

Agenda

Natural Features Protection

Review Board



City of Kalamazoo

Tuesday, July 23, 2024

4:00 PM

City Commission Chambers at City Hall - 241 W. South Street

A. CALL TO ORDER/ROLL CALL

1. (Action: Motion to Excuse Absent Board Members)

B. ADOPTION OF AGENDA

(Action: Motion to approve the agenda)

1. (Action: Motion to approve agenda as presented)

C. APPROVAL OF MINUTES

1. Approval of the minutes from the Natural Features Protection Review Board meeting on May 28th, 2024

(Action: Motion to approve the May 28th, 2024 meeting minutes as presented)

D. PUBLIC COMMENTS

E. BOARD MEMBER COMMENTS

F. NEW BUSINESS

1. Approval of the NFP Site Plan for the 3401 Nazareth Road project conditioned upon approval by the Site Plan Review Committee

(Action: Motion to Approve the NFP Site Plan for the 3401 Nazareth Road project conditioned upon approval by the Site Plan Review Committee)

2. Approval of the NFP Site Plan for the 3625 W Michigan project conditioned upon approval by the Site Plan Review Committee and adherence to the NFP

Variance conditions

(Action: Motion to Approve the NFP Site Plan for the 3625 W Michigan project conditioned upon approval by the Site Plan Review Committee and adherence to the NFP Variance conditions)

3. Approval of a recommendation to the City Commission for the reappointment of Laura Fredrickson to the NFP Board for a full term of two-years

(Action: Motion to approve a recommendation to the City Commission for the appointment of Laura Fredrickson to the NFP Board for a full term of two-years)

4. Approval of a recommendation to the Mayor and City Commission for the appointment of Evangelia Murgia to the NFP Review Board

(Action: Motion to Approve a recommendation to the Mayor and City Commission for the appointment of Evangelia Murgia to the NFP Review Board)

G. UNFINISHED BUSINESS

H. STAFF REPORTS AND UPDATES

1. NFP Phase 3 Subcommittee Update

I. COMMUNICATIONS AND ANNOUNCEMENTS

J. ADJOURNMENT



Minutes
Natural Features Protection Review Board
May 28, 2024
Regular Meeting

Held at City Hall, Commission Chambers

4:00 p.m.

- A. Call to Order: Director Martin called the meeting to order at 4:00pm.

Members absent: None.

- B. Adoption of Agenda

No changes for the May 28 agenda.

Motion to adopt the agenda as amended made by Director Lettow, supported by Director Fuller, motion passed unanimously.

- C. Approval of the Meeting Minutes

Motion to approve the minutes from the February 29th, 2024, NFP Review Board Meeting motion made by Director Hollander, supported by Director Lettow, passed unanimously.

- D. General Citizen Comments

There were no general citizen comments, either in person or by phone.

- E. Board Comments

Director Lettow stated they would be abstaining from votes or discussion for the new business item F1 as they work for the applicant, Southwest Michigan Land Conservancy and have a conflict of interest.

- F. New Business

1. Approval of a recommendation to the Zoning Board of Appeals to grant relief from the NFP Slope and Slope Setback standards for the Bow in the Clouds Trail project at 3401 Nazareth Road.



Ken Paragon, a landscape architect with OCBA, gave a presentation on the project. OCBA has been working with the Southwest Michigan Land Conservancy for many years on planned upgrades and phases to the Bow in the Clouds Preserve located at 3401 Nazareth Road. The first phase of work was planned 5 or 6 years ago and focused on the upland area of the site which was completed in 2019. The second phase focuses on the lowland areas and an overhaul of the entire trail system. The intent of phase two work is to upgrade the current boardwalk which is 15 or 20 years old and not as accessible as it could be. The project has two goals:

1. Universal Community Access
2. City Access to sanitary sewer lines (six manholes) on site which are currently inaccessible and have been for approximately 40 years. City Public Works has a legal access easement but no physical access.

Phase two work focuses on firming and stabilizing surfaces, adding rest areas, and regrading as well as utilizing a semi-pervious aggregate surface. This work will also provide physical access to some of the utilities for city staff via a vacuum truck. Applicant has worked in tandem with City staff on the design to accommodate physical access. To make these upgrades and access sewer manholes, impacts to protected slopes and slope setbacks are difficult to avoid. The applicant pointed out the landscaping planned to help stabilize slopes and other permitting that would be required and what permits they currently do have.

Ken Paragon showed existing condition images of the upland and lowland areas specifically the sloped areas and existing structures like bridges and boardwalks.

Mitch Lettow discussed the process for wetland delineation both desktop and site level work. Wetlands are primarily located on the SW portion of the parcel. Phase two preliminary plans were presented showing the locations of the existing trails and utilities as well as the areas of current trails. The trail coming from the east would be 10 ft wide to a point for the city truck to access, then the trail narrows, and access would be on foot. A spur is showing into the wetland areas but is dependent upon funding availability. Natural features were shown on this sheet except for woodland delineation. Natural features setbacks were also shown. 13 trees are slated for removal. These trees fall on the Township Parcel. Critical Roots zones were shown. Mr. Lettow explained that the trees slated for removal comprised of non-native trees like Siberian Elms which are not considered protected trees. Mr. Lettow also explained that care and consideration was taken when trying to mitigate impacts to critical roots zones for the regrading work and where possible, attempted to avoid Critical root zones. Protected slopes and slope setbacks were called out on the plans and the manhole covers that are located in those slopes and slope setbacks.

Plans showing erosion control were presented as well. Mr. Lettow explained this document and permitting that is still required. This included detailed views and explanation of long-term management to mitigate impacts. Bridge replacements and EGLE wetland permitting was shared as bridge crossings and upgrades will be within the setback areas of streams and wetlands. Mr. Lettow finished the presentations and asked questions from NFP Board members.

1. Director Glasser asked if during the EGLE wetland permitting process was it determined that impacts to streams or wetlands was small enough not to require mitigation measures?



2. Mr. Paragon stated that yes, this is true.
3. Mr. Lettow pointed out that the location of the new bridge is in a new area that takes it out of conflict with other natural features.
4. Director Bassett asked about clarification of the stream / wetland crossing locations and the choices made for the new crossing locations. Mr. Lettow explained that they try to use existing infrastructure and threading the needle to not impact more than needed in the stream and wetland areas. Helical piers and footings will be used to enhance these crossings.
5. Director Frederickson asked for clarification on how existing boardwalk will be removed to minimize impacts to existing natural features.
6. Mr. Lettow explained that upland trails would be upgraded first and then utilized to bring the new board to the lowland areas to mitigate impacts. Mr. Lettow also stated that Wetland matts or plywood will be used during deconstruction of the existing boardwalk to limit impacts as well so staff. Mr. Lettow also stated that the new boardwalk will be easier to maintain.
7. Director Glasser stated that with slope setback areas being impacted by this work is there cut and fill information available for that work, if it needs to be completed?
8. Mr. Paragon stated that those numbers or information are not available but the intent is that cut and fill is equal or equivalent.
9. Director Glasser followed up by asking about step installation, will their be measures to make sure the bridges are still accessible?
10. Mr. Lettow explained that these steps will be adjacent to the bridges and the bridges will be 6ft wide and universally accessible able to be used by a motorized device. They are working with a stream specialist to mitigate the impacts of these steps. EGLE staff recommend this design to provide an official area for the public to interact with the water.
11. Director Fuller asked for clarification for why crushed aggregate is chosen as a surface material for portions of the trail system. Were any alternatives researched or looked at?
12. Mr. Lettow explained balancing infrastructure and the natural character of the site. It is easier to repair and provides universal access without adding more impervious surface. Alternatives are available but this material can still accommodate a larger vehicle. The type of aggregate material was chosen as a balance.
13. Mr. Paragon also mentioned that the maximum cross slope of the trails will be 2% to comply with universal access design.
14. Director Frederickson asked the board and city staff if landscaping and erosion control plans and documentation would be coming back to the NFP board.
15. Mr. Bergstrom stated that yes, this is the first touch point. The action item is related to a recommendation to the Zoning Board of Appeals. The project then moves to the Zoning Board of Appeals for a final decision. Once that is complete, the site plan review process would come next and the NFP board would see this project again.
16. Director Glasser asked if Kalamazoo Township has a similar ordinance to NFP.
17. Mr. Paragon explained that he has contacted Kalamazoo Township officials who provided guidance that the Township will lean on the City review processes.

Public Comments:

- There was no phone-in, or in-person comments related to this action item.



Director Fuller motioned to approve the recommendation to the Zoning Board of Appeals to grant relief from the NFP Slope Preservation and Slope Setback standards, supported by Director Glasser. Director Lettow abstained from discussion or action related to this item. The vote was taken by roll call and passed unanimously.

2. Motion to appoint NFP Board Members to serve on an NFP Nominating subcommittee

1. Mr. Bergstrom stated that we have NFP board member seat open. Director Glasser's term expired in March but serves until an applicant is able to fill the vacancy. This applicant will need to have experience in geology or hydrogeology fields.
2. Director Fuller asked if there have been any applicants yet?
3. Mr. Bergstrom stated there has been one applicant since April with a different field of experience. A recent application has been submitted. Outreach from NFP board members has been occurring to get more applications.
4. Director Martin asked if Mr. Bergstrom was looking for volunteers from the NFP board to fill this subcommittee.
5. Mr. Bergstrom stated, yes, that is correct.
6. Director Fuller nominated Director Glasser due to his field experience.
7. Director Glasser stated he would be fine volunteering.
8. Director Fuller volunteered.
9. Director Basset volunteered

Director Lettow motioned to appoint Director Glasser, Director Fuller, and Director Bassett to serve on the NFP Nominating Subcommittee, supported by Director Hollander. The vote was taken by roll call and passed unanimously.

3. Motion to Appoint NFP Board members to an NFP Phase 3 subcommittee

1. Mr. Bergstrom stated that Phase 3 NFP plans is focused on public and community stewardship and developing an NFP guide for residents and developers.
2. Director Bassett asked if the point of Phase 3 to be proactive instead of reactive?
3. Mr. Bergstrom stated that yes, phase 3 was to expand resources to support the NFP process via the development of NFP Guide and how the NFP process interacts with other city processes.
4. Director Lettow volunteered for the Phase 3 subcommittee
5. Director Frederickson volunteered for the Phase 3 subcommittee.
6. Director Glasser asked if there has been any consideration to expand the NFP overlay district during Phase 3 work?
7. Mr. Bergstrom stated that it is not being considered currently but could be in the future. Phase 2 was adopted recently and projects are still being tracked through the NFP Process. Annual reporting could help determine future changes.



8. Director Martin volunteered for the Phase 3 subcommittee.

Public Comments:

- There was no phone-in, or in-person comments related to this action item.

Director Bassett motioned to appoint Director Lettow, Director Frederickson, and Director Martin to serve on the NFP Phase 3 Subcommittee, supported by Director Fuller. The vote was taken by roll call and passed unanimously.

G. Unfinished Business

1. Director Glasser asked for clarification on city residency and ability to serve on the NFP Board.
2. Mr. Bergstrom stated that city residency is not a requirement to serve on the NFP board.

H. Staff Reports and Updates

1. Mr. Bergstrom stated that there have been two applications submitted since outreach began in March. The ability to fill an open seat with the required expertise can be difficult.

I. Communications and Announcements

J. Adjourn Meeting

Director Martin adjourned the meeting at 4:56 p.m.



NFP Review Board Staff Report

City of Kalamazoo

TO: The Natural Features Protection Review Board

FROM: Nolan Bergstrom, NFP Board Liaison

DATE: July 23, 2024

SUBJECT: 3401 Nazareth Road (Bow in the Clouds)

RECOMMENDATION:

It is recommended the Natural Features Protection (NFP) Review Board approve the NFP Site Plan application for 3401 Nazareth Road conditioned upon approval through the Site Plan Review process.

BACKGROUND:

Currently, the subject property is located in the Burke Acres Neighborhood in the Northeast area of Kalamazoo at 3401 Nazareth Road and is known as Bow in the Clouds Preserve. The property is owned and maintained by the Southwest Michigan Land Conservancy. There is a neighboring parcel in the Township that is apart of the Bow in the Clouds Preserve. The parcel is zoned RM-36 (Residential, Multi-Dwelling) where the number 36 denotes the number of dwelling units permitted. The site consists of existing recreational trails, underground utilities, and multiple Natural Features (Slopes, Woodland, Wetlands, and Water Resources) and requires Rare Species Review. The site is approximately 118 Acres and accessible to the public. The applicant is proposing to add portions of non-motorized, aggregate surfaced trail development to connect to the existing trail system. This includes the addition of a steel boardwalk at 2 stream crossings and in wetland, and installation of benches. New trails will be universally accessible as well as provide access to the existing sanitary collector sewer traversing the property for City of Kalamazoo Public Services Dept. for future service and maintenance. These utilities are currently not accessible or difficult to access.

The project has started the Site Plan Review process and held a pre-site plan review meeting with the site plan review committee on Wednesday, July 10th. The project is seeking NFP approval to obtain full site plan approval and site permits. This project was before the NFP board at the May 28th, 2024 regular meeting seeking relief from the NFP Slope and Slope Setback standards via a variance and recommendation to the Zoning Board of Appeals. The NFP board granted this relief and the variance was approved by the Zoning Board of Appeals on Thursday, June 13th, 2024.

FINDINGS:

Currently, the subject property is located in the Burke Acres Neighborhood in the Northeast area of Kalamazoo at 3401 Nazareth Road and is known as Bow in the Clouds Preserve. The property is owned and maintained by the Southwest Michigan Land Conservancy. There is a neighboring parcel in the Township that is apart of the Bow in the Clouds Preserve. The parcel is zoned RM-36 (Residential, Multi-Dwelling) where the number 36 denotes the number of dwelling units permitted. The site consists of existing recreational trails, underground utilities, and multiple Natural Features (Slopes, Woodland, Wetlands, and Water Resources) and requires Rare Species Review. The site is approximately 118 Acres and accessible to the public. The applicant's design team evaluated the site to identify all protected natural features on the property.

The site was placed in the NFP Overlay District for the following reasons:

Michigan [Natural Features Inventory \(MNFI\)](#) Rare Species Review required (meaning: Rare Species as defined by Law with observations of Rare Species having been reported for the subject property)

1. **Primary Natural Feature:** Natural Preserve
2. **Secondary Natural Feature:** Hydrology or Water Features exist on-site (including Wetlands)
3. **Tertiary Natural Feature:** Protected Slopes greater than or equal to 20% Grade

The site has woodland areas that coincide with the water resources and slopes. The design team is working with the applicant to complete a Woodland Assessment. The applicant has been approved and provided a permit for work impacting water resources and wetlands from the Michigan Department of Environment, Great Lakes, and Energy Water Resources Division (EGLE) which expires on August 24, 2025. This permit includes Part 301 (Inland Lakes and Streams), Part 303 (Wetlands Protection), and Part 31 (Water Resources Protection [Floodplain Regulatory Authority]).

The project came before the NFP Board on July 22nd, 2020.

Since the project is located within the NFP Overlay District, the following standards were reviewed and applied in the following way:

- **Water Resources Standard** – The project is approved for work by EGLE through August 24, 2025. Permitted activities within the water resource setback or on the water resource itself include: *Water and sewer lines, utility lines, bridge abutments or approaches, or semi-pervious, nonmotorized trailways, may be developed and*

maintained within a water resource setback with approval from all applicable local, state, and/or federal agencies. As stated in [§ 50-6.2D\(2\)\(c\)](#) of the NFP Ordinance.

- **Protected Slope and Slope Setback Standards** - Areas of the parcel have slopes greater than or equal to 20% grade. To keep the new non-motorized trails as accessible as possible, impacts to slopes and slope setbacks are suggested. The applicant is asking for relief from these standards to complete the project as proposed. Variances are reviewed and voted on by the Zoning Board of Appeals. *The applicant is asking for a recommendation to the Zoning Board of Appeals to grant relief from these NFP standards from the NFP Review Board.*
- **Wetland Standard** – The project is approved for work in delineated wetlands by EGLE through August 24, 2025. Due to the size of the parent parcel, the normal setback from Wetlands is 25ft. However, permitted activities within this setback include: *Water and sewer lines, utility lines, bridge abutments or approaches, or semi pervious, nonmotorized trailways, may be developed and maintained within a wetland setback with approval from all applicable local, state, and/or federal agencies. As stated in [§ 50-6.2C\(3\)\(c\)](#) of the NFP Ordinance.*
- **Protected Tree Standard** – Due to the size of the parcel and the inclusion of a woodland delineation occurring, this standard does not apply.
- **Woodland Standard** - A woodland delineation was conducted by the applicant and the design team. The woodland preservation percentage requirement is 50% as stated in [§ 50-6.2G\(3\)\(a\)](#) of the NFP Ordinance and based on the woodland delineation. The applicant is proposing to remove a few trees. Any impact on the Critical Root Zones of the woodland edge would require a management plan.
- **Stormwater Management** – This is a low intensity development. Stormwater requirements will be monitored and applied during the Site Plan Review Process.

Ken Peregon
Southwest Michigan Land Conservancy
8395 East Main St.
Galesburg, MI 49053

June 6, 2024

**Re: Rare Species Review #4999 – Bow in the Clouds Property, City of Kalamazoo's
Natural Features Protection review process, Kalamazoo County, MI**

Hello:

The location for the proposed project was checked against known localities for rare species and unique natural features, which are recorded in the Michigan Natural Features Inventory (MNFI) natural heritage database. This continuously updated database is a comprehensive source of existing data on Michigan's endangered, threatened, or otherwise significant plant and animal species, natural plant communities, and other natural features. Records in the database indicate that a qualified observer has documented the presence of special natural features. The absence of records in the database for a particular site may mean that the site has not been surveyed. The only way to obtain a definitive statement on the status of natural features is to have a competent biologist perform a complete field survey.

Under Act 451 of 1994, the Natural Resources and Environmental Protection Act, Part 365, Endangered Species Protection, "a person shall not take, possess, transport, ...fish, plants, and wildlife indigenous to the state and determined to be endangered or threatened," unless first receiving an Endangered Species Permit from the Michigan Department of Natural Resources (MDNR), Wildlife Division. Responsibility to protect endangered and threatened species is not limited to the lists below. Other species may be present that have not been recorded in the database.



MSU EXTENSION

**Michigan Natural
Features Inventory**

PO Box 13036
Lansing MI 48901

(517) 284-6200
Fax (517) 373-9566

mnfi.anr.msu.edu

Although several at-risk species and/or natural communities have been documented within 1.5 miles of the project location it is unlikely that adverse impacts will occur. This response reflects a desktop review of the database and MNFI cannot fully evaluate this project without visiting the area. MNFI offers several levels of [Rare Species Reviews](#), including field surveys which I would be happy to discuss with you.

Sincerely,

Michael Sanders

Michael Sanders
Environmental Review Specialist/Zoologist
Michigan Natural Features Inventory

Comments for Rare Species Review #4999

It is important to note that it is the applicant's responsibility to comply with both state and federal threatened and endangered species legislation. Therefore, if a state listed species occurs at a project site, and you think you need an endangered species permit please contact: DNR-Wildlife Division, DNR-StateTEPermit@michigan.gov. If a federally listed species is involved and, you think a permit is needed, please contact Jessica Pruden, U.S. Fish and Wildlife Service, East Lansing office, 517-351-8316, or Jessica.Pruden@fws.gov.

NOTE: Special concern species and natural communities are not protected under endangered species legislation, but efforts should be taken to minimize any or all impacts. Please consult MNFI's [Rare Species Explorer](#) for additional information on Michigan's rare plants and animals.

Table 1: Occurrences of Threatened & Endangered Species within 1.5 miles of Project Site

Element Category	Scientific Name	Common Name	Federal Status	State Status	G Rank	S Rank	EO Rank	First Observed Date	Last Observed Date
Animal	<i>Bombus pensylvanicus</i>	American bumble bee		E	G3G4	S1	H	1963-09-04	1963-09-04
Plant	<i>Panax quinquefolius</i>	Ginseng		T	G3G4	S2S3	H	1838-07-27	1838-07-27

Comments for Table 1

No concerns – the occurrences are Historic and far removed from project.

Table 2: Occurrences of Special Concern Species and Natural Communities within 1.5 miles of Project Site

Element Category	Scientific Name	Common Name	Federal Status	State Status	G Rank	S Rank	EO Rank	First Observed Date	Last Observed Date
Animal	<i>Mesomphix cupreus</i>	Copper button		SC	G5	S1	H		

Comments for Table 2

No concerns – the occurrence is Historic and far removed from project.

Codes to accompany tables

State Protection Status Code Definitions

E = Endangered

T = Threatened

SC = Special concern

Federal Protection Status Code Definitions

LE = listed endangered

LT = listed threatened

LELT = partly listed endangered and partly listed threatened

PDL = proposed delist

E(S/A) = endangered based on similarities/appearance

PS = partial status (federally listed in only part of its range)

C = species being considered for federal status

Global Heritage Status Rank Definitions (G RANK)

The priority assigned by [NatureServe](#)'s national office for data collection and protection based upon the element's status throughout its entire world-wide range. Criteria not based only on number of occurrences; other critical factors also apply. Note that ranks are frequently combined.

G1 = critically imperiled globally because of extreme rarity (5 or fewer occurrences range-wide or very few remaining individuals or acres) or because of some factor(s) making it especially vulnerable to extinction.

G2 = imperiled globally because of rarity (6 to 20 occurrences or few remaining individuals or acres) or because of some factor(s) making it very vulnerable to extinction throughout its range.

G3 = Either very rare and local throughout its range or found locally (even abundantly at some of its locations) in a restricted range (e.g. a single western state, a physiographic region in the East) or because of other factor(s) making it vulnerable to extinction throughout its range; in terms of occurrences, in the range of 21 to 100.

G4 = Apparently secure globally, though it may be quite rare in parts of its range, especially at the periphery.

G5 = Demonstrably secure globally, though it may be quite rare in parts of its range, especially at the periphery.

Q = Taxonomy uncertain

State Heritage Status Rank Definitions (S RANK)

The priority assigned by the Michigan Natural Features Inventory for data collection and protection based upon the element's status within the state. Criteria not based only on number of occurrences; other critical factors also apply. Note that ranks are frequently combined.

S1 = Critically imperiled in the state because of extreme rarity (5 or fewer occurrences or very few remaining individuals or acres) or because of some factor(s) making it especially vulnerable to extirpation in the state.

S2 = Imperiled in state because of rarity (6 to 20 occurrences or few remaining individuals or acres) or because of some factor(s) making it very vulnerable to extirpation from the state.

S3 = Rare or uncommon in state (on the order of 21 to 100

occurrences). S4 = apparently secure in state, with many occurrences.

S5 = demonstrably secure in state and essentially ineradicable under present conditions.

SX = apparently extirpated from state.

EO Rank Codes

Element Occurrence (EO) ranks refer to the viability or ecological integrity of the occurrence; they provide an assessment of the likelihood that if current conditions prevail the EO will persist for a defined period of time, typically 20-100 years.

- A - Excellent estimated viability/ecological integrity
- A? - Possibly excellent estimated viability/ecological integrity
- AB - Excellent or good estimated viability/ecological integrity
- AC - Excellent, good, or fair estimated viability/ecological integrity
- B - Good estimated viability/ecological integrity
- B? - Possibly good estimated viability/ecological integrity
- BC - Good or fair estimated viability/ecological integrity
- BD - Good, fair, or poor estimated viability/ecological integrity
- C - Fair estimated viability/ecological integrity
- C? - Possibly fair estimated viability/ecological integrity
- CD - Fair or poor estimated viability/ecological integrity
- D - Poor estimated viability/ecological integrity
- D? - Possibly poor estimated viability/ecological integrity
- E - Verified extant (viability/ecological integrity not assessed)
- F - Failed to find
- F? - Possibly failed to find
- H - Historical
- H? - Possibly historical
- X - Extirpated
- X? - Possibly extirpated
- U - Unrankable
- NR - Not ranked

Section 7 Comments for Rare Species Review #4999

City of Kalamazoo's Natural Features Protection review process, Kalamazoo County, MI

Bow in the Clouds Property

Ken Peregon

Southwest Michigan Land Conservancy

8395 East Main St.

Galesburg, MI 49053

June 6, 2024

For projects involving Federal funding or a federal agency authorization

The following information is provided to assist you with Section 7 compliance of the Federal Endangered Species Act (ESA). The ESA directs all Federal agencies "to work to conserve endangered and threatened species. Section 7 of the ESA, called "Interagency Cooperation," is the means by which Federal agencies ensure their actions, including those they authorize or fund, do not jeopardize the existence of any listed species."

The project falls within the range of the following federally listed/proposed/candidate species which have been identified by the U.S. Fish and Wildlife Service (USFWS) to occur in **Kalamazoo County, Michigan:**

Federally Endangered

Indiana bat – there appears to be suitable habitat within 1.5 miles of the project. Indiana bats (*Myotis sodalis*) are found only in the eastern United States and are typically confined to the southern three tiers of counties in Michigan. Indiana bats that summer in Michigan winter in Indiana and Kentucky. This species forms colonies and forages in riparian and mature floodplain habitats. Nursery roost sites are usually located under loose bark or in hollows of trees near riparian habitat. Indiana bats typically avoid houses or other artificial structures and typically roost underneath loose bark of dead elm, maple and ash trees. Other dead trees used include oak, hickory and cottonwood. Foraging typically occurs over slow-moving, wooded streams and rivers as well as in the canopy of mature trees. Movements may also extend into the outer edge of the floodplain and to nearby solitary trees. A summer colony's foraging area usually encompasses a stretch of stream over a half-mile in length. Upland areas isolated from floodplains and non-wooded streams are generally avoided.

Management and Conservation: Every March, the USFWS publishes [survey guidelines](#) to assist project proponents (both Federal and non-Federal) with conservation planning for Federally listed bats in Michigan. We strongly encourage project managers and their designated representatives to use the U.S. Fish and Wildlife Service (USFWS) online planning tool [Information for Planning and Consultation](#) (IPaC) to evaluate potential effects of proposed activities on listed bats and other Federally listed species in Michigan. Projects that complete consultation or coordination through IPaC automatically adhere to the recommendations provided in these guidelines and are not required to implement any additional conservation measures for listed bats.

Snuffbox – there does not appear to be suitable habitat within 1.5 miles of the project. The state and federally endangered snuffbox mussel (*Epioblasma triquetra*) inhabits rivers and streams with cobble, gravel, or sand bottoms in swift currents and usually is deeply buried in the substrate. Glochidia, the parasitic larval stage of the mussel, are released from May to mid-July. In Michigan, the only host fish known for snuffbox is the log perch (*Percina caprodes*). In other parts of their range the banded sculpin (*Cottus carolinae*) is also a known host. After completing the parasitic stage and reaching adulthood, snuffbox remain relatively sessile on the river bottom, living between 8-10 years. The best time to survey for snuffbox is April through September.

Management and Conservation: the snuffbox mussel is sensitive to river impoundment, siltation, and disturbance, due to its requirement for clean, swift current and relative immobility as an adult. To maintain the current populations in Michigan, rivers need to be protected to reduce silt loading and run-off. Maintaining or establishing vegetated riparian

buffers can aid in controlling many of the threats to mussels. Control of zebra mussels is critical to preserving native mussels. And as with all mussels, protection of their hosts habitat is also crucial. Because the life cycle of the snuffbox is inherently linked with that of the logperch in Michigan, conservation and management of this fish species is needed to ensure that of the snuffbox.

Mitchell's satyr butterfly – there does not appear to be suitable habitat within 1.5 miles of the project. The federally endangered and state endangered Mitchell's satyr butterfly (*Neonympha mitchellii mitchellii*) is restricted to calcareous wetlands known as prairie fens. In Michigan, this habitat is characterized by scattered tamaracks, poison sumac, and dogwood with a ground cover of sedges, shrubby cinquefoil, and a variety of herbaceous species with prairie affinities. Adult Mitchell's satyr butterflies are active two to three weeks each summer, with males emerging before females. Adult flight dates are from mid-June to mid-July. Larvae hibernate near the bottom of a sedge. The larval food plant is thought to be several species of sedge. The caterpillar is green with white stripes.

Management and Conservation: the primary threat to the continued survival of this species is habitat loss and modification. Many of the wetland complexes occupied currently have been altered or drained for agriculture or development. Wetland alteration is responsible for extirpating the single known satyr population in Ohio. Wetland alteration also can lead to invasion by exotic plant species such as glossy buckthorn (*Rhamnus frangula*), purple loosestrife (*Lythrum salicaria*), common buckthorn (*Rhamnus cathartica*), and the common reed (*Phragmites australis*). In addition, landscape-scale processes that may be important for maintaining suitable satyr habitat and/or creating new habitat, such as wildfires, fluctuations in hydrologic regimes, and flooding from beaver (*Castor canadensis*) activity, have been virtually eliminated or altered throughout the species' range.

Northern long-eared bat – Northern long-eared bat (*M. septentrionalis*) numbers in the northeast US have declined up to 99 percent. Loss or degradation of summer habitat, wind turbines, disturbance to hibernacula, predation, and pesticides have contributed to declines in Northern long-eared bat populations. However, no other threat has been as severe to the decline as White-nose Syndrome (WNS). WNS is a fungus that thrives in the cold, damp conditions in caves and mines where bats hibernate. The disease is believed to disrupt the hibernation cycle by causing bats to repeatedly awake thereby depleting vital energy reserves. This species was federally listed in May 2015 primarily due to the threat from WNS.

Although no known hibernacula or roost trees have been documented within 1.5 miles of the project site, this activity occurs within the designated WNS zone (i.e., within 150 miles of positive counties/districts impacted by WNS. Also, there appears to be suitable habitat within 1.5 miles of the project.

Also called northern bat or northern myotis, this bat is distinguished from other *Myotis* species by its long ears. In Michigan, northern long-eared bats hibernate in abandoned mines and caves in the Upper Peninsula; they also commonly hibernate in the Tippy Dam spillway in Manistee County. This species is a regional migrant with migratory distance largely determined by locations of suitable hibernacula sites.

Northern long-eared bats typically roost and forage in forested areas. During the summer, these bats roost singly or in colonies underneath bark, in cavities or in crevices of both living and dead trees. Roost trees are selected based on the suitability to retain bark or provide cavities or crevices. Common roost trees in southern Lower Michigan include species of ash, elm and maple. Foraging occurs primarily in areas along woodland edges, woodland clearings and over small woodland ponds. Moths, beetles, and small flies are common food items. Like all temperate bats this species typically produces only 1-2 young per year.

Management and Conservation: Every March, the USFWS publishes [survey guidelines](#) to assist project proponents (both Federal and non-Federal) with conservation planning for Federally listed bats in Michigan. We strongly encourage project managers and their designated representatives to use the U.S. Fish and Wildlife Service (USFWS) online planning tool [Information for Planning and Consultation](#) (IPaC) to evaluate potential effects of proposed activities on listed bats and other Federally listed species in Michigan. Projects that complete consultation or coordination through IPaC automatically adhere to the recommendations provided in these guidelines and are not required to implement any additional conservation measures for listed bats.

Federally Threatened

Eastern massasauga rattlesnake (EMR) – there does not appear to be suitable habitat within 1.5 miles of the project. **The project falls outside Tier 1/Tier 2 EMR habitat** as designated by the U.S. Fish & Wildlife Service (USFWS). The federally threatened and state special concern Eastern massasauga rattlesnake (*Sistrurus catenatus*) is Michigan's only venomous snake and is found in a variety of wetland habitats including bogs, fens, shrub swamps, wet meadows, marshes, moist grasslands, wet prairies, and floodplain forests. Eastern massasaugas occur throughout the Lower Peninsula but are not found in the Upper Peninsula. Populations in southern Michigan are typically associated with open wetlands, particularly prairie fens, while those in northern Michigan are better known from lowland coniferous forests, such as cedar swamps. These snakes normally overwinter in crayfish or small mammal burrows often close to the groundwater level and emerge in spring as water levels rise. During late spring, these snakes move into adjacent uplands they spend the warmer months foraging in shrubby fields and grasslands in search of mice and voles, their favorite food.

Often described as “shy and sluggish”, these snakes avoid human confrontation and are not prone to strike, preferring to leave the area when they are threatened. However, like any wild animal, they will protect themselves from anything they see as a potential predator. Their short fangs can easily puncture skin and they do possess potent venom. Like many snakes, the first human reaction may be to kill the snake, but it is important to remember that all snakes play vital roles in the ecosystem. Some may eat harmful insects. Others like the massasauga consider rodents a delicacy and help control their population. Snakes are also a part of a larger food web and can provide food to eagles, herons, and several mammals.

Management and Conservation: protection of extant populations and suitable wetland and adjacent upland habitats is crucial for successful conservation of the Eastern Massasauga. Maintaining or restoring open habitat conditions is critical for this species. Fragmentation of suitable wetland-upland habitat complexes by roads or other barriers should be avoided or minimized. Land management practices such as timber harvesting, mowing, disking or prescribed burning should be conducted in such a manner so as to minimize the potential for adverse impacts to massasaugas (e.g., conducting management activities during the snakes' inactive season (November through early March) or on days when snakes are less likely to be active on the surface during the active season). Protecting suitable hibernation sites also is critical.

Copperbelly water snake – there does not appear to be suitable habitat within 1.5 miles of the project. The federally threatened and state endangered copperbelly water snake (*Nerodia erythrogaster neglecta*) can grow to a length of 4-5 feet. Adult snakes are easily identified by their deep brown or black back which contrasts easily with the unmarked reddish-to-orange belly and chin.

Copperbelly water snakes are usually found in or near shrub swamps, ponds, lakes, oxbow sloughs, fens, and slow-moving streams. They can also be found in mature or second-growth woodlands and in more open habitats adjacent to wetland areas. In spring these snakes often inhabit the open edges of shallow ponds and buttonbush swamps and frequently bask on shoreline vegetation, muskrat lodges, or woody debris. When temperatures rise, and these seasonal waters begin to dry up in early summer, the snakes migrate to permanent waters (lake and stream edges), often using fairly dry wooded or grassy upland corridors. They may become largely nocturnal during hot weather. As excellent swimmers, they hunt aquatic species including tadpoles, frogs, salamanders, insect larvae, and crayfish. In the spring, tadpoles seem to be especially tasty to hungry copper-bellied water snakes.

Management and Conservation: a copperbelly water snake travels often during spring, summer, and fall. It moves to different wetlands as water levels and food availability change and then travels to and from its hibernation site. When moving to various locations, these snakes are vulnerable to predators (e.g., skunks, raccoons, raptors, and snapping turtles), especially if the snakes must travel across cleared areas, such as roads, mowed areas and farmlands. The decline of this species can be attributed to habitat loss and fragmentation, collection for the pet trade and predation. Conservation efforts should protect or create riparian corridors and habitat corridors between wetlands, protect existing and expand upland forest habitats, and reduce forest fragmentation. Permanently lowering water tables can cause seasonally inundated wetlands and hibernacula sites to become permanently dry which could lead to local population

extirpations. Maintaining adequate prey base (i.e., mainly frogs) and shrub and log cover along the edge of wetlands for cover and thermoregulation also is crucial. Please inform field crews that snakes should not be killed, harmed, or harassed. Any copperbelly water snake sightings should be reported to this office.

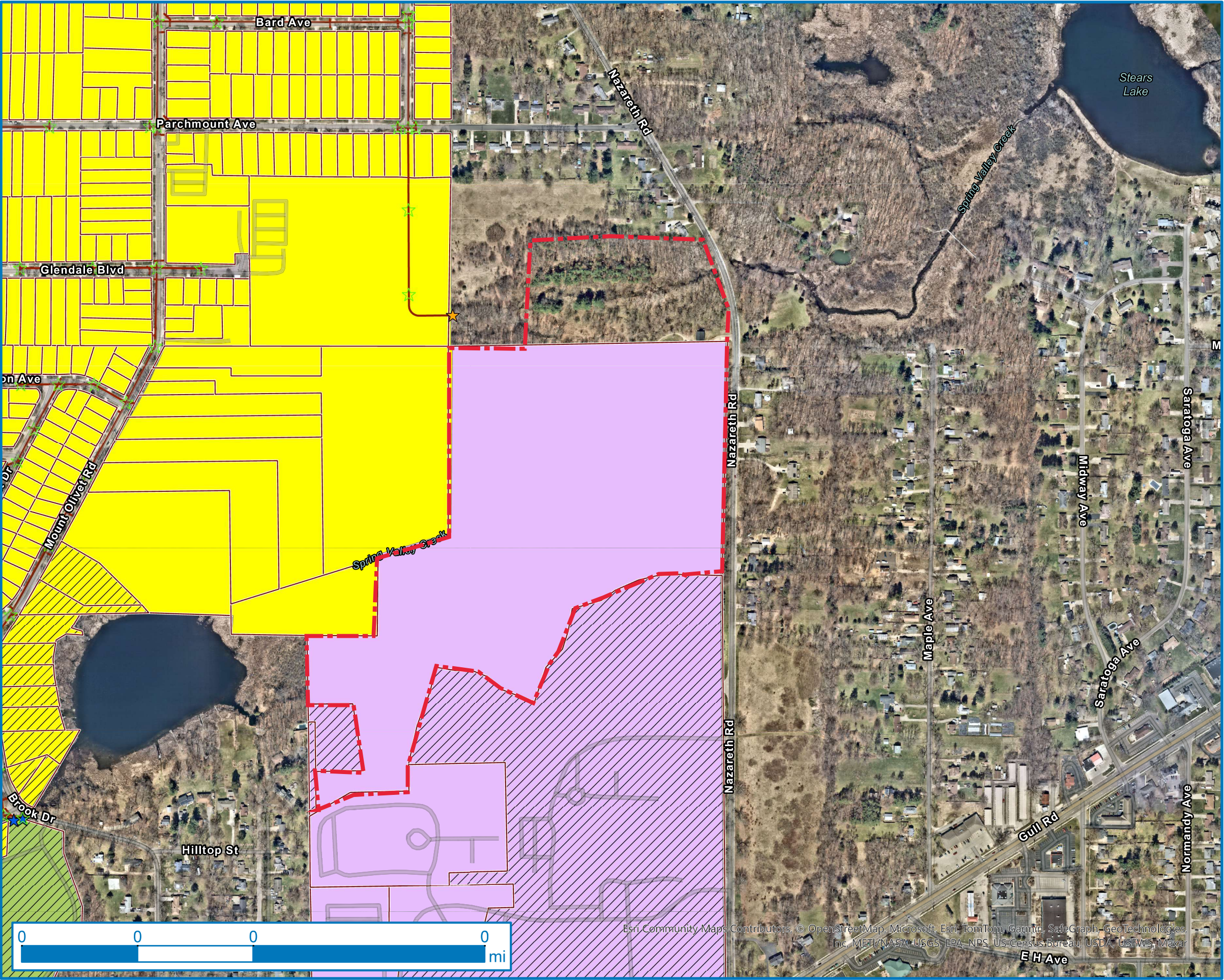
USFWS Section 7 Consultation Technical Assistance can be found at:

<https://www.fws.gov/service/esa-section-7-consultation>

The website offers step-by-step instructions to guide you through the Section 7 consultation process with prepared templates for documenting "no effect" as well as requesting concurrence on "may affect, but not likely to adversely affect" determinations.

Please let us know if you have questions.

Michael Sanders
Environmental Review Specialist/Zoologist
Michigan Natural Features Inventory



LEGEND

PUBLIC STORMWATER

Storm Structure

SUBTYPE

- ☆ Outfall to Ground
- ☆ Private Outfall
- ☆ Outfall to Water

— Storm Pipe

PARCEL MAP

□ Parcel

PLANNING & ZONING

/// Natural Features Overlay

Future Land Use

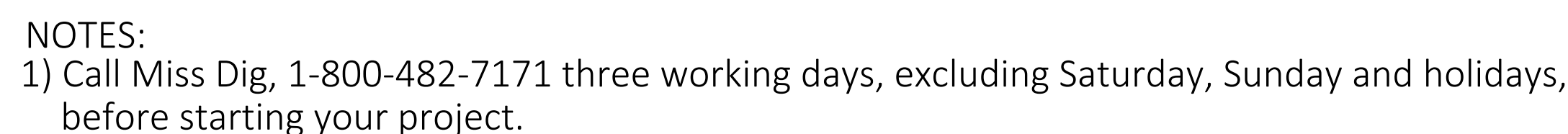
- Neighborhood Edge
- Open Space/Parks
- R1-Residential



City of Kalamazoo,
1/26/2024

KALAMAZOO, MICHIGAN

LOCATION MAP



SHEET INDEX

NO.	TITLE	
C0.0	COVER SHEET	OWNER
C1.0	EXISTING CONDITIONS PLAN	SOUTHWEST MICHIGAN LAND CONSERVANCY, INC.
C1.1	DEMOLITION PLAN	8395 E. MAIN STREET
C1.2	NFP ANALYSIS PLAN	GALESBURG, MI 49053
C2.0	LAYOUT AND MATERIALS PLAN	PHONE : 269-324-1600
C2.1	LAYOUT AND MATERIALS ENLARGEMENTS	LANDSCAPE ARCHITECTS
C3.0	NORTH GRADING AND SESC PLANS	O'BOYLE, COWELL, BLALOCK, & ASSOCIATES
C3.1	SOUTH GRADING AND SESC PLANS	141 E. MICHIGAN AVENUE, SUITE 500
C4.0	SITE DETAILS	KALAMAZOO, MI 49007
C4.1	SITE DETAILS	PHONE : 269-381-3357
		CIVIL ENGINEERS
		MITTEN STATE
		15 CARLYLE ST. SECOND FLOOR
		BATTLE CREEK, MI 49017
		PHONE : 269-364-5626

SITE PLAN REVIEW NOTES

1. Property Identification Numbers :06-01-407-001(City of Kalamazoo) 06-01-265-021 (Kalamazoo Township)
2. Owner: Southwest Michigan Land Conservancy, Inc.,
8395 E. Main Street, Galesburg, MI 49053
Phone: 269-325-1600
3. Project Zoning: RM-36
4. Project is not located within any Historic District.
5. Legal Description: See Application Attachments
6. Front Yard Setback: 15'
Rear Yard Setback: 20' to RM Zone, 25' to RS Zone
Side Yard Setback: 15' to RS Zone
7. Existing Parking Spaces: 15 spaces
8. Parking Spaces Required: NA
9. Additional parking spaces for this project: 0
10. Overall Property Area: 2,134,423 sf (49 acres)
11. Gross Area of Earth Change: x sf (x.x acres)
12. Gross Overall Site Area: x sf (x acres)
13. Proposed Impervious Total Area : x sf (x.x acres)
14. Proposed Gravel Trail Area: x sf(x.x acres)
15. Net Area of Open Space: xx sf (xx acres)
16. Gross Floor Area of Buildings: NA
17. Area of Regulated Wetlands: 4.5 acres
18. Net Area of Proposed Off-Street Parking Lots: 0
19. Number of Residential Units by Type: NA
20. Proposed Site Lighting : None
21. Proposed Bike Parking : 0
22. Site is located in the 10 year Time of Travel Capture Zone.
23. 2025 Master Plan: Neighborhood Edge.
24. Estimated Vehicle Trips per day: 5-10 weekday & 10-15 weekends.



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Project:

BOW IN THE CLOUDS

SWMLC

PHASE 2

IMPROVEMENTS

KALAMAZOO, MI

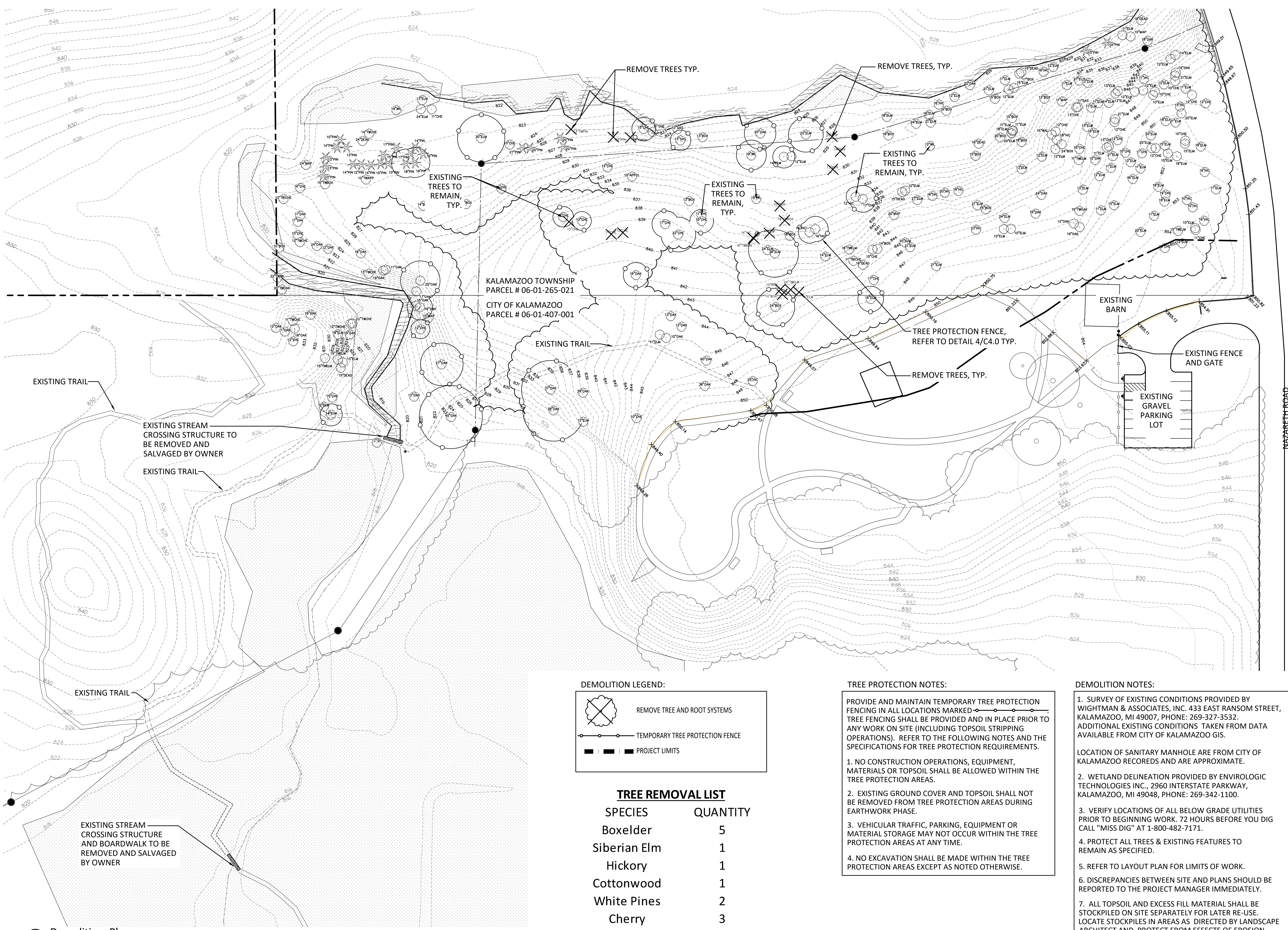
Sheet Title

Cover Sheet

Job No. _____ Sheet No. _____

052367

C0.0



DEMOLITION LEGEND:

REMOVE TREE AND ROOT SYSTEMS

TEMPORARY TREE PROTECTION FENCE

PROJECT LIMITS

TREE REMOVAL LIST	
SPECIES	QUANTITY
Boxelder	5
Siberian Elm	1
Hickory	1
Cottonwood	1
White Pines	2
Cherry	3

TREE PROTECTION NOTES:

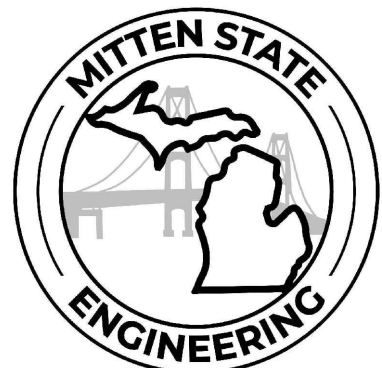
PROVIDE AND MAINTAIN TEMPORARY TREE PROTECTION FENCING IN ALL LOCATIONS MARKED . TREE FENCING SHALL BE PROVIDED AND IN PLACE PRIOR TO ANY WORK ON SITE (INCLUDING TOPSOIL STRIPPING OPERATIONS). REFER TO THE FOLLOWING NOTES AND THE SPECIFICATIONS FOR TREE PROTECTION REQUIREMENTS.

- NO CONSTRUCTION OPERATIONS, EQUIPMENT, MATERIALS OR TOPSOIL SHALL BE ALLOWED WITHIN THE TREE PROTECTION AREAS.
- EXISTING GROUND COVER AND TOPSOIL SHALL NOT BE REMOVED FROM TREE PROTECTION AREAS DURING EARTHWORK PHASE.
- VEHICULAR TRAFFIC, PARKING, EQUIPMENT OR MATERIAL STORAGE MAY NOT OCCUR WITHIN THE TREE PROTECTION AREAS AT ANY TIME.
- NO EXCAVATION SHALL BE MADE WITHIN THE TREE PROTECTION AREAS EXCEPT AS NOTED OTHERWISE.

DEMOLITION NOTES:

- SURVEY OF EXISTING CONDITIONS PROVIDED BY WIGHTMAN & ASSOCIATES, INC. 433 EAST RANSOM STREET, KALAMAZOO, MI 49007, PHONE: 269-327-3532. ADDITIONAL EXISTING CONDITIONS TAKEN FROM DATA AVAILABLE FROM CITY OF KALAMAZOO GIS.
- LOCATION OF SANITARY MANHOLE ARE FROM CITY OF KALAMAZOO RECORDS AND ARE APPROXIMATE.
- WETLAND DELINEATION PROVIDED BY ENVIROLOGIC TECHNOLOGIES INC., 2960 INTERSTATE PARKWAY, KALAMAZOO, MI 49048, PHONE: 269-342-1100.
- VERIFY LOCATIONS OF ALL BELOW GRADE UTILITIES PRIOR TO BEGINNING WORK. 72 HOURS BEFORE YOU DIG CALL "MISS DIG" AT 1-800-482-7171.
- PROTECT ALL TREES & EXISTING FEATURES TO REMAIN AS SPECIFIED.
- REFER TO LAYOUT PLAN FOR LIMITS OF WORK.
- DISCREPANCIES BETWEEN SITE AND PLANS SHOULD BE REPORTED TO THE PROJECT MANAGER IMMEDIATELY.
- ALL TOPSOIL AND EXCESS FILL MATERIAL SHALL BE STOCKPILED ON SITE SEPARATELY FOR LATER RE-USE. LOCATE STOCKPILES IN AREAS AS DIRECTED BY LANDSCAPE ARCHITECT AND PROTECT FROM EFFECTS OF EROSION.

1 Demolition Plan
SCALE : 1" = 40'-0"



For Review Only –
Not For Construction

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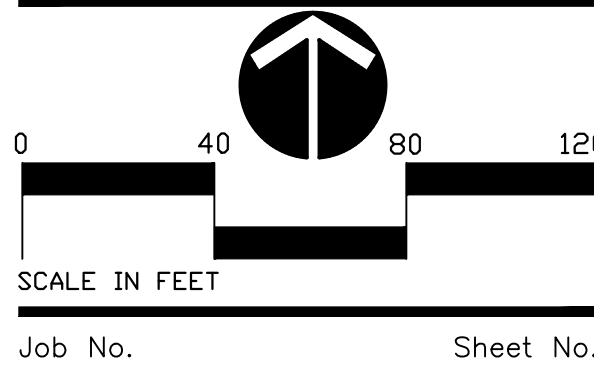
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SWMLC
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IMPROVEMENTS**

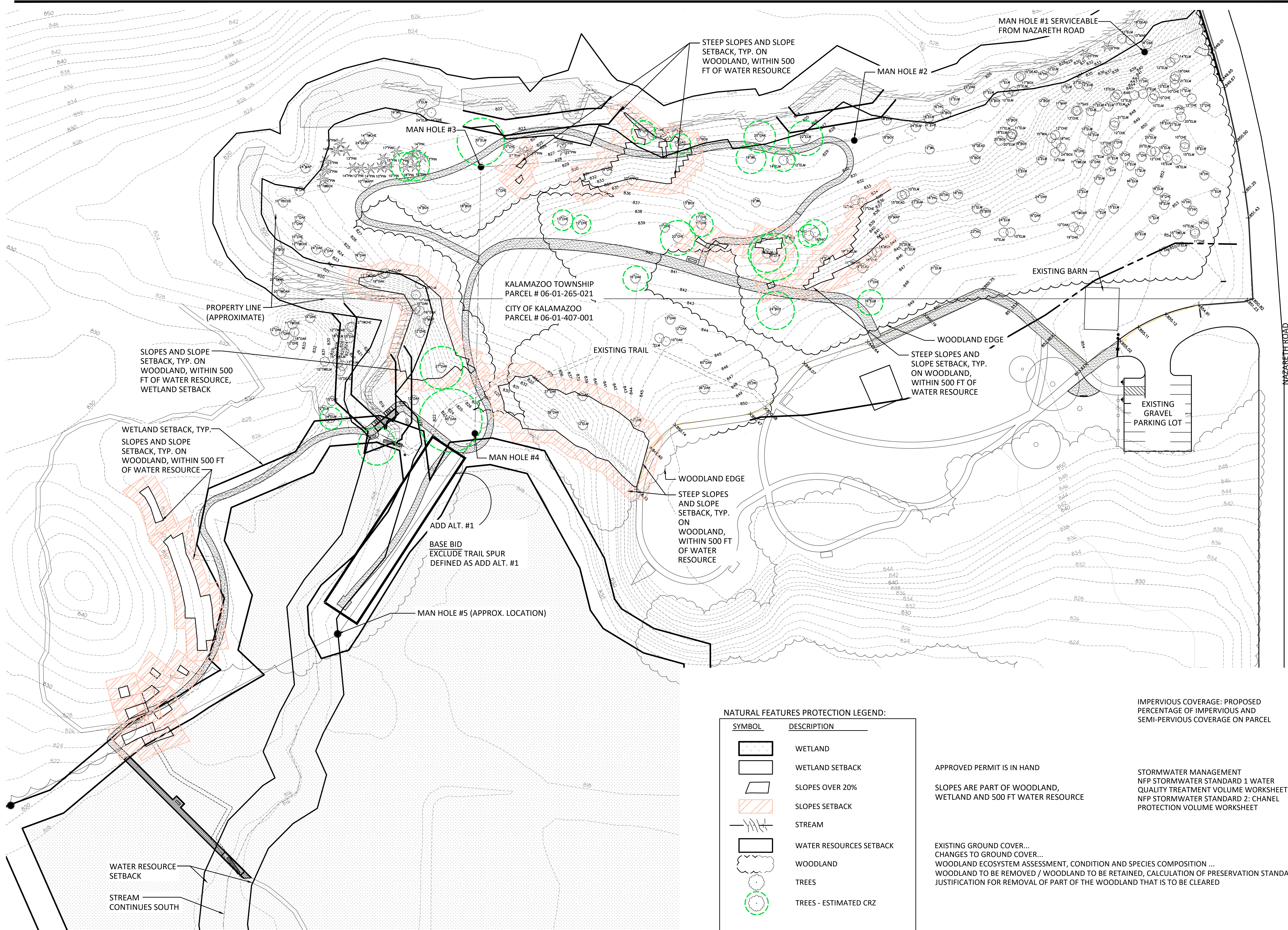
KALAMAZOO, MI

Sheet Title

DEMOLITION PLAN



Job No. Sheet No.



1 Layout and Materials Plan
SCALE: 1" = 40'-0"

NATURAL FEATURES PROTECTION LEGEND:

SYMBOL	DESCRIPTION
	WETLAND
	WETLAND SETBACK
	SLOPES OVER 20%
	SLOPES SETBACK
	STREAM
	WATER RESOURCES SETBACK
	WOODLAND
	TREES
	TREES - ESTIMATED CRZ

APPROVED PERMIT IS IN HAND
SLOPES ARE PART OF WOODLAND,
WETLAND AND 500 FT WATER RESOURCE

EXISTING GROUND COVER...
CHANGES TO GROUND COVER...
WOODLAND ECOSYSTEM ASSESSMENT, CONDITION AND SPECIES COMPOSITION ...
WOODLAND TO BE REMOVED / WOODLAND TO BE RETAINED, CALCULATION OF PRESERVATION STANDARD
JUSTIFICATION FOR REMOVAL OF PART OF THE WOODLAND THAT IS TO BE CLEARED

IMPERVIOUS COVERAGE: PROPOSED
PERCENTAGE OF IMPERVIOUS AND
SEMI-IMPERVIOUS COVERAGE ON PARCEL

STORMWATER MANAGEMENT
NFP STORMWATER STANDARD 1 WATER
QUALITY TREATMENT VOLUME WORKSHEET
NFP STORMWATER STANDARD 2: CHANEL
PROTECTION VOLUME WORKSHEET

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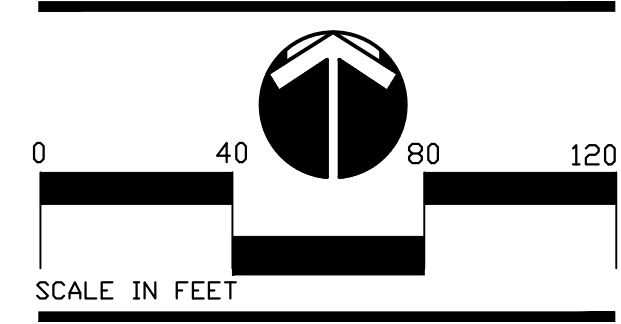
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SWMLC
PHASE 2
IMPROVEMENTS**

KALAMAZOO, MI
Sheet Title

NATURAL FEATURES



Job No. Sheet No.

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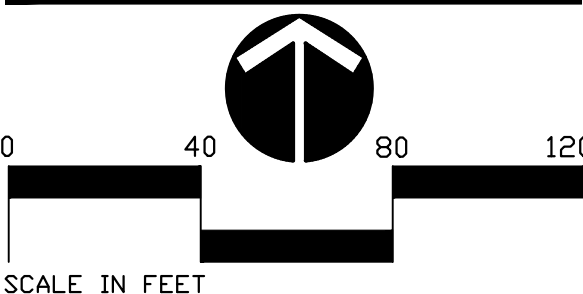
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SWMLC
PHASE 2
IMPROVEMENTS**

KALAMAZOO, MI

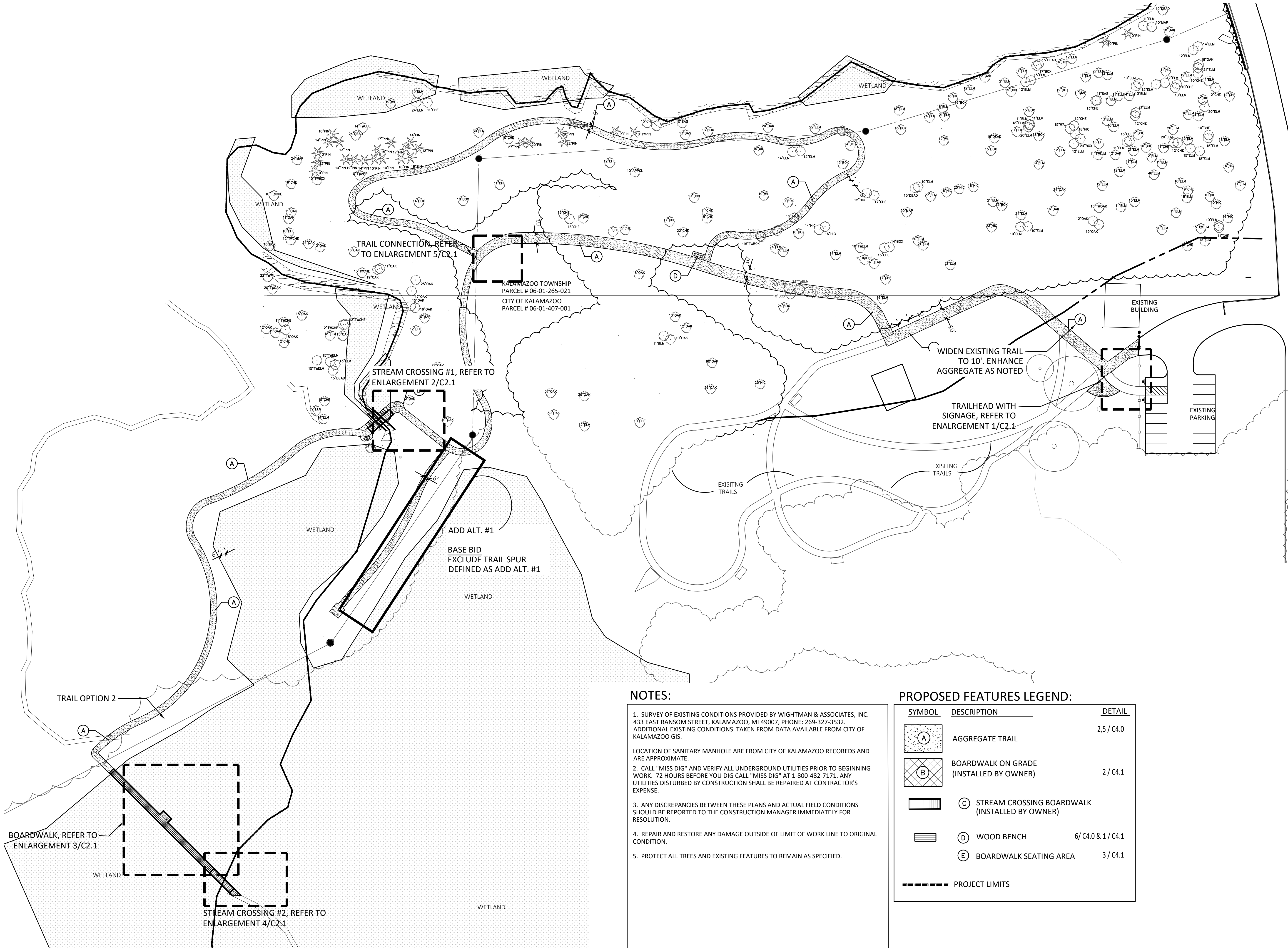
Sheet Title



Job No. Sheet No.

052367

C2.0

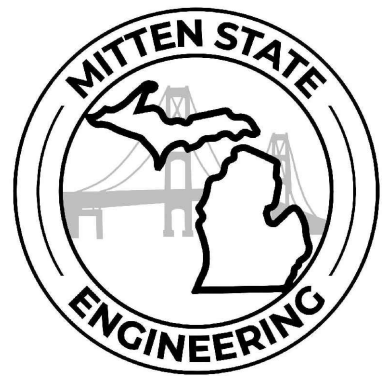


NOTES:

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2. CALL "MISS DIG" AND VERIFY ALL UNDERGROUND UTILITIES PRIOR TO BEGINNING WORK. 72 HOURS BEFORE YOU DIG CALL "MISS DIG" AT 1-800-482-7171. ANY UTILITIES DISTURBED BY CONSTRUCTION SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE.
3. ANY DISCREPANCIES BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS SHOULD BE REPORTED TO THE CONSTRUCTION MANAGER IMMEDIATELY FOR RESOLUTION.
4. REPAIR AND RESTORE ANY DAMAGE OUTSIDE OF LIMIT OF WORK LINE TO ORIGINAL CONDITION.
5. PROTECT ALL TREES AND EXISTING FEATURES TO REMAIN AS SPECIFIED.

PROPOSED FEATURES LEGEND:

SYMBOL	DESCRIPTION	DETAIL
	AGGREGATE TRAIL	2/5 / C4.0
	BOARDWALK ON GRADE (INSTALLED BY OWNER)	2 / C4.1
	STREAM CROSSING BOARDWALK (INSTALLED BY OWNER)	
	WOOD BENCH	6/ C4.0 & 1 / C4.1
	BOARDWALK SEATING AREA	3 / C4.1
	PROJECT LIMITS	

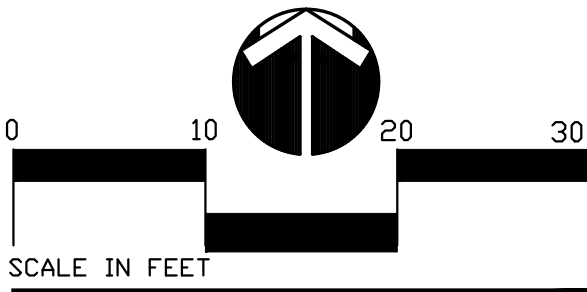


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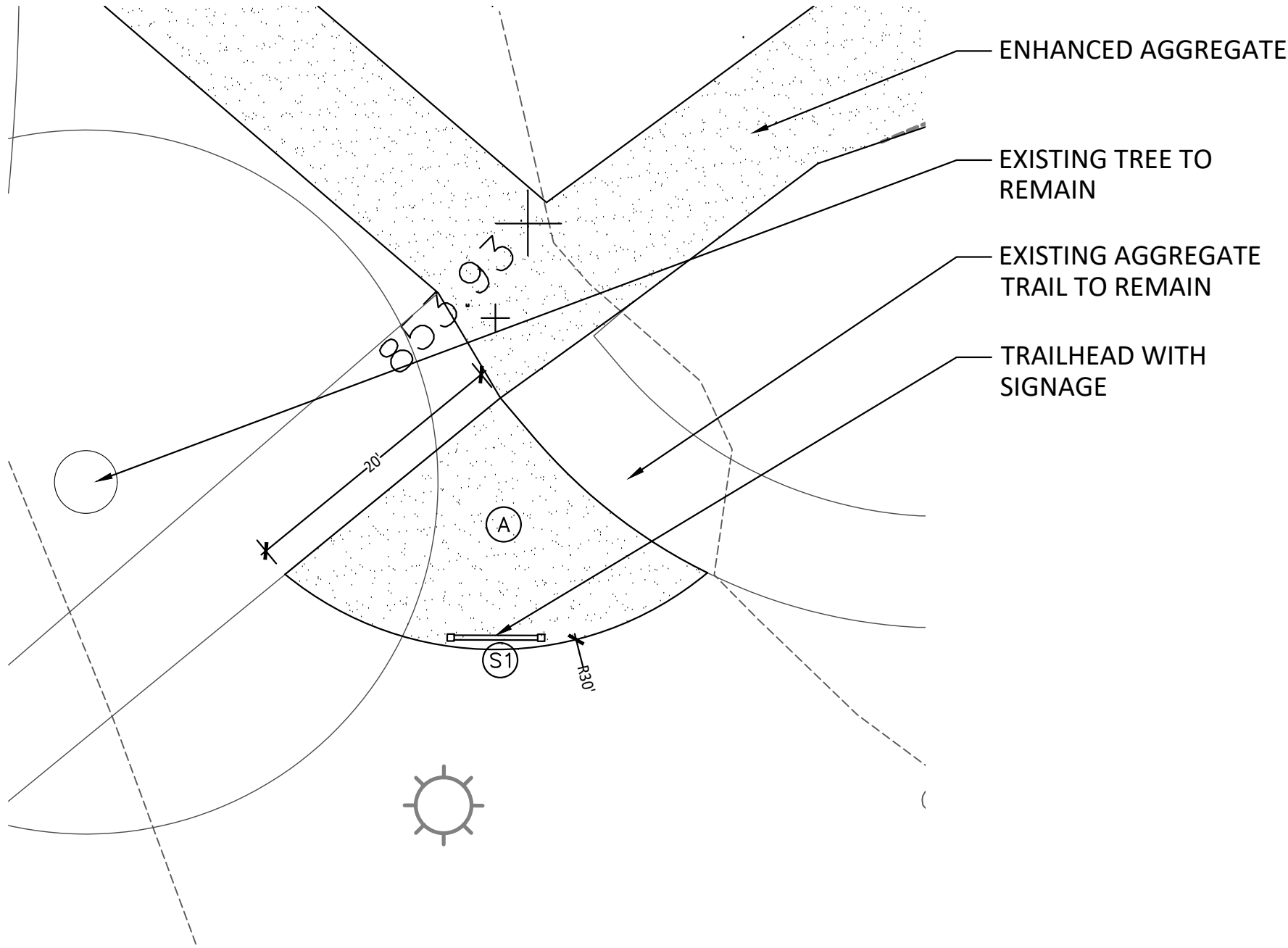
Project:
**BOW IN THE CLOUDS
SWMLC
PHASE 2
IMPROVEMENTS**

KALAMAZOO, MI
Sheet Title
**LAYOUT & MATERIALS
ENLARGEMENTS**

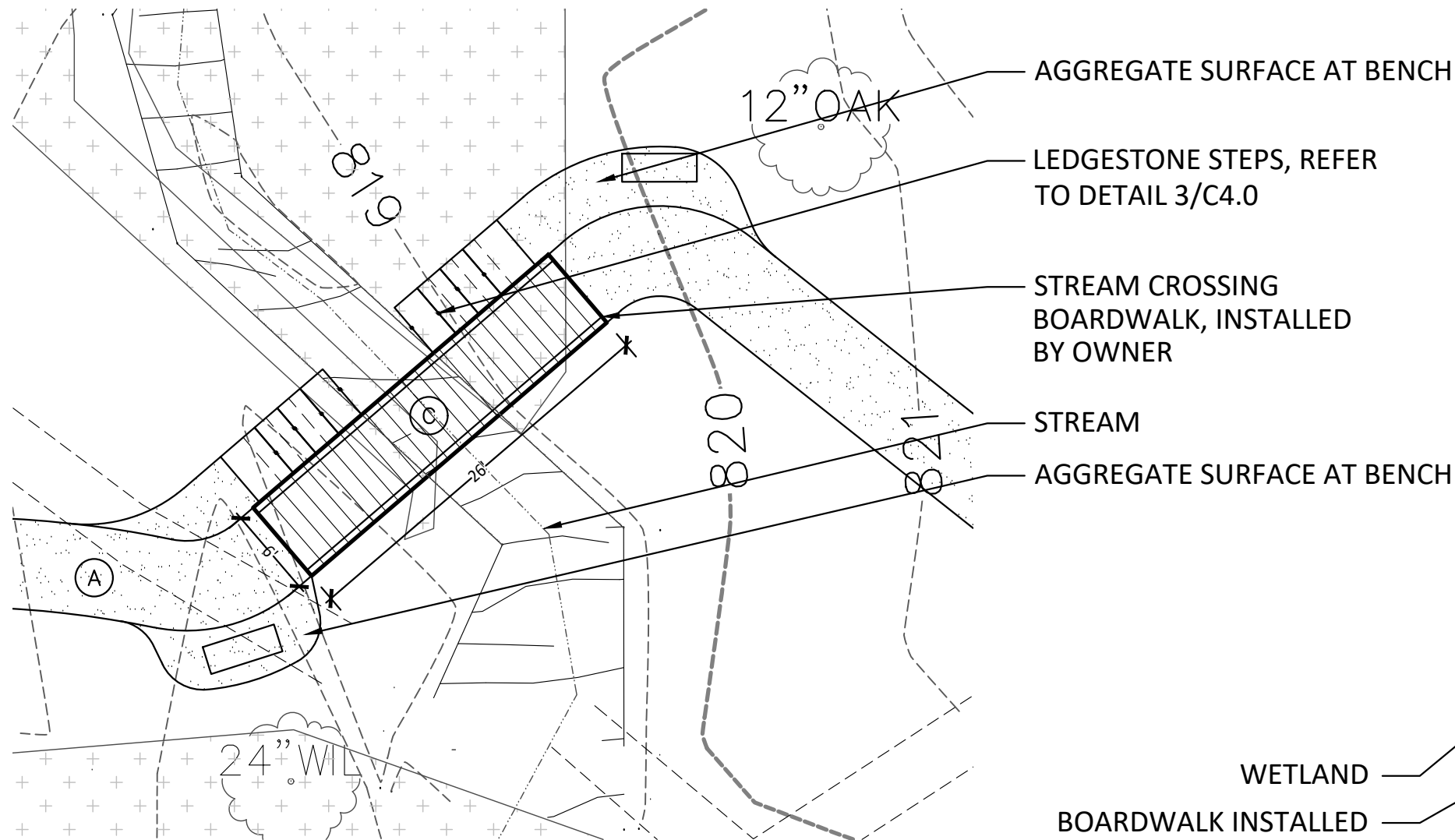


Job No. Sheet No.

052367 C2.1



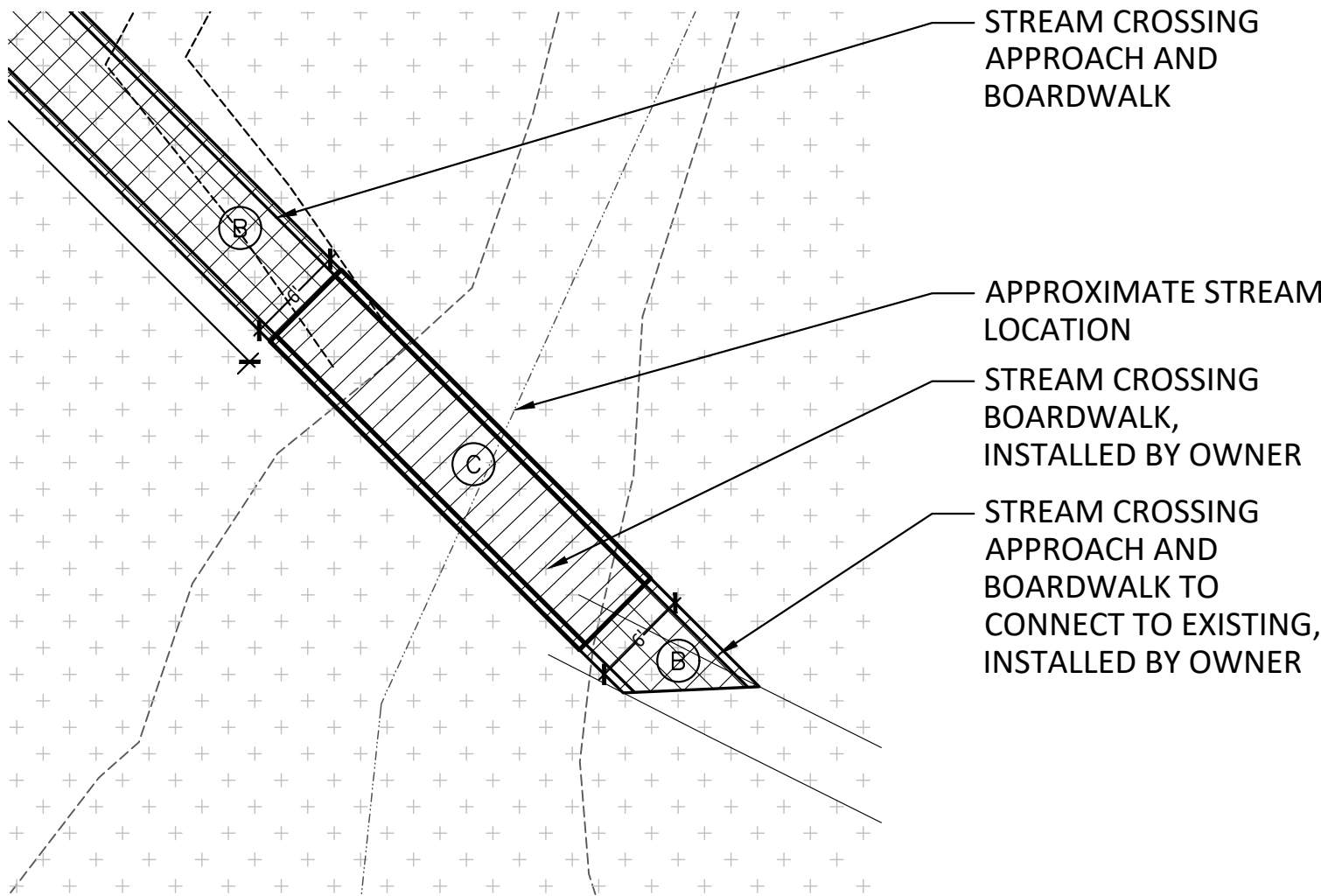
1 Trailhead Enlargement Plan
SCALE : 1" = 10'-0"



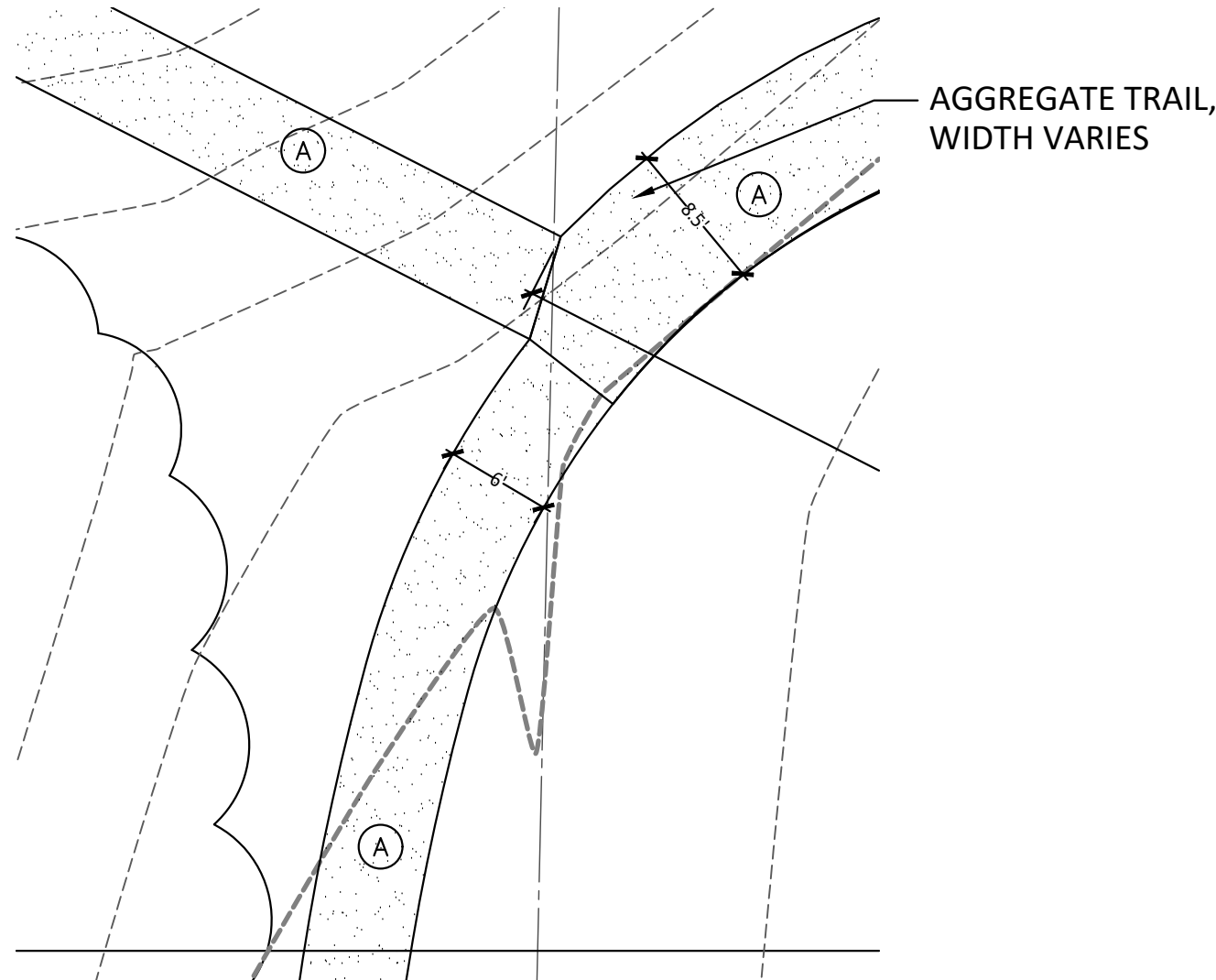
2 Stream Crossing #1 Enlargement Plan
SCALE : 1" = 10'-0"

WETLAND
BOARDWALK INSTALLED
BY OWNER
BENCH SEATING AREA
BENCH

3 Boardwalk Enlargement Plan
SCALE : 1" = 10'-0"



4 Stream Crossing Boardwalk #2 Enlargement Plan
SCALE : 1" = 10'-0"



5 Trail Enlargement Plan
SCALE : 1" = 10'-0"

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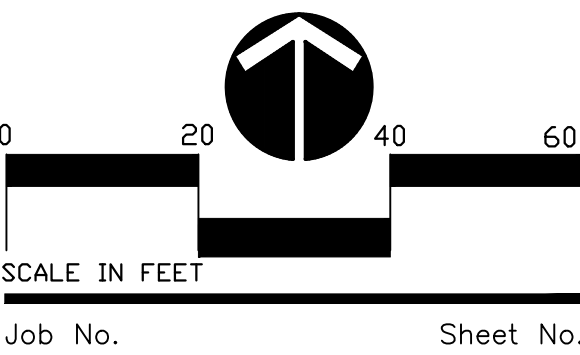
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Project:
BOW IN THE CLOUDS
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PHASE 2
IMPROVEMENTS

KALAMAZOO, MI

Sheet Title

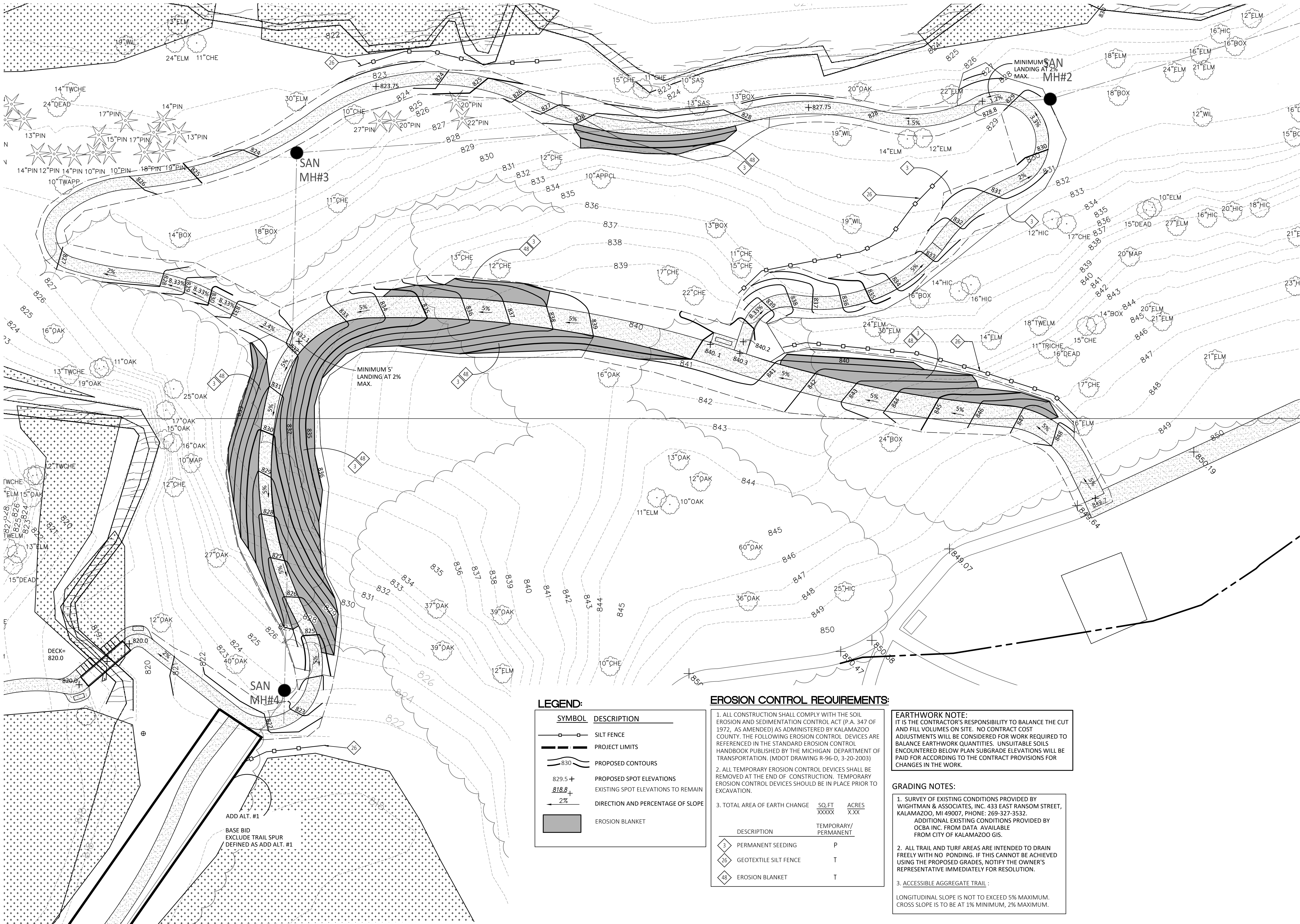
**NORTH GRADING AND
SESC PLAN**



Job No. Sheet No.

