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The Docks Development

EXHIBITS

Executive Summary

The Docks is situated between 1000’ feet of existing Muskegon Lake shoreline on the East and a short walk to Lake Michigan on the West. The Docks emphasizes engagement of the water and open space throughout the pedestrian oriented development. Greenspace, dune ridges and landscaping form the perimeter and buffer the development from neighboring residents.

The Docks’ new 12-acre boat basin takes center stage, providing immediate access to Muskegon Lake and just minutes away from Lake Michigan via the Muskegon channel. This feature provides one mile of new waterfront, varying in width from 140’ to 400’ and contains a variety of shoreline conditions from gradual sloping sand shore to hard seawall, enabling for a variety of uses. Common amenities include boardwalks, parks and trails. Residents may enjoy over-water decks, docks, boathouses. Anchoring the boat basin is a condominium building with a pool and fitness center, pickleball courts, and kayak launch for residents and a neighborhood restaurant for public enjoyment. Waterfront homes make up one area while cottages fronting on pocket parks and boardwalks find their place in another.

The underlying zoning for the property is R-1. As a Planned Unit Development (PUD) The Docks is an innovative design incorporating mixed and varied uses, clustering homes in some areas while providing significant open space in the form of parks, wetlands, walkways and water. While the density allowed under the current concept is 273 dwelling units the conceptual plan is for approximately 240 units, a significant reduction from the 400 plus units allowed with the underlying R-1 zoning.

A public hearing was held in connection with the Preliminary PUD application on October 11, 2018. Feedback from the Planning Commission, staff and the community at large was considered in arriving at this revised plan.

Community outreach through social media and hosted meetings have taken place over the past month.

Changes from the Preliminary PUD

Significant changes to the PUD plan include the connection of the boat basin to Muskegon Lake, a 15% reduction in the number of residential units proposed, the addition of a restaurant and changes to buffering from neighboring residences. A copy of the PUD plan presented to the Planning Commission on October 11, 2018 is under Tab 1 with areas that caused concern hi-lighted in purple. The request for preliminary Planned Unit Development approval was given by the Planning Commission with conditions for the final PUD submission. Below is a summary of the conditions imposed followed by a description of how they were addressed in the current plan.

1) "All access points shall be eliminated with the exception of the proposed road over the dunes at Waterworks Rd."

- The current plan has eliminated the connection at Edgewater and at the south end of Harbour Towne. Through meetings with city staff, including fire marshal Rachel McMillan it was stressed a second access point is mandatory for emergency situations. An emergency access connecting The Docks to Harbour Towne is considered important for both communities. An agreement was reached with the Harbour Towne Condominium Association to allow a gated, emergency access connection at the location shown on the current plan.

2) "Additional road connections as noted in the staff recommendation are eliminated".

- With the exception of the gated-emergency connection noted above, all connections have been eliminated.

3*) "The parking lot north of the condo building should be more separated from the existing homes; The setback should be increased and it should be fully screened with trees to create a buffer"*

- The large 4-lane deep parking lot was eliminated. The remaining single row of parking has been set back further from neighboring houses and landscape buffers have been added.

4) "*The alleys or rear lanes are eliminated along properties on Edgewater St., Wilcox Ave. and Harbour Towne"*

- Then alleys along Harbour Towne have been eliminated. Furthermore, the residential structures in this area have been eliminated and replaced with a wetland buffer.

In addition to the above outlined conditions placed by the Planning Commission there was a great deal of commentary from residents and Planning Commission members about 1) boat traffic ensuing from the connection of the boat basin to the Harbour Towne Marina channel, 2) vehicle traffic on Lakeshore Drive and 3) the impact of the development on the groundwater levels in the area.

- The current plan has moved the connection for the boat basin more than 750 feet from the Harbour Towne Channel to a separate connection to Muskegon Lake, eliminating the concerns about boat traffic in the Harbour Towne Channel.

- Prior to the submission for the Preliminary PUD a traffic study was conducted. That study concluded "*As with existing (2018) conditions, the future year (2025) build-out peak-hour capacity analyses reveal that all study area intersections and the main site driveway operate at acceptable levels of service, with all intersection movements operating at LOS of C or better during both peak-hours. A review of projected queuing at study area intersections and site driveways indicate that no lengthy queues are anticipated under future year (2025) build-out conditions for any of the movements at any of the study area intersections. Spikes in traffic with longer queues may occur during summer peak flow periods."* The changes to the plan, including a single ingress/egress, reduction in number of residential units and the addition of a restaurant called for an update to the traffic analysis. Additionally, traffic data collected on August 11, 2018, a peak traffic scenario the afternoon leading up to "movies on the beach", was substituted for the Labor Day weekend data clouded by inclement weather. The conclusion of the report is that he current site plan for the proposed The Docks PUD generates less traffic than the preliminary PUD (down from 268 trips to 197 trips). Based on the analyses performed in this study, the proposed The Docks development is not anticipated to result in any unacceptable traffic operations under summer Saturday Future Year (2025) Build-Out conditions. No mitigation measures are recommended at any of the three intersections in

the study area under build-out conditions. A complete copy of the Executive Summary from AECOM is under Tab 2.

- Lakeshore Environmental collected hydrogeological information related to the proposed lake construction. This included a review of area water wells, geology, local elevation surveys, site soil borings, the installation of observation wells and groundwater modeling to predict the effects of lake construction on area groundwater resources. Lakeshore Environmental concluded that the proposed lake construction will not have an adverse effect on area groundwater resources. A complete copy of Lakeshore's certification is under Tab 3.

Damfino communicated to the neighboring community through social media and shared the proposed plans for The Docks in meetings with a group of Edgewater residents on May 14th and a group of Bluffton residents on May 22rd. These meetings provided an opportunity for members to see the plans, hear about updated traffic and hydrogeological studies and ask questions of the developer.

The Planned Unit Development Requirements

The Docks has not been designed as a PUD to increase density, or cluster homes to reduce infrastructure cost but rather to take advantage of the reduced area, width and setbacks below the normal minimum to allow homes to be more engaged with the newly created 12-acre boat basin.

Following are the calculation of the density, open space and waterfront access requirements of the zoning ordinance.

POST DEVELOPMENT DENSITY CALCULATION

	TOTALS	NOTES
UNDEVELOPABLE AREAS		
Wetland Area	3.63 Acres	Provided Wetland Area
Surface Water/Floodplain	12.55 Acres	Boat Basin
Street R.O.W	11.85 Acres	
Area of Storm Ponds	1.50 Acres	
Area of Steep Slopes	9.52 Acres	Includes CDA and Banks above wetland
TOTAL UNDEVELOPABLE AREAS	39.06 Acres	
OVERALL AREA OF PROPERTY	76.68 Acres	
NET DEVELOPABLE AREA	37.62 Acres	
ALLOWED NO. OF DWELLING UNITS =	273	NET DEVELOPABLE AREA / MINIMUM LOT SIZE
NET DENSITY	7.3 units per acre	MINIMUM LOT SIZE = 6,000 SFT FOR R-1
PROVIDED NO. OF DWELLING UNITS =	231	
NET DENSITY	6.1 units per acre	

OPEN SPACE CALCULATION

Section 403.4 requires a minimum of 15% of the site to be dedicated common open space.
At least one third of the dedicated open space shall be usable open space.

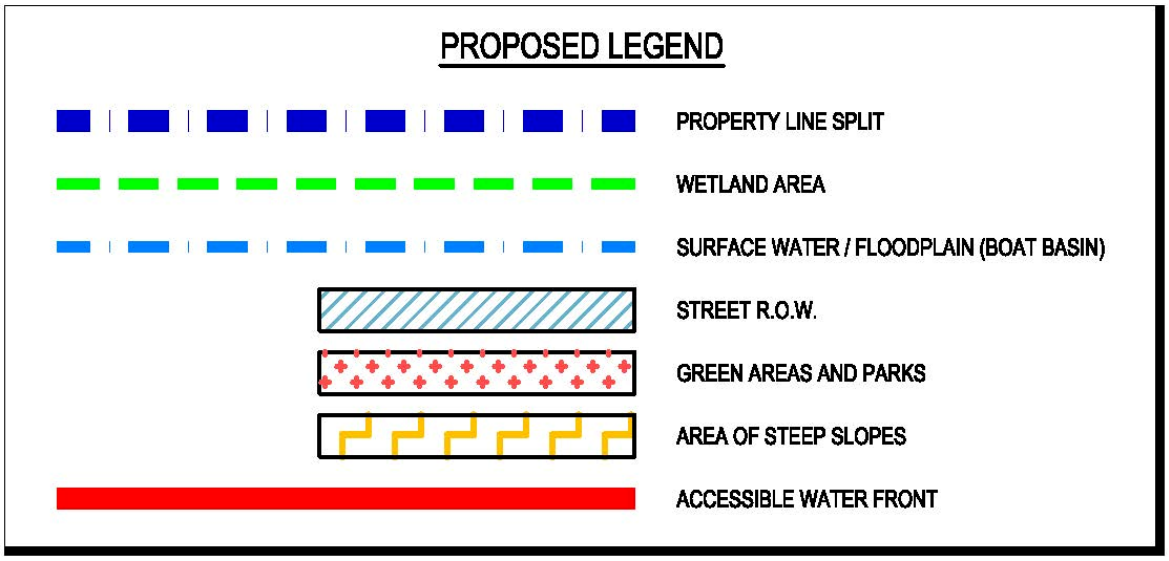
Open Space	
Wetland and Wetland Banks	3.63 Acres
Green Belts and Parks	5.97 Acres
Critical Dune	9.52 Acres
Total Open Space	19.12 Acres
Total Development Area	76.68 Acres
Percentage Open Space	**24.93%**
Usable Open Space (Green Belts and Parks)	15.49 Acres
Percentage Usable Open Space	**81.01%**

WATERFRONT CALCULATION

Section 403.6 requires a minimum of 50% of the shoreline be open space

Accessible Waterfront	
Boardwalk	1,954 feet
Green Belt (Boat Basin)	1,479 feet
Green Belt (Muskegon Lake)	70 feet
Total Accessible Waterfront	3,503 feet
Total Waterfront	
Muskegon Lake	763 feet
Boat Basin	5,513 feet
Total Length of Waterfront	6,276 feet
Percentage Accessible Waterfront	55.82%

The drawing on the following page shows the areas used in the above calculations. Below is the legend for the drawing.



10' WATER EASEMENT
10' HARBOUR TOWNE MARINA SANITARY AND WATER EASEMENT
10' HARBOUR TOWNE MARINA ACCESS EASEMENT
E HARBOUR TOWNE CIR
PIGEON HILL CT
SAND DOCK CT
ACCESSIBLE WATERFRONT
SURFACE WATER / FLOODPLAIN (LIMITS OF BOAT BASIN)
EDGEWATER STREET
BRIGHTON AVE
WINDWARD DRIVE
ARLINGTON AVENUE
PARK PLACE
20' SANITARY EASEMENT
LIMITS OF WETLAND AREA
CRITICAL DUNE - MDEQ DELINEATION
WILCOX AVENUE
AREA EXCLUDED FROM OVERALL PROPERTY CALCULATION
LAKESHORE DRIVE
WATERWORKS ROAD
PLUM AVENUE
WALNUT STREET
CHERRY STREET

PROPOSED LEGEND

- PROPERTY LINE SPLIT
- WETLAND AREA
- SURFACE WATER / FLOODPLAIN (BOAT BASIN)
- STREET R.O.W.
- GREEN AREAS AND PARKS
- AREA OF STEEP SLOPES
- ACCESSIBLE WATER FRONT

N

0 100' 200'

Landscape and Architecture of the Development

The Docks will consist of 143 site condominium lots for detached homes, 67 townhomes and a 30-unit, four-story condominium building. Entering the The Docks from Waterworks you will climb the dedicated access road at a 7% grade and at the crest, be sitting 30 feet above the boat basin with views of the entire development and out to Muskegon Lake. As you descend toward the south end of the boat basin you will pass a variety of townhomes on both sides of the road. In addition to lots with private boat slips there will be approximately 100 boat slips located throughout the basin for residences not able to have private docks.

The south end of the development is the densest and in addition to the townhomes includes the condominium building site with a pool, kayak launch, pickle ball courts and a public plaza. A restaurant with a capacity of approximately 50 seats plus outdoor seating will be located on the waterfront in this area.

Waterfront homes on the east side of the basin will be close to the water and include covered boat wells and private docks. Sidewalks through this east neighborhood lead to a boardwalk fronting the south side of the entrance to the basin from Muskegon Lake. The homes in this area are elevated above the boardwalk. Smaller cottage style homes in the east neighborhood front natural dune landscaping with a boardwalk leading to greenspace on the boat basin.

Along the west side of the basin the architecture transitions from small “fish huts” on the boardwalk to homes with large lots and public greenspace fronting the boat basin. Further north are homes fronting the Harbour Towne Marina channel and homes with private docks fronting The Docks boat basin. Inland are homes front greenbelts leading to the water and at the furthest northeast corner are 10 Muskegon Lake lots.

The Vision of The Docks is set forth in greater detail in the Design Guidelines which are included as Tab 5. Adherence to the Design Guidelines and hence the vision will be controlled through a Design Review Board.

Engineering and Development Strategy

The project is well situated within the City of Muskegon to be serviced by existing infrastructure. We, in collaboration with our development team, have completed a detailed due diligence evaluation of the property and available infrastructure to support it. The project is bordered on all sides with existing development including the Harbour Towne Condominium development and the Lake Michigan Park Plat to the west, the original City of Muskegon Plat to the south, the Edgewater Plat to the East and Harbour Towne Marina and Harbour Towne Beach to the north. This existing development has created a network of roadways and utility corridors that are sufficient to support the proposed development.

The entry into The Docks will be at the intersection of Wilcox Avenue and Plum Street. An additional gated, emergency access will be located on the northwest side of the development across form Harbour Townes's "Sand Dock Ct".

During design and construction of the Harbour Towne development, future development on the property currently proposed as The Docks was accounted for and future utility connection stubs were provided at the south end of that development. With regards to public water supply, there is adequate flow and pressure in the existing network to support the proposed development. The development engineering team has met with City Engineering staff and we have worked with them to identify connection points and main sizes that will strengthen flows and pressures in the area and provide redundancy as required by the Michigan Department of Environmental Quality (MDEQ) and good engineering practices. It should be noted that the water filtration plant is located almost due south of this development. It is our understanding that the City Engineering Department is in agreement with the layout of our proposed piping, but reserves the right to offer further comments during the design and permitting stage.

Sanitary waste from The Docks is proposed to connect to the existing 10-inch sewer stub at the south end of the Harbour Towne Condominiums and to an existing manhole located at the end of Sand Docks Court in the Harbour Towne development. These connection points flow to an existing pump station in Harbour Towne and then is pumped to Wilcox Avenue where it will flow by gravity into the City's system. It is clear that the Harbour Towne lift station was designed to accommodate a future development and that there is extra capacity in the system. The Basis of Design Developed for the existing Harbour

Towne lift station indicates that it has the capacity for about 426 residential equivalent units (REU's). An REU is the amount a normal residential household would be expected to discharge to the system. It has been estimated that there are about 200 REU's connected to the lift station leaving a capacity of 226 REU's. Based on this, the Harbour Towne Lift station would require only minor modifications to accommodate the Docks Development and then only once the final phase of the development commences. Meanwhile, flows to the lift station will be monitored to verify the design assumptions. The engineering team will be working closely with City Staff during detailed design to ensure that the proposed infrastructure meets the City's requirements for development.

The overall design for The Docks is sensitive to impacts on natural resources. The critical dune on the south end of the property has been identified and mapped, with the only anticipated impact being a high-top crossing which will minimize disturbance. Small pockets of wetlands resulting from historical mining activities have been identified on the site. Regulated wetlands have been mapped and any disturbance will be mitigated onsite with the creation of a single great lakes marsh style wetland, increasing the quality and total wetland area. Potential water quality impacts from storm water runoff will be mitigated by using Low Impact Development (LID) techniques with the main effort being infiltration to take advantage of the permeable native sands. The design for the grading and earthwork activities will be to balance cut and fills and confine the work to shaping the ground. There is no plan to export any excavated materials. Utility and Grading Plans as well as the site survey are included under Tab 6.

Project Timeline and Phasing

Damfino obtained a Special Exception Permit from the Michigan Department of Environmental Quality on May 23, 2018. This permit allows for Damfino to remove vegetation, construct an access road and pedestrian walkway and revegetate the disturbed areas of the critical dune. On March 15, 2019 the MDEQ was notified work was commencing and trees were removed from the permitted area. Damfino plans to begin construction of the road in the fall of 2019.

A pre-application meeting was held with the Michigan Department of Environment, Greta Lakes and Energy (EGLE, formerly MDEQ) to discuss the project and the joint permit application was subsequently submitted to the EGLE and United States Army Corps of Engineers. This permit will cover dredging below the ordinary high water mark of Muskegon Lake to connect the new boat basin to the lake, removal of old piling in Muskegon Lake and possible improvements to an existing mooring dolphin for public access, unavoidable impact to small wetlands that were incidentally created as a result of historical mining operations at the site, on-site compensatory wetland mitigation, installation of rip-rap breakwaters at the entrance to the connecting channel, rip-rap placement at various shoreline locations, installation of fixed pier and/or floating docks in the boat basin, kayak/canoe launching areas and marina pump out facilities as may be required.

PHASE IA will begin upon receipt of this permit, anticipated to be in early 2020. This phase includes construction of the boat basin, wetlands, the completion of Public Road A and lots 14 through 79.

PHASE IB includes Public Road E up to lot 88, the condominium site and community amenities at the south end of the basin.

PHASE II is lots 1 through 13 and the townhomes west of Public Road A.

PHASE III is he completion of Public Road E, lots 88-143 and the townhomes east and south of the condo building.

Tab 6 shows the Phasing Plan and an approximate timeline for the project.

TAB 1

MiCOAST | PROPERTIES

THE DOCKS - Project Concept Plans

Muskegon . Michigan

September 20, 2018

HIBLER design studio
9138 Kephart Lane
Berrien Springs . Michigan 49103
p. 269.815.3375

TAB 2

AECOM
3950 Sparks Drive
Grand Rapids, MI 49546
www.aecom.com

616 574 8500 tel
616 574 8542 fax

Memorandum

To	Scott Musselman, Damfino Development LLC	Page 1
CC	Dave Hendershott, Paradigm Design; Michael Bellovich, Sand Products Corp.	
Subject	**Executive Summary - The Docks PUD Traffic Impact Study: Build-Out Analysis** Muskegon, Michigan	
From	Ray Schneider, AICP	
Date	May 22, 2019 *Revised May 24, 2019*	

INTRODUCTION

AECOM previously conducted a traffic impact study for Paradigm Design for The Docks Planned Unit Development (PUD). An Executive Summary dated October 5, 2018 was submitted to Paradigm Design, Damfino Development LLC, and the City of Muskegon. The study encompassed an analysis of traffic conditions for a 299-unit residential development, including the analysis of four intersections.

Recently, an updated development site plan was received from Paradigm Design (dated 02/15/19) for The Docks PUD.

The updated site plan for The Docks PUD includes the following changes:

- A reduction in the number of residential units from 299 to 239 units.
- The addition of a sit-down restaurant with 81 seats.
- Changing the community center/clubhouse to a resident only clubhouse.
- Reduction of the number of residential access points to the development from three to one.

On April 10, 2019 Paradigm Design provided turning movement counts at the Lakeshore Drive/Beach Street intersection to AECOM, collected by the City of Muskegon on a summer Saturday, August 11, 2018. The August Saturday turning movement counts were used to update the traffic impact study analysis for the development. In addition, a roundabout is planned at the Lakeshore Drive/Beach Street intersection in the fall of 2020 and is included in the future analyses of this updated traffic impact study.

PEAK-HOUR TURNING MOVEMENT COUNTS

The City has requested that the portion of the August 2018 peak-hour turning movement counts taken on Lakeshore Drive between Beach Street and Waterworks Road be applied to Lakeshore Drive/Waterworks Road intersection to determine Lakeshore Drive through peak-hour volumes at Waterworks Road. The left-turn and right-turn related counts collected by AECOM for the previous study were used at the Lakeshore Drive/Waterworks Road intersection, as it is unlikely that these side street turning movement volumes would vary appreciably compared to a summer Saturday afternoon peak-hour.

Based on the land use changes for the proposed development listed in the Introduction section above, an update to the traffic study was completed for the future (2025) no-build and future (2025) build-out analyses, at the following three intersections:

1. Lakeshore Drive/Beach Street
2. Lakeshore Drive/Waterworks Road
3. Waterworks Road/Wilcox Avenue/Plum Avenue

A site location map is shown in **Figure 1**. The updated site plan is depicted in **Figure 2**.

TRAFFIC ANALYSIS SCENARIOS

Two (2) analysis periods were completed as part of the study as follows:

- Future Year (2025) No-Build Conditions
- Future Year (2025) Build-Out Conditions

As in the October 5, 2018 traffic study, an annual traffic growth rate of 1.0% was used to estimate growth at the three intersections. This growth rate was used to determine the future year (2025) no-build background traffic volumes. A capacity analysis was performed to determine a baseline scenario (future year (2025) no-build) of how the intersections would operate without The Docks PUD. For future year (2025) build-out conditions, a capacity analysis was performed to determine the impacts the site would have on the roadways and intersections within the study area.

FUTURE YEAR (2025) CONDITIONS

Future Year (2025) No-Build Conditions

The future year (2025) no-build peak-hour capacity analyses reveal that all study area intersections operate at acceptable levels of service, with all intersection movements at the three intersections operating at LOS D or better during the summer Saturday afternoon peak-hour. Future Year (2025) No-Build peak-hour volumes and movement-by-movement LOS values are depicted in **Figure 3.**

Future Year (2025) Build-Out Trip Generation

Traffic generated by the proposed Damfino Development PUD site, based on the updated site plan, was used to measure the impact of the development on the study area intersections for future year (2025) build-out conditions. The proposed The Docks PUD site is projected to generate 197 new trips (121 entering trips, 76 exiting trips) in the future year (2025) build-out summer Saturday afternoon peak-hour, as shown in **Table 1**.

Future Year (2025) Build-Out Trip Distribution/Traffic Assignment

Trip distribution and traffic assignment of the development site traffic was based on existing travel patterns in the study-area, surrounding land uses, access routes, the site driveway location. The trip distribution percentages were applied to the trips in Table 1 to assign the proposed site trips to the adjacent roadway network and the proposed site access point.

Table 1

The Docks Traffic Impact Study
Future (2025) Build-Out Trip Generation

Land Use	Size	Unit of Measure	Summer Saturday Afternoon Peak-Hour Trips		
			Enter	Exit	Total
Single Family Detached Housing	142	units	70	41	**111**
Multi-family Housing (Low-Rise)(1)	67	units	24	14	**38**
Condominiums(2)	30	units	9	6	**15**
Restaurant (High-Turnover Sit Down)	81	seats	23	20	43
	Less: 25% internal trips		*-5*	*-5*	*-10*
	Net Restaurant Trips		18	15	**33**
Total Trip Generation – The Docks			**121**	**76**	**197**

Source: Housing peak-hour trip generation based on peak-hour trip rate used in the October 5, 2018 traffic study.
(1)Townhouses
(2)Condominiums
(3)Assumes a 25% reduction in restaurant-related trips due to internal trips (residents, and patrons arriving by boat).

The following trip distribution percentages were applied to the trips in Table 1 to assign the proposed site trips to the adjacent roadway network.

Traffic Distribution

- 50% to/from the east via Lakeshore Drive
- 35% to/from the south via Beach Street
- 15% to/from the north via Beach Street

Future Year (2025) build-out conditions trip distribution and traffic assignment is depicted in **Figure 4**.

Future Year (2025) Build-Out Conditions

For the future year (2025) build-out analysis it was assumed that the Waterworks Road approach to Lakeshore Drive remains as a shared left-turn/right-turn lane. The future year (2025) build-out peak-hour capacity analyses reveal that for the three study area intersections, all but one intersection movement operates at LOS of D or better during the summer Saturday peak-hour at the three study area intersections. The Waterworks Road approach to Lakeshore Drive operates at LOS E under a shared left-turn/right-turn lane operation for the summer Saturday afternoon peak-hour.

It is important to note that the LOS E for the Waterworks Road shared left-turn/right-turn lane approach to Lakeshore Drive is based on a peak-peak condition: a summer Saturday afternoon that also included a special event at the Pier Marquette beach. Even though the Waterworks Road approach LOS is E (without a separate left-turn lane), the associated average delay per vehicle is 35.2 seconds for the approach, not to be considered an excessive amount of delay considering this is for a summer peak-peak condition.

While LOS D or better is preferred for all movements of an intersection, other factors need to be evaluated to determine if intersection traffic operations are acceptable. Two other measures commonly evaluated are

95th percentile queue length and volume-to-capacity ratio (V/C). The 95th percentile queue represents the queue length wherein any one queue has only a five percent probability of exceeding this value during the peak hour, herein a near maximal queue. The 95th percentile queue for the Waterworks Road approach is only 72 feet (about three vehicles) under a single shared left-turn/right-turn lane arrangement. A V/C ratio greater than 1.00 is an over capacity condition. The V/C ratio for the Waterworks Road approach is only 0.54 with the share lane, well below capacity.

Some motorists who may not want to wait to make the left-turn movement from Waterworks Road may choose to instead enter the right-turn lane to proceed westbound on Lakeshore Drive to the roundabout at Lakeshore Drive/Beach Street and use the roundabout to turn around and proceed back onto eastbound Lakeshore Drive. This would result in reduced delay and queueing for the Waterworks Road left-turn movement but would not necessarily result in changing LOS from E to D for the Waterworks Road approach to Lakeshore Drive.

For the Waterworks Road/Lakeshore Drive intersection, an analysis was run with separate left-turn and right-turn lanes on the Waterworks Road approach to Lakeshore Drive under build-out conditions. With the separate turn lanes, the LOS for the Waterworks Road the average approach delay improves from LOS E to D, (average delay of left-turn and right-turn delays). While the averaged approach delay for left-turns and right-turns is LOS D, more importantly is that with or without separate turn lanes, the left-turn movement remains at LOS E.

However, while the right-turn lane movement improves from LOS E to C with the separate right-turn lane, the LOS remains at E with a separate left-turn lane. While the left-turn lane movement LOS does not improve compared to the shared lane arrangement, the 95th percentile queue and V/C ratio are reduced from three vehicles to two vehicles and from 0.54 to 0.37, respectively. Below is a comparison of traffic capacity and operations with and without separate turn lanes:

Waterworks Road Approach to Lakeshore Drive – Future (2025) Build-Out Analysis

Waterworks Road Movement	Peak-Hour Volume	LOS	Delay (sec)	95th % Queue (vehicles)	V/C Ratio
Shared Left-Turn/Right-Turn lane	93	E	35.2	3	0.54
Left-Turn Only lane	45	E	37.2	2	0.37
Right-Turn Only lane	48	C	15.7	1	0.17
Average of Left-Turn Only & Right-Turn Only	47.5	D	26.0	1.5	0.27

Based on the above future (2025) build-out findings, constructing separate left-turn and right-turn lanes on the Waterworks Road approach to Lakeshore Drive is not recommended as separate turn lanes would not improve LOS for the Waterworks Road left-turn movement and would only marginally reduce the 95th percentile queue and V/C ratio.

Future year (2025) build-out peak-hour volumes and movement-by-movement LOS values for the summer Saturday afternoon peak-hour condition, with maintaining the existing shared left-turn/right-turn lane configuration on Waterworks Road at Lakeshore Drive, are depicted in **Figure 5.**

CONCLUSION

The current site plan for the proposed The Docks PUD generates less traffic than the preliminary PUD (down from 268 trips to 197 trips).

