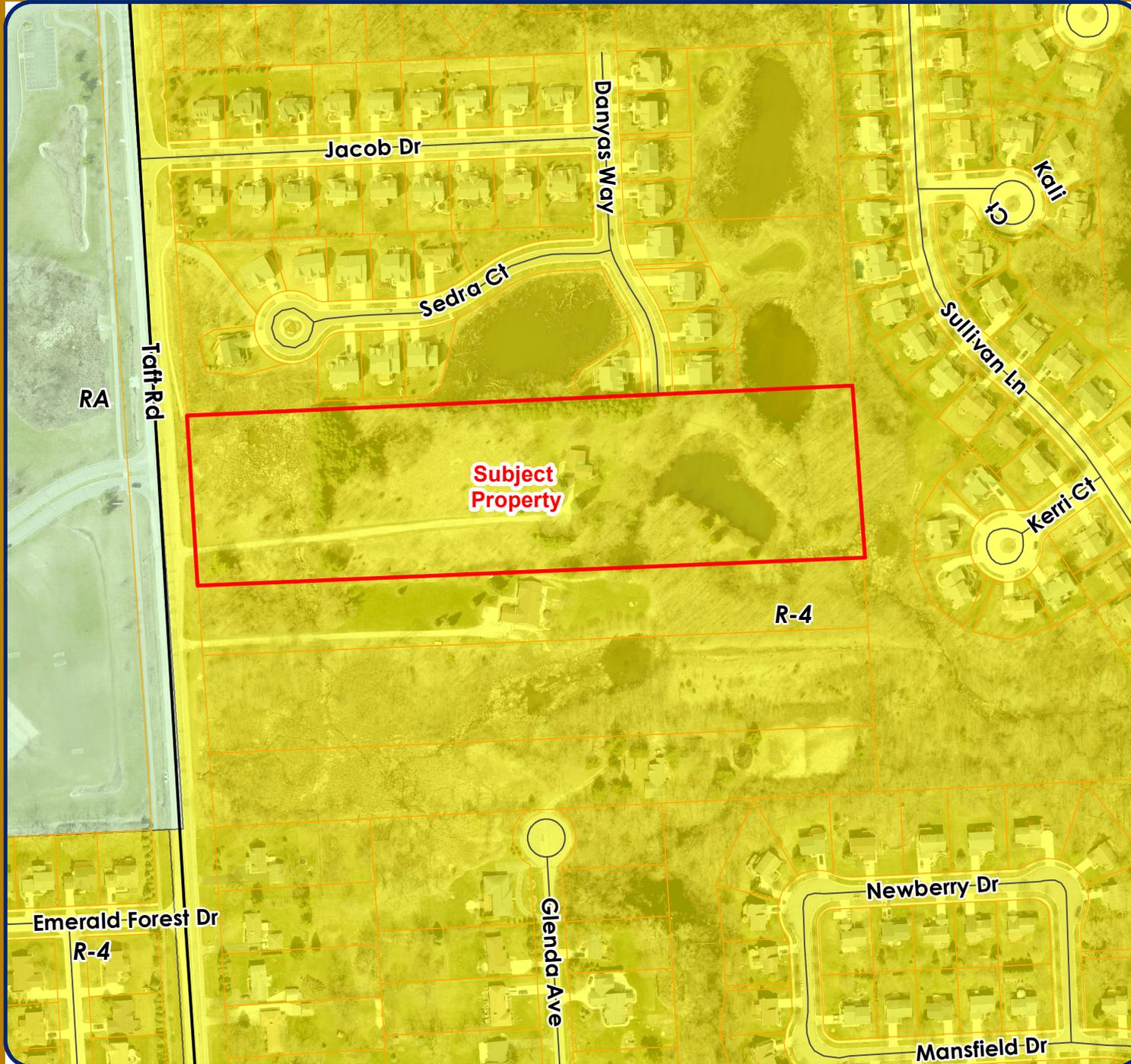


MAP INTERPRETATION NOTICE

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

JSP 19-34 TAFT KNOLLS III

ZONING



LEGEND

- R-A: Residential Acreage
- R-1: One-Family Residential District
- R-4: One-Family Residential District
- Subject Property

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

Map Author: Lindsay Bell
 Date: 6/5/20
 Project: TAFT KNOLLS III
 Version #: 1

0 62.5 125 250 375

Feet

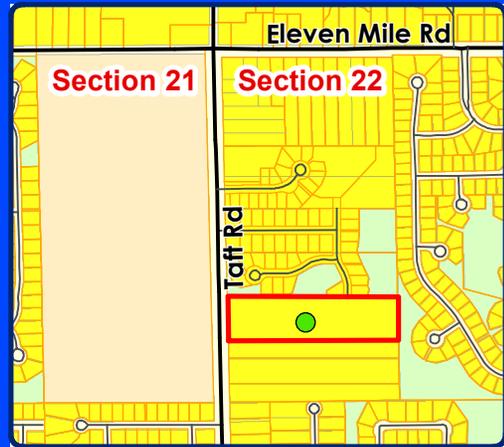
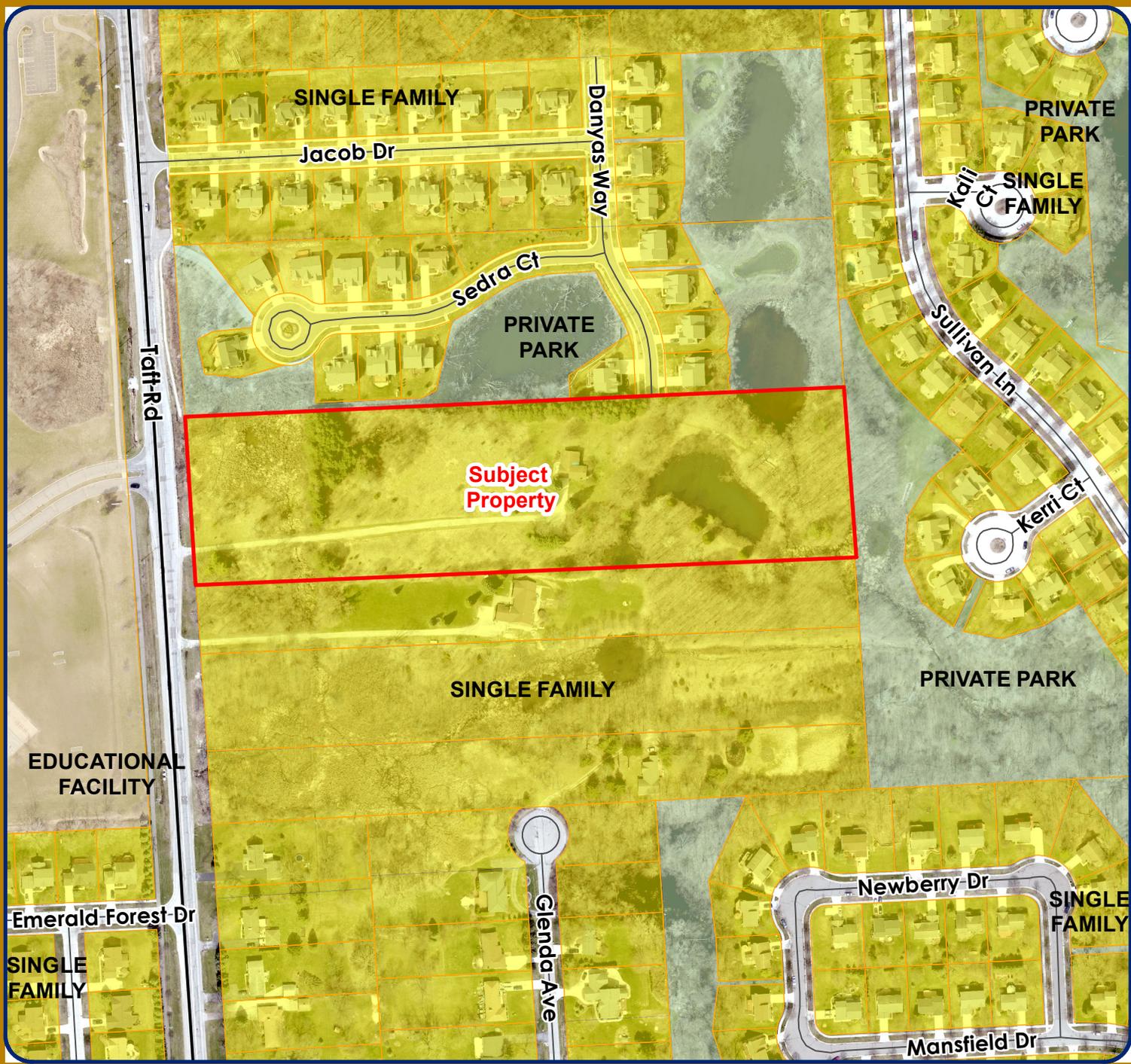
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JSP 19-34 TAFT KNOLLS III

FUTURE LAND USE



LEGEND

- Single Family
- Educational Facility
- Private Park
- Subject Property

City of Novi

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

Map Author: Lindsay Bell
 Date: 6/5/20
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0 62.5 125 250 375

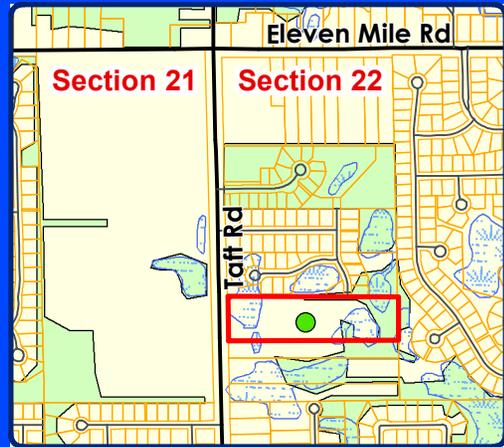
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JSP 19-34 TAFT KNOLLS III

NATURAL FEATURES



LEGEND

- WETLANDS
- WOODLANDS
- Subject Property



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

Map Author: Lindsay Bell
 Date: 6/5/20
 Project: TAFT KNOLLS III
 Version #: 1

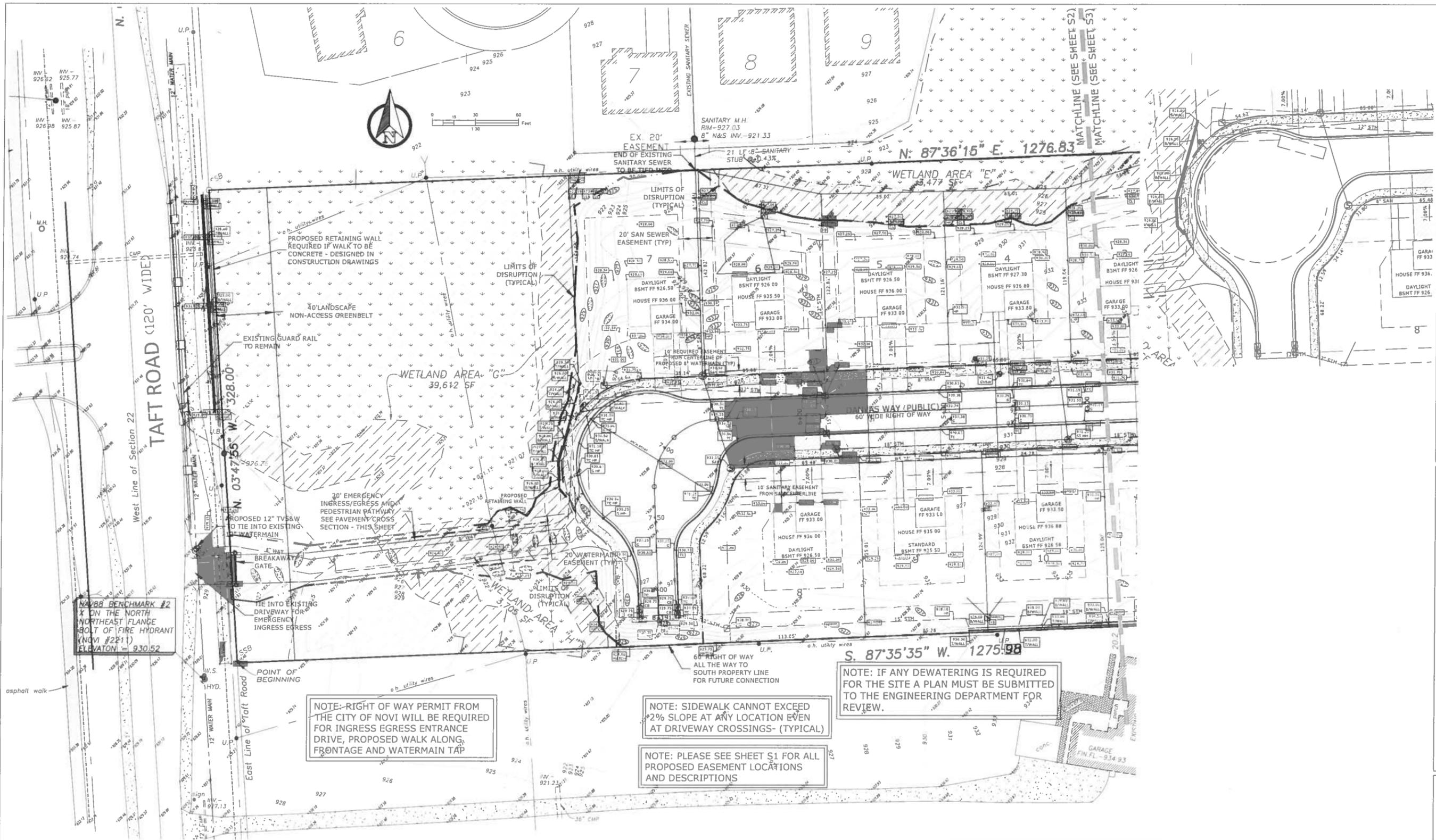
0 62.5 125 250 375 Feet
 1 inch = 278 feet



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SITE PLAN



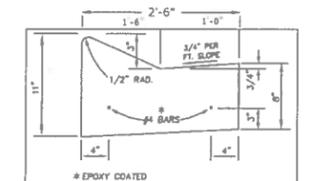
MARKER BENCHMARK #2
X ON THE NORTH
NORTHEAST FLANGE
BOULDER OF FIRE HYDRANT
(NOVI #2211)
ELEVATION = 930.52

NOTE: RIGHT OF WAY PERMIT FROM THE CITY OF NOVI WILL BE REQUIRED FOR INGRESS EGRESS ENTRANCE DRIVE, PROPOSED WALK ALONG, FRONTAGE AND WATERMAIN TAP

NOTE: SIDEWALK CANNOT EXCEED 2% SLOPE AT ANY LOCATION EVEN AT DRIVEWAY CROSSINGS- (TYPICAL)

NOTE: PLEASE SEE SHEET S1 FOR ALL PROPOSED EASEMENT LOCATIONS AND DESCRIPTIONS

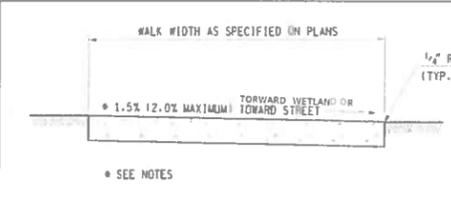
NOTE: IF ANY DEWATERING IS REQUIRED FOR THE SITE A PLAN MUST BE SUBMITTED TO THE ENGINEERING DEPARTMENT FOR REVIEW.



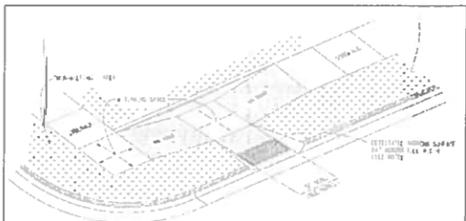
PROPOSED MOUNTABLE CURB FOR SUBDIVISION CURB (TYP)



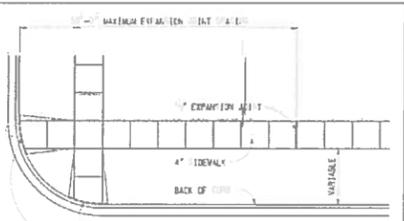
PROPOSED MDOT C4 CURB ONLY IN TAFT ROAD RIGHT OF WAY



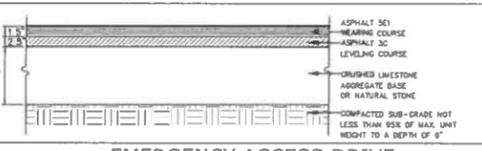
TYPICAL SIDEWALK CROSS SECTION



SIDEWALK RAMP DETAIL FOR ROAD CROSSING



TYPICAL SIDEWALK DETAIL



EMERGENCY ACCESS DRIVE PAVEMENT SECTION

Consulting Civil Engineers
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Powell Engineering & Associates, LLC
4750 Conantwood Drive, White Lake, Michigan 48383
P: 248.744.8888 info@powellengineeringllc.com

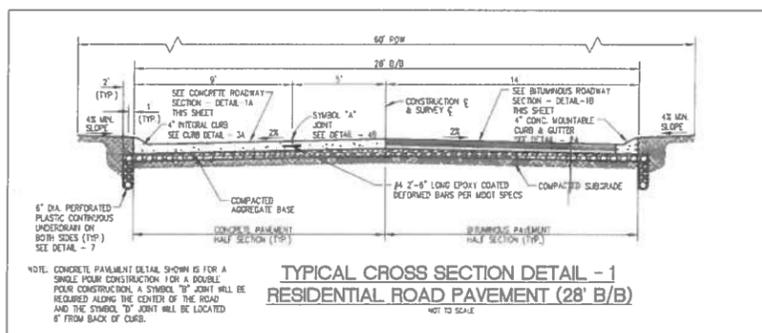
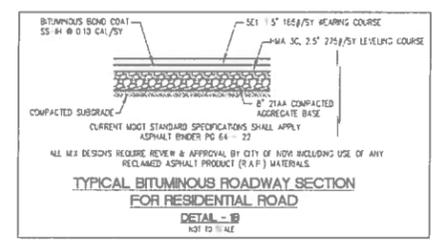
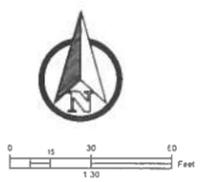
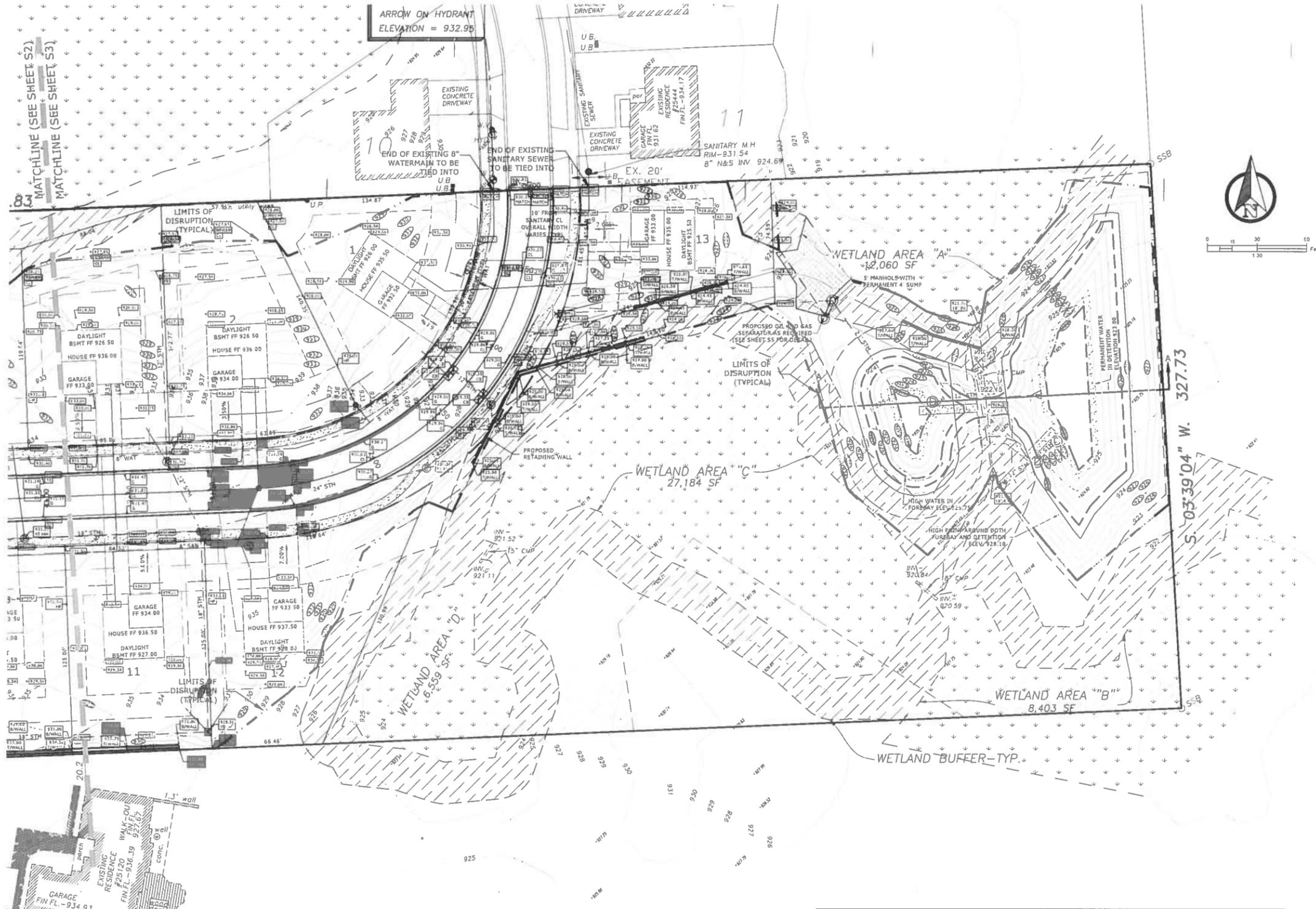
**BEFORE YOU DIG
CALL MISS DIG
1-800-482-7171**

TAFT KNOLLS III SITE CONDO GRADING AND UTILITY PLAN
TAFT KNOLLS III OPEN SPACE DEVELOPMENT
TAFT ROAD, CITY OF NOVI, MICHIGAN

ISSUE DATES

| | |
|----------------|------------|
| CITY SITE PLAN | 8/26/19 |
| CITY SITE PLAN | 10/31/2019 |
| CITY SITE PLAN | 2/18/2020 |
| CITY SITE PLAN | 3/29/2020 |

DRAWN: MCB
DESIGNED: MCB
APPROVED: MCP
P.E. JOB No. 18-472
SCALE: AS SHOWN
S2
SITE PLAN



NOTE: SIDEWALK CANNOT EXCEED 2% SLOPE AT ANY LOCATION EVEN AT DRIVEWAY CROSSINGS- (TYPICAL)

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4750 Conover Drive, White Lake, Michigan 48383
734.717.6825 info@powellengineering.com

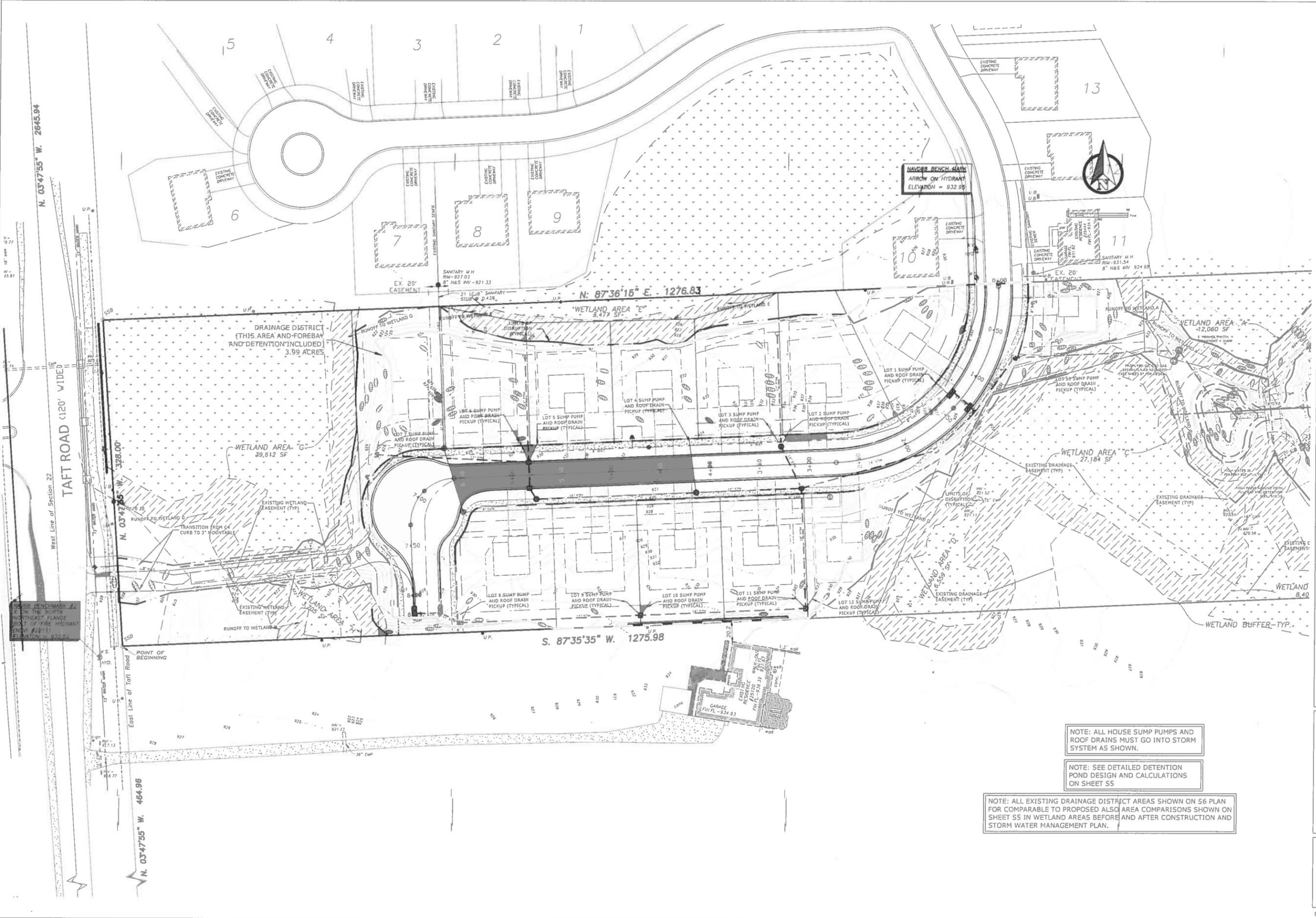
**BEFORE YOU DIG
CALL MISS DIG
1-800-482-7171**

Taft Knolls III Site Condo Grading and Utility Plan
Taft Knolls III Open Space Development
Taft Road, City of Novi, Michigan

ISSUE DATES

| | |
|----------------|------------|
| CITY SITE PLAN | 6/24/21 |
| CITY SITE PLAN | 10/23/2019 |
| CITY SITE PLAN | 2/18/2021 |
| CITY SITE PLAN | 3/28/2020 |

DRAWN: MCS
DESIGNED: MCS
APPROVED: MCP
P.E. JOB No. 18-072
SCALE: AS SHOWN
S3
SITE PLAN



N. 03°47'55" W. 2645.94

TAFT ROAD (120' WIDE)

N. 03°47'55" W. 328.00

S. 87°35'35" W. 1275.98

N: 87°36'15" E. 1276.83

N. 03°47'55" W. 464.96

NOTE: ALL HOUSE SUMP PUMPS AND ROOF DRAINS MUST GO INTO STORM SYSTEM AS SHOWN.