052367

C3.0



LEGEND:

SYMBOL	DESCRIPTION
	SILT FENCE
	PROJECT LIMITS
	PROPOSED CONTOURS
	PROPOSED SPOT ELEVATIONS
	EXISTING SPOT ELEVATIONS TO REMAIN
	DIRECTION AND PERCENTAGE OF SLOPE
	EROSION BLANKET

EROSION CONTROL REQUIREMENTS:

- ALL CONSTRUCTION SHALL COMPLY WITH THE SOIL EROSION AND SEDIMENTATION CONTROL ACT (P.A. 347 OF 1972, AS AMENDED) AS ADMINISTERED BY KALAMAZOO COUNTY. THE FOLLOWING EROSION CONTROL DEVICES ARE REFERENCED IN THE STANDARD EROSION CONTROL HANDBOOK PUBLISHED BY THE MICHIGAN DEPARTMENT OF TRANSPORTATION. (MDOT DRAWING R-96-D, 3-20-2003)
- ALL TEMPORARY EROSION CONTROL DEVICES SHALL BE REMOVED AT THE END OF CONSTRUCTION. TEMPORARY EROSION CONTROL DEVICES SHOULD BE IN PLACE PRIOR TO EXCAVATION.
- TOTAL AREA OF EARTH CHANGE

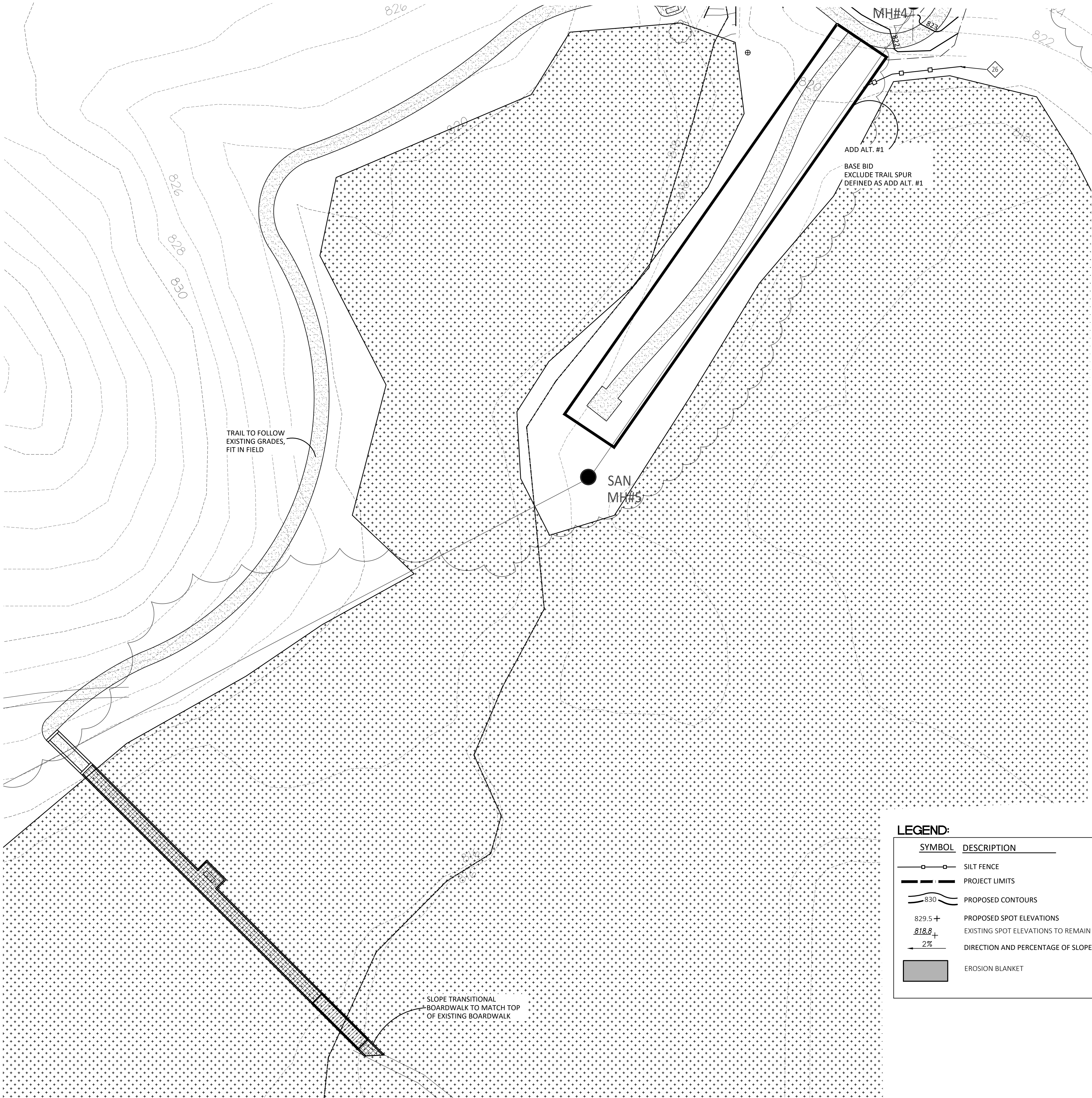
DESCRIPTION	SO.FT XXXXX	ACRES X.XX
PERMANENT SEEDING		P
GEOTEXTILE SILT FENCE		T
EROSION BLANKET		T

EARTHWORK NOTE:

IT IS THE CONTRACTOR'S RESPONSIBILITY TO BALANCE THE CUT AND FILL VOLUMES ON SITE. NO CONTRACT COST ADJUSTMENTS WILL BE CONSIDERED FOR WORK REQUIRED TO BALANCE EARTHWORK QUANTITIES. UNSUITABLE SOILS ENCOUNTERED BELOW PLAN SUBGRADE ELEVATIONS WILL BE PAID FOR ACCORDING TO THE CONTRACT PROVISIONS FOR CHANGES IN THE WORK.

GRADING NOTES:

- SURVEY OF EXISTING CONDITIONS PROVIDED BY WIGHTMAN & ASSOCIATES, INC. 433 EAST RANSOM STREET, KALAMAZOO, MI 49007, PHONE: 269-327-3532. ADDITIONAL EXISTING CONDITIONS PROVIDED BY OCBA INC. FROM DATA AVAILABLE FROM CITY OF KALAMAZOO GIS.
- ALL TRAIL AND TURF AREAS ARE INTENDED TO DRAIN FREELY WITH NO PONDING. IF THIS CANNOT BE ACHIEVED USING THE PROPOSED GRADES, NOTIFY THE OWNER'S REPRESENTATIVE IMMEDIATELY FOR RESOLUTION.
- ACCESSIBLE AGGREGATE TRAIL :
LONGITUDINAL SLOPE IS NOT TO EXCEED 5% MAXIMUM.
CROSS SLOPE IS TO BE AT 1% MINIMUM, 2% MAXIMUM.



1 Grading Plan
SCALE : 1" = 20'-0"

LEGEND:	
SYMBOL	DESCRIPTION
	SILT FENCE
	PROJECT LIMITS
	PROPOSED CONTOURS
	PROPOSED SPOT ELEVATIONS
	EXISTING SPOT ELEVATIONS TO REMAIN
	DIRECTION AND PERCENTAGE OF SLOPE
	EROSION BLANKET

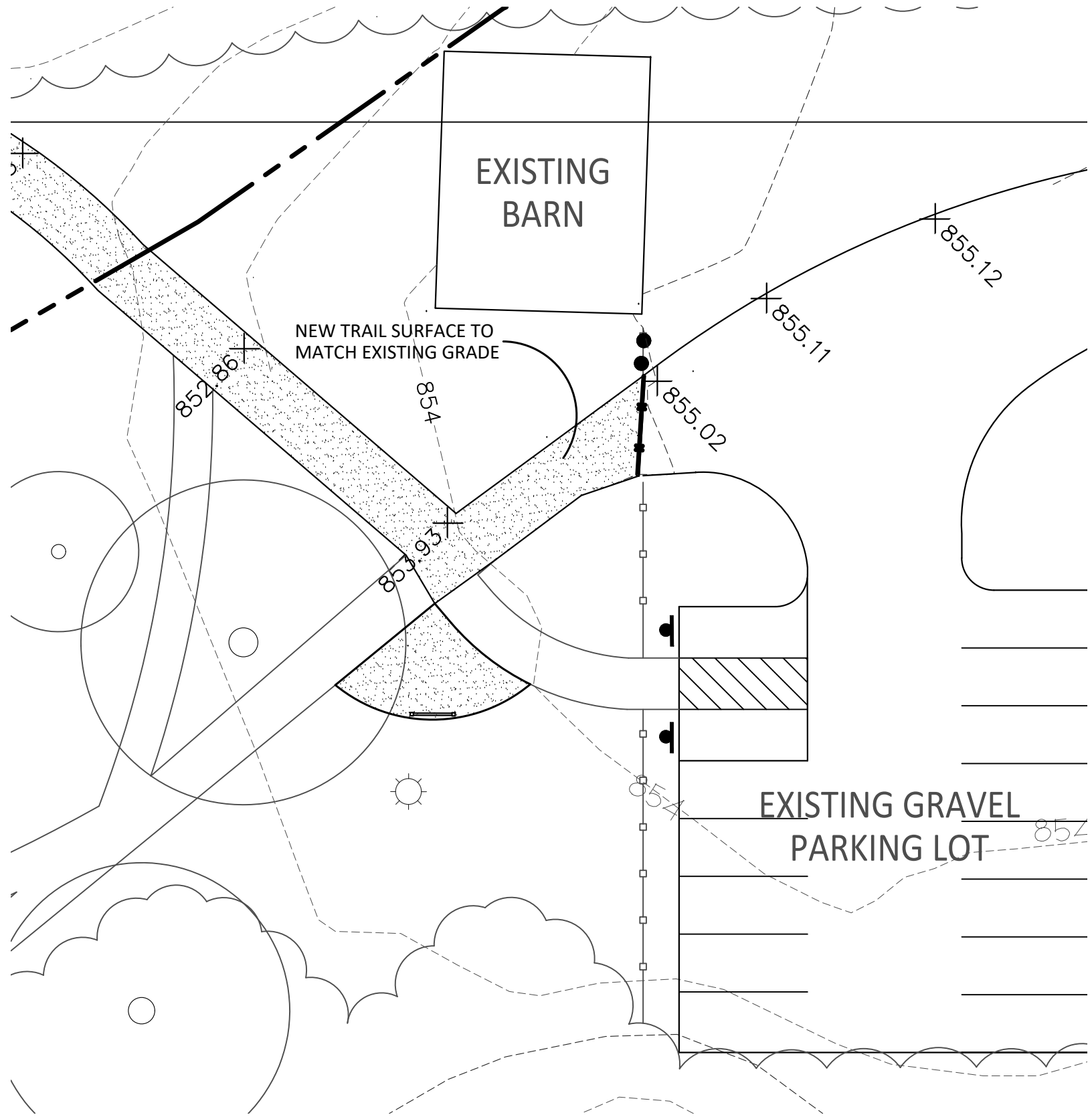
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2. ALL TEMPORARY EROSION CONTROL DEVICES SHALL BE REMOVED AT THE END OF CONSTRUCTION. TEMPORARY EROSION CONTROL DEVICES SHOULD BE IN PLACE PRIOR TO EXCAVATION.			
3. TOTAL AREA OF EARTH CHANGE		SQ.FT XXXXX	ACRES X.XX
DESCRIPTION		TEMPORARY/ PERMANENT	
	PERMANENT SEEDING	P	
	GEOTEXTILE SILT FENCE	T	
	EROSION BLANKET	T	

EARTHWORK NOTE:
IT IS THE CONTRACTOR'S RESPONSIBILITY TO BALANCE THE CUT AND FILL VOLUMES ON SITE. NO CONTRACT COST ADJUSTMENTS WILL BE CONSIDERED FOR WORK REQUIRED TO BALANCE EARTHWORK QUANTITIES. UNSUITABLE SOILS ENCOUNTERED BELOW PLAN SUBGRADE ELEVATIONS WILL BE PAID FOR ACCORDING TO THE CONTRACT PROVISIONS FOR CHANGES IN THE WORK.

GRADING NOTES:

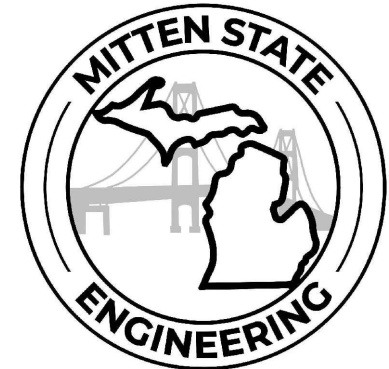
1. SURVEY OF EXISTING CONDITIONS PROVIDED BY WIGHTMAN & ASSOCIATES, INC. 433 EAST RANSOM STREET, KALAMAZOO, MI 49007, PHONE: 269-327-3532. ADDITIONAL EXISTING CONDITIONS PROVIDED BY OCBA INC. FROM DATA AVAILABLE FROM CITY OF KALAMAZOO GIS.
2. ALL TRAIL AND TURF AREAS ARE INTENDED TO DRAIN FREELY WITH NO PONDING. IF THIS CANNOT BE ACHIEVED USING THE PROPOSED GRADES, NOTIFY THE OWNER'S REPRESENTATIVE IMMEDIATELY FOR RESOLUTION.
3. ACCESSIBLE AGGREGATE TRAIL :
LONGITUDINAL SLOPE IS NOT TO EXCEED 5% MAXIMUM. CROSS SLOPE IS TO BE AT 1% MINIMUM, 2% MAXIMUM.



2 Trailhead Grading Plan
SCALE : 1" = 20'-0"

141 E. Michigan Avenue, Suite 500
Kalamazoo Michigan 49007
Phone (269) 381-3357
Fax (269) 381-2944

Landscape Architecture
Urban Planning
Parks & Recreation
Campus & Institutional Planning
Camp Planning & Design



For Review Only –
Not For Construction

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BE 24"X36" WHEN PLOTTED.
SCALE(S) INDICATED AND
GRAPHIC QUALITY MAY NOT
BE ACCURATE FOR ANY
OTHER SIZES.

Issued For:	Date
OWNER REVIEW	12-22-2023
OWNER REVIEW	1-15-2024
OWNER REVIEW	1-26-2024

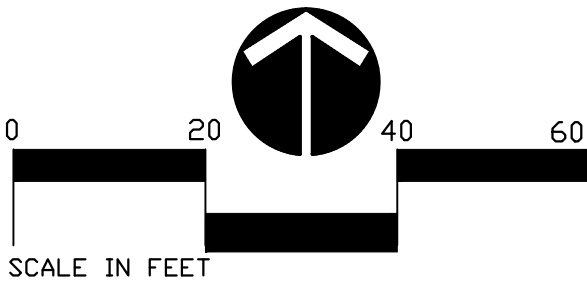
Project:

**BOW IN THE CLOUDS
SWMLC
PHASE 2
IMPROVEMENTS**

KALAMAZOO, MI

Sheet Title

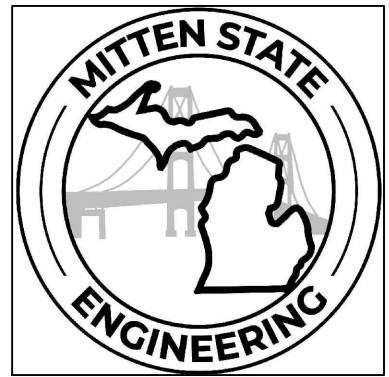
**SOUTH GRADING AND
SESC PLANS**



Job No. Sheet No.

052367

C3.1



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OWNER REVIEW	1-26-2024

Project:
BOW IN THE CLOUDS
SWMLC
PHASE 2
IMPROVEMENTS

KALAMAZOO, MI

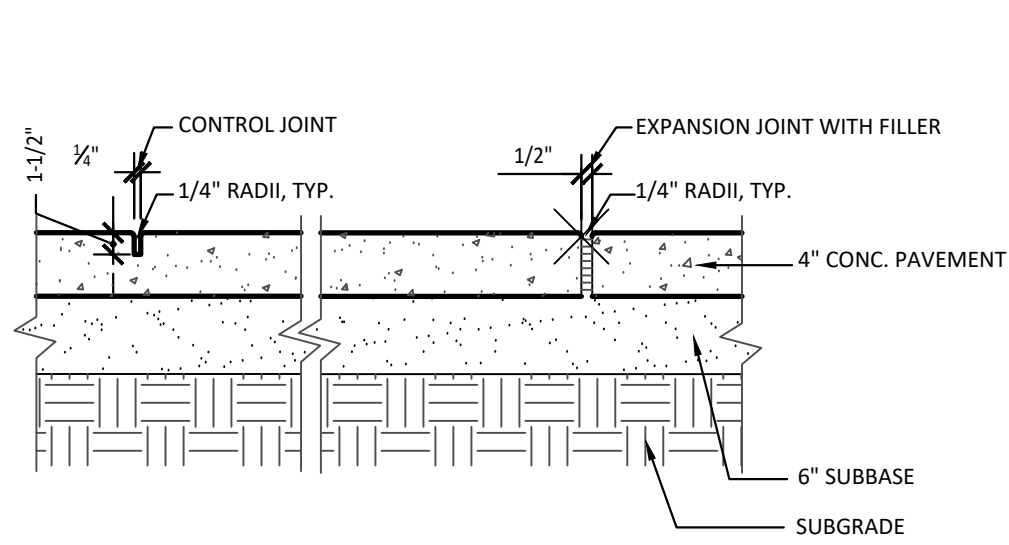
Sheet Title

SITE DETAILS

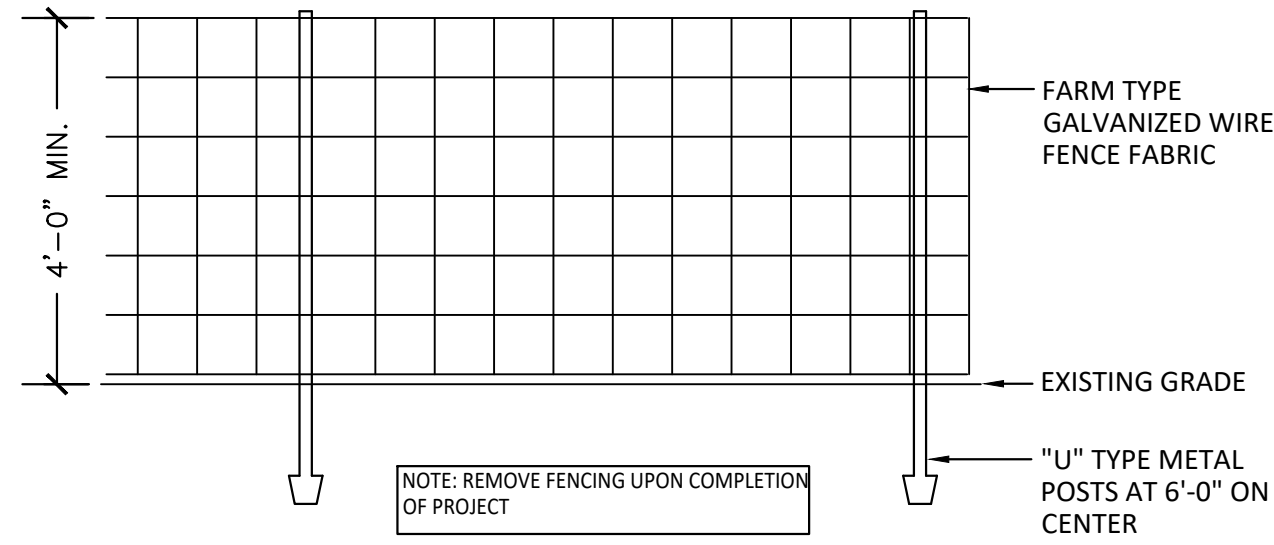
Job No. Sheet No.

052367

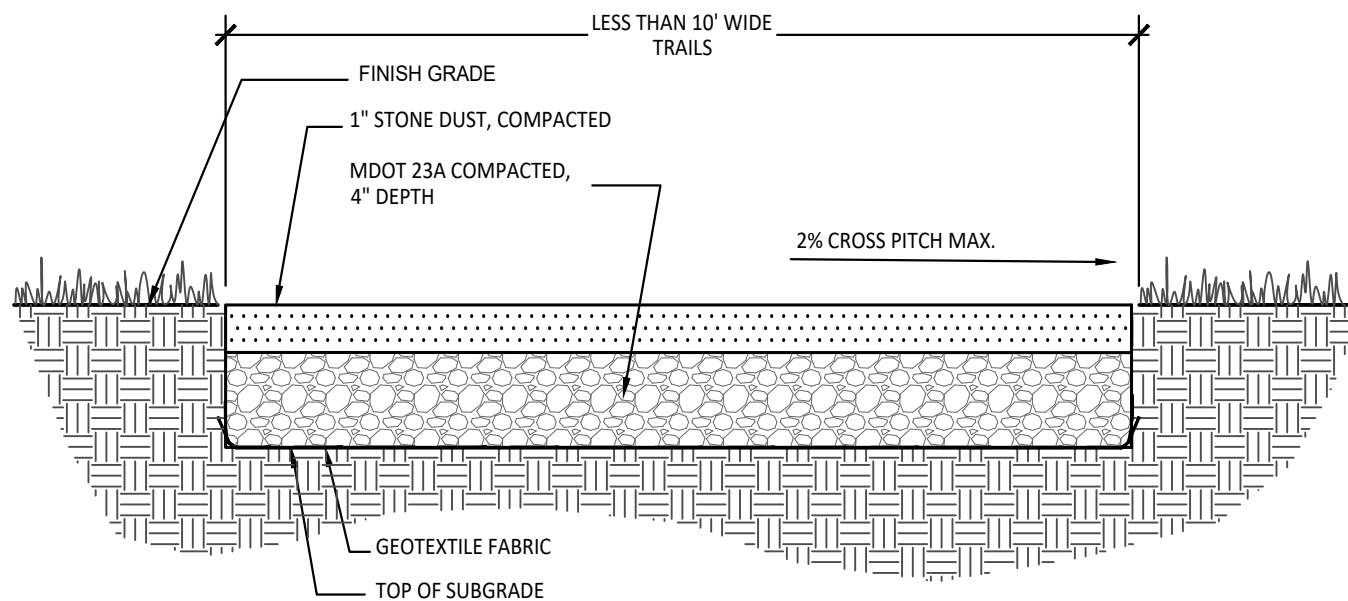
C4.0



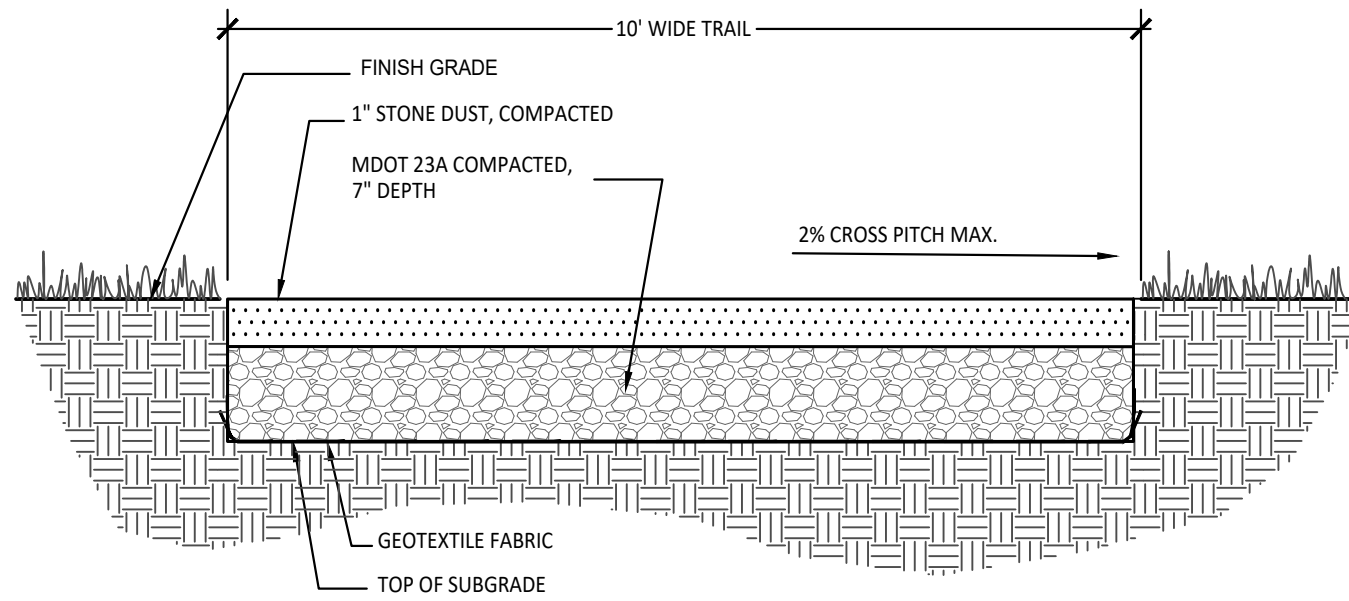
1 Section - 4" Concrete Pavement
NOT TO SCALE



4 Tree Protection Fencing
NOT TO SCALE

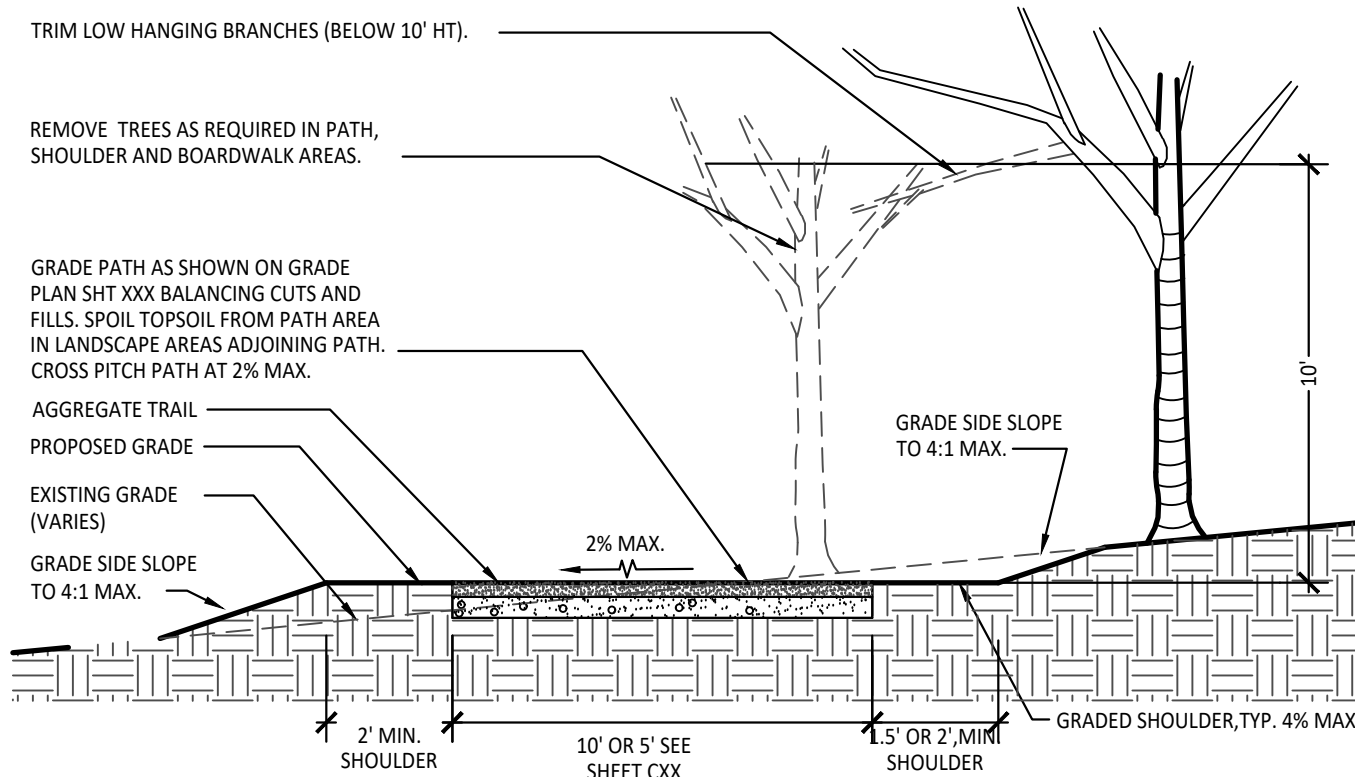


Section Detail



Section Detail

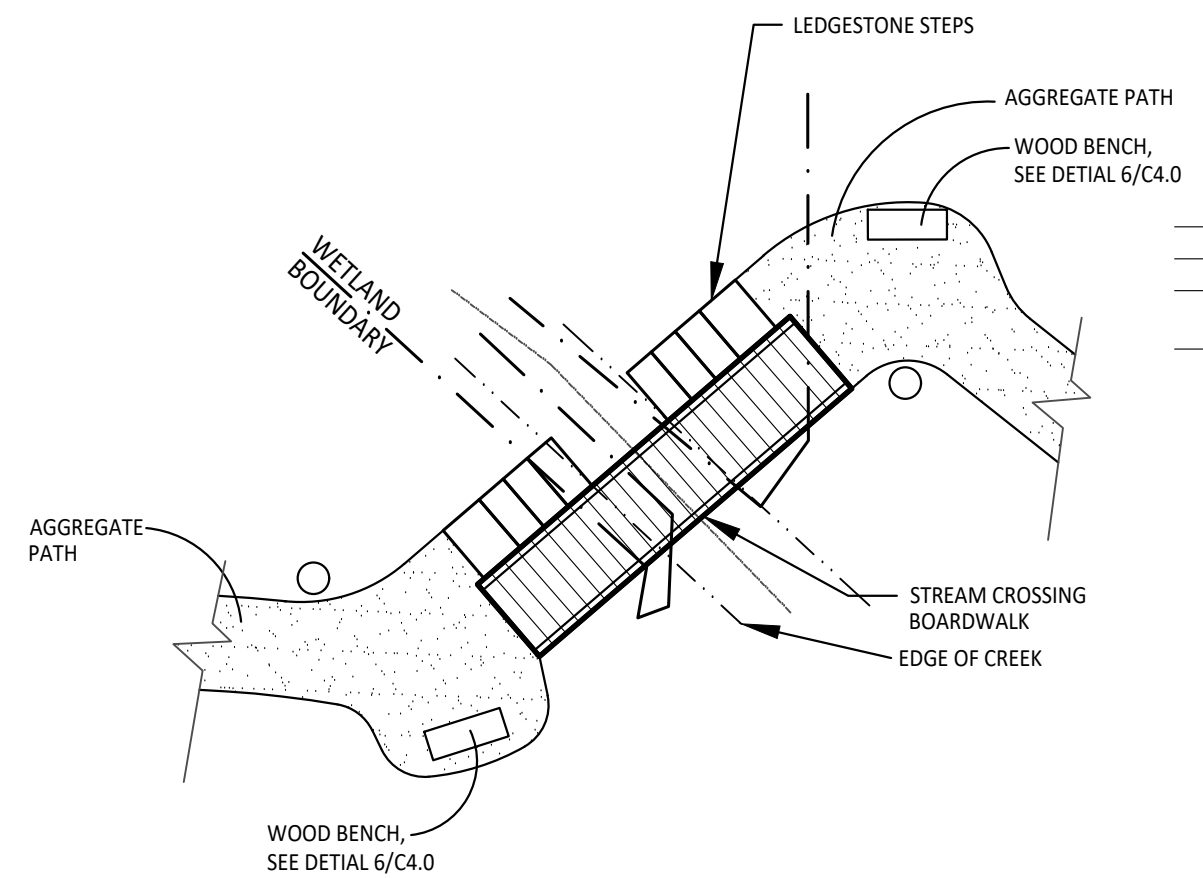
5 10' Wide Aggregate Trail
NOT TO SCALE



Section - Typical

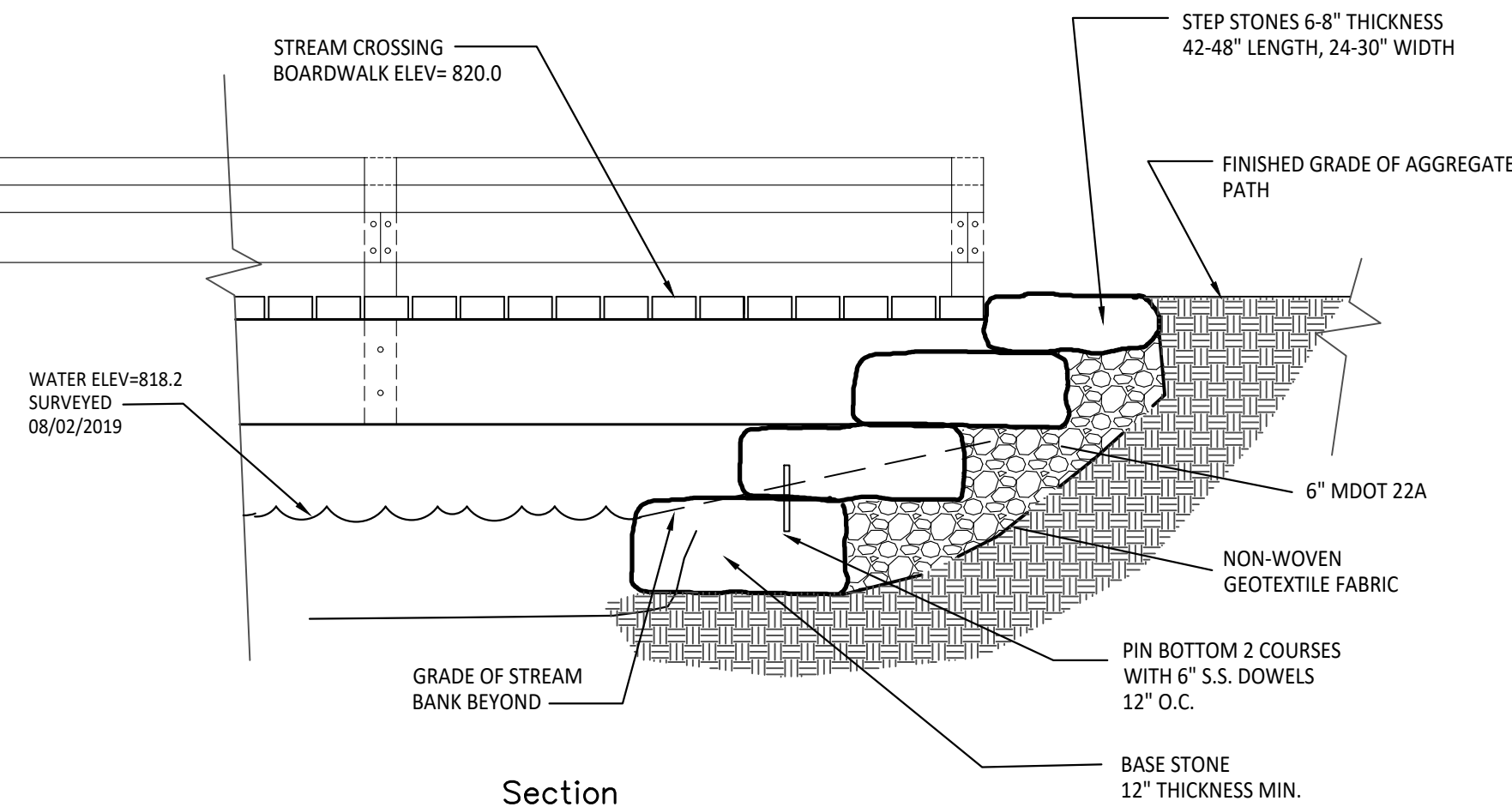
2 Aggregate Trail
NOT TO SCALE

6 Bench on Aggregate Trail
NOT TO SCALE

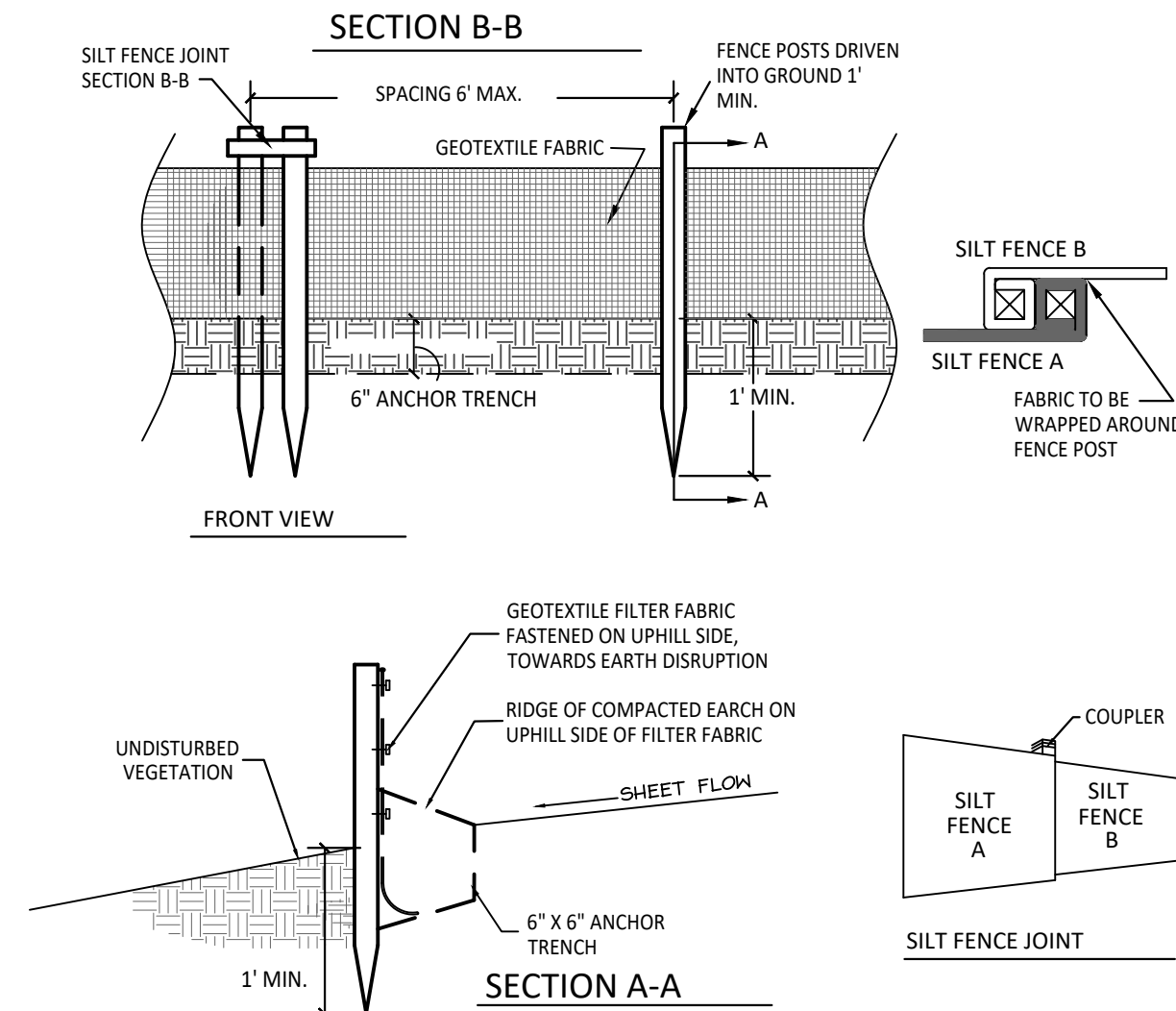


Plan
NOT TO SCALE

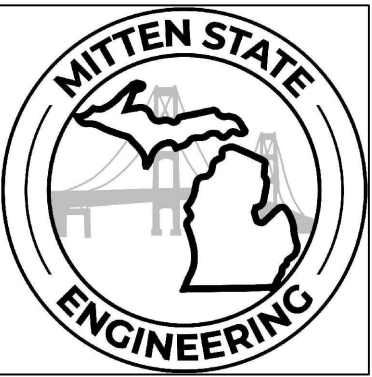
3 Ledgerstone Steps
NOT TO SCALE



Section
NOT TO SCALE



7 Silt Fence Detail
NOT TO SCALE



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GRAPHIC QUALITY MAY NOT
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OTHER SIZES.

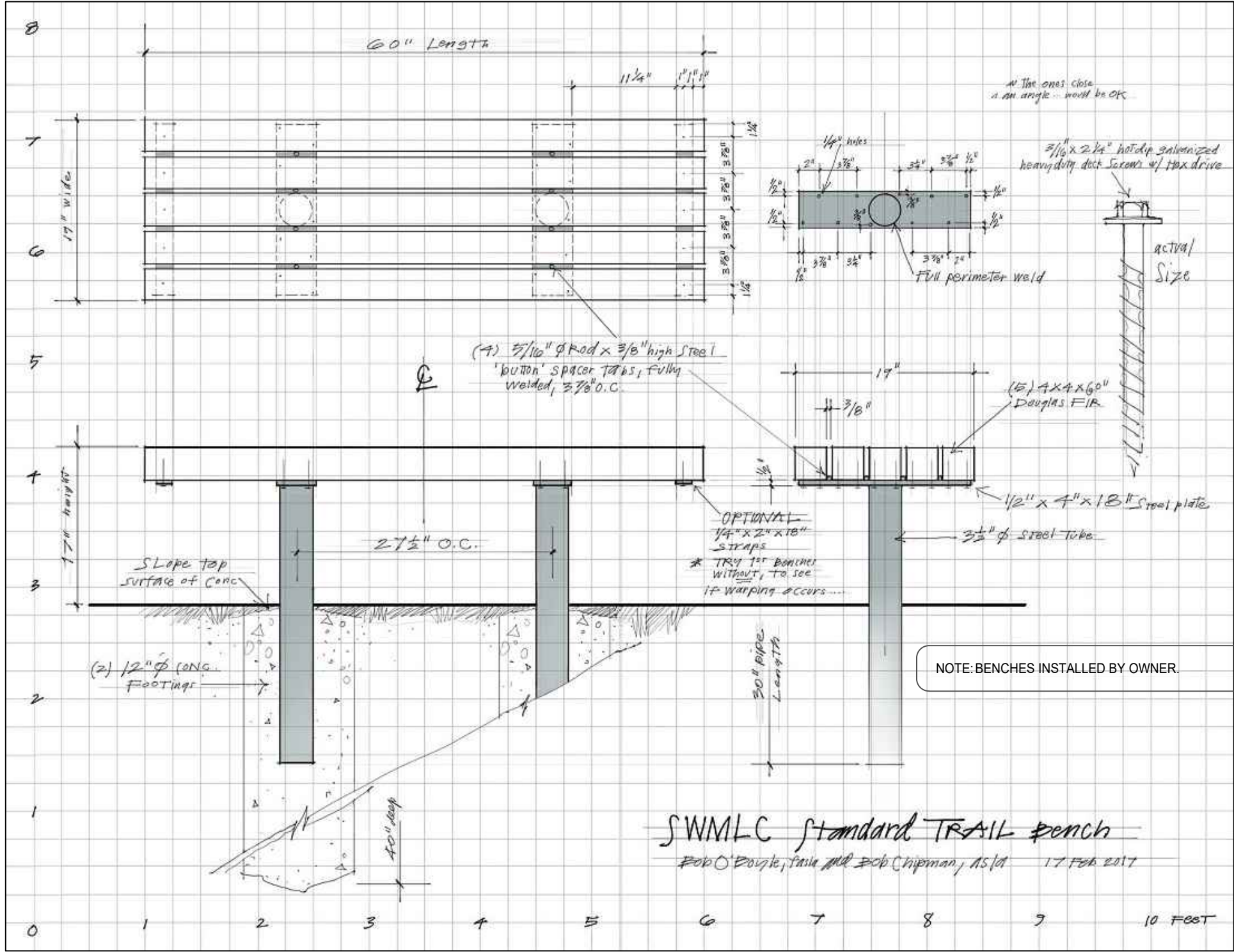
Issued For:	Date
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Project:
**BOW IN THE CLOUDS
SWMLC
PHASE 2
IMPROVEMENTS**

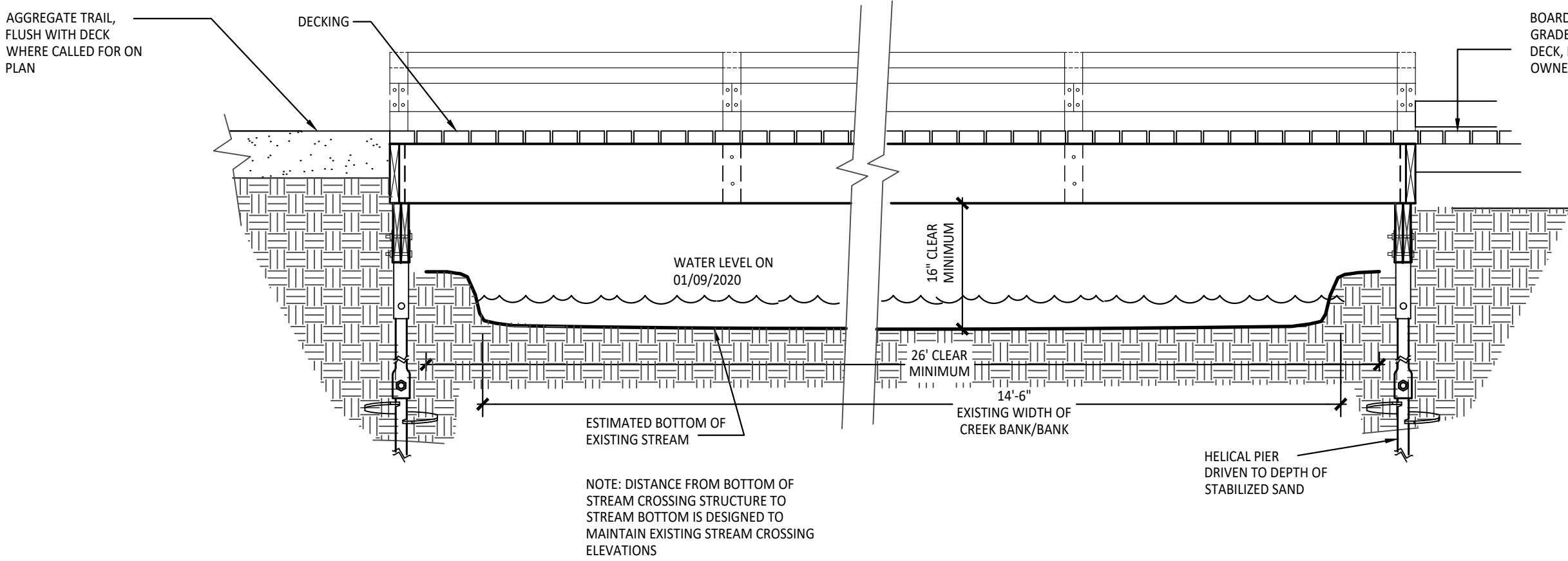
KALAMAZOO, MI

Sheet Title

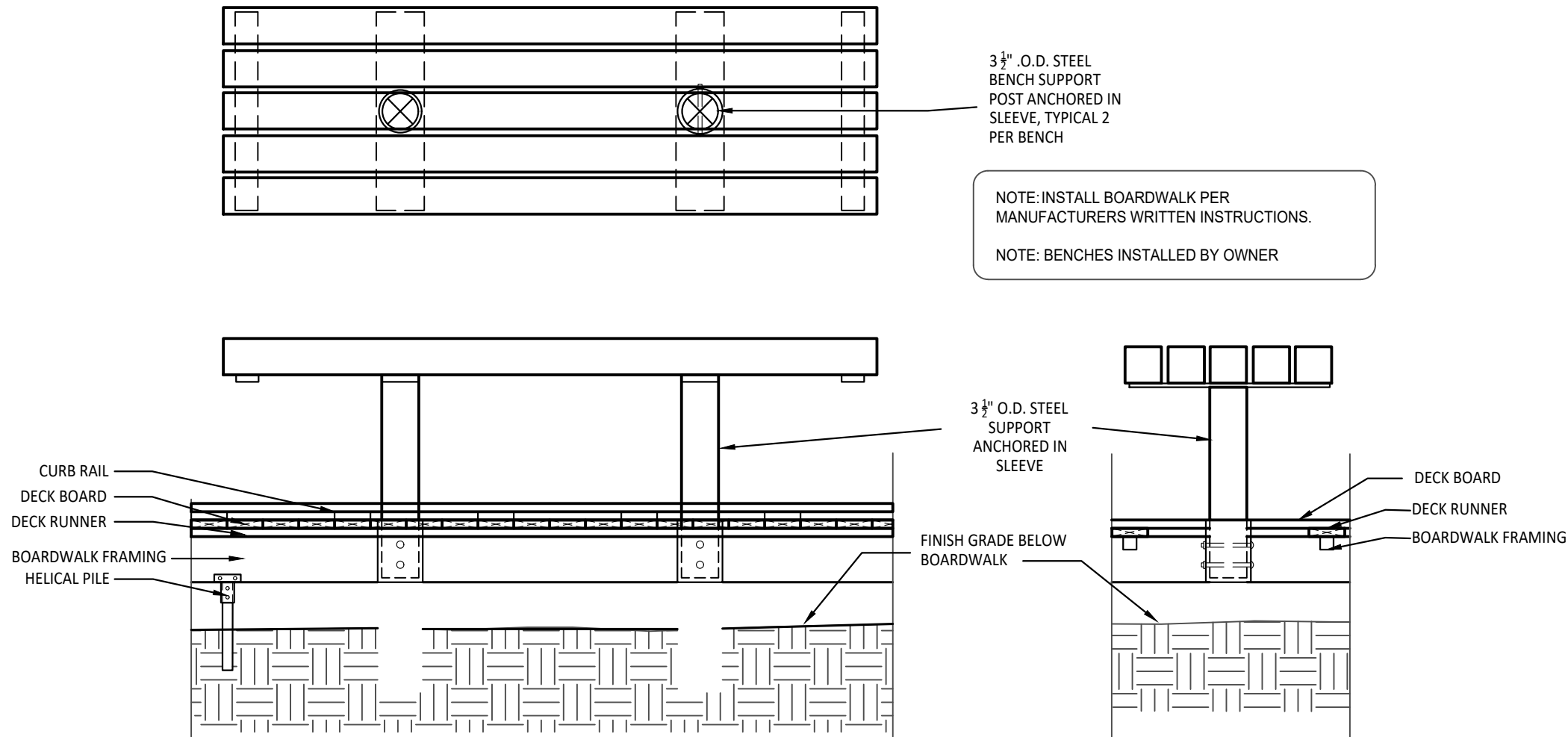
SITE DETAILS



1 Wood Bench
NOT TO SCALE



2 Stream Crossing Boardwalk Section
NOT TO SCALE



3 Bench on Boardwalk - Typical
NOT TO SCALE



**MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY
WATER RESOURCES DIVISION
PERMIT**

Issued To:

**Mitch Lettow
Southwest Michigan Land Conservancy
8395 E. Main St.
Galesburg, MI 49053**

**Permit No: WRP024430 v.1
Submission No.: HNZ-WXA1-2H29M
Site Name: SWMLC-Bow in the Clouds WRP-Kalamazoo: 13-39-0036-P
Issued: August 24, 2020
Revised:
Expires: August 24, 2025**

This permit is being issued by the Michigan Department of Environment, Great Lakes, and Energy (EGLE), Water Resources Division, under the provisions of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA); specifically:

- | | |
|--|--|
| ☒ Part 301, Inland Lakes and Streams | ☐ Part 323, Shorelands Protection and Management |
| ☒ Part 303, Wetlands Protection | ☐ Part 325, Great Lakes Submerged Lands |
| ☐ Part 315, Dam Safety | ☐ Part 353, Sand Dunes Protection and Management |
| ☒ Part 31, Water Resources Protection (Floodplain Regulatory Authority) | |

Permission is hereby granted, based on permittee assurance of adherence to State of Michigan requirements and permit conditions, to:

Authorized Activity:

Replace 2 existing clear span footbridges and part of an on-grade boardwalk and install new universal access boardwalk and seating areas over wetland which connect to new upland trails. On-grade boardwalk shall impact approximately 0.07 acre of emergent wetland, and measure approximately 560 feet long and 6 feet wide. Three diamond shaped seating areas shall be constructed along the boardwalk, each measuring approximately 12 feet per side. Two timber clear-span bridges shall each measure approximately 18 feet along the stream, and 6 feet in width, and include removal of two existing narrower bridges. Installation of stone steps at stream crossing #1 shall also include removal and replacement of approximately 1 cubic yard of floodplain wetland with new stone steps at each end of the new bridge. All work shall be in accordance with the attached plans and permit specifications.

Waterbody Affected: Spring Valley Creek and wetlands
Property Location: Kalamazoo County, City of Kalamazoo, Town/Range/Section 02S11W01
Property Tax No. 06-01-407-001

Authority granted by this permit is subject to the following limitations:

- A. Initiation of any work on the permitted project confirms the permittee's acceptance and agreement to comply with all terms and conditions of this permit.
- B. The permittee, in exercising the authority granted by this permit, shall not cause unlawful pollution as defined by Part 31 of the NREPA.
- C. This permit shall be kept at the site of the work and available for inspection at all times during the duration of the project or until its date of expiration.
- D. All work shall be completed in accordance with the approved plans and specifications submitted with the application and/or plans and specifications attached to this permit.
- E. No attempt shall be made by the permittee to forbid the full and free use by the public of public waters at or adjacent to the structure or work approved.
- F. It is made a requirement of this permit that the permittee give notice to public utilities in accordance with 2013 PA 174 (Act 174) and comply with each of the requirements of Act 174.
- G. This permit does not convey property rights in either real estate or material, nor does it authorize any injury to private property or invasion of public or private rights, nor does it waive the necessity of seeking federal assent, all local permits, or complying with other state statutes.
- H. This permit does not prejudice or limit the right of a riparian owner or other person to institute proceedings in any circuit court of this state when necessary to protect his rights.
- I. Permittee shall notify EGLE within one week after the completion of the activity authorized by this permit by completing and forwarding the attached preaddressed postcard to the office addressed thereon.
- J. This permit shall not be assigned or transferred without the written approval of EGLE.
- K. Failure to comply with conditions of this permit may subject the permittee to revocation of permit and criminal and/or civil action as cited by the specific state act, federal act, and/or rule under which this permit is granted.
- L. All dredged or excavated materials shall be disposed of in an upland site (outside of floodplains, unless exempt under Part 31 of the NREPA, and wetlands).
- M. In issuing this permit, EGLE has relied on the information and data that the permittee has provided in connection with the submitted application for permit. If, subsequent to the issuance of a permit, such information and data prove to be false, incomplete, or inaccurate, EGLE may modify, revoke, or suspend the permit, in whole or in part, in accordance with the new information.
- N. The permittee shall indemnify and hold harmless the State of Michigan and its departments, agencies, officials, employees, agents, and representatives for any and all claims or causes of action arising from acts or omissions of the permittee, or employees, agents, or representative of the permittee, undertaken in connection with this permit. The permittee's obligation to indemnify the State of Michigan applies only if the state: (1) provides the permittee or its designated representative written notice of the claim or cause of action within 30 days after it is received by the state, and (2) consents to the permittee's participation in the proceeding on the claim or cause of action. It does not apply to contested case proceedings under the Administrative Procedures Act, 1969 PA 306, as amended, challenging the permit. This permit shall not be construed as an indemnity by the State of Michigan for the benefit of the permittee or any other person.
- O. Noncompliance with these terms and conditions and/or the initiation of other regulated activities not specifically authorized shall be cause for the modification, suspension, or revocation of this permit, in whole or in part. Further, EGLE may initiate criminal and/or civil proceedings as may be deemed necessary to correct project deficiencies, protect natural resource values, and secure compliance with statutes.
- P. If any change or deviation from the permitted activity becomes necessary, the permittee shall request, in writing, a revision of the permitted activity from EGLE. Such revision request shall include complete

documentation supporting the modification and revised plans detailing the proposed modification. Proposed modifications must be approved, in writing, by EGLE prior to being implemented.

- Q. This permit may be transferred to another person upon written approval of EGLE. The permittee must submit a written request to EGLE to transfer the permit to the new owner. The new owner must also submit a written request to EGLE to accept transfer. The new owner must agree, in writing, to accept all conditions of the permit. A single letter signed by both parties that includes all the above information may be provided to EGLE. EGLE will review the request and, if approved, will provide written notification to the new owner.
- R. Prior to initiating permitted construction, the permittee is required to provide a copy of the permit to the contractor(s) for review. The property owner, contractor(s), and any agent involved in exercising the permit are held responsible to ensure that the project is constructed in accordance with all drawings and specifications. The contractor is required to provide a copy of the permit to all subcontractors doing work authorized by the permit.
- S. Construction must be undertaken and completed during the dry period of the wetland. If the area does not dry out, construction shall be done on equipment mats to prevent compaction of the soil.
- T. Authority granted by this permit does not waive permit requirements under Part 91, Soil Erosion and Sedimentation Control, of the NREPA, or the need to acquire applicable permits from the County Enforcing Agent (CEA).
- U. Authority granted by this permit does not waive permit requirements under the authority of Part 305, Natural Rivers, of the NREPA. A Natural Rivers Zoning Permit may be required for construction, land alteration, streambank stabilization, or vegetation removal along or near a natural river.
- V. The permittee is cautioned that grade changes resulting in increased runoff onto adjacent property is subject to civil damage litigation.
- W. Unless specifically stated in this permit, construction pads, haul roads, temporary structures, or other structural appurtenances to be placed in a wetland or on bottomland of the water body are not authorized and shall not be constructed unless authorized by a separate permit or permit revision granted in accordance with the applicable law.
- X. For projects with potential impacts to fish spawning or migration, no work shall occur within fish spawning or migration timelines (i.e., windows) unless otherwise approved in writing by the Michigan Department of Natural Resources (MDNR), Fisheries Division.
- Y. Work to be done under authority of this permit is further subject to the following special instructions and specifications:
1. Authority granted by this permit does not waive permit or program requirements under Part 91 of the NREPA or the need to acquire applicable permits from the CEA. To locate the Soil Erosion Program Administrator for your county, visit https://www.michigan.gov/documents/deq/wrd-sesc-agency-list_539870_7.pdf
 2. The authority to conduct the activity as authorized by this permit is granted solely under the provisions of the governing act as identified above. This permit does not convey, provide, or otherwise imply approval of any other governing act, ordinance, or regulation, nor does it waive the permittee's obligation to acquire any local, county, state, or federal approval or authorization necessary to conduct the activity.
 3. No fill, excess soil, or other material shall be placed in any wetland, floodplain, or surface water area not specifically authorized by this permit, its plans, and specifications.
 4. This permit does not authorize or sanction work that has been completed in violation of applicable federal, state, or local statutes.
 5. The permit placard shall be kept posted at the work site in a prominent location at all times for the duration of the project or until permit expiration.

6. This permit is being issued for the maximum time allowed and no extensions of this permit will be granted. Initiation of the construction work authorized by this permit indicates the permittee's acceptance of this condition. The permit, when signed by EGLE, will be for a five-year period beginning on the date of issuance. If the project is not completed by the expiration date, a new permit must be sought.
7. Prior to the initiation of any permitted construction activities, a sedimentation barrier shall be constructed immediately down gradient of each construction site. Sedimentation barriers shall be specifically designed to handle the sediment type, load, water depth, and flow conditions of each construction site throughout the anticipated time of construction and unstable site conditions. The sedimentation barrier shall be maintained in good working order throughout the duration of the project. Upon project completion, the accumulated materials shall be removed and disposed of at an upland (non-wetland, non-floodplain) site and stabilized with seed and mulch. The sedimentation barrier shall then be removed in its entirety and the area restored to its original configuration and cover.
8. All raw areas in uplands resulting from the permitted construction activity shall be effectively stabilized with sod and/or seed and mulch (or other technology specified by this permit or project plans) in a sufficient quantity and manner to prevent erosion and any potential siltation to surface waters or wetlands. Temporary stabilization measures shall be installed before or upon commencement of the permitted activity, and shall be maintained until permanent measures are in place. Permanent measures shall be in place within five (5) days of achieving final grade.
9. All raw earth within 100 feet of a lake, stream, or wetland that is not brought to final stabilization by the end of the active growing season shall be temporarily stabilized with mulch blankets in accordance with the following dates: September 20th for the Upper Peninsula, October 1st for the Lower Peninsula north of US-10, and October 10th for the Lower Peninsula south of US-10.
10. All fill/backfill shall consist of clean inert material that will not cause siltation nor contain soluble chemicals, organic matter, pollutants, or contaminants. All fill shall be contained in such a manner so as not to erode into any surface water, floodplain, or wetland. All raw areas associated with the permitted activity shall be stabilized with sod and/or seed and mulch, riprap, or other technically effective methods as necessary to prevent erosion.
11. If the project, or any portion of the project, is stopped and lies incomplete for any length of time other than that encountered in a normal work week, every precaution shall be taken to protect the incomplete work from erosion, including the placement of temporary gravel bag riprap, temporary seed and mulch, or other acceptable temporary protection.
12. No work shall be done in the stream during periods of above-normal flows except as necessary to prevent erosion.
13. This permit is limited to authorizing the construction as specified above and carries with it no assurances or implications that associated lake, stream, wetland or floodplain areas can be developed and serviced by the structures authorized by this permit.
14. The project is located within a community that participates in the National Flood Insurance Program (NFIP). As a participant in the NFIP, the community must comply with the Michigan Building Code (including Appendix G and listed supporting materials); the Michigan Residential Code; and Title 44 of the Code of Federal Regulations, Part 60, Criteria for Land Management and Use. The community is also responsible to ensure that its floodplain maps and studies are maintained to show changes to flood elevations and flood delineations as described in 44 CFR, Part 65, Identification and Mapping of Special Hazard Areas.
15. All structures constructed within the floodplain or floodway shall be firmly anchored to prevent flotation or lateral movement.
16. Any other filling, grading, or construction within the 100-year floodplain will require a separate EGLE permit before starting the work.

17. No work should be conducted in the water from March 1 through June 30 to protect fish spawning.



Issued By:

Michelle DeLong
Kalamazoo District Office
Water Resources Division

cc: City of Kalamazoo Clerk
Comstock Township Clerk
Kalamazoo County Drain Commissioner
Kalamazoo County Clerk
Kalamazoo CEA
Brad Yocum, Agent
Matthew Diana, MDNR, Fisheries Division

SUPPLEMENTAL SITE PLAN REVIEW APPLICATION FOR NATURAL FEATURES PROTECTION

For projects located within the Natural Features Protection (NFP) Overlay District, separate site plan approval is required before the full site plan can be approved. This review is done either by the NFP Review Board or administratively by staff to verify conformance with NFP Overlay District zoning code ([Chapter 50, NFP](#)). The NFP Overlay District map can be found on the [City's GIS mapping website](#) (select "Planning & Zoning" layer and make sure "NFP Overlay" is clicked on).

The NFP Supplemental Application must be completed and submitted with the regular Site Plan Review Application and checklists. The NFP Review Board meets monthly to review and approve applications. City staff can assist in scheduling a project at an upcoming NFP Review Board meeting. While the review process offers some flexibility, projects often seek NFP approval between the Pre-Application meeting and regular Site Plan Review meeting.

Section I. Project & Applicant Information

All projects must complete Section I. If the project will not impact any natural features on the site, and does not trigger additional stormwater controls or treatment, applicants should sign and submit Section I only. Staff will review and determine if the application can be approved administratively.

Section II. Natural Features Checklist & Attachments

For projects proposing improvements or changes to the site that impact natural features, change grading, or involve work in or near NFP setbacks, Sections II and III must be completed. Section II identifies which natural features are present and standards apply. Section III will assist you in determining what documentation and additional plan sets are needed for a complete application. Once a complete application is submitted to the City, the project will be scheduled for the next available NFP Review Board meeting and an application fee of \$110 will apply.

QUESTIONS

Contact the NFP staff liaison with any questions about your NFP Supplemental Application at (269) 337-8045 or development@kalamazoocity.org.

SECTION I. PROJECT AND APPLICANT INFORMATION

Please provide all of the project and applicant information requested below. Include the date of your regular site plan review meeting, if one has been scheduled or already taken place.

APPLICANT NAME:	Southwest Michigan Land Conservancy Mitch Lettow (first) (last)		
APPLICANT ADDRESS:	8395 E. Main Street (number) (street name)		
	Galesburg (city)	MI	49053 (zip)
APPLICANT EMAIL:	lettow@swmlc.org	PHONE:	(269) 324-1600
PARCEL ADDRESS/PIN:	3401 Nazareth Rd., Kalamazoo 49048		
PROJECT DESCRIPTION:	Non-motorized, aggregate surfaced trail development to connect to existing trail system, including steel boardwalk at 2 stream crossings and in wetland, and installation of benches. New trails will be universally accessible as well as provide access to the existing sanitary collector sewer traversing the property for City of Kalamazoo Public Services Dept. for service and maintenance.		
OWNER NAME: (if different)	(first) (last)		
HAS REGULAR SITE PLAN REVIEW MEETING OCCURRED?	☐ Yes ☒ No	DATE OF SITE PLAN REVIEW MEETING:	

NFP APPLICATION REQUIRED?

Is the project limited to interior work <u>only</u> with no exterior ground changes or increase in impervious coverage?	
YES ☐	If YES , Sections II & III of this application are not needed. Sign below & submit only this page with your site plan review or permit application.
☒ NO	If NO , proceed to Sections II & III. Do NOT sign below.

By signing below, the applicant certifies that no natural features will be disturbed as part of this project.

Print name: _____

Signature: _____ Date: _____

SECTION II. NFP SITE PLAN CHECKLIST & ATTACHMENTS

Use the checklist to determine what documentation and additional plans sets must be prepared for this application. All plan sets, maps, and additional information must be attached to this application to be considered complete. If you checked “no” to certain NFP items in questions 1-7 in Section II, record “N/A” on the checklist.

REQUIRED: NFP SITE PLAN SET

All applications must include separate sheets in the plan set showing the following:

1. Existing conditions map showing an inventory of all protected natural features and any associated natural features setbacks with distances (use checklist below)
2. Future development plan overlaid onto the existing conditions and natural features inventory; indicate where and to what extent protected natural features will be disturbed, removed, altered, or impacted in any way and which natural features will be protected during and after construction

Future development plan must include:

- **Boundary with extent of re-grading**, construction, or site preparation activities
 - **All existing and new building footprints** (mark whether existing buildings will be removed or maintained)
 - **New and existing parking** surfaces or structures, sidewalks, trails, and other impervious or semi-impervious surfaces including decks, patios, viewing platforms, etc. (list proposed surface materials and whether existing surfaces will be maintained or removed)
 - **Proposed location of fencing and screening**, whether permanent, natural, or construction silt fencing and/or natural feature protection fencing (with specifications)
 - **Stormwater facilities** showing boundary of ground disturbance, grading or construction activities, if located near natural features
 - **New utilities** and/or relocation of existing utilities showing corridors that could impact natural features
3. Landscape plan detailing the minimum elements needed to meet zoning code requirements and all proposed additional landscaping elements or features (include table with species name)
 4. Any additional plans or tables detailing which natural features will be restored or replaced after construction, if required (e.g., riparian buffer installation or slope restoration plan may be required under certain circumstances when the ordinance allows changes within these protected areas)

WETLANDS	Present:	Included on page #:	Notes:
Mark existing wetland boundaries with notes about wetland conditions. <i>Attach a copy of EGLE permit or permit application for work impacting Part 303 wetlands regulated by the State.</i>	☒ Yes ☐ No		
WATER RESOURCES	Present:	Included on page #:	Notes:
Mark the location of all water resources on the parcel and those within 25 feet of the parcel boundaries. <i>Attach a copy of EGLE permit or permit application for work impacting Part 301 waters regulated by the State.</i>	☒ Yes ☐ No		
Show required setbacks with dimensions; describe existing or future ground cover within riparian setbacks.			
TREES	Present:	Included on page #:	Notes:
Mark the location of all “protected” trees that are proposed to be removed and those that will remain and require protection fencing.	☐ Yes ☒ No		
Include a table with species name, size (DBH and height), and condition of “protected” trees that are proposed to be removed and list replacement tree information.			
Provide a note with justification for removal.			
WOODLANDS	Present:	Included on page #:	Notes:
Delineate the boundary of all woodlands on the parcel noting where woodlands likely extend onto adjacent parcels.	☒ Yes ☐ No		
Mark all areas of woodland that will be retained and removed (i.e., cleared).			
Include a table or note with the required preservation ratio (based on existing woodland coverage), percentage proposed to be removed, and rationale for selecting area for removal.	Woodland Assessment to be provided		
SLOPES	Present:	Included on page #:	Notes:
Provide a slope analysis that shows the boundaries of all “protected” slopes and mark the required setback(s).	☒ Yes ☐ No		
Include a note with co-existing feature that triggers “protected” slope status (e.g., wooded, within 500 ft of water resource).			

NATURAL HERITAGE AREAS	Present:	Included on page #:	Notes:
Is an MNFI* rare species review required? <i>Parcels can be pre-screened using the City's GIS website, click on the "Planning & Zoning" layer and "NFP Overlay" layer; then click on parcel and see MNFI status.</i>	☒ Yes ☐ No		
If an MNFI rare species review is required, attach the resulting report.	Rare Species Review has been requested		

*Michigan Natural Features Inventory (MNFI) Rare Species Reviews can be requested at:

<https://mnfi.anr.msu.edu/services/rare-species-reviews>

ACCEPTED DATA SOURCES & ANALYSIS

All data sources, analysis, and professionals are subject to approval by the City Planner according to Chapter 50-6.2. The following guidance may be useful when selecting a professional or methodology for inventorying natural features.

1. WETLANDS

- Wetland delineation report performed by a qualified consultant including a map denoting delineated boundary of all wetlands, OR
- Most recent US Fish & Wildlife Service's National Wetlands Inventory boundary (State of Michigan mapper: <https://www.michigan.gov/egle/about/organization/water-resources/wetlands/inventory-maps>)

2. PROTECTED TREE IDENTIFICATION

- May be performed by an qualified professional (including ISA Certified Arborist or similar); a full tree inventory is not required if all necessary information can be obtained and communicated using another survey, inventory, or site assessment methodology

3. WOODLANDS

- A qualified professional, such as an ISA Certified Arborist, landscape architect, or license engineer may perform a desktop analysis or field survey to delineate woodlands
- When a variances is being requests to remove more woodland cover than is allowed under the preservation ration, the following is required
 - Woodland assessment report with determination that the Trees per Area (TPA) meets the NFP definition of a woodland and mapped delineation of woodland
 - Woodland assessment report with a determination that Basal Area is equivalent to the TPA in the NFP definition and meets definition of a woodland and mapped delineation of woodland
 - In addition to determination of whether stand of trees meets NFP definition of a woodland, assessment must include information on general species diversity,

composition of species, any notable trees (either notable species or size), invasive species composition, and general health and age observations of tree stand

4. PROTECTED SLOPES

- Topographic survey performed in the field by a qualified consultant to delineate areas of a slope with grade of 20% or greater
- Desktop analysis performed using U.S. Geological Survey digital topographic maps, LIDAR, digital elevation map, or equivalent data showing 2' intervals or finer resolution, performed by a qualified consultant or engineer



Bow in the Clouds Woodland Delineation Natural Features Protection Project Area 2024



Image 1. A large red oak (50" DBH) found during the woodland survey by SWMLC staff, found outside of the project area.

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5. Preservation Requirements ...	Page 6
6. Tree Inventory	Page 7

Background

A trail development project has been proposed by the Southwest Michigan Land Conservancy at its Bow in the Clouds Natural Area, which lies between the City of Kalamazoo and Kalamazoo Township. Within the city, it also lies in the Natural Features Protection Layer. This project is intended to create increased community access to this important natural area through Universal Access principles, while also allowing the City of Kalamazoo staff access to manhole covers to conduct maintenance on below-ground sewers that cross the preserve in several areas. The City has a legal access easement to build a road and maintain these sewer lines, but a plan and layout formed working with SWMLC will allow legal access while maintaining a natural area aesthetic.

While several natural features are found on site (wetlands, waterways, slopes, and woodland), only impact to the slope and slope setback features cannot be avoided per NFP requirements. A recommendation was sought for a variance to this feature from the NFP Board and was recommended (5/28/24) with a subsequent approval by the Zoning Board of Appeals (6/13/24). The woodland feature was proposed (as opposed to the tree feature) by SWMLC, and would allow for much more than the limited removal of trees that is being proposed to make room for the trail layout. However, the delineation needed to be demonstrated by meeting the definition of a woodland per the NFP Ordinance language. This document clearly defines the project area as woodland, and represents the additional acreage of woodland on site outside the project area.

Woodland is defined by NFP verbiage by its:

- Minimum area
- Tree count
- Natural ground cover

NFP Woodland Delineation: Bow in the Clouds

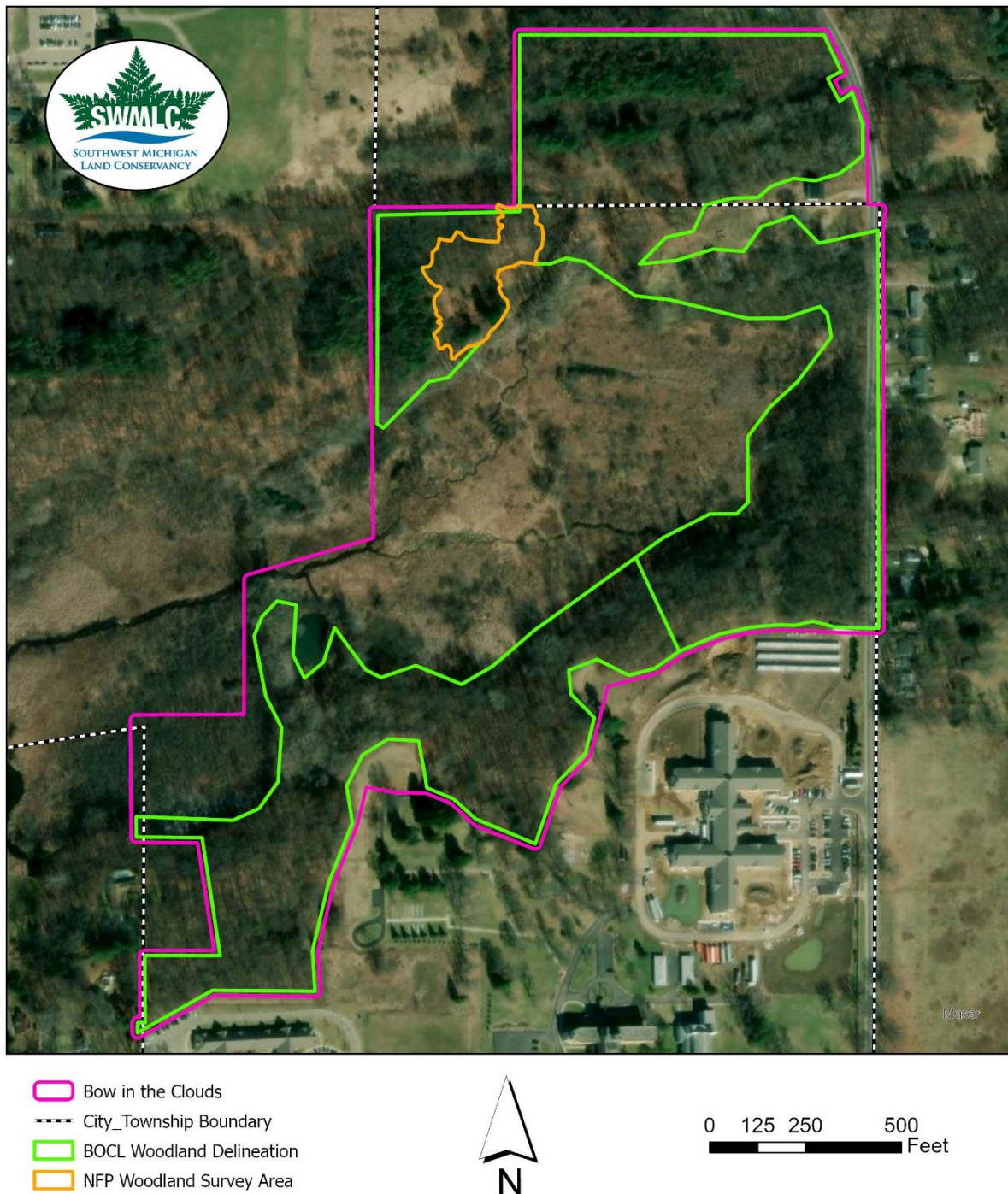


Image 2. Bow in the Clouds Natural Area, including boundary, city/township line, woodland delineation, and survey area.

Minimum Area

Trees cover a minimum area of 21,780 square feet or a half (1/2) acre, regardless of parcel boundaries (NFP II Ordinance with text amendments).