Based on the analyses performed in this study, the proposed The Docks development is not anticipated to result in any unacceptable traffic operations under summer Saturday Future Year (2025) Build-Out conditions. No mitigation measures are recommended at any of the three intersections in the study area under build-out conditions.

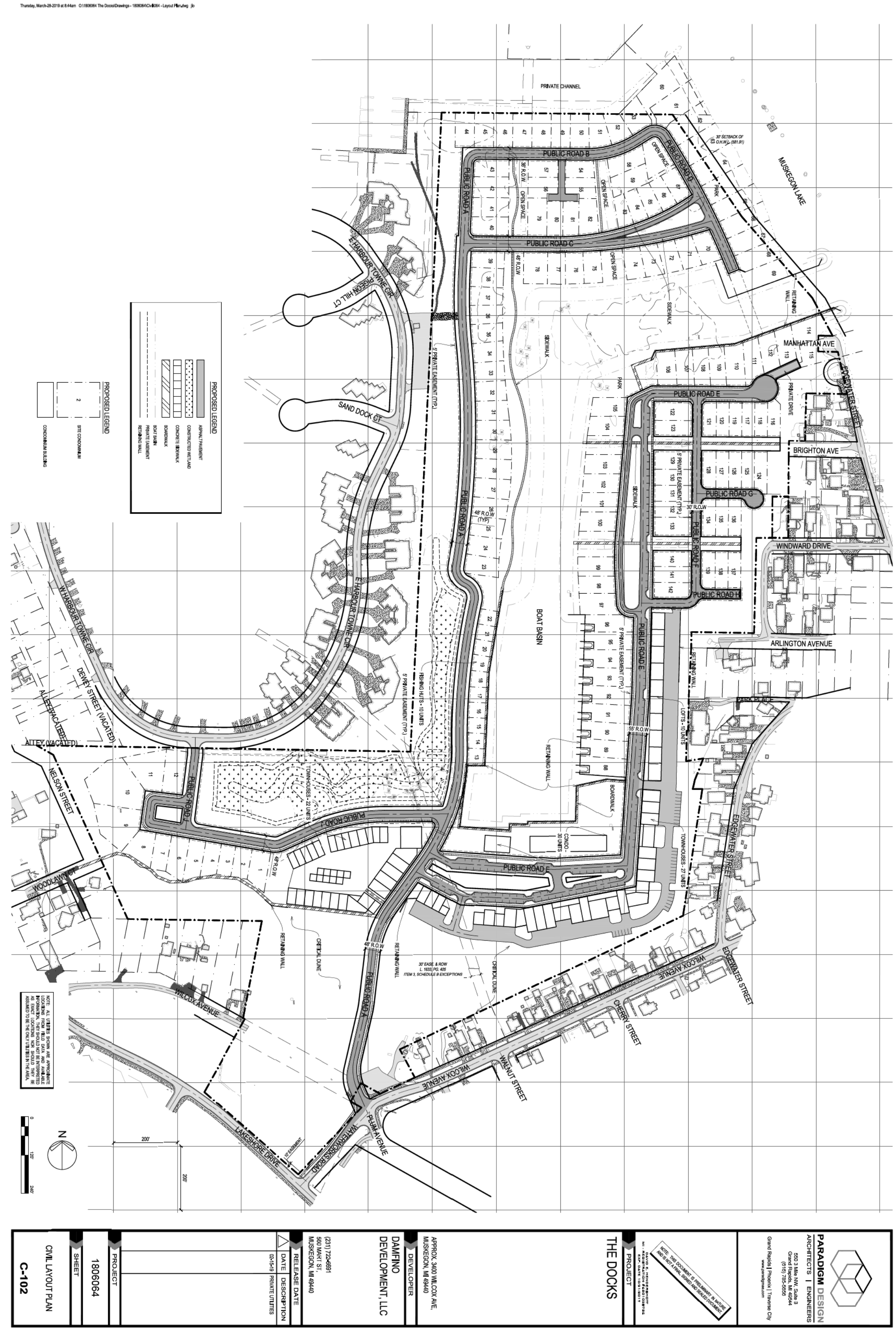
SOURCE: GOOGLE MAPS

LEGEND
○ - STUDY AREA INTERSECTIONS

THE DOCKS PUD TRAFFIC IMPACT STUDY - BUILD-OUT ANALYSIS

	AECOM DAMFINO DEVELOPMENT	STUDY AREA AND SITE LOCATION	FIGURE 1

G:\Grand Rapids\DCS\Projects\TRN\60587531-DamfinoDev\900_CAD_GIS\910_CAD\Traffic\Cadd\Amendment#1 (2019-May)\1_STUDY LOCATION AND STUDY AREA MAP.DGN



THE DOCKS PUD TRAFFIC IMPACT STUDY - BUILD-OUT ANALYSIS

AECOM

DAMFINO DEVELOPMENT

PROPOSED SITE PLAN

FIGURE 2

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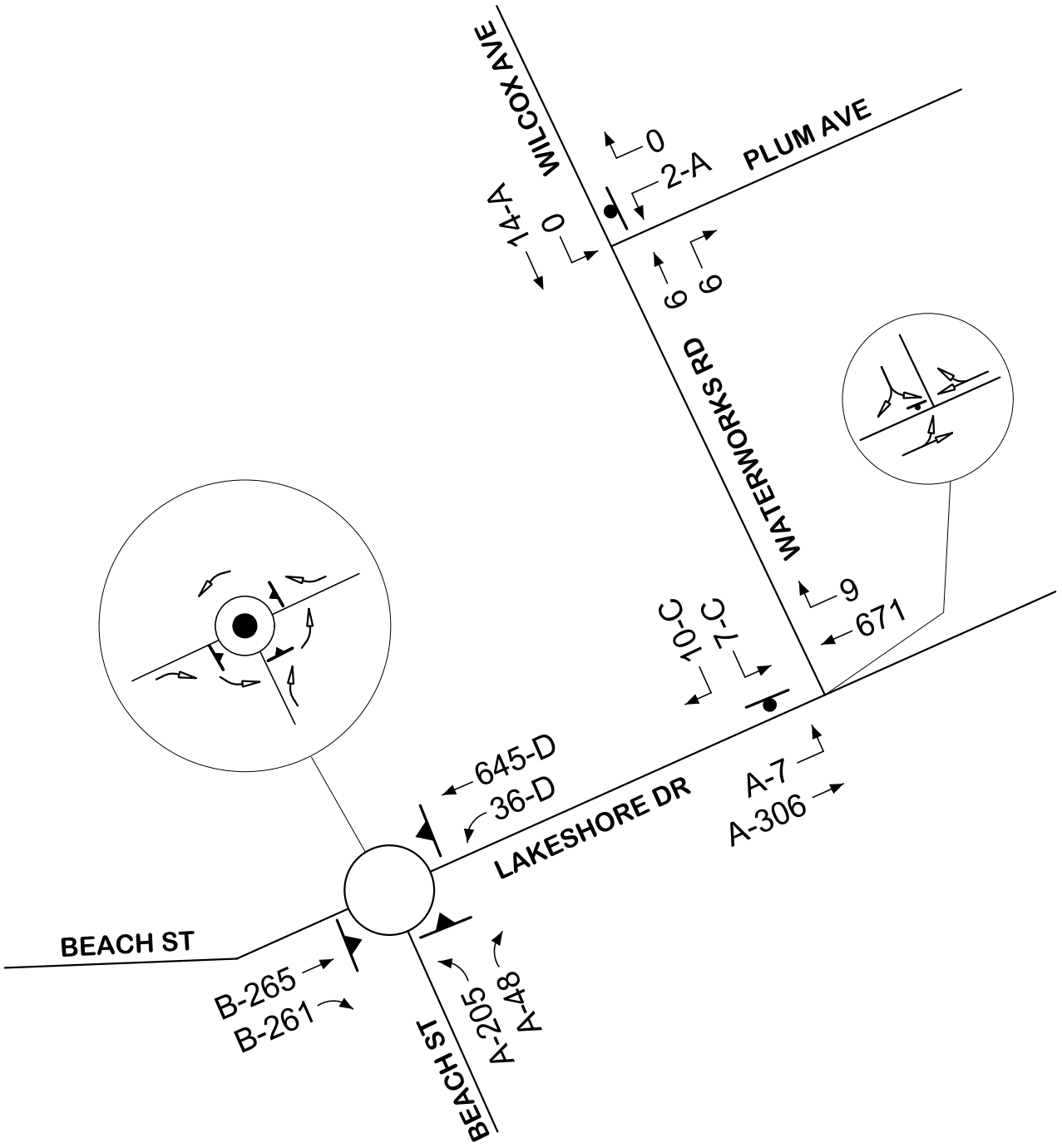
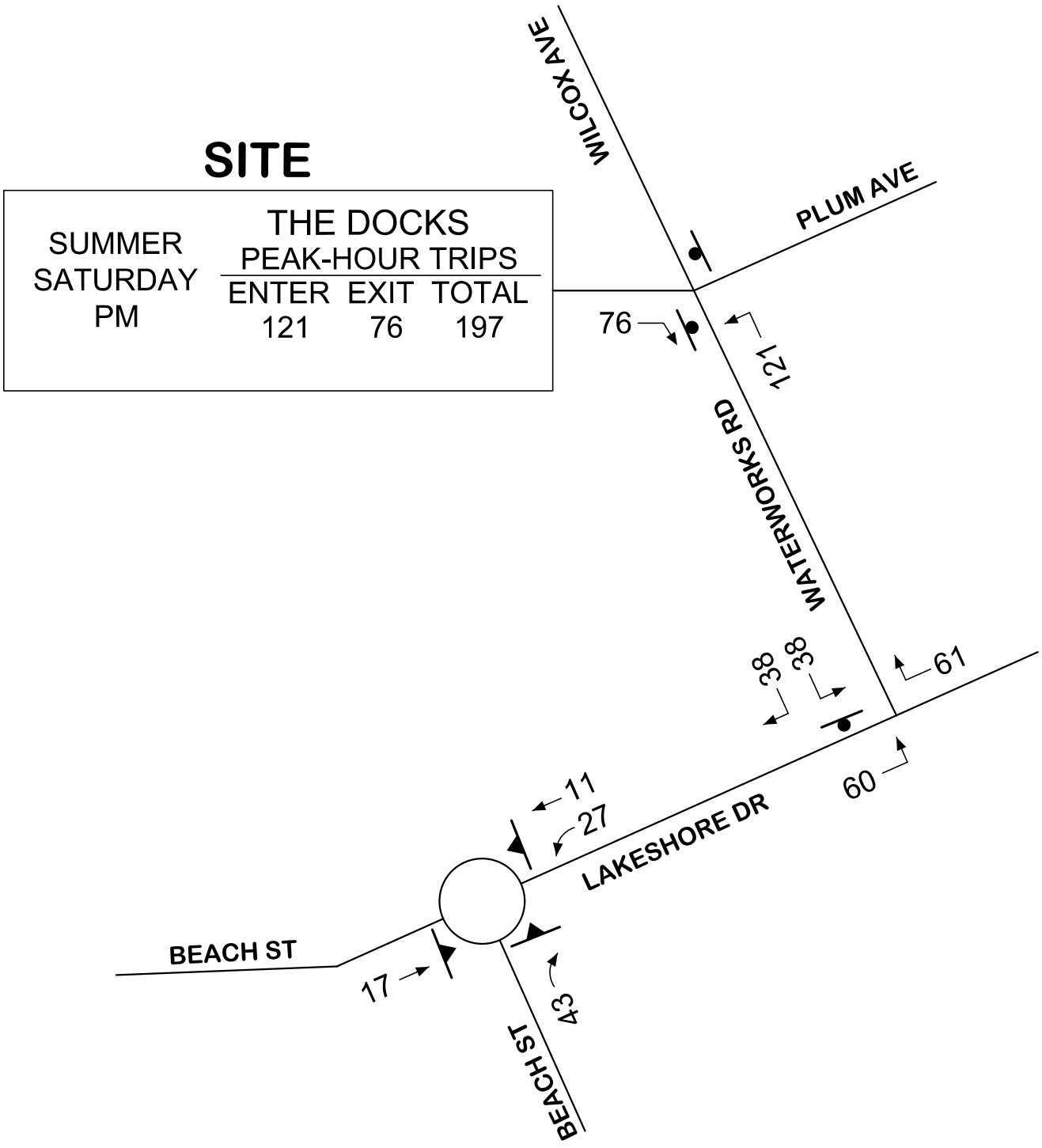


LEGEND
A - LEVEL-OF-SERVICE
- STOP SIGN
- YIELD SIGN
- LANE MOVEMENT
- LANE CONFIGURATION
XXX - SUMMER SATURDAY AFTERNOON PEAK-HOUR VOLUME

THE DOCKS PUD TRAFFIC IMPACT STUDY - BUILD-OUT ANALYSIS

	AECOM DAMFINO DEVELOPMENT	FUTURE (2025) NO-BUILD SUMMER SATURDAY AFTERNOON PEAK-HOUR VOLUMES AND LEVELS OF SERVICE	FIGURE 3

G:\Grand Rapids\DCS\Projects\TRN\60587531-DamfinoDev\900_CAD_GIS\910_CAD\Traffic\Cadd\Amendment#1 (2019-May)\ 3_FUTURE (2025) NO-BUILD SUMMER SAT PM PEAK HR VOLUME & LOS.DGN

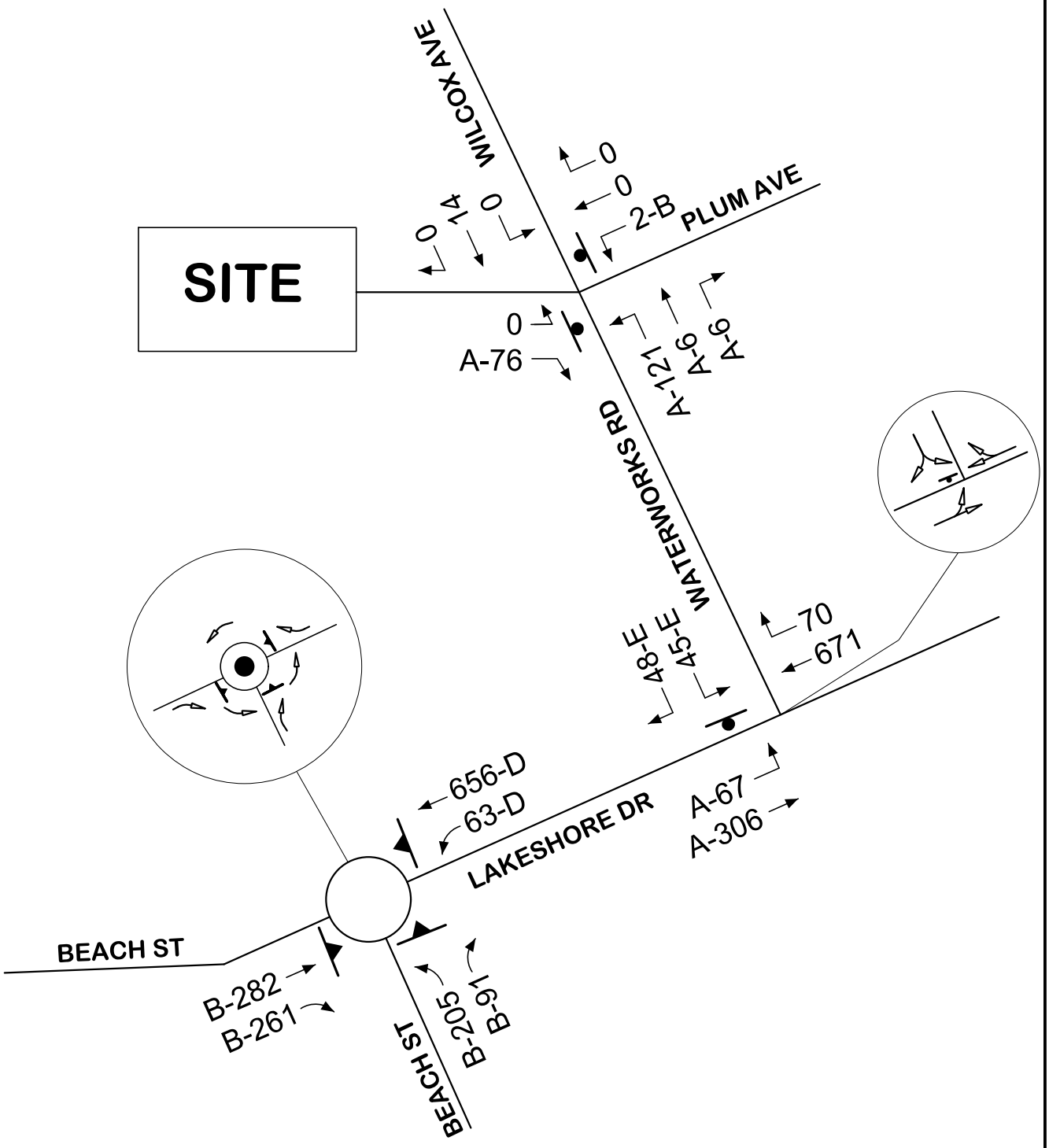


LEGEND	
A	- LEVEL-OF-SERVICE
	- STOP SIGN
	- YIELD SIGN
	- LANE MOVEMENT
XXX	- SUMMER SATURDAY AFTERNOON PEAK-HOUR VOLUME

THE DOCKS PUD TRAFFIC IMPACT STUDY - BUILD-OUT ANALYSIS

	AECOM DAMFINO DEVELOPMENT	FUTURE (2025) BUILD-OUT SUMMER SATURDAY AFTERNOON PEAK-HOUR SITE TRAFFIC ASSIGNMENT	FIGURE 4

G:\GrandRapids\DCS\Projects\TRN\60587531-DamfinoDev_CAD_GIS_CAD\Traffic\Cadd\Amendment #1 (2019-May)-4_FUTURE (2025) BUILD-OUT SUMMER SAT PM PEAK HR SITE TRAFFIC ASSIGN.dgn



LEGEND
A - LEVEL-OF-SERVICE
- STOP SIGN
- YIELD SIGN
- LANE MOVEMENT
- LANE CONFIGURATION
XXX - SUMMER SATURDAY AFTERNOON PEAK-HOUR VOLUME

THE DOCKS PUD TRAFFIC IMPACT STUDY - BUILD-OUT ANALYSIS

	AECOM DAMFINO DEVELOPMENT	FUTURE (2025) BUILD-OUT SUMMER SATURDAY AFTERNOON PEAK-HOUR VOLUMES AND LEVELS OF SERVICE	FIGURE 5

G:\GrandRapids\DCS\Projects\TRN\60587531-DamfinoDev_CAD_GIS_CAD\Traffic\Cadd\Amendment #1 (2019-May)-5_FUTURE (2025) BUILD-OUT SUMMER SAT PM PEAK HR VOLUMES & LOS.dgn

TAB 3

May 15, 2019

Sent via e-mail only: smusselman@sandproductscorp.com

Mr. Scott Musselman
Damfino Development, LLC
560 Mart Street
Muskegon, MI 49440

Re: Hydrogeological Certification
The Docks
1875 Waterworks Road, Muskegon, Michigan

Dear Mr. Musselman:

Per your request, Lakeshore Environmental, Inc. (LEI), has prepared this document to provide a certification from a professional hydrogeologist that there are no predicted significant effects from the construction of the "Docks" development. This certification is based on the extensive collection and analysis of data specific to this project beginning in March 2018. In addition, LEI staff have completed hydrogeological studies on this site and several adjacent properties since at least 1987. During that time, and in consideration of the proposed method of construction, LEI has identified no data that would indicate the development will result in any negative effects to short or long term groundwater elevations, groundwater quantity, groundwater quality, building foundations, surface water quality, wetland resources, or aquatic resources. A summary of this analysis is provided below.

PERTINENT HYDROGEOLOGICAL CONDITIONS

The surficial geology of the region is primarily characterized by sediments deposited during the later stages of the most recent glacial event, known as the Wisconsinan Glacial Period. At the Docks, the uppermost surficial deposit (where present) is dune sand, which was blown up from the shore of proglacial Lake Nipissing approximately 3,000 to 4,000 years before present. The dune sand is present only in the elevated ridges, above an elevation of 605 feet. As a result, the upper dune sand is dry, and contains no groundwater. Located immediately below the dune sand is approximately 20 feet of lacustrine (lake) sand deposited in Glacial Lake Chicago primarily during the Toleston Stage approximately 11,000 years ago when Lake Chicago was at an elevation of 605 feet. Lacustrine sand is also present from approximately 20 feet to 50 feet below grade that was deposited in Lake Chicago during the Calumet Stage, approximately 12,500 years ago when the lake elevation was 620 feet. The majority of the lacustrine sand is saturated and forms the aquifer at the Docks. As it was deposited in a lake, the sand is clean, well sorted, dense, and relatively consistent in size. It is predictable from a dewatering and drawdown calculation perspective.

A total of 25 soil borings have been completed at the Docks to evaluate site stratigraphy. In addition, 9 observation wells have been installed to evaluate groundwater conditions. The soil borings and observation wells verify stratigraphy is consistent with the geological mode of deposition outlined above. Based on observation well data, groundwater flow is consistent with topography and flows to either Lake Michigan or Muskegon Lake depending on the location within the Docks. At the majority of the property groundwater generally flows to the east or northeast toward Muskegon Lake at a low gradient of 0.00037 (ft/ft). The western portion of the Site flows west toward Lake Michigan at a low gradient of 0.00053. The predicted water elevation for the completed lake will be dependent on the elevation of Muskegon Lake, which has an average elevation of approximately 579 feet. However, since Muskegon Lake is presently above average, the predicted elevation of the constructed upland lake is anticipated to be 580 feet for the next several years. The locations of the soil borings and observation wells are illustrated in Figure 1 (Attached).

Based on available information from the Environment, Great Lakes, and Energy (EGLE) *GeoWebFace*, there are 8 well logs present within a quarter mile of the Docks. A review of these well logs reveals the wells are used for irrigation only and are not potable wells. This is supported by the fact that municipal water is available in the vicinity of the Docks, and connection is required by The City of Muskegon. Although no potable wells have been identified, the nearest shallow irrigation wells were evaluated for potential changes in groundwater elevations as a result of the development. The closest well with an available well log is located at 3223 Park Place (330 feet from the proposed upland lake).

With regard to surface water, the Docks is adjacent to Muskegon Lake. At completion, the upland lake will be connected to Muskegon Lake. Lake Michigan is located approximately 2,000 feet west of the proposed upland lake, and the Harbour Towne Marina channel is adjacent to the Docks north property line. The close proximity of these surface waters is the reason the groundwater gradient is very low and it is difficult to change water elevations at adjoining properties.

SHORT TERM CHANGES IN THE GROUNDWATER ELEVATION DURING LAKE CONSTRUCTION

In terms of hydrogeology, short term effects related to lake construction are changes in groundwater elevation due to dewatering and changes in water quality. The water withdrawn from the dewatering process will be discharged directly to Muskegon Lake, in accordance with a surface water discharge permit. Even though all extracted groundwater will become surface water, there will be no actual loss to the regional aquifer due to the large amount of storage provided by Muskegon Lake and Lake Michigan. There will only be a short term lowering of the water table in the immediate vicinity of the project. This lowering will only occur during excavation activities (April through September), and does not occur in the winter, when groundwater levels are anticipated to rapidly equilibrate.

In general, conditions at this location are favorable for dewatering:

1. The aquifer has a low transmissivity which results in a narrow cone of depression that does not extend much laterally,

2. The Docks is adjacent to several large bodies of water which provide aquifer storage and recharge,
3. No residences are located within 300 feet of the dewatering location,
4. No potable wells exist in close proximity,
5. The upland lake will be constructed with progressive dewatering in at least two smaller phases.

To conservatively predict the effects of dewatering for lake construction LEI utilized groundwater modeling (*Visual MODFLOW Pro Version 3.1.0*). Modeling was completed in accordance with EGLE guidelines. Based on the modeling, during the dewatering for construction of the upland lake, there will be less than 0.5 feet of drawdown at the nearest wells (3223 Park Place and 3434 Pigeon Hill). Considering the groundwater is more than 1 foot higher than average, and both wells have a minimum of 14 feet of groundwater above the top of the well screens, a drawdown of this magnitude will not cause a loss in pressure, discharge volume, or groundwater quality.

Similarly, no significant changes in the surface water quality are anticipated during construction activities. The dewatering will occur through horizontal (sock) and vertical well screens that transmit clear groundwater in a manner similar to a residential drinking water well. The water will be routed to Muskegon Lake via a splash pad and rock channel.

LONG TERM EFFECTS OF LAKE CONSTRUCTION

Considering the lake will be connected to Muskegon Lake, and there is very little slope to the groundwater due to the proximity of Lake Michigan and Muskegon Lake, there are no significant predicted long term effects of lake construction. Potential long term effects are changes in groundwater elevation from the conversion of groundwater to surface water, changes in groundwater elevations due to increased evaporation, and changes in water quantity and quality.

Even though the groundwater gradient across the location of the upland lake is less than 2 feet, the long term change in groundwater elevation from lake creation and increased evaporation was predicted utilizing groundwater modeling. Based on the modeling, there will be no long term change in the groundwater elevation of the adjacent properties and local irrigation wells. In addition, it is important to note that the creation of the lake will result in a large increase in storage to the shallow aquifer. This storage will significantly reduce seasonal fluctuations, drought conditions, and drawdown created by pumping of the shallow aquifer for irrigation.

Groundwater quality of the aquifer is likely to be improved due to the construction of the lake. Since the proposed lake is a water table lake, iron and hardness are readily removed as the water in the lake is exposed to the atmosphere where it can readily exchange dissolved oxygen and carbon dioxide. This improved lake water is then returned to the aquifer or Muskegon Lake.

CONCLUSION

LEI collected hydrogeological information relating to the proposed lake construction. This included a review of area water wells and geology, local elevation surveys, site soil borings, the installation of observation wells, data analysis, and groundwater modeling to predict the effects of lake construction on area groundwater resources. No short term or long term flooding,

drawdown, or changes in water quality are predicted as a result of the proposed upland lake creation for the following reasons:

1. All stormwater at the development will be contained within the development and properly managed in accordance with applicable regulations.
2. No potable water wells have been identified within a distance of 2,000 feet.
3. The upland lake is not being excavated through a confining layer or unusual stratigraphy.
4. The upland lake will be connected to Muskegon Lake and subsequently Lake Michigan. The lake water elevation is not being held up by a dam, pump, or a clay liner.
5. The storage and recharge of the aquifer is very high. Dewatering will be localized, with the dewatering discharge to Muskegon Lake (there is no planned discharge to the land surface which creates a potential for flooding).
6. Numerous marinas have been constructed in a manner similar to the Docks and in comparable hydrogeological conditions that have not resulted in flooding or a lowering of the groundwater.
7. Any short term or long term reduction of the groundwater elevation due to lake construction is insignificant based on conservative modeling.
8. The Docks is not located within a wellhead protection area, or in proximity to a site of environmental contamination. As a result, the construction of the lake does not have the potential to capture contaminated groundwater.
9. Construction of the lake requires several permits from EGLE. These permits require an evaluation of the hydrogeological conditions and the proposed effects of lake construction and creation. EGLE completes an extensive review and independent analysis of the data for permit approval.

As a result of the above analysis, LEI concludes and certifies that the proposed lake construction will not have an adverse effect on area groundwater resources. Thank you for your consideration. Please contact me with any questions, comments, or concerns regarding this information.

Sincerely,
Lakeshore Environmental, Inc.