NOTE: SEE DETAILED DETENTION POND DESIGN AND CALCULATIONS ON SHEET S5

NOTE: ALL EXISTING DRAINAGE DISTRICT AREAS SHOWN ON S6 PLAN FOR COMPARABLE TO PROPOSED ALSO AREA COMPARISONS SHOWN ON SHEET S5 IN WETLAND AREAS BEFORE AND AFTER CONSTRUCTION AND STORM WATER MANAGEMENT PLAN.

Consulting Civil Engineers
 "Engineering A Better Michigan"
Powell Engineering & Associates, LLC
 4190 Connersville Drive, White Lake, Michigan 48333
 734.717.8225 info@powellengineering.com

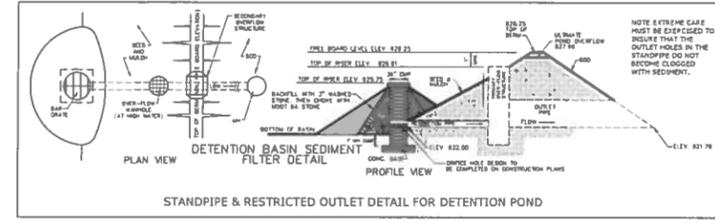
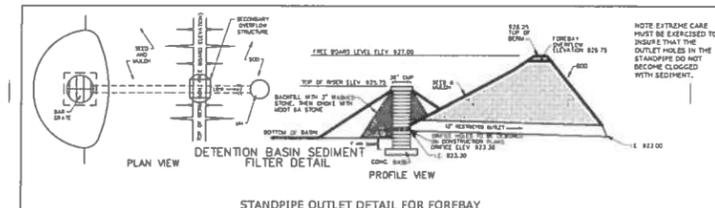
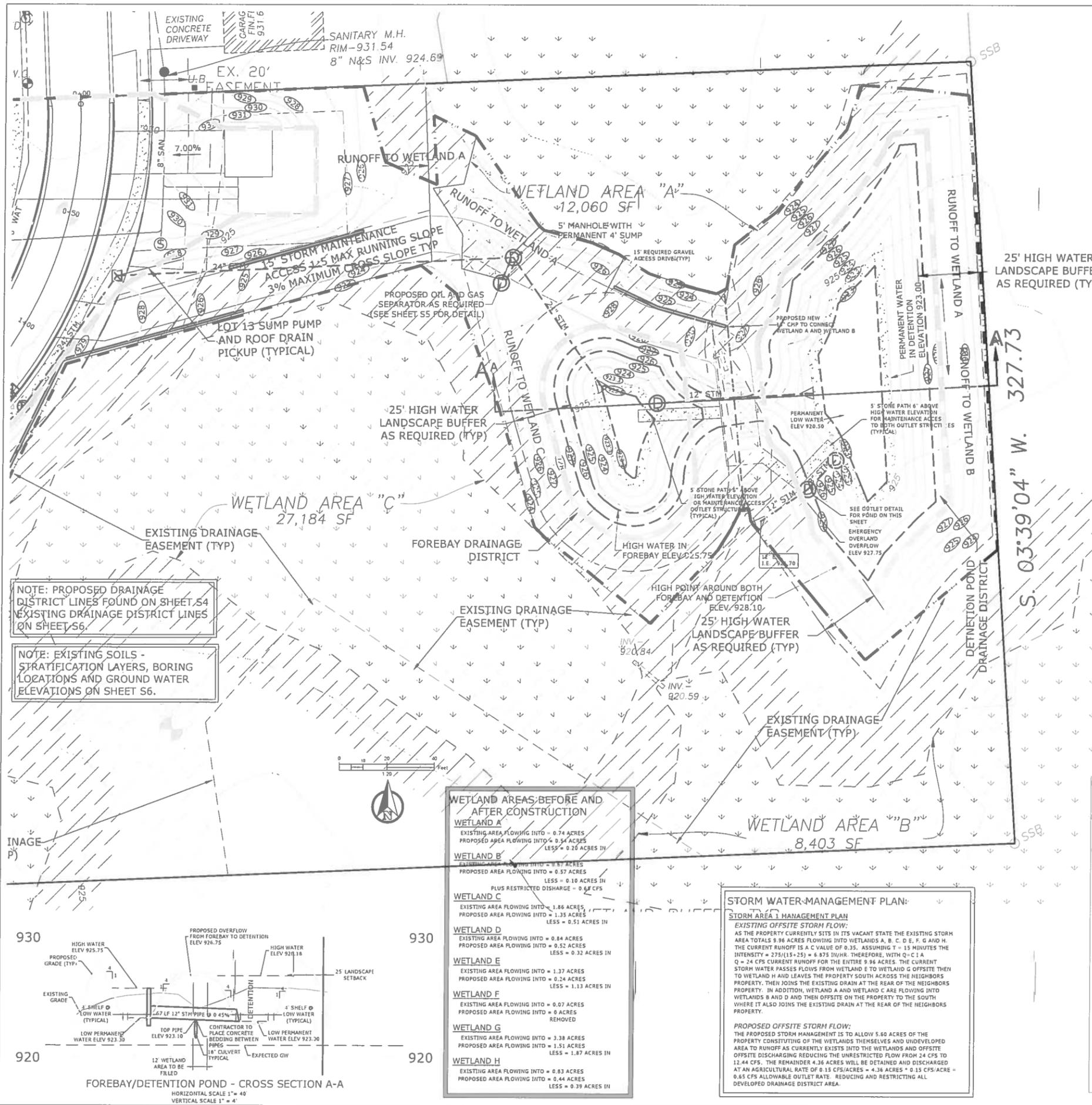
BEFORE YOU DIG
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 1-800-482-7171

**TAFT KNOLLS III SITE CONDO
 STORM WATER MANAGEMENT**
 TAFT KNOLLS III OPEN SPACE DEVELOPMENT
 TAFT ROAD, CITY OF NOVI, MICHIGAN

ISSUE DATES

| | |
|----------------|-----------|
| CITY SITE PLAN | 1/23/2019 |
| CITY SITE PLAN | 2/18/2020 |
| CITY SITE PLAN | 3/28/2020 |

| | |
|--------------|----------|
| DRAWN | MCS |
| DESIGNED | MCS |
| APPROVED | MCP |
| P.E. JOB No. | 16-472 |
| SCALE | AS SHOWN |
| S4 | |
| SITE PLAN | |



STORM WATER CALCULATIONS - DISTRICT AREA 1

DRAINAGE DISTRICT 1 - DETERMINATION OF 'C' FACTOR

| | | | | |
|-----------------------------------|---|-------------|---|-------------|
| TOTAL AREA GOING INTO POND | = | 4.13 ACRES | | |
| PAVING AREA (WALKS, DRIVES, ROAD) | = | 0.91 ACRES | @ | 0.95 = 0.86 |
| BUILDING AREA | = | 0.60 ACRES | @ | 0.35 = 0.57 |
| LAWN AREA | = | 2.6 ACRES | @ | 0.35 = 0.90 |
| DETENTION (LOW WATER AREA) | = | 0.05 ACRES | @ | 1.00 = 0.05 |
| TOTAL AREA | = | 4.13 ACRES | | 2.38 |
| C avg = TOTAL C / TOTAL ACRES = | | 2.38 / 4.13 | = | 0.58 |

DRAINAGE DISTRICT
 $A_c = 4.13$ ACRES CONTRIBUTING
 $Q_b = 0.15$ CFS PER ACRE ALLOWED TO OUTLET = 0.62

FOREBAY CALCULATIONS
 REQUIRED = $1815 \times A_c \times C_{avg}$ = 4316 CF

100-YEAR CALCULATIONS
 $Q_o = Q_b / (A_c \times C_{avg}) = 0.26$ CFS
 $T = 174$ MIN
 $V_s = [(16,500 \times T) / (T + 25)] \times (40 \times Q_b \times T) = 12614$ CU.FT/acre impervious
 $V_t = V_s \times A_c \times C_{avg} = 29997$ CU.FT
 REQUIRED 100-YEAR STORAGE = 29997 CU.FT.

PROVIDED FOREBAY STORAGE

| ELEV. | SQ. FT. | CU. FT. | ACCUM. |
|----------------------|---------|---------|--------|
| 921-923 SILT STORAGE | | | |
| 923.3 | 855 | | |
| 924 | 1400 | 789 | 789 |
| 925 | 2057 | 1729 | 2518 |
| 926 | 2823 | 2440 | 4958 |
| FREEBOARD TO 927.00 | | | |

PROVIDED DETENTION STORAGE

| ELEV. | SQ. FT. | CU. FT. | ACCUM. |
|-------------------------|---------|---------|--------|
| 920-923 PERMANENT WATER | | | |
| 923 | 2635 | 1318 | 1318 |
| 924 | 3732 | 3184 | 4501 |
| 925 | 5067 | 4400 | 8301 |
| 926 | 6536 | 5802 | 14702 |
| 927 | 12310 | 10835 | 25537 |
| 928 | 14766 | 13538 | 39075 |
| FREEBOARD 927-928 | | | |

TOTAL STORAGE PROVIDED BELOW FREEBOARD IS 30,495 CU.FT. > REQUIRED 29997 CU.FT.
 TOTAL ADDITIONAL STORAGE PROVIDED IN FREEBOARD IS 13,538 CU.FT.

NOTE: PROPOSED DRAINAGE DISTRICT LINES FOUND ON SHEET S4
 EXISTING DRAINAGE DISTRICT LINES ON SHEET S6.

NOTE: EXISTING SOILS - STRATIFICATION LAYERS, BORING LOCATIONS AND GROUND WATER ELEVATIONS ON SHEET S6.

WETLAND AREAS BEFORE AND AFTER CONSTRUCTION

WETLAND A
 EXISTING AREA FLOWING INTO = 0.74 ACRES
 PROPOSED AREA FLOWING INTO = 0.54 ACRES
 LESS = 0.20 ACRES IN

WETLAND B
 EXISTING AREA FLOWING INTO = 0.87 ACRES
 PROPOSED AREA FLOWING INTO = 0.57 ACRES
 LESS = 0.10 ACRES IN
 PLUS RESTRICTED DISCHARGE = 0.6 CFS

WETLAND C
 EXISTING AREA FLOWING INTO = 1.86 ACRES
 PROPOSED AREA FLOWING INTO = 1.35 ACRES IN
 LESS = 0.51 ACRES IN

WETLAND D
 EXISTING AREA FLOWING INTO = 0.84 ACRES
 PROPOSED AREA FLOWING INTO = 0.52 ACRES
 LESS = 0.32 ACRES IN

WETLAND E
 EXISTING AREA FLOWING INTO = 1.37 ACRES
 PROPOSED AREA FLOWING INTO = 0.24 ACRES
 LESS = 1.13 ACRES IN

WETLAND F
 EXISTING AREA FLOWING INTO = 0.07 ACRES
 PROPOSED AREA FLOWING INTO = REMOVED

WETLAND G
 EXISTING AREA FLOWING INTO = 3.38 ACRES
 PROPOSED AREA FLOWING INTO = 1.51 ACRES
 LESS = 1.87 ACRES IN

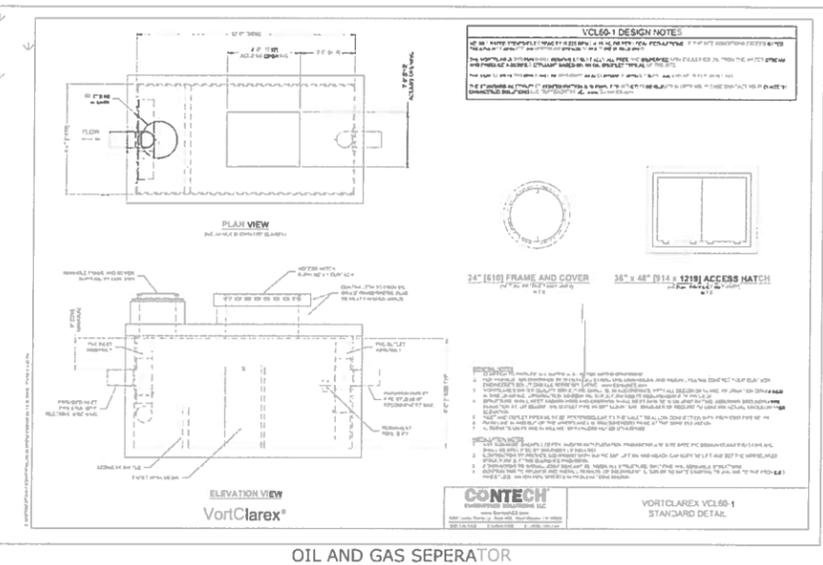
WETLAND H
 EXISTING AREA FLOWING INTO = 0.83 ACRES
 PROPOSED AREA FLOWING INTO = 0.44 ACRES
 LESS = 0.39 ACRES IN

STORM WATER MANAGEMENT PLAN:

STORM AREA 1 MANAGEMENT PLAN

EXISTING OFFSITE STORM FLOW:
 AS THE PROPERTY CURRENTLY SITS IN ITS VACANT STATE THE EXISTING STORM AREA TOTALS 9.96 ACRES FLOWING INTO WETLANDS A, B, C, D, E, F, G AND H. THE CURRENT RUNOFF IS A C VALUE OF 0.35. ASSUMING T = 15 MINUTES THE INTENSITY = $2.78(15+25) = 6.875$ IN/HR. THEREFORE, WITH $Q = C \times I \times A$ $Q = 24$ CFS CURRENT RUNOFF FOR THE ENTIRE 9.96 ACRES. THE CURRENT STORM WATER PASSES FLOWS FROM WETLAND E TO WETLAND G OFFSITE THEN TO WETLAND H AND LEAVES THE PROPERTY SOUTH ACROSS THE NEIGHBORS PROPERTY. THEN JOINS THE EXISTING DRAIN AT THE REAR OF THE NEIGHBORS PROPERTY. IN ADDITION, WETLAND A AND WETLAND C ARE FLOWING INTO WETLANDS B AND D AND THEN OFFSITE ON THE PROPERTY TO THE SOUTH WHERE IT ALSO JOINS THE EXISTING DRAIN AT THE REAR OF THE NEIGHBORS PROPERTY.

PROPOSED OFFSITE STORM FLOW:
 THE PROPOSED STORM MANAGEMENT IS TO ALLOW 5.50 ACRES OF THE PROPERTY CONSTITUTING OF THE WETLANDS THEMSELVES AND UNDEVELOPED AREA TO RUNOFF AS CURRENTLY EXISTS INTO THE WETLANDS AND OFFSITE OFFSITE DISCHARGING REDUCING THE UNRESTRICTED FLOW FROM 24 CFS TO 12.44 CFS. THE REMAINDER 4.36 ACRES WILL BE DETAINED AND DISCHARGED AT AN AGRICULTURAL RATE OF 0.15 CFS/ACRES = 4.36 ACRES * 0.15 CFS/ACRE = 0.65 CFS ALLOWABLE OUTLET RATE. REDUCING AND RESTRICTING ALL DEVELOPED DRAINAGE DISTRICT AREA.



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 P: 248.744.8888 info@powellengineering.com

BEFORE YOU DIG
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Taft Knolls III Site Condo SWMP Calculations
 Taft Knolls III Open Space Development
 Taft Road, City of Novi, Michigan

ISSUE DATES

| | |
|----------------|------------|
| CITY SITE PLAN | 8/20/18 |
| CITY SITE PLAN | 10/21/2019 |
| CITY SITE PLAN | 2/16/2021 |
| CITY SITE PLAN | 3/28/2020 |

DRAWN MCS
DESIGNED MCS
APPROVED MCP
 P.E. JOB NO. 16-472
SCALE AS SHOWN
S5
 SITE PLAN

SOILS (BY TESTING ENGINEERS & CONSULTANTS)

SOIL BORING #1 - EST. ELEV 928.00

| LAYER OVERALL DEPTH | DESCRIPTION |
|--|---|
| 1'-11" | MOIST DARK BROWN CLAYEY TOPSOIL |
| 2'-7" | LOOSE MOIST BROWN CLAYEY FINE SAND WITH CLAY LAYERS & TRACE OF GRAVEL |
| 2'-6" | FIRM MOIST BROWN OXIDIZED CLAY W/SOME SILT, TRACE OF SAND & GRAVEL |
| 5' | STIFF MOIST BROWN CLAY W/SOME SILT, TRACE OF SAND & GRAVEL |
| 4' | STIFF MOIST BROWN CLAY W/SOME SILT, TRACE OF SAND & GRAVEL |
| GW DURING 13" GW @ 137" AFTER DRILLING | |
| EXPECTED GW @ 915.00 | |

SOIL BORING #2 - EST. ELEV 932.50

| LAYER OVERALL DEPTH | DESCRIPTION |
|--|--|
| 7" | MOIST DARK BROWN CLAYEY TOPSOIL |
| 2'-5" | LOOSE MOIST BROWN CLAYEY SAND W/ TRACES OF GRAVEL & CLAY LAYERS |
| 3' | MED. COMPACT MOIST BROWN CLAYEY SAND W/ TRACES OF GRAVEL, CLAY LAYERS & WET SEAM |
| 3'-6" | FIRM MOIST BROWN CLAY WITH SOME SILT, TRACE OF SAND & GRAVEL |
| 2'-6" | FIRM MOIST GRAY CLAY WITH SOME SILT & TRACE OF GRAVEL |
| 3' | STIFF MOIST GRAY CLAY WITH SOME SILT & TRACE OF GRAVEL |
| GW @ 58" DURING GW @ 13 AFTER DRILLING | |
| EXPECTED GW @ 919.50 | |

SOIL BORING #3 - EST. ELEV 930.25

| LAYER OVERALL DEPTH | DESCRIPTION |
|---|--|
| 3" | MOIST DARK BROWN CLAYEY TOPSOIL |
| 2'-9" | MED. COMPACT MOIST BRN CLAYEY SAND W/ SOME GRAVEL & CLAY LAYERS - FILL |
| 1'-6" | MED. COMPACT MOIST DK BRN CLAYEY SAND W/TRACE OF GRAVEL - FILL |
| 2'-4" | FIRM MOIST GRAY CLAY WITH SOME SILT, TRACE OF ORGANIC MATERIAL & WET SEAM - FILL |
| 5' | STIFF MOIST GRAY OXIDIZED CLAY W/ SOME SILT & SAND SEAMS |
| 3' | STIFF MOIST GRAY CLAY WITH SOME SILT & TRACE OF GRAVEL |
| GW @ 54" DURING GW @ 57" AFTER DRILLING | |
| EXPECTED GW @ 924.75 | |

SOIL BORING #4 - EST. ELEV 925.50

| LAYER OVERALL DEPTH | DESCRIPTION |
|---|---|
| 6" | MOIST DARK BROWN CLAYEY TOPSOIL |
| 2'-6" | STIFF MOIST BROWN OXIDIZED CLAY W/ SOME SILT & TRACE OF GRAVEL |
| 3'-6" | STIFF MOIST BROWN OXIDIZED CLAY W/ SOME SILT & TRACE OF GRAVEL |
| 2'-3" | EXTREMELY STIFF MOIST BRN OXIDIZED CLAY W/SOME SILT & TRACE OF GRAVEL |
| 4'-9" | STIFF MOIST GRAY CLAY WITH SOME SILT & TRACE OF GRAVEL |
| 2' | FIRM MOIST GRAY CLAY WITH SOME SILT |
| GW @ 84" DURING GW @ 92" AFTER DRILLING | |
| EXPECTED GW @ 917.50 | |

SOIL BORING #5 - EST. ELEV 923.00

| LAYER OVERALL DEPTH | DESCRIPTION |
|--------------------------------------|---|
| 6" | MOIST DARK BROWN CLAYEY TOPSOIL |
| 3' | FIRM MOIST VARIEGATED CLAY WITH SOME SILT & CLAYEY SAND SEAMS POSSIBLE - FILL |
| 2' | EXTREMELY STIFF MOIST BRN OXIDIZED CLAY W/SOME SILT & TRACE OF GRAVEL |
| 3'-6" | STIFF MOIST BROWN OXIDIZED CLAY W/ SOME SILT, TRACE OF GRAVEL & WET SAND SEAM |
| 2'-3" | STIFF MOIST GRAY CLAY W/SOME SILT & TRACE OF GRAVEL |
| GW @ 8 DURING GW @ 4" AFTER DRILLING | |
| EXPECTED GW @ 921.00 | |

SOIL BORING #6 - EST. ELEV 925.50

| LAYER OVERALL DEPTH | DESCRIPTION |
|---------------------------------|--|
| 2' | FIRM MOIST DK BROWN CLAY W/SOME SILT - FILL |
| 3' | STIFF MOIST VARIEGATED CLAY W/ SOME SILT & TRACE OF GRAVEL |
| 4' | STIFF MOIST BROWN OXIDIZED CLAY W/ SOME SILT & TRACE OF GRAVEL |
| 4' | STIFF MOIST GRAY CLAY WITH SOME SILT & TRACE OF GRAVEL |
| 2' | FIRM MOIST GRAY CLAY WITH SOME SILT & TRACE OF GRAVEL |
| GW NOT OBSERVED GW NOT OBSERVED | |

SOIL BORING #7 - ELEV 925.51 OBSERVED 2/10/17 BY SBE (BACKHOE)

| LAYER OVERALL DEPTH | DESCRIPTION |
|----------------------------|--------------------------|
| 6" | TOPSOIL |
| 18" | SANDY BROWN CLAY |
| 24" | SILTY CLAY |
| 72" | STIFF BROWNISH GRAY CLAY |
| ELEV 915 - GW NOT OBSERVED | |

SOIL BORING #8 - ELEV 925.00 OBSERVED 2/10/17 BY SBE (BACKHOE)

| LAYER OVERALL DEPTH | DESCRIPTION |
|----------------------------|----------------------------------|
| 6" | TOPSOIL |
| 6" | CLAY/TOPSOIL MIX WITH VEGETATION |
| ELEV 917 - GW NOT OBSERVED | |

WETLAND FILLING CALCS:

| WETLAND AFFECTED | SQ. FT. FILLED (SQ FT) | VOLUME OF FILL (CU YDS) |
|------------------|---------------------------------|--------------------------------|
| WETLAND AREA A | 2,122 SQ FT (0.05 AC) | 69 CU YDS |
| WETLAND AREA B | 408 SQ FT (0.01 AC) | 30 CU YDS |
| WETLAND AREA C | NO PROPOSED FILLING | NO PROPOSED FILLING |
| WETLAND AREA D | NO PROPOSED FILLING | NO PROPOSED FILLING |
| WETLAND AREA E | NO PROPOSED FILLING | NO PROPOSED FILLING |
| WETLAND AREA F | 1,326 SF (0.03 AC) | 58 CU YDS |
| WETLAND AREA G | 144 SF (0.003 AC) | 7.5 CU YDS |
| WETLAND AREA H | 828 SF (0.02 AC) | 40 CU YDS |
| TOTAL | 4828 SQ. FT. (0.11 ACRE) | 204.50 VOLUME (CU YDS.) |

NOTES: 0.11 ACRES FILL < 0.25 ACRES FILL THEREFORE, NO MITIGATION REQUIRED

LIMITS OF DISRUPTION:

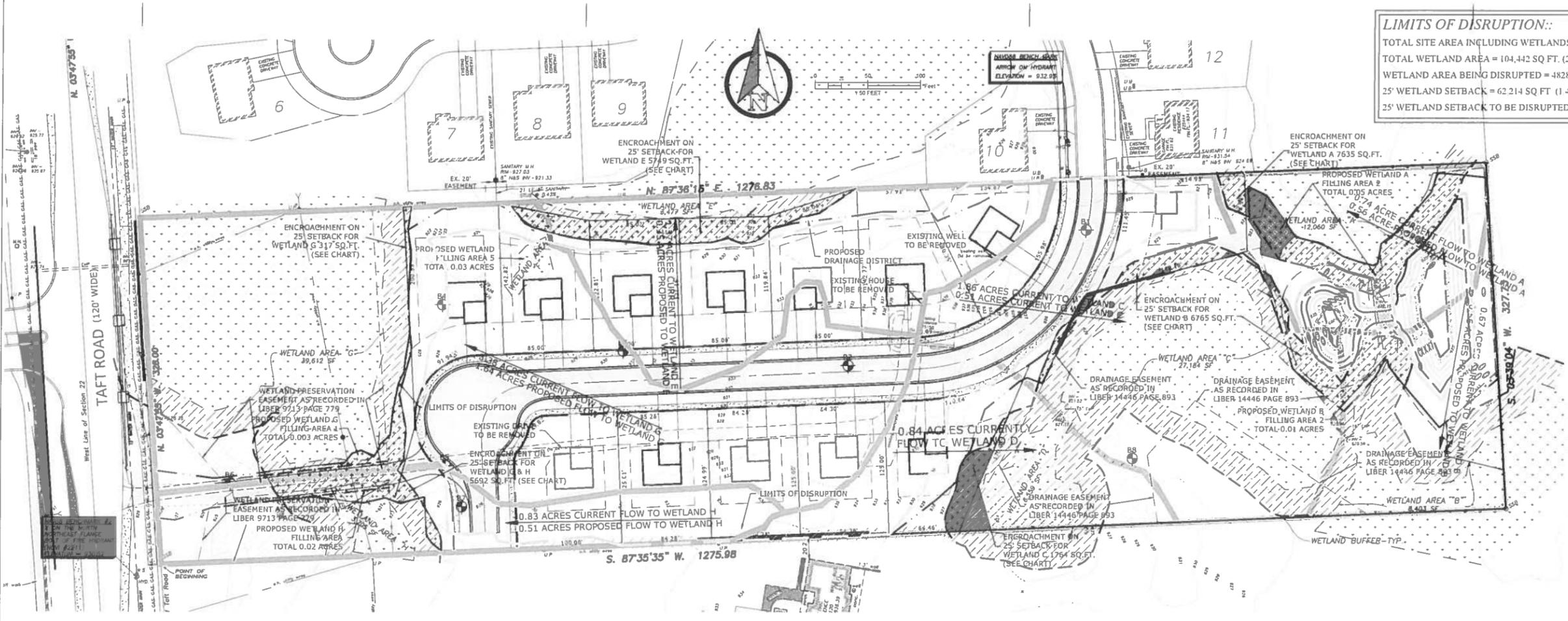
TOTAL SITE AREA INCLUDING WETLANDS = 418,379 SQ. FT. (9.60 ACRES)