Woodland acreage for the overall property is 34.92 acres (see “BOCL Woodland Delineation” on Image 1). This results in 59% (34.92 acres woodland/58.94 acres parent parcel) coverage and 52% (26.51 acres woodland/50.53 acres parent parcel) coverage if only the acreage within the City of Kalamazoo is counted. This acreage was calculated in a GIS analysis using largely National Wetland Inventory data, aerial imagery, and ground truthing to distinguish between woodland and wetland acreage.

Tree Count

The area contains the equivalent of at least forty (40) trees per acre of at least two (2) inches DBH and reach or at maturity will reach at least fifty feet (50) in height (NFP II Ordinance with text amendments).

SWMLC Stewardship Staff conducted a representative tree inventory in July 2024 using the following criteria: 1) within the City limits, 2) within the project area excluding wetland acreage, 3) trees 2” DBH or greater, and 4) excluding understory trees (less than 50’ at maturity) in density estimates. Trees were measured, identified to species wherever possible, and GPS coordinates/location recorded (See Image 3). Understory trees were initially recorded and reflected in the set of points, but later removed for purposes of calculating tree density per acre (per NFP Guidelines). 297 trees were initially recorded representing 25 species and 275 trees representing 17 species remained once understory trees were eliminated from the calculations (See Table 1). These include native and non-native species. The survey area was 1.44 acres.

191 trees per acre is the tree density within the project area.

Natural Ground Cover

No more than twenty-five (25) percent of the ground area is mowed turf grass (NFP II Ordinance with text amendments).

Bow in the Clouds has approximately 1.25 acre of mowed turf grass and prairie but these were not included in the woodland acreage assessment. Woodland areas had a natural understory of shrubs, herbaceous grasses and forbs, and leaf litter (see Image 4).

NFP Woodland Delineation Survey Area

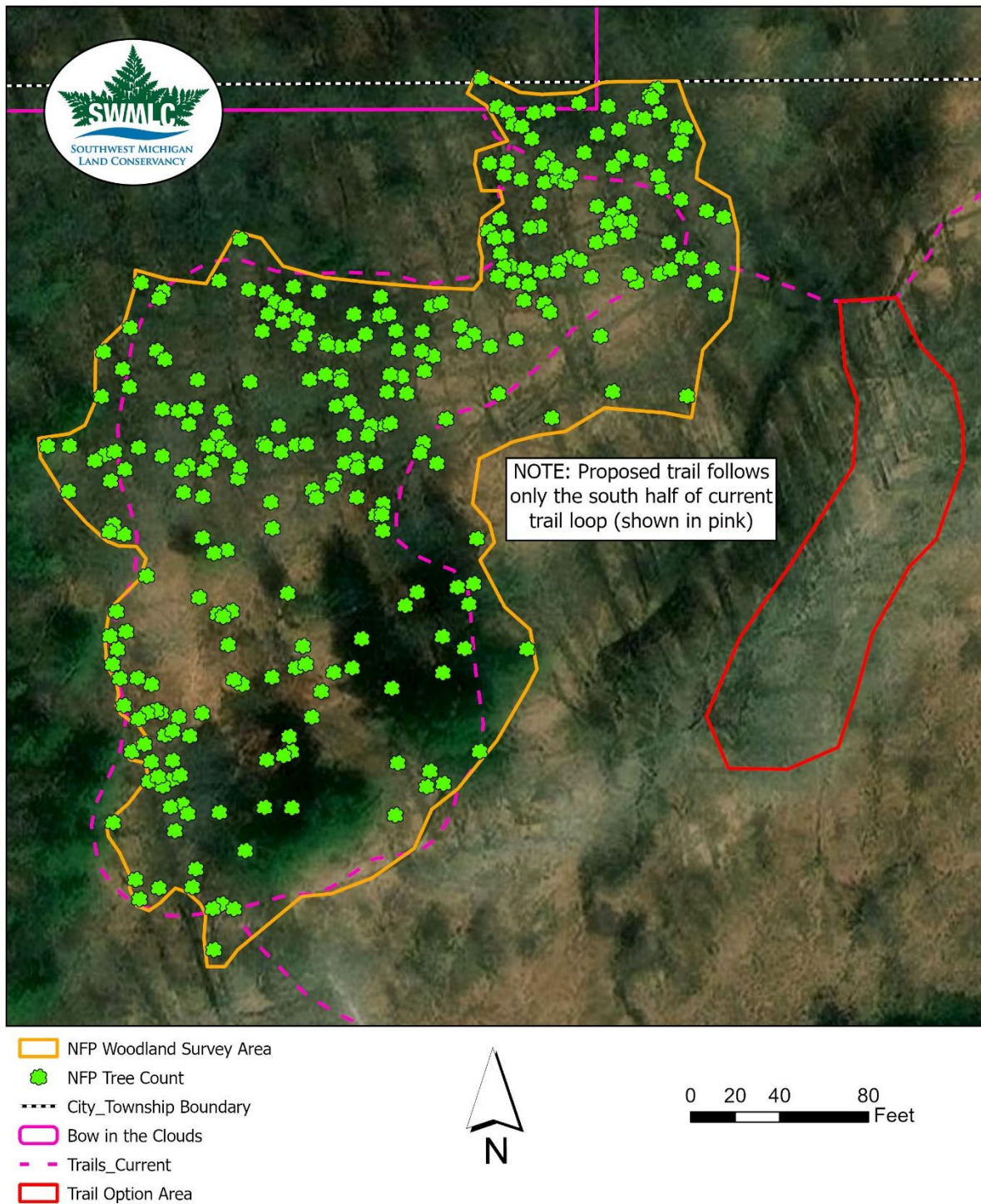


Image 3. Tree county/density survey area. Survey area was defined by the current trail loop, property boundary, City limits, and wetland/upland boundary.

Preservation Requirements

The embedded maps, narrative, and tables associated with this report clearly show that the acreage within the project area represents Woodland. Given this, NFP Woodland Preservation requirements dictate that 50% of woodland on site should be preserved (see Minimum Area section above for calculations). We anticipate having to remove as few as 3 and as many as 12 trees for the trail within the city limits (NFP Woodland Survey Area in Image 3). One small section of trail that we are currently thinking of as an option (See Image 3, “Trail Option Area”) depending on budget and contractor bids. This may require the removal of several trees, but still very few. This section of trail traverses a lane of Cottonwood (*Populus deltoides*) growing on an artificially mounded berm created with the sewer was initially laid down in the 1960s or 70s. There is a manhole cover here and the City of Kalamazoo will require access.

Trail design techniques, following the current trail, and careful monitoring of excavation work will ensure that this project minimizes the number of trees needed for removal. Given that NFP allows a removal of 13 acres of trees (50% preservation), and we are suggesting less than 13 *individual* trees would be removed as a worse-case scenario, we are well within the NFP requirement. Lastly, as a conservation organization our mission is to balance ecological integrity with community access (general public, City staff), and we have no intention removing any more trees than is absolutely necessary.



Image 4. Representative photo of woodland in survey area. Not high tree density and natural ground cover.

Tree Count

Table 1. Tree inventory within representative survey area. 275 total trees were counted and measured.

Tree #	Common Name	Scientific Name	Size (DBH in inches)
3	American elm	<i>Ulmus americana</i>	9.5
164	Black Cherry	<i>Prunus serotina</i>	2
172	Black Cherry	<i>Prunus serotina</i>	2
271	Black Cherry	<i>Prunus serotina</i>	2
278	Black Cherry	<i>Prunus serotina</i>	2
158	Black Cherry	<i>Prunus serotina</i>	2.5
296	Black Cherry	<i>Prunus serotina</i>	2.5
297	Black Cherry	<i>Prunus serotina</i>	2.5
233	Black Cherry	<i>Prunus serotina</i>	3
235	Black Cherry	<i>Prunus serotina</i>	3
244	Black Cherry	<i>Prunus serotina</i>	3
218	Black Cherry	<i>Prunus serotina</i>	3.5
220	Black Cherry	<i>Prunus serotina</i>	3.5
237	Black Cherry	<i>Prunus serotina</i>	3.5
274	Black Cherry	<i>Prunus serotina</i>	3.5
154	Black Cherry	<i>Prunus serotina</i>	4
156	Black Cherry	<i>Prunus serotina</i>	4
248	Black Cherry	<i>Prunus serotina</i>	4
275	Black Cherry	<i>Prunus serotina</i>	4
280	Black Cherry	<i>Prunus serotina</i>	4
295	Black Cherry	<i>Prunus serotina</i>	4

276	Black Cherry	<i>Prunus serotina</i>	4.5
281	Black Cherry	<i>Prunus serotina</i>	4.5
267	Black Cherry	<i>Prunus serotina</i>	5
283	Black Cherry	<i>Prunus serotina</i>	5.5
217	Black Cherry	<i>Prunus serotina</i>	6
266	Black Cherry	<i>Prunus serotina</i>	7
171	Black Cherry	<i>Prunus serotina</i>	7.5
249	Black Cherry	<i>Prunus serotina</i>	7.5
168	Black Cherry	<i>Prunus serotina</i>	8.5
206	Black Cherry	<i>Prunus serotina</i>	9.5
166	Black Cherry	<i>Prunus serotina</i>	12
205	Black Cherry	<i>Prunus serotina</i>	12
250	Black Cherry	<i>Prunus serotina</i>	12.5
210	Black Cherry	<i>Prunus serotina</i>	13
219	Black Cherry	<i>Prunus serotina</i>	13
286	Black Cherry	<i>Prunus serotina</i>	14
212	Black Cherry	<i>Prunus serotina</i>	17.5
265	Black Cherry	<i>Prunus serotina</i>	18
173	Black Cherry	<i>Prunus serotina</i>	19.5
138	Black Cherry	<i>Prunus serotina</i>	2.5
159	Black Cherry	<i>Prunus serotina</i>	2.5
269	Black Cherry	<i>Prunus serotina</i>	2.5
74	Black Cherry	<i>Prunus serotina</i>	3
111	Black Cherry	<i>Prunus serotina</i>	3
145	Black Cherry	<i>Prunus serotina</i>	3
246	Black Cherry	<i>Prunus serotina</i>	3

119	Black Cherry	<i>Prunus serotina</i>	3.5
139	Black Cherry	<i>Prunus serotina</i>	3.5
83	Black Cherry	<i>Prunus serotina</i>	4
282	Black Cherry	<i>Prunus serotina</i>	4
18	Black Cherry	<i>Prunus serotina</i>	4.5
127	Black Cherry	<i>Prunus serotina</i>	4.5
133	Black Cherry	<i>Prunus serotina</i>	4.5
150	Black Cherry	<i>Prunus serotina</i>	4.5
236	Black Cherry	<i>Prunus serotina</i>	4.5
115	Black Cherry	<i>Prunus serotina</i>	5
75	Black Cherry	<i>Prunus serotina</i>	6
130	Black Cherry	<i>Prunus serotina</i>	6
151	Black Cherry	<i>Prunus serotina</i>	6
126	Black Cherry	<i>Prunus serotina</i>	6.5
22	Black Cherry	<i>Prunus serotina</i>	7
26	Black Cherry	<i>Prunus serotina</i>	7
93	Black Cherry	<i>Prunus serotina</i>	7
125	Black Cherry	<i>Prunus serotina</i>	7
132	Black Cherry	<i>Prunus serotina</i>	7
160	Black Cherry	<i>Prunus serotina</i>	7
146	Black Cherry	<i>Prunus serotina</i>	7.5
70	Black Cherry	<i>Prunus serotina</i>	8
147	Black Cherry	<i>Prunus serotina</i>	8
91	Black Cherry	<i>Prunus serotina</i>	8.5
109	Black Cherry	<i>Prunus serotina</i>	8.5
51	Black Cherry	<i>Prunus serotina</i>	9

123	Black Cherry	<i>Prunus serotina</i>	9
148	Black Cherry	<i>Prunus serotina</i>	9
149	Black Cherry	<i>Prunus serotina</i>	9.5
221	Black Cherry	<i>Prunus serotina</i>	9.5
49	Black Cherry	<i>Prunus serotina</i>	10
73	Black Cherry	<i>Prunus serotina</i>	10
80	Black Cherry	<i>Prunus serotina</i>	10.5
110	Black Cherry	<i>Prunus serotina</i>	11
112	Black Cherry	<i>Prunus serotina</i>	11
45	Black Cherry	<i>Prunus serotina</i>	11.5
72	Black Cherry	<i>Prunus serotina</i>	11.5
94	Black Cherry	<i>Prunus serotina</i>	11.5
128	Black Cherry	<i>Prunus serotina</i>	11.5
76	Black Cherry	<i>Prunus serotina</i>	12
96	Black Cherry	<i>Prunus serotina</i>	12
102	Black Cherry	<i>Prunus serotina</i>	12
71	Black Cherry	<i>Prunus serotina</i>	13
137	Black Cherry	<i>Prunus serotina</i>	13
120	Black Cherry	<i>Prunus serotina</i>	13.5
131	Black Cherry	<i>Prunus serotina</i>	13.5
207	Black Cherry	<i>Prunus serotina</i>	13.5
77	Black Cherry	<i>Prunus serotina</i>	14
86	Black Cherry	<i>Prunus serotina</i>	14
121	Black Cherry	<i>Prunus serotina</i>	14
144	Black Cherry	<i>Prunus serotina</i>	14
78	Black Cherry	<i>Prunus serotina</i>	15

31	Black Cherry	<i>Prunus serotina</i>	16
134	Black Cherry	<i>Prunus serotina</i>	17.5
84	Black Cherry	<i>Prunus serotina</i>	18
88	Black Cherry	<i>Prunus serotina</i>	18
113	Black Cherry	<i>Prunus serotina</i>	18
118	Black Cherry	<i>Prunus serotina</i>	18
90	Black Cherry	<i>Prunus serotina</i>	18.5
153	Black Cherry	<i>Prunus serotina</i>	22
135	Black Locust	<i>Robinia pseudoacacia</i>	2.5
273	Black Locust	<i>Robinia pseudoacacia</i>	5.5
251	Black Locust	<i>Robinia pseudoacacia</i>	9.5
242	Black Locust	<i>Robinia pseudoacacia</i>	10.5
222	Black Locust	<i>Robinia pseudoacacia</i>	12.5
289	Black Locust	<i>Robinia pseudoacacia</i>	13.5
141	Black Locust	<i>Robinia pseudoacacia</i>	14.5
162	Black Locust	<i>Robinia pseudoacacia</i>	14.5
211	Black Locust	<i>Robinia pseudoacacia</i>	18
209	Black Locust	<i>Robinia pseudoacacia</i>	14
62	Black Oak	<i>Quercus velutina</i>	2

155	Black Oak	<i>Quercus velutina</i>	2
170	Black Oak	<i>Quercus velutina</i>	2
177	Black Oak	<i>Quercus velutina</i>	2
191	Black Oak	<i>Quercus velutina</i>	2
204	Black Oak	<i>Quercus velutina</i>	2
208	Black Oak	<i>Quercus velutina</i>	2
167	Black Oak	<i>Quercus velutina</i>	2.5
198	Black Oak	<i>Quercus velutina</i>	2.5
186	Black Oak	<i>Quercus velutina</i>	3
226	Black Oak	<i>Quercus velutina</i>	3
239	Black Oak	<i>Quercus velutina</i>	3
41	Black Oak	<i>Quercus velutina</i>	3.5
34	Black Oak	<i>Quercus velutina</i>	4
53	Black Oak	<i>Quercus velutina</i>	4
176	Black Oak	<i>Quercus velutina</i>	4
225	Black Oak	<i>Quercus velutina</i>	4.5
185	Black Oak	<i>Quercus velutina</i>	5
181	Black Oak	<i>Quercus velutina</i>	5.5
189	Black Oak	<i>Quercus velutina</i>	5.5
196	Black Oak	<i>Quercus velutina</i>	5.5
227	Black Oak	<i>Quercus velutina</i>	5.5
197	Black Oak	<i>Quercus velutina</i>	6
35	Black Oak	<i>Quercus velutina</i>	7
10	Black Oak	<i>Quercus velutina</i>	8
13	Black Oak	<i>Quercus velutina</i>	8
48	Black Oak	<i>Quercus velutina</i>	8

50	Black Oak	<i>Quercus velutina</i>	8
142	Black Oak	<i>Quercus velutina</i>	8
54	Black Oak	<i>Quercus velutina</i>	8.5
180	Black Oak	<i>Quercus velutina</i>	8.5
201	Black Oak	<i>Quercus velutina</i>	8.5
25	Black Oak	<i>Quercus velutina</i>	9
33	Black Oak	<i>Quercus velutina</i>	9.5
20	Black Oak	<i>Quercus velutina</i>	10.5
11	Black Oak	<i>Quercus velutina</i>	11.5
179	Black Oak	<i>Quercus velutina</i>	13
194	Black Oak	<i>Quercus velutina</i>	14
199	Black Oak	<i>Quercus velutina</i>	14.5
264	Black Oak	<i>Quercus velutina</i>	18.5
223	Black Oak	<i>Quercus velutina</i>	28
39	Black Oak	<i>Quercus velutina</i>	2.5
40	Black Oak	<i>Quercus velutina</i>	2.5
42	Black Oak	<i>Quercus velutina</i>	2.5
12	Black Oak	<i>Quercus velutina</i>	4
32	Black Oak	<i>Quercus velutina</i>	4.5
57	Black Oak	<i>Quercus velutina</i>	8
21	Black Oak	<i>Quercus velutina</i>	9
47	Black Oak	<i>Quercus velutina</i>	9
37	Black Oak	<i>Quercus velutina</i>	9.5
24	Black Oak	<i>Quercus velutina</i>	10.5
224	Black Walnut	<i>Juglans nigra</i>	3
59	Black Walnut	<i>Juglans nigra</i>	12

58	Black Walnut	<i>Juglans nigra</i>	14
288	Boxelder	<i>Acer negundo</i>	5.5
234	Common Hackberry	<i>Celtis occidentalis</i>	3
23	Green Ash	<i>Carya pennsylvanica</i>	2
262	Norway Maple	<i>Acer platanoides</i>	2
140	Red Maple	<i>Acer rubrum</i>	2.5
254	Red Maple	<i>Acer rubrum</i>	2.5
256	Red Maple	<i>Acer rubrum</i>	2.5
163	Red Maple	<i>Acer rubrum</i>	3
124	Red Maple	<i>Acer rubrum</i>	4
116	Red Maple	<i>Acer rubrum</i>	5.5
87	Red Maple	<i>Acer rubrum</i>	6
202	Red Maple	<i>Acer rubrum</i>	8.5
69	Red Maple	<i>Acer rubrum</i>	3.5
203	Red Maple	<i>Acer rubrum</i>	9
100	Red Oak	<i>Quercus rubra</i>	2
178	Red Oak	<i>Quercus rubra</i>	2
104	Red Oak	<i>Quercus rubra</i>	3
106	Red Oak	<i>Quercus rubra</i>	3
175	Red Oak	<i>Quercus rubra</i>	3
214	Red Oak	<i>Quercus rubra</i>	3
270	Red Oak	<i>Quercus rubra</i>	3
287	Red Oak	<i>Quercus rubra</i>	3
169	Red Oak	<i>Quercus rubra</i>	3.5
182	Red Oak	<i>Quercus rubra</i>	3.5

243	Red Oak	<i>Quercus rubra</i>	3.5
293	Red Oak	<i>Quercus rubra</i>	3.5
36	Red Oak	<i>Quercus rubra</i>	4
230	Red Oak	<i>Quercus rubra</i>	4
61	Red Oak	<i>Quercus rubra</i>	4.5
98	Red Oak	<i>Quercus rubra</i>	4.5
66	Red Oak	<i>Quercus rubra</i>	5
136	Red Oak	<i>Quercus rubra</i>	5.5
247	Red Oak	<i>Quercus rubra</i>	5.5
258	Red Oak	<i>Quercus rubra</i>	5.5
284	Red Oak	<i>Quercus rubra</i>	5.5
165	Red Oak	<i>Quercus rubra</i>	6
67	Red Oak	<i>Quercus rubra</i>	6.5
259	Red Oak	<i>Quercus rubra</i>	6.5
184	Red Oak	<i>Quercus rubra</i>	7
229	Red Oak	<i>Quercus rubra</i>	7
255	Red Oak	<i>Quercus rubra</i>	7.5
261	Red Oak	<i>Quercus rubra</i>	8.5
285	Red Oak	<i>Quercus rubra</i>	8.5
27	Red Oak	<i>Quercus rubra</i>	9
8	Red Oak	<i>Quercus rubra</i>	9.5
30	Red Oak	<i>Quercus rubra</i>	9.5
38	Red Oak	<i>Quercus rubra</i>	9.5
97	Red Oak	<i>Quercus rubra</i>	10
232	Red Oak	<i>Quercus rubra</i>	10.5
241	Red Oak	<i>Quercus rubra</i>	11

15	Red Oak	<i>Quercus rubra</i>	12
64	Red Oak	<i>Quercus rubra</i>	12
5	Red Oak	<i>Quercus rubra</i>	12.5
92	Red Oak	<i>Quercus rubra</i>	14
245	Red Oak	<i>Quercus rubra</i>	14
108	Red Oak	<i>Quercus rubra</i>	15
117	Red Oak	<i>Quercus rubra</i>	16.5
6	Red Oak	<i>Quercus rubra</i>	18
231	Red Oak	<i>Quercus rubra</i>	19.5
4	Red Oak	<i>Quercus rubra</i>	21
216	Red Oak	<i>Quercus rubra</i>	21
252	Red Oak	<i>Quercus rubra</i>	21
260	Red Oak	<i>Quercus rubra</i>	21
263	Red Oak	<i>Quercus rubra</i>	21.5
238	Red Oak	<i>Quercus rubra</i>	22
240	Red Oak	<i>Quercus rubra</i>	25.5
200	Red Oak	<i>Quercus rubra</i>	33
105	Red Oak	<i>Quercus rubra</i>	2.5
101	Red Oak	<i>Quercus rubra</i>	4
43	Red Oak	<i>Quercus rubra</i>	4.5
228	Red Oak	<i>Quercus rubra</i>	4.5
46	Red Oak	<i>Quercus rubra</i>	8.5
129	Rock Elm	<i>Ulmus thomasi</i>	8
99	Scots Pine	<i>Pinus sylvestris</i>	11.5
143	Spruce	<i>Picea sp.</i>	4.5
82	Spruce	<i>Picea sp.</i>	5.5

152	Spruce	<i>Picea sp.</i>	6
157	Spruce	<i>Picea sp.</i>	3
291	White Mulberry	<i>Morus alba</i>	15.5
292	White Mulberry	<i>Morus alba</i>	19.5
290	White Mulberry	<i>Morus alba</i>	20
1	White Mulberry	<i>Morus alba</i>	22.5
193	White Oak	<i>Quercus alba</i>	2
190	White Oak	<i>Quercus alba</i>	2.5
60	White Oak	<i>Quercus alba</i>	3.5
187	White Oak	<i>Quercus alba</i>	4.5
188	White Oak	<i>Quercus alba</i>	4.5
56	White Oak	<i>Quercus alba</i>	5
29	White Oak	<i>Quercus alba</i>	6
55	White Oak	<i>Quercus alba</i>	6
65	White Oak	<i>Quercus alba</i>	6.5
17	White Oak	<i>Quercus alba</i>	7
52	White Oak	<i>Quercus alba</i>	7
192	White Oak	<i>Quercus alba</i>	7
183	White Oak	<i>Quercus alba</i>	7.5
28	White Oak	<i>Quercus alba</i>	14
44	White Oak	<i>Quercus alba</i>	6.5
174	White Pine	<i>Pinus strobus</i>	10.5
195	White Pine	<i>Pinus strobus</i>	20
7	White Pine	<i>Pinus strobus</i>	14
9	White Pine	<i>Pinus strobus</i>	14
19	White Pine	<i>Pinus strobus</i>	19.5

16	White Pine	<i>Pinus strobus</i>	21
14	White Pine	<i>Pinus strobus</i>	34.5



NFP Review Board Staff Report

City of Kalamazoo

TO: The Natural Features Protection Review Board

FROM: Nolan Bergstrom, NFP Board Liaison

DATE: July 23, 2024

SUBJECT: 3625 W Michigan Avenue

RECOMMENDATION:

It is recommended the Natural Features Protection (NFP) Review Board approve the NFP Site Plan application for 3625 W Michigan Avenue conditioned upon:

- The inclusion of a diagram showing the tree protection fencing to be used
- List of tree removals with species and DBH, if trees slated for removal are protected trees according to NFP, show where replacement trees will be planted and add to the landscaping plan.

BACKGROUND:

The subject property is located in Kalamazoo along West Michigan Avenue in the Knollwood neighborhood. It is owned by Kalamazoo Realty Holdings, LLC. The parcel is zoned RM-15 and is approximately 9 acres in area. Formerly, the property was the location of senior housing. The proposed redevelopment will add multifamily housing (235 units) and be completed in phases.

The applicant has started the site plan review process and is seeking NFP board approval to obtain full site plan approval and site permits. The project was before the NFP board in 2022 for a variance to the NFP:

1) A variance from the Natural Features Protection Ordinance, Chapter 50, Section 50-6.2 H, to authorize the development proposed to encroach into a protected slope (which has a grade greater than 20%) and protected slope setback. This will impact approximately 36,590 square feet (.8 acres) of slopes and slope setback area.

2) A variance from the Natural Features Protection Ordinance, Chapter 50, Section 50-6.2 G, to authorize the removal of 71.7% of woodlands (increase of 21.7%), where 50% is the maximum

permitted.

With the condition of that, the future site plan includes native seed mix, grasses and trees being planted on the south slope of the new stormwater retention basin.

FINDINGS:

The subject property is located in Kalamazoo along West Michigan Avenue in the Knollwood neighborhood. It is owned by Kalamazoo Realty Holdings, LLC. The parcel is zoned RM-15 and is approximately 9 acres in area. Formerly, the property was the location of senior housing. The proposed redevelopment will add multifamily housing (235 units) and be completed in phases.

The applicant's design team evaluated the site to identify all protected natural features on the property. The site was placed in the NFP Overlay District due to the presence of protected slopes of 20% grade or greater. There are also trees scattered across the existing site as well as some identified woodland complexes in the southern portion coinciding with steep slopes.

Since the project is located within the NFP Overlay District, the site requires the following NFP Site Development Standards:

- **Water Resources Standard** – resources not identified on-site and do not apply.
- **Wetland Standard** – resource not identified on-site and does not apply.
- **Protected Tree Standard** – Protected trees are shown on the plans but not identified individually by species and DBH and a call-out for adding tree protection fencing is provided but a diagram of fencing not shown.
- **Woodland Protection Standard** – woodland area identified in a protected slope. Woodland is preserved except in the areas approved by the NFP variance.
- **Natural Heritage Areas Standard** – rare species review is not required for the site.
- **Plant Selection** – Both the Shrub and Tree planting lists on the landscape plan show no species that are prohibited.
- **Stormwater Management** – stormwater management includes a retention basin to the south of the new structure. This basin is located within the area outlined in the approved NFP variance. There are proposed plans to add plantings to stabilize the northern edge of the basin where the variance stated this work would occur on the southern edge.

Site Plan Review Pre-Application Meeting



Submitted on	19 October 2023, 1:18PM
Receipt number	46
Related form version	7

Does Your Project Require Site Plan Review?

Does your project fall into any of the exceptions above?	No
--	----

Applicant Information

Full Name	Greg Dilone
Address	Kalamazoo, MI No coordinates found
Date of Birth	10-19-23
Phone Number	313-461-8673
Email Address	greg@fusionmp.com
Preferred Contact	Email

Site Information

Address	3625 W Michigan Avenue No coordinates found
Ownership Status	Option or Purchase Agreement
Current Zoning	RM-36
Is this site located within any of the following districts or special designations?	Natural Features Protection Area Wellhead Protection Area
Do you have environmental reports for this site?	Yes
Will the building have a sprinkler system?	Yes
How many hydrants are within 300 feet of the site?	1

Project Information

Project Type	Residential
Please provide a general overview of your project in layman's terms	Removal of existing building, parking and other site features for new development of a 235 unit apartment complex.
What physical site improvements are within your project plan? (buildings, lights, pavement, site clearing, landscaping, etc.)	New building, parking areas, lighting, landscaping and other site features.
What utilities are on site? Will any new utilities be added? Please describe	There are storm, sanitary and water utilities to the existing building. New storm and water will be provided, with the intent to reuse the existing sanitary service that flows south to the east/west main along the south property line.

Supplemental Documentation

Concept Plan & Documentation

[Kalamazoo Multi-Family Civil Site Plans.pdf](#)
[2023-10-18 City Comment Letter.pdf](#)

KALAMAZOO MULTI - FAMILY

LEGAL DESCRIPTION

PARCEL #: 06-19-463-001

Parcel 1:
BEGINNING AT A POINT ON THE EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 19, TOWN 2 SOUTH, RANGE 11 WEST, WHICH IS SOUTH 00 DEGREES 17 MINUTES 00 SECONDS WEST, 196.00 FEET FROM THE CENTERLINE OF WHAT WAS FORMERLY THE TERRITORIAL ROAD, AND IS NOW KNOWN AS WEST MICHIGAN AVENUE; THENCE CONTINUING SOUTH 00 DEGREES 17 MINUTES 00 SECONDS WEST ALONG THE SAID EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 19, 885.38 FEET TO THE NORTHERLY RIGHT-OF-WAY LINE OF THE MICHIGAN CENTRAL RAILROAD; THENCE NORTH 80 DEGREES 50 MINUTES 00 SECONDS WEST ALONG SAID NORTHERLY RIGHT-OF-WAY LINE OF THE MICHIGAN CENTRAL RAILROAD, 515.42 FEET; THENCE NORTH 00 DEGREES 17 MINUTES EAST PARALLEL TO THE SAID EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 19, 558.94 FEET; THENCE NORTH 69 DEGREES 32 MINUTES 30 SECONDS EAST PARALLEL TO THE CENTERLINE OF WEST MICHIGAN AVENUE, 228.34 FEET; THENCE NORTH 00 DEGREES 17 MINUTES 00 SECONDS EAST PARALLEL TO THE SAID EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 19, 250.00 FEET TO THE CENTERLINE OF WEST MICHIGAN AVENUE; THENCE NORTH 69 DEGREES 32 MINUTES 30 SECONDS EAST THEREON SAID HIGHWAY CENTERLINE, 159.00 FEET; THENCE SOUTH 00 DEGREES 17 MINUTES WEST PARALLEL TO THE SAID EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 19, 140.33 FEET; THENCE SOUTH 89 DEGREES 43 MINUTES 00 SECONDS EAST, 147.00 FEET TO THE PLACE OF BEGINNING.

EXCEPT THAT PART OF THE SOUTHEAST 1/4 OF SECTION 19, TOWN 2 SOUTH, RANGE 11 WEST, CITY OF KALAMAZOO, KALAMAZOO COUNTY, MICHIGAN, DESCRIBED AS:

COMMENCING AT THE INTERSECTION OF THE EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 19 AND THE CENTERLINE OF WEST MICHIGAN AVENUE; THENCE SOUTH 70 DEGREES 26 MINUTES 05 SECONDS WEST, 157.19 FEET ALONG THE CENTERLINE OF WEST MICHIGAN AVENUE; THENCE SOUTH 01 DEGREES 10 MINUTES 41 SECONDS WEST, 35.29 FEET TO THE SOUTH RIGHT-OF-WAY LINE OF WEST MICHIGAN AVENUE FOR THE PLACE OF BEGINNING OF THIS DESCRIPTION; THENCE SOUTH 01 DEGREES 10 MINUTES 41 SECONDS WEST, 18.18 FEET; THENCE SOUTH 70 DEGREES 26 MINUTES 05 SECONDS WEST, 159.00 FEET; THENCE NORTH 01 DEGREES 10 MINUTES 41 SECONDS EAST, 18.18 FEET TO THE SOUTH RIGHT-OF-WAY LINE OF WEST MICHIGAN AVENUE; THENCE NORTH 70 DEGREES 26 MINUTES 05 SECONDS EAST, 159.00 FEET ALONG SAID LINE TO THE PLACE OF BEGINNING.

PARCEL 2:
COMMENCING AT A POINT ON THE EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 19, TOWN 2 SOUTH, RANGE 11 WEST, WHICH IS SOUTH 00 DEGREES 17 MINUTES 00 SECONDS WEST, 196.00 FEET FROM THE CENTERLINE OF WHAT WAS FORMERLY THE TERRITORIAL ROAD, AND IS NOW KNOWN AS WEST MICHIGAN AVENUE; THENCE NORTH 89 DEGREES 43 MINUTES 00 SECONDS WEST MEASURED AT RIGHT ANGLES TO SAID EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 19, 67.00 FEET FOR THE PLACE OF BEGINNING; THENCE NORTH 00 DEGREES 17 MINUTES 00 SECONDS EAST PARALLEL TO SAID EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 19, 170.63 FEET TO THE CENTERLINE OF WEST MICHIGAN AVENUE; THENCE SOUTH 69 DEGREES 32 MINUTES 30 SECONDS WEST ALONG THE SAID CENTERLINE OF WEST MICHIGAN AVENUE, 85.59 FEET; THENCE SOUTH 00 DEGREES 17 MINUTES 00 SECONDS WEST PARALLEL TO THE EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SAID SECTION 19, 140.33 FEET; THENCE SOUTH 89 DEGREES 43 MINUTES 00 SECONDS EAST 80.00 FEET TO THE PLACE OF BEGINNING.

EXCEPT THAT PART OF THE SOUTHEAST 1/4 OF SECTION 19, TOWN 2 SOUTH, RANGE 11 WEST, CITY OF KALAMAZOO, KALAMAZOO COUNTY, MICHIGAN, DESCRIBED AS:

COMMENCING AT THE INTERSECTION OF THE EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 19 AND THE CENTERLINE OF WEST MICHIGAN AVENUE; THENCE SOUTH 70 DEGREES 26 MINUTES 05 SECONDS WEST, 72.71 FEET ALONG SAID CENTERLINE; THENCE SOUTH 01 DEGREES 10 MINUTES 41 SECONDS WEST, 35.29 FEET TO THE SOUTH RIGHT-OF-WAY LINE OF WEST MICHIGAN AVENUE FOR THE PLACE OF BEGINNING OF THIS DESCRIPTION; THENCE SOUTH 01 DEGREES 10 MINUTES 41 SECONDS WEST, 18.18 FEET; THENCE SOUTH 70 DEGREES 26 MINUTES 05 SECONDS WEST, 84.48 FEET; THENCE NORTH 01 DEGREES 10 MINUTES 41 SECONDS EAST, 18.18 FEET TO THE SOUTH RIGHT-OF-WAY LINE OF WEST MICHIGAN AVENUE; THENCE NORTH 70 DEGREES 26 MINUTES 05 SECONDS EAST, 84.48 FEET ALONG SAID LINE TO THE PLACE OF BEGINNING.

PARCEL 3:

COMMENCING IN THE CENTER OF THE TERRITORIAL ROAD ON THE EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 19, TOWN 2 SOUTH, RANGE 11 WEST, AND RUNNING THENCE SOUTH 196.00 FEET; THENCE DUE WEST 67.00 FEET; THENCE NORTH 168.00 FEET MORE OR LESS TO THE CENTER OF SAID TERRITORIAL ROAD; AND THENCE NORTHEASTERLY ALONG THE CENTERLINE OF SAID ROAD TO THE PLACE OF BEGINNING.

EXCEPT THAT PART OF THE SOUTHEAST 1/4 OF SECTION 19, TOWN 2 SOUTH, RANGE 11 WEST, CITY OF KALAMAZOO, KALAMAZOO COUNTY, MICHIGAN, DESCRIBED AS:

COMMENCING AT THE INTERSECTION OF THE EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 19 AND THE CENTERLINE OF WEST MICHIGAN AVENUE; THENCE SOUTH 70 DEGREES 26 MINUTES 05 SECONDS WEST, 72.71 FEET; THENCE SOUTH 01 DEGREES 10 MINUTES 41 SECONDS WEST, 35.29 FEET TO THE SOUTH RIGHT-OF-WAY LINE OF WEST MICHIGAN AVENUE FOR THE PLACE OF BEGINNING OF THIS DESCRIPTION; THENCE NORTH 70 DEGREES 26 MINUTES 05 SECONDS EAST, 72.71 FEET ALONG SAID RIGHT-OF-WAY TO THE EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4; THENCE SOUTH 01 DEGREES 10 MINUTES 41 SECONDS WEST, 18.18 FEET ALONG SAID LINE; THENCE SOUTH 70 DEGREES 26 MINUTES 05 SECONDS WEST, 72.71 FEET; THENCE NORTH 01 DEGREES 10 MINUTES 41 SECONDS EAST, 18.18 FEET TO THE PLACE OF BEGINNING.

3625 W MICHIGAN AVE SECTION 19, T.02S, R.11W CITY OF KALAMAZOO KALAMAZOO COUNTY, MI

SITE DEVELOPMENT PLANS OCTOBER 19, 2023

ISSUED FOR: PRE-SITE PLAN RESUBMITTAL

REVISIONS

No.	ISSUED FOR:	DATE:	BY:
0	VARIANCE	08/02/22	jpr
1	PRE-SITE PLAN REVIEW	02/07/23	wlp
2	VARIANCE	03/14/23	wlp
3	PRE-SITE PLAN RESUBMITTAL	03/27/23	wlp
4	PRE-SITE PLAN RESUBMITTAL	10/19/23	wlp
5	.	.	.

SHEET INDEX

No.	SHEET TITLE
T1.0	TITLE SHEET
C1.0	EX CONDITIONS - DEMO PLAN
C2.0	SITE LAYOUT

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OWNERS:

KALAMAZOO REALTY HOLDINGS, LLC
40600 ANN ARBOR RD E STE 201
PLYMOUTH, MI 48170

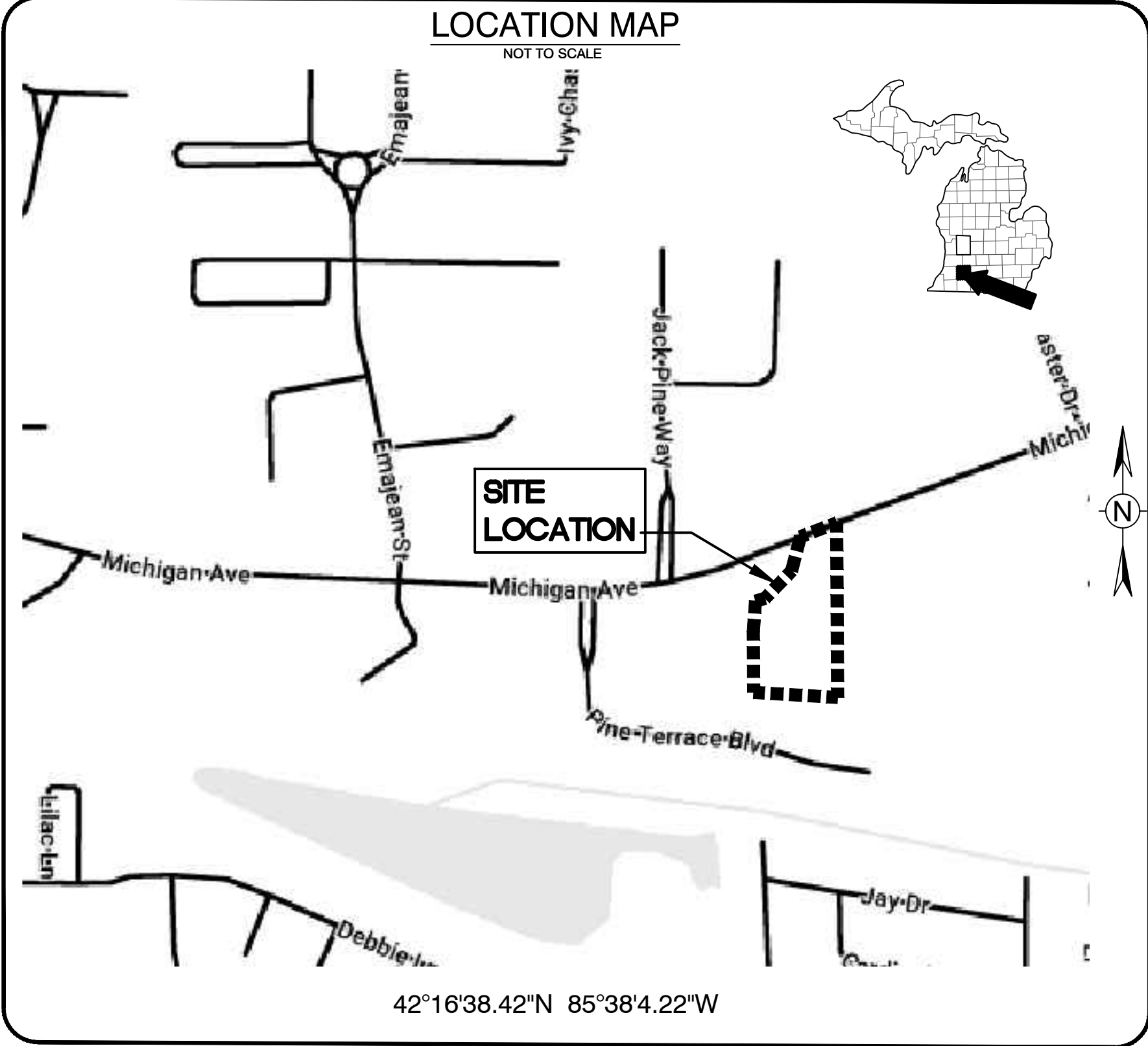
CIVIL ENGINEER:

AR ENGINEERING, LLC.
5725 VENTURE PARK DRIVE, SUITE A
KALAMAZOO, MI 49008
TEL. (269) 250-5991 FAX. (866) 569-0604



JASON RALIEGH. P.E.

DATE



Preliminary Plans
Received: 10/19/2023
City of Kalamazoo

UTILITY CONTACTS

CABLE	CABLEVISION OF MICHIGAN 4176 COMMERCIAL AVE. PORTAGE, MI 49002 ATTN: GARY KWAST TELEPHONE: 269-323-0580	TELEPHONE	AMERITECH 2919 MILLCORK ST. KALAMAZOO, MI 49001 ATTN: STAN JANCO TELEPHONE: 269-384-4476
WATER	CITY OF KALAMAZOO 415 STOCKBRIDGE AVE. KALAMAZOO, MI 49001 ATTN: ALBERTO FORERO ATTN: BOB WASS TELEPHONE : 269-337-8601	SEWER	CITY OF KALAMAZOO 415 STOCKBRIDGE AVE. KALAMAZOO, MI 49001 ATTN: ALBERTO FORERO ATTN: BOB WASS TELEPHONE : 269-337-8601
GAS	CONSUMERS ENERGY 2500 E. CORK ST. KALAMAZOO, MI 49001 ATTN: MS. JOE McFARLAND TELEPHONE: 269-337-2370	ELECTRIC	CONSUMERS ENERGY 2500 E. CORK ST. KALAMAZOO, MI 49001 ATTN: MS. JOE McFARLAND TELEPHONE: 269-337-2370
		HOLEY MOLEY	811

DEMOLITION NOTES

- ALL WORK SHALL CONFORM TO ALL LOCAL, STATE AND FEDERAL LAWS, RULES AND REGULATIONS IN FORCE AT TIME OF CONSTRUCTION.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS, PERMIT COSTS, TAP FEES, METER DEPOSITS, PERMANENT UTILITY APPLICATIONS, BONDS, AND OTHER FEES REQUIRED FOR PROPOSED WORK. THIS SHALL INCLUDE, BUT SHALL NOT BE LIMITED TO THOSE REQUIRED BY THE CITY OF KALAMAZOO, MICHIGAN AND KALAMAZOO COUNTY.
- CONTACT MISS DIG "811" FOR LOCATION OF UNDERGROUND UTILITIES A MINIMUM OF 48 HOURS BEFORE COMMENCING EXCAVATION WORK. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO ARE NOT PART OF THE "MISS DIG" ALERT SYSTEM. THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS IN A MANNER AS TO ENSURE THAT THOSE UTILITIES NOT REQUIRING RELOCATION WILL NOT BE DISTURBED.
- DEMOLISH & REMOVE ALL EXISTING SITE FEATURES AS REQUIRED.
- ALL SOIL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO DEMOLITION.
- ALL EXCAVATION SHALL BE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS AND GEOTECHNICAL REPORT FOR THIS SITE.
- ALL EXISTING ELEVATIONS ARE TO BE VERIFIED AND ACCEPTED AS SHOWN PRIOR TO COMMENCEMENT OF WORK.
- CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID TRACKING SOIL ONTO ADJACENT ROADWAYS. CONTRACTOR SHALL SWEEP IMMEDIATELY IF OCCURS.
- ANY DISTURBED AREA WHICH WILL BE LEFT UNWORKED 15 DAYS OR LONGER MUST BE SEEDED TO ESTABLISH VEGETATION FOR TEMPORARY STABILIZATION. BASINS TO BE SEEDED AND MULCH BLANKETS APPLIED IMMEDIATELY TO PROVIDE A STABLE BASE AND AVOID EXCESSIVE EROSION.
- REVIEW ALL THE REMOVALS AND PROTECTION WITH OWNER PRIOR TO COMMENCING CONSTRUCTION. INSTALL TEMPORARY SNOW FENCE AROUND ALL TREES REQUIRING PROTECTION. SNOW FENCE SHALL BE PLACED AT EDGE OF DRIP LINE.
- SAWCUT ALL CURB, SIDEWALK, AND PAVEMENTS PRIOR TO REMOVAL. ADDITIONAL SAWCUT MAY BE NECESSARY PRIOR TO REPLACEMENT TO ENSURE CLEAN EDGE.
- ALL REMOVALS SHALL BE TAKEN OFF-SITE AND DISPOSED OF PROPERLY. NO STOCKPILE OR BURNING OF DEBRIS IS ALLOWED.
- ALL REMOVALS SHALL BE TO THE LIMITS INDICATED ABOVE UNLESS OTHERWISE DIRECTED BY THE ENGINEER. UNAUTHORIZED REMOVALS AND SUBSEQUENT REPLACEMENT SHALL BE AT THE CONTRACTOR'S EXPENSE.
- REMOVE, STORE, AND RESET ANY EXISTING SIGNS AS DIRECTED BY THE ENGINEER/OWNER.
- REMOVE ALL TREES TO THE CLEARING LIMITS AS SHOWN. REMOVE ALL EXISTING TREES, STUMPS AND BRUSH FROM THE SITE AS NECESSARY TO CONSTRUCT THE IMPROVEMENTS.
- THE CONTRACTOR SHALL DEMOLISH AND REMOVE ANY ITEMS REMAINING FROM THE EXISTING BUILDING, IN ITS ENTIRETY, INCLUDING WALLS, FOUNDATIONS AND FOOTINGS. ALL BUILDING DRAINS AND UTILITY LEADS SHALL BE LOCATED AND PROPERLY PLUGGED. UTILITY LEAD WORK SHALL BE COORDINATED WITH THE APPROPRIATE UTILITY COMPANY.
- BACKFILL EXCAVATED AREAS WITH CLEAN GRANULAR FILL COMPACTED TO 95% OF THE MATERIAL UNIT WEIGHT BY MODIFIED PROCTOR.
- CONTROL SHALL BE MAINTAINED OVER THE SITE AND OPERATION TO ELIMINATE HAZARDS TO THE PUBLIC. NAILS OR OTHER TIRE PUNCTURING ITEMS SHALL NOT BE DROPPED ON STREETS, ALLEYS AND ADJACENT PROPERTY. PUBLIC STREETS, CURBS AND SIDEWALKS SHALL BE PROTECTED FROM DAMAGE. THE PERSON ENGAGED IN THE DEMOLITION WORK SHALL BE LIABLE FOR ANY AND ALL DAMAGE TO CURBS, STREETS, SIDEWALKS AND OTHER PUBLIC OR PRIVATE PROPERTY AND FOR ANY BODILY INJURY OCCURRING AS A RESULT OF THE DEMOLITION WORK.

LEGEND

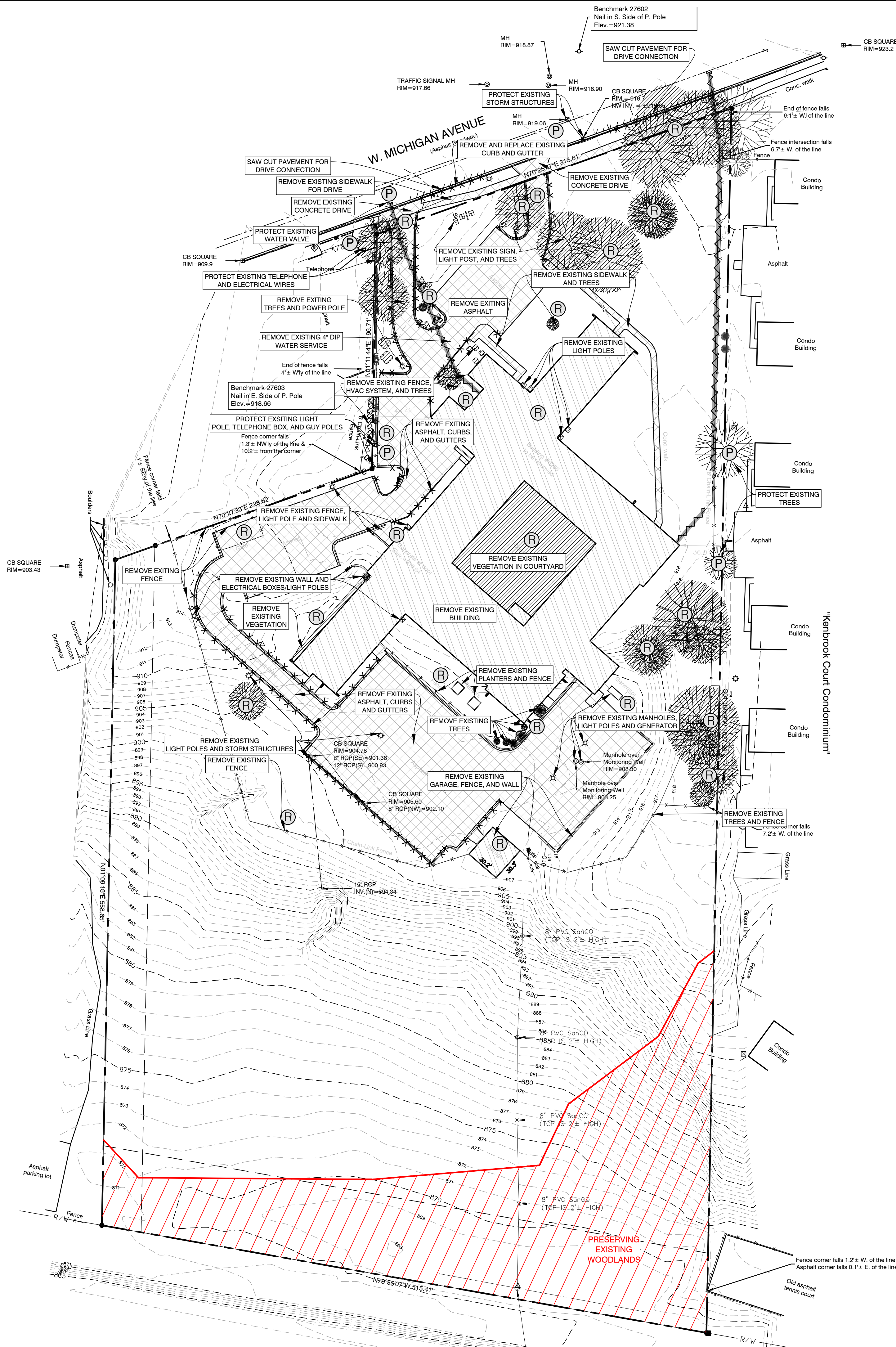
- PAVEMENT REMOVAL
- BUILDING REMOVAL
- SAWCUT
- TREE REMOVAL
- REMOVE
- PROTECT
- LIMITS OF CONSTRUCTION
- CURB & GUTTER REMOVAL
- UTILITY LINE REMOVAL

STORM STRUCTURE INFORMATION

- EX-CB-1
RIM = 904.78'
INV SE = 8" RCP (INV. = 901.38')
INV S = 12" RCP (INV. = 900.93')
- EX-CB-2
RIM = 905.60'
INV NW = 8" RCP (INV. = 902.10')
- EX-CB-3
RIM = 918.70'
INV NW = ±915.85'
- EX-CB-4
RIM = 923.20'
- EX-CB-5
RIM = 903.43
- EX-MH-3
RIM = 908.25'
- EX-MH-4
RIM = 908.30'
- EX-MH-5
RIM = 919.06'
- EX-MH-6
RIM = 918.87'
- EX-MH-7
RIM = 918.90

SANITARY STRUCTURE INFORMATION

- EX-MH-A
RIM = 868.00'
INV N = 8" PVC (INV. = 862.88')
INV E-W = 18" (INV. = 855.85')
18" IS FULL & FAST FLOW



BENCHMARK INFORMATION

- TBM: 27602
NAIL IN SOUTH SIDE OF POWER POLE
ELEVATION = 921.38
- TBM: 27603
NAIL IN EAST SIDE OF POWER POLE
ELEVATION = 918.66



ALL UTILITIES AS SHOWN ARE APPROXIMATE LOCATIONS DERIVED FROM ACTUAL MEASUREMENTS AND AVAILABLE RECORDS. THEY SHOULD NOT BE INTERPRETED TO BE EXACT LOCATION NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THE AREA. FIELD WORK PERFORMED BY: MOSTROM & ASSOC., INC.

PLANS PREPARED BY:



DRAWN: BD/EAG
CHECKED: JPR

No.	ISSUED FOR:	DATE	BY
0	VARIANCE	08/02/2022	JPR
1	PRE-SITE PLAN REVIEW	02/07/2023	WP
2	VARIANCE	03/14/2023	WP
3	PRE-SITE PLAN RESUBMITTAL	03/27/2023	WP
4	PRE-SITE PLAN RESUBMITTAL	10/19/2023	WP

EX. CONDITIONS - DEMO PLAN
KALAMAZOO MULTIFAMILY
KALAMAZOO REALTY HOLDINGS, LLC
3625 W MICHIGAN
SECTION 19, T2S, R11W

SHEET TITLE:
PROJECT:
CLIENT:
SITE ADDRESS:
SITE SECTION:

JOB NUMBER
2185008

DATE
10/19/2023

SHEET NUMBER
C1.0

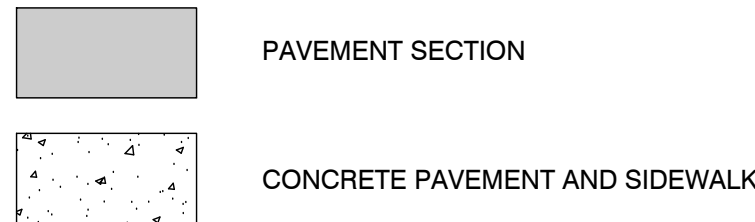
SITE DATA

1. PROPERTY INFORMATION:
PARCEL #S: PARCEL 1: 06-19-463-001
PARCEL 2: 06-19-454-002
PARCEL 3: 06-19-454-001
SITE AREA: 411,971 SF (9.46 AC)
OWNER: KALAMAZOO REALTY HOLDINGS, LLC
40600 ANN ARBOR RD. E. STE. 201
ANN ARBOR, MI 48170
2. ZONING:
PROPERTY CURRENTLY ZONED:
CC - COMMUNITY COMMERCIAL
ABUTTING PROPERTY CURRENTLY ZONED:
NORTH: CN-1 - COMMERCIAL, NEIGHBORHOOD &
RS-5 - RESIDENTIAL, SINGLE DWELLING
SOUTH: CC - COMMUNITY COMMERCIAL
EAST: RM-15 - RESIDENTIAL, MULTI-DWELLING
WEST: CN-1 - COMMERCIAL, NEIGHBORHOOD; PUD
PROPOSED LAND USE - MULTI-UNIT DWELLING
*VARIANCE TO ALLOW RESIDENTIAL OCCUPANCY IN THE
GROUND LEVEL FACING ROAD FRONTAGE
3. SETBACKS
FRONT = NOT SPECIFIED
SIDES = 25' ABUTTING R DISTRICT / N/A
REAR = 25' ABUTTING R DISTRICT / N/A
4. PARKING:
REQUIRED PARKING PER ORDINANCE
STUDENTS: 2 PARKING SPACES PER UNIT
70 STUDENT UNITS * 2 = 140 SPACES
MULTI-FAMILY: 1 PARKING SPACE PER UNIT
165 MULTI-FAMILY UNITS * 1 = 165 SPACES
TOTAL PARKING REQUIRED (MAX 10% REQ):
MIN OF 305 SPACES AND MAX OF 336 SPACES
PROPOSED PARKING:
STANDARD (9'X18') 321
ADA COMPLIANT 8
TOTAL 329
5. BUILDING:
THREE-STORY - 235 UNIT
UNIT MIX PLANNED FOR:
118 - STUDIO
79 - 1 BEDROOM
38 - 2 BEDROOM
MAXIMUM HEIGHT: N/A
PROPOSED IMPERVIOUS COVERAGE: 54%
MAXIMUM IMPERVIOUS COVERAGE: 80%
6. IMPERVIOUS AREA:
231,213 SFT / 411,971 SFT = 56%
7. DWELLING UNIT DENSITY:
235 UNITS / 9.46 AC = 24.8 UNITS/AC

GENERAL NOTES

1. DIMENSIONS TAKE PRECEDENCE OVER SCALE. CONTRACTOR TO VERIFY ALL DIMENSIONS IN FIELD.
2. IF ANY ERRORS, DISCREPANCIES, OR OMISSIONS BECOME APPARENT, THESE SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ ENGINEER PRIOR TO CONSTRUCTION OF ANYTHING AFFECTED SO THAT CLARIFICATION OR REDESIGN MAY OCCUR.
3. ALL CURB RADII AND DIMENSIONS ARE TO FACE OF CURB. CURB TO BE PROVIDED WHERE SHOWN AND INTEGRAL WITH SIDEWALK AT PAVING EDGE.
4. SLOPE GRADES UNIFORMLY BETWEEN ELEVATIONS SHOWN. NOMINAL GRADING, SLOPE SIDEWALKS AWAY FROM BUILDING AT 1/4" PER FOOT ON ENTRY WALK.

LEGEND

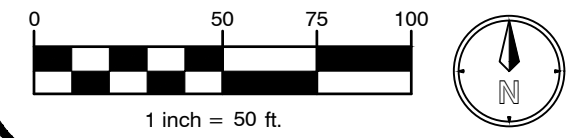
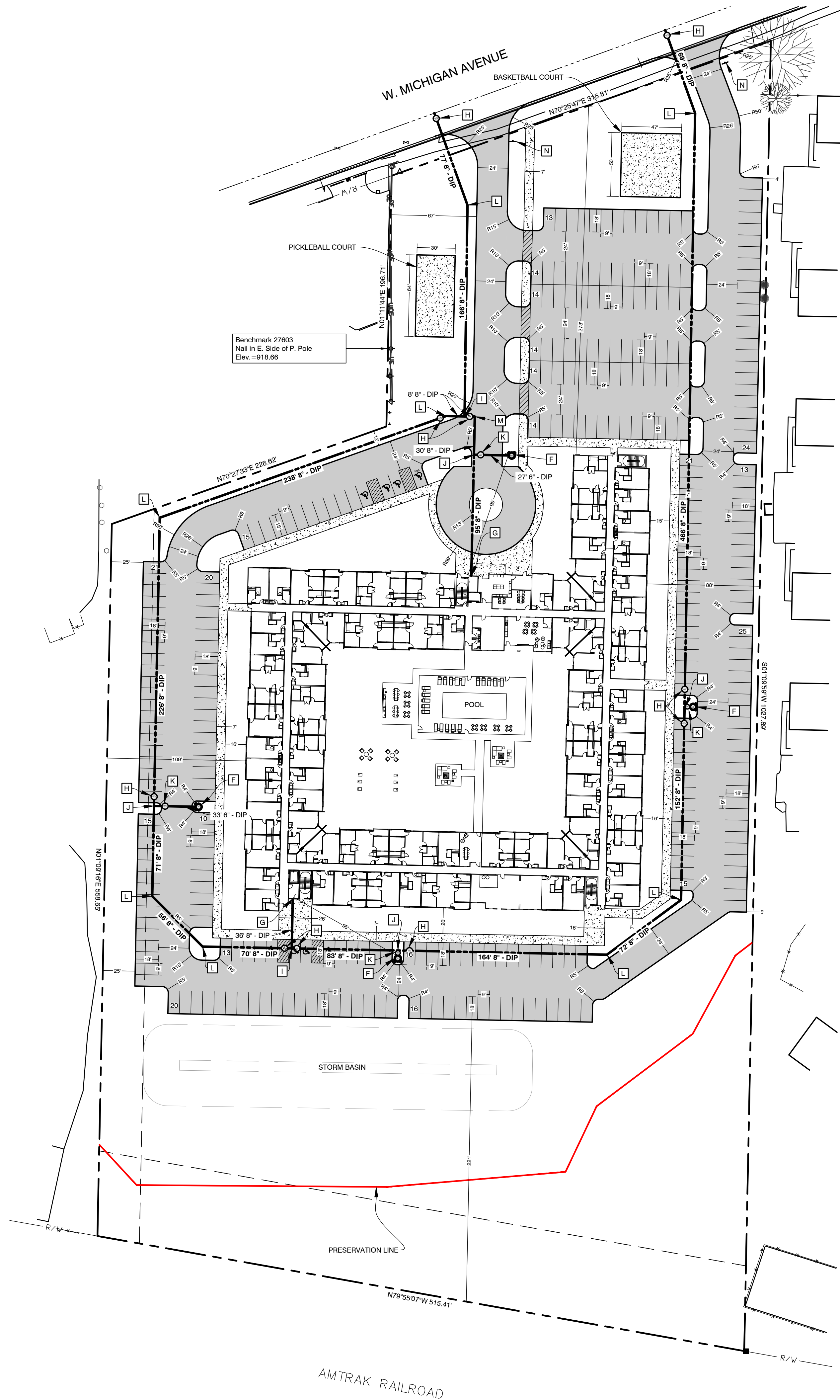


NATURAL FEATURES PROTECTION

ORDINANCE REQUIREMENTS:
WOODLAND COVERAGE OF PARENT PARCEL: 50% - 75%
MINIMUM REQUIRED WOODLAND COVERAGE TO BE PRESERVED: 50%
EXISTING WOODLAND AREA: 208,845 SFT
TOTAL SITE AREA: 411,971 SFT
WOODLAND COVERAGE PERCENTAGE: 51%
PROPOSED WOODLAND AREA: 59,037 SFT
PROPOSED WOODLAND TO BE PRESERVED: 28.3%
VARIANCE REQUESTED TO REMOVE 71.7% OF REMAINING WOODLANDS WHEN ORDINANCE ALLOWS 50% REMOVAL OF WOODLANDS.

SITE PLAN NOTES

- [A] BITUMINOUS PAVEMENT
[B] INTEGRAL CURB/WALK
[C] AT-GRADE RAMP
[D] DOWNSPOUT (TYP.)
[E] 4" PAINTED PARKING LOT MARKING/ STRIPING (TYP.)
[F] FIRE HYDRANT
[G] FDC CONNECTION
[H] 8" WATER VALVE
[I] 8"x8"x8" TEE
[J] 8"x6"x8" TEE
[K] 6" WATER VALVE
[L] 45° WATER BEND
[M] 90° WATER BEND
[N] STOP SIGNS (2)



PLANS PREPARED BY:



DRAWN: BD/EAG
CHECKED: JPR

No.	ISSUED FOR:	DATE	BY
0	VARIANCE	08/02/2022	JPR
1	PRE-SITE PLAN REVIEW	02/07/2023	WP
2	VARIANCE	03/14/2023	WP
3	PRE-SITE PLAN RESUBMITTAL	03/27/2023	WP
4	PRE-SITE PLAN RESUBMITTAL	10/19/2023	WP

OVERALL SITE LAYOUT
KALAMAZOO MULTIFAMILY
KALAMAZOO REALTY HOLDINGS, LLC
3625 W MICHIGAN
SECTION 19, T2S, R11W

SHEET TITLE:
PROJECT:
CLIENT:
SITE ADDRESS:
SITE SECTION:

JOB NUMBER
2185008

DATE
10/19/2023

SHEET NUMBER
C2.0



ALL UTILITIES AS SHOWN ARE APPROXIMATE LOCATIONS DERIVED FROM ACTUAL MEASUREMENTS AND AVAILABLE RECORDS. THEY SHOULD NOT BE INTERPRETED TO BE EXACT LOCATION NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THE AREA. FIELD WORK PERFORMED BY: MOSTROM & ASSOC., INC.

Site Plan Review Pre-Application Meeting



Submission date: 7 February 2023, 5:21PM
Receipt number: 22
Related form version: 7

Does Your Project Require Site Plan Review?

Does your project fall into any of the exceptions above? No

Applicant Information

Full Name	Greg Dilone - Great Lakes Capitol
Address	7410 Aspect Dr, Granger, IN 46530, USA Map (41.7287575, -86.17966020000001)
Date of Birth	00-00-0000
Phone Number	574-251-4400
Email Address	gdilone@greatlakescapital.com
Preferred Contact	Email

Site Information

Address	3625 W MICHIGAN AVE No coordinates found
Ownership Status	Option or Purchase Agreement
Current Zoning	CC

Is this site located within any of the following districts or special designations?	Natural Features Protection Area
Do you have environmental reports for this site?	Yes
Will the building have a sprinkler system?	Yes
How many hydrants are within 300 feet of the site?	2

Project Information

Project Type	Residential
Please provide a general overview of your project in layman's terms	For construction of a multi-family residential complex, 235 units.
What physical site improvements are within your project plan? (buildings, lights, pavement, site clearing, landscaping, etc.)	Demolition of existing building and parking lots for new residential building, new parking lots, landscaping and utility improvements.
What utilities are on site? Will any new utilities be added? Please describe	City water and sewer serves the existing building. The intent is to serve the new residential building with City water and sewer. Detail plans will be provided as we get further into the design phase for water/sewer and storm water.

Supplemental Documentation

Concept Plan & Documentation	Kalamazoo Multi-Family Civil Site Plans REV.pdf 2023-0207 KALAMAZOO APTS - 235 UNITS.pdf
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KALAMAZOO MULTI - FAMILY

LEGAL DESCRIPTION

PARCEL #: 06-19-463-001

Parcel 1:
BEGINNING AT A POINT ON THE EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 19, TOWN 2 SOUTH, RANGE 11 WEST, WHICH IS SOUTH 00 DEGREES 17 MINUTES 00 SECONDS WEST, 196.00 FEET FROM THE CENTERLINE OF WHAT WAS FORMERLY THE TERRITORIAL ROAD, AND IS NOW KNOWN AS WEST MICHIGAN AVENUE; THENCE CONTINUING SOUTH 00 DEGREES 17 MINUTES 00 SECONDS WEST ALONG THE SAID EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 19, 885.38 FEET TO THE NORTHERLY RIGHT-OF-WAY LINE OF THE MICHIGAN CENTRAL RAILROAD; THENCE NORTH 80 DEGREES 50 MINUTES 00 SECONDS WEST ALONG SAID NORTHERLY RIGHT-OF-WAY LINE OF THE MICHIGAN CENTRAL RAILROAD, 515.42 FEET; THENCE NORTH 00 DEGREES 17 MINUTES EAST PARALLEL TO THE SAID EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 19, 558.94 FEET; THENCE NORTH 69 DEGREES 32 MINUTES 30 SECONDS EAST PARALLEL TO THE CENTERLINE OF WEST MICHIGAN AVENUE, 228.34 FEET; THENCE NORTH 00 DEGREES 17 MINUTES 00 SECONDS EAST PARALLEL TO THE SAID EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 19, 250.00 FEET TO THE CENTERLINE OF WEST MICHIGAN AVENUE; THENCE NORTH 69 DEGREES 32 MINUTES 30 SECONDS EAST THEREON SAID HIGHWAY CENTERLINE, 159.00 FEET; THENCE SOUTH 00 DEGREES 17 MINUTES WEST PARALLEL TO THE SAID EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 19, 140.33 FEET; THENCE SOUTH 89 DEGREES 43 MINUTES 00 SECONDS EAST, 147.00 FEET TO THE PLACE OF BEGINNING.

EXCEPT THAT PART OF THE SOUTHEAST 1/4 OF SECTION 19, TOWN 2 SOUTH, RANGE 11 WEST, CITY OF KALAMAZOO, KALAMAZOO COUNTY, MICHIGAN, DESCRIBED AS:

COMMENCING AT THE INTERSECTION OF THE EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 19 AND THE CENTERLINE OF WEST MICHIGAN AVENUE; THENCE SOUTH 70 DEGREES 26 MINUTES 05 SECONDS WEST, 157.19 FEET ALONG THE CENTERLINE OF WEST MICHIGAN AVENUE; THENCE SOUTH 01 DEGREES 10 MINUTES 41 SECONDS WEST, 35.29 FEET TO THE SOUTH RIGHT-OF-WAY LINE OF WEST MICHIGAN AVENUE FOR THE PLACE OF BEGINNING OF THIS DESCRIPTION; THENCE SOUTH 01 DEGREES 10 MINUTES 41 SECONDS WEST, 18.18 FEET; THENCE SOUTH 70 DEGREES 26 MINUTES 05 SECONDS WEST, 159.00 FEET; THENCE NORTH 01 DEGREES 10 MINUTES 41 SECONDS EAST, 18.18 FEET TO THE SOUTH RIGHT-OF-WAY LINE OF WEST MICHIGAN AVENUE; THENCE NORTH 70 DEGREES 26 MINUTES 05 SECONDS EAST, 159.00 FEET ALONG SAID LINE TO THE PLACE OF BEGINNING.

PARCEL 2:
COMMENCING AT A POINT ON THE EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 19, TOWN 2 SOUTH, RANGE 11 WEST, WHICH IS SOUTH 00 DEGREES 17 MINUTES 00 SECONDS WEST, 196.00 FEET FROM THE CENTERLINE OF WHAT WAS FORMERLY THE TERRITORIAL ROAD, AND IS NOW KNOWN AS WEST MICHIGAN AVENUE; THENCE NORTH 89 DEGREES 43 MINUTES 00 SECONDS WEST MEASURED AT RIGHT ANGLES TO SAID EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 19, 67.00 FEET FOR THE PLACE OF BEGINNING; THENCE NORTH 00 DEGREES 17 MINUTES 00 SECONDS EAST PARALLEL TO SAID EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 19, 170.63 FEET TO THE CENTERLINE OF WEST MICHIGAN AVENUE; THENCE SOUTH 69 DEGREES 32 MINUTES 30 SECONDS WEST ALONG THE SAID CENTERLINE OF WEST MICHIGAN AVENUE, 85.59 FEET; THENCE SOUTH 00 DEGREES 17 MINUTES 00 SECONDS WEST PARALLEL TO THE EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SAID SECTION 19, 140.33 FEET; THENCE SOUTH 89 DEGREES 43 MINUTES 00 SECONDS EAST 80.00 FEET TO THE PLACE OF BEGINNING.

EXCEPT THAT PART OF THE SOUTHEAST 1/4 OF SECTION 19, TOWN 2 SOUTH, RANGE 11 WEST, CITY OF KALAMAZOO, KALAMAZOO COUNTY, MICHIGAN, DESCRIBED AS:

COMMENCING AT THE INTERSECTION OF THE EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 19 AND THE CENTERLINE OF WEST MICHIGAN AVENUE; THENCE SOUTH 70 DEGREES 26 MINUTES 05 SECONDS WEST, 72.71 FEET ALONG SAID CENTERLINE; THENCE SOUTH 01 DEGREES 10 MINUTES 41 SECONDS WEST, 35.29 FEET TO THE SOUTH RIGHT-OF-WAY LINE OF WEST MICHIGAN AVENUE FOR THE PLACE OF BEGINNING OF THIS DESCRIPTION; THENCE SOUTH 01 DEGREES 10 MINUTES 41 SECONDS WEST, 18.18 FEET; THENCE SOUTH 70 DEGREES 26 MINUTES 05 SECONDS WEST, 84.48 FEET; THENCE NORTH 01 DEGREES 10 MINUTES 41 SECONDS EAST, 18.18 FEET TO THE SOUTH RIGHT-OF-WAY LINE OF WEST MICHIGAN AVENUE; THENCE NORTH 70 DEGREES 26 MINUTES 05 SECONDS EAST, 84.48 FEET ALONG SAID LINE TO THE PLACE OF BEGINNING.

PARCEL 3:

COMMENCING IN THE CENTER OF THE TERRITORIAL ROAD ON THE EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 19, TOWN 2 SOUTH, RANGE 11 WEST, AND RUNNING THENCE SOUTH 196.00 FEET; THENCE DUE WEST 67.00 FEET; THENCE NORTH 168.00 FEET MORE OR LESS TO THE CENTER OF SAID TERRITORIAL ROAD; AND THENCE NORTHEASTERLY ALONG THE CENTERLINE OF SAID ROAD TO THE PLACE OF BEGINNING.

EXCEPT THAT PART OF THE SOUTHEAST 1/4 OF SECTION 19, TOWN 2 SOUTH, RANGE 11 WEST, CITY OF KALAMAZOO, KALAMAZOO COUNTY, MICHIGAN, DESCRIBED AS:

COMMENCING AT THE INTERSECTION OF THE EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 19 AND THE CENTERLINE OF WEST MICHIGAN AVENUE; THENCE SOUTH 70 DEGREES 26 MINUTES 05 SECONDS WEST, 72.71 FEET; THENCE SOUTH 01 DEGREES 10 MINUTES 41 SECONDS WEST, 35.29 FEET TO THE SOUTH RIGHT-OF-WAY LINE OF WEST MICHIGAN AVENUE FOR THE PLACE OF BEGINNING OF THIS DESCRIPTION; THENCE NORTH 70 DEGREES 26 MINUTES 05 SECONDS EAST, 72.71 FEET ALONG SAID RIGHT-OF-WAY TO THE EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4; THENCE SOUTH 01 DEGREES 10 MINUTES 41 SECONDS WEST, 18.18 FEET ALONG SAID LINE; THENCE SOUTH 70 DEGREES 26 MINUTES 05 SECONDS WEST, 72.71 FEET; THENCE NORTH 01 DEGREES 10 MINUTES 41 SECONDS EAST, 18.18 FEET TO THE PLACE OF BEGINNING.

3625 W MICHIGAN AVE SECTION 19, T.02S, R.11W CITY OF KALAMAZOO KALAMAZOO COUNTY, MI

SITE DEVELOPMENT PLANS MARCH 27, 2023

ISSUED FOR: PRE-SITE PLAN RESUBMITTAL

REVISIONS

No.	ISSUED FOR:	DATE:	BY:
0	VARIANCE	08/02/22	jpr
1	PRE-SITE PLAN REVIEW	02/07/23	wlp
2	VARIANCE	03/14/23	wlp
3	PRE-SITE PLAN RESUBMITTAL	03/27/23	wlp
4	.	.	.
5	.	.	.

SHEET INDEX

No.	SHEET TITLE
T1.0	TITLE SHEET
C1.0	EX CONDITIONS - DEMO PLAN
C2.0	SITE LAYOUT

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OWNERS:

KALAMAZOO REALTY HOLDINGS, LLC
40600 ANN ARBOR RD E STE 201
PLYMOUTH, MI 48170

DEVELOPER:

GREAT LAKES CAPITAL
112 W. JEFFERSON
BLVD., SUITE 200
SOUTH BEND, IN 46601
(574) 855-5700

CIVIL ENGINEER:

AR ENGINEERING, LLC.
5725 VENTURE PARK DRIVE, SUITE A
KALAMAZOO, MI 49008
TEL. (269) 250-5991 FAX. (866) 569-0604

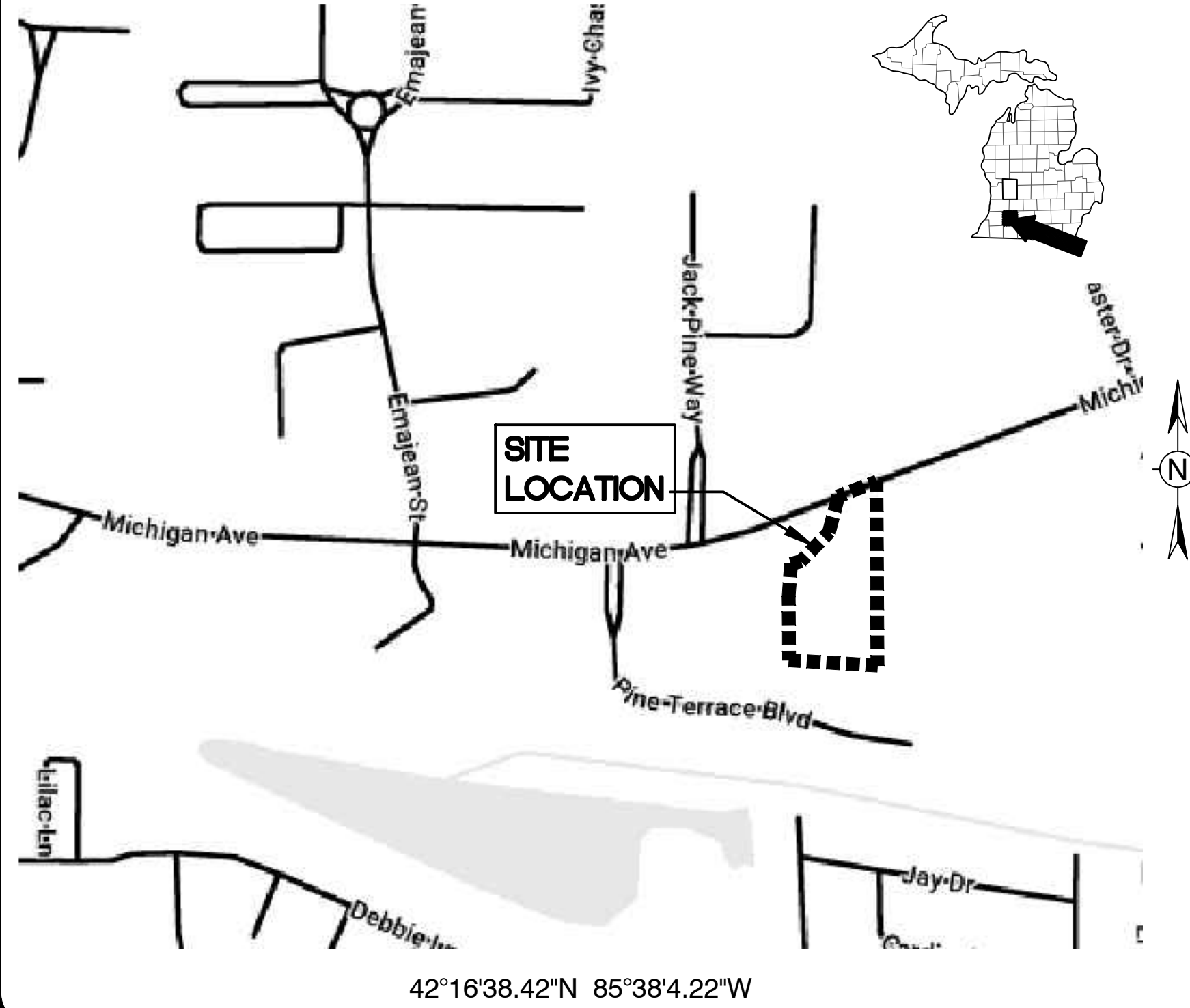


JASON RALIEGH. P.E.