Kurt C. Koella, CPG #8645
Senior Hydrogeologist

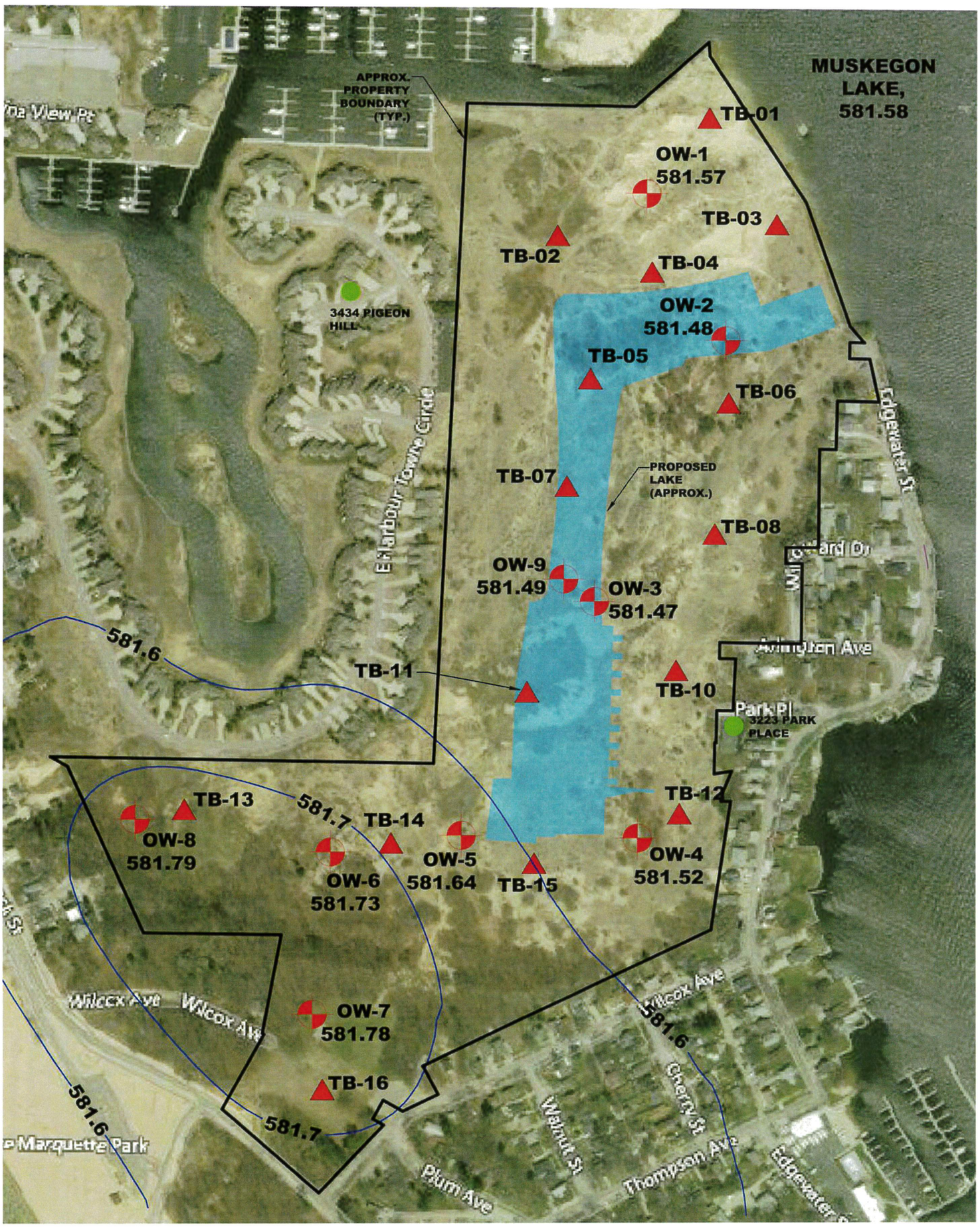
Email: KurtK@My-LEI.com

Attachments: Figure 1: Soil Boring and Observation Well Location Map

Cc: File – LEI (18-609/ck:/kck)

Attachment A

Figure 1 Soil Boring and Observation Well Locations



NOTE: AERIAL IMAGERY FROM BING, DATED 05/01/15,
MUSKEGON LAKE & OBSERVATION WELL ELEVATIONS 01/16/19

LEGEND

- SOIL BORING BY SOILS & STRUCTURES
- LEI OBSERVATION WELL
- NEAREST WATER WELL PER GEOWEBFACE (ALL IRRIGATION WELLS)
- 581.7 GROUNDWATER ELEVATION (FEET)

DWN BY: DNP

0 300' 600'
SCALE: 1" = 300'

Lakeshore Environmental, Inc.
Scientists | Engineers | Planners

SOIL BORINGS AND OBSERVATION WELLS
DAMFINO DEVELOPMENT, LLC

1875 WATERWORKS ROAD
MUSKEGON, MICHIGAN 49441

JOB 18-609	MAY 2019	FIGURE 1

TAB 4

SITE LIGHTING:

UNIVERSE BRAND BY ARCHITECTUAL AREA LIGHTING

STREET LIGHTS 14-16', FULL CUT OFF FIXTURES

BOLLARD LIGHTS

BUILDING FIXTURES

PLANT SCHEDULE

TREES	CODE	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	QTY
	AS	Acer saccharum	Sugar Maple	2.5" Cal.	B&B	48
	BP	Betula papyrifera	Paper Birch	2.5" Cal.	B&B	18
	PO	Platanus occidentalis	American Sycamore	2.5" Cal.	B&B	46
	PP	Populus balsamifera	Balsam Poplar	2.5" Cal.	B&B	14
	TC	Tilia cordata	Littleleaf Linden	2.5" Cal.	B&B	59
	ZG	Zelkova serrata `Green Vase`	Sawleaf Zelkova	2.5" Cal.	B&B	23

EVERGREEN	CODE	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	QTY
	PG	Picea glauca	White Spruce	6-7' Ht	B&B	47
	PB	Picea glauca densata	Black Hills Spruce	6-7' Ht	B&B	44

CROSS SECTION A

CROSS SECTION B

NOTE: ALL UTILITIES SHOWN ARE APPROXIMATE LOCATIONS FROM FIELD DATA AND AVAILABLE INFORMATION. THEY SHOULD NOT BE INTERPRETED AS EXACT LOCATIONS NOR SHOULD THEY BE ASSUMED TO BE THE ONLY UTILITIES IN THE AREA.

N

0 120' 240'

PARADIGM DESIGN
ARCHITECTS | ENGINEERS
550 3 Mile NW, Suite B
Grand Rapids, MI 49544
(616) 785-5656
Grand Rapids | Phoenix | Traverse City
www.paradigmae.com

STATE OF MICHIGAN
DAVID E. HENDERSHOTT
ENGINEER
No. 38725
PROFESSIONAL ENGINEER
5-21-19

DAVID E. HENDERSHOTT
MI - REGISTRATION #6201038725
EXP. DATE 10/31/2019

PROJECT

THE DOCKS

APPROX. 3400 WILCOX AVE,
MUSKEGON, MI 49440

DEVELOPER

DAMFINO
DEVELOPMENT, LLC

(231) 722-6691
560 MART ST,
MUSKEGON, MI 49440

RELEASE DATE

	DATE	DESCRIPTION
	05-23-19	FINAL PUD SUBMITTAL

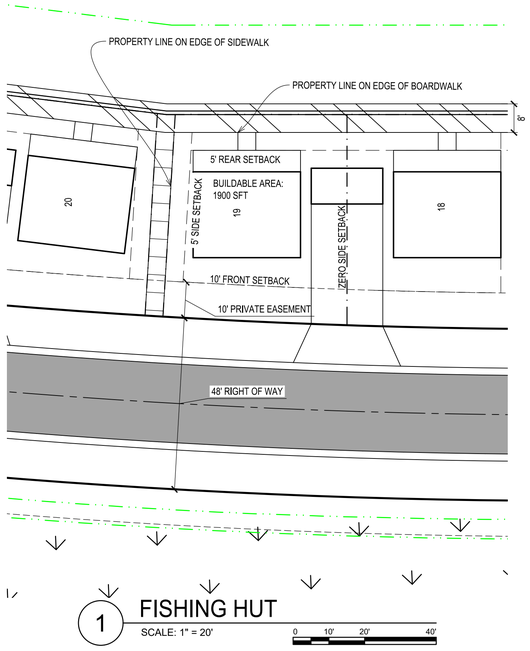
PROJECT

1806064

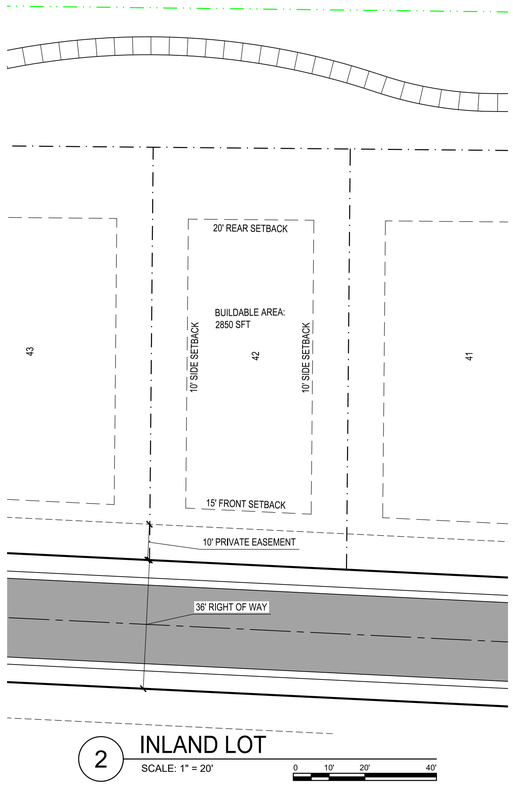
SHEET

LANDSCAPE PLAN AND SITE AMENITIES

L-101



1 FISHING HUT
SCALE: 1" = 20'
0 10' 20' 40'



2 INLAND LOT
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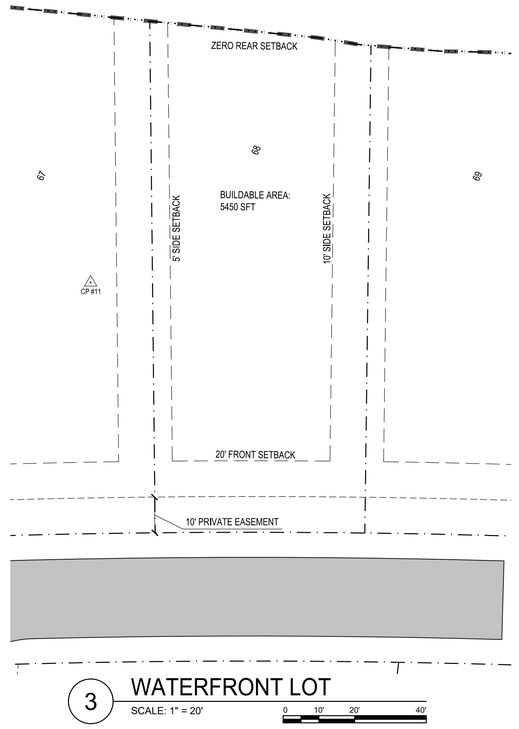

3 WATERFRONT LOT
SCALE: 1" = 20'
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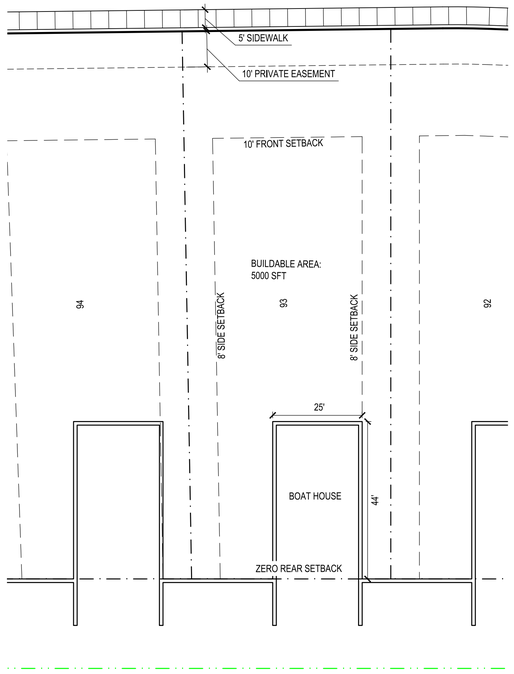
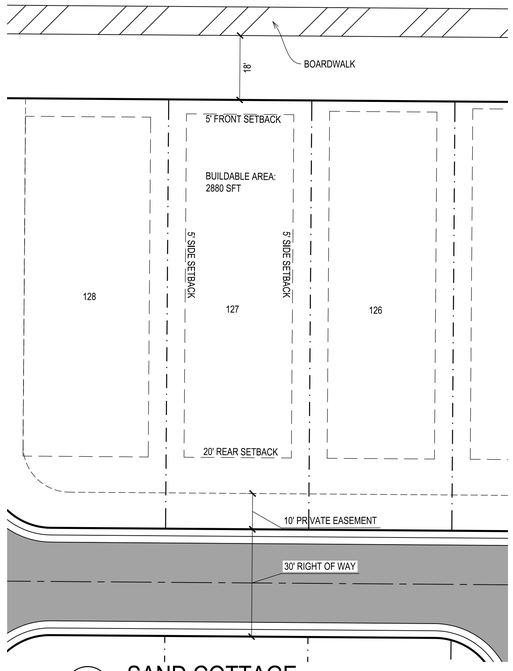


4 BOATHOUSE LOT
SCALE: 1" = 20'
0 10' 20' 40'



5 SAND COTTAGE
SCALE: 1" = 20'
0 10' 20' 40'

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Grand Rapids, MI 49544
(616) 785-5656
Grand Rapids | Phoenix | Traverse City
www.paradigmae.com

DAVID E. HENDERSHOTT
MI - REGISTRATION #6201028725
EXP. DATE 10/31/2019

PROJECT

THE DOCKS

APPROX. 3400 WILCOX AVE,
MUSKEGON, MI 49440

DEVELOPER

DAMFINO
DEVELOPMENT, LLC

(231) 722-6691
560 MART ST,
MUSKEGON, MI 49440

RELEASE DATE

	DATE	DESCRIPTION

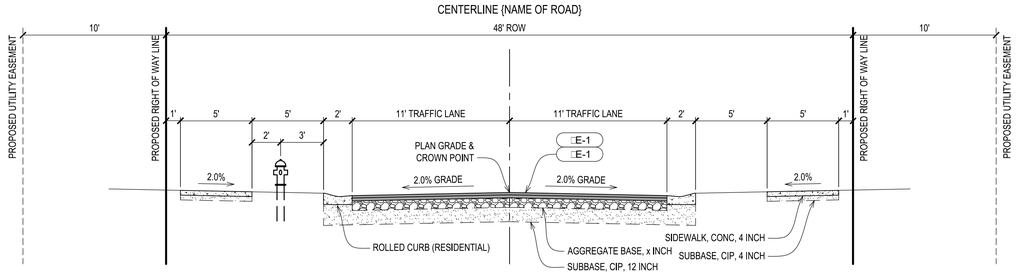
PROJECT

1806064

SHEET

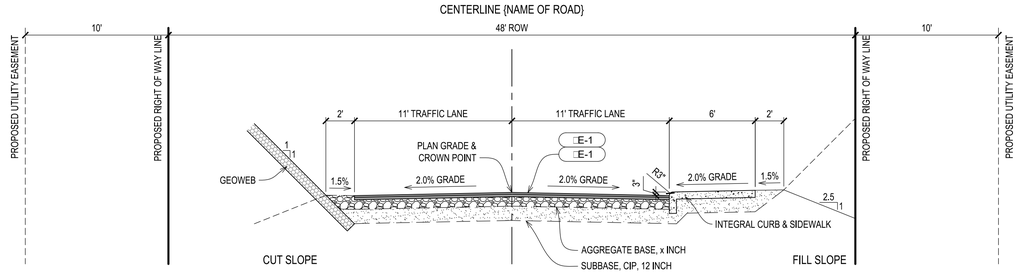
CIVIL TYPICAL LOTS

C-004



PR□P□SED □□PICA□ SEC□I□N - PRIMAR□ S□REE□

SCALE 1" = 5'



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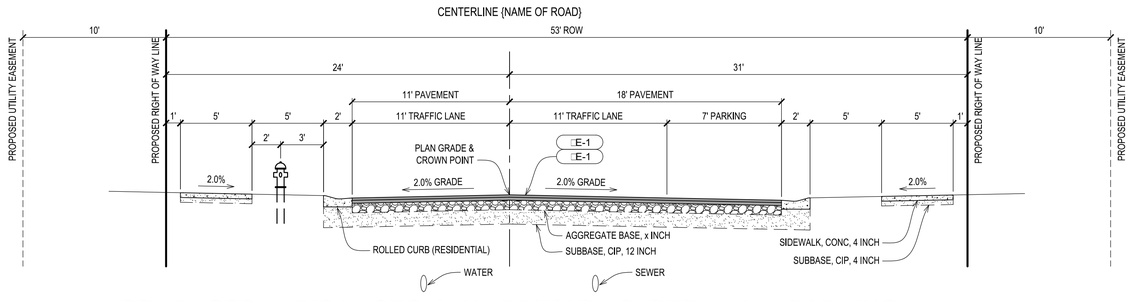

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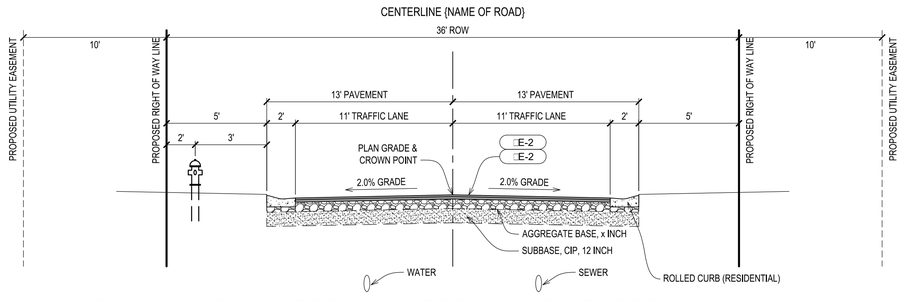

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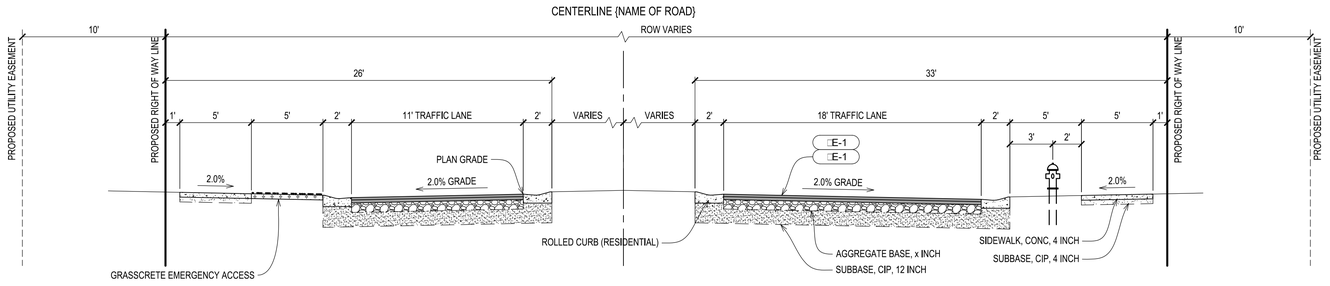
SCALE 1" = 5'



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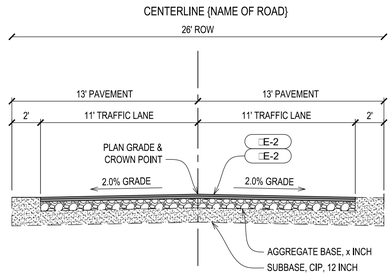
SCALE 1" = 5'



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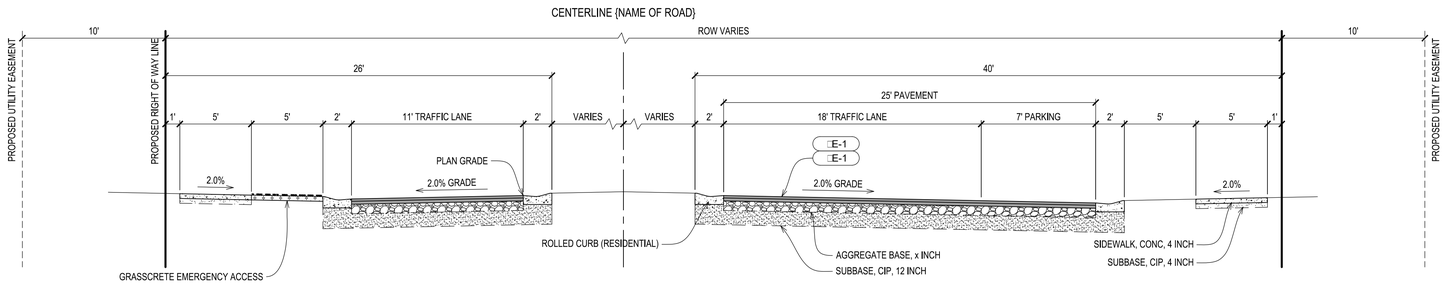

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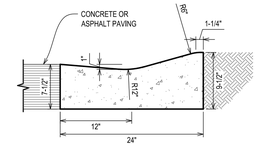
SCALE 1" = 5'



NOTES 1) CONTRACTION JOINTS SHALL BE PLACED EVERY 10 FT.
2) EXPANSION JOINTS SHALL BE PLACED AT 350 FT. MIN.
AND AT ALL RADIUS POINTS.
3) CONCRETE SHALL CONFORM TO M.D.O.T. SPEC. 802.

24" MOUNTABLE CONCRETE CURB & GUTTER

NOT TO SCALE

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ARCHITECTS | ENGINEERS
□□0 □M□□NW□S□□□B
Gr□□d R□□d□MI □□□□□
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DAVID E. HENDERSHOTT
MI - REGISTRATION #6201038725
EXP. DATE 10/31/2019