TOTAL WETLAND AREA = 104,442 SQ. FT. (2.40 ACRES)

WETLAND AREA BEING DISRUPTED = 4828 SQ. FT. (0.11 ACRES)

25' WETLAND SETBACK = 62,214 SQ. FT. (1.43 ACRES)

25' WETLAND SETBACK TO BE DISRUPTED = 25,539 SQ. FT. (0.57 ACRES)



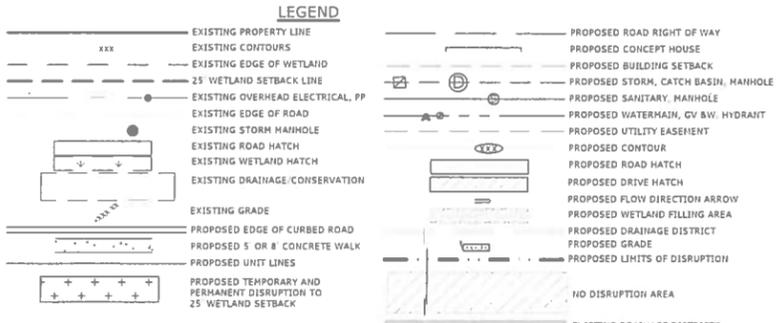
AREA OF 25' WETLAND SETBACK

| WETLAND | AREA OF 25' SETBACK | AREA OF DISRUPTION OF 25' SETBACK | AREA CONTAINED IN LOTS |
|-----------|---------------------|-----------------------------------|------------------------|
| WETLAND A | 11776 SQ. FT. | 6900 SQ. FT. | 735 SQ. FT. |
| WETLAND B | 7865 SQ. FT. | NA | NA |
| WETLAND C | 21762 SQ. FT. | 6765 SQ. FT. | NA |
| WETLAND D | 12,411 SQ. FT. | NA | 1764 SQ. FT. |
| WETLAND E | 8071 SQ. FT. | NA | 5749 SQ. FT. |
| WETLAND G | 14810 SQ. FT. | 3133 SQ. FT. | NA |
| WETLAND H | 8188 SQ. FT. | 3162 SQ. FT. | 317 SQ. FT. |

TEMPORARY AND PERMANENT IMPACTS TO 25' WETLAND SETBACK

| 25' SETBACK | TEMPORARY IMPACT | PERMANENT IMPACT |
|----------------|--|--|
| WETLAND AREA A | - GRADING FOR DETENTION POND AND FOREBAY WITH A SMALL AMOUNT OF FILLING IN WETLAND A - INSTALLATION OF RETAINING WALL - CONSTRUCTION OF STORM MAINTENANCE DRIVE - REPLACEMENT OF 18" EQUALIZATION PIPE BETWEEN WETLANDS A AND B | - RETAINING WALL TO REMAIN IN WETLAND A WETLAND SETBACK - STORM MAINTENANCE DRIVE TO REMAIN WITHIN WETLAND A WETLAND SETBACK - 18" EQUALIZATION CULVERT BETWEEN WETLANDS A AND B - BLRM FROM FOREBAY AND DETENTION POND WILL MAINTAIN IN WETLAND SETBACK - PERMANENTLY FILLING IN NEGLIGIBLE PORTION OF WETLAND A - REAR OF LOT 13 WITHIN WETLAND A 25' WETLAND SETBACK |
| WETLAND AREA B | - GRADING FOR DETENTION POND AND FOREBAY WITH A SMALL AMOUNT OF FILLING IN WETLAND B - REPLACEMENT OF EQUALIZATION PIPE BETWEEN WETLANDS A AND B | - 18" EQUALIZATION CULVERT BETWEEN WETLANDS A AND B |
| WETLAND AREA C | - GRADING FOR DETENTION POND AND FOREBAY | - RETAINING WALL TO REMAIN WITHIN WETLAND C 25' SETBACK - STORM MAINTENANCE DRIVE TO REMAIN WITHIN THE WETLAND C SETBACK |
| WETLAND AREA D | - NO TEMPORARY CHANGES | - NO PERMANENT CHANGES |
| WETLAND AREA E | - NO TEMPORARY CHANGES | - REAR OF LOTS 3, 4, 5, 6 WITHIN THE 25' WETLAND SETBACK WILL BE DEED RESTRICTED AND SIGNS PLACED EVERY 50' O.C. |
| WETLAND AREA F | - WILL BE FILLED IN | - WILL NO LONGER EXIST |
| WETLAND AREA G | - GRADING FOR EMERGENCY INGRESS EGRESS ACCESS - GRADING FOR THE EQUALIZATION PIPE BETWEEN WETLAND G AND H - MINOR FILLING OF WETLAND G - GRADING FOR ROAD EYEBROW | - PERMANENT PAVED INGRESS EGRESS ACCESS DRIVE - NEW EQUALIZATION CULVERT BETWEEN WETLANDS G AND F |
| WETLAND AREA H | - GRADING FOR EMERGENCY INGRESS EGRESS ACCESS - GRADING FOR THE EQUALIZATION PIPE BETWEEN WETLAND G AND H - MINOR FILLING OF WETLAND H | - PERMANENT PAVED INGRESS EGRESS ACCESS DRIVE - NEW EQUALIZATION CULVERT BETWEEN WETLANDS G AND F |

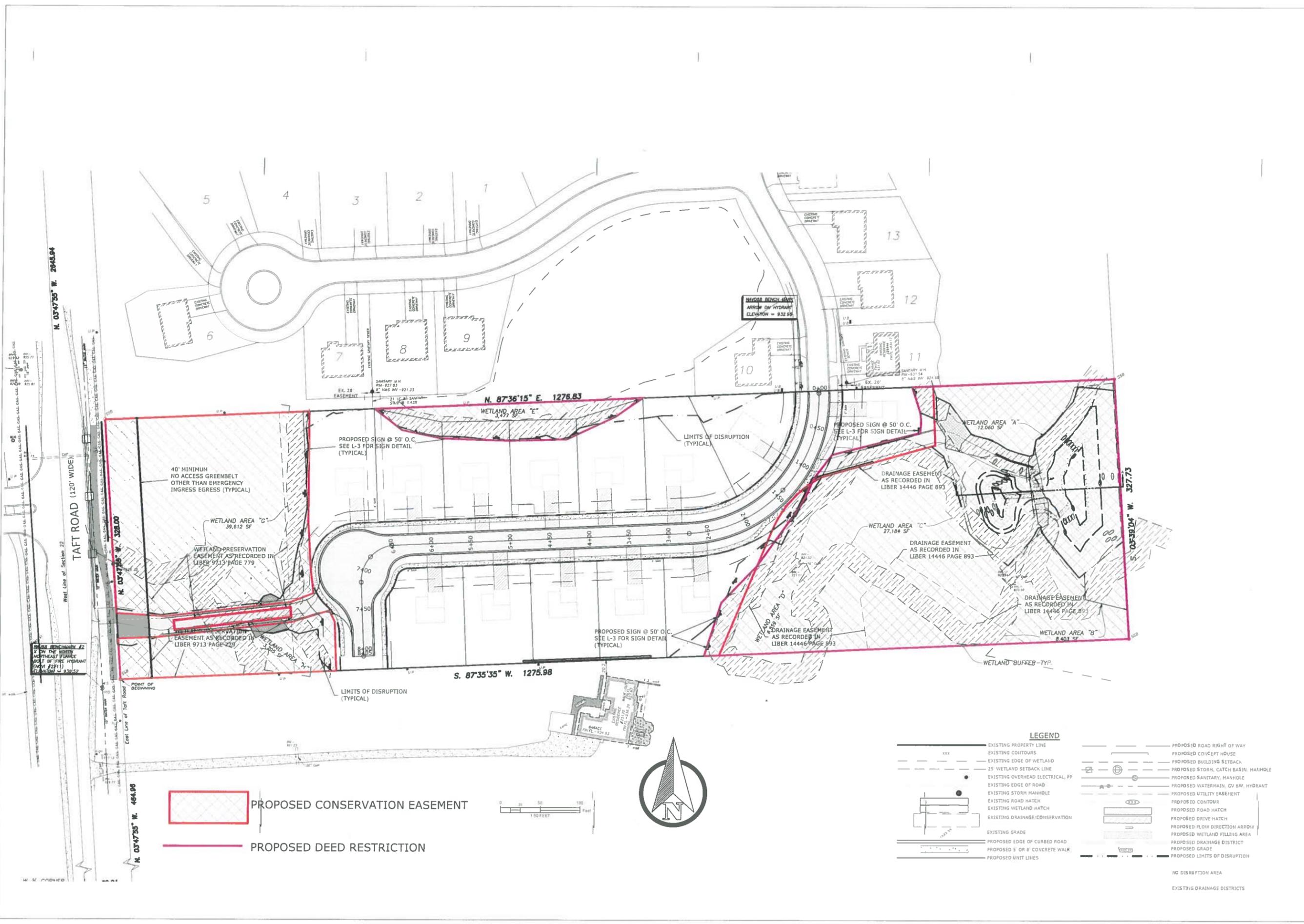
NOTE: SEE SHEET L-3 FOR NATIVE SEED MIX.



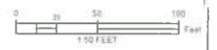
TAFT KNOLLS III SITE CONDO DEMO AND WETLAND PLAN
 TAFT ROAD, CITY OF NOVI, MICHIGAN
ISSUE DATES
 CITY SITE PLAN 6/22/19
 CITY 10/31/2019
LEGEND
 DRAWN MCS
 DESIGNED MCS
 APPROVED MCP
 P.E. JOB No. 16-472
 SCALE AS SHOWN
S6
 SITE PLAN
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 PROPOSED CONSERVATION EASEMENT
 PROPOSED DEED RESTRICTION



| LEGEND | | | |
|--------|----------------------------------|--|--------------------------------------|
| | EXISTING PROPERTY LINE | | PROPOSED ROAD RIGHT OF WAY |
| | EXISTING CONTOURS | | PROPOSED CONCEPT HOUSE |
| | EXISTING EDGE OF WETLAND | | PROPOSED BUILDING SETBACK |
| | 25' WETLAND SETBACK LINE | | PROPOSED STORM, CATCH BASIN, MANHOLE |
| | EXISTING OVERHEAD ELECTRICAL, PP | | PROPOSED SANITARY, MANHOLE |
| | EXISTING EDGE OF ROAD | | PROPOSED WATERMAIN, GV SW, HYDRANT |
| | EXISTING STORM MANHOLE | | PROPOSED UTILITY EASEMENT |
| | EXISTING ROAD HATCH | | PROPOSED CONTOUR |
| | EXISTING WETLAND HATCH | | PROPOSED ROAD HATCH |
| | EXISTING DRAINAGE/CONSERVATION | | PROPOSED DRIVE HATCH |
| | EXISTING GRADE | | PROPOSED FLOW DIRECTION ARROW |
| | PROPOSED EDGE OF CURBED ROAD | | PROPOSED WETLAND FILLING AREA |
| | PROPOSED 5' OR 8' CONCRETE WALK | | PROPOSED DRAINAGE DISTRICT |
| | PROPOSED UNIT LINES | | PROPOSED GRADE |
| | | | PROPOSED LIMITS OF DISRUPTION |
| | | | NO DISRUPTION AREA |
| | | | EXISTING DRAINAGE DISTRICTS |

Consulting Civil Engineers
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**Taft Knolls III Site Condo
 Existing Easement Overlay**
 Taft Knolls III Site Condo
 Taft Road, City of Novi, Michigan

ISSUE DATES
 CITY SITE PLAN 1/21/2019
 CITY SITE PLAN 2/16/2020
 DRAWN MCS
 DESIGNED MCS
 APPROVED MCP
 P.E. JOB No. 16-472
 SCALE AS SHOWN
S7
 SITE PLAN

NW CORNER
OF SECTION 22,
T.1N., R.8E.



VITINS ENGINEERING
44275 BRANDYwine
CANTON, MICHIGAN 48117
TELEPHONE: (734) 433-1403
FACSIMILE: (734) 433-3812

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Civil/Environmental Engineering
Municipal Consulting
Software Development

VITINS ENGINEERING
Civil/Environmental Engineering
Municipal Consulting
Software Development

| ISSUE NO. | DATE | DESCRIPTION |
|-----------|----------|-------------------|
| 1 | 8/8/2013 | SITE CONCEPT PLAN |

DO NOT SCALE DRAWINGS. USE ONLY DIMENSIONS MARKED. TYPICAL CONSTRUCTION SHALL BE AT THE DISCRETION OF THE CONTRACTOR. THE DRAWING AUTHORITY IS THE CITY OF NOVI, MICHIGAN.

Taft Knolls
PRELIMINARY SITE PLAN
CITY OF NOVI
OAKLAND COUNTY, MICHIGAN
TOPOGRAPHIC SURVEY

PROJECT NUMBER
12170
SHEET NUMBER
C-4

TAFT ROAD (120' WIDE)



HAYCOCK BENCH MARK
ARROW ON HYDRANT
ELEVATION = 932.95

LEGAL DESCRIPTION

Original Description:
Lot 4, of "Munro Subdivision" of the West Half of the Northwest Quarter of Section 22, Town 1 North, Range 8 East, City of Novi, Oakland County, Michigan, as recorded in Liber 61 of Plats, Page 26, Oakland County Records

Description After Survey:
Lot 4, of "Munro Subdivision" of the West Half of the Northwest Quarter of Section 22, Town 1 North, Range 8 East, City of Novi, Oakland County, Michigan, as recorded in Liber 61 of Plats, Page 26, Oakland County Records, more particularly described as: Commencing at the West Quarter Corner of Section 22; thence along the West Line of Section 22 and the Centerline of Taft Road, North 03°47'55" West 455.64 feet; thence North 87°35'35" East 60.02 feet to the Point of Beginning; thence along the East Line of Taft Road, North 03°47'55" West 328.00 feet; thence along the South Line of "Taft Knolls II", Oakland County Condominium Subdivision Plan No. 1879, North 87°36'15" East 1276.83 feet; thence along the West Line of "Cedarspring Estates Subdivision No. 4" as recorded in Liber 216 of Plats, Pages 22 - 27, Oakland County Records, South 03°39'04" West 327.73 feet; thence South 87°35'35" West 1275.98 feet to the Point of Beginning. Contains 9.605 Acres. Subject to Easements and Restrictions of record.

- NOTE - FLOOD INFORMATION**
- FLOOD ZONE INFORMATION IS PER DOCUMENTS ENTITLED "FLOOD INSURANCE RATE MAP, PANEL 626 OF 704, MAP NUMBER: 26125C08201, EFFECTIVE DATE: SEPTEMBER 29, 2006".
 - ZONE X: AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM THE 1% ANNUAL CHANCE FLOOD.

- REFERENCES**
- TOPOGRAPHIC AND BOUNDARY SURVEY PREPARED BY JERABSON & ASSOCIATES, P.C., JOB NO. 13-05-015 DATED JUNE 21, 2013.



LEGEND:

| | | | |
|--------|----------------|-----|---------------------------------|
| C.B. | - CATCH BASIN | --- | - LINE BREAK |
| M.H. | - MANHOLE | --- | - ASPHALT PAVEMENT |
| C.C. | - CLEAN OUT | --- | - CONCRETE PAVEMENT |
| CONC. | - CONCRETE | --- | - LIGHT POLE |
| E.S. | - END SECTION | --- | - UTILITY POLE |
| F.P. | - FLAG POLE | --- | - SIGN |
| O.P. | - OVERHEAD | --- | - FOUND IRON PIPE |
| U.C. | - UNDERGROUND | --- | - FOUND STEEL BAR |
| HYD. | - HYDRANT | --- | - SET STEEL BAR |
| GEN. | - GENERATOR | --- | - SET RIVET IN CONCRETE |
| TRANS. | - TRANSFORMER | --- | - 43,560 SQUARE FEET |
| U.B. | - UTILITY BOX | --- | - RECORDED |
| L.P. | - LIGHT POLE | --- | - MEASURED |
| U.P. | - UTILITY POLE | --- | - CALCULATED |
| B.P. | - BOLLARD POST | --- | - TREE (SEE SEPARATE TREE LIST) |
| W.G. | - WATER GATE | --- | |
| W.S. | - WATER STOP | --- | |
| W.V. | - WATER VALVE | --- | |

NOTE: UTILITY INFORMATION ON THIS DRAWING MAY BE FROM INFORMATION DISCLOSED TO THE FIRM BY THE VARIOUS UTILITY COMPANIES. NO GUARANTEE IS GIVEN AS TO THE COMPLETENESS OR ACCURACY THEREOF.

PRIOR TO CONSTRUCTION, ALL LOCATIONS AND DEPTHS OF EXISTING UTILITIES (IN CONFLICT WITH PROPOSED IMPROVEMENTS) SHALL BE VERIFIED IN THE FIELD.

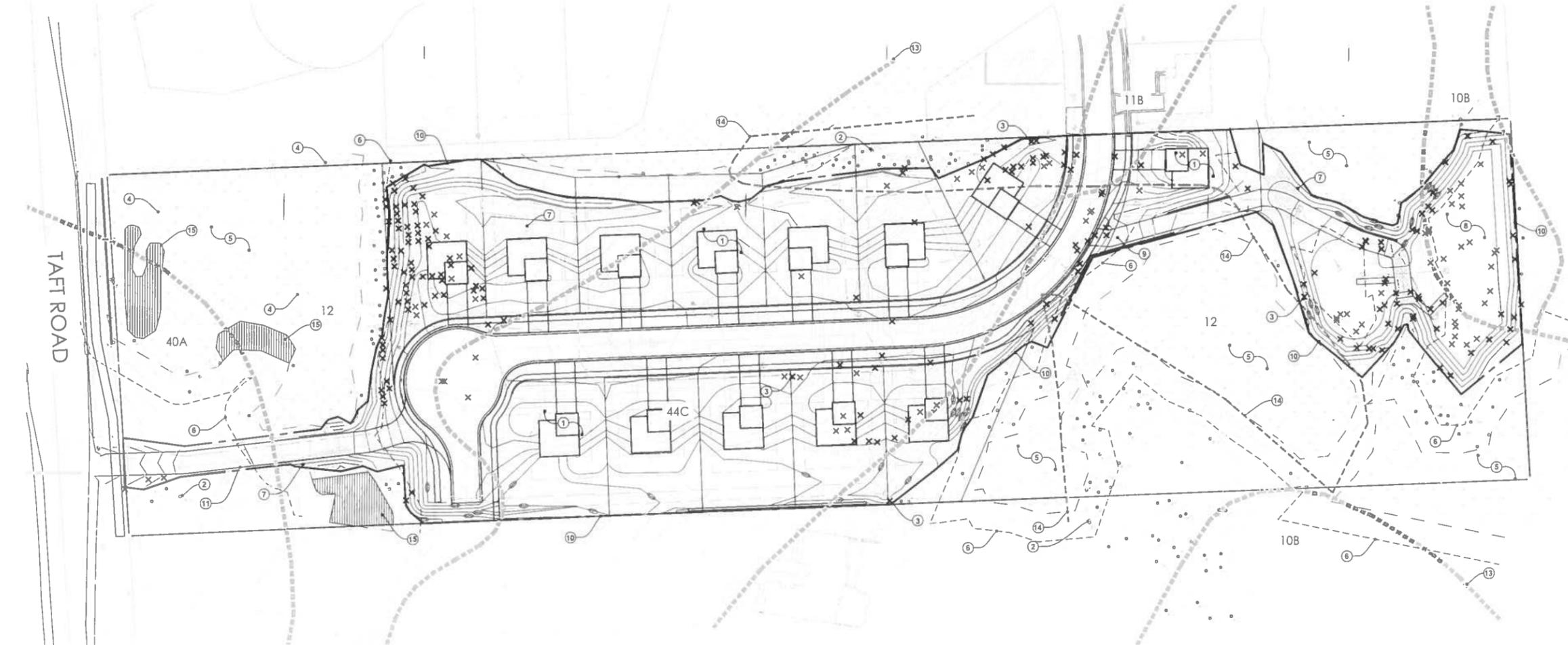
ANY INFORMATION OR DATA ON THIS DRAWING IS NOT INTENDED TO BE SUITABLE FOR REUSE BY ANY PERSON, FIRM OR CORPORATION OF ANY KINDS OR EXTENSIONS OF THIS PROJECT OR FOR ANY USE ON ANY OTHER PROJECT. ANY REUSE (WITHOUT WRITTEN VERIFICATION AND APPROVAL BY THE SURVEYOR OR ENGINEER FOR THE SPECIFIC PURPOSE INTENDED) WILL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY OF LEGAL EXPOSURE TO THE SURVEYOR OR ENGINEER.



Know what's below.
Call before you dig.

W/4 CORNER
OF SECTION 22,
T.1N., R.8E.
60.01
N. 86°56'35" E.

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Tree Protection and Removal Plan
SCALE: As Noted

City of Novi Maintenance Notes

MAINTENANCE OR REQUIRED PLANTINGS BY THE OWNER SHALL BE CARRIED OUT SO AS TO PRESENT A HEALTHY, NEAT AND ORDERLY APPEARANCE FREE FROM REFUSE AND DEBRIS.

ALL UNHEALTHY AND DEAD MATERIAL SHALL BE REPLACED WITHIN THREE (3) MONTHS OR THE NEXT APPROPRIATE PLANTING PERIOD, WHICHEVER OCCURS FIRST.

ALL LANDSCAPED AREAS SHALL BE PROVIDED AND AUTOMATIC IRRIGATION SYSTEM (SEE ATTACHED PLANS).

TREE STAKES, GUY WIRES AND TREE WRAP SHALL BE REMOVED AFTER ONE WINTER SEASON.

PLANTINGS SHALL BE GUARANTEED FOR TWO (2) GROWING SEASONS AFTER DATE OF THE ACCEPTANCE OF INSTALLATION.

IF GRASS OR WEEDS EXCEED THE HEIGHT SPECIFIED IN CHAPTER 21 OF THE NOVI CODE OF ORDINANCES, OR IF SHRUBS ARE ALLOWED TO OBSTRUCT VISION ACROSS ANY PORTION OF THE ISLAND AND THE RESPONSIBLE PARTY IS UNWILLING TO RECTIFY THE PROBLEM THE CITY WILL ABATE SUCH VIOLATIONS AND SHALL ACCESS THE COST OF SUCH ABATEMENT MEASURES IN THE MANNER PROPOSED BY THE DEVELOPER AND APPROVED BY THE CITY IN SUCH INSTRUMENT.

City of Novi Standard Notes

ALL LANDSCAPE MATERIALS, INSTALLATION, AND MAINTENANCE SHALL COMPLY WITH SECTION 5.5, SECTION 5.8 INSTALLATION, 6 MAINTENANCE AND THE LANDSCAPE DESIGN MANUAL SECTION 3 PLANT MATERIAL REQUIREMENTS.

ALL PLANT MATERIAL SHALL BE LOCALLY GROWN OR OF THIS NORTH MIDWEST AMERICAN REGION AND CONFORM TO THE CURRENT AAH STANDARDS USE NO 1 GRADE PLANT MATERIAL.

PLANTING PERIOD SHALL BE NO EARLIER THAN MARCH 15 AND NO LATER THAN NOV. 15 ANTICIPATED 2020.

ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY GROWING CONDITION FREE OF WEEDS AND DEBRIS WITH ONE CULTIVATION FOR WEED CONTROL PER MONTH DURING JUNE, JULY AND AUGUST. THIS ESTABLISHMENT PERIOD SHALL BE TWO (2) YEARS FROM THE DATE OF APPROVAL OF PLANTINGS BY THE CITY OF NOVI. REPLACEMENT OF ANY FAILING PLANT MATERIAL, INCLUDING TREES, SHALL BE GUARANTEED DURING THE TWO (2) YEAR ESTABLISHMENT PERIOD. FAILING PLANT MATERIAL SHALL BE REPLACED WITHIN THREE (3) MONTHS, OR THE NEXT GROWING SEASON.

ALL LANDSCAPE AREAS SHALL BE IRRIGATED BY AN AUTOMATIC IRRIGATION SYSTEM.

ALL TREE WRAP, STAKES AND GUY WIRES SHALL BE REMOVED AFTER ONE WINTER SEASON.

NO PLANTINGS GREATER THAN 12" HIGH SHALL BE PLANTED WITHIN TEN (10) FEET OF FIRE HYDRANTS OR UTILITY STRUCTURES. PLANT MATERIAL SHALL NOT BLOCK VISIBILITY OF HYDRANT.

ANY AND ALL SUBSTITUTIONS OR DEVIATIONS SHALL BE APPROVED IN WRITING BY THE CITY PRIOR TO INSTALLATION.

NATURAL COLOR, FINELY SHREDDED HARDWOOD BARK-SEE PLANTING DETAILS FOR DEPTH.

NO PLANT MATERIAL SHALL BE PLANTED WITHIN 4 FEET OF THE PROPERTY LINE.

City of Novi Landscape Specifications

- Wherever in this Ordinance landscape plantings are required or permitted they shall be planted in accordance with the approved final stamped landscape plan.
- All plant materials shall be installed between March 15th and November 15th. All installed landscapes including plant materials, mulch, staking, irrigation, and sodding, must be installed and inspected by the City prior to issuance of a Temporary Certificate of Occupancy. At that time a financial guarantee of 1.2 times the cost of any deficiencies will be held until inspection occurs for a Final Certificate of Occupancy. In order to receive a Final Certificate of Occupancy the deficiencies must be addressed within 30 days during the March 15th to November 15th planting season. Under extraordinary circumstances related to the inability to plant during the approved establishment period a financial guarantee of 1.5 times the cost of any deficiencies will be held until the inspection for a Final Certificate of Occupancy. If the deficiencies are not addressed in the time period outlined above, the City will cash in the amount being held for the outstanding items and remedy those items.
- A City representative will perform landscape inspections following a request from the developer. The inspection time period is from April 15th, weather permitting to November 15th. If an inspection is requested between November 16 and April 15th, weather permitting, a financial guarantee is to be provided based on 2.0 times the percent incomplete for a Temporary Certificate of Occupancy as outlined above. Beginning March 31st, the Applicant then has 30 days to complete items or the City will cash in the amount being held and finish the job.
- The establishment period for the plant material guarantee will occur beginning at the Final Certificate of Occupancy inspection approval to 2 years from that date. All plantings shall be properly planted as to be in a healthy growing condition at commencement of the establishment period. At the end of the establishment period, any plantings which are 20% dead or greater, shall be replaced.
- Notice of Installation/Minor changes.
 - The owner or developer must notify the City of the installation schedule. The City may reject any material which is defective or in generally poor condition.
 - Minor changes regarding plant materials per the approved and stamped landscape plan may be allowed upon written notification to and written sign-off by the City Landscape Architect of species, size, change, and location.
 - Minor changes due to seasonal planting problems and lack of plant availability may be approved in writing by the City Landscape Architect when there is no reduction in the quality of plant materials, no significant change in size or location of plant material, the new plant material is compatible with the area and is the same general type (deciduous/evergreen) exhibiting same design characteristics (mature height, crown) as the material being replaced. If these criteria are not fulfilled or changes are significant from approved plan, the landscape plan shall be revised and resubmitted for plan approval.
- Maintenance.
 - Maintenance of required plantings by the owner shall be carried out so as to present a healthy, neat and orderly appearance free from refuse and debris.
 - To ensure proper maintenance and as a condition of Final Site Plan approval, the property owner shall enter into and record with the office of the Oakland County Register of Deeds a Landscape Maintenance Agreement, or include such provisions as part of subdivision restrictions or condominium master deed, each of which shall be approved by the City Attorney. Such instrument shall identify the minimum plant of maintenance, the person or entity responsible for maintenance, and shall provide the procedure, authority and finance for City care of breaches by the responsible entity. Such instrument shall also include provisions that all unhealthy and dead material shall be replaced within one (1) year, or the next appropriate planting period, whichever occurs first. All landscaped areas shall be provided with an irrigation system, tree stakes, guy wires and tree wrap are to be removed after one winter season. plantings shall be guaranteed for two (2) growing seasons after date of the acceptance of the installation. If grass or weeds exceed the height specified in Chapter 21 of the Novi Code of Ordinances, or if shrubs are allowed to obstruct vision across any portion of the island and the responsible party is unwilling to rectify the problem, the City will abate such violations and shall assess the cost of such abatement measures in the manner proposed by the developer and approved by the City in such instrument.
- Responsibility and Certificate of Occupancy. The owner of the property subject to the requirements of this Section shall be responsible for installing and maintaining per landscaping the approved final landscape plan as specified in this Section. Where the property is occupied by a person other than the owner, the occupant shall also be responsible for maintenance. All landscaping work required pursuant to this Section shall be treated as a site improvement for purposes of Sections 7.7.B and 7.7.D.

*These requirements supersede all other planting requirements or specifications.

CITY OF NOVI LANDSCAPE NOTES:

- ALL PLANT MATERIALS ARE TO BE INSTALLED IN A SOUND, WORKMAN LIKE MANNER AND IN ACCORDANCE WITH THE CURRENT CITY OF NOVI PLANTING REQUIREMENTS.
- ALL PLANT MATERIALS SHALL BE INSTALLED BETWEEN MARCH 15th AND NOVEMBER 15th.
- ALL PLANT MATERIALS ARE TO BE NORTHERN NURSERY GROWN NO.1 GRADE AND INSTALLED ACCORDING TO ACCEPTED PLANTING PROCEDURES. ALL PLANT MATERIALS SHALL CONFORM TO THE CURRENT AAH STANDARDS FOR NURSERY 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 REJECT ANY PLANT MATERIALS DEEMED TO NOT MEET THE STANDARDS OF THE ZONING ORDINANCE.
- ALL TREES SHALL HAVE A CENTRAL LEADER AND A RADIAL BRANCHING STRUCTURE. PINK GRADE TREES ARE NOT ACCEPTABLE. ALL TREES SHALL BE BALLED AND BURLAPPED (BBM).
- ANY DECIDUOUS CANOPY TREES WITH BRANCHES THAT MIGHT TEND TO DEVELOP INTO "V" CROTCHES SHALL BE SUBORDINATED SO AS NOT TO BECOME DOMINANT BRANCHES.
- MULCH SHALL BE NATURAL COLOR, FINELY SHREDDED HARDWOOD BARK FOR ALL PLANTINGS. 3" THICK FOR TREES IN 4-FOOT DIAMETER CIRCLE WITH 3" PULLED AWAY FROM TRUNK. 3"-3" THICK FOR SHRUBS AND SHRUB BEDS AND 2" THICK BARK FOR PERENNIALS.
- ALL PLANT MATERIAL SHALL BE MAINTAINED FOR TWO (2) FULL YEARS AFTER DATE OF ACCEPTANCE BY THE CITY OF NOVI. ALL UNHEALTHY AND DEAD MATERIAL SHALL BE REPLACED WITHIN (3) MONTHS OR THE NEXT APPROPRIATE PLANTING PERIOD WHICHEVER COMES FIRST.
- ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY GROWING CONDITION, INCLUDING WATERING, CULTIVATION, WEED CONTROL AND SOIL ENRICHMENTS AS MAY BE NECESSARY.
- ANY SUBSTITUTIONS OR DEVIATIONS FROM THE LANDSCAPE PLAN MUST BE APPROVED IN WRITING BY THE CITY OF NOVI PRIOR TO INSTALLATION.
- ALL TREE WRAP, STAKES, AND GUY'S MUST BE REMOVED BY JULY 1ST FOLLOWING THE FIRST WINTER SEASON AFTER INSTALLATION.
- ALL LANDSCAPE AREAS ARE TO BE MAINTAINED IN HEALTHY GROWING CONDITION FREE OF DEBRIS AND REFUSE AND IN CONFORMANCE WITH THE APPROVED LANDSCAPE PLAN.
- CONTRACTOR TO REMOVE ALL CONSTRUCTION DEBRIS AND EXCESS MATERIAL FROM THE SITE PRIOR TO FINAL ACCEPTANCE.
- PLANT MATERIALS, EXCEPT SOIL, GROUND COVERS, AND CREEPING VINE TYPE PLANTINGS, SHALL NOT BE LOCATED WITHIN FOUR (4) FEET OF THE PROPERTY LINE.
- ALL TRANSFORMERS ARE TO BE SCREENED IN ACCORDANCE WITH THE CITY OF NOVI ORDINANCE AND SO AS TO NOT CONFLICT WITH DTE RESTRICTIONS. (SEE DETAIL THIS SHEET).
- THE OWNER IS RESPONSIBLE FOR REQUEST OF FINAL INSPECTION AND ACCEPTANCE OF THE LANDSCAPE AT THE END OF THE 2 YEAR GUARANTEE PERIOD.
- 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.

THE DETAILS AND NOTES SHOWN ON THIS PAGE ARE STANDARDS. THESE DETAILS ARE NOT ALL INCLUSIVE AND ARE NOT MEANT TO SUBSTITUTE FOR ANY ORDINANCE OR CODE REQUIREMENT. FOR COMPLETE LANDSCAPE REQUIREMENTS, SEE THE ZONING ORDINANCE LANDSCAPE SECTION 3.3, THE LANDSCAPE DESIGN MANUAL AND THE APPROPRIATE REFERENCES WITHIN THE APPLICABLE ZONING CLASSIFICATION AND ANY OTHER APPLICABLE CODE REQUIREMENTS.

Site Landscape Calculations

STREET TREES:

| | |
|------------------------------|-----------------------------------|
| Total Lots 70'-105' | 8 Lots |
| Total Lots 105'-140' | 2 Lots |
| Total Lots 140'-175' | 2 Lot |
| Corner Lots | 1 Lot |
| TOTAL TREES REQUIRED: | 38 (8x3)+(2x3)+(2x5)+(1x6) |
| TOTAL TREES PROVIDED: | 39 |

GREENBELT LANDSCAPE:

| | |
|--|-------------------|
| Taft Road: | |
| Total Street Frontage | 328 lf |
| Less Preservation Areas | 166 lf |
| Less Emergency Lane | 20 lf |
| Net Frontage | 142 lf |
| TOTAL CANOPY /EVERGREEN TREES REQUIRED: | 4 (1+2/40) |
| TOTAL CANOPY /EVERGREEN TREES PROVIDED: | 5 |
| TOTAL SUB-CANOPY TREES REQUIRED: | 6 (1+2/25) |
| TOTAL SUB-CANOPY TREES PROVIDED: | 8 |

STREET LAWN:

| | |
|------------------------------|--------------------------------------|
| Total Street Frontage | 328 lf |
| TOTAL TREES REQUIRED: | 9.4 (328/35) |
| TOTAL TREES PROVIDED: | 10 (6 are existing to remain) |

DETENTION BASIN LANDSCAPING:

| | |
|---------------------|--------------------|
| Length of Elevation | 630 lf |
| Required Planting | 434 lf (70% x 630) |
| Provided Planting | 445 lf (72%) |

REQUESTED WAIVERS:

- Taft Road berm due to existing wetland
- Four (4) Street Lawn trees along Taft Road due to e-existing wetland
- Four (4) Canopy and six (6) sub-canopy Greenbelt trees along Taft Road due to existing wetland

Soils

- 10B Mafette Sandy Loam
- 11B Capac Sandy Loam
- 12 Brookston and Colwood (liam)
- 40A Udohearts
- 44C Redies Sandy loam

Note Key:

- PROPOSED LOTS AND LOTS, TYPICAL
- EXISTING TREES TO REMAIN, TYPICAL
- EXISTING TREES TO BE REMOVED, SEE SHEET L-4 FOR REPLACEMENT CALCULATIONS AND SURVEY. SEE SHEET L-3 FOR REPLACEMENT PLANTING LOCATIONS
- OVERHEAD UTILITIES
- EXISTING WETLANDS, PROTECT AS REQUIRED
- 25' WETLAND BUFFER, TYPICAL. SEE CIVIL SHEET 56 FOR PROPOSED IMPACTS. SEE SHEET L-2 RESTORATION PLAN, AND SHEET L-3 FOR NATIVE SEED MIX
- PROPOSED WETLAND FILL, SEE CIVIL ENGINEERING DRAWINGS
- PROPOSED STORM WATER BASIN, SEE CIVIL ENGINEERING DRAWINGS. SEE SHEET L-2 FOR SEEDING REQUIREMENTS. SEE SHEET L-3 FOR PLANTING ENLARGEMENT
- STORM WATER BASIN MAINTENANCE ACCESS ROAD, SEE CIVIL ENGINEERING DRAWINGS
- LIMITS OF DISTURBANCE SEE CIVIL DRAWINGS FOR SITE FENCE LOCATION AND TYPICAL DETAIL
- PROPOSED EMERGENCY ACCESS ROAD, SEE CIVIL ENGINEERING DRAWINGS
- PROPOSED RETAINING WALL, SEE CIVIL ENGINEERING DRAWINGS
- SOIL BOUNDARY
- WOODLAND BOUNDARY AS DEPICTED ON THE CITY OF NOVI WOODLAND MAP
- PHOTOMETRIES OBSERVED ON SITE, SEE SHEET L-3 FOR CONTROL PLANT



| | |
|---------|-------------|
| Drawn | JG |
| Checked | JG |
| Date | 06.18.2018 |
| Scale | 1" = 50'-0" |

Project Number:
19.025

Sheet Number:
L-1

NOT FOR CONSTRUCTION



based For:
06.26.2019 Prelim Site Plan Review
10.29.2019 Revision
02.11.2020 Revision

Project:
TAFT KNOLLS III
Novi, Michigan

Project Sponsor:
Trowbridge Homes
2617 Beacon Hill Drive
Auburn Hills, MI 48326

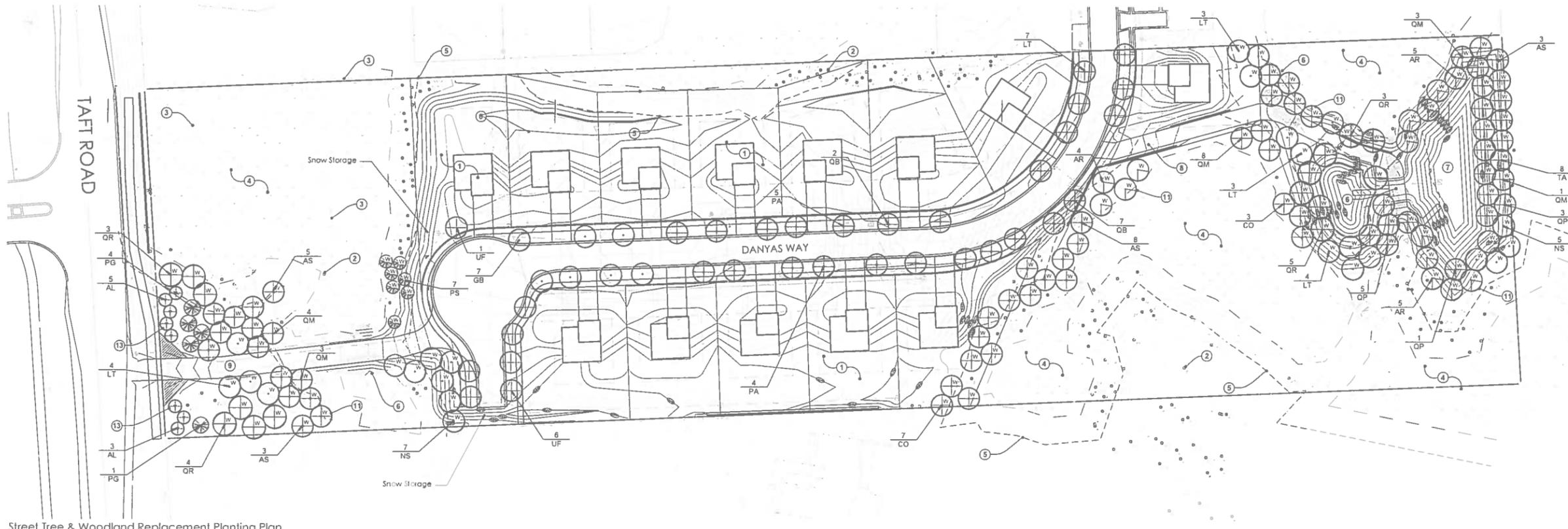
Sheet Name:
Landscape Plan

NOT FOR CONSTRUCTION

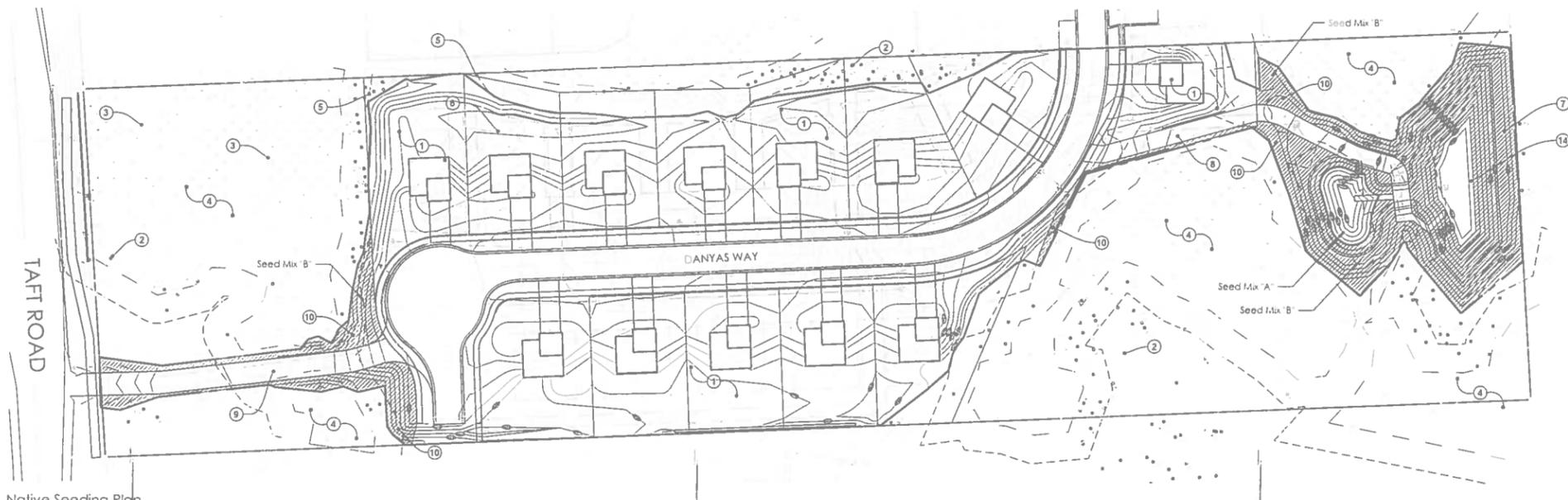


Draw: JG
Checked: JG
Date: 06.18.2018
Scale: As Noted

Project Number:
19.025
Sheet Number:
L-2
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Street Tree & Woodland Replacement Planting Plan
SCALE: 1" = 50'-0"



Native Seeding Plan
SCALE: 1" = 40'-0"

Note Key:

- 1 PROPOSED UNITS AND LOTS, TYPICAL
- 2 EXISTING TREES TO REMAIN, TYPICAL
- 3 OVERHEAD UTILITIES
- 4 EXISTING WETLANDS, PROTECT AS REQUIRED
- 5 25' WETLAND BUFFER, TYPICAL
- 6 PROPOSED WETLAND FILL, SEE CIVIL ENGINEERING DRAWINGS
- 7 PROPOSED STORM WATER BASIN, SEE CIVIL ENGINEERING DRAWINGS, SEE SHEET L-3 FOR SEED MIXES
- 8 STORM WATER BASIN MAINTENANCE ACCESS ROAD
- 9 PROPOSED EMERGENCY ACCESS ROAD, SEE CIVIL ENGINEERING DRAWINGS
- 10 25' WETLAND BUFFER RESTORATION, SEE SHEET L-3 FOR SEED MIX, SEE CIVIL SHEET S6 FOR IMPACTS
- 11 DECIDUOUS CANOPY TREE, SEE TYPICAL DETAIL SHEET L-4
- 12 EVERGREEN TREE, SEE TYPICAL DETAIL SHEET L-4
- 13 MULTI-STEM TREE, SEE TYPICAL DETAIL SHEET L-4
- 14 PERMANENT WATER ELEVATION IN DETENTION BASIN - 923.00

NOTES:
1. STREET TREES MUST BE A MINIMUM OF 10' FROM DRIVEWAYS
2. STREET TREES SHALL BE A MINIMUM OF 5' FROM ANY UNDERGROUND UTILITY LINE AND A MINIMUM OF 10' FROM ANY UTILITY STRUCTURE
3. ALL UTILITY BOXES ONCE LOCATED ON SITE SHALL BE SCREENED PER TYPICAL DETAIL, SEE SHEET L-4



Taft Knolls III
Novi, Michigan

Project Sponsor
Trowbridge Homes
2617 Beacon Hill Drive
Auburn Hills, MI 48326

Landscape Plan

Tree List

| Tree # | Scientific Name | Common Name | DBH | Condition | Remarks | Replacement | Credit | Tree # | Scientific Name | Common Name | DBH | Condition | Remarks | Replacement | Credit | Tree # | Scientific Name | Common Name | DBH | Condition | Remarks | Replacement | Credit | Tree # | Scientific Name | Common Name | DBH | Condition | Remarks | Replacement | Credit |
|--------|---------------------------|--------------|-----------------------|-----------|---------------|-------------|--------|---------------------------|-----------------|-------------|-----|---------------|---------|---------------------------|---------------|--------|-----------------|---------------|------|---------------------------|-------------|-------------|--------|---------------|-----------------|---------------------------|-------------|-----------|---------|---------------|--------|
| 1 | <i>Tilia americana</i> | Sweetgum | 9.2 | 2 | Remove | 1 | 121 | <i>Acacia salicifolia</i> | Sugar Maple | 12.0 | 1 | Remove/Exempt | 241 | <i>Pinus strobus</i> | Austrian Pine | 8.8 | 1 | Save | 2118 | <i>Pinus strobus</i> | Scotch Pine | 12.2 | 1 | Save | 2119 | <i>Pinus strobus</i> | Scotch Pine | 12.2 | 1 | Save | |
| 2 | <i>Acer saccharum</i> | Sugar Maple | 10.7 | 2 | Remove | 2 | 122 | <i>Acacia salicifolia</i> | Sugar Maple | 12.0 | 1 | Remove/Exempt | 242 | <i>Pinus strobus</i> | Austrian Pine | 8.8 | 1 | Save | 2120 | <i>Quercus macrocarpa</i> | Burr Oak | 17.2 | 1 | Remove | 2121 | <i>Quercus macrocarpa</i> | Burr Oak | 17.2 | 1 | Remove | |
| 3 | <i>Tilia americana</i> | Sweetgum | 10.1 | 1 | Remove | 1 | 123 | <i>Acacia salicifolia</i> | Sugar Maple | 12.0 | 1 | Remove/Exempt | 243 | <i>Pinus strobus</i> | Austrian Pine | 11.5 | 2 | Remove | 2122 | <i>Quercus macrocarpa</i> | Burr Oak | 17.2 | 1 | Remove | 2123 | <i>Quercus macrocarpa</i> | Burr Oak | 17.2 | 1 | Remove | |
| 4 | <i>Tilia americana</i> | Sweetgum | 23.1 | 1 | Remove | 3 | 124 | <i>Acacia salicifolia</i> | Sugar Maple | 12.0 | 1 | Remove/Exempt | 244 | <i>Pinus strobus</i> | Austrian Pine | 11.5 | 2 | Remove | 2124 | <i>Pinus strobus</i> | Scotch Pine | 11.1 | 1 | Remove | 2125 | <i>Pinus strobus</i> | Scotch Pine | 11.1 | 1 | Remove | |
| 5 | <i>Ulmus americana</i> | American Elm | 10.0 | 2 | Remove | 2 | 125 | <i>Acacia salicifolia</i> | Sugar Maple | 12.0 | 1 | Remove/Exempt | 245 | <i>Pinus strobus</i> | Austrian Pine | 11.0 | 1 | Save | 2126 | <i>Pinus strobus</i> | Scotch Pine | 11.0 | 1 | Save | 2127 | <i>Pinus strobus</i> | Scotch Pine | 11.0 | 1 | Save | |
| 6 | <i>Pinus strobus</i> | Scotch Pine | 10.0 | 2 | Remove | 2 | 126 | <i>Acacia salicifolia</i> | Sugar Maple | 12.0 | 1 | Remove/Exempt | 246 | <i>Pinus strobus</i> | Austrian Pine | 11.4 | 2 | Save/ Credit | 2128 | <i>Acacia salicifolia</i> | Sugar Maple | 11.4 | 2 | Save/ Credit | 2129 | <i>Acacia salicifolia</i> | Sugar Maple | 11.4 | 2 | Save/ Credit | |
| 7 | <i>Tilia americana</i> | Sweetgum | 10.1 | 1 | Remove | 2 | 127 | <i>Acacia salicifolia</i> | Sugar Maple | 12.0 | 1 | Remove/Exempt | 247 | <i>Pinus strobus</i> | Austrian Pine | 11.0 | 1 | Save/ Credit | 2130 | <i>Quercus rubra</i> | Red Oak | 11.0 | 2 | Remove | 2131 | <i>Quercus rubra</i> | Red Oak | 11.0 | 2 | Remove | |
| 8 | <i>Tilia americana</i> | Sweetgum | 12.8 | 1 | Remove | 2 | 128 | <i>Acacia salicifolia</i> | Sugar Maple | 12.0 | 1 | Remove/Exempt | 248 | <i>Pinus strobus</i> | Austrian Pine | 12.0 | 3 | Remove | 2132 | <i>Acacia salicifolia</i> | Sugar Maple | 12.0 | 3 | Remove | 2133 | <i>Acacia salicifolia</i> | Sugar Maple | 12.0 | 3 | Remove | |
| 9 | <i>Acacia salicifolia</i> | Sugar Maple | 10.0 | 3 | Remove | 3 | 129 | <i>Pinus strobus</i> | Scotch Pine | 11.7 | 1 | Remove/Exempt | 249 | <i>Pinus strobus</i> | Scotch Pine | 11.7 | 1 | Remove/Exempt | 2134 | <i>Acacia salicifolia</i> | Sugar Maple | 11.7 | 1 | Remove/Exempt | 2135 | <i>Acacia salicifolia</i> | Sugar Maple | 11.7 | 1 | Remove/Exempt | |
| 10 | <i>Tilia americana</i> | Sweetgum | 12.0 | 1 | Remove | 2 | 130 | <i>Pinus strobus</i> | Scotch Pine | 11.7 | 1 | Remove/Exempt | 250 | <i>Pinus strobus</i> | Scotch Pine | 11.7 | 1 | Remove/Exempt | 2136 | <i>Pinus strobus</i> | Scotch Pine | 11.7 | 1 | Remove/Exempt | 2137 | <i>Pinus strobus</i> | Scotch Pine | 11.7 | 1 | Remove/Exempt | |
| 11 | <i>Tilia americana</i> | Sweetgum | 8.5 | 1 | Remove | 1 | 131 | <i>Pinus strobus</i> | White Pine | 10.3 | 1 | Remove/Exempt | 251 | <i>Pinus strobus</i> | Scotch Pine | 8.5 | 1 | Remove/Exempt | 2138 | <i>Quercus rubra</i> | Red Oak | 8.5 | 1 | Remove/Exempt | 2139 | <i>Quercus rubra</i> | Red Oak | 8.5 | 1 | Remove/Exempt | |
| 12 | <i>Tilia americana</i> | Sweetgum | 10.5 | 1 | Remove | 1 | 132 | <i>Pinus strobus</i> | White Pine | 12.4 | 1 | Remove/Exempt | 252 | <i>Pinus strobus</i> | Scotch Pine | 10.5 | 1 | Remove/Exempt | 2140 | <i>Pinus strobus</i> | Scotch Pine | 10.5 | 1 | Remove/Exempt | 2141 | <i>Pinus strobus</i> | Scotch Pine | 10.5 | 1 | Remove/Exempt | |
| 13 | <i>Pinus strobus</i> | Scotch Pine | 10.5 | 2 | Remove | 2 | 133 | <i>Pinus strobus</i> | White Pine | 10.9 | 1 | Remove/Exempt | 253 | <i>Pinus strobus</i> | Scotch Pine | 10.5 | 1 | Remove/Exempt | 2142 | <i>Ulmus americana</i> | Elm | 11.1 | 1 | Remove/Exempt | 2143 | <i>Ulmus americana</i> | Elm | 11.1 | 1 | Remove/Exempt | |
| 14 | <i>Tilia americana</i> | Sweetgum | 15.4 | 2 | Remove | 2 | 134 | <i>Pinus strobus</i> | White Pine | 10.9 | 1 | Remove/Exempt | 254 | <i>Pinus strobus</i> | Scotch Pine | 10.5 | 1 | Remove/Exempt | 2144 | <i>Ulmus americana</i> | Elm | 11.1 | 1 | Remove/Exempt | 2145 | <i>Ulmus americana</i> | Elm | 11.1 | 1 | Remove/Exempt | |
| 15 | <i>Tilia americana</i> | Sweetgum | 10.5 | 3 | Remove | 3 | 135 | <i>Pinus strobus</i> | Blue Spruce | 12.1 | 2 | Remove/Exempt | 255 | <i>Pinus strobus</i> | Scotch Pine | 10.5 | 1 | Remove/Exempt | 2146 | <i>Ulmus americana</i> | Elm | 11.1 | 1 | Remove/Exempt | 2147 | <i>Ulmus americana</i> | Elm | 11.1 | 1 | Remove/Exempt | |
| 16 | <i>Tilia americana</i> | Sweetgum | 8.8 / 10.8 / 11 | 3 | Remove | 3 | 136 | <i>Pinus strobus</i> | Blue Spruce | 12.1 | 2 | Remove/Exempt | 256 | <i>Pinus strobus</i> | Scotch Pine | 10.5 | 1 | Remove/Exempt | 2148 | <i>Pinus strobus</i> | Scotch Pine | 10.5 | 1 | Remove/Exempt | 2149 | <i>Pinus strobus</i> | Scotch Pine | 10.5 | 1 | Remove/Exempt | |
| 17 | <i>Tilia americana</i> | Sweetgum | 12.1 / 9.7 | 2 | Remove | 2 | 137 | <i>Pinus nigra</i> | Austrian Pine | 16.9 | 3 | Remove/Exempt | 257 | <i>Pinus strobus</i> | Scotch Pine | 8.8 | 1 | Remove/Exempt | 2150 | <i>Quercus rubra</i> | Red Oak | 8.8 | 1 | Remove/Exempt | 2151 | <i>Quercus rubra</i> | Red Oak | 8.8 | 1 | Remove/Exempt | |
| 18 | <i>Tilia americana</i> | Sweetgum | 10.4 / 7.6 | 1 | Remove | 1 | 138 | <i>Pinus strobus</i> | Blue Spruce | 14.5 | 1 | Remove/Exempt | 258 | <i>Pinus strobus</i> | Scotch Pine | 10.1 | 1 | Save/ Credit | 2152 | <i>Quercus rubra</i> | Red Oak | 10.1 | 2 | Save | 2153 | <i>Quercus rubra</i> | Red Oak | 10.1 | 2 | Save | |
| 19 | <i>Tilia americana</i> | Sweetgum | 5.2 | 2 | Remove | 1 | 139 | <i>Pinus strobus</i> | Blue Spruce | 9.2 | 1 | Remove/Exempt | 259 | <i>Pinus strobus</i> | Scotch Pine | 10.0 | 2 | Save/ Credit | 2154 | <i>Quercus rubra</i> | Red Oak | 10.0 | 2 | Save/ Credit | 2155 | <i>Quercus rubra</i> | Red Oak | 10.0 | 2 | Save/ Credit | |
| 20 | <i>Ulmus americana</i> | American Elm | 11.0 | 1 | Remove | 1 | 140 | <i>Pinus strobus</i> | Blue Spruce | 12.7 | 1 | Remove/Exempt | 260 | <i>Pinus strobus</i> | Scotch Pine | 8.1 | 1 | Save/ Credit | 2156 | <i>Quercus rubra</i> | Red Oak | 8.1 | 1 | Save/ Credit | 2157 | <i>Quercus rubra</i> | Red Oak | 8.1 | 1 | Save/ Credit | |
| 21 | <i>Quercus rubra</i> | Red Oak | 15.8 | 1 | Remove | 2 | 141 | <i>Pinus strobus</i> | Blue Spruce | 14.5 | 1 | Remove/Exempt | 261 | <i>Pinus strobus</i> | Scotch Pine | 10.1 | 1 | Save/ Credit | 2158 | <i>Quercus rubra</i> | Red Oak | 10.1 | 1 | Save/ Credit | 2159 | <i>Quercus rubra</i> | Red Oak | 10.1 | 1 | Save/ Credit | |
| 22 | <i>Pinus strobus</i> | Scotch Pine | 9.6 | 1 | Remove | 1 | 142 | <i>Acacia salicifolia</i> | Sugar Maple | 14.1 | 1 | Remove/Exempt | 262 | <i>Pinus strobus</i> | Scotch Pine | 8.3 | 1 | Save/ Credit | 2160 | <i>Quercus rubra</i> | Red Oak | 8.3 | 1 | Save/ Credit | 2161 | <i>Quercus rubra</i> | Red Oak | 8.3 | 1 | Save/ Credit | |
| 23 | <i>Quercus rubra</i> | Red Oak | 11.7 | 1 | Remove | 2 | 143 | <i>Pinus strobus</i> | Blue Spruce | 10.5 | 2 | Remove/Exempt | 263 | <i>Pinus strobus</i> | Scotch Pine | 8.0 | 1 | Save/ Credit | 2162 | <i>Quercus rubra</i> | Red Oak | 8.0 | 1 | Save/ Credit | 2163 | <i>Quercus rubra</i> | Red Oak | 8.0 | 1 | Save/ Credit | |
| 24 | <i>Tilia americana</i> | Sweetgum | 10.4 / 7.6 | 2 | Remove | 2 | 144 | <i>Pinus strobus</i> | Blue Spruce | 10.1 | 2 | Remove/Exempt | 264 | <i>Pinus strobus</i> | Scotch Pine | 8.0 | 2 | Remove/Exempt | 2164 | <i>Pinus strobus</i> | Scotch Pine | 8.0 | 2 | Remove/Exempt | 2165 | <i>Pinus strobus</i> | Scotch Pine | 8.0 | 2 | Remove/Exempt | |
| 25 | <i>Tilia americana</i> | Sweetgum | 11.1 / 8.8 | 3 | Remove | 2 | 145 | <i>Pinus strobus</i> | Blue Spruce | 22.0 | 2 | Remove/Exempt | 265 | <i>Pinus strobus</i> | Scotch Pine | 8.7 | 2 | Remove/Exempt | 2166 | <i>Pinus strobus</i> | Scotch Pine | 8.7 | 2 | Remove/Exempt | 2167 | <i>Pinus strobus</i> | Scotch Pine | 8.7 | 2 | Remove/Exempt | |
| 26 | <i>Ulmus americana</i> | American Elm | 10.0 | 1 | Remove | 1 | 146 | <i>Pinus strobus</i> | Blue Spruce | 23.0 | 2 | Remove/Exempt | 266 | <i>Pinus strobus</i> | Scotch Pine | 13.8 | 1 | Save/ Credit | 2168 | <i>Acacia salicifolia</i> | Sugar Maple | 13.8 | 1 | Save/ Credit | 2169 | <i>Acacia salicifolia</i> | Sugar Maple | 13.8 | 1 | Save/ Credit | |
| 27 | <i>Acacia salicifolia</i> | Sugar Maple | 22.5 | 1 | Remove | 3 | 147 | <i>Acacia salicifolia</i> | Sugar Maple | 23.0 | 2 | Remove/Exempt | 267 | <i>Acacia salicifolia</i> | Sugar Maple | 9.3 | 1 | Save | 2170 | <i>Pinus strobus</i> | Scotch Pine | 9.3 | 1 | Save | 2171 | <i>Pinus strobus</i> | Scotch Pine | 9.3 | 1 | Save | |
| 28 | <i>Acacia salicifolia</i> | Sugar Maple | 22.0 | 2 | Remove | 3 | 148 | <i>Acacia salicifolia</i> | Sugar Maple | 21.2 | 1 | Remove/Exempt | 268 | <i>Pinus strobus</i> | Scotch Pine | 10.4 | 2 | Remove/Exempt | 2172 | <i>Pinus strobus</i> | Scotch Pine | 10.4 | 2 | Remove/Exempt | 2173 | <i>Pinus strobus</i> | Scotch Pine | 10.4 | 2 | Remove/Exempt | |
| 29 | <i>Acacia salicifolia</i> | Sugar Maple | 21.0 | 2 | Remove | 3 | 149 | <i>Pinus strobus</i> | Scotch Pine | 18.1 | 1 | Remove/Exempt | 269 | <i>Pinus strobus</i> | Scotch Pine | 10.4 | 2 | Remove/Exempt | 2174 | <i>Pinus strobus</i> | Scotch Pine | 10.4 | 2 | Remove/Exempt | 2175 | <i>Pinus strobus</i> | Scotch Pine | 10.4 | 2 | Remove/Exempt | |
| 30 | <i>Pinus strobus</i> | Scotch Pine | 11.0 | 2 | Remove | 3 | 150 | <i>Pinus strobus</i> | Scotch Pine | 18.2 | 1 | Remove/Exempt | 270 | <i>Pinus strobus</i> | Scotch Pine | 10.4 | 2 | Remove/Exempt | 2176 | <i>Pinus strobus</i> | Scotch Pine | 10.4 | 2 | Remove/Exempt | 2177 | <i>Pinus strobus</i> | Scotch Pine | 10.4 | 2 | Remove/Exempt | |
| 31 | <i>Acacia salicifolia</i> | Sugar Maple | 10.0 | 1 | Save | 1 | 151 | <i>Pinus strobus</i> | Scotch Pine | 18.5 | 1 | Save/ Credit | 271 | <i>Pinus strobus</i> | Scotch Pine | 8.1 | 1 | Remove/Exempt | 2178 | <i>Pinus strobus</i> | Scotch Pine | 8.1 | 1 | Remove/Exempt | 2179 | <i>Pinus strobus</i> | Scotch Pine | 8.1 | 1 | Remove/Exempt | |
| 32 | <i>Acacia salicifolia</i> | Sugar Maple | 11.0 | 1 | Save | 1 | 152 | <i>Pinus strobus</i> | Scotch Pine | 18.8 | 2 | Save/ Credit | 272 | <i>Pinus strobus</i> | Scotch Pine | 8.0 | 2 | Remove/Exempt | 2180 | <i>Pinus strobus</i> | Scotch Pine | 8.0 | 2 | Remove/Exempt | 2181 | <i>Pinus strobus</i> | Scotch Pine | 8.0 | 2 | Remove/Exempt | |
| 33 | <i>Acacia salicifolia</i> | Sugar Maple | 29.0 | 2 | Remove | 2 | 153 | <i>Pinus strobus</i> | Scotch Pine | 11.6 | 2 | Remove/Exempt | 273 | <i>Pinus strobus</i> | Scotch Pine | 10.3 | 1 | Remove/Exempt | 2182 | <i>Pinus strobus</i> | Scotch Pine | 10.3 | 1 | Remove/Exempt | 2183 | <i>Pinus strobus</i> | Scotch Pine | 10.3 | 1 | Remove/Exempt | |
| 34 | <i>Tilia americana</i> | Sweetgum | 17.5 / 8.0 / 5.0 / 11 | 1 | Remove | 4 | 154 | <i>Salix nigra</i> | Black Willow | 24.2 | 2 | Remove/Exempt | 274 | <i>Pinus strobus</i> | Scotch Pine | 10.3 | 1 | Remove/Exempt | 2184 | <i>Pinus strobus</i> | Scotch Pine | 10.3 | 1 | Remove/Exempt | 2185 | <i>Pinus strobus</i> | Scotch Pine | 10.3 | 1 | Remove/Exempt | |
| 35 | <i>Acacia salicifolia</i> | Sugar Maple | 29.0 | 2 | Remove | 3 | 155 | <i>Pinus strobus</i> | Scotch Pine | 11.2 | 2 | Remove/Exempt | 275 | <i>Pinus strobus</i> | Scotch Pine | 10.3 | 1 | Remove/Exempt | 2186 | <i>Pinus strobus</i> | Scotch Pine | 10.3 | 1 | Remove/Exempt | 2187 | <i>Pinus strobus</i> | Scotch Pine | 10.3 | 1 | Remove/Exempt | |
| 36 | <i>Acacia salicifolia</i> | Sugar Maple | 27.0 | 2 | Remove | 3 | 156 | <i>Pinus strobus</i> | Scotch Pine | 12.9 | 1 | Save/ Credit | 276 | <i>Pinus strobus</i> | Scotch Pine | 10.7 | 1 | Save/ Credit | 2188 | <i>Pinus strobus</i> | Scotch Pine | 10.7 | 1 | Save/ Credit | 2189 | <i>Pinus strobus</i> | Scotch Pine | 10.7 | 1 | Save/ Credit | |
| 37 | <i>Acacia salicifolia</i> | Sugar Maple | 28.1 | 3 | Remove/Exempt | 3 | 157 | <i>Pinus strobus</i> | White Pine | 12.9 | 1 | Save/ Credit | 277 | <i>Pinus strobus</i> | Scotch Pine | 10.7 | 1 | Save/ Credit | 2190 | <i>Pinus strobus</i> | Scotch Pine | 10.7 | 1 | Save/ Credit | 2191 | <i>Pinus strobus</i> | Scotch Pine | 10.7 | 1 | Save/ Credit | |
| 38 | <i>Pinus strobus</i> | Scotch Pine | 14.9 | 1 | Remove/Exempt | 1 | 158 | <i>Pinus strobus</i> | White Pine | 12.9 | 1 | Save/ Credit | 278 | <i>Pinus strobus</i> | Scotch Pine | 10.4 | 1 | Remove/Exempt | 2192 | <i>Pinus strobus</i> | Scotch Pine | 10.4 | 1 | Remove/Exempt | 2193 | <i>Pinus strobus</i> | Scotch Pine | 10.4 | 1 | Remove/Exempt | |
| 39 | <i>Pinus strobus</i> | Scotch Pine | 14.9 | 1 | Remove/Exempt | 1 | 159 | <i>Pinus strobus</i> | White Pine | 12.9 | 1 | Save/ Credit | 279 | <i>Pinus strobus</i> | Scotch Pine | 10.4</ | | | | | | | | | | | | | | | |

PLANNING REVIEW



PLAN REVIEW CENTER REPORT

April 24, 2020

Planning Review

Taft Knolls III

JSP 19-34

PETITIONER

Trowbridge Land Development

REVIEW TYPE

3rd Revised Preliminary Site Plan with Site Condominium

PROPERTY CHARACTERISTICS

| | | |
|-----------------------------|---|-----------------------------|
| Section | 22 | |
| Site Location | North of 10 Mile Road and east of Taft Road | |
| Site School District | Novi Community School District | |
| Site Zoning | R-4, One-Family Residential | |
| Adjoining Zoning | North | R-4, One-Family Residential |
| | East | R-4, One-Family Residential |
| | West | RA, One-Family Residential |
| | South | R-4, One-Family Residential |
| Current Site Use | Single home, Vacant | |
| Adjoining Uses | North | Single-Family Residential |
| | East | Single-Family Residential |
| | West | School |
| | South | Single-Family Residential |
| Site Size | 9.6 acres | |
| Plan Date | February 10, 2020 | |

PROJECT SUMMARY

The subject property is located on the east side of Taft Road north of 10 Mile Road in Section 22 of the City of Novi. The property totals 9.6 acres. The current zoning of the property is R-4, One-Family Residential. The applicant has proposed a 13 unit single-family residential development (Site Condominium). The property has single point access from the existing subdivision to the north and an emergency and construction access off of Taft Road.

RECOMMENDATION

Approval of the Preliminary Site Plan with Site Condominium *is recommended contingent on the City Council's approval of the proposed Conservation Easement modification.*

Planning Commission's approval for Preliminary Site Plan, Site Condominium, Wetlands Permit, Woodland Permit and Storm Water Management Plan is required.

PROJECT HISTORY

The applicant proposed to develop the property using an Open Space Preservation option in 2017. The Planning Commission held a public hearing on June 14, 2017, but postponed the consideration. On August 23, 2017, the Planning Commission approved the Preliminary Site Plan with Open Space Preservation and the Site Condominium subject to City Council's approval of amendments to existing

conservation easements. On May 21, 2018, the City Council considered the request for modification of the easements and postponed their decision to come back with an appropriate motion for consideration of the denial of that request.

The applicant has since elected to revise the plans and is no longer proposing to utilize the Open Space Preservation Option, essentially restarting the process. The previous Planning Commission approval is no longer valid. The new site plan will be presented for the Planning Commission's consideration when ready as noted in this review letter.

ORDINANCE REQUIREMENTS

This project was reviewed for conformance with the Zoning Ordinance with respect to Article 3 (Zoning Districts), Article 4 (Use Standards), Article 5 (Site Standards), and any other applicable provisions of the Zoning Ordinance. **Deviations from the Zoning Ordinance are listed below.**

Please see the attached chart for information pertaining to ordinance requirements. Items in **bold** below must be addressed and incorporated as part of the revised Preliminary Site Plan:

1. Modification of Existing Conservation Easements: The subject property is subject to two existing easements. The first is a preservation easement (1.52 acres) recorded on January 8, 1987, which was donated as a gift to the City of Novi by the previous owner, and is intended to preserve the floodplain and wetland area in the western part of the subject property. A twelve foot wide strip of land was excluded from the easement to allow for driveway access from Taft Road to the existing home. The second is a drainage easement (1.53 acres) recorded December 16, 1993, which was offered by the previous owner to the City of Novi to construct, operate, maintain and repair a storm drainage system on the eastern side of the property. The current layout proposes to expand the existing 12 foot wide access easement through the western conservation easement to 20 feet for construction of the secondary emergency access road and construction entrance. **City Council's approval is required for the proposed modification of the conservation easement to allow for the widened access from Taft Road following the Planning Commission's consideration and possible approval of the plan. A new Conservation Easement is proposed for the eastern portion of the property, and some areas are indicated to have deed restrictions. These areas are shown on Sheet 7 of the plan set.**
2. Wetland Buffers: Lots 3, 4, 5, 6, 12 and 13 have wetland setback areas on the rear yards. The 25-foot wetland setback on these lots is proposed to be maintained through a deed restriction. Any proposed conservation easement areas should be demarcated on-site through the use of proposed easement signage and potentially other means such as boulders or decorative fencing along the setback boundaries. **Signage is now proposed on the plans every 50 feet on lots that contain wetland buffer areas. The applicant should consider placing fewer signs (but a minimum of one per lot or common area) with additional decorative fencing or boulders for a less intrusive means of demarcating the buffer. Signage may be removed by home owners if the signs are seen as unattractive.**
3. Road Design: See the detailed letter from the Traffic consultant.
4. Pavement for Emergency Access: Plans propose asphalt pavement for the emergency access drive. Notes on the plan indicate this is also a pedestrian pathway from the development to Taft Road. The Fire review letter indicates the access road is acceptable as shown.
5. Planning Acceptance documents required at the time of electronic stamping set submittal:
 - a. Master Deed: A Master Deed is required for the proposed Site Condominium. The applicant must provide a draft copy of the Master Deed for review and approval prior to recording. The deed restrictions for the lots mentioned above would be included in this document.

- b. Conservation Easement: Proposed conservation easement boundaries are shown on the plan. Drafts for conservation easements for wetlands and woodlands are required prior to City Council meeting.

SUMMARY OF REVIEWS

- a. Planning: Approval contingent on City Council's approval of existing easement modification.
- b. Engineering: Approval of the 3rd revised Preliminary Site Plan is recommended. Additional comments to be addressed with final site plan.
- c. Landscape: A new review was not completed for this submittal. The plan requires three Planning Commission waivers which are supported by staff.
- d. Wetlands: A City of Novi Wetland Permit and Buffer Authorization are required for the proposed impacts to wetlands and regulated wetland setbacks. ECT recommends approval of the revised Preliminary Site Plan for wetlands. Refer to wetlands review for more detail.
- e. Woodlands: A City of Novi Woodland permit is required for the proposed impacts to regulated woodlands. ECT recommends approval of the revised Preliminary Site Plan for woodlands. Refer to woodlands review for more detail.
- f. Traffic: Approval of the 3rd revised Preliminary Site Plan is recommended. Additional comments to be addressed with final site plan..
- g. Facade: Not Applicable for single family homes at the time of site plan review.
- h. Fire: The plans meet Fire Department requirements. Approval is recommended.

NEXT STEP: PLANNING COMMISSION MEETING

This Site Plan is scheduled to go before Planning Commission for consideration on **June 10, 2020 at 7:00 p.m.** Please provide via email the following **by noon on June 3, 2020**, if you wish to keep this schedule:

1. Site Plan submittal in PDF format (maximum of 10MB). **NO CHANGES MADE.**
2. A response letter addressing ALL the comments from ALL the review letters and a request for waivers/variances as you see fit.
3. A color rendering of the Site Plan (Optional to be used for Planning Commission presentation).

REMAINING STEPS TILL FINAL APPROVAL:

1. **City Council Meeting**: **City Council approval is required for the following items: 1. Modification of conservation easement and 2. A variance for not meeting the cul-de-sac requirements for streets longer than 1,000 ft.** After receiving Planning Commission's approval, the plan would require the City Council's approval for modification of existing conservation easements and other applicable variances. The applicant should submit the following for City Council's consideration.
 - a. Planning Transmittal (attached)
 - b. Cover letter requesting the modification
 - c. Draft Conservation easement language
 - d. Draft Conservation easement exhibit
2. **Final Site Plan Approval**: After receiving the Preliminary Site Plan approval, please submit the following for Final site plan review and approval
 - a. Six copies of Final Site Plan addressing all comments from Preliminary review
 - b. Response letter addressing all comments and refer to sheet numbers where the change is reflected.
 - c. Final Site Plan Application
 - d. Final Site Plan Checklist
 - e. Engineering Estimate
 - f. Landscape Estimate
 - g. Other Agency Checklist

- h. Legal Documents as required per the attached Planning and Engineering Legal Transmittals
3. **Electronic Stamping Set Approval:** After receiving Final Site Plan approval, please submit the following for Electronic stamping set approval:
 - a. Plans addressing the comments in all of the staff and consultant review letters in PDF format.
 - b. Response letter addressing all comments in ALL letters and ALL charts and **refer to sheet numbers where the change is reflected.**
 - c. Master Deed draft is required prior to final stamping set approval.
4. **Stamping Set Approval:** Stamping sets are still required for this project. After having received all of the review letters from City staff the applicant should make the appropriate changes on the plans and submit **10 size 24" x 36" copies with original signature and original seals,** to the Community Development Department for final Stamping Set approval. Plans addressing the comments in all of the staff and consultant review letters should be submitted electronically for informal review and approval prior to printing Stamping Sets.

OTHER REQUIREMENTS

1. **Site Addressing:** New addresses will be required for the proposed lots. The applicant should contact the Building Division for an address prior to applying for a building permit. Building permit applications cannot be processed without a correct address. The address application can be found by clicking on this [link](#). Please contact the Ordinance Division 248.735.5678 in the Community Development Department with any specific questions regarding addressing of sites.
2. **Street and Project Name:** This project does not require approval from the Street and Project Naming Committee.
3. **Signage:** Exterior Signage is not regulated by the Planning Division or Planning Commission. Sign permit applications that relate to construction of a new building or an addition to an existing building may submitted, reviewed, and approved as part of a site plan application. Proposed signs shall be shown on the preliminary site plan. Alternatively, an applicant may choose to submit a sign application to the Building Official for administrative review. Following preliminary site plan approval, any application to amend a sign permit or for a new or additional sign shall be submitted to the Building Official. Please contact the Ordinance Division 248.735.5678 for information regarding sign permits.

PRE-CONSTRUCTION MEETING

A Pre-Construction meeting is required for this project. Prior to the start of any work on the site, Pre-Construction (Pre-Con) meetings must be held with the applicant's contractor and the City's consulting engineer. Pre-Con meetings are generally held after Stamping Sets have been issued and prior to the start of any work on the site. There are a variety of requirements, fees and permits that must be issued before a Pre-Con can be scheduled, so it is suggested you contact Sarah Marchioni [248.347.0430 or smarchioni@cityofnovi.org] once the Final Site Plan has been approved to begin the Pre-Con checklist. If you have questions regarding the checklist or the Pre-Con itself, please contact Sarah.

CHAPTER 26.5

Chapter 26.5 of the City of Novi Code of Ordinances generally requires all projects be completed within two years of the issuance of any starting permit. Please contact Sarah Marchioni at 248-347-0430 for additional information on starting permits. The applicant should review and be aware of the requirements of Chapter 26.5 before starting construction.

If the applicant has any questions concerning the above review or the process in general, do not hesitate to contact me at 248.347.0484 or lbell@cityofnovi.org.

A handwritten signature in black ink that reads "Lindsay Bell". The signature is written in a cursive, flowing style.

Lindsay Bell, AICP – Senior Planner

ENGINEERING REVIEW



PLAN REVIEW CENTER REPORT

April 23, 2020

Engineering Review

Taft Knolls III
JSP19-0034

Applicant

Trowbridge Land Holdings, LLC

Review Type

Third Revised Preliminary Site Plan

Property Characteristics

- Site Location: East Side Taft Road and South of 11 Mile Road
- Site Size: 9.6 Acres
- Plan Date: 03/29/2020
- Design Engineer: Powell Engineering & Associates, LLC

Project Summary

- Construction of a site condominium development consisting of 13 units. Site access would be provided via Danyas Way
- Water service would be provided by an 8-inch extension from the existing 8-inch water main stub on the west side of Danyas Way and looping to the 12-inch water main along Taft Road. Three (3) fire hydrants will be installed as part of this project.
- Sanitary sewer service would be provided for proposed Units 2 through 12 by extending the existing 8-inch sanitary sewer from the existing sanitary sewer stub between existing Lots 6 and 7 of Taft Knolls II. Units 1 and 13 will be served by extending the existing 8-inch sanitary sewer stub on the east side of Danyas Way.
- Storm water would be collected by a storm sewer collection system and discharged to a proposed detention basin.

Recommendation

Approval of the third Revised Preliminary Site Plan and Revised Preliminary Storm Water Management Plan is **recommended**, with items to be addressed at the time of Final Site Plan submittal.

Comments:

The Revised Preliminary Site Plan does meet the general requirements of Chapter 11 of the Code of Ordinances, the Storm Water Management Ordinance and the Engineering Design Manual. The following must be addressed prior to Final Site Plan approval:

General

1. A right-of-way permit will be required from the City of Novi.
2. Clearly label the right-of-way along Taft Road.
3. Provide a construction materials table on the Utility Plan listing the quantity and material type for each utility (water, sanitary and storm) being proposed.
4. Provide a construction materials table on the Paving Plan listing the quantity and material type for each pavement cross-section being proposed.
5. The sidewalk along Taft Road must be concrete. Please remove the note that the retaining wall will only be required if the sidewalk is concrete.
6. The sidewalk along Taft Road and Danyas Way varies in distance from the right-of-way boundary. Any distance greater than 1-foot inside the right-of-way is subject to the City Engineer's approval. Label the **unit of measurement** of the minimum distance between the edge of pavement/back of curb and the sidewalk.
 - a. If the separation is indeed five feet with a guardrail between the sidewalk and the road, and the close proximity to the road is necessary to avoid impacting wetlands, then this would be supported by the City Engineer.
7. Provide the City's standard detail sheets for water main (5 sheets-rev. 02/16/2018), sanitary sewer (3 sheets- rev. 02/16/2018), storm sewer (2 sheets-rev. 02/16/2018) and paving (2 sheets-rev. 03/05/2018) at the time of the **Stamping Set submittal**. They can be found on the City website (<http://cityofnovi.org/Government/City-Services/Public-Services/Engineering-Division/Engineering-Standards-and-Construction-Details.aspx>).

Water Main

8. Provide profile views for all proposed water main 8-inch and larger.
9. Note the typical size, material, and slope of the water service leads to the homes and the hydrant leads.
 - a. All hydrant leads longer than 25-feet shall be 8-inch.
10. Once the water main plans have been reviewed in detail and approved, provide three (3) signed and sealed sets of revised utility plans along with the Michigan Department of Environment, Great Lakes and Energy (MDEGLE) permit application (04/2019 rev.) for water main construction. The Streamlined Water Main Permit Checklist should be submitted to the Engineering Division 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 profile views for all proposed sanitary sewer.
12. Note the typical size, material, and slope of the sanitary leads. Lead connections must be located outside of the proposed pavement.
13. Provide a sanitary sewer basis of design that references the City's standard unit factors.
14. Once the sanitary sewer plans have been reviewed in detail and approved, provide three (3) signed sealed sets of revised utility plans along with the MDEGLE permit application (01/18 rev.) for sanitary sewer construction and the Streamlined Sanitary Sewer Permit Certification Checklist shall be submitted to the Engineering Division 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.

Storm Sewer

15. Provide a schedule listing the casting type and other relevant information (structure size, type, and rim/invert elevations) for each proposed storm structure on the utility plan.
16. Note typical sump lead size and material on sheet S4.
17. Provide storm sewer profiles and illustrate all pipes intersecting storm structures.

Storm Water Management Plan

18. 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.
19. Consider raising the forebay manhole to the same height as the detention basin high water line. There appears to be the potential that the two basins would achieve the same high water line since they are hydraulically connected.
20. Provide a soil boring report from a Geotechnical Engineer where the detention basin is proposed.
21. Indicate the size of orifice holes on the riser pipe on sheet S5.

Paving & Grading

22. The cul-de-sac does not meet FIII-F standards in Chapter 11 of the Code of Ordinance. Either increase the radius and provide 70-feet of right-of-way as shown in Figure FIII-F, or a **variance** will be required from City Council.
23. Due to the proximity of the guardrail to the sidewalk along Taft Road, consider placing a rubber barrier on the pedestrian side of the guardrail to protect pedestrians should they collide with it.
24. A license agreement will be required for the retaining wall within the Taft Road right-of-way.

25. The International Building Code (section 1015.2) references the need for a handrail or guards when walking surfaces are located more than 30 inches measured vertically to the grade below at any point within 36 inches horizontally to the edge of the open side. It is difficult to read the spot elevations of the retaining wall on the plans, but it appears that a hand rail may be useful on top of the retaining wall adjacent to Taft Road.

Flood Plain

26. A small area of Zone X is indicated on the southeast corner of the project site as shown on the Topographic Survey sheet. No work is proposed/shown on the Zone X area, thus no floodplain permit is required.

Soil Erosion and Sediment Control

27. A SESC permit is required. A full review has not been completed at this time.

Off-Site Easements

28. Any off-site utility easements anticipated must be executed **prior to final approval of the plans**. If you have not already done so, drafts of the easements and a recent title search shall be submitted to the Community Development Department as soon as possible for review, and shall be approved by the Engineering Division and the City Attorney prior to executing the easements.

The following must be submitted at the time of Final Site Plan submittal:

29. A letter from either the applicant or the applicant's engineer must be submitted with the Final Site Plan highlighting the changes made to the plans addressing each of the comments listed on this review letter and indicating the revised sheets involved.
30. An itemized construction cost estimate must be submitted to the Community Development Department at the time of Final Site Plan submittal for the determination of plan review and construction inspection fees. This estimate should only include the civil site work and shall not include any costs associated with construction of the building or any demolition work. **The cost estimate must be itemized** for each utility (water, sanitary, storm sewer), on-site paving, right-of-way paving (including proposed right-of-way), grading, and the storm water basin (basin construction, control structure, pretreatment structure and restoration).

The following must be submitted at the time of Stamping Set submittal:

31. A draft copy of the Storm Drainage Facility Maintenance Easement Agreement (SDFMEA), as outlined in the Storm Water Management Ordinance, must be submitted to the Community Development Department. Once the agreement is approved by the City's Legal Counsel, this agreement will then be sent to City Council for approval/acceptance. The SDFMEA will then be recorded at the office of the Oakland County Register of Deeds. This document is available on our website.

32. A draft copy of the 20-foot wide easement for the water main to be constructed on the site must be submitted to the Community Development Department.
33. A draft copy of the 20-foot wide easement for the sanitary sewer to be constructed on the site must be submitted to the Community Development Department.
34. A draft copy of the warranty deed for the street to be dedicated as public must be submitted.

The following must be addressed prior to construction:

35. A pre-construction meeting shall be required prior to the commencement of any site work. Please contact Sarah Marchioni in the Community Development Department to setup a meeting (248-347-0430).
36. A City of Novi Grading Permit will be required prior to any grading on the site. This permit will be issued at the pre-construction meeting (no application fee).
37. An NPDES permit must be obtained from the MDEGLE since the site's area of disturbance is over 5 acres in size. The MDEGLE requires an approved Soil Erosion Control plan to be submitted with the Notice of Coverage.
38. A Soil Erosion Control Permit must be obtained from the City of Novi. Contact Sarah Marchioni in the Community Development Department (248-347-0430) for forms and information.
39. A permit for work within the right-of-way of Taft Road must be obtained from the City of Novi. The application is available from the City Engineering Division and should be filed at the time of Final Site Plan submittal. Please contact the Engineering Division at 248-347-0454 for further information.
40. A permit for water main construction must be obtained from the MDEGLE. This permit application must be submitted through the Water and Sewer Senior Manager after the water main plans have been approved.
41. A permit for sanitary sewer construction must be obtained from the MDEGLE. This permit application must be submitted through the Water and Sewer Senior Manager after the sanitary sewer plans have been approved.
42. Construction Inspection Fees will be determined once the construction cost estimate is submitted and must be paid prior to the pre-construction meeting.
43. A storm water performance guarantee, equal to 1.2 times the amount required to complete storm water management and facilities (as specified in the Storm Water Management Ordinance) must be posted with Community Development.
44. An incomplete site work performance guarantee, equal to 1.2 times the amount required to complete the site improvements (excluding the storm

- water detention facilities) as specified in the Performance Guarantee Ordinance, must be posted with Community Development.
45. A street sign financial guarantee in an amount that is to be determined (\$400 per traffic control sign proposed) must be posted with Community Development.

Prior to preparing stamping sets, the Applicant is advised to provide any revised sheets directly to the Engineering Division for an informal review and approval.

To the extent this review letter addresses items and requirements that require the approval of/or a permit from an agency or entity other than the City, this review shall not be considered an indication or statement that such approvals or permits will be issued.

Please contact Kate Richardson at (248) 347-0586 with any questions.



Kate Richardson, EIT
Plan Review Engineer

cc: Lindsay Bell, Community Development Department
Ben Croy, PE; Engineering
Victor Boron, Engineering

LANDSCAPE REVIEW



PLAN REVIEW CENTER REPORT

November 18, 2019

Revised Preliminary Site Plan - Landscaping

Taft Knolls III

Review Type

Revised Preliminary Site Plan Landscape Review

Project Number

JSP19-0034

Property Characteristics

- Site Location: East side of Taft, south of Taft Knolls II
- Site Zoning: R-4
- Adjacent Zoning: North, East and South: R-4, West: R-A (Novi Woods School)
- Plan Date: October 31, 2019

Recommendation:

This project is **recommended for approval** with the understanding that the landscape waivers are granted by the Planning commission items listed below and on the associated Landscape Chart will be addressed satisfactorily in the Final Site Plans.

LANDSCAPE WAIVERS:

1. No berms are proposed along Taft Road – *supported by staff*
2. No street trees are proposed along Taft Road – *supported by staff*
3. No greenbelt canopy/evergreen or subcanopy trees are provided in north 166 lf of frontage (4 canopy and 6 subcanopy trees) – *supported by staff because wetland to be preserved occupies that section*

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** in this letter and on the associated landscape chart must be addressed and incorporated as part of the revised Preliminary Site Plan submittal. Please follow guidelines of the current Zoning Ordinance and Landscape Design Guidelines. This review is a summary and not intended to substitute for any Ordinance.

EXISTING ELEMENTS

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

Provided

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

1. Provided
2. **Please adjust the utility lines and street trees to provide 5 feet between the tree and the lines and 10 feet between trees and utility structures, including hydrants.**

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

1. All existing trees, tree removals and trees to be saved are shown on plans.
2. Please show tree protection fencing and detail on the Demolition and Grading plans.
3. **On the landscape plan, please make the numbers of trees to remain darker and more legible.**

4. Please show the regulated woodland line from the city's map on Sheet C-4 and verify that trees to be saved, for which credits are taken, are not within the regulated woodland.

LANDSCAPING REQUIREMENTS

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

1. A 4 foot tall berm with a 4 foot wide crest is required across the entire 328lf frontage (less the road access). This berm is not provided due to the existing wetlands and limited area where the berm could be provided. **A landscape waiver is requested for the lack of berm.** *It would be supported by staff because the wetland is being preserved and dense woodland replacement plantings will provide sufficient buffering from Taft Road in the southern section where it could be provided.*
2. Based on the frontage net of the wetland and emergency access lane, 4 large evergreen trees or deciduous canopy trees, and 6 subcanopy trees are required. 5 spruce trees and 8 subcanopy trees are provided. **A landscape waiver is requested for the 4 spruce/canopy trees and 7 subcanopy trees that can't be planted in the wetland.** *It is supported by staff for the same reason – preservation of the wetland.*
3. Please revise the calculations to use the current ordinance. The current ordinance can be found at this location: <http://cityofnovi.org/Reference/Code-of-Ordinances-and-City-Charter/18-283LandscapeStandards.aspx>

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

1. Based on the Taft Road frontage, 7 deciduous canopy trees are required between the sidewalk and the road. Since the wetland extends into the right-of-way, there is no room between the sidewalk and the road. In the southern frontage, there is insufficient room for trees, due to the clear vision zone and the sidewalk location. A landscape waiver is requested to not provide the required street trees. *Staff supports the waiver for the reasons given above.*
2. Based on the lot frontages, 38 street trees are required. A total of 38 street trees on the interior road are provided.
3. **Please locate at least 1 street tree on Lot 7.**
4. **Please add a note stating that street trees must be at least 10 feet from driveways.**

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

Phragmites australis locations are shown on L-1 and instructions for its removal are on L-3.

Transformer/Utility Box and Fire Hydrant Plantings (LDM 1.3 from 1-5, Zoning Sec 5.5.3.C.ii.d)

1. The required utility box screening and screening details have been provided.
2. Trees are located at least 10 feet from most, but not all, utility structures and a note on the plan stating the required spacing for use by contractors is provided.
3. **Please adjust placement of utilities and street trees to provide at least 5 feet spacing between trees and underground utility lines and 10 feet from all utility structures. The street trees must be located between the sidewalk and the curb.**
4. Please add screening for all utility boxes when they are installed.

OTHER REQUIREMENTS

Plant List, Notations and Details (LDM 2.h. and t.)

1. All have been provided.
2. **Please see the Landscape Chart for a discussion of species diversity and planting details and notes.**

Tree Credits (LDM 1.3.b.(1).d)

1. **Please see the ECT review for a complete discussion of woodlands and wetlands.**

2. Landscape credits for preserved trees are only allowed for preserved trees outside of regulated woodlands. Please verify that the "credit" trees are not in regulated woodlands.

Cost estimates for Proposed Landscaping (LDM 2.t.)

Provided

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

An irrigation plan for all landscaped areas, or information regarding alternate means of providing sufficient water for plant establishment and survival is required as part of the Final Site Plans.

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

Provided

Snow Deposit (LDM.2.q.)

Provided

Corner Clearance (Zoning Sec 5.9)

Provided

If the applicant has any questions concerning the above review or the process in general, please do not hesitate to contact me at 248.735.5621 or rmeader rmeader@cityofnovi.org.



Rick Meader – Landscape Architect

LANDSCAPE REVIEW SUMMARY CHART – Revised Preliminary Site Plan

Review Date: November 18, 2019
Project Name: JSP19 – 0034: TAFT KNOLLS III
Plan Date: October 31, 2019
Prepared by: Rick Meader, Landscape Architect E-mail: rmeader@cityofnovi.org;
 Phone: (248) 735-5621

Please revise the calculations per the current ordinance and landscape design manual. They can be found at these locations:

LANDSCAPE WAIVERS:

1. No berms are proposed along Taft Road – *supported by staff*
2. No street trees are proposed along Taft Road – *supported by staff*
3. No greenbelt canopy/evergreen or subcanopy trees are provided in north 166 lf of frontage (4 canopy and 6 subcanopy trees) – *supported by staff because wetland to be preserved occupies that section*

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

| Item | Required | Proposed | Meets Code | Comments |
|--|---|---|------------|--|
| Landscape Plan Requirements (LDM (2)) | | | | |
| Landscape Plan (Zoning Sec 5.5.2, LDM 2.e.) | <ul style="list-style-type: none"> ▪ New commercial or residential developments ▪ Addition to existing building greater than 25% increase in overall footage or 400 SF whichever is less. ▪ 1"=20' minimum with proper North. Variations from this scale can be approved by LA ▪ Consistent with plans throughout set | <ul style="list-style-type: none"> ▪ Overall plan 1"=50' ▪ Detention pond: 1"=20' | Yes | |
| Project Information (LDM 2.d.) | Name and Address | No address or location is indicated on the landscape plan | No | Please put a small location map on landscape plans. |
| Owner/Developer Contact Information (LDM 2.a.) | Name, address and telephone number of the owner and developer or association | Developer name and address are provided. | Yes | Please add the developer's phone number to the landscape plan. |
| Landscape Architect contact information (LDM 2.b.) | Name, Address and telephone number of RLA/LLA | Yes | Yes | |
| Sealed by LA. (LDM 2.g.) | Requires original signature on stamping | Yes | Yes | |

| Item | Required | Proposed | Meets Code | Comments |
|--|--|---|------------|--|
| | sets | | | |
| Miss Dig Note (800) 482-7171 (LDM.3.a.(8)) | Show on all plan sheets | Yes | Yes | |
| Zoning (LDM 2.f.) | Include all adjacent zoning | <u>Shown on S1</u> Site: R-4 North, East, South: R-4 West: R-A | Yes | |
| Survey information (LDM 2.c.) | <ul style="list-style-type: none"> ▪ Legal description or boundary line survey ▪ Existing topography | Topographic survey has been provided on Sheet C-4 | Yes | |
| Existing plant material Existing woodlands or wetlands (LDM 2.e.(2)) | Show location type and size. Label to be saved or removed. | <ul style="list-style-type: none"> • Tree survey and tree chart are provided • Tees to be removed are shown on L-1 but the tree numbers are not legible | Yes | <ol style="list-style-type: none"> 1. Please provide a demolition plan that clearly shows all trees to be removed and tree fencing for trees that will be preserved. 2. Please make the tree symbols for all trees to be saved on the landscape plan dark enough to be easily read. 3. Please add the regulated woodland edge to Sheet C-4. |
| Soil types (LDM.2.r.) | <ul style="list-style-type: none"> ▪ As determined by Soils survey of Oakland county ▪ Show types, boundaries | Sheet L-1 | Yes | |
| Existing and proposed improvements (LDM 2.e.(4)) | Existing and proposed buildings, easements, parking spaces, vehicular use areas, and R.O.W | Yes | Yes | |
| Existing and proposed utilities (LDM 2.e.(4)) | <ul style="list-style-type: none"> ▪ Overhead and underground utilities, including hydrants ▪ Proposed light poles | Existing and proposed utility lines, including overhead lines, are shown on the landscape plan. | Yes | <ol style="list-style-type: none"> 1. Please adjust trees and/or utilities to provide 10 feet between trees and structures, and 5 feet between trees and underground lines. 2. Please show proposed light poles on the landscape plan. |
| Proposed grading. 2' contour minimum | Provide proposed contours at 2' interval | Sheets S2 and S3 and L-2 | Yes | |

| Item | Required | Proposed | Meets Code | Comments |
|---|--|---|------------|---|
| (LDM 2.e.(1)) | | | | |
| Snow deposit (LDM.2.g.) | Show snow deposit areas on plan | Located on the front yard of Unit 1 | Yes | |
| LANDSCAPING REQUIREMENTS | | | | |
| Parking Area Landscape Requirements LDM 1.c. & Calculations (LDM 2.o.) | | | | |
| General requirements (LDM 1.c) | <ul style="list-style-type: none"> ▪ Clear sight distance within parking islands ▪ No evergreen trees | NA | | There are no parking areas on the plan. |
| Name, type and number of ground cover (LDM 1.c.(5)) | As proposed on planting islands | NA | | |
| General (Zoning Sec 5.5.3.C.ii) | | | | |
| Parking lot Islands (a, b. i) | <ul style="list-style-type: none"> ▪ A minimum of 300 SF to qualify ▪ 6" curbs ▪ Islands minimum width 10' BOC to BOC | NA | | |
| Curbs and Parking stall reduction (c) | Parking stall can be reduced to 17' and the curb to 4" adjacent to a sidewalk of minimum 7 ft | NA | | |
| Contiguous space limit (i) | Maximum of 15 contiguous spaces | NA | | |
| Plantings around Fire Hydrant (d) | No plantings with matured height greater than 12' within 10 ft. of fire hydrants | <ul style="list-style-type: none"> • All proposed trees are 10 ft away from hydrants but not all utility structures. • A note on the plan indicates that all trees are to be at least 10' away from hydrants. | No | <ol style="list-style-type: none"> 1. Please adjust trees and utility lines to provide required spacing from underground lines (5') and all utility structures (10'). 2. Please revise the note regarding spacing on Sheet L-1 to include utility structures. |
| Landscaped area (g) | Areas not dedicated to parking use or driveways exceeding 100 sq. ft. shall be landscaped | NA | | |
| Clear Zones (LDM 2.3.(5)) | 25 ft corner clearance required. Refer to Zoning Section 5.5.9 | Provided for emergency vehicle access lane | | |
| Berms, Walls and ROW Planting Requirements | | | | |
| Berms | | | | |
| <ul style="list-style-type: none"> ▪ All berms shall have a maximum slope of 33%. Gradual slopes are encouraged. Show 1ft. contours ▪ Berm should be located on lot line except in conflict with utilities. ▪ Top 6" layer should be topsoil | | | | |

| Item | Required | Proposed | Meets Code | Comments |
|---|---|---|------------|--|
| Residential Adjacent to Non-residential (Zoning Sec 5.5.3.A and LDM 1.a) | | | | |
| Berm requirements (Zoning Sec 5.5.A) | Adjacent Zoning is RA and R1 | NA | | |
| Planting requirements (LDM 1.a.) | LDM Novi Street Tree List | NA | | |
| Adjacent to Public Rights-of-Way (Zoning Sec 5.5.3.A and LDM 1.b) | | | | |
| Cross-Section of Berms (Zoning Sec 5.5.3.B and LDM 2.j) | | | | |
| Slope, height and width (Zoning Sec 5.5.3.A.v) | <ul style="list-style-type: none"> ▪ Label contour lines ▪ Maximum 33% slope ▪ Min. 4 feet crest ▪ Constructed of loam ▪ 6" top layer of topsoil | <ul style="list-style-type: none"> ▪ Due to wetlands and heavy landscaping, no berm is provided along Taft Road. ▪ A landscape waiver is requested for not providing the required right-of-way berm | No | <i>The waiver request is supported by staff.</i> |
| Type of Ground Cover | | Lawn is indicated. | Yes | |
| Setbacks from Utilities | Overhead utility lines and 15 ft. setback from edge of utility or 20 ft. setback from closest pole | No trees are proposed near overhead utilities – subcanopy trees are the closest | Yes | |
| Walls (LDM 2.k & Zoning Sec 5.5.3.vi) | | | | |
| Material, height and type of construction footing | Freestanding walls should have brick or stone exterior with masonry or concrete interior | None are proposed | | |
| Walls greater than 3 ½ ft. should be designed and sealed by an Engineer | | NA | | |
| ROW Landscape Screening Requirements (Sec 5.5.3.B. ii) | | | | |
| Greenbelt width (2)(3) (5) | 34 ft. | 245' min. distance from right- of-way to nearest lot | Yes | |
| Min. berm crest width | 4 ft. | <ul style="list-style-type: none"> ▪ No berm is proposed due to existing wetland to remain and heavy landscaping. ▪ A landscape waiver is requested on the plan. | No | <i>The waiver is supported as half of the site is in wetland and the other half will be heavily planted with woodland replacement trees.</i> |

| Item | Required | Proposed | Meets Code | Comments |
|---|--|--|--|--|
| Minimum berm height (9) | 4 ft. | See above | No | See above |
| 3' wall (4) (7) | NA | None | | |
| Canopy deciduous or large evergreen trees Notes (1) (10) LDM1.d.(1)(b) | <ul style="list-style-type: none"> ▪ 1 tree per 40 l.f.; ▪ Taft Road 328 lf frontage – 166 lf preserved area – 20' emergency lane/40 = 4 trees ▪ Wetland – 166/40 = 4 trees | <ul style="list-style-type: none"> ▪ 5 spruce trees ▪ A landscape waiver is required for the 4 trees that aren't planted in the wetland frontage. | No | <ol style="list-style-type: none"> 1. Please revise the calculation per the current ordinance. 2. <i>The waiver request is supported by staff in order to preserve the wetland</i> |
| Sub-canopy deciduous trees Notes (2)(10) | <ul style="list-style-type: none"> ▪ 1 tree per 25 l.f.; ▪ Taft Road (328 -166-20)/25 = 6 trees ▪ Wetland – 166/25 = 7 trees | <ul style="list-style-type: none"> ▪ 8 serviceberries ▪ A landscape waiver is required for the 7 trees that aren't planted in the wetland frontage. | No | <ol style="list-style-type: none"> 1. Please revise the calculation per the current ordinance. 2. <i>The waiver request is supported by staff in order to preserve the wetland</i> |
| Street Trees (LDM 1.d.(1) and Novi Street Tree List)) | <ul style="list-style-type: none"> • <u>Taft Road</u>: 1 tree per 35 lf • 328-166-130/35 = 1 tree • <u>Internal lots</u>: 38 trees required based on number of lots and lot widths • | <p><u>Taft Road</u>: 3 existing trees in wetland area</p> <p><u>Interior</u>: 38 trees are spread throughout the development, including along the interior wetland frontages</p> | <p><u>Taft Rd</u>: Yes</p> <p><u>Interior</u>: Yes</p> | <ol style="list-style-type: none"> 1. Please locate 1 street tree somewhere in front of Unit 1. This may require adjusting the storm line somewhat to provide room for it. 2. Please add a note stating that street trees must be at least 10 feet from driveways. |
| Island & Boulevard Planting (Zoning Sec & LDM 1.d.(1)(e)) | <ul style="list-style-type: none"> ▪ Must be landscaped & irrigated ▪ Mix of canopy/sub-canopy trees, shrubs, groundcovers, etc. ▪ No plant materials between heights of 3-6 feet | None provided as there is no island or boulevard | NA | |
| Transformers/Utility boxes (LDM 1.e from 1 through 5) | <ul style="list-style-type: none"> ▪ A minimum of 2ft. separation between box and the plants ▪ Ground cover below 4" is allowed up to pad. ▪ No plant materials within 8 ft. from the doors | No | | <ol style="list-style-type: none"> 1. Standard screening detail is provided with other details. 2. <u>If/when location of transformer/utility boxes is determined, add landscaping per city requirements.</u> 3. Please add a note stating that all utility boxes must be screened per detail. |

| Detention/Retention Basin Requirements (Sec. 5.5.3.E.iv) | | | | |
|--|---|--|-----|---|
| Planting requirements (Sec. 5.5.3.E.iv) | <ul style="list-style-type: none"> ▪ Clusters shall cover 70-75% of the basin rim area ▪ 10" to 14" tall grass along sides of basin ▪ Refer to wetland for basin mix | <ul style="list-style-type: none"> ▪ Native shrubs cover approximately 72% of the basin rims. ▪ Seed mixes are provided. | Yes | |
| Phragmites australis control (Sec 5.5.6.C) | <ul style="list-style-type: none"> ▪ Show all locations of Phragmites on the site ▪ Provide removal plan if Phragmites is found to exist on the site | <ul style="list-style-type: none"> ▪ Locations of Phragmites populations are shown on L-1. ▪ A plan for the removal of Phragmites is included on Sheet L-3. | Yes | |
| Woodland Replacements (Chapter 37 Woodlands Protection, LDM9.b(1)) | | | | |
| Woodland Replacement Calculations – Required/Provided | <ul style="list-style-type: none"> ▪ Show calculations based on existing tree chart. ▪ Indicate boundary of regulated woodland on plan | <ul style="list-style-type: none"> ▪ A tree chart showing trees to be removed and replacement calculations have been provided on Sheet L-4. ▪ Woodland replacement trees are shown on L-2 ▪ Applicant is showing 87 credits as being earned for preserving non-woodland trees | TBD | <ol style="list-style-type: none"> 1. Please show the regulated woodland boundary on Sheet C-4. 2. Please verify that all saved trees for which credits are taken are outside of a regulated woodland. 3. Please see ECT's review for a full discussion of required and provided woodland replacement trees. |
| LANDSCAPING NOTES, DETAILS AND GENERAL REQUIREMENTS | | | | |
| Landscape Notes – Utilize City of Novi Standard Notes | | | | |
| Installation date (LDM 2.I. & Zoning Sec 5.5.5.B) | Provide intended date | Between March 15 – November 15 2020 | Yes | |
| Maintenance & Statement of intent (LDM 2.m & Zoning Sec 5.5.6) | <ul style="list-style-type: none"> ▪ Include statement of intent to install and guarantee all materials for 2 years. ▪ Include a minimum one cultivation in June, July and August for the 2-year warranty period. | Yes | Yes | |
| Plant source | Shall be northern nursery | Yes | Yes | |

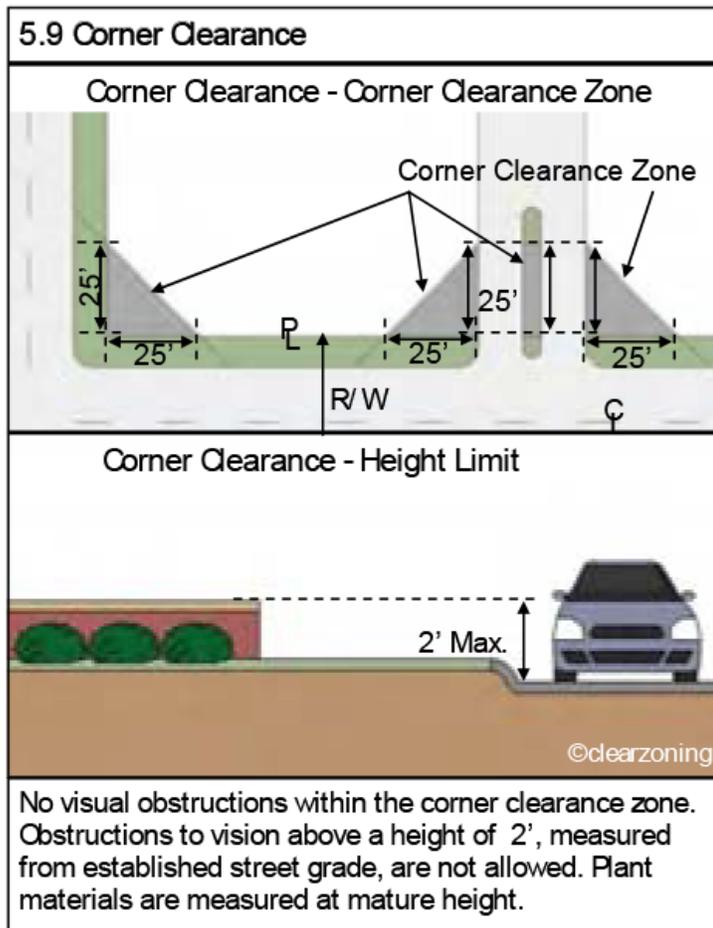
| | | | | |
|---|---|---|---|---|
| (LDM 2.n & LDM 3.a.(2)) | grown, No.1 grade | | | |
| Irrigation plan (LDM 2.s.) | A fully automatic irrigation system and a method of draining is required with Final Site Plan | No | No | <u>Need for final site plan</u> |
| Other information (LDM 2.u) | Required by Planning Commission | NA | | <p>Please revise the following notes:</p> <ul style="list-style-type: none"> • Maintenance Note #2 – change 1 year to 3 months • Specification Note #2 – change 1.5 to 1.2 and 2 to 1.5 • Specification Note #3 – Change March 15 and March 31 to “April 15, weather permitting” • Specification Note #7 – change last line to “...Sections 7.7.8 and 7.7.9. • Landscape Note #7 – change 1 year to 3 months |
| Establishment period (Zoning Sec 5.5.6.B) | 2 yr. Guarantee | Yes | Yes | |
| Approval of substitutions. (Zoning Sec 5.5.5.E) | City must approve any substitutions in writing prior to installation. | Yes | Yes | |
| Plant List (LDM 2, 4, 8, 9) – Include all cost estimates | | | | |
| Quantities and sizes | Refer to LDM suggested plant list | Yes | Yes | |
| Root type | | Yes | Yes | |
| Botanical and common names | | Yes | Yes | |
| Breakdown of genus/species diversity (LDM 4) | | <ul style="list-style-type: none"> ▪ 9 of 12 non-woodland replacement species used (75%) are native to Michigan ▪ The non-replacement tree diversity does not meet the requirements of the Landscape Design Manual Section 4. | <ul style="list-style-type: none"> ▪ Yes ▪ No | <ol style="list-style-type: none"> 1. Please use fewer Plane Trees and Swamp White Oaks as street trees to meet the species diversity requirement of LDM4. 2. Other oaks species, such as red oaks could be used, and/or other species such as maples, hackberries, basswood, to name a few. |

| | | | | |
|--|---|----------|-----|---|
| Type and amount of lawn | | Provided | Yes | |
| Cost estimate (LDM 2.t) | For all new plantings, mulch and sod as listed on the plan | Provided | Yes | |
| Planting Details/Info (LDM 2.i) – Utilize City of Novi Standard Details | | | | |
| Canopy Deciduous Tree | Refer to LDM for detail drawings | Yes | Yes | Please add a callout stating that the root ball dirt must be pulled back to expose the root flare. |
| Evergreen Tree | | Yes | Yes | See above |
| Multi-stem Tree | | Yes | Yes | See above |
| Shrub | | Yes | Yes | |
| Perennial/ Ground Cover | | NA | | |
| Tree stakes and guys. (Wood stakes, fabric guys) | | Yes | Yes | |
| Tree protection fencing | Located at Critical Root Zone (1' outside of dripline) | Yes | Yes | |
| Other Plant Material Requirements (LDM 3) | | | | |
| General Conditions (LDM 3.a) | Plant materials shall not be planted within 4 ft. of property line | Yes | Yes | |
| Plant Materials & Existing Plant Material (LDM 3.b) | Clearly show trees to be removed and trees to be saved. | Yes | Yes | |
| Landscape tree credit (LDM3.b.(d)) | Substitutions to landscape standards for preserved canopy trees outside woodlands/ wetlands should be approved by LA. Refer to Landscape tree Credit Chart in LDM | Yes | Yes | <ol style="list-style-type: none"> 1. Calculations on Sheet L-3 show 87 credits are being taken. 2. Credits may only be taken for trees outside of a regulated woodland. 3. Please verify that the trees being preserved are not in a regulated woodland. If any are, the calculations must be revised to remove those trees from the credit calculation. |
| Plant Sizes for ROW, Woodland replacement and others (LDM 3.c) | Refer to Chapter 37, LDM for more details | Yes | Yes | |

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

NOTES:

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



WETLANDS REVIEW



ECT Project No. 190462-0500

March 5, 2020

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

Re: Taft Knolls III (JSP19-0034)
Wetland Review of the Revised Preliminary Site Plan (PSP20-0015)

Dear Ms. McBeth:

Environmental Consulting & Technology, Inc. (ECT) has reviewed the Revised Preliminary Site Plan for the proposed Taft Knolls III project prepared by Powell Engineering & Associates, LLC dated February 10, 2020 and stamped "Received" by the City of Novi on February 12, 2020 (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 wetland evaluation for the property on July 9, 2019.

ECT currently recommends approval of the Revised Preliminary Site Plan (PSP20-0015) for Wetlands. The Applicant should address the items noted in the *Wetland Comments* Section of this letter prior to receiving Wetland approval of the Final Site Plan. The applicant shall review and revise the Plan for consistency and clarity.

The following wetland related items are required for this project:

| Item | Required/Not Required/Not Applicable |
|---|---|
| Wetland Permit (specify Non-Minor or Minor) | Required (Non-Minor) |
| Wetland Mitigation | Not Required (Impacts currently 0.11-acre < 0.25-acre wetland mitigation threshold) |
| Wetland Buffer Authorization | Required |
| EGLE Permit | To Be Determined. It is the applicant's responsibility to contact EGLE in order to determine the need for a wetland use permit. |
| Wetland Conservation Easement | Not Required |

The proposed project is located east off of Taft Road, between Ten Mile and Eleven Mile Roads, and just south of the Taft Knolls (Phase 2) project (Section 22). The property consists of approximately 9.6 acres (Sidwell No. 22-22-100-012). An existing home is located on the parcel. The parcel contains a mix of land cover/land types including wetlands, open field and relatively sparse to moderate tree cover in several areas of the site including around some areas of the on-site wetlands.

2200 Commonwealth
Blvd., Suite 300
Ann Arbor, MI
48105

(734)
769-3004

FAX (734)
769-3164

An on-site wetland delineation and tree survey have been completed for the site. The project includes the construction of thirteen (13) residential units (reduced from 14 on previous plans), access drive (Danyas Way) to be constructed as an extension from the existing Danyas Way to the north, emergency access drive to Taft Road on the west side of the project, associated utilities and storm water detention basin with forebay. Based on our review of the Plan, Novi aerial photos, Novi GIS, and the City of Novi Official Wetlands and Woodlands Maps (see Figure 1) it appears as if this proposed project site contains both Regulated Wetlands and Regulated Woodlands.

Wetland Evaluation

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. The site includes areas indicated as City-regulated wetland on the official City of Novi Regulated Wetland and Watercourse Map (see Figure 1).

ECT visited the site on July 9, 2019 for the purpose of a wetland boundary verification. The focus of the inspection was to review site conditions in order to determine whether on-site wetlands are considered regulated under the City of Novi's Wetland and Watercourse Protection Ordinance. Wetland boundary flagging was in place at the time of this site inspection; however it is not clear how recently the wetland delineation had been completed on the site. ECT concurs with the eight (8) wetland areas (Wetlands A, B, C, D, E, F, G, and H) indicated on the Plan. These wetlands appear to be accurately flagged in the field.

Wetlands A, B, C, and D are all primarily open water/emergent wetlands located in the eastern section of the subject property. These wetland areas contained standing water at the time of our site visit. These wetlands contain the following species of vegetation around their fringes: common buckthorn (*Rhamnus cathartica*), American elm (*Ulmus americana*), silky dogwood (*Cornus amomum*), green ash (*Fraxinus pennsylvanica*), and some narrow-leaved cattail (*Typha angustifolia*). Of these four wetland areas, Wetland B is the most vegetated.

Wetland E is an open water wetland with emergent fringe located on the northern edge of the subject parcel. This wetland contained standing water at the time of our visit and contains the same species of vegetation as Wetlands A through D, listed above. Some areas of the Wetland E fringe contain the invasive common reed (*Phragmites australis*).

Wetland F is a scrub shrub wetland located in the northern and western section of the site (south of existing Lot 8 of the Taft Knolls South development. This wetland appears to contain seasonal standing water. This area contains common buckthorn (*Rhamnus cathartica*) and common reed (*Phragmites australis*).

Wetlands G and H are emergent wetlands with areas of open water. These wetlands are located in the western portion of the property and appear to be connected with a culvert under the existing gravel driveway. These wetlands contain mainly cattails (*Typha spp.*) and some areas of common reed (*Phragmites australis*).

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

Wetland Impact Review

The Plan indicates eight (8) areas of existing wetland on the development site (totaling 2.35-acre). A description of proposed wetland impacts on this parcel follows. The following table (Table 1) summarizes

the existing wetlands and the proposed wetland impacts. This information is unchanged from the previous plan:

Table 1. Proposed Wetland Impacts

| Wetland Area | Wetland Area (square feet) | Wetland Area (acre) | City Regulated? | Impact Area (square feet) | Impact Area (acre) | Impact Volume (cubic yards) |
|--------------|----------------------------|---------------------|-----------------|---------------------------|--------------------|-----------------------------|
| A | 12,060 | 0.28 | City/Essential | 2,122 | 0.05 | 69 |
| B | 8,403 | 0.19 | City/Essential | 408 | 0.01 | 30 |
| C | 27,184 | 0.62 | City/Essential | None | None | None |
| D | 6,559 | 0.15 | City/Essential | None | None | None |
| E | 3,477 | 0.08 | City/Essential | None | None | None |
| F | 1,326 | 0.03 | City/Essential | 1,326 | 0.03 | 58 |
| G | 39,612 | 0.91 | City/Essential | 144 | 0.003 | 7.5 |
| H | 3,705 | 0.09 | City/Essential | 828 | 0.02 | 40 |
| TOTAL | 102,326 | 2.35 | -- | 4,828 | 0.11 | 204.50 |

As shown in Table 1, the current Plan indicates a permanent wetland impact of 0.11-acre and approximately 205 cubic yards of associated fill. These impact quantities remain unchanged from the previous site plan submittal. The currently proposed wetland impacts do not appear to require wetland mitigation as the City’s threshold for wetland mitigation is 0.25-acre of wetland impact. The current proposed wetland total impact is estimated to be 0.11-acre.

In addition to the proposed wetland impacts, the Plan proposes disturbance to 0.46-acre (approximately 24%) of on-site 25-foot wetland buffer area. The following table summarizes the proposed wetland/watercourse setback impacts as listed on the Plan (i.e., for Wetlands A, C, G, and H):

Table 2. Proposed 25-Foot Wetland Buffer Impacts

| Wetland Buffer | Existing Wetland Buffer Area | | Impact Area | | Area Contained in Lots | |
|----------------|------------------------------|---------------------|---------------------|---------------------|------------------------|--------------|
| | Square Feet | Acre | Square Feet | Acre | Square Feet | Acre |
| A | 11,776 | 0.270 | 6,900 | 0.158 | 735 | 0.017 |
| B | 7,865 | 0.181 | N/A | N/A | N/A | N/A |
| C | 21,762 | 0.500 | 6,765 | 0.155 | N/A | N/A |
| D | 12,411 | 0.285 | N/A | N/A | 1,764 | 0.040 |
| E | 8,071 | 0.185 | N/A | N/A | 5,749 | 0.132 |
| F | Not Provided | Not Provided | Not Provided | Not Provided | N/A | N/A |
| G | 14,810 | 0.340 | 3,133 | 0.072 | N/A | N/A |
| H | 8,188 | 0.188 | 3,162 | 0.073 | 317 | 0.007 |
| TOTAL | 84,883 | 1.95 | 19,960 | 0.458 | 8,565 | 0.197 |

It should be noted that the impacts to the 25-foot setback of Wetland F has been omitted from the table and should be added to the Plan (*Demo and Wetland Plan*; Sheet 6) and the table. There are a few other

inconsistencies with regard to the information included on Sheet S6 (*Demo and Wetland Plan*). Please review and revise the following items on subsequent site plan submittals:

- The note/leader indicating setback impact to Wetland D incorrectly reads “encroachment on 25’ setback for Wetland C, 1,764 sq. ft.”;
- The note/leader indicating setback impact to Wetland A reads “encroachment on 25’ setback for Wetland A, 7,635 sq. ft.”. This impact area is not consistent with the table on Sheet S6. The Table indicates 6,900 sq. ft. of impact.

The *Temporary and Permanent Impacts to 25’ Wetland Setback* table on Sheet S6 indicates that the Wetland E 25-foot setback contained on Lots 3, 4, 5, and 6 will be deed restricted and signage will be placed every 50’ on-center along the wetland buffer boundary. This table should be updated to include similar information for Lot 12 (Wetland D) and Lot 13 (Wetland A). ECT recommends that in addition to the proposed signage, any proposed conservation easement areas should be demarcated on-site through other physical means such as boulders or decorative fencing along the setback boundaries.

Permits & Regulatory Status

Any proposed use of on-site wetlands A through H will require a City of Novi *Wetland Use Permit* as well as an *Authorization to Encroach the 25-Foot Natural Features Setback* for any proposed impacts to the 25-foot wetland buffers. The on-site wetlands are 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.). It is the Applicant’s responsibility to contact the Michigan Department of Environment, Great Lakes, and Energy (EGLE, formerly MDEQ) in order to determine if the proposed development would require a wetland use permit. The on-site wetlands could be regulated by EGLE as some appear to be located within 500-feet of a pond, stream, drain or lake. Final determination of regulatory status should be made by EGLE. A permit from this agency may be required for any direct impacts, or potentially for storm water discharge from the proposed detention basin to existing wetlands.

Wetland Comments

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

1. Impacts to the 25-foot setback of Wetland F has been omitted from the Plan (*Demo and Wetland Plan*; Sheet 6) and the table. This information shall be added to the Plan.
2. There are a few inconsistencies with regard to the information included on Sheet S6 (*Demo and Wetland Plan*). Please review and revise the following items on subsequent site plan submittals:
 - The note/leader indicating setback impact to Wetland D incorrectly reads “encroachment on 25’ setback for Wetland C, 1,764 sq. ft.”;
 - The note/leader indicating setback impact to Wetland A reads “encroachment on 25’ setback for Wetland A, 7,635 sq. ft.”. This impact area is not consistent with the table on Sheet S6. The Table indicates 6,900 sq. ft. of impact.
3. The *Temporary and Permanent Impacts to 25’ Wetland Setback* table on Sheet S6 indicates that the Wetland E 25-foot setback contained on Lots 3, 4, 5, and 6 will be deed restricted and signage will be placed every 50’ on-center along the wetland buffer boundary. This table should be updated to include similar information for Lot 12 (Wetland D) and Lot 13 (Wetland A). ECT recommends

that in addition to the proposed signage, any proposed conservation easement areas should be demarcated on-site through other physical means such as boulders or decorative fencing along the setback boundaries.

4. It is the Applicant's responsibility to contact EGLE in order to determine if the proposed development would require a wetland use permit from EGLE. The on-site wetlands could be regulated by the Michigan Department of Environment, Great Lakes, and Energy (EGLE) as some appear to be located within 500-feet of a stream or drain. Final determination of regulatory status should be made by EGLE. A permit from this agency may be required for any direct impacts, or potentially for storm water discharge from the proposed detention basins to existing wetlands. A City of Novi Wetland Permit shall not be issued until this information is received from the Applicant.
5. The *Landscape Plan* (Sheet L-3) includes a detail for the proposed nature area-no mow area signage (i.e., for the 25-foot wetland setback areas). It is recommended that the applicant incorporate the following language on the easement signage:

Wetland & Watercourse Setback/Conservation Area
No construction or placement of structures allowed. No mowing, cutting, filling, application of chemicals, dumping, planting, or dredging allowed without written permission of the City of Novi. Contact City of Novi Community Development 248-347-0415

Recommendation

ECT currently recommends approval of the Revised Preliminary Site Plan (PSP20-0015) for Wetlands. The Applicant should address the items noted in the *Wetland Comments* Section of this letter prior to receiving Wetland approval of the Final Site Plan. The applicant shall review and revise the Plan for consistency and clarity.

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

Respectfully submitted,

ENVIRONMENTAL CONSULTING & TECHNOLOGY, INC.



Pete Hill, P.E.
Senior Associate Engineer

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

Attachments: Figure 1 – City of Novi Regulated Wetland and Woodland Map
Site Photos

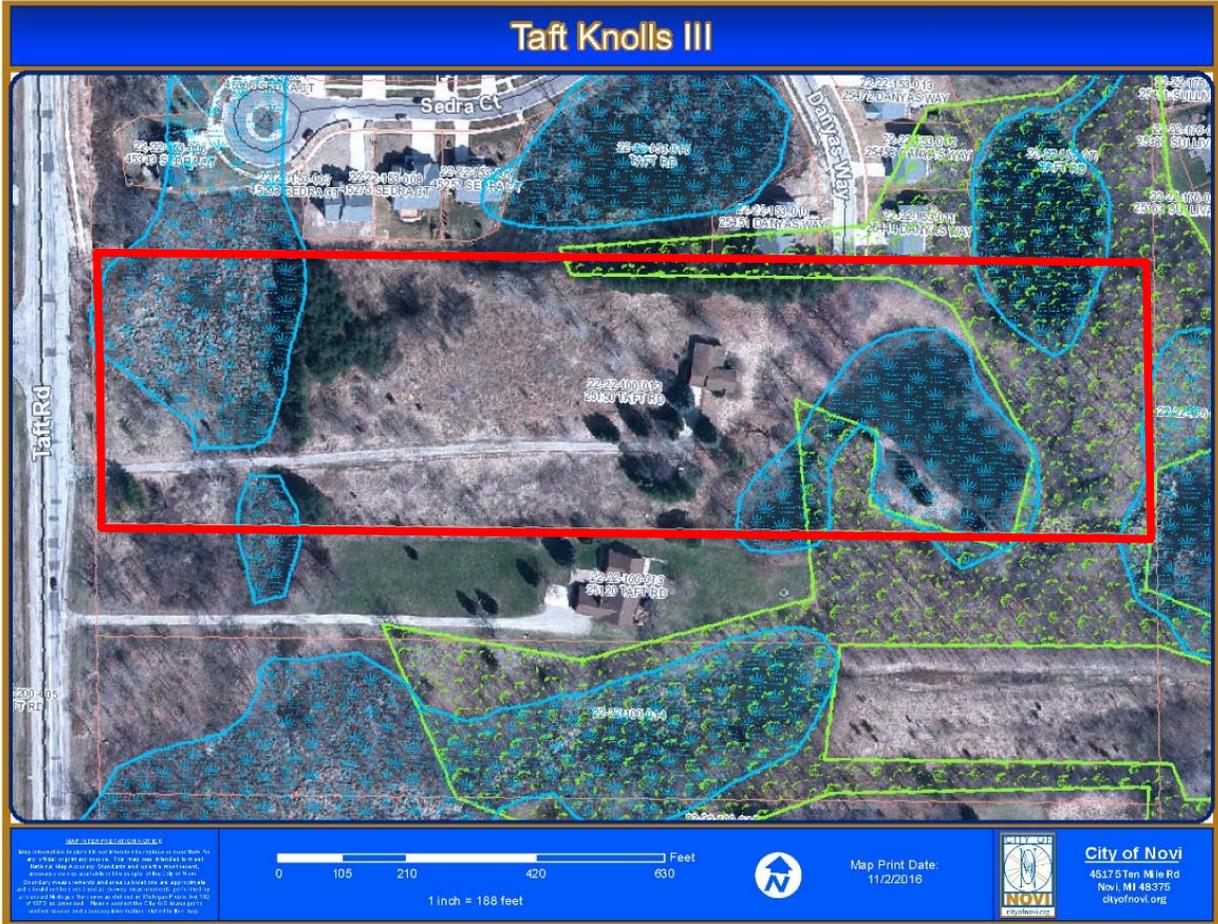


Figure 1. City of Novi Regulated Wetland & Woodland Map (approximate project boundary shown in red). Regulated Woodland areas are shown in green and Regulated Wetland areas are shown in blue.

Site Photos



Photo 1. Looking northwest towards Wetland A (ECT, July 9, 2019).



Photo 2. Looking south at Wetland B (ECT, July 9, 2019).



Photo 3. Looking west at Wetland C (ECT, July 9, 2019).



Photo 4. Looking southwest at Wetland D (ECT, July 9, 2019).



Photo 5. Looking northwest at Wetland F (ECT, July 9, 2019).



Photo 6. Looking north at Wetland G on the western portion of the site (ECT, July 9, 2019).



Photo 7. Looking south at Wetland H on the western portion of the site (ECT, July 9, 2019).

WOODLANDS REVIEW



ECT Project No.: 190462-0600

March 5, 2020

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

Re: Taft Knolls III (JP19-0034)
Woodland Review of the Revised Preliminary Site Plan (PSP20-0015)

Dear Ms. McBeth:

Environmental Consulting & Technology, Inc. (ECT) has reviewed the Revised Preliminary Site Plan for the proposed Taft Knolls III project prepared by Powell Engineering & Associates, LLC dated February 10, 2020 and stamped "Received" by the City of Novi on February 12, 2020 (Plan). The Plan was reviewed for conformance with the City of Novi Woodland Protection Ordinance Chapter 37. ECT conducted a woodland evaluation for the property on July 9, 2019.

ECT currently recommends approval of the Revised Preliminary Plan (PSP20-0015) for Woodlands. We continue to suggest that the applicant attempt to reduce the overall proposed impacts to existing woodlands. The applicant shall address the items noted in the *Woodland Comments* Section of this letter prior to receiving Woodland approval of the Final Site Plan.

The following woodland related items are required for this project:

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

The proposed project is located east off of Taft Road, between Ten Mile and Eleven Mile Roads, and just south of the Taft Knolls (Phase 2) project (Section 22). The property consists of approximately 9.6 acres (Sidwell No. 22-22-100-012). An existing home is located on the parcel. The parcel contains a mix of land cover/land types including wetlands, open field and relatively sparse to moderate tree cover in several areas of the site including around some areas of the on-site wetlands. The highest quality woodland areas are located in the eastern portion of the subject property.

An on-site wetland delineation and tree survey have been completed for the site. The project includes the construction of thirteen (13) residential units (reduced from 14 on previous plans), access drive (Danyas Way) to be constructed as an extension from the existing Danyas Way to the north, emergency access drive to Taft Road on the west side of the project, associated utilities and storm water detention basin with forebay. Based on our review of the Plan, Novi aerial photos, Novi GIS, the City of Novi Official Wetlands and Woodlands Maps (see Figure 1), and our on-site woodland evaluation, the proposed project site contains both Regulated Wetlands and Regulated Woodlands. The Regulated Woodland Boundary as shown on the City of Novi Regulated Woodland Map is indicated on the *Landscape Plan*.

2200 Commonwealth
Blvd., Suite 300
Ann Arbor, MI
48105

(734)
769-3004

FAX (734)
769-3164

The purpose of the Woodlands Protection Ordinance is to:

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

What follows is a summary of our findings regarding on-site woodlands associated with the proposed project.

On-Site Woodland Evaluation

ECT has reviewed the City of Novi Official Woodlands Map and completed onsite Woodland Evaluations on July 9, 2019 and November 20, 2020. ECT's in-office review of available materials included the City of Novi Regulated Woodland map and other available mapping. The subject property does include areas indicated as City-regulated woodland on the official City of Novi Regulated Wetland and Watercourse Map (see Figure 1).

An existing tree survey has been completed for the site by Allen Design. The Plan includes a surveyed tree list (*Landscape Plan*, Sheet L-4) that identifies tree tag numbers, diameter-at-breast-height (DBH), common/botanical name, and condition of all surveyed trees. The same sheet includes a *Woodland Summary* that lists the total woodland replacements credits that are required for the proposed tree removals as well as the requested credits for the preservation of non-Woodland trees.

The surveyed trees have been marked with aluminum (foil-type) tree tags allowing ECT to compare the tree diameters reported on the Plan to the existing tree diameters in the field. In general, ECT found that the Plan appears to accurately depict the location, species composition and the size of the existing trees. ECT took a sample of diameter-at-breast-height (DBH) measurements and found that the data provided on the Plan was consistent with the field measurements.

At the time of our past on-site woodland evaluations there were tree tags missing from some of the on-site trees and most of these trees without tags did not appear to be included on the existing tree survey. These trees were mainly located on the eastern portion of the site (i.e. east of the drain that connects Wetland "A" and Wetland "B"). The site's stormwater detention basin is proposed within this area. These trees are located in an area that is designated as Regulated Woodland on the City's map. As requested in our previous plan review letter, the applicant has revisited the site in order to ensure that all trees of regulation size (i.e., 8-inches or greater DBH) have been tagged, surveyed and indicated on the Plan. The previous plan noted that a total of 350 total trees were surveyed on-site. The current Plan includes a total of 444 surveyed trees.

Common tree species found in the woodland areas include American elm (*Ulmus americana*), Austrian pine (*Pinus nigra*), basswood (*Tilia Americana*), beech (*Fagus grandifolia*), black cherry (*Prunus serotina*), black willow (*Salix nigra*), blue spruce (*Picea pungens*), bur oak (*Quercus macrocarpa*), cottonwood (*Populus deltoides*), Scotch

pine (*Pinus sylvestris*), sugar maple (*Acer saccharum*), white cedar (*Thuja occidentalis*), white pine (*Pinus strobus*), and several other species.

As noted, the highest quality woodlands on site are found in the eastern section of the subject site (in the areas surrounding Wetlands A, B, and C). These areas are dominated by basswood (*Tilia americana*), sugar maple (*Acer saccharum*) and black cherry trees (*Prunus serotina*). There are two (2) main areas of previously planted coniferous trees (Scotch pine) are found on the site. One area is located along the southern edge of Wetland E (i.e., along the northern edge of the proposed project). The other area is located near the area of proposed Lots 7.

In terms of habitat quality and diversity of tree species, the overall subject site consists of fair to good quality trees. In terms of a scenic asset, wildlife habitat, windblock, noise buffer or other environmental asset, the forested area located on the subject site is considered to be of fair quality. The central and western sections of the site are not mapped as Regulated Woodland on the City of Novi's Regulated Woodland Map. Based on Section 37-29 (*Application Review Standards*) of the City of Novi Woodland Ordinance, the following standards shall govern the grant or denial of an application for a use permit required by this article:

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

In addition:

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

The City of Novi regulates all trees 8-inches diameter-at-breast-height (DBH) and greater that are located within the areas delineated as regulated woodlands on the City-Regulated Woodlands Map. The City also regulates any individual tree greater than or equal to 36-inches DBH, irrespective of whether such tree is within a regulated woodland. Proposed woodland impacts will require a Woodland Permit and the regulated trees shall be relocated or replaced by the permit grantee.

Proposed Woodland Impacts and Replacements

A *Woodland Summary* Table has been included on Sheet L-4 (*Landscape Plan*). The Applicant has noted the following woodland impacts associated with the Plan:

- Total Trees Surveyed: 444
- Regulated Trees Removed: 106 (increased from 85)
- Exempt Trees Removed: 56 (decreased from 61)
- Total Trees Preserved: 230 (51.8% of surveyed trees)

- Stems to be Removed 8" to 11": 41 x 1 replacement (Requiring 41 Replacements)
- Stems to be Removed 11" to 20": 45 x 2 replacements (Requiring 90 Replacements)
- Stems to be Removed 20" to 30": 12 x 3 replacements (Requiring 36 Replacements)
- Stems to be Removed 30"+: 8 x 4 replacements (Requiring 32 Replacements)
- Multi-Stemmed Trees: 15 trees (Requires 48 Replacements)

- Sub-Total Replacement Trees Required: 247 (up from 141)
- Credit for Non-Woodland Tree Preservation: 120 (preservation of 46 Non-Woodland trees)
- Total Woodland Replacements Required: 127 (up from 54)

The trees that were previously not surveyed at the time of the previous site plan submittal and review have now been included on the Plan. As a result, the removal and replacement requirements have increased. ECT encourages the Applicant to minimize impacts to on-site Woodlands to the greatest extent practicable. It is our opinion that the current site layout is not consistent with upholding the intent and goals of the City’s Woodland Ordinance. Over eighty (80) good quality, mature trees are proposed to be removed for the construction of the stormwater detention basin in the eastern section of the site. The applicant should explore other stormwater detention layouts or options in an attempt to preserve additional trees.

The applicant is proposing to preserve forty-six (46) non-woodland trees for a total of one hundred twenty (120) Woodland Replacement Credits. The City’s *Landscape Design Manual* (Section 9.b.f. Plant Material Requirements) notes the following regarding preservation of (non-woodland) trees for Woodland Replacement Credit:

Landscape credit for preserved canopy trees, which do not fall within a regulated Wetland or Woodland, may be used to fulfill woodland replacement credits that may be required. These replacements shall be at the following rate:

Table 7.b.(1)(f): Landscape Tree Credit Chart

| Diameter of Trunk of Preserved Tree* | = Number of Tree Credits |
|--------------------------------------|--------------------------|
| 36” or greater caliper | 7 trees |
| >29 to 36” caliper | 6 trees |
| >23 to 29” caliper | 5 trees |
| >17 to 23” caliper | 4 trees |
| >12 to 17” caliper | 3 trees |
| >7 to 12” caliper | 2 trees |
| 3 to 7” caliper | 1 tree |

* The tree trunk diameter measurement shall be rounded off to the height of four and one-half (4.5) feet above the natural grade. (Diameter at Breast Height, D.B.H.)

Based on our review of the *Topographic Survey* (Sheet C-4) the (46) trees proposed for preservation are located outside of the areas designated as Regulated Woodland on the City’s Regulated Woodland Map and meet the requirement for credit.

The Plan notes that all 127 required Woodland Replacement trees will be provided for on-site. The following on-site Woodland Replacement trees are proposed (as indicated on Sheet L-3, *Landscape Plan*):

- 14 – red maple (*Acer rubrum*);
- 19 – sugar maple (*Acer saccharum*);
- 14 – tulip tree (*Liriodendron tulipifera*);

- 19 – burr oak (*Quercus macrocarpa*);
- 15 – red oak (*Quercus rubra*);
- 10 – northern hackberry (*Celtis occidentalis*);
- 12 – blackgum (*Nyssa sylvatica*);
- 8 – American basswood (*Tilia americana*);
- 7 – eastern white pine (*Pinus strobus*);
- 9 – pin oak (*Quercus palustris*).

It should be noted that pin oak (*Quercus palustris*) is not a species that is approved for use as Woodland Replacement Credit on the City's *Woodland Tree Replacement Chart*. If the applicant would like to continue to plant oak trees, the following oak species are acceptable as Woodland Replacement Trees:

- white oak (*Quercus alba*);
- swamp white oak (*Quercus bicolor*);
- scarlet oak (*Quercus coccinea*);
- shingle oak (*Quercus imbricaria*);
- burr oak (*Quercus macrocarpa*);
- chinkapin oak (*Quercus muehlenbergii*);
- red oak (*Quercus rubra*); and
- black oak (*Quercus velutina*).

In addition, approved evergreen tree species shall be 6-feet in height (minimum) and are counted at a 1.5-to-1 ratio (1.5 evergreen trees planted = 1 Woodland Replacement Credit). Therefore, the seven (7) white pine trees are equivalent to 4.6 Woodland Replacement Credits.

Woodland Comments

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

1. ECT encourages the Applicant to minimize impacts to on-site Woodlands to the greatest extent practicable. It is our opinion that the current site layout is not consistent with upholding the intent and goals of the City's Woodland Ordinance. It is the intent of the woodland protection chapter to protect the integrity of woodland areas as a whole, in recognition that woodlands serve as part of an ecosystem, and to place priority on the preservation of woodlands, trees, similar woody vegetation, and related natural resources over development when there are no location alternatives.

It appears as if approximately 83 regulated trees are to be removed for the purpose of constructing the proposed stormwater forebay and detention basin. The applicant should explore other stormwater detention layouts or options in an attempt to preserve existing, regulated trees to the greatest extent possible. ECT suggests that the applicant provide alternative analyses in an attempt to decrease the proposed impacts to regulated trees.

2. A Woodland Permit from the City of Novi would be required for proposed impacts to any trees 8-inch diameter-at-breast-height (DBH) or greater and located within an area designated as City Regulated Woodland, or any tree 36-inches DBH regardless of location on the site. Such trees shall be relocated or replaced by the permit grantee. All deciduous replacement trees shall be two and one-half (2 ½) inches caliper or greater and count at a 1-to-1 replacement ratio and all

coniferous replacement trees shall be six (6) feet in height (minimum) and count at a 1.5-to-1 replacement ratio. All Woodland Replacement trees shall be species that are listed on the City's Woodland Tree Replacement Chart (attached).

3. The existing tree numbers are difficult to read on the *Landscape Plans*. The legibility should be addressed on subsequent site plan submittals. In addition, the existing tree numbers do not appear to be consistent between the tree list and the plans. For example the trees west of proposed Lot 7 include numbers such as #15180, #15181, etc. These trees appear to be listed as #180, #181, etc. in the tree list. Tree numbers should be consistent in the tree list and on the
4. It should be noted that pin oak (*Quercus palustris*) is not a species that is approved for use as Woodland Replacement Credit on the City's *Woodland Tree Replacement Chart* (attached). The applicant shall revise the *Landscape Plan* as necessary.
5. In addition, approved evergreen tree species shall be 6-feet in height (minimum) and are counted at a 1.5-to-1 ratio (1.5 evergreen trees planted = 1 Woodland Replacement Credit). Therefore, the seven (7) white pine trees are equivalent to 4.6 Woodland Replacement Credits. Please review and revise the proposed plant schedule as necessary.
6. A Woodland Replacement Performance financial guarantee for the planting of replacement trees will be required. This financial guarantee will be based on the number of on-site woodland replacement trees (credits) being provided at a per tree value of \$400. Based on the current Plan, the Woodland Replacement Performance financial guarantee will be **\$50,800** (127 Woodland Replacements Required x \$400/Credit). The Woodland Replacement Performance Financial Guarantee amount will change if the proposed number of on-site Woodland Replacement Trees is revised.
7. The Applicant will be required to pay the City of Novi Tree Fund at a value of \$400/credit for any Woodland Replacement tree credits that cannot be placed on site.
8. Based on a successful inspection of the installed on-site Woodland Replacement trees, the Woodland Replacement Performance Guarantee shall be returned to the Applicant. A Woodland Maintenance and Guarantee bond equal to twenty-five percent (25%) of the value of the original Woodland Replacement material will then be kept for a period of 2-years after the successful inspection of the tree replacement installation. Based on the current Plan, the Woodland Maintenance Guarantee will be \$12,700 (127 Woodland Replacements Required x \$400/Credit x 0.25). The Woodland Maintenance Guarantee amount will change if the proposed number of on-site Woodland Replacement Trees is revised.
9. The Applicant shall provide preservation/conservation easements as directed by the City of Novi Community Development Department for any areas of woodland replacement trees. The applicant shall demonstrate that the all proposed woodland replacement trees and existing regulated woodland trees to remain will be guaranteed to be preserved as planted with a conservation easement or landscape easement to be granted to the city. This language shall be submitted to the City Attorney for review. The executed easement must be returned to the City Attorney within 60 days of the issuance of the City of Novi Woodland permit. Any associated easement boundaries shall be indicated on the Plan.

10. Replacement material should not be located 1) within 10' of built structures or the edges of utility easements and 2) over underground structures/utilities or within their associated easements. In addition, replacement tree spacing should follow the *Plant Material Spacing Relationship Chart for Landscape Purposes* found in the City of Novi *Landscape Design Manual*.

Recommendation

ECT currently recommends approval of the Revised Preliminary Plan (PSP20-0015) for Woodlands. We continue to suggest that the applicant attempt to reduce the overall proposed impacts to existing woodlands. The applicant shall address the items noted in the *Woodland Comments* Section of this letter prior to receiving Woodland approval of the Final Site Plan.

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

Respectfully submitted,

ENVIRONMENTAL CONSULTING & TECHNOLOGY, INC.



Pete Hill, P.E.
Senior Associate Engineer

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

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

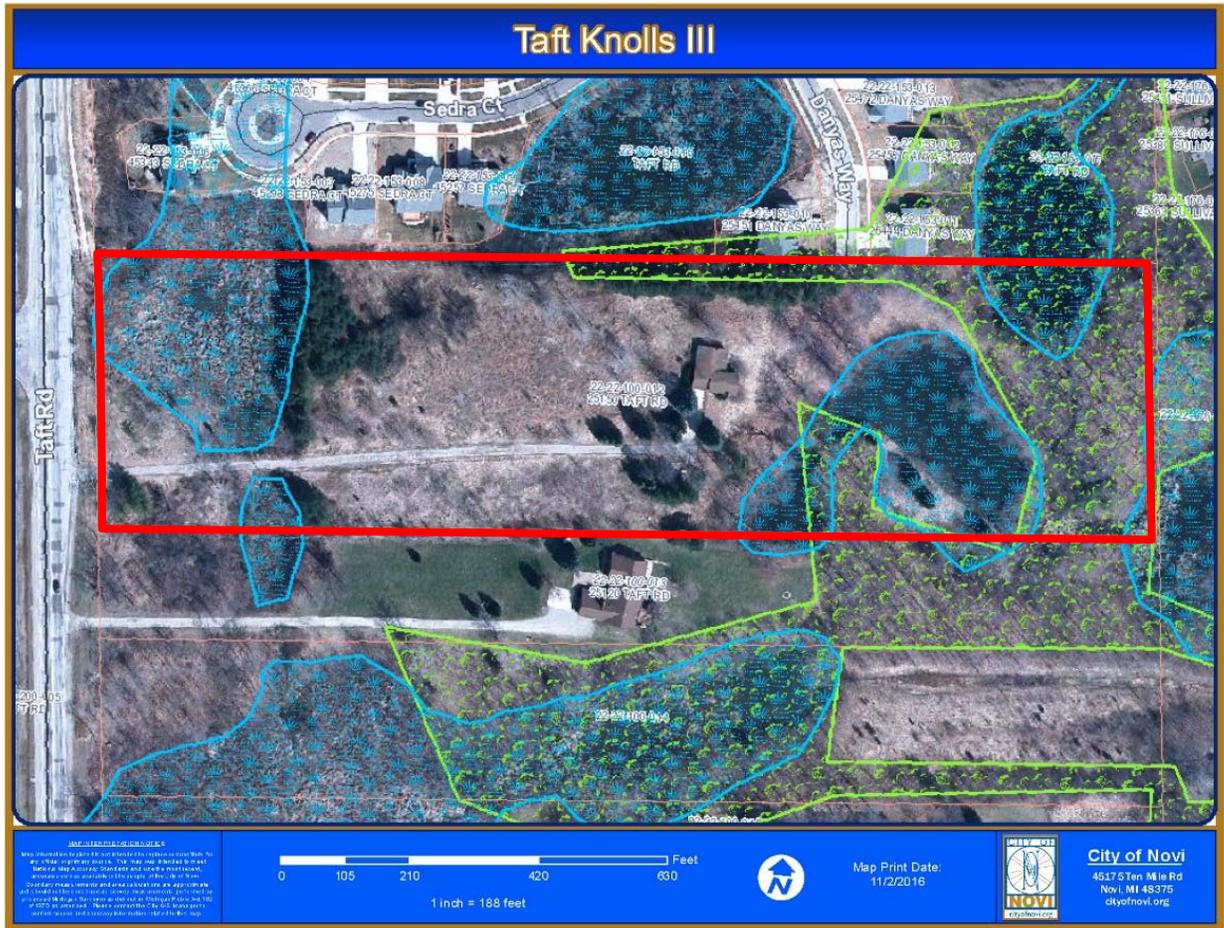


Figure 1. City of Novi Regulated Wetland & Woodland Map (approximate project boundary shown in red). Regulated Woodland areas are shown in green and Regulated Wetland areas are shown in blue.

Woodland Tree Replacement Chart

(from Chapter 37 Woodlands Protection) - Revised 5/7/2018
 (All canopy trees to be 2.5" cal or larger, evergreens as listed)

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

Site Photos



Photo 1. Looking west at area of planted conifers located on north edge of the property (ECT, May 2, 2017).



Photo 2. Higher quality woodland areas are located on the east side of the site; near Wetlands A, B, and C (ECT, July 9, 2019). This is near the area of the proposed detention basin.



Photo 3. The surveyed trees have been marked with aluminum (foil-type) tree tags allowing ECT to compare the tree diameters reported on the Plan to the existing tree diameters in the field (ECT, July 9, 2019).



Photo 4. Example of surveyed tree that had lost its foil tag.

TRAFFIC REVIEW



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

Project name:
 JSP19-0034 – Taft Knolls III 2019 Revised
 Preliminary Site Plan Traffic Review

From:
 AECOM

Date:
 April 24, 2020

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

CC:
 Lindsay Bell, Madeleine Kopko, Kate Richardson,
 Victor Boron

Memo

Subject: JSP19-0034 – Taft Knolls III 2019 Revised Preliminary Site Plan Traffic Review

The revised preliminary site plan was reviewed to the level of detail provided and AECOM recommends **approval with conditions, as indicated**, for the applicant to move forward with the condition that the comments provided below are adequately addressed to the satisfaction of the City.

GENERAL COMMENTS

1. The applicant, Trowbridge Land Development, is proposing a 13 unit residential development extending Danyas Way on the east side of Taft Rd between 10 Mile Rd and 11 Mile Rd.
2. Danyas Way is under the jurisdiction of the City of Novi.
3. The parcels are currently zoned R-4, One-Family Residential.
4. The following traffic-related waivers/variances will be required:
 - a. A variance for sidewalk offset in the wetlands area.
 - b. A variance for the eyebrow design radii not meeting City standards.

TRAFFIC IMPACTS

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

ITE Code: 210 – Single-Family Detached Housing
 Development-specific Quantity: 13 Dwelling Units
 Zoning Change: N/A

| Trip Generation Summary | | | | |
|---------------------------|-----------------|--------------------------------|------------------------|------------------|
| | Estimated Trips | Estimated Peak-Direction Trips | City of Novi Threshold | Above Threshold? |
| AM Peak-Hour Trips | 14 | 11 | 100 | N |

| | | | | |
|--------------------------------------|-----|-----|-----|---|
| PM Peak-Hour Trips | 14 | 9 | 100 | N |
| Daily (One-Directional) Trips | 159 | N/A | 750 | N |

2. The number of trips does not exceed the City's threshold of more than 750 trips per day and 100 trips per either the AM or PM peak hour.

| Trip Impact Study Recommendation | |
|---|----------------------|
| Type of Study: | Justification |
| None | N/A |

EXTERNAL SITE ACCESS AND OPERATIONS

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

1. The applicant has not proposed any modifications to Taft Road with the exception of an emergency access road between Taft Road and Danyas Way.
 - a. The applicant should provide a sign at the development side of the drive or provide dimensioning indicating the entrance is less than 100 feet from the gate. Refer to Figure VIII-K of the City's Code of Ordinances for details.
 - b. The emergency access drive is indicated to be paved per cross section on Sheet S2 and note on Sheet S1.

INTERNAL SITE OPERATIONS

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

1. General Traffic Flow
 - a. The applicant has indicated a road width of 28' for the proposed extension of Danyas Way which is in compliance with City standards.
 - b. The applicant has indicated that the stub of Danyas Way cannot extend to the limit of the property line due to grading issues and needing an easement from the neighbor's property. The applicant is proposing the right-of-way have an easement all the way to the property line.
 - c. The applicant has indicated an eyebrow near the end of the street and a dead end with no turnaround.
 - i. The applicant has included radii dimensions of the eyebrow which do not meet Figure VIII-G. The applicant indicated they will be requesting a variance to prevent further filling or encroachment on wetlands.
 - ii. As the eyebrow is intended to serve the purpose of the turnaround, the applicant should provide a more detailed turning movement diagram to show how the vehicles expected to use the facility can utilize it to turn around (i.e. delivery trucks, fire trucks, passenger vehicles). A front wheel path has been provided, however the vehicle is not labeled.
 1. The applicant could consider removing the street stub and adjusting the eyebrow radii to conform with the requirements for a cul-de-sac.

2. Parking Facilities

- a. The applicant should provide information regarding the design of the units, so that it can be determined if there is sufficient parking at each dwelling unit or if additional spaces will be necessary. Refer to Section 5.2.12 of the City's Zoning Ordinance for more information.
- b. The applicant should indicate where parking will be allowed (if anywhere) on the roadways.
 - i. In the case that the eyebrow currently proposed is used as a vehicle turn-around, "No Parking" signage should be placed along it.

3. Sidewalk Requirements

- a. The applicant has proposed sidewalk along both sides of the roadway.
- b. The applicant should indicate sidewalk widths and distance from the proposed back of curb.
 - i. The sidewalk offset appears to be less than the required 15' along the wetlands area. The applicant may be required to seek a variance if this portion of sidewalk does not comply with the ordinance.

SIGNING AND STRIPING

- 1. All on-site signing and pavement markings shall be in compliance with the Michigan Manual on Uniform Traffic Control Devices (MMUTCD). The following is a discussion of the proposed signing and striping.
 - a. The applicant should provide a signing quantities table and additional details (quantity and proposed size) in future submittals.
 - b. The applicant should label the proposed sign locations on the site plan.
 - c. The applicant should include a proposed sign at the end of the stub per Figure VIII-I of the City's Code of Ordinances.
- 2. The applicant should indicate the proposed signing on site and provide notes and details related to the proposed signing.
 - a. Single signs with nominal dimensions of 12" x 18" or smaller in size shall be mounted on a galvanized 2 lb. U-channel post. Multiple signs and/or signs with nominal dimension greater than 12" x 18" shall be mounted on a galvanized 3 lb. or greater U-channel post as dictated by the weight of the proposed signs.
 - b. The applicant should indicate a bottom height of 7' from final grade for all signs installed.
 - c. The applicant should indicate that all signing shall be placed 2' from the face of the curb or edge of the nearest sidewalk to the near edge of the sign.
 - d. Traffic control signs shall use the FHWA Standard Alphabet series.
 - e. Traffic control signs shall have High Intensity Prismatic (HIP) sheeting to meet FHWA retroreflectivity requirements.

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

Sincerely,

AECOM


Patricia Thompson, EIT
Traffic Engineer


Paula K. Johnson, PE
Senior Traffic Engineer

FIRE REVIEW



February 28, 2020

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

CITY COUNCIL

Mayor
Bob Gatt

Mayor Pro Tem
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Andrew Mutch

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Erick W. Zinser

Assistant Chief of Police
Scott R. Baetens

Assistant Fire Chief
John B. Martin

RE: Taft Knolls III

PSP #20-0015

PSP #19-0159

JSP #19-34

PSP# 19-0114

PSP# 16-0171

Project Description:

Adding 14 single family homes to a subdivision off of Taft Rd.

Comments:

- All fire hydrants **MUST** be installed and operational prior to any combustible material is brought on site. **IFC 2015 3312.1**
- **MUST** keep fire hydrants accessible during construction phase.
- **Corrected on 11/4/19** - MUST have either a paved secondary access road or grass pavers can be use but **MUST** show edge of access road.
- **Corrected on 11/4/19** - Secondary access road **CANNOT** be part of a driveway to a residence.

Recommendation:

APPROVED

Sincerely,

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

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

cc: file

cityofnovi.org

APPLICANT RESPONSE LETTER



**Powell
Engineering
& Associates, LLC**

4700 Cornerstone Drive
White Lake, MI 48383
Phone: (248)714-9895
Fax: (248)694-9222
Email: info@powelleng.net

June 4, 2020

Ms. Lindsay Bell, Senior Planner
Ms. Barb Mcbeth, City Planner
City of Novi Engineering Department
45125 W. Ten Mile Road
Novi, MI 48375

RE: Proposed Novi Taft Knolls III – Planner 4th review response letter
PSP #19-34; PE Job #16-472

Dear Ms. Lindsay Bell:

We have received final site plan review for our engineered Site Plans for the above referenced job and have the following responses to address all the comments on each review letter as follows:

PLAN REVIEW CENTER REPORT (dated March 16, 2020)

1. Modification of Existing Conservation Easement – See Attached Exhibit A Easement Overlay Plan
 - a. We are requesting modification to the existing conservation easement for the following reasons:
 - i. City requirements requires a 20' minimum width emergency ingress egress to be provided with all cul-de-sac designs so there are multiple ways to access in case of an emergency. We are providing additional conservation easements over the property to mitigate the requested widened access.
 1. Previous conservation area 64,148 sq.ft., proposed new conservation area 202,797 sq.ft. (see attached Easement overlay plan)
 - ii. The current easement is 12' wide and does not continue all of the way through where the current single home drive is located. We are requesting the modification of the easement to be 25' wide for a 20' emergency access as required.
 - iii. No modifications are proposed to be made to the existing drainage easement area in the rear of the site.
 - b. See note a above.
 - c. We will be requesting a variance to prevent further filling or encroachment on wetlands.

2. Wetland Buffers:

We proposed signage every 50' on the plan as recommended by ECT, City of Novi wetland consultant's letter. The owner will add additional buffers of decorative fencing and/or boulders along with signs for more of an esthetically pleasing views for future homeowners, but did not want to commit to exact location or types on site plan, therefore, the required minimum is shown with the intent of going beyond this as part of construction.

3. Road Design

- a. The radius is smaller to preserve the existing wetlands and prevent additional filling and/or disruption of said wetlands. We did increase the radius of the pavement to meet the requirements of the Road Commission and show a turning radius on the plan showing that a garbage truck and a fire engine can easily turn around using only the proposed cul-de-sac. Furthermore, this cul-de-sac also includes a stub road and an paved emergency access road to provide even more ability to turn around. We are requesting a waiver from City Ordinance Figure VIII-G for the reasons stated above which mitigates the concerns.
- b. As stated above, cul-de-sac was made bigger and 2 optional turnarounds as the stub and access drive provided as well on the revised plans.
- c. We placed the sidewalk closer to the edge of pavement in the cul-de-sac where vehicles would be going slower than the 25 mph speed limit. We did this to limit disruption and preserve the natural features and wetland in this area. We are seeking a variance from the standard requirement of 5' for this purpose.

ENGINEERING PLAN REVIEW REPORT (dated April 23, 2020)

All additional engineering details and construction requirements will be made on the final site plans and will meet the requirements of the City Engineer.

Sincerely,

A handwritten signature in black ink, appearing to read 'Michelle C. Spencer', written over a light blue rectangular background.

Michelle C. Spencer
Project Engineer

File

Planner Response Letter

June 4, 2020

Page 3 of 3



**Powell
Engineering
& Associates, LLC**

4700 Cornerstone Drive
White Lake, MI 48383
Phone: (248)714-9895
Fax: (248)694-9222
Email: info@powelleng.net

June 4, 2020

Ms. Lindsay Bell, Senior Planner
Ms. Barb Mcbeth, City Planner
City of Novi Engineering Department
45125 W. Ten Mile Road
Novi, MI 48375

RE: Taft Knolls III – Waiver and Modification requests PSP #19-34; PE Job #16-472

Dear Ms. Lindsay Bell:

Requesting for the following waivers or modifications as part of site plan approval are as follows:

- 1 Request for modification of existing conservation easement to allow for the emergency access drive of 25' through it – mitigation provides an additional 3+ acres of conservation easement area granted to the City of Novi.
- 2 Request for variance of City of Novi Ordinance Figure VIII-G for the granting of the smaller cul-de-sac radius to prevent encroachment and filling of natural resources and wetland. – mitigations for this variance request are:
 - a. Pavement meets necessary diameter for turn-a-round of fire truck and garbage truck and turning radius' have been shown on plans.
 - b. A stub road and emergency access drive have been provided which give additional ability to turn around beyond even the cul-de-sac.
- 3 Request for variance of sidewalk closer than 5' to edge of road ONLY in cul-de-sac to prevent encroachment and filling in natural resources and wetland. This variance is only requested in a very small area within the cul-de-sac area where car speed is limited.
- 4 Request for variance of 25' wetland setback – no lot will extend into any wetland at any location, however, we are requesting a variance to allow the 25' wetland setback to extend into lots 3, 4, 5, 6, 12 and 13 – mitigation for this item are:
 - a. A combination of signs, boulder, decorative fences to mark the deed restricted area to prevent disruption of any kind to this 25' setback area.
 - b. Additional conservation easement provided over a portion of the site of 3+ acres.
 - c.
- 5 Landscape waiver – lack of berm at the road. We are requesting this waiver for 2 reasons
 - a. If the berm were put in it would require filling into an existing wetland along Taft Road
 - b. If the berm were put in it would require cutting down of trees which are being preserved because no proposed development is being put within more than 100' from the existing Taft Road right of way.

This waiver is requested to preserve wetland and natural features.

- 6 Landscape waiver – a landscape waiver is requested for 4 spruce /canopy trees and 7 subcanopy trees to prevent the planting of said trees in the wetland
This waiver is requested to preserve wetland and natural features.

- 7 Landscape waiver – a landscape waiver is requested to not be required to propose street trees along Taft Road because no proposed development is proposed along Taft and because the road frontage has a great deal of existing vegetation and wetland area which would be negatively impacted if required.
This waiver is requested to preserve wetland and natural features.

Sincerely,

A handwritten signature in black ink, appearing to read "Michelle C. Spencer", is written over a light blue rectangular background.

Michelle C. Spencer
Project Engineer