DATE

LOCATION MAP

NOT TO SCALE



Pre-Site Plan Review
03-27-2023
City of Kalamazoo

UTILITY CONTACTS

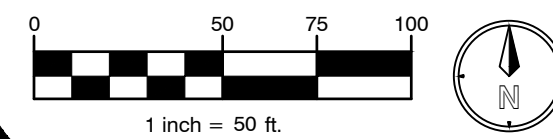
CABLE	CABLEVISION OF MICHIGAN 4176 COMMERCIAL AVE. PORTAGE, MI 49002 ATTN: GARY KWAST TELEPHONE: 269-323-0580	TELEPHONE	AMERITECH 2919 MILLCORK ST. KALAMAZOO, MI 49001 ATTN: STAN JANCO TELEPHONE: 269-384-4476
WATER	CITY OF KALAMAZOO 415 STOCKBRIDGE AVE. KALAMAZOO, MI 49001 ATTN: ALBERTO FORERO ATTN: BOB WASS TELEPHONE : 269-337-8601	SEWER	CITY OF KALAMAZOO 415 STOCKBRIDGE AVE. KALAMAZOO, MI 49001 ATTN: ALBERTO FORERO ATTN: BOB WASS TELEPHONE : 269-337-8601
GAS	CONSUMERS ENERGY 2500 E. CORK ST. KALAMAZOO, MI 49001 ATTN: MS. JOE McFARLAND TELEPHONE: 269-337-2370	ELECTRIC	CONSUMERS ENERGY 2500 E. CORK ST. KALAMAZOO, MI 49001 ATTN: MS. JOE McFARLAND TELEPHONE: 269-337-2370
		HOLEY MOLEY	811

1. ALL WORK SHALL CONFORM TO ALL LOCAL, STATE AND FEDERAL LAWS, RULES AND REGULATIONS IN FORCE AT TIME OF CONSTRUCTION.
2. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS, PERMIT COSTS, TAP FEES, METER DEPOSITS, PERMANENT UTILITY APPLICATIONS, BONDS, AND OTHER FEES REQUIRED FOR PROPOSED WORK. THIS SHALL INCLUDE, BUT SHALL NOT BE LIMITED TO THOSE REQUIRED BY THE CITY OF KALAMAZOO, MICHIGAN AND KALAMAZOO COUNTY.
10. CONTACT MISS DIG "811" FOR LOCATION OF UNDERGROUND UTILITIES A MINIMUM OF 48 HOURS BEFORE COMMENCING EXCAVATION WORK. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO ARE NOT PART OF THE "MISS DIG" ALERT SYSTEM. THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS IN A MANNER AS TO ENSURE THAT THOSE UTILITIES NOT REQUIRING RELOCATION WILL NOT BE DISTURBED.
11. DEMOLISH & REMOVE ALL EXISTING SITE FEATURES AS REQUIRED.
12. ALL SOIL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO DEMOLITION.
13. ALL EXCAVATION SHALL BE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS AND GEOTECHNICAL REPORT FOR THIS SITE.
14. ALL EXISTING ELEVATIONS ARE TO BE VERIFIED AND ACCEPTED AS SHOWN PRIOR TO COMMENCEMENT OF WORK.
15. CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID TRACKING SOIL ONTO ADJACENT ROADWAYS. CONTRACTOR SHALL SWEEP IMMEDIATELY IF OCCURS.
16. ANY DISTURBED AREA WHICH WILL BE LEFT UNWORKED 15 DAYS OR LONGER MUST BE SEED TO ESTABLISH VEGETATION FOR TEMPORARY STABILIZATION. BASINS TO BE SEEDDED AND MULCH BLANKETS APPLIED IMMEDIATELY TO PROVIDE A STABLE BASE AND AVOID EXCESSIVE EROSION.
17. REVIEW ALL THE REMOVALS AND PROTECTION WITH OWNER PRIOR TO COMMENCING CONSTRUCTION. INSTALL TEMPORARY SNOW FENCE AROUND ALL AREAS REQUIRING PROTECTION. SNOW FENCE SHALL BE PLACED AT EDGE OF DRIP LINE.
18. SAWCUT ALL CURB, SIDEWALK, AND PAVEMENTS PRIOR TO REMOVAL. ADDITIONAL SAWCUT MAY BE NECESSARY PRIOR TO REPLACEMENT TO ENSURE CLEAN EDGE.
19. ALL REMOVALS SHALL BE TAKEN OFF-SITE AND DISPOSED OF PROPERLY. NO STOCKPILE OR BURNING OF DEBRIS IS ALLOWED.
20. ALL REMOVALS SHALL BE TO THE LIMITS INDICATED ABOVE UNLESS OTHERWISE DIRECTED BY THE ENGINEER. UNAUTHORIZED REMOVALS AND SUBSEQUENT REPLACEMENT SHALL BE AT THE CONTRACTOR'S EXPENSE.
21. REMOVE, STORE, AND RESET ANY EXISTING SIGNS AS DIRECTED BY THE ENGINEER/OWNER.
22. REMOVE ALL TREES TO THE CLEARING LIMITS AS SHOWN. REMOVE ALL EXISTING TREES, STUMPS AND BRUSH FROM THE SITE AS NECESSARY TO CONSTRUCT THE IMPROVEMENTS.
23. THE CONTRACTOR SHALL DEMOLISH AND REMOVE ANY ITEMS REMAINING FROM THE EXISTING BUILDING, IN ITS ENTIRETY, INCLUDING WALLS, FOUNDATIONS AND FOOTINGS. ALL BUILDING DRAINS AND UTILITY LEADS SHALL BE LOCATED AND PROPERLY PLUGGED. UTILITY LEAD WORK SHALL BE COORDINATED WITH THE APPROPRIATE UTILITY COMPANY.
24. BACKFILL EXCAVATED AREAS WITH CLEAN GRANULAR FILL COMPACTED TO 95% OF THE MATERIAL UNIT WEIGHT BY MODIFIED PROCTOR.
25. CONTROL SHALL BE MAINTAINED OVER THE SITE AND OPERATION TO ELIMINATE HAZARDS TO THE PUBLIC. NAILS OR OTHER TRIP PUNCTURING ITEMS SHALL NOT BE DROPPED ON STREETS, ALLEYS AND ADJACENT PROPERTY. PUBLIC STREETS, CURBS AND SIDEWALKS SHALL BE PROTECTED FROM DAMAGE. THE PERSON ENGAGED IN THE DEMOLITION WORK SHALL BE LIABLE FOR ANY AND ALL DAMAGE TO CURBS, STREETS, SIDEWALKS AND OTHER PUBLIC OR PRIVATE PROPERTY AND FOR ANY BODILY INJURY OCCURRING AS A RESULT OF THE DEMOLITION WORK.

	PAVEMENT REMOVAL
	BUILDING REMOVAL
	SAWCUT
	TREE REMOVAL
	REMOVE
	PROTECT
	LIMITS OF CONSTRUCTION
	CURB & GUTTER REMOVAL
	UTILITY LINE REMOVAL

EX-CB-1 RIM = 904.78" INV SE = 8' RCP (INV. = 901.38") INV S = 12' RCP (INV. = 900.95")	EX-MH-3 RIM = 908.25"
EX-CB-2 RIM = 905.60" INV NW = 8' RCP (INV. = 902.10")	EX-MH-4 RIM = 908.30"
EX-CB-3 RIM = 918.70" INV NW = ±195.85'	EX-MH-5 RIM = 919.06"
EX-CB-4 RIM = 923.20"	EX-MH-6 RIM = 918.87"
EX-CB-5 RIM = 903.43	EX-MH-7 RIM = 918.90

EX-MH-A
RIM = 868.00'
INV N = 8" PVC (INV. = 862.88')
INV E-W = 18" (INV. = 855.85')
18" IS FULL & FAST FLOW



TBM: 27602
NAIL IN SOUTH SIDE OF POWER POLE
ELEVATION = 921.38

TBM: 27603
NAIL IN EAST SIDE OF POWER POLE
ELEVATION = 918.66



AR ENGINEERING & SURVEYING
CIVIL ENGINEERING & SURVEYING

MICHIGAN | INDIANA | ILLINOIS | OHIO
269.250.5991 PHONE | 866.569.0604 FAX
www.arengineeringllc.com

DRAWN:	BD/EAG
CHECKED:	JPR

No.	ISSUED FOR:	DATE	BY
0	VARIANCE	08/02/2022	lpr
1	PRE-SITE PLAN REVIEW	02/07/2023	WP
2	VARIANCE	03/14/2023	WP
3	PRE-SITE PLAN RESUBMITTAL	03/27/2023	
4			

EX. CONDITIONS - DEMO PLAN
KALAMAZOO MULTIFAMILY
GREAT LAKES CAPITAL
3625 W MICHIGAN
SECTION 19. T2S. R11W

SHEET TITLE:
PROJECT:
CLIENT:
SITE ADDRESS:
SITE SECTION:

JOB NUMBER
2185008

DATE
03/27/2023

SHEET NUMBER

C1.0



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

ALL UTILITIES AS SHOWN ARE APPROXIMATE LOCATIONS DERIVED FROM ACTUAL MEASUREMENTS AND AVAILABLE RECORDS. THEY SHOULD NOT BE INTERPRETED TO BE EXACT LOCATION NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THE AREA. FIELD WORK PERFORMED BY: MOSTROM & ASSOC., INC

SITE DATA

1. PROPERTY INFORMATION:
PARCEL #S: PARCEL 1: 06-19-463-001
PARCEL 2: 06-19-454-002
PARCEL 3: 06-19-454-001
- SITE AREA: 411,971 SF (9.46 AC)
- OWNER: KALAMAZOO REALTY HOLDINGS, LLC
40600 ANN ARBOR RD. E. STE. 201
ANN ARBOR, MI 48170
- DEVELOPER: GREAT LAKES CAPITAL
130 SOUTH MAIN ST., STE 325
SOUTH BEND, IN 46601
PHONE: (574) 855-5700
E-MAIL: JSMOKE@GREATLAKESCAPITAL.COM
2. ZONING:
PROPERTY CURRENTLY ZONED:
CC - COMMUNITY COMMERCIAL
ABUTTING PROPERTY CURRENTLY ZONED:
NORTH: CN-1 - COMMERCIAL, NEIGHBORHOOD &
RS-5 - RESIDENTIAL, SINGLE DWELLING
SOUTH: CC - COMMUNITY COMMERCIAL
EAST: RM-15 - RESIDENTIAL, MULTI-DWELLING
WEST: CN-1 - COMMERCIAL, NEIGHBORHOOD; PUD
- PROPOSED LAND USE = MULTI-UNIT DWELLING
*VARIANCE TO ALLOW RESIDENTIAL OCCUPANCY IN THE
GROUND LEVEL FACING ROAD FRONTAGE
3. SETBACKS
FRONT = NOT SPECIFIED
SIDES = 25' ABUTTING R DISTRICT / N/A
REAR = 25' ABUTTING R DISTRICT / N/A
4. PARKING:
REQUIRED PARKING - 1 PARKING SPACE PER UNIT
235 UNITS * 1 PER UNIT = 235
PROPOSED PARKING VARIANCE TO ALLOW 1.4 SPACES
PER UNIT = 331 SPACES PROPOSED
(MIN OF 329 SPACES AND MAX OF 362 SPACES)
5. BUILDING:
THREE-STORY - 235 UNIT
UNIT MIX PLANNED FOR:
118 - STUDIO
79 - 1 BEDROOM
38 - 2 BEDROOM
MAXIMUM HEIGHT: N/A
PROPOSED IMPERVIOUS COVERAGE: 54%
MAXIMUM IMPERVIOUS COVERAGE: 80%

GENERAL NOTES

1. DIMENSIONS TAKE PRECEDENCE OVER SCALE. CONTRACTOR TO VERIFY ALL DIMENSIONS IN FIELD.
2. IF ANY ERRORS, DISCREPANCIES, OR OMISSIONS BECOME APPARENT, THESE SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER PRIOR TO CONSTRUCTION OF ANYTHING AFFECTED SO THAT CLARIFICATION OR REDESIGN MAY OCCUR.
3. ALL CURB RADII AND DIMENSIONS ARE TO FACE OF CURB. CURB TO BE PROVIDED WHERE SHOWN AND INTEGRAL WITH SIDEWALK AT PAVING EDGE.
4. SLOPE GRADES UNIFORMLY BETWEEN ELEVATIONS SHOWN. NOMINAL GRADING, SLOPE SIDEWALKS AWAY FROM BUILDING AT 1/4" PER FOOT ON ENTRY WALK.

LEGEND

- PAVEMENT SECTION
- CONCRETE PAVEMENT AND SIDEWALK

NATURAL FEATURES PROTECTION

ORDINANCE REQUIREMENTS:
WOODLAND COVERAGE OF PARENT PARCEL: 50% - 75%
MINIMUM REQUIRED WOODLAND COVERAGE TO BE PRESERVED: 50%

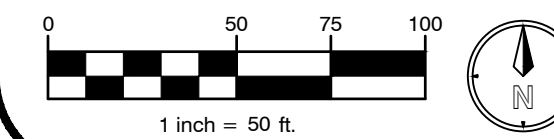
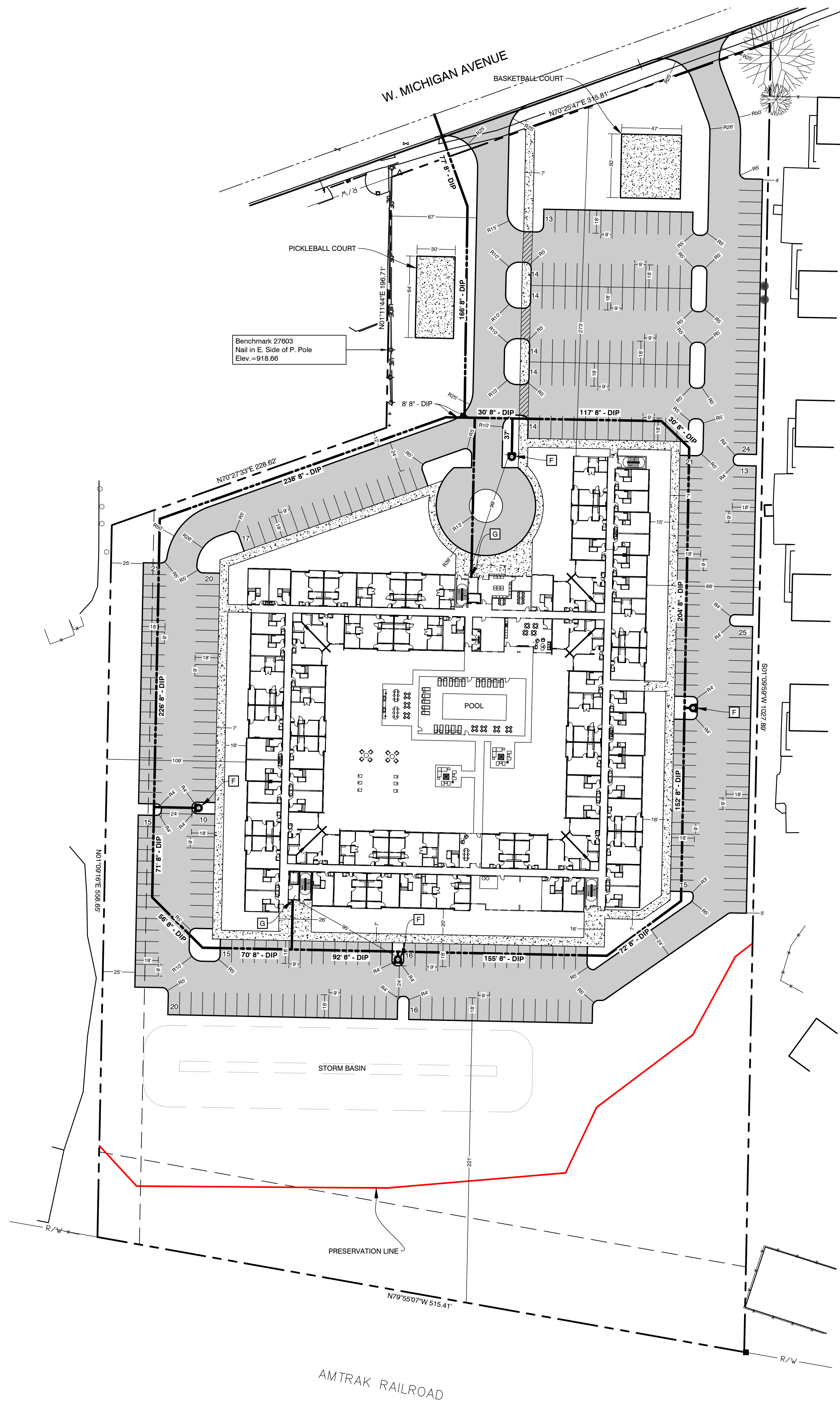
EXISTING WOODLAND AREA: 208,845 SFT
TOTAL SITE AREA: 411,971 SFT
WOODLAND COVERAGE PERCENTAGE: 51%

PROPOSED WOODLAND AREA: 59,037 SFT
PROPOSED WOODLAND TO BE PRESERVED: 28.3%

VARIANCE REQUESTED TO REMOVE 71.7% OF REMAINING WOODLANDS WHEN ORDINANCE ALLOWS 50% REMOVAL OF WOODLANDS.

SITE PLAN NOTES

- A BITUMINOUS PAVEMENT
B INTEGRAL CURB/WALK
C AT-GRADE RAMP
D DOWNSPOUT (TYP.)
E 4" PAINTED PARKING LOT MARKING/ STRIPING (TYP.)
F FIRE HYDRANT
G FDC CONNECTION



ALL UTILITIES AS SHOWN ARE APPROXIMATE LOCATIONS DERIVED FROM ACTUAL MEASUREMENTS AND AVAILABLE RECORDS. THEY SHOULD NOT BE INTERPRETED TO BE EXACT LOCATION NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THE AREA. FIELD WORK PERFORMED BY: MOSTROM & ASSOC., INC.

PLANS PREPARED BY:



DRAWN: BD/EAG
CHECKED: JPR

No.	ISSUED FOR:	DATE	BY
0	VARIANCE	08/02/2022	JPR
1	PRE-SITE PLAN REVIEW	02/07/2023	WJP
2	VARIANCE	03/14/2023	WJP
3	PRE-SITE PLAN RESUBMITTAL	03/27/2023	
4			

OVERALL SITE LAYOUT
KALAMAZOO MULTIFAMILY
GREAT LAKES CAPITAL
3625 W MICHIGAN
SECTION 19, T2S, R11W

SHEET TITLE:
PROJECT:
CLIENT:
SITE ADDRESS:
SITE SECTION:

JOB NUMBER
2185008

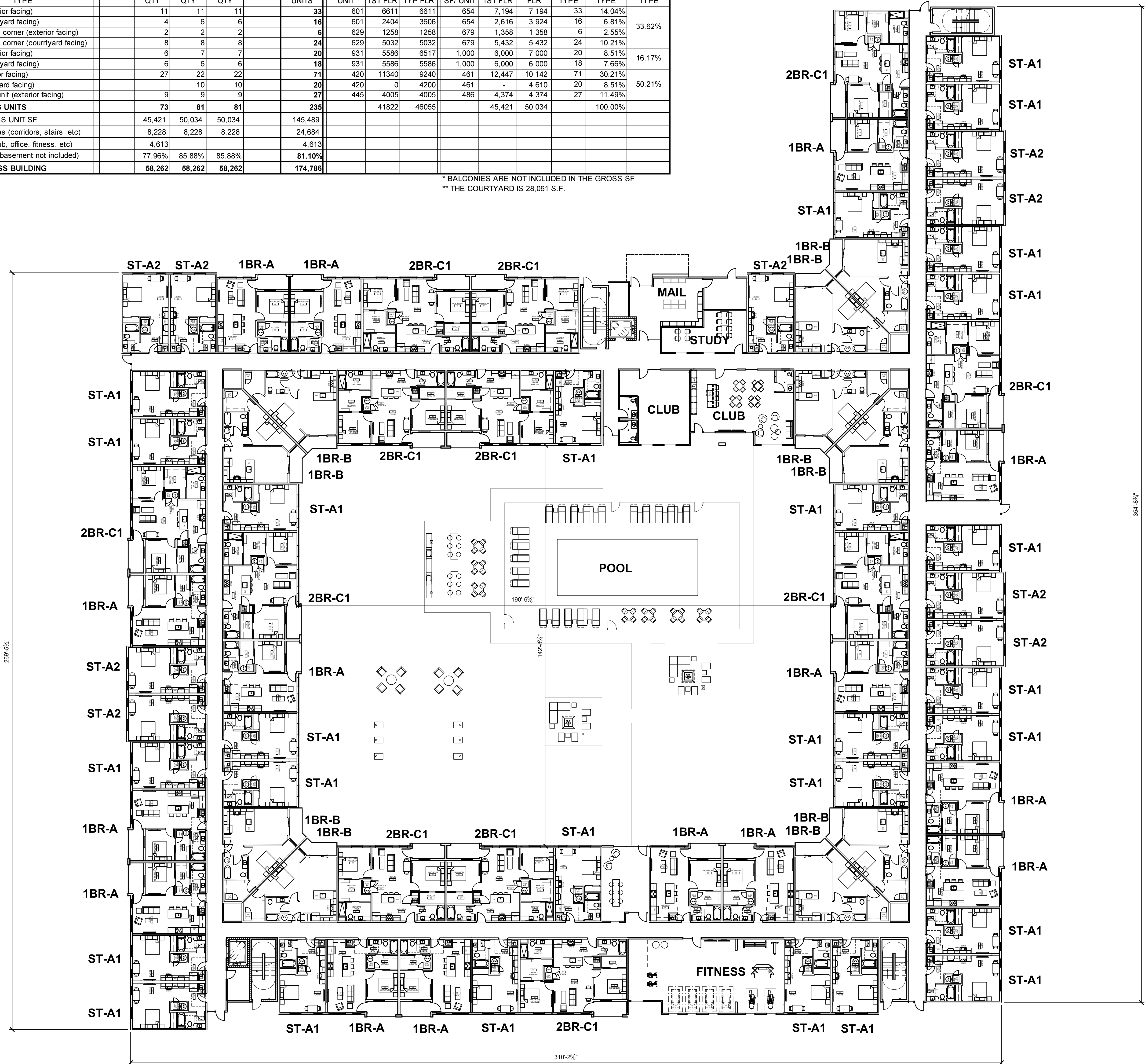
DATE
03/27/2023

SHEET NUMBER

C2.0

KZOO APARTMENT UNIT SUMMARY (LARGE SINGLE BUILDING)													
UPDATED 02/07/2023													
		1st floor	2nd floor	3rd floor									
UNIT	TYPE	QTY	QTY	QTY	TOTAL UNITS	NET SF/ UNIT	NET SF/ 1ST FLR	NET SF/ TYP FLR	GROSS SF/ UNIT	GROSS SF/ UNIT 1ST FLR	GROSS SF/ TYP UNIT FLR	NO OF UNITS PER TYPE	% / UNIT TYPE
1 BR - A	1br/1ba (exterior facing)	11	11	11	33	601	6611	6611	654	7,194	7,194	33	14.04%
1 BR - A	1br/1ba (courtyard facing)	4	6	6	16	601	2404	3606	654	2,616	3,924	16	6.81%
1 BR - B	1br/1ba inside corner (exterior facing)	2	2	2	6	629	1258	1258	679	1,358	1,358	6	2.55%
1 BR - B	1br/1ba inside corner (courtyard facing)	8	8	8	24	629	5032	5032	679	5,432	5,432	24	10.21%
2 BR - C1	2br/2ba (exterior facing)	6	7	7	20	931	5586	6517	1,000	6,000	7,000	20	8.51%
2 BR - C1	2br/2ba (courtyard facing)	6	6	6	18	931	5586	5586	1,000	6,000	6,000	18	7.66%
ST - A1	studio (exterior facing)	27	22	22	71	420	11340	9240	461	12,447	10,142	71	30.21%
ST - A1	studio (courtyard facing)		10	10	20	420	0	4200	461	-	4,610	20	8.51%
ST - A2	studio larger unit (exterior facing)	9	9	9	27	445	4005	4005	486	4,374	4,374	27	11.49%
TOTAL BDLG UNITS		73	81	81	235		41822	46055		45,421	50,034		100.00%
TOTAL GROSS UNIT SF		45,421	50,034	50,034	145,489								
Common Areas (corridors, stairs, etc)		8,228	8,228	8,228	24,684								
Amenities (club, office, fitness, etc)		4,613			4,613								
% Efficiency (basement not included)		77.96%	85.88%	85.88%	81.10%								
TOTAL GROSS BUILDING		58,262	58,262	58,262	174,786								

* BALCONIES ARE NOT INCLUDED IN THE GROSS SF
** THE COURTYARD IS 28,061 S.F.



FIRST FLOOR PLAN

SCALE: 1"= 16'-0"



Great Lakes Capital
130 South Main Street, Ste 325
South Bend, Indiana 46601
574-855-5700
www.greatlakescapital.com

Kalamazoo Apts
3625 W. Michigan Ave

GHAFARI

37 OTTAWA AVE NW
SUITE 700
GRAND RAPIDS, MI 49503 USA
TEL +1.616.771.0909
www.ghafari.com

CONSULTANT INFORMATION

REGISTRATION SEAL

NOT FOR
CONSTRUCTION

REV DATE DOC REL ## - DESCRIPTION

PROJECT # 2269091
PROJECT MANAGER
DESIGNED BY
DRAWN BY
QUALCHECK
SHEET TITLE

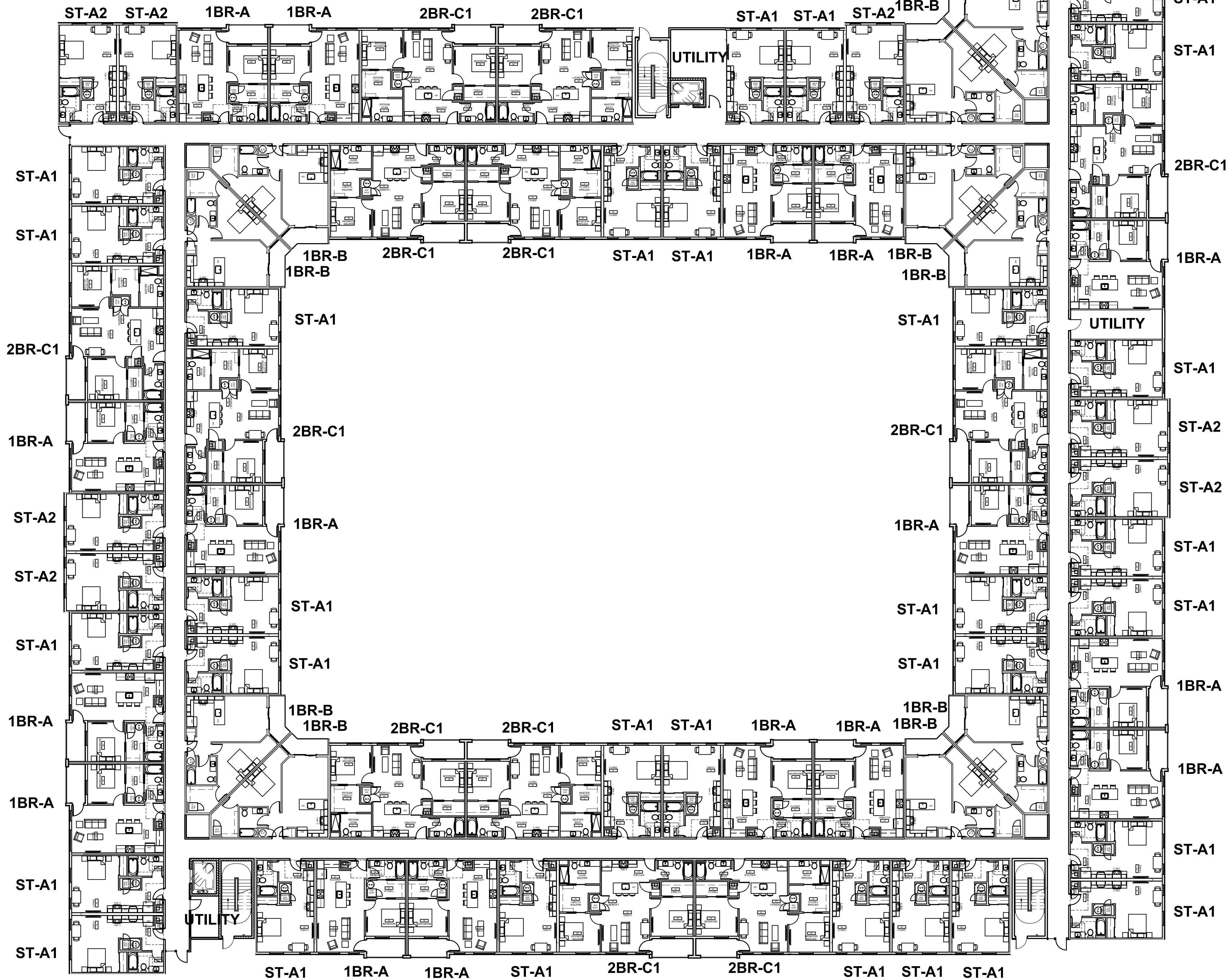
For Review
02/07/2023 10:30:04 AM

SHEET NUMBER

C:\Users\ghafari\OneDrive\Documents\GHAFARI\KZOO\KZOO-APT-2023\KZOO-APT-2023.dwg 2/7/2023 10:29:29 AM AEC/KERT GHAFARI ASSOCIATES © 2019

KZOO APARTMENT UNIT SUMMARY (LARGE SINGLE BUILDING)												
UPDATED 02/07/2023			1st floor	2nd floor	3rd floor							
UNIT	TYPE	QTY	QTY	QTY	TOTAL UNITS	NET SF/ UNIT	NET SF/ 1ST FLR	NET SF/ TYP FLR	GROSS SF/ UNIT	GROSS SF/ UNIT 1ST FLR	GROSS SF/ TYP FLR	NO OF UNITS PER TYPE
1 BR - A	1br/1ba (exterior facing)	11	11	11	33	601	6611	6611	654	7,194	7,194	33
1 BR - A	1br/1ba (courtyard facing)	4	6	6	16	601	2404	3606	654	2,616	3,924	16
1 BR - B	1br/1ba inside corner (exterior facing)	2	2	2	6	629	1258	1258	679	1,358	1,358	6
1 BR - B	1br/1ba inside corner (courtyard facing)	8	8	8	24	629	5032	5032	679	5,432	5,432	24
2 BR - C1	2br/2ba (exterior facing)	6	7	7	20	931	5586	6517	1,000	6,000	7,000	20
2 BR - C1	2br/2ba (courtyard facing)	6	6	6	18	931	5586	5586	1,000	6,000	6,000	18
ST - A1	studio (exterior facing)	27	22	22	71	420	11340	9240	461	12,447	10,142	71
ST - A1	studio (courtyard facing)		10	10	20	420	0	4200	461	-	4,610	20
ST - A2	studio larger unit (exterior facing)	9	9	9	27	445	4005	4005	486	4,374	4,374	27
TOTAL BDLG UNITS			73	81	81	235	41822	46055		45,421	50,034	100.00%
TOTAL GROSS UNIT SF			45,421	50,034	50,034	145,489						
Common Areas (corridors, stairs, etc)			8,228	8,228	8,228	24,684						
Amenities (club, office, fitness, etc)			4,613			4,613						
% Efficiency (basement not included)			77.96%	85.88%	85.88%	81.10%						
TOTAL GROSS BUILDING			58,262	58,262	58,262	174,786						

* BALCONIES ARE NOT INCLUDED IN THE GROSS SF
** THE COURTYARD IS 28,061 S.F.



SECOND/THIRD FLOOR PLANS

SCALE: 1"= 16'-0"



Great Lakes Capital
130 South Main Street, Ste 325
South Bend, Indiana 46601
574-855-5700
www.greatlakescapital.com

Kalamazoo Apts
3625 W. Michigan Ave

GHAFARI

37 OTTAWA AVE NW
SUITE 700
GRAND RAPIDS, MI 49503 USA
TEL +1.616.771.0909
www.ghafari.com

CONSULTANT INFORMATION

REGISTRATION SEAL

NOT FOR
CONSTRUCTION

REV DATE DOC REL ## - DESCRIPTION

PROJECT # 2269091
PROJECT MANAGER
DESIGNED BY
DRAWN BY
QUALCHECK
SHEET TITLE

For Review
02/07/2023 10:29:56 AM

SHEET NUMBER

SUPPLEMENTAL SITE PLAN REVIEW APPLICATION FOR NATURAL FEATURES PROTECTION

For projects located within the Natural Features Protection (NFP) Overlay District, separate site plan approval is required before the full site plan can be approved. This review is done either by the NFP Review Board or administratively by staff to verify conformance with NFP Overlay District zoning code ([Chapter 50, NFP](#)). The NFP Overlay District map can be found on the [City's GIS mapping website](#) (select "Planning & Zoning" layer and make sure "NFP Overlay" is clicked on).

The NFP Supplemental Application must be completed and submitted with the regular Site Plan Review Application and checklists. The NFP Review Board meets monthly to review and approve applications. City staff can assist in scheduling a project at an upcoming NFP Review Board meeting. While the review process offers some flexibility, projects often seek NFP approval between the Pre-Application meeting and regular Site Plan Review meeting.

Section I. Project & Applicant Information

All projects must complete Section I. If the project will not impact any natural features on the site, and does not trigger additional stormwater controls or treatment, applicants should sign and submit Section I only. Staff will review and determine if the application can be approved administratively.

Section II. Natural Features Checklist & Attachments

For projects proposing improvements or changes to the site that impact natural features, change grading, or involve work in or near NFP setbacks, Sections II and III must be completed. Section II identifies which natural features are present and standards apply. Section III will assist you in determining what documentation and additional plan sets are needed for a complete application. Once a complete application is submitted to the City, the project will be scheduled for the next available NFP Review Board meeting and an application fee of \$110 will apply.

QUESTIONS

Contact the NFP staff liaison with any questions about your NFP Supplemental Application at (269) 337-8045 or development@kalamazoocity.org.

SECTION I. PROJECT AND APPLICANT INFORMATION

Please provide all of the project and applicant information requested below. Include the date of your regular site plan review meeting, if one has been scheduled or already taken place.

APPLICANT NAME:	Greg Dilone (first) (last)		
APPLICANT ADDRESS:	4655 W Chase Ave. (number) (street name)		
	Lincolnwood IL 60712 (city) (zip)		
APPLICANT EMAIL:	greg@fusionmp.com	PHONE:	(313) 461-8673
PARCEL ADDRESS/PIN:	06-19-463-001		
PROJECT DESCRIPTION:	Multi-family / student housing with site improvements		
OWNER NAME: <i>(if different)</i>	Simda Mandelbaum (first) (last)		
HAS REGULAR SITE PLAN REVIEW MEETING OCCURRED?	☐ Yes ☒ No	DATE OF SITE PLAN REVIEW MEETING:	

NFP APPLICATION REQUIRED?

Is the project limited to interior work <u>only</u> with no exterior ground changes or increase in impervious coverage?	
YES ☐	If YES , Sections II & III of this application are not needed. Sign below & submit only this page with your site plan review or permit application.
☒ NO	If NO , proceed to Sections II & III. Do NOT sign below.

By signing below, the applicant certifies that no natural features will be disturbed as part of this project.

Print name: _____

Signature: _____

Date: _____

SECTION II. NFP SITE PLAN CHECKLIST & ATTACHMENTS

Use the checklist to determine what documentation and additional plans sets must be prepared for this application. All plan sets, maps, and additional information must be attached to this application to be considered complete. If you checked “no” to certain NFP items in questions 1-7 in Section II, record “N/A” on the checklist.

REQUIRED: NFP SITE PLAN SET

All applications must include separate sheets in the plan set showing the following:

1. Existing conditions map showing an inventory of all protected natural features and any associated natural features setbacks with distances (use checklist below)
2. Future development plan overlaid onto the existing conditions and natural features inventory; indicate where and to what extent protected natural features will be disturbed, removed, altered, or impacted in any way and which natural features will be protected during and after construction

Future development plan must include:

- **Boundary with extent of re-grading**, construction, or site preparation activities
 - **All existing and new building footprints** (mark whether existing buildings will be removed or maintained)
 - **New and existing parking** surfaces or structures, sidewalks, trails, and other impervious or semi-impervious surfaces including decks, patios, viewing platforms, etc. (list proposed surface materials and whether existing surfaces will be maintained or removed)
 - **Proposed location of fencing and screening**, whether permanent, natural, or construction silt fencing and/or natural feature protection fencing (with specifications)
 - **Stormwater facilities** showing boundary of ground disturbance, grading or construction activities, if located near natural features
 - **New utilities** and/or relocation of existing utilities showing corridors that could impact natural features
3. Landscape plan detailing the minimum elements needed to meet zoning code requirements and all proposed additional landscaping elements or features (include table with species name)
 4. Any additional plans or tables detailing which natural features will be restored or replaced after construction, if required (e.g., riparian buffer installation or slope restoration plan may be required under certain circumstances when the ordinance allows changes within these protected areas)

WETLANDS	Present:	Included on page #:	Notes:
Mark existing wetland boundaries with notes about wetland conditions. <i>Attach a copy of EGLE permit or permit application for work impacting Part 303 wetlands regulated by the State.</i>	☐ Yes ☒ No	N/A	
WATER RESOURCES	Present:	Included on page #:	Notes:
Mark the location of all water resources on the parcel and those within 25 feet of the parcel boundaries. <i>Attach a copy of EGLE permit or permit application for work impacting Part 301 waters regulated by the State.</i>	☐ Yes ☒ No	C1.0 C1.1	
Show required setbacks with dimensions; describe existing or future ground cover within riparian setbacks.			
TREES	Present:	Included on page #:	Notes:
Mark the location of all “protected” trees that are proposed to be removed and those that will remain and require protection fencing.	☒ Yes ☐ No	C1.0 C1.1	
Include a table with species name, size (DBH and height), and condition of “protected” trees that are proposed to be removed and list replacement tree information.			
Provide a note with justification for removal.			
WOODLANDS	Present:	Included on page #:	Notes:
Delineate the boundary of all woodlands on the parcel noting where woodlands likely extend onto adjacent parcels.	☒ Yes ☐ No	C1.0 C1.1	
Mark all areas of woodland that will be retained and removed (i.e., cleared).		C1.0 C1.1	
Include a table or note with the required preservation ratio (based on existing woodland coverage), percentage proposed to be removed, and rationale for selecting area for removal.			Included within NFP variance approval.
SLOPES	Present:	Included on page #:	Notes:
Provide a slope analysis that shows the boundaries of all “protected” slopes and mark the required setback(s).	☒ Yes ☐ No	C1.0	slope variance obtained in Oct 2022.
Include a note with co-existing feature that triggers “protected” slope status (e.g., wooded, within 500 ft of water resource).		C1.0	

NATURAL HERITAGE AREAS	Present:	Included on page #:	Notes:	
Is an MNFI* rare species review required? <i>Parcels can be pre-screened using the City's GIS website, click on the "Planning & Zoning" layer and "NFP Overlay" layer; then click on parcel and see MNFI status.</i>	☐ Yes ☒ No	N/A		
If an MNFI rare species review is required, attach the resulting report.				

*Michigan Natural Features Inventory (MNFI) Rare Species Reviews can be requested at:

<https://mnfi.anr.msu.edu/services/rare-species-reviews>

ACCEPTED DATA SOURCES & ANALYSIS

All data sources, analysis, and professionals are subject to approval by the City Planner according to Chapter 50-6.2. The following guidance may be useful when selecting a professional or methodology for inventorying natural features.

1. WETLANDS

- Wetland delineation report performed by a qualified consultant including a map denoting delineated boundary of all wetlands, OR
- Most recent US Fish & Wildlife Service's National Wetlands Inventory boundary (State of Michigan mapper: <https://www.michigan.gov/egle/about/organization/water-resources/wetlands/inventory-maps>)

2. PROTECTED TREE IDENTIFICATION

- May be performed by an qualified professional (including ISA Certified Arborist or similar); a full tree inventory is not required if all necessary information can be obtained and communicated using another survey, inventory, or site assessment methodology

3. WOODLANDS

- A qualified professional, such as an ISA Certified Arborist, landscape architect, or license engineer may perform a desktop analysis or field survey to delineate woodlands
- When a variances is being requests to remove more woodland cover than is allowed under the preservation ration, the following is required
 - Woodland assessment report with determination that the Trees per Area (TPA) meets the NFP definition of a woodland and mapped delineation of woodland
 - Woodland assessment report with a determination that Basal Area is equivalent to the TPA in the NFP definition and meets definition of a woodland and mapped delineation of woodland
 - In addition to determination of whether stand of trees meets NFP definition of a woodland, assessment must include information on general species diversity,
 -

composition of species, any notable trees (either notable species or size), invasive species composition, and general health and age observations of tree stand

4. PROTECTED SLOPES

- Topographic survey performed in the field by a qualified consultant to delineate areas of a slope with grade of 20% or greater
- Desktop analysis performed using U.S. Geological Survey digital topographic maps, LIDAR, digital elevation map, or equivalent data showing 2' intervals or finer resolution, performed by a qualified consultant or engineer

Full Site Plan Review
Received 05/28/2024
City of Kalamazoo

KALAMAZOO MULTI - FAMILY

LEGAL DESCRIPTION

PARCEL #: 06-19-463-001

Parcel 1:
BEGINNING AT A POINT ON THE EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 19, TOWN 2 SOUTH, RANGE 11 WEST, WHICH IS SOUTH 00 DEGREES 17 MINUTES 00 SECONDS WEST, 196.00 FEET FROM THE CENTERLINE OF WHAT WAS FORMERLY THE TERRITORIAL ROAD, AND IS NOW KNOWN AS WEST MICHIGAN AVENUE; THENCE CONTINUING SOUTH 00 DEGREES 17 MINUTES 00 SECONDS WEST ALONG THE SAID EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 19, 885.38 FEET TO THE NORTHERLY RIGHT-OF-WAY LINE OF THE MICHIGAN CENTRAL RAILROAD; THENCE NORTH 80 DEGREES 50 MINUTES 00 SECONDS WEST ALONG SAID NORTHERLY RIGHT-OF-WAY LINE OF THE MICHIGAN CENTRAL RAILROAD, 515.42 FEET; THENCE NORTH 00 DEGREES 17 MINUTES EAST PARALLEL TO THE SAID EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 19, 558.94 FEET; THENCE NORTH 69 DEGREES 32 MINUTES 30 SECONDS EAST PARALLEL TO THE CENTERLINE OF WEST MICHIGAN AVENUE, 228.34 FEET; THENCE NORTH 00 DEGREES 17 MINUTES 00 SECONDS EAST PARALLEL TO THE SAID EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 19, 250.00 FEET TO THE CENTERLINE OF WEST MICHIGAN AVENUE; THENCE NORTH 69 DEGREES 32 MINUTES 30 SECONDS EAST THEREON SAID HIGHWAY CENTERLINE, 159.00 FEET; THENCE SOUTH 00 DEGREES 17 MINUTES WEST PARALLEL TO THE SAID EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 19, 140.33 FEET; THENCE SOUTH 89 DEGREES 43 MINUTES 00 SECONDS EAST, 147.00 FEET TO THE PLACE OF BEGINNING.

EXCEPT THAT PART OF THE SOUTHEAST 1/4 OF SECTION 19, TOWN 2 SOUTH, RANGE 11 WEST, CITY OF KALAMAZOO, KALAMAZOO COUNTY, MICHIGAN, DESCRIBED AS:

COMMENCING AT THE INTERSECTION OF THE EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 19 AND THE CENTERLINE OF WEST MICHIGAN AVENUE; THENCE SOUTH 70 DEGREES 26 MINUTES 05 SECONDS WEST, 157.19 FEET ALONG THE CENTERLINE OF WEST MICHIGAN AVENUE; THENCE SOUTH 01 DEGREES 10 MINUTES 41 SECONDS WEST, 35.29 FEET TO THE SOUTH RIGHT-OF-WAY LINE OF WEST MICHIGAN AVENUE FOR THE PLACE OF BEGINNING OF THIS DESCRIPTION; THENCE SOUTH 01 DEGREES 10 MINUTES 41 SECONDS WEST, 18.18 FEET; THENCE SOUTH 70 DEGREES 26 MINUTES 05 SECONDS WEST, 159.00 FEET; THENCE NORTH 01 DEGREES 10 MINUTES 41 SECONDS EAST, 18.18 FEET TO THE SOUTH RIGHT-OF-WAY LINE OF WEST MICHIGAN AVENUE; THENCE NORTH 70 DEGREES 26 MINUTES 05 SECONDS EAST, 159.00 FEET ALONG SAID LINE TO THE PLACE OF BEGINNING.

PARCEL 2:
COMMENCING AT A POINT ON THE EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 19, TOWN 2 SOUTH, RANGE 11 WEST, WHICH IS SOUTH 00 DEGREES 17 MINUTES 00 SECONDS WEST, 196.00 FEET FROM THE CENTERLINE OF WHAT WAS FORMERLY THE TERRITORIAL ROAD, AND IS NOW KNOWN AS WEST MICHIGAN AVENUE; THENCE NORTH 89 DEGREES 43 MINUTES 00 SECONDS WEST MEASURED AT RIGHT ANGLES TO SAID EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 19, 67.00 FEET FOR THE PLACE OF BEGINNING; THENCE NORTH 00 DEGREES 17 MINUTES 00 SECONDS EAST PARALLEL TO SAID EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 19, 170.63 FEET TO THE CENTERLINE OF WEST MICHIGAN AVENUE; THENCE SOUTH 69 DEGREES 32 MINUTES 30 SECONDS WEST ALONG THE SAID CENTERLINE OF WEST MICHIGAN AVENUE, 85.59 FEET; THENCE SOUTH 00 DEGREES 17 MINUTES 00 SECONDS WEST PARALLEL TO THE EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SAID SECTION 19, 140.33 FEET; THENCE SOUTH 89 DEGREES 43 MINUTES 00 SECONDS EAST 80.00 FEET TO THE PLACE OF BEGINNING.

EXCEPT THAT PART OF THE SOUTHEAST 1/4 OF SECTION 19, TOWN 2 SOUTH, RANGE 11 WEST, CITY OF KALAMAZOO, KALAMAZOO COUNTY, MICHIGAN, DESCRIBED AS:

COMMENCING AT THE INTERSECTION OF THE EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 19 AND THE CENTERLINE OF WEST MICHIGAN AVENUE; THENCE SOUTH 70 DEGREES 26 MINUTES 05 SECONDS WEST, 72.71 FEET ALONG SAID CENTERLINE; THENCE SOUTH 01 DEGREES 10 MINUTES 41 SECONDS WEST, 35.29 FEET TO THE SOUTH RIGHT-OF-WAY LINE OF WEST MICHIGAN AVENUE FOR THE PLACE OF BEGINNING OF THIS DESCRIPTION; THENCE SOUTH 01 DEGREES 10 MINUTES 41 SECONDS WEST, 18.18 FEET; THENCE SOUTH 70 DEGREES 26 MINUTES 05 SECONDS WEST, 84.48 FEET; THENCE NORTH 01 DEGREES 10 MINUTES 41 SECONDS EAST, 18.18 FEET TO THE SOUTH RIGHT-OF-WAY LINE OF WEST MICHIGAN AVENUE; THENCE NORTH 70 DEGREES 26 MINUTES 05 SECONDS EAST, 84.48 FEET ALONG SAID LINE TO THE PLACE OF BEGINNING.

PARCEL 3:

COMMENCING IN THE CENTER OF THE TERRITORIAL ROAD ON THE EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 19, TOWN 2 SOUTH, RANGE 11 WEST, AND RUNNING THENCE SOUTH 196.00 FEET; THENCE DUE WEST 67.00 FEET; THENCE NORTH 168.00 FEET MORE OR LESS TO THE CENTER OF SAID TERRITORIAL ROAD; AND THENCE NORTHEASTERLY ALONG THE CENTERLINE OF SAID ROAD TO THE PLACE OF BEGINNING.

EXCEPT THAT PART OF THE SOUTHEAST 1/4 OF SECTION 19, TOWN 2 SOUTH, RANGE 11 WEST, CITY OF KALAMAZOO, KALAMAZOO COUNTY, MICHIGAN, DESCRIBED AS:

COMMENCING AT THE INTERSECTION OF THE EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 19 AND THE CENTERLINE OF WEST MICHIGAN AVENUE; THENCE SOUTH 70 DEGREES 26 MINUTES 05 SECONDS WEST, 72.71 FEET; THENCE SOUTH 01 DEGREES 10 MINUTES 41 SECONDS WEST, 35.29 FEET TO THE SOUTH RIGHT-OF-WAY LINE OF WEST MICHIGAN AVENUE FOR THE PLACE OF BEGINNING OF THIS DESCRIPTION; THENCE NORTH 70 DEGREES 26 MINUTES 05 SECONDS EAST, 72.71 FEET ALONG SAID RIGHT-OF-WAY TO THE EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4; THENCE SOUTH 01 DEGREES 10 MINUTES 41 SECONDS WEST, 18.18 FEET ALONG SAID LINE; THENCE SOUTH 70 DEGREES 26 MINUTES 05 SECONDS WEST, 72.71 FEET; THENCE NORTH 01 DEGREES 10 MINUTES 41 SECONDS EAST, 18.18 FEET TO THE PLACE OF BEGINNING.

3625 W MICHIGAN AVE SECTION 19, T.02S, R.11W CITY OF KALAMAZOO KALAMAZOO COUNTY, MI SITE DEVELOPMENT PLANS MARCH 15, 2024

ISSUED FOR: SITE PLAN SUBMITTAL

REVISIONS

No.	ISSUED FOR:	DATE:	BY:
0	VARIANCE	08/02/22	jpr
1	PRE-SITE PLAN REVIEW	02/07/23	wlp
2	VARIANCE	03/14/23	wlp
3	PRE-SITE PLAN RESUBMITTAL	03/27/23	wlp
4	PRE-SITE PLAN RESUBMITTAL	10/19/23	wlp
5	SITE PLAN SUBMITTAL	03/15/24	wlp

SHEET INDEX

No.	SHEET TITLE
T1.0	TITLE SHEET
C1.0	EX CONDITIONS - DEMO PLAN
C1.1	OVERALL EX. CONDITIONS - DEMO PLAN
C2.0	SITE LAYOUT
C3.0	UTILITY PLAN
C4.0	GRADING - SESC PLAN
C5.0	DETAILS
L1.0	LANDSCAPE PLAN

OWNERS:

KALAMAZOO REALTY HOLDINGS, LLC
40600 ANN ARBOR RD E STE 201
PLYMOUTH, MI 48170

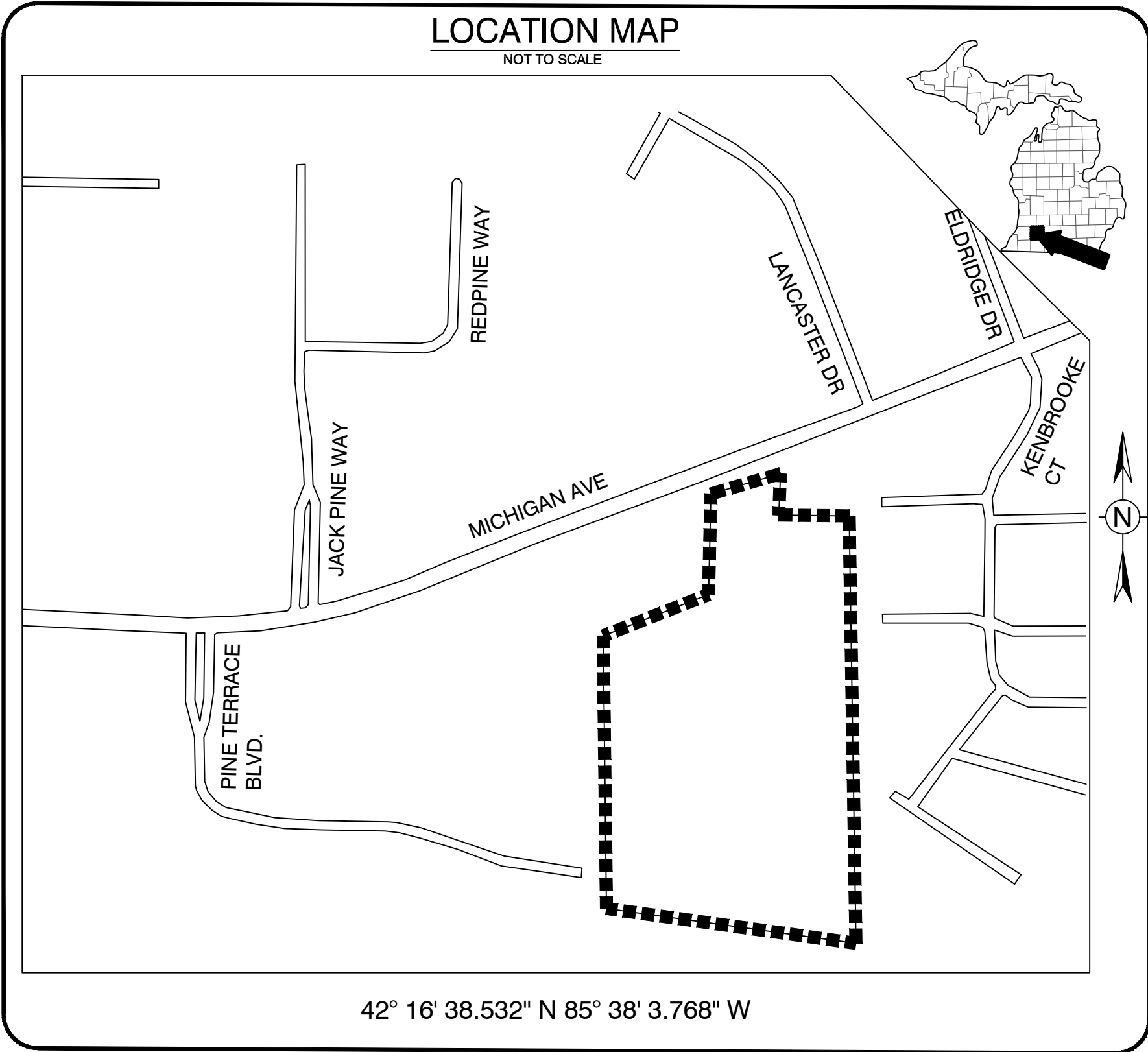
CIVIL ENGINEER:

AR ENGINEERING, LLC.
5725 VENTURE PARK DRIVE, SUITE A
KALAMAZOO, MI 49008
TEL. (269) 250-5991 FAX. (866) 569-0604



JASON RALIEGH. P.E.

DATE



UTILITY CONTACTS

CABLE	CHARTER 4176 COMMERCIAL AVE. PORTAGE, MI 49002 TELEPHONE: 269-323-0580	TELEPHONE	AT&T 2919 MILLCORK ST. KALAMAZOO, MI 49001 TELEPHONE: 269-384-4476
WATER	CITY OF KALAMAZOO 415 STOCKBRIDGE AVE. KALAMAZOO, MI 49001 ATTN: ALBERTO FORERO ATTN: BOB WASS TELEPHONE : 269-337-8601	SEWER	CITY OF KALAMAZOO 415 STOCKBRIDGE AVE. KALAMAZOO, MI 49001 ATTN: ALBERTO FORERO ATTN: BOB WASS TELEPHONE : 269-337-8601
GAS	CONSUMERS ENERGY 2500 E. CORK ST. KALAMAZOO, MI 49001 ATTN: MS. JOE McFARLAND TELEPHONE: 269-337-2370	ELECTRIC	CONSUMERS ENERGY 2500 E. CORK ST. KALAMAZOO, MI 49001 ATTN: MS. JOE McFARLAND TELEPHONE: 269-337-2370
		MISS DIG	811

DEMOLITION NOTES

- ALL WORK SHALL CONFORM TO ALL LOCAL, STATE AND FEDERAL LAWS, RULES AND REGULATIONS IN FORCE AT TIME OF CONSTRUCTION.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS, PERMIT COSTS, TAP FEES, METER DEPOSITS, PERMANENT UTILITY APPLICATIONS, BONDS, AND OTHER FEES REQUIRED FOR PROPOSED WORK. THIS SHALL INCLUDE, BUT SHALL NOT BE LIMITED TO THOSE REQUIRED BY THE CITY OF KALAMAZOO, MICHIGAN AND KALAMAZOO COUNTY.
- CONTACT MISS DIG "811" FOR LOCATION OF UNDERGROUND UTILITIES A MINIMUM OF 48 HOURS BEFORE COMMENCING EXCAVATION WORK. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO ARE NOT PART OF THE "MISS DIG" ALERT SYSTEM. THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS IN A MANNER AS TO ENSURE THAT THOSE UTILITIES NOT REQUIRING RELOCATION WILL NOT BE DISTURBED.
- DEMOLISH & REMOVE ALL EXISTING SITE FEATURES AS REQUIRED.
- ALL SOIL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO DEMOLITION.
- ALL EXCAVATION SHALL BE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS AND GEOTECHNICAL REPORT FOR THIS SITE.
- ALL EXISTING ELEVATIONS ARE TO BE VERIFIED AND ACCEPTED AS SHOWN PRIOR TO COMMENCEMENT OF WORK.
- CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID TRACKING SOIL ONTO ADJACENT ROADWAYS. CONTRACTOR SHALL SWEEP IMMEDIATELY IF OCCURS.
- ANY DISTURBED AREA WHICH WILL BE LEFT UNWORKED 15 DAYS OR LONGER MUST BE SEEDED TO ESTABLISH VEGETATION FOR TEMPORARY STABILIZATION. BASINS TO BE SEEDED AND MULCH BLANKETS APPLIED IMMEDIATELY TO PROVIDE A STABLE BASE AND AVOID EXCESSIVE EROSION.
- REVIEW ALL THE REMOVALS AND PROTECTION WITH OWNER PRIOR TO COMMENCING CONSTRUCTION. INSTALL TEMPORARY SNOW FENCE AROUND ALL TREES REQUIRING PROTECTION. SNOW FENCE SHALL BE PLACED AT EDGE OF DRIP LINE.
- SAWCUT ALL CURB, SIDEWALK, AND PAVEMENTS PRIOR TO REMOVAL. ADDITIONAL SAWCUT MAY BE NECESSARY PRIOR TO REPLACEMENT TO ENSURE CLEAN EDGE.
- ALL REMOVALS SHALL BE TAKEN OFF-SITE AND DISPOSED OF PROPERLY. NO STOCKPILE OR BURNING OF DEBRIS IS ALLOWED.
- ALL REMOVALS SHALL BE TO THE LIMITS INDICATED ABOVE UNLESS OTHERWISE DIRECTED BY THE ENGINEER. UNAUTHORIZED REMOVALS AND SUBSEQUENT REPLACEMENT SHALL BE AT THE CONTRACTOR'S EXPENSE.
- REMOVE, STORE, AND RESET ANY EXISTING SIGNS AS DIRECTED BY THE ENGINEER/OWNER.
- THE CONTRACTOR SHALL DEMOLISH AND REMOVE ANY ITEMS REMAINING FROM THE EXISTING BUILDING, IN ITS ENTIRETY, INCLUDING WALLS, FOUNDATIONS AND FOOTINGS. ALL BUILDING DRAINS AND UTILITY LEADS SHALL BE LOCATED AND PROPERLY PLUGGED. UTILITY LEAD WORK SHALL BE COORDINATED WITH THE APPROPRIATE UTILITY COMPANY.
- BACKFILL EXCAVATED AREAS WITH CLEAN GRANULAR FILL COMPACTED TO 95% OF THE MATERIAL UNIT WEIGHT BY MODIFIED PROCTOR.
- CONTROL SHALL BE MAINTAINED OVER THE SITE AND OPERATION TO ELIMINATE HAZARDS TO THE PUBLIC. NAILS OR OTHER TIRE PUNCTURING ITEMS SHALL NOT BE DROPPED ON STREETS, ALLEYS AND ADJACENT PROPERTY. PUBLIC STREETS, CURBS AND SIDEWALKS SHALL BE PROTECTED FROM DAMAGE. THE PERSON ENGAGED IN THE DEMOLITION WORK SHALL BE LIABLE FOR ANY AND ALL DAMAGE TO CURBS, STREETS, SIDEWALKS AND OTHER PUBLIC OR PRIVATE PROPERTY AND FOR ANY BODILY INJURY OCCURRING AS A RESULT OF THE DEMOLITION WORK.

LEGEND

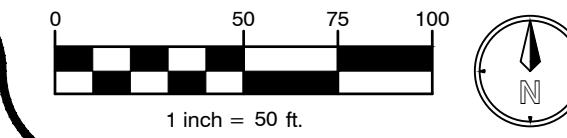
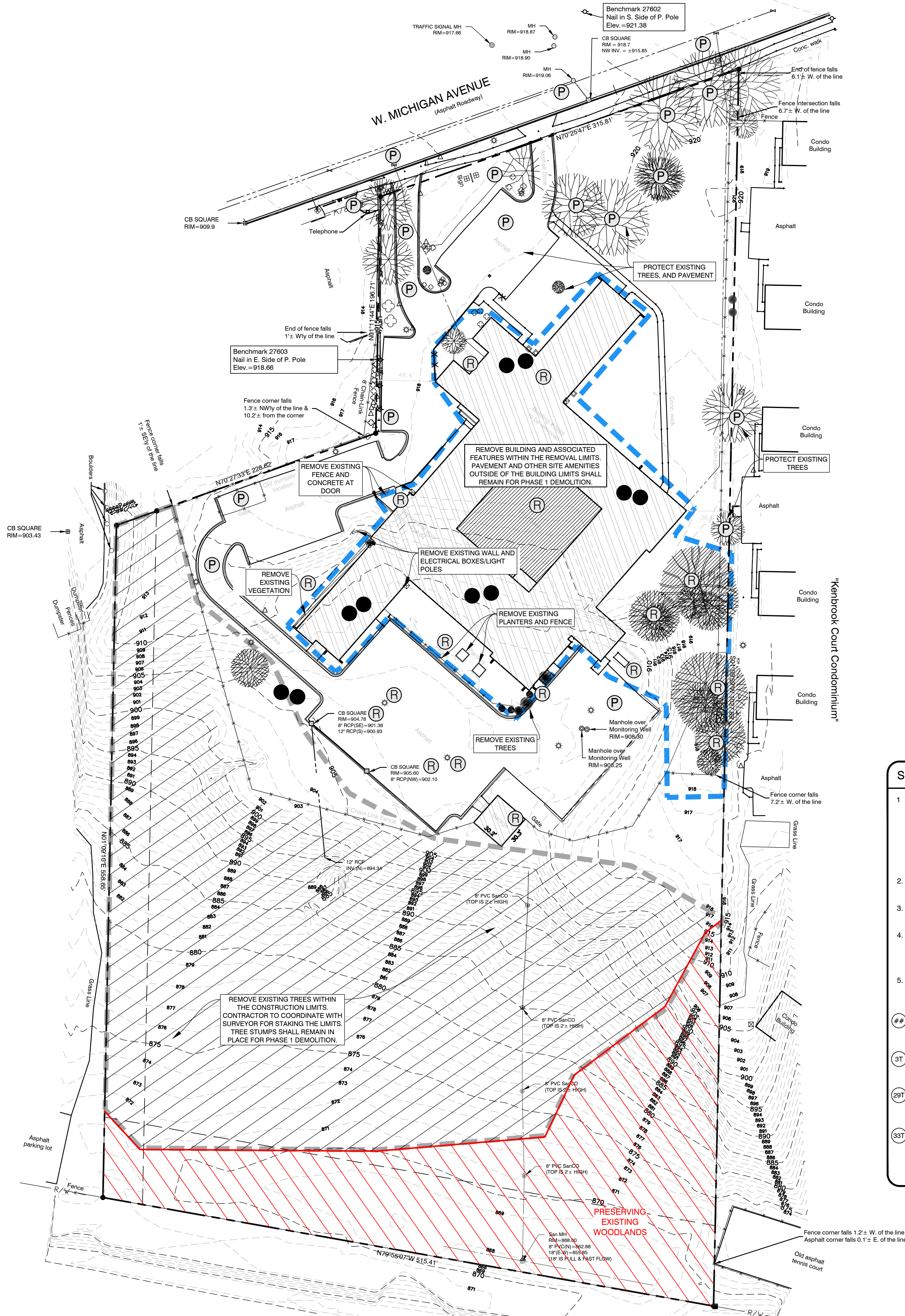
- BUILDING REMOVAL
- TREE PRESERVE AREA
- TREE REMOVAL
- REMOVE
- PROTECT
- LIMITS OF TREE REMOVAL
- LIMITS OF BLDG REMOVAL

STORM STRUCTURE INFORMATION

- EX-CB-1
RIM = 904.78'
INV SE = 8" RCP (INV. = 901.38)
INV S = 12" RCP (INV. = 900.93)
- EX-CB-2
RIM = 905.60'
INV NW = 8" RCP (INV. = 902.10)
- EX-CB-3
RIM = 918.70'
INV NW = ±915.85'
- EX-CB-4
RIM = 923.20'
- EX-CB-5
RIM = 903.43
- EX-MH-3
RIM = 908.25'
- EX-MH-4
RIM = 908.30'
- EX-MH-5
RIM = 919.06'
- EX-MH-6
RIM = 918.87'
- EX-MH-7
RIM = 918.90

SANITARY STRUCTURE INFORMATION

- EX-MH-A
RIM = 868.00'
INV N = 8" PVC (INV. = 862.88)
INV E-W = 18" (INV. = 855.85)
18" IS FULL & FAST FLOW



BENCHMARK INFORMATION

- TBM: 27602
NAIL IN SOUTH SIDE OF POWER POLE
ELEVATION = 921.38
- TBM: 27603
NAIL IN EAST SIDE OF POWER POLE
ELEVATION = 918.66

SOIL EROSION & SEDIMENT CONTROL NOTES

- ALL CONSTRUCTION METHODS SHALL BE DONE IN COMPLIANCE WITH MDOT-EGLE. THE OWNER SHALL BE RESPONSIBLE FOR OBTAINING A "SOIL EROSION PERMIT" FROM THE GOVERNING AUTHORITY AND A "PERMIT BY RULE/NOTICE OF COVERAGE" FROM THE GOVERNING AUTHORITY. IF APPLICABLE. PRIOR TO START OF CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL REQUIREMENTS OF THE "SOIL EROSION PERMIT" AND FOR ALL CERTIFIED STORM WATER INSPECTION SERVICE REQUIRED BY THE "PERMIT BY RULE." EROSION CONTROL MEASURES SHOWN ON THE PLANS ARE THE MINIMUM REQUIREMENTS AND SHALL NOT RELIEVE THE CONTRACTOR'S RESPONSIBILITY FOR PROVIDING ALL REQUIRED EROSION CONTROL MEASURES.
 - AVOID UNNECESSARY DISTURBING OR REMOVING OF EXISTING VEGETATED TOPSOIL OR EARTH COVER. THESE COVER AREAS ACT AS SEDIMENT FILTERS.
 - ALL TEMPORARY SOIL EROSION PROTECTION SHALL REMAIN IN PLACE UNTIL REMOVAL IS REQUIRED FOR FINAL CLEAN UP AND APPROVAL.
 - GEOTEXTILE SILT FENCE SHALL BE INSTALLED AS REQUIRED WHEN CROSSING CREEKS OR WHEN ADJACENT TO WETLANDS OR SURFACE WATER BODIES TO PREVENT SILTATION AND ELSEWHERE AS DIRECTED BY THE ENGINEER. SEEDING AND/OR SODDING SHALL BE INSTALLED ON CREEK BANKS IMMEDIATELY AFTER CONSTRUCTION TO PREVENT EROSION.
 - MAINTENANCE, CLEANING, AND REMOVAL OF THE VARIOUS SEDIMENT CONTROL MEASURES SHALL BE INCLUDED IN THE VARIOUS EROSION CONTROL ITEMS.
- ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE PER MDOT STANDARD DETAILS. "P" DENOTES PERMANENT MEASURE AND "T" DENOTES TEMPORARY MEASURE. SOIL EROSION CONTROL PLANS DENOTE MINIMUM EROSION MEASURES REQUIRED AS DESCRIBED BELOW.
- ## DENOTES TEMPORARY SEEDING. TEMPORARY SEEDING SHALL BE PLACED AT LOCATIONS DETERMINED BY THE ENGINEER IN THE FIELD AND SHALL INCLUDE CEREAL RYE SEED APPLIED AT A RATE OF 70 LB/ACRE AND MULCH.
- 20T DENOTES INLET PROTECTION FABRIC DROP. SHALL BE INSTALLED AT EXISTING AND PROPOSED STORM SEWER INLETS TO PROVIDE SETTLING AND FILTERING OF SILT-LADEN WATER PRIOR TO ENTRY INTO THE DRAINAGE SYSTEM.
- 33T DENOTES MULCH BLANKET OR MATTING. SHALL BE NORTH AMERICAN GREEN DS150, OR APPROVED EQUAL. MULCH BLANKETS SHALL BE PLACED ON ALL 1:3 SLOPES OR GREATER, IN AND AROUND DITCH BOTTOMS WHERE THERE IS NO BIOSWALE BY CONTRACTOR RESPONSIBLE FOR RESTORING THAT AREA.

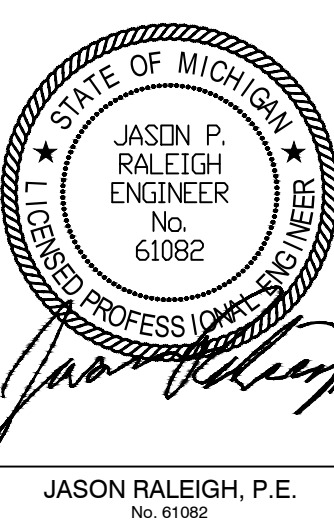


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PLANS PREPARED BY:



DRAWN: BD/EAG
CHECKED: JPR/WLP



No.	DATE	BY	ISSUED FOR:
1	02/07/2023	WP	PRE-SITE PLAN REVIEW
2	03/14/2023	WP	VARIANCE
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4	10/19/2023	WP	PRE-SITE PLAN RESUBMITTAL
5	03/15/2024	WP	SITE PLAN SUBMITTAL

EX CONDITIONS - DEMO PHASE 1
KALAMAZOO MULTIFAMILY
KALAMAZOO REALTY HOLDINGS, LLC
3625 W MICHIGAN
SECTION 19, T2S, R1W

SHEET TITLE:
PROJECT:
CLIENT:
SITE ADDRESS:
SITE SECTION:

JOB NUMBER
23169001

DATE
03/15/2024

SHEET NUMBER
C1.0

DEMOLITION NOTES

- ALL WORK SHALL CONFORM TO ALL LOCAL, STATE AND FEDERAL LAWS, RULES AND REGULATIONS IN FORCE AT TIME OF CONSTRUCTION.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS, PERMIT COSTS, TAP FEES, METER DEPOSITS, PERMANENT UTILITY APPLICATIONS, BONDS, AND OTHER FEES REQUIRED FOR PROPOSED WORK. THIS SHALL INCLUDE, BUT SHALL NOT BE LIMITED TO THOSE REQUIRED BY THE CITY OF KALAMAZOO, MICHIGAN AND KALAMAZOO COUNTY.
- CONTACT MISS DIG "811" FOR LOCATION OF UNDERGROUND UTILITIES A MINIMUM OF 48 HOURS BEFORE COMMENCING EXCAVATION WORK. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO ARE NOT PART OF THE "MISS DIG" ALERT SYSTEM. THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS IN A MANNER AS TO ENSURE THAT THOSE UTILITIES NOT REQUIRING RELOCATION WILL NOT BE DISTURBED.
- DEMOLISH & REMOVE ALL EXISTING SITE FEATURES AS REQUIRED.
- ALL SOIL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO DEMOLITION.
- ALL EXCAVATION SHALL BE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS AND GEOTECHNICAL REPORT FOR THIS SITE.
- ALL EXISTING ELEVATIONS ARE TO BE VERIFIED AND ACCEPTED AS SHOWN PRIOR TO COMMENCEMENT OF WORK.
- CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID TRACKING SOIL ONTO ADJACENT ROADWAYS. CONTRACTOR SHALL SWEEP IMMEDIATELY IF OCCURS.
- ANY DISTURBED AREA WHICH WILL BE LEFT UNWORKED 15 DAYS OR LONGER MUST BE SEEDED TO ESTABLISH VEGETATION FOR TEMPORARY STABILIZATION. BASINS TO BE SEEDED AND MULCH BLANKETS APPLIED IMMEDIATELY TO PROVIDE A STABLE BASE AND AVOID EXCESSIVE EROSION.
- REVIEW ALL THE REMOVALS AND PROTECTION WITH OWNER PRIOR TO COMMENCING CONSTRUCTION. INSTALL TEMPORARY SNOW FENCE AROUND ALL TREES REQUIRING PROTECTION. SNOW FENCE SHALL BE PLACED AT EDGE OF DRIP LINE.
- SAWCUT ALL CURB, SIDEWALK, AND PAVEMENTS PRIOR TO REMOVAL. ADDITIONAL SAWCUT MAY BE NECESSARY PRIOR TO REPLACEMENT TO ENSURE CLEAN EDGE.
- ALL REMOVALS SHALL BE TAKEN OFF-SITE AND DISPOSED OF PROPERLY. NO STOCKPILE OR BURNING OF DEBRIS IS ALLOWED.
- ALL REMOVALS SHALL BE TO THE LIMITS INDICATED ABOVE UNLESS OTHERWISE DIRECTED BY THE ENGINEER. UNAUTHORIZED REMOVALS AND SUBSEQUENT REPLACEMENT SHALL BE AT THE CONTRACTOR'S EXPENSE.
- REMOVE, STORE, AND RESET ANY EXISTING SIGNS AS DIRECTED BY THE ENGINEER/OWNER.
- REMOVE ALL TREES TO THE CLEARING LIMITS AS SHOWN. REMOVE ALL EXISTING TREES, STUMPS AND BRUSH FROM THE SITE AS NECESSARY TO CONSTRUCT THE IMPROVEMENTS.
- THE CONTRACTOR SHALL DEMOLISH AND REMOVE ANY ITEMS REMAINING FROM THE EXISTING BUILDING, IN ITS ENTIRETY, INCLUDING WALLS, FOUNDATIONS AND FOOTINGS. ALL BUILDING DRAINS AND UTILITY LEADS SHALL BE LOCATED AND PROPERLY PLUGGED. UTILITY LEAD WORK SHALL BE COORDINATED WITH THE APPROPRIATE UTILITY COMPANY.
- BACKFILL EXCAVATED AREAS WITH CLEAN GRANULAR FILL COMPACTED TO 95% OF THE MATERIAL UNIT WEIGHT BY MODIFIED PROCTOR.
- CONTROL SHALL BE MAINTAINED OVER THE SITE AND OPERATION TO ELIMINATE HAZARDS TO THE PUBLIC. NAILS OR OTHER TIRE PUNCTURING ITEMS SHALL NOT BE DROPPED ON STREETS, ALLEYS AND ADJACENT PROPERTY. PUBLIC STREETS, CURBS AND SIDEWALKS SHALL BE PROTECTED FROM DAMAGE. THE PERSON ENGAGED IN THE DEMOLITION WORK SHALL BE LIABLE FOR ANY AND ALL DAMAGE TO CURBS, STREETS, SIDEWALKS AND OTHER PUBLIC OR PRIVATE PROPERTY AND FOR ANY BODILY INJURY OCCURRING AS A RESULT OF THE DEMOLITION WORK.