PROJECT

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DEVELOPER

DAMFINO
DEVELOPMENT, LLC

(231) 722-6691
560 MART ST,
MUSKEGON, MI 49440

RELEASE DATE

	DATE	DESCRIPTION
	04-23-19	CITY REVIEW MEETING

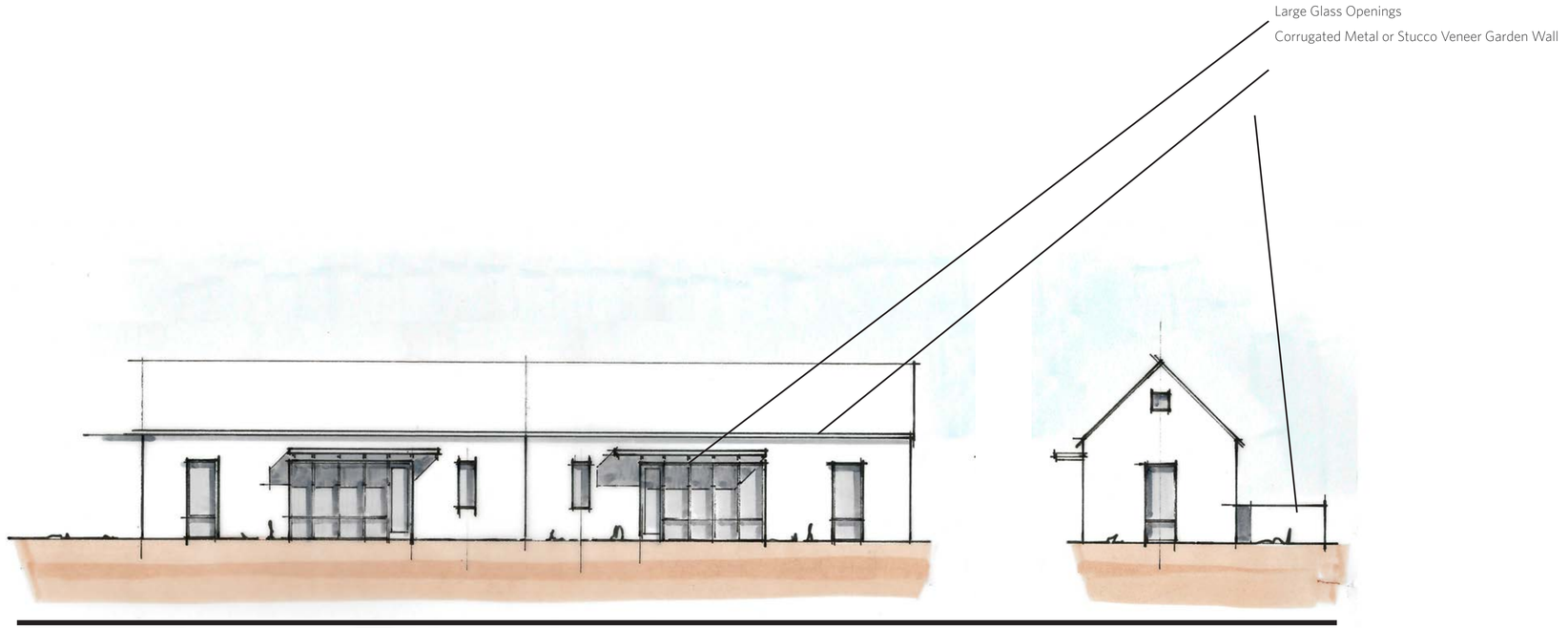
PROJECT

1□0□0□□

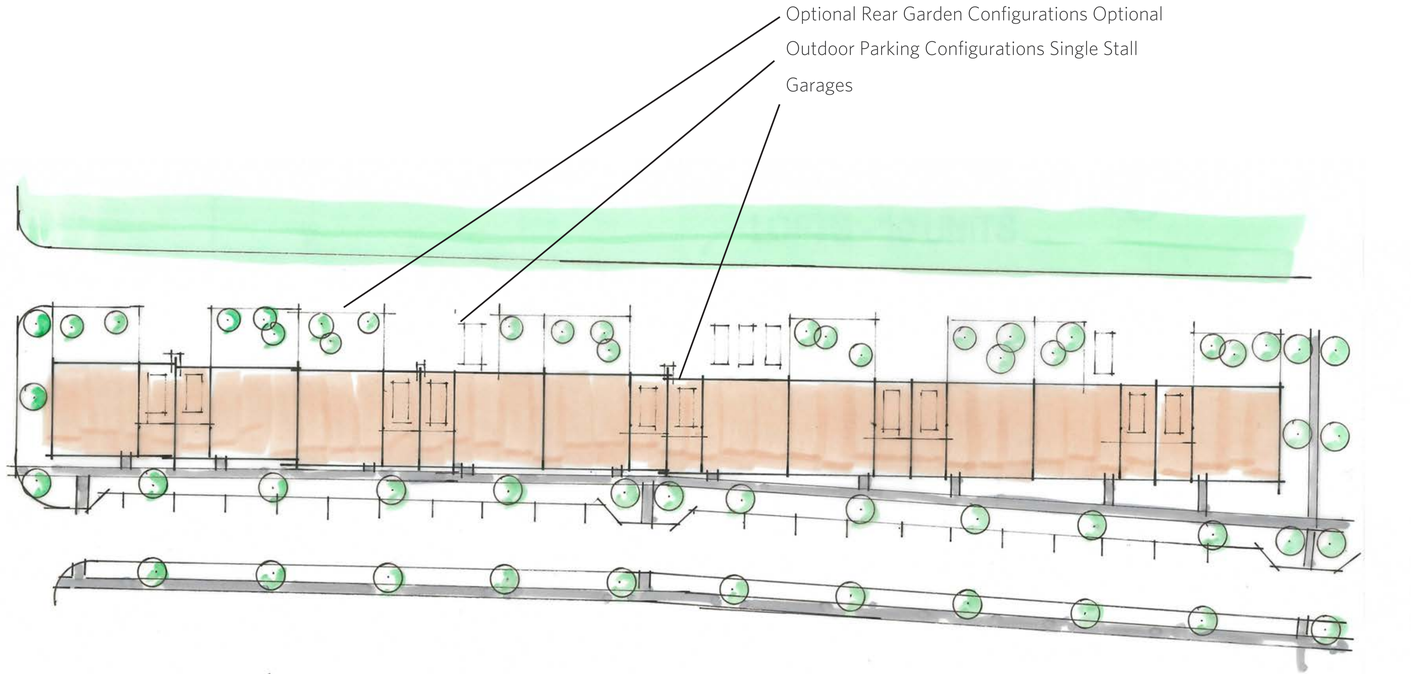
SHEET

TYPICAL SECTIONS

C-003

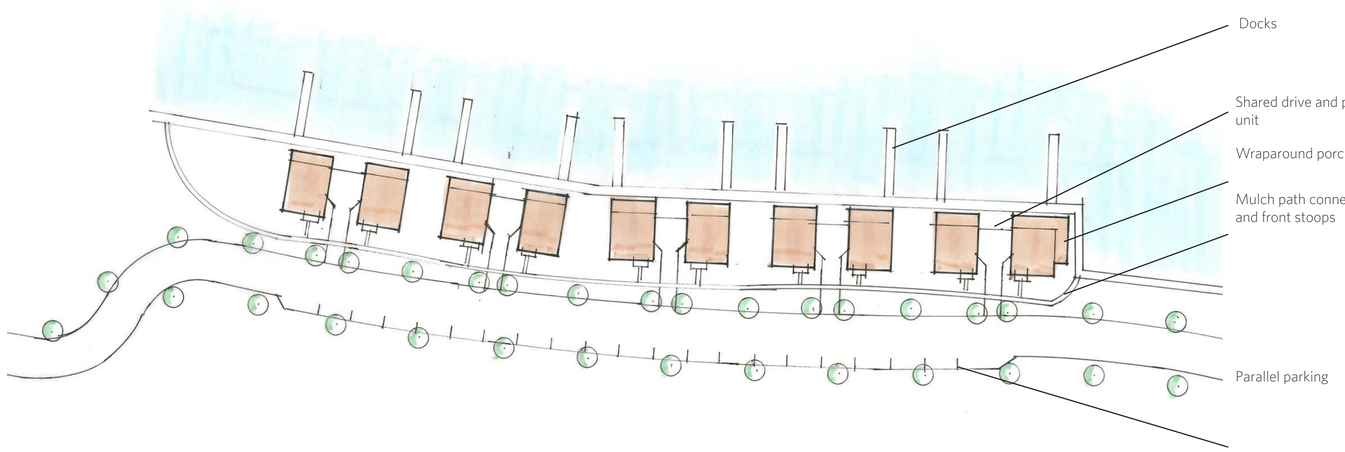


Loft Facade Studies



Street Facade

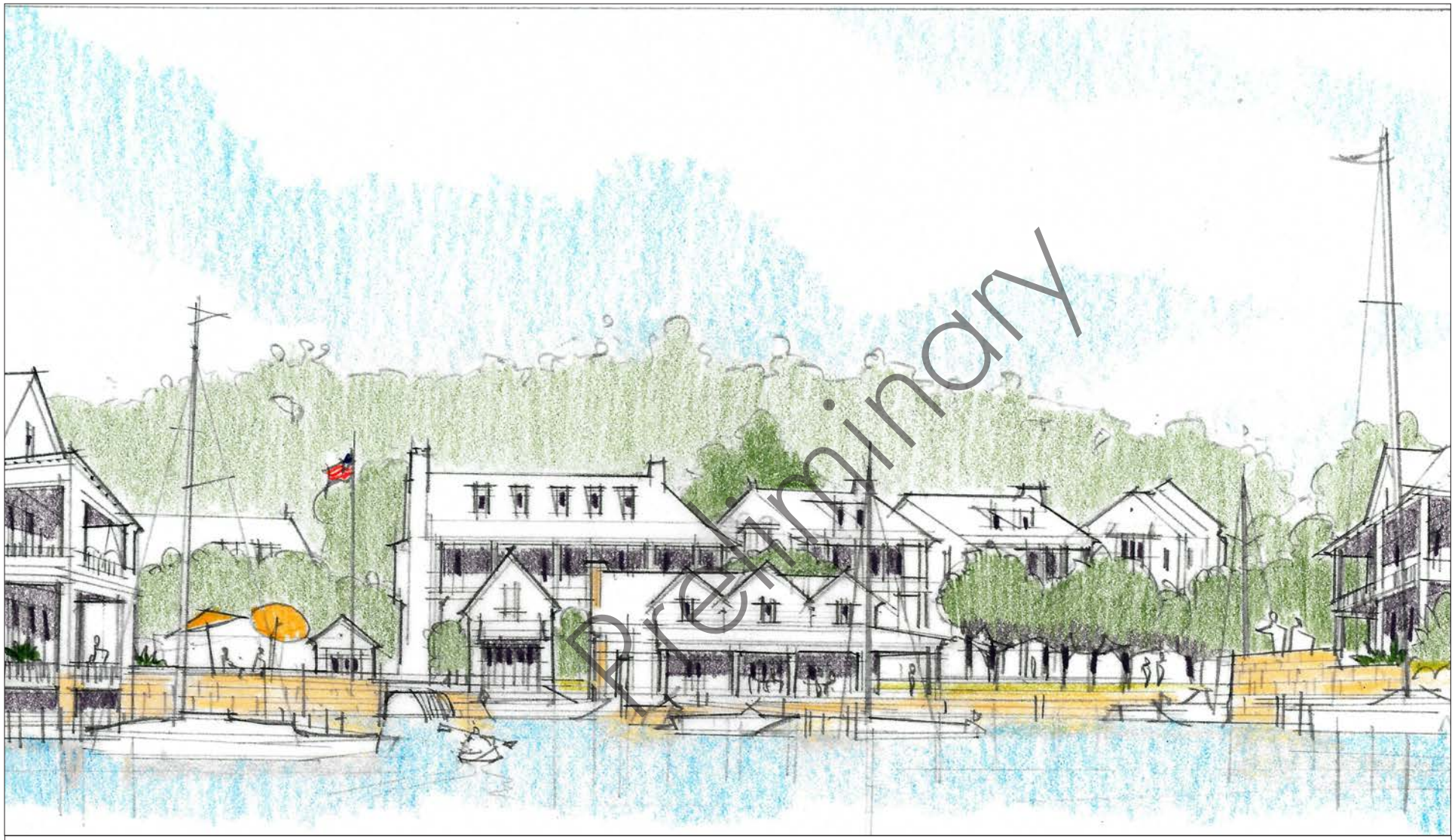
Channel Facade



Fishing Hut Site Plan & Facade Studies

Townhouse Facade Study

TAB 5



The Docks by Damfino Development

Design Guidelines

MAY 21, 2019

THE DOCKS

Table of Contents

The Vision of The Docks

A Waterfront Neighborhood

One inspiration for The Docks is the historic Wequetonsing Association in Harbor Springs, Michigan.

The Docks envisions diverse residential opportunities, including townhouses with a complimentary character.

Historic Old St. Joseph includes excellent examples of neighborly architecture shaping great streets.

Distinctive Place-based Architecture

The Docks by Damfino Development seeks to build on the best architecture found in traditional urban neighborhoods and resort communities of western Michigan. Their architectural palette is diverse and pure categories of style are not the historic norm, nor the vision of The Docks. But the identity of these communities still has a defined character established by a great diversity of forms within a relatively narrow range. At The Docks, that range is best described by the following three "anchor styles" found in Michigan:

1. Coastal Style - a broad style category which is associated with coastal lifestyles. It tends to be simple, fresh, joyful, and emphasizes outdoor life, generous porches and openings. It also offers a relaxed but stylish character associated with cottages near the water.
2. Midwestern Craftsman - a local variation of the national Craftsman movement. It tends to be practical, elegant, tailored, and emphasizes neighborliness. It holds classically refined porches and openings, and a restrained but refined character associated with great city neighborhoods.
3. Shingle Style - a well-known historic style originally from the East Coast. It tends to be generous, playful, bold, and emphasizes an irregular but sophisticated character defined by both classicism and shingle vernacular.

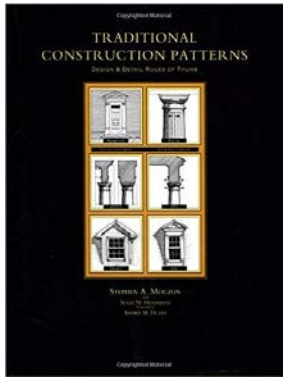
How to use these Guidelines

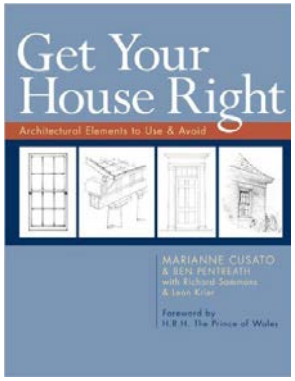
While keeping the vision of the neighborhood in mind, designers are asked, first, to understand the lot type and its specific guidelines. Second, the general guidelines introduce a broad range of design criteria that should be reviewed before drawing submission. Third, consult the *Special Features Regulating Plans* to determine whether any unique requirements exist for the lot under consideration.

These guidelines assume that the designer has expertise in the design of traditional architecture with historic vernacular and classical detailing. They provide a reference for minimum standards and basic expectations; many of which would naturally be satisfied by such an experienced designer. Designers who lack this specific type of experience should consult the following two books which serve as key references for general design criteria at The Docks:

Traditional Construction Patterns
by Stephen A. Mouzon
McGraw-Hill, New York, 2004

Get Your House Right
by Marianne Cusato & Ben Pentreath
Sterling Publishing, New York, 2007

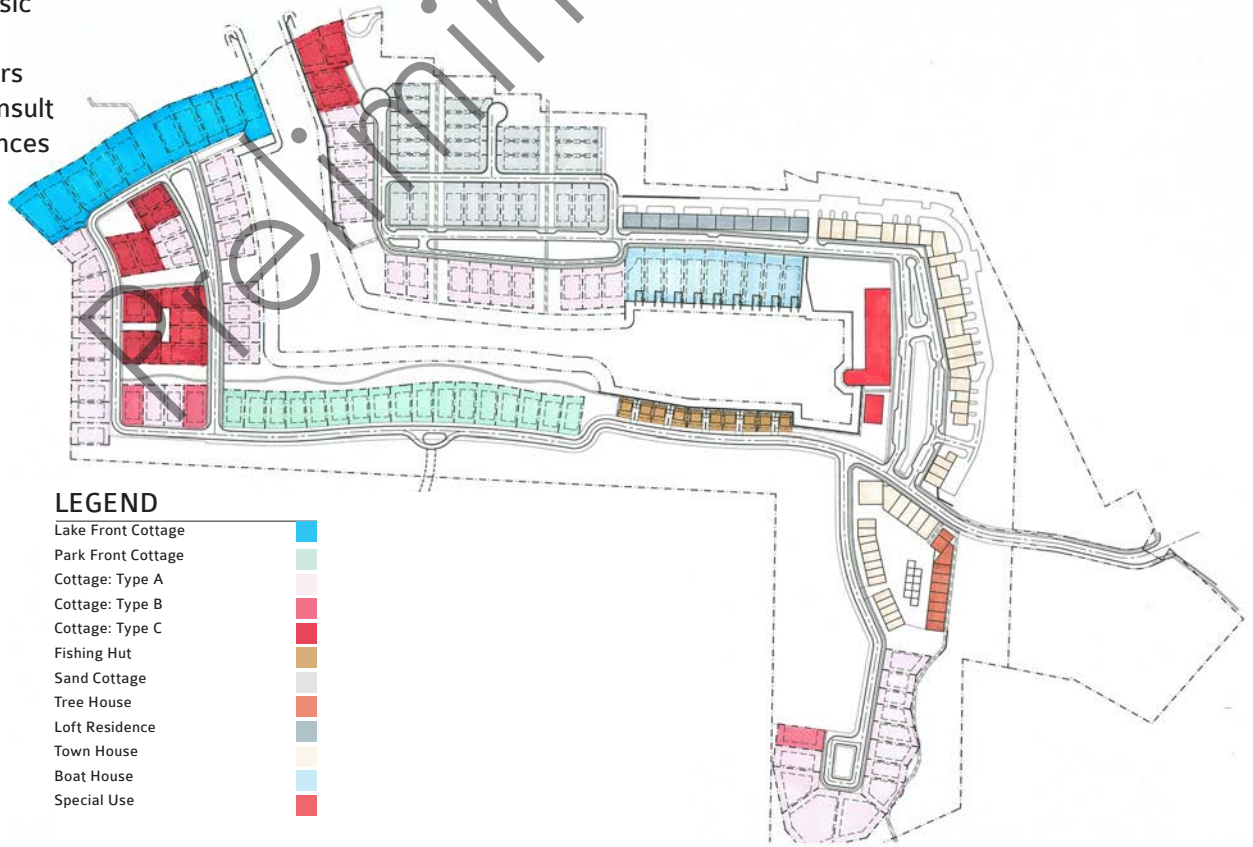




The images within these guidelines are intended to help the designer understand the general design direction preferred at The Docks and loosely set the general minimum expectations. However, the images do not fully reveal the opportunities and design potential. Therefore, they should be seen as enabling rather than restrictive. In the event that an image conflicts with a written guideline, the written guideline shall remain in force.

During the design review process, it is the role of the town architect to interpret and use the guidelines to safeguard the overarching vision of place making and great architecture at The Docks.

The plan below identifies the location of the diverse lot types, which are described on the following pages.

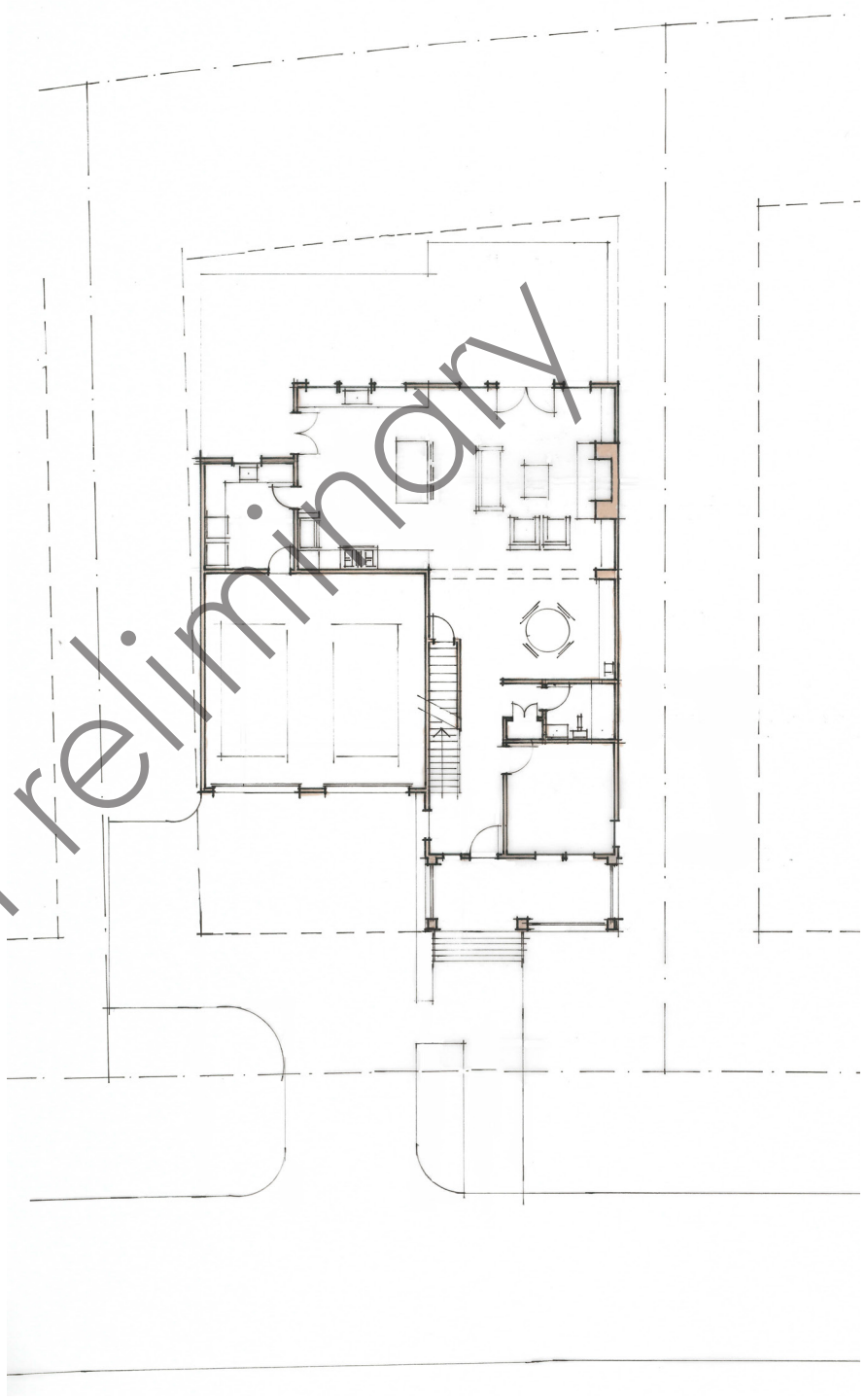


Lake Front Cottage

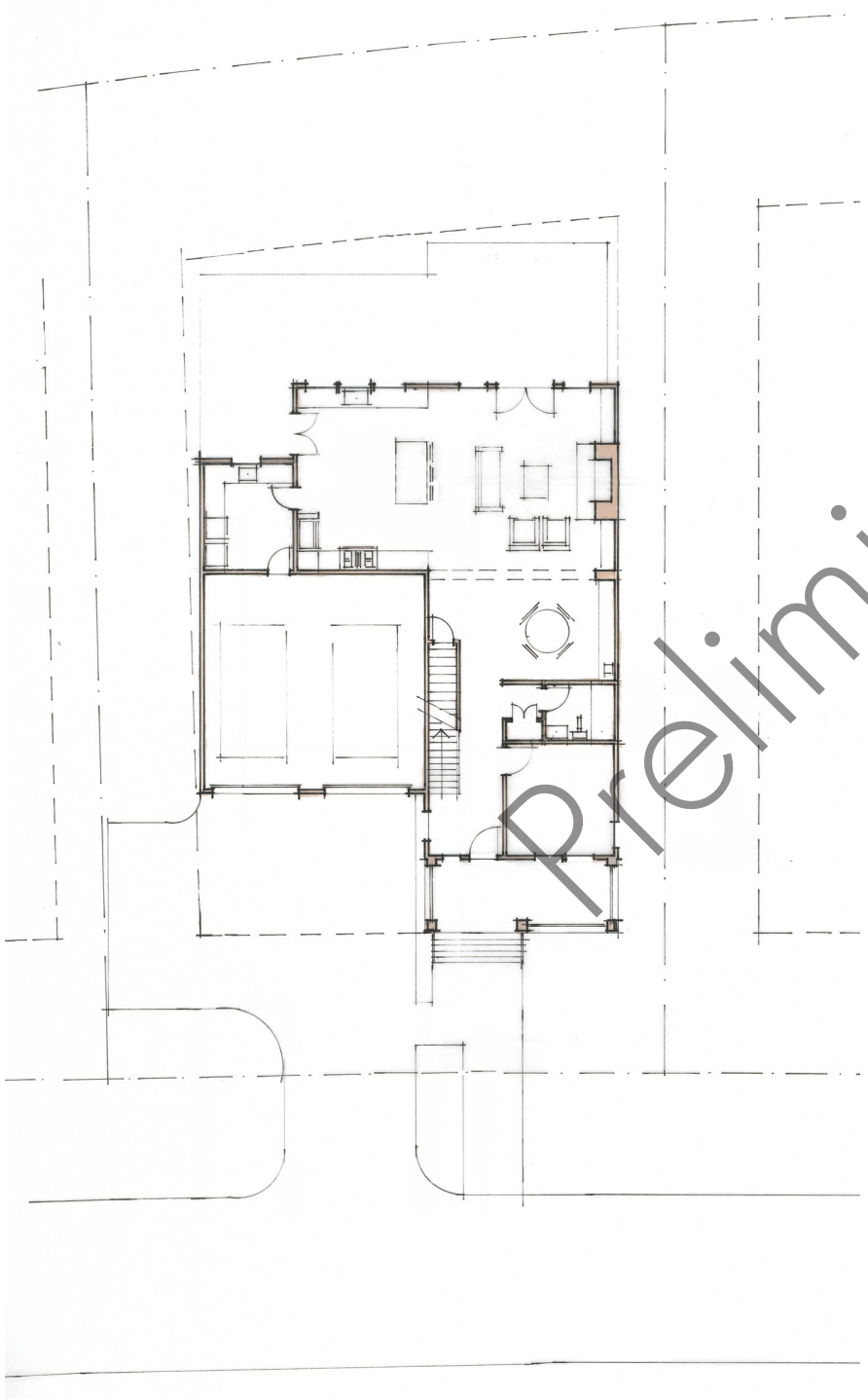
SITE DESIGN

Lake front cottages should be detached, single-family houses with a traditional neighborhood character and generous front porches, at least at the first floor. Examples in Muskegon and historic Michigan neighborhoods and resort communities should serve as key inspiration. Every lot should feature at least one private outdoor space at the side or rear. Carefully composed facades should face all streets and the waterfront. Garages and driveways are accessed from roadway.

Maximum Height: 1-2.5 Stories



Park Front Cottage



SITE DESIGN

Park front cottages should be detached, single-family houses with a traditional neighborhood character and generous front porches, at least at the first floor. Examples in Muskegon and historic Michigan neighborhoods and resort communities should serve as key inspiration. Every lot should feature at least one private outdoor space at the side or rear. Carefully composed facades should face all streets and the park. Garages and driveways are accessed from the roadway.

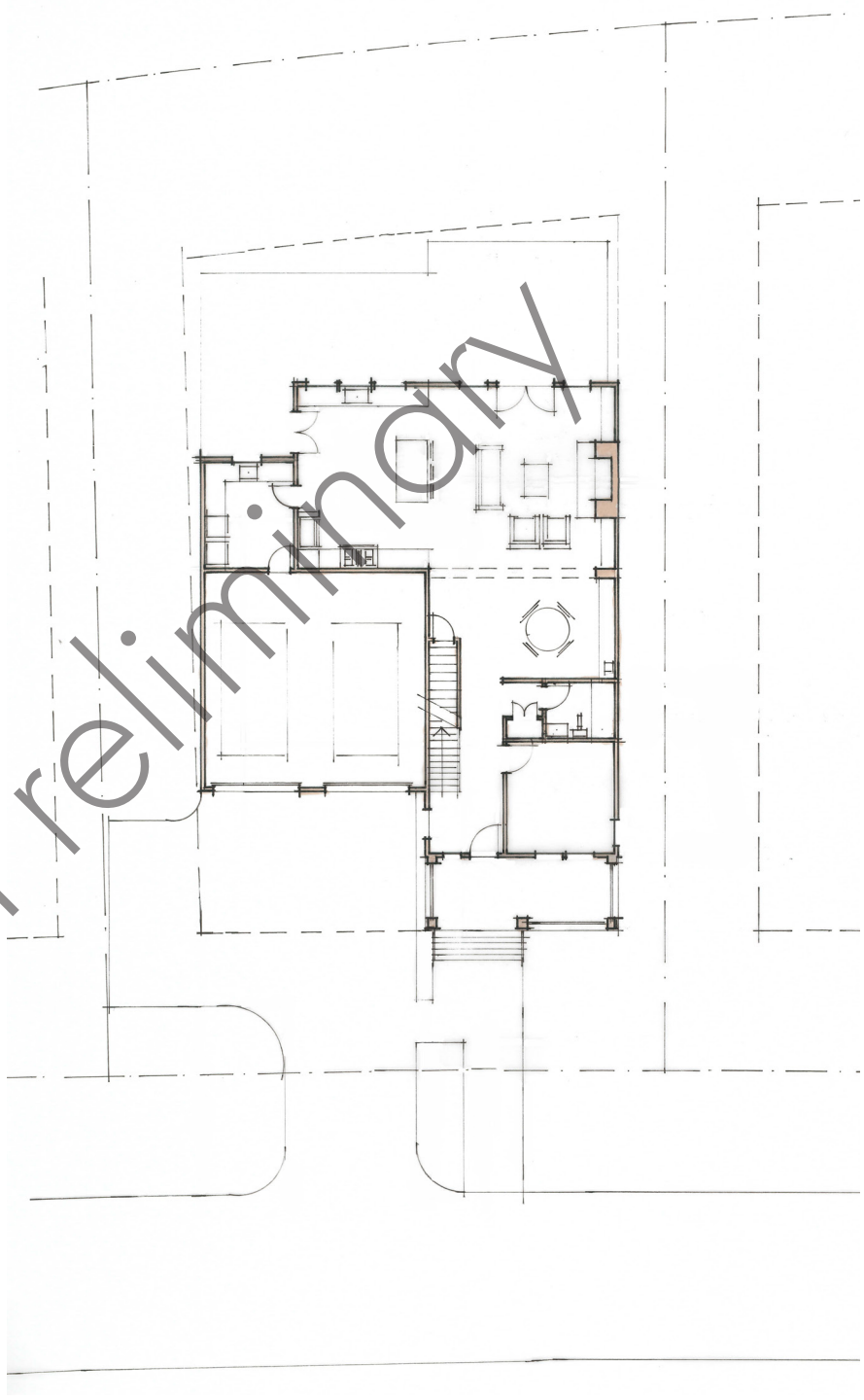
Height: 2-3 Stories

Cottage - Type A

SITE DESIGN

Type A Cottages should be detached, single-family houses with a traditional neighborhood character and generous front porches, at least at the first floor. Examples in Muskegon and historic Michigan neighborhoods and resort communities should serve as key inspiration. Every lot should feature at least one private outdoor space at the side or rear. Carefully composed facades should face both streets on corner lots. Garages and driveways are accessed from the street.

