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## MEMORANDUM

**To:** City of The Village of Douglas Planning Commission  
**Date:** November 28, 2022  
**From:** Tricia Anderson  
Andy Moore, AICP  
**RE:** **Forest Gate Townhome Condominium Project (Tabled on September 21, 2022)**

On September 21, 2022, the Planning Commission reviewed the preliminary condominium plan for the proposed 90-unit townhome condominium development on approximately 16 acres of land addressed as 485 Ferry Street and voted unanimously to table the item due to a significant number of deficiencies with the submittal. Mr. Barker has resubmitted a revised plan set, along with other supplemental documentation, for the Planning Commission's review at the December 8, 2022 meeting.

**Revised Submittal.** The applicant and his team attended a Site Plan Review Committee (SPRC) meeting on October 24, 2022. The updated plan set was revised in response to our comments and recommendations provided to the applicant at the SPRC meeting and includes the following documents for your reference and review:

- Full engineered plan set (including landscaping plan), by Driesenga & Associates, dated November 23, 2022
- 3-D Unit Floor Plan (sample only)
- Architectural Drawings of townhome buildings by TK Design & Associates (sample only)
- Traffic Impact Study by Progressive AE, dated November 2022
- Wetland Delineation Report by Barr Engineering Co., dated November 23, 2022
- Phase I Environmental Site Assessment, by Driesenga & Associates, dated July 7, 2022
- Soil Gas and Arsenic Sampling Analysis, by Lakeshore Environmental, dated November 21, 2022.
- Site Plan Review Committee Comments by Williams & Works, dated October 24, 2022, with applicant response dated November 23, 2022.
- Forest Gate Master Deed and Bylaws draft
- Site Plan Review Committee Comments by Prein & Newhof, dated October 24, 2022
- Staff Report by Williams & Works, dated September 14, 2022 from the September 21, 2022 Planning Commission meeting
- September 21, 2022 Planning Commission Meeting Minutes (draft)
- City of Douglas Design Guidelines for Multi-Family Development

**Background.** As you may recall, the subject site is generally located north and west of the intersection of Ferry Street and Blue Star Highway. It is a combination of portions of two

separate parcels (see Figure 1 – parcels A and B). The current zoning of the site is R-5, Multiple Family District, which allows multiple-family dwellings by right. The proposed development is comprised of 18 5-unit condominium townhomes. The applicant indicates a need for additional condominium housing with pricing under \$500,000 per unit. The City Master Plan indicates that the future land use designation for the property is Compact Residential.

This memorandum is intended to provide comments on the revised submittal and to identify areas where additional information is required or where compliance with applicable ordinances is needed.

**Procedure.** The Planning commission is tasked with reviewing the preliminary condominium plans and making a recommendation to the City Council for the approval/denial/tabling of the final condominium development per Section 16.24(5).

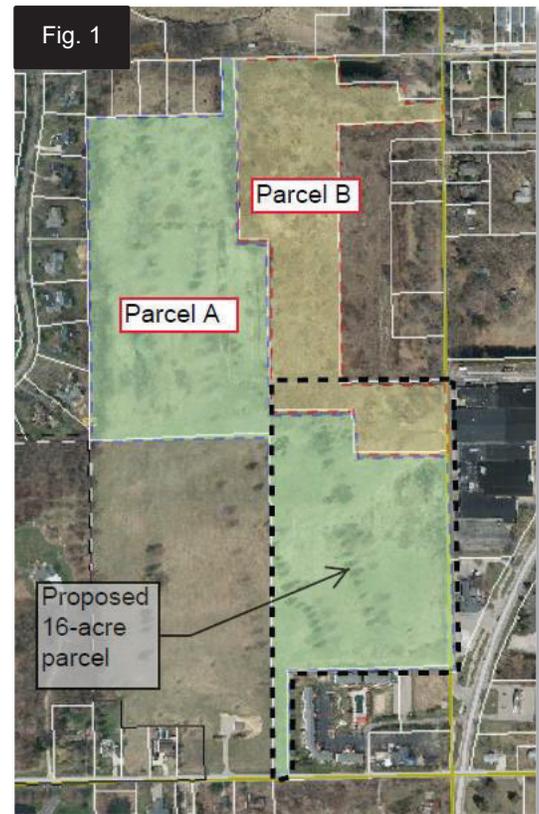
**Review.** The proposed condo development was reviewed pursuant to the following applicable articles of the Douglas Zoning Ordinance:

- Article 8, R-5, Multiple Family District
- Article 24, Site Plan Review, Section 24.02, Data Required
- Article 16, General Provisions, Section 16.24, Condominiums

Comments from the October 24, 2022 SPRC and the September 21, 2022 PC meetings are listed below, along with our updated remarks pertaining to the revised submittal:

**Article 24, Site Plan Review, Section 24.02, Data Required.** Section 16.24(4)(b)(i), Application for Condominium Approval, indicates that condominium site plans shall be submitted in accordance with Article 24.

- *24.02(3): Written statement regarding the proposed project’s impact on existing infrastructure (including traffic capacity of streets, schools, and existing utilities) and on the natural environment of the site and adjoining lands. If deemed necessary by the Zoning Administrator or Planning Commission, a phase 1 environmental review may be requested. As appropriate, the Zoning Administrator or Planning Commission may also request a phase 2 environmental review. Also see Section 24.02.21 of this Section.*



- ▷ SPRC | 9/21/22 PC Comment: The City Engineer made the recommendation that a traffic study is to be conducted.

**Remarks:** This has been completed. The traffic study executive summary has been included in your packet for review. The study does not recommend any improvements to offset the potential impacts of additional traffic on existing roads.

- ▷ SPRC | 9/21/22 PC Comment: The developer should work with the KLSWA and City Engineer to determine what impacts the project could have on existing sewer infrastructure and if capacity exists to serve the development or if improvements would be needed to accommodate the additional users.

**Remarks:** The revised site plan (Sheet C101) includes a statement that “the project will not result in any adverse impacts on public services, including police and fire protection, utilities, traffic, and roadways”. The applicant has not submitted a statement from the Kalamazoo Lake Sewer & Water Authority (KLSWA) pertaining to the impact on the capacity of existing and future water and sewer utilities. It is still our recommendation that the applicant work with KLSWA and the City Engineer to determine what (if any) impact the additional users would have on existing and future of water and sewer capacities.

- ▷ 9/21/22 PC Comment: The applicant should provide an environmental assessment, wetland delineation, and other studies pertaining to the impact of the migrating contamination plume originating from the former Haworth site.

**Remarks:** The applicant had previously provided a Phase I Environmental Assessment. The information contained within this report would suggest that soils and aquifers *may* contain a variety of point-source and non-point source contaminants as a result of solid waste dumping, migrating Haworth plume and former use of the property as an orchard. It is not intended to make any recommendations for remediation, but rather a synopsis of the history of the land and any evidence of recognizable environmental conditions.

The applicant has also provided a wetland delineation report and has updated the site plan to reflect the locations of the wetlands in relation to the proposed improvements on the site.

A study was also conducted to determine the levels of arsenic and volatile organic carbons (VOC) present in the soil. A report that contained the soil sampling data and an analysis of the data was provided. This report contained the following conclusions:

*“The analytical results for the soil gas samples, in comparison with VIAP values, indicate there is minimal risk of vapor intrusion at the property. Under these conditions, it does not appear that the future development of the Site will require a vapor mitigation system or vapor barriers. No additional investigation is recommended at this time.*”

*The analytical results for the soil samples, in comparison with GRCC values, indicate there is minimal risk of arsenic exposure at the property. No additional investigation is recommended at this time.”*

While the report concludes that a vapor mitigation system or vapor barrier for future residential uses will not be necessary, the City may wish to have an outside consultant review this information to substantiate this conclusion as a health/safety measure for future residents.

- *Section 24.02(12) A landscaping plan indicating the locations of planting and screening, fencing, and lighting in compliance with the requirements of Article 21. Also, proposed locations of common open spaces, if applicable.*

- ▷ SPRC | 9/21/22 PC Comment: A landscaping plan has not yet been provided. The plan should include an inventory of old-growth trees and a plan indicating which are planned to be retained and which are planned to be removed.

**Remarks:** The applicant has provided a detailed landscape plan which includes the location of existing trees that are planned to remain.

- *Section 24.02(9) A vicinity sketch showing the location of the site in relation to the surrounding street system and other land uses within three hundred (300) feet in every direction of the proposed use including land uses on the opposite side of any public street.*

- ▷ SPRC | 9/21/22 PC Comment: All existing land uses and zoning districts within 300 feet of the subject site must be shown on the plan, as well as adjacent driveways on Ferry Street

**Remarks:** The applicant has included Sheet C100, which provides an aerial view of the property and the adjacent zoning districts. This sheet also gives perspective to the streets onto which the project is proposed to have access from.

- *Section 24.02(8) Proposed streets, driveways, parking spaces and sidewalks, with indication of direction of travel, the inside radii of all curves including driveway curb returns, the width of streets, driveways and sidewalks, the total number of parking spaces, and dimensions of a typical individual parking space and associated aisles. This will also include a free and open general public pedestrian access in a form approved by the City Attorney to adjacent property or development unless waived by the Planning Commission as being unpractical or unreasonable due to topographical, natural barrier or similar type of reason.*

- ▷ SPRC | 9/21/22 PC Comments: Please provide parking calculations and include areas used for parking (garage, driveway, etc.) as well as guest parking.

**Remarks:** The applicant has indicated that four spaces will be provided per unit – two driveway spaces and two garage spaces. The applicant designates driveway spaces as guest spaces. The inclusion of the number of parking spaces per unit does not constitute the required *parking calculation* per Section 19.03(2). The applicant must address this to demonstrate that the minimum number of spaces are

provided for each unit, as well as for the minimum number of guest spaces that are required.

Additionally, the draft master deed describes “guest parking areas”, which have not been provided on the site plan. It also describes the prohibition of any recreational vehicles being parked outside of the garage. A condo owner could occupy the garage with a recreational vehicle, causing him or her to park only in the driveway. The applicant must ensure that the master deed contains language reflective of the limitations of the physical plan.

Regarding sidewalks, the plan does not provide sidewalk on the Ferry Street frontage. The City has an opportunity now to require sidewalks here, as future opportunities will be rare, unless funded by the City. The City Council has the authority to require sidewalks upon recommendation from the Planning Commission. This is strongly recommended.

- *Section 24.02(5) Project description, including the total number of structures, units, bedrooms, offices, square feet, total and usable floor area, carports or garages, employees by shift, amount of recreational and open space, type of recreation facilities to be provided, and pertinent information or information otherwise required by this Ordinance.*

- ▷ SPRC | 9/21/22 PC Comment: Please provide a project description that includes the total number of structures, units, bedrooms, and square feet as well as information related to the proposed garages (square footage, number of stalls, etc.).
- ▷ SPRC | 9/21/22 PC Comment: Amount and type of recreational and open space must be provided.
- ▷ SPRC | 9/21/22 PC Comment: Proposed project schedule required.

**Remarks:** The applicant has provided numbers on all the structures for ease of reference as well as floor plans and a sample architectural drawing. The dimensions of the proposed buildings were also added to the plan.

PROJECT SUMMARY		
<b>Fig. 3</b>		
<b>1. PARCEL INFORMATION</b>		
CURRENT ZONING:	R-5 MULTIPLE FAMILY RESIDENTIAL	
SITE ADDRESS:	485 FERRY ST, DOUGLAS, MI	
PARCEL NUMBER:	59-017-089-95	
<b>2. BUILDING</b>		
	REQUIRED	PROVIDED
MAX. BUILDING HEIGHT:	28 FT	22.75 FT
MAX. BUILDING LENGTH:	120 FT	120 FT
MIN. FLOOR AREA 5-UNIT:	1,100 SFT	1200 SFT
MAX. LOT COVERAGE:	35%	25.3%
<b>3. SETBACKS</b>		
	REQUIRED	PROVIDED
FRONT (MIN.)	25 FT	25 FT
SIDE (MIN.)	20 FT	20 FT
REAR (MIN.)	35 FT	51 FT
BLDG SEPARATION (MIN.)	30 FT	30 FT
<b>4. SUMMARY OF LAND / DENSITY</b>		
PARCEL AREA:	18.24 AC	
WETLAND AREA:	0.39 AC	
R.O.W. AREA:	0.81 AC	
NET BUILDABLE AREA:	15.04 AC	
MAXIMUM DENSITY:	6 UNITS PER BUILDABLE AREA	
PROPOSED UNITS:	90 UNITS	
PROPOSED DENSITY:	5.98 UNITS PER BUILDABLE ACRE	

Information has been provided on Sheet C101 and C102 pertaining to the acreage of open space, right of way, and wetland areas. Sheet C102 calls out 1.62 acres of recreational space, which the applicant has indicated will be used for passive recreation (walking path). It should be noted that the open space and stormwater

detention areas are not required to be subtracted from the gross parcel acreage to calculate net buildable area, per the definition of “buildable area”, and are thus included in the net buildable acreage of 15.04 acres.

- *Section 24.02(11) Proposed location of accessory structures, buildings and uses, including but not limited to all flagpoles, light poles, bulkheads, docks, storage sheds, carports, transformers, air conditioners, trash receptacles, and signs, and the method of screening where applicable.*
  - ▷ SPRC Comment: Show the location of HVAC structures.
  - ▷ SPRC | 9/21/22 PC Comment: Are any mail kiosks planned? If so, please show the location of the structure.
  - ▷ SPRC | 9/21/2022 PC Comment: How will trash be collected? Individual carts or a dumpster for the whole development? If a dumpster is proposed, a dumpster enclosure shall be required and shown on the plan.

**Remarks:** The HVAC pads have been provided on Sheet C103 for each unit. Regarding the mail kiosks, the City of Douglas does not have home mail delivery and residents must collect mail at the local Post Office. The applicant has indicated in the general notes that residents within the development will have individual trash carts as opposed to a dumpster.

#### **Article 16, Section 16.24, Condominiums**

- *Section 16.24(4)(b)(ii) Layout and dimensions of each condominium building, and the building envelope for such building. The condominium project plan for all types of condominium developments, whether containing detached or attached units, shall depict a building envelope around each building so as to demonstrate compliance with the minimum lot area requirement, the minimum lot width requirement, and the minimum building setback requirement of the zone district in which the building is located, and where applicable, the building placement and separation requirements of the zone district in which the building is located; provided, however, that if the condominium is a planned unit development under Article 27, the City Council, upon recommendation of the Planning Commission, may approve departures or modifications in the requirements stated in this subparagraph (ii), under the terms of Article 27 of this Ordinance and accordingly, the condominium project plan may depict any such requested departures or modifications.*
  - ▷ SPRC | 9/21/22 PC Comment: Layout and dimensions of each condo unit (referenced above – but required per this section as well).

**Remarks:** The applicant has provided a floor plan and has also added dimensions to the buildings on the site plan.

- *Section 16.24(4)(b)(iv) The use and occupancy restrictions and maintenance provisions for all general and limited common elements that will be included in the master deed including a copy of the draft master deed and by-laws.*

- ▷ SPRC | 9/21/22 PC Comment: Use and occupancy restrictions and maintenance provisions for all general and limited common elements that will be included in the master deed.

**Remarks:** The applicant has submitted a draft copy of the master deed, which must be reviewed by the City Attorney prior to recordation to ensure there are no conflicts with the master deed or bylaws and the zoning ordinance or approved condominium plan.

- *Section 16.24(4)(b)(v) A storm drainage and a storm water management plan, including all lines, swales, drains, basins, and other facilities and easements granted to the appropriate municipality for installation, repair, and maintenance of all drainage facilities.*

- ▷ SPRC | 9/21/22 PC Comment: Easements granted to City and or ACDC for repair and maintenance of utilities, including stormwater.

**Remarks:** The applicant has provided plans for grading and stormwater management that have been reviewed by the City Engineer, who has provided a detailed analysis of the proposed plan. The site plan must delineate any easements on the plan as it pertains to stormwater management facilities and provide a maintenance agreement for review by the City Attorney prior to recording.

#### **Article 8, R-5 Multiple Family District**

- *Section 8.02.A. Permitted Uses. Dwelling, Multi-Family (Subject to the City of Douglas Design Guidelines for Multi-Family Development)*

- ▷ 9/21/22 PC Comment: Multi-family dwellings are permitted by right in the R-5 district but are subject to the Design Guidelines (DG) for Multi-Family Development. While the proposed project appears to meet several of the guide's intent statements and guidelines, the building design and configuration with garages and large driveways facing the street does not seem consistent with these guidelines. This should be taken into consideration.

**Remarks:** The applicant has not addressed most of the elements required in the DG in the revised submittal. The most egregious aspect of the DG that has been overlooked is the design itself.

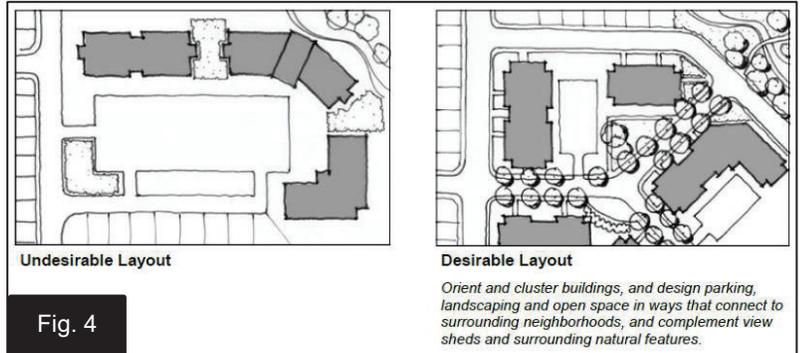
#### **Site Design**

**Fig. 4**

Site planning arranges building masses, open space, parking and circulation to create a site design that is orderly, visually pleasing, and that contributes positively to both the surrounding area and the development itself. Historic development patterns in Douglas have been designed to relate to the street, encouraging people to participate more fully in their community. These site design guidelines will promote neighborhood compatibility, retention of natural features, integration with the surrounding community, opportunity for social interaction, and a safe, comfortable, and interesting environment for residents.

The design/layout of buildings lacks the following:

- Courtyards and gathering spaces
- Clustering of buildings to avoid
- Orientation parallel to the public street (Ferry Street)
- Well-defined open-space edges
- Private open spaces for each unit at a minimum of 80 sq. ft.
- Common outdoor spaces providing at least 3 amenities, such as covered structures, play areas, and benches
- Recessed garages and enlarged entries
- Horizontal facades of greater than 30' broken into smaller units
- Reduction of building massing



The applicant has indicated that the design guidelines seem to apply more to multifamily rental housing, rather than owner-occupied housing, however, the zoning ordinance does not make this distinction.

- *Section 8.03.D The Distance between residential buildings shall be a minimum of thirty (30) feet unless waived by the planning commission as part of a PUD.*
- ▷ 9/21/22 PC Comment: The applicant must provide dimensional information including setbacks and separation distances between units.

**Remarks:** The revised plan provides setbacks and separation distances for all buildings with the exception of buildings 16, 17, and 18.

### Other Items

- **Access.** At the 10/24/22 SPRC meeting, there was discussion related to the potential for Ferry Street to be relocated to improve the intersection at Ferry Street and Blue Star Highway. There is not a definitive timeframe for this relocation, nor is there a confirmation that it will, in fact, be relocated, however, the applicant has modified spacing between the two driveways on Ferry, as well as the geometry of the southern driveway onto Ferry Street to be workable if it is relocated.

Future connections are proposed to both Wiley Road to the south and to West Center Drive to the north, as a stub street ends at the northern border of the proposed development. The applicant will be required to acquire additional land to the south in order to comply with public or private road standards for the proposed connection to Wiley Road. It is unknown whether the applicant has had discussions with the City Manager regarding the idea to purchase a portion of the City's property located at 6825 Wiley Road. The applicant is encouraged to begin this conversation to solidify the potential for the south access on Wiley Road.

**Final Thoughts.** In terms of site plan elements and requirements for condominiums, the revised site plan is much improved from the first submittal that the Planning Commission reviewed at the September 21, 2022 meeting. While the added site plan elements and information bring the project more into compliance with the zoning ordinance requirements, the glaring piece that hasn't been addressed is the layout and the lack of conformity with the Design Guidelines for Multifamily Development. While the document is titled "Guidelines", it would imply that they are optional, however, Section 8.02.A, Permitted Uses would indicate that it is a requirement to follow the guidelines.

In our view, allowing the applicant time to revise the design and bring the plan into compliance with the design guidelines before forwarding a favorable recommendation to the City Council would be in the best interest of the City in the long term.

**Recommendation.** At the December 8, 2022 meeting, the Planning Commission should carefully consider the facts presented in this memorandum, along with comments from the City Engineer, Fire Department, the public and the applicant. It is recommended that if the Planning Commission is leaning toward tabling this item, it should be based on specific findings that are entered into the record.

If the Planning Commission is inclined to offer a favorable recommendation to the City Council, it is recommended that it be subject to the following conditions, to be addressed prior to the City Council's review of the final condominium plan:

1. The applicant shall revise the layout to comply with the Design Guidelines for Multifamily Development.
2. The applicant shall address all items outlined in the City Engineer's memorandum dated 11/29/2022.
3. The applicant shall seek the plan review of the Fire Department and address any outstanding items related to fire and safety.
4. The applicant shall provide a statement from Kalamazoo Lake Sewer & Water Authority (KLSWA) pertaining to the impact on the capacity of existing and future water and sewer utilities.
5. The City may wish to conduct an independent soil gas and arsenic study to confirm the conclusion that a vapor barrier would not be needed, to protect the future residents of the condominium development.
6. The applicant shall provide stand-alone guest parking areas and provide calculations to demonstrate that minimum parking spaces are provided per Section 19.03(2).

7. The Planning Commission should consider recommending that the City Council require a sidewalk along the Ferry Street frontage during its review of the final condominium plan.
8. The draft master deed must be reviewed by the City Attorney prior to recordation to ensure there are no conflicts with the zoning ordinance or approved condominium plan, prior to the issuance of any building permits.
9. The applicant shall draft stormwater easement and maintenance agreement documents for review by the City Attorney, prior to recordation and prior to the issuance of any building permits.
10. The applicant shall work with the Manager's office to determine whether City-owned land at 6825 Wiley Road can be purchased or deeded to the applicant for public right of way to allow for the southern connection to Wiley Road.

Please feel free to reach out with any questions or comments.

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## MEMORANDUM

**To:** City of The Village of Douglas Planning Commission  
**Date:** September 14, 2022  
**From:** Tricia Anderson  
Andy Moore, AICP  
**RE:** **Forest Gate Townhome Condominium Project**

Mr. Dave Barker, on behalf of Taurus Exploration, Inc. has submitted an application for Site Plan Review of a 90-unit townhome condominium development on approximately 16 acres of land addressed as 485 Ferry Street. The purpose of this memorandum is to review the site plan pursuant to Article 24 of the Douglas Zoning Ordinance.

**Background.** The subject site is generally located north and west of the intersection of Ferry Street and Blue Star Highway. The current zoning of the site is R-5, Multiple Family District, which allows multiple-family dwellings by right. The proposed development is comprised of 18 5-unit condominium townhomes. The applicant indicates a need for additional condominium housing with pricing under \$500,000 per unit. The City Master Plan indicates that the future land use designation for the property is Compact Residential.



The proposed development provides two drive approaches onto Ferry Street, as well as future connections to both Wiley Road to the south and to West Center Drive to the north, and a stub street ends at the northern border.

It should be noted that the subject site is within close proximity to an EGLE-monitored contamination plume that originates from the former Haworth manufacturing site. Information provided by the City Attorney indicates that the plume is moving generally toward Kalamazoo Lake. In response to this known contamination, the applicant has conducted and submitted the results of a Phase 1 Environmental Assessment. The site also appears to contain some wetland areas on the eastern and southern portions of the property; however, we have not seen a wetland delineation to determine where they are located.

**Completeness of Submittal.** Section 24.02 contains a list of the data required to be submitted when applying for a site plan review. While the submittal generally contains enough information for our initial review and includes most of the materials outlined in Section 24.02, there are a number of additional items that should be included that will enable a thorough review of the project by the Planning Commission and will determine compliance with zoning ordinance requirements.

Specifically, the following items should be addressed. These comments are based on our review of the submittal package last revised 8/24/22:

- A net density calculation would place the proposed development at 6.3 units per buildable acre, where the maximum permitted density in this zoning district is 6 units per buildable acre or 12 units per gross acre, whichever is less.
- Sheet C-102, Groundwater Well Monitoring Results is not readable.
- A grading and utility plan has not been provided as it was in previous iterations of the plan set.
- A specific landscaping plan has not been submitted.
- Right of way information has not been provided for Ferry Street (dimensions, etc.)
- Adjacent driveways on the east side of Ferry Street should be provided.
- Dimensions and curve radii must be shown on the proposed drive approaches shown at Ferry Street.
- Existing land uses within 300 feet of subject site must be indicated on the plan.
- Sheet C-100 indicates that a wetland permit will be required by EGLE. A wetland delineation map should be provided, along with the proposed location and volume of fill.
- Lighting specifications and locations should be shown on the plan.
- Buildings should be numbered so that they are easily referenced.
- A phasing table should be provided (if phasing is proposed) that includes which buildings are proposed within each phase.
- Parking calculations must be provided and should also include any required guest parking spaces. Parking spaces should also be dimensioned to ensure conformance with zoning ordinance standards.
- Restrictions for on-street parking is included in the general notes. It is not clear what the rationale is for these restrictions.
- A utility plan must be submitted. Sheet C-100 provides the location of municipal water in Ferry Street, however, it is not known where the connection to sanitary sewer will occur, nor does it provide internal private connections. In addition, the City Engineer has provided a review letter dated September 1, 2022, which includes several potential revisions, and additional information that should be submitted prior to a Planning Commission decision on the project.
- Any proposed mail kiosk structures must be shown on the plan.
- Building dimensions must be shown on the plan to ensure compliance with Section 8.03.

- The applicant submitted an application for private roads to be accepted into the public system. This does not seem necessary, as the roads should be constructed as public roads, to the city's public road specifications, if they are intended to be public.

The Planning Commission has the discretion to require additional information, such as a traffic impact analysis, depending on the anticipated intensity and impact on surrounding uses and/or public facilities.

As a final note, multi-family dwellings are permitted by right in the R-5 district but are subject to the design guidelines for multi-family development. While the proposed project appears to meet several of the guide's intent statements and guidelines, the building design with garages and large driveways facing the street does not seem consistent with these guidelines. This should be taken into consideration.

**RECOMMENDATION.** At the September 21 public hearing, the Planning Commission should carefully consider the comments from the applicant and the public. Based on our review of the materials presented, we recommend that the Planning Commission hold the public hearing but postpone a decision on the application until the applicant can provide the information outlined in this memorandum. In addition, the site plan should be updated to address comments from the Fire Department and City Engineer prior to resubmittal.

Please feel free to reach out with any questions or comments.

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## MEMORANDUM

**To:** Jennifer Pearson  
**Date:** October 24, 2022  
**From:** Tricia Anderson  
**RE:** **Plan Review Comments – Forest Gate Condo**  
**Plan Date 10-20-22**

The revised plan set for the Forest Gate Condominium development was reviewed pursuant to the following sections of the City of the Village of Douglas Zoning Ordinance:

- ▷ Article 8, R-5, Multiple Family District
- ▷ Article 24, Site Plan Review, Section 24.02, Data Required
- ▷ Article 16, General Provisions, Section 16.24, Condominiums

### Section 8.03, R-5 District Notes

- Net density calculation:
  - it has been noted that the desire is to add acreage to the subject site to accommodate the required dimensions of a public street that would connect to Wiley Road. Has this acreage been included in the net density calculation?
  - The wetland area is shown as .38 acres – does this include all wetland areas (planned as both disturbed and unimpacted)?
  - Areas used for retention pond should be calculated and subtracted from the “buildable area” *Area's are Subtracted*

### Section 24.02, Data Required for Site Plans

- We have not yet seen a written statement regarding the project’s impact on existing infrastructure and utilities.
  - The City Engineer is recommending that a traffic impact analysis is conducted.
  - *Traffic analysis completed.*
  - The developer should work with the KLSWA and City Engineer to determine what impacts the project could have on existing sewer infrastructure and if capacity exists to serve the development or if improvements would be needed to accommodate the additional users. *Discussed, and providing a future connection for the Summer Grove sanitary which would eliminate pump station.*
- A landscaping plan has not yet been provided
  - The plan should include an inventory of old-growth trees and a plan indicating which are planned to be retained and which are planned to be removed.
- All existing land uses and zoning districts within 300 feet of the subject site must be shown on the plan. *Landscape Plan Provided*

- Project summary notes include “There are wetlands on the property”:
  - Individual pockets of wetlands should be labeled A, B, C, etc. *Labeled C-102*
  - please provide the acreage of each area identified as wetlands. *Labeled C-102*
  - Were the wetlands delineated by Driesenga? *Wetlands delineated by Barr Eng.*
  - Please provide the acreage of wetlands proposed to be impacted and subject to EGLE permits *Labeled C-102*
  - Please provide the location and volume of fill for wetlands proposed to be impacted. *Labeled C-102*
- Please provide a floor plan for the 5-unit building (also required per Section 16.24).
- Parking:
  - Please provide parking calculations and include areas used for parking (garage, driveway, etc.). *C-101 Project Summary*
  - Where will guests park? *In Driveway*
- Additional information needed in general notes:
  - Project description (condos, not rental, etc.) *C-101 Callout typical*
  - Total number of structures, units, bedrooms, square feet *C-101 Project Summary*
  - Garage info with square footage (one-stall, two-stall?) *C-101 Project Summary Parking Section*
  - Amount of recreational and open space *C-102 1.69 Acres Callout*
  - Type of recreation facilities to be provided *Walking Path*
- Proposed project schedule required – please add to cover page *C-105*
- Show location of HVAC structures *HVAC Pads are shown C-103*
- Are any mail kiosks planned? If so, please show location of structure *Discussion with Post Office*
- How will trash be collected? Individual carts or dumpster for whole development? If a dumpster is proposed, a dumpster enclosure shall be required and shown on the plan. *C-101 Project summary #16*
- Environmental:
  - Are test wells still there? If so, how long are they planned to be monitored?
  - The PC had asked for a statement related to what has been done to date in terms of the assessment of the contamination and what mitigation efforts have been done. *Environmental Report is provided.*

#### Section 16.24, Condominiums

- Layout and dimensions of each condo *unit* (referenced above – but required per this section as well)
- Written approval of the proposed design and location of entrance to condo development from Allegan County Road Commission *Submit concurrently with Traffic Analysis*
- Use and occupancy restrictions and maintenance provisions for all general and limited common elements that will be included in the master deed *Master Deed Included*
- Easements granted to City and or ACDC for repair and maintenance of utilities, including stormwater. *Upon final approval*
- Master deed – what is the status? *Master Deed Submitted*

Next Steps:

The following schedule provides deadlines for corresponding Planning Commission meeting dates. The November 10 meeting will not be an option since the turnaround time is too tight to resubmit, thus the earliest agenda would be the December 8 meeting.

Application Deadline <sup>1</sup>	Staff Site Plan Review (SPRC) <sup>2</sup>	Resubmittal Deadline <sup>3</sup>	PC Meeting Date
September 29, 2022	October 13, 2022	October 27, 2022	November 10, 2022
October 27, 2022	November 10, 2022	November 24, 2022	December 8, 2022
December 1, 2022	December 15, 2022	December 29, 2022	January 12, 2023
December 29, 2022	January 12, 2023	January 26, 2023	February 9, 2023
January 26, 2023	February 9, 2023	February 23, 2023	March 9, 2023

Please contact me with any questions related to this review.

November 29, 2022  
2221098

Ms. Tricia Anderson  
Williams&Works  
549 Ottawa Ave., NW Ste. 310  
Grand Rapids, MI 49503

RE: Forest Gate Condominium Development (#485 Ferry Street)  
Preliminary Engineering Review Comments

Dear Traci:

On behalf of the City of Douglas, our office has reviewed the *revised* preliminary condominium drawings dated November 23, 2022 and received November 28, 2022 for the above referenced project. Our comments regarding the project are as follows: (A previous review was completed on September 1, 2022 and October 24, 2022.)

I. GENERAL

1. The proposed condominium development sits on a 30-acre parcel located between Center Street and Wiley Road and includes construction of 90 residential units in 18 buildings as well as public water main, public sanitary sewer, storm sewer, and roadways/sidewalks to accommodate those units. Construction is proposed to take place over 9 phases. If the infrastructure is to be constructed in phases, this should be shown on the drawings as well; otherwise, we are assuming all infrastructure we be constructed in the first phase. *No indication was provided for phasing the infrastructure, if any.*
2. This property is currently located in the R-5 multiple family zoning district and will need to meet the zoning requirements for this district. *Information only.*
3. The survey map included in the drawings seems to be from a previous development plan. This should be revised to show the current project and parcels involved. *Information only.*
4. The proposed development would include entrance drives onto Wiley Road and Ferry Street with the possibility of connecting directly to Center Street in the future. With the increase in the amount of proposed residential traffic to the site, the developer should perform a traffic study in the area to evaluate the impacts on the existing intersections and traffic signals. Existing and proposed road names should also be included on the drawings. Maple Street should be constructed with curb and gutter on each side of the road; currently is proposed for the east side only. *A traffic impact study completed by Progressive AE dated November 2022 was provided; this report indicated “there would have little to no impact on the surrounding roadway network.” Street names need to be added to the drawings. Maple Street was revised to have curb and gutter on both sides of the road.*

5. The drawings seem to indicate that a 66' ROW would be established with 26' wide public roads with the exception of the proposed access to Wiley Road. This strip of parcel is only about 55' wide. If the City wants to maintain uniform 66' ROWs, the development will need to acquire additional property along this access strip. *The drawings do not indicate any change on this; the City will need to discuss.*
  6. The City may desire to review the future goals for the Ferry Street/200 Blue Star Highway property with the developer in order to coordinate the location of the proposed road intersections. Based on our understanding, the south road access onto Ferry Street may need to be removed or significantly revised. This may include consideration of a cul-de-sac at that location instead. The curb radii on Ferry Street should be set back to allow traffic to turn into the development; back of curb shall be set a minimum of 24 feet from centerline of road with 100 feet of tapers. *Changes were made to indicate present and future tie in on the south entrance on Ferry Street. The curb set backs have not been revised on the drawings.*
  7. The density of driveways onto the roadway may be a problem for public snow removal. Development may consider shared drives to buildings for access control. If the proposed driveway density and road width are approved, on-street parking should not be allowed for the development. *The width of the road was changed to 30 feet wide. It should be noted that there is not a lot of areas to have additional parking on the streets as there is the potential for blocking several driveways.*
  8. Proposed HMA pavement cross section is shown on C-501. The leveling course shall be revised to 220 lbs/syd versus 165 lbs/syd for 2 inches. Please show a minimum of 15" sand subbase. *This was not revised.*
  9. Pedestrian sidewalk is proposed to run along the streets internal to the development. Proposed concrete pavement cross sections is shown on C-501 – these should be consistent with City standards as noted in the Code of Ordinances section 93.003. We note that 6" thick sidewalks shall be constructed through all driveways. If two driveways are to remain on Ferry Street, we recommend that sidewalk be included between these driveways. *Sidewalk thickness was not revised. The recommendation to have sidewalk in Ferry Street between the two entrances should be considered by the City.*
  10. It appears that the development plan includes some proposed exterior lighting. All exterior lighting shall be in accordance with City Zoning Ordinances Section 19.05 and 24.03. *A note on site lighting is on C-101*
  11. The developer should distribute drawings to the KLSWA and the STFD for their respective reviews and comments. *Information only.*
  12. The developer will be responsible for all City fees for the project. *Information only.*
  13. We note there is a proposed sign in the Ferry Street right-of-way; this should be moved to private lands so it will not interfere with any future public improvements. *This was not revised on the drawings.*
- II. ~~SANITARY SEWER– (no utility plan was provided with this newest set of drawings; notes are from previous review.)~~

1. The proposed utility plan includes construction of *sanitary sewer from Ferry through the development and to Wiley Road. Submittal of information on the invert elevation at Summer Grove will need to be submitted with the final drawings. Also a master plan for serving the balance of the parcel to the north needs to be provided.* ~~approximately 3,200 feet of public sanitary sewer.~~ Once constructed, this main would be owned by the City of Douglas and operated and maintained by the KLSWA.
2. It is unclear from the drawings how the developer is proposing to facilitate sanitary sewer flow. The developer should plan to install 12" sanitary sewer through the development from Ferry Street to Wiley Road at a final upstream elevation of 636.7 at Wiley Road. This will allow for the future phase out of the Summer Grove pump station. *This revision was made.*
3. Wastewater from this site would flow north along Ferry Street and would be pumped under the Kalamazoo River via force main. This waste would pass through Lift Stations #6 and #1 before the treatment facility. *Information only.*
4. The proposed 90 units would contribute on average approximately 24,300 gallons per day to the sanitary system. Based on the 2021 meter data, Douglas has the available plant capacity. The KLSWA should provide current and projected flows for the downstream gravity sewer and pump stations to check system capacity. *Information only.*
5. Individual lateral connections are not shown on these preliminary drawings. Each building shall have only one sanitary lateral connection to the main; lateral connections directly into manholes will not be allowed. *Laterals are shown on C-103.*

III. WATER MAIN ~~—(no utility plan was provided with this newest set of drawings; notes are from previous review.)~~

1. The proposed utility plan includes construction of *water main throughout the development looped back to Ferry Street. Plans should be made to eventually loop this to Wiley Road.* ~~approximately 3,100 feet of public water main, including hydrants.~~ Once constructed, this main would be owned by the City of Douglas and operated and maintained by the KLSWA.
2. Individual water service connections are not shown on these preliminary drawings. Each building shall have one water service connection to the main. The proposed multi-unit buildings can split from the service behind the ROW line. The number of meters and accounts per building should be coordinated with the KLSWA. *Some services are shown; this needs to be coordinated with KLSWA.*
3. The drawings indicate that the infrastructure is proposed to be constructed in 2 phases but these boundaries are not clearly defined. The first phase of construction should include at least a completed loop from the Ferry Street water main to the Wiley Road water main. *Nothing new was provided for this.*
4. The northwest corner of the water main should include a stub to the north with a hydrant to allow for future phases to connect without cutting through the intersection. *This appears to be revised on the drawings.*
5. Are there additional means of fire protection planned for these units? STFD may require additional firelines or sprinkling that could impact the size of proposed services to the buildings. *Information only.*

6. Per the water main record drawings, an abandoned 6" and 4" water likely exists along the west side of Ferry Street. This is not noted clearly on the drawings and may be an impediment to any utility work. *This needs to be addressed on the final drawings.*

#### IV. DRAINAGE & GRADING

1. The City of Douglas uses the Allegan County Drain Commission standards for new development review & construction. Proposed site drainage measures and calculations shall meet the ACDC standards as well as the additional City of Douglas zoning requirements. *Information only.*
2. This site is largely not within an ACDC drainage district (a small section lies within the Jager-Crane Drain district). Existing surface water onsite generally flows north and east and crosses Ferry Street in a culvert to the east. *Information only.*
3. The proposed drainage plan includes storm sewer and catch basins along the roads, some rear yard catch basins, and grading for a retention basin along the east edge of the property. Proposed concrete curb and gutter along the road edges collect road runoff water to the catch basins. *Information only.*
4. The drawings do not seem to indicate that a direct outlet is planned to connect to the existing culvert at the downstream end of the property. The developer should provide soil borings with infiltration tests to verify if the existing soils can dissipate the expected volumes. *It appears that design is using a detention system; this will be reviewed by ACDC's office.*
5. An overflow route should be incorporated into the basin design to provide for flood planning. *This will be reviewed by ACDC.*
6. A homeowner's association or a 433 Agreement with the ACDC should be set up to be responsible for the maintenance and liability of the drainage infrastructure. *This will be reviewed by ACDC.*
7. The developer's drawings indicate that wetlands are present onsite. EGLE permits will be required for wetland impacts – it will be the developer's responsibility to secure all necessary environmental permitting.

#### *Additional Comments:*

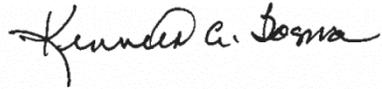
1. *Flood plain is noted on C-101, but this is not depicted on the drawings.*
2. *We recommend the City review its requirements for trees in the right-of-way. There will be many trees planted over the new water main that will be an issue for maintaining the water main.*

Ms. Tricia Anderson  
November 29, 2022  
Page 5

If you have any questions or comments regarding the above, please feel free to call me.

Sincerely,

**Prein&Newhof**

A handwritten signature in cursive script that reads "Kenneth A. Bosma".

Kenneth A Bosma, P.E.  
KAB/kab

cc: Ms. Jenny Pearson, City of Douglas  
Mr. Daryl VanDyk, KLSWA  
Mr. Jim Giese, Driesenga & Associates



**Minutes**  
**THE CITY OF THE VILLAGE OF DOUGLAS**  
**REGULAR MEETING OF THE PLANNING COMMISSION**  
**86 W CENTER ST – DOUGLAS, MI**  
**SEPTEMBER 21, 2022 – 7:00 P.M.**

**A. Call to Order:** by Chair Buszka. Chair recognized New Planners Trisha Anderson and Andy Moore from Williams and Works. Also recognized was Mr. Florian for his insight into Planning while on the Commission.

**B. Roll Call:** Present – Heneghan, O’Malley, Pattison, Seabert, Buzska, Whiteley  
Absent - None

1. Approval of Agenda: September 21, 2022  
*Motion by Seabert, with support from Pattison, to approve the Agenda for September 21, 2022, as amended, pulling agenda item 3 Public Hearing for 324 West Center St. – Motion carried by roll call vote.*
2. Approval of the Meeting Minutes for July 13, 2022  
*Motion by Seabert, with support from Pattison, to approve the Meeting Minutes of July 13, 2022, as presented. Motion carried by roll call vote.*

**C. Public Comments** (limit of 5 minutes):

Dawn Shuman, Lakeshore Dr resident – Has sat on Planning Commission and wanted to preserve the scale of the community. Currently she cannot get enough water on Lakeshore, have water studies been done? There seems to be a disconnect between the City and Residents.

**D. Communications:**

- a. Fran & Jim Martin
- b. Louise Patrick
- c. Phyllis Johnson
- d. Debra Larsen
- e. Olaf Heubner

**E. New Business:**

1. Public Hearing – 423 West Center St/424 Fremont St. – Zoning Map Amendment, Condominium Amendment, and Site Plan Approval Update.

*Motion by Seabert, with support from Whiteley, to open the public hearing. Motion carried by roll call vote.*

- a. Applicant presentation – Michael Pezok, the existing development has 9 units, 5 facing Center St. and 4 facing Fremont St. They are mixed use, owner occupied, and short-term rentals. The proposal is to expand the back of units 6-9 which face Fremont St. This project was to begin around the time Covid hit and it was on hold, would like to continue the building.



b. Public Comments – Rob Joon, 423 Center St. stated he has no objection to this build.

c. Staff Remarks – Staff recommends that the Planning Commission not take action on the Amendment from PUD to R-5 and allow staff time to do more fact finding and to consult with the City Attorney on process if the PUD zoning has been determined to be an error. This should not impact the applicant’s ability to move forward with the construction process. In the matter of Condo Amendment, staff recommends approving this request, subject to the applicant submitting a draft of the master deed amendment for review by the City Attorney. In the matter of the site plan review, it is recommended Planning approve the site plan to allow the expansion of units 6-9 of the Center Park Place condominium based on the following findings:

1. The Planning Commission voted unanimously to approve the site plan for the same request on June 24, 2020.
2. The plans for the expansion have not changed since the June 24, 2020 approval.

d. Commission questions – Is there a height issue that will need review? There was a letter regarding the fencing, will that require review? Will a new survey be required? One handicapped parking was removed, will it be replaced elsewhere?

*Motion by Seabert, with support from Whiteley to close the public hearing. Motion carried by roll call vote.*

*Motion by Pattison, with support from Whiteley, to take no action on the PUD to R-5 Amendment allowing staff additional time to speak with the City Attorney. Motion carried by roll call vote.*

*Motion by Seabert, with support from Pattison, to approve the Condo Amendment contingent upon the submittal of a draft of the master deed amendment for review by the City Attorney. Motion carried by roll call vote.*

*Motion by Seabert, with support from Heneghan, to approve the site plan allowing for the expansion of units 6-9 of the Center Park Place Condominiums. Motion carried by roll call vote.*

2. 39 Washington St. Site Plan Approval

*Motion by Pattison, with support from Seabert, to open the public hearing. Motion carried by roll call vote.*

a. 42 North Builders addressed Planning Commissioners regarding why they went with a new building rather than adding on to the original home.

b. Sam Phillippe, 31 Washington St. stated he had no qualms with the proposed build.



c. Staff – The applicant has applied for site plan review for changes to a residential home proposed at 39 Washington St. The applicant intends to move and modify the home on the lot. The proposed move of the home to the south makes the proposed dwelling more conforming. The Planning Commission has already approved the previous plan, so there should be no further action required by the Commission. Staff recommends that since this project has been noticed as a public hearing, Planning should leave the item on the agenda and take public comments that is received and refer them back to staff for review.

d. Commission Comments – Sad to see another historic home destroyed. The second drawings were nowhere near the first drawings, hate when we approve something, and it is changed. What about the trees?

*Motion by Seabert, with support from Whiteley, to close the public hearing. Motion carried by roll call vote.*

*Motion by Pattison, with support from Heneghan, to send the application back to the Zoning Administrator for further review and research. Motion carried by roll call vote.*

3. 324 West Center St. Site Plan Review and Condominium Approval (*pulled from the agenda by applicant*).

4. 485 Ferry St. Site Plan Review and Condominium Approval

*Motion by Heneghan, with support from Seabert, to open the Public Hearing. Motion carried by roll call vote.*

a. Applicant Dave Barker on behalf of Taurus Exploration, Inc submitted a site plan review for a 90 Unit Townhome condominium development.

b. Public Comments –

Suzanne Dixon, address the contaminants found on the property stating that Mr. Barker was informed, and agreed, to use the soil he moved on the berms.

She also stated her concerns with the high density of the proposed project.

Ms. Michelle Zin objected to Ms. Pattison attending the discussion. Chair Buszka stated Pattison had excused herself in a letter from any discussions or voting.

Renee Miller, concerned with how busy Ferry St is and will there be a traffic study done.

Sara Aumaugher, concerned with the increase in people within her area and arsenic. There needs to be more community feedback.

c. Staff remarked on how caring the community is with this property. A list of staff concerns is included in the staff report which includes concerns from citizens. Suggested a good beginning would be for Planning Commission to table this item until the plans with revisions is submitted.



d. Commission remarks included the concern with the lack of information in the plans. Would there be enough water to support this amount of growth in the area. Has the City Attorney reviewed the information. Is there updated information regarding the plume. What about stormwater runoff/overflow. Parking for guests, air conditioning unit locations, and so forth. There is really not enough information here.

*Motion by Seabert, with support from Heneghan, to close the public hearing. Motion carried by roll call vote.*

*Motion by Seabert, with support from O'Malley, to table this application until more information has been obtained. Motion carried by roll call vote.*

**F. Old Business - None**

**G. Reports of Officers, Members, Committees**

- Seabert Center Collective came before Council stating the then City Planner didn't with them, but they have pulled out so many times.
- Heneghan The city is losing its small-town charm when older homes are torn down to build new.
- Buszka A coming attraction is the Kayak Rental and new building they want to build, this decision was tabled in November, and we committed to revisit it.

**H. Public Comment (limit 5 minutes)**

Tony Pastor questioned if members of Planning can guarantee that drainage, water quality, and the plume on Ferry St. would be looked into. Your jobs seem to be reactive, who is responsible for the vision of Douglas?

**I. Adjournment**

Motion by Seabert, with support from Heneghan, to adjourn. Meeting adjourned by roll call vote at 9:13 pm

CITY OF THE VILLAGE OF DOUGLAS

Signed: \_\_\_\_\_ Date: \_\_\_\_\_  
Paul Buszka, Chair

Signed: \_\_\_\_\_ Date: \_\_\_\_\_  
Pamela Aalderink, City Clerk



**Certification of Minutes**

**I hereby certify that the attached is a true and correct copy of the minutes of a regular meeting of the City Council of the City of the Village of Douglas held on September 21, 2022. I further certify that the meeting was duly called and that a quorum was present.**

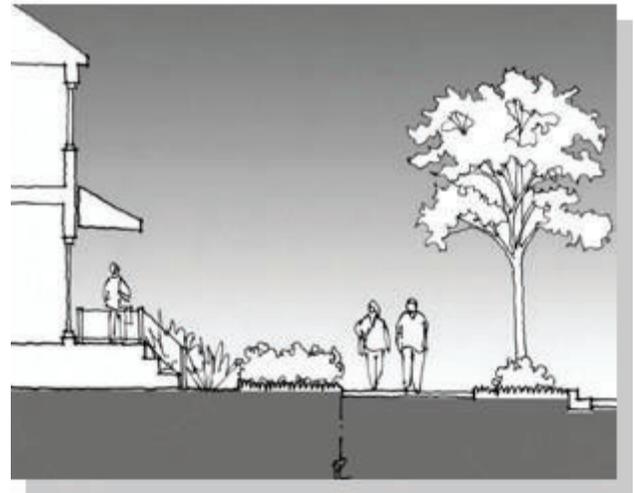
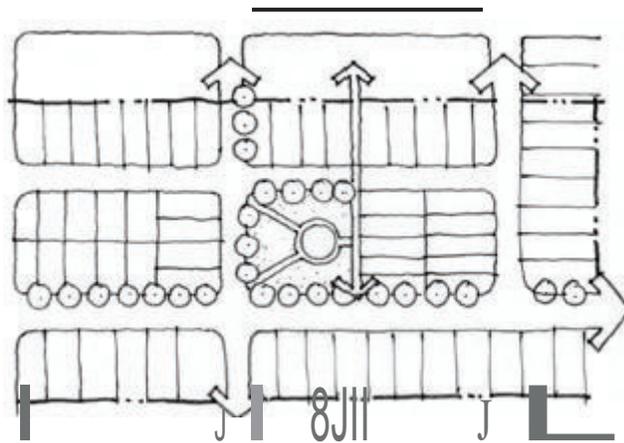
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**Pamela Alderink, City Clerk**

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**Date**

CITY OF DOUGLAS DESIGN GUIDELINES  
*for*  
**Multi-family Development**



# Introduction and Purpose

This document is intended to focus on site planning criteria and design guidance for new multi-family development and moderate density projects within the R-4 (Harbor Residential) and R-5 (Multi-family) zoning districts.

The historic development patterns of the City of Douglas are often composed of small lots in traditional grid patterns and narrow streets. Other areas have developed in a non-grid pattern with larger lots. Now, with the rate of new development likely to consume much of the remaining vacant land within the City limits over the next 20 years, the City of Douglas seeks to accommodate residential development with a mix of types, sizes and densities, clustered to retain the open space, rural land uses and significant view shed corridors that form the area's natural beauty. It is also important to connect housing, shopping, employment and recreation in a more efficient manner. With a maximum density of 12 units per acre, the pattern by which new housing types, such as townhouses, cottage housing and courtyard housing, in the R-4 and R-5 Districts are designed will be crucial to ensuring a proper "fit" with the surrounding community. The design guidelines are organized in the three categories below.

## Site Design

Site planning arranges building masses, open space, parking and circulation to create a site design that is orderly, visually pleasing, and that contributes positively to both the surrounding area and the development itself. Historic development patterns in Douglas have been designed to relate to the street, encouraging people to participate more fully in their community. These site design guidelines will promote neighborhood compatibility, retention of natural features, integration with the surrounding community, opportunity for social interaction, and a safe, comfortable, and interesting environment for residents.

## Building Design

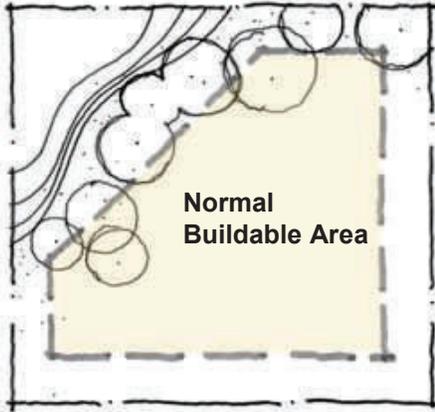
The building design guidelines address the overall external appearance of development within the multi-family districts, including building forms, details, and proportions. Use of single-family residential design elements are required to reduce perceived density, give character to the development and its individual dwelling units, add visual interest, and be compatible with the neighborhood context.

It is not intended that these guidelines prescribe one architectural style or a specific design character. There are various architectural styles found in Douglas' housing stock that help create unique settings. The primary focus should be to construct a high quality residential environment within the context of the existing community. Quality development is further encouraged through a sustainable design approach.

## Landscaping

The rolling topography and variety of open pastures and meadows, wetlands and forested areas in the city help define its character. New developments can establish visual connections with these natural features through the choice and placement of landscape features. Moreover, an attractive, well-maintained, natural landscaped environment contributes to residents' quality of life and also enhances the appearance of the surrounding neighborhood.

# SITE DESIGN



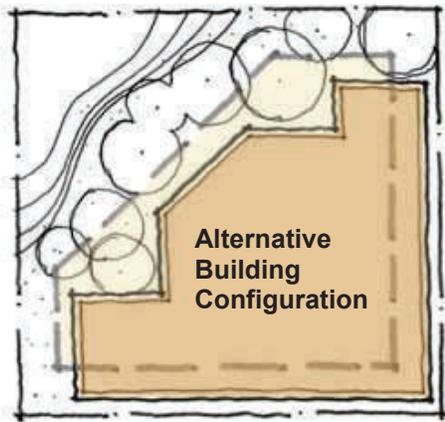
### A. Context

#### Intent

Multi-family development successfully contributes to the overall community when relationships with the existing and planned land uses, development patterns, and context are considered.

#### Standards

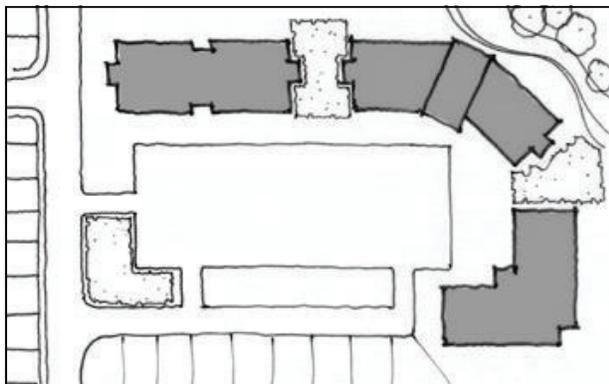
1. Developments shall comply with the City's tree preservation ordinance.



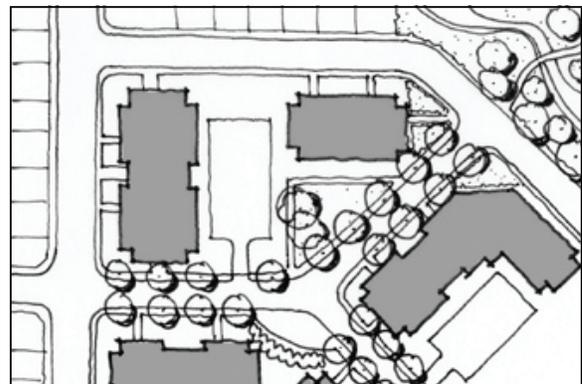
#### Guidelines

1. Incorporate existing unique site amenities such as views, mature trees, and similar natural features into developments whenever possible.
2. Use complementary building arrangements, buffers, and avoidance of incompatible building scale to ensure that new multi-family residential development is compatible with residential development in the immediate area. For example, cottage housing is encouraged in older, smaller lot residential neighborhoods to complement similar sites in the area.
3. Complement existing landscape materials, location, and massing on adjacent developments and in the natural environment with new landscape plantings.

Alternative site design can preserve mature trees and natural features



Undesirable Layout



Desirable Layout

*Orient and cluster buildings, and design parking, landscaping and open space in ways that connect to surrounding neighborhoods, and complement view sheds and surrounding natural features.*

# SITE DESIGN

## B. Building Siting

### Intent

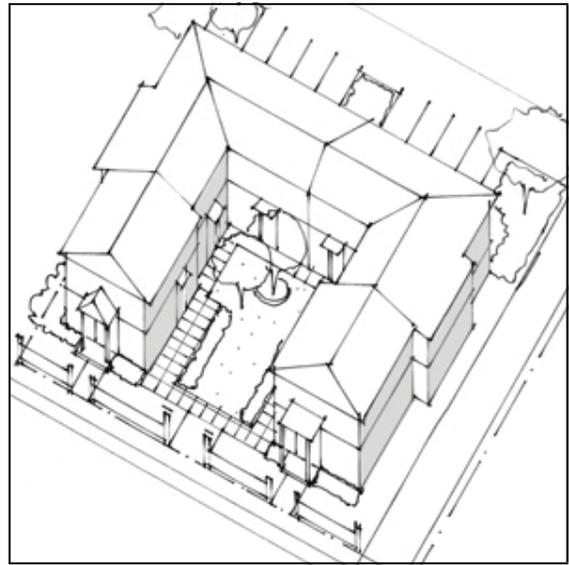
Appropriate building siting can reduce the perceived density of multi-family developments, maximize open space areas, provide “eyes on the street” surveillance, and enhance neighborliness by creating community gathering spaces.

### Standards

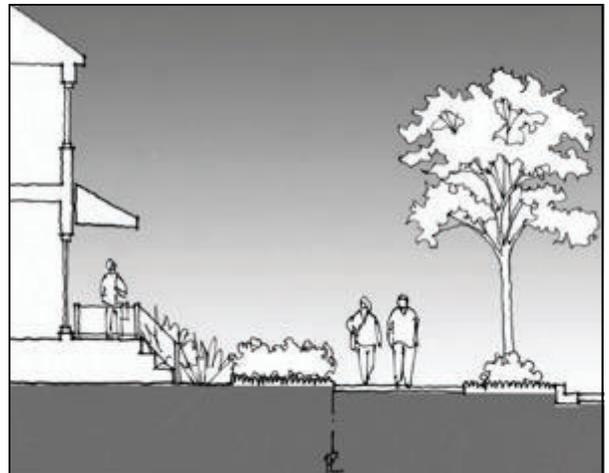
1. Developments shall be oriented parallel to the public street, with setbacks from the street used to create landscaped open space.
2. Primary building entries shall be clearly identifiable and visible from the street, with well-defined walkways from pedestrian routes.

### Guidelines

1. To create an appropriate transition from residences to the street, use the space between building and sidewalk to provide security and privacy for residents and to encourage social interaction among residents and neighbors. This may be achieved through incorporation of private porches, stoops, patios and courtyards in the front yard area.
2. Cluster multi-family buildings around courtyards, gathering areas and open spaces.
3. Repeat these design elements throughout portions of the development that are oriented toward the open spaces, parking and other semi-public or public areas.

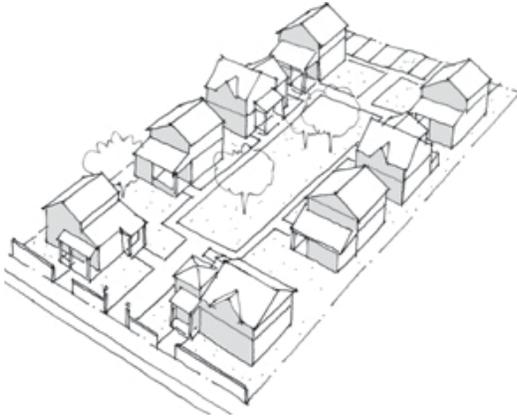


*Buildings around courtyards and sited parallel to the public street with direct entrances and windows allowing “eyes on the street”*



*Appropriate transition from residence to street*

# SITE DESIGN

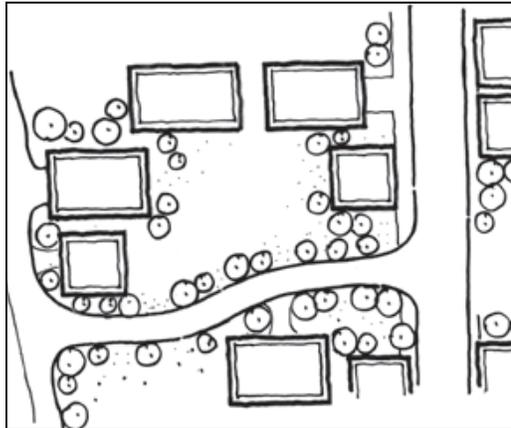


*Centralized open space provides convenient access for many units*

## C. Open Space

### *Intent*

Common open space provides opportunities for casual social interaction and safe play areas for children, and it reduces the perceived density of the development. Private open space serves as an outdoor room for residents.



*Large and small open spaces are connected and oriented to dwellings*



*A Pocket park provides small usable break between multi-family buildings and is accessible from the street.*

## Guidelines

1. Conveniently locate open space to the majority of units for recreation and social activities.
2. Open spaces should be sheltered from the noise and traffic of adjacent streets or other incompatible uses. Take advantage of sun orientation to provide a comfortable environment.
3. Provide well-defined open space edges through the use of walkways, buildings or landscaping.
4. For larger developments, provide a series of connected open space areas of varying shape, appearance and intended use.
5. Require private open space (such as yard, patio or balcony) that can be entered from inside the dwelling for all units – minimum 80 sq. ft.
6. Define boundaries between private and common open spaces by elements such as low walls or plant materials.

# SITE DESIGN

**C. Open Space**  
**Guidelines** *CONTINUED*

- 7. Site and design buildings so that windows of neighboring units do not overlook private open spaces.
- 8. Common outdoor spaces shall provide at least three of the following amenities to accommodate a variety of ages and activities to meet the needs of the residents:
  - a. Site furnishings (benches, tables)
  - b. Play areas (locate away from public streets)
  - c. Gardens
  - d. Patios or courtyards made of special paving, such as stone, brick or other unit pavers
  - e. Covered structure (i.e. pergola, pool house, etc.)
  - f. Water feature
  - g. Significant viewshed (i.e. waterfront, hillsides, etc.)



*Locate shared amenities such as outdoor play areas and bicycle parking*



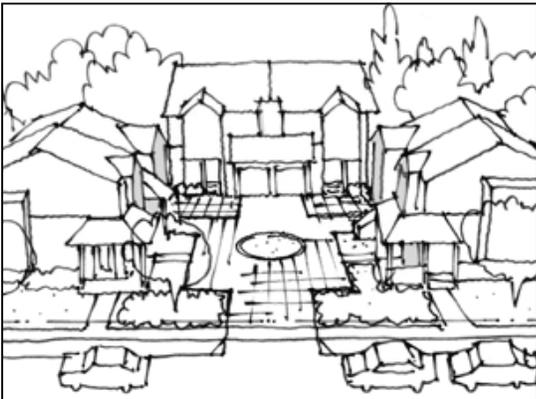
*Private open space at rear of unit*

# SITE DESIGN

## D. Parking/Vehicular Circulation

### Intent

Safe and efficient circulation and parking arrangements take into consideration the needs of pedestrians, children at play, parking lot appearance, and safety.



Single curb cuts are preferred. Recessed garages and enlarged entries have a positive impact on the streetscape.



Rear yard parking is preferred.

### Guidelines

1. Parking areas shall be located in the development's interior and not along street frontages. Driveway openings along street frontages shall be limited to one per 150 lineal feet of street facing property.
2. The number of trees required in the interior landscape area in parking lots shall be dependent upon the location of the parking lot in relation to the building and the public right-of-way (street):
  - a. Where the parking lot is located between the building and the street, one tree for every four spaces shall be provided (1:4)
  - b. Where the parking lot is located to the side of the building and partially abuts the street (max. 50%), one tree for every six spaces shall be provided (1:6)
  - c. Where the parking lot is behind the building and is not visible from the street, one tree for every eight spaces shall be provided (1:8)
3. Parking lot lighting shall be placed to create adequate visibility at night and evenly distributed to increase Security;
4. Parking areas shall be designed to
  - a. Control vehicle speeds with appropriate signage, changes in roadway texture, and other traffic calming devices, where necessary.
  - b. Avoid blank walls with rows of garage doors that face the public street front.
  - c. Use single-car garage doors, rather than double-car garage doors.
  - d. Provide landscaping around garages, and tuck-under parking.
  - e. Include an adjacent pedestrian entry path that connects to the public sidewalk along entry drives. Provide elements that define the main pedestrian entry, including lighting, textured paving, and accent plants.

# SITE DESIGN

## E. Pedestrian Connections

### Intent

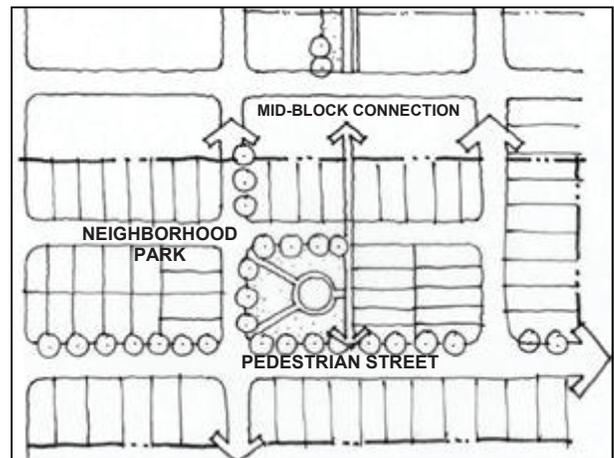
To create a network of safe, consistent, and convenient linkages for pedestrians, including locating building entrances adjacent to public sidewalks.

### Standards

1. A comprehensive system of pedestrian walkways shall link all site entrances, building entries, parking areas and common outdoor spaces with the public sidewalk.
2. Clearly defined pedestrian connections shall be provided:
  - a. Between public sidewalks and building entrances when buildings are not located directly adjacent to the sidewalk.
  - b. Between parking lots and building entrances.
3. Pedestrian walkways shall be a minimum 5 feet of clear, unobstructed passage and the type and nature of all materials shall be consistent within a development.
4. Walkways shall be accessible to disabled persons and in conformance with the Americans with Disabilities Act

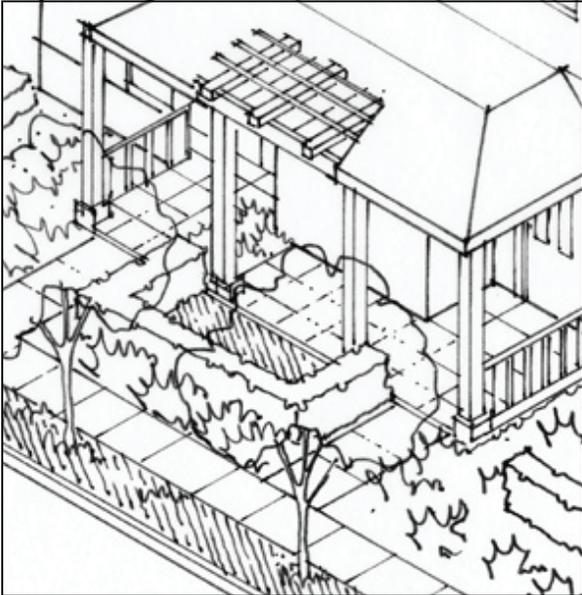
### Guidelines

1. Provide pedestrian access to adjacent existing or planned open space areas and trails.
2. Avoid combining vehicle and pedestrian access to dwelling units as this does not allow adequate room for landscaping and other features that can personalize the front entry.
3. Locate walkways to minimize the impact of pedestrians on the privacy of nearby residences or private open space.
4. Provide a landscaped planting area between walkways and building facades.



*Desirable connections to neighborhood amenities*

# SITE DESIGN



*Porches, patios, walkways and covered trellises help identify individual entrances*

## F. Front Yards/Entrances

### *Intent*

To provide separation between buildings and the public realm where the front yard serves as outdoor space and provides a welcoming and safe entry from the sidewalk to the building.

### Standards

1. Primary building entries shall be clearly visible from the nearest public circulation walkway.
2. A minimum of 50% of the front yard shall be landscaped and planted.
3. Each individual unit shall have its own private walkway to the front door at ground level.
4. Walls, shrubs and other visual obstructions between the public realm and the building shall be limited to a maximum 3 ft height to allow easy surveillance.



*Walkways combined with enhanced entry feature lead to each unit. Doors and windows encourage "eyes on the street"*

### Guidelines

1. A porch, covered stoop, or similar entry feature at each unit's front entry is strongly encouraged.
2. A wide range of plant materials, including perennials, lowering shrubs and native shrubs and groundcovers should be planted in the front yard. Plant material providing seasonal interest is encouraged.

# SITE DESIGN

## B. Building Scale and Character

### Intent

To help retain the city's small town character through building design.

### Standards

1. Horizontal facades longer than 30 feet shall be broken down into smaller units, reminiscent of the residential scale of the neighborhood. At least three of the following methods shall be included:
  - a. roof forms such as gables and dormers
  - b. changes in materials
  - c. bays or projecting balconies
  - d. recesses/offsets
  - e. windows

### Guidelines

1. Incorporate smaller-scale forms such as bays, recessed or projecting balconies, and dormers into the design to visually reduce the height and scale of the building and to emphasize the definition of individual units.
2. Where a neighborhood has a recognizable architectural context, use those building features as visual cues for incorporation into the development's design.

### Roofs

1. Gables facing the street are encouraged.
2. Vary roof lines within the overall horizontal plane through combinations of roof heights that create variation and visual interest.
3. Incorporate the roof pitch and materials of adjacent buildings into carport or garage roofs.



*Roof pitch, dormers and change in upper level materials break down the scale of a multi-family development and relate to single family character nearby*



# SITE DESIGN

### C. Facade Articulation

*Intent*

To avoid boxy and monotonous facades that lack human scale dimensions and have large expanses of flat wall planes.

### Standards

1. Buildings shall include articulation along the facades facing and visible from public right-of-way. Modulation elements shall have a minimum 2-foot projection or recession from the facade, and be a minimum of 6 feet in length.

### Guidelines

1. Use architectural treatments, such as recessed windows, moldings, decorative trim, and wood frames to add three-dimensional quality and shadow lines to the facade.
2. Windows of varied shape, size, and placement are encouraged.
3. Incorporate architectural detailing consistent with the development's overall design into garage doors, such as patterned garage doors, painted trim, or varied colors.



*Building modulation*



*Bays, dormers, balconies and other projected or recessed design elements reduce the building's mass and add visual interest*

# BUILDING DESIGN

## D. Building Entries

### *Intent*

To create a socially and visually stimulating multifamily district with street level facades that support pedestrian activity.

1. Design courtyard entry gates as an important architectural feature of the building or development.
2. Emphasize and differentiate each individual unit's entry through architectural elements such as porches, stoops, or roof canopies, and detailing such as paint color, trim, materials or awnings.
3. Provide opportunities for residents to personalize individual entries by providing ground level space or a wide ledge for plants and other features.

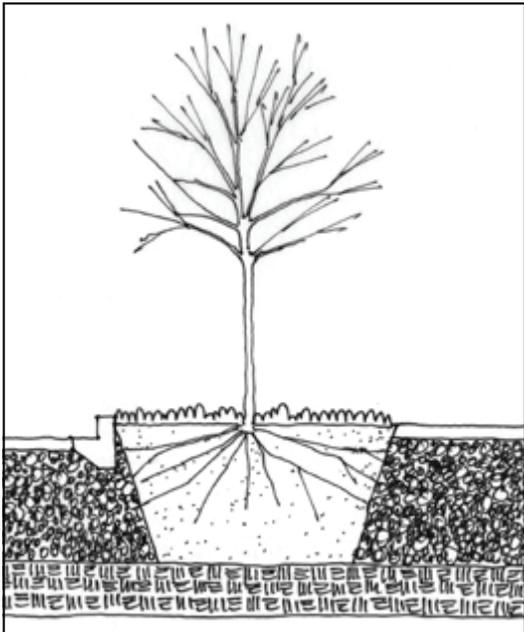


*Low walls and landscaped areas help define the transition from public to private space. Ledges create opportunities to personalize the dwelling unit.*



*Well designed entry gate*

# LANDSCAPE DESIGN



*Generous planting areas and uncompacted soil help sustain healthy landscaping*

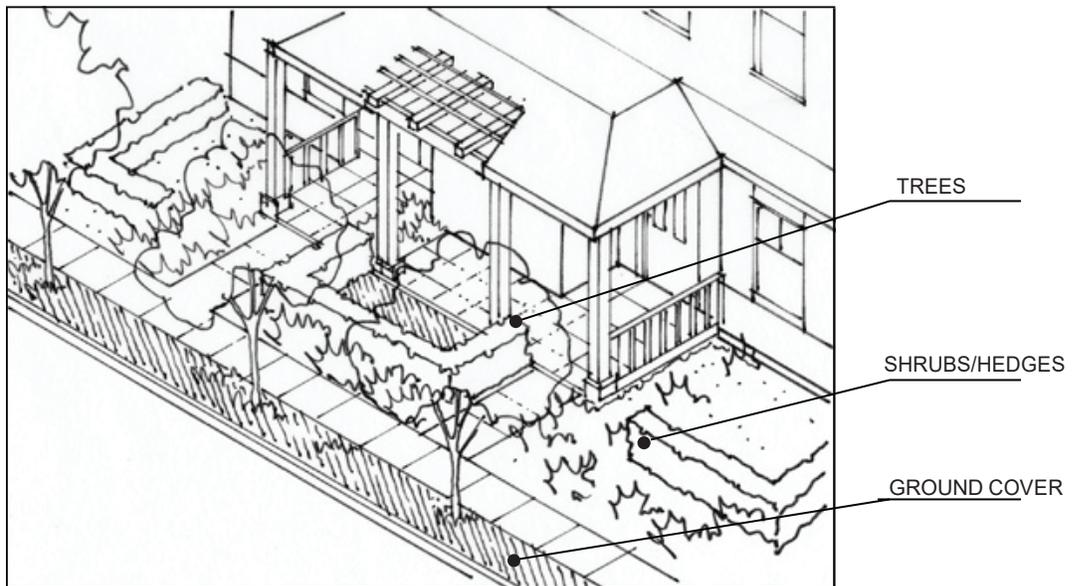
## A. Landscape Design

### *Intent*

To create unique identity, establish visual connections to surrounding natural areas, soften the architecture, provide shade and screen unattractive areas.

### **Guidelines**

1. Use a three-tiered landscape planting approach consisting of ground cover; shrubs and vines; and trees.
2. Use different landscape design and plant materials in the various courtyards and common open space areas of the development to create an individual identity for each space.
3. Use landscape plantings to help define property lines and distinguish private space from public space through a change in plant material, form or height.
4. Select trees and shrubs based on their mature size and root characteristics. Plants with root systems that uplift hardscape materials or are considered invasive shall be avoided.
5. Sixty percent of plantings materials shall be a native species.



*Landscaping to distinguish private space from public space*

November 21, 2022

Mr. Dave Barker  
Barker Brokerage and Development  
P.O. Box 705  
Saugatuck, Michigan 49453-0705

RE: Soil Gas and Arsenic Sampling and Analysis  
485 Ferry Street, Douglas, Michigan

Dear Mr. Barker:

On behalf of Barker Brokerage and Development, Lakeshore Environmental, Inc. (LEI) has completed soil gas and arsenic sampling at the 485 Ferry Street property (Site).

## **BACKGROUND**

Historic subsurface investigations in the area of the site have identified a chlorinated solvent plume in the groundwater originating from a nearby property. Chemicals of this type are known to volatilize and have the potential to emit vapors into structures located above them. Based on the currently available information, it appears that a portion of the site may be impacted by these chlorinated solvents. In addition to the chlorinated solvent plume, it has also been reported that elevated levels were previously identified in the surficial soils at the Site. As a result of some historic soil balancing at the Site it is suspected that the arsenic impacted soil may have been moved around the Site.

## **FIELD INVESTIGATION**

### Soil Gas Sampling

Soil gas samples were collected on November 1, 2022 and November 9, 2022 following LEI standard operating procedures (SOPs) provided in Appendix A. These procedures are based on the MDEQ *Guidance Document for the Vapor Intrusion Pathway* dated May 2013.

A total of eleven (11) sample locations were chosen throughout the property. Figures illustrating the Subject Property Location (Figure 1), Subject Property Features (Figure 2), and Sample Locations (Figure 3) are provided in the Attachments. All soil gas samples were transferred under chain-of-custody to Pace Analytical in Mount Juliet, Tennessee for VOCs analysis by U.S. EPA Method TO-15.

### **Corporate Office**

803 Verhoeks Street  
Grand Haven, Michigan 49417  
Phone: 800.844.5050  
[www.My-LEI.com](http://www.My-LEI.com)



### Arsenic Sampling

Subsurface investigation and sampling activities were performed in general conformance with LEI's Standard Operating Procedures, which are provided in Attachment A. Figures illustrating the Subject Property Location (Figure 1), Subject Property Features (Figure 2), Sample Locations (Figure 3) are provided in the Attachments.

The field investigation activities consisted of the following:

- Twelve (12) soil borings were completed using a stainless-steel core sampler.

Subsurface soils, recovered as core samples from the soil borings, were evaluated for the presence of stains, odors, and/or other indicators of contamination. The soil borings were completed to depths of up to 2.0 feet below ground surface. Groundwater was not encountered or sampled as part of this subsurface investigation.

Laboratory-provided containers were used for the collection of the soil samples. The soil samples were stored in an iced cooler until submittal to Bio-Chem Laboratories, a state certified laboratory located in Grand Rapids, Michigan. Chain-of-custody documentation procedures were followed in order to keep a record of sample collection and handling information, and to identify the requested analytical parameters. The submitted samples were analyzed for the presence of arsenic.

### **LABORATORY ANALYTICAL RESULTS**

Laboratory analytical results for the soil gas samples were compared to the Residential and Non-residential Volatilization to Indoor Air Pathway (VIAP) Screening Levels published by EGLE in September 2020. A table summarizing the results is provided in the Attachments and the laboratory analytical report and chain of custody documentation are provided in Appendix B. A summary of the laboratory analytical results is provided below:

- Detected concentrations of all VOCs are below the applicable VIAP values

Laboratory analytical results for the soil samples were compared to the EGLE Part 201 GRCC. A table summarizing the results is provided in the Attachments and the laboratory analytical report and chain of custody documentation are provided in Appendix B. A summary of the laboratory analytical results is provided below:

- Arsenic was detected at concentrations below the EGLE Part 201 GRCC.

### **CONCLUSIONS**

The analytical results for the soil gas samples, in comparison with VIAP values, indicate there is minimal risk of vapor intrusion at the property. Under these conditions, it does not appear that the future development of the Site will require a vapor mitigation system or vapor barriers. No additional investigation is recommended at this time.

The analytical results for the soil samples, in comparison with GRCC values, indicate there is minimal risk of arsenic exposure at the property. No additional investigation is recommended at this time.

Barker Brokerage and Development

November 21, 2022

Page 3 of 3

Please contact LEI if you have any questions or concerns with this report or the Site in general.

Sincerely,

Lakeshore Environmental, Inc.

A handwritten signature in blue ink, appearing to read "Robert N. VanDyke".

Robert N. VanDyke, PE, EP

RRD Manager | Senior Environmental Engineer

Attachments: Figures 1-3, Site Location Map, Site Features Map, Soil Gas Sample Locations  
Table 1, Soil Gas Sampling Results  
Table 2, Arsenic Sampling Results

Appendix A: Standard Operating Procedures

Appendix B: Laboratory Analytical Report

Table 1

Soil Gas Sampling Results  
485 Ferry Street  
Douglas, Michigan

Lab Sample ID	L1553060-01	L1553060-02	L1553060-03	L1553060-04	L1556274-01	L1556274-02	L1556274-03	L1556274-04	L1556274-05	L1556274-06	L1556274-07			
Client Sample ID	LEI-ESG-01	LEI-ESG-02	LEI-ESG-03	LEI-ESG-04	LEI-ESG-06	LEI-ESG-05	LEI-ESG-07	LEI-ESG-08	LEI-ESG-09	LEI-ESG-10	LEI-ESG-11			
Date Collected	11/01/2022	11/01/2022	11/01/2022	11/01/2022	11/09/2022	11/09/2022	11/09/2022	11/09/2022	11/09/2022	11/09/2022	11/09/2022			
Analyte	Units	Residential VIAP	Non-Residential VIAP											
ACETONE	µg/L	210,000	1,000,000	60.8	69.1	54.7	57.7	482	459	237	220	159	99.8	186
BENZENE	µg/L	110	260	1.07	1.29	1.66	4.57	2.85	5.05	3.29	2.66	3.39	1.93	2.99
CARBON DISULFIDE	µg/L	24,000	36,000	ND	ND	ND	ND	0.657	ND	ND	1.01	ND	ND	ND
CHLOROMETHANE	µg/L	1,400	87	ND	ND	ND	0.463	0.425	ND	ND	0.665	ND	0.514	0.537
ETHANOL	µg/L	630,000	630,000	59.2	112	63.9	53.5	27.3	12.1	17.6	21.3	23.2	14.5	22.1
ETHYLBENZENE	µg/L	340	800	10.6	6.63	5.25	7.8	6.16	8.41	4.64	3.4	ND	2.49	4.21
4-ETHYLTOLUENE	µg/L	NA	NA	18	15.1	12.6	4.29	1.41	1.56	1.38	1.31	ND	4.25	5.55
TRICHLOROFLUOROMETHANE	µg/L	15,000	22,000	1.46	1.4	1.4	1.17	1.46	1.34	1.42	1.63	1.63	1.51	1.49
DICHLORODIFLUOROMETHANE	µg/L	11,000	17,000	2.38	2.43	2.33	2.19	2.52	2.32	2.45	2.45	1.87	2.05	2.1
HEPTANE	µg/L	120,000	180,000	1.17	1.4	21.8	3.06	6.38	5.52	6.5	4.62	10.5	6.83	6.63
N-HEXANE	µg/L	24,000	36,000	ND	2.3	3.14	2.73	12	12.1	14.2	11.4	12.1	11.7	9.06
METHYLENE CHLORIDE	µg/L	21,000	31,000	ND	1.42	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYL BUTYL KETONE	µg/L	NA	NA	ND	ND	ND	6.22	16.7	15.5	12.7	20.8	11.5	5.84	9.76
2-BUTANONE (MEK)	µg/L	170,000	170,000	41.6	49.8	32.7	43.6	ND	ND	ND	ND	ND	ND	ND
4-METHYL-2-PENTANONE (MIBK)	µg/L	27,000	27,000	21.8	18.8	20.3	16.4	ND	ND	ND	ND	ND	ND	ND
METHYL TERT-BUTYL ETHER	µg/L	3,300	100,000	ND	ND	ND	ND	0.782	0.904	ND	ND	ND	ND	ND
2-PROPANOL	µg/L	52,000	10,000	ND	ND	ND	5.9	ND	ND	ND	3.37	3.2	ND	ND
PROPENE	µg/L	NA	NA	ND	21.4	ND	ND	ND						
STYRENE	µg/L	1,500	3,500	ND	ND	ND	0.996	ND	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE	µg/L	1,400	1,400	10.9	6.29	5.0	7.33	ND	ND	ND	ND	ND	ND	ND
TETRAHYDROFURAN	µg/L	70,000	100,000	ND	ND	ND	15.3	4.31	7.17	ND	ND	ND	ND	ND
TOLUENE	µg/L	170,000	250,000	15.6	14.5	20.7	42.9	9.94	17.4	8.32	6.86	9.61	4.56	6.33
1,2,4-TRIMETHYLBENZENE	µg/L	2,100	3,100	18.8	17.1	14.6	15.7	6.38	6.97	6.63	6.67	7.02	6.23	6.87
1,3,5-TRIMETHYLBENZENE	µg/L	2,100	3,100	5.89	4.96	4.28	4.41	1.91	2.19	1.97	1.85	2.13	1.72	2.01
2,2,4-TRIMETHYLPENTANE	µg/L	120,000	180,000	3.38	1.32	2.2	3.97	1.94	6.96	3.56	ND	ND	ND	ND
XYLENE	µg/L	7,600	11,000	64.3	43.2	33.4	45.2	31.8	42.6	25.2	18.7	18.1	15.4	24.6

Notes:  
Bold concentrations exceed laboratory reporting limits  
Bold and shaded concentrations exceed EGLE VIAP

TABLE 2  
Soil Sample Results Summary  
Concentrations Compared to Part 201 Generic Residential Cleanup Criteria  
485 Ferry Street  
Douglas, MI

Hazardous Substance	Chemical Abstract Service Number	Statewide Default Background Levels	Generic Residential Cleanup Criteria			Sample Identification Number											
			Groundwater Protection		Direct Contact	AS-1	AS-2	AS-3	AS-4	AS-5	AS-6	AS-7	AS-8	AS-9	AS-10	AS-11	AS-12
			Residential Drinking Water Protection	Groundwater Surface Water Interface Protection		11/9/2022	11/9/2022	11/9/2022	11/9/2022	11/9/2022	11/9/2022	11/9/2022	11/9/2022	11/9/2022	11/9/2022	11/9/2022	11/9/2022
<b>Metals (µg/kg)</b>																	
Arsenic	7440382	5,800	4,600	4,600	7,600	3,300	3,300	3,600	3,600	5,200	2,600	1,500	2,000	2,000	2,400	1,200	1,300

**Notes**  
 Bold concentrations exceed laboratory reporting limits  
 Shaded concentrations exceed EGLE Part 201 GRCC

Table based on most recent EGLE Part 201 GRCC updated December 30, 2013; GSI Protection Criteria updated June 25, 2018  
 \* GSI was calculated utilizing a Hardness Coefficient of 150 (mg CaCO3/L) established by EGLE for southern lower peninsula of Michigan

Landscape Ordinance Requires One (1) 3" cal. Shade Tree per 50 ft. ft. Required (based on 410 ft. ft.), 1 (1) B.66 shade tree. Proposed: 7 Shade Trees, 2 Existing Trees and 0 Evergreen Trees.

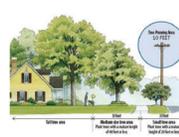
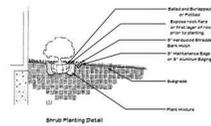
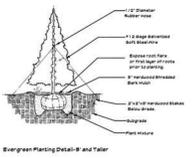
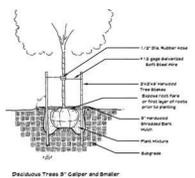
Ferry Street



**Plant Legend Key**

Quantity	Symbol	Plant Name	Size
24	(Symbol)	Black Hills spruce	15' Ht.
28	(Symbol)	Vanderwolf Pine	8' Ht.
48	(Symbol)	Red Oak	3" cal.
27	(Symbol)	American Sentry Linden	3" cal.
22	(Symbol)	Redpointe Maple	3" cal.
18	(Symbol)	Kuansan Cherry	2" cal.
18	(Symbol)	Allegheny Serviceberry Tree	2" cal. Tree Form
24	(Symbol)	Blue Arrow Juniper	9' Ht.
100	(Symbol)	Show Off Forsythia	18-24" Ht.
72	(Symbol)	Bobo Dwarf Hydrangea	18-24" Ht.
100	(Symbol)	Gem Box Inkberry Holly	18-24" Ht.
	(Symbol)	Existing Deciduous Tree	
	(Symbol)	Existing Evergreen Tree	

Note: Approximately 88 Shade Trees, 41 Evergreen Trees, 86 Ornamental Trees and 324 shrubs are specified beyond landscape ordinance requirements.



**Low Maintenance Meadow Mix**  
50% CHEWINGS FESCUE  
30% HARD FESCUE  
20% SHEEP FESCUE

- Notes:**
- All landscaping shall be installed by a qualified Landscape Contractor. Plant types selected on the landscape plan shall be the plant species. Plants shall be installed in accordance with the Landscape Ordinance. Substitutions are only allowed if approved in writing by the Landscape Architect.
  - All plantings shall be installed with 3" preformed premium landscape bark mulch.
  - The Landscape Architect shall remove any trees that are located on the site that are not to be retained. Substitutions are only allowed if approved in writing by the Landscape Architect.
  - On the night of the final installation, the contractor shall provide a site visit to the owner to inspect the work. The contractor shall provide a site visit to the owner to inspect the work. The contractor shall provide a site visit to the owner to inspect the work.
  - All plants shall be installed with a mechanical root barrier to define a border for the planting area.
  - Landscaping shall be installed in accordance with the specifications. Check with specifications for any special requirements. Landscaping shall be installed in accordance with the specifications. Check with specifications for any special requirements.
  - Maintenance of the landscape shall be provided for by the owner and include fertilizing, watering and pest control, as needed. The contractor shall provide a site visit to the owner to inspect the work.
  - Plant materials shall be chosen and installed in accordance with standards recommended by the County Cooperative Extension Service or American Nursery Association.

**DESIGN SHAPES**  
Landscape and Construction Architecture  
485 Ferry Street, Douglas, Michigan  
907.222.1222

**Forest Gate Condominiums**  
485 Ferry Street, Douglas, Michigan

**AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS**

**PROJECT NUMBER:** 091122  
**DRAWN BY:** Jeffrey E. Nevel P.L.A., A.S.L.A.  
**DRAWING DATE:** 060422  
**ISSUED FOR:** 2412122 - Building Approval  
1212122 - Revision

**SCALE:** 1"=50'  
**SHEET NUMBER:** L-1

# HIGHLANDS



HIGHLANDS BUILDING 1



SITE LOCATION MAP  
SCALE: 1" = 100'

CODES	
MICHIGAN RESIDENTIAL CODE (MRC) - 209	
MICHIGAN MECHANICAL CODE (MPC) - 205	
MICHIGAN PLUMBING CODE (MPC) - 205	
NFPA 70 NATIONAL ELECTRICAL CODE - 2017	
IRC BUILDING CODE DATA	
ZONING:	RUD
TYPE OF CONSTRUCTION:	WOOD FRAME ON FOUNDED FND.
NUMBER OF FLOORS:	2
BUILDING HEIGHT:	30'-0"
FIRE RATING:	WALLS & PARTITIONS
SPRINKLER SYSTEM:	NOT SPRINKLED
NOTES:	1. REFER TO GENERAL SHEETS FOR FIRE RATED WALL DETAILS

UNIT IDENTITY	PLUMBING FIXTURES		
	BATHROOM	KITCHEN SINK	DISHWASHER
ELEV 1 END	15		
ELEV 4	15		
ELEV 5	15		
ELEV 6 END	15		
<b>TOTAL</b>	<b>60</b>	<b>0</b>	<b>0</b>

UNIT IDENTITY	SQUARE FOOTAGE			TOTAL	GARAGE PORCH / OUTDOOR LIVING
	FIRST FLOOR	SECOND FLOOR	HALF BATH		
ELEV 1 END	488	500	100	1088	48
ELEV 4	488	500	100	1088	48
ELEV 5	488	500	100	1088	48
ELEV 6 END	488	500	100	1088	48
<b>BUILD TOTAL SQ. FT. ±</b>	<b>1952</b>	<b>2000</b>	<b>400</b>	<b>4352</b>	<b>192</b>



## PLAN DRAWING INDEX

REV.	DATE	DESCRIPTION
01		PRELIMINARY
02		ARCHITECTURAL BUILDING COMPOSITION
03		GENERAL NOTES & DETAILS
04		FOUNDATION PLAN
05		FIRST FLOOR PLAN
06		SECOND FLOOR PLAN
07		FRONT LEFT ELEVATION
08		RIGHT REAR ELEVATION / ROOF PLAN
09		BUILDING SECTIONS
10		BUILDING SECTIONS
11		DETAILS
12		FOUNDATION STRUCTURE PLAN
13		FIRST FLOOR STRUCTURE PLAN
14		SECOND FLOOR STRUCTURE PLAN

**TK DESIGN ASSOCIATES**

ANNETTE ANGELINA GLEASON  
ARCHITECT  
No. 1201087938

CLIENT / PROJECT:  
HIGHLANDS  
SUBDIVISION  
CONDOMINIUM

DATE: 06/07/21  
SCALE: PER PLAN  
SHEET #  
**COVER**

**GENERAL NOTES**

**HANDLING AND ERECTION SPECIFICATIONS**

1. These notes are to be read in conjunction with the drawings and specifications for the project.
2. The contractor shall be responsible for the safe handling and erection of all materials and equipment used in the project.
3. All materials and equipment shall be stored in a safe and secure manner on the project site.
4. The contractor shall be responsible for the safe handling and erection of all materials and equipment used in the project.
5. All materials and equipment shall be stored in a safe and secure manner on the project site.

**SOIL REQUIREMENTS & EARTH WORK AND CONCRETE**

1. The contractor shall be responsible for the safe handling and erection of all materials and equipment used in the project.
2. All materials and equipment shall be stored in a safe and secure manner on the project site.
3. The contractor shall be responsible for the safe handling and erection of all materials and equipment used in the project.
4. All materials and equipment shall be stored in a safe and secure manner on the project site.

**REINFORCING STEEL SPECIFICATIONS**

1. Reinforcing steel shall be in accordance with the specifications of the American Institute of Steel Construction, Inc. (AISC).
2. The contractor shall be responsible for the safe handling and erection of all materials and equipment used in the project.
3. All materials and equipment shall be stored in a safe and secure manner on the project site.
4. The contractor shall be responsible for the safe handling and erection of all materials and equipment used in the project.

**CARBON MONOXIDE DETECTION**

1. The contractor shall be responsible for the safe handling and erection of all materials and equipment used in the project.
2. All materials and equipment shall be stored in a safe and secure manner on the project site.
3. The contractor shall be responsible for the safe handling and erection of all materials and equipment used in the project.
4. All materials and equipment shall be stored in a safe and secure manner on the project site.

**FINISHING AND WEATHERING**

1. The contractor shall be responsible for the safe handling and erection of all materials and equipment used in the project.
2. All materials and equipment shall be stored in a safe and secure manner on the project site.
3. The contractor shall be responsible for the safe handling and erection of all materials and equipment used in the project.
4. All materials and equipment shall be stored in a safe and secure manner on the project site.

**AREAS THAT REQUIRE SAFETY GLASSING**

1. The contractor shall be responsible for the safe handling and erection of all materials and equipment used in the project.
2. All materials and equipment shall be stored in a safe and secure manner on the project site.
3. The contractor shall be responsible for the safe handling and erection of all materials and equipment used in the project.
4. All materials and equipment shall be stored in a safe and secure manner on the project site.

**EGRESS WINDOW REQUIREMENTS**

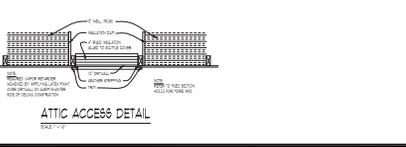
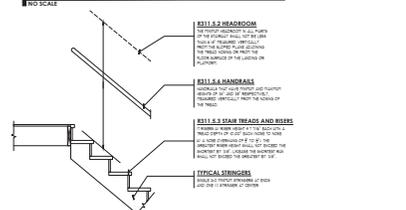
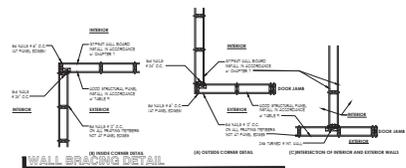
1. The contractor shall be responsible for the safe handling and erection of all materials and equipment used in the project.
2. All materials and equipment shall be stored in a safe and secure manner on the project site.
3. The contractor shall be responsible for the safe handling and erection of all materials and equipment used in the project.
4. All materials and equipment shall be stored in a safe and secure manner on the project site.

**TABLE A601.1 (SI)**

Member Designation	Member Dimensions (mm)	Minimum Vertical Reinforcement - Bar Size and Spacing (mm)												
		1	2	3	4	5	6	7	8	9	10	11	12	
1	4	100	100	100	100	100	100	100	100	100	100	100	100	100
		150	150	150	150	150	150	150	150	150	150	150	150	
		200	200	200	200	200	200	200	200	200	200	200	200	
	6	100	100	100	100	100	100	100	100	100	100	100	100	100
		150	150	150	150	150	150	150	150	150	150	150	150	
		200	200	200	200	200	200	200	200	200	200	200	200	
	8	100	100	100	100	100	100	100	100	100	100	100	100	100
		150	150	150	150	150	150	150	150	150	150	150	150	
		200	200	200	200	200	200	200	200	200	200	200	200	
	10	100	100	100	100	100	100	100	100	100	100	100	100	100
		150	150	150	150	150	150	150	150	150	150	150	150	
		200	200	200	200	200	200	200	200	200	200	200	200	

**TABLE A601.2 (SI)**

Member Designation	Member Dimensions (mm)	Minimum Vertical Reinforcement - Bar Size and Spacing (mm)											
		1	2	3	4	5	6	7	8	9	10	11	12
1	4	100	100	100	100	100	100	100	100	100	100	100	100
		150	150	150	150	150	150	150	150	150	150	150	150
		200	200	200	200	200	200	200	200	200	200	200	200
	6	100	100	100	100	100	100	100	100	100	100	100	100
		150	150	150	150	150	150	150	150	150	150	150	150
		200	200	200	200	200	200	200	200	200	200	200	200
	8	100	100	100	100	100	100	100	100	100	100	100	100
		150	150	150	150	150	150	150	150	150	150	150	150
		200	200	200	200	200	200	200	200	200	200	200	200
	10	100	100	100	100	100	100	100	100	100	100	100	100
		150	150	150	150	150	150	150	150	150	150	150	150
		200	200	200	200	200	200	200	200	200	200	200	200



6-7-21

**TK DESIGN ASSOCIATES**

CLIENT / PROJECT: PROBLEMS SUBMISSION

DATE: 06/07/2021

PROJECT: PER PLAN

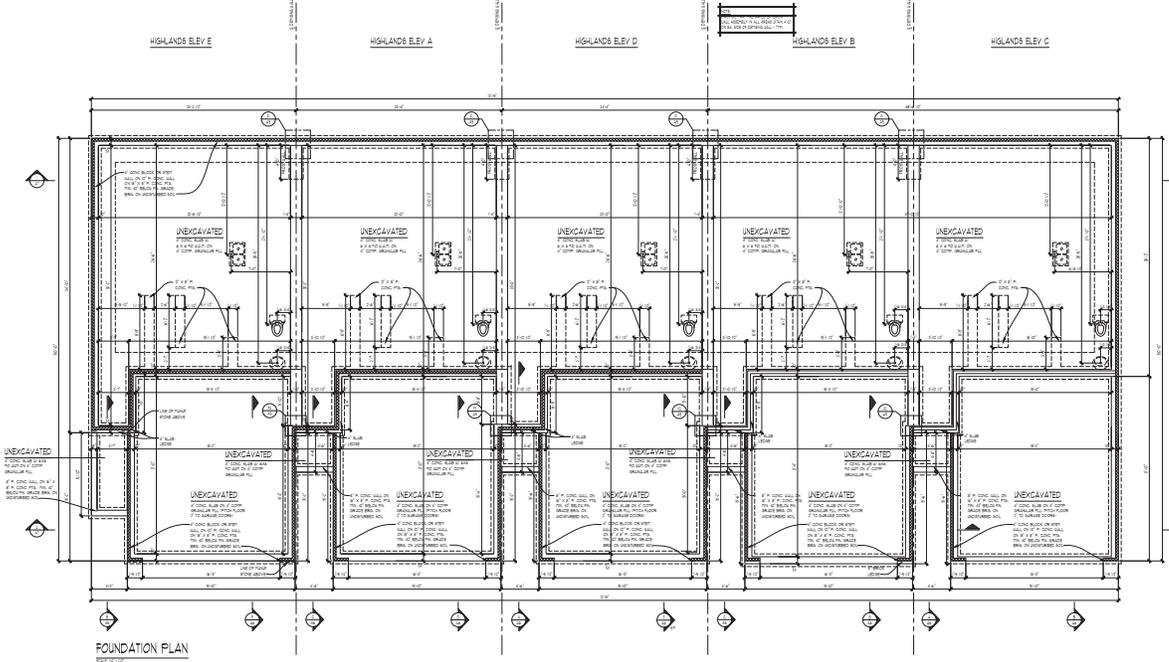
SHEET # GN1

**FOUNDATION NOTES**

NOTE  
 1. ALL FOUNDATION WALLS SHALL BE 12" THICK UNLESS OTHERWISE NOTED.  
 2. ALL FOUNDATION WALLS SHALL BE 12" THICK UNLESS OTHERWISE NOTED.  
 3. ALL FOUNDATION WALLS SHALL BE 12" THICK UNLESS OTHERWISE NOTED.  
 4. ALL FOUNDATION WALLS SHALL BE 12" THICK UNLESS OTHERWISE NOTED.  
 5. ALL FOUNDATION WALLS SHALL BE 12" THICK UNLESS OTHERWISE NOTED.  
 6. ALL FOUNDATION WALLS SHALL BE 12" THICK UNLESS OTHERWISE NOTED.  
 7. ALL FOUNDATION WALLS SHALL BE 12" THICK UNLESS OTHERWISE NOTED.  
 8. ALL FOUNDATION WALLS SHALL BE 12" THICK UNLESS OTHERWISE NOTED.  
 9. ALL FOUNDATION WALLS SHALL BE 12" THICK UNLESS OTHERWISE NOTED.  
 10. ALL FOUNDATION WALLS SHALL BE 12" THICK UNLESS OTHERWISE NOTED.

NOTE  
 1. ALL FOUNDATION WALLS SHALL BE 12" THICK UNLESS OTHERWISE NOTED.  
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 3. ALL FOUNDATION WALLS SHALL BE 12" THICK UNLESS OTHERWISE NOTED.  
 4. ALL FOUNDATION WALLS SHALL BE 12" THICK UNLESS OTHERWISE NOTED.  
 5. ALL FOUNDATION WALLS SHALL BE 12" THICK UNLESS OTHERWISE NOTED.  
 6. ALL FOUNDATION WALLS SHALL BE 12" THICK UNLESS OTHERWISE NOTED.  
 7. ALL FOUNDATION WALLS SHALL BE 12" THICK UNLESS OTHERWISE NOTED.  
 8. ALL FOUNDATION WALLS SHALL BE 12" THICK UNLESS OTHERWISE NOTED.  
 9. ALL FOUNDATION WALLS SHALL BE 12" THICK UNLESS OTHERWISE NOTED.  
 10. ALL FOUNDATION WALLS SHALL BE 12" THICK UNLESS OTHERWISE NOTED.

NOTE  
 1. ALL FOUNDATION WALLS SHALL BE 12" THICK UNLESS OTHERWISE NOTED.  
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 4. ALL FOUNDATION WALLS SHALL BE 12" THICK UNLESS OTHERWISE NOTED.  
 5. ALL FOUNDATION WALLS SHALL BE 12" THICK UNLESS OTHERWISE NOTED.  
 6. ALL FOUNDATION WALLS SHALL BE 12" THICK UNLESS OTHERWISE NOTED.  
 7. ALL FOUNDATION WALLS SHALL BE 12" THICK UNLESS OTHERWISE NOTED.  
 8. ALL FOUNDATION WALLS SHALL BE 12" THICK UNLESS OTHERWISE NOTED.  
 9. ALL FOUNDATION WALLS SHALL BE 12" THICK UNLESS OTHERWISE NOTED.  
 10. ALL FOUNDATION WALLS SHALL BE 12" THICK UNLESS OTHERWISE NOTED.



**TK DESIGN ASSOCIATES**

CLIENT / PROJECT  
 HIGHLANDS SUBDIVISION  
 FOUNDATION PLAN

DATE: 06/21/2024  
 DRAWN BY: [Name]  
 CHECKED BY: [Name]  
 PROJECT NO: 242124  
 REVISION: 0001

SCALE: PER PLAN

SHEET #  
 A-1

**PLAN NOTES**

**INTERIOR WALLS:**  
 1. ALL INTERIOR WALLS SHALL BE 1/2" GYPSUM BOARD ON 2x4 STUDS @ 16" O.C.  
 2. ALL INTERIOR WALLS SHALL BE FINISHED WITH 5/8" DRYWALL ON 2x4 STUDS @ 16" O.C.

**EXTERIOR WALLS (CONCRETE):**  
 1. EXTERIOR WALLS SHALL BE 12" THICK CONCRETE ON 12" SAND FILL.  
 2. EXTERIOR WALLS SHALL BE FINISHED WITH 1/2" GYPSUM BOARD ON 2x4 STUDS @ 16" O.C.

**EXTERIOR WALLS (BRICK):**  
 1. EXTERIOR WALLS SHALL BE 8" THICK BRICK ON 4" SAND FILL.  
 2. EXTERIOR WALLS SHALL BE FINISHED WITH 1/2" GYPSUM BOARD ON 2x4 STUDS @ 16" O.C.

**ROOFING:**  
 1. ROOF SHALL BE 2" POLYURETHANE FOAM INSULATION ON 2x8 RAFTERS @ 16" O.C.  
 2. ROOF SHALL BE FINISHED WITH 1/2" GYPSUM BOARD ON 2x4 STUDS @ 16" O.C.

**FLOORING:**  
 1. FLOOR SHALL BE 1/2" GYPSUM BOARD ON 2x4 STUDS @ 16" O.C.  
 2. FLOOR SHALL BE FINISHED WITH 1/2" GYPSUM BOARD ON 2x4 STUDS @ 16" O.C.

**CEILING:**  
 1. CEILING SHALL BE 1/2" GYPSUM BOARD ON 2x4 STUDS @ 16" O.C.  
 2. CEILING SHALL BE FINISHED WITH 1/2" GYPSUM BOARD ON 2x4 STUDS @ 16" O.C.

**DOORS:**  
 1. ALL DOORS SHALL BE 1 3/4" THICK SOLID CORE DOORS.  
 2. ALL DOORS SHALL BE FINISHED WITH 1/2" GYPSUM BOARD ON 2x4 STUDS @ 16" O.C.

**WINDOWS:**  
 1. ALL WINDOWS SHALL BE 1/2" GYPSUM BOARD ON 2x4 STUDS @ 16" O.C.  
 2. ALL WINDOWS SHALL BE FINISHED WITH 1/2" GYPSUM BOARD ON 2x4 STUDS @ 16" O.C.

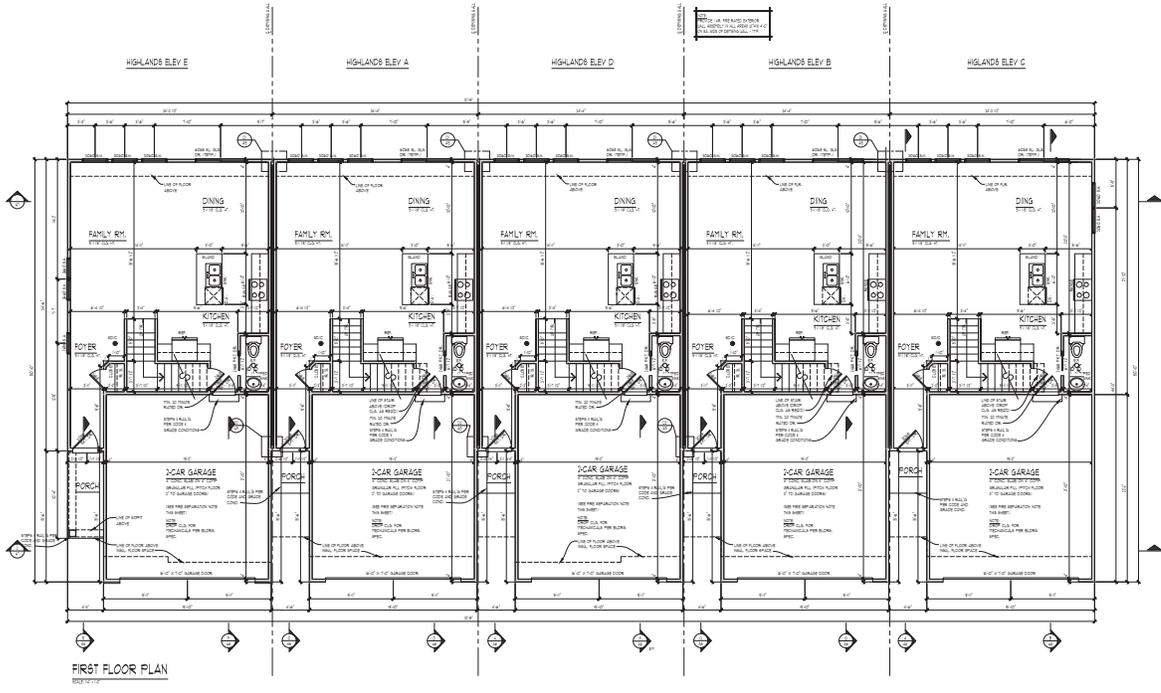
**NOTE**  
 ALL INTERIOR WALLS SHALL BE 1/2" GYPSUM BOARD ON 2x4 STUDS @ 16" O.C.

**NOTE**  
 ALL EXTERIOR WALLS SHALL BE 12" THICK CONCRETE ON 12" SAND FILL.

**NOTE**  
 ALL ROOFING SHALL BE 2" POLYURETHANE FOAM INSULATION ON 2x8 RAFTERS @ 16" O.C.

**NOTE**  
 ALL FLOORING SHALL BE 1/2" GYPSUM BOARD ON 2x4 STUDS @ 16" O.C.

**NOTE**  
 ALL CEILING SHALL BE 1/2" GYPSUM BOARD ON 2x4 STUDS @ 16" O.C.



**FIRST FLOOR PLAN**  
 SHEET # A-2



**TK DESIGN ASSOCIATES**

CLIENT / PROJECT:  
 HIGHLANDS SUBDIVISION

DATE: 06/20/24  
 DRAWN BY: [Name]  
 CHECKED BY: [Name]  
 PROJECT NO: 242124  
 SHEET NO: A-2

**PLAN NOTES**

**INTERIOR WALLS:**  
 1. ALL INTERIOR WALLS SHALL BE 1/2" THICK UNLESS NOTED OTHERWISE.  
 2. ALL INTERIOR WALLS SHALL BE FINISHED WITH 5/8" GYP BOARD ON BOTH SIDES UNLESS NOTED OTHERWISE.

**EXTERIOR WALLS (CONCRETE):**  
 1. ALL EXTERIOR WALLS SHALL BE 12" THICK UNLESS NOTED OTHERWISE.  
 2. ALL EXTERIOR WALLS SHALL BE FINISHED WITH 5/8" GYP BOARD ON BOTH SIDES UNLESS NOTED OTHERWISE.

**EXTERIOR WALLS (BRICK):**  
 1. ALL EXTERIOR WALLS SHALL BE 8" THICK UNLESS NOTED OTHERWISE.  
 2. ALL EXTERIOR WALLS SHALL BE FINISHED WITH 5/8" GYP BOARD ON BOTH SIDES UNLESS NOTED OTHERWISE.

**ROOF:**  
 1. ROOF SHALL BE 2" THICK UNLESS NOTED OTHERWISE.  
 2. ROOF SHALL BE FINISHED WITH 5/8" GYP BOARD ON BOTH SIDES UNLESS NOTED OTHERWISE.

**FLOORING:**  
 1. ALL FLOORING SHALL BE 1/2" THICK UNLESS NOTED OTHERWISE.  
 2. ALL FLOORING SHALL BE FINISHED WITH 5/8" GYP BOARD ON BOTH SIDES UNLESS NOTED OTHERWISE.

**CEILING:**  
 1. ALL CEILING SHALL BE 5/8" GYP BOARD UNLESS NOTED OTHERWISE.  
 2. ALL CEILING SHALL BE FINISHED WITH 5/8" GYP BOARD ON BOTH SIDES UNLESS NOTED OTHERWISE.

**DOORS:**  
 1. ALL DOORS SHALL BE 1 3/4" THICK UNLESS NOTED OTHERWISE.  
 2. ALL DOORS SHALL BE FINISHED WITH 5/8" GYP BOARD ON BOTH SIDES UNLESS NOTED OTHERWISE.

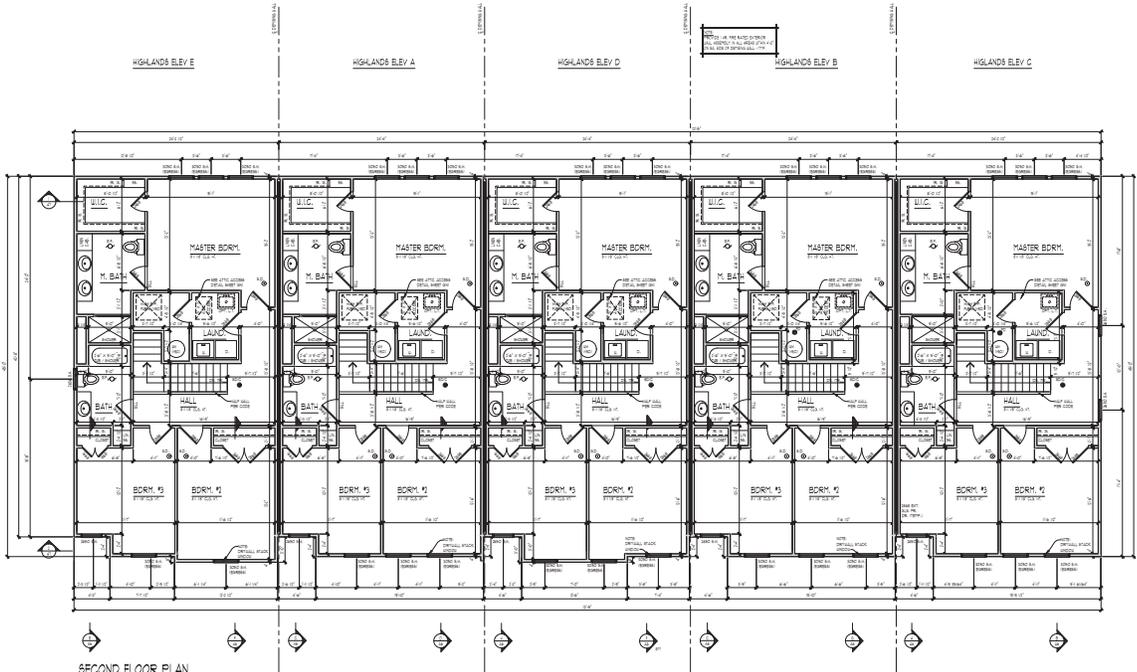
**WINDOWS:**  
 1. ALL WINDOWS SHALL BE 1 3/4" THICK UNLESS NOTED OTHERWISE.  
 2. ALL WINDOWS SHALL BE FINISHED WITH 5/8" GYP BOARD ON BOTH SIDES UNLESS NOTED OTHERWISE.

**NOTE**  
 ALL INTERIOR WALLS SHALL BE 1/2" THICK UNLESS NOTED OTHERWISE.

**NOTE**  
 ALL EXTERIOR WALLS SHALL BE 12" THICK UNLESS NOTED OTHERWISE.

**NOTE**  
 ALL FLOORING SHALL BE 1/2" THICK UNLESS NOTED OTHERWISE.

**NOTE**  
 ALL CEILING SHALL BE 5/8" GYP BOARD UNLESS NOTED OTHERWISE.



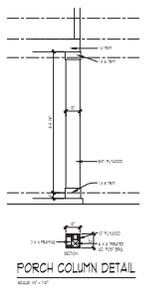
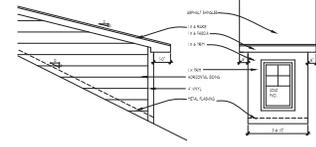
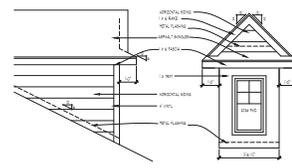
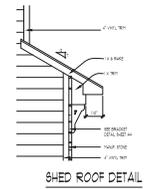
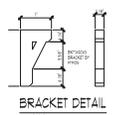
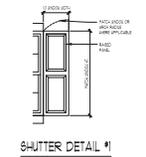
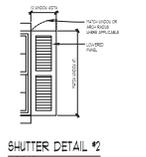
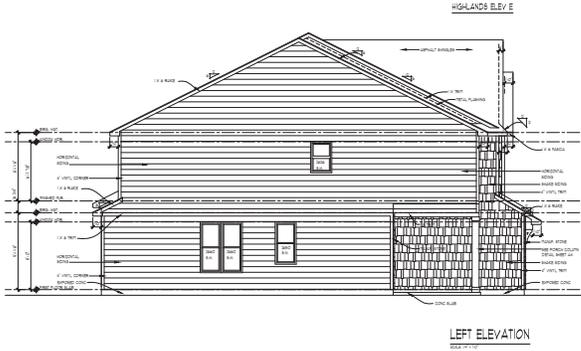
SECOND FLOOR PLAN  
 SEE NOTES



**TK DESIGN ASSOCIATES**

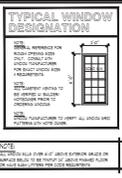
CLIENT / PROJECT:  
 HIGHLANDS SUBDIVISION  
 HOUSING

DATE: 06/15/21  
 DRAWN BY: [Name]  
 CHECKED BY: [Name]  
 SCALE: PER PLAN  
 SHEET #  
 A-3



**ELEVATION NOTES**

1. ALL DIMENSIONS TO BE FINISHED UNLESS NOTED OTHERWISE.
2. FINISHES TO BE AS SHOWN UNLESS NOTED OTHERWISE.
3. MATERIALS TO BE USED SHALL BE OF THE QUALITY AND MANUFACTURE SPECIFIED.
4. METAL FLASHING AS REQUIRED BY CODE.
5. ROOF SLOPE SHALL BE AS SHOWN OR AS NOTED.
6. FINISHES TO BE AS SHOWN UNLESS NOTED OTHERWISE.
7. FINISHES TO BE AS SHOWN UNLESS NOTED OTHERWISE.
8. FINISHES TO BE AS SHOWN UNLESS NOTED OTHERWISE.
9. FINISHES TO BE AS SHOWN UNLESS NOTED OTHERWISE.
10. FINISHES TO BE AS SHOWN UNLESS NOTED OTHERWISE.



**TK DESIGN ASSOCIATES**

**CLIENT / PROJECT:**  
HIGHLANDS SUBDIVISION

**DATE:** 06/15/2024  
**SCALE:** AS SHOWN  
**PROJECT NO.:** 242224  
**DESCRIPTION:** ARCHIT.

**SHEET #**  
A-4



RIGHT ELEVATION  
ELEVATION

**ELEVATION NOTES**

1. ALL DIMENSIONS TO BE FINISHED UNLESS NOTED OTHERWISE.
2. FINISH TO FACE UNLESS NOTED OTHERWISE.
3. MATERIALS TO BE SPECIFIED PER MANUFACTURER'S RECOMMENDATION.
4. METAL FLASHING AS REQUIRED BY CODE.
5. ROOF SLOPE SHALL BE AS REQUIRED BY CODE.
6. PROVIDE SLOPE TO DRAINAGE FOR ROOFING OF ALL ROOFS. DRAINAGE SHALL BE TO THE STREET OR TO A DRAINAGE SYSTEM AS REQUIRED BY CODE.

**NOTE**

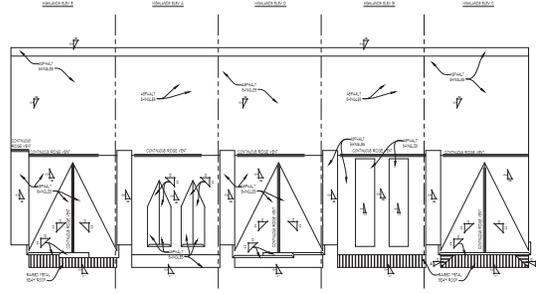
ALL DIMENSIONS TO BE FINISHED UNLESS NOTED OTHERWISE.

**TYPICAL WINDOW DESIGNATION**



**NOTE**

ALL DIMENSIONS TO BE FINISHED UNLESS NOTED OTHERWISE.



ROOF PLAN  
ELEVATION

**ATC VENTILATION CALC.**

ALL OF THE ABOVE MUST BE MET TO OBTAIN THE ATC VENTILATION CALC. THE ATC VENTILATION CALC. IS A GUIDE ONLY AND DOES NOT GUARANTEE THE ATC VENTILATION CALC. IS A GUIDE ONLY AND DOES NOT GUARANTEE THE ATC VENTILATION CALC.



Annette Angelina Gleason  
6-7-21



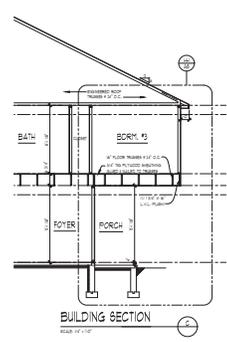
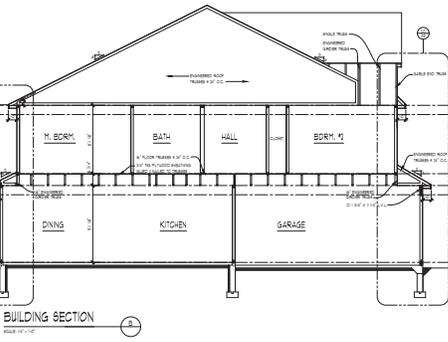
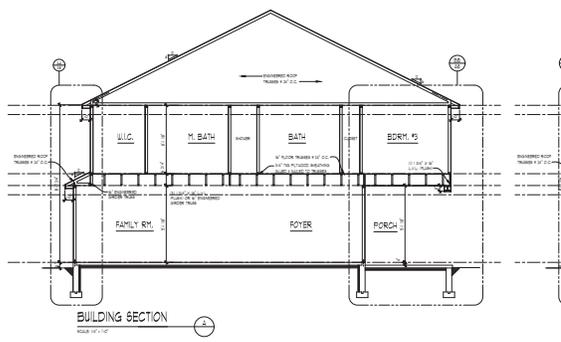
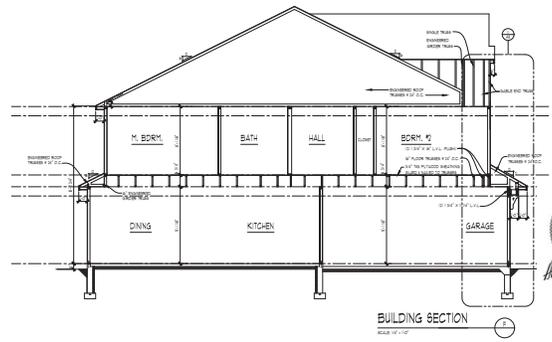
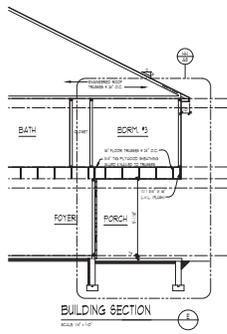
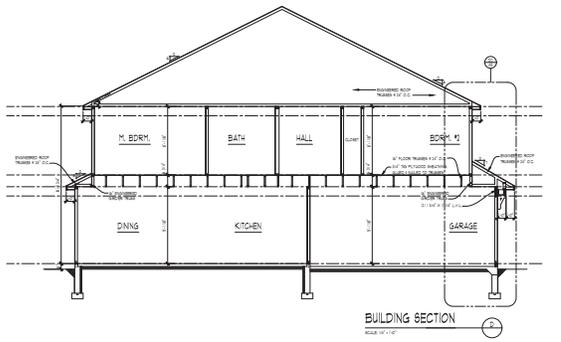
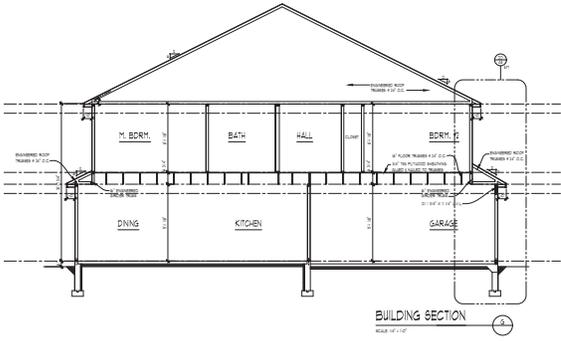
REAR ELEVATION  
ELEVATION

**TK DESIGN ASSOCIATES**

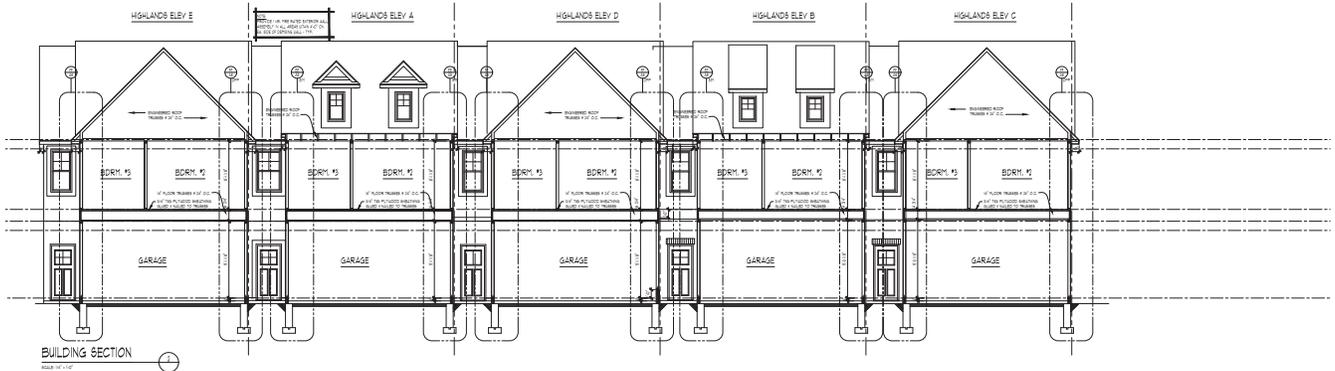
ANNETTE ANGELINA GLEASON  
ARCHITECT  
No. 190087938  
State of Michigan

CLIENT / PROJECT  
HIGHLANDS SUBDIVISION  
LANSING, MI

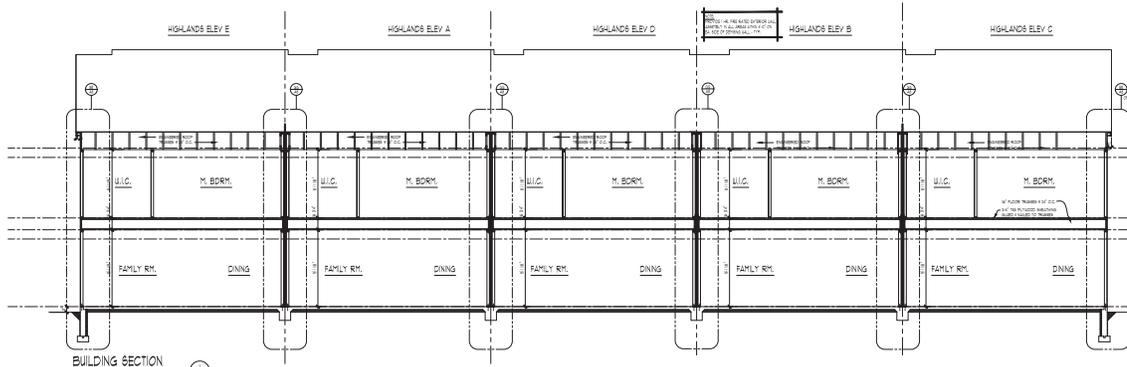
DATE: 06/07/21  
SCALE: AS SHOWN  
SHEET #  
A-5



	<b>TK DESIGN ASSOCIATES</b> <small>ARCHITECTS</small>
	<small>1000 W. WASHINGTON AVE. SUITE 100          ANN ARBOR, MI 48106-1500          TEL: 734.769.1234 FAX: 734.769.1235          WWW.TKDESIGNASSOCIATES.COM</small>
<b>CLIENT / PROJECT:</b> PROHLANDS SUBDIVISION COLONY	<b>DATE:</b> 06/15/2021 <b>DESIGNER:</b> AG <b>PROJECT NO.:</b> 190189785 <b>SCALE:</b> AS SHOWN <b>REVISION:</b> 06/21/21
<b>SCALE:</b> PER PLAN	<b>SHEET #</b> A-6



BUILDING SECTION  
SCALE: 1/8" = 1'-0"



BUILDING SECTION  
SCALE: 1/8" = 1'-0"



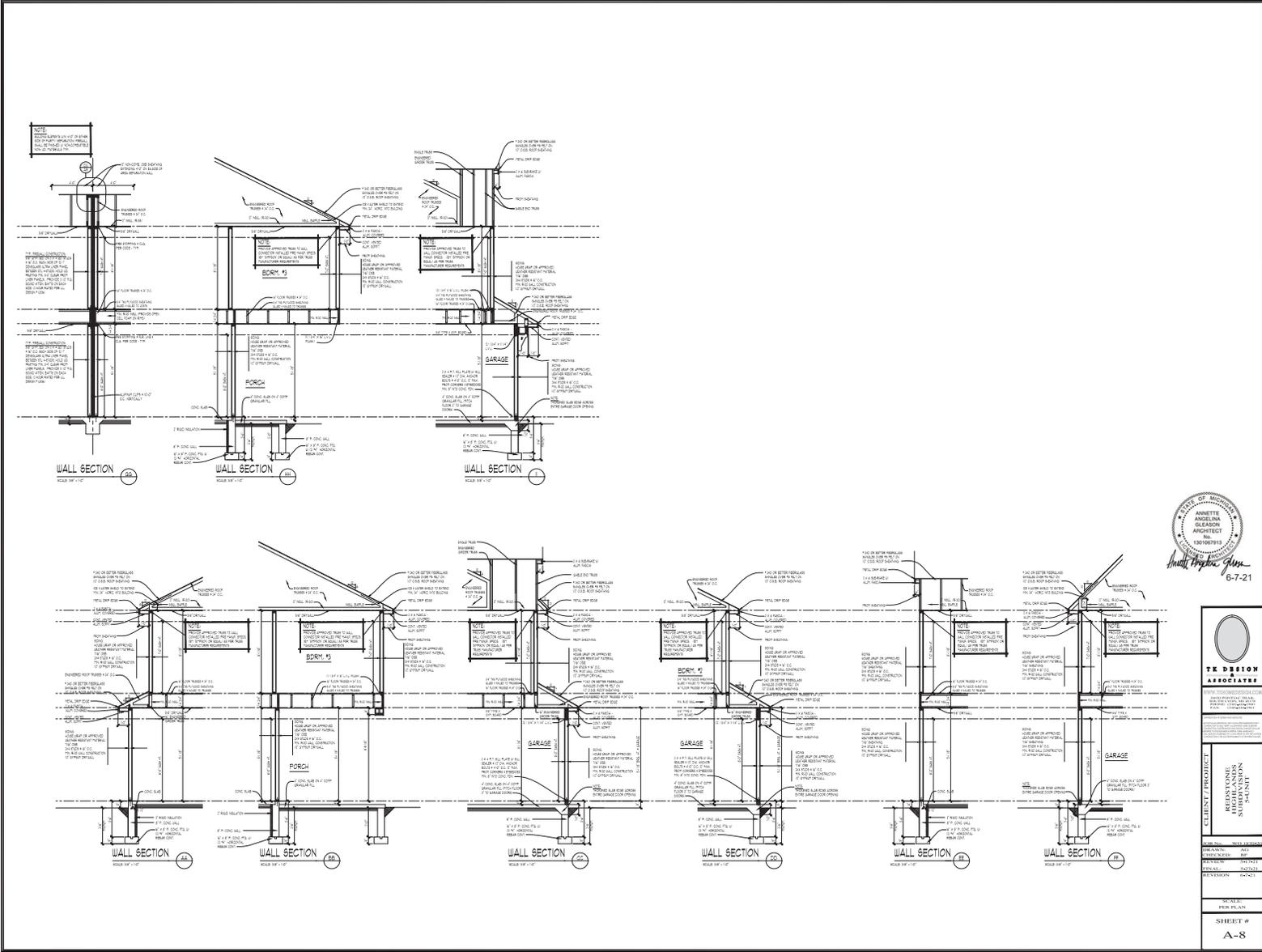
**T&D DESIGN ASSOCIATES**

CLIENT / PROJECT:  
HIGHLANDS SUBDIVISION  
LANSING

DATE: 06/14/2021  
DRAWN BY: AG  
CHECKED BY: BT  
DATE: 06/14/21  
SCALE: 1/8" = 1'-0"

SCALE:  
PER PLAN

SHEET #  
A-7



6-7-21  
Annette Angeline Gleason

**T.K. DESIGN ASSOCIATES**

CLIENT / PROJECT: HOPLANDS SUBDIVISION

DATE: 06/15/2021  
 SHEET NO: 6-7  
 PROJECT NO: 242224  
 DESIGNER: T.K. DESIGN ASSOCIATES

SCALE: PER PLAN

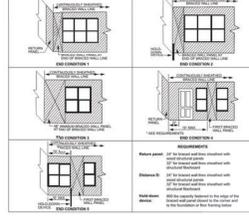
SHEET #  
**A-8**





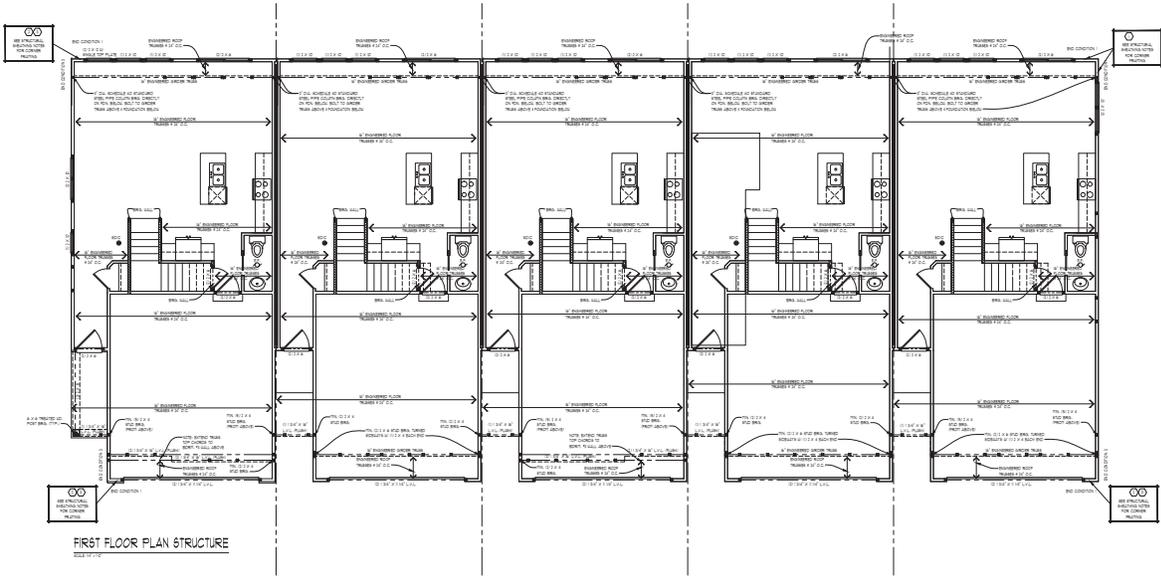
**REQUIREMENT: Glass of glazed wall with continuous shading**

Each end of a glazed wall with continuous shading shall be one of the conditions shown in Figure 9006.02C.



See 9006.02B for details of glazed wall with continuous shading.

- |   |  |
|---|--|
| <p><b>NOTE</b></p> <p>1. SEE 9006.02B FOR DETAILS OF GLAZED WALL WITH CONTINUOUS SHADING.</p> | <p><b>REQUIREMENT</b></p> <p>1. SEE 9006.02B FOR DETAILS OF GLAZED WALL WITH CONTINUOUS SHADING.</p> |
| <p><b>NOTE</b></p> <p>2. SEE 9006.02B FOR DETAILS OF GLAZED WALL WITH CONTINUOUS SHADING.</p> | <p><b>REQUIREMENT</b></p> <p>2. SEE 9006.02B FOR DETAILS OF GLAZED WALL WITH CONTINUOUS SHADING.</p> |
| <p><b>NOTE</b></p> <p>3. SEE 9006.02B FOR DETAILS OF GLAZED WALL WITH CONTINUOUS SHADING.</p> | <p><b>REQUIREMENT</b></p> <p>3. SEE 9006.02B FOR DETAILS OF GLAZED WALL WITH CONTINUOUS SHADING.</p> |
| <p><b>NOTE</b></p> <p>4. SEE 9006.02B FOR DETAILS OF GLAZED WALL WITH CONTINUOUS SHADING.</p> | <p><b>REQUIREMENT</b></p> <p>4. SEE 9006.02B FOR DETAILS OF GLAZED WALL WITH CONTINUOUS SHADING.</p> |
| <p><b>NOTE</b></p> <p>5. SEE 9006.02B FOR DETAILS OF GLAZED WALL WITH CONTINUOUS SHADING.</p> | <p><b>REQUIREMENT</b></p> <p>5. SEE 9006.02B FOR DETAILS OF GLAZED WALL WITH CONTINUOUS SHADING.</p> |
| <p><b>NOTE</b></p> <p>6. SEE 9006.02B FOR DETAILS OF GLAZED WALL WITH CONTINUOUS SHADING.</p> | <p><b>REQUIREMENT</b></p> <p>6. SEE 9006.02B FOR DETAILS OF GLAZED WALL WITH CONTINUOUS SHADING.</p> |



**TK DESIGN ASSOCIATES**

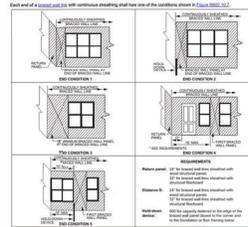
CLIENT / PROJECT: **PROVIDERS SUBDIVISION**

DATE: 08/14/2014

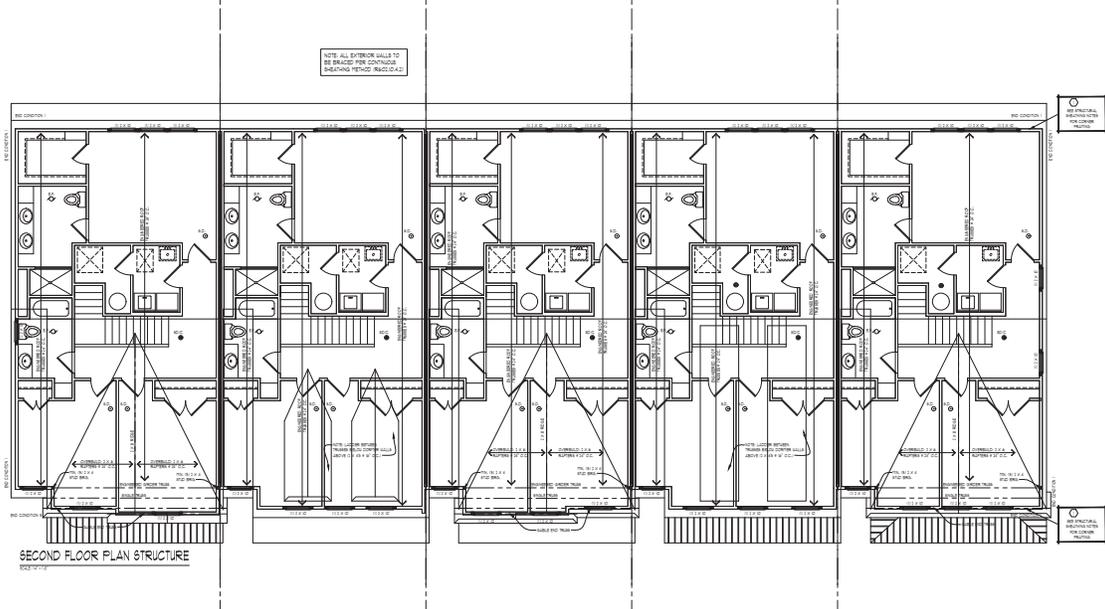
SCALE: **PER PLAN**

SHEET # **S-2**

**FIGURE 10-7 Detail of structural floor with continuous slabting**



- NOTES:**
1. SEE SECTION 10-1 FOR DETAILS OF ALL WALLS.
  2. SEE SECTION 10-2 FOR DETAILS OF ALL FLOORS.
  3. SEE SECTION 10-3 FOR DETAILS OF ALL ROOFS.
  4. SEE SECTION 10-4 FOR DETAILS OF ALL FOUNDATIONS.
  5. SEE SECTION 10-5 FOR DETAILS OF ALL STAIRS.
  6. SEE SECTION 10-6 FOR DETAILS OF ALL ELEVATORS.
  7. SEE SECTION 10-7 FOR DETAILS OF ALL MECHANICAL ROOMS.
  8. SEE SECTION 10-8 FOR DETAILS OF ALL ELECTRICAL ROOMS.
  9. SEE SECTION 10-9 FOR DETAILS OF ALL TELEPHONE ROOMS.
  10. SEE SECTION 10-10 FOR DETAILS OF ALL JANETTES.
  11. SEE SECTION 10-11 FOR DETAILS OF ALL RESTROOMS.
  12. SEE SECTION 10-12 FOR DETAILS OF ALL KITCHENS.
  13. SEE SECTION 10-13 FOR DETAILS OF ALL BATHS.
  14. SEE SECTION 10-14 FOR DETAILS OF ALL BEDROOMS.
  15. SEE SECTION 10-15 FOR DETAILS OF ALL LIVING AREAS.
  16. SEE SECTION 10-16 FOR DETAILS OF ALL DINING AREAS.
  17. SEE SECTION 10-17 FOR DETAILS OF ALL BREAKFAST ROOMS.
  18. SEE SECTION 10-18 FOR DETAILS OF ALL PORCHES.
  19. SEE SECTION 10-19 FOR DETAILS OF ALL PATIOS.
  20. SEE SECTION 10-20 FOR DETAILS OF ALL TERRACES.



**TE DESIGN ASSOCIATES**

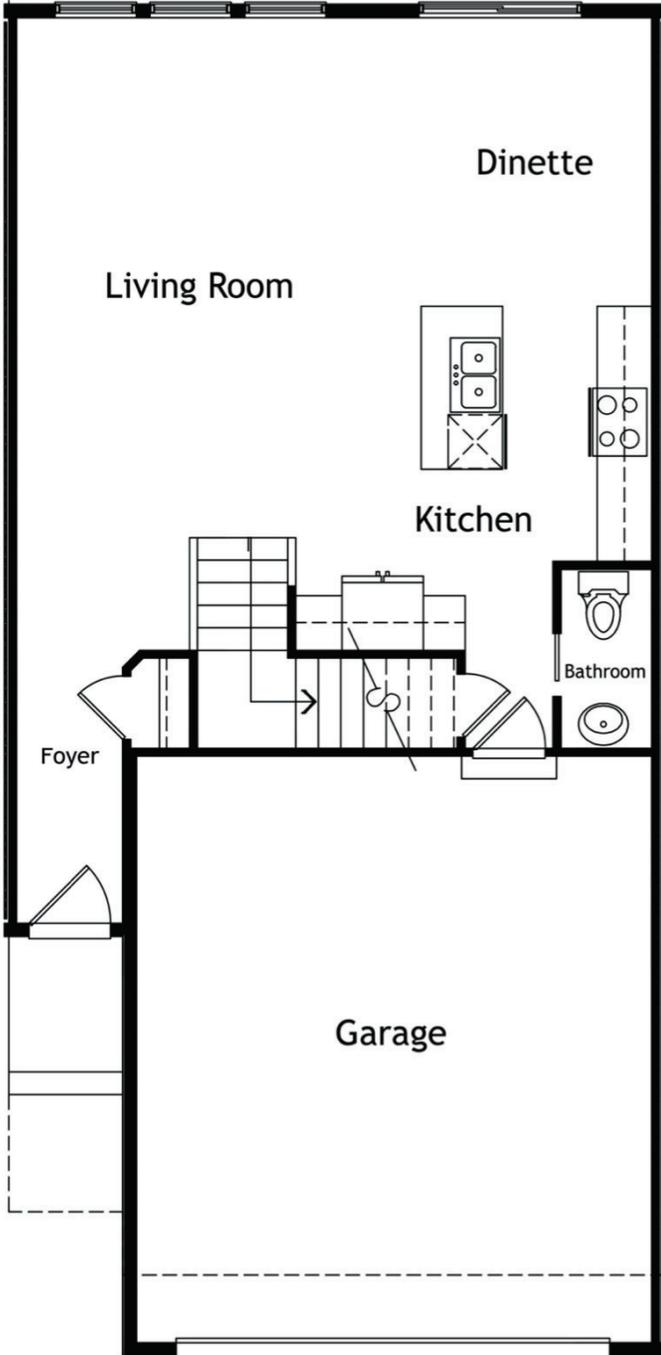
CLIENT / PROJECT:  
 HOUSING  
 HOURLANDS  
 SUBDIVISION  
 HOUSING

DATE: 06/07/2021  
 DRAWN BY: JAG  
 CHECKED BY: JAG  
 PROJECT NO.: 242224  
 REVISION: 0001

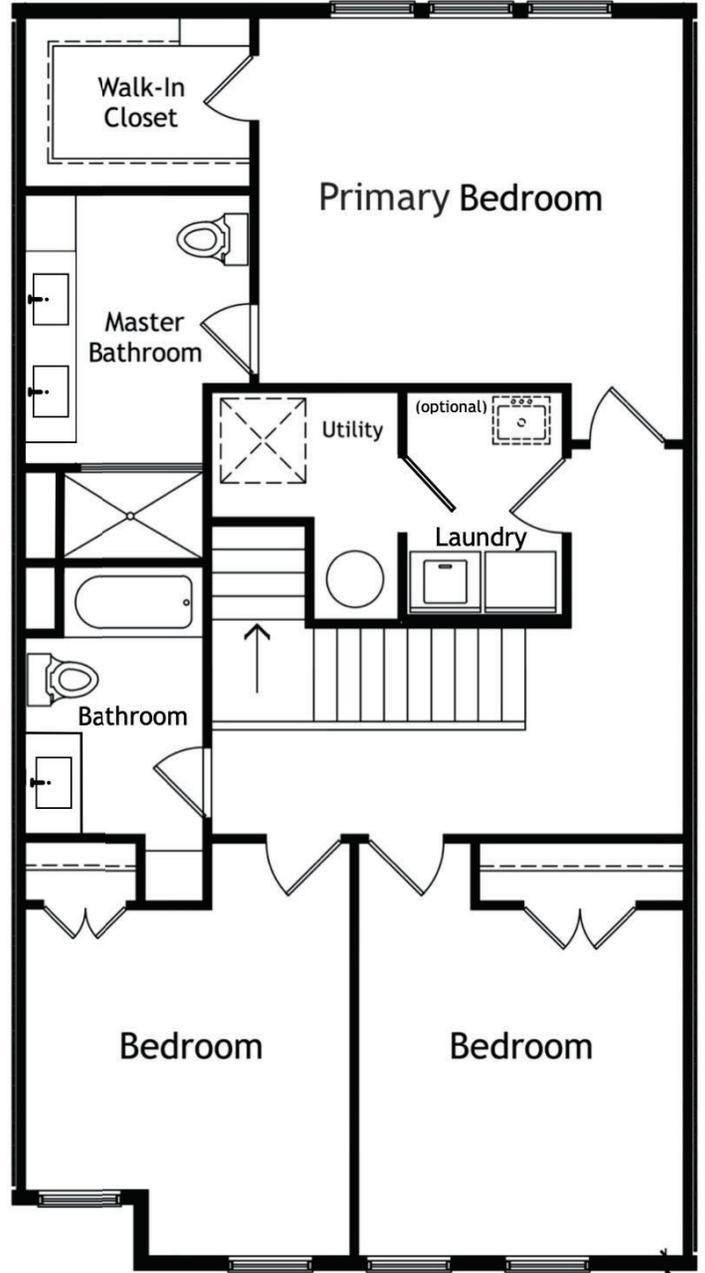
SCALE:  
 PER PLAN

SHEET #  
 S-3

Main Level - 700 Square



Second Floor - 1030 Square Feet





**MASTER DEED  
of  
FOREST GATE**

**(Act 59, Public Acts of 1978)  
as amended**

Allegan County Condominium Subdivision Plan No. \_\_\_\_\_

- (1) Master Deed establishing Forest Gate, a Condominium Project.
- (2) Exhibit A to Master Deed: Condominium Bylaws of Forest Gate.
- (3) Exhibit B to Master Deed: Condominium Subdivision Plan for Forest Gate.
- (4) Exhibit C to Master Deed: Mortgagee's Consent to Master Deed
- (5) Exhibit D to Master Deed: Affidavit of Mailing as to Notices required by Section 71 of the Michigan Condominium Act.

No interest in real estate is being conveyed by this Master Deed, no revenue stamps are required.

This instrument drafted by  
and after recording return to:

Steven A. Cook  
2951 Thornhills Ave. SE  
Grand Rapids, MI 49546

# MASTER DEED of FOREST GATE

(Act 59, Public Acts of 1978)  
as amended

THIS MASTER DEED is made and executed on this \_\_\_\_ day of \_\_\_\_\_, 2022, by \_\_\_\_\_, LLC, a Michigan limited liability company, of \_\_\_\_\_ (the "Developer"), upon the terms and conditions set forth below.

## ARTICLE 1 ESTABLISHMENT OF CONDOMINIUM

1.1 Project. The Developer is engaged in the development of a residential condominium project to be known as Forest Gate (the "Project"), in the City of the Village of Douglas, Allegan County, Michigan, on a parcel of land as described in Article 2.1.

1.2 Establishment of Condominium. The Developer desires, by recording this Master Deed together with the Condominium Bylaws attached as Exhibit A and the Condominium Subdivision Plan attached as Exhibit B to establish the real property described in Article 2.1 (the "Property"), together with the improvements located and to be located on such Property, as a condominium project (the "Condominium") under the provisions of the Michigan Condominium Act, as amended (the "Act"). The Developer does hereby declare that upon the recording of this Master Deed, the Condominium shall be a Project under the Act and the Project shall be held, conveyed, encumbered, leased, rented, occupied, improved, or in any other manner used, subject to the provisions of the Act and to the covenants, conditions, restrictions, uses, limitations, and affirmative obligations contained in this Master Deed, all of which shall be deemed to run with the land and to be a burden upon and a benefit to the Developer, its successors and assigns, and to any persons who may acquire or own an interest in such real property, their grantees, successors, heirs, personal representatives, administrators, and assigns.

1.3 Project Description. The Project is a residential condominium that consists of 88 Condominium Units (the "Units"). The Condominium Units that may be developed in the Project, including the number, boundaries, dimensions, and area of each Unit, are shown on the Condominium Subdivision Plan. Each of the Units is capable of individual use by reason of having its own entrance from and exit to a Common Element of the Project.

1.4 Co-Owner Rights. Each owner of a Unit ("Co-owner") in the Project shall have an exclusive property right to the Co-owner's Unit and to the Limited Common Elements that are appurtenant to the Co-owner's Unit, and shall have an undivided right to share with other Co-owners in the ownership and use of the General Common Elements of the Project as described in this Master Deed.

**ARTICLE 2**  
**LEGAL DESCRIPTION**

2.1 The Land. The land upon which the Project is situated, and which is submitted to Condominium ownership pursuant to the provisions of the Act, is described as follows:

[Insert legal description.]

2.2 Other Interests. The property submitted to condominium ownership by this Master Deed is subject to local zoning, building and use ordinances, to easements, restrictions and agreements of record, to the rights of the public and of any governmental unit in any part of the property taken, used or deeded for street or highway uses.

**ARTICLE 3**  
**DEFINITIONS**

3.1 Definitions. Certain terms used in this Master Deed are defined terms and have the meaning given them in the text where they are defined, and the same meaning shall be ascribed to the term in various other instruments with regard to the Project such as, by way of example and not limitation, the Articles of Incorporation, Association Bylaws and Rules and Regulations of the Association, and deeds, mortgages, liens, land contracts, easements and other instruments affecting the establishment of, or transfer of, interests in the Project. As used in such documents, unless the context otherwise requires:

- a. "Act" or "Condominium Act" means the Michigan Condominium Act, being Act 59 of the Public Acts of 1978, as amended.
- b. "Arbitration Association" means the American Arbitration Association or its successor.
- c. "Association of Co-owners" or "Association" means Forest Gate Condominium Association, the Michigan non-profit corporation of which all Co-owners shall be members, which shall administer, operate, manage and maintain the Project.
- d. "Association Bylaws" means the corporate bylaws of the Association.

e. "City" means the City of Douglas or the City of the Village of Douglas in Allegan County, Michigan, or its successors. When approval or other action of the City is required by the Condominium Documents, the approval or action shall be by the governing body of the City or by a committee, commission or person designated by the governing body.

f. "Common Elements," where used without modification, means the portions of the Project other than the Condominium Units, including all General and Limited Common Elements described in Article 4 of this Master Deed.

g. "Condominium Bylaws" means Exhibit A to this Master Deed, which are the Bylaws setting forth the substantive rights and obligations of the Co-owners with respect to the Project.

h. "Condominium Documents" means and includes this Master Deed and all of its exhibits, the Articles of Incorporation and Bylaws of the Association, the Rules and Regulations of the Association and any other instrument referred to in this Master Deed which affects the rights and obligations of a Co-owner in the Condominium.

i. "Condominium property" means the land described in Article 2, as the same may be amended, together with all structures, improvements, easements, rights, and appurtenances located on or belonging to such property.

j. "Condominium Subdivision Plan", or "Subdivision Plan" means Exhibit B to this Master Deed, which is the set of the site, survey, floor plans, and other drawings depicting the real property and existing and proposed improvements to be included in the Project.

k. "Condominium Unit" or "Unit" means that portion of the Project which is designed and intended for separate ownership and use by a Co-owner, as described in this Master Deed.

l. "Co-owner" means the person, firm, corporation, partnership, association, trust or other legal entity or any combination of persons or entities who or which owns a Condominium Unit in the Project, including the vendee of any executory land contract of purchase if the land contract does not expressly designate otherwise. The term "Owner," wherever used, shall be synonymous with the term "Co-owner."

m. "Developer" means \_\_\_\_\_, LLC, a Michigan limited liability company, which has made and executed this Master Deed, and its successors and assigns. Both "successors" and "assigns" shall always be deemed to be included within the term "Developer" whenever, however, and wherever such term is used in the Condominium Documents.

n. "Development and Sales Period", for purposes of the Condominium Documents and the rights reserved by the Developer and its successors, shall be deemed

to continue for as long as the Developer or its successors continue to own and offer for sale any Unit in the Project that has not been previously conveyed or leased.

o. "General Common Elements" means those Common Elements of the Project described in Article 4.1 of this Master Deed which are for the use and enjoyment of all Co-owners of the Project.

o. "Limited Common Elements" means those Common Elements of the Project described in Article 4.2 of this Master Deed which are reserved for the exclusive use of the Co-owner(s) of a specified Unit or Units.

p. "Master Deed" means this document, together with the exhibits attached to it and all amendments to this document which may be adopted in the future.

q. "Percentage of Value" means the percentage assigned to each Unit by this Master Deed, which is determinative of the value of a Co-owner's vote at meetings of the Association when voting by value or by number and value, and the proportionate share of each Co-owner's undivided interest in the Common Elements of the Project.

r. "Project" or "Condominium" means Forest Gate, a residential condominium development established in conformity with the provisions of the Act.

t. "Transitional Control Date" means the date on which a Board of Directors for the Association takes office pursuant to an election in which the votes that may be cast by eligible Co-owners unaffiliated with the Developer exceed the votes which may be cast by the Developer.

3.2 Gender and Number. Whenever any reference is made to one gender, it will be assumed to include any and all genders where such reference is appropriate; similarly, whenever a reference is made to the singular, the reference shall be assumed to include the plural where such reference is appropriate.

#### **ARTICLE 4** **COMMON ELEMENTS**

4.1 General Common Elements. The General Common Elements are:

a. Real Estate. The Property described in Article 2.1 of this Master Deed, including easement interests benefiting the Condominium including, but not limited to, interests for ingress, egress, and utility installation and other purposes, over, across, and through non-Condominium properties, but excluding individual Units in the Project and the real estate designated as Limited Common Elements.

b. Landscape Improvements. The lawns, trees, shrubs and other landscape improvements, including any block, boulder, concrete or wood retaining walls, located within the Common Elements of the Project.

c. Access Paths. The private roadways and trails, if any, of the Project, and any sidewalks which do not lead to specific Unit(s), all traffic signs, gates, fencing and other equipment used in association with such access paths.

d. Wiring Networks. Except as provided in Section 4.2(a), the electrical, telephone, cable television, internet access systems and other telecommunications and service wiring networks throughout the Common Elements of the Project, including those transmission lines contained within common walls, floors and ceilings, but not including electrical fixtures, plugs and switches within any Unit.

e. Gas. The natural gas distribution system, if any, throughout the Common Elements of the Project, including those distribution lines contained within the common walls, floors and ceilings, but not including any gas fixtures or appliances within any Unit.

f. Stormwater Drainage System. The stormwater drainage system throughout the Common Elements of the Project, including drainage ditches, culverts, pipes, stormwater detention ponds or retaining basins and any sump pump installed by the Developer within the basement of any Unit.

g. Entry Improvements. The entry signage and other improvements, if any, located at or near the entry or entries to the Project.

h. Recreational Areas. The recreational areas, if any, designated on the Condominium Subdivision Plan for common use and any equipment or structures associated with the recreational areas.

i. Water. The underground sprinkling system, including wells, pumps and/or treatment systems, if any, and any water distribution system throughout the Common Elements of the Project, including those distribution lines contained within common walls, floors and ceilings, but not including plumbing fixtures within any Unit.

j. Sanitary Sewer. Any sanitary sewer system throughout the Common Elements of the Project, including those service lines contained within common walls, floors and ceilings, but excluding any parts of the system owned by any governmental entity or public authority.

k. Building Elements. The foundations, roofs, perimeter walls, unit dividing walls and ceilings (including the drywall portion of the wall or ceiling, but not including the finished surface of the drywall, which is a Limited Common Element) as shown on Exhibit B (including chimneys), and floors (including the subfloor portion of the floor, but not including the finished surface of the floor, which is a Limited Common Element).

l. Common Spaces. The common attic spaces, and the portions of any garage, other building or parking area not otherwise designated as a Unit or Limited Common Element on the Condominium Subdivision Plan.

m. Common Lighting. Any system of lighting intended to illuminate the common access paths for the Project, but excluding any lighting designated as a Limited Common Element.

n. Privacy Walls. The block, brick, wood and/or stucco privacy walls, if any, in the project.

o. Four Season Porches. The foundations or pads, perimeter walls (excluding doors), ceilings and floors of any four season porch.

p. Miscellaneous. All other Common Elements of the Project which are not designated as Limited Common Elements and which are not enclosed within the boundaries of a Unit, and which are intended for common use or are necessary to the existence, upkeep, or safety of the Project.

q. Ownership of utility and telecommunication systems. Some or all of the utility systems and/or cable television lines (including mains and services leads) and/or equipment may be owned by a governmental entity, public authority or utility or cable television company that is providing the pertinent service. Accordingly, such utility and/or cable television lines, systems and equipment shall be General Common Elements only to the extent of the Co-owners' or the Association's interest, if any, in them, and Developer makes no warranty whatsoever with respect to the nature or extent of such interest.

#### 4.2 Limited Common Elements. The Limited Common Elements are:

a. Cable and Utility Service Lines. The pipes, ducts, wiring, cable, and conduits supplying service for electricity, gas, water, sewage, telephone, television internet access systems and/or other utility or telecommunication services located within a Condominium Unit and supplying service to that Unit alone.

b. Porches and Decks. Each porch and/or deck appurtenant to a Unit and the exterior hardware of each unit.

c. Driveways and Sidewalks. The driveway leading to the garage and the sidewalk leading to the porch, which are appurtenant to the Unit(s) which they service, and any parking areas which may be designated for use by fewer than all of the Co-owners.

d. Delivery Boxes. The mail and/or newspaper box located on a Unit or permitted by the Association on the General Common Elements to serve the Unit.

- e. Heating and Cooling Appliances. The fireplace combustion chamber and flue, and the separate furnace, water heater, humidifier, air conditioner and/or compressor and all related equipment located within or adjacent to a Unit or cluster of Units and serving only that Unit or cluster of Units.
- f. Exterior Windows, Sliders, Doors and Screens. The garage door, the automatic garage door opening mechanism, and the windows, sliders, doors, and screens located within or adjacent to any Unit exterior wall.
- g. Garage Interiors. Garage interior spaces, and the interior surfaces of garage walls, ceilings and floors.
- h. Interior Unit Surfaces. The interior surfaces of perimeter walls, ceilings and floors located within a Condominium Unit.
- i. Courtyard or Garden Area. Any courtyard or garden area which may be designated as Limited Common Elements in the Condominium Subdivision Plan.
- j. Exterior Light Fixture. The light fixtures attached to the exterior of each Unit.
- k. Miscellaneous. Any other improvement designated as a Limited Common Element appurtenant to a particular Unit or Units on the Condominium Subdivision Plan or in any future amendment to the Master Deed.

If no specific assignment of one or more of the Limited Common Elements described in this Article has been made in the Condominium Subdivision Plan, the Developer (during the Development Period) and the Association (after the Development Period has expired) reserve the right to designate each such space or improvement as a Limited Common Element appurtenant to a particular Unit or Units by subsequent amendment or amendments to this Master Deed.

4.3 Co-owner Maintenance Responsibilities. The responsibility for the cost of cleaning, maintenance, decoration, repair, and replacement of a Unit, and all improvements located within the Unit (including cabinetry, appliances and fixtures) shall be the responsibility of the Co-owner of the Unit. The responsibility for the cost of cleaning, maintenance, decoration, repair, and replacement of the Limited Common Elements appurtenant to a Unit shall be the responsibility of the Co-owner of the Unit which is served thereby (except as noted in Article 4.4 below), and includes the following:

- a. Utility Service Lines. Each Co-owner shall be responsible for the cost of maintenance, repair and replacement of the cable and utility service lines appurtenant to the Co-owners Unit.

b. Heating and Cooling Appliances. Each Co-owner shall be responsible for the cost of maintenance, repair and replacement of the individual heating and cooling unit, and all related equipment, appurtenant to the Co-owners Unit.

c. Exterior Windows, Sliders, Doors and Screens. Each Co-owner shall be responsible for the cost of maintenance, repair and replacement of the exterior windows, sliders, doors, screens, garage door, and garage door opening mechanism appurtenant to the Co-owners Unit. The materials and colors of garage doors must be approved in advance by the Developer (or by the Association following the Development Period). No changes in design, materials, or color of doors, windows, glass or screens may be made without the prior written approval of the Developer (or of the Association following the Development Period).

d. Garage Interiors. Each Co-owner shall be responsible for the cost of maintenance, repair and replacement of the garage interiors.

e. Exterior Building Lighting. Each Co-owner shall be responsible for the maintenance of the exterior building lighting attached to the Co-owners Unit. The size and nature of light bulbs for the exterior building lighting fixtures shall be determined by the Association in its discretion. No Co-owner shall modify or change exterior building lighting fixtures in any way, and no Co-owner shall cause the electricity flow for operation of the lighting fixtures to be interrupted at any time; however, each Co-owner shall replace burned out light bulbs with light bulbs of the same kind and character.

f. Utility Costs. Each Co-owner shall be responsible for the cost of utilities serving the Co-owner's Unit and appurtenant common elements, except that the Association shall be responsible for the cost of trash removal service and municipal water service to the Project, the cost of which shall be borne by individual Co-owners as part of monthly assessments.

g. Association Oversight. The appearance of the decks, porches, driveways, and Unit walkways shall at all times be subject to the approval of the Association. In the event that the cleaning and decoration of such common elements by the responsible Co-owner does not conform to reasonable aesthetic and maintenance standards established by the Association, the Association will have the right to take such action as may be necessary to bring such common elements up to required standards and to charge all costs incurred to the Co-owner responsible for cleaning, repair, and maintenance.

4.4 Association Maintenance Responsibilities. The Association's responsibilities for the maintenance, repair and replacement of the Common Elements will be as follows:

a. General Common Elements. The Association, by its Board of Directors, shall be responsible for the maintenance, repair and replacement of the General Common Elements and those Limited Common Elements as described in Article 4.4 (b). The cost of maintenance, repair and replacement of all the General Common Elements, and any Limited Common Elements for which the Association is responsible, shall be borne by the Association and assessed to the Co-owners as set forth in the Bylaws, except to the

extent of repair or replacement of a Common Element due to the act or neglect of a Co-owner or a Co-owner's agent, invitee, family member or pet.

b. Other Common Elements. The Association's responsibility for the maintenance, repair and replacement of other Common Elements will be as follows:

(1). Driveways and Walkways. The Association shall be responsible for the cost of maintenance, repair and replacement of the driveway and walkway appurtenant to the Co-owners Unit. The Association shall also be responsible for contracting for snow removal of accumulations of two inches or greater from the private roadways and from the driveways (except for the two feet closest to the garage, which shall be the responsibility of the Co-owner of the Unit to which the driveway is appurtenant) of each Unit.

(2). Patios, Porches and Decks. The Association shall be responsible for the cost of maintenance, repair and replacement of any porch, patio and/or deck appurtenant to the Co-owners Unit. The Association shall also determine how often, and in what manner, the deck is cleaned and stained, and the Association shall contract with a service provider for the periodic cleaning and staining of decks within the Project.

(3). Trash removal and water service. The Association shall be responsible for providing trash removal service and municipal water service for all of the Units in the Project.

(4). Delivery boxes. The Association shall be responsible for the cost of maintenance, repair and replacement of each Unit's delivery box.

c. Co-owner Neglect. Notwithstanding any provision in this Article 4.4 to the contrary, to the extent that cleaning, repair or replacement of any Common Element is needed due to the act or neglect of a Co-owner or his or her agent, invitee, family member or pet, such Co-owner shall be liable for such costs.

4.5 Power of Attorney. By acceptance of a deed, mortgage, land contract or other instrument of conveyance or encumbrance, all Co-owners, mortgagees and other interested parties shall be deemed to have appointed the Developer (during the Development Period) and/or the Association (after the Development Period has expired) as their agent and attorney, to act in connection with all matters concerning the Common Elements and their respective interests in the Common Elements. Without limiting the generality of this appointment, the Developer (or Association) will have full power and authority to grant easements over, to sever or lease mineral interests in, and/or to convey title to, the land and/or improvements constituting the General Common Elements or any part of them, to dedicate as public streets any part of the General Common Elements, to amend the Condominium Documents for the purpose of assigning or reassigning the Limited Common Elements and in general to execute all documents and to do all things necessary or convenient to the exercise of such powers.

4.6 Assignment and Reassignment. A Limited Common Element may be assigned and reassigned, upon notice to any affected mortgagee, by written application to the Board of Directors by all Co-owners whose interest will be directly affected by the (re)assignment. Upon receipt of such application, the Association shall promptly prepare or cause to be prepared and executed an amendment to this Master Deed (re)assigning all rights and obligations with respect to the Limited Common Elements involved, and shall deliver such amendment to the Co-owners of the Units affected upon payment by them of all reasonable costs for the preparation and recording of the amendment.

4.7 Separability. Except as provided in this Master Deed, Condominium Units shall not be separable from their appurtenant Common Elements and neither a Unit nor a Common Element shall be used in any manner inconsistent with the purposes of the Project or in any other way which will interfere with, or impair the rights of, any other Co-owner in the use and enjoyment of the Co-owner's Unit or appurtenant Common Elements.

## **ARTICLE 5**

### **DESCRIPTION AND PERCENTAGE OF VALUE**

5.1 Description of Units. A complete description of each Condominium Unit in the Project, with elevations referenced to an official benchmark of the United States Geological Survey, is set forth in the Condominium Subdivision Plan as prepared by the Project's consulting engineers and surveyors. Each Unit shall include the airspace located within Unit boundaries from the interior surfaces of the walls, ceilings and subfloors, as shown on Exhibit B and delineated with heavy outlines (but not including any Common Element that may be located within that description).

5.2 Percentage of Value. The total percentage of value of the Project is 100, and the percentage of such value assigned to each of the Condominium Units of the Project shall be equal. The determination that Percentages of Value for all Units shall be equal was made after reviewing the comparative characteristics of each Unit and the allocable expenses of maintenance for each Unit and concluding that there are no material differences among them insofar as the allocation of Percentages of Value is concerned. Except as otherwise provided in this Master Deed, such Percentages of Value shall be changed only in the manner provided by Article 9 expressed in an amendment to the Master Deed, duly executed and recorded.

5.3 Unit Modification. The number, style, size and/or location of Units or of any Limited Common Element may be modified from time to time, in Developer's sole discretion, by amendment effected solely by the Developer without the consent of any Co-owner, mortgagee or other person, so long as such modifications do not unreasonably impair or diminish the appearance of the Project or the view, privacy or other significant attribute or amenity of any Unit which adjoins or is proximate to the modified Unit or Limited Common Element; provided, that no Unit which has been sold or is subject to a binding Purchase Agreement shall be modified without the consent of the Co-owner or purchaser and the mortgagee of such Unit. The Developer's (and, with the prior written approval of the Developer prior to the Transitional Control Date and of the Association thereafter, a Co-owner's) enclosing a Limited Common Element deck or patio or otherwise creating a four season porch as part of a Unit shall not be

deemed to be a modification which unreasonably impairs or diminishes the appearance of the Project or the view, privacy or other significant attribute or amenity of any other Unit. The Developer may also, in connection with any such amendment, readjust Percentages of Value for all Units in a manner which gives reasonable recognition to such modifications based upon the method of original determination of Percentage of Value for the Project. All Co-owners, mortgagees of Units and other persons interested or to become interested in the Project from time to time shall be deemed to have unanimously consented to such amendments and to have granted a power of attorney to the Developer for such purpose which is similar in nature and effect to the power of attorney described in Article 4.5 of this Master Deed.

## **ARTICLE 6**

### **EXPANDABILITY OF CONDOMINIUM**

The project is not an expandable project under Section 32 of the Michigan Condominium Act.

## **ARTICLE 7**

### **CONTRACTION**

#### 7.1 Contraction.

a. Withdraw of Units. The number of Units in the Project may, at the option of the Developer from time to time within a period ending not later than six years after the recording of the Master Deed, be decreased by the withdrawal of all or any portion of the lands described in Article 2.1; provided that no Unit that has been sold or that is the subject of a binding purchase agreement may be withdrawn without the consent of the Co-owner, purchaser and/or mortgagee of such Unit. Other than as provided in this Article, there are no restrictions or limitations on the right of the Developer to withdraw lands from the Project or as to the portion or portions of land that may be withdrawn; provided, however, that the lands remaining will not be reduced to less than necessary to accommodate the remaining Units in the Project with reasonable access and utility service to such Units.

b. Addition after Contraction. Developer reserves the right, subsequent to such withdrawal, but prior to six (6) years from the date of recording of this Master Deed, to expand the reduced Project to include all or any portion of the land which had been earlier withdrawn.

c. Contraction Not Mandatory. There is no obligation on the part of the Developer to contract the Condominium Project nor is there any obligation to add or withdraw portions of the Project in any particular order nor to construct particular improvements on any withdrawn lands. The Developer may, in its discretion, establish all

or a portion of the lands withdrawn from the Project as a separate condominium project (or projects) or as any other form of development. Any development on the withdrawn lands will, however, not be materially detrimental to the Project.

e. Access and Use of Withdrawn Property. At the option of the Developer, any undeveloped portions of the project that have been withdrawn under the provisions this Article shall be granted easements for access and utility installation over, across, and through the remaining project, subject to the payment of a pro rata share of the cost of maintaining such easements based upon the number of Units developed on the withdrawn lands to the number of Units developed in the remaining project. Removed lands shall be developed in a manner that is not detrimental to, or inconsistent with, the character of the remaining project.

7.2 Conversion. Developer reserves the right, on behalf of itself, and the Association after the Development Period, to convert any General Common Element into a Limited Common Element appurtenant to one or more Units for the purposes of facilitating the installation, replacement, operation, repair and maintenance of a sidewalk, or a private drive access to a roadway of the Project, or to facilitate the construction of an auxiliary building or swimming pool or other amenity. All exercises of the conversion rights described in this Article shall be reflected by an appropriate amendment(s) to the Master Deed. In connection with exercise of such reserved rights, the Developer or the Association, as the case may be, shall have the right with the consent of the affected Co-owner, to relocate the boundaries of a Unit and to convert any Unit or Limited Common Element area into a General Common Element.

7.3 Amendments to the Master Deed. Any contraction, withdrawal or conversion of the Project by the Developer will be given effect by an appropriate amendment(s) to the Master Deed, which amendment(s) will not require the consent or approval of any co-owner, mortgagee or other interested person. Such Amendments(s) shall be prepared by and at the sole discretion of the Developer, and may adjust the percentages of value assigned by Article 5.2 in order to preserve a total value of 100% for the entire Project. The precise determination of the re-adjustments in percentages of value, if any, will be made in the sole judgment of the Developer.

7.4 Additional Provisions. Any amendment or amendments to the Master Deed made by the Developer to contract or convert as set forth in this Article may also contain such provisions as the Developer may determine necessary or desirable including, but not limited to, provisions: (i) to create easements burdening or benefiting any portion of the Project affected by the amendment(s); and (ii) to create or change restrictions or other terms and provisions, including designations and definition of Common Elements, affecting any portion of the Project affected by the amendment(s), as reasonably necessary in the Developer's judgment to enhance the value or desirability of the Project.

## **ARTICLE 8** **EASEMENTS**

8.1 Easements. The easements shown on the Condominium Subdivision Plan shall

benefit and burden the Condominium Units and Common Elements as shown on Exhibit B, and shall be maintained by the Association unless otherwise provided in the Condominium Documents.

8.2 Easements for Support, Maintenance, and Repair. Every portion of a Condominium Unit that contributes to the structural support of a building not entirely within the Unit shall be burdened with an easement of structural support for the benefit of the Common Elements within the building. In the event that any portion of a Unit or Common Element encroaches upon another Unit or Common Element due to the shifting, settling, or moving of a building, or due to survey errors or construction deviations, reciprocal easements shall exist for the maintenance of the encroachment for so long as the encroachment exists, and for the maintenance of the encroachment after rebuilding in the event of destruction. There shall also be permanent easements in favor of the Association (and/or the Developer during the Development and Sales Period) for the maintenance and repair of Common Elements in the Project, as it may be expanded or converted, for which the Association (or Developer) may from time to time be responsible or for which it is permitted to and elects to assume responsibility, and there shall be easements to, through, and over those portions of the land, structures, buildings, improvements, and walls (including interior Unit walls) as may be reasonable for the installation, maintenance, and repair of all utility services furnished to the Project. Public utilities shall have access to the Common Elements in the Project, as it may be expanded or converted, and to the Units at such times as may be reasonable for the installation, repair, or maintenance of such services, and any costs incurred in the opening or repairing of any building, wall, or other improvement to install, repair, or maintain utility services shall be an expense of administration assessed against all Co-owners in accordance with the Condominium Bylaws.

8.3 Emergency, Mail and Delivery Access. There shall exist for the benefit of the local municipality, any emergency service agency, the United States Postal Service, package and document delivery services and other persons and entities invited to a Unit by a Co-owner for a legitimate purpose, an easement over all roads in the Project and other areas, if any, designated on the Subdivision Plan for such specific use. This easement shall be for purposes of ingress and egress to provide, without limitation, fire and police protection, ambulance and rescue services and other lawful governmental and private services to the Condominium Project and the Co-owners.

8.4 Easements Reserved by Developer. Until the initial sale of all Units that may be created under the provisions of this Master Deed or of any other project developed by the Developer or its successors on the property has been completed, the Developer reserves nonexclusive easements that may be used at any time or times for the benefit of itself, its successors, and assigns:

- a. to use, improve, and/or extend all roadways, drives, and walkways in the Condominium for the purpose of ingress and egress to and from any Unit or real property owned by it; and
- b. to use, tap, tie into, extend, and/or enlarge all utility lines and mains, public and private, located on the land described in Article 2.1.

The easements described in this section are subject to payment by the owners of a proportionate share (based on the total number of residences using the easements) of the cost of maintenance and repair of the improvements constructed in such easements.

To the extent that the Easements establish rights and duties with regard to the Project, the Association shall be responsible for the costs and expenses allocated under the Easements. To the extent that any decisions are required to be made or any actions are to be undertaken under any of the Easements, the Developer shall be responsible for those decisions and actions during the Development and Sales Period, and following the expiration of that period, the Association shall be responsible for those decisions and actions.

## **ARTICLE 9**

### **AMENDMENT TERMINATION AND WITHDRAWAL**

9.1 Pre-Conveyance. If there is no Co-Co-owner other than the Developer, the Developer may unilaterally amend the Master Deed (including Exhibits A and B) or, with the consent of any interested mortgagee, unilaterally terminate the Project. All documents reflecting such amendment or termination shall be recorded in the office of the Allegan County Register of Deeds.

9.2 Post-Conveyance. If there is a Co-Co-owner other than the Developer, the Master Deed may be amended for a proper purpose only as follows:

a. Non-Material Changes. The amendment may be made and recorded by the Developer or the Association without the consent of any Co-Co-owner or mortgagee if the amendment does not materially alter or change the rights of any Co-Co-owner or mortgagee. An amendment which does not materially change the rights of a Co-Co-owner or mortgagee includes, without limitation: (i) amendments to modify the types and sizes of unsold Condominium Units and their appurtenant Limited Common Elements; (ii) amendments correcting survey or other errors in the Condominium Documents; (iii) amendments for the purpose of facilitating conventional mortgage loan financing for existing or prospective Co-owner, and enabling the purchase of such mortgage loans by the Federal Home Loan Mortgage Corporation, the Federal National Mortgage Association, the Government National Mortgage Association and/or any other agency of the federal government or the State of Michigan; (iv) amendments to clarify or explain the provisions of the Master Deed or any other Condominium Document; and (v) with respect to any mortgagee, any other amendments which, in the written opinion of a licensed real estate appraiser, do not detrimentally change the value of any affected Unit.

b. Material changes. An amendment may be made, even if it will materially alter or change the rights of the Co-owner or mortgagees, with the consent of not less than two-thirds of the Co-owner and mortgagees (if required by law); provided, that a Co-Co-owner's Unit dimensions or Limited Common Elements may not be modified without that Co-Co-owner's consent, nor may the formula used to determine Percentages of Value for the Project or provisions relating to the ability or terms under which a Unit

may be rented be modified without the consent of the Developer and each affected Co-Co-owner. Rights reserved by the Developer, including without limitation rights to amend for purposes of contraction and/or modification of Units, shall not be amended without the written consent of the Developer so long as the Developer or its successors continue to own and to offer for sale any Unit in the Project.

c. Compliance with the law. Amendments may be made by the Developer without the consent of Co-owner and mortgagees, even if the amendment will materially alter or change the rights of Co-owner and mortgagees, to achieve compliance with the Act or rules, interpretations, or orders adopted by the administrator or by the courts pursuant to the Act or with other federal, state, or local laws, ordinances, or regulations affecting the Project.

d. Reserved Developer rights. A material amendment may also be made unilaterally by the Developer without the consent of any Co-Co-owner or mortgagee for the specific purpose(s) reserved by the Developer in this Master Deed. During the Development and Sales Period, this Master Deed and Exhibits A and B shall not be amended nor shall provisions be modified in any way without the written consent of the Developer, its successors, or assigns.

e. Costs of amendments. A person causing or requesting an amendment to the Condominium Documents shall be responsible for costs and expenses of the amendment, except for amendments based upon a vote of the Co-owners, the costs of which are expenses of administration. The Co-owner shall be notified of proposed amendments under this Article not less than 10 days before the amendment is recorded.

9.3 Project Termination. If there is a Co-Co-owner other than the Developer, the Project may be terminated only with written consent of the Developer and not less than 80% of the Co-owners and mortgagees, as follows:

a. Termination Agreement. Agreement of the required number of Co-owner and mortgagees to termination of the Project shall be evidenced by their execution of a termination agreement or by written ratification of the termination agreement, and the termination shall become effective only when the agreement is so evidenced of record.

b. Real Property Co-ownership. Upon recordation of an instrument terminating the Project, the property constituting the Common Elements of the Project shall be owned by the Co-owner as tenants in common in proportion to their respective undivided interests in the Common Elements immediately before recordation. As long as the tenancy in common lasts, each Co-Co-owner or the heirs, successors, or assigns of the Co-Co-owner shall have an exclusive right of occupancy of that portion of the property, which formerly constituted his or her Condominium Unit.

c. Association Assets. Upon recordation of an instrument terminating the Project, any rights the Co-owner may have to the assets of the Association shall be in proportion to their respective undivided interests in the Common Elements immediately

before recordation, except that common profits shall be distributed in accordance with the Condominium Documents and the Act.

d. Notice of Interested Parties. Notification of termination by first class mail shall be made to all parties interested in the Project, including escrow agents, land contract vendors, creditors, lienholders, and prospective purchasers who deposited funds. Proof of dissolution must be submitted to the Michigan Department of Consumer and Industry Services or its successor.

#### 9.4 Withdrawal of Property.

a. Withdrawal by Developer. Notwithstanding anything in this Master Deed to the contrary, if Developer has not completed development and construction of Units or Improvements in the Project that are identified as “need not be built” during a period ending 10 years after the date of commencement of construction by Developer of the Project, Developer has the right to withdraw from the Project all undeveloped portions of the Project not identified as “must be built” without the prior consent of any Co-owners, mortgagees of Units in the Project, or any other person having an interest in the Project. If this Master Deed contains provisions permitting the expansion, contraction, or rights of convertibility of Units or Common Elements in the Project, the time period is the greater of (i) the 10-year period set forth above or (ii) 6 years after the date Developer exercised its rights regarding either expansion, contraction, or rights of convertibility, whichever right was exercised last. The undeveloped portions of the Project withdrawn shall also automatically be granted easements for utility and access purposes through the Project for the benefit of the undeveloped portions of the Project, subject to the payment of a reasonable pro rata share of the costs of maintaining the easements.

b. Withdrawal by Association. If Developer does not withdraw the undeveloped portions of the Project from the Project or convert the undeveloped portions of the Project to “must be built” before the time periods set forth in section 10.4(a) expire, the Association, by an affirmative two-thirds majority vote of Co-owners in good standing, may declare that the undeveloped land shall revert to the general common elements and all rights to construct Units on the undeveloped land shall cease. When such a declaration is made, the Association shall provide written notice of the declaration to Developer or its successor by first-class mail at its last known address. Within 60 days after receipt of the notice, Developer or its successor may withdraw the undeveloped land or convert the undeveloped condominium units to “must be built.” However, if the undeveloped land is not withdrawn or the undeveloped condominium units are not converted within 60 days, the Association may file the notice of the declaration with the register of deeds. The declaration takes effect on recording by the register of deeds. The Association shall also file notice of the declaration with the local supervisor or assessing officer.

**ARTICLE 10**  
**ASSIGNMENT OF DEVELOPER RIGHTS**

10.1 Right to Assign. Any or all of the rights and powers granted to or reserved by the Developer in the Condominium Documents or by law, including without limitation the power to approve or to disapprove any act, use or proposed action, may be assigned by the Developer to any other entity or person, including the Association. Any such assignment or transfer shall be made by appropriate instrument in writing, and shall be duly recorded in the office of the Allegan County Register of Deeds.

**ARTICLE 11**  
**Convertible Areas**

The Condominium is established with convertible areas in accordance with the provisions of this Article and the Act:

**11.1 Designation of Convertible Areas.** All present and future Common Elements and Units, whether or not so designated on the Condominium Subdivision Plan, are designated as Convertible Areas and the land area within which Units and Common Elements may be added, removed, expanded and modified and within which Limited Common Elements may be created as provided in this Article. The Developer reserves the right, but not the obligation, to convert all or any portion of the Convertible Areas. The maximum number of Units that may be created in the Project as it may be expanded or converted is 90 Units. All Units shall be used for residential purposes. All structures and improvements within the Convertible Areas of the Condominium shall be compatible with residential uses and with the structures and improvements on the other portions of the Project, as determined by Developer in its sole discretion.

**11.2 Developer's Right to Convert.** The Developer reserves the right, in its sole discretion, during a period ending six (6) years from the date of recording this Master Deed, to modify the number, size, location and configuration of any Unit that it owns or Common Elements in the Project, and to make corresponding changes to the Common Elements or to create General or Limited Common Elements or Units within the Convertible Area and to designate Common Elements that may subsequently be assigned as Limited Common Elements.

**11.3 Developer's Right to Make Other Improvements.** The Developer reserves the right from time to time, within a period ending no later than six (6) years from the date of recording this Master Deed, to construct entrance monuments, statuary or other improvements to the Condominium Premises. The precise location, design and composition of those improvements shall be determined by the Developer in its sole judgment but nothing in this paragraph shall obligate the Developer to make any such improvements whatever. If constructed or installed, the improvements shall be General Common Elements and the costs of maintenance, repair and replacement of them shall be an Association expense.

**11.4 Restrictions on Conversion.** All improvements constructed or installed within

the Convertible Areas described above shall be restricted exclusively to those compatible with residential use. There are no other restrictions upon such improvements except as stated in this Article and those which are imposed by state law, local ordinances or building authorities. The extent to which any change in the Convertible Areas is compatible with the original Master Deed is not limited by this Master Deed, but lies solely within the discretion of the Developer, subject only to the requirements of local ordinances and building authorities, including the City.

**11.5 Consent Not Required.** The consent of any Co-Owner shall not be required to convert the Convertible Areas. All of the Co-Owners and mortgagees and other persons interested or to become interested in the Condominium from time to time shall be deemed to have irrevocably and unanimously consented to such conversion of the Convertible Areas and any amendment or amendments to this Master Deed to effectuate the conversion and to any reallocation of Percentages of Value of existing Units which Developer may determine necessary in connection with such amendment or amendments. All such interested persons irrevocably appoint the Developer or its successors, as agent and attorney for the purpose of execution of such amendment or amendments to the Master Deed and all other documents necessary to effectuate the foregoing. Such amendments may be effected without the necessity of re-recording the entire Master Deed or the Exhibits thereto and may incorporate by reference all or any pertinent portions of this Master Deed and the Exhibits hereto. Nothing herein contained, however, shall in any way obligate Developer to convert the Convertible Areas. These provisions give notice to all Co-Owners, mortgagees and other persons acquiring interests in the Condominium that such amendments of this Master Deed may be made and recorded, and no further notice of such amendments shall be required.

**11.6 Amendment of Master Deed.** All modifications to Units and Common Elements made pursuant to this Article shall be given effect by an appropriate amendment or amendments to the Master Deed in the manner provided by law, which amendments shall be prepared by and at the discretion of the Developer and in which the percentages of value stated in Article 5 shall be proportionately readjusted, if the Developer deems it to be applicable, in order to preserve a total value of 100% for the entire Project resulting from the amendment or amendments to this Master Deed. Except as otherwise limited by the Condominium Documents, the precise determination of the readjustments in percentages of value shall be made within the sole judgment of Developer. The readjustments, however, shall reflect a continuing reasonable relationship among percentages of value based upon the original percentages of value for the Project. The amendment or amendments to the Master Deed shall also contain such further definitions and redefinitions of General or Limited Common Elements as may be necessary to adequately describe and service the Units and Common Elements being modified by the amendment. In connection with any such amendment, Developer shall have the right to change the nature of any Common Element previously included in the Project for any purpose reasonably necessary to achieve the purposes of this Article, including, but not limited to, the connection of the roadways and sidewalks in the Project to any Convertible Area, and to provide access to any Unit from the roadways and sidewalks located in the Project. Developer shall also have the right to modify the provisions of this Master Deed and the Bylaws attached to it as may be reasonably necessary i) to effectuate the redefined Units added, and ii) to create or change restrictions or other terms and provisions affecting the additional Unit(s) being added to the Project or affecting the balance of the Project as may be reasonably necessary in the Developer's

judgment to enhance the value or desirability of such Units.

**11.7 Consent of Interested Parties.** Except as otherwise provided in this Article, the consent of any Co Owner shall not be required to convert the Convertible Areas. All of the Owners and mortgagees of the Units and other persons interested or to become interested in the Project from time to time shall be deemed to have irrevocably and unanimously consented to such amendments to this Master Deed as may be proposed by the Developer to effectuate the foregoing. All such interested persons irrevocably appoint the Developer as agent and attorney for the purpose of execution of such amendments to the Master Deed and all other documents necessary to effectuate the foregoing. Such amendments may be effected without the necessity of re-recording an entire Master Deed or the Exhibits thereto and may incorporate by reference all or any pertinent portions of this Master Deed and the Exhibits to it. These provisions give notice to all Owners, mortgagees and other persons acquiring any interest in the Project that such amendments of this Master Deed may be made and recorded, and no further notice of such amendments shall be required.

**ARTICLE 12**  
**LIMITATION OF LIABILITY**

12.1 Limitation. The enforcement of any rights or obligations contained in the Condominium Documents against the Developer shall be limited to the interest of the Developer in the Project. No judgment against the Developer shall be subject to execution on, or be a lien on any assets of, the Developer other than the Developer's interest in the Project.

The Developer has duly executed this Master Deed on the day and year, which appear in the opening paragraph of this Master Deed.

[Signatures appear on following page.]

DEVELOPER:

\_\_\_\_\_, LLC,  
a Michigan limited liability company



**EXHIBIT A**

**CONDOMINIUM BYLAWS  
FOREST GATE**

**ARTICLE 1  
ASSOCIATION OF CO-OWNERS**

1.1 Organization. Forest Gate is a residential condominium project located in the City of the Village of Douglas, Allegan County, Michigan comprising of a total of 88 Units. Upon the recording of the Master Deed, the management, maintenance, operation, and administration of the project shall be vested in an association of Co-owners organized as a nonprofit corporation under the laws of the State of Michigan. The entity created for this purpose is Forest Gate Condominium Association (the “Association”). The Association will keep current copies of the Master Deed, all amendments to the Master Deed, and other Condominium Documents for the Project available at reasonable hours for inspection by Co-owners, prospective purchasers, mortgagees, and prospective mortgagees of Units in the Project.

1.2 Compliance. All present and future Co-owners mortgagees, lessees, or other persons who may use the facilities of the Condominium in any manner shall be subject to and comply with the provisions of Act No. 59, P.A. 1978, as amended, the Master Deed and any amendments, the Condominium Bylaws, and the Articles of Incorporation, the Association Bylaws, Rules and Regulations of the Association and other Condominium Documents that pertain to the use and operation of the Project. The acceptance of a deed of conveyance, the entering into of a lease, or the act of occupying a Unit in the Project shall constitute an acceptance of the terms of the Condominium Documents and an agreement to comply with their provisions.

1.3 Purpose of the Bylaws. These Bylaws are designated as both the Condominium Bylaws, relating to the manner in which the Condominium and the common affairs of the Co-owners of the Condominium Units shall be administered, as required by Act No. 59 of the Public Acts of Michigan of 1978, as amended, and the Association or Corporate Bylaws, governing the operation of the Association as a corporate entity, as required by Act No. 162 of the Public Acts of Michigan of 1982, as amended

**ARTICLE 2  
MEMBERSHIP AND VOTING**

2.1 Membership. Each Co-owner of a Unit in the Project, during the period of ownership, shall be a member of the Association, and no other person or entity will be entitled to membership. Neither Association membership, nor the share of a member in the Association’s funds and assets, shall be assigned, pledged or transferred in any manner except as an appurtenance to a Unit, and any attempted assignment, pledge or transfer in violation of this provision shall be void. No Co-owner may resign or be expelled from membership in the Association so long as they continue to be a Co-owner.

2.2 Voting Rights. Except as limited in these Bylaws, each Co-owner (including the Developer) shall be entitled to one vote for each Condominium Unit owned when voting. Voting shall be by number. In the case of any Unit owned jointly by more than one Co-owner, the voting rights appurtenant to that Unit may be exercised only jointly as a single vote.

2.3 Evidence of Ownership. No Co-owner, other than the Developer, will be entitled to vote at any meeting of the Association until the Co-owner has presented written evidence of ownership of a Unit in the Project or such other evidence that satisfies the Board that the person is a Co-owner. No Co-owner, other than the Developer, shall be entitled to vote (except for elections pursuant to Article 4.3) prior to the First Annual Meeting of Members held in accordance with Article 3.2. The vote of each Co-owner may be cast only by the individual representative designated by such Co-owner in the notice required in Section 2.4 below or by a proxy given by such individual.

2.4 Designation of Voting Representative. Each Co-owner, other than the Developer, shall file a written notice with the Association designating the individual representative who shall vote at meetings of the Association and receive all notices and other communication from the Association on behalf of such Co-owner. The notice shall state the name and address of the individual representative designated, the number of the Unit owned, and the name and address of the person or persons, firm, corporation, partnership, association, trust, or other legal entity who is the Unit owner. Such notice shall be signed and dated by the Co-owner. The individual representative designation may be changed by the Co-owner at any time by the filing of a new notice in the manner provided herein. At any meeting the filing of such written notice as a prerequisite to voting may be waived by the chairman of the meeting.

2.5 Voting and Proxies. Votes may be cast in person, in writing duly signed by the designated voting representative, or by any other means allowed by the voting procedures adopted by the Association for a given vote, provided the same are not in violation of the provisions of these Bylaws. Any proxies, written votes or other votes cast by means allowed hereunder must be filed with the Secretary of the Association at or before the appointed time of each meeting of members of the Association or voting deadline if no meeting is held. Votes may be cast by mail, fax, delivery or electronically (by any method that creates a record that may be retrieved and retained by the Association and reproduced in paper form such as email), or any other method approved by the Association in advance of the vote.

2.6 Majority. At any meeting of members at which a quorum is present, an affirmative vote of more than fifty (50%) percent in number of the members present in person, proxy or by written vote shall constitute a majority for the approval of the matters presented to the meeting, except in those instances in which a majority exceeding a simple majority is required by these Bylaws, the Master Deed, or by law.

### **ARTICLE 3** **MEETINGS AND QUORUM**

3.1 Place of Meetings. Meetings of the Association members shall be held at the

principal office of the Association or at such other suitable place convenient to the Co-owners as may be designated by the Board of Directors. Voting shall be as provided in these Condominium Bylaws. Except as otherwise approved by the Board of Directors, only Co-owners in good standing, and their legal representatives, may speak at meetings of the Association and/or address the Board or Co-owners at any such meetings. Any person in violation of this provision or the rules of order governing the meeting may be removed from such meeting, without any liability to the Association or its Board of Directors.

3.2 Initial Meetings of Members. The initial meeting of the members of the Association may be convened only by the Developer and may be called at any time after two or more of the Units in the Project have been sold and the purchasers qualified as members of the Association. In no event, however, shall the initial meeting be called later than: (i) 120 days after the conveyance of legal or equitable title to non-Developer Co-owners of 75 percent of the total number of Units in the project; or (ii) 54 months after the first conveyance of legal or equitable title to a non-Developer Co-owner of a Unit, whichever first occurs, at which meeting the eligible Co-owners may vote for the election of directors of the Association. The Developer may call meetings of members of the Association for informational or other appropriate purposes prior to the initial meeting, but no such informational meeting shall be construed as the initial meeting of members.

3.3 Annual Meeting of Members. After the initial meeting has occurred, annual meetings of members of the Association shall be held each succeeding year at such time and place as shall be determined by the Board of Directors. Written notice of each annual meeting shall be given to all Co-owners at least ten (10) days before the date for which the meeting is or was originally scheduled. At the annual meeting, there shall be elected by ballot of the co-owners a Board of Directors in accordance with the requirements of Article 4 of these Bylaws. The Co-owners may also transact at annual meetings such other business of the Association as may properly come before them.

3.4 Special Meetings. It shall be the duty of the President to call a special meeting of the Co-owners as directed by resolution of the Board of Directors. The President shall also call a special meeting upon a petition signed by two-third (2/3) of the Co-owners in number presented to the Secretary of the Association. Notice of any special meeting shall state the time and place of such meeting and the purpose thereof. No business shall be transacted at a special meeting except as stated in the notice.

3.5 Notice of Meetings. It shall be the duty of the Secretary (or other Association officer in the Secretary's absence) to serve a written notice of the time, place and purposes of each annual or special meeting, not less than 10 nor more than 60 days before the date of the meeting, to each Co-owner of record entitled to vote at the meeting, personally, by mail to the Co-owner's last address as it appears on the books of the Association, or by a verifiable form of electronic transmission to which the Co-owner has consented. If a Co-owner or proxy holder may be present and vote at the meeting by remote communication, the means of remote communication allowed shall be included in the notice. Any Co-owner may, by written waiver of notice signed by such Co-owner, waive such notice, and such waiver when filed in the records of the Association shall be deemed due notice.

3.6 Participation by Remote Communication. If the Board of Directors decides to permit member participation at a meeting of members by remote communication, the Association shall first implement reasonable measures to: (i) verify that each person considered present and permitted to vote by means of remote communication is a member of the Association; (ii) provide each member with a reasonable opportunity to participate in the meeting and to vote on matters submitted to the members, including an opportunity to read or hear the proceedings of the meeting substantially concurrently with the proceedings; and (iii) maintain a record of any remote communication vote or other action taken by the participant(s). Provided all of the conditions in the preceding sentence are met, any or all Owners may participate in and vote at a meeting of the members of the Association by remote communication provided that: (i) the notice of the meeting includes a description of the means of remote communication that will be used; (ii) all persons participating in the meeting may hear each other; (iii) all participants are advised of the means of remote communication in use; and (iv) the names of all participants in the meeting are divulged to all participants. Participation in a meeting pursuant to this Section shall constitute presence in person at the meeting

3.7 Quorum. The presence in person or by proxy of Fifty percent (50%) in number and in value of the Co-owners qualified to vote shall constitute a quorum for holding a meeting of the members of the Association, except for voting on questions specifically required herein to require a greater quorum. The written vote of any person furnished at or prior to any duly called meeting at which meeting said person is not otherwise present in person or by proxy shall be counted in determining the presence of a quorum with respect to the question upon which the vote is cast. Subject to any guidelines and procedures adopted by the Board of Directors, Co-owners and proxy holders not physically present at a meeting may participate in the meeting by means of remote communication and are considered present in person for all relevant purposes, and may vote at the meeting if all of the following conditions are satisfied: (1) the Association implements reasonable measures to verify that each person considered present and permitted to vote at the meeting by means of remote communication is a Co-owner or proxy holder, (2) the Association implements reasonable measures to provide each Co-owner and proxy holder with a reasonable opportunity to participate in the meeting and to vote on matters submitted to the Co-owners, including an opportunity to read or hear the proceedings of the meeting substantially concurrently with the proceedings, and (3) if any Co-owner or proxy holder votes or takes other action at the meeting by means of remote communication, a record of the vote or other action is maintained by the Association.

3.7 Adjournment for Lack of Quorum. If any meeting of owners cannot be held because a quorum is not in attendance, the owners who are present may adjourn the meeting to a time not less than forty-eight (48) hours from the time the original meeting was called. The quorum for each subsequent meeting shall be reduced by one-half from the quorum requirement of the previously scheduled meeting.

3.8 Order of Business. The order of business at all meetings of members will be as follows: (a) roll call to determine the voting power represented at the meeting; (b) proof of notice of meeting or waiver of notice; (c) approval of minutes of preceding meeting; (d) reports of officers; (e) reports of committees; (f) election of Directors (at annual meeting or special meeting held for such purpose); (g) unfinished business; and (h) new business. The most senior officer of the

Association present at such meeting will chair the meeting of members. For purposes of this Section, the order of seniority of officers will be President, Vice President, Secretary and Treasurer.

3.9 Action Without Meeting. Any action which may be taken at a meeting of the members (except for the election or removal of Directors) may be taken without a meeting by written ballot of the members. Ballots shall be solicited in the same manner (with respect to notice) as provided in Article 3.5 hereof. Such solicitations shall specify (a) the number of responses needed to meet the quorum requirements; (b) the percentage of approvals necessary to approve the action; and (c) the time by which ballots must be received in order to be counted. The form of written ballot shall afford an opportunity to specify a choice between approval and disapproval of each matter and shall provide that, where the member specifies a choice, the vote shall be cast in accordance therewith. Approval by written ballot shall be constituted by receipt, within the time period specified in the solicitation, of (i) a number of ballots which equals or exceeds the quorum which would be required if the action were taken at a meeting; and (ii) a number of approvals which equals or exceeds the number of votes which would be required for approval if the action were taken at a meeting at which the total number of votes cast was the same as the total number of ballots cast. Votes may be cast in accordance with this paragraph by mail, hand delivery, electronically or by facsimile.

3.10 Consent of Absentees. The transactions at any meeting of members, either annual or special, however called and noticed, shall be as valid as though made at a meeting duly held after regular call and notice, if a quorum is present either in person or by proxy; and if, either before or after the meeting, each of the members not present in person or by proxy, signs a written waiver of notice, or a consent to the holding of such meeting, or an approval of the minutes thereof. All such waivers, consents or approvals shall be filed with the corporate records or made a part of the minutes of the meeting.

3.11 Minutes. Minutes or a similar record of the proceedings of meetings of members, or of the Board of Directors, when signed by the President or Secretary, shall be presumed truthfully to evidence the matters set forth therein. A recitation in the minutes of any such meeting that notice of the meeting was properly given shall be prima facie evidence that such notice was given.

#### **ARTICLE 4**

#### **BOARD OF DIRECTORS/ADMINISTRATION**

4.1 Board of Directors. The business, property, and affairs of the Association shall be managed by a Board of Directors (the "Board"), all of whom shall serve without compensation and who must be members of the Association, except for the First Board of Directors designated in the Articles of Incorporation of the Association and any successors thereto elected by the Developer prior to the First Annual Meeting of Members held pursuant to Article 3.2. If a member is a partnership or corporation, any partner or employee of the partnership, or officer, director or employee of the corporation shall be qualified to serve as a director. No more than one person owning or residing in a Unit may run for the Board at any time. All actions of the first Board designated in the Articles of Incorporation or any successors to such directors selected by the Developer before the initial meeting of members shall be binding upon the Association in the same manner as though such actions had been authorized by a Board of

Directors elected by the members of the Association, so long as such actions are within the scope of the powers and duties that may be exercised by a board as provided in the Condominium Documents. A service contract or management agreement entered into between the Association and the Developer or affiliates of the Developer shall be voidable without cause by the Board on the Transitional Control Date or within 90 days after the initial meeting has been held, and on 30 days' notice at any time thereafter for cause.

4.2 Number of Directors. The First Board of Directors designated in the Articles of Incorporation shall manage the affairs of the Association until a successor board of Directors is elected at initial meeting of Members of the Association convened at the time required by Article 3.2 of these Bylaws. Thereafter, the Board shall consist an odd number of not less than three (3) nor more than seven (7) members as determined by a vote of the Co-owners prior to the election of Directors, provided however that if a motion is not made and carried to increase or decrease the number of Directors, then the Board shall consist of the same number of persons as previously comprised the full Board.

4.3 Election of Directors. The following provisions shall apply to the election of the Board and Advisory Committee before and after the Transitional Control Date:

(a) Advisory Committee. An advisory committee of 2 or more non-Developer Co-owners shall be established either 120 days after conveyance of legal or equitable title to non-developer co-owners of one-third of the total number of Units in the Project, or one year after the initial conveyance of legal or equitable title to a non-Developer Co-owner of a Unit in the Project, whichever first occurs. The purpose of the Advisory Committee is to facilitate communication between the Developer appointed Board of Directors and the non-Developer Co-owners and to aid in the ultimate transition of control to the Co-owners. The members of the Advisory Committee shall serve for one year or until their successors are selected, and the Committee shall automatically cease to exist at the Transitional Control Date. The Board of Directors and the Advisory Committee shall meet with each other upon the request of the Advisory Committee; provided, however, that there shall be not more than two such meetings each year unless both parties agree.

(b) Co-owner elected Directors. Not later than 120 days after conveyance of legal or equitable title to non-Developer Co-owners of 25 percent of the Units in the Project, at least one director and not less than one-fourth of the Board of Directors of the Association shall be elected by non-Developer Co-owners. Not later than 120 days after conveyance of legal or equitable title to non-Developer Co-owners of 50 percent of the Units in the Project, not less than one-third of the Board of Directors shall be elected by non-Developer Co-owners. Not later than 120 days after conveyance of legal or equitable title to non-Developer Co-owners of 75 percent of the Units in the Project, and before conveyance of 90 percent of such Units, the non-Developer Co-owners shall elect all directors on the Board except that the Developer shall have the right to designate at least one director as long as the Developer owns and offers for sale at least 10 percent of the Units in the Project.

(c) Co-owner Controlled Board. If 75 percent of the Units in the Project have not been conveyed within 54 months after the first conveyance of legal or equitable title to a

non-Developer Co-owner, the non-Developer Co-owners shall have the right to elect the percentage of members of the Board of Directors of the Association equal to the percentage of Units they hold, and the Developer will have the right to elect the percentage of members of the Board equal to the percentage of Units that are owned by the Developer and for which assessments are payable by the Developer. This election may increase, but shall not reduce, the minimum election and designation rights of directors otherwise established in Article 4.3. Application of this provision does not require a change in the size of the Board as designated in the Association Bylaws.

(d) Mathematical Calculations. If the calculation of the percentage of members of the Board that the non-Developer Co-owners have a right to elect, or the product of the number of members of the Board multiplied by the percentage of Units held by the non-Developer Co-owners results in a right of non-Developer Co-owners to elect a fractional number of members of the Board, then a fractional election right of 0.5 or greater shall be rounded up to the nearest whole number. After application of this formula, the Developer shall have the right to elect the remaining members of the Board. Application of this provision shall not eliminate the right of the Developer to designate at least one member as provided in Article 4.3B.

(e) Election of Directors at First Annual Meeting/Term. At the first annual meeting, all members of the board shall stand for election. The term of office for all directors shall be not less than one year nor more than 2 years as determined by a vote of the Co-owners prior to the election of board members. In addition, the Co-owners may, by making and passing a resolution, provide that in lieu of annually electing all Directors, the Directors be divided into two classes, each to be as nearly equal in number as possible, with terms of office such that the terms of the Directors in the first class will expire at the first annual meeting following their election, the terms of the second class will expire at the second annual meeting after their election. At each annual meeting after such a classification of the Board of Directors, a number of Directors equal to the number of the class whose term is expiring shall be elected to hold office until the second succeeding annual meeting. Notwithstanding these provisions, as long as the Developer is entitled to appoint one member of the Board, the Developer appointed board member will fill a one-year term seat.

4.4 Powers and Duties. The Board shall have all powers and duties necessary for the administration of the affairs of the Association, and may take all actions in support of the administration as are not prohibited by the Condominium Documents or specifically reserved to the members, including by way of example, the following:

(a) Management and Administration. To manage and administer the affairs of the Condominium Project and to and maintain the Common Elements thereof.

(b) Develop Annual Budget and Collect Assessments. To develop an annual budget and to levy and collect assessments against and from the members of the Association; and to use the proceeds thereof for the purposes of the Association; and to enforce assessments through liens and foreclosure proceedings where appropriate.

(c) Contract and Employ Persons. To contract for and employ persons, firms, corporations or other agents to assist in the management, operation, maintenance and administration of the Condominium Project.

(d) Occupancy and Use Rules and Regulations. To make reasonable rules and regulations, not inconsistent with these Bylaws, governing the use and enjoyment of the Condominium Project by members, invitees, families and pets, and to enforce such rules and regulations by all legal methods including, without limitation, imposing fines and late payment charges, or instituting eviction or legal proceedings.

(e) Bank Accounts and Borrow Money. To open bank accounts; and to borrow money and issue evidences of indebtedness in furtherance of any and all of the purposes of the business of the Association, and to designate signatories required for such purposes.

(f) Insurance. To obtain and carry insurance on behalf of the Association and/or the Board, and collect and allocate the proceeds thereof.

(g) Real or Personal Property. To own, acquire, maintain and improve, and to buy, operate, manage, sell, convey, assign, mortgage or lease any real or personal property (including any Unit in the Condominium and any easements, rights-of-way and licenses) on behalf of the Association in furtherance of any of the purposes of the Association.

(h) Deeds, Easements and Licenses. To authorize the execution of contracts, deeds of conveyance, easements, and rights-of-way affecting any real or personal property of the Condominium on behalf of the Owners; and to grant concessions, licenses and easements for the use of the Common Elements for purposes not inconsistent with the provisions of the Act or of the Condominium Documents.

(i) Repair and Rebuild Improvements. To restore, repair or rebuild improvements after casualty, and to negotiate on behalf of all members in connection with any taking of the Condominium, or any portion thereof, by eminent domain.

(j) Assert and Settle Claims. To assert, defend and/or or settle claims on behalf of all Owners in connection with the Common Elements of the Project and, on written notice to all Owners, instituting actions on behalf of and against the Owners in the name of the Association.

(k) Committees. To establish such committees as it deems necessary, convenient or desirable; and to appoint persons thereto for the purpose of implementing the administration of the Condominium and to delegate to such committees, or any specific Officers or Directors of the Association any functions or responsibilities which are not by law or the Condominium Documents required to be performed by the Board.

(l) Additional Duties. To exercise further duties as may be imposed by resolution of the members of the Association or that may be required by the Condominium

Documents or the Act.

4.5 Professional Management. The Board of Directors may employ for the Association a professional management agent at reasonable compensation established by the Board to perform such duties and services as the Board shall authorize, including, but not limited to, the duties listed in Section 4 of this Article 4, and the Board may delegate to such management agent any other duties or powers which are not by law or by the Condominium Documents required to be performed by or have the approval of the Board of Directors or the members of the Association. In no event shall the Board be authorized to enter into any contract with a professional management agent in which the maximum term is greater than three (3) years, or which is not terminable by the Association upon sixty (60) days' written notice thereof to the other party. In the event the Board does employ professional management for the Association, the Board shall notify each institutional holder of a first mortgage lien on any Unit in the Condominium prior to terminating professional management and assuming self-management.

4.6 Vacancies. Vacancies in the Board of Directors caused by any reason other than the removal of a director by a vote of the members of the Association shall be filled by vote of the majority of the remaining directors, even though they may constitute less than a quorum. Each person so appointed shall be a director until the end of the term of the director who he/she replaced and a successor is elected at such annual meeting of the Association.

4.7 Resignation and Removal of Directors. A Director may resign at any time and such resignation shall take effect upon receipt of written notice by the Association, or such subsequent time as may be set forth in the notice of resignation. At any regular or special meeting of the Association duly called and held, any one or more of the directors may be removed with or without cause by the vote of fifty-one percent (51%) of all Co-owners, and a successor may then and there be elected to fill the vacancy thus created. Any director whose removal has been proposed by the Co-owners shall be given an opportunity to be heard at the meeting. Furthermore, a majority of the Board of Directors may, without a vote of the Co-owners, remove from the Board any director who fails to attend more than three (3) duly scheduled Board meetings, in three (3) different months, in any given calendar year.

4.8 First Meeting of New Board. The first meeting of a newly elected Board of Directors shall be held within ten (10) days of election at such place and time as shall be fixed by the directors at the meeting at which such directors were elected, and no notice shall be necessary to the newly elected directors in order legally to constitute such meeting, provided a majority of the entire Board is present at such a meeting.

4.9 Regular Meetings. Regular meetings of the Board of Directors may be held at such times and places as shall be determined from time to time by a majority of the directors. Notice of regular meetings of the Board of Directors shall be given to each director, personally, or by mail, telephone or electronic transmission at least ten (10) days prior to the date of the meeting, unless waived by said director.

4.10 Special Meetings. Special meetings of the Board of Directors may be called by the president on three (3) days notice to each director, given personally, or by mail, telephone or

electronic transmission, which notice shall state the time, place and purpose of the meeting. Special meetings of the Board of Directors shall be called by the president or secretary in like manner and on like notice on the written request of one director.

4.11 Waiver of Notice. Before or at any meeting of the Board of Directors, any director may, in writing or orally, waive notice of such meeting and such waiver shall be deemed equivalent to the giving of such notice. Attendance by a director at any meetings of the Board shall be deemed a waiver of notice by that director of the time and place thereof. If all the directors are present at any meeting of the Board, no notice shall be required and any business may be transacted at such meeting.

4.12 Quorum. At all meetings of the Board of Directors, a majority of the directors shall constitute a quorum for the transaction of business, and the acts of the majority of the directors present at a meeting at which a quorum is present shall be the acts of the Board of Directors. If, at any meeting of the Board of Directors, there be less than a quorum present, the majority of those present may adjourn the meeting from time to time. At any such adjourned meeting, any business which might have been transacted at the meeting as originally called may be transacted without further notice. The joinder of a director in the action of a meeting by signing and concurring in the minutes thereof shall constitute the presence of such director for purposes of determining a quorum.

4.13 Attendance Via Remote Communication. A member of the Board, or a committee designated by the Board, may participate in a meeting by means of conference telephone or other means of remote communication by which all persons participating in the meeting can communicate with each other. Participation in a meeting pursuant to this section constitutes presence in person at the meeting.

4.14 Action Without Meeting. Any action permitted to be taken by the Board of Directors at a meeting of the Board shall be valid if consented to in writing by the requisite majority of the Board of Directors. Further, the presiding officer of the Association, in exceptional cases requiring immediate action, may poll all Directors by phone or other means of electronic communication for a vote, and provided the action is consented to by the requisite number of Directors, such vote shall constitute valid action by the Board, provided the results of the vote and the issue voted upon are noted in the minutes of the next Board meeting to take place.

4.15 Opening/Closing of Board of Directors' Meetings to Members. The Board of Directors, in its discretion, or may permit members of the Association to attend a portion or all of any meeting of the Board of Directors or may close a portion or all of any meeting of the Board of Directors to the members of the Association.

4.16 Fidelity Bonds. The Board of Directors shall require that all officers and employees of the Association handling or responsible for Association funds shall furnish adequate fidelity bonds. The premiums for such bonds shall be expenses of administration.

## **ARTICLE 5**

### **OFFICERS**

5.1 Designation and term. The Board shall elect a president, a secretary and a treasurer, and may also elect a vice president as the needs of the Association may require. Any two offices except that of president and vice president may be held by one person. The directors may also appoint such other officers as the needs of the Association may require. Each officer must be a member of the Board of Directors and shall hold office for the term of one year and until a successor is elected and qualified. No officer shall receive any compensation from the Association for acting as such.

5.2 President. The president shall be the chief executive officer of the Association, and shall preside at all meetings of the Association and of the Board of Directors, and shall be an ex officio member of any standing committees. The president shall have all of the general powers and duties which are usually vested in the office of the president of a corporation, including, but not limited to, the power to appoint committees from among the members of the Association from time to time in the president's discretion as may be deemed appropriate to assist in the conduct of the affairs of the Association.

5.3 Vice President. The vice president, if any, shall take the place of the president and perform the president's duties whenever the president shall be absent or unable to act. If neither the president nor the vice president are able to act, the Board of Directors shall appoint some other member of the Board to so do on an interim basis. The vice president shall also perform such other duties as shall from time to time be imposed by the Board of Directors.

5.4 Secretary. The secretary shall keep the minutes of all Board and Association meetings, have charge of the corporate minute book, corporate seal (if any) and of such books and papers as the Board of Directors may direct; and shall in general, perform all duties incident to the office of the secretary.

5.5 Treasurer. Subject at all times to the approval of the Board of Directors, and as not otherwise delegated by the Board to the Association's management agent, the treasurer shall have responsibility for all Association funds and securities and shall be responsible for keeping full and accurate accounts of all receipts and disbursements in books belonging to the Association. The treasurer shall be responsible for the deposit of all monies and other valuable papers of the Association, in the name of and to the credit of the Association, in such depositories as may from time to time be designated by the Board of Directors.

5.6 Resignation and Removal. An officer may resign at any time and such resignation shall take effect upon receipt of written notice by the Association, or at such subsequent time as may be set forth in the notice of resignation. Any or all of the officers may be removed, with or without cause, by the vote of a majority of the Board of Directors at any regular meeting, or any

special meeting of the Board called for such purpose. No removal action may be taken, however, unless the matter will have been included in the notice of the meeting, and any officer proposed to be removed shall be given an opportunity to be heard at the meeting.

5.7 Vacancies. Vacancies in any office may be filled by the affirmative vote of a majority of the remaining members of the Board at any regular or special meeting. Each person appointed to fill the vacancy shall be a Director and shall remain an officer for the term equal to that remaining of the replaced officer and until his or her successor has been duly elected and qualified.

## **ARTICLE 6** **FINANCES**

6.1 Books and Records. The Association shall keep books and records containing a detailed account of the expenditures and receipts of administration, which will specify the maintenance and repair expenses of the Common Elements and any other expenses incurred by or on behalf of the Association and its members. Such accounts shall be open for inspection by the Co-owners and their mortgagees during reasonable hours. The Association shall also prepare and distribute a financial statement to each Co-owner at least once a year, the contents of which will be defined by the Association. The books of account shall be independently audited or reviewed at least annually by a certified public accountant; provided however that such review need not be a certified audit. The above notwithstanding, the Association may opt out of the requirement for such annual review on an annual basis by an affirmative vote of its members. The costs of any such audit/review and any accounting expenses shall be expenses of administration. The Association also shall maintain on file current copies of the Amended and Restated Master Deed for the Project, any amendments thereto and all other Condominium Documents and shall permit all Co-owners, prospective purchasers and prospective mortgagees interested in the Project to inspect the same during reasonable business hours.

6.2 Fiscal Year. The fiscal year of the Association shall be an annual period commencing on such date as may be initially determined by the Board of Directors. The commencement date of the fiscal year of the Association shall be subject to change by the Board of Directors for accounting reasons or other good cause.

6.3 Banking. The funds of the Association shall be deposited in such bank or other depository as may be designated by the Board of Directors and shall be withdrawn only upon the check or order of such officers, employees or agents as are designated by resolution of the Board of Directors from time to time.

6.4 Investment of Funds. Funds of the Association shall only be held in accounts that are fully insured and/or backed by the full faith and credit of the United States Government. Only depositories or instruments where there is no risk of principal loss may be utilized by the Association for investment of its monies.

6.5 Maintenance and Repair. The responsibility for maintenance and repair of Units and Common Elements is as follows:

(a) Co-owner Responsibilities. All maintenance of and repair to a Unit (other than maintenance and repair of General Common Elements located within a Unit) and to a Limited Common Element that is the responsibility of the Co-owner of a Unit as set forth in the Master Deed, shall be made by the Co-owner of the Unit. Any Co-owner who desires to make structural modifications to a Unit or Limited Common Element must first obtain the written consent of the Association and shall be responsible for all damages to the Common Elements resulting from such repairs.

(b) Association Responsibilities. All maintenance of, repair to, and replacement for the General Common Elements, whether located inside or outside the Units, and to Limited Common Elements to the extent required by the Master Deed, shall be made by the Association and shall be charged to all the Co-owners as a common expense unless necessitated by the negligence, misuse, or neglect of a particular Co-owner, in which case the expense shall be charged to the Co-owner individually. The Association or its agent shall have access to each Unit from time to time during reasonable hours, upon notice to the occupant, for the purpose of maintenance, repair, or replacement of any of the Common Elements that are the responsibility of the Association located within or accessible only from a Unit. The Association or its agents shall also have access to each Unit at all times without notice for making emergency repairs necessary to prevent damage to other Units and/or to the Common Elements.

6.6 Reserve Fund. The Association shall maintain a reserve fund to be used for major repairs and replacement of the Common Elements as provided by section 105 of the Act. The fund shall be established in the minimum amount required on or before the Transitional Control Date, and shall, to the extent possible, be maintained at a level that is equal to or greater than 10 percent of the then-current annual budget of the Association on a noncumulative basis. The minimum reserve standard required by this section may prove to be inadequate, and the Board should carefully analyze the Project from time to time in order to determine if a greater amount should be set aside or if additional reserve funds shall be established for other purposes.

6.7 Construction Liens. A construction lien arising as a result of work performed on a Unit or on an appurtenant Limited Common Element shall attach only to the Unit upon which the work was performed, and a lien for work authorized by the Developer shall attach only to Condominium Units owned by the Developer at the time of recording the statement of account and lien. A construction lien for work authorized by the Association shall attach to each Unit only to the proportionate extent that the Co-owner of such Unit is required to contribute to the expenses of administration. No construction lien shall arise or attach to a Condominium Unit for work performed on the General Common Elements not contracted for by the Association or the Developer.

## ARTICLE 7

### INDEMNIFICATION

7.1 Scope of Indemnification. The Association shall indemnify to the fullest extent authorized or permitted by the Michigan Nonprofit Corporation Act, [MCL 450.2101 et seq.](#), any person, or the person's estate or personal representative, who is made or threatened to be made a party to an action, suit, or proceeding (whether civil, criminal, administrative, or investigative) because the person is or was a director or an officer of the Association or serves or served in any other enterprise at the request of the Association. Persons who are not Directors or officers of the Association may be similarly indemnified in respect of services rendered to the Association or at the request of the Association to the extent authorized at any time by the Board of Directors of the Association. The provisions of this section shall apply to Directors and officers who have ceased to render service and shall inure to the benefit of their heirs, personal representatives, executors, and administrators. This right of indemnify shall not be exclusive, and the Association may indemnify any person, by agreement or otherwise, on whatever terms and conditions the Board of Directors of the Association approves. Any agreement for the indemnification of any director, officer, employee, or other person may provide indemnification rights that are broader or otherwise different than those set forth in the Michigan Nonprofit Corporation Act, unless otherwise prohibited by law.

7.2 Authorization of Indemnification. Any indemnification under this Article 7 (unless ordered by a court) shall be made by the Association only when authorized in the specific case on a determination that indemnification of the Director, officer, employee, or agent is proper in the circumstances because that person has met the applicable standard of conduct set forth in this section and after 10 days' written notice to all Owners of the facts surrounding the request for indemnification. The determination shall be made (a) by the Board of Directors by a majority vote of a quorum consisting of Directors who were not parties to the action, suit, or proceeding; (b) if a quorum is not obtainable or, even if obtainable, when a quorum of disinterested Directors directs, by independent legal counsel (who may be the regular counsel of the Association) in a written opinion; or (c) by the members by a majority vote of a quorum at a meeting of the members.

7.3 Advancing of Expenses. The Association may pay expenses incurred in defending a civil or criminal action, suit, or proceeding described above in Section 1 in advance of the final disposition of the action, suit, or proceeding as authorized by the Board of Directors on receipt of an agreement by or on behalf of the Director, officer, employee, or agent to repay the amount unless it is ultimately determined that the person is entitled to be indemnified by the Association as authorized in this section.

7.4 Insurance. The Association may purchase and maintain insurance on behalf of any person who is or was a Director, an officer, an employee, or an agent of the Association or who

is or was serving at the request of the Association as a director, an officer, an employee, or an agent of another Association, partnership, joint venture, trust, or other enterprise against any liability asserted against that person and incurred by that person in any capacity for the Association or arising out of that status, whether or not the Association would have the power to indemnify that person against the liability under the provisions of this section.

7.5 Mergers. For the purposes of this section, references to the Association include all constituent entities absorbed in a consolidation or merger, as well as the resulting or surviving entity, so that any person who is or was a Director, an officer, an employee, or an agent of such a constituent entity or who is or was serving at the request of the constituent entity as a Director, an officer, an employee, or an agent of a corporation, partnership, joint venture, trust, or other enterprise shall stand in the same position under the provisions of this section 5 with respect to the resulting or surviving Association as that person would if that person had served the resulting or surviving Association in the same capacity

## **ARTICLE 8** **ASSESSMENTS**

8.1 Administration Expenses. The Association shall be assessed as the entity in possession of any tangible personal property of the Condominium owned or possessed in common, and personal property taxes levied on such property shall be treated as expenses of administration. All costs incurred by the Association in satisfaction of any liability arising within, caused by, or connected with the Common Elements or the administration of the Project shall be expenses of administration, and all sums received as proceeds of, or pursuant to any policy of insurance covering the interests of the Co-owners against liabilities or losses arising within, caused by, or connected with the Common Elements or the administration of such Common Elements shall be receipts of administration.

8.2 Determination of Assessments. Assessments will be determined in accordance with the following provisions:

(a) Initial budget. The Board of the Association shall establish an initial budget in advance for each fiscal year, which budget will project all expenses for the coming year that may be required for the proper operation, management, and maintenance of the Condominium Project, including a reasonable allowance for contingencies and reserves. The annual assessment to be levied against each Unit in the Project shall then be determined on the basis of the budget. Copies of the budget will be delivered to each Co-owner, although the failure to deliver such a copy to each Co-owner will not affect or in any way diminish the liability of a Co-owner for any existing or future assessment.

(b) Budget assessments. Should the Board determine at any time, in its sole discretion, that the initial assessments levied are insufficient: (1) to pay the costs of operation and maintenance of the Common Elements; (2) to provide for the replacement of existing Common Elements; (3) to provide for additions to the Common Elements not

exceeding \$5,000 annually; or (4) to respond to an emergency or unforeseen development; the Board is authorized to increase the initial assessment or to levy such additional assessments as it deems to be necessary for such purpose(s). The discretionary authority of the Board to levy additional assessments will rest solely with the Board for the benefit of the Association and its members, and may not be attached by or subject to specific performance by any creditors of the Association.

(c) Special assessments. Special assessments, in excess of those permitted by subsections (a) and (b), may be made by the Board from time to time with the approval of the Co-owners as provided in this subsection to meet other needs or requirements of the Association, including but not limited to: (1) assessments for additions to the Common Elements costing more than \$5,000 in any year; (2) assessments to purchase a Unit upon foreclosure of the lien described in Article 8.5; or (3) assessments for any other appropriate purpose not specifically described. Special assessments referred to in this subsection (but not including those assessments referred to in subsections (a) and (b), which will be levied in the sole discretion of the Board) will not be levied without the prior approval of 60 percent or more of all Co-owners. The authority to levy assessments pursuant to this subsection is solely for the benefit of the Association and its members and may not be attached by or subject to specific performance by any creditors of the Association.

8.3 Apportionment of Assessments. All assessments levied against the Unit Owners to cover expenses of administration shall be apportioned among and paid by the Co-owners on an equal basis, without increase or decrease for the existence of any rights to the use of Limited Common Elements appurtenant to a Unit. Unless the Board shall elect some other periodic payment schedule, annual assessments will be payable by Co-owners in 12 equal monthly installments, commencing with the acceptance of a deed to, or a land contract vendee's interest in a Unit, or with the acquisition of title to a Unit by any other means. The payment of an assessment will be in default if the assessment, or any part, is not received by the Association in full on or before the due date for such payment established by rule or regulation of the Association.

8.4 Expenses of Administration. The expenses of administration shall consist, among other things, of such amounts as the Board may deem proper for the operation and maintenance of the Condominium property under the powers and duties delegated to it and may include, without limitation, amounts to be set aside for working capital of the Condominium, for a general operating reserve, for a reserve for replacement, and for meeting any deficit in the common expense for any prior year; provided, that any reserves established by the Board prior to the initial meeting of members shall be subject to approval by such members at the initial meeting. The Board shall advise each Co-owner in writing of the amount of common charges payable by the Co-owner and shall furnish copies of each budget containing common charges to all Co-owners.

8.5 Collection of Assessments. Each Co-owner shall be obligated for the payment of all

assessments levied upon the Co-owner's Unit during the time that the person is the Co-owner of the Unit, and no Co-owner may become exempt from liability for the Co-owner's contribution toward the expenses of administration by waiver of the use or enjoyment of any of the Common Elements, or by the abandonment of a Unit.

(a) Legal remedies. In the event of default by any Co-owner in paying the assessed common charges, the Board may declare all unpaid installments of the annual assessment for the pertinent fiscal year to be immediately due and payable. In addition, the Board may impose reasonable fines or charge interest at the legal rate on such assessments from and after the due date. Unpaid assessments, together with interest on the unpaid assessments, collection, and late charges; advances made by the Association for taxes or other liens to protect its lien; attorney fees; and fines in accordance with the Condominium Documents shall constitute a lien on the Unit prior to all other liens except tax liens in favor of any state or federal taxing authority and sums unpaid upon a mortgage of record recorded prior to the recording of any notice of lien by the Association, and the Association may enforce the collection of all sums due by suit at law for a money judgment or by foreclosure of the liens securing payment in the manner provided by section 108 of the Act. In a foreclosure proceeding, whether by advertisement or by judicial action, the Co-owner or anyone claiming under the Co-owner shall be liable for assessments charged against the Unit that become due before the redemption period expires, together with interest, advances made by the Association for taxes or other liens to protect its lien, costs, and reasonable attorney fees incurred in their collection.

(b) Sale of Unit. Upon the sale or conveyance of a Unit, all unpaid assessments against the Unit shall be paid out of the sale price by the purchaser in preference over any other assessment or charge except as otherwise provided by the Condominium Documents or by the Act. A purchaser or grantee may request a written statement from the Association as to the amount of unpaid assessments levied against the Unit being sold or conveyed. The purchaser or grantee shall not be liable for, and the Unit sold or conveyed shall not be subject to a lien for any unpaid assessments in excess of, the amount stated in a written response from the Association. Unless the purchaser or grantee requests a written statement from the Association at least five days before sale as provided in the Act, however, the purchaser or grantee shall be liable for any unpaid assessments against the Unit together with interest, late charges, fines, costs, and attorney fees.

(c) Self-help. The Association may enter upon the Common Elements, Limited or General, to remove and abate any condition constituting a violation of the Condominium Documents, or may discontinue the furnishing of services to a Co-owner in default under any of the provisions of the Condominium Documents, upon seven days' written notice to such Co-owner of the Association's intent to do so. A Co-owner in default shall not be entitled to utilize any of the General Common Elements of the Project and shall not be entitled to vote at any meeting of the Association so long as the default continues;

provided, that this provision shall not operate to deprive any Co-owner of ingress and egress to and from the Co-owner's unit.

(d) Application of payments. Money received by the Association in payment of assessments in default shall be applied as follows: first, to costs of collection and enforcement of payment, including reasonable attorney fees; second, to any interest charges and fines for late payment on such assessments; and third, to installments of assessments in default in order of their due dates.

8.6 Financial Responsibility of the Developer. The Developer of the Condominium, although a member of the Association, will not be responsible for payment of either general or special assessments levied by the Association during the Development and Sales Period.

(a) Pre-turnover expenses. Prior to the initial meeting of Co-owners, it will be the Developer's responsibility to keep the books balanced, and to avoid any continuing deficit in operating expenses. At the time of the initial meeting, the Developer will be liable for the funding of any existing deficit of the Association that was incurred prior to the date of the initial meeting.

(b) Post-turnover expenses. After the initial meeting and for the duration of the Development and Sales Period, the Developer shall not be responsible for the payment of either general or special assessments levied by the Association on Units owned by the Developer that have not been conveyed or leased. To the extent the Developer holds title to Units that were previously conveyed or leased, the Developer shall be responsible for the same maintenance assessment levied against other Units in the Project and for all special assessments levied by the Association.

(c) Exempted transactions. At no time will the Developer be responsible for the payment of any portion of any assessment that is levied for deferred maintenance, reserves for replacement or capital improvements or additions, or to finance litigation or other claims against the Developer, including any cost of investigating and/or preparing such litigation or claim, or any similar related costs.

8.7 Liability of Mortgagee. Notwithstanding any other provisions of the Condominium Documents, the holder of any first mortgage covering any Unit in the Project, or its successors and assigns, which comes into possession of the Unit pursuant to the foreclosure remedies provided in the mortgage, shall take the property free of any claims for unpaid assessments or charges against the mortgaged Unit which become due prior to the acquisition of title to the Unit by such person or entity, except for claims for a pro rata share of such assessments or charges resulting from a pro rata reallocation of such assessments or charges to all Units including the mortgaged Unit, and except for claims evidenced by a Notice of Lien recorded prior to the recordation of the first mortgage.

8.8 Working Capital Deposit. At the closing of a purchase of a Unit in the Project each

Owner (other than a successor Developer) shall pay to the Association and amount equal to two (2) months of the regular monthly maintenance assessment installment at that time payable with respect to the Unit purchased as a working capital deposit for use by the Association. This obligation shall apply to both the original purchase of a Unit from the Developer and any subsequent purchase of the Unit, but shall not apply to any transfer of the Unit for less than One Hundred Dollars (\$100.00) consideration, or via foreclosure of deed in lieu of foreclosure. Such payment shall be nonrefundable.

## **ARTICLE 9**

### **TAXES, INSURANCE, AND REPAIR**

9.1 Real Property Taxes. Real property taxes and assessments shall be levied against the individual Units and not against the property of the Project except for the calendar year in which the Project was established. Taxes and assessments that become a lien against the property in the year in which the Project was established shall be expenses of administration and shall be assessed against the Units located on the land with respect to which the tax or assessment was levied in proportion to the Percentage of Value assigned to each Unit. Real property taxes and assessments levied in any year in which a vacation of the Project occurs shall be assessed only against the individual Units. For tax and special assessment purposes no Unit shall be combined with any other Unit or Units, and no assessment of any fraction of a Unit or combination of any Unit with other whole or partial Units shall be made, nor shall any division or split of the assessment or taxes of a single Unit be made, whether the Unit is owned by an individual or multiple Co-owners. Taxes for real property improvements made to or within a specific Unit shall be assessed against that Unit only, and each Unit shall be treated as a separate, single parcel of real property for purposes of property taxes and special assessments.

9.2 Insurance Coverage. The Association shall be appointed as attorney-in-fact for each Co-owner to act on insurance matters and shall be required to obtain and maintain, to the extent applicable: casualty insurance with extended coverage, vandalism and malicious mischief endorsements; liability insurance (including director's and officer's liability coverage if deemed advisable); and worker's compensation insurance pertinent to the ownership, use, and maintenance of the Common Elements of the Project. The Association may purchase and carry such other insurance coverage as the Board of Directors, in its sole discretion, may determine from time to time to be in the best interests of the Association and Unit Co-owners. All insurance shall be purchased by the Board of Directors for the benefit of the Association, the Co-owners, the mortgagees, and the Developer, as their interests may appear. Such insurance, other than title insurance, shall be carried and administered according to the following provisions:

- (a) Co-owner responsibilities. Each Co-owner will be responsible for obtaining insurance (generally Form HO-6) coverage for the Co-owner's personal property and improvements located within the Co-owner's Unit or elsewhere on the Condominium, for

personal liability for occurrences within the Co-owner's Unit or on the Limited Common Elements appurtenant to the Co-owner's Unit, and for alternative living expenses in the event of fire or other casualty causing temporary loss of the Co-owner's Unit. All insurance carried by the Association or any Co-owner shall contain provisions waiving the right of subrogation as to any claims against any Co-owner or the Association for insured losses.

(b) Common element insurance. The General Common Elements of the Project shall be insured by the Association against fire and other perils covered by a standard extended coverage endorsement, to the extent deemed applicable and appropriate, in an amount to be determined annually by the Board.

(c) Fidelity insurance. The Association shall fidelity coverage to protect against dishonest acts by its officers, directors, trustees, and employees and all others who are responsible for handling funds of the Association.

(d) Power of attorney. The Board is irrevocably appointed as the agent for each Co-owner, each mortgagee, other named insureds and their beneficiaries, and any other holder of a lien or other interest in the Condominium or the property, to adjust and settle all claims arising under insurance policies purchased by the Board and to execute and deliver releases upon the payment of claims.

(e) Indemnification. Each individual Co-owner shall indemnify and hold harmless every other Co-owner, the Developer, and the Association for all damages, costs, and judgments, including reasonable attorney fees, that any indemnified party may suffer as a result of defending claims arising out of an occurrence on or within an individual Co-owner's Unit or appurtenant Limited Common Elements. This provision shall not be construed to give an insurer any subrogation right or other right or claim against an individual Co-owner, the Developer or the Association.

(f) Premium expenses. Except as otherwise provided, all premiums upon insurance purchased by the Association pursuant to these Bylaws shall be expenses of administration.

9.3 Reconstruction and Repair. The following provisions will control if any part of the Condominium property is damaged or destroyed:

(a) General Common Elements. If the damaged property is a General Common Element, the damaged property shall be repaired or rebuilt promptly unless 80 percent or more of the Co-owners and the institutional holders of mortgages on any Unit in the project agree to the contrary. Provided, that if the affected General Common Element is the common roadway providing the sole means of ingress and egress to one or more Units in the Project, it will be repaired or rebuilt unless the 80 percent or more of the Co-owners agreeing not to repair or rebuild includes the Co-owners of all such Units.

(b) Limited Common Elements and improvements. If the damaged property is a Limited Common Element or an improvement located within the boundaries of a Unit, the Co-owner of the applicable Unit or Units alone shall determine whether to rebuild or repair the damaged property, subject to the rights of any mortgagee or other person having an interest in the property, and the Co-owner shall be responsible for the cost of any reconstruction or repair that the Co-owner elects to make. The Co-owner shall in any event remove all debris and restore the Unit and its improvements to a clean and slightly condition satisfactory to the Association within a reasonable period of time following the occurrence of the damage.

(c) Reconstruction standards. Any reconstruction or repair shall be substantially in accordance with the Master Deed and the original plans and specifications for the improvements located within the Unit, unless prior written approval for changes is obtained from the Association.

(d) Procedure and timing. Immediately after the occurrence of a casualty causing damage that is to be reconstructed or repaired by the Association, the Association shall obtain reliable and detailed estimates of the cost to place the damaged property in a condition as good as that existing before the damage. If the proceeds of insurance are not sufficient to cover the estimated cost of reconstruction or repair required to be performed by the Association, or if at any time during such reconstruction or repair the funds for the payment of such costs by the Association are insufficient, assessments shall be levied against all Co-owners in sufficient amounts to provide funds to pay the estimated or actual costs of reconstruction or repair.

(e) Withdrawal from the Condominium. If a decision to reconstruct is not made in the manner provided by subparagraphs (a) and (b) of Article 9.3, provision for the withdrawal of the damaged property from the project and the provisions of the Act may be made by the affirmative vote of not fewer than 80 percent of the co-owners voting at a meeting called for the specific purpose. The meeting shall be held within 30 days following the final adjustment of insurance claims, if any, or within 90 days after the casualty happens, whichever first occurs. If any Unit or portion of a Unit is withdrawn, the percentage of ownership in the Common Elements appurtenant to the withdrawn property shall be reallocated among the remaining Units not withdrawn on the basis of the relative percentages of ownership in the Common Elements appurtenant to each remaining Unit. If only a portion of a Unit is withdrawn, the percentage of ownership in the Common Elements appurtenant to the Unit shall be reduced accordingly, upon the basis of the diminution in market value of such Unit, as determined by the Board.

(f) Allocation of proceeds. In the event of the withdrawal of a Unit, a Common Element or a portion of either, any insurance proceeds received by the Association shall be allocated among the withdrawn Units and/or Common Elements on the basis of the square footage withdrawn or such other equitable basis as the Board may determine. As

compensation for such withdrawals: (1) any insurance proceeds allocated to withdrawn Units or portions of Units shall be applied in payment to the Co-owners of such Units in proportion to their relative percentages of ownership in the Common Elements appurtenant to such withdrawn Units, or portions of them; (2) any insurance proceeds allocated to withdrawn portions of the Limited Common Elements shall be applied in payment to the Unit Co-owners entitled to their use in proportion to their relative percentages of ownership in the Common Elements appurtenant to the Units served by such Limited Common Elements; and (3) any insurance proceeds allocated to withdrawn portions of the General Common Elements shall be applied in payment to all Unit Co-owners in proportion to their relative percentages of ownership in the Common Elements. Upon the withdrawal of any Unit or portion of a Unit, the Co-owner shall be relieved of further responsibility or liability for the payment of any assessments, if the entire Unit is withdrawn, or for the payment of a portion of such assessments proportional to the diminution in square footage of such Unit, if only a portion of the Unit is withdrawn.

9.4 Eminent Domain. The following provisions will control upon any taking by eminent domain:

(a) Units. In the event of the taking of all or any portion of a Unit, the award for such taking shall be paid to the Co-owner of the Unit and any mortgagee of the Unit, as their interests may appear. If a Co-owner's entire Unit is taken by eminent domain, such Co-owner and any mortgagee shall, after acceptance of the condemnation award, be divested of all interest in the Project.

(b) Common Elements. In the event of the taking of all or any portion of the General Common Elements, the condemnation proceeds relative to the taking shall be paid to the Association for use and/or distribution to its members. The affirmative vote of 80 percent or more of the Co-owners in number and in value shall determine whether to rebuild, repair, or replace the portion so taken or to take such other action as the Co-owners deem appropriate.

(c) Amendment to Master Deed. In the event the Project continues after the taking by eminent domain, the remaining portion of the Project shall be resurveyed and the Master Deed amended accordingly. If any Unit shall have been taken, Article 5 of the Master Deed shall also be amended to reflect the taking and to proportionately readjust the Percentages of Value of the remaining Co-owners based upon the continuing total value of the Condominium of 100 percent. The amendment may be completed by an officer of the Association duly authorized by the Board without the necessity of execution or specific approval by any Co-owner.

(d) Notice to mortgagees. In the event any Unit in the Condominium, the Common Elements, or any portion of them is made the subject matter of an eminent domain proceeding or is otherwise sought to be acquired by a condemning authority, the Association shall promptly notify each holder of a publicly recorded mortgage lien on

any of the Units in the Condominium.

(e) Inconsistent provisions. To the extent not inconsistent with the provisions of this Article, section 133 of the Act ("Contractable Projects") shall control upon any taking by eminent domain.

## **ARTICLE 10** **USE AND OCCUPANCY RESTRICTIONS**

10.1 Residential Use. Condominium Units shall be used exclusively for residential occupancy, and no Unit or appurtenant Common Element shall be used for any purpose other than that of a single family residence or purposes incidental to residential use. Home occupations conducted entirely within the residence and participated in solely by members of the immediate family residing in the residence, that do not generate unreasonable traffic by members of the general public and do not change the residential character of the building, are expressly declared to be incidental to primary residential use. Also, professional and quasi-professional co-owners may use their residence as an ancillary facility to an office established elsewhere, so long as such use does not generate unreasonable traffic by members of the general public. It shall be the responsibility of any Co-owner wishing to conduct a home occupation to obtain any required approval or permit from local governmental authorities or other third parties. No building intended for other business uses, and no apartment house, rooming house, day care facility, foster care residence, or other commercial and/or multiple-family dwelling of any kind shall be erected, placed, or permitted in any Unit.

10.2 Common Areas. The Common Elements shall be used only by the Co-owners of Units in the Condominium and by their agents, tenants, family members, invitees, and licensees for access, ingress to, and egress from the respective Units, and for other purposes incidental to use of the Units; provided, that any parking areas, storage facilities, or other Common Elements designed for a specific purpose shall be used only for those purposes or other uses approved by the Board. The use, maintenance, and operation of the Common Elements shall not be obstructed, damaged, or unreasonably interfered with by any Co-owner, and shall be subject to any lease or easement presently in existence or entered into by the Board at some future date that affects all or any part of the Common Elements. Residents shall not speed on any of the roads within the Project, and shall maintain a proper speed at all times and in accordance with any posted speed limits and/or rules and regulations adopted by the Board of Directors.

### 10.3 Alterations to a Condominium Unit or Common Element.

(a) Co-owner Alterations. No Co-owner shall make alterations in exterior appearance or make structural modifications to any Unit (including interior walls through or in which there exist easements for support or utilities) or make changes in the appearance or use of any of the Common Elements, limited or general, without the express written approval of the Board of Directors, including but not limited to, exterior painting, replacement of windows, installation of egress windows, or the erection of lights, awnings, shutters, doors, newspaper holders, mailboxes,

spas, hot tubs, decks, landscaping, invisible pet fences or other exterior attachments or modifications. The erection of antennas, DBS reception devices, and other technologies regulated by the Federal Communications Commission, shall be in accordance with duly promulgated rules and regulations of the Association, which shall at all times be construed so as not to violate FCC regulations applicable thereto. The Association shall not approve any alterations or structural modifications that would jeopardize or impair the soundness, safety, or appearance of the Project. Any Co-owner may make alterations, additions, or improvements within the Co-owner's Unit without the prior approval of the Board, but the Co-owner shall be responsible for any damage to other Units, the Common Elements, or the property resulting from such alterations, additions, or improvements. All costs for the maintenance, repair and replacement of any Co-owner alteration or modification shall be the complete responsibility of the Co-owner.

(b) Modification or Improvement to Accommodate the Disabled. Notwithstanding the previous subparagraph A, a Co-owner may make improvements or modifications to the Co-owner's Condominium Unit, including Common Elements and the route from the public way to the door of the Co-owner's Condominium Unit, at the Co-owner's expense, if the purpose of the improvement or modification is to facilitate access to or movement within the Unit for persons with disabilities who reside in or regularly visit the Unit or to alleviate conditions that could be hazardous to persons with disabilities who reside in or regularly visit the Unit, subject to the following:

(1) The improvement or modification shall not impair the structural integrity of a structure or otherwise lessen the support of a portion of the Condominium Project, nor unreasonably prevent passage by other residents of the Condominium Project upon the Common Elements.

(2) The Co-owner shall be liable for the cost of repairing any damage to a Common Element caused by building or maintaining the improvement or modification, and such improvement or modification shall comply with all applicable state and local building requirements and health and safety laws and ordinances and shall be made as closely as possible in conformity with the intent of applicable prohibitions and restrictions regarding safety and aesthetics of the proposed modification.

(3) Before an improvement or modification allowed by this subsection is made the Co-owner shall submit plans and specifications for such alteration to the Association for approval. If the proposed alteration substantially conforms to the requirements of this subsection, the Association shall not deny the same without good cause. A denial shall be in writing, delivered to the Co-owner, listing the changes needed for the proposed alteration to conform. Any requests for approval by the Association under this subsection shall be acted upon not later than sixty (60) days after the required plans and specifications are submitted. Failure of the Association to approve or deny a request within the sixty (60) day period shall entitle the Co-owner to undertake the alteration without the approval of the Association.

(4) Any Co-owner making an alteration pursuant to this subsection shall maintain liability insurance and provide the Association with proof thereof prior to undertaking the alteration or

modification, underwritten by an insurer authorized to do business in this state, in an amount adequate to compensate for personal injuries caused by the exterior improvement or modification, and naming the Association as an additional insured, but the Co-owner shall not be liable for acts or omissions of the Association with respect to the exterior alteration, and the Co-owner shall not be required to maintain liability insurance with respect to any Common Element.

(5) Responsibility for the cost of any maintenance, repair or replacement of an exterior alteration allowed by this Section shall be in accordance with the provisions of Section 47(a) of the Michigan Condominium Act.

(6) A Co-owner having made an improvement or modification allowed by this subsection shall notify the Association in writing of the Co-owner's intention to convey any interest in or lease his or her Condominium Unit to another, not less than thirty (30) days before the effective date of the conveyance or lease. Not more than thirty (30) days after receiving such a notice, the Association may require that the Co-owner remove the improvement or modification and restore the premises at the Co-owner's expense. In the absence of the required notice of conveyance or lease, the Association may at any time remove or require the Co-owner to remove the improvement or modification at the Co-owner's expense, however, the Association may not remove or require the removal of an improvement or modification if the Co-owner intends to resume residing in the Unit within 12 months or a Co-owner conveys or leases the Condominium Unit to a person with disabilities who needs the same type of improvement or modification, or who has a person residing with him or her who requires the same type of improvement or modification. As used in this Section, "person with disabilities" means that term as defined in Section 2 of the state construction code act of 1972 – MCL 125.1502.

10.4 Specific Restrictions. Without limiting the generality of the preceding provisions in this Article, the use of the Project and all Common Elements by any Co-owner shall be subject to the following restrictions:

(a) Household Composition. No rule shall interfere with the freedom of occupants to determine the composition of their households, except that the Association shall have the power to adopt rules limiting the use of Units to single family residential use and to limit the total number of occupants permitted in each Unit on the basis of size and facilities and its fair share use of the Common Elements including parking.

(b) Use of Common Elements. The Common Elements, limited or general, shall not be used for storage of supplies, materials, personal property or trash or refuse of any kind, except as provided in duly adopted rules and regulations of the Association. Trash receptacles shall be maintained in garages or other areas designated therefor by the Association, and except for such short periods of time established by the Board of Directors as necessary to permit periodic collection of trash, shall not be permitted to remain elsewhere on the Common Elements at any time. No bicycles, vehicles, chairs, benches, toys, baby carriages, obstructions or other personal

property may be left unattended on or about the Common Elements. Use of all General Common Elements may be limited to such times and in such manner as the Board of Directors shall determine by duly adopted regulations. In general, no activity shall be carried on nor condition maintained by a Co-owner either in his Unit or upon the Common Elements, which detracts from or spoils the appearance of the Condominium.

(c) Nuisances. No nuisances shall be permitted on the property nor shall any use or practice be permitted that is a source of annoyance to, or that interferes with the peaceful possession or proper use of the Project by the Co-owners. No Unit shall be used in whole or in part for the storage of rubbish or trash, nor for the storage of any property or thing that may cause the Unit to appear in an unclean or untidy condition. No substance or material shall be kept on a Unit that will emit foul or obnoxious odors, or that will cause excessive noise that will or might disturb the peace, quiet, comfort, or serenity of the occupants of surrounding Units.

(d) Prohibited uses. No immoral, improper, offensive, or unlawful use shall be conducted on the property, and nothing shall be done or kept in any Unit or on the Common Elements that will increase the rate of insurance for the Project without the prior written consent of the Association. No Co-owner shall permit anything to be done or kept in the Co-owner's Unit or elsewhere on the Common Elements that will result in the cancellation of insurance on any Unit or any part of the Common Elements, or that will be in violation of any law.

(e) Signs. No signs (including "For Sale" and "For Rent" signs), advertising devices, pennants or flags (other than a US flag no larger than 3' x 5'), that are visible from the exterior of a Unit or from the common elements shall be displayed from any Unit, without written permission from the Association or as otherwise permitted by the rules and regulations adopted by the Board of Directors.

(f) Personal property. No Co-owner shall display, hang, or store any clothing, sheets, blankets, laundry, or other articles outside a Unit or inside the Unit in a way that is visible from the outside of the Unit, except for draperies, curtains, blinds, or shades of a customary type and appearance. Neither shall any Co-owner paint or decorate the outside of a Unit or install any radio or television antenna, window air-conditioning unit, snap-in window divider, awning, or other equipment, fixtures, or items without written permission from the Association. Exceptions to this subsection may be made by the Association for temporary holiday decorations, bird feeders, landscape accents and the like. These restrictions shall not be construed to prohibit a Co-owner from placing and maintaining an outdoor grill, outdoor furniture and accouterments, and decorative foliage of a customary type and appearance on a deck, patio, or stoop that is a limited common element appurtenant to a Unit. However, storage of furniture or other personal property on any open deck, patio or stoop is subject to rules and regulations as may be adopted by the Board of Directors.

(g) Firearms and weapons. No Co-owner shall use, or permit the use by any occupant, agent, tenant, invitee, guest, or member of the Co-owner's family of any firearms, air rifles, pellet guns, B-B guns, bows and arrows, fireworks or other dangerous weapons, projectiles, or devices

anywhere on or about the Project.

(h) Pets and animals. Except for 1 dog and 1 cat, no animals of any kind may be kept or maintained in any Unit without the prior written consent of the Association, which consent, if given, may be revoked at any time by the Association. No exotic, savage, or dangerous animal shall be kept on the property, and no animal may be kept or bred for commercial purposes. Renters and guests will not be permitted to have pets at any time without express written approval of the Board of Directors. Common household pets permitted under the provisions of this subsection shall be kept only in compliance with the rules and regulations promulgated by the Board of Directors from time to time, and must at all times be kept under care and restraint so as not to be obnoxious on account of noise, odor, or unsanitary conditions. No animal shall be permitted to run loose upon the Common Elements or within any Unit (except the Unit owned by the owner of such animal), and the owner of each pet shall be responsible for immediately collecting and properly disposing of wastes and litter of their pet.

The Association may charge a Co-owner maintaining animals a reasonable supplemental assessment if the Association determines that such an assessment is necessary to defray additional maintenance costs to the Association of accommodating animals within the Condominium. After a hearing in which the owner of the animal in question is permitted to participate, the Association may, without liability to the owner of the pet, remove or cause any animal to be removed from the Condominium that it determines to be in violation of the restrictions imposed by this Article. Any person who causes or permits any animal to be brought to or kept on the Condominium property shall indemnify and hold the Association harmless from any loss, damage, or liability that the Association may sustain as a result of the presence of such animal on the Condominium property.

(i) Vehicles and Parking. No recreational vehicle, motor home, boat or trailer shall be parked outside of a garage, or stored in any garage if such storage would prevent full closure of the door to the garage, without the written approval of the Association; provided, however, that such vehicles may be visibly parked for a period of not more than 72 consecutive hours (nor more than 6 days in any 30 day period) to permit loading, unloading, vacation preparation and the like. No snowmobile, dirt bike, go-cart, all-terrain vehicle or other motorized recreational vehicle shall be operated within the Project without written permission from the Association. No maintenance or repair shall be performed on any boat or vehicle of any type except within a garage or Unit where totally isolated from public view without prior written permission from the Association. Each Co-owner shall park said Co-owner's vehicles in the Unit garage spaces provided therefore, and no more than two (2) vehicles shall be kept outside a closed garage anywhere on the Condominium Property by those persons residing in any Unit except as the Association may make reasonable exceptions thereto from time to time. Vehicles kept outside the garage shall be parked only on the Limited Common Element driveway appurtenant to a Unit and not on the General Common Element guest parking areas unless approved in writing by the Association. No inoperable or unlicensed vehicles of any type may be brought or stored upon the Condominium Property either temporarily or permanently, unless parked in the garage with the door closed. Commercial vehicles and trucks shall not be parked in or about the Condominium

unless while making deliveries or pickups in the normal course of business. Both for security reasons and to present an attractive appearance to the Project, all garage doors are to be closed overnight and shall not otherwise remain open for prolonged periods. No vehicles shall be parked on sidewalks or lawn areas, nor shall vehicles be parked along the private drive(s) (except in the event of occasional parties or receptions generating a need for such parking). Overnight parking on any street in the Condominium is prohibited except as the Association may make reasonable exceptions thereto from time to time.

(j) Accessory Structures and Objects. No tent, trampoline, portable pool, shack, shed, garage accessory building, outbuilding or other structure of a temporary character shall be erected, occupied or used at any time without the prior written consent of the Board of Directors.

(k) Satellite Dishes and Other Antennas. No device or equipment used for the receipt of video programming services, including direct broadcast satellite, television broadcast and multipoint distribution service (collectively, "Satellite Dish") larger than one meter in diameter in size may be installed within the Project without prior written consent of the Association. Satellite dishes one meter and smaller in diameter may be installed in the Project as permitted by duly adopted rules and regulations of the Association. The rules and regulations adopted pursuant to this subparagraph shall not be inconsistent with any then valid and existing rule of the Federal Communications Commission or its successor.

(l) Utility Access. No Co-owner shall in any way restrict access to any utility line or other Common Element that must be accessible to service the Common Elements or to any Unit in any manner which affects the Association's responsibility in any way without the prior written consent of the Board of Directors.

(m) Garage Sales. No garage sales, estate sales, rummage sales or similar activities may be conducted on the Condominium Premises without the prior written consent of the Board of Directors.

(n) Landscaping. Each Co-owner may plant annual or perennial flowers (but no other plants or vegetation) in the General Common Element planting bed immediately adjacent to the Co-owner's Unit subject to limitations and restrictions as may be promulgated by the Board of Directors. Other than this limited right to plant annual and perennial flowers only, no Co-owner shall perform any landscaping or plant any trees or shrubs or place any ornamental materials upon the Common Elements unless approved in writing by the Board or permitted by the rules and regulations adopted by the Board.

(o) Arbitration and Hearing. In the absence of an election to arbitrate pursuant to Article 14 of these Bylaws, a dispute or question whether a violation of any specific regulation or restriction in this article has occurred shall be submitted to the Board of Directors of the Association, which shall conduct a hearing and render a written decision. The board's decision shall bind all owners and other parties that have an interest in the condominium

10.5 Zoning Compliance. In addition to the restrictions contained in this Article, the use of any Unit must satisfy the requirements of the zoning ordinances of the municipality in which the Project is located in effect at the time of the contemplated use, unless a variance for such use is obtained from the municipality.

10.6 Rules and Regulations. Additional rules and regulations consistent with the Act, the Master Deed, and these Bylaws concerning the use of Units and Common Elements may be promulgated and amended by the Board. Copies of such rules and regulations must be furnished by the Board to each Co-owner at least 10 days prior to their effective date, and may be revoked at any time by the affirmative vote of a majority of all Co-owners entitled to vote.

10.7 Association Access to Units and/or Limited Commons Elements. The Association or its duly authorized agents shall have access to each Unit and any limited Common Elements appurtenant thereto from time to time, during reasonable working hours, upon notice to the Co-owner thereof, as may be necessary for the maintenance, repair or replacement of any of the Common Elements. The Association or its agents shall also have access to each Unit and any Limited Common Elements appurtenant thereto at all times without notice as may be necessary to make emergency repairs to prevent damage to the Common Elements or to another Unit. In all such cases of access by the Association or its agents, due care shall be exercised to avoid or minimize damage to the extent reasonably possible. It shall be the responsibility of each Co-owner to provide the Association means of access to his Unit and any Limited Common Elements appurtenant thereto during all periods of absence and in the event of the failure of such Co-owner to provide means of access, the Association may gain access in such manner as may be reasonable under the circumstances and shall not be liable to such Co-owner for any necessary damage to his Unit and any Limited Common Elements appurtenant thereto caused thereby or for repair or replacement of any doors or windows damaged in gaining such access.

10.8 Co-owner Maintenance of Unit and Limited Common Elements. Each Co-owner shall maintain his Unit and any Limited Common Elements appurtenant thereto for which he has maintenance responsibility in a safe, clean and sanitary condition. Each Co-owner shall also use due care to avoid damaging any of the Common Elements, including, but not limited to, the telephone, water, gas, plumbing, electrical, cable TV or other utility conduits and systems and any other Common Elements in any Unit which are appurtenant to or which may affect any other Unit. Each Co-owner shall be responsible for damages or costs to the Association resulting from damage to or misuse of any of the Common Elements by him, or his family, guests, agents or invitees, or by casualties and occurrences, whether or not resulting from Co-owner negligence, involving items or Common Elements which are the responsibility of the Co-owner to maintain, repair and replace, unless such damages or costs are covered by insurance carried by the Association, in which case there shall be no such responsibility (unless reimbursement to the Association is excluded by virtue of a deductible provision, in which case the responsible Co-owner shall bear the expense to the extent of the deductible amount.) Any costs or damages to the Association may be assessed to and collected from the responsible Co-owner in the manner provided in Article 8 hereof. Each individual Co-owner shall indemnify the Association and all

other Co-owners against such damages and costs, including reasonable attorneys' fees, and all such costs or damages to the Association may be assessed to and collected from the responsible Co-owner in the manner provided in Article 8 hereof. The Co-owners shall have the responsibility to report to the Association any Common Element which has been damaged or which is otherwise in need of maintenance, repair or replacement.

10.9 Costs of Enforcing Documents. Any and all costs, damages, fines, expenses and/or actual attorneys fees incurred or levied by the Association in enforcing any of the restrictions set forth in this Article 10, Article 12 and/or rules and regulations promulgated by the Board of Directors of the Association, and any expenses incurred as a result of the conduct of less than all those entitled to occupy the Condominium Project, or by their licensees or invitees, may be assessed to, secured by the statutory lien on the Unit, and collected from the responsible Co-owner or Co-owners in the manner provided in Article 8 hereof. This specifically includes actual costs and legal fees incurred by the Association in investigating and seeking legal advice concerning violations, and responding to and defending actions relating to violations in small claims court, or any other court of competent jurisdiction.

10.10 Enforcement by Developer. The Project shall at all times be maintained in a manner consistent with the highest standards of a private residential community, used and occupied for the benefit of the Co-owners and all other persons interested in the Condominium. If at any time the Association fails or refuses to carry out its obligations to maintain, repair, replace, and landscape in a manner consistent with the maintenance of such standards, the Developer, or any person to whom it may assign this right may, at its option, elect to maintain, repair, and/or replace any Common Elements or to do any landscaping required by these Bylaws and to charge the cost to the Association as an expense of administration. The Developer shall have the right to enforce these Bylaws throughout the Development and Sales Period, which right of enforcement shall include (without limitation) an action to restrain the Association or any Co-owner from any prohibited activity.

10.11 Remedies on Breach. In addition to the remedies granted elsewhere in these Bylaws, the Association, acting through it's duly designated Board of Directors, shall have the right to levy and assess monetary fines for violation of any provision of the Condominium Documents. Any such fines levied against a Co-owner shall be due the first of the next following month and failure to pay will subject the Co-owner to all liabilities set forth in the Condominium Documents including, without limitation, those described in Article 8 of these Bylaws. The Association shall also have the right, in the event of a violation of the restrictions on use and occupancy imposed by this Article, to enter the Unit and to remove or correct the cause of the violation. Such entry will not constitute a trespass, and the Co-owner of the Unit will reimburse the Association for all costs of the removal or correction. Failure to enforce any of the restrictions contained in this section will not constitute a waiver of the right of the Association to enforce restrictions in the future.

10.12 Reserved Rights of Developer. The restrictions contained in this Article shall not apply to the commercial activities of the Developer during the Development and Sales Period.

The Developer shall also have the right to maintain a sales office, advertising display signs, storage areas, and reasonable parking incident to its sales efforts and such access to, from, and over the Condominium property as may be reasonable to enable development and sale of the entire Project.

10.13 Assignment and Succession. Any of the rights granted to or reserved by the Developer in the Condominium Documents or by law may be assigned by it to any other entity or to the Association. Any such assignment or transfer shall be made by an appropriate document in writing, signed by the Developer and recorded in the public records of the county in which the Project is located. Upon such qualification, the assignee will have the same rights and powers as those granted to or reserved by the Developer in the Condominium Documents.

## **ARTICLE 11** **MORTGAGES**

11.1 Notice to Association. Any Co-owner who mortgages a Unit shall notify the Association of the name and address of the mortgagee (referenced in this Article as a "mortgagee"), and the Association will maintain such information. The information relating to mortgagees will be made available to the Developer or its successors as needed for the purpose of obtaining consent from, or giving notice to mortgagee concerning actions requiring consent or notice to mortgagees under the Condominium Documents or the Act.

11.2 Insurance. The Association shall notify each mortgagee of the name of each company insuring the Condominium against fire, perils covered by extended coverage, and vandalism and malicious mischief, with the amounts of the coverage.

11.3 Rights of Mortgagees. Except as otherwise required by applicable law or regulation, a mortgagee has the following rights:

(a) Inspection and notice. Upon written request to the Association, a mortgagee will be entitled to: (1) inspect the books and records relating to the Project upon reasonable notice; (2) receive a copy of the annual financial statement that is distributed to Co-owners; (3) notice of any default under the Condominium Documents by its mortgagor in the performance of the mortgagor's obligations that is not cured within 30 days; and (4) notice of all meetings of the Association and its right to designate a representative to attend the meetings.

(b) Exemption from restrictions. A mortgagee that comes into possession of a Unit pursuant to the remedies provided in the mortgage or by deed in lieu of foreclosure, shall be exempt from any option or right of first refusal on the sale or rental of the mortgaged Unit in the Condominium Documents.

(c) Past-due assessments. A mortgagee that comes into possession of a Unit pursuant to

the remedies provided in the mortgage, or by deed in lieu of foreclosure, shall take the Unit free of any claims for unpaid assessments or charges against the mortgaged Unit that accrue prior to the time the mortgagee comes into possession, except for assessments having priority as liens against the Unit or claims for a pro rata share of such assessments or charges resulting from a reallocation of such assessments charged to all Units including the mortgaged Unit.

11.4 Additional Notification. When notice is to be given to a mortgagee, the Board shall also give such notice to the Federal Home Loan Mortgage Corporation, the Federal National Mortgage Association, the Veterans Administration, the Federal Housing Administration, the Farmer's Home Administration, the Government National Mortgage Association and any other public or private secondary mortgage market entity participating in purchasing or guarantying mortgages of Units in the Condominium if the Board has notice of such participation.

## **ARTICLE 12** **LEASES**

12.1 Notice of Lease. A Co-owner, including the Developer, intending to lease a Unit, shall disclose that fact in writing to the Association at least 10 days before presenting a lease form to the prospective tenant and, at the same time, shall supply the Association with a copy of the lease form. No Co-owner, other than the Developer, shall lease a Unit for a period of less than 90 days without the prior written consent of the Association.

12.2 Terms of Lease. Non Co-owner occupants of a Unit shall comply with all the conditions of the Condominium Documents of the Project, and all lease and rental agreements must require such compliance.

12.3 Remedies of Association. If the Association determines that any non Co-owner occupant has failed to comply with any conditions of the Condominium Documents, the Association may take the following action:

(a) Notice. The Association shall notify the Co-owner of the Unit by certified mail advising of the alleged violation by the non Co-owner occupant.

(b) Investigation. The Co-owner will have 15 days after receipt of the notice to investigate and correct the alleged breach by the non Co-owner occupant or to advise the Association that a violation has not occurred.

(c) Legal action. If, after 15 days, the Association believes that the alleged breach has not been cured or may be repeated, it may institute an action for eviction against the non Co-owner occupant and a simultaneous action for money damages (in the same or in a separate action) against both the Co-owner and the non Co-owner occupant for breach of the conditions of the Condominium Documents. The relief provided for in this Article may be by summary proceeding. The Association may hold both the non Co-owner

occupant and the Co-owner liable for any damages to the Common Elements caused by the Co-owner or non Co-owner occupant in connection with the Unit or the Project.

12.4 Liability for Assessments. If a Co-owner is in arrears to the Association for assessments, the Association may give written notice of the arrearage to a non Co-owner occupant occupying the Co-owner's Unit under a lease or rental agreement and the non Co-owner occupant, after receiving such notice, shall deduct from rental payments due the Co-owner the full arrearage, and future assessments as they fall due, and pay them to the Association. Such deductions shall not be a breach of the lease agreement by the non Co-owner occupant.

### **ARTICLE 13** **TRANSFER OF UNITS**

12.1 Unrestricted Transfers. An individual Co-owner may, without restriction under these Bylaws, sell, give, devise, or otherwise transfer the Co-owner's Unit, or any interest in the Unit. The Association may levy a transfer fee against a new Co-owner and the transferred Unit in an amount not to exceed two times the then current monthly assessment plus the reasonable administrative costs of transferring ownership on the records of the Association.

12.2 Notice to Association. Whenever a Co-owner shall sell, give, devise, or otherwise transfer the Co-owner's Unit, or any interest in the Unit, the Co-owner shall give written notice to the Association at least 10 days prior to consummating the transfer. Such notice shall be accompanied by documents evidencing the title or interest to be transferred.

### **ARTICLE 14** **ARBITRATION**

13.1 Submission to Arbitration. Any dispute, claim, or grievance arising out of or relating to the interpretation or application of the Master Deed, Bylaws, or other Condominium Documents, and any disputes, claims, or grievances arising among or between Co-owners or between Co-owners and the Association may, upon the election and written consent of the parties to the dispute, claim, or grievance, and written notice to the Association, be submitted to arbitration. The parties shall accept the arbitrator's decision and/or award as final and binding. The commercial arbitration rules of the American Arbitration Association, as amended and in effect from time to time, shall be applicable to all such arbitration's.

13.2 Disputes Involving the Developer. A contract to settle by arbitration may also be executed by the Developer and any claimant with respect to any claim against the Developer that might be the subject of a civil action, provided that:

(a) Purchaser's option. At the exclusive option of a purchaser or Co-owner in the Project, a contract to settle by arbitration shall be executed by the Developer with respect to any claim that might be the subject of a civil action against the Developer, which claim involves an amount less than \$2,500 and arises out of or relates to a purchase agreement,

Unit, or the Project.

(b) Association's option. At the exclusive option of the Association of Co-owners, a contract to settle by arbitration shall be executed by the Developer with respect to any claim that might be the subject of a civil action against the Developer, which claim arises out of or relates to the Common Elements of the Project, if the amount of the claim is \$10,000 or less.

13.3 Preservation of Rights. Election by any Co-owner or by the Association to submit any dispute, claim, or grievance to arbitration shall preclude that party from litigating the dispute, claim, or grievance in the courts. Except as provided in this section, however, all interested parties shall be entitled to petition the courts to resolve any dispute, claim, or grievance in the absence of an election to arbitrate.

## **ARTICLE 14** **OTHER PROVISIONS**

14.1 Definitions. All terms used in these Bylaws will have the same meaning assigned by the Master Deed to which the Bylaws are attached, or as defined in the Act.

14.2 Severability. In the event that any of the terms, provisions, or covenants of these Bylaws or of any Condominium Document are held to be partially or wholly invalid or unenforceable for any reason whatsoever, such holding shall not affect, alter, modify, or impair any of the other terms, provisions, or covenants of such documents or the remaining portions of any terms, provisions, or covenants held to be partially invalid or unenforceable.

14.3 Notices. Notices provided for in the Act, Master Deed, or Bylaws shall be in writing and shall be addressed to the Association at its registered office in the State of Michigan and to any Co-owner at the address contained in the deed of conveyance, or at such other address as may subsequently be provided. The Association may designate a different address for notices to it by giving written notice of such change of address to all Co-owners. Any Co-owner may designate a different address for notices by giving written notice to the Association. Notices addressed as above shall be deemed delivered when mailed by United States mail with postage prepaid or when delivered in person.

14.4 Amendment. These Bylaws may be amended, altered, changed, added to, or repealed only in the manner prescribed in the Master Deed.

14.5 Conflicting Provisions. In the event of a conflict between the Act (or other laws of the State of Michigan) and any Condominium Document, the Act (or other laws of the State of Michigan) shall govern. In the event of a conflict between the provisions of any one or more of the Condominium Documents themselves, the following order of priority shall be applied, and the provisions of the document having the highest priority shall govern:

1. the Master Deed, including the Condominium Subdivision Plan (but excluding these Bylaws);
2. these Condominium Bylaws;
3. the Articles of Incorporation of the Association;
4. the rules and regulations of the Association; and
5. the Disclosure Statement.

November 23, 2022

David Barker  
PO Box 571  
Douglas, MI, 49406

**Re: Wetland Delineation Report – Ferry Street Parcels**

Dear Mr. Barker:

At your request, Barr Engineering Co. (Barr) conducted a wetland delineation at the above-referenced site. The purpose of this wetland delineation report is to summarize the results of the wetland delineation conducted on June 21, 2022.

### 1.0 Area of Investigation Description

The Area of Investigation (AOI) includes a portion of parcel numbers 59-017-089-95, 59-017-089-00, 59-017-089-80, 59-017-089-10, 59-017-089-20, 59-017-089-30, 59-017-089-70, and 59-017-089-60, located at 485, 440, 504, 462, 464, 466, 468, and 502 Ferry Street, in the City of Douglas, Allegan County, Michigan. Surrounding land uses and cover types include residential, commercial, and industrial. The dominant land uses and cover types within the AOI consist of wetlands, upland forest and scrub brush, and several utility corridors.

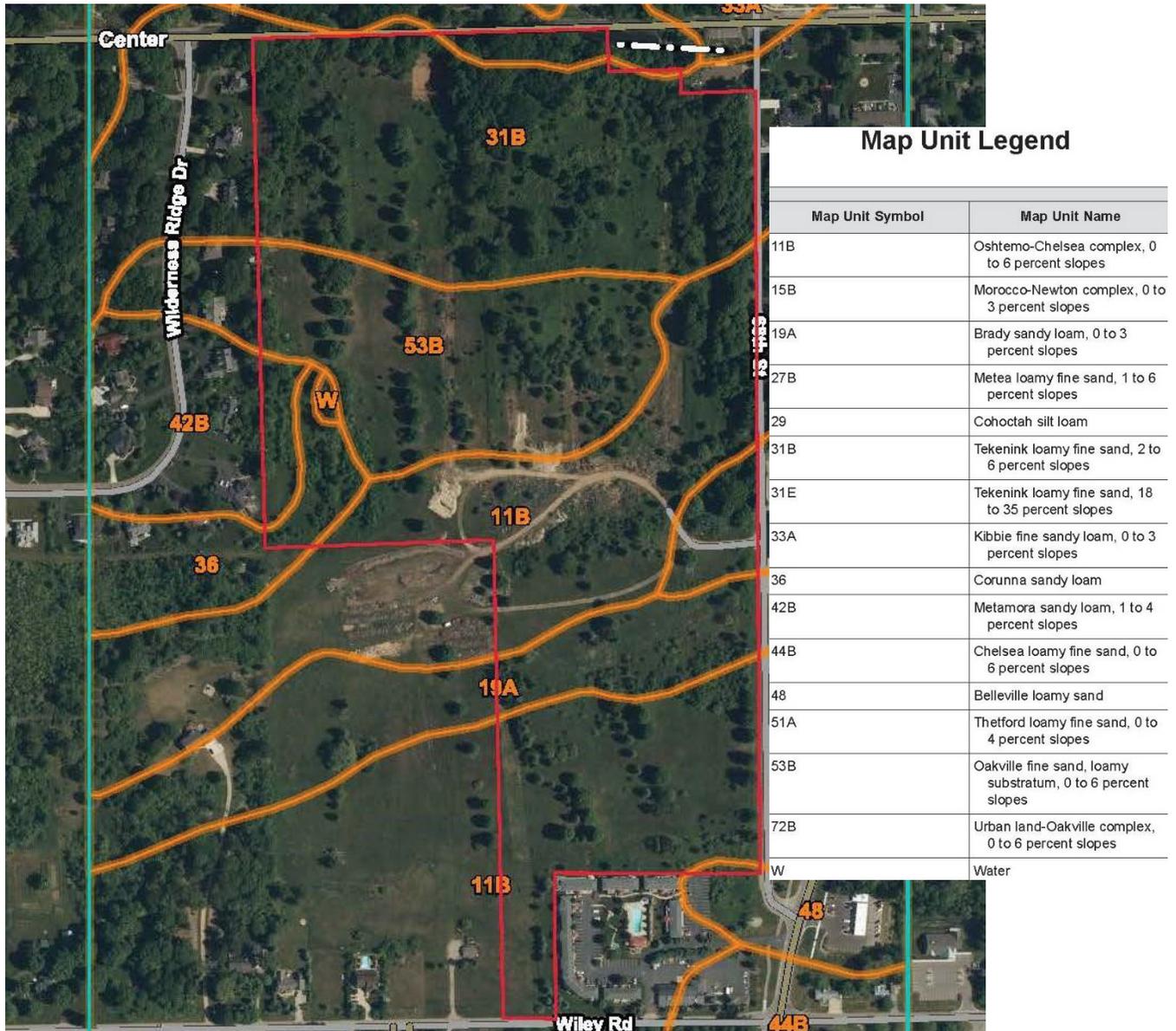
### 1.1 Desktop Review

Barr conducted a desktop review to evaluate aerial imagery, topography, soil types, and mapped wetlands within the AOI prior to the wetland delineation. As part of the desktop review, Barr staff reviewed resources such as the National Wetlands Inventory (NWI; Figure 1), Natural Resources Conservation Service (NRCS) Web Soil Survey (WSS; Figure 2), and aerial photography.

Figure 1. NWI



**Figure 2. WSS**



## 1.2 Methodology

The wetland delineation was conducted in a manner consistent with the *Corps of Engineers Wetlands Delineation Manual* (USACE 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0, USACE 2012)*. The wetland delineation procedures outlined in these manuals require the evaluation of on-site vegetation, soils, and hydrologic characteristics. Site observations are described in the sections below.

The wetland boundaries were flagged in the field with alphanumerically labeled pink pin flags and/or pink flagging tape. Flagging was located using a GPS unit capable of sub-meter accuracy.

## 1.3 Results

The AOI includes palustrine, or freshwater, emergent (PEM) and scrub-shrub (PSS) habitats. The AOI also includes an unmaintained sewer corridor, stormwater detention basins, upland scrub, and recently clear-cut areas. Figure 3 depicts the approximate location of the wetland areas encountered on site and U.S. Army Corps of Engineers (USACE) wetland data forms provide additional wetland detail.

### Vegetation, Soil, and Hydrology

#### Wetland A

This PEM/PSS wetland is located along the western edge of the AOI as identified by flags A1 – A22. The vegetation identified within the wetland includes species such as green ash, red osier dogwood, fox sedge, woolgrass, bitter dock, Chinese silver grass, and soft rush. Primary and secondary hydrology indicators were identified within the wetland. The soils are described in the WSS as Oakville fine sand, loamy substratum, a moderately well drained soil. The soils evaluated within the wetland were not consistent with this description, as they appeared to be poorly drained, displaying hydric characteristics.

#### Wetland B

This PEM wetland is located on the northern edge of the AOI as identified by flags B1 – B10. The vegetation identified within the wetland includes species such as clearweed, purple loosestrife, white grass, and white avens. Primary and secondary hydrology indicators were identified within the wetland. The soils are described in the WSS as Tekonink loamy fine sand, a well-drained soil. The soils evaluated within the wetland were not consistent with this description, as they appeared to be poorly or very poorly drained, displaying hydric characteristics.

#### Wetland C and D

These PEM/PSS wetlands are located on the southern half of the AOI as identified by flags C1 – C18 and D1 – D36. The vegetation identified within the wetlands include species such as cottonwood, sandbar willow, silky dogwood, awl-fruited sedge, marsh bedstraw, paniced aster, common horsetail, quack grass, wool grass, and purple loosestrife. Primary and secondary hydrology indicators were identified within the wetland. The soils are described in the WSS as Oshtemo-Chelsea (well drained) and Brady sandy loam (somewhat poorly drained). The soils evaluated within these wetlands were not consistent with this description, as they appeared to be poorly drained, displaying hydric characteristics.

In contrast, the adjacent upland areas included species such as red cedar, autumn olive, common privet, Kentucky bluegrass, velvet grass, blackberry, tall fescue, tall goldenrod, and spinulose woodfern with no observed evidence of wetland hydrology or soils. One exception was a depression area located within the north-central portion of the AOI in which reed canary grass was a dominant species. However, the area did not appear to meet wetland vegetation, hydrology, or hydric soil criteria. Please refer to Upland Data Forms 1 through 3 attached.

## 1.4 Conclusions

Based on observations of topography, vegetation, soil, and indicators of hydrology, Barr has determined that wetland habitat is present within the AOI. According to Part 303, Wetlands Protection, of the Michigan Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, wetlands regulated by the State of Michigan include wetlands that are:

1. Located within 500 feet of, or having a direct surface water connection to, an inland lake, pond, river, or stream; or

2. Greater than 5 acres in size; or
3. Located within 1,000 feet of, or having a direct surface water connection to, the Great Lakes or Lake St. Clair; or
4. A water of the United States as that term is used in section 502(7) of the Federal Water Pollution Control Act, 33 USC 1362; or
5. Known to have a documented presence of an endangered or threatened species under Part 365 of State of Michigan 1994 PA 451, as amended or the Federal Endangered Species Act of 1973, Public Law 93-205; or
6. Rare or imperiled.

Wetland A does not appear to be regulated under Part 303 of 1994 PA 451 as amended as it does not appear to meet any of the abovementioned criteria. Therefore, a Part 303 permit would not be required from the Michigan Department of Environment, Great Lakes, and Energy (EGLE) in most instances to place fill, remove soil, drain surface water from, or make use of this wetland if they concur with this determination.

However, Wetlands B, C, and D appear to be regulated under Part 303 of 1994 PA 451 as they appear to have either a direct surface water connection to, or are within 500 feet of, the Warnock County Drain or Tannery Creek. Therefore, a Part 303 permit would be required from EGLE to place fill, remove soil, drain surface water from, or make use of these wetlands.

Please be advised that EGLE and in some coastal cases USACE have regulatory authority regarding the wetland boundary location(s) and jurisdictional status of wetlands in the State of Michigan. Barr's wetland determination was performed in general accordance with accepted procedures for conducting wetland determinations. Barr provides no warranty, guarantee, or other agreement in respect to the period of time for which this wetland determination will remain valid. Barr's conclusions reflect our professional opinion based on the site conditions within the AOI observed during the site visits. Discrepancies may arise between current and future wetland determinations and delineations due to changes in vegetation and/or hydrology as the result of land use practices or other environmental factors, whether on-site or on adjacent or nearby properties. In addition, wetland delineations performed outside the growing season, from late-October until late-April, may differ from those performed at the same site during the growing season due to the presence of snow cover or frozen ground conditions. We recommend our wetland boundary determination and jurisdictional opinion be reviewed by EGLE prior to undertaking any activity within any identified wetlands.

Thank you for the opportunity to provide this wetland delineation. If you have any questions, please contact me at your convenience at 616.512.7042 or rphillips@barr.com.

Sincerely,

BARR ENGINEERING CO.

Randall Phillips, PWS

Senior Ecologist



## References

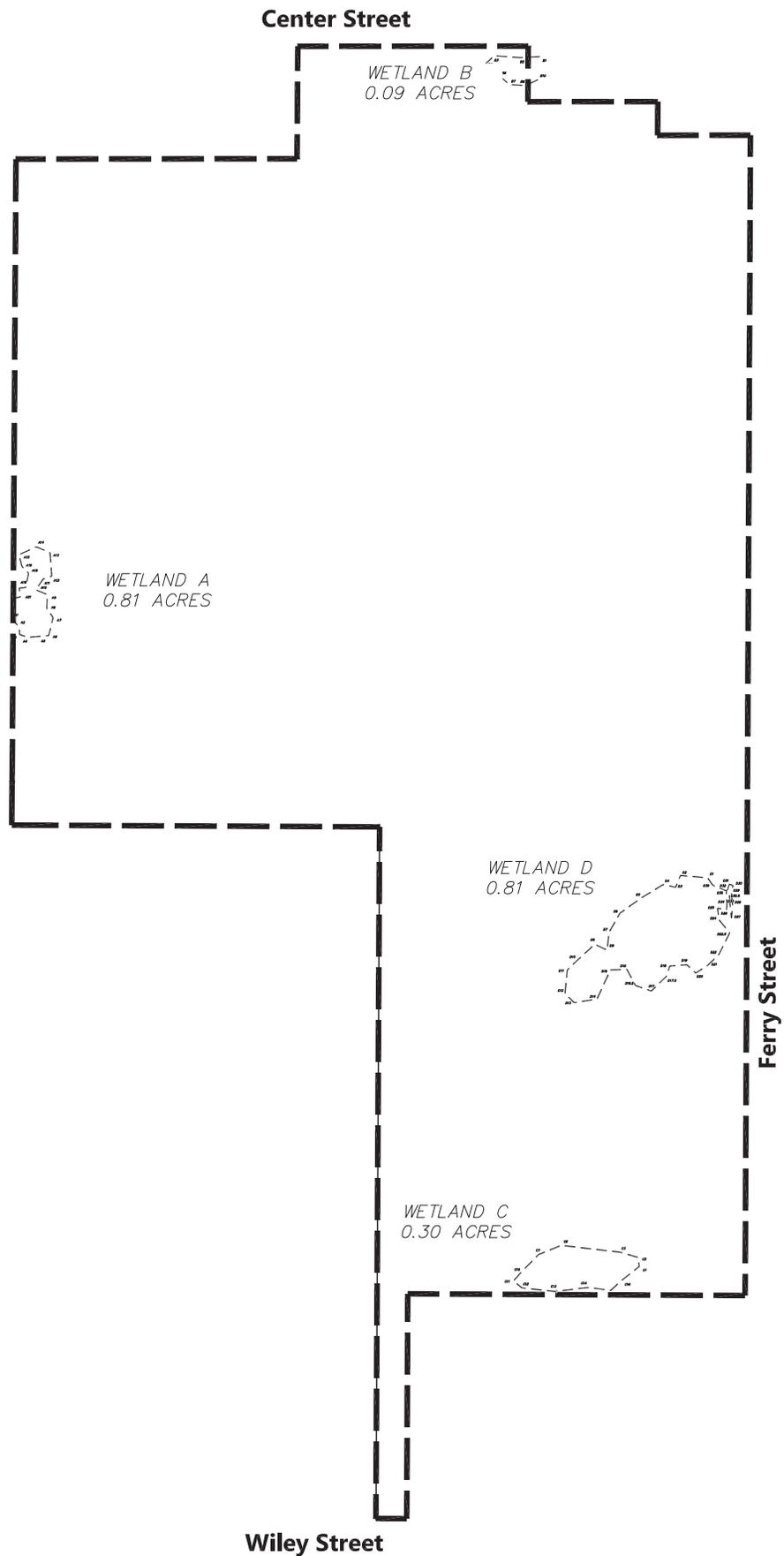
U.S. Army Corps of Engineers (USACE). 1987. *Corps of Engineers Wetlands Delineation Manual*. Washington, DC.

USACE. 2012. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0)*. Washington, DC.

### **Attachments:**

Figure 3. Wetland Delineation

Attachment 1 – USACE Wetland Determination Data Forms



**Figure 3. Wetland Delineation  
Ferry Street Parcels**

## Attachments

## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Wiley-Ferry Street Parcels City/County: Douglas/Allegan Sampling Date: 6/21/2022  
 Applicant/Owner: David Barker State: MI Sampling Point: A up  
 Investigator(s): R.L. Phillips Section, Township, Range: S17 T3N R16W  
 Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none): concave Slope %: 3-4  
 Subregion (LRR or MLRA): LRR L Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Oakville fine sand, loamy substratum, 0 to 6 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Near Flag A9.	

### HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

**VEGETATION** – Use scientific names of plants.

Sampling Point:     A up    

<u>Tree Stratum</u> (Plot size: <u>    30'    </u> )	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Fraxinus americana</u>	<u>    5    </u>	Yes	FACU	<b>Dominance Test worksheet:</b>  Number of Dominant Species That Are OBL, FACW, or FAC: <u>    0    </u> (A)  Total Number of Dominant Species Across All Strata: <u>    4    </u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>    0.0%    </u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
	<u>    5    </u> =Total Cover			<b>Prevalence Index worksheet:</b>  <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:right;">Total % Cover of:</td> <td style="width:50%; text-align:left;">Multiply by:</td> </tr> <tr> <td>OBL species <u>    0    </u></td> <td>x 1 = <u>    0    </u></td> </tr> <tr> <td>FACW species <u>    0    </u></td> <td>x 2 = <u>    0    </u></td> </tr> <tr> <td>FAC species <u>    5    </u></td> <td>x 3 = <u>    15    </u></td> </tr> <tr> <td>FACU species <u>   185   </u></td> <td>x 4 = <u>   740   </u></td> </tr> <tr> <td>UPL species <u>    45    </u></td> <td>x 5 = <u>   225   </u></td> </tr> <tr> <td>Column Totals: <u>   235   </u> (A)</td> <td><u>   980   </u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>    4.17    </u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>    0    </u>	x 1 = <u>    0    </u>	FACW species <u>    0    </u>	x 2 = <u>    0    </u>	FAC species <u>    5    </u>	x 3 = <u>    15    </u>	FACU species <u>   185   </u>	x 4 = <u>   740   </u>	UPL species <u>    45    </u>	x 5 = <u>   225   </u>	Column Totals: <u>   235   </u> (A)	<u>   980   </u> (B)	Prevalence Index = B/A = <u>    4.17    </u>	
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FACW species <u>    0    </u>	x 2 = <u>    0    </u>																			
FAC species <u>    5    </u>	x 3 = <u>    15    </u>																			
FACU species <u>   185   </u>	x 4 = <u>   740   </u>																			
UPL species <u>    45    </u>	x 5 = <u>   225   </u>																			
Column Totals: <u>   235   </u> (A)	<u>   980   </u> (B)																			
Prevalence Index = B/A = <u>    4.17    </u>																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>    15'    </u> )				<b>Hydrophytic Vegetation Indicators:</b>  <u>    </u> 1 - Rapid Test for Hydrophytic Vegetation <u>    </u> 2 - Dominance Test is >50% <u>    </u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>    </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  <u>    </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)																
1. <u>Elaeagnus umbellata</u>	<u>   45   </u>	Yes	UPL																	
2. <u>Ligustrum vulgare</u>	<u>   20   </u>	Yes	FACU																	
3. <u>Fraxinus americana</u>	<u>    5    </u>	No	FACU																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
	<u>   70   </u> =Total Cover			<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.																
<u>Herb Stratum</u> (Plot size: <u>    5'    </u> )																				
1. <u>Poa pratensis</u>	<u>   85   </u>	Yes	FACU																	
2. <u>Holcus lanatus</u>	<u>   25   </u>	No	FACU																	
3. <u>Rubus allegheniensis</u>	<u>   15   </u>	No	FACU																	
4. <u>Fraxinus americana</u>	<u>   15   </u>	No	FACU																	
5. <u>Dactylis glomerata</u>	<u>    5    </u>	No	FACU																	
6. <u>Parthenocissus quinquefolia</u>	<u>    5    </u>	No	FACU																	
7. <u>Toxicodendron radicans</u>	<u>    5    </u>	No	FAC																	
8. <u>Festuca arundinacea</u>	<u>    5    </u>	No	FACU																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
	<u>   160   </u> =Total Cover																			
<u>Woody Vine Stratum</u> (Plot size: <u>          </u> )				<b>Hydrophytic Vegetation Present?</b> Yes <u>    </u> No <u>  X  </u>																
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
	_____ =Total Cover																			

Remarks: (Include photo numbers here or on a separate sheet.)



## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Wiley-Ferry Street Parcels City/County: Douglas/Allegan Sampling Date: 6/21/2022  
 Applicant/Owner: David Barker State: MI Sampling Point: A wet  
 Investigator(s): R.L. Phillips Section, Township, Range: S17 T3N R16W  
 Landform (hillside, terrace, etc.): depression/swale Local relief (concave, convex, none): concave Slope %: 1-2  
 Subregion (LRR or MLRA): LRR L Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Corunna sandy loam NWI classification: PUB [PEM/SS obs.]  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Near Flag A9.	

### HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators</u> (minimum of one is required; check all that apply) _____ _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators</u> (minimum of two required) _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) <u>X</u> Geomorphic Position (D2) _____ Shallow Aquitard (D3) <u>X</u> Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

**VEGETATION** – Use scientific names of plants.

Sampling Point:     A wet    

<u>Tree Stratum</u> (Plot size: <u>    30'    </u> )	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Fraxinus pennsylvanica</u>	<u>10</u>	Yes	FACW	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>    7    </u> (A) Total Number of Dominant Species Across All Strata: <u>    8    </u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>    87.5%    </u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
	<u>10</u>	=Total Cover																		
<u>Sapling/Shrub Stratum</u> (Plot size: <u>    15'    </u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Prevalence Index worksheet:</b> <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:center;">Total % Cover of:</td> <td style="width:50%; text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>    40    </u></td> <td>x 1 = <u>    40    </u></td> </tr> <tr> <td>FACW species <u>    70    </u></td> <td>x 2 = <u>   140   </u></td> </tr> <tr> <td>FAC species <u>    15    </u></td> <td>x 3 = <u>    45    </u></td> </tr> <tr> <td>FACU species <u>    10    </u></td> <td>x 4 = <u>    40    </u></td> </tr> <tr> <td>UPL species <u>    10    </u></td> <td>x 5 = <u>    50    </u></td> </tr> <tr> <td>Column Totals: <u>   145   </u> (A)</td> <td><u>   315   </u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>    2.17    </u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>    40    </u>	x 1 = <u>    40    </u>	FACW species <u>    70    </u>	x 2 = <u>   140   </u>	FAC species <u>    15    </u>	x 3 = <u>    45    </u>	FACU species <u>    10    </u>	x 4 = <u>    40    </u>	UPL species <u>    10    </u>	x 5 = <u>    50    </u>	Column Totals: <u>   145   </u> (A)	<u>   315   </u> (B)	Prevalence Index = B/A = <u>    2.17    </u>	
Total % Cover of:	Multiply by:																			
OBL species <u>    40    </u>	x 1 = <u>    40    </u>																			
FACW species <u>    70    </u>	x 2 = <u>   140   </u>																			
FAC species <u>    15    </u>	x 3 = <u>    45    </u>																			
FACU species <u>    10    </u>	x 4 = <u>    40    </u>																			
UPL species <u>    10    </u>	x 5 = <u>    50    </u>																			
Column Totals: <u>   145   </u> (A)	<u>   315   </u> (B)																			
Prevalence Index = B/A = <u>    2.17    </u>																				
1. <u>Cornus alba</u>	<u>20</u>	Yes	FACW																	
2. <u>Fraxinus pennsylvanica</u>	<u>15</u>	Yes	FACW																	
3. <u>Ligustrum vulgare</u>	<u>5</u>	No	FACU																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
	<u>40</u>	=Total Cover																		
<u>Herb Stratum</u> (Plot size: <u>    5'    </u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Indicators:</b> <u>    </u> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>    </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>    </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Carex vulpinoidea</u>	<u>25</u>	Yes	OBL																	
2. <u>Fraxinus pennsylvanica</u>	<u>15</u>	Yes	FACW																	
3. <u>Miscanthus sinensis</u>	<u>10</u>	Yes	UPL																	
4. <u>Scirpus cyperinus</u>	<u>10</u>	Yes	OBL																	
5. <u>Rumex obtusifolius</u>	<u>10</u>	Yes	FAC																	
6. <u>Juncus effusus</u>	<u>5</u>	No	OBL																	
7. <u>Impatiens capensis</u>	<u>5</u>	No	FACW																	
8. <u>Geum canadense</u>	<u>5</u>	No	FAC																	
9. <u>Symphyotrichum lanceolatum</u>	<u>5</u>	No	FACW																	
10. <u>Rosa multiflora</u>	<u>5</u>	No	FACU																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
	<u>95</u>	=Total Cover																		
<u>Woody Vine Stratum</u> (Plot size: <u>          </u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Definitions of Vegetation Strata:</b> <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.																
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
	_____	=Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.)				<b>Hydrophytic Vegetation Present?</b> Yes <u>  X  </u> No <u>      </u>																



**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: Wiley-Ferry Street Parcels City/County: Douglas/Allegan Sampling Date: 6/21/2022  
 Applicant/Owner: David Barker State: MI Sampling Point: B up  
 Investigator(s): R.L. Phillips Section, Township, Range: S17 T3N R16W  
 Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none): concave Slope %: 30-35  
 Subregion (LRR or MLRA): LRR L Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Tekenink loamy fine sand, 18 to 35 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Near Flag B6.	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

**VEGETATION** – Use scientific names of plants.

Sampling Point:          B up

<u>Tree Stratum</u> (Plot size: <u>        30'        </u> )	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Acer saccharum</u>	75	Yes	FACU	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>        0        </u> (A)  Total Number of Dominant Species Across All Strata: <u>        5        </u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>        0.0%        </u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
	75	=Total Cover		<b>Prevalence Index worksheet:</b> <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:center;">Total % Cover of:</td> <td style="width:50%; text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>        0        </u></td> <td>x 1 = <u>        0        </u></td> </tr> <tr> <td>FACW species <u>        10        </u></td> <td>x 2 = <u>        20        </u></td> </tr> <tr> <td>FAC species <u>        0        </u></td> <td>x 3 = <u>        0        </u></td> </tr> <tr> <td>FACU species <u>        145        </u></td> <td>x 4 = <u>        580        </u></td> </tr> <tr> <td>UPL species <u>        0        </u></td> <td>x 5 = <u>        0        </u></td> </tr> <tr> <td>Column Totals: <u>        155        </u> (A)</td> <td><u>        600        </u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>        3.87        </u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>        0        </u>	x 1 = <u>        0        </u>	FACW species <u>        10        </u>	x 2 = <u>        20        </u>	FAC species <u>        0        </u>	x 3 = <u>        0        </u>	FACU species <u>        145        </u>	x 4 = <u>        580        </u>	UPL species <u>        0        </u>	x 5 = <u>        0        </u>	Column Totals: <u>        155        </u> (A)	<u>        600        </u> (B)	Prevalence Index = B/A = <u>        3.87        </u>	
Total % Cover of:	Multiply by:																			
OBL species <u>        0        </u>	x 1 = <u>        0        </u>																			
FACW species <u>        10        </u>	x 2 = <u>        20        </u>																			
FAC species <u>        0        </u>	x 3 = <u>        0        </u>																			
FACU species <u>        145        </u>	x 4 = <u>        580        </u>																			
UPL species <u>        0        </u>	x 5 = <u>        0        </u>																			
Column Totals: <u>        155        </u> (A)	<u>        600        </u> (B)																			
Prevalence Index = B/A = <u>        3.87        </u>																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>        15'        </u> )																				
1. <u>Acer saccharum</u>	25	Yes	FACU																	
2. <u>Fraxinus pennsylvanica</u>	5	No	FACW																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
	30	=Total Cover																		
<u>Herb Stratum</u> (Plot size: <u>        5'        </u> )				<b>Hydrophytic Vegetation Indicators:</b> <u>        </u> 1 - Rapid Test for Hydrophytic Vegetation <u>        </u> 2 - Dominance Test is >50% <u>        </u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>        </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  <u>        </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Carex swanii</u>	20	Yes	FACU																	
2. <u>Holcus lanatus</u>	10	Yes	FACU																	
3. <u>Dactylis glomerata</u>	10	Yes	FACU																	
4. <u>Fraxinus pennsylvanica</u>	5	No	FACW																	
5. <u>Solidago caesia</u>	5	No	FACU																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
	50	=Total Cover																		
<u>Woody Vine Stratum</u> (Plot size: <u>                        </u> )				<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.																
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
	_____	=Total Cover																		
<b>Hydrophytic Vegetation Present?</b> Yes <u>        </u> No <u>        X        </u>																				

Remarks: (Include photo numbers here or on a separate sheet.)



**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: Wiley-Ferry Street Parcels City/County: Douglas/Allegan Sampling Date: 6/21/2022  
 Applicant/Owner: David Barker State: MI Sampling Point: B wet  
 Investigator(s): R.L. Phillips Section, Township, Range: S17 T3N R16W  
 Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): concave Slope %: 0-3  
 Subregion (LRR or MLRA): LRR L Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Tekenink loamy fine sand, 18 to 35 percent slopes NWI classification: none [PEM/UB obs.]  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Near Flag B6.	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one is required; check all that apply) _____ _____ Surface Water (A1) <u>X</u> Water-Stained Leaves (B9) <u>X</u> High Water Table (A2)                              _____ Aquatic Fauna (B13) <u>X</u> Saturation (A3)                                      _____ Marl Deposits (B15) _____ Water Marks (B1)                              _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2)                              _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3)                                      _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4)                                      _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5)                                      _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7)                      _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<b>Secondary Indicators (minimum of two required)</b> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) <u>X</u> Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>8</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>4</u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

**VEGETATION** – Use scientific names of plants.

Sampling Point:     B wet    

<u>Tree Stratum</u> (Plot size: <u>    30'    </u> )	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b>  Number of Dominant Species That Are OBL, FACW, or FAC: <u>    4    </u> (A)  Total Number of Dominant Species Across All Strata: <u>    4    </u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>    100.0%    </u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover				<b>Prevalence Index worksheet:</b>  <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">Total % Cover of:</th> <th style="width:50%;">Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>    10    </u></td> <td>x 1 = <u>    10    </u></td> </tr> <tr> <td>FACW species <u>    35    </u></td> <td>x 2 = <u>    70    </u></td> </tr> <tr> <td>FAC species <u>    20    </u></td> <td>x 3 = <u>    60    </u></td> </tr> <tr> <td>FACU species <u>    5    </u></td> <td>x 4 = <u>    20    </u></td> </tr> <tr> <td>UPL species <u>    0    </u></td> <td>x 5 = <u>    0    </u></td> </tr> <tr> <td>Column Totals: <u>    70    </u> (A)</td> <td><u>    160    </u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>    2.29    </u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>    10    </u>	x 1 = <u>    10    </u>	FACW species <u>    35    </u>	x 2 = <u>    70    </u>	FAC species <u>    20    </u>	x 3 = <u>    60    </u>	FACU species <u>    5    </u>	x 4 = <u>    20    </u>	UPL species <u>    0    </u>	x 5 = <u>    0    </u>	Column Totals: <u>    70    </u> (A)	<u>    160    </u> (B)	Prevalence Index = B/A = <u>    2.29    </u>	
Total % Cover of:	Multiply by:																			
OBL species <u>    10    </u>	x 1 = <u>    10    </u>																			
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FACU species <u>    5    </u>	x 4 = <u>    20    </u>																			
UPL species <u>    0    </u>	x 5 = <u>    0    </u>																			
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Prevalence Index = B/A = <u>    2.29    </u>																				
_____ =Total Cover																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>    15'    </u> )																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover																				
<u>Herb Stratum</u> (Plot size: <u>    5'    </u> )																				
1. <u><i>Pilea fontana</i></u>	20	Yes	FACW																	
2. <u><i>Lythrum salicaria</i></u>	10	Yes	OBL																	
3. <u><i>Leersia virginica</i></u>	10	Yes	FACW																	
4. <u><i>Geum canadense</i></u>	10	Yes	FAC																	
5. <u><i>Poa alsodes</i></u>	5	No	FAC																	
6. <u><i>Solidago altissima</i></u>	5	No	FACU																	
7. <u><i>Bidens frondosa</i></u>	5	No	FACW																	
8. <u><i>Persicaria virginiana</i></u>	5	No	FAC																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
_____ =Total Cover																				
<u>Woody Vine Stratum</u> (Plot size: <u>                    </u> )																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
_____ =Total Cover																				

**Hydrophytic Vegetation Indicators:**

     1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0<sup>1</sup>

     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

     Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Vegetation Strata:**

**Tree** – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/shrub** – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vines** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**      Yes       No     

Remarks: (Include photo numbers here or on a separate sheet.)



**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: Wiley-Ferry Street Parcels City/County: Douglas/Allegan Sampling Date: 6/21/2022  
 Applicant/Owner: David Barker State: MI Sampling Point: C,D up  
 Investigator(s): R.L. Phillips Section, Township, Range: S17 T3N R16W  
 Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none): concave Slope %: 2-3  
 Subregion (LRR or MLRA): LRR L Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Oshtemo-Chelsea complex, 0 to 6 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Near Flag C3.	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

**VEGETATION** – Use scientific names of plants.

Sampling Point:  C,D up

<u>Tree Stratum</u> (Plot size: <u> 30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Juniperus virginiana</u>	<u> 5</u>	<u> Yes</u>	<u> FACU</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u> 0</u> (A) Total Number of Dominant Species Across All Strata: <u> 3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u> 0.0%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
	<u> 5</u> =Total Cover			<b>Prevalence Index worksheet:</b> <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:center;">Total % Cover of:</td> <td style="width:50%; text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species <u> 0</u></td> <td>x 1 = <u> 0</u></td> </tr> <tr> <td>FACW species <u> 0</u></td> <td>x 2 = <u> 0</u></td> </tr> <tr> <td>FAC species <u> 5</u></td> <td>x 3 = <u> 15</u></td> </tr> <tr> <td>FACU species <u> 165</u></td> <td>x 4 = <u> 660</u></td> </tr> <tr> <td>UPL species <u> 10</u></td> <td>x 5 = <u> 50</u></td> </tr> <tr> <td>Column Totals: <u> 180</u> (A)</td> <td><u> 725</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u> 4.03</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u> 0</u>	x 1 = <u> 0</u>	FACW species <u> 0</u>	x 2 = <u> 0</u>	FAC species <u> 5</u>	x 3 = <u> 15</u>	FACU species <u> 165</u>	x 4 = <u> 660</u>	UPL species <u> 10</u>	x 5 = <u> 50</u>	Column Totals: <u> 180</u> (A)	<u> 725</u> (B)	Prevalence Index = B/A = <u> 4.03</u>	
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Prevalence Index = B/A = <u> 4.03</u>																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u> 15'</u> )				<b>Hydrophytic Vegetation Indicators:</b> <u> 1</u> - Rapid Test for Hydrophytic Vegetation <u> 2</u> - Dominance Test is >50% <u> 3</u> - Prevalence Index is ≤3.0 <sup>1</sup> <u> 4</u> - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)																
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
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	_____ =Total Cover			<b>Definitions of Vegetation Strata:</b> <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.																
<u>Herb Stratum</u> (Plot size: <u> 5'</u> )																				
1. <u>Poa pratensis</u>	<u> 65</u>	<u> Yes</u>	<u> FACU</u>																	
2. <u>Elymus repens</u>	<u> 35</u>	<u> Yes</u>	<u> FACU</u>																	
3. <u>Rubus flagellaris</u>	<u> 25</u>	<u> No</u>	<u> FACU</u>																	
4. <u>Fragaria virginiana</u>	<u> 15</u>	<u> No</u>	<u> FACU</u>																	
5. <u>Festuca arundinacea</u>	<u> 10</u>	<u> No</u>	<u> FACU</u>																	
6. <u>Solidago altissima</u>	<u> 5</u>	<u> No</u>	<u> FACU</u>																	
7. <u>Plantago lanceolata</u>	<u> 5</u>	<u> No</u>	<u> FACU</u>																	
8. <u>Equisetum arvense</u>	<u> 5</u>	<u> No</u>	<u> FAC</u>																	
9. <u>Centaurea stoebe</u>	<u> 5</u>	<u> No</u>	<u> UPL</u>																	
10. <u>Asclepias syriaca</u>	<u> 5</u>	<u> No</u>	<u> UPL</u>																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
	<u> 175</u> =Total Cover																			
<u>Woody Vine Stratum</u> (Plot size: _____ )				<b>Hydrophytic Vegetation Present?</b> Yes <u>   </u> No <u> X</u>																
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
	_____ =Total Cover																			

Remarks: (Include photo numbers here or on a separate sheet.)



## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Wiley-Ferry Street Parcels City/County: Douglas/Allegan Sampling Date: 6/21/2022  
 Applicant/Owner: David Barker State: MI Sampling Point: B wet  
 Investigator(s): R.L. Phillips Section, Township, Range: S17 T3N R16W  
 Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): concave Slope %: 0-2  
 Subregion (LRR or MLRA): LRR L Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Oshtemo-Chelsea complex, 0 to 6 percent slopes NWI classification: none [PEM/SS obs.]  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Near Flag C3.	

### HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators</u> (minimum of one is required; check all that apply) <table style="width: 100%; border: none;"> <tr> <td><input type="checkbox"/> Surface Water (A1)</td> <td><input checked="" type="checkbox"/> Water-Stained Leaves (B9)</td> </tr> <tr> <td><input type="checkbox"/> High Water Table (A2)</td> <td><input type="checkbox"/> Aquatic Fauna (B13)</td> </tr> <tr> <td><input type="checkbox"/> Saturation (A3)</td> <td><input type="checkbox"/> Marl Deposits (B15)</td> </tr> <tr> <td><input type="checkbox"/> Water Marks (B1)</td> <td><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</td> </tr> <tr> <td><input type="checkbox"/> Sediment Deposits (B2)</td> <td><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)</td> </tr> <tr> <td><input type="checkbox"/> Drift Deposits (B3)</td> <td><input type="checkbox"/> Presence of Reduced Iron (C4)</td> </tr> <tr> <td><input type="checkbox"/> Algal Mat or Crust (B4)</td> <td><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</td> </tr> <tr> <td><input type="checkbox"/> Iron Deposits (B5)</td> <td><input type="checkbox"/> Thin Muck Surface (C7)</td> </tr> <tr> <td><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</td> <td><input type="checkbox"/> Other (Explain in Remarks)</td> </tr> <tr> <td><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</td> <td></td> </tr> </table>	<input type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<u>Secondary Indicators</u> (minimum of two required) <table style="width: 100%; border: none;"> <tr> <td><input type="checkbox"/> Surface Soil Cracks (B6)</td> </tr> <tr> <td><input type="checkbox"/> Drainage Patterns (B10)</td> </tr> <tr> <td><input type="checkbox"/> Moss Trim Lines (B16)</td> </tr> <tr> <td><input type="checkbox"/> Dry-Season Water Table (C2)</td> </tr> <tr> <td><input type="checkbox"/> Crayfish Burrows (C8)</td> </tr> <tr> <td><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</td> </tr> <tr> <td><input type="checkbox"/> Stunted or Stressed Plants (D1)</td> </tr> <tr> <td><input checked="" type="checkbox"/> Geomorphic Position (D2)</td> </tr> <tr> <td><input type="checkbox"/> Shallow Aquitard (D3)</td> </tr> <tr> <td><input type="checkbox"/> Microtopographic Relief (D4)</td> </tr> <tr> <td><input checked="" type="checkbox"/> FAC-Neutral Test (D5)</td> </tr> </table>	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Moss Trim Lines (B16)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Crayfish Burrows (C8)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/> Shallow Aquitard (D3)	<input type="checkbox"/> Microtopographic Relief (D4)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)																															
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<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)																															
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)																															
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)																															
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<b>Field Observations:</b> Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <u>X</u> No _____																															
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:																																
Remarks:																																

**VEGETATION** – Use scientific names of plants.

Sampling Point: B wet

	Absolute % Cover	Dominant Species?	Indicator Status																	
<b>Tree Stratum</b> (Plot size: <u>30'</u> )																				
1. <u>Populus deltoides</u>	<u>75</u>	Yes	FAC	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
	<u>75</u>	=Total Cover																		
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15'</u> )																				
1. <u>Salix interior</u>	<u>40</u>	Yes	FACW	<b>Prevalence Index worksheet:</b> <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:center;">Total % Cover of:</td> <td style="width:50%; text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>105</u></td> <td>x 1 = <u>105</u></td> </tr> <tr> <td>FACW species <u>90</u></td> <td>x 2 = <u>180</u></td> </tr> <tr> <td>FAC species <u>85</u></td> <td>x 3 = <u>255</u></td> </tr> <tr> <td>FACU species <u>15</u></td> <td>x 4 = <u>60</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>295</u> (A)</td> <td><u>600</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>2.03</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>105</u>	x 1 = <u>105</u>	FACW species <u>90</u>	x 2 = <u>180</u>	FAC species <u>85</u>	x 3 = <u>255</u>	FACU species <u>15</u>	x 4 = <u>60</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>295</u> (A)	<u>600</u> (B)	Prevalence Index = B/A = <u>2.03</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>105</u>	x 1 = <u>105</u>																			
FACW species <u>90</u>	x 2 = <u>180</u>																			
FAC species <u>85</u>	x 3 = <u>255</u>																			
FACU species <u>15</u>	x 4 = <u>60</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>295</u> (A)	<u>600</u> (B)																			
Prevalence Index = B/A = <u>2.03</u>																				
2. <u>Cornus amomum</u>	<u>25</u>	Yes	FACW																	
3. <u>Salix amygdaloides</u>	<u>5</u>	No	FACW																	
4. <u>Fraxinus pennsylvanica</u>	<u>5</u>	No	FACW																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
	<u>75</u>	=Total Cover																		
<b>Herb Stratum</b> (Plot size: <u>5'</u> )																				
1. <u>Carex stipata</u>	<u>60</u>	Yes	OBL	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Galium palustre</u>	<u>35</u>	Yes	OBL																	
3. <u>Symphytotrichum lanceolatum</u>	<u>10</u>	No	FACW																	
4. <u>Equisetum arvense</u>	<u>10</u>	No	FAC																	
5. <u>Elymus repens</u>	<u>5</u>	No	FACU																	
6. <u>Scirpus cyperinus</u>	<u>5</u>	No	OBL																	
7. <u>Rubus allegheniensis</u>	<u>5</u>	No	FACU																	
8. <u>Lythrum salicaria</u>	<u>5</u>	No	OBL																	
9. <u>Fraxinus pennsylvanica</u>	<u>5</u>	No	FACW																	
10. <u>Allium canadense</u>	<u>5</u>	No	FACU																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
	<u>145</u>	=Total Cover																		
<b>Woody Vine Stratum</b> (Plot size: _____)																				
1. _____	_____	_____	_____	<b>Definitions of Vegetation Strata:</b> <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
	=Total Cover																			

Remarks: (Include photo numbers here or on a separate sheet.)



**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: Wiley-Ferry Street Parcels City/County: Douglas/Allegan Sampling Date: 6/21/2022

Applicant/Owner: David Barker State: MI Sampling Point: UPL 1

Investigator(s): R.L. Phillips Section, Township, Range: S17 T3N R16W

Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none): concave Slope %: 2-3

Subregion (LRR or MLRA): LRR L Lat: 42.642140 Long: -86.214095 Datum: \_\_\_\_\_

Soil Map Unit Name: Tekenink loamy fine sand, 2 to 6 percent slopes NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)

Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_

Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Area previously cleared/maintained	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

**VEGETATION** – Use scientific names of plants.

Sampling Point: UPL 1

<u>Tree Stratum</u> (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u><i>Acer saccharinum</i></u>	<u>45</u>	<u>Yes</u>	<u>FACW</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>5</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>40.0%</u> (A/B)																
2. <u><i>Prunus serotina</i></u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	<u>65</u>	=Total Cover																		
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15'</u> )																				
1. <u><i>Prunus serotina</i></u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>	<b>Prevalence Index worksheet:</b> <table style="width:100%; border:none;"> <tr> <td style="text-align:right;">Total % Cover of:</td> <td style="text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>150</u></td> <td>x 2 = <u>300</u></td> </tr> <tr> <td>FAC species <u>5</u></td> <td>x 3 = <u>15</u></td> </tr> <tr> <td>FACU species <u>90</u></td> <td>x 4 = <u>360</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>245</u> (A)</td> <td><u>675</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>2.76</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>150</u>	x 2 = <u>300</u>	FAC species <u>5</u>	x 3 = <u>15</u>	FACU species <u>90</u>	x 4 = <u>360</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>245</u> (A)	<u>675</u> (B)	Prevalence Index = B/A = <u>2.76</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>150</u>	x 2 = <u>300</u>																			
FAC species <u>5</u>	x 3 = <u>15</u>																			
FACU species <u>90</u>	x 4 = <u>360</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>245</u> (A)	<u>675</u> (B)																			
Prevalence Index = B/A = <u>2.76</u>																				
2. _____																				
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	<u>5</u>	=Total Cover																		
<u>Herb Stratum</u> (Plot size: <u>5'</u> )																				
1. <u><i>Phalaris arundinacea</i></u>	<u>95</u>	<u>Yes</u>	<u>FACW</u>	<b>Hydrophytic Vegetation Indicators:</b> <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 <sup>1</sup> <u>4</u> - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  <u>        </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)																
2. <u><i>Rubus allegheniensis</i></u>	<u>45</u>	<u>Yes</u>	<u>FACU</u>																	
3. <u><i>Dryopteris carthusiana</i></u>	<u>10</u>	<u>No</u>	<u>FACW</u>																	
4. <u><i>Elymus repens</i></u>	<u>5</u>	<u>No</u>	<u>FACU</u>																	
5. <u><i>Glechoma hederacea</i></u>	<u>5</u>	<u>No</u>	<u>FACU</u>																	
6. <u><i>Solidago altissima</i></u>	<u>5</u>	<u>No</u>	<u>FACU</u>																	
7. <u><i>Solidago rugosa</i></u>	<u>5</u>	<u>No</u>	<u>FAC</u>																	
8. <u><i>Lonicera morrowii</i></u>	<u>5</u>	<u>No</u>	<u>FACU</u>																	
9. _____																				
10. _____																				
11. _____																				
12. _____																				
	<u>175</u>	=Total Cover																		
<u>Woody Vine Stratum</u> (Plot size: _____)																				
1. _____				<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.																
2. _____																				
3. _____																				
4. _____																				
				<b>Hydrophytic Vegetation Present?</b> Yes <u>        </u> No <u>  X  </u>																
=Total Cover																				

Remarks: (Include photo numbers here or on a separate sheet.)



## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Wiley-Ferry Street Parcels City/County: Douglas/Allegan Sampling Date: 6/21/2022  
 Applicant/Owner: David Barker State: MI Sampling Point: UPL 2  
 Investigator(s): R.L. Phillips Section, Township, Range: S17 T3N R16W  
 Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none): concave Slope %: 2-3  
 Subregion (LRR or MLRA): LRR L Lat: 42.641930 Long: -86.214586 Datum: \_\_\_\_\_  
 Soil Map Unit Name: Tekenink loamy fine sand, 2 to 6 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Area previously cleared/maintained	

### HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

**VEGETATION** – Use scientific names of plants.

Sampling Point: UPL 2

<u>Tree Stratum</u> (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u><i>Acer saccharinum</i></u>	<u>15</u>	Yes	FACW	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>5</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>40.0%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
	<u>15</u>	=Total Cover		<b>Prevalence Index worksheet:</b> <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:right;">Total % Cover of:</td> <td style="width:50%; text-align:left;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>110</u></td> <td>x 2 = <u>220</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>75</u></td> <td>x 4 = <u>300</u></td> </tr> <tr> <td>UPL species <u>5</u></td> <td>x 5 = <u>25</u></td> </tr> <tr> <td>Column Totals: <u>190</u> (A)</td> <td><u>545</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>2.87</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>110</u>	x 2 = <u>220</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>75</u>	x 4 = <u>300</u>	UPL species <u>5</u>	x 5 = <u>25</u>	Column Totals: <u>190</u> (A)	<u>545</u> (B)	Prevalence Index = B/A = <u>2.87</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>110</u>	x 2 = <u>220</u>																			
FAC species <u>0</u>	x 3 = <u>0</u>																			
FACU species <u>75</u>	x 4 = <u>300</u>																			
UPL species <u>5</u>	x 5 = <u>25</u>																			
Column Totals: <u>190</u> (A)	<u>545</u> (B)																			
Prevalence Index = B/A = <u>2.87</u>																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15'</u> )																				
1. <u><i>Pyrus calleryana</i></u>	<u>5</u>	Yes	UPL	<b>Hydrophytic Vegetation Indicators:</b> <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 <sup>1</sup> <u>4</u> - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  <u>        </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)																
2. <u><i>Prunus serotina</i></u>	<u>5</u>	Yes	FACU																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
	<u>10</u>	=Total Cover																		
<u>Herb Stratum</u> (Plot size: <u>5'</u> )																				
1. <u><i>Phalaris arundinacea</i></u>	<u>95</u>	Yes	FACW	<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.  <b>Hydrophytic Vegetation Present?</b> Yes <u>        </u> No <u>  X  </u>																
2. <u><i>Rubus allegheniensis</i></u>	<u>55</u>	Yes	FACU																	
3. <u><i>Elymus repens</i></u>	<u>10</u>	No	FACU																	
4. <u><i>Galium aparine</i></u>	<u>5</u>	No	FACU																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
	<u>165</u>	=Total Cover																		
<u>Woody Vine Stratum</u> (Plot size: _____)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
	_____	=Total Cover																		

Remarks: (Include photo numbers here or on a separate sheet.)



**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: Wiley-Ferry Street Parcels City/County: Douglas/Allegan Sampling Date: 6/21/2022

Applicant/Owner: David Barker State: MI Sampling Point: UPL 3

Investigator(s): R.L. Phillips Section, Township, Range: S17 T3N R16W

Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none): concave Slope %: 1-3

Subregion (LRR or MLRA): LRR L Lat: 42.642498 Long: -86.214321 Datum: \_\_\_\_\_

Soil Map Unit Name: Tekenink loamy fine sand, 2 to 6 percent slopes NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)

Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_

Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) area previously cleared/mainatined	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

**VEGETATION** – Use scientific names of plants.

Sampling Point: UPL 3

<u>Tree Stratum</u> (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Prunus avium</u>	<u>15</u>	Yes	FACU	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)  Total Number of Dominant Species Across All Strata: <u>6</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)																
2. <u>Acer saccharinum</u>	<u>5</u>	Yes	FACW																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	<u>20</u>	=Total Cover																		
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15'</u> )	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Prunus serotina</u>	<u>10</u>	Yes	FACU	<b>Prevalence Index worksheet:</b> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">Total % Cover of:</th> <th style="width:50%;">Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>30</u></td> <td>x 1 = <u>30</u></td> </tr> <tr> <td>FACW species <u>50</u></td> <td>x 2 = <u>100</u></td> </tr> <tr> <td>FAC species <u>5</u></td> <td>x 3 = <u>15</u></td> </tr> <tr> <td>FACU species <u>120</u></td> <td>x 4 = <u>480</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>205</u> (A)</td> <td><u>625</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>3.05</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>30</u>	x 1 = <u>30</u>	FACW species <u>50</u>	x 2 = <u>100</u>	FAC species <u>5</u>	x 3 = <u>15</u>	FACU species <u>120</u>	x 4 = <u>480</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>205</u> (A)	<u>625</u> (B)	Prevalence Index = B/A = <u>3.05</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>30</u>	x 1 = <u>30</u>																			
FACW species <u>50</u>	x 2 = <u>100</u>																			
FAC species <u>5</u>	x 3 = <u>15</u>																			
FACU species <u>120</u>	x 4 = <u>480</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>205</u> (A)	<u>625</u> (B)																			
Prevalence Index = B/A = <u>3.05</u>																				
2. _____																				
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	<u>10</u>	=Total Cover																		
<u>Herb Stratum</u> (Plot size: <u>5'</u> )	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Phalaris arundinacea</u>	<u>45</u>	Yes	FACW	<b>Hydrophytic Vegetation Indicators:</b> <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 <sup>1</sup> <u>4</u> - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  <u>        </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Rubus allegheniensis</u>	<u>35</u>	Yes	FACU																	
3. <u>Juncus effusus</u>	<u>30</u>	Yes	OBL																	
4. <u>Holcus lanatus</u>	<u>25</u>	No	FACU																	
5. <u>Elymus repens</u>	<u>20</u>	No	FACU																	
6. <u>Dactylis glomerata</u>	<u>10</u>	No	FACU																	
7. <u>Solidago altissima</u>	<u>5</u>	No	FACU																	
8. <u>Solidago rugosa</u>	<u>5</u>	No	FAC																	
9. _____																				
10. _____																				
11. _____																				
12. _____																				
	<u>175</u>	=Total Cover																		
<u>Woody Vine Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____				<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.																
2. _____																				
3. _____																				
4. _____																				
				<b>Hydrophytic Vegetation Present?</b> Yes <u>        </u> No <u>  X  </u>																
=Total Cover																				

Remarks: (Include photo numbers here or on a separate sheet.)



November 23, 2022

David Barker  
PO Box 571  
Douglas, MI, 49406

**Re: Wetland Delineation Report – Ferry Street Parcels**

Dear Mr. Barker:

At your request, Barr Engineering Co. (Barr) conducted a wetland delineation at the above-referenced site. The purpose of this wetland delineation report is to summarize the results of the wetland delineation conducted on June 21, 2022.

### 1.0 Area of Investigation Description

The Area of Investigation (AOI) includes a portion of parcel numbers 59-017-089-95, 59-017-089-00, 59-017-089-80, 59-017-089-10, 59-017-089-20, 59-017-089-30, 59-017-089-70, and 59-017-089-60, located at 485, 440, 504, 462, 464, 466, 468, and 502 Ferry Street, in the City of Douglas, Allegan County, Michigan. Surrounding land uses and cover types include residential, commercial, and industrial. The dominant land uses and cover types within the AOI consist of wetlands, upland forest and scrub brush, and several utility corridors.

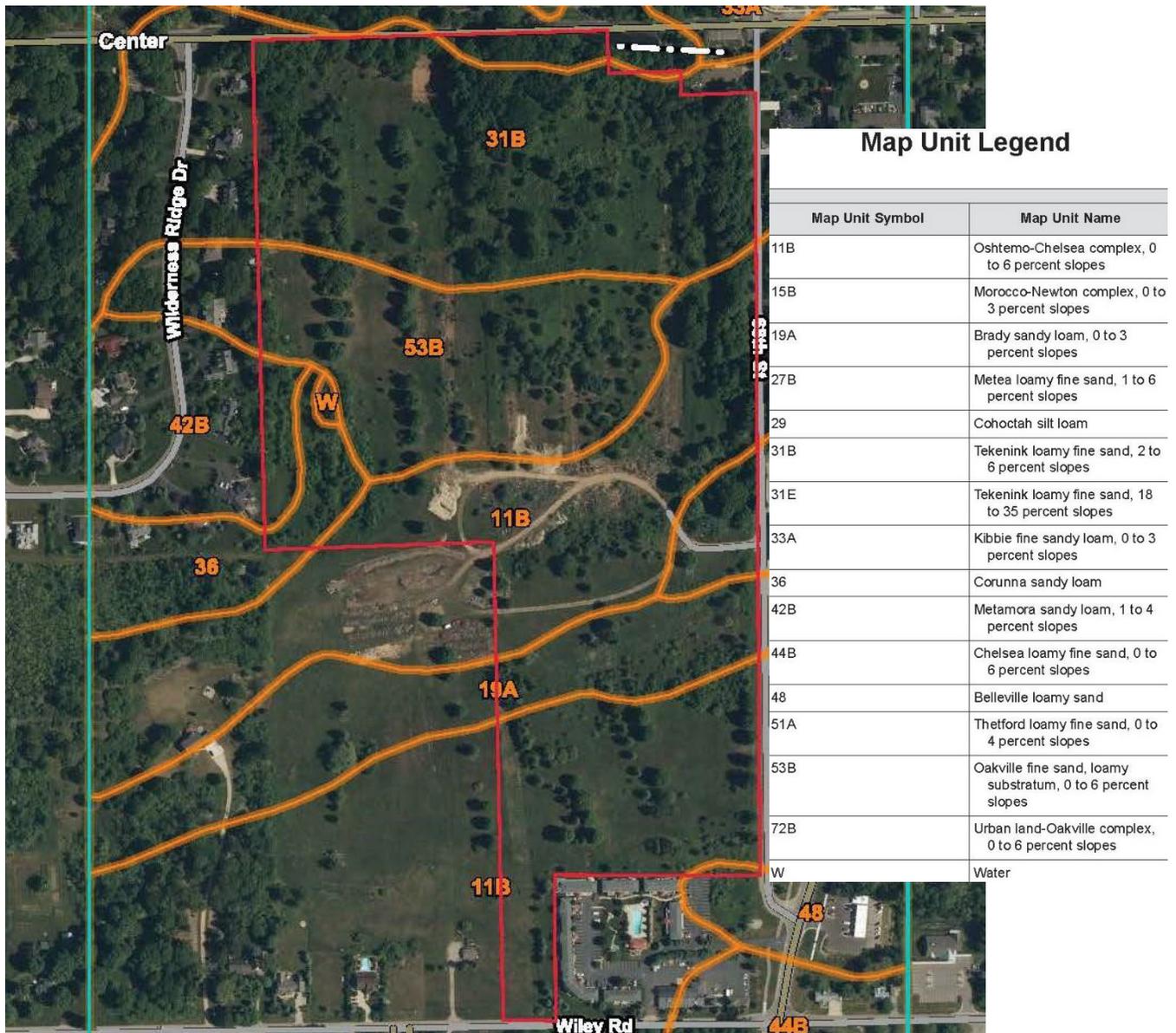
### 1.1 Desktop Review

Barr conducted a desktop review to evaluate aerial imagery, topography, soil types, and mapped wetlands within the AOI prior to the wetland delineation. As part of the desktop review, Barr staff reviewed resources such as the National Wetlands Inventory (NWI; Figure 1), Natural Resources Conservation Service (NRCS) Web Soil Survey (WSS; Figure 2), and aerial photography.

Figure 1. NWI



**Figure 2. WSS**



## 1.2 Methodology

The wetland delineation was conducted in a manner consistent with the *Corps of Engineers Wetlands Delineation Manual* (USACE 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0, USACE 2012)*. The wetland delineation procedures outlined in these manuals require the evaluation of on-site vegetation, soils, and hydrologic characteristics. Site observations are described in the sections below.

The wetland boundaries were flagged in the field with alphanumerically labeled pink pin flags and/or pink flagging tape. Flagging was located using a GPS unit capable of sub-meter accuracy.

## 1.3 Results

The AOI includes palustrine, or freshwater, emergent (PEM) and scrub-shrub (PSS) habitats. The AOI also includes an unmaintained sewer corridor, stormwater detention basins, upland scrub, and recently clear-cut areas. Figure 3 depicts the approximate location of the wetland areas encountered on site and U.S. Army Corps of Engineers (USACE) wetland data forms provide additional wetland detail.

### Vegetation, Soil, and Hydrology

#### Wetland A

This PEM/PSS wetland is located along the western edge of the AOI as identified by flags A1 – A22. The vegetation identified within the wetland includes species such as green ash, red osier dogwood, fox sedge, woolgrass, bitter dock, Chinese silver grass, and soft rush. Primary and secondary hydrology indicators were identified within the wetland. The soils are described in the WSS as Oakville fine sand, loamy substratum, a moderately well drained soil. The soils evaluated within the wetland were not consistent with this description, as they appeared to be poorly drained, displaying hydric characteristics.

#### Wetland B

This PEM wetland is located on the northern edge of the AOI as identified by flags B1 – B10. The vegetation identified within the wetland includes species such as clearweed, purple loosestrife, white grass, and white avens. Primary and secondary hydrology indicators were identified within the wetland. The soils are described in the WSS as Tekonink loamy fine sand, a well-drained soil. The soils evaluated within the wetland were not consistent with this description, as they appeared to be poorly or very poorly drained, displaying hydric characteristics.

#### Wetland C and D

These PEM/PSS wetlands are located on the southern half of the AOI as identified by flags C1 – C18 and D1 – D36. The vegetation identified within the wetlands include species such as cottonwood, sandbar willow, silky dogwood, awl-fruited sedge, marsh bedstraw, paniced aster, common horsetail, quack grass, wool grass, and purple loosestrife. Primary and secondary hydrology indicators were identified within the wetland. The soils are described in the WSS as Oshtemo-Chelsea (well drained) and Brady sandy loam (somewhat poorly drained). The soils evaluated within these wetlands were not consistent with this description, as they appeared to be poorly drained, displaying hydric characteristics.

In contrast, the adjacent upland areas included species such as red cedar, autumn olive, common privet, Kentucky bluegrass, velvet grass, blackberry, tall fescue, tall goldenrod, and spinulose woodfern with no observed evidence of wetland hydrology or soils. One exception was a depression area located within the north-central portion of the AOI in which reed canary grass was a dominant species. However, the area did not appear to meet wetland vegetation, hydrology, or hydric soil criteria. Please refer to Upland Data Forms 1 through 3 attached.

## 1.4 Conclusions

Based on observations of topography, vegetation, soil, and indicators of hydrology, Barr has determined that wetland habitat is present within the AOI. According to Part 303, Wetlands Protection, of the Michigan Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, wetlands regulated by the State of Michigan include wetlands that are:

1. Located within 500 feet of, or having a direct surface water connection to, an inland lake, pond, river, or stream; or

2. Greater than 5 acres in size; or
3. Located within 1,000 feet of, or having a direct surface water connection to, the Great Lakes or Lake St. Clair; or
4. A water of the United States as that term is used in section 502(7) of the Federal Water Pollution Control Act, 33 USC 1362; or
5. Known to have a documented presence of an endangered or threatened species under Part 365 of State of Michigan 1994 PA 451, as amended or the Federal Endangered Species Act of 1973, Public Law 93-205; or
6. Rare or imperiled.

Wetland A does not appear to be regulated under Part 303 of 1994 PA 451 as amended as it does not appear to meet any of the abovementioned criteria. Therefore, a Part 303 permit would not be required from the Michigan Department of Environment, Great Lakes, and Energy (EGLE) in most instances to place fill, remove soil, drain surface water from, or make use of this wetland if they concur with this determination.

However, Wetlands B, C, and D appear to be regulated under Part 303 of 1994 PA 451 as they appear to have either a direct surface water connection to, or are within 500 feet of, the Warnock County Drain or Tannery Creek. Therefore, a Part 303 permit would be required from EGLE to place fill, remove soil, drain surface water from, or make use of these wetlands.

Please be advised that EGLE and in some coastal cases USACE have regulatory authority regarding the wetland boundary location(s) and jurisdictional status of wetlands in the State of Michigan. Barr's wetland determination was performed in general accordance with accepted procedures for conducting wetland determinations. Barr provides no warranty, guarantee, or other agreement in respect to the period of time for which this wetland determination will remain valid. Barr's conclusions reflect our professional opinion based on the site conditions within the AOI observed during the site visits. Discrepancies may arise between current and future wetland determinations and delineations due to changes in vegetation and/or hydrology as the result of land use practices or other environmental factors, whether on-site or on adjacent or nearby properties. In addition, wetland delineations performed outside the growing season, from late-October until late-April, may differ from those performed at the same site during the growing season due to the presence of snow cover or frozen ground conditions. We recommend our wetland boundary determination and jurisdictional opinion be reviewed by EGLE prior to undertaking any activity within any identified wetlands.

Thank you for the opportunity to provide this wetland delineation. If you have any questions, please contact me at your convenience at 616.512.7042 or rphillips@barr.com.

Sincerely,

BARR ENGINEERING CO.

Randall Phillips, PWS

Senior Ecologist



## References

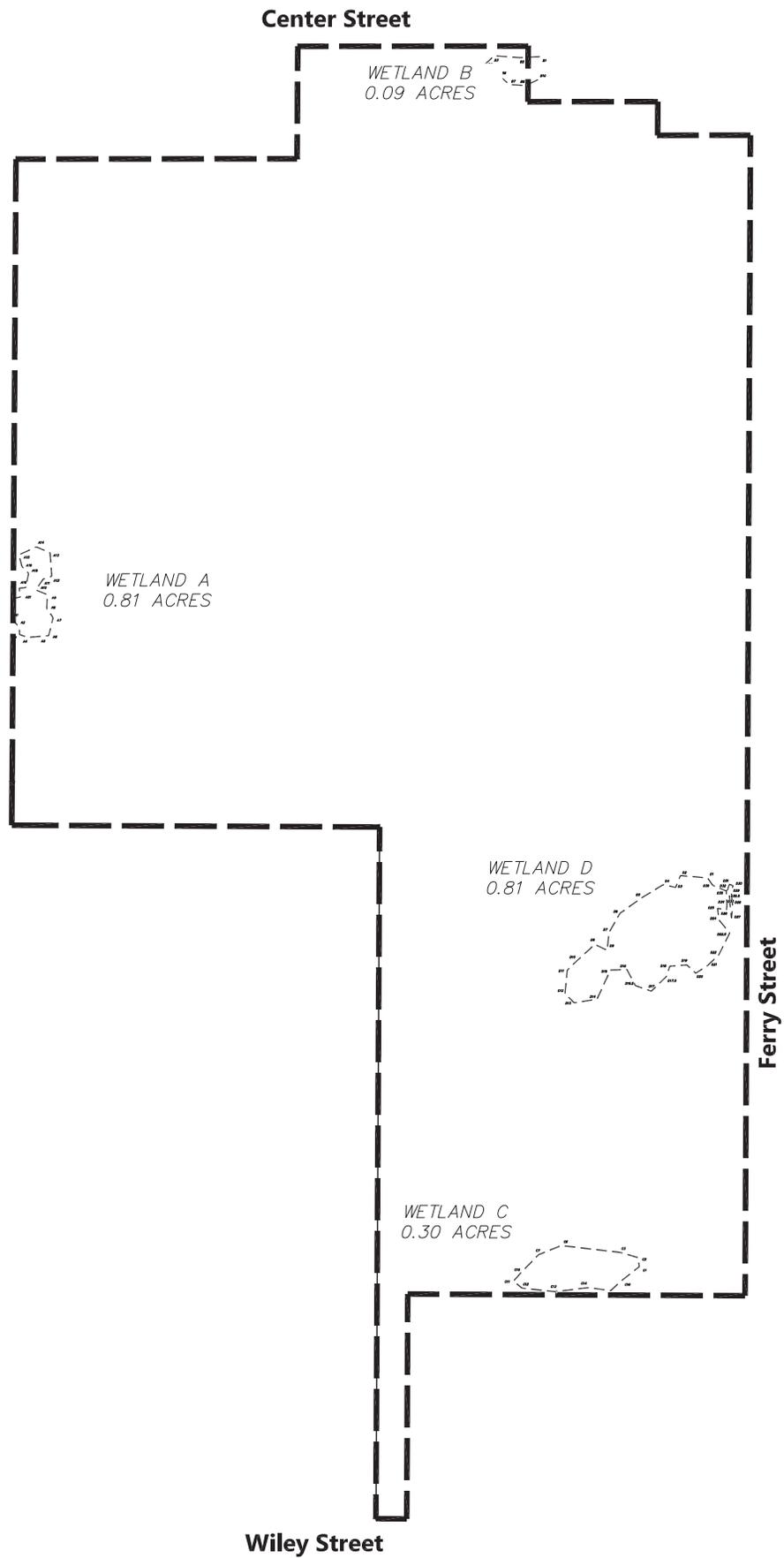
U.S. Army Corps of Engineers (USACE). 1987. *Corps of Engineers Wetlands Delineation Manual*. Washington, DC.

USACE. 2012. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0)*. Washington, DC.

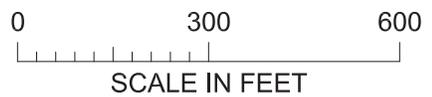
### **Attachments:**

Figure 3. Wetland Delineation

Attachment 1 – USACE Wetland Determination Data Forms



**Figure 3. Wetland Delineation  
Ferry Street Parcels**



## Attachments

## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Wiley-Ferry Street Parcels City/County: Douglas/Allegan Sampling Date: 6/21/2022  
 Applicant/Owner: David Barker State: MI Sampling Point: A up  
 Investigator(s): R.L. Phillips Section, Township, Range: S17 T3N R16W  
 Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none): concave Slope %: 3-4  
 Subregion (LRR or MLRA): LRR L Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Oakville fine sand, loamy substratum, 0 to 6 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Near Flag A9.	

### HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

**VEGETATION** – Use scientific names of plants.

Sampling Point:     A up    

<u>Tree Stratum</u> (Plot size: <u>    30'    </u> )	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Fraxinus americana</u>	<u>    5    </u>	Yes	FACU	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>    0    </u> (A)  Total Number of Dominant Species Across All Strata: <u>    4    </u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>    0.0%    </u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
	<u>    5    </u> =Total Cover			<b>Prevalence Index worksheet:</b> <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:right;">Total % Cover of:</td> <td style="width:50%; text-align:left;">Multiply by:</td> </tr> <tr> <td>OBL species <u>    0    </u></td> <td>x 1 = <u>    0    </u></td> </tr> <tr> <td>FACW species <u>    0    </u></td> <td>x 2 = <u>    0    </u></td> </tr> <tr> <td>FAC species <u>    5    </u></td> <td>x 3 = <u>    15    </u></td> </tr> <tr> <td>FACU species <u>   185   </u></td> <td>x 4 = <u>   740   </u></td> </tr> <tr> <td>UPL species <u>    45    </u></td> <td>x 5 = <u>   225   </u></td> </tr> <tr> <td>Column Totals: <u>   235   </u> (A)</td> <td><u>   980   </u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>    4.17    </u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>    0    </u>	x 1 = <u>    0    </u>	FACW species <u>    0    </u>	x 2 = <u>    0    </u>	FAC species <u>    5    </u>	x 3 = <u>    15    </u>	FACU species <u>   185   </u>	x 4 = <u>   740   </u>	UPL species <u>    45    </u>	x 5 = <u>   225   </u>	Column Totals: <u>   235   </u> (A)	<u>   980   </u> (B)	Prevalence Index = B/A = <u>    4.17    </u>	
Total % Cover of:	Multiply by:																			
OBL species <u>    0    </u>	x 1 = <u>    0    </u>																			
FACW species <u>    0    </u>	x 2 = <u>    0    </u>																			
FAC species <u>    5    </u>	x 3 = <u>    15    </u>																			
FACU species <u>   185   </u>	x 4 = <u>   740   </u>																			
UPL species <u>    45    </u>	x 5 = <u>   225   </u>																			
Column Totals: <u>   235   </u> (A)	<u>   980   </u> (B)																			
Prevalence Index = B/A = <u>    4.17    </u>																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>    15'    </u> )				<b>Hydrophytic Vegetation Indicators:</b> <u>    </u> 1 - Rapid Test for Hydrophytic Vegetation <u>    </u> 2 - Dominance Test is >50% <u>    </u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>    </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  <u>    </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)																
1. <u>Elaeagnus umbellata</u>	<u>   45   </u>	Yes	UPL																	
2. <u>Ligustrum vulgare</u>	<u>   20   </u>	Yes	FACU																	
3. <u>Fraxinus americana</u>	<u>    5    </u>	No	FACU																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
	<u>   70   </u> =Total Cover																			
<u>Herb Stratum</u> (Plot size: <u>    5'    </u> )				<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.																
1. <u>Poa pratensis</u>	<u>   85   </u>	Yes	FACU																	
2. <u>Holcus lanatus</u>	<u>   25   </u>	No	FACU																	
3. <u>Rubus allegheniensis</u>	<u>   15   </u>	No	FACU																	
4. <u>Fraxinus americana</u>	<u>   15   </u>	No	FACU																	
5. <u>Dactylis glomerata</u>	<u>    5    </u>	No	FACU																	
6. <u>Parthenocissus quinquefolia</u>	<u>    5    </u>	No	FACU																	
7. <u>Toxicodendron radicans</u>	<u>    5    </u>	No	FAC																	
8. <u>Festuca arundinacea</u>	<u>    5    </u>	No	FACU																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
	<u>  160  </u> =Total Cover																			
<u>Woody Vine Stratum</u> (Plot size: <u>          </u> )				<b>Hydrophytic Vegetation Present?</b> Yes <u>    </u> No <u>  X  </u>																
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
	_____ =Total Cover																			

Remarks: (Include photo numbers here or on a separate sheet.)



## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Wiley-Ferry Street Parcels City/County: Douglas/Allegan Sampling Date: 6/21/2022  
 Applicant/Owner: David Barker State: MI Sampling Point: A wet  
 Investigator(s): R.L. Phillips Section, Township, Range: S17 T3N R16W  
 Landform (hillside, terrace, etc.): depression/swale Local relief (concave, convex, none): concave Slope %: 1-2  
 Subregion (LRR or MLRA): LRR L Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Corunna sandy loam NWI classification: PUB [PEM/SS obs.]  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Near Flag A9.	

### HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators</u> (minimum of one is required; check all that apply) _____ _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators</u> (minimum of two required) _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) <u>X</u> Geomorphic Position (D2) _____ Shallow Aquitard (D3) <u>X</u> Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

**VEGETATION** – Use scientific names of plants.

Sampling Point:     A wet    

<u>Tree Stratum</u> (Plot size: <u>    30'    </u> )	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Fraxinus pennsylvanica</u>	<u>10</u>	Yes	FACW	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>    7    </u> (A) Total Number of Dominant Species Across All Strata: <u>    8    </u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>    87.5%    </u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
	<u>10</u>	=Total Cover																		
<u>Sapling/Shrub Stratum</u> (Plot size: <u>    15'    </u> )				<b>Prevalence Index worksheet:</b> <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:center;">Total % Cover of:</td> <td style="width:50%; text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>    40    </u></td> <td>x 1 = <u>    40    </u></td> </tr> <tr> <td>FACW species <u>    70    </u></td> <td>x 2 = <u>   140    </u></td> </tr> <tr> <td>FAC species <u>    15    </u></td> <td>x 3 = <u>    45    </u></td> </tr> <tr> <td>FACU species <u>    10    </u></td> <td>x 4 = <u>    40    </u></td> </tr> <tr> <td>UPL species <u>    10    </u></td> <td>x 5 = <u>    50    </u></td> </tr> <tr> <td>Column Totals: <u>   145    </u> (A)</td> <td><u>   315    </u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>    2.17    </u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>    40    </u>	x 1 = <u>    40    </u>	FACW species <u>    70    </u>	x 2 = <u>   140    </u>	FAC species <u>    15    </u>	x 3 = <u>    45    </u>	FACU species <u>    10    </u>	x 4 = <u>    40    </u>	UPL species <u>    10    </u>	x 5 = <u>    50    </u>	Column Totals: <u>   145    </u> (A)	<u>   315    </u> (B)	Prevalence Index = B/A = <u>    2.17    </u>	
Total % Cover of:	Multiply by:																			
OBL species <u>    40    </u>	x 1 = <u>    40    </u>																			
FACW species <u>    70    </u>	x 2 = <u>   140    </u>																			
FAC species <u>    15    </u>	x 3 = <u>    45    </u>																			
FACU species <u>    10    </u>	x 4 = <u>    40    </u>																			
UPL species <u>    10    </u>	x 5 = <u>    50    </u>																			
Column Totals: <u>   145    </u> (A)	<u>   315    </u> (B)																			
Prevalence Index = B/A = <u>    2.17    </u>																				
1. <u>Cornus alba</u>	<u>20</u>	Yes	FACW																	
2. <u>Fraxinus pennsylvanica</u>	<u>15</u>	Yes	FACW																	
3. <u>Ligustrum vulgare</u>	<u>5</u>	No	FACU																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
	<u>40</u>	=Total Cover																		
<u>Herb Stratum</u> (Plot size: <u>    5'    </u> )				<b>Hydrophytic Vegetation Indicators:</b> <u>    </u> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>    </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>    </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Carex vulpinoidea</u>	<u>25</u>	Yes	OBL																	
2. <u>Fraxinus pennsylvanica</u>	<u>15</u>	Yes	FACW																	
3. <u>Miscanthus sinensis</u>	<u>10</u>	Yes	UPL																	
4. <u>Scirpus cyperinus</u>	<u>10</u>	Yes	OBL																	
5. <u>Rumex obtusifolius</u>	<u>10</u>	Yes	FAC																	
6. <u>Juncus effusus</u>	<u>5</u>	No	OBL																	
7. <u>Impatiens capensis</u>	<u>5</u>	No	FACW																	
8. <u>Geum canadense</u>	<u>5</u>	No	FAC																	
9. <u>Symphyotrichum lanceolatum</u>	<u>5</u>	No	FACW																	
10. <u>Rosa multiflora</u>	<u>5</u>	No	FACU																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
	<u>95</u>	=Total Cover																		
<u>Woody Vine Stratum</u> (Plot size: <u>            </u> )				<b>Definitions of Vegetation Strata:</b> <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.																
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
	_____	=Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.)				<b>Hydrophytic Vegetation Present?</b> Yes <u>  X  </u> No <u>      </u>																



**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: Wiley-Ferry Street Parcels City/County: Douglas/Allegan Sampling Date: 6/21/2022  
 Applicant/Owner: David Barker State: MI Sampling Point: B up  
 Investigator(s): R.L. Phillips Section, Township, Range: S17 T3N R16W  
 Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none): concave Slope %: 30-35  
 Subregion (LRR or MLRA): LRR L Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Tekenink loamy fine sand, 18 to 35 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Near Flag B6.	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one is required; check all that apply) _____ _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<b>Secondary Indicators (minimum of two required)</b> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

**VEGETATION** – Use scientific names of plants.

Sampling Point:          B up

	Absolute % Cover	Dominant Species?	Indicator Status																	
<b>Tree Stratum</b> (Plot size: <u>        </u> 30' )				<p><b>Dominance Test worksheet:</b></p> <p>Number of Dominant Species That Are OBL, FACW, or FAC: <u>        </u> 0 (A)</p> <p>Total Number of Dominant Species Across All Strata: <u>        </u> 5 (B)</p> <p>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>        </u> 0.0% (A/B)</p> <p><b>Prevalence Index worksheet:</b></p> <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:right;">Total % Cover of:</td> <td style="width:50%; text-align:left;">Multiply by:</td> </tr> <tr> <td>OBL species <u>        </u> 0</td> <td>x 1 = <u>        </u> 0</td> </tr> <tr> <td>FACW species <u>        </u> 10</td> <td>x 2 = <u>        </u> 20</td> </tr> <tr> <td>FAC species <u>        </u> 0</td> <td>x 3 = <u>        </u> 0</td> </tr> <tr> <td>FACU species <u>        </u> 145</td> <td>x 4 = <u>        </u> 580</td> </tr> <tr> <td>UPL species <u>        </u> 0</td> <td>x 5 = <u>        </u> 0</td> </tr> <tr> <td>Column Totals: <u>        </u> 155 (A)</td> <td><u>        </u> 600 (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>        </u> 3.87</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>        </u> 0	x 1 = <u>        </u> 0	FACW species <u>        </u> 10	x 2 = <u>        </u> 20	FAC species <u>        </u> 0	x 3 = <u>        </u> 0	FACU species <u>        </u> 145	x 4 = <u>        </u> 580	UPL species <u>        </u> 0	x 5 = <u>        </u> 0	Column Totals: <u>        </u> 155 (A)	<u>        </u> 600 (B)	Prevalence Index = B/A = <u>        </u> 3.87	
Total % Cover of:	Multiply by:																			
OBL species <u>        </u> 0	x 1 = <u>        </u> 0																			
FACW species <u>        </u> 10	x 2 = <u>        </u> 20																			
FAC species <u>        </u> 0	x 3 = <u>        </u> 0																			
FACU species <u>        </u> 145	x 4 = <u>        </u> 580																			
UPL species <u>        </u> 0	x 5 = <u>        </u> 0																			
Column Totals: <u>        </u> 155 (A)	<u>        </u> 600 (B)																			
Prevalence Index = B/A = <u>        </u> 3.87																				
1. <u>        </u> <i>Acer saccharum</i>	<u>        </u> 75	<u>        </u> Yes	<u>        </u> FACU																	
2. <u>        </u>																				
3. <u>        </u>																				
4. <u>        </u>																				
5. <u>        </u>																				
6. <u>        </u>																				
7. <u>        </u>																				
	<u>        </u> 75 =Total Cover																			
<b>Sapling/Shrub Stratum</b> (Plot size: <u>        </u> 15' )																				
1. <u>        </u> <i>Acer saccharum</i>	<u>        </u> 25	<u>        </u> Yes	<u>        </u> FACU																	
2. <u>        </u> <i>Fraxinus pennsylvanica</i>	<u>        </u> 5	<u>        </u> No	<u>        </u> FACW																	
3. <u>        </u>																				
4. <u>        </u>																				
5. <u>        </u>																				
6. <u>        </u>																				
7. <u>        </u>																				
	<u>        </u> 30 =Total Cover																			
<b>Herb Stratum</b> (Plot size: <u>        </u> 5' )																				
1. <u>        </u> <i>Carex swanii</i>	<u>        </u> 20	<u>        </u> Yes	<u>        </u> FACU																	
2. <u>        </u> <i>Holcus lanatus</i>	<u>        </u> 10	<u>        </u> Yes	<u>        </u> FACU																	
3. <u>        </u> <i>Dactylis glomerata</i>	<u>        </u> 10	<u>        </u> Yes	<u>        </u> FACU																	
4. <u>        </u> <i>Fraxinus pennsylvanica</i>	<u>        </u> 5	<u>        </u> No	<u>        </u> FACW																	
5. <u>        </u> <i>Solidago caesia</i>	<u>        </u> 5	<u>        </u> No	<u>        </u> FACU																	
6. <u>        </u>																				
7. <u>        </u>																				
8. <u>        </u>																				
9. <u>        </u>																				
10. <u>        </u>																				
11. <u>        </u>																				
12. <u>        </u>																				
	<u>        </u> 50 =Total Cover																			
<b>Woody Vine Stratum</b> (Plot size: <u>        </u> )																				
1. <u>        </u>																				
2. <u>        </u>																				
3. <u>        </u>																				
4. <u>        </u>																				
	<u>        </u> =Total Cover																			

**Hydrophytic Vegetation Indicators:**

         1 - Rapid Test for Hydrophytic Vegetation

         2 - Dominance Test is >50%

         3 - Prevalence Index is ≤3.0<sup>1</sup>

         4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

         Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Vegetation Strata:**

**Tree** – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/shrub** – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vines** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**      Yes               No          X

Remarks: (Include photo numbers here or on a separate sheet.)



**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: Wiley-Ferry Street Parcels City/County: Douglas/Allegan Sampling Date: 6/21/2022  
 Applicant/Owner: David Barker State: MI Sampling Point: B wet  
 Investigator(s): R.L. Phillips Section, Township, Range: S17 T3N R16W  
 Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): concave Slope %: 0-3  
 Subregion (LRR or MLRA): LRR L Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Tekenink loamy fine sand, 18 to 35 percent slopes NWI classification: none [PEM/UB obs.]  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Near Flag B6.	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one is required; check all that apply) _____ _____ Surface Water (A1) <u>X</u> Water-Stained Leaves (B9) <u>X</u> High Water Table (A2)                              _____ Aquatic Fauna (B13) <u>X</u> Saturation (A3)                                      _____ Marl Deposits (B15) _____ Water Marks (B1)                              _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2)                      _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3)                              _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4)                              _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5)                                  _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<b>Secondary Indicators (minimum of two required)</b> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) <u>X</u> Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>8</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>4</u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

**VEGETATION** – Use scientific names of plants.

Sampling Point:     B wet    

<u>Tree Stratum</u> (Plot size: <u>    30'    </u> )	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b>  Number of Dominant Species That Are OBL, FACW, or FAC: <u>    4    </u> (A)  Total Number of Dominant Species Across All Strata: <u>    4    </u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>    100.0%    </u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover				<b>Prevalence Index worksheet:</b>  <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">Total % Cover of:</th> <th style="width:50%;">Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>    10    </u></td> <td>x 1 = <u>    10    </u></td> </tr> <tr> <td>FACW species <u>    35    </u></td> <td>x 2 = <u>    70    </u></td> </tr> <tr> <td>FAC species <u>    20    </u></td> <td>x 3 = <u>    60    </u></td> </tr> <tr> <td>FACU species <u>    5    </u></td> <td>x 4 = <u>    20    </u></td> </tr> <tr> <td>UPL species <u>    0    </u></td> <td>x 5 = <u>    0    </u></td> </tr> <tr> <td>Column Totals: <u>    70    </u> (A)</td> <td><u>    160    </u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>    2.29    </u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>    10    </u>	x 1 = <u>    10    </u>	FACW species <u>    35    </u>	x 2 = <u>    70    </u>	FAC species <u>    20    </u>	x 3 = <u>    60    </u>	FACU species <u>    5    </u>	x 4 = <u>    20    </u>	UPL species <u>    0    </u>	x 5 = <u>    0    </u>	Column Totals: <u>    70    </u> (A)	<u>    160    </u> (B)	Prevalence Index = B/A = <u>    2.29    </u>	
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OBL species <u>    10    </u>	x 1 = <u>    10    </u>																			
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FACU species <u>    5    </u>	x 4 = <u>    20    </u>																			
UPL species <u>    0    </u>	x 5 = <u>    0    </u>																			
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Prevalence Index = B/A = <u>    2.29    </u>																				
_____ =Total Cover																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>    15'    </u> )																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover																				
<u>Herb Stratum</u> (Plot size: <u>    5'    </u> )																				
1. <u><i>Pilea fontana</i></u>	20	Yes	FACW																	
2. <u><i>Lythrum salicaria</i></u>	10	Yes	OBL																	
3. <u><i>Leersia virginica</i></u>	10	Yes	FACW																	
4. <u><i>Geum canadense</i></u>	10	Yes	FAC																	
5. <u><i>Poa alsodes</i></u>	5	No	FAC																	
6. <u><i>Solidago altissima</i></u>	5	No	FACU																	
7. <u><i>Bidens frondosa</i></u>	5	No	FACW																	
8. <u><i>Persicaria virginiana</i></u>	5	No	FAC																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
_____ 70 =Total Cover																				
<u>Woody Vine Stratum</u> (Plot size: <u>                    </u> )																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
_____ =Total Cover																				

**Hydrophytic Vegetation Indicators:**

     1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0<sup>1</sup>

     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

     Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Vegetation Strata:**

**Tree** – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/shrub** – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vines** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**      Yes     X          No     

Remarks: (Include photo numbers here or on a separate sheet.)



## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Wiley-Ferry Street Parcels City/County: Douglas/Allegan Sampling Date: 6/21/2022  
 Applicant/Owner: David Barker State: MI Sampling Point: C,D up  
 Investigator(s): R.L. Phillips Section, Township, Range: S17 T3N R16W  
 Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none): concave Slope %: 2-3  
 Subregion (LRR or MLRA): LRR L Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Oshtemo-Chelsea complex, 0 to 6 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Near Flag C3.	

### HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

**VEGETATION** – Use scientific names of plants.

Sampling Point:  C,D up

<u>Tree Stratum</u> (Plot size: <u> 30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Juniperus virginiana</u>	<u> 5</u>	<u> Yes</u>	<u> FACU</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u> 0</u> (A)  Total Number of Dominant Species Across All Strata: <u> 3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u> 0.0%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
	<u> 5</u> =Total Cover			<b>Prevalence Index worksheet:</b> <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:right;">Total % Cover of:</td> <td style="width:50%; text-align:left;">Multiply by:</td> </tr> <tr> <td>OBL species <u> 0</u></td> <td>x 1 = <u> 0</u></td> </tr> <tr> <td>FACW species <u> 0</u></td> <td>x 2 = <u> 0</u></td> </tr> <tr> <td>FAC species <u> 5</u></td> <td>x 3 = <u> 15</u></td> </tr> <tr> <td>FACU species <u> 165</u></td> <td>x 4 = <u> 660</u></td> </tr> <tr> <td>UPL species <u> 10</u></td> <td>x 5 = <u> 50</u></td> </tr> <tr> <td>Column Totals: <u> 180</u> (A)</td> <td><u> 725</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u> 4.03</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u> 0</u>	x 1 = <u> 0</u>	FACW species <u> 0</u>	x 2 = <u> 0</u>	FAC species <u> 5</u>	x 3 = <u> 15</u>	FACU species <u> 165</u>	x 4 = <u> 660</u>	UPL species <u> 10</u>	x 5 = <u> 50</u>	Column Totals: <u> 180</u> (A)	<u> 725</u> (B)	Prevalence Index = B/A = <u> 4.03</u>	
Total % Cover of:	Multiply by:																			
OBL species <u> 0</u>	x 1 = <u> 0</u>																			
FACW species <u> 0</u>	x 2 = <u> 0</u>																			
FAC species <u> 5</u>	x 3 = <u> 15</u>																			
FACU species <u> 165</u>	x 4 = <u> 660</u>																			
UPL species <u> 10</u>	x 5 = <u> 50</u>																			
Column Totals: <u> 180</u> (A)	<u> 725</u> (B)																			
Prevalence Index = B/A = <u> 4.03</u>																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u> 15'</u> )				<b>Hydrophytic Vegetation Indicators:</b> <u> 1</u> - Rapid Test for Hydrophytic Vegetation <u> 2</u> - Dominance Test is >50% <u> 3</u> - Prevalence Index is ≤3.0 <sup>1</sup> <u> 4</u> - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  <u> </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)																
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
	_____ =Total Cover			<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.																
<u>Herb Stratum</u> (Plot size: <u> 5'</u> )					<b>Hydrophytic Vegetation Present?</b> Yes <u> </u> No <u> X</u>															
1. <u>Poa pratensis</u>	<u> 65</u>	<u> Yes</u>	<u> FACU</u>																	
2. <u>Elymus repens</u>	<u> 35</u>	<u> Yes</u>	<u> FACU</u>																	
3. <u>Rubus flagellaris</u>	<u> 25</u>	<u> No</u>	<u> FACU</u>																	
4. <u>Fragaria virginiana</u>	<u> 15</u>	<u> No</u>	<u> FACU</u>																	
5. <u>Festuca arundinacea</u>	<u> 10</u>	<u> No</u>	<u> FACU</u>																	
6. <u>Solidago altissima</u>	<u> 5</u>	<u> No</u>	<u> FACU</u>																	
7. <u>Plantago lanceolata</u>	<u> 5</u>	<u> No</u>	<u> FACU</u>																	
8. <u>Equisetum arvense</u>	<u> 5</u>	<u> No</u>	<u> FAC</u>																	
9. <u>Centaurea stoebe</u>	<u> 5</u>	<u> No</u>	<u> UPL</u>																	
10. <u>Asclepias syriaca</u>	<u> 5</u>	<u> No</u>	<u> UPL</u>																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
	<u> 175</u> =Total Cover																			
<u>Woody Vine Stratum</u> (Plot size: _____ )				<b>Hydrophytic Vegetation Present?</b> Yes <u> </u> No <u> X</u>																
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____	_____ =Total Cover																

Remarks: (Include photo numbers here or on a separate sheet.)



## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Wiley-Ferry Street Parcels City/County: Douglas/Allegan Sampling Date: 6/21/2022  
 Applicant/Owner: David Barker State: MI Sampling Point: B wet  
 Investigator(s): R.L. Phillips Section, Township, Range: S17 T3N R16W  
 Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): concave Slope %: 0-2  
 Subregion (LRR or MLRA): LRR L Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Oshtemo-Chelsea complex, 0 to 6 percent slopes NWI classification: none [PEM/SS obs.]  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Near Flag C3.	

### HYDROLOGY

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one is required; check all that apply) _____ _____ Surface Water (A1) <u>X</u> Water-Stained Leaves (B9) _____ High Water Table (A2)                      _____ Aquatic Fauna (B13) _____ Saturation (A3)                                      _____ Marl Deposits (B15) _____ Water Marks (B1)                                      _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2)                              _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3)                                      _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4)                                      _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5)                                      _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<b>Secondary Indicators (minimum of two required)</b> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ <u>X</u> Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ <u>X</u> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

**VEGETATION** – Use scientific names of plants.

Sampling Point:     B wet    

	Absolute % Cover	Dominant Species?	Indicator Status																									
<b>Tree Stratum</b> (Plot size: <u>    30'    </u> )																												
1. <u>Populus deltoides</u>	75	Yes	FAC	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>    5    </u> (A) Total Number of Dominant Species Across All Strata: <u>    5    </u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>    100.0%    </u> (A/B)																								
2. _____	_____	_____	_____																									
3. _____	_____	_____	_____																									
4. _____	_____	_____	_____																									
5. _____	_____	_____	_____																									
6. _____	_____	_____	_____																									
7. _____	_____	_____	_____																									
	75	=Total Cover																										
<b>Sapling/Shrub Stratum</b> (Plot size: <u>    15'    </u> )																												
1. <u>Salix interior</u>	40	Yes	FACW	<b>Prevalence Index worksheet:</b> <table style="width:100%; border:none;"> <tr> <td style="width:50%;"></td> <td style="width:25%; text-align:center;">Total % Cover of:</td> <td style="width:25%; text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species</td> <td style="text-align:center;"><u>    105    </u></td> <td style="text-align:center;">x 1 = <u>    105    </u></td> </tr> <tr> <td>FACW species</td> <td style="text-align:center;"><u>    90    </u></td> <td style="text-align:center;">x 2 = <u>    180    </u></td> </tr> <tr> <td>FAC species</td> <td style="text-align:center;"><u>    85    </u></td> <td style="text-align:center;">x 3 = <u>    255    </u></td> </tr> <tr> <td>FACU species</td> <td style="text-align:center;"><u>    15    </u></td> <td style="text-align:center;">x 4 = <u>    60    </u></td> </tr> <tr> <td>UPL species</td> <td style="text-align:center;"><u>    0    </u></td> <td style="text-align:center;">x 5 = <u>    0    </u></td> </tr> <tr> <td>Column Totals:</td> <td style="text-align:center;"><u>    295    </u> (A)</td> <td style="text-align:center;"><u>    600    </u> (B)</td> </tr> <tr> <td colspan="3" style="text-align:center;">Prevalence Index = B/A = <u>    2.03    </u></td> </tr> </table>		Total % Cover of:	Multiply by:	OBL species	<u>    105    </u>	x 1 = <u>    105    </u>	FACW species	<u>    90    </u>	x 2 = <u>    180    </u>	FAC species	<u>    85    </u>	x 3 = <u>    255    </u>	FACU species	<u>    15    </u>	x 4 = <u>    60    </u>	UPL species	<u>    0    </u>	x 5 = <u>    0    </u>	Column Totals:	<u>    295    </u> (A)	<u>    600    </u> (B)	Prevalence Index = B/A = <u>    2.03    </u>		
	Total % Cover of:	Multiply by:																										
OBL species	<u>    105    </u>	x 1 = <u>    105    </u>																										
FACW species	<u>    90    </u>	x 2 = <u>    180    </u>																										
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FACU species	<u>    15    </u>	x 4 = <u>    60    </u>																										
UPL species	<u>    0    </u>	x 5 = <u>    0    </u>																										
Column Totals:	<u>    295    </u> (A)	<u>    600    </u> (B)																										
Prevalence Index = B/A = <u>    2.03    </u>																												
2. <u>Cornus amomum</u>	25	Yes	FACW																									
3. <u>Salix amygdaloides</u>	5	No	FACW																									
4. <u>Fraxinus pennsylvanica</u>	5	No	FACW																									
5. _____	_____	_____	_____																									
6. _____	_____	_____	_____																									
7. _____	_____	_____	_____																									
	75	=Total Cover																										
<b>Herb Stratum</b> (Plot size: <u>    5'    </u> )																												
1. <u>Carex stipata</u>	60	Yes	OBL	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																								
2. <u>Galium palustre</u>	35	Yes	OBL																									
3. <u>Symphyotrichum lanceolatum</u>	10	No	FACW																									
4. <u>Equisetum arvense</u>	10	No	FAC																									
5. <u>Elymus repens</u>	5	No	FACU																									
6. <u>Scirpus cyperinus</u>	5	No	OBL																									
7. <u>Rubus allegheniensis</u>	5	No	FACU																									
8. <u>Lythrum salicaria</u>	5	No	OBL																									
9. <u>Fraxinus pennsylvanica</u>	5	No	FACW																									
10. <u>Allium canadense</u>	5	No	FACU																									
11. _____	_____	_____	_____																									
12. _____	_____	_____	_____																									
	145	=Total Cover																										
<b>Woody Vine Stratum</b> (Plot size: <u>                    </u> )																												
1. _____	_____	_____	_____	<b>Definitions of Vegetation Strata:</b> <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.																								
2. _____	_____	_____	_____																									
3. _____	_____	_____	_____																									
4. _____	_____	_____	_____																									
	=Total Cover																											

Remarks: (Include photo numbers here or on a separate sheet.)



**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: Wiley-Ferry Street Parcels City/County: Douglas/Allegan Sampling Date: 6/21/2022

Applicant/Owner: David Barker State: MI Sampling Point: UPL 1

Investigator(s): R.L. Phillips Section, Township, Range: S17 T3N R16W

Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none): concave Slope %: 2-3

Subregion (LRR or MLRA): LRR L Lat: 42.642140 Long: -86.214095 Datum: \_\_\_\_\_

Soil Map Unit Name: Tekenink loamy fine sand, 2 to 6 percent slopes NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)

Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_

Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Area previously cleared/maintained	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

**VEGETATION** – Use scientific names of plants.

Sampling Point: UPL 1

<u>Tree Stratum</u> (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u><i>Acer saccharinum</i></u>	<u>45</u>	<u>Yes</u>	<u>FACW</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>5</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>40.0%</u> (A/B)																
2. <u><i>Prunus serotina</i></u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	<u>65</u>	=Total Cover																		
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15'</u> )																				
1. <u><i>Prunus serotina</i></u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>	<b>Prevalence Index worksheet:</b> <table style="width:100%; border:none;"> <tr> <td style="text-align:right;">Total % Cover of:</td> <td style="text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>150</u></td> <td>x 2 = <u>300</u></td> </tr> <tr> <td>FAC species <u>5</u></td> <td>x 3 = <u>15</u></td> </tr> <tr> <td>FACU species <u>90</u></td> <td>x 4 = <u>360</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>245</u> (A)</td> <td><u>675</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>2.76</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>150</u>	x 2 = <u>300</u>	FAC species <u>5</u>	x 3 = <u>15</u>	FACU species <u>90</u>	x 4 = <u>360</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>245</u> (A)	<u>675</u> (B)	Prevalence Index = B/A = <u>2.76</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>150</u>	x 2 = <u>300</u>																			
FAC species <u>5</u>	x 3 = <u>15</u>																			
FACU species <u>90</u>	x 4 = <u>360</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>245</u> (A)	<u>675</u> (B)																			
Prevalence Index = B/A = <u>2.76</u>																				
2. _____																				
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	<u>5</u>	=Total Cover																		
<u>Herb Stratum</u> (Plot size: <u>5'</u> )																				
1. <u><i>Phalaris arundinacea</i></u>	<u>95</u>	<u>Yes</u>	<u>FACW</u>	<b>Hydrophytic Vegetation Indicators:</b> <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 <sup>1</sup> <u>4</u> - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  <u>        </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)																
2. <u><i>Rubus allegheniensis</i></u>	<u>45</u>	<u>Yes</u>	<u>FACU</u>																	
3. <u><i>Dryopteris carthusiana</i></u>	<u>10</u>	<u>No</u>	<u>FACW</u>																	
4. <u><i>Elymus repens</i></u>	<u>5</u>	<u>No</u>	<u>FACU</u>																	
5. <u><i>Glechoma hederacea</i></u>	<u>5</u>	<u>No</u>	<u>FACU</u>																	
6. <u><i>Solidago altissima</i></u>	<u>5</u>	<u>No</u>	<u>FACU</u>																	
7. <u><i>Solidago rugosa</i></u>	<u>5</u>	<u>No</u>	<u>FAC</u>																	
8. <u><i>Lonicera morrowii</i></u>	<u>5</u>	<u>No</u>	<u>FACU</u>																	
9. _____																				
10. _____																				
11. _____																				
12. _____																				
	<u>175</u>	=Total Cover																		
<u>Woody Vine Stratum</u> (Plot size: _____)																				
1. _____				<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.																
2. _____																				
3. _____																				
4. _____																				
				<b>Hydrophytic Vegetation Present?</b> Yes <u>        </u> No <u>  X  </u>																
=Total Cover																				

Remarks: (Include photo numbers here or on a separate sheet.)



## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Wiley-Ferry Street Parcels City/County: Douglas/Allegan Sampling Date: 6/21/2022  
 Applicant/Owner: David Barker State: MI Sampling Point: UPL 2  
 Investigator(s): R.L. Phillips Section, Township, Range: S17 T3N R16W  
 Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none): concave Slope %: 2-3  
 Subregion (LRR or MLRA): LRR L Lat: 42.641930 Long: -86.214586 Datum: \_\_\_\_\_  
 Soil Map Unit Name: Tekenink loamy fine sand, 2 to 6 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Area previously cleared/maintained	

### HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

**VEGETATION** – Use scientific names of plants.

Sampling Point: UPL 2

<u>Tree Stratum</u> (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u><i>Acer saccharinum</i></u>	<u>15</u>	Yes	FACW	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>40.0%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
	<u>15</u>	=Total Cover		<b>Prevalence Index worksheet:</b> <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:right;">Total % Cover of:</td> <td style="width:50%; text-align:right;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>110</u></td> <td>x 2 = <u>220</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>75</u></td> <td>x 4 = <u>300</u></td> </tr> <tr> <td>UPL species <u>5</u></td> <td>x 5 = <u>25</u></td> </tr> <tr> <td>Column Totals: <u>190</u> (A)</td> <td><u>545</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>2.87</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>110</u>	x 2 = <u>220</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>75</u>	x 4 = <u>300</u>	UPL species <u>5</u>	x 5 = <u>25</u>	Column Totals: <u>190</u> (A)	<u>545</u> (B)	Prevalence Index = B/A = <u>2.87</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>110</u>	x 2 = <u>220</u>																			
FAC species <u>0</u>	x 3 = <u>0</u>																			
FACU species <u>75</u>	x 4 = <u>300</u>																			
UPL species <u>5</u>	x 5 = <u>25</u>																			
Column Totals: <u>190</u> (A)	<u>545</u> (B)																			
Prevalence Index = B/A = <u>2.87</u>																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15'</u> )																				
1. <u><i>Pyrus calleryana</i></u>	<u>5</u>	Yes	UPL	<b>Hydrophytic Vegetation Indicators:</b> <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 <sup>1</sup> <u>4</u> - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>        </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)																
2. <u><i>Prunus serotina</i></u>	<u>5</u>	Yes	FACU																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
	<u>10</u>	=Total Cover																		
<u>Herb Stratum</u> (Plot size: <u>5'</u> )																				
1. <u><i>Phalaris arundinacea</i></u>	<u>95</u>	Yes	FACW	<b>Definitions of Vegetation Strata:</b> <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.																
2. <u><i>Rubus allegheniensis</i></u>	<u>55</u>	Yes	FACU																	
3. <u><i>Elymus repens</i></u>	<u>10</u>	No	FACU																	
4. <u><i>Galium aparine</i></u>	<u>5</u>	No	FACU																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
	<u>165</u>	=Total Cover																		
<u>Woody Vine Stratum</u> (Plot size: _____)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
	_____	=Total Cover																		

Remarks: (Include photo numbers here or on a separate sheet.)



**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: Wiley-Ferry Street Parcels City/County: Douglas/Allegan Sampling Date: 6/21/2022

Applicant/Owner: David Barker State: MI Sampling Point: UPL 3

Investigator(s): R.L. Phillips Section, Township, Range: S17 T3N R16W

Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none): concave Slope %: 1-3

Subregion (LRR or MLRA): LRR L Lat: 42.642498 Long: -86.214321 Datum: \_\_\_\_\_

Soil Map Unit Name: Tekenink loamy fine sand, 2 to 6 percent slopes NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)

Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_

Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) area previously cleared/mainatined	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

**VEGETATION** – Use scientific names of plants.

Sampling Point: UPL 3

<u>Tree Stratum</u> (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Prunus avium</u>	<u>15</u>	Yes	FACU	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)  Total Number of Dominant Species Across All Strata: <u>6</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)																
2. <u>Acer saccharinum</u>	<u>5</u>	Yes	FACW																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	<u>20</u>	=Total Cover																		
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15'</u> )	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Prunus serotina</u>	<u>10</u>	Yes	FACU	<b>Prevalence Index worksheet:</b> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">Total % Cover of:</th> <th style="width:50%;">Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>30</u></td> <td>x 1 = <u>30</u></td> </tr> <tr> <td>FACW species <u>50</u></td> <td>x 2 = <u>100</u></td> </tr> <tr> <td>FAC species <u>5</u></td> <td>x 3 = <u>15</u></td> </tr> <tr> <td>FACU species <u>120</u></td> <td>x 4 = <u>480</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>205</u> (A)</td> <td><u>625</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>3.05</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>30</u>	x 1 = <u>30</u>	FACW species <u>50</u>	x 2 = <u>100</u>	FAC species <u>5</u>	x 3 = <u>15</u>	FACU species <u>120</u>	x 4 = <u>480</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>205</u> (A)	<u>625</u> (B)	Prevalence Index = B/A = <u>3.05</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>30</u>	x 1 = <u>30</u>																			
FACW species <u>50</u>	x 2 = <u>100</u>																			
FAC species <u>5</u>	x 3 = <u>15</u>																			
FACU species <u>120</u>	x 4 = <u>480</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>205</u> (A)	<u>625</u> (B)																			
Prevalence Index = B/A = <u>3.05</u>																				
2. _____																				
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	<u>10</u>	=Total Cover																		
<u>Herb Stratum</u> (Plot size: <u>5'</u> )	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Phalaris arundinacea</u>	<u>45</u>	Yes	FACW	<b>Hydrophytic Vegetation Indicators:</b> <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 <sup>1</sup> <u>4</u> - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  <u>        </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Rubus allegheniensis</u>	<u>35</u>	Yes	FACU																	
3. <u>Juncus effusus</u>	<u>30</u>	Yes	OBL																	
4. <u>Holcus lanatus</u>	<u>25</u>	No	FACU																	
5. <u>Elymus repens</u>	<u>20</u>	No	FACU																	
6. <u>Dactylis glomerata</u>	<u>10</u>	No	FACU																	
7. <u>Solidago altissima</u>	<u>5</u>	No	FACU																	
8. <u>Solidago rugosa</u>	<u>5</u>	No	FAC																	
9. _____																				
10. _____																				
11. _____																				
12. _____																				
	<u>175</u>	=Total Cover																		
<u>Woody Vine Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____				<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.																
2. _____																				
3. _____																				
4. _____																				
				<b>Hydrophytic Vegetation Present?</b> Yes <u>        </u> No <u>  X  </u>																
				=Total Cover																

Remarks: (Include photo numbers here or on a separate sheet.)





**DRIESENKA &  
ASSOCIATES, INC.**

**Engineering • Surveying • Testing**

12330 James Street, Suite H80  
Holland, Michigan 49424  
Ph. (616) 396-0255 • Fax (616) 396-0100  
[www.driesenga.com](http://www.driesenga.com)

July 7, 2022

Mr. Dave Barker  
ARGENT MANAGEMENT GROUP INC. / TAURUS EXPLORATION INC  
P.O. Box 571  
Douglas, Michigan 49406

**Re: All Appropriate Inquiry Compliant Phase I Environmental Site Assessment  
Ferry Street Parcels  
Douglas, Michigan**

Dear Mr. Barker:

Driesenga & Associates, Inc. has performed an All Appropriate Inquiry (AAI) Compliant Phase I Environmental Site Assessment (ESA) at the above-referenced sites. The enclosed report presents the findings of this investigation.

We urge you to read the entire report and to contact the undersigned with any questions you may have regarding the assessment. We appreciate the opportunity to provide environmental consulting services for this project.

Sincerely,

**DRIESENKA & ASSOCIATES, INC.**

Michael Stork  
Environmental Scientist

Randy Pail, P.E.  
Director of Geotechnical Engineering

Attachment

pc: File – 2210328.2A

**ALL APPROPRIATE INQUIRY COMPLIANT  
PHASE I ENVIRONMENTAL SITE ASSESSMENT**

**SITE:**

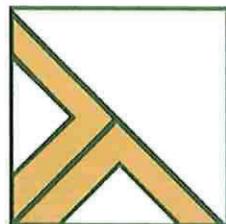
**FERRY STREET PARCELS  
440, 462, 464, 466, 468, 485, 502 AND 504 FERRY STREET  
DOUGLAS, MICHIGAN**

**JULY 7, 2022  
D&A PROJECT NO. 2210328.2A**

**PREPARED FOR:**

**ARGENT MANAGEMENT GROUP INC /  
TAURUS EXPLORATION INC  
P.O. BOX 571  
DOUGLAS, MICHIGAN**

Prepared by:



**DRIESENKA &  
ASSOCIATES, INC.**  

---

**Engineering · Surveying · Testing**



## EXECUTIVE SUMMARY

An All-Appropriate Inquiry (AAI) Compliant Phase I Environmental Site Assessment (ESA) was performed for the *subject property* identified as 440, 462, 464, 466, 468, 485, 502 and 507 Ferry Street in the City of the Village of Douglas, Allegan County, Michigan. The subject property has the associated Permanent Parcel Numbers 03-59-017-089-00, 03-59-017-089-10, 03-59-017-089-20, 03-59-017-089-30, 03-59-017-089-70, 03-59-017-089-95, 03-59-017-089-60, 03-59-017-089-80. This Phase I ESA was performed for Argent Management Group Inc by Driesenga & Associates, Inc. (D&A). This Executive Summary does not fully describe the findings, conclusions, or recommendations of this ESA. A complete description of the findings, conclusions, and recommendations is presented within the full report.

The subject property is comprised of eight (8) adjacent parcels with a combined area of 50.98 acres and is primarily undeveloped, with wide areas of unmaintained vegetation and trees. Leading west off of Ferry Street, a construction haul road enters the site and circles around the center of the property. Numerous piles of wood/timber, metal, and construction debris are located adjacent to this haul road. Soil piles also abound near the haul road, but also in the northeast section of the site. A groundwater monitoring well enclosure was noted around the parcel address 462 Ferry Street. Historical information obtained on the subject site revealed that portions of the property were formerly used as a fruit orchard in the 1950's (northeast portion of the property) and residential housing along Ferry Street before 1999. Between 1981 and 1997, a portion of the site was used as a golf course. Since that time, this site has essentially been vacant for the past 20 years with the exception of dumping of solid waste near the center of the site.

NETROnline performed a search of government lists of sites in the area of the subject site posing potential environmental concerns, as specified by ASTM E 1527-21. Four (4) sites with known contamination were found to lie within the applicable radii of the subject property. Given that groundwater is not currently utilized at the subject site and that the area is serviced with municipal water services, any potential impacts from any neighboring sites that may have migrated beneath the subject site would not be expected to create a health concern. However, due to the proximity of the contamination, considerations should be made to ensure groundwater is not accessed or exposed with any future development. Although there is potential for contamination from off-site facilities to migrate to the subject site, it should be noted that Part 201 of the Michigan Natural Resources and Environmental Protection Act, P.A. 451 of 1994 Section 20126 (4)(c), states that "The owner or operator of property onto which contamination has migrated [is not liable] unless that person is responsible for an activity causing the release that is the source of the contamination."

The Allegan County and the City of the Village of Douglas websites were visited for copies of tax assessor records and building department records associated with the subject site. The properties are owned by Taurus Exploration Inc of New Era, Michigan and are zoned Residential-Vacant. The individual lots range in size from 0.33 acres to 30.1 acres.

The Michigan Department of Environment, Great Lakes and Energy (EGLE) Kalamazoo District and Lansing Offices were contacted for files pertaining to the subject site. The Remediation and Redevelopment Division, Air Quality Division, the Oil, Gas, and Minerals Division, Water



Resources Division, and the Materials Management Division responded to our request for information. No items of environmental concern were noted from these departments of EGLE regarding these properties.

The Allegan County Environmental Health Department was contacted for potential files related to the subject property. No files related to the environmental concerns for subject property were available for review.

Deputy Chief/Fire Inspector Chris Mantels of the Saugatuck Township Fire District responded that the fire district has no records for either of the properties.

The site grounds were visually inspected for this Phase I ESA on July 7, 2022. No evidence of above-ground storage tanks, underground storage tanks or any hazardous waste were directly identified during this investigation.

In conclusion, this assessment has revealed no items of a recognized environmental condition (as defined by ASTM Standard E 1527-21) in connection with the subject site, with the exception of the following:

- The former orchard located on the northeastern portion of the property may have contributed contaminants into the soils (typically arsenic) during its operation around the 1950's.
- Neighboring properties (Douglas Haworth/Former Chase Manufacturing Plant and Kalico Kitchen Ltd) located upgradient with known contamination have the potential for contamination to flow beneath the subject property if transported by groundwater flow towards Lake Michigan.
- Numerous piles of soil, wood/timber, metal, building debris are located within the subject property and are from an unknown source. This solid waste dumping may have contributed contaminants onto the site.



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APPENDIX H	Site Photographs
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## 1.0 INTRODUCTION

An All Appropriate Inquiry (AAI) Compliant Phase I Environmental Site Assessment (ESA) of the subject property was performed for Argent Management Group Inc. and Taurus Exploration Inc. by Driesenga & Associates, Inc. (D&A). The subject site is a combined 51 acres and is identified as 440, 462, 464, 466, 468, 485, 502 and 507 Ferry Street in the City of the Village of Douglas, Allegan County, Michigan. The subject property has the associated Permanent Parcel Numbers 03-59-017-089-00, 03-59-017-089-10, 03-59-017-089-20, 03-59-017-089-30, 03-59-017-089-70, 03-59-017-089-95, 03-59-017-089-60, 03-59-017-089-80. D&A personnel collected data for the ESA during the time period dating from June 1 to July 7, 2022.

### 1.1 PURPOSE

This AAI Compliant Phase I ESA was performed to allow the **USER** of this report to claim protection from Federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) liability as an innocent landowner, a bona fide prospective purchaser, or a contiguous property owner. CERCLA provides a defense for environmental liability if pre-acquisition practices are undertaken which constitute appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice.

On November 1, 2021, the American Society for Testing and Materials (ASTM) International approved its current edition to the Standard Practice for ESAs – Phase I ESA Process. The current edition is designated as E 1527-21. On November 1, 2021, the Environmental Protection Agency's (EPA's) rule which establishes federal standards for conducting environmental due diligence became effective. EPA's final AAI rule establishes specific regulatory requirements for conducting "all appropriate inquires" into the previous ownership, operations, and environmental conditions of a property consistent with good commercial or customary practice. The EPA currently recognizes the revised ASTM Standard E 1527-21 as compliant with the AAI Rule. This ESA was conducted in accordance with ASTM Standard E 1527-21.

Similarly, this ESA was performed to provide a "diligent purchaser defense" pursuant to Section 20126(3) (h) of Part 201 of the Michigan Natural Resources and Environmental Protection Act (Act 451 P.A. of 1994, as amended). Under Part 201, this ESA is also an integral first step in conducting a "Baseline Environmental Assessment" if evidence of contamination exists.

### 1.2 SCOPE OF SERVICES

The scope of services performed for this AAI Compliant Phase I ESA included a historical and regulatory records review, interviews with persons familiar with the site history, and a visual observation of the site grounds to determine if any recognized environmental conditions exist at the subject site, per ASTM Standard E 1527-21.

The records search included a review of applicable local government files, library records, aerial photographs, state and county health department files, and lists of sites of environmental contamination, within applicable radii, as specified by ASTM Standard E 1527-21.



The site review included interviews with persons familiar with the history of the site and past operations, and a review of records pertaining to underground storage tanks (USTs) and hazardous substances, if available. Adjoining properties were also viewed for potential impact to the site.

Additional items required to conform to the current ASTM Standard included a review of title records and environmental liens or activity and an evaluation of specialized knowledge or experience, purchase price of the property, and commonly known or reasonably ascertainable information concerning the subject site.

This AAI Phase I Compliant Phase I ESA was managed and overseen by an Environmental Professional (EP) as required and defined by ASTM Standard E 1527-21.

### 1.3 SPECIAL TERMS AND CONDITIONS

The scope of this ESA was limited to the matters expressly presented in this report. Pursuant to ASTM Standard E 1527-21, no inspection for radon, mold, asbestos-containing materials, wetlands, lead in drinking water or lead-containing materials was conducted. In addition, no laboratory analytical testing of subsurface soils or groundwater was performed as part of this assessment.

In preparing this report, D&A has relied upon information derived from secondary sources and personal interviews. Except as set forth in this report, D&A has made no independent investigation as to the accuracy or completeness of the information derived from the secondary sources and personal interviews, and therefore cannot guarantee that such information is accurate and complete.

All information referenced in this ESA is on file at the offices of D&A. Any documentation not included in the appendices of this report is available for review at the offices of D&A or can be supplied upon request.

All findings, conclusions, and recommendations stated in this report are based upon facts and circumstances as they existed during the time that the data for this ESA was collected. A change in any fact or circumstance upon which this report is based may affect the information contained in this report.

The conclusions of this ESA are based upon the scope of services described herein and are intended to function as indicators of potential environmental impact (or lack thereof) from readily determined historical or current activities conducted at, or in close proximity of, the subject site. The results and conclusions of this study do not insure, warrant, or represent that no additional environmental issues would be discovered if a more thorough evaluation was undertaken.

This ESA was not conducted as an operational audit to determine the environmental compliance status of the subject site. D&A makes no representation or warranty that the implementation or use of the findings, conclusions, or recommendations of this report will result in compliance with applicable law as related to any operations conducted at the site.



#### 1.4 DEFINITIONS

ASTM Standard E 1527-21 defines three separate types of recognized environmental conditions (REC's) as follows:

“Recognized environmental conditions (REC's)” are “the presence or likely presence of any hazardous substances or petroleum products in, on, or at the property: (1) due to release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. De minimis conditions are not recognized environmental conditions.”

“Controlled recognized environmental conditions (CREC's)” are “a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority, with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls.

“Historical recognized environmental conditions (HREC's)” are “a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls.”

#### 1.5 LIMITATIONS AND EXCEPTIONS AND DELETIONS AND DEVIATIONS TO ASTM STANDARD E 1527-21

D&A has performed this assessment in conformance with the scope and limitations of ASTM Standard E 1527-21. No exceptions or deletions from this standard were made or intended.

#### 1.6 DATA FAILURES AND SIGNIFICANT DATA GAPS

Title work was not provided during the time of this assessment. This would be considered a minor data gap. No other data failures or significant data gaps were identified during performance of this assessment.

#### 1.7 USER RELIANCE

This report has been prepared for the benefit Argent Management Group Inc. and Taurus Exploration Inc. and may not be relied upon by any other person or entity without written authorization of D&A.



## 2.0 SITE DESCRIPTION

### 2.1 LOCATION AND LEGAL DESCRIPTION

As shown on Figure 1, the subject site is located in the East 1/2 of the SE ¼ of Section 17, Township 3 North, Range 16 West, the City of the Village of Douglas, Allegan County, Michigan. The site is bound on the north side by West Center Street and residential lots, Ferry Street is the east boundary and commercial and residential lots are present to the west and south. A legal description can be viewed within the Assessor's documents for each of the eight (8) parcels.

### 2.2 SITE CHARACTERISTICS

The subject property is comprised of eight (8) adjacent parcels with a combined area of 50.98 acres and is primarily undeveloped, with wide areas of unmaintained vegetation and trees. Leading west off of Ferry Street, a construction haul road enters the site and circles around the center of the property. Numerous piles of wood/timber, metal, and construction debris are located adjacent to this haul road. Soil piles also abound near the haul road, but also in the northeast section of the site. A groundwater monitoring well enclosure was noted around the parcel address 462 Ferry Street.

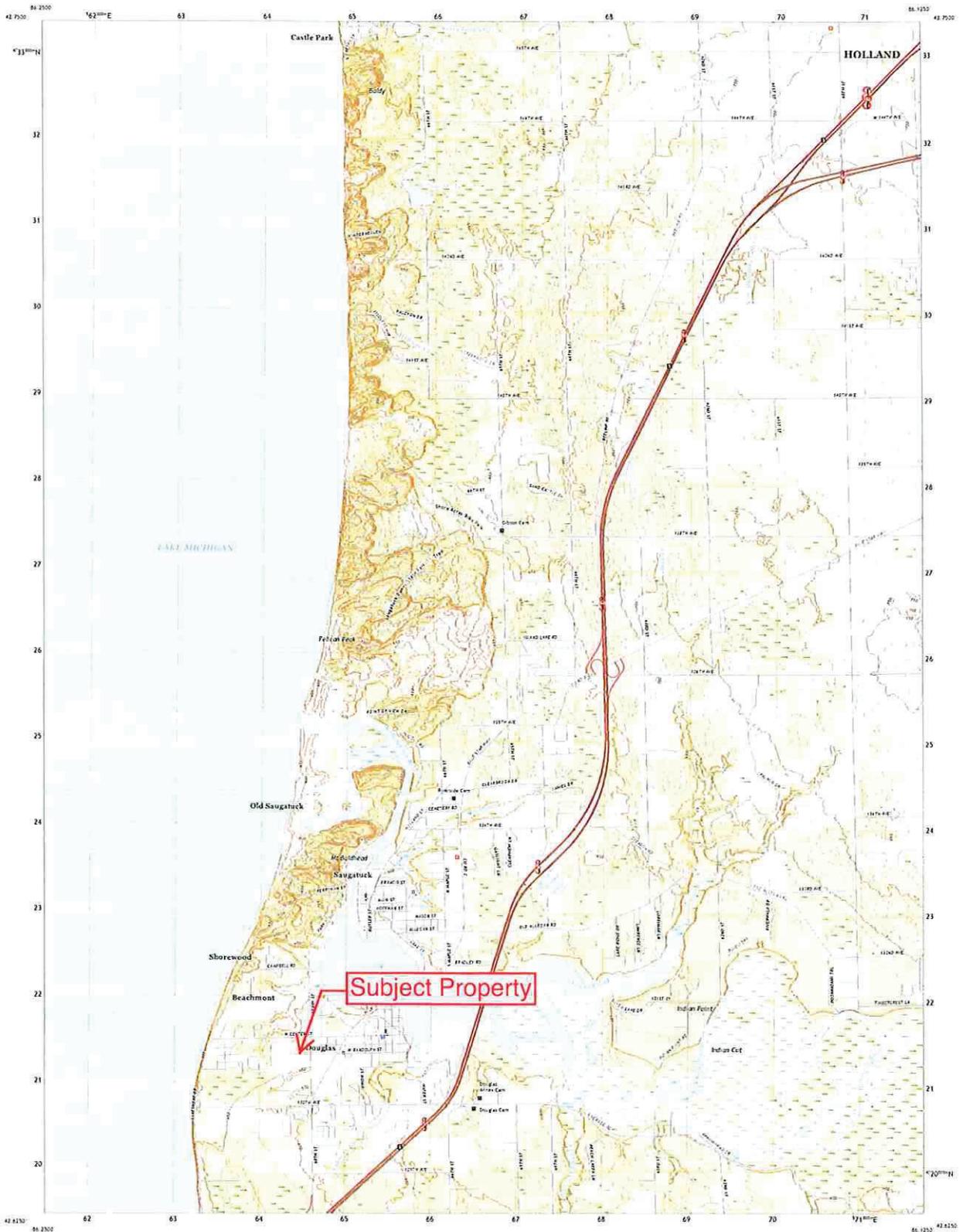
Historical information obtained on the subject site revealed that portions of the property were formerly used as a fruit orchard in the 1950's (northeast portion of the property) and residential housing along Ferry Street before 1999. Between 1981 and 1997, a portion of the site was used as a golf course. Since that time, this site has essentially been vacant for the past 20 years with the exception of dumping of solid waste near the center of the site.

A Site Map noting the current property features is shown on Figure 2.

### 2.3 VICINITY CHARACTERISTICS

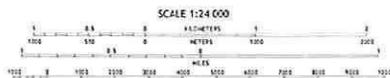
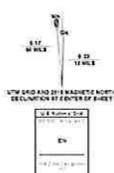
A visual observation of nearby sites was performed to determine the potential for industrial activity, USTs, AST's and/or landfills that may impact the subject site. The subject site is located in an area of primarily residential and commercial usage. Further discussion of nearby sites and their potential impact to the subject site, or lack thereof, is provided in Section 5.0.

Given the topography in the general area of the subject site, as shown on the United States Geological Survey (USGS) topographic map in Figure 1, groundwater flow would be expected to toward the west toward Lake Michigan (approximately 2,500 feet west).



Produced by the United States Geological Survey  
North American Datum of 1983 (NAD83)  
Map Grid System of 1983 (MGRS) - Projection and  
Datum: Universal Transverse Mercator, Zone 16T  
This map is a digital document. Boundaries may be  
generalized for this map scale. Please consult with your  
representative for more information about a particular  
property or parcel.

Map Date: July 2016 - October 2016  
Scale: 1:24,000  
Projection: UTM  
Datum: NAD83  
Map Grid System: MGRS  
Map Scale: 1:24,000  
Map Date: July 2016 - October 2016  
Scale: 1:24,000  
Projection: UTM  
Datum: NAD83  
Map Grid System: MGRS  
Map Scale: 1:24,000



**ROAD CLASSIFICATION**

Expressway: Thick red line  
Primary Road: Red line  
Secondary Road: Thin red line  
Local Road: Dashed red line  
Unimproved Road: Dotted red line  
Local Connector: Thin black line  
Local Road: Dashed black line  
Unimproved Road: Dotted black line  
State Road: Thick black line

\*7643016371669\*





### 3.0 USER PROVIDED INFORMATION

#### 3.1 TITLE RECORDS

Title records were not made available by the client during the time of this assessment.

#### 3.2 ENVIRONMENTAL LIENS OR ACTIVITY AND USE LIMITATIONS

Mr. Dave Barker was not aware of any environmental liens or any activity and use limitations (AULs) pertaining to the subject site. In addition, Mr. Barker was not aware of any environmental liens associated with the subject site.

#### 3.3 USER INTERVIEW

Mr. Dave Barker (Authorized Agent/Owner of Subject Property) completed the User Provided Questionnaire for the subject site as requested by D&A (see Appendix B). Based on the information from this questionnaire, Mr. Barker indicated that this AAI Compliant Phase I ESA was being performed as part of the sale of the property and the participation in a joint venture. He stated that the property was formerly used as a golf course and vacant land. Mr. Barker was not aware of any pending, threatened, or past litigation or administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the property, or of any notices from any government entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products. In addition, Mr. Barker was not aware of any past or present environmental liens against the site, and he was not aware of the subject site having a significantly lower purchase price than a comparable site. He noted that a factory was formerly situated east of the subject property, across Ferry Street and that contamination is known to exist at that site. Mr. Barker was not aware of any commonly known or reasonably ascertainable information within the local community that would indicate a recognized environmental condition in connection with the subject site. The site is to be developed for residential use including multi-family single family condos and houses.



## 4.0 SITE HISTORY

### 4.1 PLAT MAPS

Historical Allegan County Plat Maps were reviewed for indication of property ownership. The subject parcel is located within the City of the Village of Douglas, Allegan County, Michigan, and ownership is listed as follows:

1996 – Robert & Frances Dykstra / Douglas City  
1993 – Old Kent Bank / Douglas City  
1984 to 1987-89 – Joseph Migas, etal  
1962 to 1979 – Joseph Migas / Douglas City  
1954 to 1958 – WC Craine  
1913 – Chas Kimball

No items of a recognized environmental condition were identified related to the subject site within the viewed record.

### 4.2 SANBORN FIRE INSURANCE MAPS

An attempt was made to review copies of Sanborn Fire Insurance Maps for the subject site and surrounding area. Sanborn Fire Insurance Maps do not exist for the subject site or surrounding area (see Appendix C for “No Coverage Letter”).

### 4.3 CITY DIRECTORIES

Polk City Directories, which list site occupants by address, were attempted to be reviewed for historical information on the subject properties and neighboring properties at the Herrick District Library located in Holland, Michigan.

2002 to 2022 – Addresses Not Listed in City Directories Reviewed  
1992 to 1997 – Street Not Listed

Pertinent copies of the records for the subject site are included in Appendix D. No items of a recognized environmental condition were identified related to the subject site within the viewed records.

### 4.4 TAX ASSESSOR RECORDS

The Allegan County and the City of the Village of Douglas websites were visited for copies of tax assessor records and building department records associated with the subject site. The properties are owned by Taurus Exploration Inc of New Era, Michigan and are zoned Residential-Vacant. The individual lots range in size from 0.33 acres to 30.1 acres. Pertinent copies of the records for the subject site are included in Appendix E.



No items of a recognized environmental condition were identified related to the subject site within the viewed records.

#### 4.5 AERIAL PHOTOGRAPHS

Aerial photographs dating 1955, 1981, 1997, 2006, 2011, 2016 and 2021, which include the subject site, were obtained from NETROnline and Google Earth. Copies of the aerial photographs are presented in Appendix F.

The aerial photographs show that portions of the property were formerly used as a fruit orchard in the 1950's (northeast portion of the property) and residential housing along Ferry Street before 1999. Between 1981 and 1997, a portion of the site was used as a golf course. Since that time, this site has essentially been vacant for the past 20 years with the exception of dumping of solid waste near the center of the site.

Orchards, such as this one, historically used arsenic and lead containing products during operations and thus may have contributed those elements into the upper soils. This historical use would be considered a REC. No other items of a recognized environmental condition were identified related to the subject site or the adjoining properties in the aerial photographs.

#### 4.6 INTERVIEWS

Mr. Dave Barker (Taurus Exploration Inc.) was interviewed for information pertaining to the subject property. Mr. Barker was not aware of any recognized environmental conditions associated with the site. He was not aware of any current underground storage tanks, hydrogeologic studies of the site or adjacent sites, geotechnical investigations, hazardous waste generator notices or deed restrictions which would limit the use of the property. The subject site is listed with a purchase price similar to comparable properties. Mr. Barker was not aware of any pending, threatened, or past litigation, any environmental liens or administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the property, or of any notices from any government entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products.



## 5.0 REGULATORY REVIEW

### 5.1 STATE AND FEDERAL LISTS

A review of sites listed by State and Federal agencies as posing known or potential environmental concern, as specified by ASTM Standard E 1527-21, was performed by NETROnline Services. The review was conducted to determine if the subject site, or any sites located near it, are listed by State and Federal agencies. A copy of the Environmental Radius Report dated July 6, 2022, is provided in Appendix G. In accordance with ASTM Standard E 1527-21, the lists reviewed and approximate search distances from the subject site are denoted below and on the Environmental Radius Report Summary page.

Name of List	Approximate Search Radius (miles)
EPA – Federal National Priority List (NPL)	1.0
EPA – Federal National Priority List (NPL) Delisted	0.5
Federal Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) List	0.5
Federal Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) No Further Remedial Action Planned (NFRAP) List	0.5
Federal Resource Conservation and Recovery Act (RCRA) Hazardous Waste Treatment, Storage, and Disposal Facilities Subject to Corrective Actions (CORRACTS) List	1.0
Federal Resource Conservation and Recovery Act (RCRA) Hazardous Waste Treatment, Storage, and Disposal Facilities not Subject to Corrective Actions (NON-CORRACTS) List	0.5
Federal Institutional Control/Engineering Control Registries	Property only
Federal Emergency Response Notification (ERNS) List	Property only
Federal RCRA Hazardous Waste Generators List	Site and adjoining properties
Michigan Environmental Response Act (Part 201) Sites of Environmental Contamination List	1.0
Michigan Sanitary Landfill and Waste Disposal Sites List	0.5
Michigan State Police Fire Marshal's List of Registered Underground Storage Tanks (USTs)	Site and adjoining properties
State and Tribal Institutional Control/Engineering Control Registries	Property only
Michigan Leaking UST List	0.5
State and Tribal Voluntary Cleanup Sites	0.5
Brownfield Sites List	0.5

Four (4) listed sites were identified within the search distance radius listed above.



The sites listed below may potentially present a recognized environmental condition:

- "Douglas Haworth/Former Chase Manufacturing Plant" – 200 Blue Star Hwy (0.05 miles east of subject site)  
Site is on the EPA US ACRES/MI EGLE Brownfield List – PCB's contaminating the soils are listed as occurring on the site as of 2004. The site has been vacant since 2014 with plans for mixed commercial office and retail use redevelopment.
- "West Shore Golf Club" – 14 Ferry Street (0.02 miles north of subject site)  
Site is on the MI EGLE Part 201 List of Contaminated Sites/ Underground Storage Tank List/RCRA – The golf course is no longer active.
- "Kalico Kitchen Ltd" – 312 Ferry Street (0.01 miles east-southeast of subject site)  
Site is on the MI EGLE LUST List – The LUST is listed as "Open", but the site is listed as "Closed".
- "Metropolitan Title Office" – 25-27 Blue Star Hwy (0.1 miles east-northeast of subject site)  
Site is on the MI EGLE LUST List – The LUST is listed as "Open", but the site is listed as "Closed".

Based on a review of the USGS map provided on Figure 1, groundwater flow in the area of the subject site would be expected to flow toward the west. As such, the Douglas Haworth/Former Chase Manufacturing Plant and the Kalico Kitchen Ltd are both located upgradient and adjacent to the subject property. Given their current classification, these sites are likely to pose an environmental threat and/or a Vapor Migration/Encroachment threat to the subject site. Contaminates from each of these sites may have traveled by way of groundwater below the subject property and further evaluation of the possible contamination should be conducted to limit exposures from future wells or direct contact during development.

The Environmental Radius Report is only a summary of listed sites and does not indicate if contaminants have migrated downstream from the listed sites. Although there is potential for contamination from these off-site facilities to migrate to the subject site, it should be noted that Part 201 of the Michigan Natural Resources and Environmental Protection Act, P.A. 451 of 1994 Section 20126 (4)(c), states that "The owner or operator of property onto which contamination has migrated [is not liable] unless that person is responsible for an activity causing the release that is the source of the contamination." Given that groundwater is not utilized at the subject site, any potential impacts from the above noted sites that may migrate beneath the subject site would not be expected to create a health concern.

## 5.2 NEARBY SITES

A cursory visual observation of the sites surrounding the subject site was made by D&A personnel via public thoroughfares during this assessment. The subject site is located in an area of primarily residential, commercial and former industrial usage. Residential properties are located adjacent to the west, north and portions of the south and east. The former Chase Manufacturing Plant and the Kalico Kitchen sites are located east of the property. Based on their respective classification as a



Brownfield and a LUST site, these two (2) sites would be considered recognized environmental conditions affecting the subject site.

### 5.3 SUBJECT SITE

The Michigan Department of Environment, Great Lakes and Energy (EGLE) Kalamazoo District and Lansing Offices were contacted for files pertaining to the subject site. The Remediation and Redevelopment Division, Air Quality Division, the Oil, Gas, and Minerals Division, Water Resources Division, and the Materials Management Division responded to our request for information. No items of environmental concern were noted from these departments of EGLE regarding these properties.

The Allegan County Environmental Health Department was contacted for potential files related to the subject site. No files related to the subject property were available for review.

Deputy Chief/Fire Inspector Chris Mantels of the Saugatuck Township Fire District responded that the fire district has no records for either of the properties.



## 6.0 SITE OBSERVATIONS

### 6.1 METHODOLOGY AND LIMITING CONDITIONS

Michael Stork of D&A performed visual observations of the site grounds on July 7, 2022. The observations were performed to determine if any recognized environmental concerns exist at the subject site. Photographs of the subject property are presented in Appendix H and a Site Map is shown on Figure 2.

### 6.2 GENERAL SITE SETTING

The subject property is located in an area primarily used for residential and commercial purposes. An industrial development was recently demolished across Ferry Street to the east. The property is relatively flat, with a gentle general downward grade from the east to the west. The site is vacant and most recently used for solid waste dumping at the central east portion of the site.

### 6.3 SITE OBSERVATIONS

#### 6.3.1 Aboveground Storage Tanks

No evidence of above ground storage tanks was observed on the subject site during the site reconnaissance.

#### 6.3.2 Underground Storage Tanks

No evidence of underground storage tanks was observed on the subject site during the site reconnaissance.

#### 6.3.3 Hazardous Substances and Petroleum Products

No hazardous substances or petroleum products were observed on the subject site during the site reconnaissance.

#### 6.3.4 Other Containers

No other containers were readily identified on the subject site during the site reconnaissance.

#### 6.3.5 PCB-Containing Equipment

No potentially PCB-containing equipment was readily identified on the subject site during the site reconnaissance.



#### 6.3.6 Spills and Releases

No spills or releases were readily identified on the subject site during the site reconnaissance.

#### 6.3.7 Discharge Features

No discharge features were readily identified on the subject site during the site reconnaissance.

#### 6.3.8 Solid Waste Dumping

Numerous piles of wood/timber, metal, construction debris and soil were noted in the central east and east portions of the site. The source location of the dumped materials was not provided and would be considered a recognized environmental condition (REC) given their span and abundance.

#### 6.3.9 Pits, Ponds, or Lagoons

A pit, which appears to have been formerly a pond, was observed at the subject site during the site reconnaissance along the west side of the property.

#### 6.3.10 Stained Soils and Stressed Vegetation

No stained soil or stressed vegetation was observed across the subject site during the site reconnaissance.

#### 6.3.11 Wells/Water Supply

No wells were noted on the subject site.

#### 6.3.12 Sanitary Sewer/Septic Systems

No active sanitary sewer systems exist at the site.

#### 6.3.13 Heat Source

No heat sources were noted associated with the subject site during the site reconnaissance.



## 7.0 CONCLUSIONS AND FINDINGS

D&A has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Standard E 1527-21 for the subject site identified as 440, 462, 464, 466, 468, 485, 502 and 507 Ferry Street in the City of the Village of Douglas, Allegan County, Michigan. The subject property has the associated Permanent Parcel Numbers 03-59-017-089-00, 03-59-017-089-10, 03-59-017-089-20, 03-59-017-089-30, 03-59-017-089-70, 03-59-017-089-95, 03-59-017-089-60, 03-59-017-089-80. Any exceptions to, or deletions from, this practice are described in Section 1.5 of this report.

In conclusion, this assessment has revealed no evidence of recognized environmental conditions (as defined by ASTM Standard E 1527-21) in connection with the subject property, except for the following:

- The former orchard located on the northeastern portion of the property may have contributed contaminants into the soils (typically arsenic) during its operation around the 1950's.
- Neighboring properties (Douglas Haworth/Former Chase Manufacturing Plant and Kalico Kitchen Ltd) located upgradient with known contamination have the potential for contamination to flow beneath the subject property if transported by groundwater flow towards Lake Michigan.
- Numerous piles of soil, wood/timber, metal, building debris are located within the subject property and are from an unknown source. This solid waste dumping may have contributed contaminants onto the site.



## **8.0 OPINION**

It is our opinion that based on the scope of services performed for this AAI Compliant Phase I ESA, the item(s) identified in Section 7.0 of this report were the only recognized environmental conditions identified.



## 9.0 REFERENCES

D&A has utilized the following published sources to prepare the ESA for the subject site:

ASTM E 1527-21 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, West Conshohocken, PA, November 2021.

Aerial photographs dating 1955, 1981, 1997, 2006, 2011, 2016 and 2021 as provided by NETROnline and Google Earth.

Allegan County Plat Books dated 1913, 1954, 1958, 1962, 1966, 1969, 1974, 1979, 1984, 1987-89, 1990, 1993 and 1996 as viewed at the Herrick District Library in Holland, Michigan.

The City of the Village of Douglas and Allegan County online assessment and building records.

Polk City Directories dated 1992, 19967, 2002, 2007, 2012, 2017 and 2022 as viewed at the Herrick District Library in Holland, Michigan.

United States Department of the Interior Geological Survey, 7.5 Minute Series, Topographic Map, 2019.



## 10.0 SIGNATURE AND QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS

I declare that, to the best of my professional knowledge and belief, I meet the definition of *Environmental Professional* as defined in Part 312.10 of 40 CFR 312 and I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject site. I have developed and performed the all appropriate inquires in conformance with the standards and practices set forth in 40 CFR Part 312.

Sincerely,

**DRIESENKA & ASSOCIATES, INC.**

Michael Stork  
Environmental Scientist

Randy Pail, P.E.  
Director of Geotechnical Engineering



**APPENDIX A**  
**• TITLE RECORDS •**

No Title Work was provided for the target property.



## **APPENDIX B**

### **• USER PROVIDED QUESTIONNAIRE •**



## USER PROVIDED QUESTIONNAIRE

**Driesenga & Associates has been retained to perform an All Appropriate Inquiry Phase I Environmental Site Assessment for a site located at Ferry Street Parcels, Douglas, Michigan including 485, 440, 504, 462, 464, 466, 468, 502 Ferry Street. In accordance with ASTM E1527, we ask that you answer the following questions in good faith and to the best extent of your knowledge:**

- A. What is your relationship to the site (e.g., owner, prospective buyer, prospective lender, etc.)?

Authorized agent / owner of subject property

- B. What is the current use of the property (e.g., residential, commercial, industrial, agricultural, etc.)?

Vacant land

- C. What is the future intended use of the property?

Residential use. Specifically, multi family and single family condos and houses.

- D. Please detail any knowledge of current and/or previous ownership history. Attach any title records or chain of title information.

Previous ownership was golf course and vacant land.

- E. Do you know of any past or present environmental liens on the property?

No

- F. Do you have any specialized and/or actual knowledge or experience that would indicate an environmental concern at the property?

There was a factory east of the subject property that is now torn down which has contamination

- G. Does the property have a significantly lower purchase price than a comparable property? If so, what is the reason for the lower price?

No

- H. Are you aware of any commonly known or reasonably ascertainable information within the local community that would indicate a recognized environmental condition in connection with the property?

Old factory site to the east has contamination.



I. Do you know of any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the property?

No

J. Do you know of any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the property?

No

K. Do you know of any notices from any government entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products?

No

L. Please state the reason that this Phase I ESA is being performed.

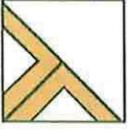
Sale of property and participation in joint venture.

M. Do you have title records? If so, please provide them to our office (it is the User's responsibility to have a title search conducted).

Do not have.

This questionnaire was completed by:

Name: David Barker  
Signature:   
Title: Agent  
Firm: Tarus Exploration  
Address: PO Box 571  
Douglas, MI 49406



## **APPENDIX C**

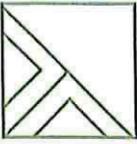
### **• SANBORN FIRE INSURANCE MAPS •**

No Sanborn Maps were found for the target property.



## **APPENDIX D**

### **• CITY DIRECTORY REVIEW •**



**DRIESENKA &  
ASSOCIATES, INC.**

**Engineering • Surveying • Testing**

JOB \_\_\_\_\_

SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_

CALCULATED BY \_\_\_\_\_ DATE \_\_\_\_\_

CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_

SCALE \_\_\_\_\_

City Directory Search - Ferry Street Properties

2022 - Addresses not listed

2017 - Addresses not listed

2012 - Addresses not listed

2007 - Addresses not listed

2002 - Addresses not listed

1997 - Street not listed

1992 - Street not listed

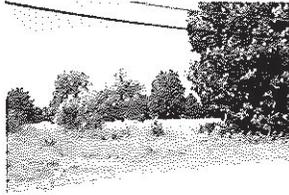


## **APPENDIX E**

### **• ALLEGAN COUNTY AND THE CITY OF THE VILLAGE OF DOUGLAS ASSESSOR'S RECORDS •**

**440 FERRY ST DOUGLAS, MI 49406** (Property Address)

Parcel Number: 59-017-089-00



Item 1 of 1 1 Image / 0 Sketches

**Property Owner: TAURUS EXPLORATION INC**

**Summary Information**

> Assessed Value: \$147,100 | Taxable Value: \$67,237 > Property Tax information found

**Owner and Taxpayer Information**

<b>Owner</b>	TAURUS EXPLORATION INC WICKSTRA JAMES P 7117 W CLAY RD NEW ERA, MI 49446	<b>Taxpayer</b>	SEE OWNER INFORMATION
--------------	---	-----------------	-----------------------

**General Information for Tax Year 2022**

<b>Property Class</b>	402 RESIDENTIAL-VACANT	<b>Unit</b>	59 DOUGLAS CITY
<b>School District</b>	SAUGATUCK PUBLIC SCHOOLS	<b>Assessed Value</b>	\$147,100
<b>MAP #</b>	122	<b>Taxable Value</b>	\$67,237
<b>ACTION</b>	0	<b>State Equalized Value</b>	\$147,100
<b>USER ALPHA 1</b>	<i>Not Available</i>	<b>Date of Last Name Change</b>	12/14/2021
<b>USER ALPHA 3</b>	<i>Not Available</i>	<b>Notes</b>	<i>Not Available</i>
<b>Historical District</b>	<i>Not Available</i>	<b>Census Block Group</b>	<i>Not Available</i>
<b>ADDRESS CHANGE</b>	<i>Not Available</i>	<b>Exemption</b>	<i>No Data to Display</i>

**Principal Residence Exemption Information**

**Homestead Date** *No Data to Display*

Principal Residence Exemption	June 1st	Final
2023	0.0000 %	-
2022	0.0000 %	0.0000 %

**Previous Year Information**

Year	MBOR Assessed	Final SEV	Final Taxable
2021	\$147,100	\$147,100	\$65,090
2020	\$132,000	\$132,000	\$64,192
2019	\$132,000	\$132,000	\$62,996

**Land Information**

<b>Zoning Code</b>	R-5 MUL FAM PUD	<b>Total Acres</b>	12.570
<b>Land Value</b>	\$294,200	<b>Land Improvements</b>	\$0
<b>Renaissance Zone</b>	No	<b>Renaissance Zone Expiration Date</b>	<i>No Data to Display</i>
<b>ECF Neighborhood</b>	RESIDENTAL DEVELOPABLE	<b>Mortgage Code</b>	<i>No Data to Display</i>
<b>Lot Dimensions/Comments</b>	<i>No Data to Display</i>	<b>Neighborhood Enterprise Zone</b>	No

Lot(s)	Frontage	Depth
No lots found.		
<b>Total Frontage: 0.00 ft</b>		<b>Average Depth: 0.00 ft</b>

**Legal Description**

BEG 1180' N OF SE COR OF SEC TH W 345' TH N 150' TH W 300' TH N 630' TH W 105' TH N 659.13' TH E TO E 1/4 PST TH S TO POB EX COM AT E 1/4 PST TH S 159' TH W 165' TH N 60' TH W 231' TH N 99' TH E 396' TO POB ALSO EX S 935' OF N 1174' OF E 393' THEREOF SEC 17 T3N R16W (93)

Land Division Act Information

<b>Date of Last Split/Combine</b>	<i>No Data to Display</i>	<b>Number of Splits Left</b>	0
<b>Date Form Filed</b>	<i>No Data to Display</i>	<b>Unallocated Div.s of Parent</b>	0
<b>Date Created</b>	01/01/0001	<b>Unallocated Div.s Transferred</b>	0
<b>Acreage of Parent</b>	0.00	<b>Rights Were Transferred</b>	<i>Not Available</i>
<b>Split Number</b>	0	<b>Courtesy Split</b>	<i>Not Available</i>
<b>Parent Parcel</b>	<i>No Data to Display</i>		

Sale History

Sale Date	Sale Price	Instrument	Grantor	Grantee	Terms of Sale	Liber/Page
07/27/1999	\$624,225.00	WD	MIGAS JOSEPH & MARY	VISTIANA PROPERTIES LLC	21-NOT USED/OTHER	1868/105

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**462 FERRY ST DOUGLAS, MI 49406** (Property Address)

Parcel Number: 59-017-089-10

**Property Owner: TAURUS EXPLORATION INC**

**Summary Information**

> Assessed Value: \$25,000 | Taxable Value: \$13,500 > Property Tax information found

No Images Found

**Owner and Taxpayer Information**

<b>Owner</b>	TAURUS EXPLORATION INC WICKSTRA JAMES P 7117 W CLAY RD NEW ERA, MI 49446	<b>Taxpayer</b>	SEE OWNER INFORMATION
--------------	---	-----------------	-----------------------

**General Information for Tax Year 2022**

<b>Property Class</b>	402 RESIDENTIAL-VACANT	<b>Unit</b>	59 DOUGLAS CITY
<b>School District</b>	SAUGATUCK PUBLIC SCHOOLS	<b>Assessed Value</b>	\$25,000
<b>MAP #</b>	122-B	<b>Taxable Value</b>	\$13,500
<b>ACTION</b>	0	<b>State Equalized Value</b>	\$25,000
<b>USER ALPHA 1</b>	<i>Not Available</i>	<b>Date of Last Name Change</b>	12/14/2021
<b>USER ALPHA 3</b>	<i>Not Available</i>	<b>Notes</b>	<i>Not Available</i>
<b>Historical District</b>	<i>Not Available</i>	<b>Census Block Group</b>	<i>Not Available</i>
<b>ADDESS CHANGE</b>	<i>Not Available</i>	<b>Exemption</b>	<i>No Data to Display</i>

**Principal Residence Exemption Information**

**Homestead Date** *No Data to Display*

Principal Residence Exemption	June 1st	Final
2023	0.0000 %	-
2022	0.0000 %	0.0000 %

**Previous Year Information**

Year	MBOR Assessed	Final SEV	Final Taxable
2021	\$25,000	\$25,000	\$13,069
2020	\$21,500	\$21,500	\$12,889
2019	\$21,500	\$21,500	\$12,649

**Land Information**

<b>Zoning Code</b>	R-5 MUL FAM PUD	<b>Total Acres</b>	0.340
<b>Land Value</b>	\$50,000	<b>Land improvements</b>	\$0
<b>Renaissance Zone</b>	No	<b>Renaissance Zone Expiration Date</b>	<i>No Data to Display</i>
<b>ECF Neighborhood</b>	RESIDENTAL DEVELOPABLE	<b>Mortgage Code</b>	<i>No Data to Display</i>
<b>Lot Dimensions/Comments</b>	<i>No Data to Display</i>	<b>Neighborhood Enterprise Zone</b>	No

Lot(s)	Frontage	Depth
Lot 1	<i>Not Available</i>	<i>Not Available</i>
<b>Total Frontage: 0.00 ft</b>		<b>Average Depth: 0.00 ft</b>

**Legal Description**

COM AT E 1/4 PST SEC 17 TH S ON E LIN SD SEC 309' TO POB TH CONT S 75' TH W 193' TH N 75' TH E 193' TO POB SEC 17 T3N R16W.

**Land Division Act Information**

<b>Date of Last Split/Combine</b>	<i>No Data to Display</i>	<b>Number of Splits Left</b>	0
<b>Date Form Filed</b>	<i>No Data to Display</i>	<b>Unallocated Div.s of Parent</b>	0
<b>Date Created</b>	01/01/0001	<b>Unallocated Div.s Transferred</b>	0
<b>Acreage of Parent</b>	0.00	<b>Rights Were Transferred</b>	<i>Not Available</i>
<b>Split Number</b>	0	<b>Courtesy Split</b>	<i>Not Available</i>
<b>Parent Parcel</b>	<i>No Data to Display</i>		

Sale History

Sale Date	Sale Price	Instrument	Grantor	Grantee	Terms of Sale	Liber/Page
12/15/1999	\$0.00	QC	GREENTREE LIMITED PARTNERSHIP	VISTIANA PROPERTIES	21-NOT USED/OTHER	1908/450
04/29/1994	\$150,000.00	WD	PARK PROPERTIES	MITCHELL, HARRIET	03-ARM'S LENGTH	1464/846

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**464 FERRY ST SAUGATUCK, MI 49453** (Property Address)

Parcel Number: 59-017-089-20

**Property Owner: TAURUS EXPLORATION INC**

**Summary Information**

> Assessed Value: \$25,000 | Taxable Value: \$13,500 > Property Tax information found

Item 1 of 1 1 Image / 0 Sketches

**Owner and Taxpayer Information**

<b>Owner</b>	TAURUS EXPLORATION INC WICKSTRA JAMES P 7117 W CLAY RD NEW ERA, MI 49446	<b>Taxpayer</b>	SEE OWNER INFORMATION
--------------	---	-----------------	-----------------------

**General Information for Tax Year 2022**

<b>Property Class</b>	402 RESIDENTIAL-VACANT	<b>Unit</b>	59 DOUGLAS CITY
<b>School District</b>	SAUGATUCK PUBLIC SCHOOLS	<b>Assessed Value</b>	\$25,000
<b>MAP #</b>	122-C	<b>Taxable Value</b>	\$13,500
<b>ACTION</b>	0	<b>State Equalized Value</b>	\$25,000
<b>USER ALPHA 1</b>	Not Available	<b>Date of Last Name Change</b>	12/14/2021
<b>USER ALPHA 3</b>	Not Available	<b>Notes</b>	Not Available
<b>Historical District</b>	Not Available	<b>Census Block Group</b>	Not Available
<b>ADDESS CHANGE</b>	Not Available	<b>Exemption</b>	No Data to Display

**Principal Residence Exemption Information**

**Homestead Date** No Data to Display

Principal Residence Exemption	June 1st	Final
2023	0.0000 %	-
2022	0.0000 %	0.0000 %

**Previous Year Information**

Year	MBOR Assessed	Final SEV	Final Taxable
2021	\$25,000	\$25,000	\$13,069
2020	\$21,500	\$21,500	\$12,889
2019	\$21,500	\$21,500	\$12,649

**Land Information**

<b>Zoning Code</b>	R-5 MUL FAM PUD	<b>Total Acres</b>	0.340
<b>Land Value</b>	\$50,000	<b>Land Improvements</b>	\$0
<b>Renaissance Zone</b>	No	<b>Renaissance Zone Expiration Date</b>	No Data to Display
<b>ECF Neighborhood</b>	RESIDENTAL DEVELOPABLE	<b>Mortgage Code</b>	No Data to Display
<b>Lot Dimensions/Comments</b>	No Data to Display	<b>Neighborhood Enterprise Zone</b>	No

Lot(s)	Frontage	Depth
Lot 1	Not Available	Not Available
<b>Total Frontage: 0.00 ft</b>		<b>Average Depth: 0.00 ft</b>

**Legal Description**

COM AT E 1/4 PST SEC 17 TH S ON E LIN SD SEC 384' TO POB TH CONT S 75' TH W 193' TH N 75' TH E 193' TO POB SEC 17 T3N R16W.

Land Division Act Information

<b>Date of Last Split/Combine</b>	<i>No Data to Display</i>	<b>Number of Splits Left</b>	0
<b>Date Form Filed</b>	<i>No Data to Display</i>	<b>Unallocated Div.s of Parent</b>	0
<b>Date Created</b>	01/01/0001	<b>Unallocated Div.s Transferred</b>	0
<b>Acreage of Parent</b>	0.00	<b>Rights Were Transferred</b>	<i>Not Available</i>
<b>Split Number</b>	0	<b>Courtesy Split</b>	<i>Not Available</i>
<b>Parent Parcel</b>	<i>No Data to Display</i>		

Sale History

Sale Date	Sale Price	Instrument	Grantor	Grantee	Terms of Sale	Liber/Page
12/15/1999	\$0.00	QC	GREENTREE LIMITED PARTNERSHIP	VISTIANA PROP	21-NOT USED/OTHER	1908/450
03/29/1994	\$150,000.00	WD	PARK PROPERTIES	MITCHELL, HARRIET	03-ARM'S LENGTH	1464/846

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**466 FERRY ST SAUGATUCK, MI 49453** (Property Address)

Parcel Number: 59-017-089-30

**Property Owner: TAURUS EXPLORATION INC**

*Summary Information*

> Assessed Value: \$25,000 | Taxable Value: \$13,500 > Property Tax information found

No Images Found

**Owner and Taxpayer Information**

<b>Owner</b>	TAURUS EXPLORATION INC WICKSTRA JAMES P 7117 W CLAY RD NEW ERA, MI 49446	<b>Taxpayer</b>	SEE OWNER INFORMATION
--------------	---	-----------------	-----------------------

**General Information for Tax Year 2022**

<b>Property Class</b>	402 RESIDENTIAL-VACANT	<b>Unit</b>	59 DOUGLAS CITY
<b>School District</b>	SAUGATUCK PUBLIC SCHOOLS	<b>Assessed Value</b>	\$25,000
<b>MAP #</b>	122-D	<b>Taxable Value</b>	\$13,500
<b>ACTION</b>	0	<b>State Equalized Value</b>	\$25,000
<b>USER ALPHA 1</b>	<i>Not Available</i>	<b>Date of Last Name Change</b>	12/14/2021
<b>USER ALPHA 3</b>	<i>Not Available</i>	<b>Notes</b>	<i>Not Available</i>
<b>Historical District</b>	<i>Not Available</i>	<b>Census Block Group</b>	<i>Not Available</i>
<b>ADDESS CHANGE</b>	<i>Not Available</i>	<b>Exemption</b>	<i>No Data to Display</i>

**Principal Residence Exemption Information**

**Homestead Date** *No Data to Display*

Principal Residence Exemption	June 1st	Final
2023	0.0000 %	-
2022	0.0000 %	0.0000 %

**Previous Year Information**

Year	MBOR Assessed	Final SEV	Final Taxable
2021	\$25,000	\$25,000	\$13,069
2020	\$21,500	\$21,500	\$12,889
2019	\$21,500	\$21,500	\$12,649

**Land Information**

<b>Zoning Code</b>	R-5 MUL FAM PUD	<b>Total Acres</b>	0.340
<b>Land Value</b>	\$50,000	<b>Land Improvements</b>	\$0
<b>Renaissance Zone</b>	No	<b>Renaissance Zone Expiration Date</b>	<i>No Data to Display</i>
<b>ECF Neighborhood</b>	RESIDENTAL DEVELOPABLE	<b>Mortgage Code</b>	<i>No Data to Display</i>
<b>Lot Dimensions/Comments</b>	<i>No Data to Display</i>	<b>Neighborhood Enterprise Zone</b>	No

Lot(s)	Frontage	Depth
Lot 1	<i>Not Available</i>	<i>Not Available</i>
<b>Total Frontage: 0.00 ft</b>		<b>Average Depth: 0.00 ft</b>

**Legal Description**

COM AT E 1/4 PST SEC 17 TH S ON E LIN SD SEC 459' TO POB TH CONT S 75' TH W 193' TH N 75' TH E 193' TO POB SEC 17 T3N R16W.

**Land Division Act Information**

<b>Date of Last Split/Combine</b>	<i>No Data to Display</i>	<b>Number of Splits Left</b>	0
<b>Date Form Filed</b>	<i>No Data to Display</i>	<b>Unallocated Div.s of Parent</b>	0
<b>Date Created</b>	01/01/0001	<b>Unallocated Div.s Transferred</b>	0
<b>Acreage of Parent</b>	0.00	<b>Rights Were Transferred</b>	<i>Not Available</i>
<b>Split Number</b>	0	<b>Courtesy Split</b>	<i>Not Available</i>
<b>Parent Parcel</b>	<i>No Data to Display</i>		

## Sale History

Sale Date	Sale Price	Instrument	Grantor	Grantee	Terms of Sale	Liber/Page
12/15/1999	\$0.00	QC	GREENTREE LIMITED PARTNERSHIP	VISTIANA PROPERTIES	21-NOT USED/OTHER	1908/450
04/29/1994	\$150,000.00	WD	PARK PROPERTIES	MITCHELL, HARRIET	03-ARM'S LENGTH	1464/846

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**468 FERRY ST DOUGLAS, MI 49406** (Property Address)

Parcel Number: 59-017-089-70

**Property Owner: TAURUS EXPLORATION INC**

**Summary Information**

> Assessed Value: \$58,400 | Taxable Value: \$34,133 > Property Tax information found

Item 1 of 1 1 Image / 0 Sketches

**Owner and Taxpayer Information**

<b>Owner</b>	TAURUS EXPLORATION INC WICKSTRA JAMES P 7117 W CLAY RD NEW ERA, MI 49446	<b>Taxpayer</b>	SEE OWNER INFORMATION
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**General Information for Tax Year 2022**

<b>Property Class</b>	402 RESIDENTIAL-VACANT	<b>Unit</b>	59 DOUGLAS CITY
<b>School District</b>	SAUGATUCK PUBLIC SCHOOLS	<b>Assessed Value</b>	\$58,400
<b>MAP #</b>	122-H	<b>Taxable Value</b>	\$34,133
<b>ACTION</b>	0	<b>State Equalized Value</b>	\$58,400
<b>USER ALPHA 1</b>	Not Available	<b>Date of Last Name Change</b>	12/14/2021
<b>USER ALPHA 3</b>	Not Available	<b>Notes</b>	Not Available
<b>Historical District</b>	Not Available	<b>Census Block Group</b>	Not Available
<b>ADDESS CHANGE</b>	Not Available	<b>Exemption</b>	No Data to Display

**Principal Residence Exemption Information**

**Homestead Date** No Data to Display

Principal Residence Exemption	June 1st	Final
2023	0.0000 %	-
2022	0.0000 %	0.0000 %

**Previous Year Information**

Year	MBOR Assessed	Final SEV	Final Taxable
2021	\$58,400	\$58,400	\$33,043
2020	\$55,000	\$55,000	\$32,587
2019	\$55,000	\$55,000	\$31,980

**Land Information**

<b>Zoning Code</b>	R-5 MUL FAM PUD	<b>Total Acres</b>	1.418
<b>Land Value</b>	\$116,800	<b>Land Improvements</b>	\$0
<b>Renaissance Zone</b>	No	<b>Renaissance Zone Expiration Date</b>	No Data to Display
<b>ECF Neighborhood</b>	RESIDENTIAL DEVELOPABLE	<b>Mortgage Code</b>	No Data to Display
<b>Lot Dimensions/Comments</b>	No Data to Display	<b>Neighborhood Enterprise Zone</b>	No

Lot(s)	Frontage	Depth
Lot 1	Not Available	Not Available
<b>Total Frontage: 0.00 ft</b>		<b>Average Depth: 0.00 ft</b>

**Legal Description**

COM 534' S OF E 1/4 PST TH S 320' TH W 193' TH N 320' TH E TO POB SEC 17 T3N R16W (86)

Land Division Act Information

<b>Date of Last Split/Combine</b>	<i>No Data to Display</i>	<b>Number of Splits Left</b>	0
<b>Date Form Filed</b>	<i>No Data to Display</i>	<b>Unallocated Div.s of Parent</b>	0
<b>Date Created</b>	01/01/0001	<b>Unallocated Div.s Transferred</b>	0
<b>Acreage of Parent</b>	0.00	<b>Rights Were Transferred</b>	<i>Not Available</i>
<b>Split Number</b>	0	<b>Courtesy Split</b>	<i>Not Available</i>
<b>Parent Parcel</b>	<i>No Data to Display</i>		

Sale History

Sale Date	Sale Price	Instrument	Grantor	Grantee	Terms of Sale	Liber/Page
12/15/1999	\$0.00	QC	GREENTREE LIMITED PARTNERSHIP	VISTIANA PROPERTIES	21-NOT USED/OTHER	1908/450
04/29/1994	\$150,000.00	WD	PARK PROPERTIES	MITCHELL, HARRIET	03-ARM'S LENGTH	1464/846

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**485 FERRY ST** (Property Address)

Parcel Number: 59-017-089-95

**Property Owner:** TAURUS EXPLORATION INC

*Summary Information*

> Assessed Value: \$330,100 | Taxable Value: \$121,621 > Property Tax information found

No Images Found

**Owner and Taxpayer Information**

<b>Owner</b>	TAURUS EXPLORATION INC WICKSTRA JAMES P 7117 W CLAY RD NEW ERA, MI 49446	<b>Taxpayer</b>	SEE OWNER INFORMATION
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**General Information for Tax Year 2022**

<b>Property Class</b>	402 RESIDENTIAL-VACANT	<b>Unit</b>	59 DOUGLAS CITY
<b>School District</b>	SAUGATUCK PUBLIC SCHOOLS	<b>Assessed Value</b>	\$330,100
<b>MAP #</b>	122 K	<b>Taxable Value</b>	\$121,621
<b>ACTION</b>	0	<b>State Equalized Value</b>	\$330,100
<b>USER ALPHA 1</b>	<i>Not Available</i>	<b>Date of Last Name Change</b>	12/14/2021
<b>USER ALPHA 3</b>	<i>Not Available</i>	<b>Notes</b>	<i>Not Available</i>
<b>Historical District</b>	<i>Not Available</i>	<b>Census Block Group</b>	<i>Not Available</i>
<b>ADDESS CHANGE</b>	<i>Not Available</i>	<b>Exemption</b>	<i>No Data to Display</i>

**Principal Residence Exemption Information**

**Homestead Date** *No Data to Display*

Principal Residence Exemption	June 1st	Final
2023	0.0000 %	-
2022	0.0000 %	0.0000 %

**Previous Year Information**

Year	MBOR Assessed	Final SEV	Final Taxable
2021	\$330,100	\$330,100	\$117,736
2020	\$300,100	\$300,100	\$116,111
2019	\$300,100	\$300,100	\$113,947

**Land Information**

<b>Zoning Code</b>	R-5 MUL FAM PUD	<b>Total Acres</b>	30.010
<b>Land Value</b>	\$660,200	<b>Land Improvements</b>	\$0
<b>Renaissance Zone</b>	No	<b>Renaissance Zone Expiration Date</b>	<i>No Data to Display</i>
<b>ECF Neighborhood</b>	RESIDENTAL DEVELOPABLE	<b>Mortgage Code</b>	<i>No Data to Display</i>
<b>Lot Dimensions/Comments</b>	<i>No Data to Display</i>	<b>Neighborhood Enterprise Zone</b>	No

Lot(s)	Frontage	Depth
No lots found.		
<b>Total Frontage: 0.00 ft</b>		<b>Average Depth: 0.00 ft</b>

**Legal Description**

BEG 400' N OF SE COR SEC 17 TH W 600' TH S 400' TH W 709.88' TH N 2615.67' TO E-W 1/4 LIN TH E ALG SD LIN 555.68' TH S 659.13' TH E 105' TH S 630' TH E 300' TH S 150' TH E 345' TH S 780' TO POB EX W 1/2 SE 1/4 SE 1/4 ALSO EX N 200' OF W 500' THEREOF SEC 17 T3N R16W (97)

Land Division Act Information

<b>Date of Last Split/Combine</b>	<i>No Data to Display</i>	<b>Number of Splits Left</b>	0
<b>Date Form Filed</b>	<i>No Data to Display</i>	<b>Unallocated Div.s of Parent</b>	0
<b>Date Created</b>	01/01/0001	<b>Unallocated Div.s Transferred</b>	0
<b>Acreage of Parent</b>	0.00	<b>Rights Were Transferred</b>	<i>Not Available</i>
<b>Split Number</b>	0	<b>Courtesy Split</b>	<i>Not Available</i>
<b>Parent Parcel</b>	<i>No Data to Display</i>		

Sale History

Sale Date	Sale Price	Instrument	Grantor	Grantee	Terms of Sale	Liber/Page
07/27/1999	\$624,225.00	WD	MIGAS JOSEPH P & MARY R	VISTIANA PROPERTIES LLC	03-ARM'S LENGTH	1868/105

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**502 FERRY ST DOUGLAS, MI 49406** (Property Address)

Parcel Number: 59-017-089-60

**Property Owner: TAURUS EXPLORATION INC**

**Summary Information**

> Assessed Value: \$30,000 | Taxable Value: \$27,024 > Property Tax information found

No Images Found

**Owner and Taxpayer Information**

<b>Owner</b>	TAURUS EXPLORATION INC WICKSTRA JAMES P 7117 W CLAY RD NEW ERA, MI 49446	<b>Taxpayer</b>	SEE OWNER INFORMATION
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**General Information for Tax Year 2022**

<b>Property Class</b>	402 RESIDENTIAL-VACANT	<b>Unit</b>	59 DOUGLAS CITY
<b>School District</b>	SAUGATUCK PUBLIC SCHOOLS	<b>Assessed Value</b>	\$30,000
<b>MAP #</b>	122-G	<b>Taxable Value</b>	\$27,024
<b>ACTION</b>	0	<b>State Equalized Value</b>	\$30,000
<b>USER ALPHA 1</b>	Not Available	<b>Date of Last Name Change</b>	12/14/2021
<b>USER ALPHA 3</b>	Not Available	<b>Notes</b>	Not Available
<b>Historical District</b>	Not Available	<b>Census Block Group</b>	Not Available
<b>ADDESS CHANGE</b>	Not Available	<b>Exemption</b>	No Data to Display

**Principal Residence Exemption Information**

**Homestead Date** No Data to Display

Principal Residence Exemption	June 1st	Final
2023	0.0000 %	-
2022	0.0000 %	0.0000 %

**Previous Year Information**

Year	MBOR Assessed	Final SEV	Final Taxable
2021	\$30,000	\$30,000	\$26,161
2020	\$25,800	\$25,800	\$25,800
2019	\$25,800	\$25,800	\$25,800

**Land Information**

<b>Zoning Code</b>	R-5 MUL FAM PUD	<b>Total Acres</b>	0.710
<b>Land Value</b>	\$60,000	<b>Land Improvements</b>	\$0
<b>Renaissance Zone</b>	No	<b>Renaissance Zone Expiration Date</b>	No Data to Display
<b>ECF Neighborhood</b>	RESIDENTIAL DEVELOPABLE	<b>Mortgage Code</b>	No Data to Display
<b>Lot Dimensions/Comments</b>	No Data to Display	<b>Neighborhood Enterprise Zone</b>	No

Lot(s)	Frontage	Depth
Lot 1	Not Available	Not Available
<b>Total Frontage: 0.00 ft</b>		<b>Average Depth: 0.00 ft</b>

**Legal Description**

COM 854' S OF E 1/4 PST TH S 160' TH W 193' TH N 160' TH E 193' TO POB SEC 17 T3N R16W (86)

**Land Division Act Information**

<b>Date of Last Split/Combine</b>	<i>No Data to Display</i>	<b>Number of Splits Left</b>	0
<b>Date Form Filed</b>	<i>No Data to Display</i>	<b>Unallocated Div.s of Parent</b>	0
<b>Date Created</b>	01/01/0001	<b>Unallocated Div.s Transferred</b>	0
<b>Acreage of Parent</b>	0.00	<b>Rights Were Transferred</b>	<i>Not Available</i>
<b>Split Number</b>	0	<b>Courtesy Split</b>	<i>Not Available</i>
<b>Parent Parcel</b>	<i>No Data to Display</i>		

Sale History

Sale Date	Sale Price	Instrument	Grantor	Grantee	Terms of Sale	Liber/Page
12/15/1999	\$0.00	QC	GREENTREE LIMITED PARTNERSHIP	VISTIANA PROP	21-NOT USED/OTHER	1908/450
04/29/1994	\$150,000.00	WD	PARK PROPERTIES	MITCHELL, HARRIET	03-ARM'S LENGTH	1464/846

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**504 S FERRY ST** DOUGLAS, MI 49406 (Property Address)

Parcel Number: 59-017-089-80

**Property Owner:** TAURUS EXPLORATION

**Summary Information**

> Assessed Value: \$58,600 | Taxable Value: \$40,150 > Property Tax Information found

No Images Found

**Owner and Taxpayer Information**

<b>Owner</b>	TAURUS EXPLORATION WICKSTRA JAMES P 7117 W CLAY RD NEW ERA, MI 49446	<b>Taxpayer</b>	SEE OWNER INFORMATION
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**General Information for Tax Year 2022**

<b>Property Class</b>	402 RESIDENTIAL-VACANT	<b>Unit</b>	59 DOUGLAS CITY
<b>School District</b>	SAUGATUCK PUBLIC SCHOOLS	<b>Assessed Value</b>	\$58,600
<b>MAP #</b>	122-1	<b>Taxable Value</b>	\$40,150
<b>ACTION</b>	0	<b>State Equalized Value</b>	\$58,600
<b>USER ALPHA 1</b>	Not Available	<b>Date of Last Name Change</b>	12/14/2021
<b>USER ALPHA 3</b>	Not Available	<b>Notes</b>	Not Available
<b>Historical District</b>	Not Available	<b>Census Block Group</b>	Not Available
<b>ADESS CHANGE</b>	Not Available	<b>Exemption</b>	No Data to Display

**Principal Residence Exemption Information**

**Homestead Date** No Data to Display

Principal Residence Exemption	June 1st	Final
2023	0.0000 %	-
2022	0.0000 %	0.0000 %

**Previous Year Information**

Year	MBOR Assessed	Final SEV	Final Taxable
2021	\$58,600	\$58,600	\$38,868
2020	\$53,600	\$53,600	\$38,332
2019	\$53,600	\$53,600	\$37,618

**Land Information**

<b>Zoning Code</b>	R-5 MUL FAM PUD	<b>Total Acres</b>	5.186
<b>Land Value</b>	\$117,200	<b>Land Improvements</b>	\$0
<b>Renaissance Zone</b>	No	<b>Renaissance Zone Expiration Date</b>	No Data to Display
<b>ECF Neighborhood</b>	RESIDENTIAL DEVELOPABLE	<b>Mortgage Code</b>	No Data to Display
<b>Lot Dimensions/Comments</b>	No Data to Display	<b>Neighborhood Enterprise Zone</b>	No

Lot(s)	Frontage	Depth
Lot 1	Not Available	Not Available
<b>Total Frontage: 0.00 ft</b>		<b>Average Depth: 0.00 ft</b>

**Legal Description**

COM 239' S OF E 1/4 PST TH S 70' TH S 88 DEG 29'59" W 193' TH S 705' TH N 88 DEG 39'59" E 193' TH S 160' TH S 88 DEG 39' 59" W 393' TH N 935' TH N 88 DEG 39'59" E 393' TO POB SEC 17 T3N R16W (B7)

Land Division Act Information

<b>Date of Last Split/Combine</b>	<i>No Data to Display</i>	<b>Number of Splits Left</b>	0
<b>Date Form Filed</b>	<i>No Data to Display</i>	<b>Unallocated Div.s of Parent</b>	0
<b>Date Created</b>	01/01/0001	<b>Unallocated Div.s Transferred</b>	0
<b>Acreage of Parent</b>	0.00	<b>Rights Were Transferred</b>	<i>Not Available</i>
<b>Split Number</b>	0	<b>Courtesy Split</b>	<i>Not Available</i>
<b>Parent Parcel</b>	<i>No Data to Display</i>		

Sale History

Sale Date	Sale Price	Instrument	Grantor	Grantee	Terms of Sale	Liber/Page
12/15/1999	\$0.00	QC	GREENTREE LIMITED PARTNERSHIP	VISTIANA PROPERTIES	21-NOT USED/OTHER	1908/450
04/29/1994	\$150,000.00	WD	PARK PROPERTIES	MITCHELL, HARRIET	03-ARM'S LENGTH	1464/846

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**440 FERRY ST DOUGLAS, MI 49406** (Property Address)

Parcel Number: 59-017-089-00

**Property Owner: TAURUS EXPLORATION INC**

**Summary Information**

> Assessed Value: \$147,100 | Taxable Value: \$67,237

> Property Tax information found

**Parcel is Vacant**

**Owner and Taxpayer Information**

<b>Owner</b>	TAURUS EXPLORATION INC WICKSTRA JAMES P 7117 W CLAY RD NEW ERA, MI 49446	<b>Taxpayer</b>	SEE OWNER INFORMATION
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**General Information for Tax Year 2022**

<b>Property Class</b>	402 RESIDENTIAL-VACANT	<b>Unit</b>	59 DOUGLAS CITY
<b>School District</b>	SAUGATUCK PUBLIC SCHOOLS	<b>Assessed Value</b>	\$147,100
<b>MAP #</b>	122	<b>Taxable Value</b>	\$67,237
<b>ACTION</b>	0	<b>State Equalized Value</b>	\$147,100
<b>USER ALPHA 1</b>	<i>Not Available</i>	<b>Date of Last Name Change</b>	12/14/2021
<b>USER ALPHA 3</b>	<i>Not Available</i>	<b>Notes</b>	<i>Not Available</i>
<b>Historical District</b>	No	<b>Census Block Group</b>	<i>No Data to Display</i>
<b>ADDRESS CHANGE</b>	<i>Not Available</i>	<b>Exemption</b>	<i>No Data to Display</i>

**Principal Residence Exemption Information**

**Homestead Date** *No Data to Display*

Principal Residence Exemption	June 1st	Final
2022	0.0000 %	-
2021	0.0000 %	0.0000 %

**Previous Year Information**

Year	MBOR Assessed	Final SEV	Final Taxable
2021	\$147,100	\$147,100	\$65,090
2020	\$132,000	\$132,000	\$64,192
2019	\$132,000	\$132,000	\$62,996

**Land Information**

<b>Zoning Code</b>	R-5 MUL FAM PUD	<b>Total Acres</b>	12.570
<b>Land Value</b>	\$294,250	<b>Land Improvements</b>	\$0
<b>Renaissance Zone</b>	No	<b>Renaissance Zone Expiration Date</b>	<i>No Data to Display</i>
<b>ECF Neighborhood</b>	RESIDENTIAL DEVELOPABLE	<b>Mortgage Code</b>	<i>No Data to Display</i>
<b>Lot Dimensions/Comments</b>	<i>No Data to Display</i>	<b>Neighborhood Enterprise Zone</b>	No

Lot(s)	Frontage	Depth
No lots found.		
<b>Total Frontage: 0.00 ft</b>		<b>Average Depth: 0.00 ft</b>

**Legal Description**

BEG 1180' N OF SE COR OF SEC TH W 345' TH N 150' TH W 300' TH N 630' TH W 105' TH N 659.13' TH E TO E 1/4 PST TH S TO POB EX COM AT E 1/4 PST TH S 159' TH W 165' TH N 60' TH W 231' TH N 99' TH E 396' TO POB ALSO EX S 935' OF N 1174' OF E 393' THEREOF SEC 17 T3N R16W (93)

**Sale History**

Sale Date	Sale Price	Instrument	Grantor	Grantee	Terms of Sale	Liber/Page
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Sale Date	Sale Price	Instrument	Grantor	Grantee	Terms of Sale	Liber/Page
07/27/1999	\$624,225.00	WD	MIGAS JOSEPH & MARY	VISTIANA PROPERTIES LLC	21-NOT USED/OTHER	1868/105

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**462 FERRY ST DOUGLAS, MI 49406** (Property Address)

Parcel Number: 59-017-089-10

**Property Owner: TAURUS EXPLORATION INC**

**Summary Information**

> Assessed Value: \$25,000 | Taxable Value: \$13,500

> Property Tax information found

**Parcel is Vacant**

**Owner and Taxpayer Information**

<b>Owner</b>	TAURUS EXPLORATION INC WICKSTRA JAMES P 7117 W CLAY RD NEW ERA, MI 49446	<b>Taxpayer</b>	SEE OWNER INFORMATION
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**General Information for Tax Year 2022**

<b>Property Class</b>	402 RESIDENTIAL-VACANT	<b>Unit</b>	59 DOUGLAS CITY
<b>School District</b>	SAUGATUCK PUBLIC SCHOOLS	<b>Assessed Value</b>	\$25,000
<b>MAP #</b>	122-B	<b>Taxable Value</b>	\$13,500
<b>ACTION</b>	0	<b>State Equalized Value</b>	\$25,000
<b>USER ALPHA 1</b>	Not Available	<b>Date of Last Name Change</b>	12/14/2021
<b>USER ALPHA 3</b>	Not Available	<b>Notes</b>	Not Available
<b>Historical District</b>	No	<b>Census Block Group</b>	No Data to Display
<b>ADDRESS CHANGE</b>	Not Available	<b>Exemption</b>	No Data to Display

**Principal Residence Exemption Information**

**Homestead Date** No Data to Display

Principal Residence Exemption	June 1st	Final
2022	0.0000 %	-
2021	0.0000 %	0.0000 %

**Previous Year Information**

Year	MBOR Assessed	Final SEV	Final Taxable
2021	\$25,000	\$25,000	\$13,069
2020	\$21,500	\$21,500	\$12,889
2019	\$21,500	\$21,500	\$12,649

**Land Information**

<b>Zoning Code</b>	R-5 MUL FAM PUD	<b>Total Acres</b>	0.340
<b>Land Value</b>	\$50,000	<b>Land Improvements</b>	\$0
<b>Renaissance Zone</b>	No	<b>Renaissance Zone Expiration Date</b>	No Data to Display
<b>ECF Neighborhood</b>	RESIDENTIAL DEVELOPABLE	<b>Mortgage Code</b>	No Data to Display
<b>Lot Dimensions/Comments</b>	No Data to Display	<b>Neighborhood Enterprise Zone</b>	No

Lot(s)	Frontage	Depth
Lot 1	75.00 ft	200.00 ft
<b>Total Frontage: 75.00 ft</b>		<b>Average Depth: 200.00 ft</b>

**Legal Description**

COM AT E 1/4 PST SEC 17 TH S ON E LIN SD SEC 309' TO POB TH CONT S 75' TH W 193' TH N 75' TH E 193' TO POB SEC 17 T3N R16W.

**Sale History**

Sale Date	Sale Price	Instrument	Grantor	Grantee	Terms of Sale	Liber/Page
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Sale Date	Sale Price	Instrument	Grantor	Grantee	Terms of Sale	Liber/Page
12/15/1999	\$0.00	QC	GREENTREE LIMITED PARTNERSHIP	VISTIANA PROPERTIES	21-NOT USED/OTHER	1908/450
04/29/1994	\$150,000.00	WD	PARK PROPERTIES	MITCHELL, HARRIET	03-ARM'S LENGTH	1464/846

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**464 FERRY ST SAUGATUCK, MI 49453** (Property Address)

Parcel Number: 59-017-089-20

**Property Owner: TAURUS EXPLORATION INC**

**Summary Information**

> Assessed Value: \$25,000 | Taxable Value: \$13,500

> Property Tax information found

**Parcel is Vacant**

**Owner and Taxpayer Information**

<b>Owner</b>	TAURUS EXPLORATION INC WICKSTRA JAMES P 7117 W CLAY RD NEW ERA, MI 49446	<b>Taxpayer</b>	SEE OWNER INFORMATION
--------------	---	-----------------	-----------------------

**General Information for Tax Year 2022**

<b>Property Class</b>	402 RESIDENTIAL-VACANT	<b>Unit</b>	59 DOUGLAS CITY
<b>School District</b>	SAUGATUCK PUBLIC SCHOOLS	<b>Assessed Value</b>	\$25,000
<b>MAP #</b>	122-C	<b>Taxable Value</b>	\$13,500
<b>ACTION</b>	0	<b>State Equalized Value</b>	\$25,000
<b>USER ALPHA 1</b>	Not Available	<b>Date of Last Name Change</b>	12/14/2021
<b>USER ALPHA 3</b>	Not Available	<b>Notes</b>	Not Available
<b>Historical District</b>	No	<b>Census Block Group</b>	No Data to Display
<b>ADDRESS CHANGE</b>	Not Available	<b>Exemption</b>	No Data to Display

**Principal Residence Exemption Information**

**Homestead Date** No Data to Display

Principal Residence Exemption	June 1st	Final
2022	0.0000 %	-
2021	0.0000 %	0.0000 %

**Previous Year Information**

Year	MBOR Assessed	Final SEV	Final Taxable
2021	\$25,000	\$25,000	\$13,069
2020	\$21,500	\$21,500	\$12,889
2019	\$21,500	\$21,500	\$12,649

**Land Information**

<b>Zoning Code</b>	R-5 MUL FAM PUD	<b>Total Acres</b>	0.340
<b>Land Value</b>	\$50,000	<b>Land Improvements</b>	\$0
<b>Renaissance Zone</b>	No	<b>Renaissance Zone Expiration Date</b>	No Data to Display
<b>ECF Neighborhood</b>	RESIDENTIAL DEVELOPABLE	<b>Mortgage Code</b>	No Data to Display
<b>Lot Dimensions/Comments</b>	No Data to Display	<b>Neighborhood Enterprise Zone</b>	No

Lot(s)	Frontage	Depth
Lot 1	75.00 ft	200.00 ft
<b>Total Frontage: 75.00 ft</b>		<b>Average Depth: 200.00 ft</b>

**Legal Description**

COM AT E 1/4 PST SEC 17 TH S ON E LIN SD SEC 384' TO POB TH CONT S 75' TH W 193' TH N 75' TH E 193' TO POB SEC 17 T3N R16W.

**Sale History**

Sale Date	Sale Price	Instrument	Grantor	Grantee	Terms of Sale	Liber/Page
-----------	------------	------------	---------	---------	---------------	------------

Sale Date	Sale Price	Instrument	Grantor	Grantee	Terms of Sale	Liber/Page
12/15/1999	\$0.00	QC	GREENTREE LIMITED PARTNERSHIP	VISTIANA PROP	21-NOT USED/OTHER	1908/450
03/29/1994	\$150,000.00	WD	PARK PROPERTIES	MITCHELL, HARRIET	03-ARM'S LENGTH	1464/846

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**466 FERRY ST SAUGATUCK, MI 49453** (Property Address)

Parcel Number: 59-017-089-30

**Property Owner:** TAURUS EXPLORATION INC

**Summary Information**

> Assessed Value: \$25,000 | Taxable Value: \$13,500

> Property Tax information found

**Parcel is Vacant**

**Owner and Taxpayer Information**

<b>Owner</b>	TAURUS EXPLORATION INC WICKSTRA JAMES P 7117 W CLAY RD NEW ERA, MI 49446	<b>Taxpayer</b>	SEE OWNER INFORMATION
--------------	---	-----------------	-----------------------

**General Information for Tax Year 2022**

<b>Property Class</b>	402 RESIDENTIAL-VACANT	<b>Unit</b>	59 DOUGLAS CITY
<b>School District</b>	SAUGATUCK PUBLIC SCHOOLS	<b>Assessed Value</b>	\$25,000
<b>MAP #</b>	122-D	<b>Taxable Value</b>	\$13,500
<b>ACTION</b>	0	<b>State Equalized Value</b>	\$25,000
<b>USER ALPHA 1</b>	<i>Not Available</i>	<b>Date of Last Name Change</b>	12/14/2021
<b>USER ALPHA 3</b>	<i>Not Available</i>	<b>Notes</b>	<i>Not Available</i>
<b>Historical District</b>	No	<b>Census Block Group</b>	<i>No Data to Display</i>
<b>ADDRESS CHANGE</b>	<i>Not Available</i>	<b>Exemption</b>	<i>No Data to Display</i>

**Principal Residence Exemption Information**

**Homestead Date** *No Data to Display*

Principal Residence Exemption	June 1st	Final
2022	0.0000 %	-
2021	0.0000 %	0.0000 %

**Previous Year Information**

Year	MBOR Assessed	Final SEV	Final Taxable
2021	\$25,000	\$25,000	\$13,069
2020	\$21,500	\$21,500	\$12,889
2019	\$21,500	\$21,500	\$12,649

**Land Information**

<b>Zoning Code</b>	R-5 MUL FAM PUD	<b>Total Acres</b>	0.340
<b>Land Value</b>	\$50,000	<b>Land Improvements</b>	\$0
<b>Renaissance Zone</b>	No	<b>Renaissance Zone Expiration Date</b>	<i>No Data to Display</i>
<b>ECF Neighborhood</b>	RESIDENTAL DEVELOPABLE	<b>Mortgage Code</b>	<i>No Data to Display</i>
<b>Lot Dimensions/Comments</b>	<i>No Data to Display</i>	<b>Neighborhood Enterprise Zone</b>	No

Lot(s)	Frontage	Depth
Lot 1	75.00 ft	200.00 ft
<b>Total Frontage: 75.00 ft</b>		<b>Average Depth: 200.00 ft</b>

**Legal Description**

COM AT E 1/4 PST SEC 17 TH S ON E LIN SD SEC 459' TO POB TH CONT S 75' TH W 193' TH N 75' TH E 193' TO POB SEC 17 T3N R16W.

**Sale History**

Sale Date	Sale Price	Instrument	Grantor	Grantee	Terms of Sale	Liber/Page
-----------	------------	------------	---------	---------	---------------	------------

Sale Date	Sale Price	Instrument	Grantor	Grantee	Terms of Sale	Liber/Page
12/15/1999	\$0.00	QC	GREENTREE LIMITED PARTNERSHIP	VISTIANA PROPERTIES	21-NOT USED/OTHER	1908/450
04/29/1994	\$150,000.00	WD	PARK PROPERTIES	MITCHELL, HARRIET	03-ARM'S LENGTH	1464/846

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**468 FERRY ST** DOUGLAS, MI 49406 (Property Address)

Parcel Number: 59-017-089-70

**Property Owner:** TAURUS EXPLORATION INC

**Summary Information**

> Assessed Value: \$58,400 | Taxable Value: \$34,133

> Property Tax information found

**Parcel is Vacant**

**Owner and Taxpayer Information**

<b>Owner</b>	TAURUS EXPLORATION INC WICKSTRA JAMES P 7117 W CLAY RD NEW ERA, MI 49446	<b>Taxpayer</b>	SEE OWNER INFORMATION
--------------	---	-----------------	-----------------------

**General Information for Tax Year 2022**

<b>Property Class</b>	402 RESIDENTIAL-VACANT	<b>Unit</b>	59 DOUGLAS CITY
<b>School District</b>	SAUGATUCK PUBLIC SCHOOLS	<b>Assessed Value</b>	\$58,400
<b>MAP #</b>	122-H	<b>Taxable Value</b>	\$34,133
<b>ACTION</b>	0	<b>State Equalized Value</b>	\$58,400
<b>USER ALPHA 1</b>	Not Available	<b>Date of Last Name Change</b>	12/14/2021
<b>USER ALPHA 3</b>	Not Available	<b>Notes</b>	Not Available
<b>Historical District</b>	No	<b>Census Block Group</b>	No Data to Display
<b>ADDRESS CHANGE</b>	Not Available	<b>Exemption</b>	No Data to Display

**Principal Residence Exemption Information**

**Homestead Date** No Data to Display

Principal Residence Exemption	June 1st	Final
2022	0.0000 %	-
2021	0.0000 %	0.0000 %

**Previous Year Information**

Year	MBOR Assessed	Final SEV	Final Taxable
2021	\$58,400	\$58,400	\$33,043
2020	\$55,000	\$55,000	\$32,587
2019	\$55,000	\$55,000	\$31,980

**Land Information**

<b>Zoning Code</b>	R-5 MUL FAM PUD	<b>Total Acres</b>	1.418
<b>Land Value</b>	\$116,720	<b>Land Improvements</b>	\$0
<b>Renaissance Zone</b>	No	<b>Renaissance Zone Expiration Date</b>	No Data to Display
<b>ECF Neighborhood</b>	RESIDENTIAL DEVELOPABLE	<b>Mortgage Code</b>	No Data to Display
<b>Lot Dimensions/Comments</b>	No Data to Display	<b>Neighborhood Enterprise Zone</b>	No

Lot(s)	Frontage	Depth
Lot 1	320.00 ft	193.00 ft
<b>Total Frontage: 320.00 ft</b>		<b>Average Depth: 193.00 ft</b>

**Legal Description**

COM 534' S OF E 1/4 PST TH S 320' TH W 193' TH N 320' TH E TO POB SEC 17 T3N R16W (86)

**Sale History**

Sale Date	Sale Price	Instrument	Grantor	Grantee	Terms of Sale	Liber/Page
-----------	------------	------------	---------	---------	---------------	------------

Sale Date	Sale Price	Instrument	Grantor	Grantee	Terms of Sale	Liber/Page
12/15/1999	\$0.00	QC	GREENTREE LIMITED PARTNERSHIP	VISTIANA PROPERTIES	21-NOT USED/OTHER	1908/450
04/29/1994	\$150,000.00	WD	PARK PROPERTIES	MITCHELL, HARRIET	03-ARM'S LENGTH	1464/846

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**485 FERRY ST** (Property Address)

Parcel Number: 59-017-089-95

**Property Owner:** TAURUS EXPLORATION INC

**Summary Information**

> Assessed Value: \$330,100 | Taxable Value: \$121,621

> Property Tax information found

**Parcel is Vacant**

**Owner and Taxpayer Information**

<b>Owner</b>	TAURUS EXPLORATION INC WICKSTRA JAMES P 7117 W CLAY RD NEW ERA, MI 49446	<b>Taxpayer</b>	SEE OWNER INFORMATION
--------------	---	-----------------	-----------------------

**General Information for Tax Year 2022**

<b>Property Class</b>	402 RESIDENTIAL-VACANT	<b>Unit</b>	59 DOUGLAS CITY
<b>School District</b>	SAUGATUCK PUBLIC SCHOOLS	<b>Assessed Value</b>	\$330,100
<b>MAP #</b>	122 K	<b>Taxable Value</b>	\$121,621
<b>ACTION</b>	0	<b>State Equalized Value</b>	\$330,100
<b>USER ALPHA 1</b>	<i>Not Available</i>	<b>Date of Last Name Change</b>	12/14/2021
<b>USER ALPHA 3</b>	<i>Not Available</i>	<b>Notes</b>	<i>Not Available</i>
<b>Historical District</b>	No	<b>Census Block Group</b>	<i>No Data to Display</i>
<b>ADDRESS CHANGE</b>	<i>Not Available</i>	<b>Exemption</b>	<i>No Data to Display</i>

**Principal Residence Exemption Information**

**Homestead Date** *No Data to Display*

Principal Residence Exemption	June 1st	Final
2022	0.0000 %	-
2021	0.0000 %	0.0000 %

**Previous Year Information**

Year	MBOR Assessed	Final SEV	Final Taxable
2021	\$330,100	\$330,100	\$117,736
2020	\$300,100	\$300,100	\$116,111
2019	\$300,100	\$300,100	\$113,947

**Land Information**

<b>Zoning Code</b>	R-5 MUL FAM PUD	<b>Total Acres</b>	30.010
<b>Land Value</b>	\$660,180	<b>Land Improvements</b>	\$0
<b>Renaissance Zone</b>	No	<b>Renaissance Zone Expiration Date</b>	<i>No Data to Display</i>
<b>ECF Neighborhood</b>	RESIDENTAL DEVELOPABLE	<b>Mortgage Code</b>	<i>No Data to Display</i>
<b>Lot Dimensions/Comments</b>	<i>No Data to Display</i>	<b>Neighborhood Enterprise Zone</b>	No

Lot(s)	Frontage	Depth
No lots found.		
<b>Total Frontage: 0.00 ft</b>		<b>Average Depth: 0.00 ft</b>

**Legal Description**

BEG 400' N OF SE COR SEC 17 TH W 600' TH S 400' TH W 709.88' TH N 2615.67' TO E-W 1/4 LIN TH E ALG SD LIN 555.68' TH S 659.13' TH E 105' TH S 630' TH E 300' TH S 150' TH E 345' TH S 780' TO POB EX W 1/2 SE 1/4 SE 1/4 ALSO EX N 200' OF W 500' THEREOF SEC 17 T3N R16W (97)

**Sale History**

Sale Date	Sale Price	Instrument	Grantor	Grantee	Terms of Sale	Liber/Page
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Sale Date	Sale Price	Instrument	Grantor	Grantee	Terms of Sale	Liber/Page
07/27/1999	\$624,225.00	WD	MIGAS JOSEPH P & MARY R	VISTIANA PROPERTIES LLC	03-ARM'S LENGTH	1868/105

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**502 FERRY ST DOUGLAS, MI 49406** (Property Address)

Parcel Number: 59-017-089-60

**Property Owner: TAURUS EXPLORATION INC**

**Summary Information**

> Assessed Value: \$30,000 | Taxable Value: \$27,024

> Property Tax information found

**Parcel is Vacant**

**Owner and Taxpayer Information**

<b>Owner</b>	TAURUS EXPLORATION INC WICKSTRA JAMES P 7117 W CLAY RD NEW ERA, MI 49446	<b>Taxpayer</b>	SEE OWNER INFORMATION
--------------	---	-----------------	-----------------------

**General Information for Tax Year 2022**

<b>Property Class</b>	402 RESIDENTIAL-VACANT	<b>Unit</b>	59 DOUGLAS CITY
<b>School District</b>	SAUGATUCK PUBLIC SCHOOLS	<b>Assessed Value</b>	\$30,000
<b>MAP #</b>	122-G	<b>Taxable Value</b>	\$27,024
<b>ACTION</b>	0	<b>State Equalized Value</b>	\$30,000
<b>USER ALPHA 1</b>	<i>Not Available</i>	<b>Date of Last Name Change</b>	12/14/2021
<b>USER ALPHA 3</b>	<i>Not Available</i>	<b>Notes</b>	<i>Not Available</i>
<b>Historical District</b>	No	<b>Census Block Group</b>	<i>No Data to Display</i>
<b>ADDESS CHANGE</b>	<i>Not Available</i>	<b>Exemption</b>	<i>No Data to Display</i>

**Principal Residence Exemption Information**

**Homestead Date** *No Data to Display*

Principal Residence Exemption	June 1st	Final
2022	0.0000 %	-
2021	0.0000 %	0.0000 %

**Previous Year Information**

Year	MBOR Assessed	Final SEV	Final Taxable
2021	\$30,000	\$30,000	\$26,161
2020	\$25,800	\$25,800	\$25,800
2019	\$25,800	\$25,800	\$25,800

**Land Information**

<b>Zoning Code</b>	R-5 MUL FAM PUD	<b>Total Acres</b>	0.710
<b>Land Value</b>	\$60,000	<b>Land Improvements</b>	\$0
<b>Renaissance Zone</b>	No	<b>Renaissance Zone Expiration Date</b>	<i>No Data to Display</i>
<b>ECF Neighborhood</b>	RESIDENTIAL DEVELOPABLE	<b>Mortgage Code</b>	<i>No Data to Display</i>
<b>Lot Dimensions/Comments</b>	<i>No Data to Display</i>	<b>Neighborhood Enterprise Zone</b>	No

Lot(s)	Frontage	Depth
Lot 1	160.00 ft	193.00 ft
<b>Total Frontage: 160.00 ft</b>		<b>Average Depth: 193.00 ft</b>

**Legal Description**

COM 854' S OF E 1/4 PST TH S 160' TH W 193' TH N 160' TH E 193' TO POB SEC 17 T3N R16W (86)

**Sale History**

Sale Date	Sale Price	Instrument	Grantor	Grantee	Terms of Sale	Liber/Page
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Sale Date	Sale Price	Instrument	Grantor	Grantee	Terms of Sale	Liber/Page
12/15/1999	\$0.00	QC	GREENTREE LIMITED PARTNERSHIP	VISTIANA PROP	21-NOT USED/OTHER	1908/450
04/29/1994	\$150,000.00	WD	PARK PROPERTIES	MITCHELL, HARRIET	03-ARM'S LENGTH	1464/846

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**504 S FERRY ST DOUGLAS, MI 49406** (Property Address)

Parcel Number: 59-017-089-80

**Property Owner: TAURUS EXPLORATION**

**Summary Information**

> Assessed Value: \$58,600 | Taxable Value: \$40,150

> Property Tax information found

**Parcel is Vacant**

**Owner and Taxpayer Information**

<b>Owner</b>	TAURUS EXPLORATION WICKSTRA JAMES P 7117 W CLAY RD NEW ERA, MI 49446	<b>Taxpayer</b>	SEE OWNER INFORMATION
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**General Information for Tax Year 2022**

<b>Property Class</b>	402 RESIDENTIAL-VACANT	<b>Unit</b>	59 DOUGLAS CITY
<b>School District</b>	SAUGATUCK PUBLIC SCHOOLS	<b>Assessed Value</b>	\$58,600
<b>MAP #</b>	122-1	<b>Taxable Value</b>	\$40,150
<b>ACTION</b>	0	<b>State Equalized Value</b>	\$58,600
<b>USER ALPHA 1</b>	Not Available	<b>Date of Last Name Change</b>	12/14/2021
<b>USER ALPHA 3</b>	Not Available	<b>Notes</b>	Not Available
<b>Historical District</b>	No	<b>Census Block Group</b>	No Data to Display
<b>ADDRESS CHANGE</b>	Not Available	<b>Exemption</b>	No Data to Display

**Principal Residence Exemption Information**

**Homestead Date** No Data to Display

Principal Residence Exemption	June 1st	Final
2022	0.0000 %	-
2021	0.0000 %	0.0000 %

**Previous Year Information**

Year	MBOR Assessed	Final SEV	Final Taxable
2021	\$58,600	\$58,600	\$38,868
2020	\$53,600	\$53,600	\$38,332
2019	\$53,600	\$53,600	\$37,618

**Land Information**

<b>Zoning Code</b>	R-5 MUL FAM PUD	<b>Total Acres</b>	5.186
<b>Land Value</b>	\$117,155	<b>Land Improvements</b>	\$0
<b>Renaissance Zone</b>	No	<b>Renaissance Zone Expiration Date</b>	No Data to Display
<b>ECF Neighborhood</b>	RESIDENTIAL DEVELOPABLE	<b>Mortgage Code</b>	No Data to Display
<b>Lot Dimensions/Comments</b>	No Data to Display	<b>Neighborhood Enterprise Zone</b>	No

Lot(s)	Frontage	Depth
Lot 1	160.00 ft	193.00 ft
<b>Total Frontage: 160.00 ft</b>		<b>Average Depth: 193.00 ft</b>

**Legal Description**

COM 239' S OF E 1/4 PST TH S 70' TH S 88 DEG 29'59" W 193' TH S 705' TH N 88 DEG 39'59" E 193' TH S 160' TH S 88 DEG 39' 59" W 393' TH N 935' TH N 88 DEG 39'59" E 393' TO POB SEC 17 T3N R16W (87)

**Sale History**

Sale Date	Sale Price	Instrument	Grantor	Grantee	Terms of Sale	Liber/Page
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Sale Date	Sale Price	Instrument	Grantor	Grantee	Terms of Sale	Liber/Page
12/15/1999	\$0.00	QC	GREENTREE LIMITED PARTNERSHIP	VISTIANA PROPERTIES	21-NOT USED/OTHER	1908/450
04/29/1994	\$150,000.00	WD	PARK PROPERTIES	MITCHELL, HARRIET	03-ARM'S LENGTH	1464/846

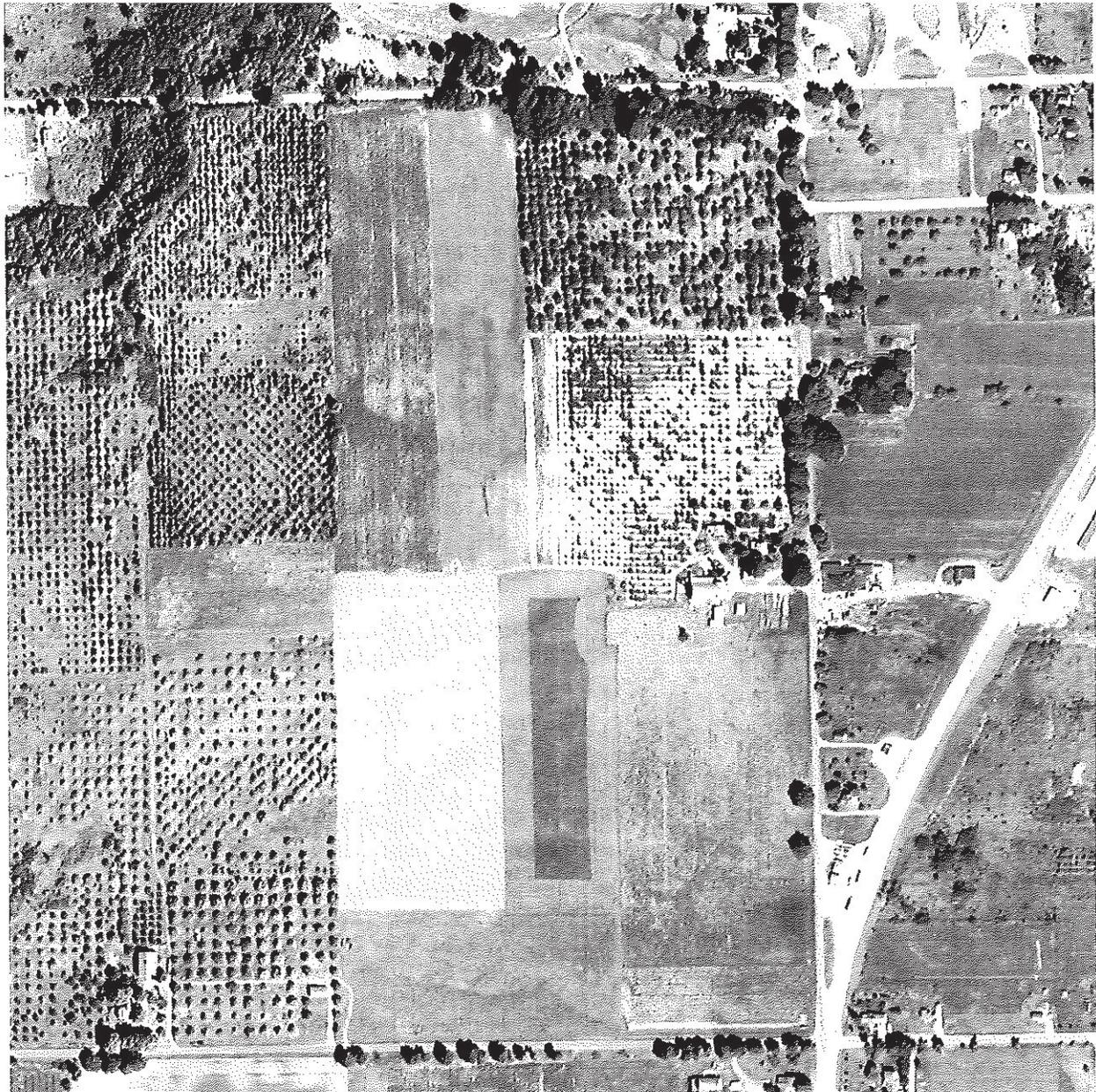
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## **APPENDIX F**

### **• AERIAL PHOTOGRAPHS •**



Historical Aerial Photo

1955

Ferry Street Parcels, Douglas, Michigan



Historical Aerial Photo

1981

Ferry Street Parcels, Douglas, Michigan



Historical Aerial Photo

1997

Ferry Street Parcels, Douglas, Michigan



Historical Aerial Photo

2006

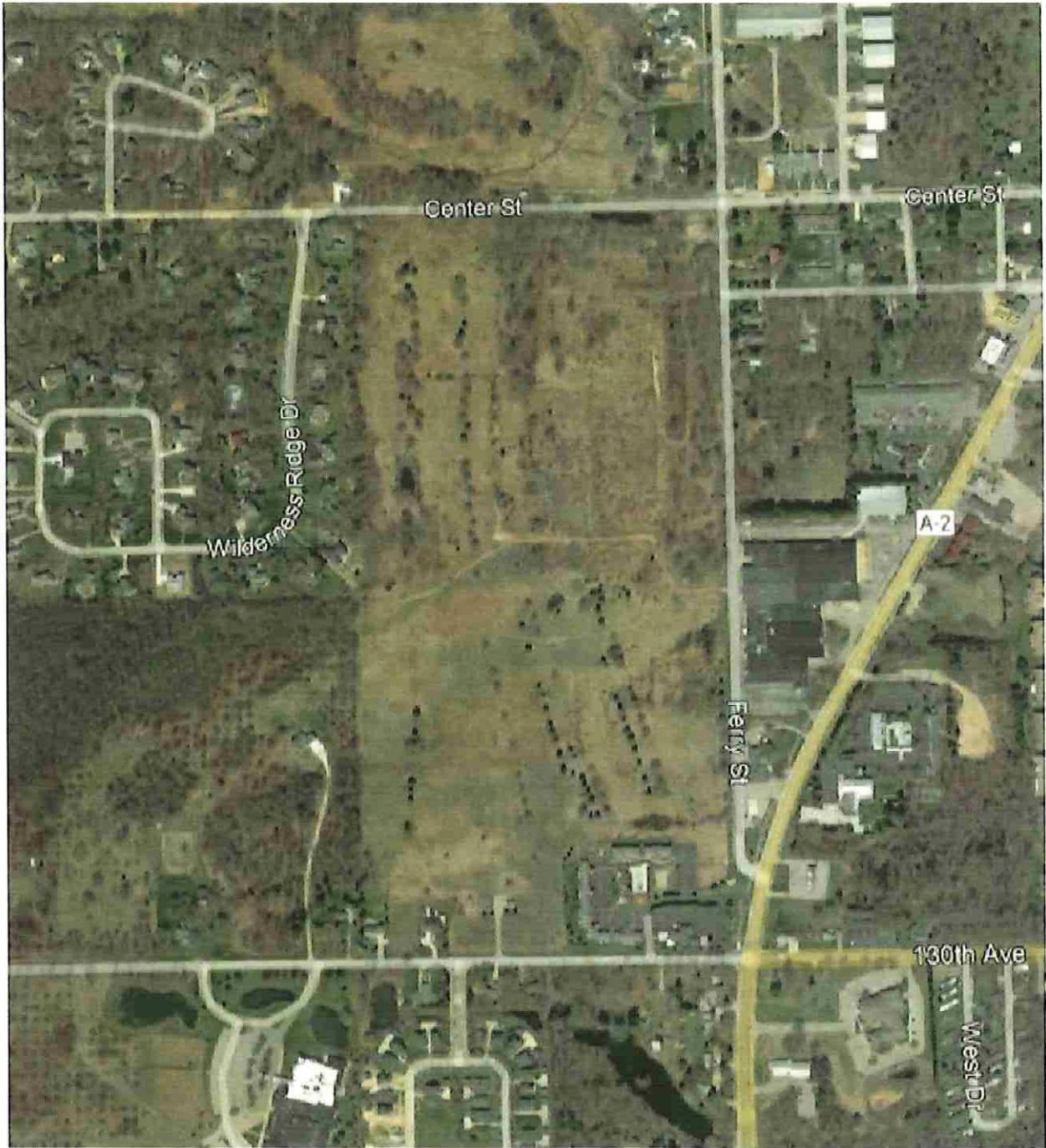
Ferry Street Parcels, Douglas, Michigan



Historical Aerial Photo

2011

Ferry Street Parcels, Douglas, Michigan



Historical Aerial Photo

2016

Ferry Street Parcels, Douglas, Michigan



Historical Aerial Photo

2021

Ferry Street Parcels, Douglas, Michigan



## **APPENDIX G**

### **• ENVIRONMENTAL RADIUS REPORT •**

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**Ferry Street Parcels**  
485 Ferry St, Douglas, MI 49406  
prepared for: Driesenga & Associates, Inc.  
Ref: 2210328.2A

2022-07-06

## ***Environmental Radius Report***

# Summary

## Federal

	< 1/4	1/4 - 1/2	1/2 - 1
Lists of Federal NPL (Superfund) sites	1	0	0
Lists of Federal Delisted NPL sites	0	0	-
Lists of Federal sites subject to CERCLA removals and CERCLA orders	2	3	-
Lists of Federal CERCLA sites with NFRAP	0	0	-
Lists of Federal RCRA facilities undergoing Corrective Action	0	0	-
Lists of Federal RCRA TSD facilities	0	0	-
Lists of Federal RCRA generators	0	-	-
Federal institutional control/engineering control registries	0	-	-
Federal ERNS list	0	-	-

## State

	< 1/4	1/4 - 1/2	1/2 - 1
Lists of state and tribal Superfund equivalent sites	0	0	0
Lists of state and tribal hazardous waste facilities	0	0	-
Lists of state and tribal landfills and solid waste disposal facilities	0	0	-
Lists of state and tribal leaking storage tanks	1	3	-
Lists of state and tribal registered storage tanks	1	-	-
State and tribal institutional control/engineering control registries	5	-	-
Lists of state and tribal voluntary cleanup sites	0	0	-
Lists of state and tribal brownfields sites	2	0	-

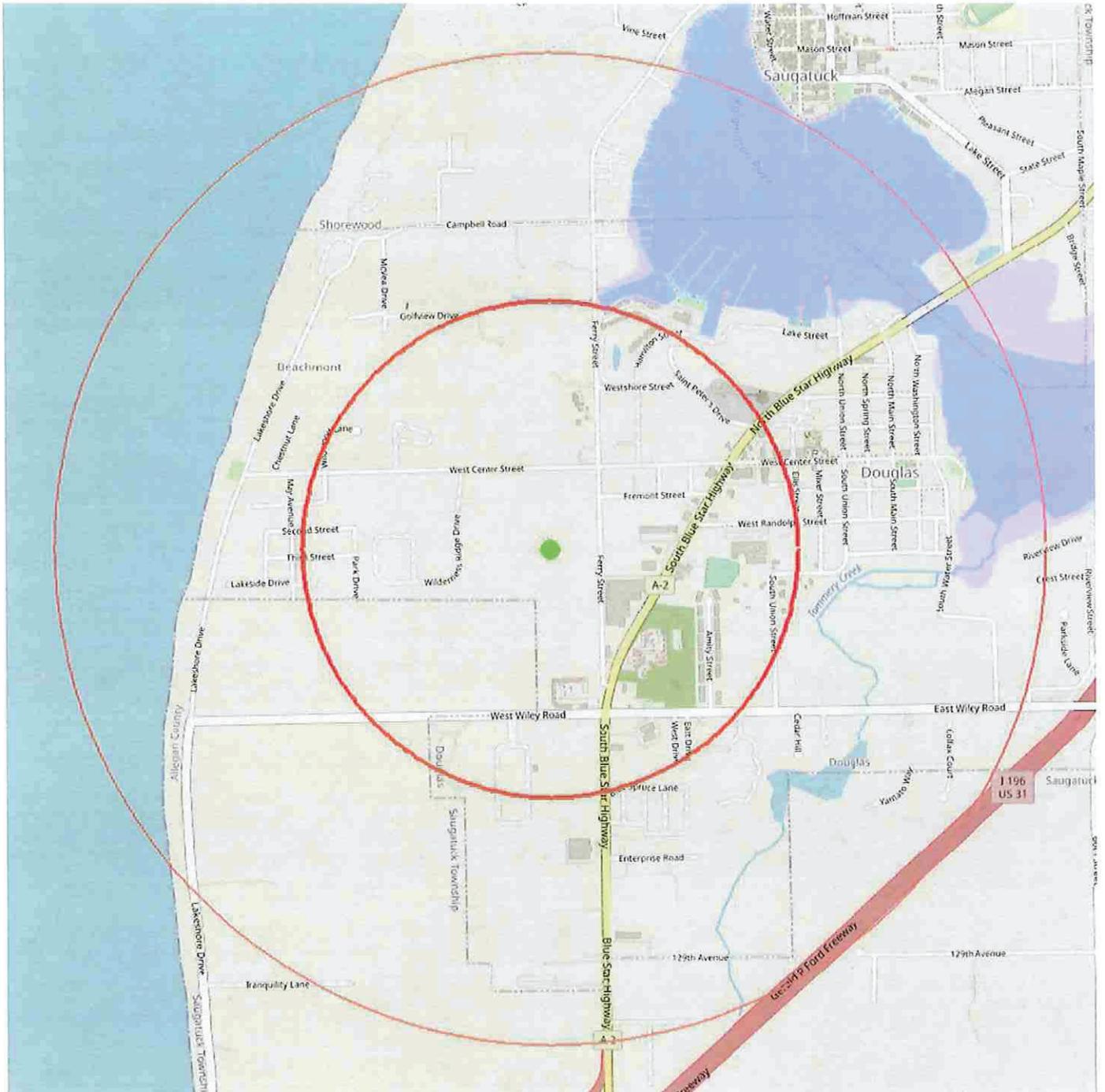
## Other

	< 1/4	1/4 - 1/2	1/2 - 1
Resource Conservation and Recovery Act Information (RCRAInfo)	2	3	-
U.S. EPA Underground Storage Tanks (UST)	2	-	-
U.S. EPA Toxic Release Inventory System (TRIS)	0	0	-

# Lists of Federal NPL (Superfund) sites

## FEDERAL NPL SUPERFUND SITES (BOUNDARIES)

The National Priority List (NPL) is the list of sites of national priority among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States and its territories. This data layer includes currently active NPL sites, proposed NPL sites, and delisted NPL sites. The NPL was searched for sites within a one-mile radius of the target property.



center 42.64111196212485 -  
86.21410600385094

0.5 mile

1.0 mile

# FEDERAL NPL SUPERFUND SITES (BOUNDARIES)

1

EPA Program	Superfund Remedial
EPA ID	MID006007306
Site Name	ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER
Street Address	320 EAST ALCOTT STREET
City	KALAMAZOO
County	KALAMAZOO
Acreage	12747.530176
Original Creation Date	2020-11-08
Last Changed Date	2021-01-26
Source	2015 OU5 ROD, Fig. 4, PDF pg. 81
Site Contact	Saric, James
Telephone	(312) 886-0992
Email	saric.james@epa.gov
distance from center (miles)	0.0000
data source	last updated 2022-02-10 from EPA-NPL-BOUNDARIES

## **Lists of Federal Delisted NPL sites**

The EPA may delete a final NPL site if it determines that no further response is required to protect human health or the environment. Under Section 300.425(e) of the NCP (55 FR 8845, March 8, 1990), a site may be deleted when no further response is appropriate if EPA determines that one of the following criteria has been met: 1) EPA, in conjunction with the state, has determined that responsible parties have implemented all appropriate response action required, 2) EPA, in consultation with the state, has determined that all appropriate Superfund-financed responses under CERCLA have been implemented and that no further response by responsible parties is appropriate, 3) A remedial investigation/feasibility study (RI/FS) has shown that the release poses no significant threat to public health or the environment and, therefore, remedial measures are not appropriate.

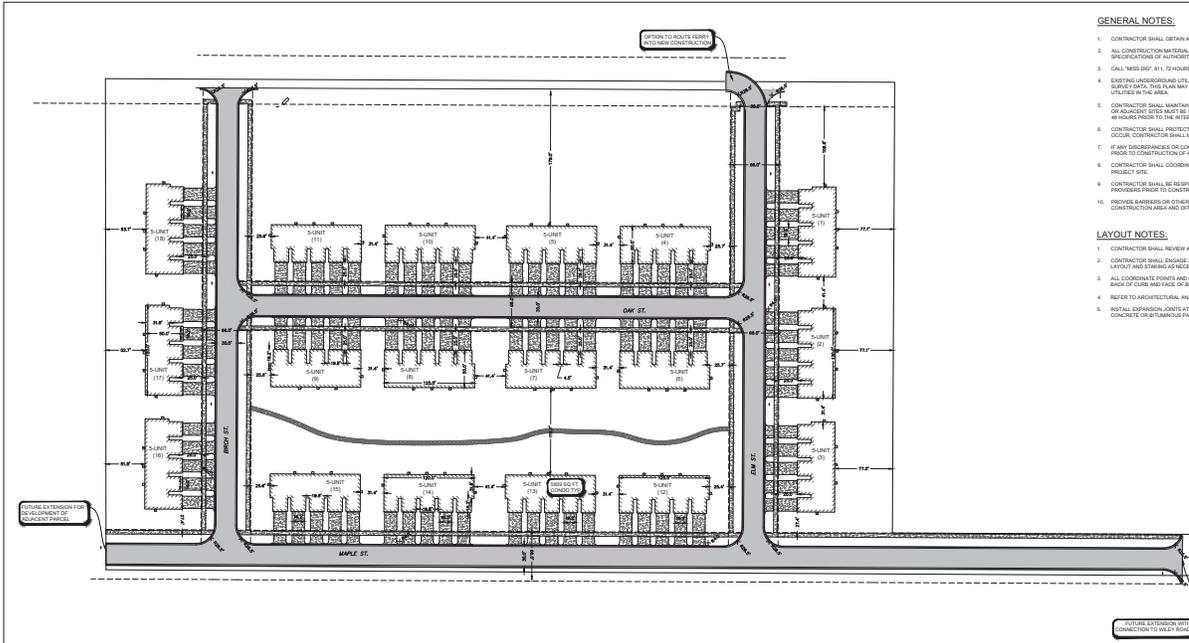
**There were no Federal Delisted NPL sites found within a half-mile radius of the target property.**











**GENERAL NOTES:**

- CONTRACTOR SHALL OBTAIN ALL NECESSARY LOCAL, STATE AND FEDERAL PERMITS REQUIRED.
- ALL CONSTRUCTION MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF APPLICABLE MINING JURISDICTION.
- CALL 1-888-8-8111 72 HOURS PRIOR TO THE START OF ANY EXCAVATION.
- EXISTING UNDERGROUND UTILITIES ARE SHOWN BASED ON AVAILABLE RECORDS AND FIELD SURVEY DATA. THIS PLAN MAY NOT SHOW UTILITIES IN THEIR EXACT LOCATION AND MAY NOT SHOW ALL UTILITIES IN THE AREA.
- CONTRACTOR SHALL MAINTAIN UTILITY SERVICES AT ALL TIMES. ANY INTERRUPTION IN SERVICES TO THIS SITE OR ADJACENT AREAS MUST BE SCHEDULED WITH THE OWNER, UTILITY PROVIDER, AND AFFECTED PROPERTIES 48 HOURS PRIOR TO THE INTERRUPTION.
- CONTRACTOR SHALL PROTECT ALL EXISTING AND NEW CONSTRUCTION FROM DAMAGE. SHOULD ANY DAMAGE OCCUR, CONTRACTOR SHALL MAKE ALL NECESSARY REPAIRS AT HIS/HER OWNERS COST.
- IF ANY DISCREPANCIES OR CONFLICTS ARE FOUND, CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY PRIOR TO CONSTRUCTION OF AFFECTED WORK TO DETERMINE COURSE OF ACTION.
- CONTRACTOR SHALL COORDINATE THEIR WORK WITH OTHER CONTRACTORS ON OR ADJACENT TO THE PROJECT SITE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING AND COORDINATING THEIR WORK WITH ALL UTILITY PROVIDERS PRIOR TO CONSTRUCTION.
- PROVIDE BARRIERS OR OTHER PROTECTION TO KEEP VEHICULAR AND PEDESTRIAN TRAFFIC AWAY FROM CONSTRUCTION AREA AND OTHER NEWLY PAVED AREAS.

**LAYOUT NOTES:**

- CONTRACTOR SHALL REVIEW AND VERIFY SITE LAYOUT PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL ENGAGE A LICENSED SURVEYOR TO PERFORM ALL CONSTRUCTION LAYOUT AND STAKING AS NECESSARY.
- ALL COORDINATE POINTS AND DIMENSIONS GIVEN UNLESS OTHERWISE NOTED, ARE TO BACKS OF CURB AND FACE OF BUILDING SHALL.
- REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR BUILDING DIMENSIONS.
- INSTALL EXPANSION JOINTS AT ALL LOCATIONS WHERE NEW CONCRETE MEETS EXISTING CONCRETE OR ADJACENT STRUCTURE.

**LANDSCAPING LEGEND**



**LEGEND**



**PHASE CONSTRUCTION**

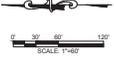
PHASE	BUILDING NUMBER
1	1,2,3
2	4,5
3	6,7
4	8,9
5	10,11
6	12,13
7	14,15
8	16,17
9	18

**PROJECT SUMMARY**

- PROPOSED DEVELOPMENT:** 6.6 MULTIFAMILY RESIDENTIAL  
 CURRENT ZONING: R-6 MULTIFAMILY RESIDENTIAL  
 SITE ADDRESS: 485 FERRY ST. DOUGLAS, MI  
 PARCEL NUMBER: 29-017-089-05
- PERMITS:**
  - REQUIRED: PROVIDED
  - MIN. BUILDING HEIGHT: 20 FT
  - MAX. BUILDING HEIGHT: 100 FT
  - MIN. LOT COVER: 10%
  - MIN. LOT COVER: 25.3%
- SETBACKS:**
  - REQUIRED: PROVIDED
  - FRONT (B.N.): 20 FT
  - SIDE (B.N.): 20 FT
  - REAR (B.N.): 20 FT
  - BUILDING SETBACK (B.N.): 20 FT
- SUMMARY OF LAND USES:**
  - PARCEL AREA: 6.6 AC
  - NET BULBUILDABLE AREA: 6.6 AC
  - NET BULBUILDABLE AREA: 154 AC
- MINIMUM DENSITY:** 6 UNITS PER BULBUILDABLE AREA
- PROPOSED DENSITY:** 20 UNITS PER BULBUILDABLE AREA
- MINIMUM DENSITY:** 20 UNITS PER BULBUILDABLE AREA

- REGULATORY APPROVALS:** THE PROJECT WILL REQUIRE THE FOLLOWING APPROVALS, AT A MINIMUM (OTHER PERMITS/APPROVAL MAY ALSO BE REQUIRED):
  - CITY OF THE VILLAGE OF DOUGLAS SITE PLAN
  - CITY OF THE VILLAGE OF DOUGLAS FIRE DEPARTMENT
  - ALLEGAN COUNTY DRAIN COMMISSIONERS STORM WATER MANAGEMENT
  - ALLEGAN COUNTY SOIL EROSION & SEDIMENTATION CONTROL PERMIT
  - ALLEGAN COUNTY ROAD COMMISSION
  - EDGE WATERS CONSTRUCTION SITE STORM WATER DISCHARGE
  - EDGE PUBLIC WATER SYSTEM PERMIT
  - EDGE PUBLIC WASTEWATER SYSTEM PERMIT
  - EDGE FLOODPLAIN PERMIT
  - EDGE WETLAND PERMIT
- NEIGHBORHOOD SERVICES:** PROJECT WILL NOT RESULT IN A DIVERSE IMPACT TO PUBLIC SERVICES, INCLUDING POLICE & FIRE PROTECTION, UTILITIES, TRAFFIC OR ROADWAYS.
- IMPACT TO SURROUNDING PROPERTIES:** USE OF PROPERTY WILL BE CONSISTENT WITH OTHER USES IN THIS ZONING DISTRICT AND IN THE SURROUNDING AREA. USE OF PROPERTY WILL NOT GENERATE ADVERSE LEVELS OF NOISE, VIBRATION, SMOKE, LIGHT, GLARE, OR OTHER PROBLEMATIC CONDITIONS.
- PARKING:** TO BE PROVIDED PER CITY STANDARDS. TWO PARKING SPACES WILL BE PROVIDED INSIDE EACH 418 SQ FT GARAGE FOR RESIDENTS. TWO GUEST PARKING SPOTS ARE AVAILABLE IN THE DRIVEWAY TO EACH GARAGE.
- SPACING:** TO BE PROVIDED PER CITY STANDARDS.
- STORM WATER MANAGEMENT:** STORM WATER WILL BE COLLECTED IN A SERIES OF CATCH BASINS, PIPES, AND DITCHES AND ROUTED TO AN EXISTING LAKE ON THE EAST SIDE OF THE PROPERTY FOR ALLEGAN COUNTY DRAIN COMMISSIONER REQUIREMENTS.
- WETLANDS/DEVELOPMENT:** DUE SHALL BE SERVED BY NEW PRIVATE WATER AND SEWER SERVICES AND WARE CONNECTED TO EXISTING WARE PLACED TO THE SITE.

- WETLANDS:** THERE ARE WETLANDS ON THE SUBJECT PROPERTY. FOR FEMA FIRM MAP ON 28046600A.
- FLOODPLAINS:** THERE ARE REGULATORY FLOODPLAINS ON THE SUBJECT PROPERTY. FOR FEMA FIRM MAP ON 28046600A.
- LANDSCAPING:** LANDSCAPING TO BE PROVIDED PER CITY STANDARDS. PROVIDED LIGHTING WILL CONSIST OF SHIELDED LIGHT POLES AND WALL FIXTURES. LIGHTING SHALL BE CONSIDERED WITH OTHER USES IN THE AREA AND WILL COMPLY WITH ORDINANCE REQUIREMENTS.
- RESIDUE MANAGEMENT:** RESIDENTIAL UNITS WILL HAVE INDIVIDUAL WASTE BINS AND CURBSIDE WASTE COLLECTION.
- CONSTRUCTION SCHEDULE:** CONSTRUCTION SHALL BE COMPLETED TO START SPRING 2023.
- DRIVING SURFACES AND CLEARANCES:** MINIMUM CLEAR HEIGHT OF 10' WILL BE MET PROVIDED OVERHEAD ELECTRICAL AT ENTRANCE FROM FERRY ST AT 41' MINIMUM CLEARANCE. NO SURFACE OVERHEAD CONSTRUCTION IS TO OCCUR. ALL DRIVING SURFACES SHALL MEET THE MINIMUM LOAD BEARING CAPACITY AND ALL ACCESS ROADS WILL BE COMPLETED PRIOR TO PHASE BUILDING CONSTRUCTION. ROAD GRASSES SHALL NOT EXCEED 10% SLOPE AT ANY GIVEN INTERVAL. ON STREET PARKING WILL BE ON THE NORTH AND SOUTH SIDES ON THE OPPOSITE SIDE OF THE DRIVEWAYS. NO PARKING WILL BE PERMITTED ON ROADS THAT TRAVEL NORTH TO SOUTH. THIS IS DUE TO EMERGENCY ACCESS AND ALLOWING FLOWING OF SNOW AND ICE. OWNERS SHALL PROVIDE SNOW AND ICE REMOVAL UNTIL THE CITY TAKES OVER TO MAINTAIN ALL WEATHER DRIVING CAPABILITIES. NO PARKING FIRE LANE SIGNAGE TO BE INSTALLED AT DEAD END.
- UTILITIES:** UTILITIES SHALL BE SERVED BY NEW PRIVATE WATER AND SEWER SERVICES AND WARE CONNECTED TO EXISTING WARE PLACED TO THE SITE.



**ISSUED FOR APPROVAL**

**Engineering Group, Inc.**  
 185 FERRY ST., DOUGLAS, ALLEGAN CO., MI 49806  
 Phone: 616-366-0255  
 Fax: 616-366-0255  
 Grand Rapids, MI 49508-3600  
 Kalamazoo, MI 49004-4455  
 Lansing, MI 48906-4410  
 Ypsilanti, MI 48198-3483

**FOREST GATE CONDOMINIUMS**  
 SECTION 17, TOWN 10N, R1W, CO. OF DOUGLAS, ALLEGAN CO.  
 ARGENT MANAGEMENT GROUP, INC.  
 PO BOX 571, DOUGLAS, MI 49806

**ISSUED FOR APPROVAL**

**OVERALL SITE PLAN**

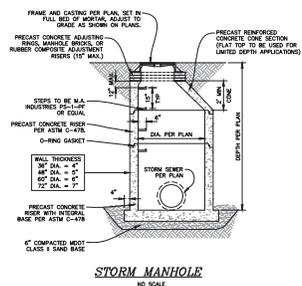
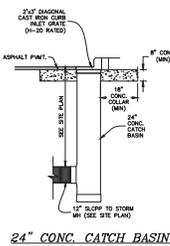
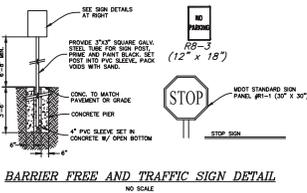
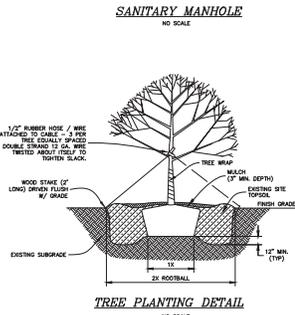
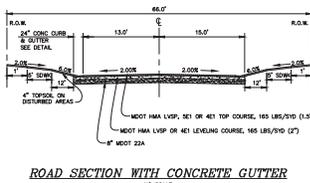
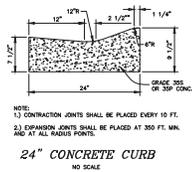
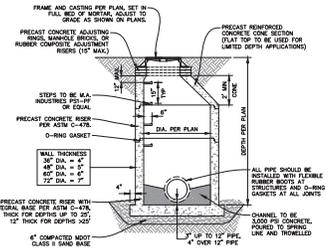
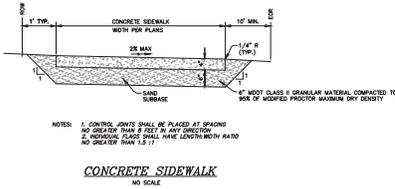
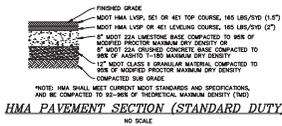
Project No: JOHN TENPAS  
 Project: 220328 1A  
 Sheet No: C-101  
 of 12











**Engineering Consulting**  
Kalamazoo, MI  
200-544-4455  
Lansing, MI  
317-481-1710  
Ypsilanti, MI  
734-368-8483

**FOREST GATE CONDOMINIUMS**  
SECTION 17, TOWN OF BERRY ST., DOUGLAS / ALEGAN CO., MI  
ARGENT MANAGEMENT GROUP, INC.  
PO BOX 571, DOUGLAS, MI 48806

ISSUED FOR	
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50	PRELIMINARY REVIEW

Project Manager: JOHN TENPAS  
Project #: 210328.1A  
Sheet Title:

DETAILS

Issue #  
**C-501**  
10 of 12



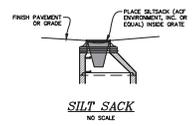
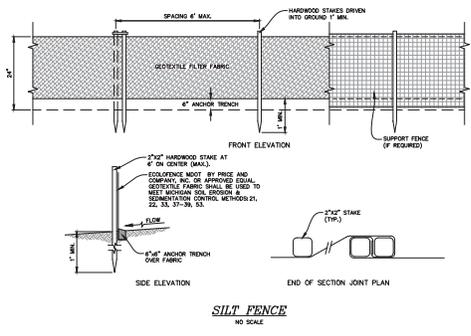
**ISSUED FOR APPROVAL**

ISSUED FOR:

1	PRELIMINARY REVIEW
2	PRELIMINARY REVIEW
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20	CITY REVIEW

Project Manager: JOHN TENPAS  
 Project #: 210328 1A  
 Sheet Title: DETAILS

Sheet # C-502  
 11 of 12



**ISSUED FOR APPROVAL**



## Traffic Impact Study Forest Gate Condominiums Douglas, Michigan

### Prepared for:

Argent Management Group, Inc.  
P.O. Box 571  
Douglas, MI 49406

### Prepared by:

Progressive AE  
1811 4 Mile Road NE  
Grand Rapids, MI 49525

November 2022  
Project No. 95510001

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## EXECUTIVE SUMMARY

### Introduction

Argent Management Group, Inc. is working with Driesenga & Associates, Inc. on the development of a 90-unit multifamily residential site located in Douglas, Michigan. This site is located on the west side of Ferry Street just north of Blue Star Highway. Access to the site will be via two site driveways to Ferry Street and one site driveway to Wiley Road. Full build-out of the site is expected to be completed within the next five years.

As part of the project approval process, the City of Douglas (City) has requested a traffic impact study be prepared to quantify the impacts the project may have on the surrounding roadway network.

The purpose of this traffic impact study was to analyze the potential impacts of the planned development and to identify what physical and/or operational roadway system improvements may be necessary to mitigate existing or anticipated background issues and/or impacts created by this development's traffic.

### Study Area

The study area includes two existing unsignalized intersections as listed below:

- Blue Star Highway / Wiley Road
- Blue Star Highway / Ferry Street

### Data Collection

Morning and afternoon peak hour turning movement counts were completed at the study area intersections in October 2022.

### Analysis

Two analysis scenarios were completed for the weekday morning and afternoon peak hours as part of the study as follows:

- Existing Conditions
- Future (2027) Conditions

An annual background traffic growth rate of 1.00 percent was applied to the existing volumes based on historical growth in the area to help reflect anticipated non-development traffic increases by the 2027 horizon year.

Trip generation for the site was calculated for the typical weekday, weekday morning, and weekday afternoon peak hours based on the methods of the ITE Trip Generation Manual, 11th Edition, published by the Institute of Transportation Engineers (ITE). The site is expected to generate approximately 635 daily vehicle trips (317 inbound, 318 outbound), 41 new weekday morning peak hour vehicle trips (13 inbound, 28 outbound), and 50 new weekday afternoon peak hour trips (28 inbound, 22 outbound) onto the street system.

For the existing and future (2027) conditions, capacity and queuing analyses were performed to determine the impacts the site would have on the roadways and intersections within the study area.

## **Conclusions**

Based on the analyses performed as part of this study, the proposed development will have little to no impact on the surrounding roadway network. The findings of this study are as follows:

### Existing Conditions

The data collected shows minimal traffic volumes along Ferry Street and Wiley Road during the morning and afternoon peak hours.

The existing conditions analyses show all controlled movements at the study area unsignalized intersections are currently operating at LoS "C" or better during the morning and afternoon peak hours.

### Future (2027) Conditions

The trip generation estimates show the proposed development will add minimal traffic to the surrounding roadway network during the morning and afternoon peak hours.

The future (2027) conditions are similar to the existing conditions, with all controlled movements at the study area unsignalized intersections and the site driveways anticipated to continue operating at LoS "C" or better during the morning and afternoon peak hours.

All 95th percentile vehicular queues at the unsignalized intersections and site driveways are anticipated to be one vehicle or less, except for the eastbound Wiley Road approach to Blue Star Highway. The 95th percentile queue for this movement is anticipated to be 1.4 vehicles during the afternoon peak hour.

## **Recommendations**

No improvements to the study area intersections were found necessary to mitigate the impact of the proposed Forest Gate Condominium development site.

## CHAPTER 1

### INTRODUCTION

Argent Management Group, Inc. is working with Driesenga & Associates, Inc. on the development of a 90-unit multifamily residential site located in Douglas, Michigan. This site is located on the west side of Ferry Street just north of Blue Star Highway. Access to the site will be via two site driveways to Ferry Street and one site driveway to Wiley Road. Figure 1 shows the site location and the proposed driveway locations. Full build-out of the site is expected to be completed within the next five years.

As part of the project approval process, the City has requested a traffic impact study be prepared to quantify the impacts the project may have on the surrounding roadway network.

The purpose of this traffic impact study was to analyze the potential impacts of the planned development and to identify what physical and/or operational roadway system improvements may be necessary to mitigate existing or anticipated background issues, and/or impacts created by this development's traffic. Tasks undertaken to complete the analyses include:

1. **Data Collection.** Morning and afternoon peak hour turning movement counts were completed at the study area intersections in October 2022. Information regarding lane configurations, speed limits, traffic controls, and other related data for the study area roadways was also collected.
2. **Background Growth.** An annual background traffic growth rate of 1.00 percent was applied to the existing volumes reflect anticipated non-development traffic increases by the 2027 horizon year.
3. **Trip Generation/Distribution.** The number of trips the proposed development is expected to generate during peak hours was identified. These trips were then assigned to the adjacent street system based upon the patterns followed by existing traffic and engineering judgment.



Figure 1. Location Map and Study Area

4. **Levels of Service.** Capacity calculations were completed at the study area intersections and the proposed site driveways to identify existing and anticipated future peak hour operational characteristics.
5. **Mitigation.** Roadway/intersection improvements were identified, when applicable, that will enable the adjacent roadways and study area intersections to maintain equal and/or acceptable levels of operation under future conditions upon the addition of background traffic growth and/or due to development traffic.

Pre-study coordination was completed with the City to help identify the required study area, study parameters, and any specific areas of concern. The following chapters outline the results of analyses completed during the study process.

## CHAPTER 2

### EXISTING CONDITIONS

The first step in the identification of potential traffic impacts is to determine how well the adjacent streets are operating under current conditions. This chapter summarizes the data collection and existing operating conditions analysis procedures.

#### Key Study Area Roadways

##### Blue Star Highway

Blue Star Highway is a north-south three-lane roadway with one travel lane in each direction and a two-way left-turn lane (TWLTL) within the study area under the Allegan County Road Commission jurisdiction. The speed limit along Blue Star Highway is 45 miles per hour (mph) south of Wiley Road and 35 mph north of Wiley Road. Weekday 24-hour traffic volumes along Blue Star Highway are estimated to be approximately 9,000 vehicles per day.



*Eastbound Ferry Street at Blue Star Highway*

#### Existing Intersections

The study area includes two existing unsignalized intersections as listed in Table 1.

**Table 1. Existing Intersections**

Intersection	Traffic Control
Blue Star Highway / Wiley Road	Two-Way Stop
Blue Star Highway / Ferry Street	Two-Way Stop

Source: Progressive AE, November 2022

#### Data Collection

Morning (7:00 – 9:00 a.m.) and afternoon (4:00 – 6:00 p.m.) peak hour turning movement counts at the study area intersections were collected in October 2022 on a typical weekday.

Figure 2 shows the existing morning and afternoon peak hour volumes at the study area intersections. Detailed printouts of the count reports are included in the Appendix.

These counts indicated that the typical weekday morning peak hour generally occurs between 7:30 to 8:30 a.m. and the typical afternoon peak hour occurs between 4:30 to 5:30 p.m.

#### Existing Conditions Capacity Analysis

Intersection level of service calculations were completed to evaluate the current operational efficiency of the study area intersections. These calculations were completed using techniques outlined in the Highway Capacity Manual, published by the Transportation Research Board. *Synchro*® traffic analysis software, version 11, based on the Highway Capacity Manual methodologies, was used in the analysis.



*Eastbound Wiley Road at Blue Star Highway*

Level of service at signalized and unsignalized intersections relates to the delay, traffic volumes, and intersection geometry. Level of service are expressed in a range from "A" to "F", with "A" denoting the highest or best, operating conditions. Generally, a LoS "D" rating is considered the minimum acceptable service level for signalized and unsignalized intersections in most areas, although a LoS "E" or LoS "F" can be deemed as acceptable during the peak hours. The criteria for determining the level of service at signalized and unsignalized intersections are outlined in the Appendix of this report.

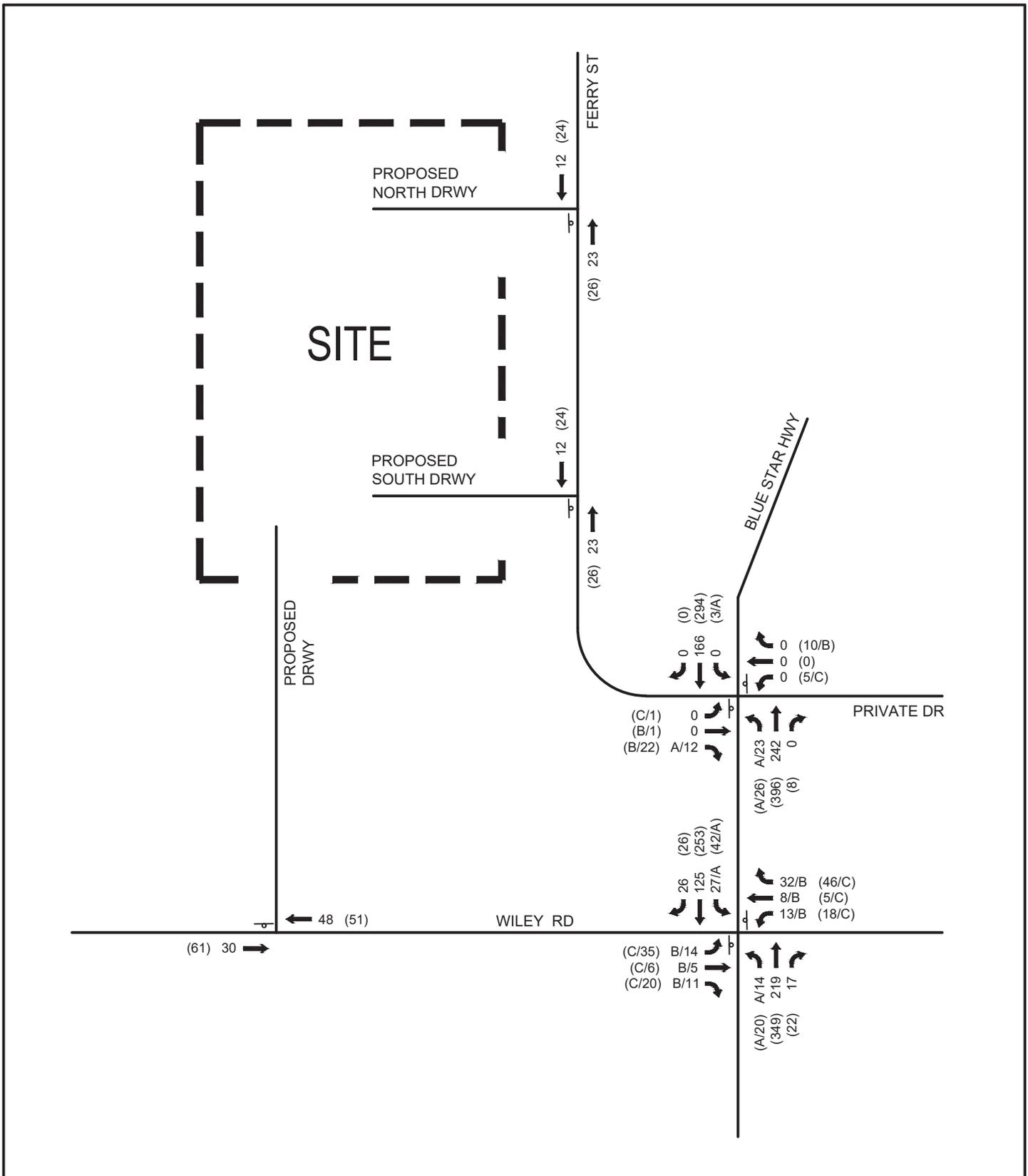
The existing morning and afternoon peak hours were analyzed at the study area intersections. Table 2 and Figure 2 show the levels of service for the study area intersections.

All controlled movements at the study area unsignalized intersections are currently operating at LoS "C" or better during the morning and afternoon peak hours. Copies of the *Synchro*<sup>®</sup> analyses are included in the Appendix.

**Table 2. Existing Levels of Service and Delay**

Intersection/ Movement	Existing Conditions			
	A.M.		P.M.	
	LoS	Delay(s)	LoS	Delay(s)
<b>Blue Star Highway / Wiley Road<sup>1</sup></b>				
<i>NBL</i>	A	7.6	A	7.9
<i>EB</i>	B	12.6	C	21.0
<i>WB</i>	B	11.9	C	15.7
<i>SBL</i>	A	7.9	A	8.3
<b>Blue Star Highway / Ferry Street<sup>1</sup></b>				
<i>NBL</i>	A	7.6	A	8.0
<i>EBL</i>	A	0	C	18.8
<i>EBT/R</i>	A	9.2	B	10.6
<i>WBL</i>	A	0	C	19.8
<i>WBT/R</i>	A	0	B	11.2
<i>SBL</i>	A	0	A	8.3

<sup>1</sup>Unsignalized intersection, controlled movement(s) shown  
Source: Progressive AE, November 2022



FOREST GATE CONDOMINIUMS TRAFFIC IMPACT STUDY

LEGEND

- XX (XX) = AM (PM)
- A = LEVEL-OF-SERVICE
- Ⓢ = SIGNALIZED INTERSECTION
- Ⓟ = STOP-CONTROLLED

EXISTING PEAK-HOUR VOLUMES + LEVELS-OF-SERVICE



FIGURE 2

## CHAPTER 3

### FUTURE (2027) CONDITIONS

The purpose of this chapter is to summarize the anticipated future (2027) traffic conditions within the study area with background traffic growth and the proposed development traffic in place. These analyses provide the before/after comparison of future conditions and helps define the timing and applicability of any potential roadway improvements necessary to mitigate the impact of the proposed development.

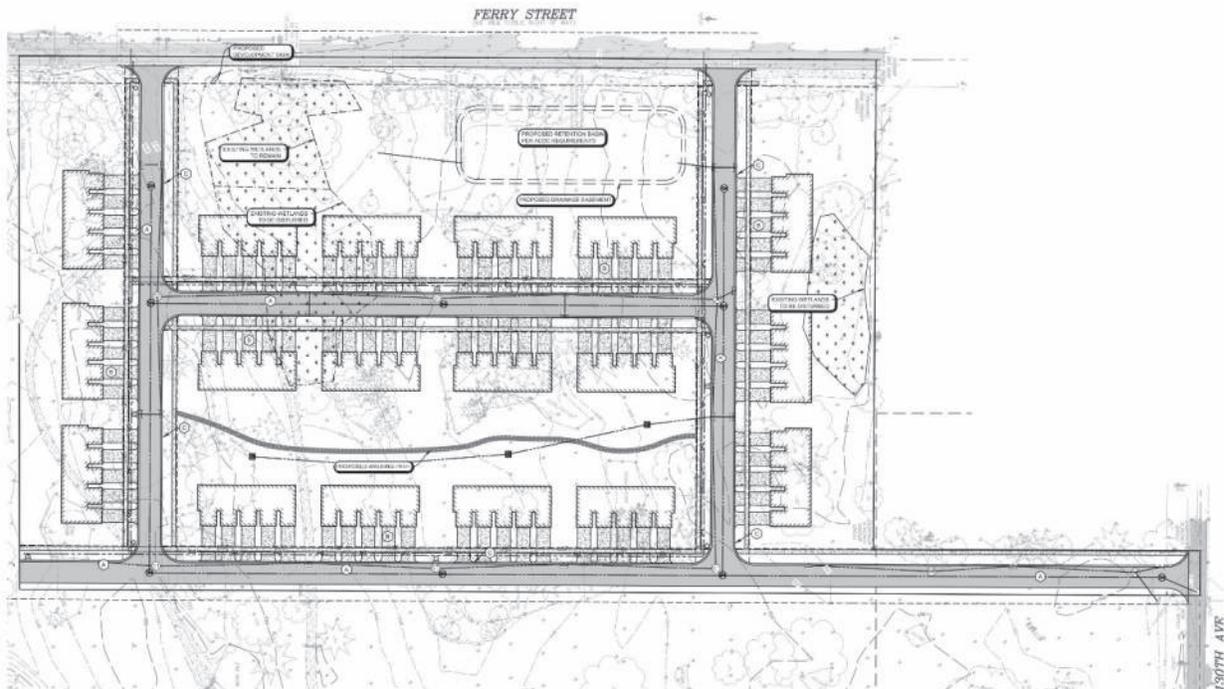
#### Background Traffic Growth

An annual background traffic growth rate of 1.00 percent was applied to the existing volumes based on historical growth in the area to help reflect anticipated non-development traffic increases by the 2027 horizon year. A separate analysis of the background traffic volumes was not completed as the results would largely be the same as the existing conditions.

#### Proposed Development and Site Access

Argent Management Group, Inc. is working with Driesenga & Associates, Inc. on the development of a 90-unit multifamily residential site located in Douglas, Michigan. This site is located on the west side of Ferry Street just north of Blue Star Highway. Full build-out of the site is expected to be completed within the next five years.

The proposed plan calls for the construction of 18 buildings with five (5) single family residential units within each building. Access to the site will be via two site driveways to Ferry Street and one site driveway to Wiley Road. A copy of the proposed site plan is included in the Appendix.



#### Trip Generation

The Trip Generation Manual, Eleventh Edition, by the Institute of Transportation Engineers (ITE) was used to calculate the anticipated traffic that may be generated by the proposed site. Trips are measured individually for inbound and outbound movements; therefore, a visit to the site by an employee or visitor, for instance, generates two trips – one inbound and one outbound.

Based on the land use descriptions provided within the ITE Trip Generation Manual, the most applicable land use for the proposed site would be Single Family Attached Housing (Land Use Code 215).

Trips for the site were calculated for the typical weekday, weekday morning, and weekday afternoon peak hours. Table 3 shows the daily and peak hour trips anticipated to be generated by the proposed development after full completion of the site.

**Table 3. Trip Generation Summary**

Land Use	ITE Code	Size	A.M.			P.M.			Daily Trips
			Total	Enter	Exit	Total	Enter	Exit	
Single Family Attached Housing	215	90 units	41	13	28	50	28	22	635

Source: ITE Trip Generation Manual, 11<sup>th</sup> Edition

As shown in Table 3, the site is expected to generate approximately 635 daily vehicle trips (317 inbound, 318 outbound), 41 new weekday morning peak hour vehicle trips (13 inbound, 28 outbound), and 50 new weekday afternoon peak hour trips (28 inbound, 22 outbound) onto the street system.

### Trip Distribution

The directional distribution of the site generated new trips was based upon existing travel patterns and engineering judgment. Given the proximity of the I-94/Blue Star Highway interchange immediately to the south of the site, a significant portion of the trips are anticipated to be to/from I-94. Directional distribution to/from the proposed development for site generated new trips is expected to be approximately as follows:

To/from Wiley Road west	5%	To/from Blue Star Highway north	30%
To/from Wiley Road east	5%	To/from Blue Star Highway south	50%
To/from Ferry Street north	10%		

Based upon the above distribution patterns for new trips and engineering judgment, the anticipated peak hour project traffic was assigned to the proposed site access driveways and the other study area intersections. Figure 3 shows the total anticipated morning and afternoon peak hour trips for site generated traffic upon full completion of the proposed site.

The anticipated site trips were added to the background (2027) peak hour volumes to depict the estimated total future (2027) volumes during the morning and afternoon peak hours. Figure 4 shows the total anticipated future (2027) volumes.

### Future (2027) Capacity Analysis

Intersection level of service calculations were completed to evaluate the future (2027) morning and afternoon peak hour conditions at the site access driveways and study area intersections assuming the completion of the site. The results of the level of service analyses are shown in Table 4. Copies of the *Synchro*<sup>®</sup> analyses are included in the Appendix.

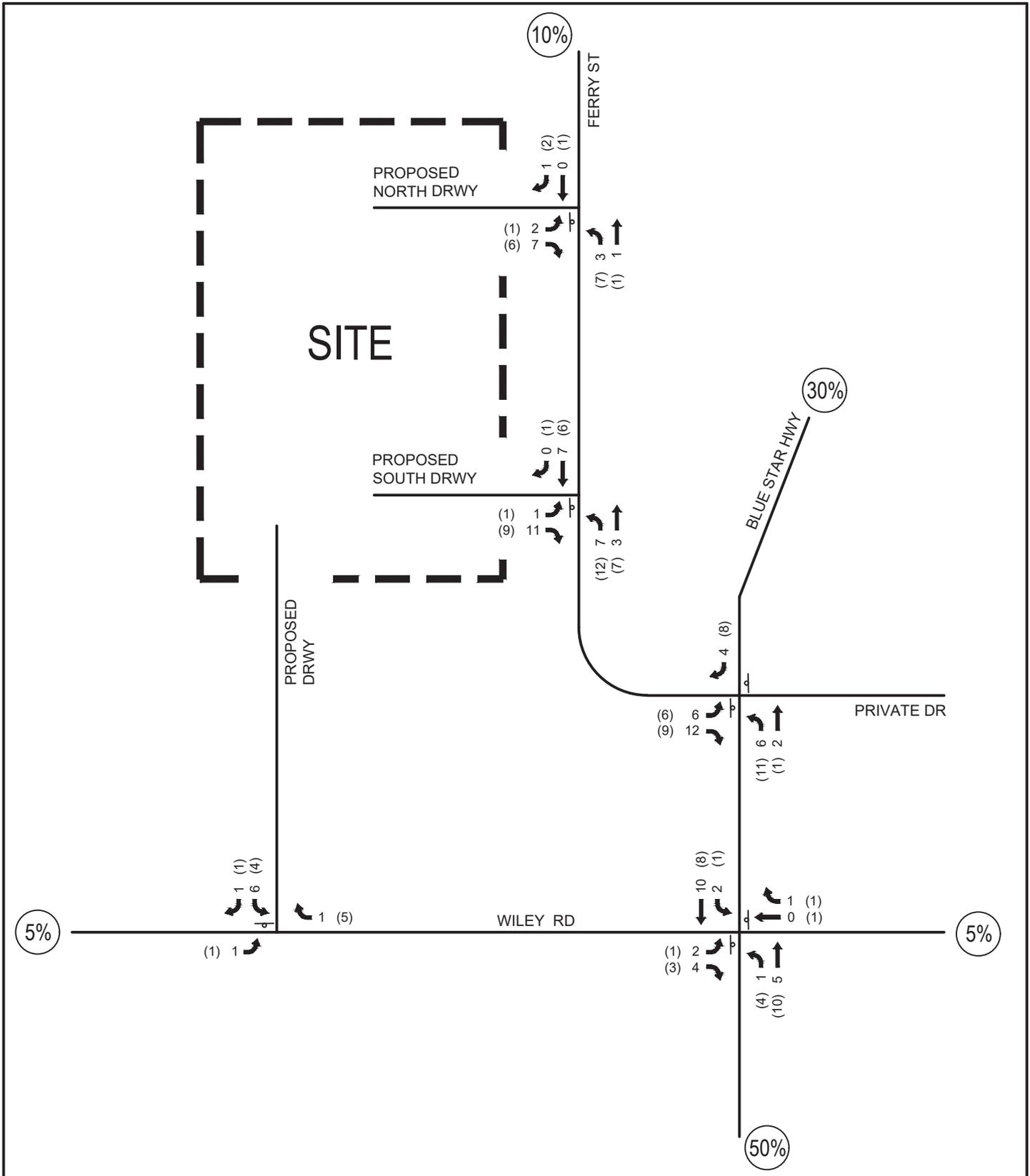
The future (2027) conditions are similar to the existing conditions, with all controlled movements at the study area unsignalized intersections and the site driveways anticipated to continue operating at LoS “C” or better during the morning and afternoon peak hours. Copies of the *Synchro*<sup>®</sup> analyses are included in the Appendix.

All 95th percentile vehicular queues at the unsignalized intersections and site driveways are anticipated to be one vehicle or less, except for the eastbound Wiley Road approach to Blue Star Highway. The 95th percentile queue for this movement is anticipated to be 1.4 vehicles during the afternoon peak hour.

**Table 4. Future (2027) Levels of Service and Delay**

Intersection/ Movement	Existing Conditions				Future (2027) Conditions			
	A.M.		P.M.		A.M.		P.M.	
	LoS	Delay(s)	LoS	Delay(s)	LoS	Delay(s)	LoS	Delay(s)
<b>Blue Star Highway / Wiley Road<sup>1</sup></b>								
<i>NBL</i>	A	7.6	A	7.9	A	7.6	A	8.0
<i>EB</i>	B	12.6	C	21.0	B	13.2	C	24.5
<i>WB</i>	B	11.9	C	15.7	B	12.4	C	17.4
<i>SBL</i>	A	7.9	A	8.3	A	8.0	A	8.4
<b>Blue Star Highway / Ferry Street<sup>1</sup></b>								
<i>NBL</i>	A	7.6	A	8.0	A	7.7	A	8.1
<i>EBL</i>	A	0	C	18.8	B	13.5	C	21.4
<i>EBT/R</i>	A	9.2	B	10.6	A	9.3	B	10.8
<i>WBL</i>	A	0	C	19.8	A	0	C	22.4
<i>WBT/R</i>	A	0	B	11.2	A	0	B	11.4
<i>SBL</i>	A	0	A	8.3	A	0	A	8.4
<b>Ferry Street / Proposed North Driveway<sup>1</sup></b>								
<i>NBL</i>	-	-	-	-	A	7.2	A	7.3
<i>EB</i>	-	-	-	-	A	8.5	A	8.6
<b>Ferry Street / Proposed South Driveway<sup>1</sup></b>								
<i>NBL</i>	-	-	-	-	A	7.3	A	7.3
<i>EB</i>	-	-	-	-	A	8.5	A	8.6
<b>Wiley Road / Proposed Driveway<sup>1</sup></b>								
<i>EBL</i>	-	-	-	-	A	7.3	A	7.4
<i>SB</i>	-	-	-	-	A	9.0	A	9.2

<sup>1</sup>Unsignalized intersection, controlled movements shown  
Source: Progressive AE, November 2022



FOREST GATE CONDOMINIUMS TRAFFIC IMPACT STUDY

LEGEND	
XX (XX)	= AM (PM) GENERATED TRIPS
(X%)	= DISTRIBUTION FOR NEW TRIPS

FUTURE (2027) TRIP DISTRIBUTION + TRAFFIC ASSIGNMENT



FIGURE  
3



## CHAPTER 4

### CONCLUSIONS AND RECOMMENDATIONS

This chapter summarizes the results of the analyses performed as part of the study. Recommendations to improve the surrounding roadway network are also presented.

#### Conclusions

Based on the analyses performed as part of this study, the proposed development will have little to no impact on the surrounding roadway network. The findings of this study are as follows:

##### Existing Conditions

The data collected shows minimal traffic volumes along Ferry Street and Wiley Road during the morning and afternoon peak hours.

The existing conditions analyses show all controlled movements at the study area unsignalized intersections are currently operating at LoS "C" or better during the morning and afternoon peak hours.

##### Future (2027) Conditions

The trip generation estimates show the proposed development will add minimal traffic to the surrounding roadway network during the morning and afternoon peak hours.

The future (2027) conditions are similar to the existing conditions, with all controlled movements at the study area unsignalized intersections and the site driveways anticipated to continue operating at LoS "C" or better during the morning and afternoon peak hours.

All 95th percentile vehicular queues at the unsignalized intersections and site driveways are anticipated to be one vehicle or less, except for the eastbound Wiley Road approach to Blue Star Highway. The 95th percentile queue for this movement is anticipated to be 1.4 vehicles during the afternoon peak hour.

#### Recommendations

No improvements to the study area intersections were found necessary to mitigate the impact of the proposed Forest Gate Condominium development site.

## **Technical Appendix**

### **Forest Gate Condominiums TIS**

- **Level of Service Definitions**
- **Glossary**
- **Site Plan**
- **NCHRP Captured Trips Results**
- **Signal Warrant Data**
- **Traffic Count Data**
- **Synchro Analyses Results**

## Level of Service Definitions

### Signalized Intersections

- Level of Service A:** Describes operations with very low average stopped delay, i.e., less than 10.0 seconds per vehicle. This occurs when progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.
- Level of Service B:** Describes operations with an average stopped delay in the range of 10.0 to 20.0 seconds per vehicle. This generally occurs with good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.
- Level of Service C:** Describes operations with an average stopped delay in the range of 20.1 to 35.0 seconds per vehicle. These higher delays may result from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear in this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.
- Level of Service D:** Describes operations with an average stopped delay in the range of 35.1 to 55.0 seconds per vehicle. At Level of Service D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high v/c (volume/capacity) ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
- Level of Service E:** Describes operations with an average stopped delay in the range of 55.1 to 80.0 seconds per vehicle. This is considered to be the limit of acceptable delay in many cases. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are a frequent occurrence.
- Level of Service F:** Describes operations with an average stopped delay in excess of 80.0 seconds per vehicle. This is considered to be unacceptable to most drivers. This condition often occurs with over-saturation, i.e., when arrival flow rates exceed the capacity of the intersection. It may also occur at high v/c ratios with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

## **Level of Service Definitions**

### **Unsignalized Intersections**

<b>Level of Service A:</b>	Average delay per vehicles for impeded movements is less than 10 seconds. There is little or no delay with typically low side street and/or main street traffic.
<b>Level of Service B:</b>	Average stopped delays from 10.1 seconds to 15.0 seconds. Short delays, many acceptable gaps in main street traffic stream.
<b>Level of Service C:</b>	Average delay per vehicle ranges from 15.1 to 25.0 seconds. Average traffic delays with frequent gaps in main street traffic.
<b>Level of Service D:</b>	Average delays from 25.1 to 35.0 seconds for impeded movements. Long traffic delays for impeded movements due in part to a limited number of acceptable gaps.
<b>Level of Service E:</b>	Average delays in the 35.1 to 50.0 second range. May experience very long delays for impeded movements with a very small number of acceptable gaps in the traffic stream.
<b>Level of Service F:</b>	Average vehicle delays of over 50.0 seconds. Extreme traffic delays with virtually no acceptable gaps in main street traffic.

# Glossary

**Approach:** A set of lanes accommodating all left-turn, through, and right-turn movements arriving at an intersection from a given direction.

**Arterial:** Signalized streets that serve primarily through traffic and provide access to abutting properties as a secondary function.

**Average Stopped Delay:** The total time vehicles are stopped in an intersection approach or lane group during a specified time interval divided by the volume departing from the approach or lane group during the same time period, in seconds per vehicle.

**Background Traffic:** Traffic volumes that will be on the roadway network without the presence of the proposed development.

**Bypass Lane:** A one-lane widening on a two-lane roadway that allows through traffic to pass by waiting left-turn traffic.

**Capacity:** The maximum rate of flow at which persons or vehicles can be reasonably expected to traverse a point or uniform segment of a lane or roadway during a specified time period under prevailing roadway, traffic, and control conditions; usually expressed as vehicles per hour or persons per hour.

**Conflicting Traffic Volume:** The volume of traffic which conflicts with a specific movement at an intersection.

**Corridor:** A lineal study area aligned with a roadway facility in which traffic, land use, right-of-way, environmental, and other factors are evaluated to determine future transportation facility needs.

**Cycle:** Any complete sequence of traffic signal indications.

**Cycle Length:** The total time for a traffic signal to complete one cycle.

**Design Hour Volume:** The traffic volume for the design hour, usually a forecast of the relevant peak hour volume, in vehicles per hour.

**Diverted Linked Trips:** Trips from the traffic volume on roadways within the vicinity of the generator but which requires a diversion from that roadway to another roadway to gain access to the site.

**Driveway Offset:** Distance between driveways on opposite sides of a roadway, measured parallel to roadway.

**Freeway:** A multi-lane divided highway having a minimum of two lanes for exclusive use of traffic in each direction and full control of access and egress.

**Gaps (Critical Gap):** The median time headway between vehicles in a major traffic stream which will permit side-street vehicles to cross through or merge with the major traffic stream.

**Green Time:** The actual length of the "green" indication for a given movement at a signalized intersection.

**Level of Service:** A qualitative measure describing operational conditions within a traffic stream; generally described in terms of such factors as speed and travel time, delay, freedom to maneuver, traffic interruptions, comfort and convenience, and safety.

**Operational Analysis:** A use of capacity analysis to determine the prevailing level of service on an existing or projected facility, with known or projected traffic, roadway, and control conditions. This analysis can involve a particular location, such as an intersection or a corridor.

**Pass-by Trips:** Trips made as intermediate stops on the way from an origin to a primary trip destination.

**Peak Hour (AM):** The one hour period in the morning representing the highest hourly volume of traffic flow on the adjacent public street system.

**Peak Hour (PM):** The one hour period in the afternoon or evening representing the highest hourly volume of traffic flow on the adjacent public street system.

**Peak Hour Factor:** The hourly volume during the maximum volume hour of the day divided by four times the peak 15-minute flow within the peak hour; a measure of traffic demand fluctuation within the peak hour.

**Phase:** The part of the signal cycle allocated to any combination of traffic movements receiving the right-of-way simultaneously during one or more intervals.

**Roadway Conditions:** Geometric characteristics of a street or highway, including the type of facility, number and width of lanes (by direction), shoulder widths and lateral clearances, design speed, etc.

**Service Drive:** A roadway (usually private) that provides internal access to two or more uses.

**Site Traffic:** Existing or projected vehicular traffic generated by the development.

**Study Area:** The geographic area containing site access points and critical intersections (and connecting highway segments) which are impacted by the site-traffic generated by the development, and should be evaluated.

**System Improvements:** Added lanes, signal improvements, and other roadway improvements not considered site-related improvements.

**Traffic Impact:** The adverse impact on intersection Level of Service and/or street and highway safety and operations as determined by the criteria and procedures set forth in this handbook.

**Trip (Directional Trip):** A single or one-direction vehicle movement with either the origin or the destination (exiting or entering) inside a study site.

**Trip Distribution:** The distribution or assignment of site traffic into site driveways and study area roadways/intersections based upon expected direction of approach and departure.

**Unsignalized Intersection:** Any intersection not controlled by traffic signals.

**Volume:** The number of persons or vehicles passing a point on a lane or roadway during some time interval, such as one hour or during an average day.

**Volume-to-Capacity Ratio (V/C):** The ratio of demand flow rate to capacity for a traffic facility.

## Site Plan



## Traffic Count Data



Progressive AE  
1811 4 Mile Rd NE

Grand Rapids, Michigan, United States 49525  
(616) 361-2664

Count Name: Blue Star Hwy &  
Ferry St  
Site Code:  
Start Date: 10/27/2022  
Page No: 1

### Turning Movement Data

Start Time	Ferry St Eastbound					Green Koi Parking Lot Westbound				Blue Star Hwy Northbound					Blue Star Hwy Southbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
7:00 AM	0	0	1	0	1	0	0	0	0	1	26	0	0	27	1	23	0	0	24	52
7:15 AM	1	0	3	0	4	0	0	0	0	2	37	1	0	40	3	20	0	0	23	67
7:30 AM	0	0	4	0	4	0	0	0	0	7	51	0	0	58	0	43	0	0	43	105
7:45 AM	0	0	3	0	3	0	0	0	0	12	68	0	0	80	0	43	0	0	43	126
Hourly Total	1	0	11	0	12	0	0	0	0	22	182	1	0	205	4	129	0	0	133	350
8:00 AM	0	0	3	0	3	0	0	0	0	4	55	0	0	59	0	38	0	0	38	100
8:15 AM	0	0	2	0	2	0	0	0	0	0	68	0	0	68	0	42	0	0	42	112
8:30 AM	0	0	7	0	7	0	0	0	0	2	36	0	0	38	0	53	1	0	54	99
8:45 AM	0	0	3	0	3	0	0	0	0	6	46	0	0	52	0	27	2	0	29	84
Hourly Total	0	0	15	0	15	0	0	0	0	12	205	0	0	217	0	160	3	0	163	395
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	1	7	1	8	2	0	0	2	7	63	2	0	72	4	70	0	0	74	156
4:15 PM	0	0	8	1	8	2	0	4	6	2	59	1	0	62	2	80	0	0	82	158
4:30 PM	0	0	9	0	9	2	0	3	5	11	68	3	0	82	1	76	0	0	77	173
4:45 PM	0	0	3	0	3	0	0	3	3	8	108	3	0	119	1	80	0	0	81	206
Hourly Total	0	1	27	2	28	6	0	10	16	28	298	9	0	335	8	306	0	0	314	693
5:00 PM	1	0	6	0	7	1	0	3	4	2	125	1	0	128	0	61	0	0	61	200
5:15 PM	0	1	4	0	5	2	0	1	3	5	95	1	0	101	1	77	0	0	78	187
5:30 PM	0	0	2	0	2	1	1	1	3	2	53	2	0	57	1	50	0	0	51	113
5:45 PM	0	0	3	0	3	2	0	1	3	5	50	2	0	57	1	49	0	0	50	113
Hourly Total	1	1	15	0	17	6	1	6	13	14	323	6	0	343	3	237	0	0	240	613
Grand Total	2	2	68	2	72	12	1	16	29	76	1008	16	0	1100	15	832	3	0	850	2051
Approach %	2.8	2.8	94.4	-	-	41.4	3.4	55.2	-	6.9	91.6	1.5	-	-	1.8	97.9	0.4	-	-	-
Total %	0.1	0.1	3.3	-	3.5	0.6	0.0	0.8	1.4	3.7	49.1	0.8	-	53.6	0.7	40.6	0.1	-	41.4	-
Lights	2	2	63	-	67	12	1	16	29	75	975	16	-	1066	15	805	3	-	823	1985
% Lights	100.0	100.0	92.6	-	93.1	100.0	100.0	100.0	100.0	98.7	96.7	100.0	-	96.9	100.0	96.8	100.0	-	96.8	96.8
Mediums	0	0	5	-	5	0	0	0	0	1	25	0	-	26	0	24	0	-	24	55
% Mediums	0.0	0.0	7.4	-	6.9	0.0	0.0	0.0	0.0	1.3	2.5	0.0	-	2.4	0.0	2.9	0.0	-	2.8	2.7
Articulated Trucks	0	0	0	-	0	0	0	0	0	0	8	0	-	8	0	3	0	-	3	11
% Articulated Trucks	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	-	0.7	0.0	0.4	0.0	-	0.4	0.5
Pedestrians	-	-	-	2	-	-	-	-	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Progressive AE  
1811 4 Mile Rd NE

Grand Rapids, Michigan, United States 49525  
(616) 361-2664

Count Name: Blue Star Hwy &  
Ferry St  
Site Code:  
Start Date: 10/27/2022  
Page No: 2

### Turning Movement Peak Hour Data (7:30 AM)

Start Time	Ferry St Eastbound					Green Koi Parking Lot Westbound				Blue Star Hwy Northbound					Blue Star Hwy Southbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
7:30 AM	0	0	4	0	4	0	0	0	0	7	51	0	0	58	0	43	0	0	43	105
7:45 AM	0	0	3	0	3	0	0	0	0	12	68	0	0	80	0	43	0	0	43	126
8:00 AM	0	0	3	0	3	0	0	0	0	4	55	0	0	59	0	38	0	0	38	100
8:15 AM	0	0	2	0	2	0	0	0	0	0	68	0	0	68	0	42	0	0	42	112
Total	0	0	12	0	12	0	0	0	0	23	242	0	0	265	0	166	0	0	166	443
Approach %	0.0	0.0	100.0	-	-	0.0	0.0	0.0	-	8.7	91.3	0.0	-	-	0.0	100.0	0.0	-	-	-
Total %	0.0	0.0	2.7	-	2.7	0.0	0.0	0.0	0.0	5.2	54.6	0.0	-	59.8	0.0	37.5	0.0	-	37.5	-
PHF	0.000	0.000	0.750	-	0.750	0.000	0.000	0.000	0.000	0.479	0.890	0.000	-	0.828	0.000	0.965	0.000	-	0.965	0.879
Lights	0	0	11	-	11	0	0	0	0	23	237	0	-	260	0	160	0	-	160	431
% Lights	-	-	91.7	-	91.7	-	-	-	-	100.0	97.9	-	-	98.1	-	96.4	-	-	96.4	97.3
Mediums	0	0	1	-	1	0	0	0	0	0	4	0	-	4	0	5	0	-	5	10
% Mediums	-	-	8.3	-	8.3	-	-	-	-	0.0	1.7	-	-	1.5	-	3.0	-	-	3.0	2.3
Articulated Trucks	0	0	0	-	0	0	0	0	0	0	1	0	-	1	0	1	0	-	1	2
% Articulated Trucks	-	-	0.0	-	0.0	-	-	-	-	0.0	0.4	-	-	0.4	-	0.6	-	-	0.6	0.5
Pedestrians	-	-	-	0	-	-	-	-	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

### Turning Movement Peak Hour Data (4:30 PM)

Start Time	Ferry St Eastbound					Green Koi Parking Lot Westbound				Blue Star Hwy Northbound					Blue Star Hwy Southbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
4:30 PM	0	0	9	0	9	2	0	3	5	11	68	3	0	82	1	76	0	0	77	173
4:45 PM	0	0	3	0	3	0	0	3	3	8	108	3	0	119	1	80	0	0	81	206
5:00 PM	1	0	6	0	7	1	0	3	4	2	125	1	0	128	0	61	0	0	61	200
5:15 PM	0	1	4	0	5	2	0	1	3	5	95	1	0	101	1	77	0	0	78	187
Total	1	1	22	0	24	5	0	10	15	26	396	8	0	430	3	294	0	0	297	766
Approach %	4.2	4.2	91.7	-	-	33.3	0.0	66.7	-	6.0	92.1	1.9	-	-	1.0	99.0	0.0	-	-	-
Total %	0.1	0.1	2.9	-	3.1	0.7	0.0	1.3	2.0	3.4	51.7	1.0	-	56.1	0.4	38.4	0.0	-	38.8	-
PHF	0.250	0.250	0.611	-	0.667	0.625	0.000	0.833	0.750	0.591	0.792	0.667	-	0.840	0.750	0.919	0.000	-	0.917	0.930
Lights	1	1	19	-	21	5	0	10	15	26	384	8	-	418	3	288	0	-	291	745
% Lights	100.0	100.0	86.4	-	87.5	100.0	-	100.0	100.0	100.0	97.0	100.0	-	97.2	100.0	98.0	-	-	98.0	97.3
Mediums	0	0	3	-	3	0	0	0	0	0	8	0	-	8	0	6	0	-	6	17
% Mediums	0.0	0.0	13.6	-	12.5	0.0	-	0.0	0.0	0.0	2.0	0.0	-	1.9	0.0	2.0	-	-	2.0	2.2
Articulated Trucks	0	0	0	-	0	0	0	0	0	0	4	0	-	4	0	0	0	-	0	4
% Articulated Trucks	0.0	0.0	0.0	-	0.0	0.0	-	0.0	0.0	0.0	1.0	0.0	-	0.9	0.0	0.0	-	-	0.0	0.5
Pedestrians	-	-	-	0	-	-	-	-	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Progressive AE  
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Count Name: Blue Star Hwy &  
Wiley Rd  
Site Code:  
Start Date: 10/27/2022  
Page No: 1

### Turning Movement Data

Start Time	Wiley Rd Eastbound					Wiley Rd Westbound					Blue Star Hwy Northbound					Blue Star Hwy Southbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
7:00 AM	2	1	3	0	6	3	1	4	0	8	2	24	3	0	29	2	22	0	0	24	67
7:15 AM	5	0	0	0	5	3	3	7	0	13	1	30	5	0	36	4	16	3	0	23	77
7:30 AM	2	1	2	0	5	4	2	9	0	15	3	46	3	0	52	13	27	5	1	45	117
7:45 AM	5	1	5	0	11	1	2	6	0	9	5	69	4	0	78	6	29	8	1	43	141
Hourly Total	14	3	10	0	27	11	8	26	0	45	11	169	15	0	195	25	94	16	2	135	402
8:00 AM	3	1	2	0	6	3	1	10	0	14	4	43	6	0	53	3	35	3	0	41	114
8:15 AM	4	2	2	0	8	5	3	7	0	15	2	54	4	0	60	5	27	10	0	42	125
8:30 AM	4	0	0	0	4	6	3	5	0	14	2	30	2	0	34	8	46	7	0	61	113
8:45 AM	5	3	0	2	8	5	3	7	0	15	1	38	3	0	42	7	17	4	2	28	93
Hourly Total	16	6	4	2	26	19	10	29	0	58	9	165	15	0	189	23	125	24	2	172	445
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	8	3	3	2	14	8	2	3	0	13	6	62	4	0	72	13	58	8	2	79	178
4:15 PM	7	3	3	2	13	8	0	9	0	17	2	47	4	0	53	18	61	8	0	87	170
4:30 PM	5	0	4	0	9	5	2	5	0	12	3	71	5	0	79	13	69	3	0	85	185
4:45 PM	9	3	4	0	16	3	2	13	0	18	5	99	7	0	111	9	66	9	0	84	229
Hourly Total	29	9	14	4	52	24	6	30	0	60	16	279	20	0	315	53	254	28	2	335	762
5:00 PM	9	1	6	0	16	6	1	15	0	22	6	103	6	0	115	7	53	8	0	68	221
5:15 PM	12	2	6	0	20	4	0	13	0	17	6	75	4	0	85	13	60	6	0	79	201
5:30 PM	6	0	6	0	12	5	1	12	0	18	1	37	7	0	45	7	38	8	0	53	128
5:45 PM	6	0	0	0	6	4	1	11	0	16	1	39	5	0	45	5	43	5	0	53	120
Hourly Total	33	3	18	0	54	19	3	51	0	73	14	254	22	0	290	32	194	27	0	253	670
Grand Total	92	21	46	6	159	73	27	136	0	236	50	867	72	0	989	133	667	95	6	895	2279
Approach %	57.9	13.2	28.9	-	-	30.9	11.4	57.6	-	-	5.1	87.7	7.3	-	-	14.9	74.5	10.6	-	-	-
Total %	4.0	0.9	2.0	-	7.0	3.2	1.2	6.0	-	10.4	2.2	38.0	3.2	-	43.4	5.8	29.3	4.2	-	39.3	-
Lights	88	21	44	-	153	70	25	129	-	224	49	842	68	-	959	127	646	91	-	864	2200
% Lights	95.7	100.0	95.7	-	96.2	95.9	92.6	94.9	-	94.9	98.0	97.1	94.4	-	97.0	95.5	96.9	95.8	-	96.5	96.5
Mediums	4	0	2	-	6	3	2	7	-	12	1	20	4	-	25	6	18	4	-	28	71
% Mediums	4.3	0.0	4.3	-	3.8	4.1	7.4	5.1	-	5.1	2.0	2.3	5.6	-	2.5	4.5	2.7	4.2	-	3.1	3.1
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	5	0	-	5	0	3	0	-	3	8
% Articulated Trucks	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.6	0.0	-	0.5	0.0	0.4	0.0	-	0.3	0.4
Pedestrians	-	-	-	6	-	-	-	-	0	-	-	-	-	0	-	-	-	-	6	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-



Progressive AE  
1811 4 Mile Rd NE

Grand Rapids, Michigan, United States 49525  
(616) 361-2664

Count Name: Blue Star Hwy &  
Wiley Rd  
Site Code:  
Start Date: 10/27/2022  
Page No: 2

### Turning Movement Peak Hour Data (7:30 AM)

Start Time	Wiley Rd Eastbound					Wiley Rd Westbound					Blue Star Hwy Northbound					Blue Star Hwy Southbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
7:30 AM	2	1	2	0	5	4	2	9	0	15	3	46	3	0	52	13	27	5	1	45	117
7:45 AM	5	1	5	0	11	1	2	6	0	9	5	69	4	0	78	6	29	8	1	43	141
8:00 AM	3	1	2	0	6	3	1	10	0	14	4	43	6	0	53	3	35	3	0	41	114
8:15 AM	4	2	2	0	8	5	3	7	0	15	2	54	4	0	60	5	27	10	0	42	125
Total	14	5	11	0	30	13	8	32	0	53	14	212	17	0	243	27	118	26	2	171	497
Approach %	46.7	16.7	36.7	-	-	24.5	15.1	60.4	-	-	5.8	87.2	7.0	-	-	15.8	69.0	15.2	-	-	-
Total %	2.8	1.0	2.2	-	6.0	2.6	1.6	6.4	-	10.7	2.8	42.7	3.4	-	48.9	5.4	23.7	5.2	-	34.4	-
PHF	0.700	0.625	0.550	-	0.682	0.650	0.667	0.800	-	0.883	0.700	0.768	0.708	-	0.779	0.519	0.843	0.650	-	0.950	0.881
Lights	14	5	10	-	29	13	8	31	-	52	13	207	17	-	237	27	114	23	-	164	482
% Lights	100.0	100.0	90.9	-	96.7	100.0	100.0	96.9	-	98.1	92.9	97.6	100.0	-	97.5	100.0	96.6	88.5	-	95.9	97.0
Mediums	0	0	1	-	1	0	0	1	-	1	1	4	0	-	5	0	3	3	-	6	13
% Mediums	0.0	0.0	9.1	-	3.3	0.0	0.0	3.1	-	1.9	7.1	1.9	0.0	-	2.1	0.0	2.5	11.5	-	3.5	2.6
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	1	0	-	1	0	1	0	-	1	2
% Articulated Trucks	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.5	0.0	-	0.4	0.0	0.8	0.0	-	0.6	0.4
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

### Turning Movement Peak Hour Data (4:30 PM)

Start Time	Wiley Rd Eastbound					Wiley Rd Westbound					Blue Star Hwy Northbound					Blue Star Hwy Southbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
4:30 PM	5	0	4	0	9	5	2	5	0	12	3	71	5	0	79	13	69	3	0	85	185
4:45 PM	9	3	4	0	16	3	2	13	0	18	5	99	7	0	111	9	66	9	0	84	229
5:00 PM	9	1	6	0	16	6	1	15	0	22	6	103	6	0	115	7	53	8	0	68	221
5:15 PM	12	2	6	0	20	4	0	13	0	17	6	75	4	0	85	13	60	6	0	79	201
Total	35	6	20	0	61	18	5	46	0	69	20	348	22	0	390	42	248	26	0	316	836
Approach %	57.4	9.8	32.8	-	-	26.1	7.2	66.7	-	-	5.1	89.2	5.6	-	-	13.3	78.5	8.2	-	-	-
Total %	4.2	0.7	2.4	-	7.3	2.2	0.6	5.5	-	8.3	2.4	41.6	2.6	-	46.7	5.0	29.7	3.1	-	37.8	-
PHF	0.729	0.500	0.833	-	0.763	0.750	0.625	0.767	-	0.784	0.833	0.845	0.786	-	0.848	0.808	0.899	0.722	-	0.929	0.913
Lights	34	6	20	-	60	18	4	45	-	67	20	339	22	-	381	38	243	26	-	307	815
% Lights	97.1	100.0	100.0	-	98.4	100.0	80.0	97.8	-	97.1	100.0	97.4	100.0	-	97.7	90.5	98.0	100.0	-	97.2	97.5
Mediums	1	0	0	-	1	0	1	1	-	2	0	6	0	-	6	4	5	0	-	9	18
% Mediums	2.9	0.0	0.0	-	1.6	0.0	20.0	2.2	-	2.9	0.0	1.7	0.0	-	1.5	9.5	2.0	0.0	-	2.8	2.2
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	3	0	-	3	0	0	0	-	0	3
% Articulated Trucks	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.9	0.0	-	0.8	0.0	0.0	0.0	-	0.0	0.4
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

## Synchro Analysis Results

Intersection												
Int Delay, s/veh	2.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	14	5	11	13	8	32	14	219	17	27	125	26
Future Vol, veh/h	14	5	11	13	8	32	14	219	17	27	125	26
Conflicting Peds, #/hr	2	0	0	0	0	2	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	68	68	68	88	88	88	78	78	78	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	1	1	1	1	1	1
Mvmt Flow	21	7	16	15	9	36	18	281	22	28	132	27

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	555	541	146	541	543	294	159	0	0	303	0	0
Stage 1	202	202	-	328	328	-	-	-	-	-	-	-
Stage 2	353	339	-	213	215	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.11	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.209	-	-	2.209	-	-
Pot Cap-1 Maneuver	445	451	906	455	450	750	1427	-	-	1264	-	-
Stage 1	805	738	-	689	651	-	-	-	-	-	-	-
Stage 2	668	643	-	794	729	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	405	435	906	430	434	749	1427	-	-	1264	-	-
Mov Cap-2 Maneuver	405	435	-	430	434	-	-	-	-	-	-	-
Stage 1	795	722	-	680	643	-	-	-	-	-	-	-
Stage 2	618	635	-	755	713	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	12.6		11.9		0.4		1.2	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1427	-	-	515	580	1264	-	-
HCM Lane V/C Ratio	0.013	-	-	0.086	0.104	0.022	-	-
HCM Control Delay (s)	7.6	-	-	12.6	11.9	7.9	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.3	0.1	-	-

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷		↶	↷		↶	↷	
Traffic Vol, veh/h	0	0	12	0	0	0	23	242	0	0	166	0
Future Vol, veh/h	0	0	12	0	0	0	23	242	0	0	166	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	40	-	-	40	-	-	50	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	92	92	92	83	83	83	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	1	1	1	1	1	1
Mvmt Flow	0	0	16	0	0	0	28	292	0	0	175	0

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	523	523	175	531	523	292	175	0	0	292	0	0
Stage 1	175	175	-	348	348	-	-	-	-	-	-	-
Stage 2	348	348	-	183	175	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.11	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.209	-	-	2.209	-	-
Pot Cap-1 Maneuver	468	462	874	462	462	752	1407	-	-	1275	-	-
Stage 1	832	758	-	672	638	-	-	-	-	-	-	-
Stage 2	672	638	-	823	758	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	461	453	874	447	453	752	1407	-	-	1275	-	-
Mov Cap-2 Maneuver	461	453	-	447	453	-	-	-	-	-	-	-
Stage 1	815	758	-	659	625	-	-	-	-	-	-	-
Stage 2	659	625	-	808	758	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.2	0	0.7	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1407	-	-	-	874	-	-	1275	-	-
HCM Lane V/C Ratio	0.02	-	-	-	0.018	-	-	-	-	-
HCM Control Delay (s)	7.6	-	-	0	9.2	0	0	0	-	-
HCM Lane LOS	A	-	-	A	A	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1	-	-	0	-	-

Intersection												
Int Delay, s/veh	3.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	35	6	20	18	5	46	20	349	22	42	253	26
Future Vol, veh/h	35	6	20	18	5	46	20	349	22	42	253	26
Conflicting Peds, #/hr	2	0	0	0	0	2	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	76	76	76	78	78	78	85	85	85	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0	1	1	1	1	1	1
Mvmt Flow	46	8	26	23	6	59	24	411	26	45	272	28

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	883	861	286	865	862	426	300	0	0	437	0	0
Stage 1	376	376	-	472	472	-	-	-	-	-	-	-
Stage 2	507	485	-	393	390	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.11	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.209	-	-	2.209	-	-
Pot Cap-1 Maneuver	269	295	758	276	295	633	1267	-	-	1128	-	-
Stage 1	649	620	-	576	562	-	-	-	-	-	-	-
Stage 2	552	555	-	636	611	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	229	278	758	249	278	632	1267	-	-	1128	-	-
Mov Cap-2 Maneuver	229	278	-	249	278	-	-	-	-	-	-	-
Stage 1	637	595	-	565	551	-	-	-	-	-	-	-
Stage 2	484	544	-	582	587	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	21	15.7	0.4	1.1
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1267	-	-	304	423	1128	-
HCM Lane V/C Ratio	0.019	-	-	0.264	0.209	0.04	-
HCM Control Delay (s)	7.9	-	-	21	15.7	8.3	-
HCM Lane LOS	A	-	-	C	C	A	-
HCM 95th %tile Q(veh)	0.1	-	-	1	0.8	0.1	-

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Vol, veh/h	1	1	22	5	0	10	26	396	8	3	294	0
Future Vol, veh/h	1	1	22	5	0	10	26	396	8	3	294	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	40	-	-	40	-	-	50	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	67	67	67	75	75	75	84	84	84	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	1	1	1	1	1	1
Mvmt Flow	1	1	33	7	0	13	31	471	10	3	320	0

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	871	869	320	881	864	476	320	0	0	481	0	0
Stage 1	326	326	-	538	538	-	-	-	-	-	-	-
Stage 2	545	543	-	343	326	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.11	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.209	-	-	2.209	-	-
Pot Cap-1 Maneuver	274	292	725	269	294	593	1246	-	-	1087	-	-
Stage 1	691	652	-	531	526	-	-	-	-	-	-	-
Stage 2	526	523	-	676	652	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	262	284	725	250	286	593	1246	-	-	1087	-	-
Mov Cap-2 Maneuver	262	284	-	250	286	-	-	-	-	-	-	-
Stage 1	674	650	-	518	513	-	-	-	-	-	-	-
Stage 2	501	510	-	642	650	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	10.9		14.1		0.5		0.1	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1246	-	-	262	679	250	593	1087	-	-
HCM Lane V/C Ratio	0.025	-	-	0.006	0.051	0.027	0.022	0.003	-	-
HCM Control Delay (s)	8	-	-	18.8	10.6	19.8	11.2	8.3	-	-
HCM Lane LOS	A	-	-	C	B	C	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0	0.2	0.1	0.1	0	-	-

Intersection												
Int Delay, s/veh	2.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	17	5	16	14	8	35	16	235	18	30	141	27
Future Vol, veh/h	17	5	16	14	8	35	16	235	18	30	141	27
Conflicting Peds, #/hr	2	0	0	0	0	2	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	68	68	68	88	88	88	78	78	78	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	1	1	1	1	1	1
Mvmt Flow	25	7	24	16	9	40	21	301	23	32	148	28

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	607	592	162	597	595	315	176	0	0	324	0	0
Stage 1	226	226	-	355	355	-	-	-	-	-	-	-
Stage 2	381	366	-	242	240	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.11	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.209	-	-	2.209	-	-
Pot Cap-1 Maneuver	411	422	888	418	420	730	1406	-	-	1241	-	-
Stage 1	781	721	-	666	633	-	-	-	-	-	-	-
Stage 2	645	626	-	766	711	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	369	405	888	389	403	729	1406	-	-	1241	-	-
Mov Cap-2 Maneuver	369	405	-	389	403	-	-	-	-	-	-	-
Stage 1	769	702	-	656	624	-	-	-	-	-	-	-
Stage 2	591	617	-	719	693	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	13.2		12.4		0.5		1.2	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1406	-	-	497	549	1241	-
HCM Lane V/C Ratio	0.015	-	-	0.112	0.118	0.025	-
HCM Control Delay (s)	7.6	-	-	13.2	12.4	8	-
HCM Lane LOS	A	-	-	B	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.4	0.1	-

Intersection												
Int Delay, s/veh	1.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷		↶	↷		↶	↷	
Traffic Vol, veh/h	6	0	25	0	0	0	30	256	0	0	174	4
Future Vol, veh/h	6	0	25	0	0	0	30	256	0	0	174	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	40	-	-	40	-	-	50	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	92	92	92	83	83	83	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	1	1	1	1	1	1
Mvmt Flow	8	0	33	0	0	0	36	308	0	0	183	4

Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	565	565	185	582	567	308	187	0	0	308	0	0
Stage 1	185	185	-	380	380	-	-	-	-	-	-	-
Stage 2	380	380	-	202	187	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.11	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.209	-	-	2.209	-	-
Pot Cap-1 Maneuver	439	437	862	427	436	737	1393	-	-	1258	-	-
Stage 1	821	751	-	646	617	-	-	-	-	-	-	-
Stage 2	646	617	-	805	749	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	430	426	862	402	425	737	1393	-	-	1258	-	-
Mov Cap-2 Maneuver	430	426	-	402	425	-	-	-	-	-	-	-
Stage 1	800	751	-	629	601	-	-	-	-	-	-	-
Stage 2	629	601	-	774	749	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.1	0	0.8	0
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1393	-	-	430	862	-	-	1258	-	-
HCM Lane V/C Ratio	0.026	-	-	0.019	0.039	-	-	-	-	-
HCM Control Delay (s)	7.7	-	-	13.5	9.3	0	0	0	-	-
HCM Lane LOS	A	-	-	B	A	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0.1	-	-	0	-	-

Intersection						
Int Delay, s/veh	1.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	2	7	3	25	13	1
Future Vol, veh/h	2	7	3	25	13	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	9	4	33	17	1

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	59	18	18	0	0
Stage 1	18	-	-	-	-
Stage 2	41	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-
Pot Cap-1 Maneuver	953	1066	1612	-	-
Stage 1	1010	-	-	-	-
Stage 2	987	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	950	1066	1612	-	-
Mov Cap-2 Maneuver	950	-	-	-	-
Stage 1	1007	-	-	-	-
Stage 2	987	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.5	0.8	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1612	-	1038	-	-
HCM Lane V/C Ratio	0.002	-	0.012	-	-
HCM Control Delay (s)	7.2	0	8.5	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection						
Int Delay, s/veh	2.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	1	11	7	27	20	0
Future Vol, veh/h	1	11	7	27	20	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	15	9	36	27	0

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	81	27	27	0	0
Stage 1	27	-	-	-	-
Stage 2	54	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-
Pot Cap-1 Maneuver	926	1054	1600	-	-
Stage 1	1001	-	-	-	-
Stage 2	974	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	920	1054	1600	-	-
Mov Cap-2 Maneuver	920	-	-	-	-
Stage 1	995	-	-	-	-
Stage 2	974	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.5	1.5	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1600	-	1041	-	-
HCM Lane V/C Ratio	0.006	-	0.015	-	-
HCM Control Delay (s)	7.3	0	8.5	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	1	32	50	1	6	1
Future Vol, veh/h	1	32	50	1	6	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	43	67	1	8	1

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	68	0	-	0	113
Stage 1	-	-	-	-	68
Stage 2	-	-	-	-	45
Critical Hdwy	4.1	-	-	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	2.2	-	-	-	3.5
Pot Cap-1 Maneuver	1546	-	-	-	888
Stage 1	-	-	-	-	960
Stage 2	-	-	-	-	983
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1546	-	-	-	887
Mov Cap-2 Maneuver	-	-	-	-	887
Stage 1	-	-	-	-	959
Stage 2	-	-	-	-	983

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1546	-	-	-	902
HCM Lane V/C Ratio	0.001	-	-	-	0.01
HCM Control Delay (s)	7.3	0	-	-	9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection												
Int Delay, s/veh	4.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	38	6	24	19	6	49	25	377	23	45	274	27
Future Vol, veh/h	38	6	24	19	6	49	25	377	23	45	274	27
Conflicting Peds, #/hr	2	0	0	0	0	2	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	76	76	76	78	78	78	85	85	85	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0	1	1	1	1	1	1
Mvmt Flow	50	8	32	24	8	63	29	444	27	48	295	29

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	959	935	310	942	936	460	324	0	0	471	0	0
Stage 1	406	406	-	516	516	-	-	-	-	-	-	-
Stage 2	553	529	-	426	420	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.11	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.209	-	-	2.209	-	-
Pot Cap-1 Maneuver	239	267	735	245	267	605	1241	-	-	1096	-	-
Stage 1	626	601	-	546	538	-	-	-	-	-	-	-
Stage 2	521	530	-	610	593	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	198	249	735	217	249	604	1241	-	-	1096	-	-
Mov Cap-2 Maneuver	198	249	-	217	249	-	-	-	-	-	-	-
Stage 1	612	575	-	533	526	-	-	-	-	-	-	-
Stage 2	448	518	-	551	567	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	24.5		17.4		0.5		1.1	
HCM LOS	C		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1241	-	-	273	384	1096	-
HCM Lane V/C Ratio	0.024	-	-	0.328	0.247	0.044	-
HCM Control Delay (s)	8	-	-	24.5	17.4	8.4	-
HCM Lane LOS	A	-	-	C	C	A	-
HCM 95th %tile Q(veh)	0.1	-	-	1.4	1	0.1	-

Intersection												
Int Delay, s/veh	1.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷		↶	↷		↶	↷	
Traffic Vol, veh/h	7	1	32	5	0	11	38	417	8	3	309	8
Future Vol, veh/h	7	1	32	5	0	11	38	417	8	3	309	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	40	-	-	40	-	-	50	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	67	67	67	75	75	75	84	84	84	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	1	1	1	1	1	1
Mvmt Flow	10	1	48	7	0	15	45	496	10	3	336	9

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	946	943	341	962	942	501	345	0	0	506	0	0
Stage 1	347	347	-	591	591	-	-	-	-	-	-	-
Stage 2	599	596	-	371	351	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.11	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.209	-	-	2.209	-	-
Pot Cap-1 Maneuver	243	265	706	237	265	574	1220	-	-	1064	-	-
Stage 1	673	638	-	497	498	-	-	-	-	-	-	-
Stage 2	492	495	-	653	636	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	230	254	706	213	254	574	1220	-	-	1064	-	-
Mov Cap-2 Maneuver	230	254	-	213	254	-	-	-	-	-	-	-
Stage 1	648	636	-	479	480	-	-	-	-	-	-	-
Stage 2	462	477	-	606	634	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	12.7		14.8		0.7		0.1	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1220	-	-	230	670	213	574	1064	-	-
HCM Lane V/C Ratio	0.037	-	-	0.045	0.074	0.031	0.026	0.003	-	-
HCM Control Delay (s)	8.1	-	-	21.4	10.8	22.4	11.4	8.4	-	-
HCM Lane LOS	A	-	-	C	B	C	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0.2	0.1	0.1	0	-	-

Intersection						
Int Delay, s/veh	1.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	6	7	28	26	2
Future Vol, veh/h	1	6	7	28	26	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	8	9	37	35	3

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	92	37	38	0	0
Stage 1	37	-	-	-	-
Stage 2	55	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-
Pot Cap-1 Maneuver	913	1041	1585	-	-
Stage 1	991	-	-	-	-
Stage 2	973	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	908	1041	1585	-	-
Mov Cap-2 Maneuver	908	-	-	-	-
Stage 1	985	-	-	-	-
Stage 2	973	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	1.5	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1585	-	1020	-	-
HCM Lane V/C Ratio	0.006	-	0.009	-	-
HCM Control Delay (s)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection						
Int Delay, s/veh	2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	1	9	12	34	31	1
Future Vol, veh/h	1	9	12	34	31	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	12	16	45	41	1

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	119	42	42	0	0
Stage 1	42	-	-	-	-
Stage 2	77	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-
Pot Cap-1 Maneuver	882	1034	1580	-	-
Stage 1	986	-	-	-	-
Stage 2	951	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	873	1034	1580	-	-
Mov Cap-2 Maneuver	873	-	-	-	-
Stage 1	976	-	-	-	-
Stage 2	951	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	1.9	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1580	-	1015	-	-
HCM Lane V/C Ratio	0.01	-	0.013	-	-
HCM Control Delay (s)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	1	64	54	5	4	1
Future Vol, veh/h	1	64	54	5	4	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	85	72	7	5	1

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	79	0	-	0	163 76
Stage 1	-	-	-	-	76 -
Stage 2	-	-	-	-	87 -
Critical Hdwy	4.1	-	-	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	1532	-	-	-	832 991
Stage 1	-	-	-	-	952 -
Stage 2	-	-	-	-	941 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1532	-	-	-	831 991
Mov Cap-2 Maneuver	-	-	-	-	831 -
Stage 1	-	-	-	-	951 -
Stage 2	-	-	-	-	941 -

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	9.2
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1532	-	-	-	859
HCM Lane V/C Ratio	0.001	-	-	-	0.008
HCM Control Delay (s)	7.4	0	-	-	9.2
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0