LEGEND

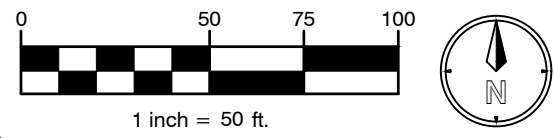
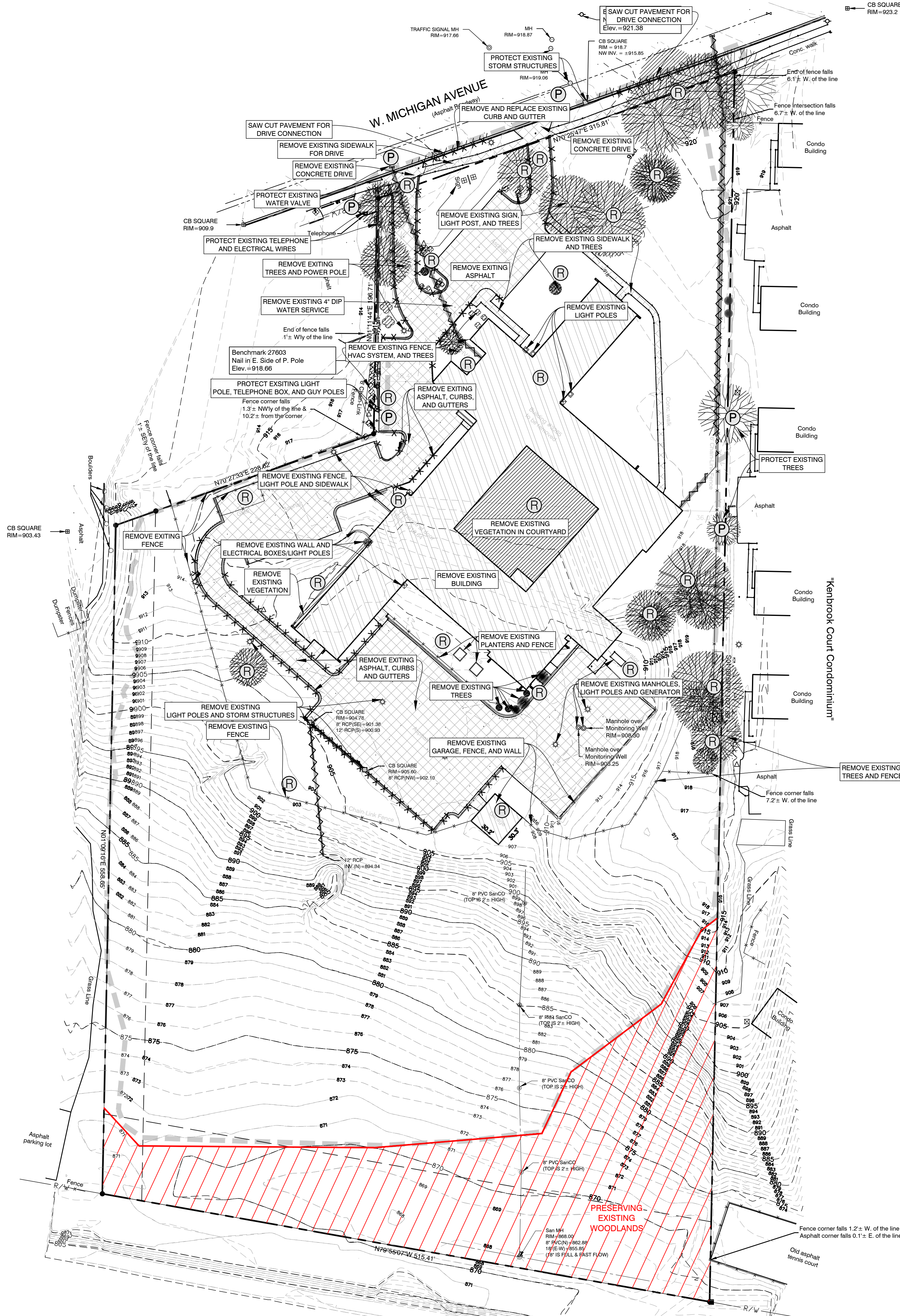
- PAVEMENT REMOVAL
- BUILDING REMOVAL
- SAWCUT
- TREE REMOVAL
- REMOVE
- PROTECT
- LIMITS OF CONSTRUCTION
- CURB & GUTTER REMOVAL
- UTILITY LINE REMOVAL

STORM STRUCTURE INFORMATION

- EX-CB-1
RIM = 904.78'
INV SE = 8" RCP (INV. = 901.38')
INV S = 12" RCP (INV. = 900.93')
- EX-CB-2
RIM = 905.60'
INV NW = 8" RCP (INV. = 902.10')
- EX-CB-3
RIM = 918.70'
INV NW = ±915.85'
- EX-CB-4
RIM = 923.20'
- EX-CB-5
RIM = 903.43'
- EX-MH-3
RIM = 908.25'
- EX-MH-4
RIM = 908.30'
- EX-MH-5
RIM = 919.06'
- EX-MH-6
RIM = 918.87'
- EX-MH-7
RIM = 918.90'

SANITARY STRUCTURE INFORMATION

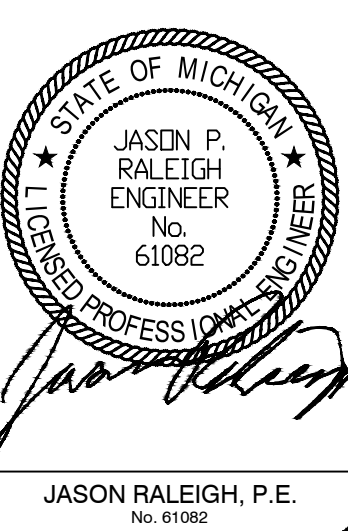
- EX-MH-A
RIM = 868.00'
INV N = 8" PVC (INV. = 862.88')
INV E-W = 18" (INV. = 855.85')
18" IS FULL & FAST FLOW



PLANS PREPARED BY:



DRAWN: BD/EAG
CHECKED: JPR/WLP



JASON RALEIGH, P.E.
No. 61082

No.	ISSUED FOR:	DATE	BY:
1	PRE-SITE PLAN REVIEW	02/07/2023	WP
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5	SITE PLAN SUBMITTAL	03/15/2024	WP

OVERALL EX. CONDITIONS & DEMO PLAN

KALAMAZOO MULTIFAMILY
KALAMAZOO REALTY HOLDINGS, LLC
3625 W MICHIGAN
SECTION 19, T2S, R11W

SHEET TITLE:
PROJECT:
CLIENT:
SITE ADDRESS:
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JOB NUMBER
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C1.1



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SITE DATA

- PROPERTY INFORMATION:
PARCEL #S: PARCEL 1: 06-19-463-001
PARCEL 2: 06-19-454-002
PARCEL 3: 06-19-454-001

SITE AREA: 411,971 SF (9.46 AC)

OWNER: KALAMAZOO REALTY HOLDINGS, LLC
40600 ANN ARBOR RD, E. STE. 201
ANN ARBOR, MI 48170
- ZONING:
PROPERTY CURRENTLY ZONED:
RM-15, RESIDENTIAL, MULTI-DWELLING
ABUTTING PROPERTY CURRENTLY ZONED:
NORTH: CN-1 - COMMERCIAL, NEIGHBORHOOD &
RS-5 - RESIDENTIAL, SINGLE DWELLING
SOUTH: CC - COMMUNITY COMMERCIAL
EAST: RM-15 - RESIDENTIAL, MULTI-DWELLING
WEST: CN-1 - COMMERCIAL, NEIGHBORHOOD; PUD

PROPOSED LAND USE = MULTI-UNIT DWELLING
*VARIANCE TO ALLOW RESIDENTIAL OCCUPANCY IN THE
GROUND LEVEL FACING ROAD FRONTAGE
- SETBACKS
FRONT = 20'
SIDES = 20'
REAR = 5'
- PARKING:
REQUIRED PARKING PER ORDINANCE
STUDENTS: 2 PARKING SPACES PER UNIT
75 STUDENT UNITS * 2 = 150 SPACES
MULTI-FAMILY: 1 PARKING SPACE PER UNIT
160 MULTI-FAMILY UNITS * 1 = 160 SPACES
TOTAL PARKING REQUIRED (MAX 10% REQ):
MIN OF 310 SPACES AND MAX OF 341 SPACES

PROPOSED PARKING:
STANDARD (9'X18') 321
ADA COMPLIANT 8
TOTAL 329
- BUILDING:
THREE-STORY - 235 UNIT
UNIT MIX PLANNED FOR:
118 - STUDIO
79 - 1 BEDROOM
38 - 2 BEDROOM
MAXIMUM HEIGHT: 35-FT
MIN. LOT AREA: 4,000 SFT
MIN. LOT AREA PER DWELLING UNIT: 1,500 SFT
MIN. LOT WIDTH: 33-FT
- IMPERVIOUS AREA:
231,213 SFT / 411,971 SFT = 56%
MAXIMUM IMPERVIOUS AREA = 60%

7. DWELLING UNIT DENSITY:
235 UNITS / 9.46 AC = 24.8 UNITS/AC

SITE PLAN NOTES

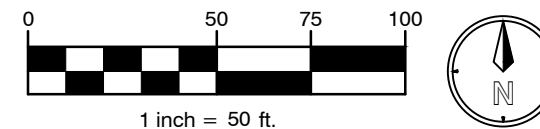
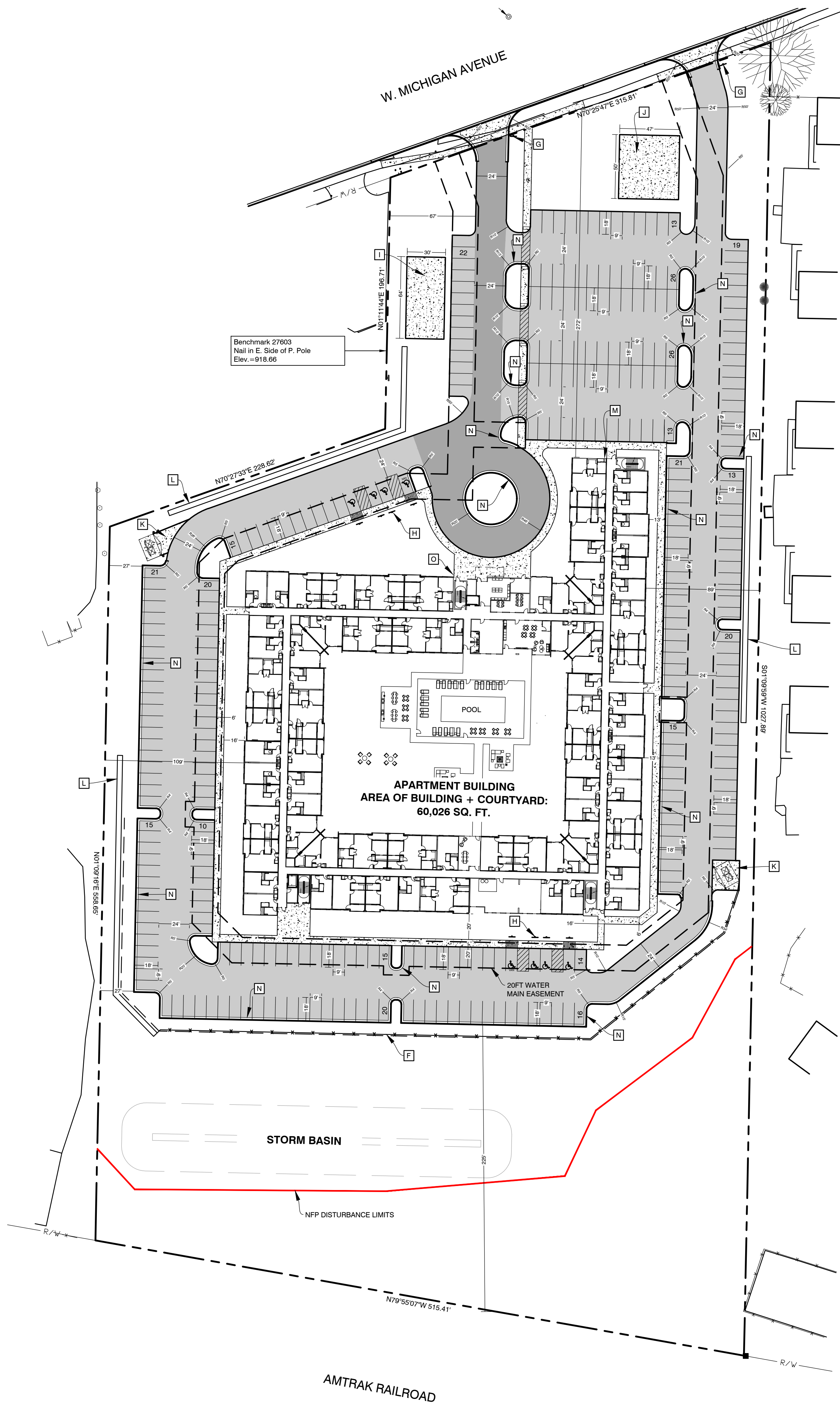
- [A] BITUMINOUS PAVEMENT (SEE DETAIL, SHEET C5.0)
[B] INTEGRAL CURB/WALK (SEE DETAIL, SHEET C5.0)
[C] AT-GRADE RAMP (SEE GRADING PLAN)
[D] DOWNSPOUT (TYP.)
[E] 4" PAINTED PARKING LOT MARKING/ STRIPING (TYP.)
[F] 6" VINYL COATED CHAIN LINK FENCE (SEE ARCH PLANS)
[G] STOP SIGNS (2)
[H] ADA SIGNS (8) (SEE DETAIL, SHEET C5.0)
[I] PICKLEBALL COURT
[J] BASKETBALL COURT
[K] 6" CONCRETE PAD/LOADING AREA FOR 18' x 18' (MIN.)
DUMPSTER. AREA FOR (2) STD DUMPSTER (SEE DETAIL
SHEET).
[L] REDI-ROCK GRAVITY RETAINING WALL OR APPROVED
EQUAL.
[M] 24-INCH ADDRESS NUMBERS ON BLDG. COORDINATE
WITH CITY OF KALAMAZOO FIRE DEPARTMENT.
[N] CONCRETE CURB & GUTTER (SEE DETAIL SHEET)
[O] KNOX BOX, SEE NOTES THIS SHEET.

KNOX BOX & ADDRESSING REQUIREMENTS

- CONTACT CITY OF KALAMAZOO FIRE DEPARTMENT TO COORDINATE AT
269-337-8260.
- INSTALLATION OF KNOX BOX. THE SIZE SHALL BE A "3200" SERIES OR LARGER.
THE VAULT SHALL BE MOUNTED UNOBSTRUCTED AND VISIBLE APPROXIMATELY
FIVE FEET (60") FROM GROUND LEVEL NEAR A MAIN ACCESS DOOR. DEVICES
MAY ONLY BE PURCHASED AT [HTTPS://WWW.KNOXBOX.COM](https://www.knoxbox.com). FURTHER
INFORMATION IS AVAILABLE AT
[HTTPS://KALAMAZOOPUBLICSAFETY.ORG/FIRE/MARSHAL/](https://kalamazoopublicsafety.org/fire/marshal/)
- THE ADDRESS NUMBERS AND STREET NAME SHALL CONTRAST WITH THEIR
BACKGROUND.
- ADDRESS NUMBERS SHALL BE AT LEAST 24" HIGH.
- ADDRESS LETTERS INDICATING STREET NAMES SHALL BE 6" TO 24", HEIGHT TO
BE APPROVED.
- BUILDING IDENTIFICATION SHALL BE PLACED IN A POSITION THAT IS PLAINLY
LEGIBLE AND VISIBLE FROM ANY STREET OR ROAD FRONTING THE PROPERTY.
- THOSE PROPERTIES FRONTING MORE THAN ONE STREET OR ROAD SHALL
IDENTIFY THE ADDRESS BY BOTH NUMBER AND STREET NAME ON EACH SIDE OF
ROAD FRONTAGE.

GENERAL NOTES

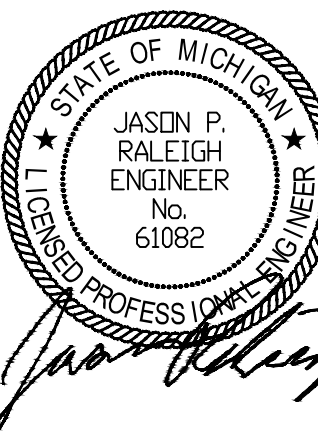
- DIMENSIONS TAKE PRECEDENCE OVER SCALE. CONTRACTOR
TO VERIFY ALL DIMENSIONS IN FIELD.
- IF ANY ERRORS, DISCREPANCIES, OR OMISSIONS BECOME
APPARENT, THESE SHALL BE BROUGHT TO THE ATTENTION
OF THE ARCHITECT/ ENGINEER PRIOR TO CONSTRUCTION OF
ANYTHING AFFECTED SO THAT CLARIFICATION OR REDESIGN
MAY OCCUR.
- ALL CURB RADII AND DIMENSIONS ARE TO FACE OF CURB.
CURB TO BE PROVIDED WHERE SHOWN AND INTEGRAL WITH
SIDEWALK AT PAVING EDGE.
- SLOPE GRADES UNIFORMLY BETWEEN ELEVATIONS SHOWN.
NOMINAL GRADING, SLOPE SIDEWALKS AWAY FROM BUILDING
AT 1/4" PER FOOT ON ENTRY WALK.



LEGEND

- HEAVY DUTY PAVEMENT
(SEE DETAIL ON C5.0)
- LIGHT DUTY PAVEMENT
(SEE DETAIL ON C5.0)
- CONCRETE PAVEMENT AND SIDEWALK
(SEE DETAIL ON C5.0)

PLANS PREPARED BY:

DRAWN: BD/EAG
CHECKED: JPR/WLPJASON RALEIGH, P.E.
No. 61082

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OVERALL SITE LAYOUT
KALAMAZOO MULTIFAMILY
KALAMAZOO REALTY HOLDINGS, LLC
3625 W MICHIGAN
SECTION 19, T2S, R11W

SHEET TITLE:
PROJECT:
CLIENT:
SITE ADDRESS:
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JOB NUMBER
23169001DATE
03/15/2024

SHEET NUMBER

C2.0



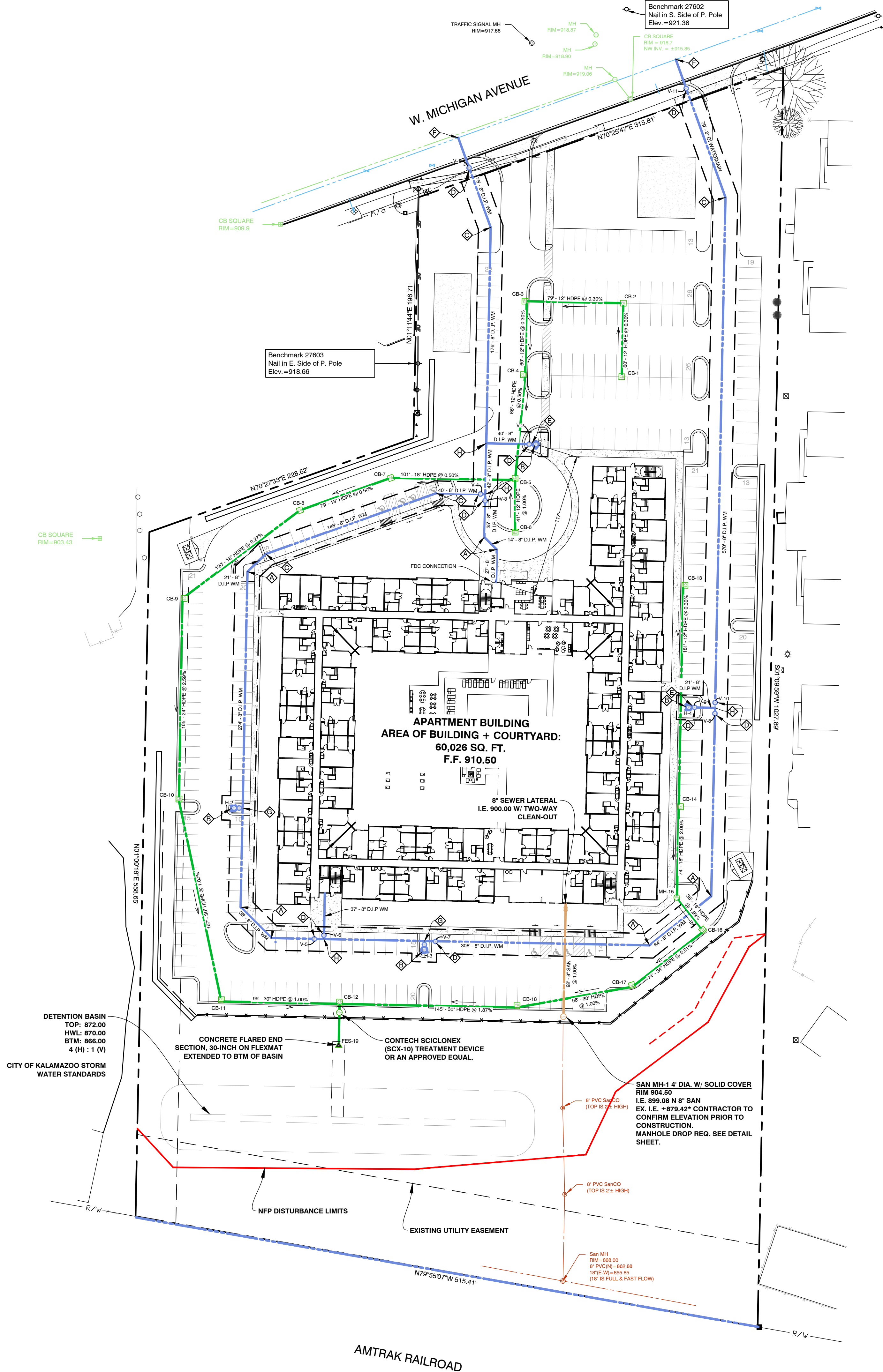
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AREA. FIELD WORK PERFORMED BY: MOSTROM & ASSOC., INC.

SITE MATERIALS & CONSTRUCTION NOTES

1. SOILS EXPOSED IN THE BASE OF ALL SATISFACTORY FOUNDATION EXCAVATIONS SHOULD BE PROTECTED AGAINST ANY DETRIMENTAL CHANGES IN CONDITION SUCH AS FROM DISTURBANCE, RAIN AND FREEZING. SURFACE RUN-OFF WATER SHOULD BE DRAINED AWAY FROM THE EXCAVATION AND NOT ALLOWED TO POND. IF POSSIBLE, ALL FOOTING CONCRETE SHOULD BE POURED THE SAME DAY THE EXCAVATION IS MADE. IF THIS IS NOT PRACTICAL, THE FOOTING EXCAVATIONS SHOULD BE ADEQUATELY PROTECTED.
2. REMOVE ALL SUBGRADE GRADE MATERIAL THAT MAY BE SOFTENED BY RAINS, FREEZING, OR CONSTRUCTION TRAFFIC, ETC. AND REPLACE WITH COMPACTED GRANULAR FILL.
3. STORM SEWER SHALL BE CORRUGATED HDPE PIPE WITH SMOOTH INTERIOR WALL, BY ADS OR EQUAL. LEACHING BASINS AND MANHOLES ARE TO BE REINFORCED CONCRETE WITH RIM AND SLOTTED GRATING (AS SHOWN). STORM SEWER & LEACHING BASINS ARE TO BE WRAPPED WITH FILTER FABRIC.
4. SANITARY SEWER PIPE MAY BE PVC SDR 3034 MATERIAL.
5. ALL WATER SERVICE LINES SHALL BE D.I. PIPE WITHIN 5' OF BUILDING, WITH COMPRESSION FITTINGS OR MECHANICAL FITTINGS OTHER THAN FLARED ENDS. PROVIDE 5' COVER FROM FINISHED GRADE.
6. PROVIDE MINIMUM 5' COVER FROM FINISHED GRADE FOR ALL WATER SERVICE LINES, IF COVER CANNOT BE MAINTAINED DUE TO SITE CONDITIONS OR INVERT ELEVATIONS THE ENTIRE LENGTH OF THE EXTERIOR PIPE MUST BE PROTECTED WITH 2" RIGID INSULATION BOARD ON THE TOP AND SIDES.
7. PROVIDE MINIMUM 5' COVER FROM FINISHED GRADE FOR ALL SANITARY SEWER LINES, IF COVER CANNOT BE MAINTAINED DUE TO SITE CONDITIONS OR INVERT ELEVATIONS THE ENTIRE LENGTH OF THE EXTERIOR PIPE MUST BE PROTECTED WITH 2" RIGID INSULATION BOARD ON THE TOP AND SIDES.
8. MAINTAIN 10 FOOT MINIMUM HORIZONTAL SEPARATION BETWEEN THE SEWER AND WATER MAIN UTILITIES. PROVIDE 18" MINIMUM VERTICAL SEPARATION WHERE UTILITIES CROSS.
9. THE CONTRACTOR SHALL INSTALL A PEDESTRIAN FENCE AROUND ALL EXCAVATIONS TO BE LEFT OPEN OVERNIGHT AS REQUIRED.
10. EXTERIOR CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 4000 PSI AND SHALL HAVE LIMESTONE AGGREGATE AND SHALL HAVE 4 - 6 % AIR ENTRAINMENT WITH A BROOM FINISH.
11. EXPANSION JOINTS IN CONCRETE PAVEMENT AND WALLS SHALL BE 1/2" ASPHALT IMPREGNATED FULL DEPTH 40' O.C. MAXIMUM & AT SIDEWALK INTERSECTIONS. CRACK CONTROL SCORING AT SIDEWALK WIDTH DIMENSION AND @ 10'-0" O.C. IN DRIVES.

GENERAL NOTES

1. ALL WORK SHALL CONFORM TO ALL LOCAL, STATE AND FEDERAL LAWS, RULES AND REGULATIONS IN FORCE AT TIME OF CONSTRUCTION.
2. ELECTRICAL WORK SHALL BE PERFORMED BY A STATE OF MICHIGAN LICENSED ELECTRICIAN ACCORDING TO THE N.F.P.A. NATIONAL ELECTRICAL CODE AS MODIFIED BY THE STATE OF MICHIGAN. FURNISH AND INSTALL ALL MATERIALS AND LABOR TO PROVIDE A COMPLETE WORKING SYSTEM.
3. ALL PLUMBING WORK SHALL BE PERFORMED BY A STATE OF MICHIGAN LICENSED PLUMBER ACCORDING TO THE INTERNATIONAL PLUMBING CODE AS MODIFIED BY THE STATE OF MICHIGAN AND LOCAL HEALTH DEPARTMENT. FURNISH AND INSTALL ALL MATERIALS AND LABOR TO PROVIDE A FULL WORKING SYSTEM.
4. ALL MECHANICAL WORK SHALL BE PERFORMED ACCORDING TO THE INTERNATIONAL MECHANICAL CODE AS MODIFIED BY THE STATE OF MICHIGAN AND THE MICHIGAN ENERGY CODE. FURNISH AND INSTALL ALL MATERIALS AND LABOR TO PROVIDE A FULL WORKING SYSTEM.
5. ALL WORK SHALL CONFORM TO THE MICHIGAN HANDICAPPED ACCESSIBILITY CODE AND THE AMERICANS WITH DISABILITIES ACT.
6. WATER SERVICE PRESSURE TESTING AND CHLORINATION SHALL BE PER EGLE AND THE CITY OF KALAMAZOO REQUIREMENTS.
7. SANITARY SEWER INSTALLATION AND TESTING MUST MEET THE REQUIREMENTS OF THE CITY OF KALAMAZOO AND EGLE.
8. ALL REGULATORY SIGNAGE (IF SPECIFIED) SHALL BE PER THE MICHIGAN DEPARTMENT OF TRANSPORTATION.
9. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS, PERMIT COSTS, TAP FEES, METER DEPOSITS, PERMANENT UTILITY APPLICATIONS, BONDS, AND OTHER FEES REQUIRED FOR PROPOSED WORK.
10. CONTACT MISS DIG "811" FOR LOCATION OF UNDERGROUND UTILITIES A MINIMUM OF 48 HOURS BEFORE COMMENCING EXCAVATION WORK. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO ARE NOT PART OF THE "MISS DIG" ALERT SYSTEM. THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS IN A MANNER AS TO ENSURE THAT THOSE UTILITIES NOT REQUIRING RELOCATION WILL NOT BE DISTURBED.
11. ANY SANITARY SEWER, SANITARY SEWER SERVICE LEADS, WATER MAIN, WATER SERVICES, OR STORM SEWER WHICH IS DAMAGED BY THE CONTRACTOR DURING HIS OPERATIONS SHALL BE REPAIRED TO THE OWNERS SATISFACTION, AND AT THE CONTRACTORS EXPENSE. IF ANY ELEMENTS OF THE SANITARY SEWER SYSTEM ARE DAMAGED AND NEED REPAIRED, IT MUST MEET THE CITY OF KALAMAZOO SPECIFICATIONS.
12. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR THE ELECTRICAL TRANSFORMER PAD PER THE UTILITY COMPANY SPECIFICATIONS.
13. THE TELEPHONE UTILITY COMPANY SHALL PROVIDE UNDERGROUND TELEPHONE TO THE BUILDING AT THE OWNERS EXPENSE.
14. REFER TO ELECTRICAL DRAWINGS FOR UNDERGROUND ELECTRICAL REQUIREMENTS FOR SITE LIGHTING & SITE DETAILS SHEETS FOR THE FIXTURE AND POLE SPECIFICATIONS.
15. DESIGN, INSTALLATION AND SPECIFICATION FOR IMPROVEMENTS RELATED TO GAS, TELEPHONE, ELECTRIC AND CABLE TELEVISION SERVICES SHALL BE COORDINATED BY THE CONTRACTOR.
16. CONTRACTOR SHALL COORDINATE TELEPHONE, ELECTRIC, AND CABLE TELEVISION CONDUITS WITH THE APPROPRIATE UTILITY PRIOR TO PAVEMENT INSTALLATION.
17. CONTRACTOR IS TO UNCOVER AND CONFIRM ALL TAP LOCATIONS. LOCATION DISCREPANCIES ARE TO BE BROUGHT TO THE ENGINEERS ATTENTION FOR RESOLUTION.
18. THE CONTRACTOR IS TO PROVIDE THE WATER SERVICE PIPING FROM THE BUILDING TO THE EXISTING WATERMAIN. THE CONTRACTOR SHALL MAKE THE CONNECTION TO THE SHUT OFF VALVE. THE CONTRACTOR SHALL COORDINATE SERVICES WITH THE CITY OF KALAMAZOO WATER DEPARTMENT.
19. CONTRACTOR/OWNER SHALL OBTAIN UTILITY CONNECTION PERMITS AND SETTLE APPLICABLE UTILITY ASSESSMENTS PRIOR TO EXTENSION OF PUBLIC UTILITIES ONSITE.
20. MANHOLE AND CATCH BASIN STRUCTURES SHALL BE PRECAST AND HAVE A MAXIMUM OF 2 ADJUSTING RINGS FOR FINISH GRADE ADJUSTMENT. STORM STRUCTURES MUST ALL HAVE A SUMP OF TWO FEET.
21. ALL WATER MAIN TO HAVE A BURIAL DEPTH AS REQUIRED BY THE EGLE FOR THE SPECIFIC REGION OF WORK IN CITY OF KALAMAZOO.
22. DEMOLISH & REMOVE ALL EXISTING SITE FEATURES AS REQUIRED.
23. THE CONTRACTOR SHALL REVIEW THE GEOTECHNICAL REPORT.
24. DRIVEWAY LAYOUT AND CONNECTION TO W MICHIGAN AVE. SHALL COMPLY WITH ALL ASPECTS OF THE CITY OF KALAMAZOO DRIVE PERMIT.



WATER MAIN FITTING SCHEDULE

FITTING	DESCRIPTION	TOTAL
A	8" 45° BEND	7
B	HYDRANT ASSEMBLY	4
C	8" 22.5° BEND	4
D	8" GATE VALVE	11
E	8" x 6" REDUCER	2
F	8" x 8" LIVE TAP	2
G	8" x 8" x 6" TEE	2
H	8" x 8" x 8" TEE	4

PROPOSED STORM STRUCTURE TABLE

CB-1, 4' DIA. EJIW 5105 RIM = 908.69 12" HDPE N	904.81	CB-10, 4' DIA. EJIW 7075, TYPE M1 RIM = 903.88 24" HDPE N 30" HDPE S	898.20 897.94
CB-2, 4' DIA. EJIW 5105 RIM = 908.51 12" HDPE S 12" HDPE W	904.63 904.63	CB-11, 4' DIA. EJIW 7075, TYPE M1 RIM = 901.76 30" HDPE N 30" HDPE E	896.26 896.26
CB-3, 4' DIA. EJIW 7075, TYPE M1 RIM = 910.41 12" HDPE S 12" HDPE E	904.39 904.39	CB-12, 4' DIA. EJIW 7075, TYPE M1 RIM = 902.45 30" HDPE W 30" HDPE S 30" HDPE E	895.30 892.80 895.30
CB-4, 4' DIA. EJIW 7075, TYPE M1 RIM = 910.48 12" HDPE S 12" HDPE N	904.21 904.21	CB-13, 4' DIA. EJIW 7075, TYPE M1 RIM = 908.11 12" HDPE S	903.91
CB-5, 4' DIA. EJIW 7075, TYPE M1 RIM = 908.36 12" HDPE S 18" HDPE W 12" HDPE N	903.95 903.70 903.95	CB-14, 4' DIA. EJIW 7075, TYPE M1 RIM = 908.21 12" HDPE N 18" HDPE S	903.37 903.12
CB-6, 4' DIA. EJIW 7075, TYPE M1 RIM = 908.36 12" HDPE N	904.36	MH-15, 4' DIA. EJIW 1020, TYPE A, SOLID RIM = 908.85 18" HDPE N 18" HDPE SE	901.64 901.64
CB-7, 4' DIA. EJIW 5105 RIM = 908.38 18" HDPE E 18" HDPE W	903.20 903.20	CB-16, 4' DIA. EJIW 7075, TYPE M1 RIM = 908.02 18" HDPE NW 24" HDPE SW	900.94 900.69
CB-8, 4' DIA. EJIW 5105 RIM = 908.13 18" HDPE E 18" HDPE SW	902.80 902.80	CB-17, 4' DIA. EJIW 7075, TYPE M1 RIM = 905.67 24" HDPE NE 30" HDPE W	899.21 898.96
CB-9, 4' DIA. EJIW 7075, TYPE M1 RIM = 907.82 18" HDPE NE 24" HDPE S	902.48 902.48	CB-18, 4' DIA. EJIW 7075, TYPE M1 RIM = 903.89 30" HDPE E 30" HDPE W	898.00 898.00

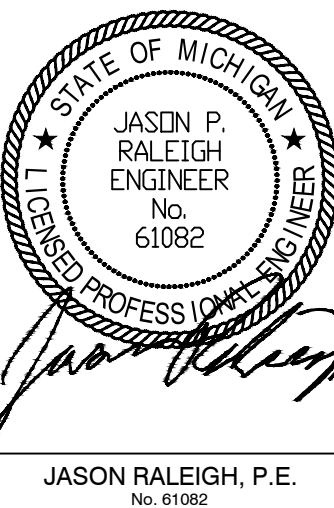


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PLANS PREPARED BY:



DRAWN: BD/EAG
CHECKED: JPR/WLP



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UTILITY PLAN
KALAMAZOO MULTIFAMILY
KALAMAZOO REALTY HOLDINGS, LLC
3625 W MICHIGAN
SECTION 19, T2S, R1W

SHEET TITLE:
PROJECT:
CLIENT:
SITE ADDRESS:
SITE SECTION:

JOB NUMBER
23169001

DATE
03/15/2024

SHEET NUMBER
C3.0

GRADING NOTES

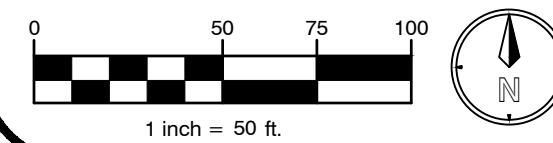
1. ALL WORK SHALL CONFORM TO ALL LOCAL, STATE AND FEDERAL LAWS, RULES AND REGULATIONS IN FORCE AT TIME OF CONSTRUCTION.
2. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS, PERMIT COSTS, TAP FEES, METER DEPOSITS, PERMANENT UTILITY APPLICATIONS, BONDS, AND OTHER FEES REQUIRED FOR PROPOSED WORK. THIS SHALL INCLUDE, BUT SHALL NOT BE LIMITED TO THOSE REQUIRED BY THE MICHIGAN DEPARTMENT OF TRANSPORTATION.
3. CONTACT MISS DIG "811" FOR LOCATION OF UNDERGROUND UTILITIES A MINIMUM OF 48 HOURS BEFORE COMMENCING EXCAVATION WORK. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO ARE NOT PART OF THE "MISS DIG" ALERT SYSTEM. THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS IN A MANNER AS TO ENSURE THAT THOSE UTILITIES NOT REQUIRING RELOCATION WILL NOT BE DISTURBED.
4. DEMOLISH & REMOVE ALL EXISTING SITE FEATURES AS REQUIRED.
5. MATCH EXISTING GRADES AROUND PERIMETER WITH SLOPES AS SHOWN.
6. ALL SPOT ELEVATIONS ARE TOP OF PAVEMENT GRADES AT EDGE OF METAL (EOM) UNLESS OTHERWISE NOTED.
7. ALL SOIL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO MASS GRADING.
8. ALL EARTHWORK SHALL BE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS AND GEOTECHNICAL REPORT.
9. ALL EXISTING ELEVATIONS ARE TO BE VERIFIED AND ACCEPTED AS SHOWN PRIOR TO COMMENCEMENT OF WORK.
10. CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID TRACKING SOIL ONTO ADJACENT ROADWAYS. CONTRACTOR SHALL SWEEP IMMEDIATELY IF OCCURS.
11. ANY DISTURBED AREA WHICH WILL BE LEFT UNWORKED 15 DAYS OR LONGER MUST BE SEEDED TO ESTABLISH VEGETATION FOR TEMPORARY STABILIZATION. BASINS TO BE SEEDED AND MULCH BLANKETS APPLIED IMMEDIATELY TO PROVIDE A STABLE BASE AND AVOID EXCESSIVE EROSION.

SOIL EROSION & SEDIMENT CONTROL NOTES

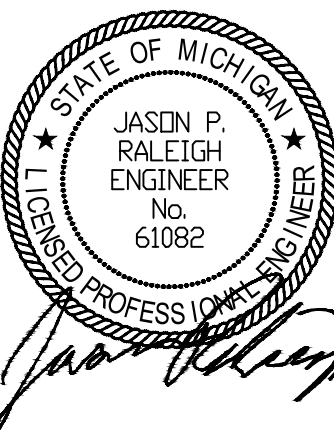
1. ALL CONSTRUCTION METHODS SHALL BE DONE IN COMPLIANCE WITH MDOT-EGLE. THE OWNER SHALL BE RESPONSIBLE FOR OBTAINING A "SOIL EROSION PERMIT" FROM THE GOVERNING AUTHORITY AND A "PERMIT BY RULE/NOTICE OF COVERAGE" FROM THE GOVERNING AUTHORITY. IF APPLICABLE, PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL REQUIREMENTS OF THE "SOIL EROSION PERMIT" AND FOR ALL CERTIFIED STORM WATER INSPECTION SERVICE REQUIRED BY THE "PERMIT BY RULE". EROSION CONTROL MEASURES SHOWN ON THE PLANS ARE THE MINIMUM REQUIREMENTS AND SHALL NOT RELIEVE THE CONTRACTOR'S RESPONSIBILITY FOR PROVIDING ALL REQUIRED EROSION CONTROL MEASURES.
 2. AVOID UNNECESSARY DISTURBING OR REMOVING OF EXISTING VEGETATED TOPSOIL OR EARTH COVER. THESE COVER AREAS ACT AS SEDIMENT FILTERS.
 3. ALL TEMPORARY SOIL EROSION PROTECTION SHALL REMAIN IN PLACE UNTIL REMOVAL IS REQUIRED FOR FINAL CLEAN UP AND APPROVAL.
 4. GEOTEXTILE SILT FENCE SHALL BE INSTALLED AS REQUIRED WHEN CROSSING CREEKS OR WHEN ADJACENT TO WETLANDS OR SURFACE WATER BODIES TO PREVENT SILTATION AND ELSEWHERE AS DIRECTED BY THE ENGINEER. SEEDING AND/OR SODDING SHALL BE INSTALLED ON CREEK BANKS IMMEDIATELY AFTER CONSTRUCTION TO PREVENT EROSION.
 5. MAINTENANCE, CLEANING, AND REMOVAL OF THE VARIOUS SEDIMENT CONTROL MEASURES SHALL BE INCLUDED IN THE VARIOUS EROSION CONTROL ITEMS.
- ## ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE PER (MDOT) STANDARD DETAILS. "P" DENOTES PERMANENT MEASURE AND "T" DENOTES TEMPORARY MEASURE. SOIL EROSION CONTROL PLANS DENOTE MINIMUM EROSION MEASURES REQUIRED AS DESCRIBED BELOW.
- 3P DENOTES PERMANENT SEEDING. ALL DISTURBED AREAS NOT PAVED OR GRAVELED SHALL BE RESTORED. PLACE TOPSOIL SURFACE, SALV. 3 INCH, MDOT SEEDING MIXTURE TUF APPLIED AT A RATE OF 220 LB/ACRE, FERTILIZER, CHEMICAL NUTRIENT, CL A APPLIED AT A RATE OF 228 LB/ACRE; MULCH AT A RATE OF 2 TON/ACRE AND MULCH ANCHORING. (APPLIES TO ENTIRE PROJECT)
- 3T DENOTES TEMPORARY SEEDING. TEMPORARY SEEDING SHALL BE PLACED AT LOCATIONS DETERMINED BY THE ENGINEER IN THE FIELD AND SHALL INCLUDE CEREAL RYE SEED APPLIED AT A RATE OF 70 LB/ACRE AND MULCH.
- 4T DENOTES DUST CONTROL. DUST CONTROL MAY BE REQUIRED ON THE SUBGRADE CONSTRUCTION AND WILL INCLUDE APPLYING FRESH WATER TO BE INCLUDED IN THE ITEM OF EMBANKMENT. DUST CONTROL ON THE AGGREGATE BASE COURSE WILL BE ACCOMPLISHED BY APPLYING FRESH WATER (INCLUDED IN THE ITEM OF AGGREGATE BASE, 8 INCH) AND APPLYING DUST PALLIATIVE, APPLIED, CACL₂ (TON) AS DIRECTED BY THE PROJECT ENGINEER.
- 8P DENOTES AGGREGATE COVER/PERMANENT PAVEMENT RESTORATION
- 14T DENOTES GRAVEL ACCESS APPROACH. APPROACH SHALL BE INSTALLED TO PROVIDE STABLE ACCESS TO ROADWAYS AND MINIMIZE DUST AND TRACKING OF MATERIALS ONTO PUBLIC STREETS AND HIGHWAYS. THE APPROACH SHALL BE A MINIMUM OF 12' WIDE, 6" DEEP, AND CONSIST OF 2"-4" AGGREGATE.
- 26T DENOTES TEMPORARY SILT FENCE. SILT FENCE SHALL BE INSTALLED AT CREEK CROSSINGS, ADJACENT TO ALL WETLANDS AND SURFACE WATERS, AND OTHER LOCATIONS AS DIRECTED BY THE ENGINEER. EACH SILT FENCE SHALL BE INSTALLED GENERALLY ALONG THE SAME CONTOUR ELEVATION.
- 29T DENOTES INLET PROTECTION FABRIC DROP. SHALL BE INSTALLED AT EXISTING AND PROPOSED STORM SEWER INLETS TO PROVIDE SETTLING AND FILTERING OF SILT LADEN WATER PRIOR TO ENTRY INTO THE DRAINAGE SYSTEM.
- 33T DENOTES MULCH BLANKET OR MATTING. SHALL BE NORTH AMERICAN GREEN DS150, OR APPROVED EQUAL. MULCH BLANKETS SHALL BE PLACED ON ALL 1:3 SLOPES OR GREATER, IN AND AROUND DITCH BOTTOMS WHERE THERE IS NO BIOSWALE BY CONTRACTOR RESPONSIBLE FOR RESTORING THAT AREA.

LEGEND

- — — — — LIMITS OF CONSTRUCTION
- X X — X X — SILT FENCE

REDI-ROCK
GRAVITY
RETAINING WALLREDI-ROCK
GRAVITY
RETAINING WALLAPARTMENT BUILDING
AREA OF BUILDING + COURTYARD:
60,026 SQ. FT.
F.F. 910.50DETENTION BASIN
TOP: 872.00
HWL: 870.00
BTM: 866.00
4 (H) : 1 (V)
CITY OF
KALAMAZOO STORM
WATER STANDARDSSan MH
RM = 855.00
6" PVC IN = 852.88
18" E W = 855.85
(18" IS FULL & FAST FLOW)

PLANS PREPARED BY:

DRAWN: BD/EAG
CHECKED: JPR/WLPJASON RALEIGH, P.E.
No. 61082

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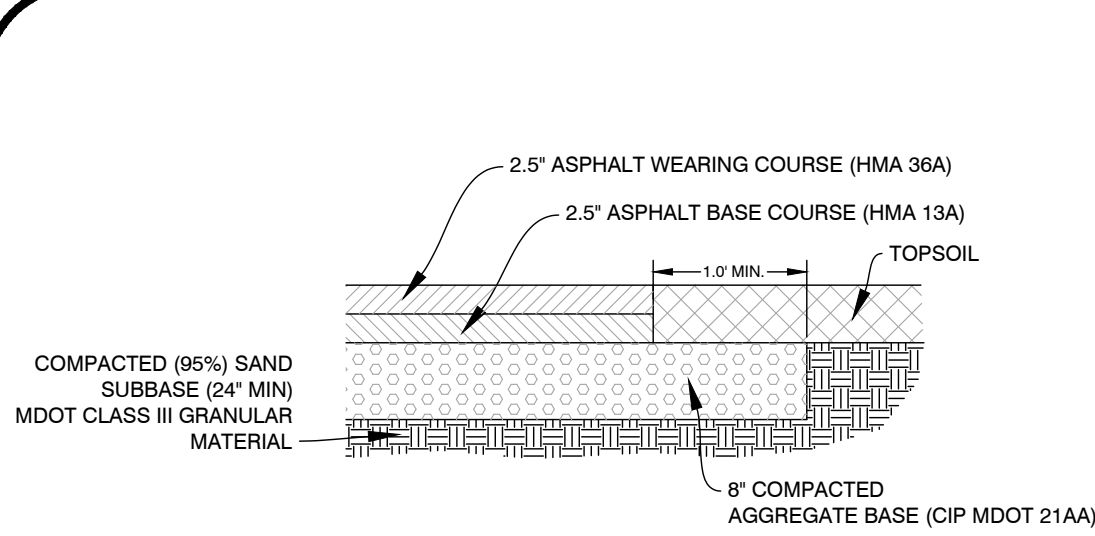
GRADING & SESC PLAN
KALAMAZOO MULTIFAMILY
KALAMAZOO REALTY HOLDINGS, LLC
3625 W MICHIGAN
SECTION 19, T2S, R11WSHEET TITLE:
PROJECT:
CLIENT:
SITE ADDRESS:
SITE SECTION:JOB NUMBER
23169001DATE
03/15/2024

SHEET NUMBER

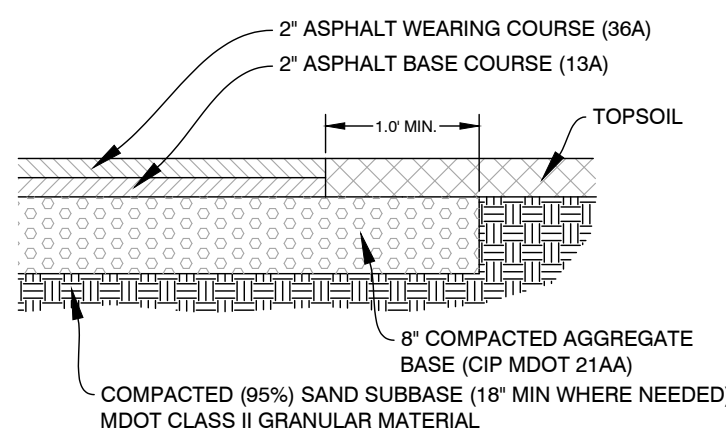
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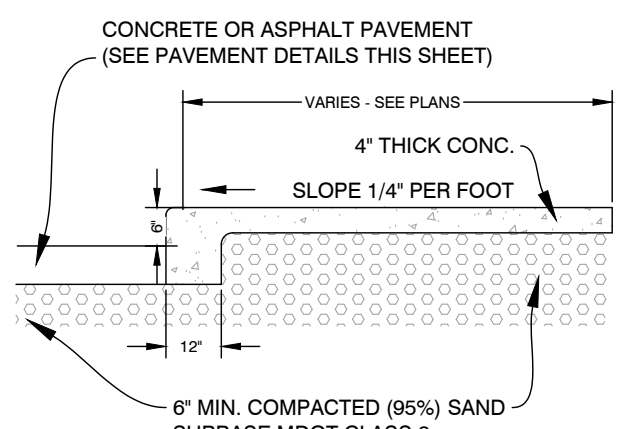
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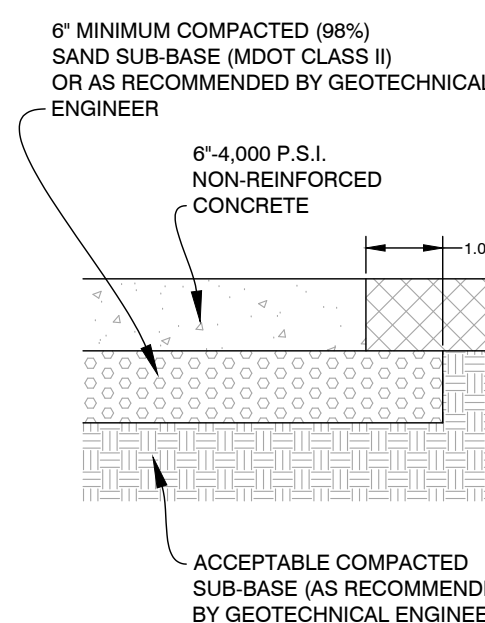
HEAVY DUTY ASPHALT SECTION
C5.0 - 030401 NOT TO SCALE



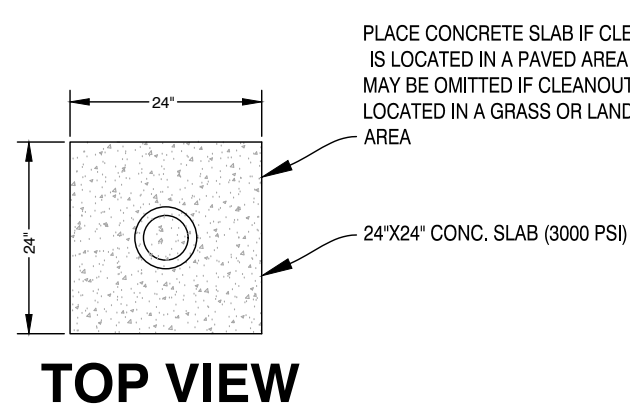
LIGHT DUTY ASPHALT SECTION
C5.0 - 030401 NOT TO SCALE



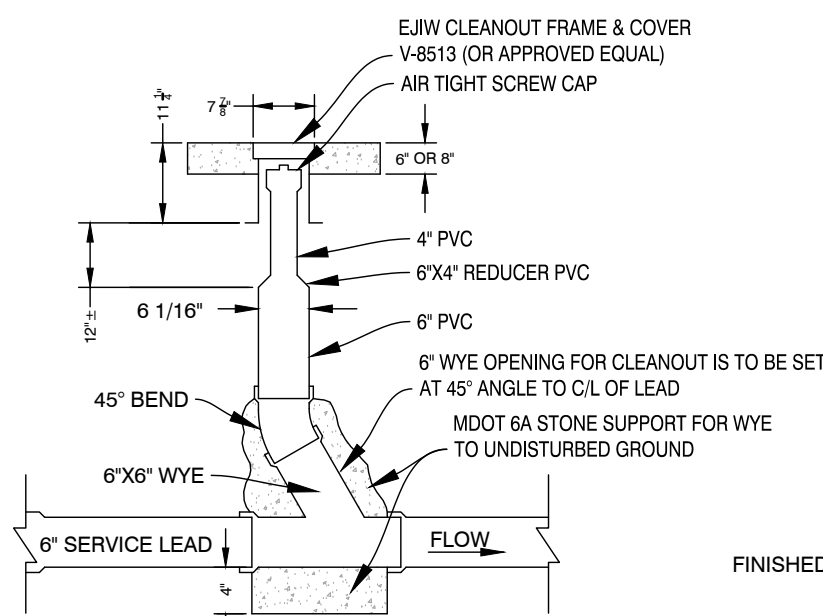
RAISED / INTEGRAL CURB WALK SECTION
C5.0 - 030303 NOT TO SCALE



CONC. PAVEMENT SECTION
C5.0 - 030402 NOT TO SCALE

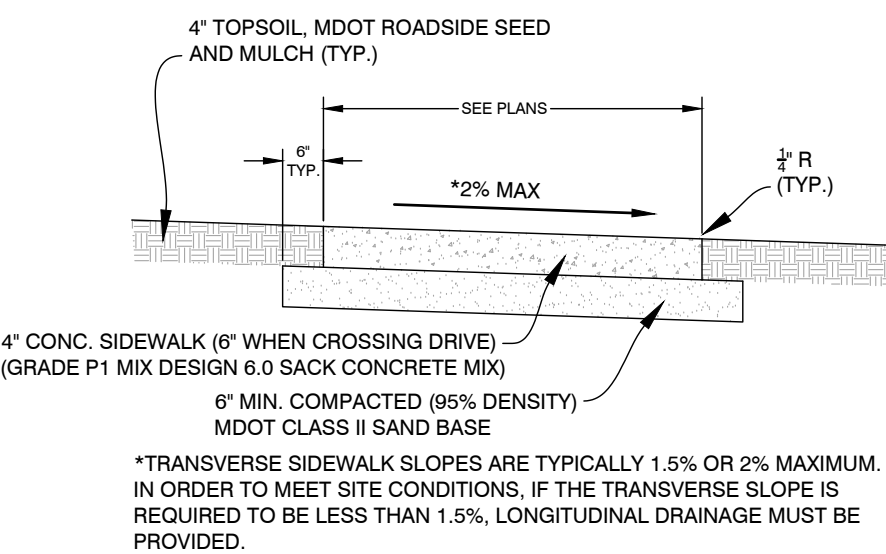


TOP VIEW

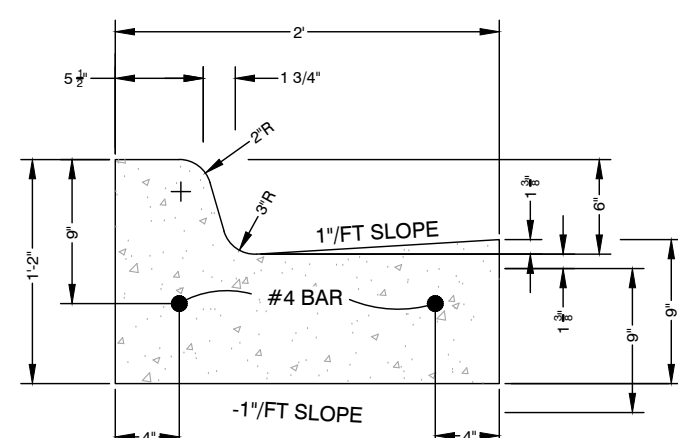


ELEVATION

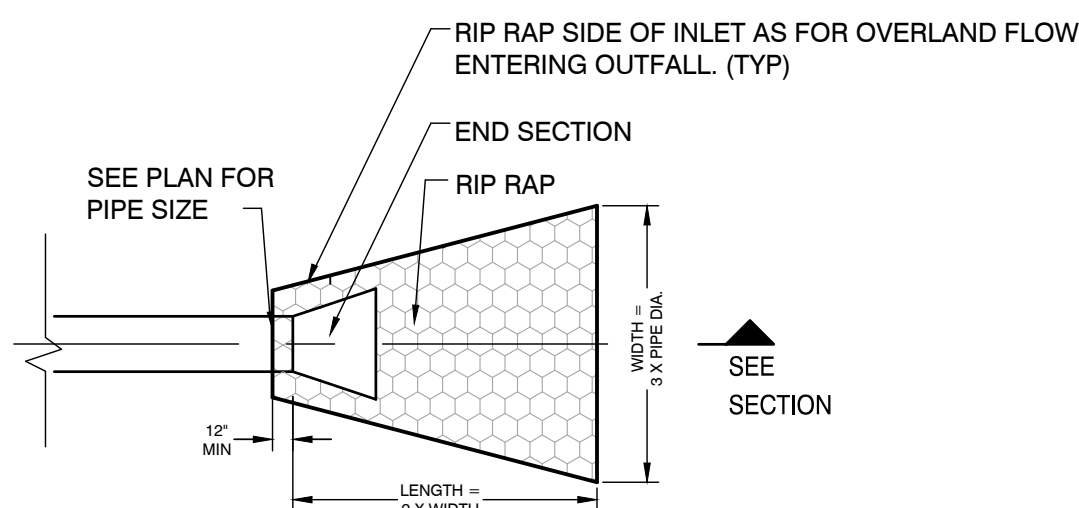
SANITARY SEWER CLEANOUT DETAIL
C5.0 - 090109 NOT TO SCALE



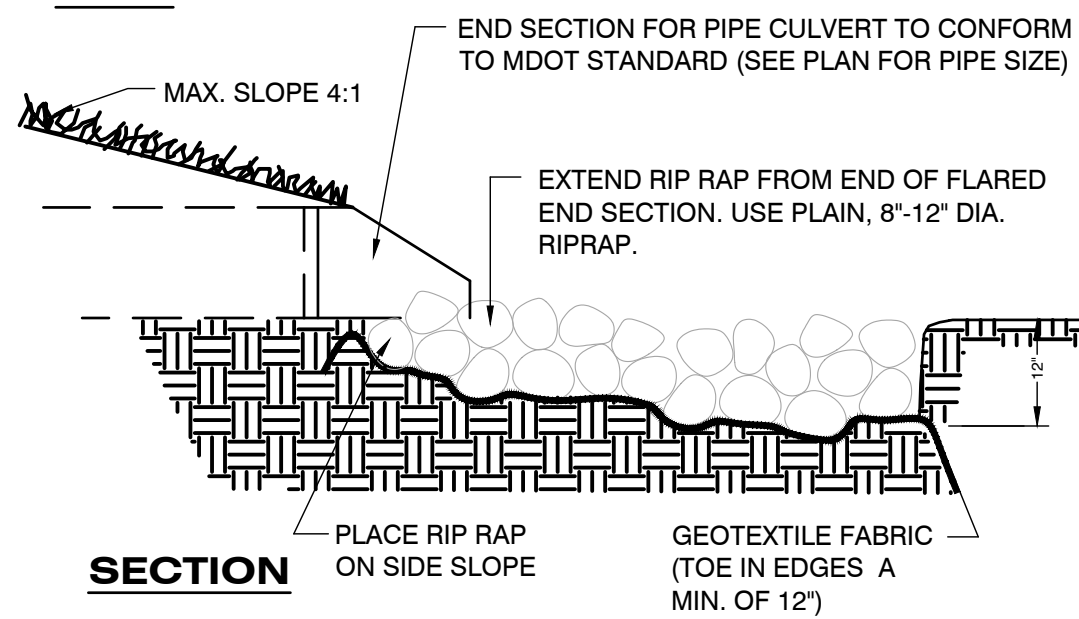
5' WIDE SIDEWALK SECTION
C5.0 - 030301 NOT TO SCALE



MDOT F4 CONC. CURB & GUTTER
C5.0 - 030109 NOT TO SCALE

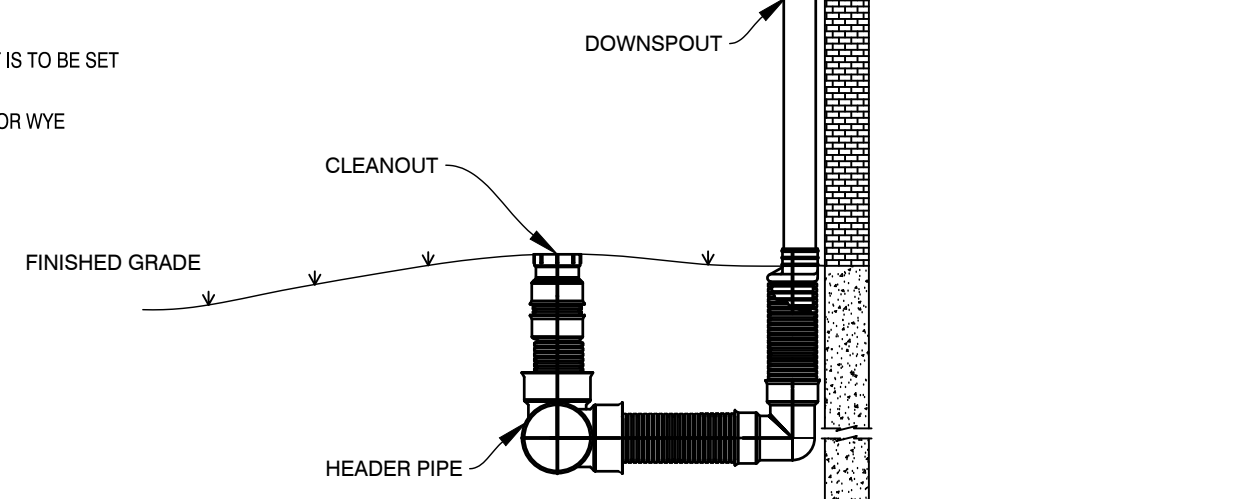


PLAN

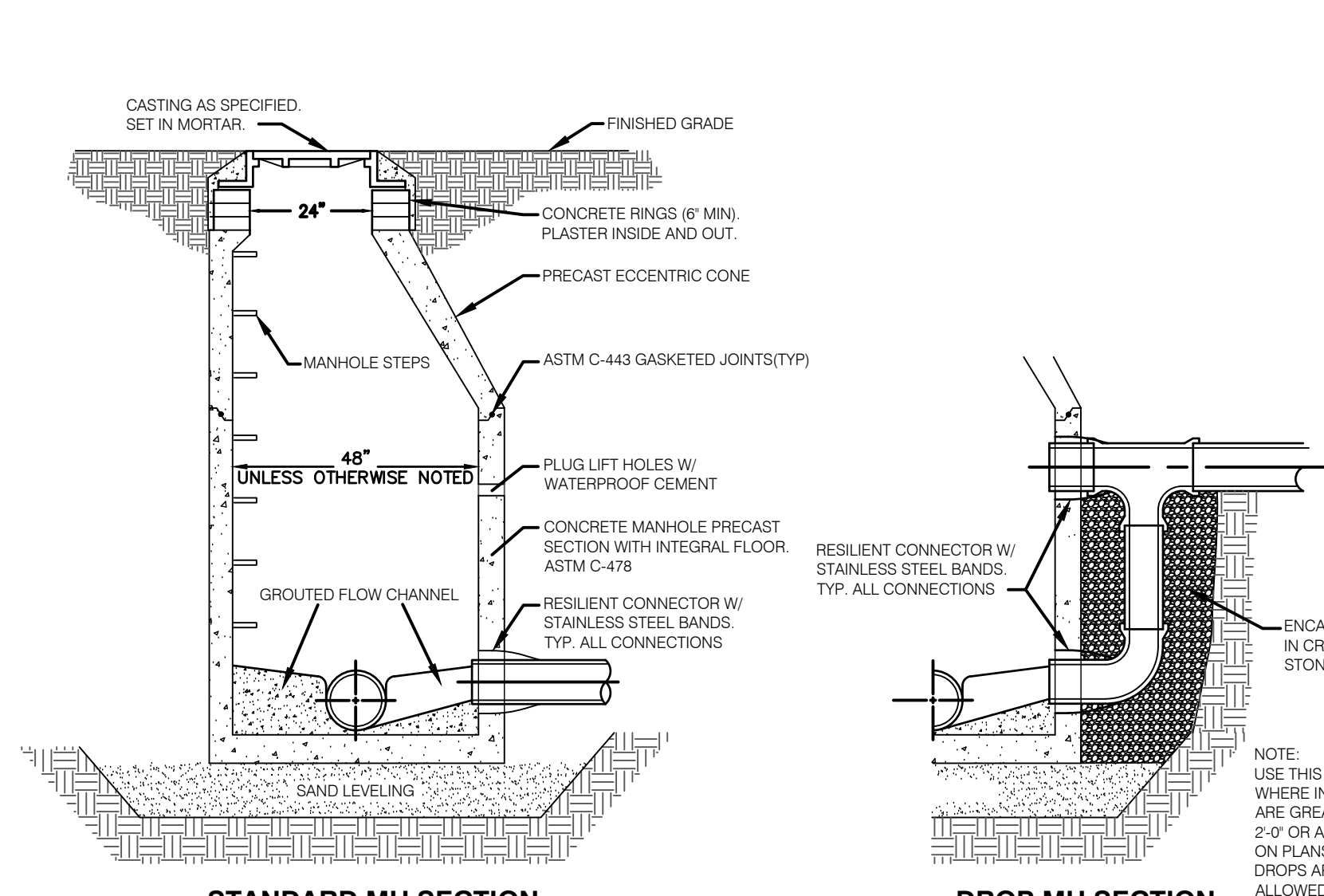


SECTION

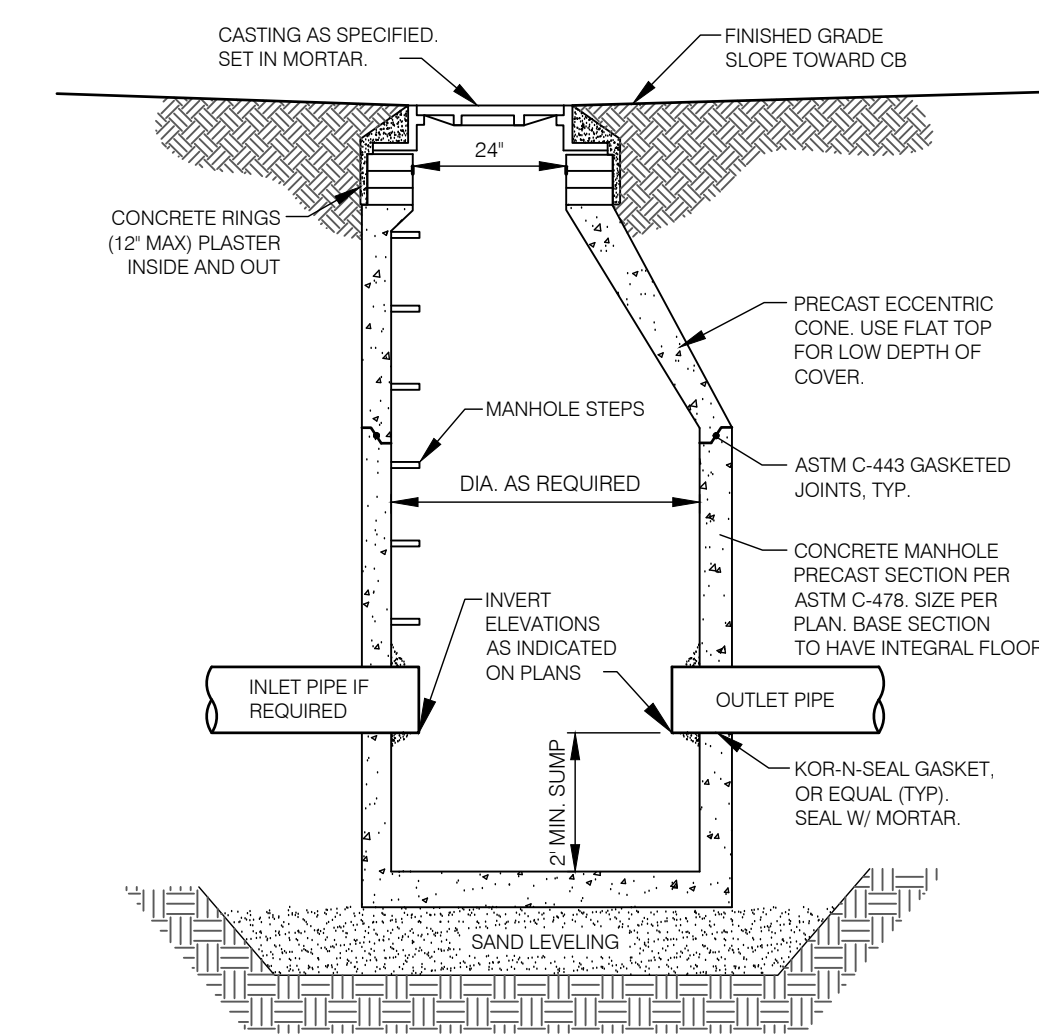
PIPE CULVERT WITH FLARED END SECTION DETAIL
C5.0 - 050002 NOT TO SCALE



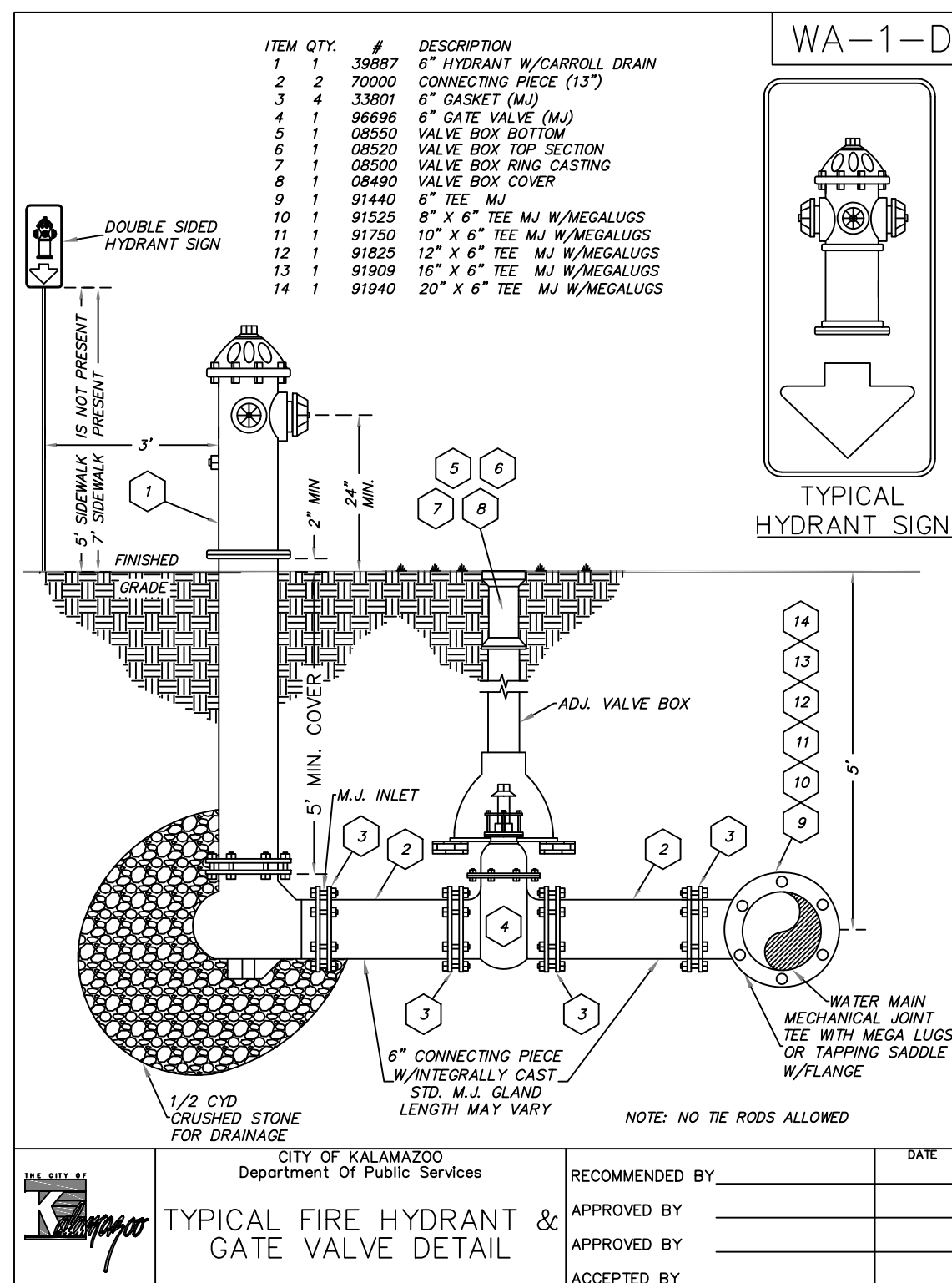
STORM CLEANOUT AND DOWNSPOUT CONNECTION DETAIL
NOT TO SCALE



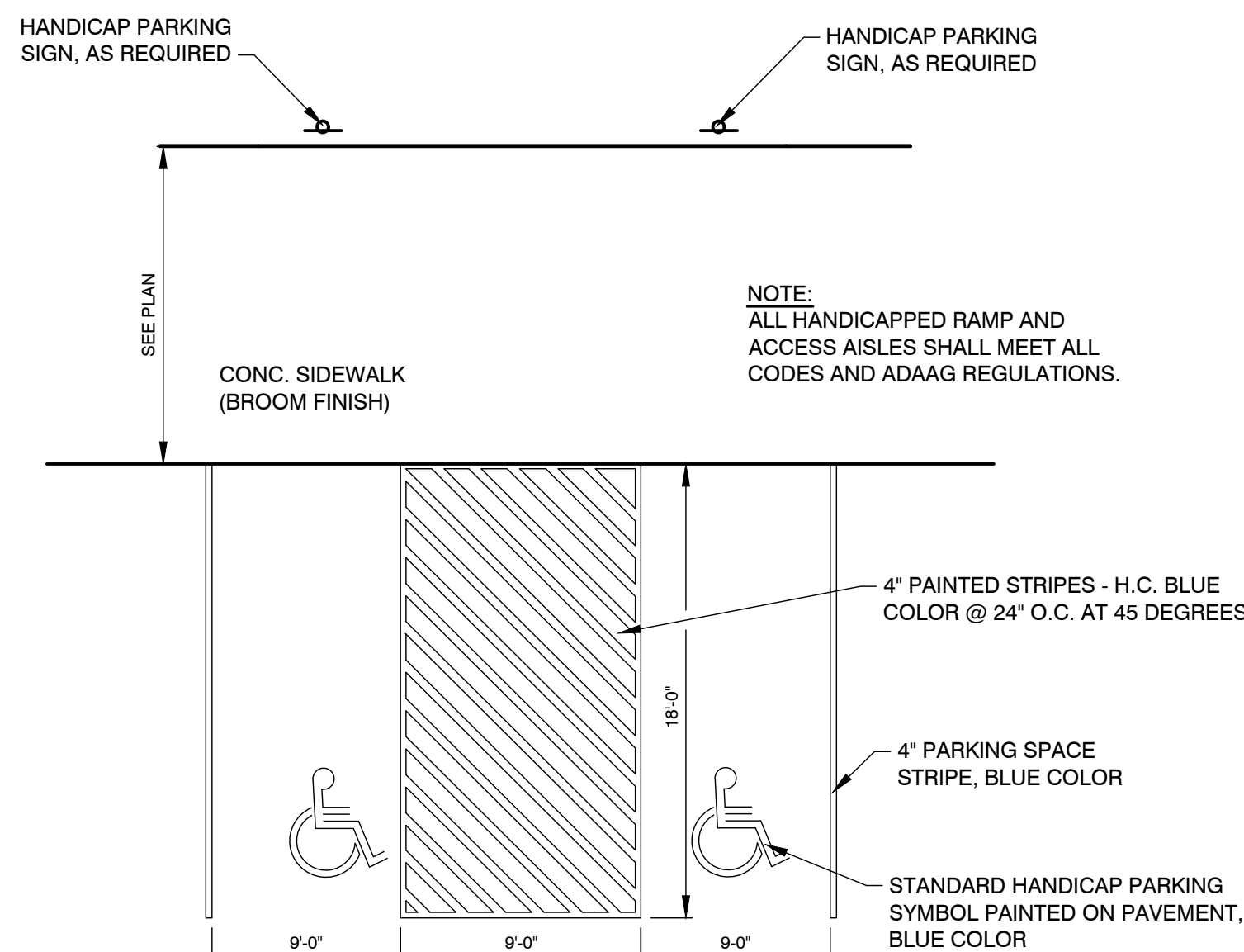
SANITARY MANHOLE DETAILS
C5.0 - 030401 NOT TO SCALE



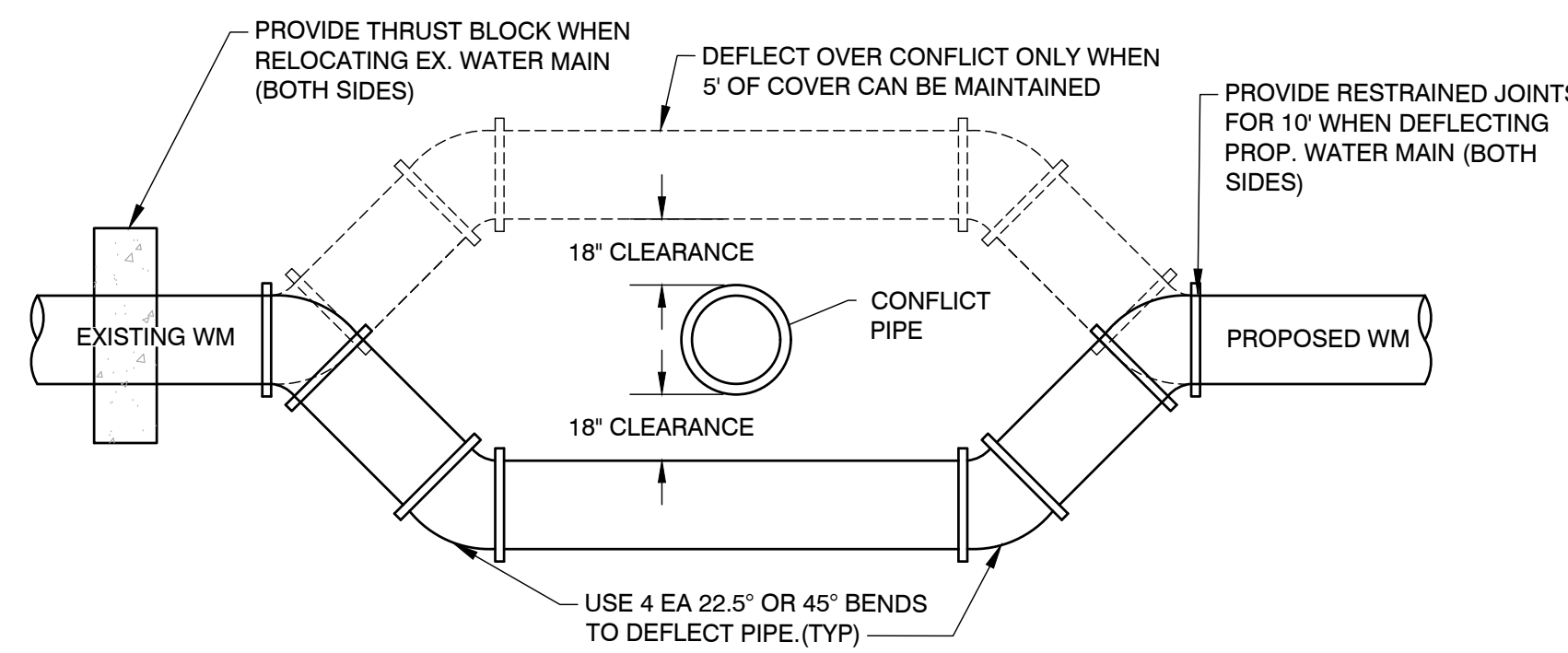
STORM CATCH BASIN DETAIL
C5.0 - 030403 NOT TO SCALE



TYPICAL FIRE HYDRANT & GATE VALVE DETAIL

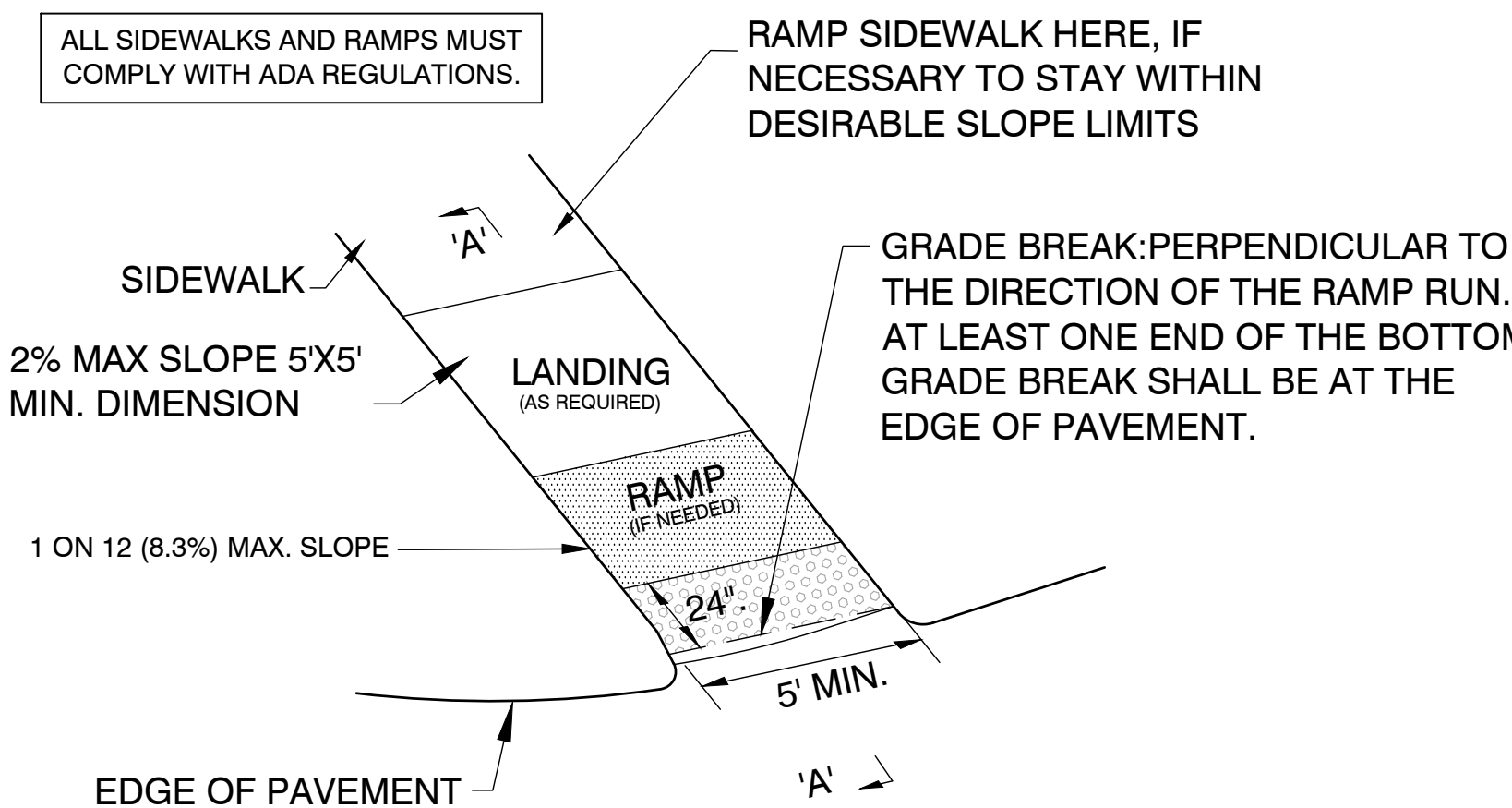


HANDICAP PARKING DETAIL
C5.0 - 040902 NOT TO SCALE



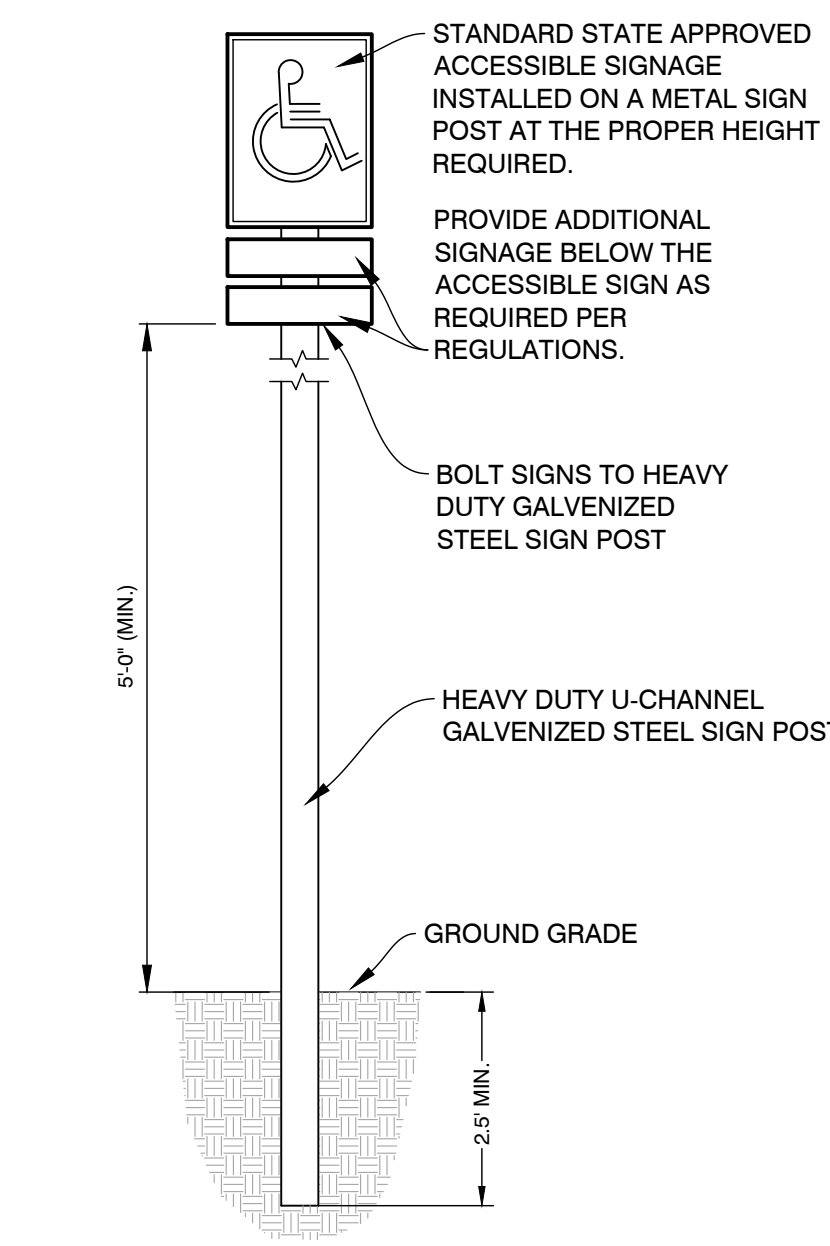
NOTE: RESTRAIN ALL JOINTS IN DEFLECTION AREA.