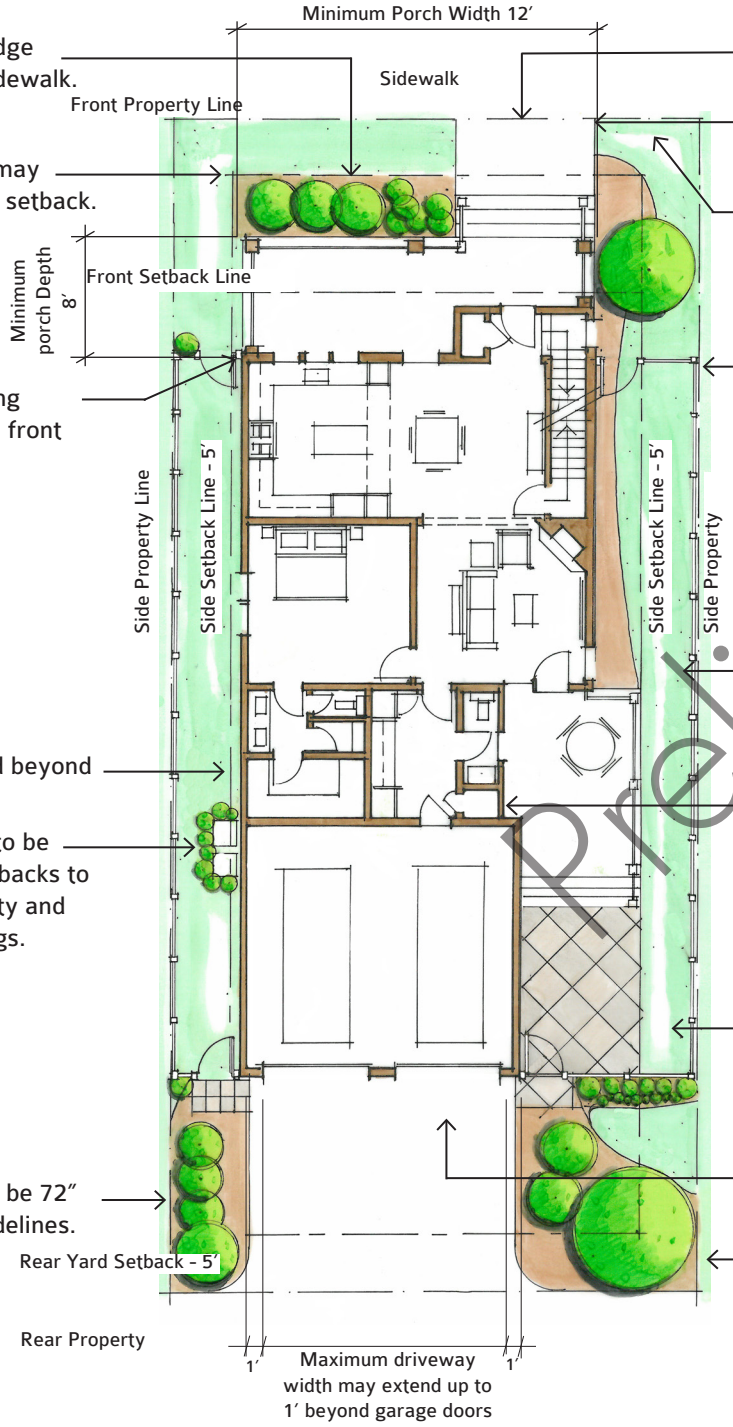
Height: 2-3 Stories



Cottage - Type B

SITE DESIGN

Type B Cottages should be detached, single-family houses with a traditional neighborhood character and generous front porches, at least at the first floor. Examples in Muskegon and historic Michigan neighborhoods and resort communities should serve as key inspiration. Every lot should feature at least one private outdoor space at the side or rear. Carefully composed facades should face both streets on corner lots. Water front lots should be treated as having two "fronts". Garages and driveways are accessed from the side toward the rear of the lot.



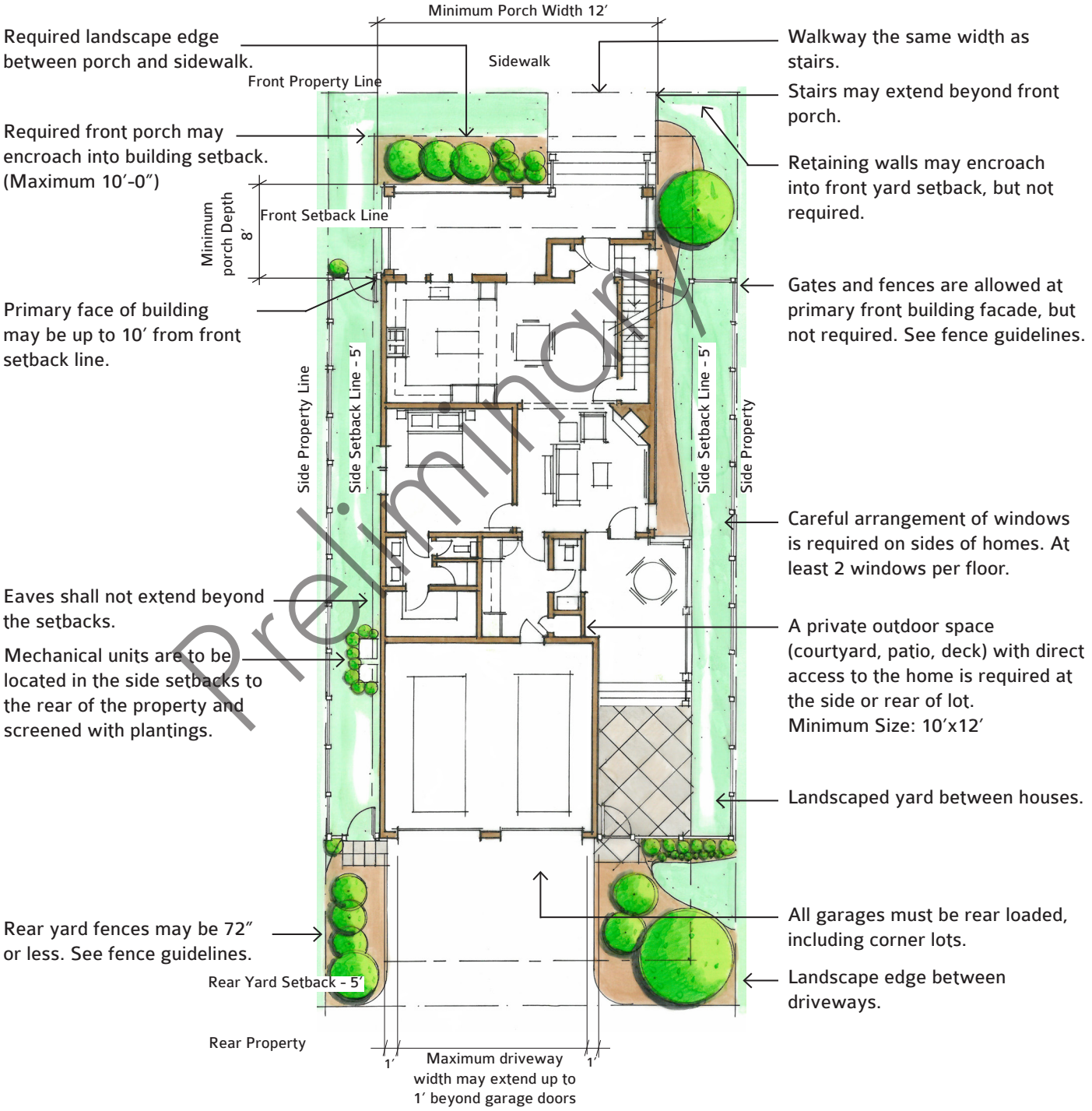
Height: 1-2 Stories

Cottage - Type C

SITE DESIGN

Type C Cottages should be detached, single-family houses with a traditional neighborhood character and generous front porches, at least at the first floor. Examples in Muskegon and historic Michigan neighborhoods and resort communities should serve as key inspiration. Every lot should feature at least one private outdoor space at the side or rear. Carefully composed facades should face both streets on corner lots. Garages and driveways are accessed from rear lane.

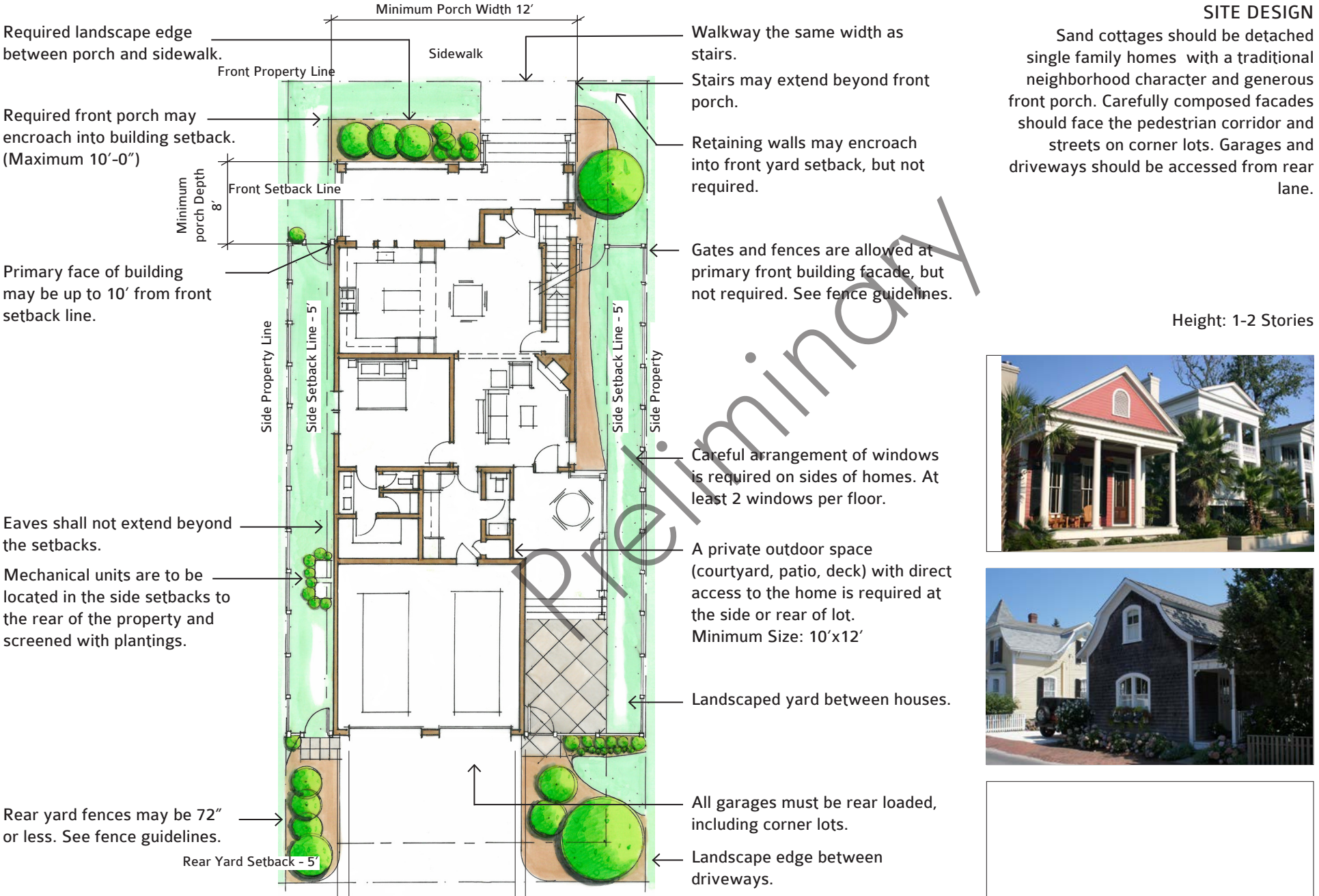
Height: 2-3 Stories



Sand Cottage

SITE DESIGN

Sand cottages should be detached single family homes with a traditional neighborhood character and generous front porch. Carefully composed facades should face the pedestrian corridor and streets on corner lots. Garages and driveways should be accessed from rear lane.



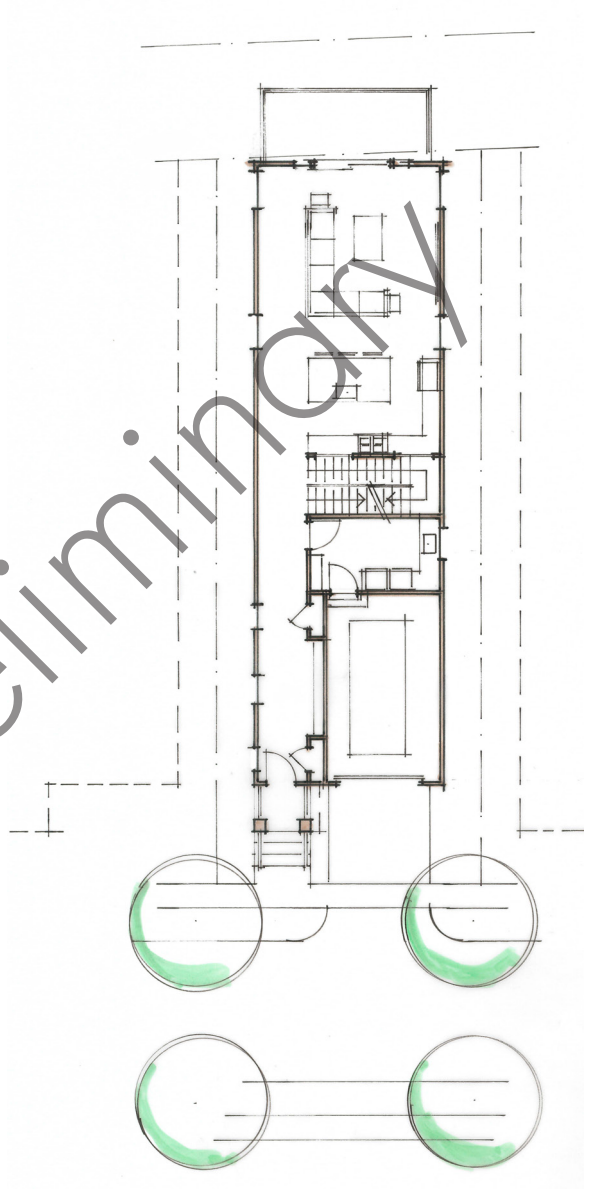
Height: 1-2 Stories

Boat House

SITE DESIGN

Boat houses should be detached, single-family houses with a traditional neighborhood character and placed on the water. Every boat house residence should feature at least one generous front porch at the second floor, overlooking the water. Both the street and the water front should be treated as fronts. Carefully composed facades should both streets on corner lots. Garages should be accessed from the street facade and placed behind the main facade of the building.

Height: 2-3 Stories



Fishing Hut

SITE DESIGN

Fishing huts should be detached single family housing with a traditional neighborhood character and generous front porches facing both the street and the waterfront. Historic Michigan neighborhoods and resort communities should serve as key inspiration. Every Lot Should feature at least one private outdoor space at the side or rear. The street and the waterfront should both be treated as fronts. Carefully composed facades should face both streets on corner lots. Garages and driveways are accessed from the road, set back from the primary facade.

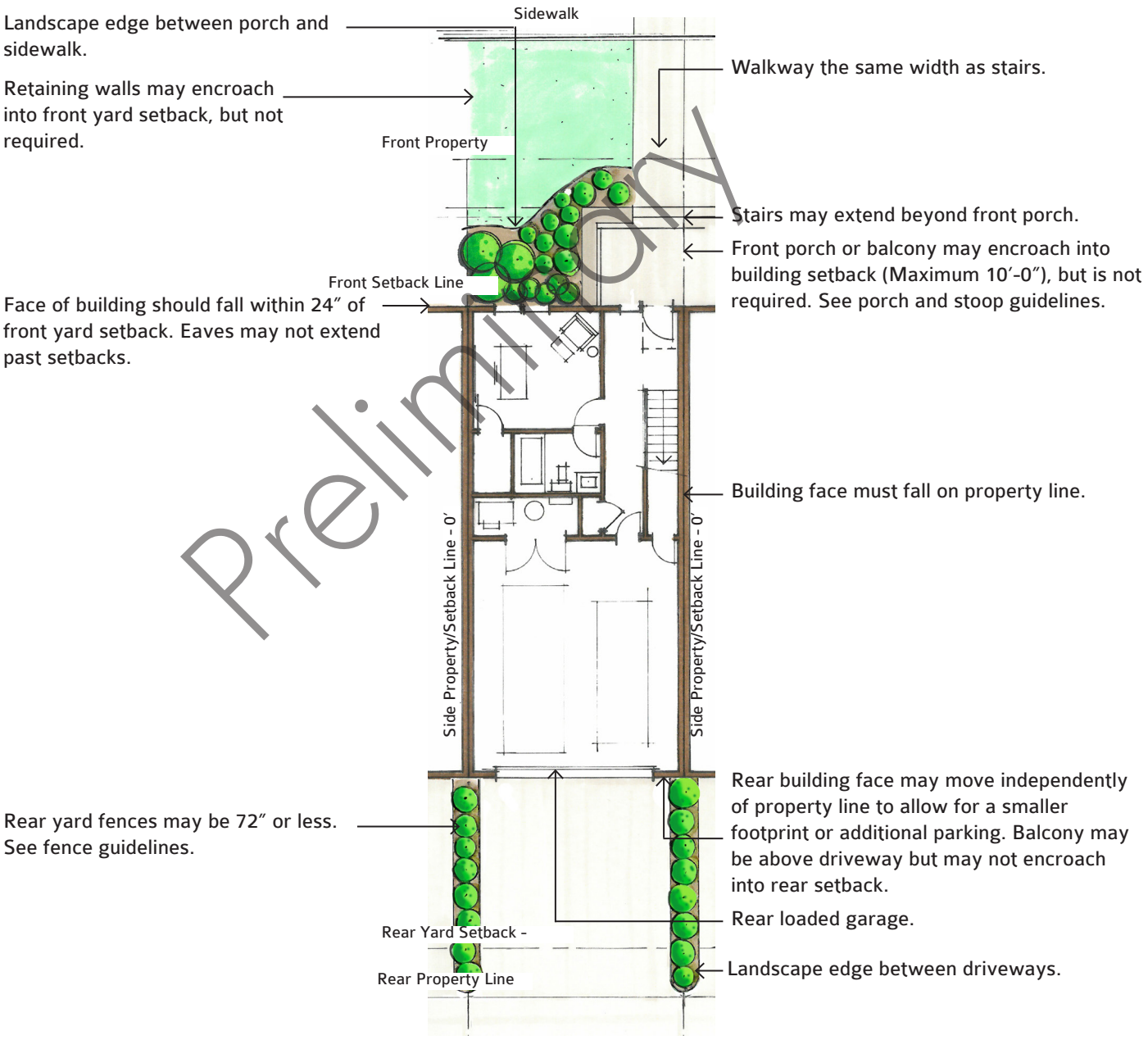
Height: 1-2 Stories

Townhouse

SITE DESIGN

Townhouses should be attached, single-family houses with a traditional neighborhood character and placed at the front of the lot. Every townhouse should feature at least one generous porch, balcony or stepped roof terrace, either at front or back, at any floor level. Townhouses with no front porch or balcony should include a stoop. Corner lots should face both streets with carefully composed facades. Where rear lanes are present, garage and driveways should be accessed off the lane, otherwise access will be off the street set back from the primary facade.

Height: 2-3 Stories



Loft Residence

SITE DESIGN

Loft residences should be attached, single-family houses with a traditional neighborhood character and placed at the front of the lot. Every townhouse should feature at least one generous porch, balcony or stepped roof terrace, either at front or back, at any floor level. Lofts with no front porch or balcony should include a stoop. Corner lots should face both streets with carefully composed facades. Garages and driveways are accessed from the rear lane.

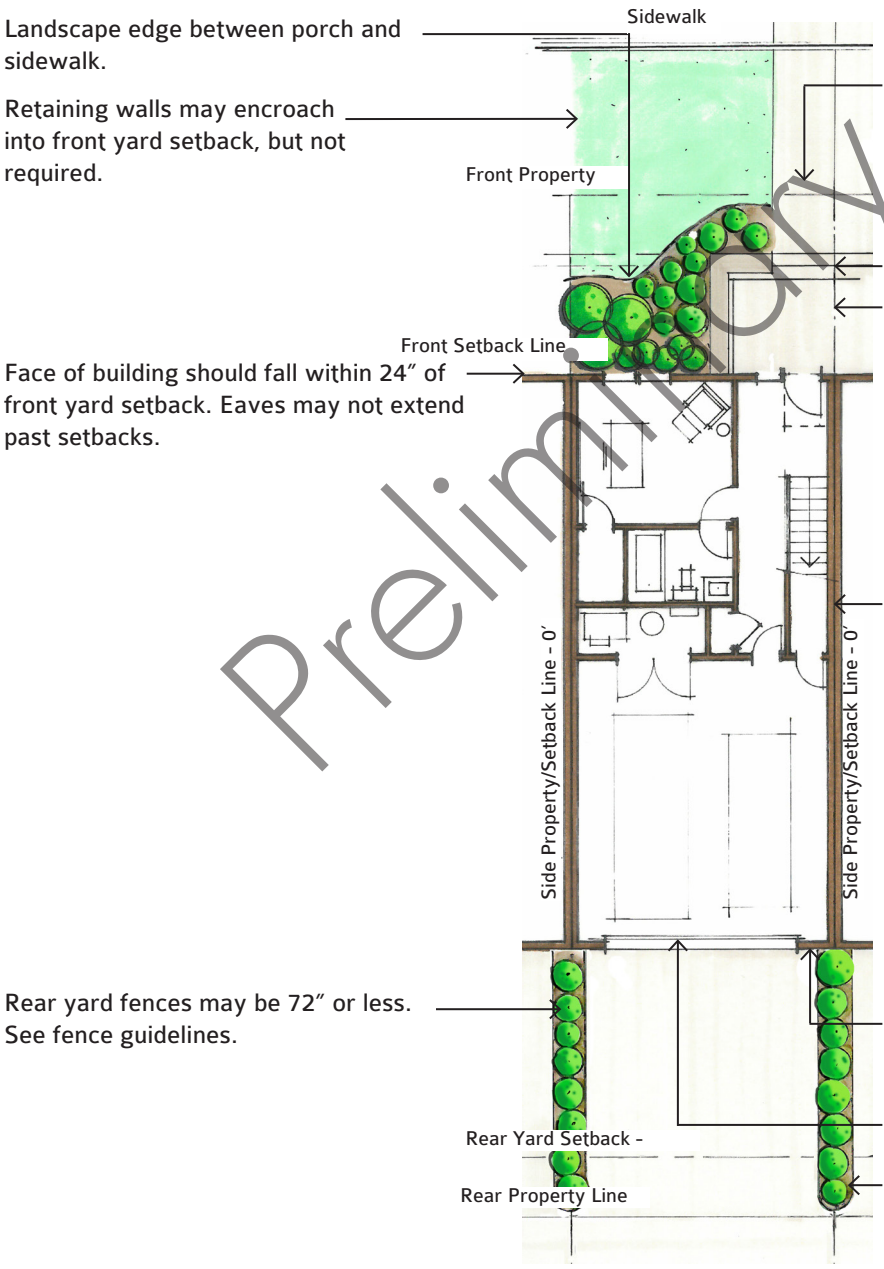
Height: 1-2 Stories

Tree House

SITE DESIGN

Tree houses should be attached, single-family houses with a traditional neighborhood character and placed at the front of the lot. Every tree house residence should feature at least one generous porch, balcony or stepped roof terrace, either at front or back, at any floor level. Tree house residences with no front porch or balcony should include a stoop. Corner lots should face both streets with carefully composed facades. Garages and driveways are accessed from the alley.

Height: 2-3 Stories



Landscape edge between porch and sidewalk.

Retaining walls may encroach into front yard setback, but not required.

Face of building should fall within 24" of front yard setback. Eaves may not extend past setbacks.

Rear yard fences may be 72" or less. See fence guidelines.

Walkway the same width as stairs.

Stairs may extend beyond front porch.

Front porch or balcony may encroach into building setback (Maximum 10'-0"), but is not required. See porch and stoop guidelines.

Building face must fall on property line.

Rear building face may move independently of property line to allow for a smaller footprint or additional parking. Balcony may be above driveway but may not encroach into rear setback.

Rear loaded garage.

Landscape edge between driveways.

Massing and Proportions

Diversity of simple massing

Side facade massing is composed

Clear hierarchy of massing

Simple four-square massing with porch

Townhouses with the same massing

Dormers & chimneys shape court

Porch as distinct secondary massing

Townhouses with diverse massing

Courtyard flanked by diverse massing

1. The primary massing should be a simple volume or an assembly of simple volumes.
2. When a building massing includes an assembly of multiple volumes, there should be a clear hierarchy of massing.
3. Multiple attached townhouses may each feature the same massing, except when facing the marina. When multiple attached townhouses include diverse massing, there should be a clear hierarchy of massing.
4. The massing should be arranged on the site to shape usable courtyards, side yards, and similar spaces, not merely for visual interest.
5. Proportions should be simple, consistent, and in keeping with the chosen architectural style.
6. The primary massing may be adorned with attached elements such as bays, balconies, porches, chimneys, dormers, and/or towers; appropriately scaled to the building. These attached elements should form a distinct secondary massing with corners at some distance from the corners of the primary massing.
7. Massing and proportions at the front should appear as a carefully composed front facade.
8. Massing and proportions should shape carefully composed rear facades and side facades, especially when immediately adjacent to or facing a street.

1. Roof forms may be gable, hip, Dutch gable, half hip, or gambrel. Townhouses may also include a stepped roof terrace.
2. Primary roof pitches should be appropriate to the chosen style and may range from 6:12 to 18:12.
3. Secondary roof pitches on attached elements such as porches and bays may be as low as 0:12 and should generally be at least half of the primary roof pitch.
4. Roofs may be clad in wood shingles, wood shakes, asphalt shingles, or true standing seam metal roofing.
5. Metal roof panels should be flat between the primary ribs, without striations or pencil ribs. Standing seam ridge caps should be hemmed or of the lowest profile possible.
6. Overlapping gables should be limited to porches, balconies, or entrances, as appropriate to the chosen style.
7. Dormers must be true and serve the interior space. Skylights are not permitted.
8. The proportions, trim details, and eave details of dormers should meet the same standards as windows, bay windows, and primary roofs. Siding should generally be avoided on the face of dormers, unless the dormers are very large.
9. Penthouses, towers, lanterns, and crow's nests should occupy no more than 30% of the ridge. These elements should feature no siding above the sill height.

Third floor within gable roof front

Shingles on main roof, metal on porch

View tower above top story

Eave front with dormer and swoop

Shed dormer serves interior space

Stepped roof terraces

Gambrel cross-gable

Hip roofs with rounded corner tower

Crow's nest on top of roofs

Base

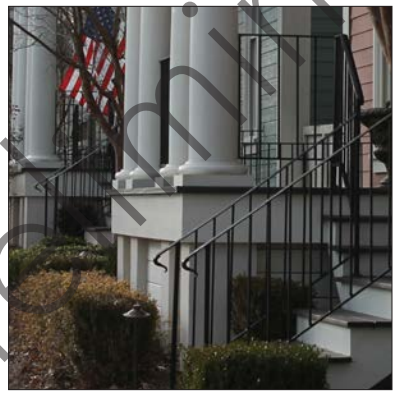
Concrete base & water table

Brick base with siding above

Face of studs aligns with base

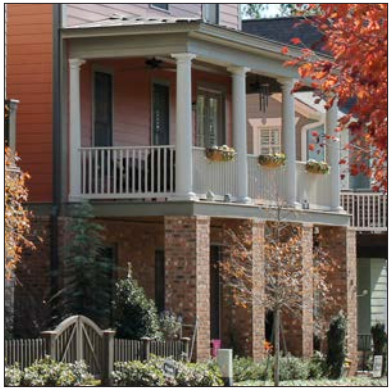
Ashlar coursing on stone base

Masonry first floor & chimney



Column base aligns foundation

Stucco porch piers



Masonry piers

Porch skirting made of wood

1. Building bases may be concrete, stone, brick, or stucco.
2. Raised porches must feature skirting, which may be wood or look like painted wood at arm's length.
3. Walls and piers may extend the base material up to the 2nd floor level. Exposed concrete bases may extend up to 6″ above finished grade.
4. Where the top of the base meets the wall above there should be a continuous water table, trim board, or similar transition device appropriate to the chosen style.
5. Where the frame wall meets the top of the base the exterior face of the stud should align with the exterior face of the base wall below.
6. Stone veneer bases should be laid to look like true ashlar stone coursing laid horizontally and as historically found in western Michigan.
7. Brick veneer should be laid to look like true historic brick masonry coursing with simple, unraked, thin joints and no significant color variation. Brick may be painted white or off-white as appropriate to the style. Brick masonry openings should be detailed to look like openings found in true load-bearing masonry walls.
8. In general, the outer face of a column base should align with the outer face of its supporting wall below. It should never project beyond its supporting wall below.