WATER MAIN DEFLECTION DETAIL
C5.0 - 030403 NOT TO SCALE



A-A SECTION THROUGH ALL RAMPS
NO SCALE

SIDEWALK RAMP AT DRIVEWAY
NOT TO SCALE



ACCESSIBLE PARKING SIGN DETAIL
C5.0 - 090101 NOT TO SCALE

PLANS PREPARED BY:

AR ENGINEERING
CIVIL ENGINEERING & SURVEYING

MICHIGAN | INDIANA | ILLINOIS | OHIO
289.250.5991 PHONE | 800.560.0604 FAX
www.arengineeringllc.com

DRAWN: BD/EAG
CHECKED: JPR/WLP

STATE OF MICHIGAN
JASON P. RALEIGH
ENGINEER
NO. 61082
LICENSED PROFESSIONAL ENGINEER

JASON RALEIGH, P.E.
No. 01082

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DETAILS

KALAMAZOO MULTIFAMILY
KALAMAZOO REALTY HOLDINGS, LLC

3625 W MICHIGAN
SECTION 19, T2S, R11W

SHEET TITLE:
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SITE SECTION:

JOB NUMBER
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DATE
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SHEET NUMBER
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LANDSCAPING NOTES

1. INSTALL CONSTRUCTION FENCE AROUND DRIP LINES OF EXISTING TREES TO REMAIN. NO COMPACTION OR INCREASED DEPTH OF SOIL OVER THE ROOT SYSTEM AREA PRIOR TO AND DURING CONSTRUCTION.
2. ALL LAWN AREAS SHALL BE SEEDED AND MULCHED WITH THE FOLLOWING MIXTURE: 20% IMPROVED PERENNIAL RYEGRASS, 40% FINE FESCUE, AND 40% KENTUCKY BLUEGRASS AT A RATE OF 3-4 LBS/ 1000 SFT.
3. ALL EDGING SHALL BE STANDARD COMMERCIAL-STEEL EDGING 3/8" X 4", ROLLED EDGE, FABRICATED IN SECTIONS OF STANDARD LENGTHS, WITH LOOPS STAMPED FROM OR WELDED TO FACE OF SECTIONS TO RECEIVE STAKES IN STANDARD FINISH OF GREEN PAINT.
4. PROVIDE QUALITY, SIZE, GENUS, SPECIES, AND VARIETY OF EXTERIOR PLANTS INDICATED, COMPLYING WITH APPLICABLE REQUIREMENTS IN ANSI Z60.1 "AMERICAN STANDARD FOR NURSERY STOCK," MEASURE ACCORDING TO ANSI Z60.1 STANDARDS.
5. MAINTAIN AND ESTABLISH LAWN BY WATERING, FERTILIZING, WEEDING, MOWING, TRIMMING, REPLANTING, AND OTHER OPERATIONS. ROLL, REGRADE, AND REPLANT BARE OR ERODED AREAS AND REMULCH TO PRODUCE A UNIFORMLY SMOOTH LAWN.
6. BEGIN LAWN MAINTENANCE IMMEDIATELY AFTER EACH AREA IS PLANTED AND CONTINUE UNTIL ACCEPTABLE LAWN IS ESTABLISHED. A MINIMUM OF 60 DAYS AFTER SUBSTANTIAL COMPLETION.
7. PROTECT ADJACENT AND ADJOINING STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS, AND PLANTINGS FROM HYDROSEEDING OVER-SPRAY AND DAMAGE CAUSED BY PLANTING OPERATIONS.
8. REMOVE STONES LARGER THAN 1" IN ANY DIMENSION AND STICK, ROOTS, RUBBISH, AND OTHER EXTRANEOUS MATTER FROM SITE.
9. MAINTAIN LAWN UNTIL A HEALTHY, UNIFORM, CLOSE STAND OF GRASS HAS BEEN ESTABLISHED, FREE OF WEEDS AND SURFACE IRREGULARITIES, WITH COVERAGE EXCEEDING 90% OVER ANY 10 SFT AND BARE SPOTS DO NOT EXCEED 5 BY 5 INCHES.
10. MAINTAIN TREES AND SHRUBS FOR ONE YEAR FROM DATE OF SUBSTANTIAL COMPLETION BY PRUNING, CULTIVATING, WATERING, WEEDING, FERTILIZING, RESTORING PLANTING SAUCERS, TIGHTENING AND REPAIRING STAKES AND GUY SUPPORTS, AND RESETTling TO PROPER GRADES OR VERTICAL POSITION, AS REQUIRED TO ESTABLISH HEALTHY VIABLE PLANTINGS. SPRAY AS REQUIRED TO KEEP TREES AND SHRUBS FREE OF INSECTS AND DISEASE.
11. REMOVE AND REPLACE DEAD PLANTS IMMEDIATELY. REPLACE PLANTS THAT ARE MORE THAN 25% DEAD OR IN AN UNHEALTHY CONDITION AT END OF WARRANTY PERIOD. A LIMIT OF ONE REPLACEMENT OF EACH PLANT WILL BE REQUIRED, EXCEPT FOR LOSSES OR REPLACEMENTS DUE TO FAILURE TO COMPLY WITH REQUIREMENTS.
12. TREES, AND SHRUBS SHALL BE WARRANTED FOR ONE YEAR FROM DATE OF SUBSTANTIAL COMPLETION AGAINST DEFECTS INCLUDING DEATH AND UNSATISFACTORY GROWTH, EXCEPT FOR DEFECTS RESULTING FROM INCIDENTS THAT ARE BEYOND CONTRACTOR'S CONTROL.
13. OWNER TO MAINTAIN AND REPLACE ALL LANDSCAPE IN ATTRACTIVE CONDITION WITHIN THE AREAS OUTLINED AS OPEN SPACE ON THE LANDSCAPE PLAN, TO INCLUDE ALL PLANTINGS, TREES, AND SHRUBS.

LEGEND

- 1 NUMBER AND TYPE OF PLANTS TO BE PROVIDED AND INSTALLED
- Xx
- PROPOSED DECIDUOUS TREE
- PROPOSED SHRUB DECIDUOUS/ EVERGREEN
- SOD LAWN WITH IRRIGATION ON 4" TOPSOIL
- PERENNIAL RYE GRASS WITHOUT IRRIGATION ON 4" TOPSOIL
- NATIVE SEED MIX

ALL PLANTINGS AND LANDSCAPED BEDS REQUIRE IRRIGATION - EITHER DRIP LINE OR MISTERS AS REQUIRED TO ESTABLISH GROWTH AND MAINTAIN HEALTH OF ALL PLANTINGS/LANDSCAPED BEDS.

LANDSCAPING CONTRACTOR RESPONSIBLE FOR TOUCHING-UP AND FINISH-LEVELING OF TOPSOIL AS NECESSARY TO ENSURE HYDROSEED AND SOD ARE INSTALLED ON A SMOOTH AND LEVEL SURFACE FREE OF CLUMPS, STICKS, HOLES, ETC.

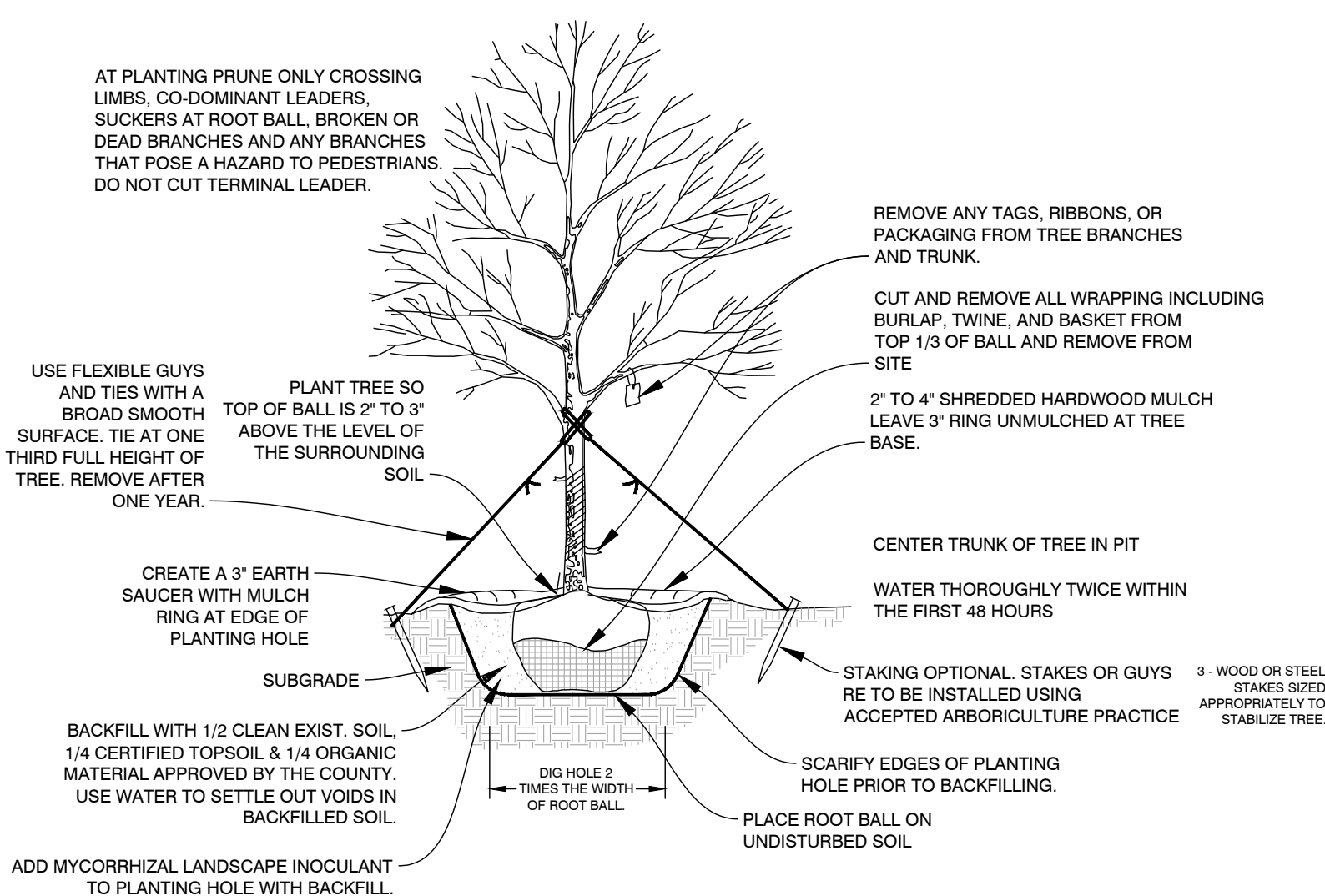
Shrub Planting Schedule

Symbol	Latin Name	Common Name	Size	Container Type	Comments
Cfm	Chamaecyparis filifera 'Mops'	Goldmop Cypress	24-30"	cont.	
Jg	Juniper virginiana 'Grey Owl'	Grey Owl Juniper	18-24"	cont.	
Pod	Physocarpus opulus 'Diablo'	Diablo Ninebark	24-30"	cont.	
Hi	Hydrangea paniculata 'Limelight'	Limelight Hydrangea	24"	cont.	

Tree Planting Schedule

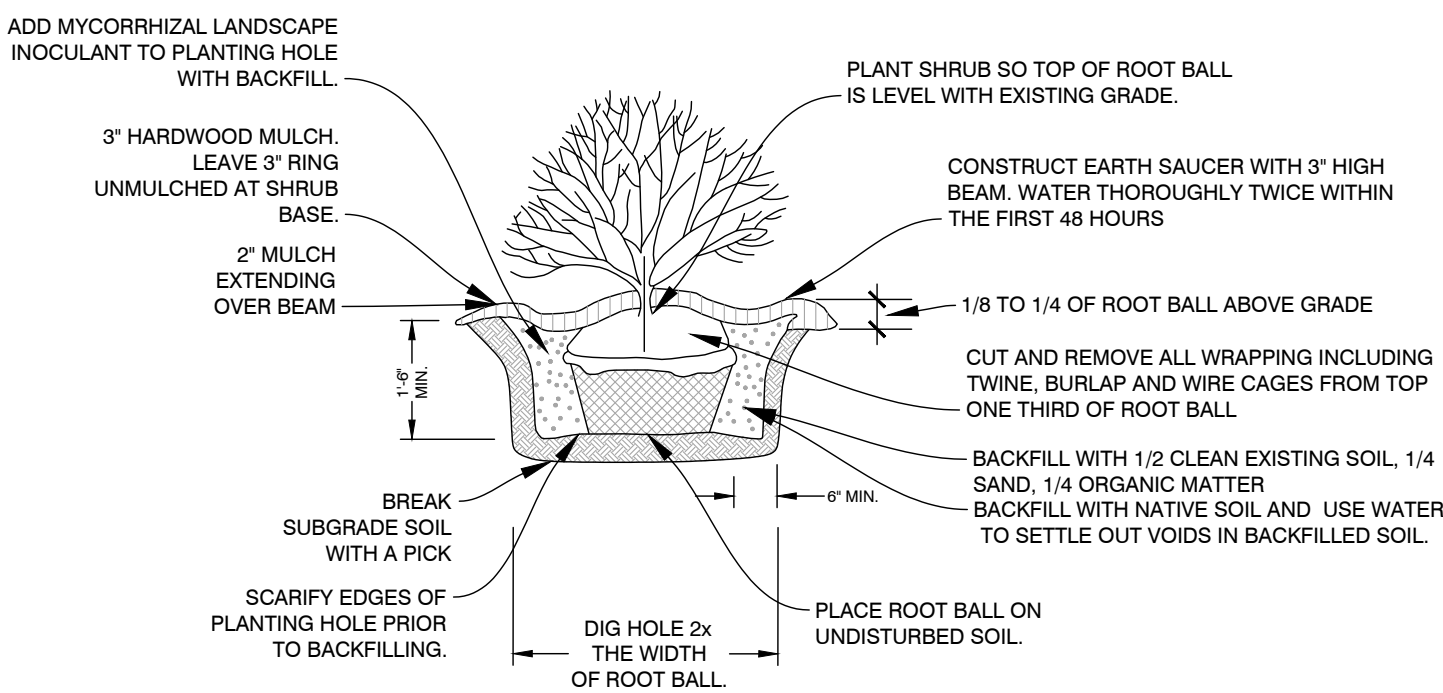
Symbol	Latin Name	Common Name	Size	Container Type	Comments
Gd	Gleditsia triacanthos 'Skycole'	Skyline Honey Locust	2.5-3" Cal.	B&B	
As	Acer saccharum	Sugar Maple	2.5-3" Cal.	B&B	
Bn	Betula nigra 'Cully'	Heritage River Birch	10 - 12'	B&B	
Ta	Tilia americana 'Boulevard'	Boulevard American Linden	2.5-3" Cal.	B&B	
Ps	Pinus strobus	Eastern White Pine	10-12'	B&B	

NOTE:
STAKING OF BALL AND BURLAP TREES REQUIRED AT THE DISCRETION OF THE CONTRACTOR. CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL STAKING AT END OF ONE YEAR WARRANTY PERIOD.



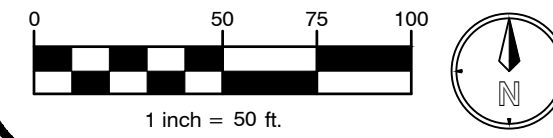
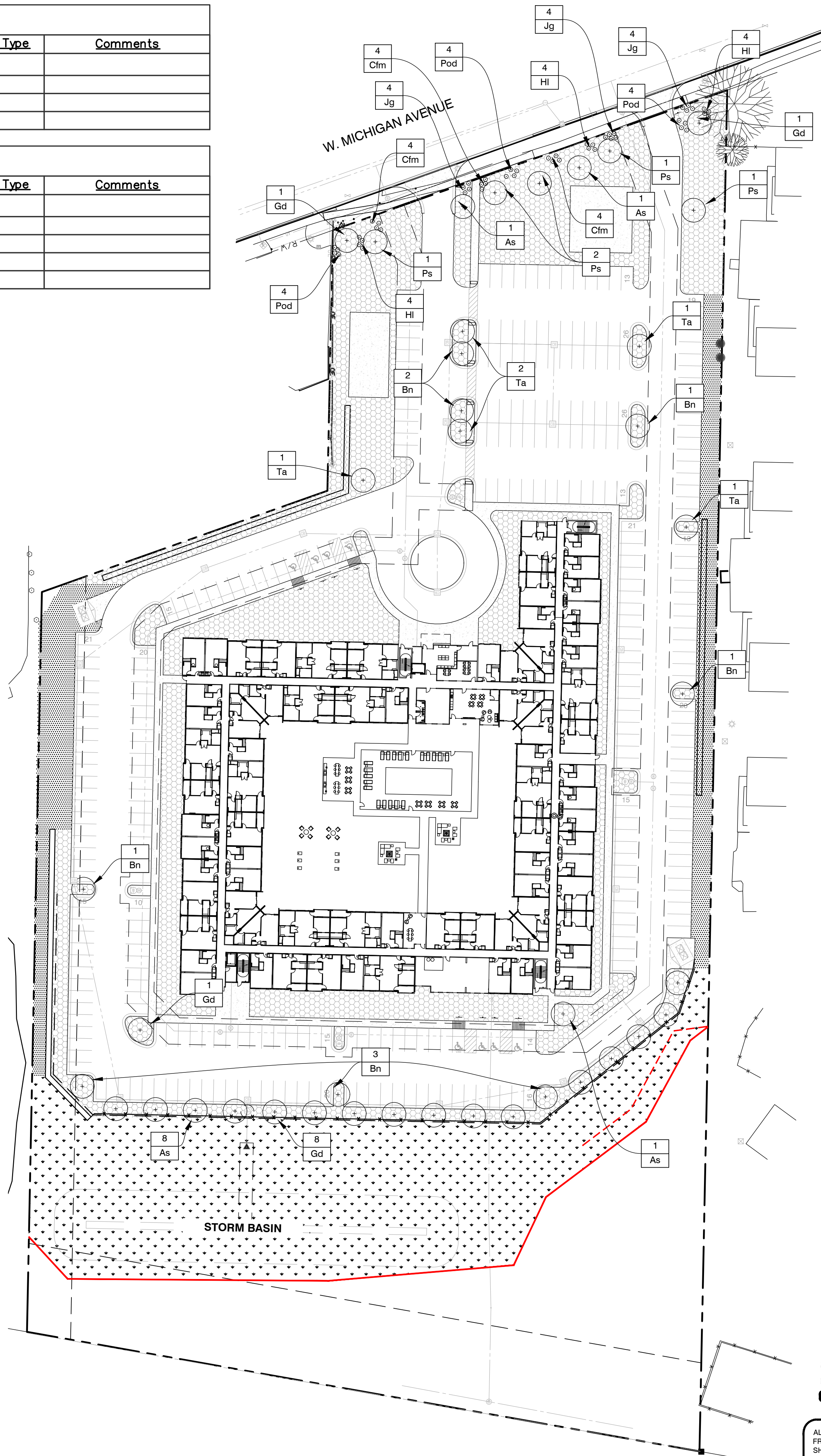
TYPICAL DESCIDUOUS TREE PLANTING DETAIL

L1.0 - 170102 NOT TO SCALE



TYPICAL SHRUB PLANTING DETAIL

L1.0 - 170103 NOT TO SCALE



PLANS PREPARED BY:



DRAWN: BD/EAG
CHECKED: JPR/WLP

No.	ISSUED FOR:	DATE	BY:
1	PRE-SITE PLAN REVIEW	02/07/2023	WP
2	VARIANCE	03/14/2023	WP
3	PRE-SITE PLAN RESUBMITTAL	03/27/2023	WP
4	PRE-SITE PLAN RESUBMITTAL	10/19/2023	WP
5	SITE PLAN SUBMITTAL	03/15/2024	WP

LANDSCAPE PLAN
KALAMAZOO MULTIFAMILY
KALAMAZOO REALTY HOLDINGS, LLC
3625 W MICHIGAN
SECTION 19, T2S, R11W

SHEET TITLE:
PROJECT:
CLIENT:
SITE ADDRESS:
SITE SECTION:

JOB NUMBER
23169001

DATE
03/15/2024

SHEET NUMBER

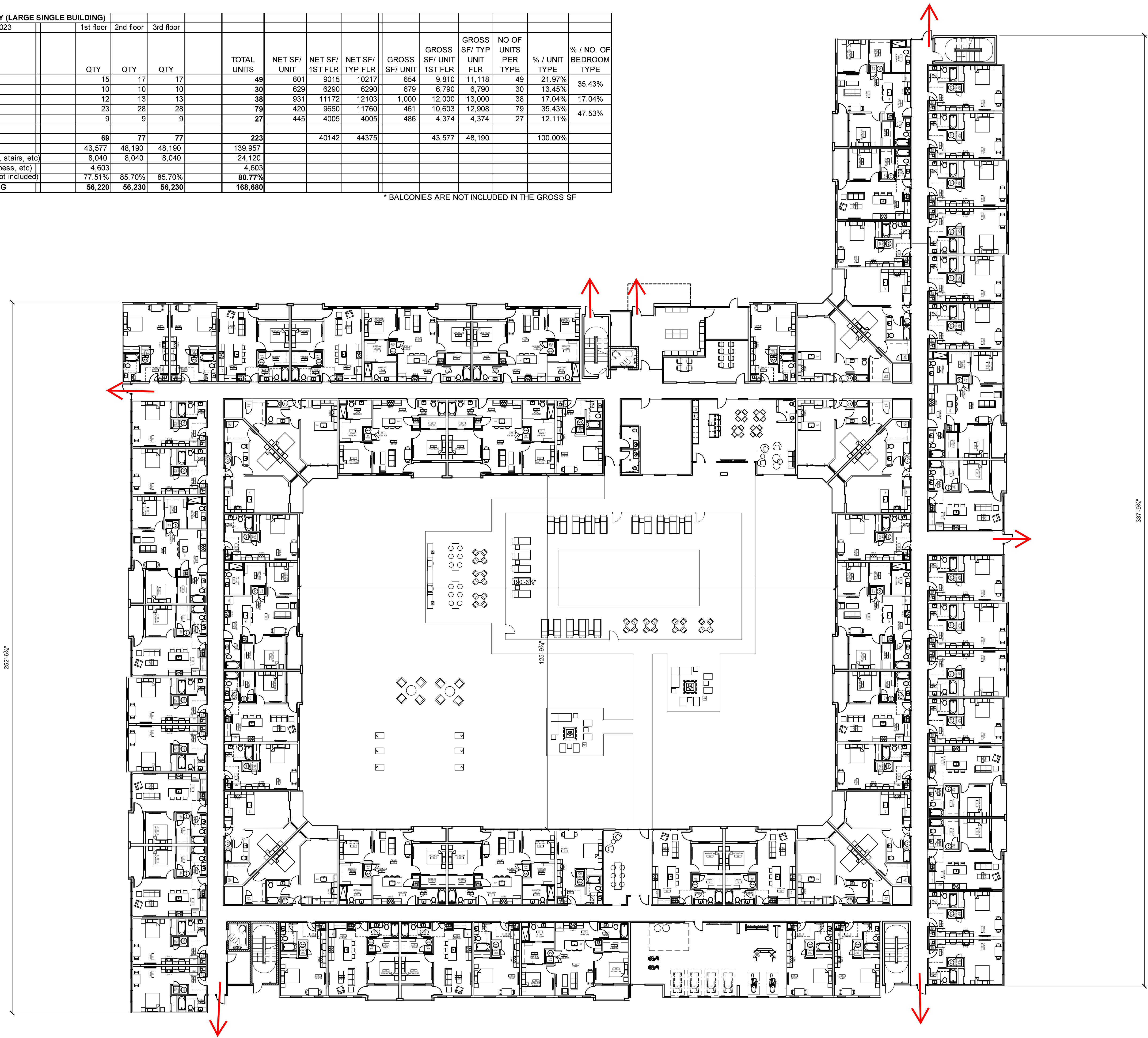
L1.0



ALL UTILITIES AS SHOWN ARE APPROXIMATE LOCATIONS DERIVED FROM ACTUAL MEASUREMENTS AND AVAILABLE RECORDS. THEY SHOULD NOT BE INTERPRETED TO BE EXACT LOCATION NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THE AREA. FIELD WORK PERFORMED BY: MOSTROM & ASSOC., INC

KZOO APARTMENT UNIT SUMMARY (LARGE SINGLE BUILDING)													
UPDATED 02/06/2023													
UNIT	TYPE	1st floor			TOTAL UNITS	NET SF/ UNIT	NET SF/ 1ST FLR	NET SF/ TYP FLR	GROSS SF/ UNIT	GROSS SF/ UNIT 1ST FLR	GROSS SF/ TYP FLR	NO OF UNITS PER TYPE	% / UNIT TYPE
		QTY	QTY	QTY									
1 BR - A	1br/1ba	15	17	17	49	601	9015	10217	654	9,810	11,118	49	21.97%
1 BR - B	1br/1ba inside corner unit	10	10	10	30	629	6290	6290	679	6,790	6,790	30	13.45%
2 BR - C1	2br/2ba	12	13	13	38	931	11172	12103	1,000	12,000	13,000	38	17.04%
ST - A1	studio	23	28	28	79	420	9660	11760	461	10,603	12,908	79	35.43%
ST - A2	studio (larger unit)	9	9	9	27	445	4005	4005	486	4,374	4,374	27	12.11%
TOTAL BDLG UNITS		69	77	77	223		40142	44375		43,577	48,190		100.00%
TOTAL GROSS UNIT SF		43,577	48,190	48,190	139,957								
Common Areas (corridors, stairs, etc)		8,040	8,040	8,040	24,120								
Amenities (club, office, fitness, etc)		4,603			4,603								
% Efficiency (basement not included)		77.51%	85.70%	85.70%	80.77%								
TOTAL GROSS BUILDING		56,220	56,230	56,230	168,680								

* BALCONIES ARE NOT INCLUDED IN THE GROSS SF



FIRST FLOOR PLAN

SCALE: 1"= 16'-0"

CONSULTANT INFORMATION

REGISTRATION SEAL

NOT FOR
CONSTRUCTION

REV DATE DOC REL ## - DESCRIPTION

CITY OF KALAMAZOO – SITE PLAN APPLICATION & CHECKLIST

Site Plan Review is an administrative process through the Site Plan Review Committee. The Committee is comprised of members of many City Departments, including Public Safety, Public Services, Building and Trades, Community Planning and Economic Development (CPED).

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All Site Plans must be developed using this checklist. You will use this checklist as your cover page to your Site Plan. Using this checklist, provide all information pertinent to the project and note on which plan page the information can be found. Assistance and questions with this form or the process can be answered by CPED staff at any point during the process.

SITE PLAN REVIEW REQUIREMENTS

- Drawn at an engineering scale of between 1"=50' or 1"=20' with a north arrow
- Name, address, email, phone number of property owners, applicant, and firms/professionals involved in the project. *Verify property address with City Assessor's Office*
- Address, legal description, and Parcel Identification Number (PIN) of subject property.
- All plans *must* be submitted in an **electronic format (PDF) plus one hard copy in 11"x17" format, one physical copy of application and supporting document required.**
- Supporting documents such as surveys, environmental reports, stormwater worksheets and stormwater agreements if required.
- Application is not complete until the application completed in full and fee are submitted.

DEPOSIT & FEES

You can find a copy of our fee schedule here: <https://www.kalamazoo-city.org/cpdfeeschedule/file>

COMPLETED APPLICATIONS

Once completed, please submit this checklist and your completed site plan in PDF format to siteplan@kalamazoo-city.org. If you have any questions, please visit www.kalamazoo-city.org/siteplanreview or call [269-377-8044](tel:269-377-8044). Only completed applications following all Site Plan Review requirements will be accepted.

SITE PLAN REVIEW CHECKLIST

APPLICANT INFORMATION	
Applicant Name: Greg Dilone Jr.	
Applicant Mailing Address: 4655 W Chase Ave.	
Applicant City: Lincolnwood	Applicant State: IL Applicant ZIP Code: 60712
Applicant Phone: 313.461.8673	Preferred Contact: ☒ Email ☐ Phone
Applicant Email: greg@fusionmp.com	
PROPERTY OWNER INFORMATION	
Owner Name: Kalamazoo Realty Holdings, LLC	
Owner Mailing Address: 4655 W Chase Ave.	
Owner City: Lincolnwood	Owner State: IL Owner ZIP Code: 60712
Owner Phone:	Preferred Contact: ☒ Email ☐ Phone
Owner Email: simi@hallmark-living.com	
PROPERTY INFORMATION	
Property Address: 3625 W Michigan Ave. Kalamazoo, MI 49006	
Parcel Identification Number (PIN): 06-19-463-001	
EXISTING CONDITIONS: All projects should provide information related to the site's existing conditions. Projects involving no new construction of buildings or additions less than 1,500 square feet and those not increasing a site's impervious coverage more than 10%, do not need to include a topographic site survey.	
Site Plan Review Checklist Item	Site Plan: Found on Page
Vicinity Maps illustrating adjacent streets and existing structures (within 200'), zoning, land use, and 2025 Master Plan Land Development designation of adjacent parcels.	Cover Page C2.0
Note presence of special district or designation such as:	
➤ Historic District	N/A
➤ Brownfield Redevelopment Authority	N/A
➤ State/Federal List for Soil/Groundwater Contamination – If yes, also contact MEGLE	N/A
➤ Endangered/rare species/habitat area -if yes, also contact MDNR	N/A
➤ Required reporting for RCRA/US EPA Hazardous Waste Handler site (note site type: small quantity generator, large quantity generator, transporter, treatment/storage/disposal, notifier, other)	N/A
➤ Solid Waste Facility	N/A
➤ Baseline Environmental Assessment (BEA)	
➤ Tax capture or deferment area (such as CIA, TIF, NEZ, etc.)	
➤ Natural Features Protection – 2025 Master Plan	C1.0, C2.0
➤ Wellhead Protection Area	Capture Zone 10

SITE PLAN REVIEW CHECKLIST –COMPLETE IN FULL, ITEMS THAT DON'T APPLY MARK 'NA' AND NOTE WHY

EXISTING CONDITIONS: All projects should provide information related to the site's existing conditions. Projects involving no new construction of buildings or additions less than 1,500 square feet and those not increasing a site's impervious coverage more than 10%, do not need to include a topographic site survey.	
Site Plan Review Checklist Item	Site Plan: Found on Page
Location and type of existing features on the subject property and on adjacent properties, such as woods, wetlands, streams, rivers, lake, drains, 100-year flood plains, floodway, wetland, soil contamination, groundwater contamination etc. Also required are:	C1.0, C1.1
➤ Topography (2' contour lines labeled with USGS datum)	C1.0, C1.1
➤ Tree Inventory (note all trees 10" or greater at diameter breast height or dbh on the site with species type, condition, and remain/ remove status)	
If project disturbs an area greater than 1 acre within 500' of a lake or stream, EGLE permit req'd.	
Location, dimensions, and/or capacities of existing property lines; lots; recorded and unrecorded easements (including County drains); all utilities, including water, sewer, electric, gas, phone, cable, Internet, etc.; wells and cisterns, hydrants; Fire Department Connections, rights-of-way (including sidewalk, trails, landscaping, lighting, pavement, notes on vacation, etc. within it); and points of access	C1.0, C1.1
Location of existing buildings and structures (such as signs, light fixtures, refuse areas, parking areas, fences, drainage, above/underground storage tanks, Fire Department Connection, fire service with backflow prevention type etc.) on the subject property, including setbacks, structure use, if planned to remain or be demolished, and age of structure if to remain.	C1.0, C1.1
PROPOSED SITE PLAN: The following is the checklist of plan details and documentation required for the proposed site plan. Provide all information relevant to project. Please check with the Senior Development Planner if you are unclear on any provision prior to making application.	
PLANNING & ZONING ITEMS:	
Alignment with 2025 Master Plan	
Building Location, including distance from property lines and	C2.0
Building elevations, including number of stories and locating doors windows, facade materials, signage, and lighting	Pending
Off-street parking (vehicle and bicycle) & loading, including location, barrier free, quantity, dimensions, signage	C2.0
All on-site lighting, including location, height, type, wattage	Pending
Signage - type, location, and size	C2.0
Site Access for All Modes (vehicle, pedestrian, bicycle, transit) including location, dimension, radii, materials, signage	C2.0
Impervious surface, pre an post construction	Stm Calcs
Refuse location & screening	C2.0
Landscape Plan, including fences, walls, plant schedule (number, size, species), and incorporate of existing trees and vegetation	L1.0

SITE PLAN REVIEW CHECKLIST—COMPLETE IN FULL, ITEMS THAT DON'T APPLY MARK 'NA' AND NOTE WHY

PROPOSED SITE PLAN: The following is the checklist of plan details and documentation required for the proposed site plan. Provide all information relevant to project. Please check with the Senior Development Planner if you are unclear on any provision prior to making application.	
BUILDING & TRADES	
Soil erosion control measures	C4.0
Final site grading/topography (2' contour lines labeled with USGS datum)	C4.0
USGS first floor elevation of buildings	C4.0
Locations, dimensions, area, use and construction type of all buildings	C2.0
ADA accessible routes	C2.0
Occupant egress path from all structures	C2.0
KDPS – FIRE MARSHALL	
Installation of Knox Box	TBD
Proper location & sizing of:	
➤ Fire Department Connection (FDC)	TBD
➤ FDC Signage	TBD
➤ Hydrants	C3.0
➤ Water mains serving fire protection systems	C3.0
➤ Building identification (street number & name)	C2.0
Protective bollards	C2.0
Vehicular access & circulation	C2.0
On-site Storage or Use of Hazardous Chemicals. *Permit from Fire Marshall may be required*	
➤ SDS information	TBD
➤ Right to Know Survey/Chemical Inventory Storage Form Part I	TBD
➤ Wellhead Protection/Chemical Inventory Storage Form Part II	TBD
➤ Classify hazard class of site and/or structure(s)	TBD
PUBLIC SERVICES – TRANSPORTATION & UTILITIES	
Location and dimensions of new rights-of-way	C1.0
Site access for all modes (vehicle, pedestrian, bicycle, transit) including location, approach type, dimension, radii, materials, signage	C2.0
Access & circulation of site or proposed street network	C2.0
Improvements to existing off-site rights-of-way for all modes (vehicle, pedestrian, bicycle, transit)	C2.0
Timeline of proposed right of way work, street closures, lane restrictions or sidewalk closures.	TBD
Location and dimension of proposed traffic control measures, including acceleration, deceleration, and passing lanes, traffic signals or signs, etc.	N/A
Location and dimension of utilities & easements for gas, electric, phone, cable, etc.	C1.0

SITE PLAN REVIEW CHECKLIST—COMPLETE IN FULL, ITEMS THAT DON'T APPLY MARK 'NA' AND NOTE WHY

PROPOSED SITE PLAN: The following is the checklist of plan details and documentation required for the proposed site plan. Provide all information relevant to project. Please check with the Senior Development Planner if you are unclear on any provision prior to making application.	
Public Services - Environmental/Wellhead Protection	
Wellhead Protection Area (WHPA)	Capture Zone 10
➤ Stormwater Compliance with Performance Standards	Stm Calcs
➤ Groundwater Infiltration Compliance	Stm Calcs
Manufactured Treatment Device Worksheet	Pending
Hazardous Material Storage present? If yes, complete Hazard Material Storage Forms 1 & 2	
Management of abandoned wells, cisterns, and above or underground storage tanks, including information on installation, operation, capping, or removing	
Installation of new well (temporary or permanent) with or without a Reduced Principle Backflow Prevention Assembly.	
Soil contamination present? If yes, MEGLE approval required for proposed stormwater infiltration.	
Property/site drains present? Detail connection to sanitary or storm sewer, on-site holding tank with pumping/disposal plan, or other.	C3.0
Detail direct or indirect discharge into or toward a storm sewer, drain, wetland, pond, lagoon, or other surface water feature?	C3.0
Detail all grade changes, cutting, and fill, including management of existing vegetation and soil erosion and/or sedimentation.	C4.0
Public Services – Stormwater Management	
Stormwater structures and systems, including size of development area (small 1/2 acre or less, medium 1/2 to 1 acre, and large 1+ acres)	C3.0
If there is any change (increase or decrease), complete:	Stm Calcs
➤ Uniform Standard 1: Water Quality Treatment Volume Work sheet	Stm Calcs
➤ Uniform Standard 2: Chanel Protection Volume Worksheet	Stm Calcs
Geothermal Wells on the property.	
Site Discharge Calculation Worksheet Properly buffer water features on adjacent properties If site is to discharge into a County drain and/or is adjacent to an MDOT street, please contact appropriate authority for more information, additional standards, and permitting	

PROPOSED SITE PLAN: The following is the checklist of plan details and documentation required for the proposed site plan. Provide all information relevant to project. Please check with the Senior Development Planner if you are unclear on any provision prior to making application.	
Public Services - Water	
Location & capacity of water main, water service, and hydrants.	C3.0
➤ For new water service also detail:	C3.0
➤ Size of line required	C3.0
➤ Use for fire service	C3.0
➤ Domestic meter size required	
➤ Irrigation meter size required	
➤ For new public water mains:	
➤ Located in public right-of-way -or -	C3.0
➤ Located in easement dedicated to COK	C3.0
➤ MDEQ PA399 Permit Application	to be completed
Quantity of new hydrants <u>4</u>	C3.0
Fire Service (note: existing systems may require inspection & upgrade)	
➤ Locate cross-connections	
➤ Backflow prevention devices	
Public Services – Sanitary Sewer	
Sanitary sewer service lateral location and sizing	C3.0
➤ All existing & proposed new, including identification & depth of	C1.0 / C3.0
➤ underground utility crossings	Pending
Invert elevation of existing lateral at ROW/easement lines which will continue to be active.	C3.0
Invert Elevation of proposed new lateral at ROW/easement line.	
Sanitary main U.S. invert elevation.	
Sanitary main D.S. invert elevation.	C3.0
Compliance with Chapter 28 of the City of Kalamazoo Ordinances & Engineering Best Practices	
Discharge Basis of Design Flow Rate, per connection: (Residential – Multi-Family 3+; Commercial – Restaurant, Laundry Facility, Manufacturing, Hotel/Motel, Medical, and others as required)	
➤ Contribution Per REU: (gpd)	Pending
➤ Total REU's with justification/calculation	
➤ Average Flow Rate(gpm)	
➤ Peaking Factor with justification/calculation	
➤ Peak Flow Rate(gpm)	
If a new connection is proposed, a Sanitary Sewer Connection Application Form is required	

SITE PLAN REVIEW CHECKLIST—COMPLETE IN FULL, ITEMS THAT DON'T APPLY MARK 'NA' AND NOTE WHY

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Summary of Site Calculations	
Gross site area	C2.0
Area of site covered with impervious and semi-pervious surfaces	C2.0
Number and type of housing units	C2.0
Square footage of commercial, manufacturing, or institutional uses - site total and by floor area per building	C2.0
Number of vehicle & bicycle parking spaces provided, including barrier-free	C2.0
Number of trees (at or greater than 10" (dbh) saved and/or removed with proposed plan, including species type, size, and health	
Estimated number of vehicle trips per day generated by the proposed use (refer to ITE trip generation)	
If generating more than 1,000 vehicle trips/day are generated, a complete traffic impact analysis	
Light grid/illumination plan, if required.	
If requiring 20 or more parking spaces or impervious surface greater than 6,000 square feet, complete the following:	included in submittal
➤ Water Quality Treatment Volume worksheet	
➤ Chanel Protection Volume Worksheet	
Calculations for proposed sewer main, sewer lead, water main, water service, and hydrants.	

Description of Project:

Muli-family / student housing development with site improvements

Applicant name & Signature

Gregory R. Dilone Jr

Gregory R. Dilone Jr

Date:

3-28-24

SITE PLAN REVIEW RESOURCES

- [Zoning Ordinance](#)
- [2025 Master Plan](#)
- [2015 Michigan Building Code](#)
- [2015 Michigan Residential Code](#)
- [2015 Michigan Mechanical Code](#)
- [2015 Michigan Plumbing Code](#)
- [ADA - ICC A117.1-2009](#)
- [Chapter 28, Kalamazoo Code of Ordinances, as Amended, as Amended](#)
- [Soil Erosion and Sedimentation Control - Chapter 30, Kalamazoo Ordinances, as Amended](#)
- [Flood Plain Management - Chapter 29 City of Kalamazoo Ordinances, as Amended](#)
- [Chapter 38 of the City of Kalamazoo's Code of Ordinances, as Amended](#)
- [MMUTCD](#)
- [NACTO](#)
- Complete Streets Policy, City of Kalamazoo
- ITE Trip Generation
- MDEQ - Uniform Stormwater Standards 1-4
- [Title 40 of the Code of Federal Regulations \(CFR\) as Amended, US EPA](#)
- [Natural Resources and Environmental Protection Act \(NREPA\), Act 451 of 1994 Part 41, as Amended Recommended Standards for Wastewater Facilities, Current Addition \(10 States Standards\)](#)
- [Standard Construction Specifications for Wastewater, City of Kalamazoo, Current addition](#)
- Wellhead Protection Zoning Overlay - Chapter 3, Section 3.5, Ordinance No. 1825 as Appendix A
- Performance Standards for Groundwater Protection Within Wellhead Protection Capture Zones and Stormwater Quality Management - Ordinance No. 1826 as Appendix A, Chapter 8, Section 8.3
- [Phase II Stormwater NPDES Permit](#)
- <https://kalamazoopublisafety.org/fire/marshall>
- Maker of Acceptable Knox Box (www.knoxbox.com)
- [USEPA Safe Drinking Water Act, 42 U.S.C. §300f et seq. \(1974\)](#)
- MDEQ, Michigan Safe Drinking water Act 1976 PA 399, as Amended
- Recommended Standards for Water Works, Current Addition (10 States Standards)
- [City of Kalamazoo's Standard Specifications for Water Main and Service Installation, Current Edition](#)
- www.protectyourwater.net

CITY OF KALAMAZOO – SITE PLAN APPLICATION & CHECKLIST

Received:
05/28/2024
COK

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Owner City: Lincolnwood	Owner State: IL Owner ZIP Code: 60712
Owner Phone:	Preferred Contact: ☒ Email ☐ Phone
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Location of existing buildings and structures (such as signs, light fixtures, refuse areas, parking areas, fences, drainage, above/underground storage tanks, Fire Department Connection, fire service with backflow prevention type etc.) on the subject property, including setbacks, structure use, if planned to remain or be demolished, and age of structure if to remain.	C1.0, C1.1
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Signage - type, location, and size	C2.0
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Impervious surface, pre an post construction	Stm Calcs
Refuse location & screening	C2.0
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USGS first floor elevation of buildings	C4.0
Locations, dimensions, area, use and construction type of all buildings	C2.0
ADA accessible routes	C2.0
Occupant egress path from all structures	C2.0
KDPS – FIRE MARSHALL	
Installation of Knox Box	C2.0
Proper location & sizing of:	
➤ Fire Department Connection (FDC)	C3.0
➤ FDC Signage	C3.0
➤ Hydrants	C3.0
➤ Water mains serving fire protection systems	C3.0
➤ Building identification (street number & name)	C2.0
Protective bollards	C2.0
Vehicular access & circulation	C2.0
On-site Storage or Use of Hazardous Chemicals. *Permit from Fire Marshall may be required*	
➤ SDS information	N/A
➤ Right to Know Survey/Chemical Inventory Storage Form Part I	N/A
➤ Wellhead Protection/Chemical Inventory Storage Form Part II	N/A
➤ Classify hazard class of site and/or structure(s)	Residential
PUBLIC SERVICES – TRANSPORTATION & UTILITIES	
Location and dimensions of new rights-of-way	C1.0
Site access for all modes (vehicle, pedestrian, bicycle, transit) including location, approach type, dimension, radii, materials, signage	C2.0
Access & circulation of site or proposed street network	C2.0
Improvements to existing off-site rights-of-way for all modes (vehicle, pedestrian, bicycle, transit)	C2.0
Timeline of proposed right of way work, street closures, lane restrictions or sidewalk closures.	N/A
Location and dimension of proposed traffic control measures, including acceleration, deceleration, and passing lanes, traffic signals or signs, etc.	N/A
Location and dimension of utilities & easements for gas, electric, phone, cable, etc.	C1.0

SITE PLAN REVIEW CHECKLIST—COMPLETE IN FULL, ITEMS THAT DON'T APPLY MARK 'NA' AND NOTE WHY

PROPOSED SITE PLAN: The following is the checklist of plan details and documentation required for the proposed site plan. Provide all information relevant to project. Please check with the Senior Development Planner if you are unclear on any provision prior to making application.	
Public Services - Environmental/Wellhead Protection	
Wellhead Protection Area (WHPA)	Capture Zone 10
➤ Stormwater Compliance with Performance Standards	Stm Calcs
➤ Groundwater Infiltration Compliance	Stm Calcs
Manufactured Treatment Device Worksheet	Stm Calcs
Hazardous Material Storage present? If yes, complete Hazard Material Storage Forms 1 & 2	N/A
Management of abandoned wells, cisterns, and above or underground storage tanks, including information on installation, operation, capping, or removing	
Installation of new well (temporary or permanent) with or without a Reduced Principle Backflow Prevention Assembly.	N/A
Soil contamination present? If yes, MEGLE approval required for proposed stormwater infiltration.	N/A
Property/site drains present? Detail connection to sanitary or storm sewer, on-site holding tank with pumping/disposal plan, or other.	C3.0
Detail direct or indirect discharge into or toward a storm sewer, drain, wetland, pond, lagoon, or other surface water feature?	C3.0
Detail all grade changes, cutting, and fill, including management of existing vegetation and soil erosion and/or sedimentation.	C4.0
Public Services – Stormwater Management	
Stormwater structures and systems, including size of development area (small 1/2 acre or less, medium 1/2 to 1 acre, and large 1+ acres)	C3.0
If there is any change (increase or decrease), complete:	Stm Calcs
➤ Uniform Standard 1: Water Quality Treatment Volume Work sheet	Stm Calcs
➤ Uniform Standard 2: Chanel Protection Volume Worksheet	Stm Calcs
Geothermal Wells on the property.	N/A
Site Discharge Calculation Worksheet Properly buffer water features on adjacent properties If site is to discharge into a County drain and/or is adjacent to an MDOT street, please contact appropriate authority for more information, additional standards, and permitting	N/A

PROPOSED SITE PLAN: The following is the checklist of plan details and documentation required for the proposed site plan. Provide all information relevant to project. Please check with the Senior Development Planner if you are unclear on any provision prior to making application.	
Public Services - Water	
Location & capacity of water main, water service, and hydrants.	C3.0
➤ For new water service also detail:	C3.0
➤ Size of line required	C3.0
➤ Use for fire service	C3.0
➤ Domestic meter size required	C3.0
➤ Irrigation meter size required	C3.0
➤ For new public water mains:	
➤ Located in public right-of-way -or -	C3.0
➤ Located in easement dedicated to COK	C3.0
➤ MDEQ PA399 Permit Application	to be completed
Quantity of new hydrants <u>4</u>	C3.0
Fire Service (note: existing systems may require inspection & upgrade)	
➤ Locate cross-connections	
➤ Backflow prevention devices	Will be provided
Public Services – Sanitary Sewer	
Sanitary sewer service lateral location and sizing	C3.0
➤ All existing & proposed new, including identification & depth of	C1.0 / C3.0
➤ underground utility crossings	C3.0
Invert elevation of existing lateral at ROW/easement lines which will continue to be active.	C3.0
Invert Elevation of proposed new lateral at ROW/easement line.	N/A
Sanitary main U.S. invert elevation.	C3.0
Sanitary main D.S. invert elevation.	C3.0
Compliance with Chapter 28 of the City of Kalamazoo Ordinances & Engineering Best Practices	Yes
Discharge Basis of Design Flow Rate, per connection: (Residential – Multi-Family 3+; Commercial – Restaurant, Laundry Facility, Manufacturing, Hotel/Motel, Medical, and others as required)	
➤ Contribution Per REU: (gpd)	See attached
➤ Total REU's with justification/calculation	
➤ Average Flow Rate(gpm)	
➤ Peaking Factor with justification/calculation	
➤ Peak Flow Rate(gpm)	↓
If a new connection is proposed, a Sanitary Sewer Connection Application Form is required	N/A

SITE PLAN REVIEW CHECKLIST—COMPLETE IN FULL, ITEMS THAT DON'T APPLY MARK 'NA' AND NOTE WHY

PROPOSED SITE PLAN: The following is the checklist of plan details and documentation required for the proposed site plan. Provide all information relevant to project. Please check with the Senior Development Planner if you are unclear on any provision prior to making application.	
Summary of Site Calculations	
Gross site area	C2.0
Area of site covered with impervious and semi-pervious surfaces	C2.0
Number and type of housing units	C2.0
Square footage of commercial, manufacturing, or institutional uses - site total and by floor area per building	C2.0
Number of vehicle & bicycle parking spaces provided, including barrier-free	C2.0
Number of trees (at or greater than 10" (dbh) saved and/or removed with proposed plan, including species type, size, and health	
Estimated number of vehicle trips per day generated by the proposed use (refer to ITE trip generation) $233 \text{ units} * 0.44 = 103 \text{ trips PM Peak}$	
If generating more than 1,000 vehicle trips/day are generated, a complete traffic impact analysis	N/A
Light grid/illumination plan, if required.	
If requiring 20 or more parking spaces or impervious surface greater than 6,000 square feet, complete the following:	included in submittal
➤ Water Quality Treatment Volume worksheet	
➤ Chanel Protection Volume Worksheet	
Calculations for proposed sewer main, sewer lead, water main, water service, and hydrants.	

Description of Project:

Muli-family / student housing development with site improvements

Applicant name & Signature

Gregory R. Dilone Jr

Gregory R. Dilone Jr

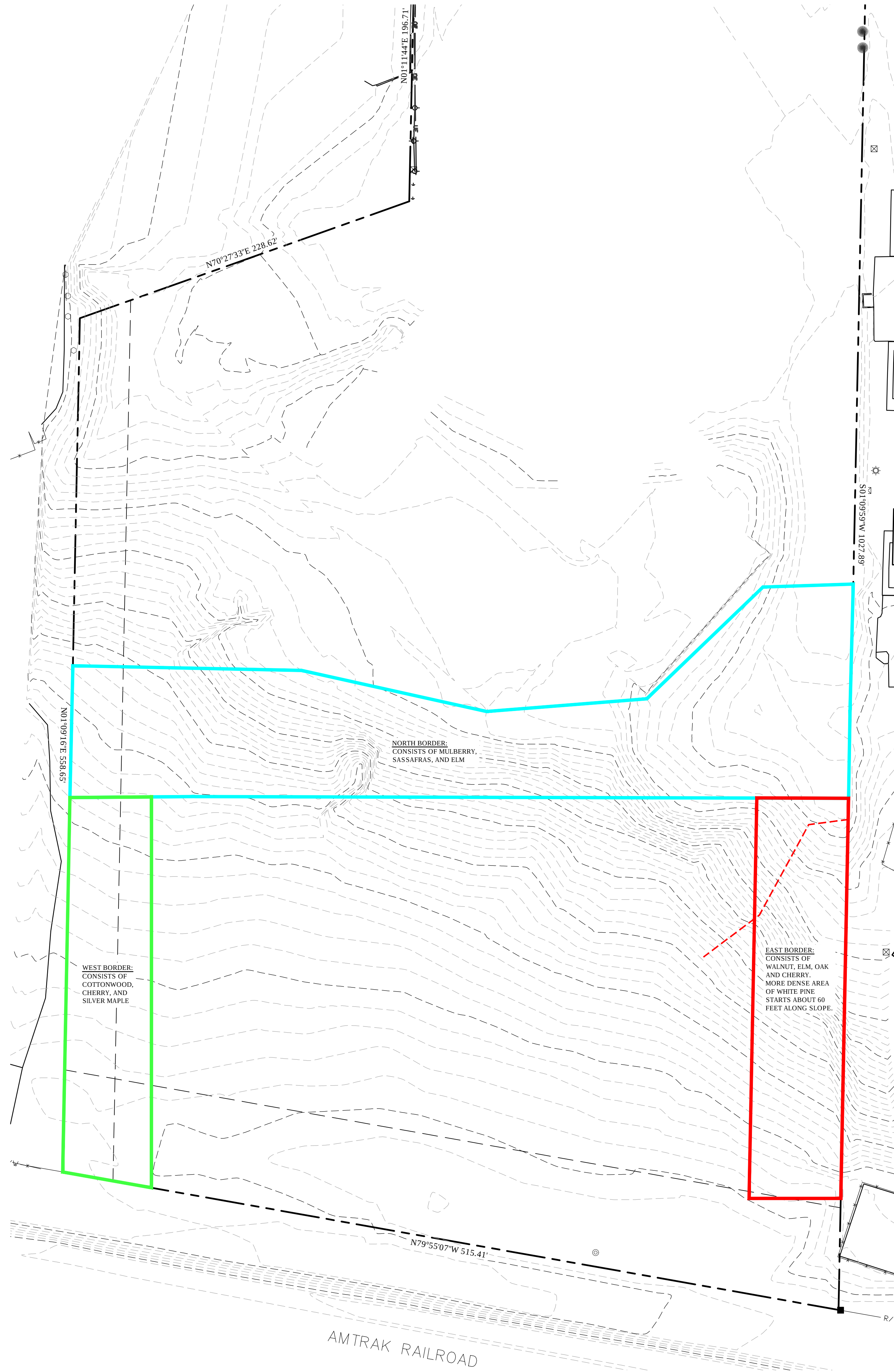
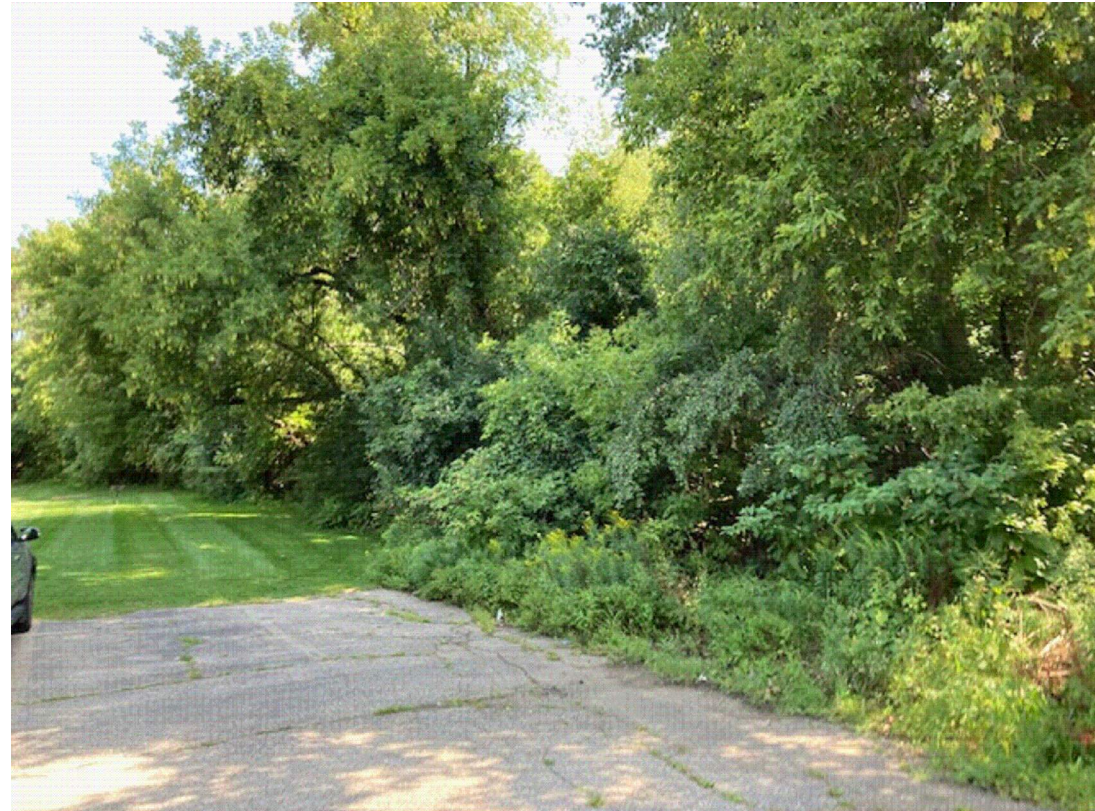
Date:

3-28-24

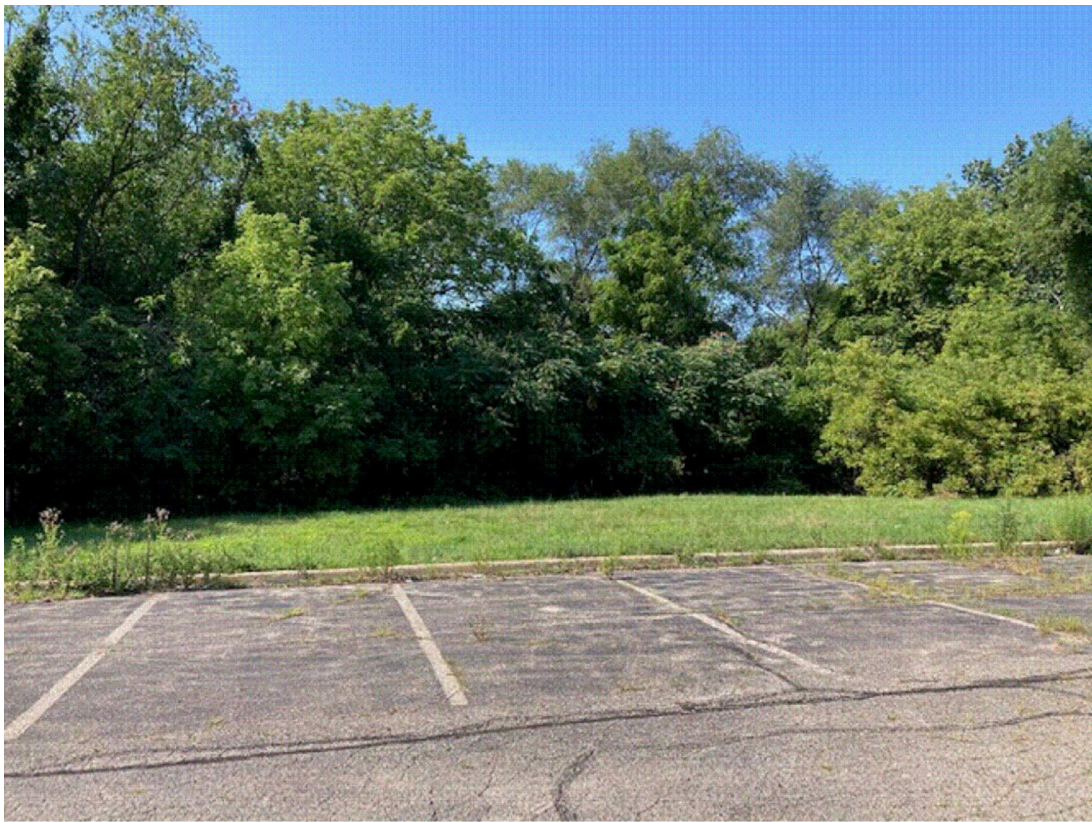
SITE PLAN REVIEW RESOURCES

- [Zoning Ordinance](#)
- [2025 Master Plan](#)
- [2015 Michigan Building Code](#)
- [2015 Michigan Residential Code](#)
- [2015 Michigan Mechanical Code](#)
- [2015 Michigan Plumbing Code](#)
- [ADA - ICC A117.1-2009](#)
- [Chapter 28, Kalamazoo Code of Ordinances, as Amended, as Amended](#)
- [Soil Erosion and Sedimentation Control - Chapter 30, Kalamazoo Ordinances, as Amended](#)
- [Flood Plain Management - Chapter 29 City of Kalamazoo Ordinances, as Amended](#)
- [Chapter 38 of the City of Kalamazoo's Code of Ordinances, as Amended](#)
- [MMUTCD](#)
- [NACTO](#)
- Complete Streets Policy, City of Kalamazoo
- ITE Trip Generation
- MDEQ - Uniform Stormwater Standards 1-4
- [Title 40 of the Code of Federal Regulations \(CFR\) as Amended, US EPA](#)
- [Natural Resources and Environmental Protection Act \(NREPA\), Act 451 of 1994 Part 41, as Amended Recommended Standards for Wastewater Facilities, Current Addition \(10 States Standards\)](#)
- [Standard Construction Specifications for Wastewater, City of Kalamazoo, Current addition](#)
- Wellhead Protection Zoning Overlay - Chapter 3, Section 3.5, Ordinance No. 1825 as Appendix A
- Performance Standards for Groundwater Protection Within Wellhead Protection Capture Zones and Stormwater Quality Management - Ordinance No. 1826 as Appendix A, Chapter 8, Section 8.3
- [Phase II Stormwater NPDES Permit](#)
- <https://kalamazoopublisafety.org/fire/marshall>
- Maker of Acceptable Knox Box (www.knoxbox.com)
- [USEPA Safe Drinking Water Act, 42 U.S.C. §300f et seq. \(1974\)](#)
- MDEQ, Michigan Safe Drinking water Act 1976 PA 399, as Amended
- Recommended Standards for Water Works, Current Addition (10 States Standards)
- [City of Kalamazoo's Standard Specifications for Water Main and Service Installation, Current Edition](#)
- www.protectyourwater.net

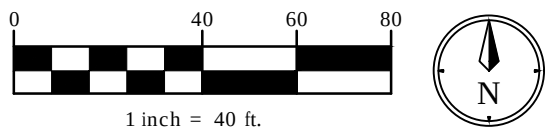
WEST BORDER TREE EXAMPLES



NORTH BORDER TREE EXAMPLE



EAST BORDER TREE EXAMPLES



PLANS PREPARED BY:



DRAWN: BD/EAG
CHECKED: JPR

No.	ISSUED FOR:	DATE	BY
0	VARIANCE	08/02/22	JPR
1	.	.	.
2	.	.	.
3	.	.	.
4	.	.	.

TREE ANALYSIS
KALAMAZOO MULTIFAMILY
GREAT LAKES CAPITAL
3625 W MICHIGAN
SECTION 19, T2S, R11W

SHEET TITLE:
PROJECT:
CLIENT:
SITE ADDRESS:
SITE SECTION:

JOB NUMBER
2185008

DATE
08/02/2022

SHEET NUMBER
1 OF 1

KALAMAZOO MULTI - FAMILY

LEGAL DESCRIPTION

PARCEL #: 06-19-463-001

Parcel 1:
BEGINNING AT A POINT ON THE EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 19, TOWN 2 SOUTH, RANGE 11 WEST, WHICH IS SOUTH 00 DEGREES 17 MINUTES 00 SECONDS WEST, 196.00 FEET FROM THE CENTERLINE OF WHAT WAS FORMERLY THE TERRITORIAL ROAD, AND IS NOW KNOWN AS WEST MICHIGAN AVENUE; THENCE CONTINUING SOUTH 00 DEGREES 17 MINUTES 00 SECONDS WEST ALONG THE SAID EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 19, 885.38 FEET TO THE NORTHERLY RIGHT-OF-WAY LINE OF THE MICHIGAN CENTRAL RAILROAD; THENCE NORTH 80 DEGREES 50 MINUTES 00 SECONDS WEST ALONG SAID NORTHERLY RIGHT-OF-WAY LINE OF THE MICHIGAN CENTRAL RAILROAD, 515.42 FEET; THENCE NORTH 00 DEGREES 17 MINUTES EAST PARALLEL TO THE SAID EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 19, 558.94 FEET; THENCE NORTH 69 DEGREES 32 MINUTES 30 SECONDS EAST PARALLEL TO THE CENTERLINE OF WEST MICHIGAN AVENUE, 228.34 FEET; THENCE NORTH 00 DEGREES 17 MINUTES 00 SECONDS EAST PARALLEL TO THE SAID EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 19, 250.00 FEET TO THE CENTERLINE OF WEST MICHIGAN AVENUE; THENCE NORTH 69 DEGREES 32 MINUTES 30 SECONDS EAST THEREON SAID HIGHWAY CENTERLINE, 159.00 FEET; THENCE SOUTH 00 DEGREES 17 MINUTES WEST PARALLEL TO THE SAID EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 19, 140.33 FEET; THENCE SOUTH 89 DEGREES 43 MINUTES 00 SECONDS EAST, 147.00 FEET TO THE PLACE OF BEGINNING.

EXCEPT THAT PART OF THE SOUTHEAST 1/4 OF SECTION 19, TOWN 2 SOUTH, RANGE 11 WEST, CITY OF KALAMAZOO, KALAMAZOO COUNTY, MICHIGAN, DESCRIBED AS:

COMMENCING AT THE INTERSECTION OF THE EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 19 AND THE CENTERLINE OF WEST MICHIGAN AVENUE; THENCE SOUTH 70 DEGREES 26 MINUTES 05 SECONDS WEST, 157.19 FEET ALONG THE CENTERLINE OF WEST MICHIGAN AVENUE; THENCE SOUTH 01 DEGREES 10 MINUTES 41 SECONDS WEST, 35.29 FEET TO THE SOUTH RIGHT-OF-WAY LINE OF WEST MICHIGAN AVENUE FOR THE PLACE OF BEGINNING OF THIS DESCRIPTION; THENCE SOUTH 01 DEGREES 10 MINUTES 41 SECONDS WEST, 18.18 FEET; THENCE SOUTH 70 DEGREES 26 MINUTES 05 SECONDS WEST, 159.00 FEET; THENCE NORTH 01 DEGREES 10 MINUTES 41 SECONDS EAST, 18.18 FEET TO THE SOUTH RIGHT-OF-WAY LINE OF WEST MICHIGAN AVENUE; THENCE NORTH 70 DEGREES 26 MINUTES 05 SECONDS EAST, 159.00 FEET ALONG SAID LINE TO THE PLACE OF BEGINNING.

PARCEL 2:
COMMENCING AT A POINT ON THE EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 19, TOWN 2 SOUTH, RANGE 11 WEST, WHICH IS SOUTH 00 DEGREES 17 MINUTES 00 SECONDS WEST, 196.00 FEET FROM THE CENTERLINE OF WHAT WAS FORMERLY THE TERRITORIAL ROAD, AND IS NOW KNOWN AS WEST MICHIGAN AVENUE; THENCE NORTH 89 DEGREES 43 MINUTES 00 SECONDS WEST MEASURED AT RIGHT ANGLES TO SAID EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 19, 67.00 FEET FOR THE PLACE OF BEGINNING; THENCE NORTH 00 DEGREES 17 MINUTES 00 SECONDS EAST PARALLEL TO SAID EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 19, 170.63 FEET TO THE CENTERLINE OF WEST MICHIGAN AVENUE; THENCE SOUTH 69 DEGREES 32 MINUTES 30 SECONDS WEST ALONG THE SAID CENTERLINE OF WEST MICHIGAN AVENUE, 85.59 FEET; THENCE SOUTH 00 DEGREES 17 MINUTES 00 SECONDS WEST PARALLEL TO THE EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SAID SECTION 19, 140.33 FEET; THENCE SOUTH 89 DEGREES 43 MINUTES 00 SECONDS EAST 80.00 FEET TO THE PLACE OF BEGINNING.

EXCEPT THAT PART OF THE SOUTHEAST 1/4 OF SECTION 19, TOWN 2 SOUTH, RANGE 11 WEST, CITY OF KALAMAZOO, KALAMAZOO COUNTY, MICHIGAN, DESCRIBED AS:

COMMENCING AT THE INTERSECTION OF THE EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 19 AND THE CENTERLINE OF WEST MICHIGAN AVENUE; THENCE SOUTH 70 DEGREES 26 MINUTES 05 SECONDS WEST, 72.71 FEET ALONG SAID CENTERLINE; THENCE SOUTH 01 DEGREES 10 MINUTES 41 SECONDS WEST, 35.29 FEET TO THE SOUTH RIGHT-OF-WAY LINE OF WEST MICHIGAN AVENUE FOR THE PLACE OF BEGINNING OF THIS DESCRIPTION; THENCE SOUTH 01 DEGREES 10 MINUTES 41 SECONDS WEST, 18.18 FEET; THENCE SOUTH 70 DEGREES 26 MINUTES 05 SECONDS WEST, 84.48 FEET; THENCE NORTH 01 DEGREES 10 MINUTES 41 SECONDS EAST, 18.18 FEET TO THE SOUTH RIGHT-OF-WAY LINE OF WEST MICHIGAN AVENUE; THENCE NORTH 70 DEGREES 26 MINUTES 05 SECONDS EAST, 84.48 FEET ALONG SAID LINE TO THE PLACE OF BEGINNING.

PARCEL 3:

COMMENCING IN THE CENTER OF THE TERRITORIAL ROAD ON THE EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 19, TOWN 2 SOUTH, RANGE 11 WEST, AND RUNNING THENCE SOUTH 196.00 FEET; THENCE DUE WEST 67.00 FEET; THENCE NORTH 168.00 FEET MORE OR LESS TO THE CENTER OF SAID TERRITORIAL ROAD; AND THENCE NORTHEASTERLY ALONG THE CENTERLINE OF SAID ROAD TO THE PLACE OF BEGINNING.

EXCEPT THAT PART OF THE SOUTHEAST 1/4 OF SECTION 19, TOWN 2 SOUTH, RANGE 11 WEST, CITY OF KALAMAZOO, KALAMAZOO COUNTY, MICHIGAN, DESCRIBED AS:

COMMENCING AT THE INTERSECTION OF THE EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 19 AND THE CENTERLINE OF WEST MICHIGAN AVENUE; THENCE SOUTH 70 DEGREES 26 MINUTES 05 SECONDS WEST, 72.71 FEET; THENCE SOUTH 01 DEGREES 10 MINUTES 41 SECONDS WEST, 35.29 FEET TO THE SOUTH RIGHT-OF-WAY LINE OF WEST MICHIGAN AVENUE FOR THE PLACE OF BEGINNING OF THIS DESCRIPTION; THENCE NORTH 70 DEGREES 26 MINUTES 05 SECONDS EAST, 72.71 FEET ALONG SAID RIGHT-OF-WAY TO THE EAST LINE OF THE WEST 1/2 OF THE SOUTHEAST 1/4; THENCE SOUTH 01 DEGREES 10 MINUTES 41 SECONDS WEST, 18.18 FEET ALONG SAID LINE; THENCE SOUTH 70 DEGREES 26 MINUTES 05 SECONDS WEST, 72.71 FEET; THENCE NORTH 01 DEGREES 10 MINUTES 41 SECONDS EAST, 18.18 FEET TO THE PLACE OF BEGINNING.

3625 W MICHIGAN AVE SECTION 19, T.02S, R.11W CITY OF KALAMAZOO KALAMAZOO COUNTY, MI SITE DEVELOPMENT PLANS MARCH 15, 2024

ISSUED FOR: SITE PLAN SUBMITTAL

REVISIONS

No.	ISSUED FOR:	DATE:	BY:
0	VARIANCE	08/02/22	jpr
1	PRE-SITE PLAN REVIEW	02/07/23	wlp
2	VARIANCE	03/14/23	wlp
3	PRE-SITE PLAN RESUBMITTAL	03/27/23	wlp
4	PRE-SITE PLAN RESUBMITTAL	10/19/23	wlp
5	SITE PLAN SUBMITTAL	03/15/24	wlp

SHEET INDEX

No.	SHEET TITLE
T1.0	TITLE SHEET
C1.0	EX CONDITIONS - DEMO PLAN
C1.1	OVERALL EX. CONDITIONS - DEMO PLAN
C2.0	SITE LAYOUT
C3.0	UTILITY PLAN
C4.0	GRADING - SESC PLAN
C5.0	DETAILS
L1.0	LANDSCAPE PLAN

OWNERS:

KALAMAZOO REALTY HOLDINGS, LLC
40600 ANN ARBOR RD E STE 201
PLYMOUTH, MI 48170

CIVIL ENGINEER:

AR ENGINEERING, LLC.
5725 VENTURE PARK DRIVE, SUITE A
KALAMAZOO, MI 49008
TEL. (269) 250-5991 FAX. (866) 569-0604

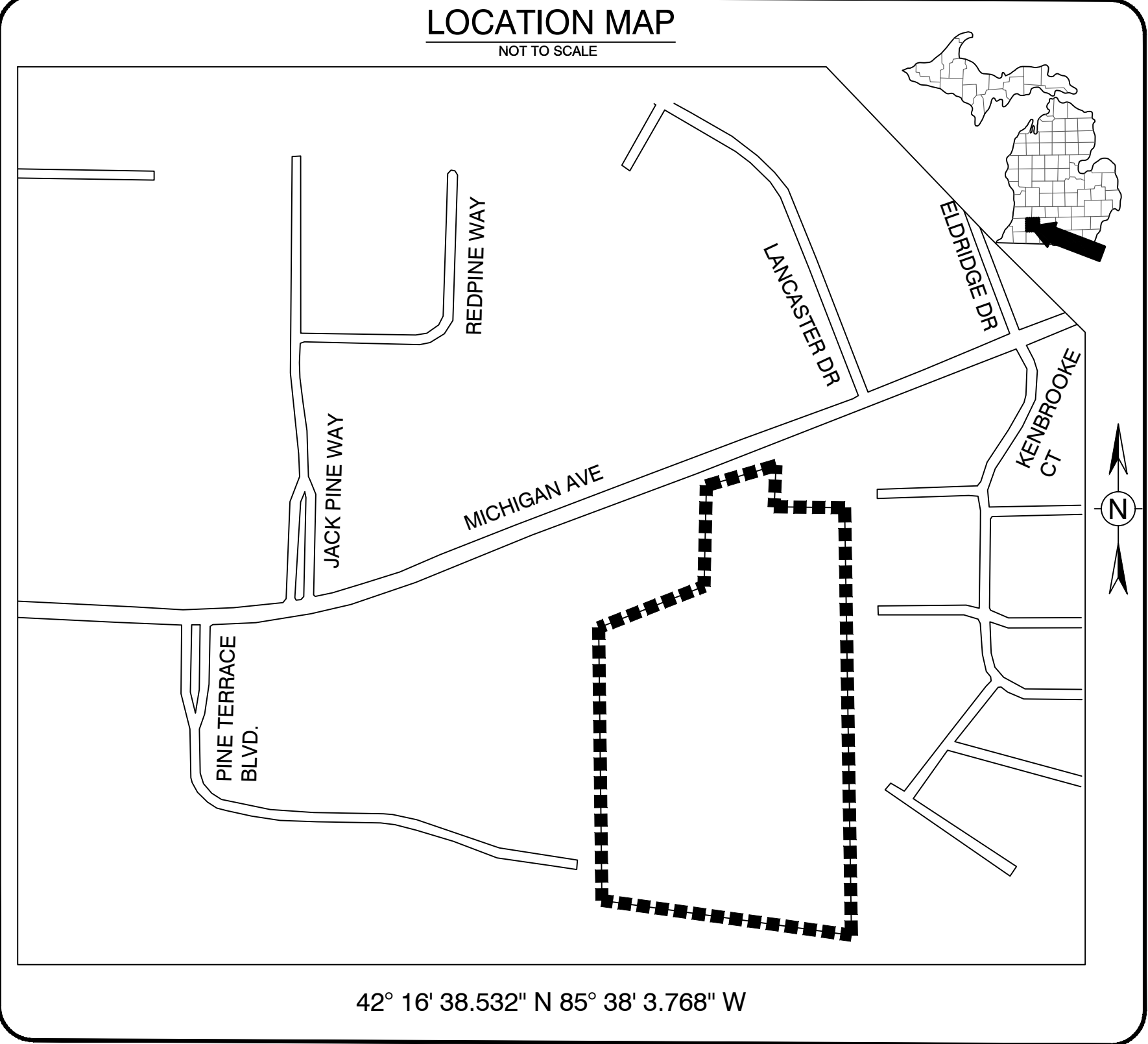


JASON RALIEGH. P.E.

DATE

LOCATION MAP

NOT TO SCALE



UTILITY CONTACTS

CABLE	CHARTER 4176 COMMERCIAL AVE. PORTAGE, MI 49002 TELEPHONE: 269-323-0580	TELEPHONE	AT&T 2919 MILLCORK ST. KALAMAZOO, MI 49001 TELEPHONE: 269-384-4476
WATER	CITY OF KALAMAZOO 415 STOCKBRIDGE AVE. KALAMAZOO, MI 49001 ATTN: ALBERTO FORERO ATTN: BOB WASS TELEPHONE : 269-337-8601	SEWER	CITY OF KALAMAZOO 415 STOCKBRIDGE AVE. KALAMAZOO, MI 49001 ATTN: ALBERTO FORERO ATTN: BOB WASS TELEPHONE : 269-337-8601
GAS	CONSUMERS ENERGY 2500 E. CORK ST. KALAMAZOO, MI 49001 ATTN: MS. JOE McFARLAND TELEPHONE: 269-337-2370	ELECTRIC	CONSUMERS ENERGY 2500 E. CORK ST. KALAMAZOO, MI 49001 ATTN: MS. JOE McFARLAND TELEPHONE: 269-337-2370
		MISS DIG	811

DEMOLITION NOTES

- ALL WORK SHALL CONFORM TO ALL LOCAL, STATE AND FEDERAL LAWS, RULES AND REGULATIONS IN FORCE AT TIME OF CONSTRUCTION.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS, PERMIT COSTS, TAP FEES, METER DEPOSITS, PERMANENT UTILITY APPLICATIONS, BONDS, AND OTHER FEES REQUIRED FOR PROPOSED WORK. THIS SHALL INCLUDE, BUT SHALL NOT BE LIMITED TO THOSE REQUIRED BY THE CITY OF KALAMAZOO, MICHIGAN AND KALAMAZOO COUNTY.
- CONTACT MISS DIG "811" FOR LOCATION OF UNDERGROUND UTILITIES A MINIMUM OF 48 HOURS BEFORE COMMENCING EXCAVATION WORK. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO ARE NOT PART OF THE "MISS DIG" ALERT SYSTEM. THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS IN A MANNER AS TO ENSURE THAT THOSE UTILITIES NOT REQUIRING RELOCATION WILL NOT BE DISTURBED.
- DEMOLISH & REMOVE ALL EXISTING SITE FEATURES AS REQUIRED.
- ALL SOIL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO DEMOLITION.
- ALL EXCAVATION SHALL BE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS AND GEOTECHNICAL REPORT FOR THIS SITE.
- ALL EXISTING ELEVATIONS ARE TO BE VERIFIED AND ACCEPTED AS SHOWN PRIOR TO COMMENCEMENT OF WORK.
- CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID TRACKING SOIL ONTO ADJACENT ROADWAYS. CONTRACTOR SHALL SWEEP IMMEDIATELY IF OCCURS.
- ANY DISTURBED AREA WHICH WILL BE LEFT UNWORKED 15 DAYS OR LONGER MUST BE SEEDED TO ESTABLISH VEGETATION FOR TEMPORARY STABILIZATION. BASINS TO BE SEEDED AND MULCH BLANKETS APPLIED IMMEDIATELY TO PROVIDE A STABLE BASE AND AVOID EXCESSIVE EROSION.
- REVIEW ALL THE REMOVALS AND PROTECTION WITH OWNER PRIOR TO COMMENCING CONSTRUCTION. INSTALL TEMPORARY SNOW FENCE AROUND ALL TREES REQUIRING PROTECTION. SNOW FENCE SHALL BE PLACED AT EDGE OF DRIP LINE.
- SAWCUT ALL CURB, SIDEWALK, AND PAVEMENTS PRIOR TO REMOVAL. ADDITIONAL SAWCUT MAY BE NECESSARY PRIOR TO REPLACEMENT TO ENSURE CLEAN EDGE.
- ALL REMOVALS SHALL BE TAKEN OFF-SITE AND DISPOSED OF PROPERLY. NO STOCKPILE OR BURNING OF DEBRIS IS ALLOWED.
- ALL REMOVALS SHALL BE TO THE LIMITS INDICATED ABOVE UNLESS OTHERWISE DIRECTED BY THE ENGINEER. UNAUTHORIZED REMOVALS AND SUBSEQUENT REPLACEMENT SHALL BE AT THE CONTRACTOR'S EXPENSE.
- REMOVE, STORE, AND RESET ANY EXISTING SIGNS AS DIRECTED BY THE ENGINEER/OWNER.
- THE CONTRACTOR SHALL DEMOLISH AND REMOVE ANY ITEMS REMAINING FROM THE EXISTING BUILDING, IN ITS ENTIRETY, INCLUDING WALLS, FOUNDATIONS AND FOOTINGS. ALL BUILDING DRAINS AND UTILITY LEADS SHALL BE LOCATED AND PROPERLY PLUGGED. UTILITY LEAD WORK SHALL BE COORDINATED WITH THE APPROPRIATE UTILITY COMPANY.
- BACKFILL EXCAVATED AREAS WITH CLEAN GRANULAR FILL COMPACTED TO 95% OF THE MATERIAL UNIT WEIGHT BY MODIFIED PROCTOR.
- CONTROL SHALL BE MAINTAINED OVER THE SITE AND OPERATION TO ELIMINATE HAZARDS TO THE PUBLIC. NAILS OR OTHER TIRE PUNCTURING ITEMS SHALL NOT BE DROPPED ON STREETS, ALLEYS AND ADJACENT PROPERTY. PUBLIC STREETS, CURBS AND SIDEWALKS SHALL BE PROTECTED FROM DAMAGE. THE PERSON ENGAGED IN THE DEMOLITION WORK SHALL BE LIABLE FOR ANY AND ALL DAMAGE TO CURBS, STREETS, SIDEWALKS AND OTHER PUBLIC OR PRIVATE PROPERTY AND FOR ANY BODILY INJURY OCCURRING AS A RESULT OF THE DEMOLITION WORK.

LEGEND

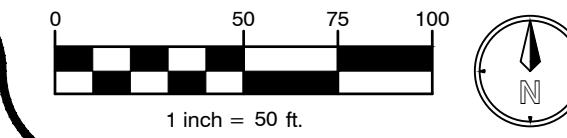
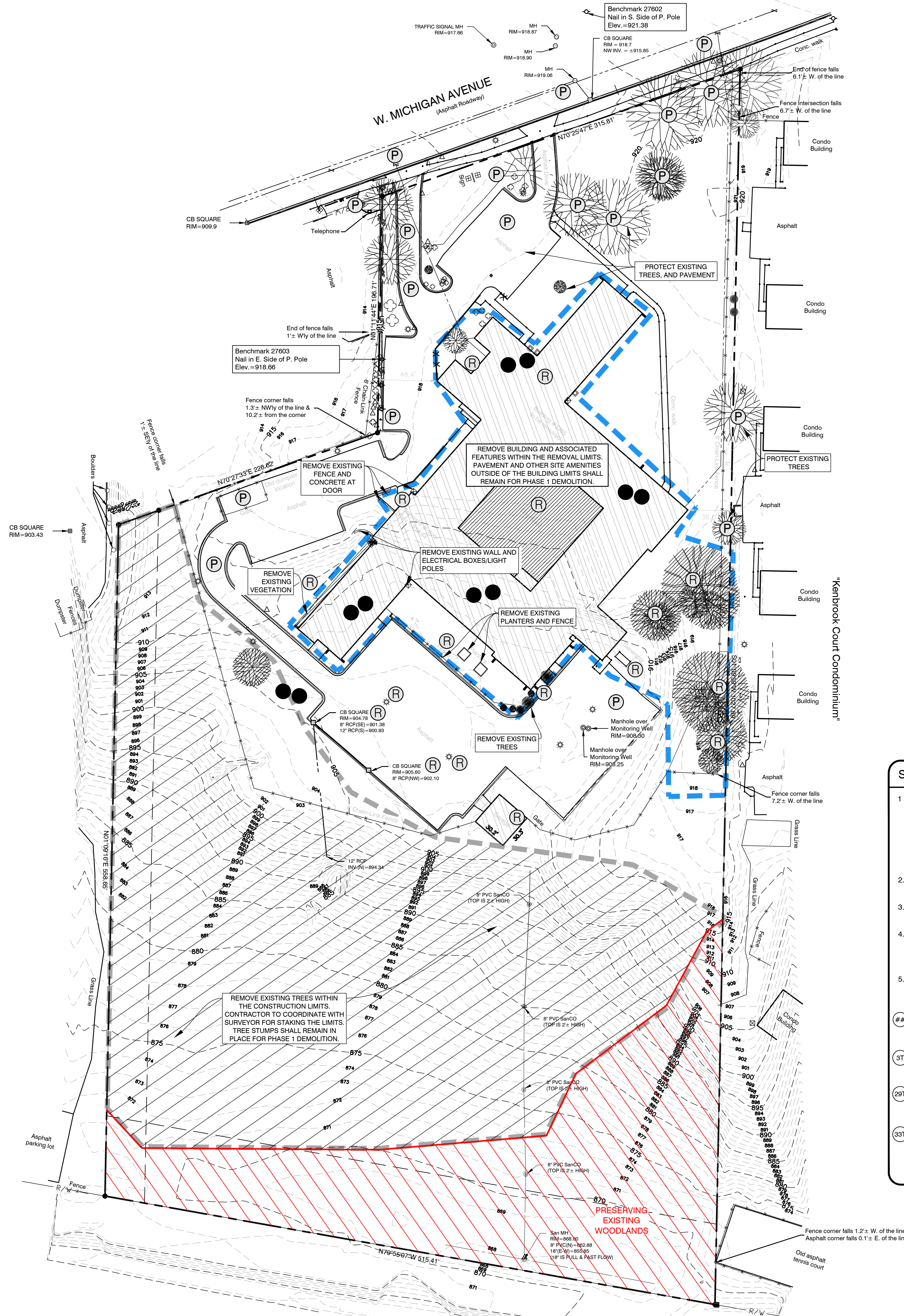
- BUILDING REMOVAL
- TREE PRESERVE AREA
- TREE REMOVAL
- REMOVE
- PROTECT
- LIMITS OF TREE REMOVAL
- LIMITS OF BLDG REMOVAL

STORM STRUCTURE INFORMATION

- EX-CB-1
RIM = 904.78'
INV SE = 8" RCP (INV. = 901.38)
INV S = 12" RCP (INV. = 900.93)
- EX-CB-2
RIM = 905.60'
INV NW = 8" RCP (INV. = 902.10)
- EX-CB-3
RIM = 918.70'
INV NW = ±915.85'
- EX-CB-4
RIM = 923.20'
- EX-CB-5
RIM = 903.43
- EX-MH-3
RIM = 908.25'
- EX-MH-4
RIM = 908.30'
- EX-MH-5
RIM = 919.06'
- EX-MH-6
RIM = 918.87'
- EX-MH-7
RIM = 918.90

SANITARY STRUCTURE INFORMATION

- EX-MH-A
RIM = 868.00'
INV N = 8" PVC (INV. = 862.88)
INV E-W = 18" (INV. = 855.85)
18" IS FULL & FAST FLOW



BENCHMARK INFORMATION

- TBM: 27602
NAIL IN SOUTH SIDE OF POWER POLE
ELEVATION = 921.38
- TBM: 27603
NAIL IN EAST SIDE OF POWER POLE
ELEVATION = 918.66

SOIL EROSION & SEDIMENT CONTROL NOTES

- ALL CONSTRUCTION METHODS SHALL BE DONE IN COMPLIANCE WITH MDOT-EGLE. THE OWNER SHALL BE RESPONSIBLE FOR OBTAINING A "SOIL EROSION PERMIT" FROM THE GOVERNING AUTHORITY AND A "PERMIT BY RULE/NOTICE OF COVERAGE" FROM THE GOVERNING AUTHORITY. IF APPLICABLE, PRIOR TO START OF CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL REQUIREMENTS OF THE "SOIL EROSION PERMIT" AND FOR ALL CERTIFIED STORM WATER INSPECTION SERVICE REQUIRED BY THE "PERMIT BY RULE." EROSION CONTROL MEASURES SHOWN ON THE PLANS ARE THE MINIMUM REQUIREMENTS AND SHALL NOT RELIEVE THE CONTRACTOR'S RESPONSIBILITY FOR PROVIDING ALL REQUIRED EROSION CONTROL MEASURES.
 - AVOID UNNECESSARY DISTURBING OR REMOVING OF EXISTING VEGETATED TOPSOIL OR EARTH COVER. THESE COVER AREAS ACT AS SEDIMENT FILTERS.
 - ALL TEMPORARY SOIL EROSION PROTECTION SHALL REMAIN IN PLACE UNTIL REMOVAL IS REQUIRED FOR FINAL CLEAN UP AND APPROVAL.
 - GEOTEXTILE SILT FENCE SHALL BE INSTALLED AS REQUIRED WHEN CROSSING CREEKS OR WHEN ADJACENT TO WETLANDS OR SURFACE WATER BODIES TO PREVENT SILTATION AND ELSEWHERE AS DIRECTED BY THE ENGINEER. SEEDING AND/OR SODDING SHALL BE INSTALLED ON CREEK BANKS IMMEDIATELY AFTER CONSTRUCTION TO PREVENT EROSION.
 - MAINTENANCE, CLEANING, AND REMOVAL OF THE VARIOUS SEDIMENT CONTROL MEASURES SHALL BE INCLUDED IN THE VARIOUS EROSION CONTROL ITEMS.
- ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE PER MDOT STANDARD DETAILS. "P" DENOTES PERMANENT MEASURE AND "T" DENOTES TEMPORARY MEASURE. SOIL EROSION CONTROL PLANS DENOTE MINIMUM EROSION MEASURES REQUIRED AS DESCRIBED BELOW.
- ## DENOTES TEMPORARY SEEDING. TEMPORARY SEEDING SHALL BE PLACED AT LOCATIONS DETERMINED BY THE ENGINEER IN THE FIELD AND SHALL INCLUDE CEREAL RYE SEED APPLIED AT A RATE OF 70 LB/ACRE AND MULCH.
- 20T DENOTES INLET PROTECTION FABRIC DROP. SHALL BE INSTALLED AT EXISTING AND PROPOSED STORM SEWER INLETS TO PROVIDE SETTLING AND FILTERING OF SILT-LADEN WATER PRIOR TO ENTRY INTO THE DRAINAGE SYSTEM.
- 33T DENOTES MULCH BLANKET OR MATTING. SHALL BE NORTH AMERICAN GREEN DS150, OR APPROVED EQUAL. MULCH BLANKETS SHALL BE PLACED ON ALL 1:3 SLOPES OR GREATER, IN AND AROUND DITCH BOTTOMS WHERE THERE IS NO BIOSWALE BY CONTRACTOR RESPONSIBLE FOR RESTORING THAT AREA.

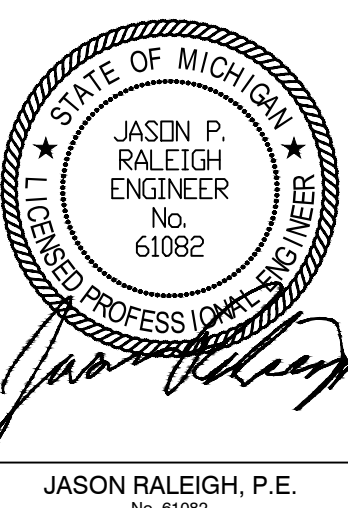


ALL UTILITIES AS SHOWN ARE APPROXIMATE LOCATIONS DERIVED FROM ACTUAL MEASUREMENTS AND AVAILABLE RECORDS. THEY SHOULD NOT BE INTERPRETED TO BE EXACT LOCATION NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THE AREA. FIELD WORK PERFORMED BY: MOSTROM & ASSOC., INC.

PLANS PREPARED BY:



DRAWN: BD/EAG
CHECKED: JPR/WLP



No.	DATE	BY	ISSUED FOR:
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5	03/15/2024	WP	SITE PLAN SUBMITTAL

EX CONDITIONS - DEMO PHASE 1
KALAMAZOO MULTIFAMILY
KALAMAZOO REALTY HOLDINGS, LLC
3625 W MICHIGAN
SECTION 19, T2S, R1W

SHEET TITLE:
PROJECT:
CLIENT:
SITE ADDRESS:
SITE SECTION:

JOB NUMBER
23169001

DATE
03/15/2024

SHEET NUMBER
C1.0

DEMOLITION NOTES

- ALL WORK SHALL CONFORM TO ALL LOCAL, STATE AND FEDERAL LAWS, RULES AND REGULATIONS IN FORCE AT TIME OF CONSTRUCTION.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS, PERMIT COSTS, TAP FEES, METER DEPOSITS, PERMANENT UTILITY APPLICATIONS, BONDS, AND OTHER FEES REQUIRED FOR PROPOSED WORK. THIS SHALL INCLUDE, BUT SHALL NOT BE LIMITED TO THOSE REQUIRED BY THE CITY OF KALAMAZOO, MICHIGAN AND KALAMAZOO COUNTY.
- CONTACT MISS DIG "811" FOR LOCATION OF UNDERGROUND UTILITIES A MINIMUM OF 48 HOURS BEFORE COMMENCING EXCAVATION WORK. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO ARE NOT PART OF THE "MISS DIG" ALERT SYSTEM. THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS IN A MANNER AS TO ENSURE THAT THOSE UTILITIES NOT REQUIRING RELOCATION WILL NOT BE DISTURBED.
- DEMOLISH & REMOVE ALL EXISTING SITE FEATURES AS REQUIRED.
- ALL SOIL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO DEMOLITION.
- ALL EXCAVATION SHALL BE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS AND GEOTECHNICAL REPORT FOR THIS SITE.
- ALL EXISTING ELEVATIONS ARE TO BE VERIFIED AND ACCEPTED AS SHOWN PRIOR TO COMMENCEMENT OF WORK.
- CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID TRACKING SOIL ONTO ADJACENT ROADWAYS. CONTRACTOR SHALL SWEEP IMMEDIATELY IF OCCURS.
- ANY DISTURBED AREA WHICH WILL BE LEFT UNWORKED 15 DAYS OR LONGER MUST BE SEEDED TO ESTABLISH VEGETATION FOR TEMPORARY STABILIZATION. BASINS TO BE SEEDED AND MULCH BLANKETS APPLIED IMMEDIATELY TO PROVIDE A STABLE BASE AND AVOID EXCESSIVE EROSION.
- REVIEW ALL THE REMOVALS AND PROTECTION WITH OWNER PRIOR TO COMMENCING CONSTRUCTION. INSTALL TEMPORARY SNOW FENCE AROUND ALL TREES REQUIRING PROTECTION. SNOW FENCE SHALL BE PLACED AT EDGE OF DRIP LINE.
- SAWCUT ALL CURB, SIDEWALK, AND PAVEMENTS PRIOR TO REMOVAL. ADDITIONAL SAWCUT MAY BE NECESSARY PRIOR TO REPLACEMENT TO ENSURE CLEAN EDGE.
- ALL REMOVALS SHALL BE TAKEN OFF-SITE AND DISPOSED OF PROPERLY. NO STOCKPILE OR BURNING OF DEBRIS IS ALLOWED.
- ALL REMOVALS SHALL BE TO THE LIMITS INDICATED ABOVE UNLESS OTHERWISE DIRECTED BY THE ENGINEER. UNAUTHORIZED REMOVALS AND SUBSEQUENT REPLACEMENT SHALL BE AT THE CONTRACTOR'S EXPENSE.
- REMOVE, STORE, AND RESET ANY EXISTING SIGNS AS DIRECTED BY THE ENGINEER/OWNER.
- REMOVE ALL TREES TO THE CLEARING LIMITS AS SHOWN. REMOVE ALL EXISTING TREES, STUMPS AND BRUSH FROM THE SITE AS NECESSARY TO CONSTRUCT THE IMPROVEMENTS.
- THE CONTRACTOR SHALL DEMOLISH AND REMOVE ANY ITEMS REMAINING FROM THE EXISTING BUILDING, IN ITS ENTIRETY, INCLUDING WALLS, FOUNDATIONS AND FOOTINGS. ALL BUILDING DRAINS AND UTILITY LEADS SHALL BE LOCATED AND PROPERLY PLUGGED. UTILITY LEAD WORK SHALL BE COORDINATED WITH THE APPROPRIATE UTILITY COMPANY.
- BACKFILL EXCAVATED AREAS WITH CLEAN GRANULAR FILL COMPACTED TO 95% OF THE MATERIAL UNIT WEIGHT BY MODIFIED PROCTOR.
- CONTROL SHALL BE MAINTAINED OVER THE SITE AND OPERATION TO ELIMINATE HAZARDS TO THE PUBLIC. NAILS OR OTHER TIRE PUNCTURING ITEMS SHALL NOT BE DROPPED ON STREETS, ALLEYS AND ADJACENT PROPERTY. PUBLIC STREETS, CURBS AND SIDEWALKS SHALL BE PROTECTED FROM DAMAGE. THE PERSON ENGAGED IN THE DEMOLITION WORK SHALL BE LIABLE FOR ANY AND ALL DAMAGE TO CURBS, STREETS, SIDEWALKS AND OTHER PUBLIC OR PRIVATE PROPERTY AND FOR ANY BODILY INJURY OCCURRING AS A RESULT OF THE DEMOLITION WORK.

LEGEND

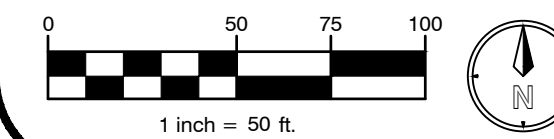
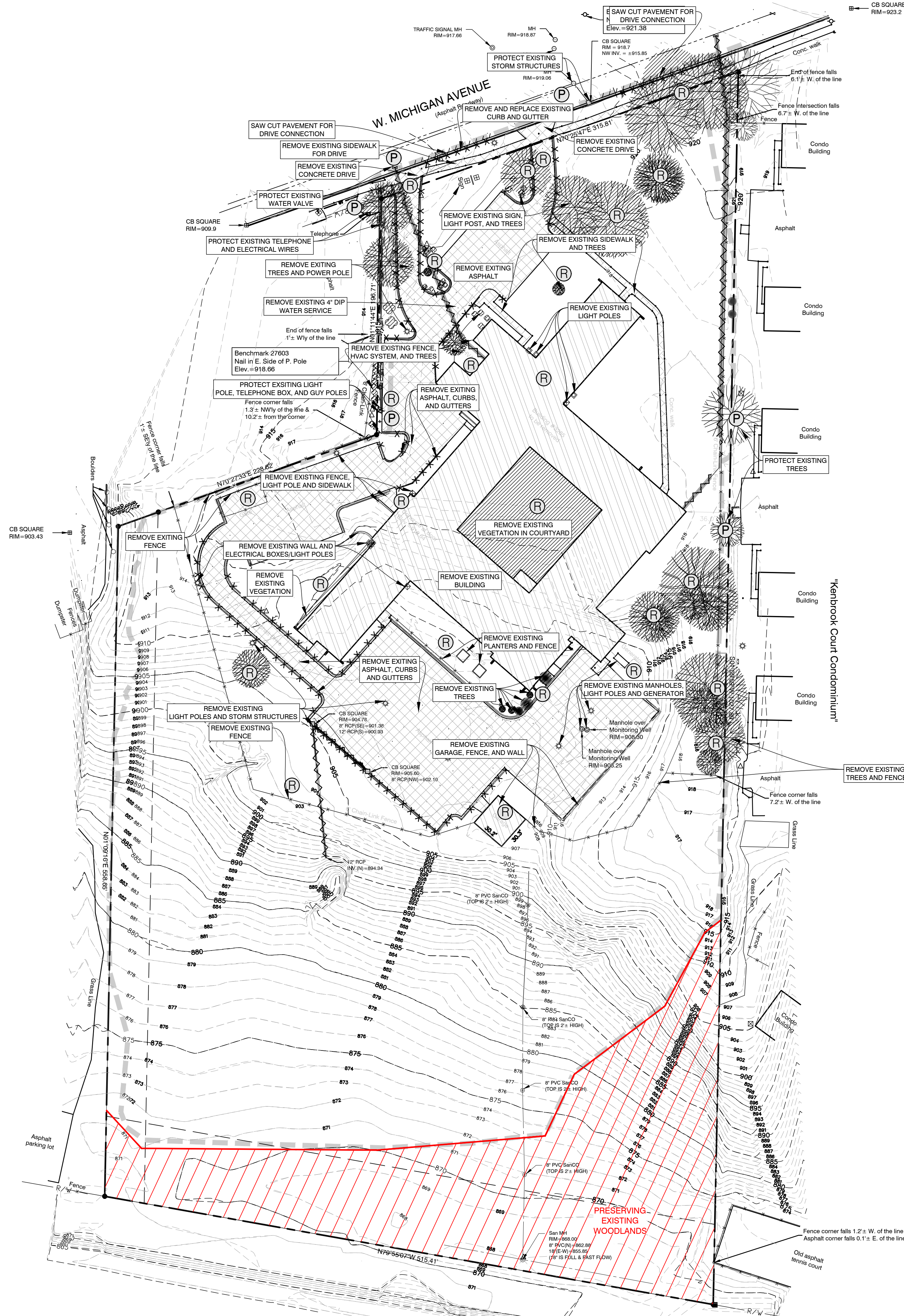
- PAVEMENT REMOVAL
- BUILDING REMOVAL
- SAWCUT
- TREE REMOVAL
- REMOVE
- PROTECT
- LIMITS OF CONSTRUCTION
- CURB & GUTTER REMOVAL
- UTILITY LINE REMOVAL

STORM STRUCTURE INFORMATION

- | | |
|--|--------------------------|
| EX-CB-1
RIM = 904.78'
INV SE = 8" RCP (INV. = 901.38')
INV S = 12" RCP (INV. = 900.93') | EX-MH-3
RIM = 908.25' |
| EX-CB-2
RIM = 905.60'
INV NW = 8" RCP (INV. = 902.10') | EX-MH-4
RIM = 908.30' |
| EX-CB-3
RIM = 918.70'
INV NW = ±915.85' | EX-MH-5
RIM = 919.06' |
| EX-CB-4
RIM = 923.20' | EX-MH-6
RIM = 918.87' |
| EX-CB-5
RIM = 903.43' | EX-MH-7
RIM = 918.90' |

SANITARY STRUCTURE INFORMATION

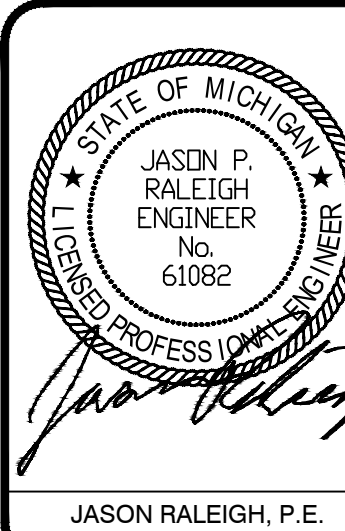
- EX-MH-A
RIM = 868.00'
INV N = 8" PVC (INV. = 862.88')
INV E-W = 18" (INV. = 855.85')
18" IS FULL & FAST FLOW



PLANS PREPARED BY:



DRAWN: BD/EAG
CHECKED: JPR/WLP



JASON RALEIGH, P.E.
No. 61082

No.	DATE	BY	ISSUED FOR:
1	02/07/2023	WP	PRE-SITE PLAN REVIEW
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OVERALL EX. CONDITIONS & DEMO PLAN
KALAMAZOO MULTIFAMILY
KALAMAZOO REALTY HOLDINGS, LLC
3625 W MICHIGAN
SECTION 19, T2S, R1W

SHEET TITLE:
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SITE DATA

- PROPERTY INFORMATION:
PARCEL #S: PARCEL 1: 06-19-463-001
PARCEL 2: 06-19-454-002
PARCEL 3: 06-19-454-001

SITE AREA: 411,971 SF (9.46 AC)

OWNER: KALAMAZOO REALTY HOLDINGS, LLC
40600 ANN ARBOR RD. E. STE. 201
ANN ARBOR, MI 48170
- ZONING:
PROPERTY CURRENTLY ZONED:
RM-15, RESIDENTIAL, MULTI-DWELLING
ABUTTING PROPERTY CURRENTLY ZONED:
NORTH: CN-1 - COMMERCIAL, NEIGHBORHOOD &
RS-5 - RESIDENTIAL, SINGLE DWELLING
SOUTH: CC - COMMUNITY COMMERCIAL
EAST: RM-15 - RESIDENTIAL, MULTI-DWELLING
WEST: CN-1 - COMMERCIAL, NEIGHBORHOOD; PUD

PROPOSED LAND USE = MULTI-UNIT DWELLING
*VARIANCE TO ALLOW RESIDENTIAL OCCUPANCY IN THE
GROUND LEVEL FACING ROAD FRONTAGE
- SETBACKS
FRONT = 20'
SIDES = 20'
REAR = 5'
- PARKING:
REQUIRED PARKING PER ORDINANCE
STUDENTS: 2 PARKING SPACES PER UNIT
75 STUDENT UNITS * 2 = 150 SPACES
MULTI-FAMILY: 1 PARKING SPACE PER UNIT
160 MULTI-FAMILY UNITS * 1 = 160 SPACES
TOTAL PARKING REQUIRED (MAX 10% REQ):
MIN OF 310 SPACES AND MAX OF 341 SPACES

PROPOSED PARKING:
STANDARD (9'X18') 321
ADA COMPLIANT 8
TOTAL 329
- BUILDING:
THREE-STORY - 235 UNIT
UNIT MIX PLANNED FOR:
118 - STUDIO
79 - 1 BEDROOM
36 - 2 BEDROOM
MAXIMUM HEIGHT: 35-FT
MIN. LOT AREA: 4,000 SFT
MIN. LOT AREA PER DWELLING UNIT: 1,500 SFT
MIN. LOT WIDTH: 33-FT
- IMPERVIOUS AREA:
231,213 SFT / 411,971 SFT = 56%
MAXIMUM IMPERVIOUS AREA = 60%

7. DWELLING UNIT DENSITY:
235 UNITS / 9.46 AC = 24.8 UNITS/AC

SITE PLAN NOTES

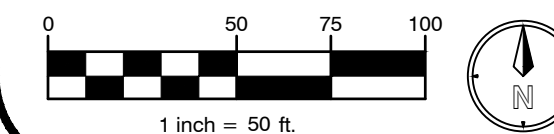
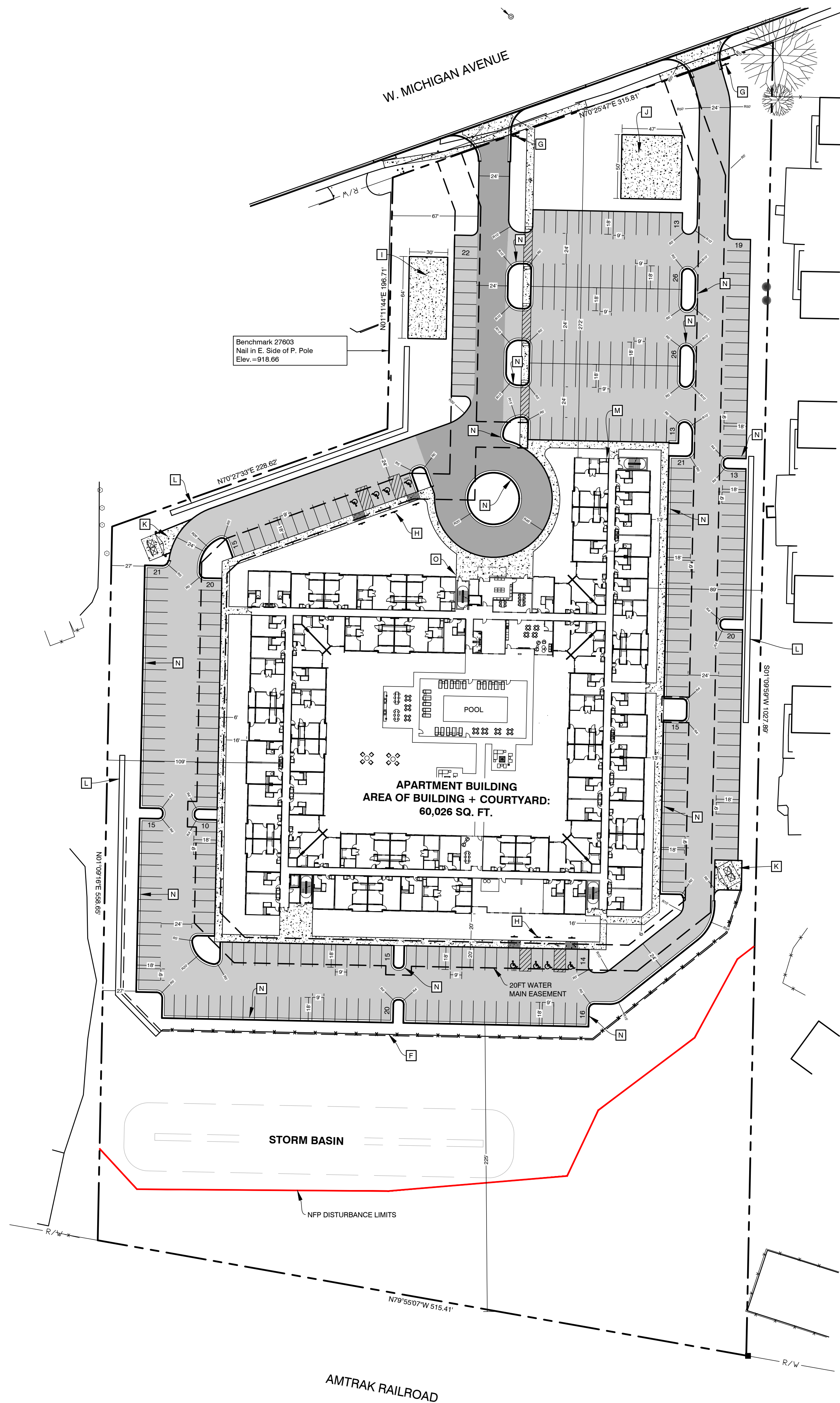
- [A] BITUMINOUS PAVEMENT (SEE DETAIL, SHEET C5.0)
[B] INTEGRAL CURB/WALK (SEE DETAIL, SHEET C5.0)
[C] AT-GRADE RAMP (SEE GRADING PLAN)
[D] DOWNSPOUT (TYP.)
[E] 4" PAINTED PARKING LOT MARKING/ STRIPING (TYP.)
[F] 6" VINYL COATED CHAIN LINK FENCE (SEE ARCH PLANS)
[G] STOP SIGNS (2)
[H] ADA SIGNS (8) (SEE DETAIL, SHEET C5.0)
[I] PICKLEBALL COURT
[J] BASKETBALL COURT
[K] 6" CONCRETE PAD/LOADING AREA FOR 18' x 18' (MIN.)
DUMPSTER. AREA FOR (2) STD DUMPSTER (SEE DETAIL
SHEET).
[L] REDI-ROCK GRAVITY RETAINING WALL OR APPROVED
EQUAL.
[M] 24-INCH ADDRESS NUMBERS ON BLDG. COORDINATE
WITH CITY OF KALAMAZOO FIRE DEPARTMENT.
[N] CONCRETE CURB & GUTTER (SEE DETAIL SHEET)
[O] KNOX BOX, SEE NOTES THIS SHEET.

KNOX BOX & ADDRESSING REQUIREMENTS

- CONTACT CITY OF KALAMAZOO FIRE DEPARTMENT TO COORDINATE AT
269-337-8260.
- INSTALLATION OF KNOX BOX. THE SIZE SHALL BE A "3200" SERIES OR LARGER.
THE VAULT SHALL BE MOUNTED UNOBSTRUCTED AND VISIBLE APPROXIMATELY
FIVE FEET (60") FROM GROUND LEVEL NEAR A MAIN ACCESS DOOR. DEVICES
MAY ONLY BE PURCHASED AT [HTTPS://WWW.KNOXBOX.COM](https://www.knoxbox.com). FURTHER
INFORMATION IS AVAILABLE AT
[HTTPS://KALAMAZOOPUBLICSAFETY.ORG/FIRE/MARSHAL/](https://kalamazoopublicsafety.org/fire/marshal/)
- THE ADDRESS NUMBERS AND STREET NAME SHALL CONTRAST WITH THEIR
BACKGROUND.
- ADDRESS NUMBERS SHALL BE AT LEAST 24" HIGH.
- ADDRESS LETTERS INDICATING STREET NAMES SHALL BE 6" TO 24", HEIGHT TO
BE APPROVED.
- BUILDING IDENTIFICATION SHALL BE PLACED IN A POSITION THAT IS PLAINLY
LEGIBLE AND VISIBLE FROM ANY STREET OR ROAD FRONTING THE PROPERTY.
- THOSE PROPERTIES FRONTING MORE THAN ONE STREET OR ROAD SHALL
IDENTIFY THE ADDRESS BY BOTH NUMBER AND STREET NAME ON EACH SIDE OF
ROAD FRONTAGE.

GENERAL NOTES

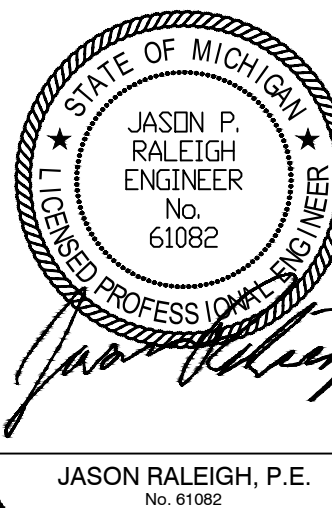
- DIMENSIONS TAKE PRECEDENCE OVER SCALE. CONTRACTOR
TO VERIFY ALL DIMENSIONS IN FIELD.
- IF ANY ERRORS, DISCREPANCIES, OR OMISSIONS BECOME
APPARENT, THESE SHALL BE BROUGHT TO THE ATTENTION
OF THE ARCHITECT/ ENGINEER PRIOR TO CONSTRUCTION OF
ANYTHING AFFECTED SO THAT CLARIFICATION OR REDESIGN
MAY OCCUR.
- ALL CURB RADII AND DIMENSIONS ARE TO FACE OF CURB.
CURB TO BE PROVIDED WHERE SHOWN AND INTEGRAL WITH
SIDEWALK AT PAVING EDGE.
- SLOPE GRADES UNIFORMLY BETWEEN ELEVATIONS SHOWN.
NOMINAL GRADING, SLOPE SIDEWALKS AWAY FROM BUILDING
AT 1/4" PER FOOT ON ENTRY WALK.



LEGEND

- HEAVY DUTY PAVEMENT
(SEE DETAIL ON C5.0)
- LIGHT DUTY PAVEMENT
(SEE DETAIL ON C5.0)
- CONCRETE PAVEMENT AND SIDEWALK
(SEE DETAIL ON C5.0)

PLANS PREPARED BY:

DRAWN: BD/EAG
CHECKED: JPR/WLPJASON RALEIGH, P.E.
No. 61082

No.	ISSUED FOR:	DATE	BY
1	PRE-SITE PLAN REVIEW	02/07/2023	WP
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5	SITE PLAN SUBMITTAL	03/15/2024	WP

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OVERALL SITE LAYOUT
KALAMAZOO MULTIFAMILY
KALAMAZOO REALTY HOLDINGS, LLC
3625 W MICHIGAN
SECTION 19, T2S, R11W

SHEET TITLE:
PROJECT:
CLIENT:
SITE ADDRESS:
SITE SECTION:JOB NUMBER
23169001DATE
03/15/2024

SHEET NUMBER

C2.0

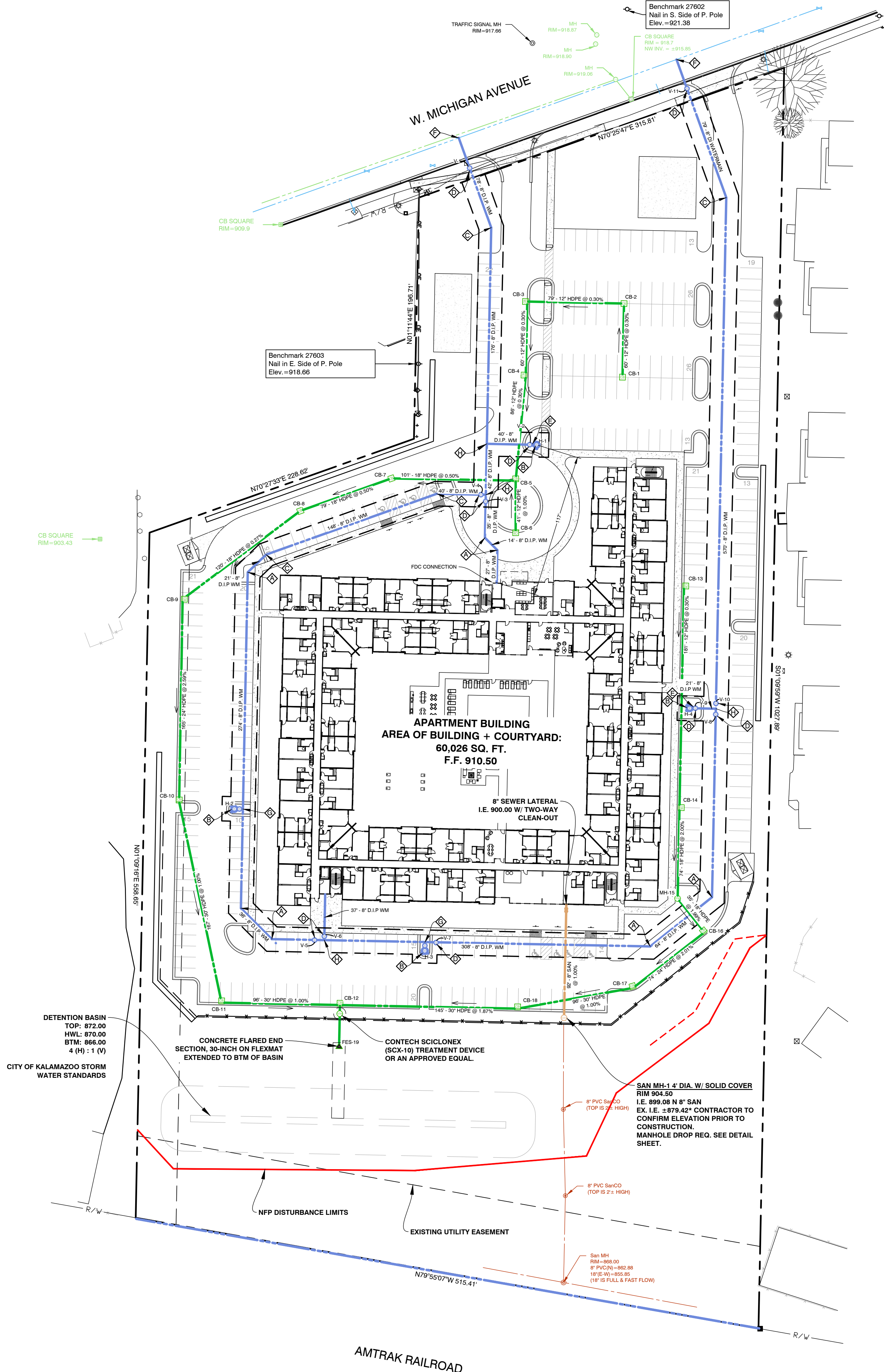
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AREA. FIELD WORK PERFORMED BY: MOSTROM & ASSOC., INC

SITE MATERIALS & CONSTRUCTION NOTES

- SOILS EXPOSED IN THE BASE OF ALL SATISFACTORY FOUNDATION EXCAVATIONS SHOULD BE PROTECTED AGAINST ANY DETRIMENTAL CHANGES IN CONDITION SUCH AS FROM DISTURBANCE, RAIN AND FREEZING. SURFACE RUN-OFF WATER SHOULD BE DRAINED AWAY FROM THE EXCAVATION AND NOT ALLOWED TO POND. IF POSSIBLE, ALL FOOTING CONCRETE SHOULD BE POURED THE SAME DAY THE EXCAVATION IS MADE. IF THIS IS NOT PRACTICAL, THE FOOTING EXCAVATIONS SHOULD BE ADEQUATELY PROTECTED.
- REMOVE ALL SUBGRADE GRADE MATERIAL THAT MAY BE SOFTENED BY RAINS, FREEZING, OR CONSTRUCTION TRAFFIC, ETC. AND REPLACE WITH COMPACTED GRANULAR FILL.
- STORM SEWER SHALL BE CORRUGATED HDPE PIPE WITH SMOOTH INTERIOR WALL, BY ADS OR EQUAL. LEACHING BASINS AND MANHOLES ARE TO BE REINFORCED CONCRETE WITH RIM AND SLOTTED GRATING (AS SHOWN). STORM SEWER & LEACHING BASINS ARE TO BE WRAPPED WITH FILTER FABRIC.
- SANITARY SEWER PIPE MAY BE PVC SDR 3034 MATERIAL.
- ALL WATER SERVICE LINES SHALL BE D.I. PIPE WITHIN 5' OF BUILDING, WITH COMPRESSION FITTINGS OR MECHANICAL FITTINGS OTHER THAN FLARED ENDS. PROVIDE 5" COVER FROM FINISHED GRADE.
- PROVIDE MINIMUM 5" COVER FROM FINISHED GRADE FOR ALL WATER SERVICE LINES, IF COVER CANNOT BE MAINTAINED DUE TO SITE CONDITIONS OR INVERT ELEVATIONS THE ENTIRE LENGTH OF THE EXTERIOR PIPE MUST BE PROTECTED WITH 2" RIGID INSULATION BOARD ON THE TOP AND SIDES.
- PROVIDE MINIMUM 5" COVER FROM FINISHED GRADE FOR ALL SANITARY SEWER LINES, IF COVER CANNOT BE MAINTAINED DUE TO SITE CONDITIONS OR INVERT ELEVATIONS THE ENTIRE LENGTH OF THE EXTERIOR PIPE MUST BE PROTECTED WITH 2" RIGID INSULATION BOARD ON THE TOP AND SIDES.
- MAINTAIN 10 FOOT MINIMUM HORIZONTAL SEPARATION BETWEEN THE SEWER AND WATER MAIN UTILITIES. PROVIDE 18" MINIMUM VERTICAL SEPARATION WHERE UTILITIES CROSS.
- THE CONTRACTOR SHALL INSTALL A PEDESTRIAN FENCE AROUND ALL EXCAVATIONS TO BE LEFT OPEN OVERNIGHT AS REQUIRED.
- EXTERIOR CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 4000 PSI AND SHALL HAVE LIMESTONE AGGREGATE AND SHALL HAVE 4 - 6 % AIR ENTRAINMENT WITH A BROOM FINISH.
- EXPANSION JOINTS IN CONCRETE PAVEMENT AND WALLS SHALL BE 1/2" ASPHALT IMPREGNATED FULL DEPTH 40' O.C. MAXIMUM & AT SIDEWALK INTERSECTIONS. CRACK CONTROL SCORING AT SIDEWALK WIDTH DIMENSION AND @ 10'-0" O.C. IN DRIVES.

GENERAL NOTES

- ALL WORK SHALL CONFORM TO ALL LOCAL, STATE AND FEDERAL LAWS, RULES AND REGULATIONS IN FORCE AT TIME OF CONSTRUCTION.
- ELECTRICAL WORK SHALL BE PERFORMED BY A STATE OF MICHIGAN LICENSED ELECTRICIAN ACCORDING TO THE N.F.P.A. NATIONAL ELECTRICAL CODE AS MODIFIED BY THE STATE OF MICHIGAN. FURNISH AND INSTALL ALL MATERIALS AND LABOR TO PROVIDE A COMPLETE WORKING SYSTEM.
- ALL PLUMBING WORK SHALL BE PERFORMED BY A STATE OF MICHIGAN LICENSED PLUMBER ACCORDING TO THE INTERNATIONAL PLUMBING CODE AS MODIFIED BY THE STATE OF MICHIGAN AND LOCAL HEALTH DEPARTMENT. FURNISH AND INSTALL ALL MATERIALS AND LABOR TO PROVIDE A FULL WORKING SYSTEM.
- ALL MECHANICAL WORK SHALL BE PERFORMED ACCORDING TO THE INTERNATIONAL MECHANICAL CODE AS MODIFIED BY THE STATE OF MICHIGAN AND THE MICHIGAN ENERGY CODE. FURNISH AND INSTALL ALL MATERIALS AND LABOR TO PROVIDE A FULL WORKING SYSTEM.
- ALL WORK SHALL CONFORM TO THE MICHIGAN HANDICAPPED ACCESSIBILITY CODE AND THE AMERICANS WITH DISABILITIES ACT.
- WATER SERVICE PRESSURE TESTING AND CHLORINATION SHALL BE PER EGLE AND THE CITY OF KALAMAZOO REQUIREMENTS.
- SANITARY SEWER INSTALLATION AND TESTING MUST MEET THE REQUIREMENTS OF THE CITY OF KALAMAZOO AND EGLE.
- ALL REGULATORY SIGNAGE (IF SPECIFIED) SHALL BE PER THE MICHIGAN DEPARTMENT OF TRANSPORTATION.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS, PERMIT COSTS, TAP FEES, METER DEPOSITS, PERMANENT UTILITY APPLICATIONS, BONDS, AND OTHER FEES REQUIRED FOR PROPOSED WORK.
- CONTACT MISS DIG "611" FOR LOCATION OF UNDERGROUND UTILITIES A MINIMUM OF 48 HOURS BEFORE COMMENCING EXCAVATION WORK. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO ARE NOT PART OF THE "MISS DIG" ALERT SYSTEM. THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS IN A MANNER AS TO ENSURE THAT THOSE UTILITIES NOT REQUIRING RELOCATION WILL NOT BE DISTURBED.
- ANY SANITARY SEWER, SANITARY SEWER SERVICE LEADS, WATER MAIN, WATER SERVICES, OR STORM SEWER WHICH IS DAMAGED BY THE CONTRACTOR DURING HIS OPERATIONS SHALL BE REPAIRED TO THE OWNERS SATISFACTION, AND AT THE CONTRACTORS EXPENSE. IF ANY ELEMENTS OF THE SANITARY SEWER SYSTEM ARE DAMAGED AND NEED REPAIRED, IT MUST MEET THE CITY OF KALAMAZOO SPECIFICATIONS.
- THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR THE ELECTRICAL TRANSFORMER PAD PER THE UTILITY COMPANY SPECIFICATIONS.
- THE TELEPHONE UTILITY COMPANY SHALL PROVIDE UNDERGROUND TELEPHONE TO THE BUILDING AT THE OWNERS EXPENSE.
- REFER TO ELECTRICAL DRAWINGS FOR UNDERGROUND ELECTRICAL REQUIREMENTS FOR SITE LIGHTING & SITE DETAILS SHEETS FOR THE FIXTURE AND POLE SPECIFICATIONS.
- DESIGN, INSTALLATION AND SPECIFICATION FOR IMPROVEMENTS RELATED TO GAS, TELEPHONE, ELECTRIC AND CABLE TELEVISION SERVICES SHALL BE COORDINATED BY THE CONTRACTOR.
- CONTRACTOR SHALL COORDINATE TELEPHONE, ELECTRIC, AND CABLE TELEVISION CONDUITS WITH THE APPROPRIATE UTILITY PRIOR TO PAVEMENT INSTALLATION.
- CONTRACTOR IS TO UNCOVER AND CONFIRM ALL TAP LOCATIONS. LOCATION DISCREPANCIES ARE TO BE BROUGHT TO THE ENGINEERS ATTENTION FOR RESOLUTION.
- THE CONTRACTOR IS TO PROVIDE THE WATER SERVICE PIPING FROM THE BUILDING TO THE EXISTING WATERMAIN. THE CONTRACTOR SHALL MAKE THE CONNECTION TO THE SHUT OFF VALVE. THE CONTRACTOR SHALL COORDINATE SERVICES WITH THE CITY OF KALAMAZOO WATER DEPARTMENT.
- CONTRACTOR/OWNER SHALL OBTAIN UTILITY CONNECTION PERMITS AND SETTLE APPLICABLE UTILITY ASSESSMENTS PRIOR TO EXTENSION OF PUBLIC UTILITIES ONSITE.
- MANHOLE AND CATCH BASIN STRUCTURES SHALL BE PRECAST AND HAVE A MAXIMUM OF 2 ADJUSTING RINGS FOR FINISH GRADE ADJUSTMENT. STORM STRUCTURES MUST ALL HAVE A SUMP OF TWO FEET.
- ALL WATER MAIN TO HAVE A BURIAL DEPTH AS REQUIRED BY THE EGLE FOR THE SPECIFIC REGION OF WORK IN CITY OF KALAMAZOO.
- DEMOLISH & REMOVE ALL EXISTING SITE FEATURES AS REQUIRED.
- THE CONTRACTOR SHALL REVIEW THE GEOTECHNICAL REPORT.
- DRIVEWAY LAYOUT AND CONNECTION TO W MICHIGAN AVE. SHALL COMPLY WITH ALL ASPECTS OF THE CITY OF KALAMAZOO DRIVE PERMIT.



WATER MAIN FITTING SCHEDULE

FITTING	DESCRIPTION	TOTAL
A	8" 45° BEND	7
B	HYDRANT ASSEMBLY	4
C	8" 22.5° BEND	4
D	8" GATE VALVE	11
E	8" x 6" REDUCER	2
F	8" x 8" LIVE TAP	2
G	8" x 8" x 6" TEE	2
H	8" x 8" x 8" TEE	4

PROPOSED STORM STRUCTURE TABLE

CB-1, 4' DIA. EJIW 5105 RIM = 908.69 12" HDPE N	904.81	CB-10, 4' DIA. EJIW 7075, TYPE M1 RIM = 903.88 24" HDPE N 30" HDPE S	898.20 897.94
CB-2, 4' DIA. EJIW 5105 RIM = 908.51 12" HDPE S 12" HDPE W	904.63 904.63	CB-11, 4' DIA. EJIW 7075, TYPE M1 RIM = 901.76 30" HDPE N 30" HDPE E	896.26 896.26
CB-3, 4' DIA. EJIW 7075, TYPE M1 RIM = 910.41 12" HDPE S 12" HDPE E	904.39 904.39	CB-12, 4' DIA. EJIW 7075, TYPE M1 RIM = 902.45 30" HDPE W 30" HDPE S 30" HDPE E	895.30 892.80 895.30
CB-4, 4' DIA. EJIW 7075, TYPE M1 RIM = 910.48 12" HDPE S 12" HDPE N	904.21 904.21	CB-13, 4' DIA. EJIW 7075, TYPE M1 RIM = 908.11 12" HDPE S	903.91
CB-5, 4' DIA. EJIW 7075, TYPE M1 RIM = 908.36 12" HDPE S 12" HDPE W	903.95 903.70 903.95	CB-14, 4' DIA. EJIW 7075, TYPE M1 RIM = 908.21 12" HDPE N 12" HDPE S	903.37 903.12
CB-6, 4' DIA. EJIW 7075, TYPE M1 RIM = 908.36 12" HDPE N	904.36	MH-15, 4' DIA. EJIW 1020, TYPE A, SOLID RIM = 908.85 18" HDPE N 18" HDPE SE	901.64 901.64
CB-7, 4' DIA. EJIW 5105 RIM = 908.38 18" HDPE E 18" HDPE W	903.20 903.20	CB-16, 4' DIA. EJIW 7075, TYPE M1 RIM = 908.02 18" HDPE NW 24" HDPE SW	900.94 900.69
CB-8, 4' DIA. EJIW 5105 RIM = 908.13 18" HDPE E 18" HDPE SW	902.80 902.80	CB-17, 4' DIA. EJIW 7075, TYPE M1 RIM = 905.67 24" HDPE NE 30" HDPE W	899.21 898.96
CB-9, 4' DIA. EJIW 7075, TYPE M1 RIM = 907.82 18" HDPE NE 24" HDPE S	902.48 902.48	CB-18, 4' DIA. EJIW 7075, TYPE M1 RIM = 903.89 30" HDPE E 30" HDPE W	898.00 898.00

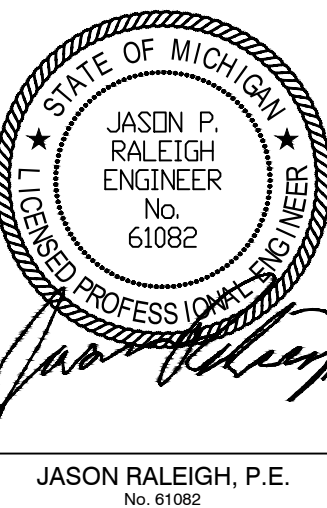


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PLANS PREPARED BY:



DRAWN: BD/EAG
CHECKED: JPR/WLP



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UTILITY PLAN
KALAMAZOO MULTIFAMILY
KALAMAZOO REALTY HOLDINGS, LLC
3625 W MICHIGAN
SECTION 19, T2S, R1W

SHEET TITLE:
PROJECT:
CLIENT:
SITE ADDRESS:
SITE SECTION:

JOB NUMBER
23169001

DATE
03/15/2024

SHEET NUMBER
C3.0

GRADING NOTES

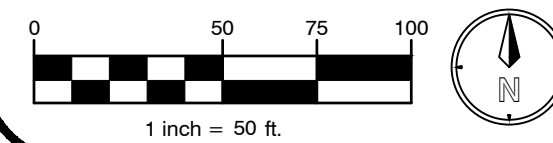
1. ALL WORK SHALL CONFORM TO ALL LOCAL, STATE AND FEDERAL LAWS, RULES AND REGULATIONS IN FORCE AT TIME OF CONSTRUCTION.
2. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS, PERMIT COSTS, TAP FEES, METER DEPOSITS, PERMANENT UTILITY APPLICATIONS, BONDS, AND OTHER FEES REQUIRED FOR PROPOSED WORK. THIS SHALL INCLUDE, BUT SHALL NOT BE LIMITED TO THOSE REQUIRED BY THE MICHIGAN DEPARTMENT OF TRANSPORTATION.
3. CONTACT MISS DIG "811" FOR LOCATION OF UNDERGROUND UTILITIES A MINIMUM OF 48 HOURS BEFORE COMMENCING EXCAVATION WORK. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO ARE NOT PART OF THE "MISS DIG" ALERT SYSTEM. THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS IN A MANNER AS TO ENSURE THAT THOSE UTILITIES NOT REQUIRING RELOCATION WILL NOT BE DISTURBED.
4. DEMOLISH & REMOVE ALL EXISTING SITE FEATURES AS REQUIRED.
5. MATCH EXISTING GRADES AROUND PERIMETER WITH SLOPES AS SHOWN.
6. ALL SPOT ELEVATIONS ARE TOP OF PAVEMENT GRADES AT EDGE OF METAL (EOM) UNLESS OTHERWISE NOTED.
7. ALL SOIL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO MASS GRADING.
8. ALL EARTHWORK SHALL BE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS AND GEOTECHNICAL REPORT.
9. ALL EXISTING ELEVATIONS ARE TO BE VERIFIED AND ACCEPTED AS SHOWN PRIOR TO COMMENCEMENT OF WORK.
10. CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID TRACKING SOIL ONTO ADJACENT ROADWAYS. CONTRACTOR SHALL SWEEP IMMEDIATELY IF OCCURS.
11. ANY DISTURBED AREA WHICH WILL BE LEFT UNWORKED 15 DAYS OR LONGER MUST BE SEEDED TO ESTABLISH VEGETATION FOR TEMPORARY STABILIZATION. BASINS TO BE SEEDED AND MULCH BLANKETS APPLIED IMMEDIATELY TO PROVIDE A STABLE BASE AND AVOID EXCESSIVE EROSION.

SOIL EROSION & SEDIMENT CONTROL NOTES

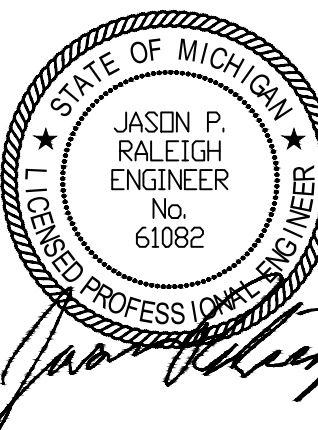
1. ALL CONSTRUCTION METHODS SHALL BE DONE IN COMPLIANCE WITH MDOT-EGLE. THE OWNER SHALL BE RESPONSIBLE FOR OBTAINING A "SOIL EROSION PERMIT" FROM THE GOVERNING AUTHORITY AND A "PERMIT BY RULE/NOTICE OF COVERAGE" FROM THE GOVERNING AUTHORITY. IF APPLICABLE, PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL REQUIREMENTS OF THE "SOIL EROSION PERMIT" AND FOR ALL CERTIFIED STORM WATER INSPECTION SERVICE REQUIRED BY THE "PERMIT BY RULE". EROSION CONTROL MEASURES SHOWN ON THE PLANS ARE THE MINIMUM REQUIREMENTS AND SHALL NOT RELIEVE THE CONTRACTOR'S RESPONSIBILITY FOR PROVIDING ALL REQUIRED EROSION CONTROL MEASURES.
 2. AVOID UNNECESSARY DISTURBING OR REMOVING OF EXISTING VEGETATED TOPSOIL OR EARTH COVER. THESE COVER AREAS ACT AS SEDIMENT FILTERS.
 3. ALL TEMPORARY SOIL EROSION PROTECTION SHALL REMAIN IN PLACE UNTIL REMOVAL IS REQUIRED FOR FINAL CLEAN UP AND APPROVAL.
 4. GEOTEXTILE SILT FENCE SHALL BE INSTALLED AS REQUIRED WHEN CROSSING CREEKS OR WHEN ADJACENT TO WETLANDS OR SURFACE WATER BODIES TO PREVENT SILTATION AND ELSEWHERE AS DIRECTED BY THE ENGINEER. SEEDING AND/OR SODDING SHALL BE INSTALLED ON CREEK BANKS IMMEDIATELY AFTER CONSTRUCTION TO PREVENT EROSION.
 5. MAINTENANCE, CLEANING, AND REMOVAL OF THE VARIOUS SEDIMENT CONTROL MEASURES SHALL BE INCLUDED IN THE VARIOUS EROSION CONTROL ITEMS.
- ## ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE PER (MDOT) STANDARD DETAILS. "P" DENOTES PERMANENT MEASURE AND "T" DENOTES TEMPORARY MEASURE. SOIL EROSION CONTROL PLANS DENOTE MINIMUM EROSION MEASURES REQUIRED AS DESCRIBED BELOW.
- 3P DENOTES PERMANENT SEEDING. ALL DISTURBED AREAS NOT PAVED OR GRAVELED SHALL BE RESTORED. PLACE TOPSOIL SURFACE, SALV. 3 INCH, MDOT SEEDING MIXTURE TYP APPLIED AT A RATE OF 220 LB/ACRE, FERTILIZER, CHEMICAL NUTRIENT, CL A APPLIED AT A RATE OF 228 LB/ACRE; MULCH AT A RATE OF 2 TON/ACRE AND MULCH ANCHORING. (APPLIES TO ENTIRE PROJECT)
- 3T DENOTES TEMPORARY SEEDING. TEMPORARY SEEDING SHALL BE PLACED AT LOCATIONS DETERMINED BY THE ENGINEER IN THE FIELD AND SHALL INCLUDE CEREAL RYE SEED APPLIED AT A RATE OF 70 LB/ACRE AND MULCH.
- 4T DENOTES DUST CONTROL. DUST CONTROL MAY BE REQUIRED ON THE SUBGRADE CONSTRUCTION AND WILL INCLUDE APPLYING FRESH WATER TO BE INCLUDED IN THE ITEM OF EMBANKMENT. DUST CONTROL ON THE AGGREGATE BASE COURSE WILL BE ACCOMPLISHED BY APPLYING FRESH WATER (INCLUDED IN THE ITEM OF AGGREGATE BASE, 6 INCH) AND APPLYING DUST PALLIATIVE, APPLIED, CACL₂ (TON) AS DIRECTED BY THE PROJECT ENGINEER.
- 8P DENOTES AGGREGATE COVER/PERMANENT PAVEMENT RESTORATION
- 14T DENOTES GRAVEL ACCESS APPROACH. APPROACH SHALL BE INSTALLED TO PROVIDE STABLE ACCESS TO ROADWAYS AND MINIMIZE DUST AND TRACKING OF MATERIALS ONTO PUBLIC STREETS AND HIGHWAYS. THE APPROACH SHALL BE A MINIMUM OF 12' WIDE, 6" DEEP, AND CONSIST OF 2"-4" AGGREGATE.
- 26T DENOTES TEMPORARY SILT FENCE. SILT FENCE SHALL BE INSTALLED AT CREEK CROSSINGS, ADJACENT TO ALL WETLANDS AND SURFACE WATERS, AND OTHER LOCATIONS AS DIRECTED BY THE ENGINEER. EACH SILT FENCE SHALL BE INSTALLED GENERALLY ALONG THE SAME CONTOUR ELEVATION.
- 29T DENOTES INLET PROTECTION FABRIC DROP. SHALL BE INSTALLED AT EXISTING AND PROPOSED STORM SEWER INLETS TO PROVIDE SETTLING AND FILTERING OF SILT LADEN WATER PRIOR TO ENTRY INTO THE DRAINAGE SYSTEM.
- 33T DENOTES MULCH BLANKET OR MATTING. SHALL BE NORTH AMERICAN GREEN DS150, OR APPROVED EQUAL. MULCH BLANKETS SHALL BE PLACED ON ALL 1:3 SLOPES OR GREATER, IN AND AROUND DITCH BOTTOMS WHERE THERE IS NO BIOSWALE BY CONTRACTOR RESPONSIBLE FOR RESTORING THAT AREA.

LEGEND

- — — — — LIMITS OF CONSTRUCTION
- X X — X X — SILT FENCE

REDI-ROCK
GRAVITY
RETAINING WALLREDI-ROCK
GRAVITY
RETAINING WALLAPARTMENT BUILDING
AREA OF BUILDING + COURTYARD:
60,026 SQ. FT.
F.F. 910.50DETENTION BASIN
TOP: 872.00
HWL: 870.00
BTM: 866.00
4 (H) : 1 (V)CITY OF
KALAMAZOO STORM
WATER STANDARDSSan MH
RM = 565.00
PVC 18" x 24" = 862.88
18" (E) W = 855.85
(18" IS FULL & FAST FLOW)

PLANS PREPARED BY:

DRAWN: BD/EAG
CHECKED: JPR/WLPJASON RALEIGH, P.E.
No. 61082

No.	DATE	BY	ISSUED FOR:
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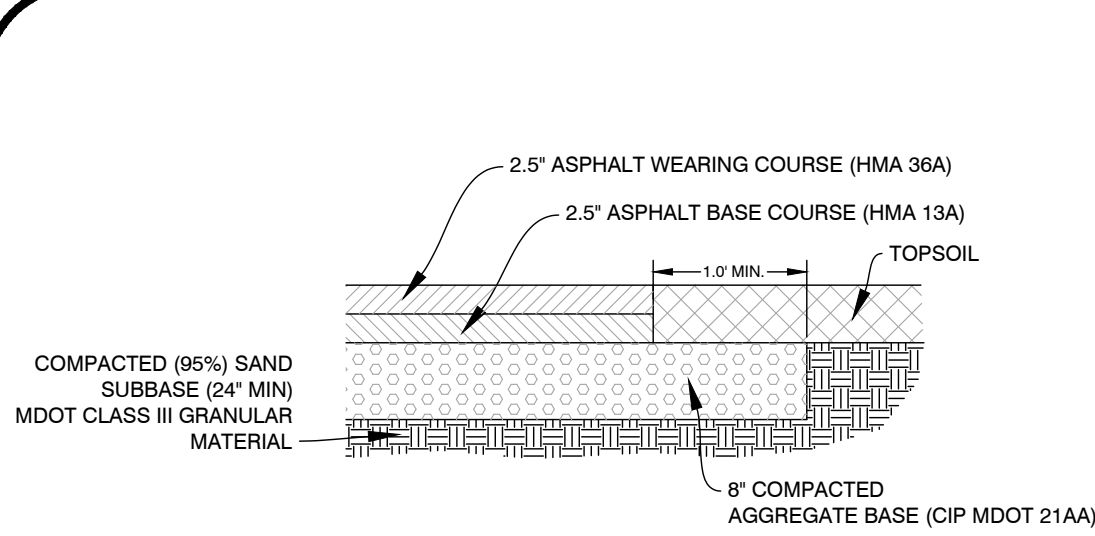
GRADING & SESC PLAN
KALAMAZOO MULTIFAMILY
KALAMAZOO REALTY HOLDINGS, LLC
3625 W MICHIGAN
SECTION 19, T2S, R11WSHEET TITLE:
PROJECT:
CLIENT:
SITE ADDRESS:
SITE SECTION:JOB NUMBER
23169001DATE
03/15/2024

SHEET NUMBER

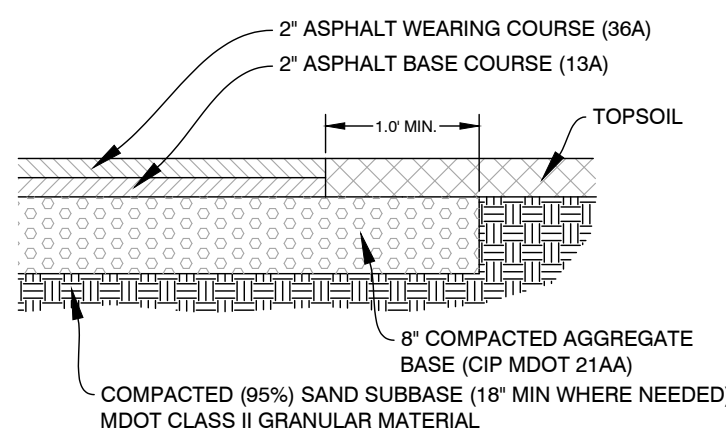
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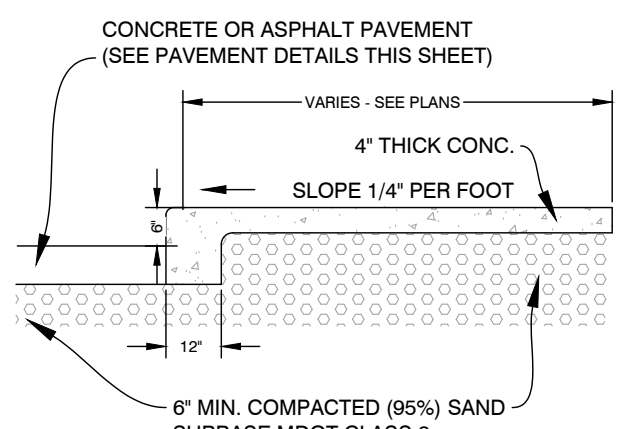
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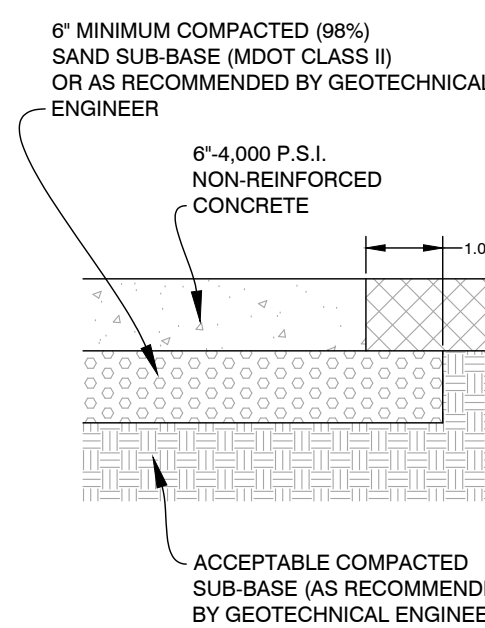
HEAVY DUTY ASPHALT SECTION
C5.0 - 030401 NOT TO SCALE



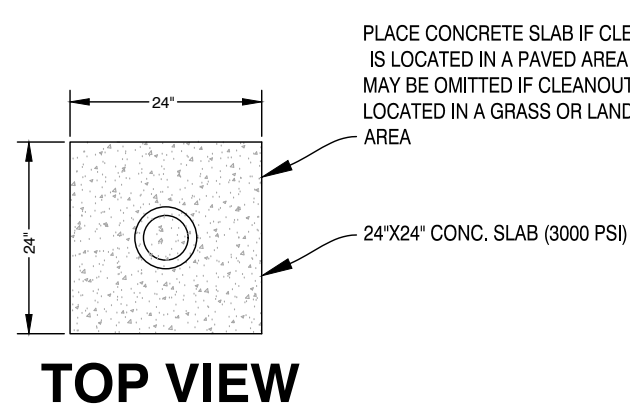
LIGHT DUTY ASPHALT SECTION
C5.0 - 030401 NOT TO SCALE



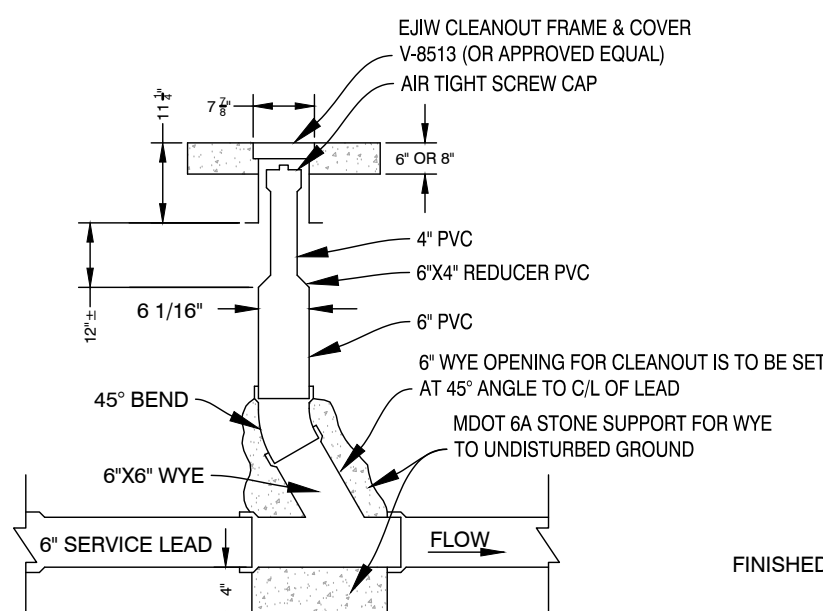
RAISED / INTEGRAL CURB WALK SECTION
C5.0 - 030303 NOT TO SCALE



CONC. PAVEMENT SECTION
C5.0 - 030402 NOT TO SCALE

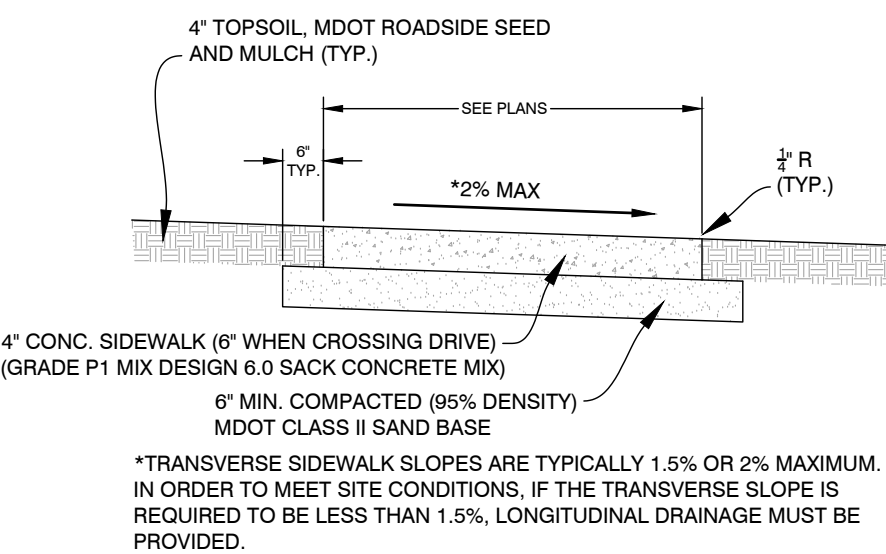


TOP VIEW

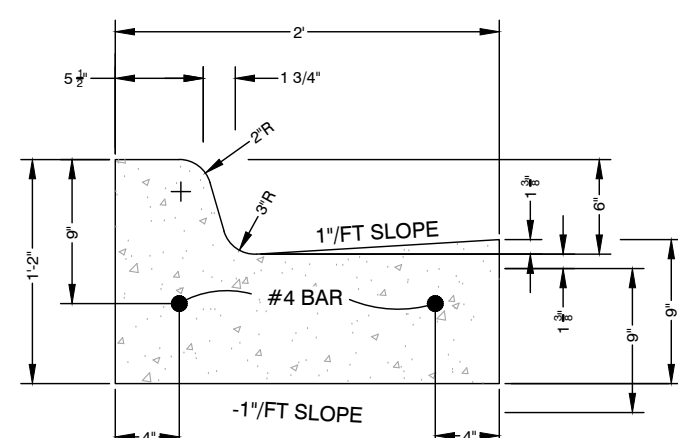


ELEVATION

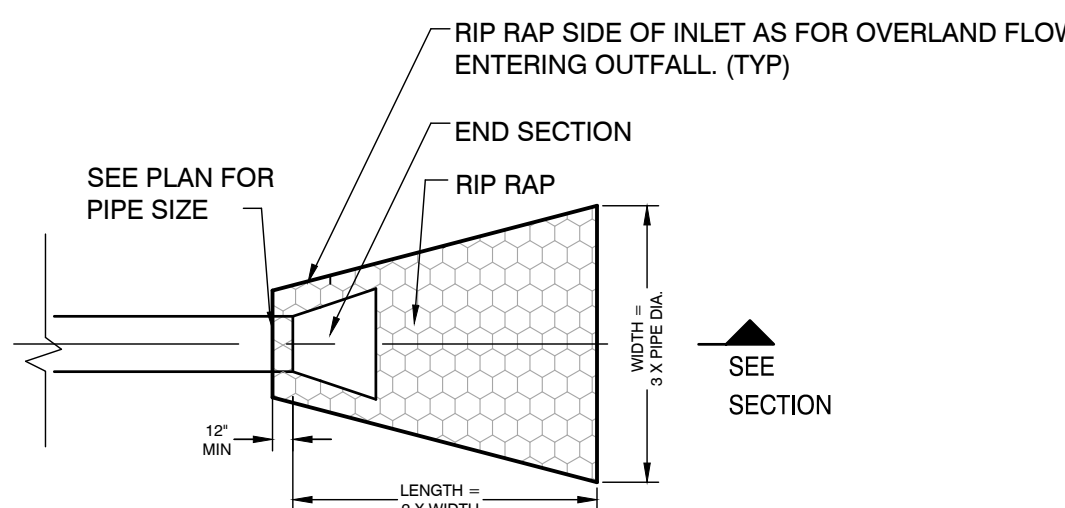
SANITARY SEWER CLEANOUT DETAIL
C5.0 - 090109 NOT TO SCALE



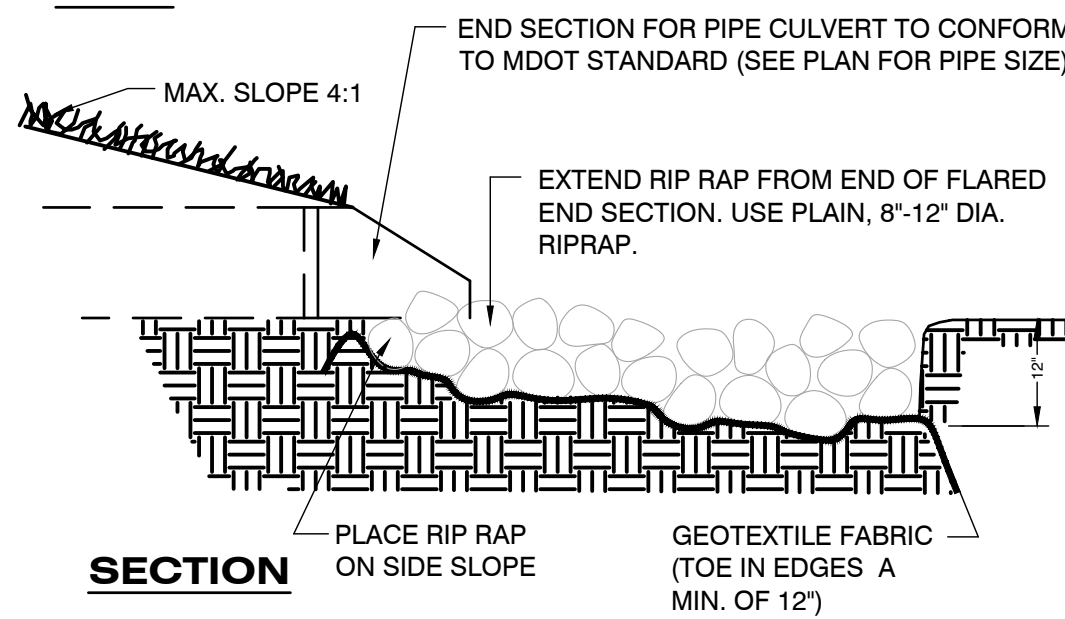
5' WIDE SIDEWALK SECTION
C5.0 - 030301 NOT TO SCALE