1. Each exterior wall should be limited to two wall materials, excluding the foundation or base.
2. As much as possible, material transitions should occur at the sills or heads of wall openings. Away from openings, material transitions should feature continuous trim bands or similar devices appropriate to the chosen style.
3. Visually heavier materials should be located below horizontal joints. Vertical joints between different materials should occur only at inside corners.
4. Walls (ceilings) should be at least 9′ in height on ground and main living levels.
5. Siding may be lap (beveled), drop, shake shingle, tongue and grove, board and batten, or ship lap. Corners may be mitered or feature trim casing.
6. All siding and trim should be wood or look like wood at arm's length when painted.
7. Siding and trim which simulate wood should expose only smooth, flat surfaces.
8. Stucco should be cementitious and smooth sand-finished.
9. Exterior walls should generally be limited to two wall colors, excluding doors, window sashes, shutters, and similar secondary elements.
10. Building colors should generally reflect the range of colors illustrated within this document, which intends to bring a broad diversity within a narrow range. Colors should be muted, pale, restrained, and reflective of natural materials found in Michigan. Pastel colors are prohibited.

Lap siding finished with wide casing

Mitered corners

Vertical joints only at inside corner

Shingle siding above lap siding

Smooth sand finish stucco

Limited number of materials & colors

Board-and-batten siding

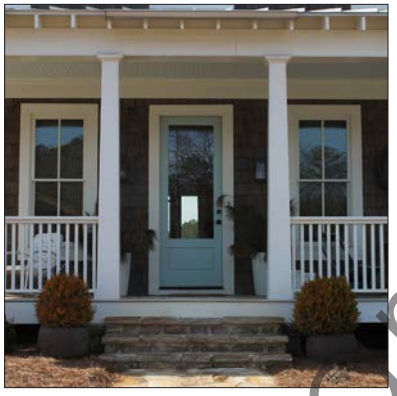
Change of siding at horizontal lines

Tall walls on main & living levels

Windows and Doors

Window sash & frame appear as real wood

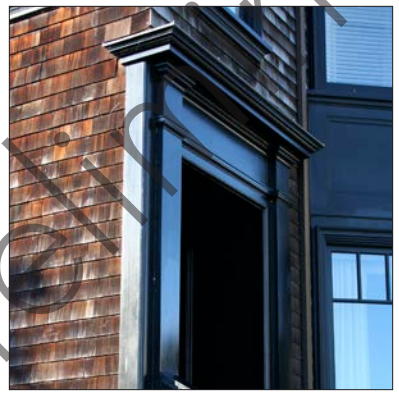
Wide jamb & tall head casing



Doors that appear as real wood

Vertical & square proportions

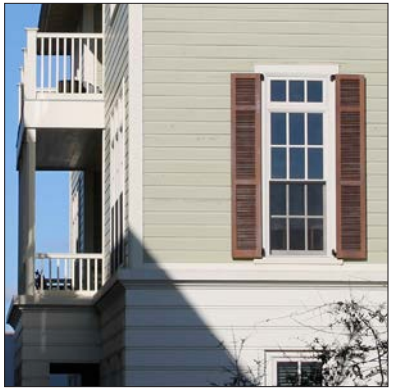
Muntins appear to form true divided lites.



Expressive entry surround

Operable double-hung window

Sill casing appears as visual base



Operable shutters appear as wood

1. Window and door frames and sashes should be built of wood or be indistinguishable from painted wood at arm's length.
2. Windows may be single-hung, double-hung, triple-hung, or casements. Fixed windows are prohibited, except at transoms and special situations.
3. The proportion of all window units and panes should be vertical or square. And they should be appropriate to the chosen style.
4. Jamb and head casing should be at least 3.5" wide, unless the siding material is shake shingle.
5. Windows may be ganged together with mullion casing at least 3.5" wide.
6. Muntins should form true divided lights or look indistinguishable from true divided lights at arm's length.
7. Sill casing should appear as a visual base to a window and should never be mitered.
8. Doors may be single or double and should include a lite, side lite, or transom.
9. Entry doors not accessed from a covered porch must feature an expressive entry surround in keeping with the chosen style.
10. Entry doors must be located on the front of the house. Side yard lots may feature entry doors at the side instead, if the gate into the side yard is an expressive entry.
11. Shutters must be operable or appear operable and sized to cover the opening. They should be built of wood or be indistinguishable from wood at arm's length.

1. Porches should be raised above the ground and may be up to 2 stories high.
2. Front porches should be open and at least 8′ deep and 12′ wide. Porches may encroach into the street side setbacks provided that they are set back by at least 5′ from property line. Stoops should be at least 6′x 6′.
3. Porches may be attached or in-board, but should follow the massing guidelines.
4. Columns should be of wood or look like wood at arm's length when painted. Piers may be brick, stone, stucco, or wood-clad up to the second floor level. Columns above the second floor level should be visually lighter than below. The proportions and detailing of porch columns and openings should be appropriate to the style.
5. Porches must include an expressive beam or arch as appropriate to the style.
6. Porch ceilings should be located above the porch beam. Exposed and enclosed ceilings should be made of wood or look like wood at arm's length when painted.
7. The outer face of a porch beam should never project beyond the outer face of its supporting column shafts.
8. Porches at the second floor level may include screens or privacy louvers.
9. Porch entry stairs should be at least 6′ wide and may be on the front or side.
10. Railings should be wood or look like wood at arm's length when painted. They should include top and bottom rails, with balusters centered on the rails.
11. As much as possible, low porches should not feature railings.
12. Stoops should be detailed like porches.

Attached porch as separate massing

Low porches with no railing

Visually lighter columns at second story

In-board porch within main massing

Face of beam aligns with face of post

Privacy louvers at second story

Porch ceiling above beam

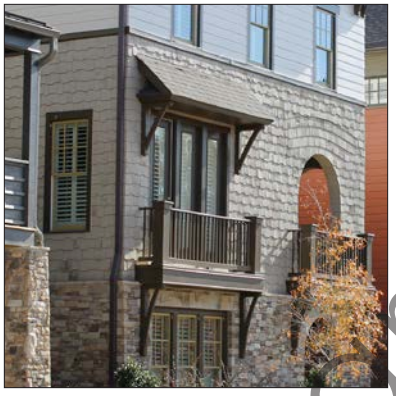
Arched porch opening in shingle wall

Second story porch may be screened

Balconies

Strong brackets with ends expressed

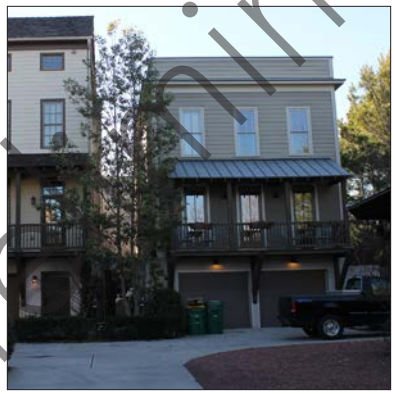
Deep balconies on front facade



Shallow balconies on side facade

Visually strong, tapered brackets

Minimum 12′ Wide



Balcony above garage

Distinct balconies for townhouses

Balconies on townhouse corner lot

Balconies at second & third floors

1. Balcony structures may be one or two stories in total height. Balconies stacked above other balconies must be combined into a single structure.
2. Balconies may encroach into the street side setbacks, provided that they are set back by at least 5′ from the property line.
3. Balconies should have a distinct, separate massing with corners located away from the primary massing corners.
4. Balconies should be built of wood or look like wood at arm's length when painted.
5. Balconies should be visually supported by brackets. Brackets should appear strong and safe to stand on and under. The ends of brackets should be visibly expressed rather than hidden. Bracket design should be appropriate to the chosen style.
6. Balconies may be shallow or deep, but all balconies must be designed to be physically accessed.
7. Where a balcony is required as a special feature it must be at least 6′ deep and 12′ wide and include a roof as part of the balcony structure.
8. Balconies should be private rather than shared between dwelling units. Each balcony should be a distinct separate structure or separated by privacy louver walls within a combined structure.
9. The detailing and materials of balcony railings and roofs should meet the same standards as porches.
10. Required balconies may include screens, smaller balconies may not.

Bay Windows

1. Bay windows may be one to two stories in height.
2. Bay windows may not encroach into the setbacks.
3. The scale and proportions of bay windows should be appropriate to the chosen style.
4. Bay windows either should extend to finished grade or should be visually supported by brackets, columns, or similar appropriately scaled elements.
5. Corner jambs on bay windows should be trimmed with vertical jamb casing at least 3.5″ wide as measured from the window sash to the corner of the bay.
6. Bay windows should feature paneling and trim instead of siding, except when appropriate to the shingle style. Paneling and siding should never extend above the window sill.
7. Bay window roofs should be distinct from the primary roof or share a continuous deep eave.

Wide jamb casing on bay windows

Distinct bay roof under deep eave.

Visual support for bay windows

Chimneys and Roof Penetrations

1. Visible chimneys may be finished simply in brick, stone, or stucco. Material standards should meet those of bases and walls.
2. Visible chimneys should have vertical proportions appropriate to the chosen style.
3. Chimneys should have a projecting cap.
4. Chimneys located on an outside wall should extend to finished grade. In most cases the massing of these chimneys should be expressed.
5. Flues should be clay tile, galvanized metal, or copper and their form should provide a graceful top for the chimney. The color of the metal should be left natural or painted black.
6. Except for chimneys, roof penetrations should not be visible from the waterfront or any streets, sidewalks, parks or greens.
7. Except for chimneys, the color of roof penetrations should match the roof.
8. When possible, attic vents are to be placed on gable ends and finished with decorative grills made of wood.

Chimney expressed as tapered mass

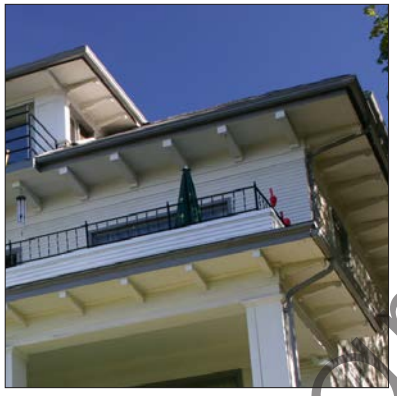
Stucco chimney with projecting cap

Simple metal flues painted black

Eaves and Rakes

Open eave with rafter tails

Soffit material appears as wood



Deep eave, brackets meet fascia

Closed eave, returns & continues

Eaves should be generally continuous

Closed eaves, perforated soffit vents

Closed eave returns & terminates into wall

Frieze board at rakes and eaves

Discreet vents in open eave

1. Open eaves may feature exposed rafter tails. Their exposed ends should be shorter than 6".
2. The proportions of closed eaves should be appropriate to the chosen style.
3. Closed eaves should always return the fascia and soffit around the corner. Either to continue as a closed rake, as a continued soffit, or to terminate into the wall. Box eave ends with residual triangle "pork chops" are not permitted.
4. All eave and rake material, including the fascia and soffit should be wood or look like wood at arm's length when painted.
5. Eaves should be as continuous as possible rather than providing frequent breaks.
6. A frieze board should be located immediately below every eave and rake, except as appropriate in the shingle style.
7. Eaves deeper than 12" should feature exposed rafter tails or brackets. Eaves may be up to 24" deep.
8. Exposed rafter tails and brackets must meet or project beyond the fascia.
9. In closed eaves venting should occur through manufactured perforated soffits or similarly discreet methods. In open eaves venting should occur through small circular screened vents or similarly discreet methods.
10. In closed eaves, the trim immediately below the soffit should be a bed mold or similar shape; not a crown mold.
11. Eave return caps should be inconspicuous, preferably made of continuous, unseamed flashing.

Gutters and Downspouts

1. Exposed downspouts, gutters, scuppers, and conductor heads should be copper, galvanized steel or aluminum.
2. Exposed gutters should generally be half-round. Gutters may be ogee if the proportions are appropriate to the chosen style and the gutter ends can terminate into walls together with the eave returns.
3. All downspouts should be round.
4. Where there is no gutter at the end of a roof, the drip zone on the ground should be designed to mitigate splashing.
5. If scuppers are required at roof terraces or porches, they should be trumpet scuppers appropriate to the chosen style.
6. Roofs that drain internally behind parapet walls should feature conductor heads and matching downspouts on exterior walls.
7. Gutters should not feature maintenance technology which distorts classic gutter proportions found in historic Michigan.

Eaves with no gutters & drip zone

Ogee gutters must return into wall

Half-round gutters on non-return eaves

Lighting and Fixtures

1. All light fixtures should be expressive of their function and appropriate to the chosen style.
2. Every porch and balcony should include at least one wall or ceiling-mounted light fixture. Can lights and similar recessed light fixtures are not permitted.
3. Porches and balconies may include ceiling-mounted fans with simple designs that are appropriate to the chosen style.
4. Every entrance without a porch should feature at least one wall-mounted light fixture.
5. Garages should feature wall-mounted lights at each garage door.
6. Other appropriate light fixtures include gate post lamps, mushroom path lights, and similar discreet light fixtures.
7. Floodlights and LED strips are not permitted.

Ceiling-mounted light & fan at porch

Wall-mounted lights at entrances

Wall-mounted lights at garage doors

Garages and Accessory Structures

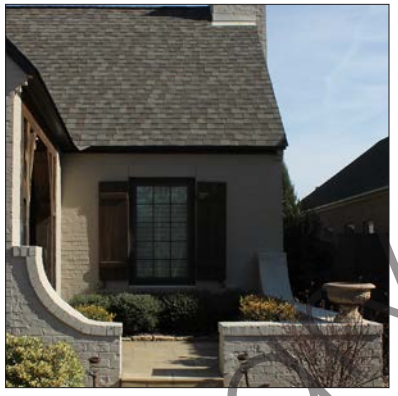
Carriage doors where required

Carriage house and car port

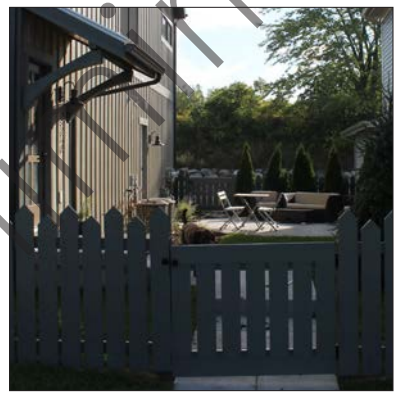
Accessory structure detailed like house

1. Garage doors should always face the rear alley or lane.
2. Each lot may have up to two sheltered parking spaces. This may include a garage, carport, or combination thereof.
3. Where required as a special feature, garage doors must be single-bay carriage doors no wider than 9′ on cottage lots and may be a double bay carriage door on townhouses.
4. Where carriage doors are required, they should include TDL or SDL glazing and should be made of wood panels or boards, or look like wood within arm's length when painted.
5. Where carriage doors are not required, as much as possible, garage doors should look like wood panel doors.
6. Garages may be detached and may be part of detached carriage houses. Carriage houses cannot include a separate dwelling unit.
7. Accessory structures such as garden sheds, car ports, etc. should be located towards the rear of the lot.
8. Garage walls which face a street must include at least one window.
9. All structures (including the rear facade, garages, carriage houses, car ports, and accessory structures) should be detailed to meet the same standards as presented throughout these guidelines.

Private Courtyards



Private court in rear yard



Private court in side yard

Private front terrace in cottage court

1. Except townhouses and cottage courts, every lot should include at least one functional private courtyard. This space should include an area no smaller than 10′ x 12′ that is paved, gravel, and/or wood deck.
2. In cottage courts, each dwelling unit should include at least one usable private outdoor space, no smaller than 6′ in any direction. It may be a small terrace within the shared front court, a private courtyard near the rear of the lot, or both.
3. Private courtyards must be accessible directly from the interior of the dwelling unit. They may also be accessed by gates from the front and/or rear of the lot.
4. Private courtyards should feature fences or garden walls in keeping with the guidelines described herein. Fully enclosed courtyards must have a gate or well-designed opening.
5. Private courtyards should be landscaped to provide privacy and shade as needed. Continuous planting material should expose no more than 40″ of private fence at any location.
6. In private courts, pavers and paver patterns that enable water infiltration are encouraged.

Fences: General

1. Fences and garden walls are not permitted within the front setback of the lot, but may align with the front facade of the house.
2. Fences and garden walls should be refined, not rustic, and appropriate to an urban neighborhood and the chosen style of the house.
3. Fence and garden wall design should be different from neighboring fences and garden walls.
4. Alley fences and gates should be made of wood and may be painted or stained or look like wood at arms length when painted. Gates may be open designs or made of closed boards.
5. Garden walls should match the building's base and wall materials, unless this includes exposed concrete.
6. Fenced lots should be accessible by gates; both from the front and the rear of the lot.
7. Gates may be celebrated and include a trellis up to 8′ tall or an arbor up to 10′ tall.
8. Newel posts may be a maximum of 6″ taller than the fence.

Refined design and made of wood

Fences align with front facade

Side yard fences at street must be low

Privacy Fences

1. Privacy fences or garden walls may be installed on the side and rear property lines and in line with the primary front facade.
2. On sideyard lots, fences may not be placed on the side property line, except if that line faces a street.
3. At the side property line, unless it is directly facing a street, fences may be solid up to 72″ tall.
4. Fences located within the side setback and facing a street should be an open picket design and should be no higher than 40″, with newels up to 46″.
5. At the alley and facing the front setback, privacy fences and garden walls may be up to 54″ tall with an optional open lattice- or trellis-type design extending it up to 72″.
6. Where taller privacy fences or garden walls meet shorter fences or walls, the design should feature a tapered or swooped transition.
7. To visually soften large walls of solid wood and bring life to the alley, the use of continuous planting (half the height of the overall fence height) is encouraged to run the length of the fence.

Refined privacy board fence

Tapered height transition

Alley fence with open trellis above

Landscape at Front

Hedges to protect low porch

Solid hedge lower than 40″

Close porch softened by plants

1. On front and street facing side yards plantings should run along the entire face of all porch and house walls to soften the foundation. A multi-tiered approach should be taken.
2. A multi-tiered approach should consist of a combination of any of the following; shrubs, ornamental grasses, perennials, and ground cover. The largest tier should be located closest to the face and be at least 12″ tall decreasing in size as the plantings move outward.
3. In front of porches continuous planting may be no more than 40″ high.
4. Vertical elements, more than 40″ high may be used in front of porches to enhance columns and corners. Vertical elements must be spaced at least 48″ apart.
5. Front porches and patios lower than 12″ above grade should be screened by continuous planting material 24″ high or taller to create a sense of privacy.
6. On street facing side yards plant material along the building may be greater than 40″ high.
7. Evergreen trees such as pine trees are prohibited within the front yard setback.
8. Where mulch beds meet the sidewalk without a fence, a raised curb should provide a continuous edge.

Landscape in the Alley

Landscape between driveways

Landscape lining building side

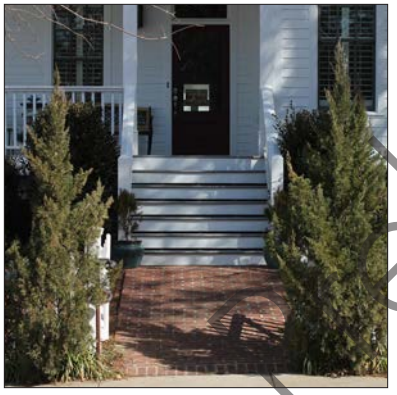
Privacy landscape if no fence

1. Private driveways should be lined with continuous planting material at least 12″ high.
2. Where a building is located 7′ or less from the alley, building faces should be planted with continuous planting material at least 12″ high. Where space allows a multi-tiered approach is encouraged. (Not required on townhouse lots).
3. On cottage and sideyard units where no fence is provided between the alley and rear yard privacy should be created with continuous planting material at least 52″ high. A multi-tiered approach may be used in this situation.
4. Wherever possible, trees should be planted near the alley. Care should be taken with placement to not obstruct views, when using trees with low branching systems.
5. Fruit bearing trees may be planted no closer than 20′ from the front or rear setback to keep it from dropping fruit on the streets, sidewalks, or alleys.

Paving and Walkways

1. Walkways leading to front entries should be paved with poured concrete, brick, stone, or concrete pavers. Pavers and paver patterns that enable water infiltration are encouraged.
2. Stamped concrete should never be used.
3. When leading to a set of stairs, walkways should be equal to the width of the stairs within 6′ of the first riser.
4. Walkways may be landscaped.
5. Secondary paths and private patios may be of poured concrete, brick, stone, concrete pavers, or gravel. Pavers and paver patterns that enable water infiltration are encouraged.
6. Driveways should be paved with poured concrete or pavers, not asphalt or gravel.
7. The width of the driveway may extend up to 1′ beyond the width of the garage door, combined carriage doors, or car port. Each lot should include only one driveway.

Width is equal to stairs



Walkway extends to sidewalk

Concrete driveway off alley

Curbs and Retaining Walls

1. Curbs and retaining walls may occur within the front setback of the lot.
2. Curbs may be built of stone, brick, or poured concrete and should be raised at least 1″ above finished grade.
3. Retaining walls may be built of stone or brick.
4. The top of a retaining wall should not be more than 1″ above the upper finished grade.
5. Stone should be dry stacked and laid to look like true ashlar stone coursing, laid horizontally and as historically found in western Michigan.
6. Brick should be laid to look like true historic brick masonry coursing, with simple, unraked, thin joints and no significant color variation.
7. Where required as a special feature, retaining walls should be at least 8″ high and transition smoothly into neighboring retaining walls.
8. Retaining walls may include entry piers up to 48″ above finished grade.

Low retaining wall

Tall retaining wall

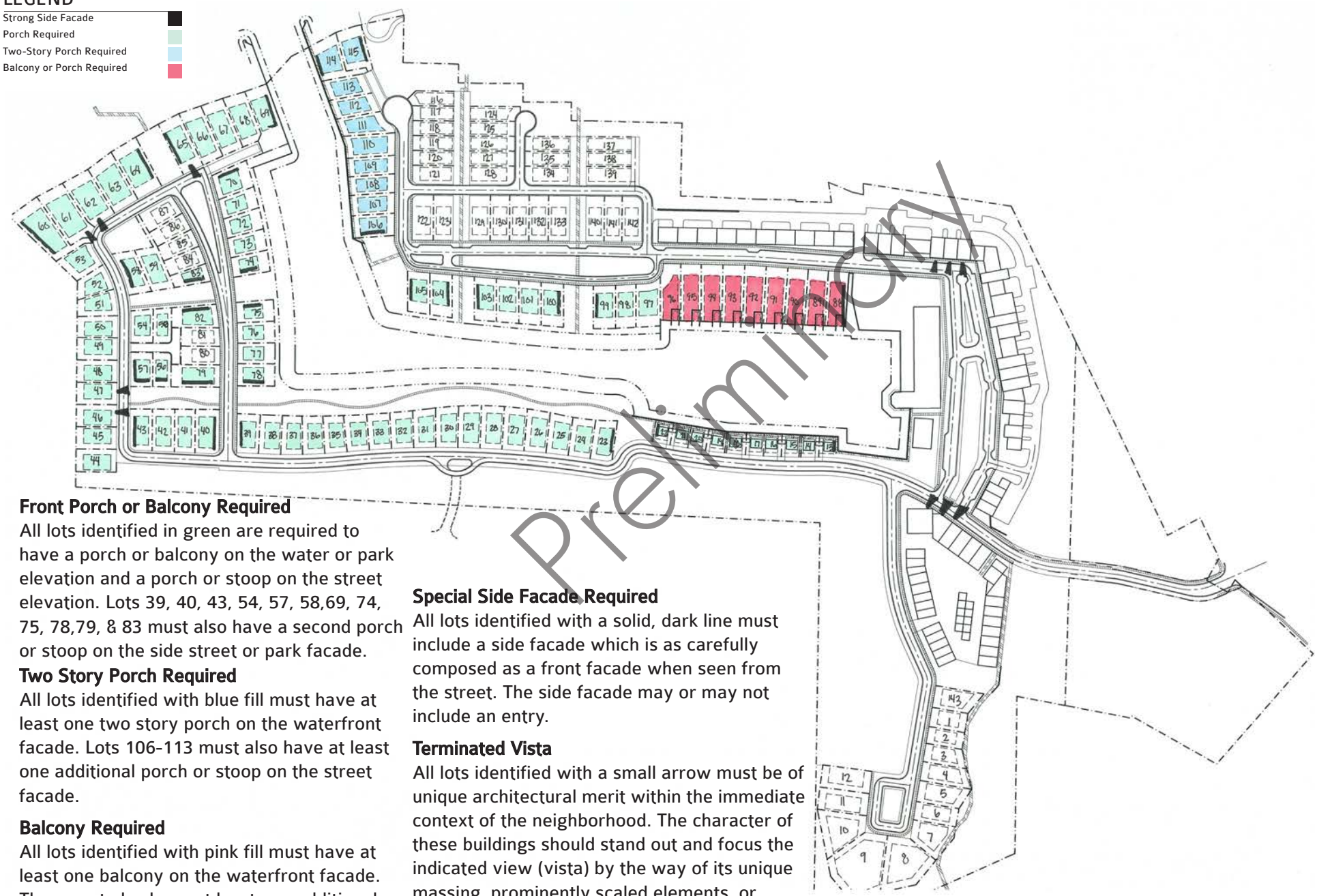
Retaining wall with entry piers

Special Features Regulating Plans

A. Building Facade Requirements

LEGEND

- Strong Side Facade
- Porch Required
- Two-Story Porch Required
- Balcony or Porch Required



Front Porch or Balcony Required
All lots identified in green are required to have a porch or balcony on the water or park elevation and a porch or stoop on the street elevation. Lots 39, 40, 43, 54, 57, 58,69, 74, 75, 78,79, & 83 must also have a second porch or stoop on the side street or park facade.

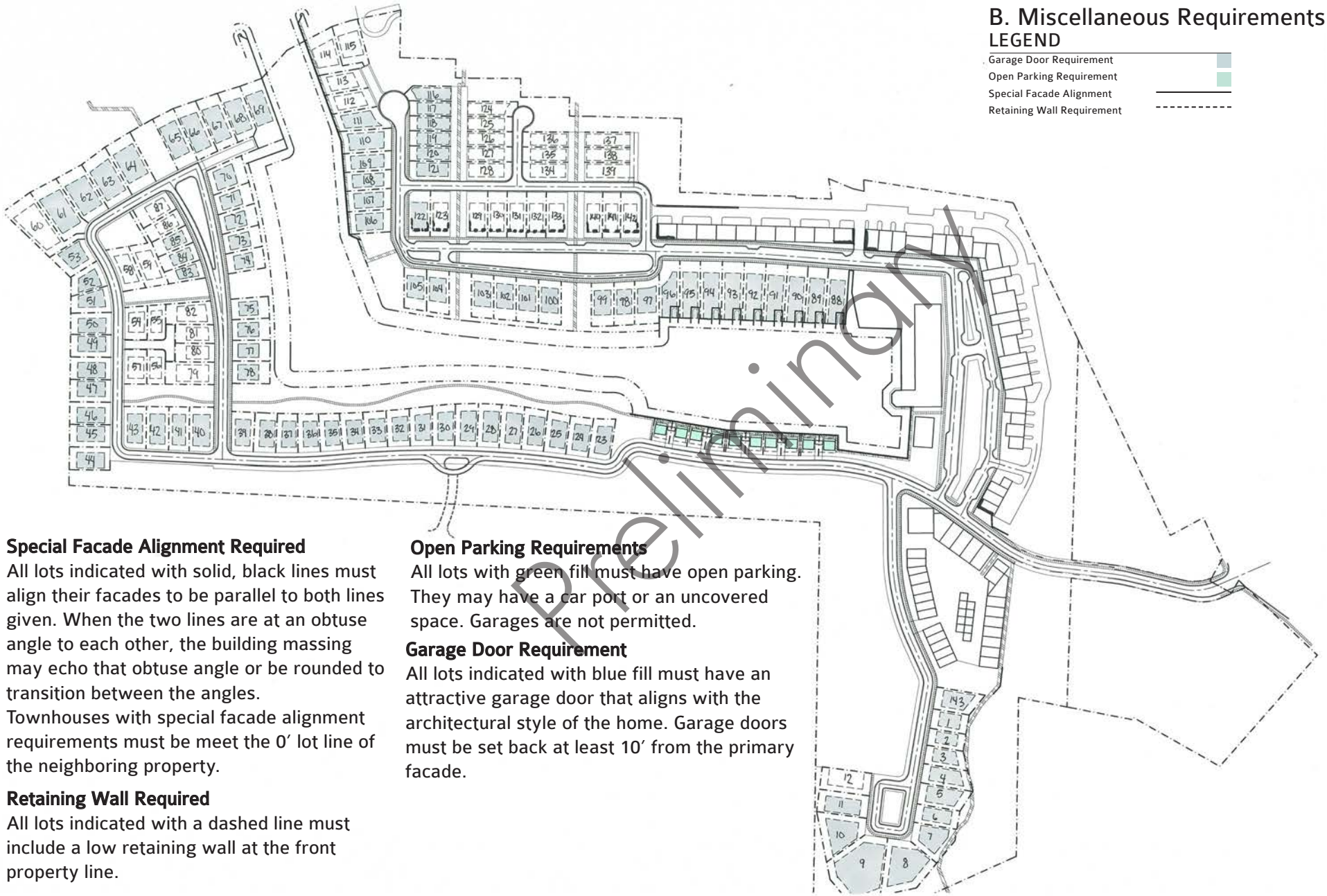
Two Story Porch Required
All lots identified with blue fill must have at least one two story porch on the waterfront facade. Lots 106-113 must also have at least one additional porch or stoop on the street facade.

Balcony Required
All lots identified with pink fill must have at least one balcony on the waterfront facade. They must also have at least one additional porch or stoop on the street facade.

Special Side Facade Required
All lots identified with a solid, dark line must include a side facade which is as carefully composed as a front facade when seen from the street. The side facade may or may not include an entry.

Terminated Vista
All lots identified with a small arrow must be of unique architectural merit within the immediate context of the neighborhood. The character of these buildings should stand out and focus the indicated view (vista) by the way of its unique massing, prominently scaled elements, or similar configuration appropriate to its style.

B. Miscellaneous Requirements



Special Facade Alignment Required
All lots indicated with solid, black lines must align their facades to be parallel to both lines given. When the two lines are at an obtuse angle to each other, the building massing may echo that obtuse angle or be rounded to transition between the angles.
Townhouses with special facade alignment requirements must be meet the 0′ lot line of the neighboring property.

Retaining Wall Required
All lots indicated with a dashed line must include a low retaining wall at the front property line.

Open Parking Requirements
All lots with green fill must have open parking. They may have a car port or an uncovered space. Garages are not permitted.

Garage Door Requirement
All lots indicated with blue fill must have an attractive garage door that aligns with the architectural style of the home. Garage doors must be set back at least 10′ from the primary facade.

The Design Review

The Design Review Board

The Design Review Board ("DRB") and Town Architect are responsible for effectively communicating and implementing the design parameters set forth within these Guidelines. The DRB will consist of no less than three (3) individuals with varied yet applicable professional experiences which allow for objective and comprehensive critique of each design submission. The Town Architect is a single individual who acts as the primary contact for all design submissions. They are also a member of the DRB. As the DRB is concerned with all aesthetic aspects of the design, it is neither responsible nor obligated to provide comments regarding techniques of construction, engineering systems, accuracy of the construction documents, and compliance with building code requirements. Submissions may be disapproved solely for aesthetic reasons deemed contrary to the goals and objectives of these guidelines and the DRB. The DRB, in its review process, shall not dictate any particular architectural style or hinder personal design preferences while at the same time, strive to facilitate a cohesive character within The Docks.

The Design Review Process

The DRB Review Process is the decisive juncture to ensure that the standards established within these Guidelines are adhered to and the overall design integrity of the community is apparent in each Structure. It is the desire of the DRB to institute a positive approach and establish an amicable relationship with the Owner throughout the Review Process. The term "Owner" shall be applicable to the homeowner or a representative thereof, typically the builder.

The review process will consist of three stages;
1.) an optimal Preliminary Design Meeting,
2.) a mandatory Preliminary Design Review,
3.) a Final Design Review.

Preliminary Design Review

After review of the guidelines and any other pertinent information regarding The Docks, the Owner may contact the Town Architect for further explanation as well as schedule a meeting to discuss preliminary design schemes to ensure that the process is streamlined and efficient. The Preliminary Design Review is intended to ensure that the proposed conceptual design possesses the potential for an aesthetically pleasing building and appears to commensurate with the Guidelines. The intermediate procedure shall serve as a safeguard measure to identify any issues that may delay the granting of "The Docks DRB Final Approval" and the subsequent issuance of the Building Permit and beginning of construction. Preliminary approvals are valid for one-hundred eighty (180) days from issuance of the approval by the DRB. In the case the Final Design Review does not occur within one-hundred eighty (180) days of the Preliminary Approval, said Approval will be considered as expired and another Preliminary Review and consequential Review fee will be required.

Final Design Review

The review is based on the premise that the design has been submitted for Preliminary Review and constructive comments were issued by the DRB. In the Final Review, the DRB shall revisit comments from the Preliminary Review and verify that all open issues were rectified in accordance with the DRB's expectation. Depending upon the nature and magnitude of new comments resulting from the Final Review, a revised set of Design Documents may be requested for further review prior to the commencement of the Lot Stake-out Review. Otherwise, an approval to proceed will be granted either fully or with conditions to be addressed during the construction process. The Final Approval is valid for twelve (12) months from issuance of the approval by the DRB. The following items are necessary for submission in order for the Final Design Review to take place:

a. The completed Application for Residential Construction;
b. The payment of the applicable DRB review fee;
c. The required Design Documents (see following Submission Requirements)

All comments resulting from the Preliminary and Final Reviews will be issued in writing within five (5) business days of the review date. In order to resolve any potentially contentious issues in an amicable manner, it is encouraged that a follow-up meeting take place at the earliest convenience for both the Owner and a member of the DRB.

Design Review Submission Requirements

The submission of a comprehensive and professionally presented set of the Design Documents is essential to provide a systematic and uniform review of proposed residential construction. For both the Preliminary and Final Reviews three (3) bond sets of design documents at a sheet of 24″x36″ or 30″x42″ will be required. Incomplete submissions which do not fulfill each of the following criteria will not be reviewed until all required items of information are submitted.

Preliminary Design Review

1) Site Plan - 1″ = 30′
- Property lines, Building Setback Lines, and Easements.
- Building Footprint w/ Finished Floor Elevations
- Drives, Walks, Patios w/ finished materials
- Proposed drainage patterns

2) Foundation/Basement Plan - 1/4″ = 1′-0″
- All notes and dimensions necessary for construction
- Sizes of Windows and Doors noted or drawn accurately
- Unfinished Areas, Crawl Spaces, Unexcavated Areas
- Patios, Porches, Deck Structures, Light Wells
- Square Footage Calculation of Conditioned Area

3) Floor Plans - 1/4″ = 1′-0″
- All notes and dimensions necessary for construc tion
- Sizes of Windows and Doors noted or drawn accurately
- Patios, Porches, Loggias, Decks, Porte-cocheres, Pergolas
- Square Footage Calculation of Conditioned Area

4) Roof Plan - 1/4″ = 1′-0″
- Drawn accurately in accordance w/ Elevations
- Roof Pitches, Typical overhang dimension
- Chimneys, Dormers, Cupolas, Widow's Walks, etc.

5) Exterior Elevations - 1/4″ = 1′-0″
- All four (4) primary Elevations
- Roof Pitches
- Exterior Finish Materials drawn as accurately as possible
- Floor, Sill, Head, Roof Plate, & Ridge Heights

Final Design Review

1) Site Plan - 1″ = 30′ - scale of choice
- Registered Site Survey or Plot Plan
- Courtyard Walls, Retaining Walls, etc.
- Elevations of Finished Grades at Footprint, Drive, Curb, etc.
- Limits of clearing and Silt Fence locations
- Placement of structure within Building Envelope

2) Foundation/Basement Plan - 1/4″ = 1′-0″
- Interior Structural Columns and Load Bearing Walls
- Footer and thickened slab locations
- Retaining Walls attached to Foundation

3) Floor Plans - 1/4″ = 1′-0″
- Ceiling design, heights and depiction of vaulted areas
- Mechanical Chases, Attics, Roofs below

4) Roof Plan - 1/4″ = 1′-0″
- Mechanical Vents, Roof Vents
- Floor Plan Superimposed (preferred but not required)

5) Exterior Elevations - 1/4″ = 1′-0″
- Hidden Elevations behind Garages, Covered Porches, etc.
- Garage Door design accurately depicted
- Dimensions to louvers, arches, masonry detailing, etc.
- Accurate depiction of Finished Grade Line

6) Exterior Details - 3/4″ or 1″=1′0″
- Rakes, Soffits, Porches, Decks, Bays, Dormers, Cupolas, etc.
- Front Door, Window Head, and Sill Details

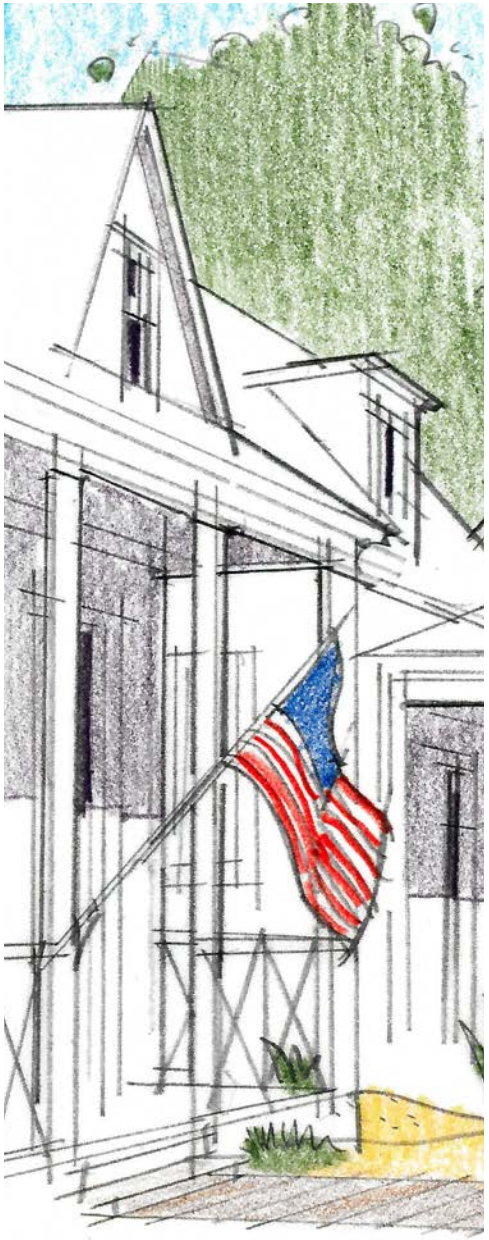
7) Exterior Finish Sample Board
- Roof material sample or palette
- Masonry sample(s)
- Colors for fascia, trim, handrails, decks, pergolas, doors, window, etc.

8) Landscape Plan - 1″ = 1′-0″
- Property Lines, Building Setback Lines, Easement
- House Footprint w/ Finished Floor Elevations
- Existing trees at least 8″ dia. depicting saved and removed.
- Size, spacing and quantities of plants shown to scale
- Decks, Patios, Porches coordinated w/ Floor Plans
- Light Wells, Retaining Walls, Planters w/ heights
- Drives, Parking Areas & Walks w/ materials noted
- A/C Compressors, Utility Meters, Service Yards, etc.
- Courtyard Walls, Fences, Sight Screens
- Irrigation Layout
- Exterior Lighting Layout

9) Landscape Details - scale of choice
- Light Wells, Retaining Walls, Structural Planters
- Seat Walls, Fences, Sight Screens

10) Plant Schedule - grid format
- Common and Scientific Names
- Quantities and sizes at the time of installation
- Special or notable Characteristics

Approval Process



Lot Stake-out Review

After all conditions following the Final Design Review have been met and before any site disturbance can commence, a series of stakes demarcating all proposed construction including: Building Foundation, Porches, Patios, Decks, Drives, etc. must be installed for a review by the Developer's representative. In no case shall any tree removal or site clearing commence without "The Docks DRB Final Approval" authorization.

The Docks DRB Final Approval

"The Docks DRB Final Approval" shall be granted in writing once the Final Design Review conditions have been met, the lot Stake-out Review has taken place and all Deposits have been made. Once this approval is granted and all local ordinances and governmental permits have been addressed and issued, site disturbance can commence.

Construction Progress Inspections

The DRB shall have the right, but not be obligated, to monitor the construction progress to ensure that ongoing construction is compliant with the approved set of Design Documents.

Request for Inspection

A request for inspection of any type can be arranged by calling _____ at (XXX) XXX-XXXX.

Limiting Conditions of the Guidelines

These Guidelines establish the design standards for The Docks. They do not supersede (except where more restrictive) the Declaration of Covenants, Conditions and Restrictions, municipal, county, state, or federal regulations, or other legally binding agreements involving the Developer.

Disclaimer of Liability

Neither the DRB, the Developer, nor any of their representatives, successors or assigns shall be liable for damages to anyone submitting plans for approval, or to any owner, builder, contractor, visitor, or occupant of any of the property in The Docks by reason of mistake in judgment, negligence or nonfeasance arising out of or in connection with the approval or disapproval of any plans or the failure to approve any plans. No DRB approval as provided herein shall be deemed to represent or imply that the proposed improvement, if constructed in accordance with the approved plans and specifications, will result properly designed and constructed improvement or that it will meet all applicable building codes, governmental or agency requirements. The issuance of The Docks DRB Final Approval does not take the place of other governmental approvals and permits. All such approvals and permits are the responsibility of each Owner.

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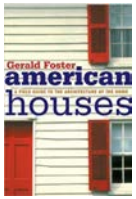

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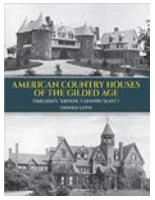

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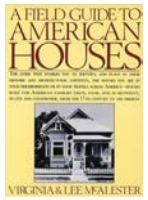

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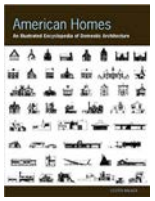

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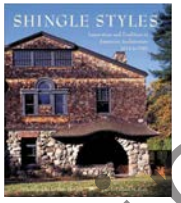

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Preliminary

Prepared By

HIBLER
design studio

Set Backs

Lot#	Set Back (clockwise)				Lot#	Set Back (clockwise)			
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Set Backs

Lot#	Set Back (clockwise) Road	Left	Back	Right	Set Back (clockwise) Road	Left	Back	Right	
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122	15	6	30	8					
123	15	8	30	6					
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125	3	5	20	5					
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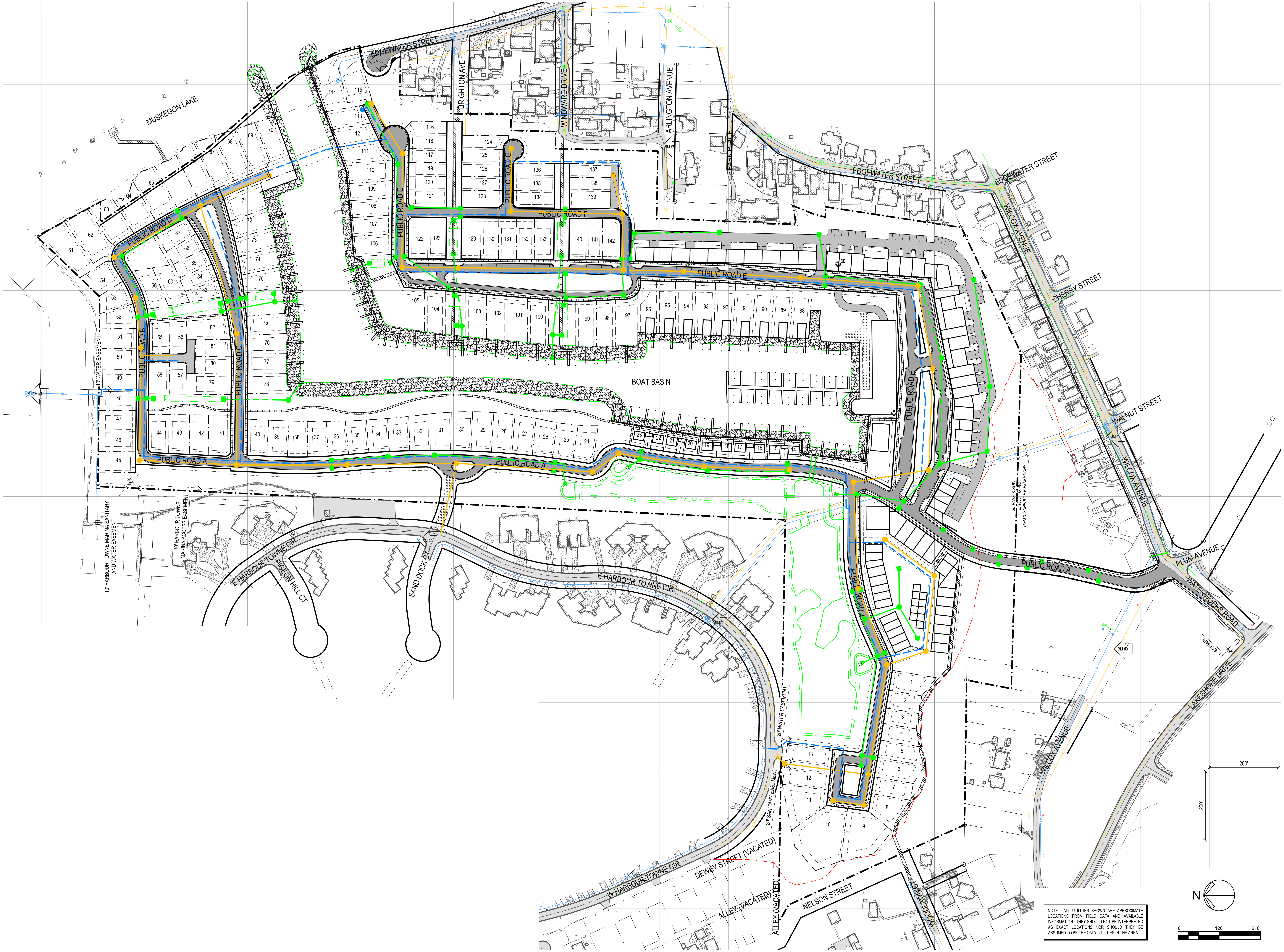
129	15	8	30	8					

TAB 6



PARADIGM DESIGN
ARCHITECTS | ENGINEERS

Grand Rapids | Phoenix | Traverse City
www.paradigmae.com

NOTE: THIS DOCUMENT IS PRELIMINARY IN NATURE AND IS NOT A FINAL, SIGNED AND SEALED DOCUMENT.

DAVID E. HENDERSHOTT
MI - REGISTRATION #6201038725
EXP. DATE 10/31/2019

PROJECT

THE DOCKS

APPROX. 3400 WILCOX AVE,
MUSKEGON, MI 49440

DEVELOPER

DAMFINO DEVELOPMENT, LLC

(231) 722-6691
560 MART ST,
MUSKEGON, MI 49440

RELEASE DATE

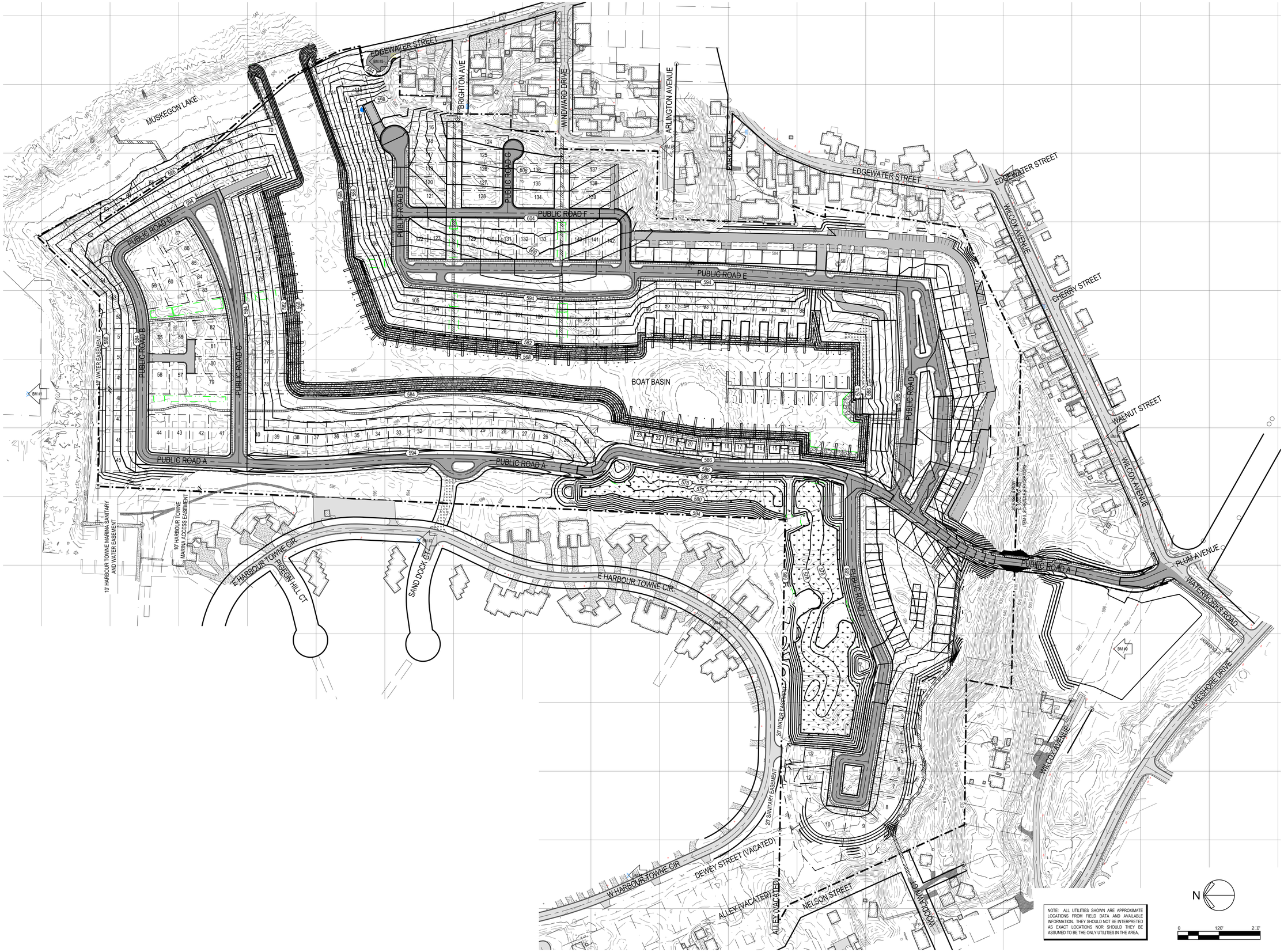
DATE	DESCRIPTION
02-15-19	PRIVATE UTILITIES
04-23-19	CITY REVIEW MEETING

PROJECT

SHEET

CIVIL UTILITY PLAN

C-103



NOTE: ALL UTILITIES SHOWN ARE APPROXIMATE LOCATIONS FROM FIELD DATA AND AVAILABLE INFORMATION. THEY SHOULD NOT BE INTERPRETED AS EXACT LOCATIONS NOR SHOULD THEY BE ASSUMED TO BE THE ONLY UTILITIES IN THE AREA.

PARADIGM DESIGN
ARCHITECTS | ENGINEERS
□□0 □M□□NW□S□□□B
Gr□□d R□□□d□□MI □□□□□
(□□) □□□-□□□□
Grand Rapids | Phoenix | Traverse City
www.paradigmae.com

DAVID E. HENDERSHOTT
MI - REGISTRATION #620102B725
EXP. DATE 10/31/2019

PROJECT

THE DOCKS

APPROX. 3400 WILCOX AVE,
MUSKEGON, MI 49440

DEVELOPER

DAMFINO
DEVELOPMENT, LLC

(231) 722-6691
560 MART ST,
MUSKEGON, MI 49440

RELEASE DATE

	DATE	DESCRIPTION
1	04-23-19	CITY REVIEW MEETING

PROJECT

1□0□0□□

SHEET

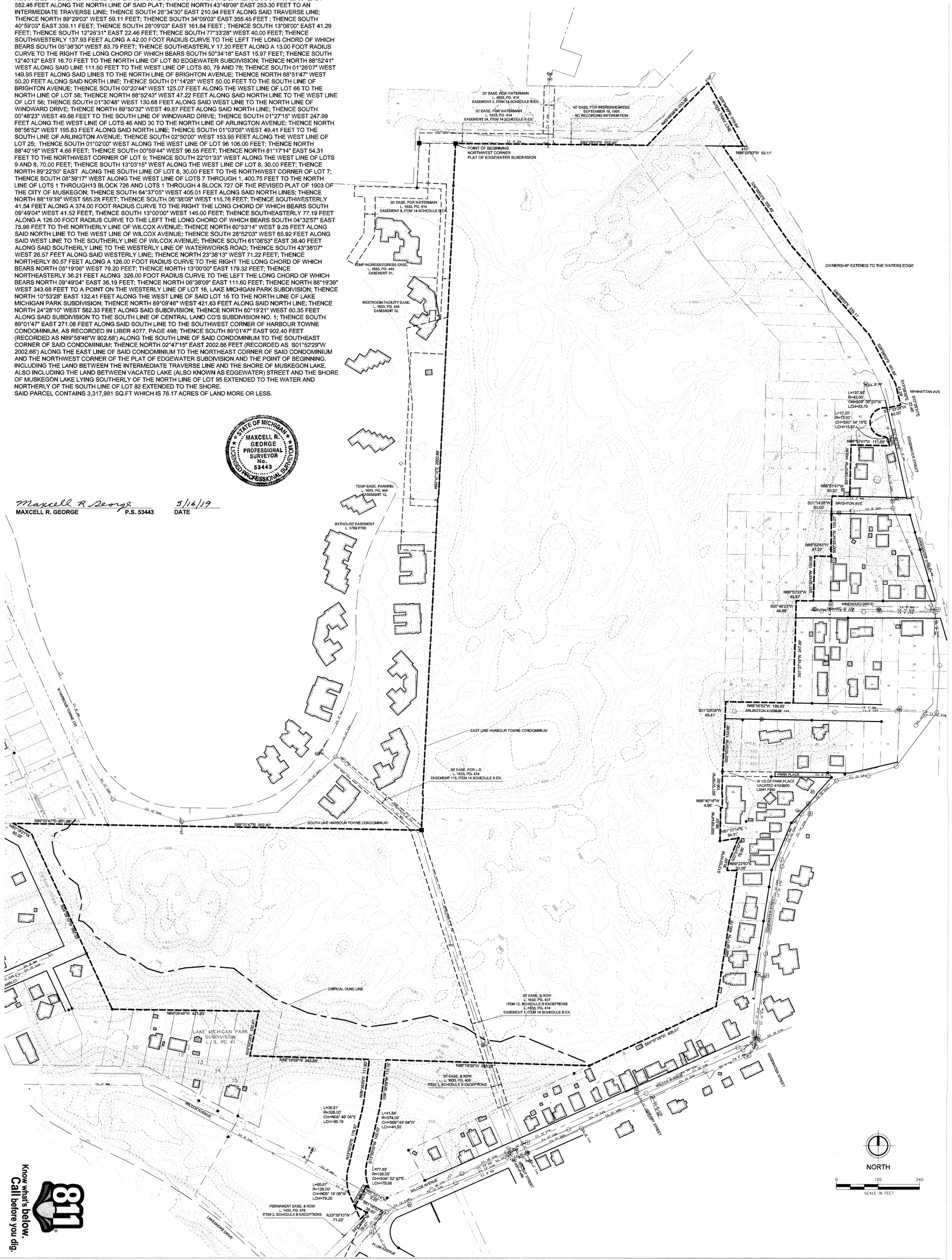
CIVIL GRADING PLAN

C-104

PUD DESCRIPTION:
PART OF SECTIONS 27, 28 AND 33, TOWN 10 NORTH, RANGE 17 WEST, CITY OF MUSKEGON, MUSKEGON COUNTY, MICHIGAN MORE PARTICULARLY DESCRIBED AS:
BEGINNING AT THE NORTHWEST CORNER OF THE PLAT OF EDGEWATER SUBDIVISION, MUSKEGON COUNTY, RECORDED IN LIBER 3, PAGE 82 OF PLATS, MUSKEGON COUNTY RECORDS; THENCE SOUTH 89°29'03" EAST 552.46 FEET ALONG THE NORTH LINE OF SAID PLAT; THENCE NORTH 43°46'09" EAST 253.30 FEET TO AN INTERMEDIATE TRAVERSE LINE; THENCE SOUTH 28°34'30" EAST 210.94 FEET ALONG SAID TRAVERSE LINE; THENCE NORTH 89°29'03" WEST 59.11 FEET; THENCE SOUTH 34°09'03" EAST 355.45 FEET ; THENCE SOUTH 40°59'03" EAST 339.11 FEET; THENCE SOUTH 28°09'03" EAST 161.84 FEET ; THENCE SOUTH 13°08'00" EAST 41.29 FEET; THENCE SOUTH 12°26'31" EAST 22.46 FEET; THENCE SOUTH 77°33'28" WEST 40.00 FEET; THENCE SOUTHWESTERLY 137.93 FEET ALONG A 42.00 FOOT RADIUS CURVE TO THE LEFT THE LONG CHORD OF WHICH BEARS SOUTH 05°36'30" WEST 83.79 FEET; THENCE SOUTHEASTERLY 17.20 FEET ALONG A 13.00 FOOT RADIUS CURVE TO THE RIGHT THE LONG CHORD OF WHICH BEARS SOUTH 50°34'18" EAST 15.97 FEET; THENCE SOUTH 12°40'12" EAST 16.70 FEET TO THE NORTH LINE OF LOT 80 EDGEWATER SUBDIVISION; THENCE NORTH 88°52'41" WEST ALONG SAID LINE 111.50 FEET TO THE WEST LINE OF LOTS 80, 79 AND 78; THENCE SOUTH 01°26'07" WEST 149.95 FEET ALONG SAID LINES TO THE NORTH LINE OF BRIGHTON AVENUE; THENCE NORTH 88°51'47" WEST 50.20 FEET ALONG SAID NORTH LINE; THENCE SOUTH 01°14'28" WEST 50.00 FEET TO THE SOUTH LINE OF BRIGHTON AVENUE; THENCE SOUTH 00°20'44" WEST 125.07 FEET ALONG THE WEST LINE OF LOT 66 TO THE NORTH LINE OF LOT 56; THENCE NORTH 88°52'43" WEST 47.22 FEET ALONG SAID NORTH LINE TO THE WEST LINE OF LOT 56; THENCE SOUTH 01°30'48" WEST 130.68 FEET ALONG SAID WEST LINE TO THE NORTH LINE OF WINDWARD DRIVE; THENCE NORTH 89°50'32" WEST 49.87 FEET ALONG SAID NORTH LINE; THENCE SOUTH 00°48'23" WEST 49.88 FEET TO THE SOUTH LINE OF WINDWARD DRIVE; THENCE SOUTH 01°27'15" WEST 247.99 FEET ALONG THE WEST LINE OF LOTS 46 AND 30 TO THE NORTH LINE OF ARLINGTON AVENUE; THENCE NORTH 88°56'52" WEST 195.83 FEET ALONG SAID NORTH LINE; THENCE SOUTH 01°03'08" WEST 49.41 FEET TO THE SOUTH LINE OF ARLINGTON AVENUE; THENCE SOUTH 02°50'00" WEST 153.95 FEET ALONG THE WEST LINE OF LOT 25; THENCE SOUTH 01°02'00" WEST ALONG THE WEST LINE OF LOT 96 106.00 FEET; THENCE NORTH 88°40'16" WEST 4.66 FEET; THENCE SOUTH 00°59'44" WEST 96.55 FEET; THENCE NORTH 81°17'14" EAST 54.31 FEET TO THE NORTHWEST CORNER OF LOT 9; THENCE SOUTH 22°01'33" WEST ALONG THE WEST LINE OF LOTS 9 AND 8, 70.00 FEET; THENCE SOUTH 13°03'15" WEST ALONG THE WEST LINE OF LOT 8, 30.00 FEET; THENCE NORTH 89°22'50" EAST ALONG THE SOUTH LINE OF LOT 8, 30.00 FEET TO THE NORTHWEST CORNER OF LOT 7; THENCE SOUTH 08°39'17" WEST ALONG THE WEST LINE OF LOTS 7 THROUGH 1, 400.75 FEET TO THE NORTH LINE OF LOTS 1 THROUGH13 BLOCK 726 AND LOTS 1 THROUGH 4 BLOCK 727 OF THE REVISED PLAT OF 1903 OF THE CITY OF MUSKEGON; THENCE SOUTH 64°37'05" WEST 405.01 FEET ALONG SAID NORTH LINES; THENCE NORTH 88°19'39" WEST 585.28 FEET; THENCE SOUTH 06°38'09" WEST 115.76 FEET; THENCE SOUTHWESTERLY 41.54 FEET ALONG A 374.00 FOOT RADIUS CURVE TO THE RIGHT THE LONG CHORD OF WHICH BEARS SOUTH 09°49'04" WEST 41.52 FEET; THENCE SOUTH 13°00'00" WEST 145.00 FEET; THENCE SOUTHEASTERLY 77.19 FEET ALONG A 126.00 FOOT RADIUS CURVE TO THE LEFT THE LONG CHORD OF WHICH BEARS SOUTH 04°32'57" EAST 75.98 FEET TO THE NORTHERLY LINE OF WILCOX AVENUE; THENCE NORTH 60°53'14" WEST 9.25 FEET ALONG SAID NORTH LINE TO THE WEST LINE OF WILCOX AVENUE; THENCE SOUTH 28°52'03" WEST 65.92 FEET ALONG SAID WEST LINE TO THE SOUTHERLY LINE OF WILCOX AVENUE; THENCE SOUTH 61°06'53" EAST 38.40 FEET ALONG SAID SOUTHERLY LINE TO THE WESTERLY LINE OF WATERWORKS ROAD; THENCE SOUTH 43°38'07" WEST 26.57 FEET ALONG SAID WESTERLY LINE; THENCE NORTH 23°38'13" WEST 71.22 FEET; THENCE NORTHERLY 80.57 FEET ALONG A 126.00 FOOT RADIUS CURVE TO THE RIGHT THE LONG CHORD OF WHICH BEARS NORTH 05°19'06" WEST 79.20 FEET; THENCE NORTH 13°00'00" EAST 179.32 FEET; THENCE NORTHEASTERLY 36.21 FEET ALONG 326.00 FOOT RADIUS CURVE TO THE LEFT THE LONG CHORD OF WHICH BEARS NORTH 09°49'04" EAST 36.19 FEET; THENCE NORTH 06°38'09" EAST 111.60 FEET; THENCE NORTH 88°19'39" WEST 343.68 FEET TO A POINT ON THE WESTERLY LINE OF LOT 16, LAKE MICHIGAN PARK SUBDIVISION; THENCE NORTH 10°53'28" EAST 132.41 FEET ALONG THE WEST LINE OF SAID LOT 16 TO THE NORTH LINE OF LAKE MICHIGAN PARK SUBDIVISION; THENCE NORTH 89°09'46" WEST 421.63 FEET ALONG SAID NORTH LINE; THENCE NORTH 24°28'10" WEST 562.33 FEET ALONG SAID SUBDIVISION; THENCE NORTH 60°19'21" WEST 60.35 FEET ALONG SAID SUBDIVISION TO THE SOUTH LINE OF CENTRAL LAND CO'S SUBDIVISION NO. 1; THENCE SOUTH 89°01'47" EAST 271.08 FEET ALONG SAID SOUTH LINE TO THE SOUTHWEST CORNER OF HARBOUR TOWNE CONDOMINIUM, AS RECORDED IN LIBER 4077, PAGE 498; THENCE SOUTH 89°01'47" EAST 902.40 FEET (RECORDED AS N89°58'46"W 902.68') ALONG THE SOUTH LINE OF SAID CONDOMINIUM TO THE SOUTHEAST CORNER OF SAID CONDOMINIUM; THENCE NORTH 02°47'15" EAST 2002.66 FEET (RECORDED AS S01°52'29"W 2002.66') ALONG THE EAST LINE OF SAID CONDOMINIUM TO THE NORTHEAST CORNER OF SAID CONDOMINIUM AND THE NORTHWEST CORNER OF THE PLAT OF EDGEWATER SUBDIVISION AND THE POINT OF BEGINNING.
INCLUDING THE LAND BETWEEN THE INTERMEDIATE TRAVERSE LINE AND THE SHORE OF MUSKEGON LAKE.
ALSO INCLUDING THE LAND BETWEEN VACATED LAKE (ALSO KNOWN AS EDGEWATER) STREET AND THE SHORE OF MUSKEGON LAKE LYING SOUTHERLY OF THE NORTH LINE OF LOT 95 EXTENDED TO THE WATER AND NORTHERLY OF THE SOUTH LINE OF LOT 82 EXTENDED TO THE SHORE.
SAID PARCEL CONTAINS 3,317,981 SQ.FT WHICH IS 76.17 ACRES OF LAND MORE OR LESS.

STATE OF MICHIGAN
MAXCELL R. GEORGE
PROFESSIONAL SURVEYOR
No. 53443
LICENSED PROFESSIONAL SURVEYOR

Maxcell R George 5/16/19
MAXCELL R. GEORGE P.S. 53443 DATE



Know what's below. Call before you dig. 811

1	
52319 FINAL PUD	
FV PROJECT NO. 835610	
DRAWING INFORMATION: 835610_PUD-Description.mwg	
DRAWN BY: SAD/MG	
CHECK BY:	

DAMFINO
SECTION 28, TOWN 10 NORTH, RANGE 17 WEST
CITY OF MUSKEGON, MUSKEGON COUNTY, MICHIGAN

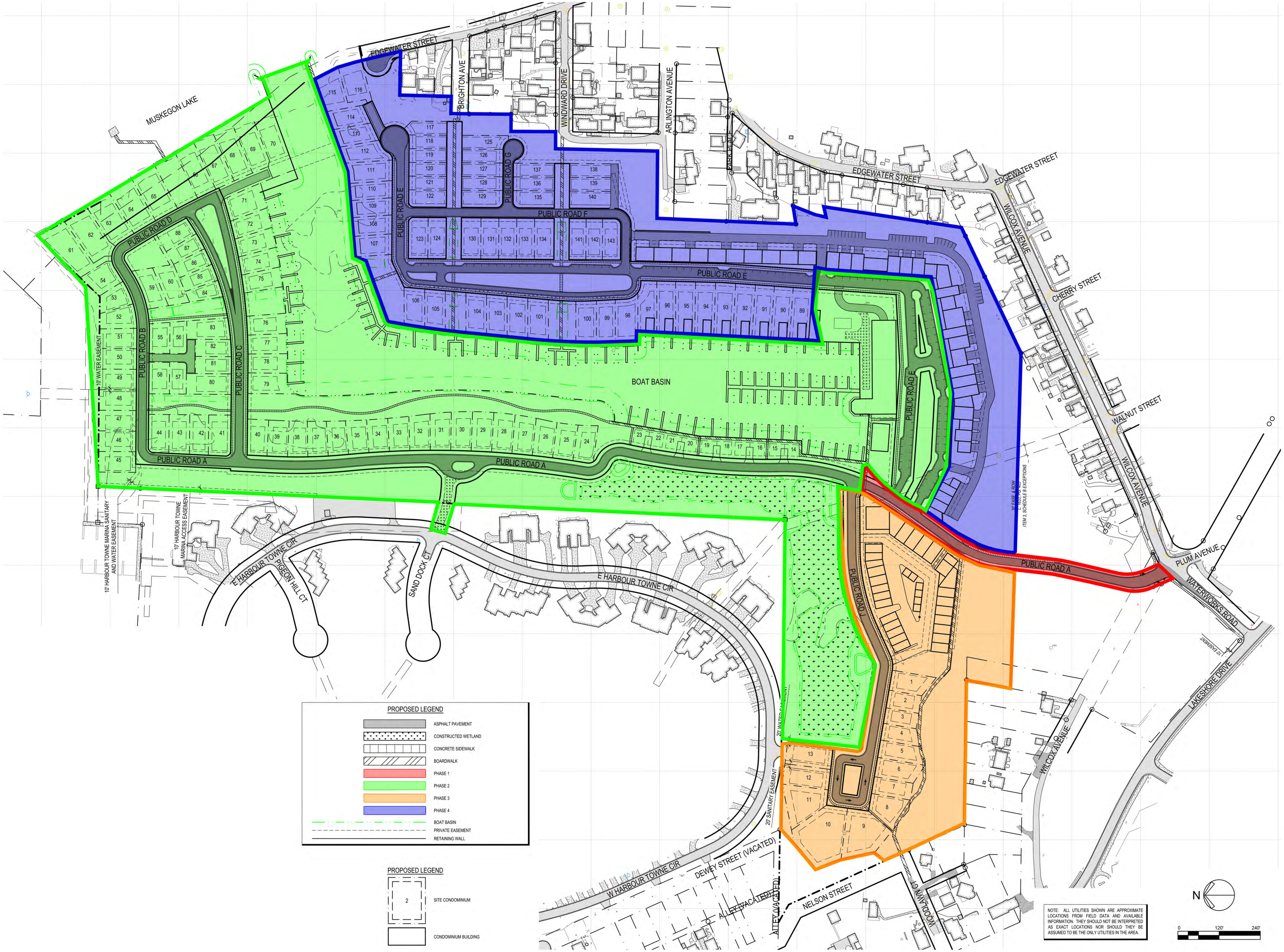
TOPOGRAPHIC SURVEY

REVISIONS

316 Morris Avenue, Suite 230
Muskegon, MI 49440
P: 231.726.1000
F: 231.726.2200

FLEIS&VANDENBRINK
DESIGN. BUILD. OPERATE.

TAB 7



MUSKEGON LAKE
EDGEWATER STREET
BRIGHTON AVE
WINDWARD DRIVE
ARLINGTON AVENUE
EDGEWATER STREET
WILCOX AVENUE
CHERRY STREET
WALNUT STREET
PLUM AVENUE
WATERWORKS ROAD
LAKESHORE DRIVE
PUBLIC ROAD A
PUBLIC ROAD B
PUBLIC ROAD C
PUBLIC ROAD D
PUBLIC ROAD E
PUBLIC ROAD F
PUBLIC ROAD G
PUBLIC ROAD J
BOAT BASIN
10' WATER EASEMENT
10' HARBOUR TOWNE MARINA SANITARY AND WATER EASEMENT
10' HARBOUR TOWNE MARINA ACCESS EASEMENT
E HARBOUR TOWNE CIR
PIGEON HILL CT
SAND DOCK CT
W HARBOUR TOWNE CIR
DEWEY STREET (VACATED)
ALLEY (VACATED)
NELSON STREET
WOODLAWN CT
20' SANITARY EASEMENT
PROPOSED LEGEND
ASPHALT PAVEMENT
CONSTRUCTED WETLAND
CONCRETE SIDEWALK
BOARDWALK
PHASE 1
PHASE 2
PHASE 3
PHASE 4
BOAT BASIN
PRIVATE EASEMENT
RETAINING WALL
PROPOSED LEGEND
SITE CONDOMINIUM
CONDOMINIUM BUILDING
NOTE: ALL UTILITIES SHOWN ARE APPROXIMATE LOCATIONS FROM FIELD DATA AND AVAILABLE INFORMATION. THEY SHOULD NOT BE INTERPRETED AS EXACT LOCATIONS NOR SHOULD THEY BE ASSUMED TO BE THE ONLY UTILITIES IN THE AREA.
N
0 120' 240'

PARADIGM DESIGN
ARCHITECTS | ENGINEERS

550 3 Mile NW, Suite B
Grand Rapids, MI 49544
(616) 785-5656

Grand Rapids | Phoenix | Traverse City
www.paradigmae.com

STATE OF MICHIGAN — DAVID E. HENDERSHOTT — ENGINEER — No. 38725 — LICENSED PROFESSIONAL ENGINEER
5-21-19
DAVID E. HENDERSHOTT
MI - REGISTRATION #6201038725
EXP. DATE 10/31/2019

PROJECT

THE DOCKS

APPROX. 3400 WILCOX AVE,
MUSKEGON, MI 49440

DEVELOPER

DAMFINO DEVELOPMENT, LLC

(231) 722-6691
560 MART ST,
MUSKEGON, MI 49440

RELEASE DATE

	DATE	DESCRIPTION
	05-23-19	FINAL PUD SUBMITTAL

PROJECT

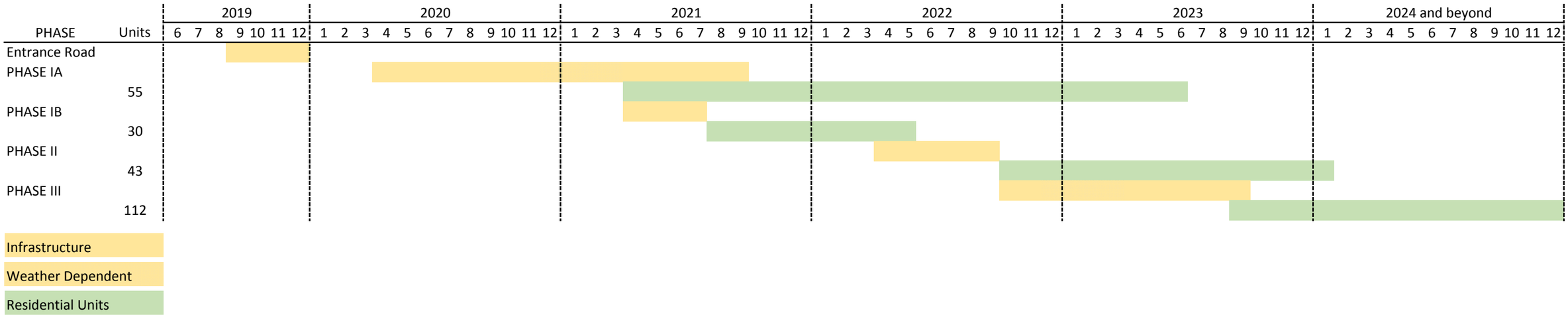
1806064

SHEET

CIVIL PHASING PLAN

C-002

THE DOCKS PROJECT TIMELINE



TAB 8

Street Vacation

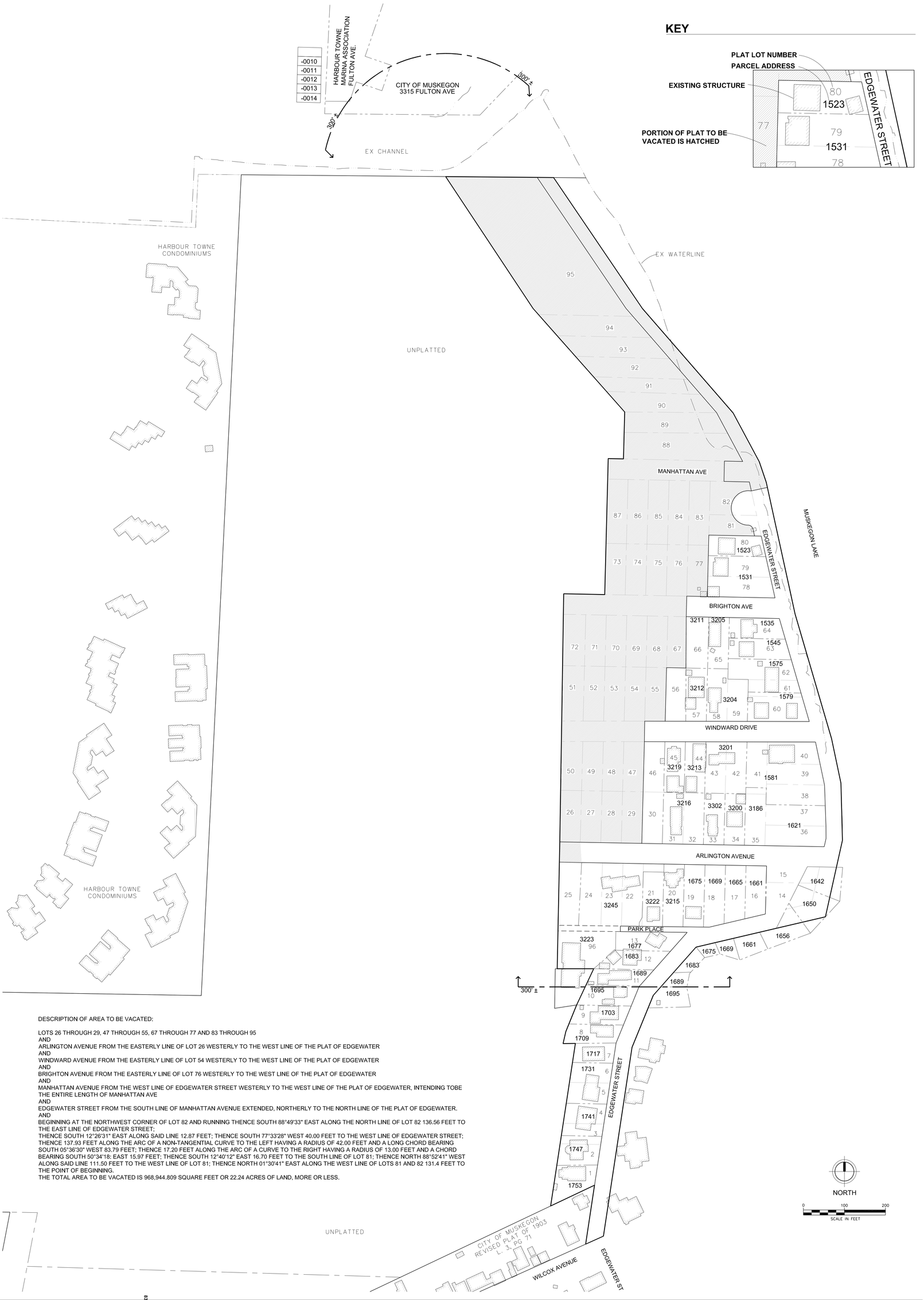
Damfino Development is seeking to have the Edgewater Plat revised through a Vacation Complaint in the circuit court, eliminating 39 lots and vacating certain areas designated for streets that were never built. All of the subject lots and streets are on property owned by Damfino. Residents of the Edgewater Plat have been notified in writing and were invited to a meeting to have questions answered regarding this process.

Damfino is also seeking to relocate the cul-de-sac at the north end of Edgewater Street approximately 90 feet to the south. The current location and the proposed location are both on property owned by Damfino and Damfino will incur the cost of the relocation.

The reason for this request is to facilitate the revision of the Edgewater Plat and the development of the property to be consistent with the proposed PUD.

Pursuant to Section 74 of the City Ordinances, we are asking the City to pass a resolution approving—

1. **The vacation of the existing cul-de-sac portion of Edgewater Street (north of Lot 80);**
2. **The revision/alteration of the cul-de-sac portion of Edgewater Street to be as depicted in the attached drawing; and**
3. **The vacation of the unimproved streets within the Edgewater Plat, those being (a) Arlington Avenue, west of Lot 24; (b) Windward Drive, west of Lot 46; (c) Brighton Avenue, west of Lot 66; (d) Manhattan Avenue, west of the existing cul-de-sac portion of Edgewater Street; and (e) Edgewater Street north of the existing cul-de-sac.**



DESCRIPTION OF AREA TO BE VACATED:

LOTS 26 THROUGH 29, 47 THROUGH 55, 67 THROUGH 77 AND 83 THROUGH 95
AND
ARLINGTON AVENUE FROM THE EASTERLY LINE OF LOT 26 WESTERLY TO THE WEST LINE OF THE PLAT OF EDGEWATER
AND
WINDWARD AVENUE FROM THE EASTERLY LINE OF LOT 54 WESTERLY TO THE WEST LINE OF THE PLAT OF EDGEWATER
AND
BRIGHTON AVENUE FROM THE EASTERLY LINE OF LOT 76 WESTERLY TO THE WEST LINE OF THE PLAT OF EDGEWATER
AND
MANHATTAN AVENUE FROM THE WEST LINE OF EDGEWATER STREET WESTERLY TO THE WEST LINE OF THE PLAT OF EDGEWATER, INTENDING TOBE THE ENTIRE LENGTH OF MANHATTAN AVE
AND
EDGEWATER STREET FROM THE SOUTH LINE OF MANHATTAN AVENUE EXTENDED, NORTHERLY TO THE NORTH LINE OF THE PLAT OF EDGEWATER.
AND
BEGINNING AT THE NORTHWEST CORNER OF LOT 82 AND RUNNING THENCE SOUTH 88°49'33" EAST ALONG THE NORTH LINE OF LOT 82 136.56 FEET TO THE EAST LINE OF EDGEWATER STREET;
THENCE SOUTH 12°26'31" EAST ALONG SAID LINE 12.87 FEET; THENCE SOUTH 77°33'28" WEST 40.00 FEET TO THE WEST LINE OF EDGEWATER STREET;
THENCE 137.93 FEET ALONG THE ARC OF A NON-TANGENTIAL CURVE TO THE LEFT HAVING A RADIUS OF 42.00 FEET AND A LONG CHORD BEARING SOUTH 05°36'30" WEST 83.79 FEET; THENCE 17.20 FEET ALONG THE ARC OF A CURVE TO THE RIGHT HAVING A RADIUS OF 13.00 FEET AND A CHORD BEARING SOUTH 50°34'18; EAST 15.97 FEET; THENCE SOUTH 12°40'12" EAST 16.70 FEET TO THE SOUTH LINE OF LOT 81; THENCE NORTH 88°52'41" WEST ALONG SAID LINE 111.50 FEET TO THE WEST LINE OF LOT 81; THENCE NORTH 01°30'41" EAST ALONG THE WEST LINE OF LOTS 81 AND 82 131.4 FEET TO THE POINT OF BEGINNING.
THE TOTAL AREA TO BE VACATED IS 968,944.809 SQUARE FEET OR 22.24 ACRES OF LAND, MORE OR LESS.

PART OF THE CITY OF MUSKEGON

SECTION 28, TOWN 10 NORTH, RANGE 17 WEST

CITY OF MUSKEGON, MUSKEGON COUNTY, MICHIGAN

PLAT OF EDGEWATER SUBDIVISION VACATION

APRIL 2019

316 Morris Avenue, Suite 320
Muskegon, MI 49440
P. 231.726.2000
F. 231.726.2001

FLEIS&VANDENBRINK
DESIGN. BUILD. OPERATE.