MDOT F4 CONC. CURB & GUTTER
C5.0 - 030109 NOT TO SCALE

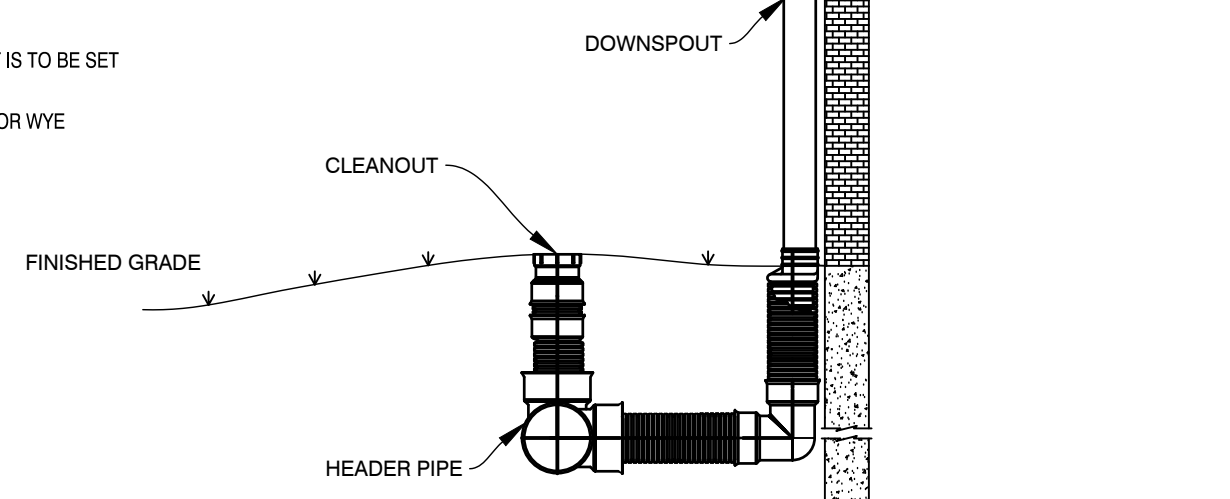


PLAN

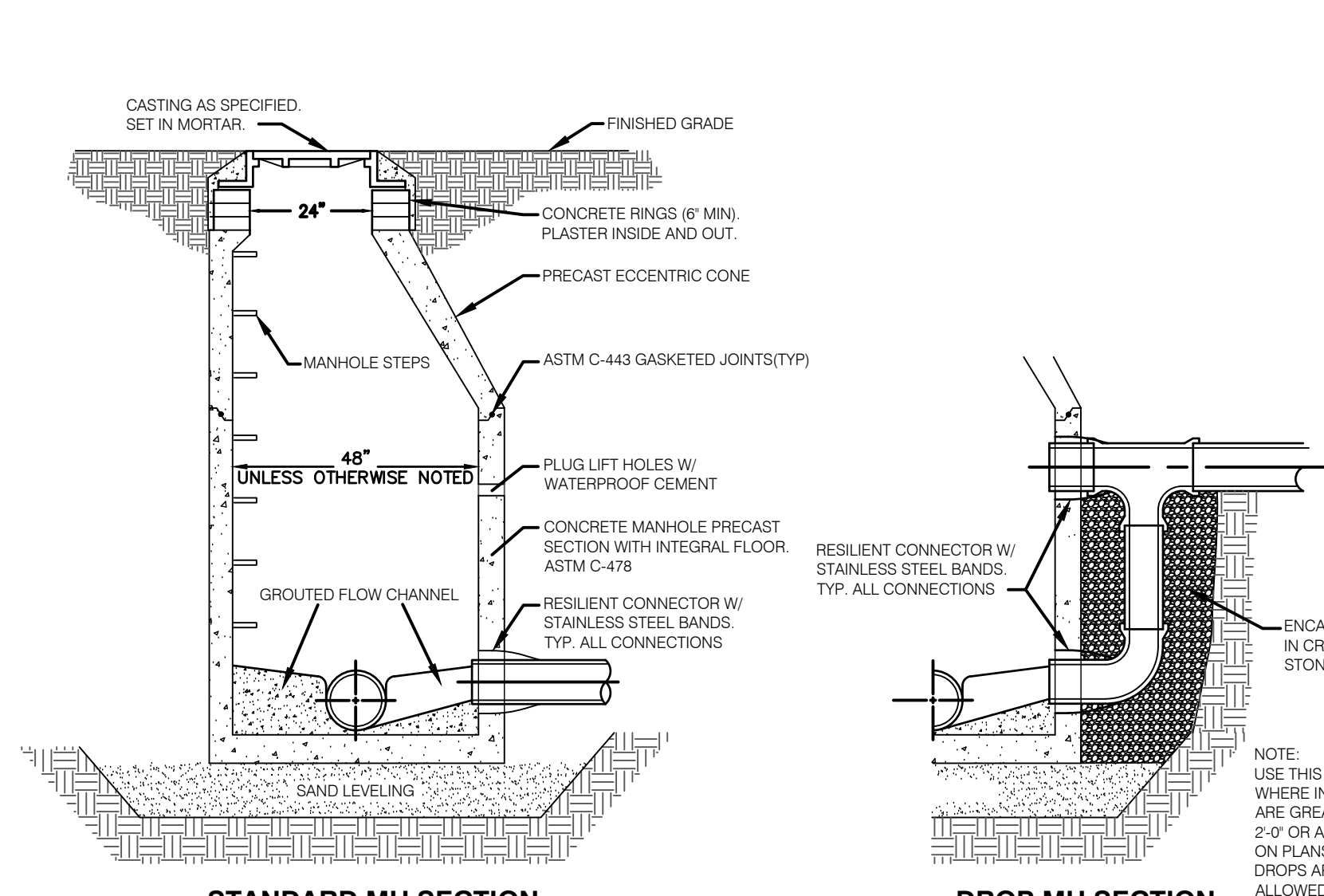


SECTION

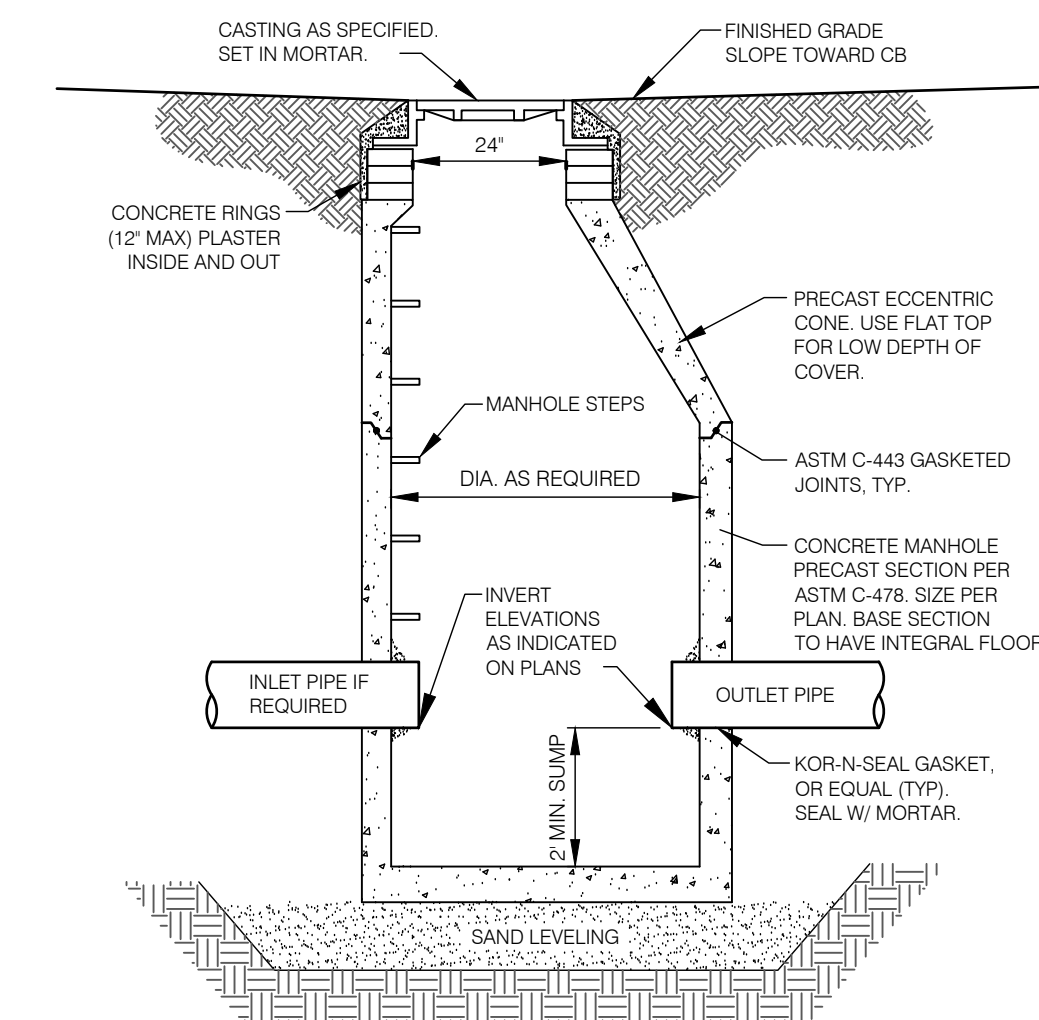
PIPE CULVERT WITH FLARED END SECTION DETAIL
C5.0 - 050002 NOT TO SCALE



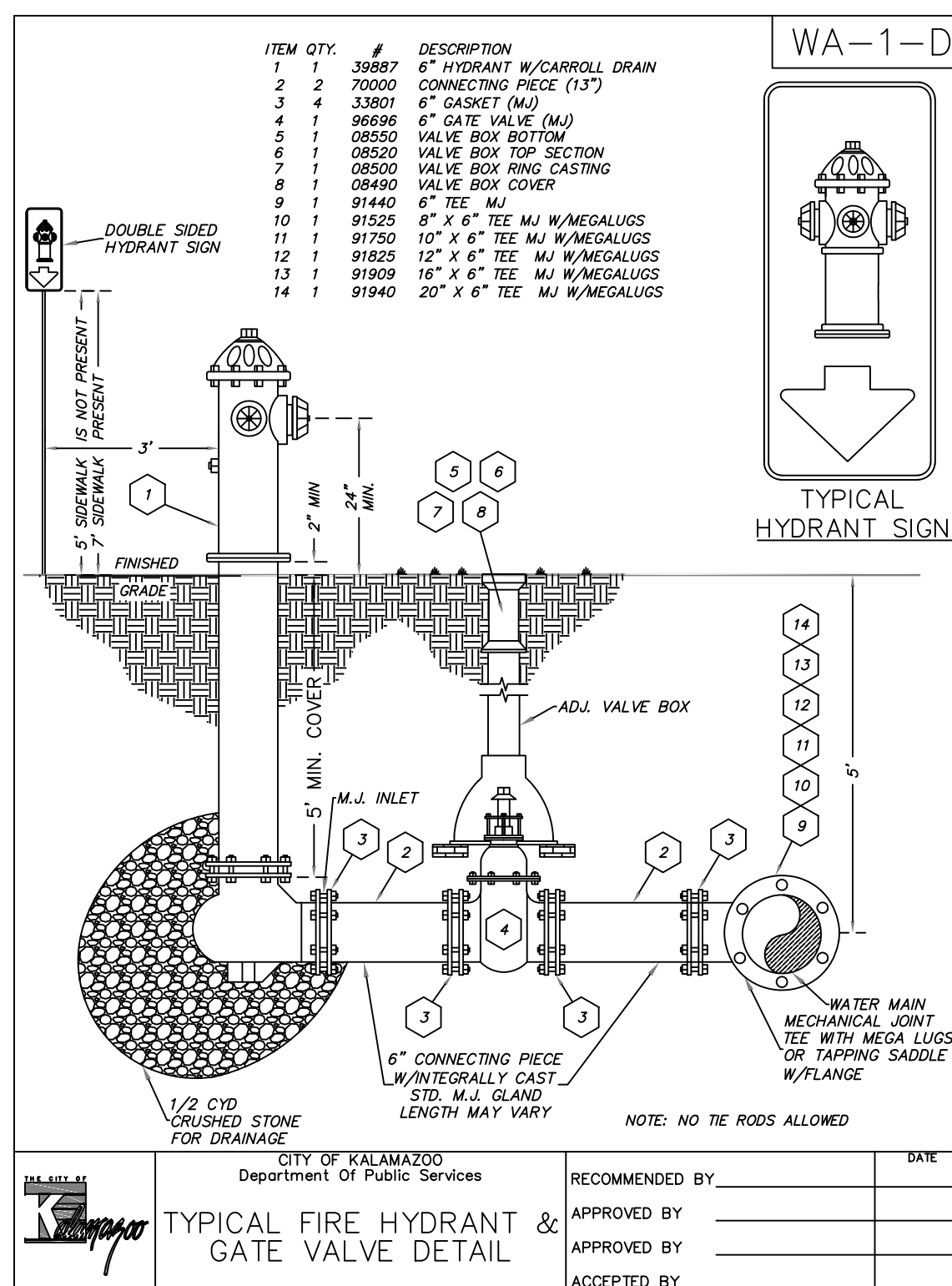
STORM CLEANOUT AND DOWNSPOUT CONNECTION DETAIL
NOT TO SCALE



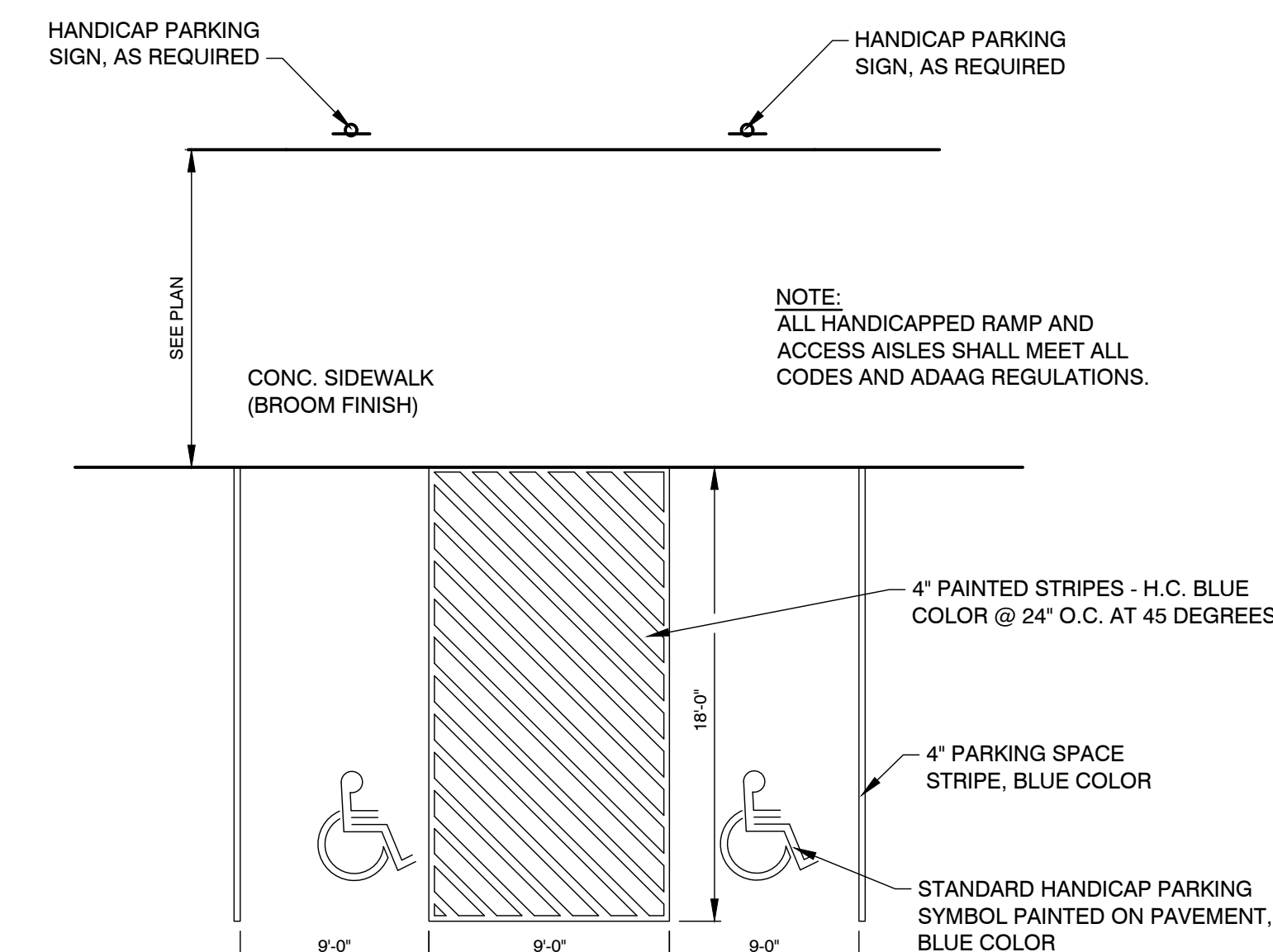
SANITARY MANHOLE DETAILS
C5.0 - 030401 NOT TO SCALE



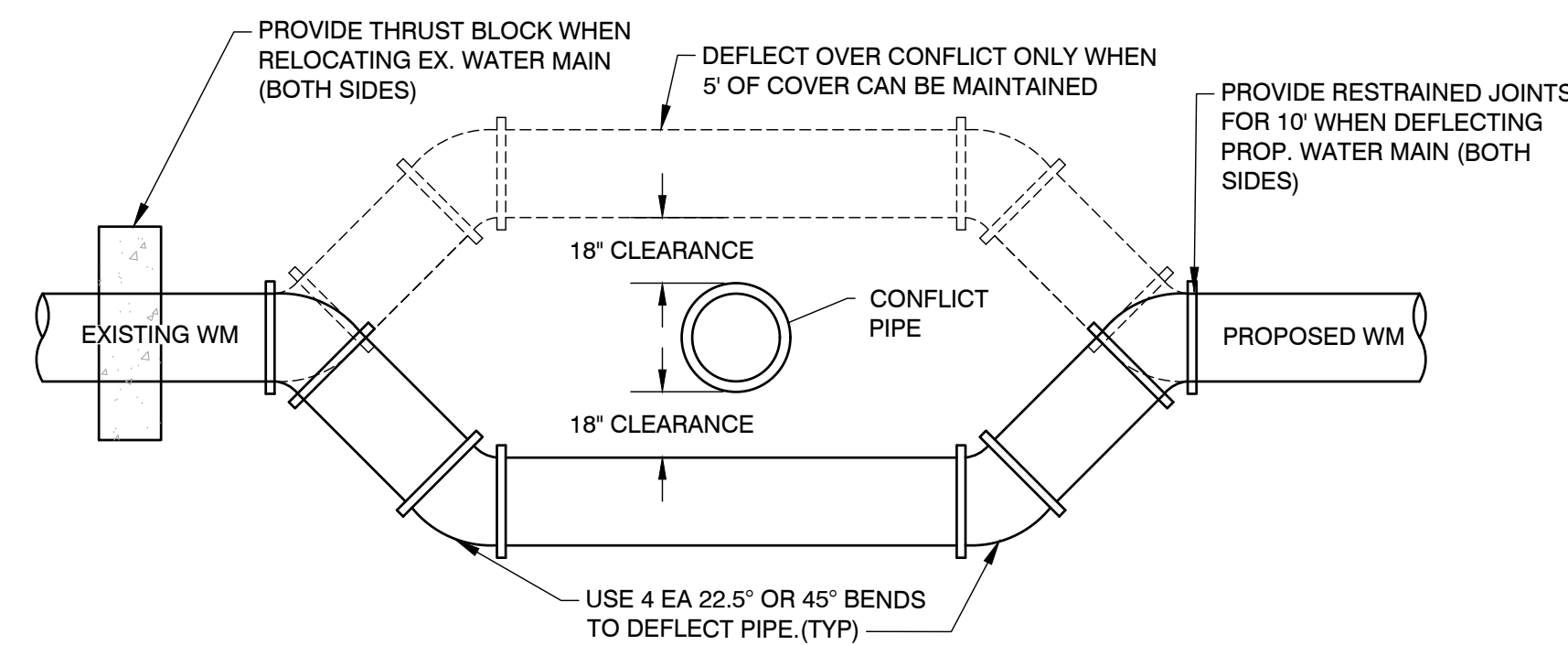
STORM CATCH BASIN DETAIL
C5.0 - 030403 NOT TO SCALE



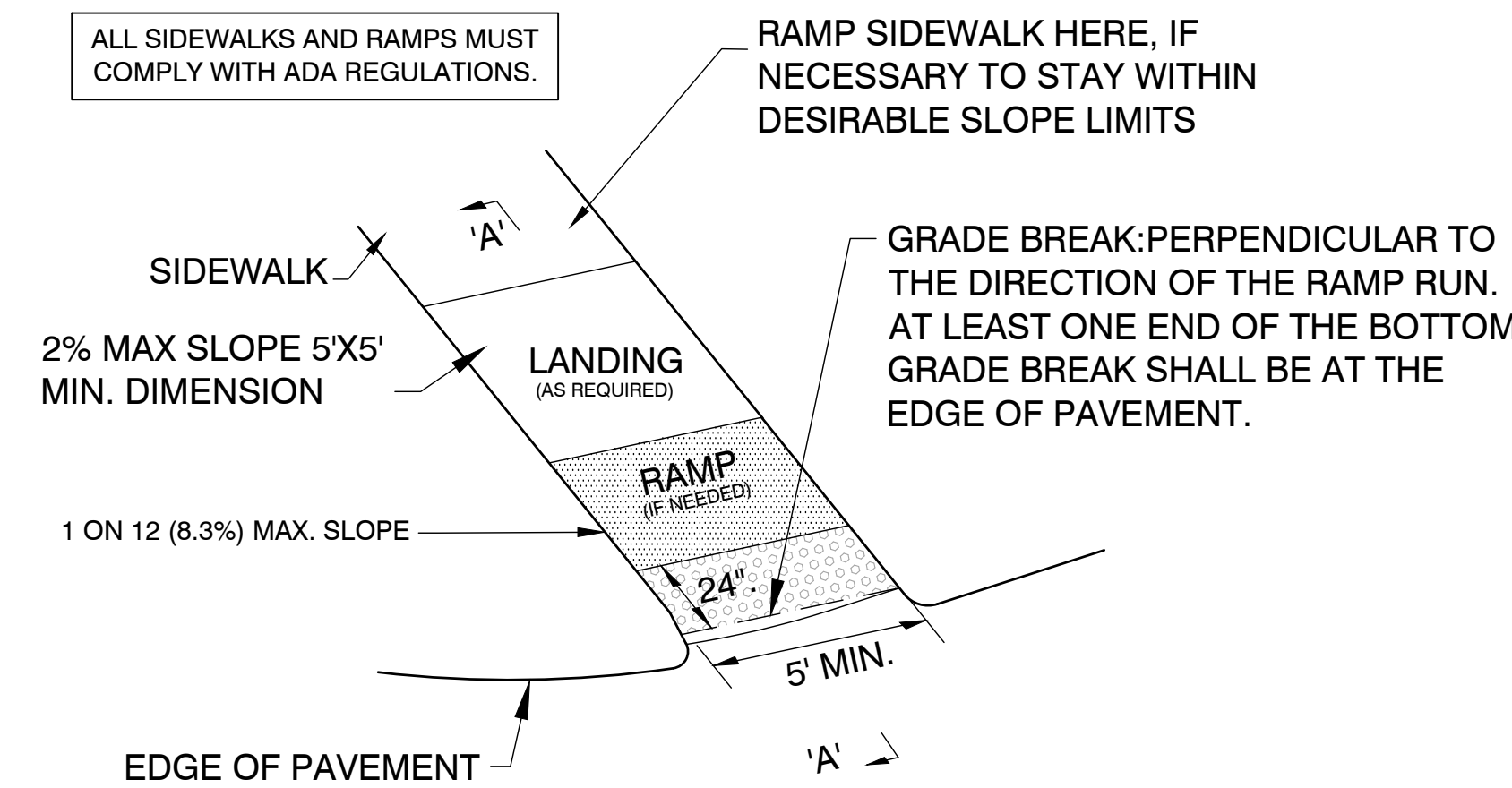
TYPICAL FIRE HYDRANT & GATE VALVE DETAIL



HANDICAP PARKING DETAIL
C5.0 - 040902 NOT TO SCALE

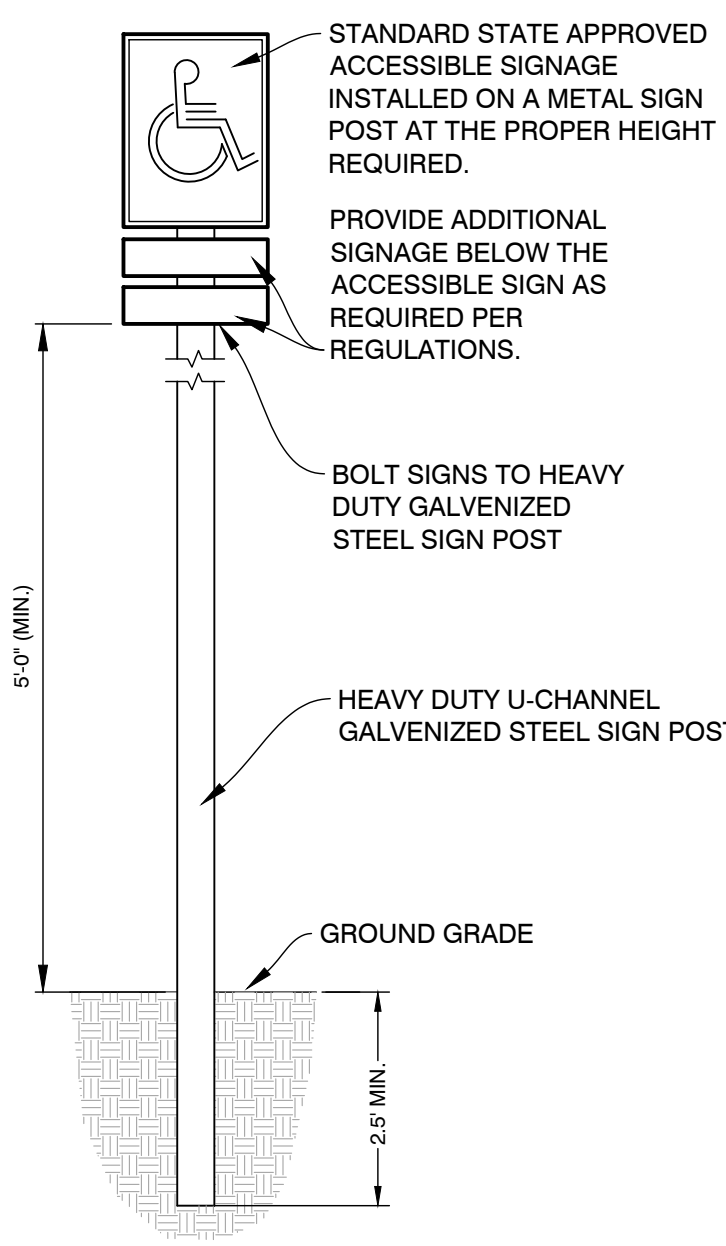


WATER MAIN DEFLECTION DETAIL
C5.0 - 030403 NOT TO SCALE



A-A SECTION THROUGH ALL RAMPS
NO SCALE

SIDEWALK RAMP AT DRIVEWAY
NOT TO SCALE



ACCESSIBLE PARKING SIGN DETAIL
C5.0 - 090101 NOT TO SCALE

PLANS PREPARED BY:

AR ENGINEERING
CIVIL ENGINEERING & SURVEYING

MICHIGAN | INDIANA | ILLINOIS | OHIO
289.250.5991 PHONE | 800.560.0604 FAX
www.arengineeringllc.com

DRAWN: BD/EAG
CHECKED: JPR/WLP

STATE OF MICHIGAN
JASON P. RALEIGH
ENGINEER
NO. 61082
LICENSED PROFESSIONAL ENGINEER

JASON RALEIGH, P.E.
No. 01082

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DETAILS

KALAMAZOO MULTIFAMILY HOLDINGS, LLC

KALAMAZOO REALTY HOLDINGS, LLC

3625 W MICHIGAN
SECTION 19, T2S, R11W

SHEET TITLE:
PROJECT:
CLIENT:
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SITE SECTION:

JOB NUMBER
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DATE
03/15/2024

SHEET NUMBER
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LANDSCAPING NOTES

1. INSTALL CONSTRUCTION FENCE AROUND DRIP LINES OF EXISTING TREES TO REMAIN. NO COMPACTION OR INCREASED DEPTH OF SOIL OVER THE ROOT SYSTEM AREA PRIOR TO AND DURING CONSTRUCTION.
2. ALL LAWN AREAS SHALL BE SEEDED AND MULCHED WITH THE FOLLOWING MIXTURE: 20% IMPROVED PERENNIAL RYEGRASS, 40% FINE FESCUE, AND 40% KENTUCKY BLUEGRASS AT A RATE OF 3-4 LBS/ 1000 SFT.
3. ALL EDGING SHALL BE STANDARD COMMERCIAL-STEEL EDGING 3/8" X 4", ROLLED EDGE, FABRICATED IN SECTIONS OF STANDARD LENGTHS, WITH LOOPS STAMPED FROM OR WELDED TO FACE OF SECTIONS TO RECEIVE STAKES IN STANDARD FINISH OF GREEN PAINT.
4. PROVIDE QUALITY, SIZE, GENUS, SPECIES, AND VARIETY OF EXTERIOR PLANTS INDICATED, COMPLYING WITH APPLICABLE REQUIREMENTS IN ANSI Z60.1 "AMERICAN STANDARD FOR NURSERY STOCK," MEASURE ACCORDING TO ANSI Z60.1 STANDARDS.
5. MAINTAIN AND ESTABLISH LAWN BY WATERING, FERTILIZING, WEEDING, MOWING, TRIMMING, REPLANTING, AND OTHER OPERATIONS. ROLL, REGRADE, AND REPLANT BARE OR ERODED AREAS AND REMULCH TO PRODUCE A UNIFORMLY SMOOTH LAWN.
6. BEGIN LAWN MAINTENANCE IMMEDIATELY AFTER EACH AREA IS PLANTED AND CONTINUE UNTIL ACCEPTABLE LAWN IS ESTABLISHED. A MINIMUM OF 60 DAYS AFTER SUBSTANTIAL COMPLETION.
7. PROTECT ADJACENT AND ADJOINING STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS, AND PLANTINGS FROM HYDROSEEDING OVER-SPRAY AND DAMAGE CAUSED BY PLANTING OPERATIONS.
8. REMOVE STONES LARGER THAN 1" IN ANY DIMENSION AND STICK, ROOTS, RUBBISH, AND OTHER EXTRANEOUS MATTER FROM SITE.
9. MAINTAIN LAWN UNTIL A HEALTHY, UNIFORM, CLOSE STAND OF GRASS HAS BEEN ESTABLISHED, FREE OF WEEDS AND SURFACE IRREGULARITIES, WITH COVERAGE EXCEEDING 90% OVER ANY 10 SFT AND BARE SPOTS DO NOT EXCEED 5 BY 5 INCHES.
10. MAINTAIN TREES AND SHRUBS FOR ONE YEAR FROM DATE OF SUBSTANTIAL COMPLETION BY PRUNING, CULTIVATING, WATERING, WEEDING, FERTILIZING, RESTORING PLANTING SAUCERS, TIGHTENING AND REPAIRING STAKES AND GUY SUPPORTS, AND RESETTling TO PROPER GRADES OR VERTICAL POSITION, AS REQUIRED TO ESTABLISH HEALTHY VIABLE PLANTINGS. SPRAY AS REQUIRED TO KEEP TREES AND SHRUBS FREE OF INSECTS AND DISEASE.
11. REMOVE AND REPLACE DEAD PLANTS IMMEDIATELY. REPLACE PLANTS THAT ARE MORE THAN 25% DEAD OR IN AN UNHEALTHY CONDITION AT END OF WARRANTY PERIOD. A LIMIT OF ONE REPLACEMENT OF EACH PLANT WILL BE REQUIRED, EXCEPT FOR LOSSES OR REPLACEMENTS DUE TO FAILURE TO COMPLY WITH REQUIREMENTS.
12. TREES, AND SHRUBS SHALL BE WARRANTED FOR ONE YEAR FROM DATE OF SUBSTANTIAL COMPLETION AGAINST DEFECTS INCLUDING DEATH AND UNSATISFACTORY GROWTH, EXCEPT FOR DEFECTS RESULTING FROM INCIDENTS THAT ARE BEYOND CONTRACTOR'S CONTROL.
13. OWNER TO MAINTAIN AND REPLACE ALL LANDSCAPE IN ATTRACTIVE CONDITION WITHIN THE AREAS OUTLINED AS OPEN SPACE ON THE LANDSCAPE PLAN, TO INCLUDE ALL PLANTINGS, TREES, AND SHRUBS.

LEGEND

- 1 NUMBER AND TYPE OF PLANTS TO BE PROVIDED AND INSTALLED
- Xx
- PROPOSED DECIDUOUS TREE
- PROPOSED SHRUB DECIDUOUS/ EVERGREEN
- SOD LAWN WITH IRRIGATION ON 4" TOPSOIL
- PERENNIAL RYE GRASS WITHOUT IRRIGATION ON 4" TOPSOIL
- NATIVE SEED MIX

ALL PLANTINGS AND LANDSCAPED BEDS REQUIRE IRRIGATION - EITHER DRIP LINE OR MISTERS AS REQUIRED TO ESTABLISH GROWTH AND MAINTAIN HEALTH OF ALL PLANTINGS/LANDSCAPED BEDS.

LANDSCAPING CONTRACTOR RESPONSIBLE FOR TOUCHING-UP AND FINISH-LEVELING OF TOPSOIL AS NECESSARY TO ENSURE HYDROSEED AND SOD ARE INSTALLED ON A SMOOTH AND LEVEL SURFACE FREE OF CLUMPS, STICKS, HOLES, ETC.

LANDSCAPING SCHEDULE

- REQUIRED PERIMETER LANDSCAPING:
1. ONE TREE PER 35 FEET OF FRONTAGE
 - 1.1. MINIMUM OF 9 TREES NEEDED
 2. ONE SHRUB PER 6 FEET OF FRONTAGE
 - 2.1. MINIMUM OF 53 SHRUBS NEEDED

- PROVIDED PERIMETER LANDSCAPING:
1. 9 TREES
 2. 53 SHRUBS

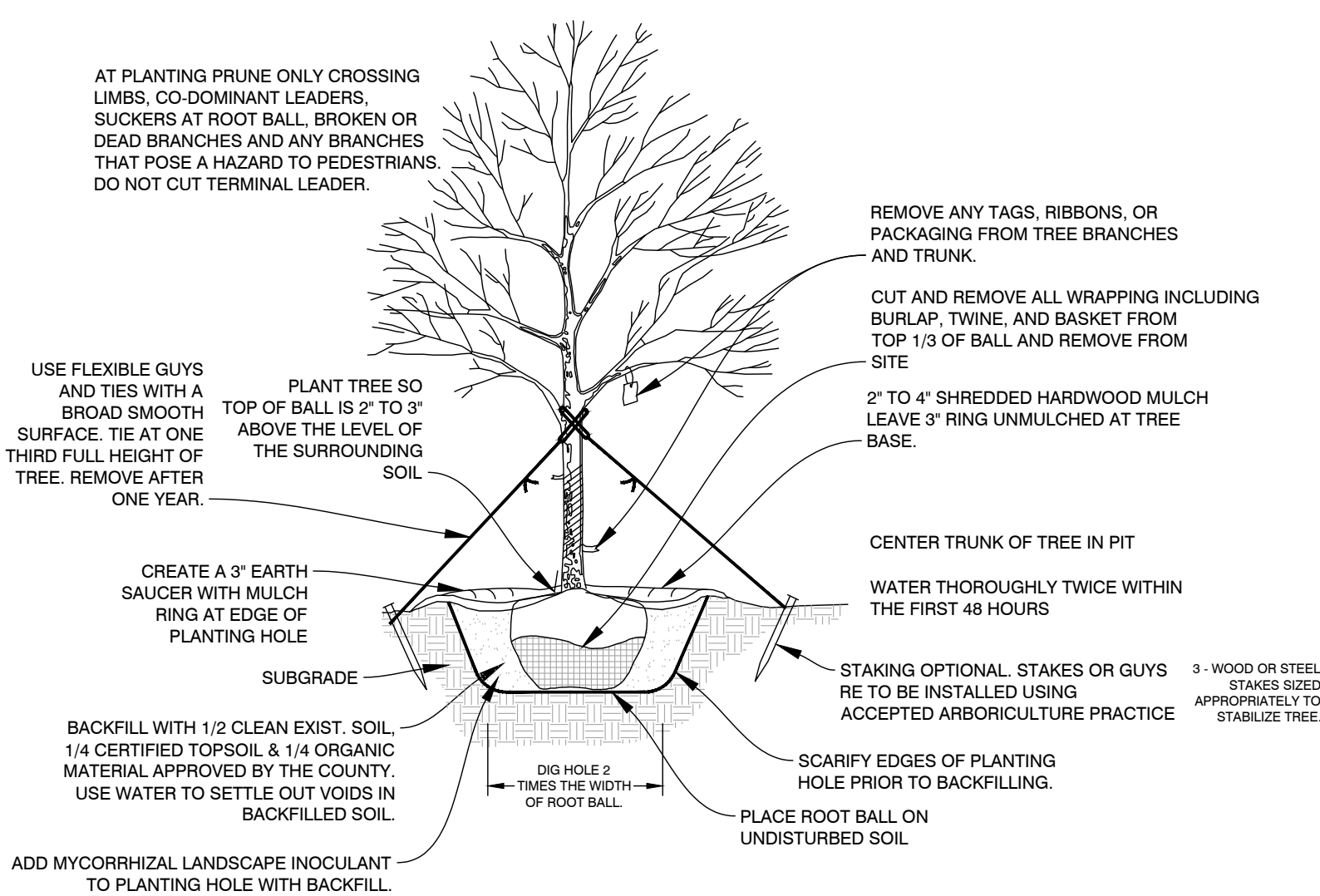
- REQUIRED PARKING LOT LANDSCAPING:
1. 5% OF ENTIRE PARKING LOT SHALL BE PROVIDED AS A LANDSCAPE AREA
 - 1.1. MINIMUM OF 4,802 SF OF LANDSCAPE AREA NEEDED
 2. ONE TREE PER 300 SQUARE FEET
 - 2.1. MINIMUM OF 16 TREES NEEDED

- PROVIDED PARKING LOT LANDSCAPING:
1. 4,967 SQUARE FEET OF LANDSCAPING
 2. 20 TREES PROVIDED

Shrub Planting Schedule					
Symbol	Latin Name	Common Name	Size	Container Type	Comments
Cfm	Chamaecyparis filifera 'Mops'	Goldmop Cypress	24-30"	cont.	
Jg	Juniper virginiana 'Grey Owl'	Grey Owl Juniper	18-24"	cont.	
Pod	Physocarpus opulus 'Diablo'	Diablo Ninebark	24-30"	cont.	
Hi	Hydrangea paniculata 'Limelight'	Limelight Hydrangea	24"	cont.	

Tree Planting Schedule					
Symbol	Latin Name	Common Name	Size	Container Type	Comments
Gd	Gleditsia triacanthos 'Skycole'	Skyline Honey Locust	2.5-3" Cal.	B&B	
As	Acer saccharum	Sugar Maple	2.5-3" Cal.	B&B	
Bn	Betula nigra 'Cully'	Heritage River Birch	10 - 12'	B&B	
Ta	Tilia americana 'Boulevard'	Boulevard American Linden	2.5-3" Cal.	B&B	
Ps	Pinus strobus	Eastern White Pine	10-12'	B&B	

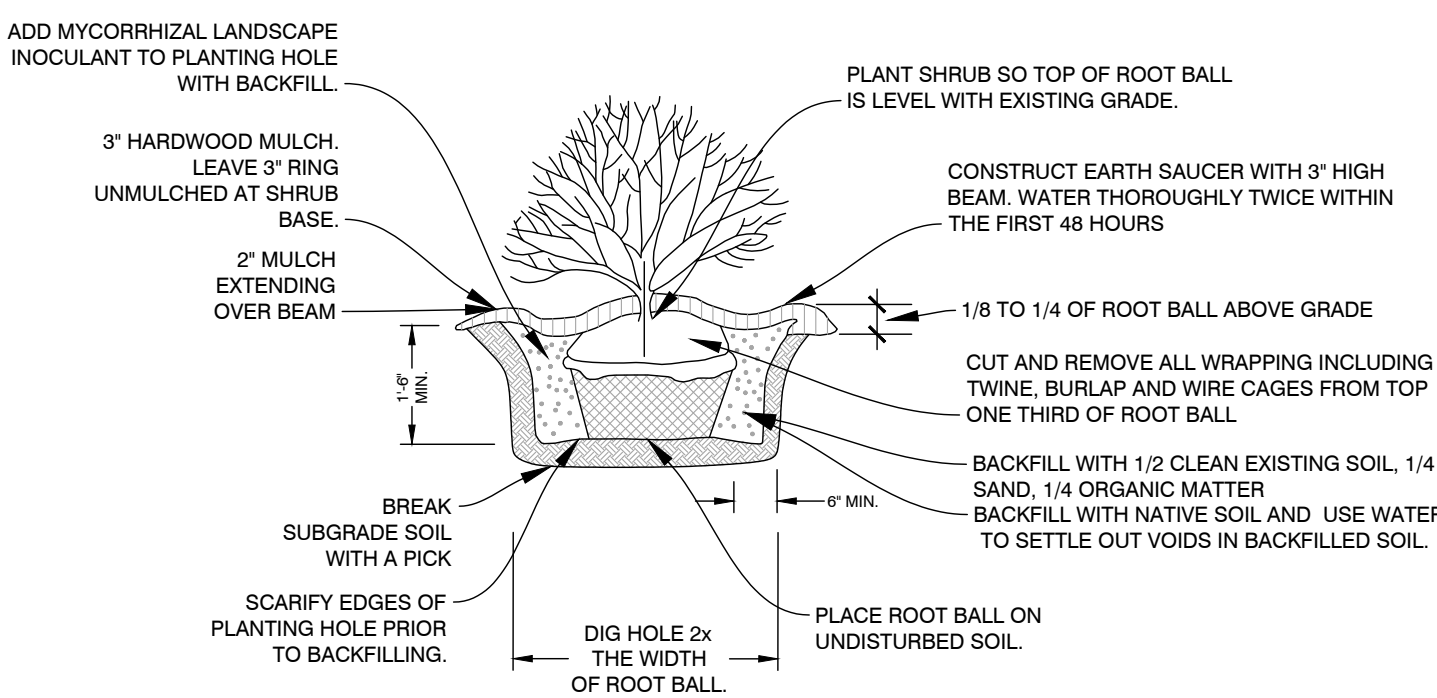
NOTE:
STAKING OF BALL AND BURLAP TREES REQUIRED AT THE DISCRETION OF THE CONTRACTOR. CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL STAKING AT END OF ONE YEAR WARRANTY PERIOD.



TYPICAL DESCIDUOUS TREE PLANTING DETAIL

L1.0 - 170102

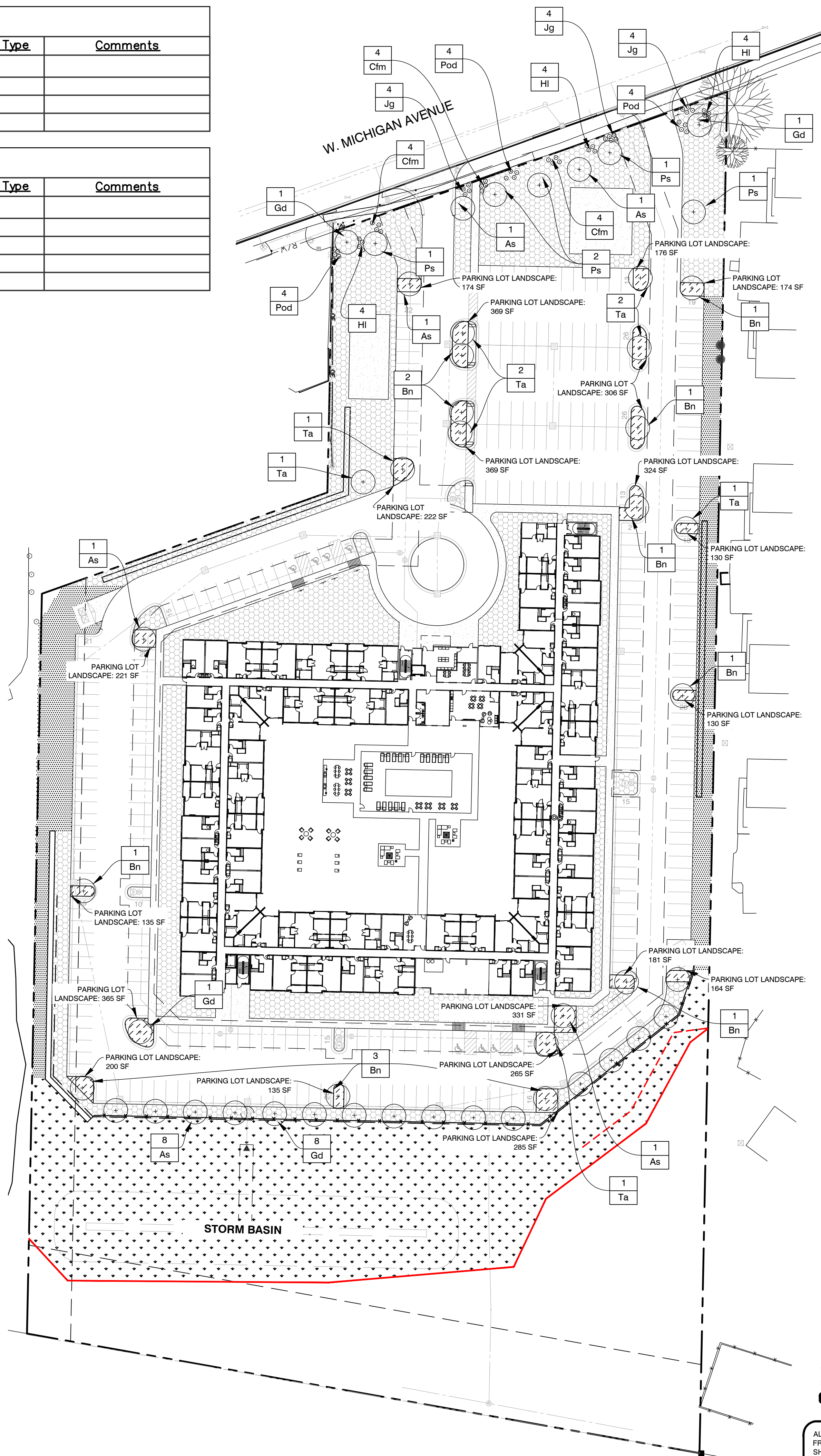
NOT TO SCALE



TYPICAL SHRUB PLANTING DETAIL

L1.0 - 170103

NOT TO SCALE



ALL UTILITIES AS SHOWN ARE APPROXIMATE LOCATIONS DERIVED FROM ACTUAL MEASUREMENTS AND AVAILABLE RECORDS. THEY SHOULD NOT BE INTERPRETED TO BE EXACT LOCATION NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THE AREA. FIELD WORK PERFORMED BY: MOSTROM & ASSOC., INC.

PLANS PREPARED BY:



DRAWN: BD/EAG
CHECKED: JPR/WLP

No.	ISSUED FOR:	DATE	BY:
1	PRE-SITE PLAN REVIEW	02/07/2023	WP
2	VARIANCE	03/14/2023	WP
3	PRE-SITE PLAN RESUBMITTAL	03/27/2023	WP
4	PRE-SITE PLAN RESUBMITTAL	10/19/2023	WP
5	SITE PLAN SUBMITTAL	03/15/2024	WP

LANDSCAPE PLAN
KALAMAZOO MULTIFAMILY
KALAMAZOO REALTY HOLDINGS, LLC
3625 W MICHIGAN
SECTION 19, T2S, R1W

SHEET TITLE:
PROJECT:
CLIENT:
SITE ADDRESS:
SITE SECTION:

JOB NUMBER
23169001

DATE
03/15/2024

SHEET NUMBER

L1.0

ZONING BOARD OF APPEALS

NATURAL FEATURES PROTECTION REVIEW SHEET**General Information**

Specific Project Details (may also provide on a separate sheet):

The site is proposed to be redeveloped as an apartment complex. The existing site will be demolished and cleaned up to allow for redevelopment. The development is planned to have several amenity upgrades such as a pool, pool house, basketball court and other sport court.

Review Criteria for Natural Features Protection Variances

ZBA will review all NFP Variance requests using the following criteria. Please reach out to staff if you have questions.

The parcel cannot be reasonably utilized for its zoned use without the requested relief.

The existing parcel was recently added into the NFP Overlay. Adjacent parcels have been developed fully utilizing their parcel. The property in question cannot reasonably be utilized as similar uses that exist on the adjacent parcels without some relief.

The extent of relief requested is the minimum needed to permit reasonable utilization of the site.

The extent of relief shown for the steep slope limits is the minimum needed when considering a balance between preservation, cost feasibility, and required site improvements. There are fire department requirements that dictate needing a looped fire lane around the site. This requirement does require impacts to a section of steep slope. The neighboring development to the East created berm areas / steep slopes adjacent to the shared property line, which creates hardships to match existing grades.

It is demonstrated that the relief can be granted without substantial detriment to the public good and will not substantially impair the intent and the purpose of the NFP Overlay District.

There is no concern for substantial detriment to the public good and granting relief will not impair the intent and purpose of the NFP Overlay District. Slope restoration methods such as double sided mulch blanket, utilizing foundation walls of proposed buildings, and reinforcing slopes are planned for in order to minimize steep slope impacts.

The requested relief is balanced by the use of conservation and/or green development tools and actions, such as utilizing stormwater best management practices from the Michigan Low Impact Development Manual that promote infiltration, restoration or expansion of a natural feature on the site, or use of wild-type native plants or desired trees as detailed in Table 6.2-5, Replacement Tree List.

The requested relief utilizes existing site features as best possible to minimize impacts to steep slopes. Storm water management will be reviewed in greater detail with the City Engineering team, but existing natural low areas near the South property line are intended to be utilized to help minimize required storm water runoff requirements and therefore keep impacts to steep slopes minimal (as shown on the submitted plans).

The proposed site redevelopment will clean up a dilapidated building and site that has created issues for the City of Kalamazoo. The shown improvements (number of units) are at the low end of desired unit count to make this project feasible to redevelop the site. We will plan to attend the required meeting and be prepared to discuss any questions the City or Board may have that the required meetings.

The proposed development coincides with the City's zoning ordinance and provides more residential housing within the City limits in an area that has additional demand for housing. Michigan Ave contains multiple uses ranging from commercial to multi-family residential. Approving this variance increases housing availability for families and students in this area.

ZONING BOARD OF APPEALS

NATURAL FEATURES PROTECTION REVIEW SHEET

General Information

Specific Project Details (may also provide on a separate sheet):

The site is proposed to be redeveloped as an apartment complex. The existing site will be demolished and cleaned up to allow for redevelopment. The development is planned to have several amenity upgrades such as a pool, pool house, basketball court and other sport court.

Review Criteria for Natural Features Protection Variances

ZBA will review all NFP Variance requests using the following criteria. Please reach out to staff if you have questions.

The parcel cannot be reasonably utilized for its zoned use without the requested relief.

The existing parcel was recently added into the NFP Overlay. Adjacent parcels have been developed fully utilizing their parcel. The property in question cannot reasonably be utilized as similar uses that exist on the adjacent parcels without some relief.

The extent of relief requested is the minimum needed to permit reasonable utilization of the site.

The extent of relief shown for the tree impacts are the minimum needed when considering a balance between preservation, cost feasibility, and required site improvements. There are fire department requirements that dictate needing a looped fire lane around the site. This requirement does impact and require tree removal. The site redevelopment will clean up a dilapidated building and site that has created issues for the City of Kalamazoo. The shown improvements (number of units) are at the low end of desired unit count to make this project feasible to redevelop the site.

It is demonstrated that the relief can be granted without substantial detriment to the public good and will not substantially impair the intent and the purpose of the NFP Overlay District.

There is no concern for substantial detriment to the public good and granting relief will not impair the intent and purpose of the NFP Overlay District.

The requested relief is balanced by the use of conservation and/or green development tools and actions, such as utilizing stormwater best management practices from the Michigan Low Impact Development Manual that promote infiltration, restoration or expansion of a natural feature on the site, or use of wild-type native plants or desired trees as detailed in Table 6.2-5, Replacement Tree List.

The requested relief utilizes existing site features as best possible to minimize tree removals and minimize slope impacts. Storm water management will be reviewed in greater detail with the City Engineering team, but existing natural low areas near the South property line are intended to be utilized to help minimize required storm water runoff requirements.

It is intended to plant desired trees detailed in Table 6.2-5. We will work closely with the City of Kalamazoo and our landscape architect to put together a detailed landscape plan utilizing desired trees and plantings.

We also intend to have additional supporting documentation on the types and condition of existing trees within the woodland area that is proposed to be impacted. We will have these documents prepared and provide them to the City prior to the upcoming Board meetings.

The proposed development coincides with the City's zoning ordinance and provides more residential housing within the City limits in an area that has additional demand for housing. Michigan Ave contains multiple uses ranging from commercial to multi-family residential. Approving this variance increases housing availability for families and students in this area.

ZONING BOARD OF APPEALS

DIMENSIONAL VARIANCE REVIEW SHEET

General Information

Specific Project Details (may also provide on a separate sheet):

The site is proposed to be redeveloped as an apartment complex. The existing site will be demolished and cleaned up to allow for redevelopment. The development is planned to have several amenity upgrades such as a pool, pool house, basketball court and other sport court.

Review Criteria for Dimensional Variances

ZBA will review all Dimensional Variance requests using the following criteria. Please reach out to staff if you have questions.

Are there conditions, like unusual topography, the shape of the lot or structure that are not commonly found on other lots or structures in the same zone district that make this request unique?

The proposed development coincides with the range of parking provided per unit in the immediate surrounding area. An increase in parking count is desired to provide sufficient parking for residents and a small amount of parking for visitors / guests.

Are there special circumstances which are not the result of the actions of the applicant or property owner of the land that impact the project?

The sudden grade change makes it difficult to grade to existing without impacting the existing trees on the south side of the property. The site is also located within an NFP overlay district, which affects developable land and is part of the reasoning for this submittal.

Does the Ordinance deprive the applicant of rights enjoyed by other property owners in the same zone district?

Adjoining developments to the East and West have developed beyond the 1:1 parking to unit ratio. The development to the West appears to be close to the 2.5 spaces to 1 unit ratio.

Is this the minimum action which will make it possible to use the lot or structure in a manner that does not negatively impact the public and meets the spirit of this Ordinance?

The proposed parking count is close to 1.5 spaces to 1 unit ratio. This is the minimal ratio desired.

Will the granting of the variance negatively affect adjacent land?

Granting of the variance will not negatively affect the adjacent properties. Not granting the variance could negatively impact the development.

Will the granting of the variance be generally consistent with the purpose and intent of this Ordinance?

Granting the variance will generally be consistent with the intent of the ordinance, as well as be consistent with the neighboring developments.

Additional Criteria for Variance Requests for Required Landscaping

Does existing landscaping, screening or wetlands planned to be preserved meet the intent of the Ordinance?

Landscaping requirements are intended to be met. Existing site features will be preserved where possible. These will be reviewed in further detail with the City as design progresses.

Does the landscaping proposed by the applicant meet the intent of this section?

Landscaping requirements are intended to be met. These will be reviewed in further detail with the City as design progresses.

Are there steep changes in topography that would limit the benefits of landscaping?

There are steep changes in topography towards the south portion of the property. The proposed layout works to minimize impacts to steep slopes in portions of the site.

Are the proposed building and parking lot locations setback beyond the required setback?

The proposed building and parking lots meet the required setbacks.

Are there abutting lands developed or could be developed in the near future with a use other than residential?

Abutting land is already developed. Properties to the North and Northwest of our site are developed as commercial use. Properties directly East and West are developed as apartment complexes.

Do similar landscaping conditions exist which would result in no added benefit if additional landscaping or screening was provided?

There are existing vegetative buffers along both the East and West property lines. Existing or proposed plantings are intended to be incorporated into the development.



NFP Review Board Staff Report

City of Kalamazoo

TO: The Natural Features Protection Review Board

FROM: Nolan Bergstrom, NFP Board Liaison

DATE: July 23, 2024

SUBJECT: NFP Reappointment (Laura Fredrickson)

RECOMMENDATION:

It is recommended the Natural Features Protection (NFP) Review Board recommend to the Mayor and City Commission to reappoint Ms. Laura Frederickson to the NFP Board for a two-year full term.

BACKGROUND:

Ms. Laura Fredrickson has served on the NFP Board since June 2023. They were interviewed by a subcommittee of NFP board members. They were then recommended by the NFP Board to the City Commission for appointment to the NFP Board to serve the rest of Mr. Paul MacNellis's NFP term. This partial term ended on March 31st, 2024. Ms. Fredrickson has indicated they wish to continue serving on the NFP Board.

FINDINGS:

SPECIAL REQUIREMENTS FOR THIS POSITION

According to the Bylaws of the Natural Features Protection (NFP) Review Board, members must possess certain professional experience in natural resources and site design or property management to serve on the board.

SELECTION PROCESS

Ms. Fredrickson was alerted of the expiration of the partial term and asked by the NFP Board Liaison, Nolan Bergstrom, if they wished to serve a second term. Ms. Fredrickson replied that they wish to serve a second full term. The NFP Board voted to recommend Ms. Fredrickson serve a second full term of two years.

NOMINEE QUALIFICATIONS

Ms. Fredrickson holds a State of Michigan License as a Professional Landscape Architect. She works and lives in the City of Kalamazoo. She shared her passion and love for the outdoors and environmental conservation during her interview with the committee. She has project experience in parks and recreation design, sustainable site planning, and green infrastructure design. She is an asset to the board as they review NFP site plans to ensure compliance with the protection standards, as well as offering sustainable alternatives to site design challenges.

Dual Board Memberships

Currently, nominee does not serve as member on other city advisory boards.

Residency

The NFP Bylaws do not require City residency, however the nominee currently resides in the City of Kalamazoo.

Contribution To Diversity

This nominee offers an important professional discipline to the board of directors with their background in Landscape Architecture and Development.

NOMINATION RATIONALE

The reappointment of Ms. Fredrickson to a second full term contributes to professional diversity on the NFP Board and makes the NFP board more gender diverse. She has shown dedication to supporting the intent of the NFP Ordinance as they serve.



Advisory Boards and Commissions Appointee Nomination Report

City of Kalamazoo

RECOMMENDATION

The Natural Features Protection Review Board recommends the new appointment of Ms. Laura Fredrickson to the board for a partial term ending on March 31, 2024. Ms. Fredrickson will take the place for Mr. Paul MacNellis who resigned his term in Fall 2022.

SPECIAL REQUIREMENTS FOR THIS POSITION

According to the Bylaws of the Natural Features Protection (NFP) Review Board, members must possess certain professional experience in natural resources and site design or property management to serve on the board.

SELECTION PROCESS

The NFP Review Board formed a review committee to interview qualifying candidates who applied to serve on the board. The committee reviewed four applications and found two had natural resources and site design experience that would best serve the board. Following interviews, the committee recommended to the board the application of Ms. Laura Fredrickson.

NOMINEE QUALIFICATIONS

Ms. Fredrickson holds a State of Michigan License as a Professional Landscape Architect. She works and lives in the City of Kalamazoo. She shared her passion and love for the outdoors and environmental conservation during her interview with the committee. She has project experience in parks and recreation design, sustainable site planning, and green infrastructure design. She will be an asset to the board as they review NFP site plans to ensure compliance with the protection standards, as well as offering sustainable alternatives to site design challenges.

Dual Board Memberships

Currently, nominee does not serve as member on other city advisory boards.

Residency

The NFP Bylaws do not require City residency, however the nominee currently resides in the City of Kalamazoo.

Contribution to Diversity

This nominee offers a new professional discipline to the board of directors. This selection will serve to balance gender on the board of directors as well.

NOMINATION RATIONALE

The nominee will contribute to a diverse board and has demonstrated commitment to leadership in natural resource protection.

CITY CLERK'S CERTIFICATION

The nominees' qualifications regarding dual board membership, residency, and term limits have been reviewed and verified by the City Clerk's Office.

Scott A. Borling, City Clerk

Board, Commission, or Committee Application



Submission date: 10 March 2023, 9:17AM
Receipt number: 97
Related form version: 18

Applicant Information

Full Name	Laura Fredrickson
Home Address	2312 S Park St, Kalamazoo, MI 49001, USA Map (42.2681753, -85.5874793)
Are you a City of Kalamazoo resident?	Yes
Phone Number	3193313018
Email Address	lfredrickson@gowightman.com
Occupation	Landscape Architect
Employer	Wightman
Employer Address	433 E Ransom St, Kalamazoo, MI 49007, USA Map (42.2972994, -85.5768891)
Employer Phone Number	269-327-3532

Board or Commission

Which Board or Commission are you applying for? Natural Features Protection (NFP) Review Board

What experience, education, community activities, etc. do you think should be considered for your appointment to this board or commission?

I am a licensed landscape architect with a passion for balancing protecting nature alongside new development and for sustainable development. I am an outdoor person and value the natural resources and outdoor public spaces available in the City of Kalamazoo. I live and work in the City of Kalamazoo and am motivated to advance the community's vision for sustainability.

For the past 6 years I have been working at Wightman, an Engineering/Survey/Architecture firm. While at Wightman I have been in a project management role taking parks, trails, streetscape and site plan projects from conceptual design through construction. This includes presenting and communicating design concepts and construction documents to clients; design; construction documentation and specifications including MDOT specifications; cost estimating; permits; site plan development and approvals; bidding, and contract administration through construction.

My project experience includes parks and recreation design, sustainable site plan development, green infrastructure design, recreation grant writing (Land and Water Conservation Fund, Michigan Natural Resources Trust Fund, Recreation Passport, and Revitalization and Placemaking Program), trail design, streetscape design, park master planning, landscape design and subdivision master planning.

Are there any reasons you may have a conflict of interest if you were appointed to this board or commission? If so, please explain.

If a site plan is up for review by the Natural Features Protection Board that the company I work for produced (Wightman) then I would recuse myself from the review.

Are you currently serving as an appointee to any other City of Kalamazoo board or commission? If so, which one(s)?

No

References

Reference 1 Full Name	Phil Doorlag, PE
Reference 1 Address	433 E Ransom St, Kalamazoo, MI 49007, USA Map (42.2972994, -85.5768891)
Reference 1 Phone Number	2,697,796,923
Reference 2 Full Name	Paul Schram, PE
Reference 2 Address	433 E Ransom St, Kalamazoo, MI 49007, USA Map (42.2972994, -85.5768891)
Reference 2 Phone Number	2,698,089,848

Supporting Documents

[2023.03.10 Laura Fredrickson Resume.pdf](#)

Optional Demographic Information

Gender	Female
Race	White
Ethnicity	Non-Hispanic or Latino
Age	35-54
Household Income	More than \$61,921 (More than 80% median family income)
Neighborhood	Westnedge Hill
How did you learn about this opportunity to serve on a board or commission?	My colleague Phil Doorlag at Wightman told me about this opportunity.



NFP Review Board Staff Report

City of Kalamazoo

TO: The Natural Features Protection Review Board

FROM: Nolan Bergstrom, NFP Board Liaison

DATE: July 23, 2024

SUBJECT: NFP Board Member Appointment (Murgia)

RECOMMENDATION:

It is recommended that the NFP Board approve the recommendation to the Mayor and City Commission for the appointment of Ms. Evangelia Murgia to the NFP Review Board.

BACKGROUND:

Mr. Bobby Glasser was alerted of the expiration of his term as an NFP Board member ending on March 31st, 2024. Following this, outreach began to fill this seat with someone who has the correct professional experience. A subcommittee of NFP board members was formed to review and interview potential candidates. Of the candidates that applied, one met the professional experience requirement. Ms. Murgia was interviewed by the NFP nominating subcommittee. This committee recommended that Ms. Murgia be appointed to the NFP Board.

FINDINGS:

SPECIAL REQUIREMENTS FOR THIS POSITION

According to the Bylaws of the Natural Features Protection (NFP) Review Board, members must possess certain professional experience in natural resources, site design or property management to serve on the board. This board member position is filling the slope/geology/hydrogeology professional experience requirement.

SELECTION PROCESS

Mr. Bobby Glasser was alerted of the expiration of his term as an NFP Board member. This term ended on March 31st, 2024. Following this, outreach began to fill this seat with someone who has the correct professional experience. A subcommittee of NFP board members was formed to review and interview potential candidates. Of the candidates that applied, one met the professional experience requirement. Ms. Murgia was interviewed by the NFP nominating

subcommittee. This committee recommended that Ms. Murgia be appointed to the NFP Board.

NOMINEE QUALIFICATIONS

Ms. Murgia is a highly motivated hydrogeologist with a diverse skill set and experience with project management, field work, and a variety of GIS and hydrological software. They are a Kalamazoo native and hold a B.S. in Geology and an M.S. in Geosciences from Western Michigan University. They currently work for the Michigan Geological Survey as a Research Associate / Hydrogeologist. They also expressed an interest in community engagement initiatives as it relates to NFP.

Dual Board Memberships

Currently, nominee does not serve as member on other city advisory boards.

Residency

The NFP Bylaws do not require City residency, however the nominee currently resides in the City of Kalamazoo.

Contribution To Diversity

This nominee offers an important professional discipline to the board of directors with their background in Geology and Hydrogeology. They would also bring more gender balance to the board and are younger than previous board members.

Evangelia M. Murgia

www.linkedin.com/in/evangeliamurgia



PERSONAL STATEMENT

Highly motivated hydrogeologist with a vested interest in quality improvement and company growth. Diverse skill set and experience with project management, field work, and a variety of GIS and hydrological software. Professional objective of expediting procedures while improving overall work quality, and bolstering team expertise while fostering a positive work environment. Specific areas of interest include contaminant transport and remediation, public outreach and presentation, and project development.

SKILLS

- | | | |
|----------------------------|-----------------------------|---|
| - HAZWOPER | - PMBOK Management | - Microsoft Office Suite |
| - ArcMap, ArcPro, | - Public Speaking | - Advanced Excel and PowerPoint Functions |
| - Python, ArcPython | - Organization | - Microsoft Teams and Stream |
| - MODFLOW | - Interpersonal Skills | - Legal Quality Field Notes |
| - Surfer | - Quality Assurance | - Adobe Illustrator, GIMP |
| - AQTESOLV | - Professional Writing | - Video Editing, Davinci Resolve |
| - InSitu, WinSitu5, VuSitu | - Creativity and Innovation | |
| - USGS Groundwater Chart | - Semi-fluent in Greek | |
| - ENVI, SNAP | | |

EDUCATION

M.S Earth Science | Western Michigan University | Summa Cum Laude | Fall 2022

- Research in fluid flow and contaminant transport within volumetric contraction induced fracture networks, and evaluation and measurement in human subject performance with asynchronous training in environmental science applications
 - o The comparative efficacy of in-person, online-live, and online-asynchronous training programs | Geological Society of America Connects 2022 | Denver, CO | First author oral presentation
- Key Coursework: Groundwater Modeling, Environmental Remote Sensing, Surface Water Hydrology, Clastic Depositional Systems, Hazardous Waste Remediation, Introduction to

Soils, Geophysics, and Geological UAV Applications, Engineering Project Management, Organizational Communication, Organizational Change and Leadership

Applied Hydrogeology Field Course | Western Michigan University | Summa Cum Laude | Summer 2021

- Granted opportunity to gain valuable field work experience with various practices and equipment used in environmental sciences and consulting; including but not limited to pump test performance and analysis using In-Situ pressure transducers and Hermit collection, slug testing, and a variety in-field geochemical analysis
- Key Coursework: Environmental Geophysics, HAWOPER 40-hour Certification, Water Well Drilling, Groundwater Sampling, Aquifer Testing, Contaminant Transport and Remediation Technologies, Fundamentals of Hydrogeology, and Remote Sensing

B.S Geology | Western Michigan University | Magna Cum Laude | Fall 2019

- Conducted an independent study on geometric fracturing across rock and soil types
 - o Recent developments on the origin of gold mineralization in East Kazakhstan | 15th Biennial Society for Geology Applied to Mineral Deposits Meeting 2019 | Glasgow, Scotland | Poster presentation
- Key Coursework: Minerology, Igneous and Metamorphic Petrology, Structural Geology, Sedimentology and Stratigraphy, Geologic Communications

RELEVANT WORK HISTORY AND VOLUNTEER EXPERIENCE

Hydrogeologist, Project Manager | Michigan Geological Survey | Sep. 2019 – Present

- Responsible for directing, coordinating, and oversight of a multiphase project focused on improving the quality of the Michigan water wells public database for production of reliable hydrogeologic maps related primarily to PFAS and PFOS contamination
- Project phases include: validation of existing database, digitization of historic and recent data, state of emergency response groundwater mapping, lithological cross-section mapping, quality assurance programming, and education and outreach
- Experience with environmental policy, working with government agencies, program budgeting, and project summarization and reporting
- Familiar with conducting multiple concurrent operations, coordinating teams ranging from 3 to 32 staff members, and hiring and firing, academic and early professional mentoring of student staff and recent graduate employees
- Constructed and executed several rigid and dense training programs across project phases, presented in-person, online-live, and online-asynchronously with focuses on quality assurance, production efficiency, and project applications such as parcel viewers, groundwater concepts, and the Public Land Survey System
- Directed and programmed ArcPython script for the automation of water well location validation, increasing productivity by a minimum of 60%

- UAV field experience on USGS project in collection of elevation and thermal data for analysis of rapid bluff erosion and lake level changes across the Lake Michigan eastern shoreline
- Deep monitoring well drilling field experience on Allegan and Ottawa County grant funded projects for evaluation of local drift and bedrock lithology, and ongoing monitoring for contamination transport progression
- Gamma Ray Logging Workshop | Supported organization, setup, and instruction efforts for student and staff day course on gamma ray log data collection
- Wireline Logging Workshop | Initiated and coordinated for student employees via Baker Hughes, Mt. Pleasant. Included overview of equipment application and limitations and data interpretation for gamma ray, spontaneous potential, gamma-gamma, neutron porosity, acoustic, resistivity, NMR, and caliper logs
- Online Outreach | Scripted and directed comprehensive educational videos on a variety of geological topics for both public and internal purposes
 - o Produced informative and engaging content on wireline logging, drinking water testing and contaminants, well drilling specifications and construction, public land survey system, drill core collection and interpretation, virtual training series, and more
 - o Creation and management of organizational media presence on YouTube and LinkIn
- Middle & High School Water Quality Outreach Program | directed development and implementation of an in-person public outreach program focused on teaching students about groundwater resources, quality and quantity issues, remediation efforts, and consumer awareness

Adjunct Professor | Kalamazoo Valley Community College | Sep. 2021 – Present

- Physical Geology: instruction of laboratory and lecture content pertaining to introductory earth science concept such as volcanism, sedimentology, climate change, and groundwater- surface water interactions for both online and in-person learning
 - o Developed a detailed field trip laboratory activity based on evaluating bedrock outcrops, for correlation, depositional environment interpretation, and fossil identification in Grand ledge, Michigan; allowing students to gain a better understanding of the junction of many geologic concepts and principals

Graduate Teaching Assistant | Western Michigan University | Aug. 2020 – Dec. 2021

- Rocks and Minerals: laboratory adaptation and instruction of earth material analysis, classifications, identification, and interpretation
- Hydrogeology Field Course: Geochemical Sampling and Analysis, Aquifer Testing, and Remediation Technologies
 - o Demonstrated use of various equipment for pumping and slug tests using Level Troll 700 pressure transducers, Hermit pumping recorder, and WinSitu5 slug testing software

- Demonstrated performance of a variety of in-field geochemical analysis including conductivity, reduction potential, total iron using photogrammetry, pH, and nitrate and nitrite concentration
- Ensuring students acquire the necessary resources for completion of groundwater sampling of deep and shallow monitoring wells, using low flow methodology, peristaltic and submersible pumps, with follow through of decontamination procedures
- Coordination of field trip visits to facilities related to the course work, equipment rentals, content delivery, and updates to procedural plans in response to evolving COVID-19 restrictions and university policy
- Dynamic Planet
 - Responsible for instruction of introductory geology labs and delivery of supplemental lecture
 - Made adaptations to course work to allow for remote alternatives, and proper execution of university COVID-19 guidelines
 - Creation of new laboratory exercises to improve student engagement and retainment

Rental Agent | Enterprise Holdings | May 2016 – Dec 2016

- Gained valuable sales and interpersonal skills via frequent high quality customer service interaction and regularly provided sales training programs
- Developed comfortability with safely driving and parking large vehicles

Volunteer Event Staff | Michigan Geologic Repository for Research and Education, Michigan Basin Geological Society | Oct. 2021

- Michigan Core Workshop | Detailed logging and depositional system interpretation of the Antrim, Dundee, Niagaran Reef, and Trenton/Black River formations, development of knowledge and tool application to oil and gas storage and production potential with specification of immature organic content influence, production zone extent, and modeling production potential based on porosity and water saturation observed in core | Brief analysis of carbon capture and storage potential in the Michigan Basin in conjunction with oil and gas production

Volunteer Environmental Science Instructor | Izaak Walton League | Sep. 2016 – Present

- Designed and taught immersive, nature education programs for K-8th grade children covering topics such as natural resource management, wildlife conservation, and primitive survival skills

Volunteer Instructor | Michigan Potter's Market | Oct. 2022 – Present

- Generated, documented, and instructed on new underglaze technique for strategic polygonal fracturing using a bentonite-gypsum mixed slurry
- Coordination and logistical management of annual show

Volunteer Ambassador | Upward Bound (U.S Department of Education) | Summer 2021

- Responsible for organizing day trips plans for high school aged students to receive an introduction to STEM sciences—specifically opportunities within geological and environmental sciences including but not limited to freshwater resource conservation, forensic geology, and geophysical surveying

Volunteer Test Author and Proctor | Science Olympiad | Mar. 2021 – Apr. 2021

- Wrote and proctored road scholar, dynamic planet, and structural geology tests for middle school students during Michigan Science Olympiads first fully virtual meeting

CERTIFICATIONS AND LISCENSES

HAZWOPER (40-hour) Certification | Envirologic Technologies Inc. | Jun. 2021

FAA Part 107 | Federal Aviation Administration | Anticipated Dec. 2022

- Commercial unmanned aerial vehicle pilot's license for remote sensing and geologic imaging

Human Subjects Research for Social and Behavioral Sciences | Collaborative Training Institutional Program | Mar. 2022

Responsible Conduct of Research | Collaborative Training Institutional Program | Mar. 2021

Rescue Diver | Professional Association of Diving Instructors | Jun. 2015

PERSONAL QUALITIES AND INTERESETS

- | | |
|--|---|
| <ul style="list-style-type: none"> - Accountable - Direct - Organized - Positive - Analytical | <ul style="list-style-type: none"> - Foraging for wild edibles - Open water swimming <ul style="list-style-type: none"> - Hiking - Stained glass production <ul style="list-style-type: none"> - Blacksmithing |
|--|---|

ACHEIVEMENTS AND AFFILIATIONS

Envirologic Technologies Award | May 2021

- Scholarship awarded for considerable contribution to environmental concerns within southwest Michigan

Michigan Geological Survey Appreciation Award | Sep. 2020

- In recognition of quality effort and leadership within a grant funded project

Steininger Geology Scholarship in Honor of Dr. Lloyd Schmaltz | May 2020

- Awarded for outstanding academic achievement and research in environmental applications

Research and Creative Scholarship Excellence Award | May 2019

- Western Michigan University Office of the Vice President of Research

Research and Creative Activities Award | Oct. 2018

- Western Michigan University College of Arts and Sciences

American Institute of Professional Geologists | Aug 2019 – Present

- Western Michigan University student chapter treasurer

Geological Society of America | Feb. 2017 – Present

Michigan Izaak- Walton League | Jun. 2016 – Present

EVANGELIA MURGIA | Michigan Geological Survey

Proposed Role: Natural Features Protection Review Board Member

Education and Training

M.S., Geoscience, Western Michigan University, 2022

B.S., Geology, Western Michigan University, 2019, with honors

Earth MRI, Mine Waste Identification and Documentation Training, 2023

Environmental Geophysics Workshop, 2022

ArcPython Essentials, 2021

Hazardous Waste Operations and Emergency Response Certification, 2021

Human Subjects Research for Social and Behavioral Sciences Certification, 2021

Michigan Basin Core Analysis Workshop, 2021

Geological Cross Section Mapping Workshop, 2019

Research and Professional Experience

2022-Present Research Associate/Hydrogeologist, Michigan Geological Survey

2021-Present Adjunct Instructor, Kalamazoo Valley Community College

2020–2022 Project Manager, Michigan Geological Survey

2020-2022 Teaching Assistant, Western Michigan University

2019–2020 Research Assistant, Michigan Geological Survey

2009-2011 Teaching Assistant, Central Michigan University

Selected Publications

Murgia, E., Ringle, G., and Yellich, J., 2023. A Simple and Effective Method for Improving Accessibility of Michigan Parks. Geological Society of America Abstracts with Programs, Vol. 55, No. 3, 2023. Doi: 10.1130/abs/2023NC-386901

Murgia, E., White, S., Yellich, J., Voice, P., and Petcovik, H., 2022. The Comparative Efficacy of In-Person, Online-Live, and Asynchronous-Online Training Programs. GSA Connects 2022 Meeting, 2022, 10.1130/abs/2022AM-380477.

Mizernaya, M., Akylbaeva, A., Thakurta, J. and **Murgia, E.**, 2019, Recent Developments on the Origin of Gold Mineralization in East Kazakhstan, 15th Biennial SGA Meeting Proceedings, vol. 2, p. 857-859.

Synergistic Activities

Advancing CCUS in the Michigan Basin (Client: US DOE-NETL, 2024-2026). Project aimed at characterizing primary confining systems, evaluating wellbore integrity risks, and integrating geotechnical with societal considerations. Ms. Murgia will contribute to this project as a web-based accessibility advisor and provide support to the principal investigator with coordination and progress tracking efforts.

Validation and Bolstering of Michigan's Water Well Database (Client: State of Michigan, EGLE, 2019-2023). Ms. Murgia was the project manager for the multiphase project, responsible for

development, reporting, milestone delivery, quality assurance, training, and outreach. Project conclusion objective include correcting vast majority of prior data errors, digitizing historic data, validating key record components for hydrogeologic mapping applications, and development of an automated quality assurance application and supporting web-based applications.

Borehole Drilling and Monitoring Well Installation in Southwest Michigan (Client: County Level Government, MGS, 2022-2025). Ms. Murgia is the field operations lead responsible for on-site safety supervision, well construction, data-driven decision making, sampling collection and documentation, junior staff training, logistical coordination, site planning, and community engagement. Additionally, she contributed to post-data collection internal database building and coordinating further material sampling, testing, and characterization efforts.

Development of Organization Online Presence for Improved Outreach and Entity Accessibility (Client: MGS, 2022-2024). Ms. Murgia is the project lead for construction of the Michigan Geological Survey's website, online data sharing library, and online media platform presence geared towards informing the general public, industry, and academia of local geoscience topics and organizational activities. This project will integrate modern aesthetics with user-friendly functionality and cultural relevance to provide an enhanced user experience with easily accessible data and information. Ms. Murgia is responsible for strategic planning based on performance analytics, content creation, support of in-person outreach activities, and ensuring a cohesive and impactful online presence to elevate organizational visibility. Additionally, Ms. Murgia implemented and monitored data and web security measures.

Production of Publicly Available State Park and Recreation Maps with Enhanced Accessibility Features (Client: State Park Management, MGS, 2023). Ms. Murgia was the principal investigator for production of free, online enhanced accessibility maps for select state park and recreation areas, responsible for research of needed application features, map accuracy assessments, design, and implementation including additional features to promote user feedback and informative analytics for park management.

Geoscience Curriculum Development for Early College (Client: WMU, KVCC, 2020-2024). Ms. Murgia has designed, curated, and instructed various introductory and intermediate college level earth science courses including development of hand-on learning laboratory activities, field trips, and research project advising.

Applied Hydrogeology Field Course Coordination and Instruction (Client: WMU, 2021). This field course was designed to provide graduate students and upper-level undergraduate students with a comprehensive overview of environmental field methodology and safety for geochemical analysis, well drilling, contaminant site assessment and remediation planning, and geophysical and land surveyal applications. Ms. Murgia contributed to operations by coordinating industry visitors, course component instructors, acquiring and testing equipment, supplies, software, and transport and providing demonstrations and troubleshooting for all utilized resources.

Memberships: Michigan Water Use Advisory Council, Modeling Committee Member, Geological Society of America (2017-2023), American Institute of Professional Geologists (2016-2021, Student Chapter President and Treasurer)

Board, Commission, or Committee Application

Submitted on	28 May 2024, 1:01PM
Receipt number	231
Related form version	18

Applicant Information

Full Name	Evangelia Murgia
Home Address	1314 James St, Kalamazoo, MI 49001, USA Map (42.2782556, -85.5655721)
Are you a City of Kalamazoo resident?	Yes
Phone Number	817-304-5148
Email Address	evangelia.m.murgia@wmich.edu
Occupation	Hydrogeologist (Research Associate)
Employer	Michigan Geological Survey (WMU Department of Geological & Environmental Sciences)
Employer Address	5272 W Michigan Ave, Kalamazoo, MI 49009, USA Map (42.27271229999999, -85.653857)
Employer Phone Number	269-387-8633

Board or Commission

Which Board or Commission are you applying for?	Natural Features Protection (NFP) Review Board
What experience, education, community activities, etc. do you think should be considered for your appointment to this board or commission?	I believe my extensive background in hydrogeology, combined with my educational achievements and active community involvement, makes me a strong candidate for appointment to the Natural Features Protection Board. Professional Experience: I am a professional hydrogeologist with over eight years of experience in the field. My work has primarily focused on groundwater flow and contaminant transport, where I have successfully managed various environmental improvement projects. These projects have ranged from data infrastructure development to contaminant remediation, always with a strong emphasis on health and human safety. My role has required a deep understanding of the complex interactions between natural features and human activities, ensuring that environmental sustainability and

protection are at the forefront of all initiatives.

Education:

I hold a Master of Science degree in Earth Science, with a focus on groundwater flow and contaminant transport, as well as engineering project management. My academic background has provided me with a robust foundation in the scientific principles and practical applications necessary for effective environmental management and protection.

Community Activities:

Beyond my professional responsibilities, I have dedicated considerable time to volunteering in various environmental and community projects. Some of my notable volunteer efforts include:

Educating the public about emerging contaminants and their impact on the environment and human health.

Participating in and supporting wetland restoration projects to preserve and enhance local ecosystems.

Engaging in ecosystem characterization studies to better understand and protect natural habitats.

Contributing to trail maintenance projects to promote outdoor recreation and environmental stewardship within the community.

Passion and Commitment:

My passion for the outdoors and the environment is a driving force behind my professional and volunteer activities. Living and working in Kalamazoo, I am committed to the well-being and sustainability of our natural features. I believe that my combined expertise, experience, and enthusiasm uniquely position me to contribute effectively to the goals and responsibilities of the Natural Features Protection Board.

Are there any reasons you may have a conflict of interest if you were appointed to this board or commisison? If so, please explain.

No

Are you currently serving as an appointee to any other City of Kalamazoo board or commission? If so, which one(s)?

No

References

Reference 1 Full Name	John Yellich (Supervisor, Director of the Michigan Geological Survey)
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Reference 1 Address	5272 W Michigan Ave, Kalamazoo, MI 49009, USA Map (42.27271229999999, -85.653857)
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Reference 1 Phone Number	2693701645
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Reference 2 Full Name	Sophia White (Colleague, Michigan Geological Survey)
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Reference 2 Address	5272 W Michigan Ave, Kalamazoo, MI 49009, USA Map (42.27271229999999, -85.653857)
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Reference 2 Phone Number	2695678742
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Supporting Documents

[MURGIA_CV_202302.pdf](#)
[Murgia_RARes_052024.pdf](#)

Optional Demographic Information

Gender	Female
Race	White
Ethnicity	Non-Hispanic or Latinx
Year of Birth	1997
Household Income	More than \$61,921 (More than 80% median family income)
Disability Status	No disability
Employment	Full-time
Education	Post-graduate degree
Neighborhood	Edison
How did you learn about this opportunity to serve on a board or commission?	Nolan Bergstrom had inquired with our department chair, Dr. Heather Petcovic about potential candidates. Heather then passed along the posting to me.



NFP Review Board Staff Report

City of Kalamazoo

TO: The Natural Features Protection Review Board

FROM: Nolan Bergstrom, NFP Board Liaison

DATE: July 23, 2024

SUBJECT: NFP Phase 3 Subcommittee

RECOMMENDATION:

BACKGROUND:

FINDINGS: