



AGENDA
CHARTER TOWNSHIP OF MERIDIAN
PLANNING COMMISSION – REGULAR MEETING
December 11, 2023 6:30 PM

1. CALL MEETING TO ORDER
2. ROLL CALL
3. PUBLIC REMARKS
4. APPROVAL OF AGENDA
5. APPROVAL OF MINUTES
 - A. November 13, 2023
6. COMMUNICATIONS
 - A. Williamston Township
7. PUBLIC HEARINGS
 - A. REZ #23036 – 5681 Shaw Street, PO, Professional and Office, to RC, Multiple-Family Residential
8. UNFINISHED BUSINESS
 - A. REZ #23034 – 4660 Marsh Road, PO, Professional and Office, to C-2, Commercial
 - B. SUP #23035 – Elevation 4 Floodplain
 - C. 2023 Meridian Township Master Plan
9. OTHER BUSINESS
 - A. 2024 Planning Commission Schedule – Reapproval
10. MASTER PLAN UPDATE
11. REPORTS AND ANNOUNCEMENTS
 - A. Township Board update.
 - B. Liaison reports.
12. PROJECT UPDATES
 - A. Project Report
13. PUBLIC REMARKS
14. COMMISSIONER COMMENTS
15. ADJOURNMENT

Individuals with disabilities requiring auxiliary aids or services should contact: Director of Community Planning and Development
Timothy R. Schmitt, 5151 Marsh Road, Okemos, MI 48864 or 517.853.4506 - Ten Day Notice is Required.
Meeting Location: 5151 Marsh Road, Okemos, MI 48864



TENTATIVE PLANNING COMMISSION AGENDA
January 8, 2023

1. PUBLIC HEARINGS
 - A. None

2. UNFINISHED BUSINESS
 - A. REZ #23036 – 5681 Shaw Street, PO, Professional and Office, to RC, Multiple-Family Residential

3. OTHER BUSINESS
 - A. None

4. MASTER PLAN
 - A. None

Individuals with disabilities requiring auxiliary aids or services should contact: Director of Community Planning and Development
Timothy R. Schmitt, 5151 Marsh Road, Okemos, MI 48864 or 517.853.4506 - Ten Day Notice is Required.
Meeting Location: 5151 Marsh Road, Okemos, MI 48864

Providing a safe and welcoming, sustainable, prime community.



CHARTER TOWNSHIP OF MERIDIAN
REGULAR MEETING PLANNING COMMISSION 2023
5151 Marsh Road, Okemos MI 48864-1198
517.853.4000, Township Hall Room
MONDAY, November 13th, 2023, 6:30 pm

PRESENT: Chair Blumer, Vice-Chair Trezise, Commissioners Richards, Scales, Snyder, Brooks, Shrewsbury, McCurtis

ABSENT: Commissioner McConnell

STAFF: Community Development Director Schmitt, Senior Planner Brian Shorkey

1. CALL MEETING TO ORDER
Chair Blumer called the November 13, 2023 regular meeting for the Meridian Township Planning Commission to order at 6:30pm.

2. ROLL CALL
Chair Blumer called the roll of the Board. All board members present.

3. PUBLIC REMARKS
None

4. APPROVAL OF AGENDA
Vice-Chair Trezise moved to approve the November 13, 2023 regular Planning Commission meeting agenda. Seconded by Commissioner McCurtis.

VOICE VOTE YEAS: Chair Blumer, Vice-Chair Trezise, Commissioners Richards, Scales, Snyder, Brooks, Shrewsbury, McCurtis

NAYS: None

Motion carried: 8-0

5. APPROVAL OF MINUTES
Commissioner Scales pointed out a correction in the October 25, 2023 minutes. Senior Planner Shorkey said that he would correct the minutes. Commissioner Shrewsbury pointed out a correction in the October 25, 2023 minutes.

Vice-Chair Trezise moved to approve the Minutes of the October 25, 2023 Planning Commission Regular Meeting as amended. Seconded by Commissioner McCurtis.

VOICE VOTE YEAS: Chair Blumer, Vice-Chair Trezise, Commissioners Richards, Scales, Snyder, Brooks, Shrewsbury, McCurtis

NAYS: None

Motion carried: 8-0

6. COMMUNICATIONS

A. None

7. PUBLIC HEARINGS

A. REZ #23034 – 4660 Marsh Road, PO, Professional and Office, to C-2, Commercial

Senior Planner Shorkey outlined his memo and described the application and the reasons for the rezoning request. Shorkey noted that although the application is for C-2, C-1 would work as well and that the Planning Commission had the authority to recommend either category. Senior Planner Shorkey discussed the difference between the C-1 and C-2 districts.

Chair Blumer asked if Staff intended to condense the commercial districts in the future. Senior Planner Shorkey said that language to that effect is in the Master Plan but that no work has been done. Commissioner Brooks asked Senior Planner Shorkey to show the zoning for the surrounding area and discussed the surrounding zoning and future land use map categories. Commissioner McCurtis asked about the character of the subject property and clarified that the entire parcel is under consideration for rezoning. Commissioner Scales discussed the businesses in the building and asked if this is a new hair salon. Senior Planner Shorkey said that it was and that it was the trigger for the rezoning. Commissioner Scales asked how Staff found out about the new salon. Senior Planner Shorkey said that the applicant had applied for a building permit. Commissioner Scales asked what Staff does when a business is found out of compliance. Director Schmitt said that normally a permit would be denied but that this was a borderline case.

Chair Blumer invited the applicant, Tamara Noe, to address the Commission. Ms. Noe introduced herself. Chair Blumer asked if Ms. Noe had received any complaints from neighbors about the businesses in the building. Ms. Noe said no. Chair Blumer asked Ms. Noe to describe the types of businesses in the building. Commissioner Scales asked for the name of the new hair salon.

Commissioner Richards asked Senior Planner Shorkey for any information before 2019 and asked when it went from residential to office zoning. Senior Planner Shorkey said November 2015. Commissioner Shrewsbury asked if the Planning Commission had been supportive of the change in 2015. Senior Planner Shorkey said that he didn't have that information but that it would be easy to check.

Commissioner Brooks asked for the zoning of the surrounding properties. Commissioner Richards asked if the application was for C-2 and asked if Staff was recommending C-2 or C-1. Staff said that no recommendation was being made but that C-1 would work and be less intense. Planning Commission and Staff discussed uses in the C-1 and C-2 zoning and the surrounding existing land uses.

Chair Blumer asked Staff if the request complies with the surrounding zoning and the Master Plan. Senior Planner Shorkey said pointed out that all of the property to the west was zoned C-2 but that the future land use designation is R3. Commissioner Brooks asked if the C-1 district would meet the needs of the applicant. Senior Planner Shorkey confirmed that it would. Commissioner Richards asked Ms. Noe if there was a specific reason that she asked for C-2 instead of C-1. Ms. Noe said that she was okay with either. Commissioner Shrewsbury discussed land uses allowed in the C-1 and C-2 land uses.

Commissioner Shrewsbury said that she was comfortable with the C-1 zoning. Chair Blumer asked if anyone in the public wanted to speak. Hearing none, Chair Blumer asked for a straw poll.

Commissioner McCurtis asked why the application was for C-2. Senior Planner Shorkey explained the application process. Commissioner Scales said that the Commission should consider the character of the area and asked if the Commission was being asked to change between C-1 and C-2. Discussion about zoning compliance about the land uses in the area.

Chair Blumer closed the public hearing and called for a straw poll. Commissioner Scales asked about the possibility of a bar in the C-1 district. Senior Planner Shorkey said that a bar would not be allowed because there is a 500-foot separation requirement from churches. The Planning Commission indicated that they unanimously supported recommending approval of the application to rezone the property from PO, Professional and Office, to C-1, Commercial.

Commissioner Shrewsbury said that she had asked for a hearing process to be included in the packet. Senior Planner Shorkey said that Staff was working with the Communications Department on that document and described the approval process for Ms. Noe.

B. SUP #23035 – Elevation 4 Floodplain

Senior Planner Shorkey outlined his memo and described the application for the floodplain crossing.

Commissioner McCurtis asked if the floodplain fill would result in any more water. Senior Planner Shorkey said no because the applicant is creating more capacity with their compensating cut. Commissioner Scales asked if the application complies with state law. Senior Planner Shorkey said that the application to the state was in the packet and that the applicant could speak about that further. Chair Blumer asked for the location of the compensating cut on the site plan.

Commissioner McCurtis clarified that the need for the cut is the Pathway. Chair Blumer invited the applicant to speak, represented by Allan Patrick of Kebs Inc. Commissioner Scales asked about the status of the state permits for the floodplain cut. Mr. Patrick said that the application packet had been sent to EGLE. Chair Blumer asked if the cut is adjacent to the floodplain, was it enlarging the floodplain. Mr. Patrick said yes. Commissioner Scales said that he did not have a problem with an application, especially since it is for a Pathway and that it is consistent with his understanding of the law. Chair Blumer said that it was a restricted area and that it would not have large effect.

Chair Blumer asked if there was any public comment on the application. Hearing none, Chair Blumer closed the public hearing.

Chair Blumer said that he agreed with Commissioner Scales and that it was a relatively small area.

Chair Blumer called for a straw poll. After discussion, the Planning Commission unanimously indicated that they supported the application to allow the Pathway to be built in a floodplain.

C. 2023 Meridian Township Master Plan

Director Schmitt outlined his memo and asked the Planning Commission to open the public hearing and defer conversation the Master Plan until later in the meeting.

Chair Blumer opened the public hearing. Commissioner Scales asked Director Schmitt to review the response of the Board. Director Schmitt said that the Board has not reviewed the draft Master Plan and was waiting for the Planning Commission's action. Chair Blumer noted the large number of comments from the public. Hearing no comment, Chair Blumer closed the public hearing.

8. UNFINISHED BUSINESS

ZA #2023-06 – CV: Conservancy District Updates

Senior Planner Shorkey outlined his memo and described the application for the text amendment.

Commissioner Shrewsbury moved to approve the resolution to recommend approval of ZA #2023-06. Seconded by Commissioner Brooks.

Vice-Chair Trezise asked Senior Planner Shorkey if the amendment applied just to decks and not structures. Senior Planner Shorkey said that home improvements were included if the cut was less than ten cubic yards and that moving decks to allowed uses was necessary to keep them from being special use permits. Chair Blumer asked if there was a definition for what constituted a deck. Senior Planner Shorkey said that the zoning ordinance did not define it, but that it was defined in the Michigan Building Code. Commissioner Scales asked where the definition was tied in. Senior Planner Shorkey said that the application would apply after the deck was applied for during the building permit process.

VOICE VOTE YEAS: Chair Blumer, Vice-Chair Trezise, Commissioners Richards, Scales, Snyder, Brooks, Shrewsbury, McCurtis

NAYS: None

Motion carried: 8-0

9. OTHER BUSINESS

None

10. MASTER PLAN UPDATE

Director Schmitt reminded the Planning Commission that their November 13th meeting was the public hearing for the Master Plan and described the approval process. Director Schmitt asked the Planning Commission to read the draft Master Plan and prepare to make a final recommendation to the Board at the December meeting.

Commissioner Snyder asked about accessibility of the draft Master Plan. Director Schmitt said that he would discuss this with the Communication Department and the current format of the draft Master Plan was chosen for its accessibility. Commissioner Snyder asked if there could be an audio format for the document. Commissioner Snyder said that she had previously asked for a native land acknowledgement in the Master Plan. Director Schmitt said he would finalize the language and include it.

Commissioner Trezise said that it is not readily apparent how to access the draft Master Plan on the Township website. Director Schmitt said that he would discuss this with the Communication Department.

Chair Blumer noted the large number of public comments and that it was interesting how consistent the comments were. Chair Blumer asked if there was anyone who wanted to address the issue. Hearing none, Chair Blumer asked if there was anything else.

Commissioner Brooks complimented Staff for the work on the Master Plan. Commissioner Scales said that the Master Plan update process had gone more smoothly than in the past and thanked Staff for their assistance.

11. REPORTS AND ANNOUNCEMENTS

A. Township Board Update

Director Schmitt updated the Planning Commission on Board activity; framework for CIA TIF approved, RRC housing updates approved, expected to take up marijuana licensing standards, held a study session on status of senior center. Director Schmitt said that they Township had applied for the state's CDBG MSHDA housing grant for home rehabilitations and that more information would come in the future. Director Schmitt said that the Board recognized their volunteers of the year, Steve Thomas and Vice-Chair Trezise.

Commissioner Brooks asked if there had been a CIA meeting in the fall. Director Schmitt said one was coming up.

B. Liaison Reports

Chair Blumer said that he went to the DDA meeting; they did not have a quorum but the members in attendance heard a presentation from the Drain Commissioner's office.

Commissioner Scales said that he went to the EDC meeting and that he also attended the Board's study session on the senior center.

12. PROJECT UPDATES

A. Project Report

Senior Planner Shorkey pointed out the updated project report in the packet.

13. PUBLIC REMARKS

None

14. COMMISSIONER COMMENTS

Commissioner Brooks commented on a pothole behind the Drain Commissioners site on Marsh Road and asked if Staff had any update. Director Schmitt said that Staff would reach out again.

15. ADJOURNMENT

Chair Blumer asked for a motion to adjourn. Motion by Commissioner Richards to adjourn, unanimously approved.

Meeting adjourned at 7:45 pm.



Williamstown Township
4990 Zimmer Rd., Williamston, MI 48895
WilliamstownTownship.com
P: (517) 655-3193 | F: (517) 655-3971

November 15, 2023

Meridian Township Planning Commission

Dear Planning Commissioners:

The purpose of this letter is to notify you that the Williamstown Township Planning Commission, Ingham County, MI, intends to begin the preparation of a new Township Master Plan in accordance with the Michigan Planning Enabling Act, P. A. 33 of 2008, as amended. Pursuant to Section 39(2) of the Act, the Planning Commission requests your cooperation and comment as it undertakes this task.

Thank you.

On behalf of the Williamstown Township Planning Commission,


James M. Howard



To: Planning Commission

From: Brian Shorkey, AICP, Senior Planner

Date: December 8, 2023

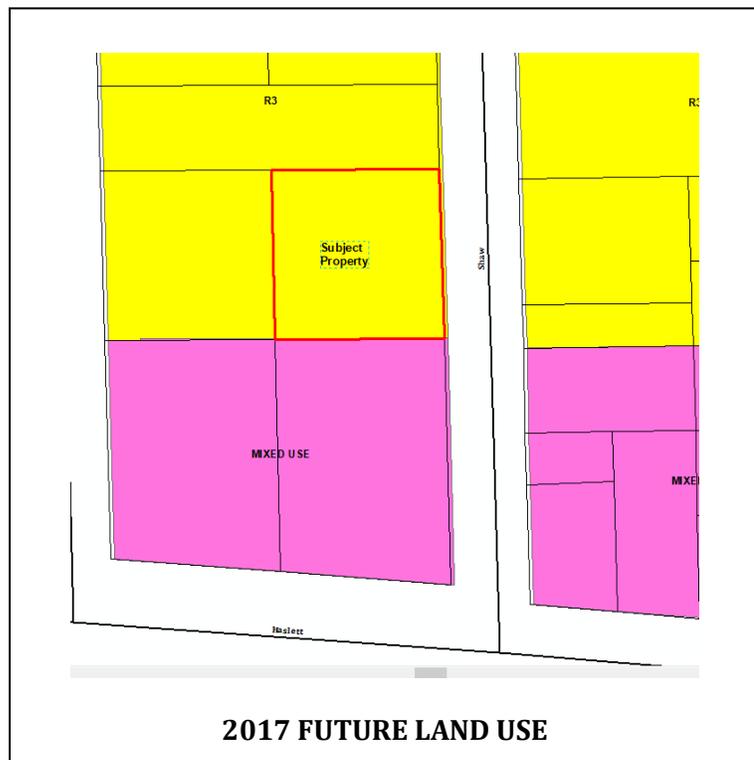
Re: Rezoning #23036 (5681 Shaw), rezone one parcel at 5681 Shaw Street from PO (Professional Office) to RC (Multiple-Family Residential).

Liliac LLC (Applicant) has requested the rezoning of their property at 5681 Shaw Street (Subject Property) in order to redevelop the existing building from a multi-tenant office building into a four-unit residential building. The Subject Property is currently unoccupied and previously operated as a dental office.

Future Land Use

The Future Land Use Map from the 2017 Master Plan designates the Subject Property in the R3 – 1.25-3.5 DU/A Future Land Use category. This category corresponds with the RA, RB, and RX zoning designations, which means that neither the current PO zoning, nor the requested RC zoning, comply with the R3 future land use designation. However, the RC zoning might be considered to be closer to the R3 Future Land Use category than the current PO zoning.

The surrounding properties to the west, north, and east are also designated as R3 in the 2017 future land use map. The properties to the south are designated as Mixed Use Core and include the various office and service businesses. The property immediately adjacent to the west is owned by the Ingham County Drain Commission.



Zoning

The schedule of regulations in the Zoning Ordinance indicates that the requested RC zoning district requires a minimum of 100 feet of lot width. The Subject Property is approximately 130 feet wide and meets the minimum lot width for the requested RC district. The RC district allows a maximum density

of 14 residential units per acre. The Subject Property is approximately 0.4 acre in size, which would allow 5 residential units, which the proposed four-unit development would comply with.

The Subject Property is surrounded on the west, north, and east by the RN – Village of Nemoka zoning designation. The RN district generally allows single-family residential units, as well as duplex units. The property to the south is zoned C-2 – Commercial.

Physical Features

The Subject Property is developed with a vacant multiple-tenant business building and associated parking lot. Past conversations with potential applicants indicates that there is a drain easement on the north property line of the Subject Property.

Wetlands and Greenspace Plan

The Township Wetland Map depicts no wetlands on the Subject Property. In addition, the Subject Property contains no floodplains. The Township Greenspace Plan does not show any preservation corridors.

Streets & Traffic

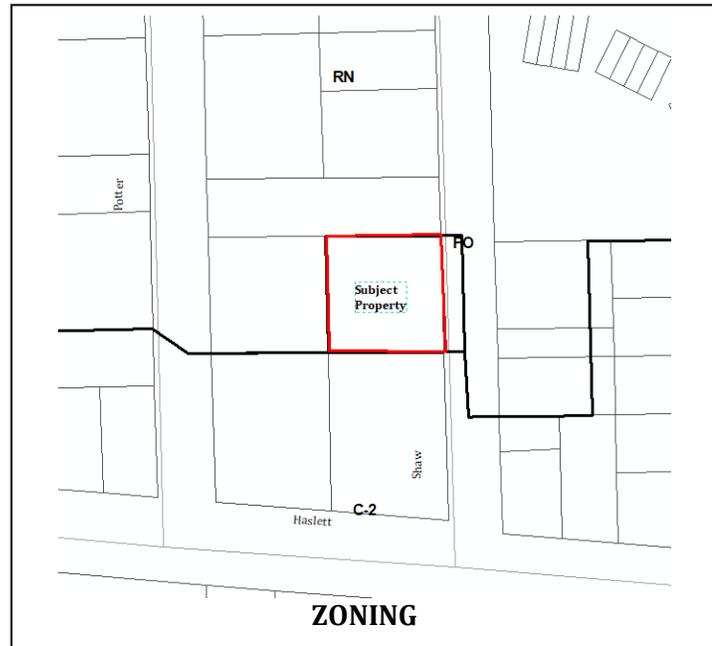
The applicant has indicated in their application that no increase in traffic is expected. Staff consulted the ITE Trip Generation Manual and compared General Office to MFR. According to the ITE Manual, a general office is generally expected to generate 9.74 trips per 1,000 square feet per weekday, meaning that the existing building could be expected to generate approximately 23.5 trips per weekday. In comparison, the ITE Manual suggests that a multifamily housing structure is generally expected to generate 7.32 trips per day per unit per weekday, meaning that the proposed quadplex could be expected to generate approximately 29.3 trips per weekday. The Zoning Ordinance requires a traffic study to be prepared when the proposed uses that could generate more than 100 additional directional trips during the peak hour. As a result, no traffic study is required for this rezoning application.

Utilities

Municipal water and sanitary sewer serve the subject site.

Planning Commission Options

The Planning Commission may recommend approval or denial of the request, or it may recommend a different zoning designation than proposed by the applicant to the Township Board. A resolution will be provided at a future meeting.



Attachments

1. Rezoning application and associated drawings from Lilliac LLC, dated November 7, 2023.



**CHARTER TOWNSHIP OF MERIDIAN
DEPARTMENT OF COMMUNITY PLANNING AND DEVELOPMENT
5151 MARSH ROAD, OKEMOS, MI 48864
PHONE: (517) 853-4560, FAX: (517) 853-4095**

REZONING APPLICATION

Part I, II and III of this application must be completed. Failure to complete any portion of this form may result in the denial of your request.

Part I

A. Owner/Applicant Liliac LLC
Address of applicant 4510 Dobie Rd, Okemos MI 48864
Telephone: Work 857 600 2033 Home _____
Fax _____ Email Liliac.inc@gmail.com

If there are multiple owners, list names and addresses of each and indicate ownership interest. Attach additional sheets if necessary. If the applicant is not the current owner of the subject property, the applicant must provide a copy of a purchase agreement or instrument indicating the owner is aware of and in agreement with the requested action.

B. Applicant's Representative, Architect, Engineer or Planner responsible for request:
Name / Contact Person Roozbeh Dargazany
Address 16922 Thorngate Rd, East Lansing MI 48823
Telephone: Work 617 583 2602 Home _____
Fax _____ Email Drgzny@gmail.com

C. Site address/location 5681 Shaw St, Haslett MI
Legal description (Attach additional sheets if necessary) _____
Parcel number 33-02-02-10-428-007 Site acreage 0.4 Acre

D. Current zoning PO Requested zoning RC - 4 Units

E. The following support materials must be submitted with the application:

1. Nonrefundable fee.
2. Evidence of fee or other ownership of the subject property.
3. A rezoning traffic study prepared by a qualified traffic engineer based on the most current edition of the handbook entitled *Evaluating Traffic Impact Studies: A Recommended Practice for Michigan Communities*, published by the State Department of Transportation, is required for the following requests:
 - a. Rezonings when the proposed district would permit uses that could generate more than 100 additional directional trips during the peak hour than the principal uses permitted under the current zoning.
 - b. Rezonings having direct access to a principal or minor arterial street, unless the uses in the proposed zoning district would generate fewer peak hour trips than uses in the existing zoning district.
(Information pertaining to the contents of the rezoning traffic study will be available in the Department of Community Planning and Development.)
4. Other information deemed necessary to evaluate the application as specified by the Director of Community Planning and Development.

Part II

REASONS FOR REZONING REQUEST

Respond only to the items which you intend to support with proof. Explain your position on the lines below, and attach supporting information to this form.

A. Reasons why the present zoning is unreasonable:

- 1) There is an error in the boundaries of the Zoning Map, specifically: _____
Not Applicable
- 2) The conditions of the surrounding area have changed in the following respects: _____
Surrounding conditions have shifted away from professional offices, creating an urgent need for more residential housing options
- 3) The current zoning is inconsistent with the Township's Master Plan, explain:
Current zoning is inconsistent with the Township's Future Master Plan which indicates a preference for residential use in this area.
- 4) The Township did not follow the procedures that are required by Michigan laws, when adopting the Zoning Ordinance, specifically: _____
Not Applicable
- 5) The Township did not have a reasonable basis to support the current zoning classification at the time it was adopted; and the zoning has exempted the following legitimate uses from the area:
Not Applicable
- 6) The current zoning restrictions on the use of the property do not further the health safety or general welfare of the public, explain: _____
The vacant offices don't serve the public interest; converting to residential units addresses housing shortages and activates unused space.

B. Reasons why the requested zoning is appropriate:

- 1) Requested rezoning is consistent with the Township's Master Plan, explain:
The rezoning aligns with the Master Plan's vision for residential development, supporting an organic transition from professional to residential use.
- 2) Requested rezoning is compatible with other existing and proposed uses surrounding the site, specifically: _____
Rezoning request responds to reduced demand for professional offices and increased demands for mid-scale family housing. There are multiple RC facilities within 100 yards of the property.
- 3) Requested rezoning would not result in significant adverse impacts on the natural environment, explain: _____
The requested rezoning requires No structural changes, No changes in siteplan. It also reduces the traffic.
- 4) Requested rezoning would not result in significant adverse impacts on traffic circulation, water and sewer systems, education, recreation or other public services, explain: _____
It won't significantly alter current traffic patterns or overburden public utilities and services, given the property's history and size.
- 5) Requested rezoning addresses a proven community need, specifically: _____
It addresses the urgent need for additional housing, directly contributing to alleviating the local housing shortage.
- 6) Requested rezoning results in logical and orderly development in the Township, explain:
It would be 'downzoning' from PO to RC for a single quadruplex instead of a multi-tenant office building.
- 7) Requested rezoning will result in better use of Township land, resources and properties and therefore more efficient expenditure of Township funds for public improvements and services, explain: _____
REzoning a 20-year vacant office building into a much-needed leasing unites, provides an efficient use of existing structure, fostering cost-effective public service provision and property utilization.

Part III

I (we) hereby grant permission for members of the Charter Township of Meridian's Boards and/or Commissions, Township staff member(s) and the Township's representatives or experts the right to enter onto the above described property (or as described in the attached information) in my (our) absence for the purpose of gathering information including but not limited to the taking and the use of photographs.

Yes No (Please check one)

By the signature(s) attached hereto, I (we) certify that the information provided within this application and accompanying documentation is, to the best of my (our) knowledge, true and accurate

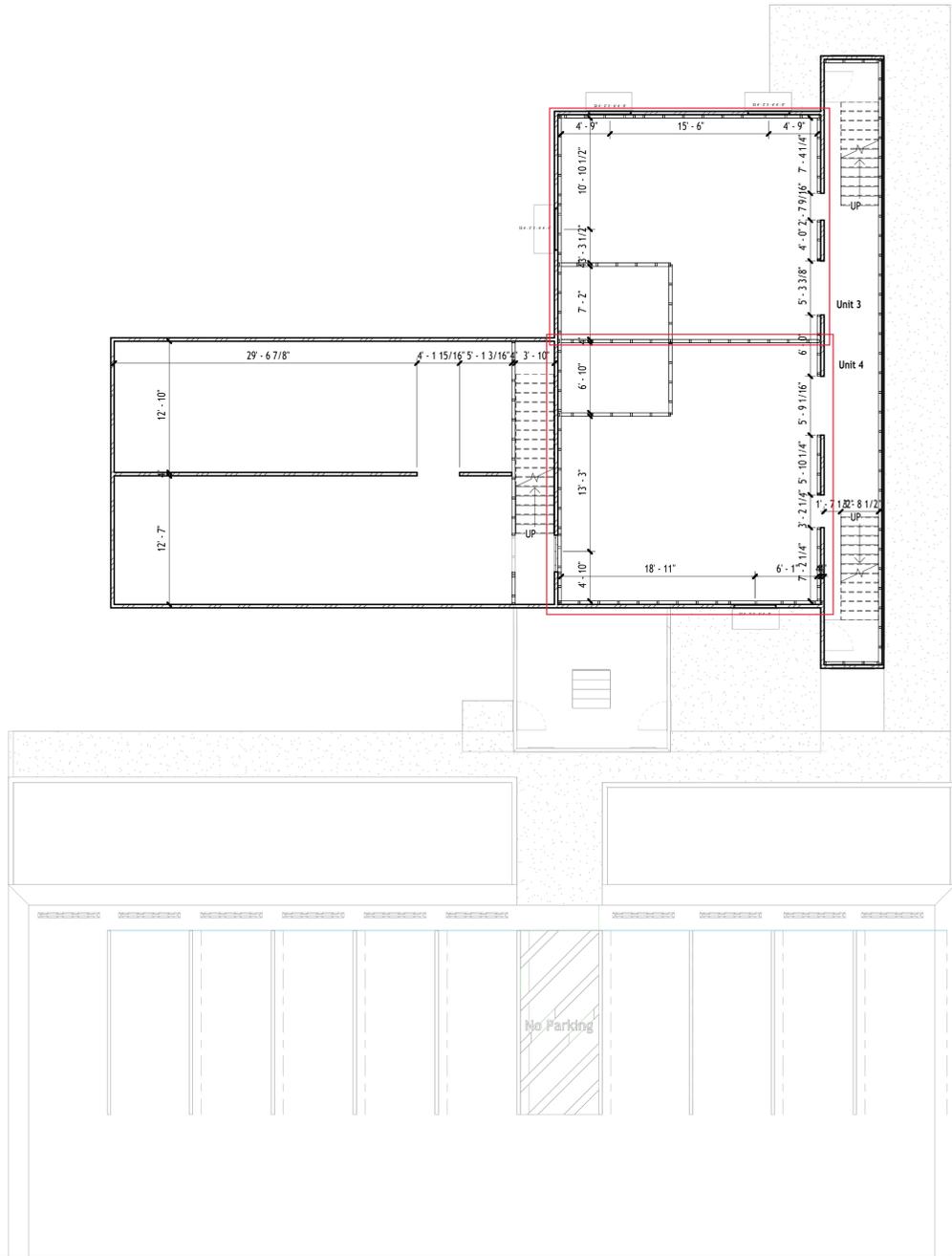
Signature of Applicant
Roozbeh Dargazany

Type/Print Name

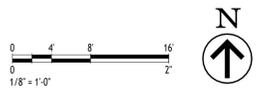
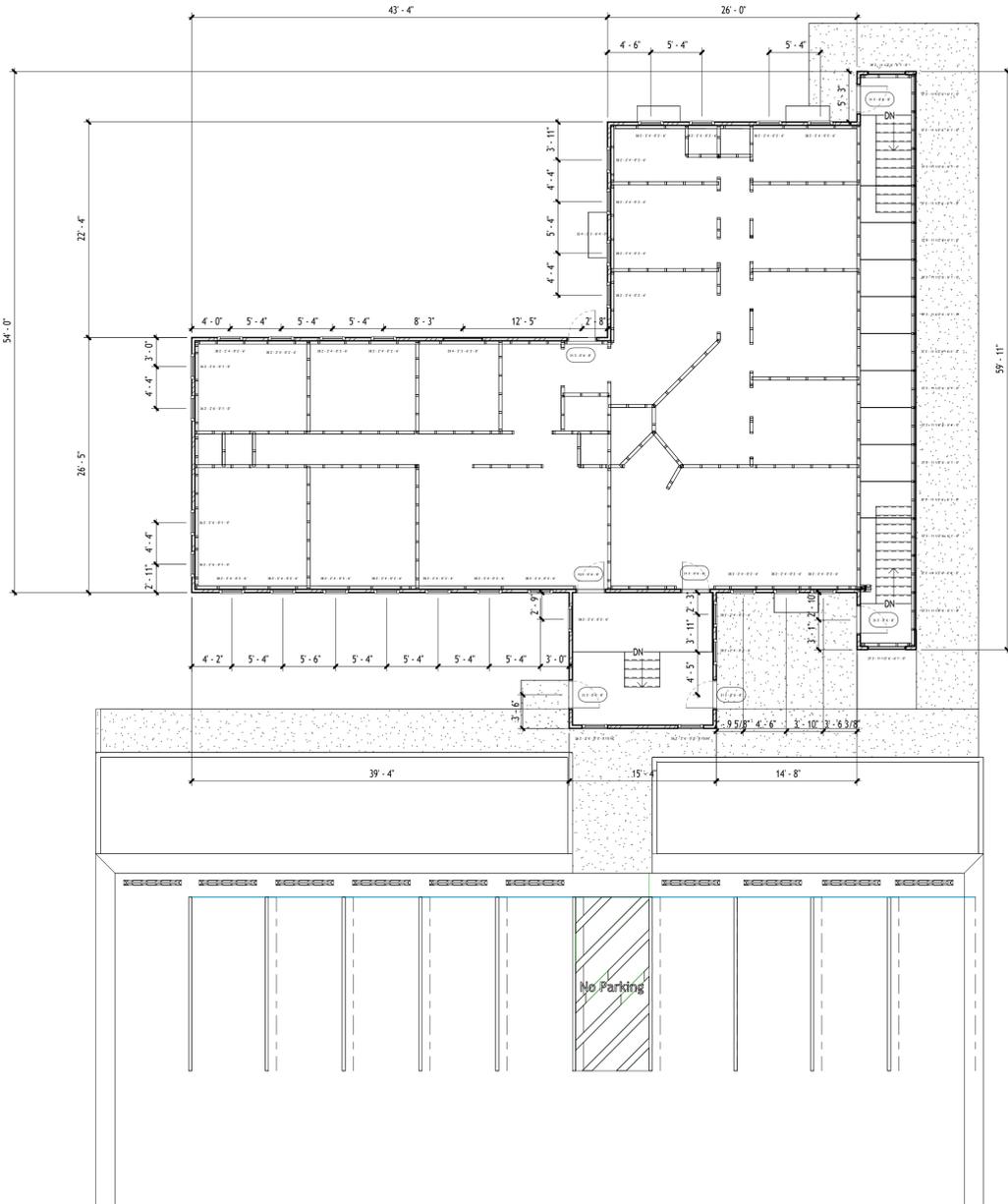
11/07/2023

Date

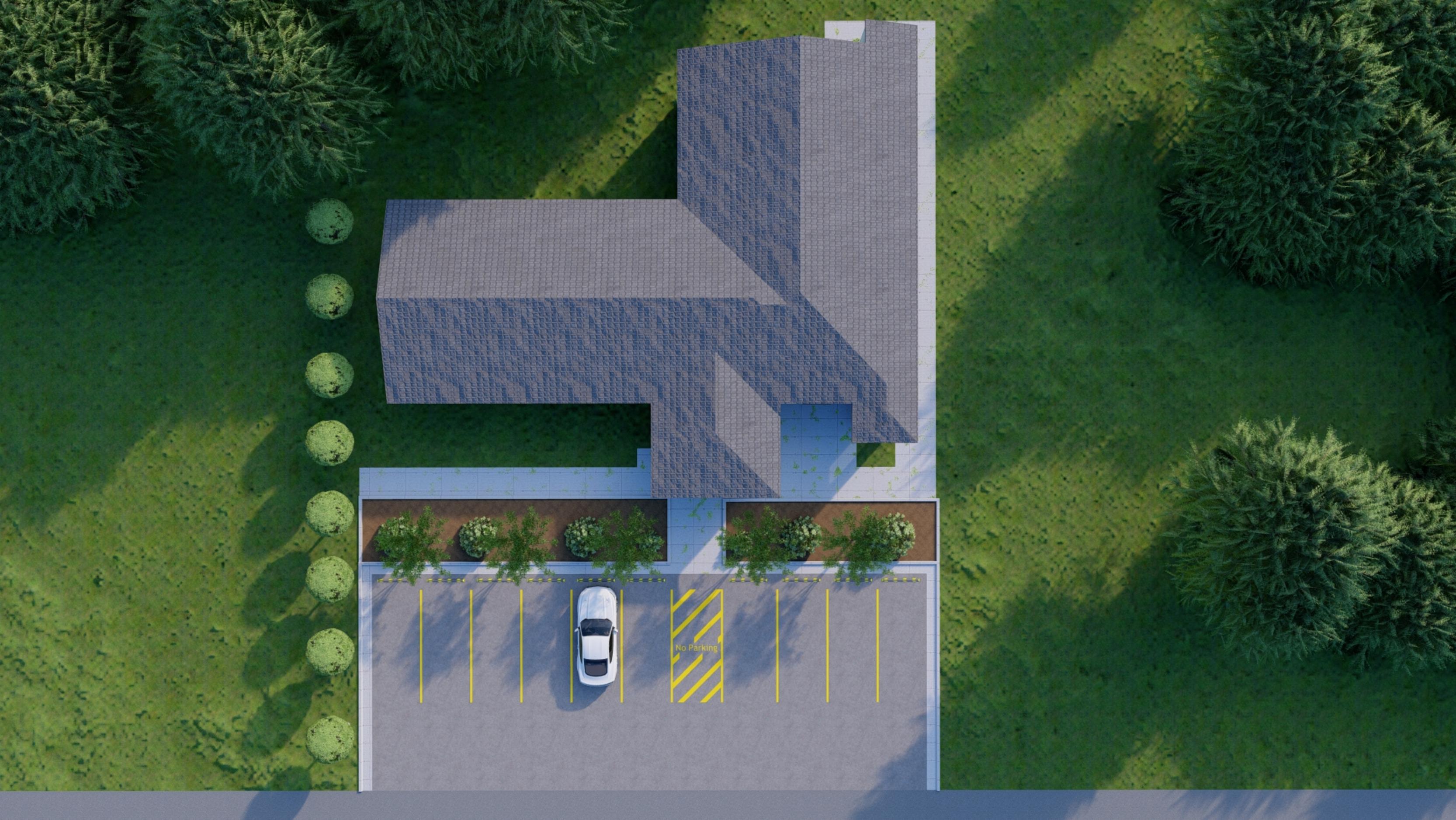
Fee: _____ Received by/Date: _____



Siteplan







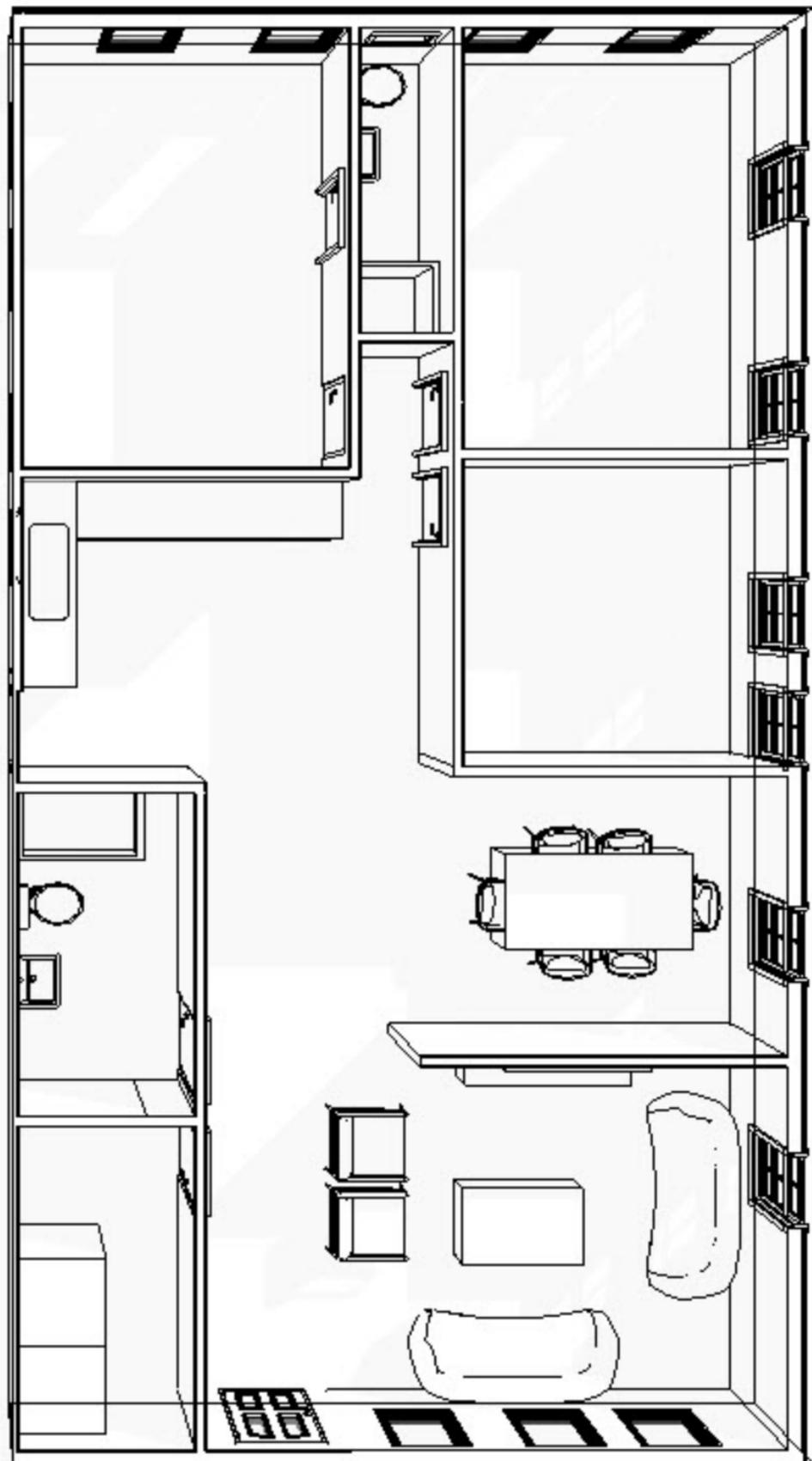
No Parking



No Parking

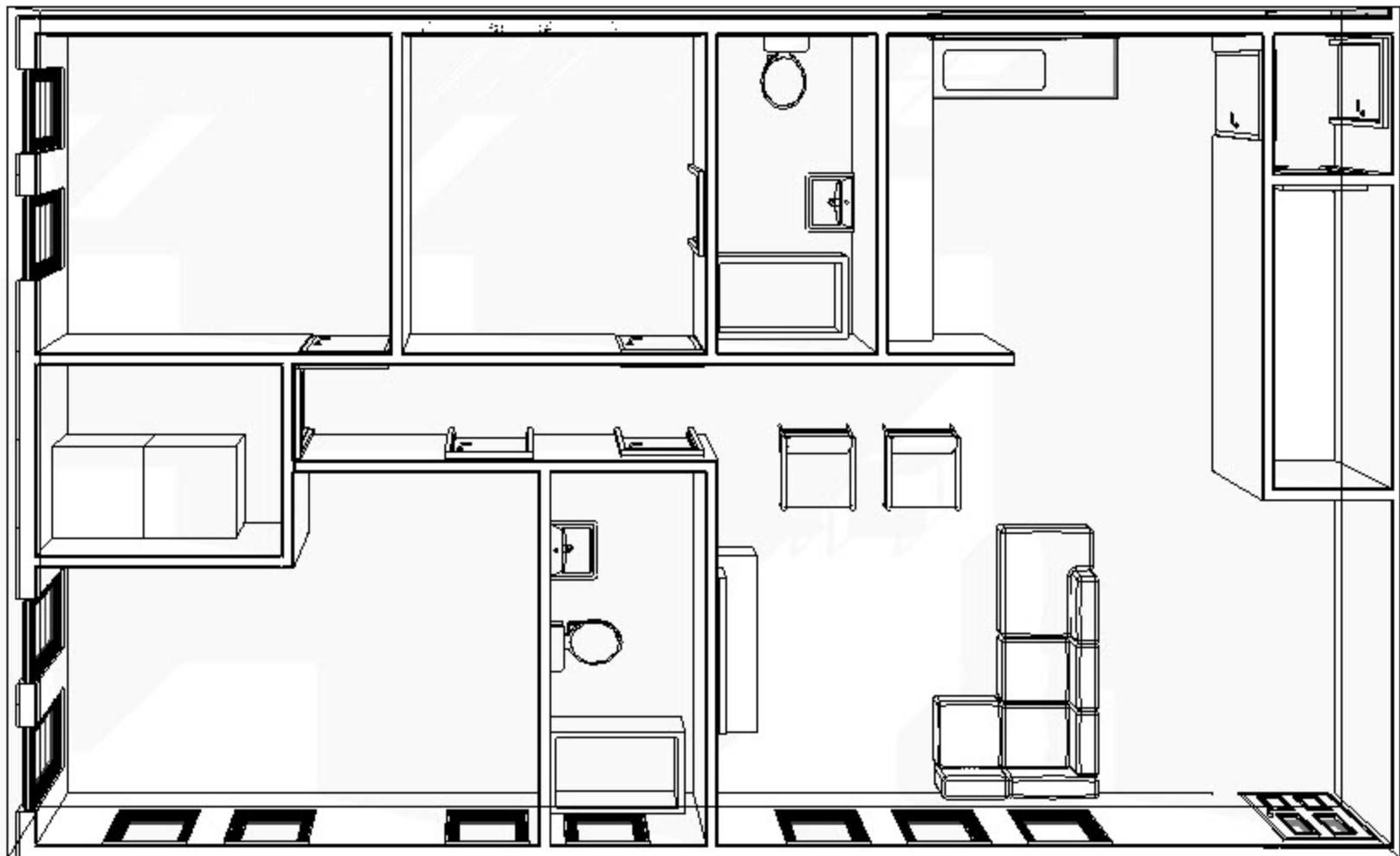














To: Planning Commission

From: Brian Shorkey, AICP, Senior Planner

Date: December 8, 2023

Re: Rezoning #23034 (4660 Marsh), rezone one parcel at 4660 Marsh Road from PO (Professional Office) to C-2 (Commercial).

Tamara Noe (Applicant) has requested the rezoning of her property at 4660 Marsh Road (Subject Property) in order to bring the zoning into compliance with the land uses at the Subject Property. The Subject Property is developed as a multiple-tenant commercial building, but it is zoned Professional Office (PO).

The Planning Commission held a public hearing for Rezoning #23034 at its November 13, 2023 regular meeting and the Planning Commission indicated that they supported the rezoning from PO to C-1, Commercial. No other major concerns were raised during the discussion of the request. No comments have been received from the public regarding this request.

At the public hearing, the Planning Commission discussed the difference in allowed uses between the C-1 and C-2 districts.

C-1 (Commercial)

Uses By Right: Banks, instructional centers, offices, personal service establishments, restaurants without drive-throughs, retail, health and fitness establishments.

Conditional Uses: Child care centers, adult care centers, small animal veterinary clinics

Special Uses: Drive-throughs, utility buildings, social institutions, gasoline stations without repair service or car wash facilities

C-2 (Commercial)

Uses By Right: Banks; instructional centers; churches; community centers; public service buildings; offices; personal service establishments; restaurants, including service of alcohol; retail; supermarkets; social clubs; theaters and auditoriums.

Conditional Uses: Bars and taverns, child care centers, adult care centers, small animal veterinary clinics

Special Uses: Funeral homes, hospitals, light manufacturing, open air businesses, parking lots, utility buildings, bus terminals, tattoo and body piercing, drive-throughs, hotels, enclosed climate controlled storage facilities, new automobile dealerships, outdoor recreation

Planning Commission Options

The Planning Commission may recommend approval or denial of the request, or it may recommend a different zoning designation than proposed by the applicant to the Township Board. A resolution to recommend approval of the request is attached to this memo.

Rezoning #22010 (Township)
Planning Commission (August 3, 2022)
Page 2

Staff would offer the following motion for the Planning Commission to consider during their review of the proposed rezoning request. Should the Planning Commission have additional reasons for supporting the recommendation, they can be added to the end of the motion.

Move to adopt the resolution to recommend approval of Rezoning #23034 to rezone the Subject Property at 4660 Marsh Road from PO (Professional Office) to C-1 (Commercial), for the following reason:

- The proposed rezoning brings the existing business building into land use conformance.

Attachments

1. Resolution recommending approval
2. Staff report and attached materials from the public hearing, dated November 13, 2023



RESOLUTION TO RECOMMEND APPROVAL

**Rezoning #23034
4660 Marsh**

RESOLUTION

At a regular meeting of the Planning Commission of the Charter Township of Meridian, Ingham County, Michigan, held at the Meridian Municipal Building, in said Township on the 11th day of December, 2023, at 6:30 p.m., Local Time.

PRESENT:

ABSENT:

The following resolution was offered by Commissioner _____ and supported by Commissioner _____.

WHEREAS, Tamara Noe, the applicant, has requested the rezoning of an approximately 1.1-acre parcel located at 4660 Marsh Road from PO (Professional Office) to C-2 (Commercial); and

WHEREAS, the Planning Commission held a public hearing and discussed the rezoning at its regular meeting on November 13, 2023; and

WHEREAS, the Planning Commission has the right to recommend a different zoning category than the requested one if they think it is more applicable; and

WHEREAS, the Planning Commission indicated support for rezoning the property from PO to C-1 (Commercial); and

WHEREAS, the applicant agreed with the C-1 designation; and

WHEREAS, the proposed rezoning brings the existing business building into zoning conformance; and

WHEREAS, approving the rezoning would allow the applicant to construct an additional business in her existing building.

NOW THEREFORE, BE IT RESOLVED THE PLANNING COMMISSION OF THE CHARTER TOWNSHIP OF MERIDIAN hereby recommends approval of Rezoning #23034 to rezone the subject property from PO (Professional Office) to C-1 (Commercial).

ADOPTED: YEAS:

NAYS:

STATE OF MICHIGAN)

) ss

COUNTY OF INGHAM)

I, the undersigned, the duly qualified and acting Chair of the Planning Commission of the Township of Meridian, Ingham County, Michigan, DO HEREBY CERTIFY that the foregoing is a true

Resolution to Recommend Approval

Rezoning #23034 (4660 Marsh)

Page 2

and a complete copy of a resolution adopted at a regular meeting of the Planning Commission on the 11th day of December, 2023.

Mark Blumer
Planning Commission Chair



To: Planning Commission

From: Brian Shorkey, AICP, Senior Planner

Date: November 13, 2023

Re: Rezoning #23034 (4660 Marsh), rezone one parcel at 4660 Marsh Road from PO (Professional Office) to C-2 (Commercial).

Tamara Noe (Applicant) has requested the rezoning of her property at 4660 Marsh Road (Subject Property) in order to bring the zoning into compliance with the land uses at the Subject Property. The Subject Property is developed as a multiple-tenant commercial building, but it is zoned Professional Office (PO). The Applicant wishes to add another tenant to the building, which requires the building to be brought into zoning compliance. The requested C-2 zoning achieves this, although the Planning Commission may consider C-1 as well, which is not as intense as C-2.

The Subject Property was previously rezoned from RC (Multiple Family-Medium Density) to PO (Professional and Office) in November 2015. The current building includes several businesses, including a waxing studio, a massage therapist, an eyelash salon, and a social worker. The Applicant now wishes to add one more business, a one-chair hair salon. It has been determined that most of the uses, including the proposed hair salon, would be more appropriate under a Commercial zoning designation.

The Applicant applied for site plan approval for a new accessory building in April 2023. The Applicant has withdrawn that application. Staff brings it up because the site plan for that application is attached to this report. The proposed building on that plan is not going to be constructed and if the rezoning is approved, no new site plan will be required since the proposed business is going inside the existing building.

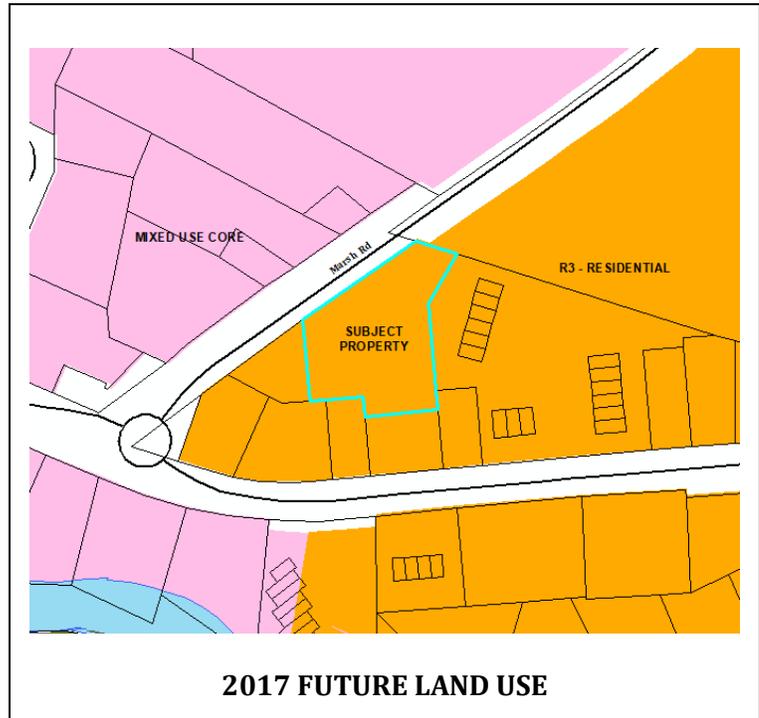
Future Land Use

The Future Land Use Map from the 2017 Master Plan designates the Subject Property in the R3 – 1.25-3.5 DU/A Future Land Use category. The surrounding properties to the west, south, and east are also designated as R3. R3 correlates with the RA, RB, and RX zoning districts. The properties to the west, across Marsh Road, are designated as Mixed Use Core.

Staff notes that the requested zoning does not comply with the Future Land Use. Staff is comfortable with the rezoning request as it brings an existing business into compliance. Staff also suggests not updating the Future Land Use map at this time, as it is still the vision for that corner to convert to single-family residential in the future.

Zoning

The requested C-2 zoning district requires a minimum of 100 feet of lot width and a minimum lot area of 4,000 square feet. The Subject Property is approximately 228 feet wide and meets the minimum lot width and size for the requested C-2 district. The Subject Property also meets the setback requirements for the C-2 district.



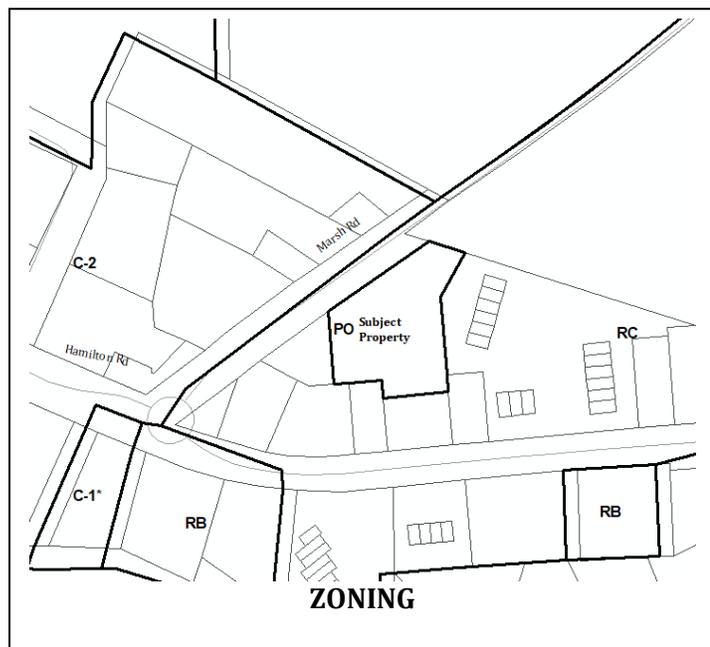
The Subject Property is surrounded on the west, south, and east by the former RC zoning designation. Generally, the property to the north, on the other side of Marsh Road, is zoned C-2.

Physical Features

The Subject Property is developed with a multiple-tenant business building. This is a non-conforming land use in the current PO zoning district but in conformance with the requested C-2 zoning district.

Wetlands and Greenspace Plan

The Township Wetland Map depicts no wetlands on the Subject Property. In addition, the Subject Property contains no floodplains. There is a paved Pathway running along the front of the property along Marsh Road. The Pathway will not be affected by the proposed rezoning. The Township Greenspace Plan does not show any preservation corridors.



Streets & Traffic

No change in the existing traffic pattern is expected from this rezoning as the businesses already exist. As noted, the Applicant wished to add an additional business. This is a proposed one chair hair salon. Minimal additional traffic is expected and adequate parking exists on the site.

Utilities

Municipal water and sanitary sewer serve the subject site.

Planning Commission Options

The Planning Commission may recommend approval or denial of the request, or it may recommend a different zoning designation than proposed by the applicant to the Township Board. A resolution will be provided at a future meeting. As previously noted, the Planning Commission may also consider whether the C-1 zoning district may be more appropriate for the site.

Attachments

1. Rezoning application from Tamara Noe, dated October 16, 2023.
2. Letter from Philip R. Smith, land owner, authorizing Ms. Noe to apply for the rezoning, dated October 16, 2023.
3. Site Plan, prepared by the Peabody Group, dated April 10, 2023.

**CHARTER TOWNSHIP OF MERIDIAN
DEPARTMENT OF COMMUNITY PLANNING AND DEVELOPMENT
5151 MARSH ROAD, OKEMOS, MI 48864
PHONE: (517) 853-4560, FAX: (517) 853-4095**

REZONING APPLICATION

Part I, II and III of this application must be completed. Failure to complete any portion of this form may result in the denial of your request.

Part I

A. Owner/Applicant ~~Philip Smith~~ Tamara Noe
Address of applicant ~~4473 Matinee Drive~~ 4660 Marsh Rd, Okemos
Telephone: Work _____ Home 517 881-2513 48864
Fax _____ Email marsh2022@gmail.com

If there are multiple owners, list names and addresses of each and indicate ownership interest. Attach additional sheets if necessary. If the applicant is not the current owner of the subject property, the applicant must provide a copy of a purchase agreement or instrument indicating the owner is aware of and in agreement with the requested action.

B. Applicant's Representative, Architect, Engineer or Planner responsible for request:
Name / Contact Person Tamara Noe
Address 9611 Retrieville Hwy, Faxon Rapids, MI 48827
Telephone: Work _____ Home _____
Fax _____ Email _____

C. Site address/location 4660 Marsh Rd, Okemos MI 48864
Legal description (Attach additional sheets if necessary) _____
Parcel number 21-428-002 Site acreage 1.05

D. Current zoning RC PO Requested zoning C2

E. The following support materials must be submitted with the application:

1. Nonrefundable fee.
2. Evidence of fee or other ownership of the subject property.
3. ~~A rezoning traffic study prepared~~ by a qualified traffic engineer based on the most current edition of the handbook entitled *Evaluating Traffic Impact Studies: A Recommended Practice for Michigan Communities*, published by the State Department of Transportation, is required for the following requests:
 - a. Rezoning when the proposed district would permit uses that could generate more than 100 additional directional trips during the peak hour than the principal uses permitted under the current zoning.
 - b. Rezoning having direct access to a principal or minor arterial street, unless the uses in the proposed zoning district would generate fewer peak hour trips than uses in the existing zoning district. already has
(Information pertaining to the contents of the rezoning traffic study will be available in the Department of Community Planning and Development.)
4. Other information deemed necessary to evaluate the application as specified by the Director of Community Planning and Development.

Part II

REASONS FOR REZONING REQUEST

Respond only to the items which you intend to support with proof. Explain your position on the lines below, and attach supporting information to this form.

A. Reasons why the present zoning is unreasonable:

- 1) There is an error in the boundaries of the Zoning Map, specifically: _____
- 2) The conditions of the surrounding area have changed in the following respects: _____
- 3) The current zoning is inconsistent with the Township's Master Plan, explain: _____
- 4) The Township did not follow the procedures that are required by Michigan laws, when adopting the Zoning Ordinance, specifically: _____
- 5) The Township did not have a reasonable basis to support the current zoning classification at the time it was adopted; and the zoning has exempted the following legitimate uses from the area: _____
- 6) The current zoning restrictions on the use of the property do not further the health safety or general welfare of the public, explain: _____

B. Reasons why the requested zoning is appropriate:

- 1) Requested rezoning is consistent with the Township's Master Plan, explain: _____
- 2) Requested rezoning is compatible with other existing and proposed uses surrounding the site, specifically: *we are in operation and they are consistent with G*
- 3) Requested rezoning would not result in significant adverse impacts on the natural environment, explain: _____
- 4) Requested rezoning would not result in significant adverse impacts on traffic circulation, water and sewer systems, education, recreation or other public services, explain: _____
- 5) Requested rezoning addresses a proven community need, specifically: _____
- 6) Requested rezoning results in logical and orderly development in the Township, explain: _____
- 7) Requested rezoning will result in better use of Township land, resources and properties and therefore more efficient expenditure of Township funds for public improvements and services, explain: _____

Part III

I (we) hereby grant permission for members of the Charter Township of Meridian's Boards and/or Commissions, Township staff member(s) and the Township's representatives or experts the right to enter onto the above described property (or as described in the attached information) in my (our) absence for the purpose of gathering information including but not limited to the taking and the use of photographs.

Yes No (Please check one)

By the signature(s) attached hereto, I (we) certify that the information provided within this application and accompanying documentation is, to the best of my (our) knowledge, true and accurate

Tamara Noe
Signature of Applicant

10-16-23
Date

Tamara Noe
Type/Print Name

Fee: \$750

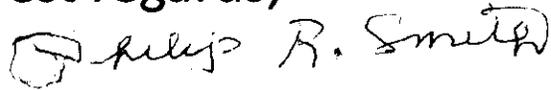
Received by/Date: 10/16/2023

October 16, 2023

To Whom It May Concern,

Tamara Noe is the Executive Director of Marsh Place. She has my permission to apply for a zoning change from RC to C2 with Meridian Township.

Best regards,

A handwritten signature in black ink that reads "Philip R. Smith". The signature is written in a cursive style with a circular flourish at the beginning.

Philip R. Smith
(Owner)

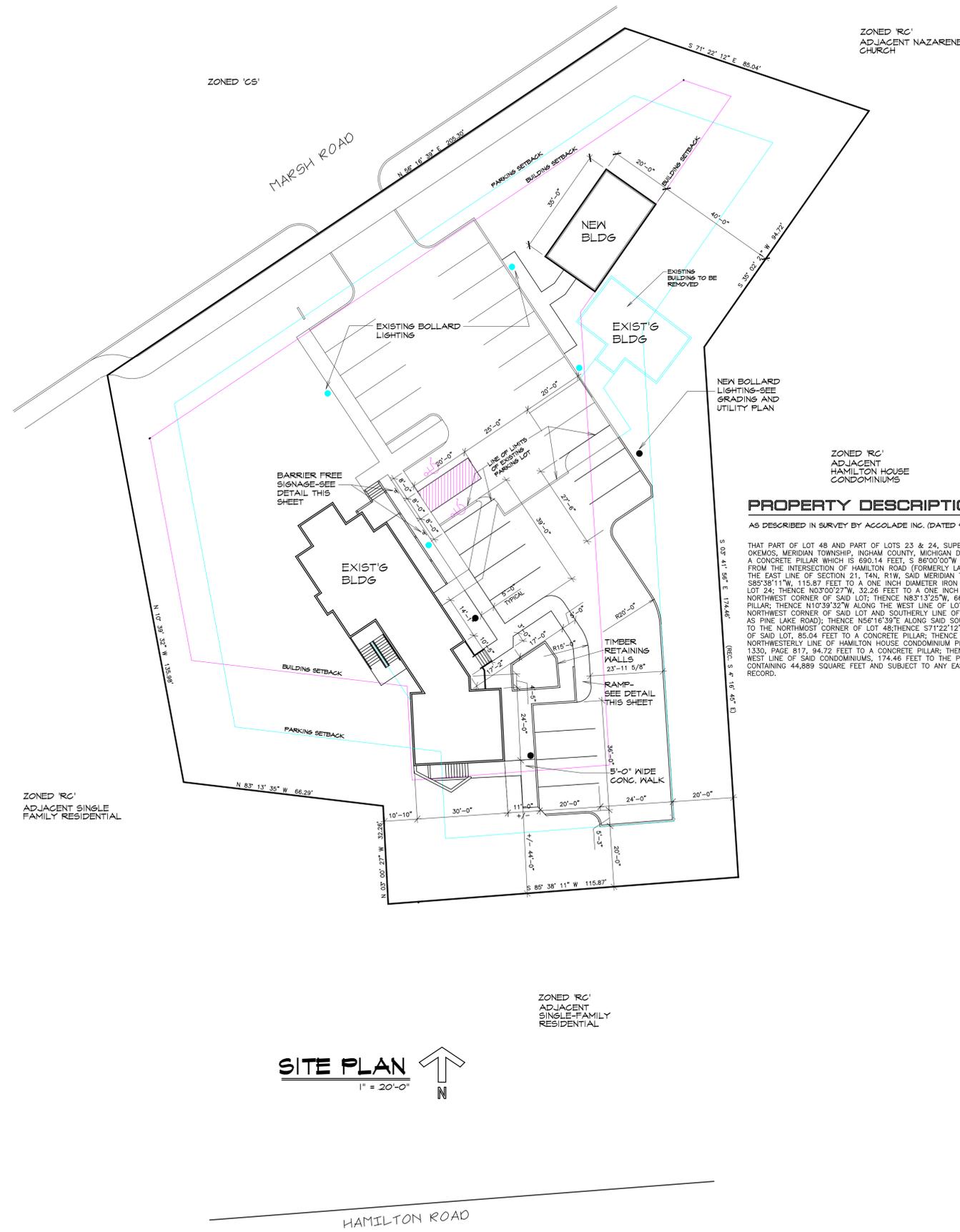


PROJECT MANAGER:
RLP
DRAWN BY:
RLP

NEW CONSTRUCTION
4660 MARSH RD
OKEMOS, MERIDIAN TWP, MICHIGAN

23.014

AI.0



PROPERTY DESCRIPTION

AS DESCRIBED IN SURVEY BY ACCOLADE INC. (DATED 9/09/92).

THAT PART OF LOT 48 AND PART OF LOTS 23 & 24, SUPERVISOR'S PLAT NO. 1 OF OKEMOS, MERIDIAN TOWNSHIP, INGHAM COUNTY, MICHIGAN DESCRIBED AS BEGINNING AT A CONCRETE PILLAR WHICH IS 690.14 FEET, S 66°00'00"W AND 99 FEET, N04°16'45"W FROM THE INTERSECTION OF HAMILTON ROAD (FORMERLY LANSING AND HOWELL ROAD) WITH THE EAST LINE OF SECTION 21, T4N, R1W, SAID MERIDIAN TOWNSHIP; THENCE S85°56'11"W, 115.87 FEET TO A ONE INCH DIAMETER IRON BAR ON THE WEST LINE OF LOT 24; THENCE N03°00'27"W, 32.26 FEET TO A ONE INCH DIAMETER IRON BAR AT THE NORTHWEST CORNER OF SAID LOT; THENCE N83°13'25"W, 66.29 FEET TO A CONCRETE PILLAR; THENCE N10°39'33"W ALONG THE WEST LINE OF LOT 48, 135.98 FEET TO THE NORTHWEST CORNER OF SAID LOT AND SOUTHERLY LINE OF MARSH ROAD (FORMERLY KNOWN AS PINE LAKE ROAD); THENCE N56°16'39"E, ALONG SAID SOUTHERLY LINE, 205.30 FEET TO THE NORTHMOST CORNER OF LOT 48; THENCE S71°22'12"E ALONG THE NORTHERLY LINE OF SAID LOT, 85.04 FEET TO A CONCRETE PILLAR; THENCE S25°02'21"W ALONG THE NORTHWESTERLY LINE OF HAMILTON HOUSE CONDOMINIUM PROJECT AS RECORDED IN LIBER 1330, PAGE 817, 94.72 FEET TO A CONCRETE PILLAR; THENCE S03°41'56"E ALONG THE WEST LINE OF SAID CONDOMINIUMS, 174.46 FEET TO THE POINT OF BEGINNING. CONTAINING 44,889 SQUARE FEET AND SUBJECT TO ANY EASEMENTS OR RESTRICTIONS OF RECORD.

SITE PLAN
1" = 20'-0"
↑
N



To: Planning Commission

From: Brian Shorkey, Senior Planner

Date: December 8, 2023

Re: Special Use Permit #23035 (Elevation 4), to construct a portion of the required Pathway within a floodplain.

Okemos Pointe LLC (Applicant) has submitted a Special Use Permit (SUP) application for the construction of a portion of the required Pathway in their project, Elevation, located on Farrins Parkway (Subject Property). A public hearing for this application was held at the Planning Commission's regular meeting on Monday, November 13, 2023, during which the Planning Commission indicated support for the application.

No concerns have been raised for the Special Use Permit for floodplain crossings. SUP #23035 is necessary to approve the Site Plan for Elevation 4 (SPR #23009). This is the final phase for Elevation and contains 41 residential units in two residential buildings, as well as associated parking. The floodplain crossing is for the construction of the required Pathway on the southwest corner of Elevation 4 and not for either of the residential buildings nor associated parking.

Staff would **recommend approval** of the proposed Special Use Permit to allow excavation of 31.5 cubic yards of fill, installation of the required Township Pathway, and placement of 63.1 cubic yards of fill in the 100-year floodplain.

Planning Commission Options

The Planning Commission may approve, approve with conditions, or deny the special use permit. A resolution to approve the request is provided.

Attachments:

1. Amended resolution to approve with conditions
2. Information from November 13, 2023 Planning Commission meeting

RESOLUTION TO APPROVE

**Special Use Permit #23035
Elevation 4**

RESOLUTION

At a regular meeting of the Planning Commission of the Charter Township of Meridian, Ingham County, Michigan, held at the Meridian Municipal Building, in said Township on the 11th day of December, 2023 at 6:30 p.m., Local Time.

PRESENT:

ABSENT:

The following resolution was offered by _____ and supported by _____.

WHEREAS, Okemos Pointe LLC has submitted a request to construct the fourth phase of the Elevation development, known as Elevation 4; and

WHEREAS, the site plan for Elevation 4 is currently under review; and

WHEREAS, the site plan for Elevation 4 shows a required Pathway running through a portion of the adjacent floodplain; and

WHEREAS, a special use permit is required to be approved by the Planning Commission for developments in floodplain; and

WHEREAS, the Planning Commission held a public hearing at its regular meeting on November 11, 2023, and has reviewed staff material forwarded under a cover memorandum dated November 11, 2023; and

WHEREAS, the proposed project is consistent with the general standards for granting a special use permit found in Section 86-126 of the Code of Ordinances.

WHEREAS, the proposed project is consistent with the Meridian Township Pathway/Bicycle Master Plan.

NOW THEREFORE, BE IT RESOLVED THE PLANNING COMMISSION OF THE CHARTER TOWNSHIP OF MERIDIAN hereby approves Special Use Permit #23035, subject to the following conditions:

1. Prior to site plan approval, a Letter of Floodplain Amendment (LOMA) will be submitted to Planning Staff.
2. Prior to site plan approval, the proposed trail must receive approval from the State's Department of Environment, Great Lakes, and Energy (EGLE)

ADOPTED: YEAS:

NAYS:



To: Planning Commission

From: Brian Shorkey, Senior Planner

Date: November 8, 2023

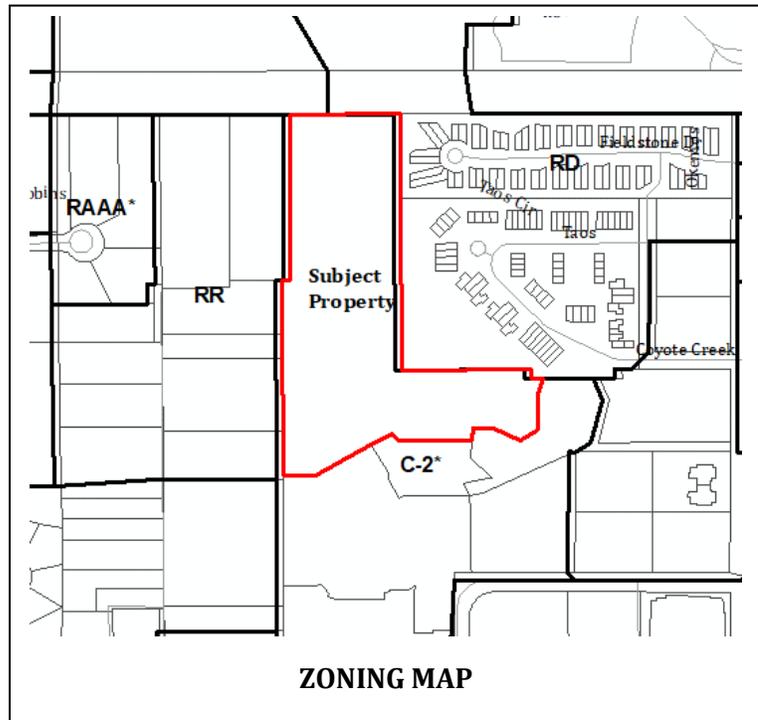
Re: Special Use Permit #23035 (Elevation 4), to construct a portion of the required Pathway within a floodplain.

Okemos Pointe LLC (Applicant) has submitted a Special Use Permit (SUP) application for the construction of a portion of the required Pathway in their project, Elevation, located on Farrins Parkway (Subject Property). The request is for construction in the fourth phase of the Elevation project, which is a 39 acre MUPUD with a commercial building and residential apartments. The Subject Property is zoned C-2 (Commercial) with an MUPUD overlay.

SUP #23035 is necessary to approve the Site Plan for Elevation 4 (SPR #23009). This is the final phase for Elevation and contains 41 residential units in two residential buildings, as well as associated parking. The floodplain crossing is for the construction of the Pathway on the southwest corner of Elevation 4 and not for either of the residential buildings nor associated parking.

Zoning and Future Land Use

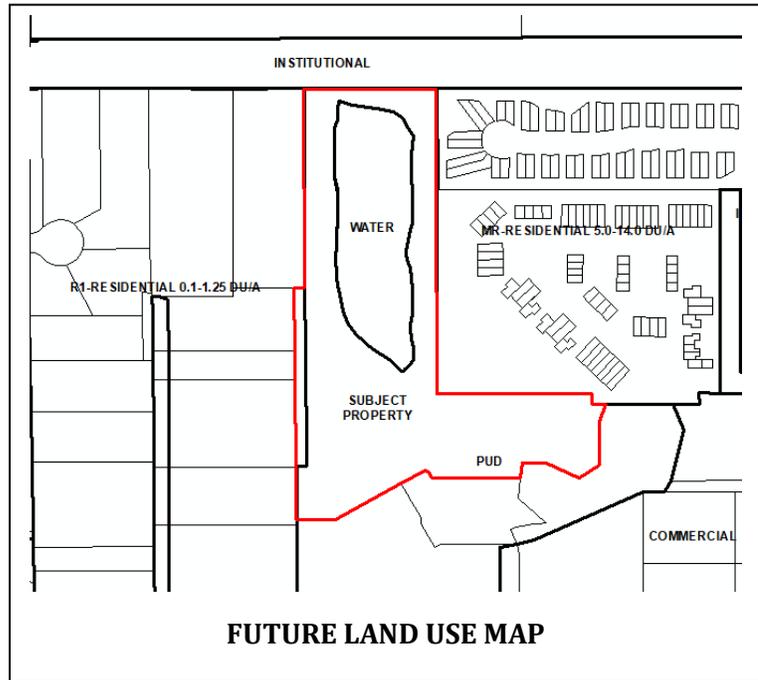
The Subject Property is located in the C-2 – Commercial zoning district with an MUPUD overlay. That designation covers the entire Elevation project to the south. The property to the west is zoned RR –



**Special Use Permit #23035 (Elevation 4)
Planning Commission (November 13, 2023)
Page 2**

Rural Residential. The property to the north is zoned RD – Multiple-Family Residential and includes Club Meridian Apartments. The property to the east is similarly zoned RD.

The 2017 Master Plan designates the subject site as PUD – Planned Unit Development as well as Water on the north half to the Subject Property. The Water designation does not affect the proposed Elevation 4 Site Plan as the proposed development is well away from it. The PUD designation applies to the rest of the Elevation development. The property to the west is shown as R1 – Residential. The property to the east is designated as MR – Multiple-Family Residential.



The property adjacent to the north is a utility corridor owned by Consumers Energy and shown as Institutional. The corridor separates the Subject Property from Club Meridian Apartments.

Staff Analysis

Sec. 86-436 – CV District includes regulations for developments in floodplains and defines extraction of sand and gravel as a special land use. The standards, with Staff comments, are as follows:

1. Structures shall not be designed for human habitation and shall have a low flood damage potential.

Comment: As described, the floodplain cut and fill is required for a Pathway, not residential structures.

2. Structures, if permitted, shall be constructed and placed on the site so as to offer the minimum obstruction to the flow of floodwaters and whenever possible shall be constructed with the longitudinal axis parallel to the direction of flood flow.

Comment: Floodwater is not meaningfully obstructed due to the improvements. The Floodplain Disturbance Site Plan shows that the compensating cut will more than compensate any obstruction that might be caused by the improvements.

3. No special use permit shall be issued for the development of new structures, the substantial improvement or relocation of old structures, or development of any kind within the floodway area when such development, construction, improvement, or relocation would cause any increase in flood level associated with the base flood elevation.

Special Use Permit #23035 (Elevation 4)
Planning Commission (November 13, 2023)
Page 3

Comment: Based on the calculations included on the concept plan, no increase in flood level is expected.

4. Excavation and shaping of the floodway shall be conducted in such a manner as to maintain or improve the flow of the base flood elevation. In no case shall the flow or impoundment capacity of the floodway be reduced. Excavation of soil, sand, gravel, and other materials for the sole purpose of providing a compensating excavation in the floodway for the placement of fill in the floodway fringe is prohibited.

Comment: The 31.5 cubic yards of floodplain fill are being compensated with a 63.1 cubic yard compensating cut, as shown on Cross Section A-A in the Floodplain Disturbance Site Plan.

Planning Commission Options

The Planning Commission has the option to approve, approve with conditions, or deny Special Use Permit #23035. A resolution will be provided at a future meeting.

Attachments

1. SUP permit application, dated October 17, 2023.
2. SUP Request Standards Response letter, dated October 17, 2023.
3. Elevation 4 Construction Plans prepared by Kebs, Inc., dated October 17, 2023.
4. EGLE/USACE Joint Permit Application, dated October 17, 2023.

**CHARTER TOWNSHIP OF MERIDIAN
DEPARTMENT OF COMMUNITY PLANNING AND DEVELOPMENT
5151 MARSH ROAD, OKEMOS, MI 48864
PLANNING DIVISION PHONE: (517) 853-4560, FAX: (517) 853-4095**

SPECIAL USE PERMIT APPLICATION

Before submitting this application for review, an applicant may meet with the Director of Community Planning and Development to discuss the requirements for a special use permit and/or submit a conceptual plan for review to have preliminary technical deficiencies addressed prior to submittal of the application. If the property or land use is located in the following zoning districts RD, RC, RCC, RN then the applicant must meet with the Planning Director to discuss technical difficulties before filing a formal application.

Part I

- A. Applicant Okemos Pointe III, LLC
 Address of Applicant P.O. Box 523 Grand Ledge, MI 48837
 Telephone - Work 517-290-4650 Home _____ Fax _____ Email jrj5069@gmail.com
 Interest in property (circle one): Owner Tenant Option Other
 (Please attach a list of all persons with an ownership interest in the property.)
- B. Site address / location / parcel number 0 Farrins Parkway: 33-02-02-33-302-016
 Legal description (please attach if necessary) See site plans
 Current zoning C-2(MUPUD)
 Use for which permit is requested / project name Floodplain disturbance
 Corresponding ordinance number 86-436(1)(1 & 7)
- C. Developer (if different than applicant) _____
 Address _____
 Telephone – Work _____ Home _____ Fax _____
- D. Architect, Engineer Planner or Surveyor responsible for design of project if different from applicant:
 Name Allen Patrick, P.E., KEBS, Inc.
 Address 2116 Haslett Road, Haslett, MI 48840
 Telephone – Work 517-339-1014 Home ajpatrick@kebs.com Fax 517-339-8047
- E. Acreage of all parcels in the project: Gross 39.02 Net 38.81
- F. Explain the project and development phases: 39 acre MUPUD with commercial buildings and residential apartments. Project is the final phase of the MUPUD(Phase 4) constructing 2 apartment buildings.
- G. Total number of:
 Existing: structures 20 bedrooms 533 offices _____ parking spaces 532 carports 342 garages _____
 Proposed: structures 5 bedrooms 85 offices _____ parking spaces 52 carports 22 garages 27
- H. Square footage: existing buildings _____ proposed buildings 65,336
 Usable Floor area: existing buildings _____ proposed buildings 52,285
379,306
303,445
- I. If employees will work on the site, state the number of full time and part time employees working per shift and hours of operation:
- J. Existing Recreation: Type Pocket parks and township pathways Acreage 1.06
 Proposed Recreation: Type Pocket parks and township pathways Acreage 1.27
 Existing Open Space: Type woods, meadow, pond, grass Acreage 23.47
 Proposed Open Space: Type woods, meadow, pond, grass Acreage 21.54

K. If Multiple Housing:

Total acres of property	<u>39.02</u>		
Acres in floodplain	<u>±8.64</u>	Percent of total	<u>22.14%</u>
Acres in wetland (not in floodplain)	<u>±2.17</u>	Percent of total	<u>5.56%</u>
Total dwelling units	<u>394</u>		
Dwelling unit mix:			
Number of single family detached:		for Rent	<u> </u> Condo <u> </u>
Number of duplexes:		for Rent	<u> </u> Condo <u> </u>
Number of townhouses:		for Rent	<u> </u> Condo <u> </u>
Number of garden style apartments:		for Rent	<u> </u> Condo <u> </u>
Number of other dwellings:		for Rent	<u>394</u> Condo <u> </u>

L. The following support materials must be submitted with the application:

1. Nonrefundable Fee.
2. Legal Description of the property.
3. Evidence of fee or other ownership of the property.
4. Site Plan containing the information listed in the attachment to this application.
5. Architectural sketches showing all sides and elevations of the proposed buildings or structures, including the project entrance, as they will appear upon completion. The sketches should be accompanied by material samples or a display board of the proposed exterior materials and colors.
6. A Traffic Study, prepared by a qualified traffic engineer, based on the most current edition of *Evaluating Traffic Impact Studies: A Recommended Practice for Michigan Communities*, published by the State Department of Transportation.
 - a. A traffic assessment will be required for the following:
 - 1) New special uses which could, or expansion or change of an existing special use where increase in intensity would, generate between 50 to 99 directional trips during a peak hour of traffic.
 - 2) All other special uses requiring a traffic assessment as specified in the Township Code of Ordinances, Chapter 86, Article IV, Division 2.
 - b. A traffic impact study will be required for the following:
 - 1) New special uses which would, or expansion or change of an existing special use where increase in intensity would, generate over 100 directional trips or more during a peak hour of traffic, or over 750 trips on an average day.
 - 2) All other special uses requiring a traffic assessment as specified in the Township Code of Ordinances, Chapter 86, Article IV, Division 2.
7. Natural features assessment which includes a written description of the anticipated impacts on the natural features at each phase and at project completion that contains the following:
 - a. An inventory of natural features proposed to be retained, removed, or modified. Natural features shall include, but are not limited to, wetlands, significant stands of trees or individual trees greater than 12 inches dbh, floodways, floodplains, waterbodies, identified groundwater vulnerable areas, slopes greater than 20 percent, ravines, and vegetative cover types with potential to sustain significant or endangered wildlife.
 - b. Description of the impacts on natural features.
 - c. Description of any proposed efforts to mitigate any negative impacts.

The natural features assessment may be waived by the Director of Community Planning and Development in certain circumstances.

- M. Any other information specified by the Director of Community Planning and Development which is deemed necessary to evaluate the application.
- N. In addition to the above requirements, for zoning districts, **RD, RC, RCC, RN, and CV** and **Group Housing Residential Developments** the following is required:
1. Existing and proposed contours of the property at two foot intervals based on United States Geological Survey (USGS) data.
 2. Preliminary engineering reports in accordance with the adopted Township water and sewer standards, together with a letter of review from the Township Engineer.
 3. Ten copies of a report on the intent and scope of the project including, but not limited to: Number, size, volume, and dimensions of buildings; number and size of living units; basis of calculations of floor area and density and required parking; number, size, and type of parking spaces; architectural sketches of proposed buildings.
 4. Seven copies of the project plans which the Township shall submit to local agencies for review and comments.
- O. In addition to the above requirements, a special use application in zoning district **RP** requires the following material as part of the site plan:
1. A description of the operations proposed in sufficient detail to indicate the effects of those operations in producing traffic congestion, noise, glare, air pollution, water pollution, fire hazards or safety hazards or the emission of any potentially harmful or obnoxious matter or radiation.
 2. Engineering and architectural plans for the treatment and disposal of sewerage and industrial waste tailings, or unusable by-products.
 3. Engineering and architectural plans for the handling of any excessive traffic congestion, noise, glare, air pollution, or the emission of any potentially harmful or obnoxious matter or radiation.
- P. In addition to the above requirements, a special use application for a use in the Floodway Fringe of zoning district **CV** requires the following:
1. A letter of approval from the State Department of Environmental Quality.
 2. A location map including existing topographic data at two-foot interval contours at a scale of one inch representing 100 feet.
 3. A map showing proposed grading and drainage plans including the location of all public drainage easements, the limits, extent, and elevations of the proposed fill, excavation, and occupation.
 4. A statement from the County Drain Commissioner, County Health Department, and Director of Public Works and Engineering indicating that they have reviewed and approved the proposal.
- Q. In addition to the above requirements, a special use application for a use in the Groundwater Recharge area or zoning district **CV** requires the following:
1. A location map including existing topographic data at two-foot interval contours.
 2. A map showing proposed grading and drainage plans including the location of all public drainage easements, the limits and extent of the proposed fill, excavation, and occupation.
 3. A statement from the County Drain Commissioner, County Health Department, and Director of Public Works and Engineering indicating that they have reviewed and approved the proposal.
- R. In addition to the above requirements, the Township Code of Ordinances, Article VI, should be reviewed for the following special uses: group housing residential developments, mobile home parks, nonresidential structures and uses in residential districts, planned community and regional shopping center developments, sand or gravel pits and quarries, sod farms, junk yards, sewage treatment and disposal installations, camps and clubs for outdoor sports and buildings greater than 25,000 square feet in gross floor area.

Part II

**SUP REQUEST STANDARDS
Township Code of Ordinances, Section 86-126**

Applications for Special Land Uses will be reviewed with the standards stated below. An application that complies with the standards stated in the Township Ordinance, conditions imposed pursuant to the Ordinance, other applicable Ordinances, and State and Federal statutes will be approved. Your responses to the questions below will assist the Planning Commission in its review of your application.

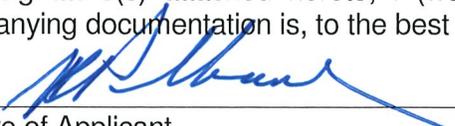
- (1) The project is consistent with the intent and purposes of this chapter.
- (2) The project is consistent with applicable land use policies contained in the Township's Master Plan of current adoption.
- (3) The project is designed, constructed, operated, and maintained so as to be harmonious and appropriate in appearance with the existing or intended character of the general vicinity and that such a use will not change the essential character of the same area.
- (4) The project will not adversely affect or be hazardous to existing neighboring uses.
- (5) The project will not be detrimental to the economic welfare of surrounding properties or the community.
- (6) The project is adequately served by public facilities, such as existing roads, schools, stormwater drainage, public safety, public transportation, and public recreation, or that the persons or agencies responsible for the establishment of the proposed use shall be able to provide any such service.
- (7) The project is adequately served by public sanitation facilities if so designed. If on-site sanitation facilities for sewage disposal, potable water supply, and storm water are proposed, they shall be properly designed and capable of handling the longterm needs of the proposed project.
- (8) The project will not involve uses, activities, processes, materials, and equipment and conditions of operation that will be detrimental to any persons, property, or the general welfare by reason of excessive production of traffic, noise, smoke, fumes, glare, or odors.
- (9) The project will not directly or indirectly have a substantial adverse impact on the natural resources of the Township, including, but not limited to, prime agricultural soils, water recharge areas, lakes, rivers, streams, major forests, wetlands, and wildlife areas.

Part III

I (we) hereby grant permission for members of the Charter Township of Meridian's Boards and/or Commissions, Township staff member(s) and the Township's representatives or experts the right to enter onto the above described property (or as described in the attached information) in my (our) absence for the purpose of gathering information including but not limited to the taking and the use of photographs.

Yes No (Please check one)

By the signature(s) attached hereto, I (we) certify that the information provided within this application and accompanying documentation is, to the best of my (our) knowledge, true and accurate



Signature of Applicant

10/17/23
Date

JOHN R PERKITAM

Type/Print Name

Fee: _____

Received by/Date: _____

Special Use Permit Application Attachment
Site Plan Requirements Per Section 86-124(c)(4)

A site plan, drawn to a legible scale, containing the following information where applicable:

- a. Boundaries of the subject property.
- b. Total area of the subject property.
- c. Location of all existing and proposed structures.
- d. Approximate location and distance of all structures within 100 feet of the subject property.
- e. Uses of existing and proposed buildings, on the subject site.
- f. Proposed means of vehicular and pedestrian ingress and egress to the subject property.
- g. Public and private roads and streets, rights-of-way, and easements, indicating names and widths, which abut or cross the site.
- h. Existing and proposed parking spaces, and vehicular and pedestrian circulation patterns.
- i. The buildable area of the subject property indicating all required setbacks, yards and open space.
- j. Zoning classification of the subject and adjacent properties.
- k. Existing and proposed fencing, screening, landscaping, and buffers.
- l. Location and sizes of existing utilities including power lines and towers, both above and below the ground.
- m. Amount and location of all impervious surfaces.
- n. The verified boundaries of all natural water features and required setback lines.



SUP REQUEST STANDARDS

Elevation Phase 4 – Floodplain Disturbance SUP
October 17, 2023

1. The project is consistent with the intent and purposes of the Township Ordinance. Section 86-436(1)(1 & 7) allows for filling and compensating excavation of floodway fringe areas within the C-2(MUPUD) zoning district to be permitted by SUP. The work to be permitted by the special use permit preserves or increases flood storage capacity. The design of the project considers the adjacent floodplain and minimizes the effect in placing the buildings, parking, and pathways.
2. The project is consistent with current land use policies in the Township's comprehensive development plan. The proposed project is the final phase of the existing Elevation MUPUD and is consistent with the previously approved MUPUD plan. The property's proposed use and development are consistent with the objectives of the Township's development plan.
3. The project is to be designed, constructed, operated, and maintained to be harmonious and appropriate in appearance with the existing and intended character of the area and will not change the essential character of the area. The proposed consists of the final two residential buildings of the Elevation MUPUD and the associated parking lot. The proposed buildings will be constructed to match the existing building style and materials in previous phases of the development. The proposed project will not change the essential character of the area.
4. The project will not adversely affect or be hazardous to existing neighborhood uses. The proposed project will finish the Elevation MUPUD by utilizing an existing on-site crossing of the Smith Consolidated Drain. Residents will utilize the existing phases of the development for traffic movements and amenities. The project will provide a benefit to existing neighboring uses by constructing a connection of the on-site township pathway to the existing pathway NW of Kansas Street, completing a public watermain loop from the development to Kansas Street, and providing a secondary access drive connection for emergency services through the development to Kansas Street.
5. The project will not be detrimental to the economic welfare of surrounding properties. The proposed project will complete the Elevation MUPUD that has redeveloped contaminated property and provided new commercial and residential uses to the benefit of surrounding properties and the community.
6. The project is adequately served by public facilities. The Smith Consolidated Drain and associated detention pond are located on the development property and were constructed with sufficient capacity to support development of this property. The proposed project will construct new storm piping and low impact treatment areas to collect and pretreat stormwater prior to discharge to the drain. This final phase of the Elevation MUPUD will utilize the existing roadway connections to Farrins Parkway, Jolly Oak Way, Jolly Oak Road, and Jolly Road for vehicular traffic and connections



KEBS, INC.

to the associated sidewalks and on-site township pathways for pedestrian traffic. Public transportation, safety, and recreation are available in the area.

7. The project is adequately served by public sanitary facilities. Public sanitary and water mains are located on the property and were constructed with sufficient capacity to support development of this property. Existing recorded easements on the property to the west also provide access for sanitary, water and pathway extensions to the site.
8. The project will not be detrimental to persons, property, or general welfare from excessive traffic, noise, smoke, fumes, glare, or odors. The proposed project consists of two residential buildings with pedestrian and vehicular access connections through the existing phases of the Elevation MUPUD. No other activities, processes, materials, or equipment is proposed which would produce the detriments listed above.
9. The project will not directly or indirectly create adverse impacts on natural resources of the Township. The project will have a positive effect on the floodplain by creating a net increase in floodplain storage volume. The proposed project will construct new storm piping and low impact treatment areas to collect and pretreat stormwater prior to discharging to the Smith Consolidated Drain and its detention pond. The low impact treatment areas are proposed infiltration swales designed to remove sediment and contaminants by filtering the stormwater through sand while promoting subsurface infiltration. Stormwater discharge locations are proposed to include riprap stabilization to reduce flows to non-erosive velocities and to provide an additional opportunity for infiltration and sediment treatment prior to discharging to the drain, detention pond, and/or associated wetlands. No wetland disturbance is proposed with the project.

OVERALL LEGAL DESCRIPTION:
 A parcel of land in the Southwest 1/4 of Section 33, T4N, R1W, Meridian Township, Ingham County, Michigan, the boundary of said parcel described as: Commencing at the Southwest corner of said Section 33; thence N89°46'20"E along the South line of said Section 33 a distance of 858.00 feet to the point of beginning of this description; thence N00°36'06"W parallel with the West line of Section 33 a distance of 1996.56 feet; thence N89°46'12"E 35.84 feet; thence N00°27'14"W 642.58 feet to the East-West 1/4 line of said Section 33; thence N89°44'23"E along said East-West 1/4 line of said Section 33 to the West line of Fieldstone Condominium, Subdivision Plan No. 184, Ingham County Records; thence S00°18'07"E along said West line and the West line of Coyote Creek Condominium, Subdivision Plan No. 82, Ingham County Records, a distance of 989.98 feet; thence along the South line of said Coyote Creek Condominium the following three courses: N89°45'08"E 503.25 feet, South 34.97 feet and N89°45'08"E 255.61 feet to the Westerly line of Unit 1 of Okemos Pointe Office Park Condominium, Subdivision Plan No. 267, Ingham County Records; thence along said Westerly line the following two courses: S22°44'37"E 82.61 feet and S14°02'26"W 172.95 feet to the North line of Ferrins Parkway, thence along said North line the following four courses: S89°51'41"W 85.18 feet, Southwesterly 180.54 feet on a curve to the left, said curve having a radius of 232.50 feet, a delta angle of 44°29'30" and a chord length of 176.04 feet bearing S87°30'40"W, Southwesterly 206.25 feet on a curve to the right, said curve having a radius of 277.50 feet, a delta angle of 42°35'09" and a chord length of 201.54 feet bearing S86°39'56"W and Southwesterly 77.04 feet on a curve to the left, said curve having a radius of 197.50 feet, a delta angle of 22°20'57" and a chord length of 76.55 feet bearing S78°47'04"W to the East line of Water Lily Way; thence along said East line the following three courses: Southeasterly 106.18 feet on a curve to the right, said curve having a radius of 205.00 feet, a delta angle of 29°40'31" and a chord length of 104.99 feet bearing S14°50'20"E, S00°00'04"E 221.47 feet and Southeasterly 47.24 feet on a curve to the left, said curve having a radius of 30.00 feet, a delta angle of 90°13'36" and a chord length of 42.51 feet bearing S45°06'52"E to the North line of Jolly Oak Road; thence S89°46'20"W along the extension of said North line 90.12 feet to the West line of Jolly Oak Road; thence S00°00'04"E along said West line 805.00 feet to the Southeast corner of Lot 1 of Jolly-Okemos Industrial Park as recorded in Liber 27, Pages 20-21, Ingham County Records; thence S89°46'20"W along the South line of said Lot 1 a distance of 196.04 feet to the West line of said Jolly-Okemos Industrial Park; thence N00°48'30"W along said West line 163.00 feet; thence S89°46'20"W parallel with said South Section line 181.50 feet; thence S00°48'30"E along a line parallel with said West line of Lots 1 and 2 a distance of 213.00 feet to said South line; thence S89°46'20"W along said South line 280.06 feet to the point of beginning; said parcel containing 39.02 acres, more or less, subject to all right-of-way for road purposes; said parcel subject to all easements and restrictions if any.

PHASE 4 LEGAL DESCRIPTION:
 A parcel of land in the Southwest 1/4 of Section 33, T4N, R1W, Meridian Township, Ingham County, Michigan, the boundary of said parcel described as: Commencing at the Southwest corner of said Section 33; thence N89°46'20"E along the South line of said Section 33 a distance of 858.00 feet; thence N00°36'06"W parallel with the West line of Section 33 a distance of 1217.85 feet to the point of beginning of this description; thence continuing N00°36'06"W parallel with said West line 778.71 feet; thence N89°46'12"E 35.84 feet; thence N00°27'14"W 642.58 feet to the East-West 1/4 line of said Section 33; thence N89°44'23"E along said East-West 1/4 line 433.70 feet to the West line of Fieldstone Village Condominium, Subdivision Plan No. 184, Ingham County Records; thence S00°18'07"E along said West line and the West line of Coyote Creek Condominium, Subdivision Plan No. 82, Ingham County Records, a distance of 989.98 feet; thence S89°45'08"E 49.74 feet; thence S08°19'09"W 276.80 feet; thence S61°38'16"W 333.53 feet; thence S89°23'54"W 78.22 feet to the point of beginning.

- STANDARD CONSTRUCTION NOTES**
- The Contractor shall notify the Charter Township of Meridian, Department of Public Works, Office of Engineering, p#8 517-853-4440, a minimum of 72 hours prior to the start of construction of public utilities or construction within the public right-of-way.
 - All construction shall conform to the current standards and specifications of the Charter Township of Meridian which are included as part of these plans in effect at the time of construction.
 - After the completion of construction of public utilities or construction within public right-of-way, the contractor must request a final inspection. Any punchlist items resulting from the final inspection must be resolved prior to final release and acceptance.
 - The existing utilities indicated on the plans are in accordance with available information. It shall be the contractor's obligation to verify the exact location of all existing utilities, which might affect this job.
 - The contractor shall notify "MISS DIG" 1-800-482-7171 at least 72 hours prior to the start of construction.
 - The contractor shall at all times be aware of inconvenience caused to the abutting property owners and the general public. Where the contractor does not remedy undue inconveniences, the Meridian Charter Township, upon four hours notice, reserves the right to perform the work and deduct the cost thereof from the money due the contractor.
 - A Registered Land Surveyor provided by the contractor at the contractor's expense shall replace all property irons and monuments destroyed or destroyed by the contractor's operations.
 - The contractor shall provide Owner and Township Engineer a copy of written permission to use private property for storage of equipment and materials for his construction operations.
 - Trench backfill under existing or proposed roadways, driveways, and parking areas, shall be sand or gravel, placed in 12" layers (maximum) and consolidated to 95% of maximum density as measured by modified proctor unless otherwise noted.
 - Trees and shrubs are to be protected during construction and bared where necessary.
 - Existing fences shall be removed and restored to their original condition or better where in conflict with construction.
 - Driveways, culverts, ditches, drain tiles, drainage structures, etc., that are disturbed by the contractor's operations shall be immediately restored.
 - All established lawn areas disturbed by the contractor's operations shall be reseeded with matching soil. All other areas shall be seeded and mulched. Seeding and mulching shall be done in accordance with the General Specifications.
 - All ditch slopes shall have established vegetation and be protected from erosion.
 - All utility poles in close proximity to construction shall be supported in a manner satisfactory to the utility owners.
 - Prior to acceptance of the public utility, one complete set of acceptable sealed as-built plans, minimum 3 mill thick, and one disquette (AutoCAD format) of the site plans shall be submitted to the Office of Engineering.
 - On-site parking and sanitary facilities shall be provided for construction workers. The facilities shall be constructed and operated (with minimal impact to the surrounding area) to the satisfaction of the Township.

- PATHWAY / SIDEWALK NOTES**
- Sidewalks - 5' (minimum) wide concrete 4" thick, 6" thick through single family residential driveways, 7" thick through multi-family residential and commercial driveways on 3" compacted sand backfill. To maintain continuity, all 4' wide concrete sidewalks shall be replaced with new 4' wide concrete sidewalk when appropriate.
 - Pathways (adjacent to roadways) - 7' (minimum) [if when next to a wall or other object] wide concrete, 4" thick, 6" thick through residential driveways, 7" thick through commercial driveways on 3" compacted sand backfill.
 - Pathways (off-road) - 8' (minimum) wide concrete, 6" thick concrete on 3" compacted sand backfill or 8' (minimum) wide asphalt 3" thick (Bituminous Mixture 150M) [1 in 6" x 21/2" x 21/2" crushed limestone (minimum 90%)] on 3" compacted sand backfill.
 - Sidewalks and pathways shall generally be placed 1' (one) foot from the ultimate right-of-way as identified on the "Street and Highway Plan". Contact the Department of Planning and Community Development for a current copy of the plan.
 - A boardwalk may be required to be installed instead of a standard concrete sidewalk/pathway if regulations do not allow their installation.
 - Pathways and sidewalks shall be constructed so as to promote proper positive surface drainage. Where ever possible the sidewalk/pathway shall be constructed 8" higher than the curb.
 - Retaining walls shall only be installed where all other efforts (soilside grading, erosion, tree retention, etc.) to mitigate the need for such wall have been evaluated for cost effectiveness and dismissed.
 - Guardrails and handrails shall be installed where the slopes adjacent to the pathway/sidewalk cannot be constructed to 1" vertical for every 3" horizontal. The depth to the toe of the slope area will be considered when implementing this requirement.
 - Pathways or sidewalks that do not connect to an existing pathway/sidewalk shall provide a gradual transition to existing ground. A "path ends" sign shall be posted at all pathway/sidewalk termini.
 - Maximum slope of sidewalk is 6%. Cross slope is 2%.
 - All existing bituminous and concrete shall be removed shall be sawcut.
 - Expansion joints to be placed at 100' intervals.
 - All lumber to be pressure treated (Smoose 33 or equal) to 0.4 retention.

- SANITARY SEWER NOTES**
- All sewers to be placed in Class "B" bedding or better.
 - Wyes, risers, and house leads are to be placed at location shown on the plans or as directed by the Engineer. All wyes are incidental.
 - Each wye or house lead shall have a plug of the same type of joint as the house lead.
 - House leads shall be a minimum of 9 ft. deep at the property line. Individual site topography may require a deviation of this minimum.
 - Downspouts or other conduits carrying storm or ground water shall not be connected to the sanitary sewer.
 - Whenever existing manholes or sewer pipes are to be tapped, holes are to be drilled at 4 inch center to center spacing around the periphery of the proposed opening to create a plane of weakness joint (or core saw the diameter) - a 12 inch thick collar is to encase the new pipe and opening.
 - All sanitary sewer manholes shall be provided with watertight covers.
 - All manhole covers shall bear the legend "Meridian Sanitary Sewer" with tree logo.
 - All public sanitary sewer main lines shall be SDR 26, or ABS Truss Pipe. Clay pipe may be installed in locations approved by the Township Engineer.
 - The PVC (SDR-26) pipe shall be installed in accordance with ASTM 477.
 - Pipe installation shall be in accordance with ASTM D 2321. All pipe shall be marked to provide ASTM D2321, SDR number, manufacturer's name, and pipe diameter.
 - The contractor shall test the flexible pipe main for deflection by pulling a mandrel through the sewer after all backfill has been placed and compacted over the pipe. The maximum allowable deflection shall not exceed 5% of the pipe's inside diameter. The outside diameter of the test mandrel shall be equal to the inside diameter of the pipe less 5%. The initial test shall be performed at least 30 days after pipe installation. A second test shall be performed after 10 months of pipe installation or just before line intended use.
 - Inspection and testing of the sanitary system shall also include video inspection by CCTV method of sanitary main, air testing of sanitary main, and vacuum testing of sanitary manholes. All inspections and testing shall be performed in the Township of Meridian.

- WATER MAIN NOTES**
- Hydrant elevations and gate well tap elevations shall be set to existing ground elevations unless otherwise directed by the Township Engineer.
 - All water mains shall be constructed with 5 feet of cover below finish grade, unless otherwise indicated on the plans.
 - Connection to the existing water sewer shall not be made until after the successful completion of pressure and bacteriological tests. Pressure testing shall be performed in accordance with AWWA standard C-600. Disinfection and bacteriological testing shall be in accordance with the AWWA Standard C-651. Before the mains are chlorinated, they shall be thoroughly flushed. All mains shall be chlorinated for a period of twenty-four (24) hours. Chlorine shall be added in sufficient quantity to give a 50-ppm residual of free chlorine after a twenty-four (24) hour period. After completion of the chlorine procedure, the mains shall be flushed. Then water samples shall be taken from the main for bacteriological tests. If the tests should result in unsafe conditions, the chlorinating shall be repeated by the contractor. Two consecutive passing samples in a ten 24 hours span must be obtained before the main can be connected to the existing water system.
 - All valves shall be counter-clockwise open.
 - All fire hydrants shall be IJW 5-RR (code 54915) Traffic Type with breakaway flange or approved equal.
 - Hydrants shall be painted OSHA red.
 - Two brass wedges shall be installed at each joint on ductile iron pipe.
 - Polyethylene encasement of pipes will be required in all areas. The encasement shall be V-Biob® Enhanced Polyethylene Encasement, in accordance with ANSI/AWWA C105/A21.5, installed per the manufacturer's instructions.
 - For existing lines, service taps, shut off valves, and service line extensions to the property shall be made by Township Department of Public Works personnel for connections 2" and smaller.
 - Where water mains must dip to pass under a storm sewer or sanitary sewer, the sections which are deeper than normal shall be placed to a minimum length by the use of 45, 22 1/2 or 1 1/4 degree bends properly restrained.
 - All manhole covers shall bear the legend "Meridian Water" with tree logo, where available.
 - Lead content requirements for all pipes, piping fittings, plumbing fittings, and fixtures that are used for potable water shall comply with NSF/ANSI 372 Standard.
 - All mechanical joints and fittings shall be restrained using MEGALOC® style restraints, or approved equal. All exposed metal components of the restrained-joint system shall be treated with a corrosion resistant coating, including, the collar, breakaway bolts, wedges, and connecting metal bolts.

EX. LEGEND

● = SET 1/2" BAR WITH CAP	⊕ = SANITARY MANHOLE
□ = FOUND IRON AS NOTED	⊖ = DRAINAGE MANHOLE
— = DISTANCE NOT TO SCALE	⊕ = ELECTRIC MANHOLE
— = ASPHALT	⊕ = TELEPHONE MANHOLE
— = CONCRETE	⊕ = CATCHBASIN
— = GRAVEL	⊕ = SANITARY CLEANOUT
— = EXISTING SPOT ELEVATION	⊕ = FIRE HYDRANT
— = EXISTING CONTOUR ELEVATION	⊕ = VALVE
— = GAS LINE	⊕ = UTILITY POLE
— = UNDERGROUND TELEPHONE	⊕ = LIGHT POLE
— = ROAD RIGHT OF WAY	⊕ = GUY POLE
— = UNDERGROUND ELECTRIC	⊕ = GUY WIRE
— = OVERHEAD WIRES	⊕ = UTILITY PEDESTAL
— = EDGE OF WOODS	⊕ = TRANSFORMER
— = DECIDUOUS TREE	⊕ = ELECTRIC METER
— = CONIFEROUS TREE	⊕ = GAS METER
— = PROPOSED TOP OF CURB ELEV.	⊕ = WATER METER
	⊕ = SOIL BORING
	⊕ = SIGN
	⊕ = POST

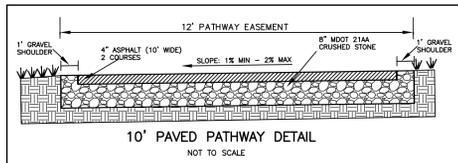
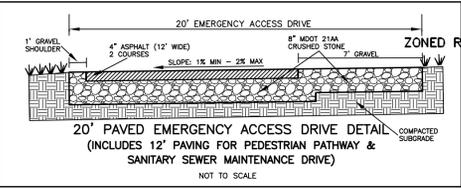
LEGEND

— = EXT. CONTOURS	— = EXT. WATER MAIN
— = EXT. SANITARY SEWER	— = EXT. STORM SEWER
— = EXT. ELEVATIONS	— = PROPOSED WATER MAIN
— = PROPOSED SANITARY SEWER	— = PROPOSED STORM SEWER
— = MANHOLE (NEW)	— = PROPOSED C.B. MANHOLE (EX.)
— = UTILITY EASEMENT	— = CENTER LINE OF ROAD
— = ROAD RIGHT OF WAY	— = PROPERTY LINE
— = FIRE HYDRANT	— = WATER VALVE
— = THRUST BLOCK	— = 1/3" 800.00

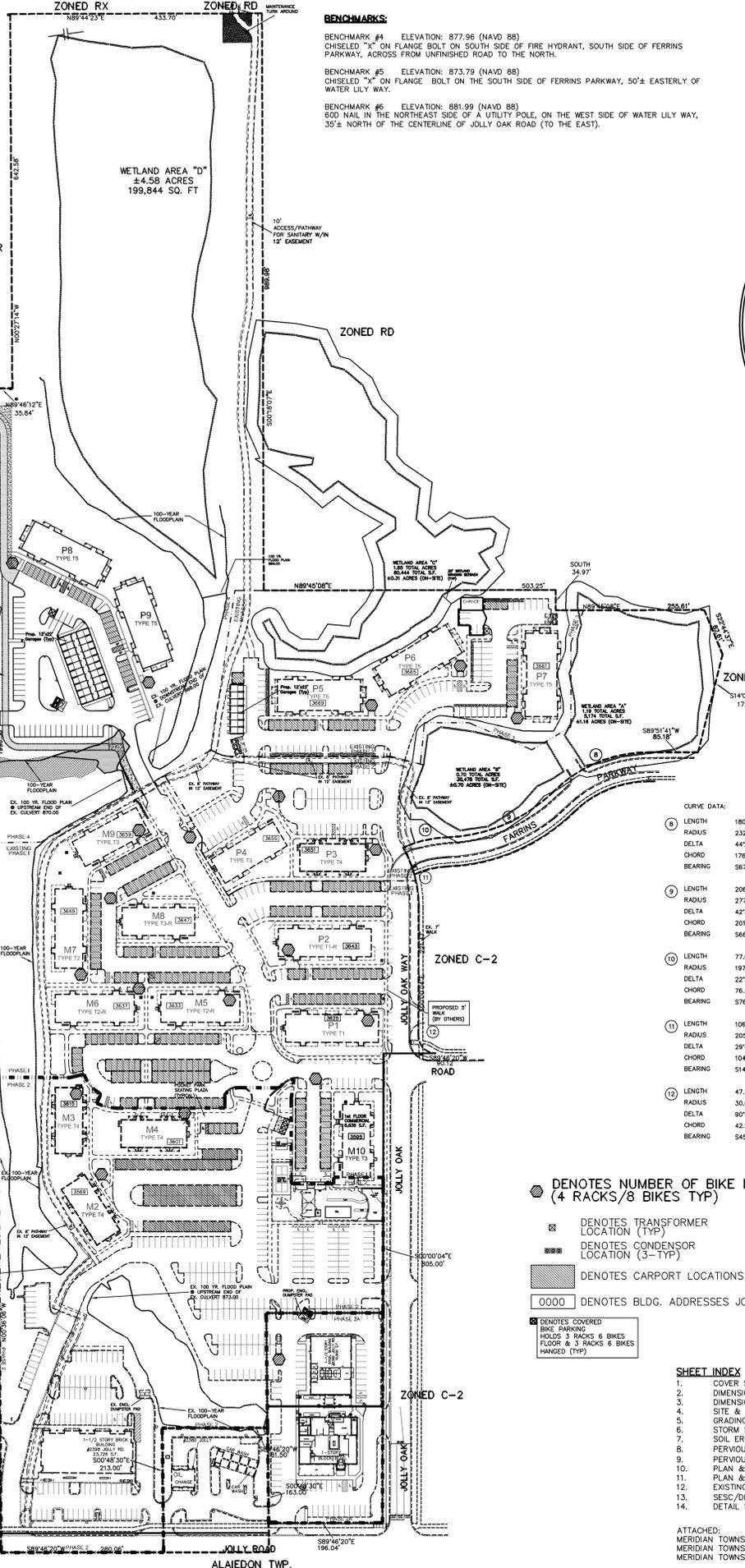
CUT FILL

HATCH DENOTES AREA OF FLOODPLAIN DISTURBANCE. NO WORK IN FLOODPLAIN TO BE COMPLETED UNTIL EGE PERMIT AND TOWNSHIP S.U.P. IS APPROVED

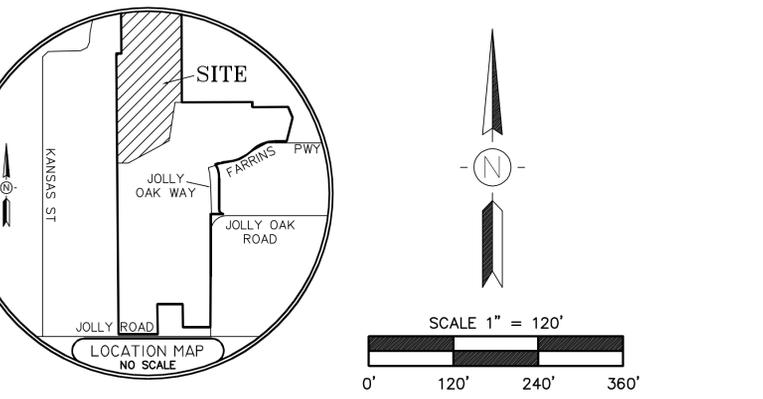
12 HOURS (3 WORKING DAYS) BEFORE YOU DIG CALL MISS DIG 800-482-7171 (TOLL-FREE)



- STORM SEWER**
- All storm sewer construction shall comply with the requirements of the Ingham County Drain Commissioner and the Ingham County Road Commission and shall be subject to their inspection and approval.
 - All storm sewer 8" and smaller shall be PVC SDR 35, or vitrified clay C-700 ES.
 - All storm sewer pipe 10" and larger shall be C-76, Class III reinforced concrete pipe.
 - All storm sewer joints shall be wrapped with Miraf Geotextile 140N or equal. No joint mastic shall be used. Fabric shall be 18" wide, overlapped by not less than 6" and held in place by duct taping the overlap and/or equal holding material, until backfilled. 1/2" ring rubbers on PVC pipe shall be removed and wrapped as indicated above.
 - All pipe to be laid with the aid of laser equipment.
 - All storm sewer manholes and catch basin shall be in accordance with the Ingham County Drain Commissioner and the Ingham County Road Commission Standards with Neenah R-1784 or E.J.I.W. 1060-B covers for manholes. E.J.I.W. 7045 or Neenah R-3031-B for Standard curb inlets, E.J.I.W. 7065 or Neenah R-3034-B for rolled curb inlets, E.J.I.W. 550B or Neenah R-4340-A for Beehive Gate or castings as indicated on the plans.
 - All catch basins and yard drains shall have a three foot deep sump.
 - All storm leads shall be 4" Polyvinylchloride (PVC) tubing, installed at a minimum slope of 1%.
 - All 7 foot dia storm manhole, as approved by Ingham County Drain Commission, shall be constructed with concrete radial block provided that precast bases and precast reducer tops are used. Construction with MDT standard plan 1-1E, sheets 1 to 4 and all applicable MDT specifications. All 4 foot and 5 foot diameter storm manholes shall be precast in accordance with ASTM C-478 and applicable MDT standards and specifications.



CONSTRUCTION PLANS FOR: Elevation Ph 4 MERIDIAN TOWNSHIP, INGHAM COUNTY, MICHIGAN



BUILDING DATA:

RESIDENTIAL

TYPE I = (M5, M6, P2)
 22 UNITS/BUILDING
 (2) 1 BR, (20) 2 BR = 42 BEDS/BUILDING
 24,944 G.S.F./BUILDING

TOTAL TYPE I (2) = 44 UNITS
 84 BEDS
 64,464 G.S.F./BUILDING

TYPE II (M5, M6, M7)
 22 UNITS/BUILDING
 (14) 1 BR, (8) 2 BR = 30 BEDS/BUILDING
 21,488 G.S.F./BUILDING

TOTAL TYPE II (3) = 66 UNITS
 90 BEDS
 64,464 G.S.F. RESIDENTIAL

TYPE III (M8, M9, M10, P4)
 22 UNITS/BUILDING
 (4) JR 1 BR, (10) 1 BR, (6) 2 BR, (2) 3 BR = 32 BEDS/BUILDING
 19,904 G.S.F./BUILDING

P4 = (12) 1 BR, (6) 2 BR, (3) 3 BR = 21 UNITS/33 BEDS
 M10 = 16 UNITS, 23 BEDS WITH 1st FLOOR COMMERCIAL
 (13,269 G.S.F. RESIDENTIAL, 6,635 G.S.F. COMMERCIAL)

TOTAL TYPE III (4) = 81 UNITS
 120 BEDS
 72,891 G.S.F. RESIDENTIAL
 6,635 G.S.F. COMMERCIAL

TYPE IV = (M2, M3, M4, P3)
 24 UNITS/BUILDING
 (24) 1 BR = 24 BEDS/BUILDING
 17,340 G.S.F./BUILDING

TYPE V = (P5, P6, P7, P8, P9)
 22 UNITS/BUILDING
 (20) 1 BR, (2) 3 BR = 46 BEDS/BUILDING
 23,376 G.S.F./BUILDING

TOTAL TYPE IV (5) = 96 UNITS
 98 BEDS
 69,360 G.S.F.

TOTAL TYPE V (5) = 107 UNITS
 223 BEDS
 126,155 G.S.F.

COMMERCIAL

2360 JOLLY RD 15,523 S.F.
 2398 JOLLY RD 23,726 S.F.
 BLDG M10 6,635 S.F.
 TOTAL COMMERCIAL 45,884 S.F.

TOTAL PROJECT

394 UNITS
 818 BEDS
 382,848 G.S.F. RESIDENTIAL
 46,000 G.S.F. COMMERCIAL
 1,800 G.S.F. AMENITY BLDGS
 14,082 G.S.F. GARAGES
 444,662 G.S.F. TOTAL

TOTAL SITE AREA = 1,699,859 S.F. = 39.02 AC.
 DENSITY 394 UNITS/39.02 AC. = 10.10 UNITS/ACRE

BUILDING COVERAGE:
 APARTMENT FIRST FLOOR 123,194 S.F.
 COMMERCIAL FIRST FLOOR 45,884 S.F.
 AMENITY BUILDINGS 1,800 S.F.
 GARAGES 14,082 S.F.
 TOTAL = 184,940 S.F. = 10.88%

PARKING DATA:
 394 UNITS x 2 = 788 SPACES
 = 25% FUTURE SPACES = 788 x .25 = 197
 46,000 S.F. COMMERCIAL @ 4/1000 MIN. 4.5/1000 MAX. = 184-207
 1,169 SPACES REQUIRED
 WITH 10% ALLOWED PARKING REDUCTION FOR BIKE PARKING = 1,052 SPACES
 79 SPACE WANNER WITH PREVIOUS MUPUD APPROVAL OF 394 UNITS = 1,052 - 79 = 973 SPACES REQUIRED

PARKING PROVIDED:
 552 GENERAL PARKING SPACES
 364 CARPORT SPACES
 27 GARAGE SPACES
 32 B/F SPACES
 915 TOTAL SPACES PROVIDED

BIKE PARKING DATA:
 20 RACKS x 8 = 160 SPACES
 1 RACK x 48 = 48 SPACES
 2 COVERED BIKE PARKING x 12 = 24 SPACES
 TOTAL BIKE PARKING SPACES PROVIDED = 232 SPACES

MAX. ALLOWED IMPERVIOUS AREA = 70%

PROPOSED PERVIOUS/IMPERVIOUS AREAS:
 TOTAL PROPERTY = 1,699,859 S.F.
 TOTAL PERVIOUS = 936,214 S.F.
 = 1/2 OF DETENTION = 234,341/2 = (-117,170 S.F.)
 NET PERVIOUS = 821,044 S.F. = 48.30%
 NET IMPERVIOUS = 878,815 SF = 51.70%

- EX. LEGEND**
- DENOTES NUMBER OF BIKE RACKS (4 RACKS/8 BIKES TYP)
 - ⊕ DENOTES TRANSFORMER LOCATION (TYP)
 - ⊖ DENOTES CONDENSOR LOCATION (3-TYP)
 - ▨ DENOTES CARPORT LOCATIONS
 - 0000 DENOTES BLDG. ADDRESSES JOLLY OAK RD.
 - ⊕ DENOTES COVERED BIKE PARKING (HOLD 3 BIKES & 3 RACKS 6 BIKES HANGED (TYP))

SHEET INDEX

- COVER SHEET
- DIMENSION PLAN NORTH
- DIMENSION PLAN SOUTH
- SITE & UTILITY PLAN
- GRADING PLAN
- STORM SEWER PLAN
- SOIL EROSION PLAN
- PERVIOUS/IMPERVIOUS PLAN NORTH
- PERVIOUS/IMPERVIOUS PLAN SOUTH
- PLAN & PROFILE
- PLAN & PROFILE
- EXISTING FEATURES PLAN
- SECC/DETAIL SHEET
- DETAIL SHEET



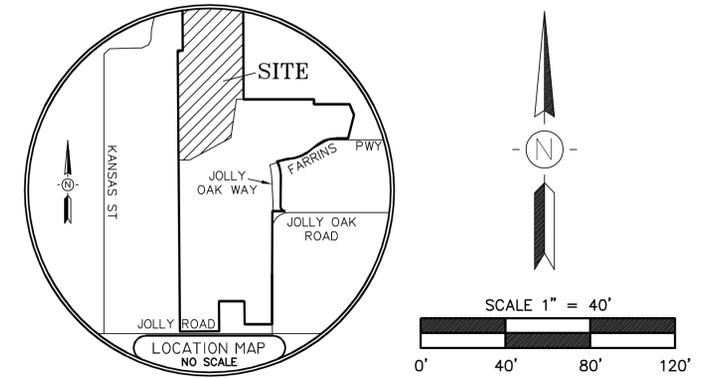
CLIENT:
 OKEMOS POINT III, LLC
 P.O. BOX 523
 GRAND LEDGE, MI 48837
 PH: (517) 290-4650

ENGINEER/SURVEYOR:
 KEBS, INC.
 2116 HASLETT RD.
 HASLETT, MI 48840
 PH: (517) 339-1014
 FAX: (517) 339-8047

REVISIONS		<p>KEBS, INC. KYES ENGINEERING BRYAN LAND SURVEYS 2116 HASLETT ROAD, HASLETT, MI 48840 PH. 517-339-1014 FAX. 517-339-8047 Marshall Office Ph. 269-781-9800</p>	<p>Elevation Ph 4 COVER SHEET</p>
3-10-23 SUBMITTAL			
8-10-23 TRV REV			
10-17-23 SUP			
SCALE: 1" = 120'	DESIGNER: JWK	APPROVED BY: JWK	
DATE: 6-5-19	PROJECT MGR. JWK	SHEET 1 OF 14	
AUTHORIZED BY: OKEMOS POINT III, LLC	JOB #:	93644	

CONSTRUCTION PLANS FOR: Elevation Ph 4

MERIDIAN TOWNSHIP, INGHAM COUNTY, MICHIGAN

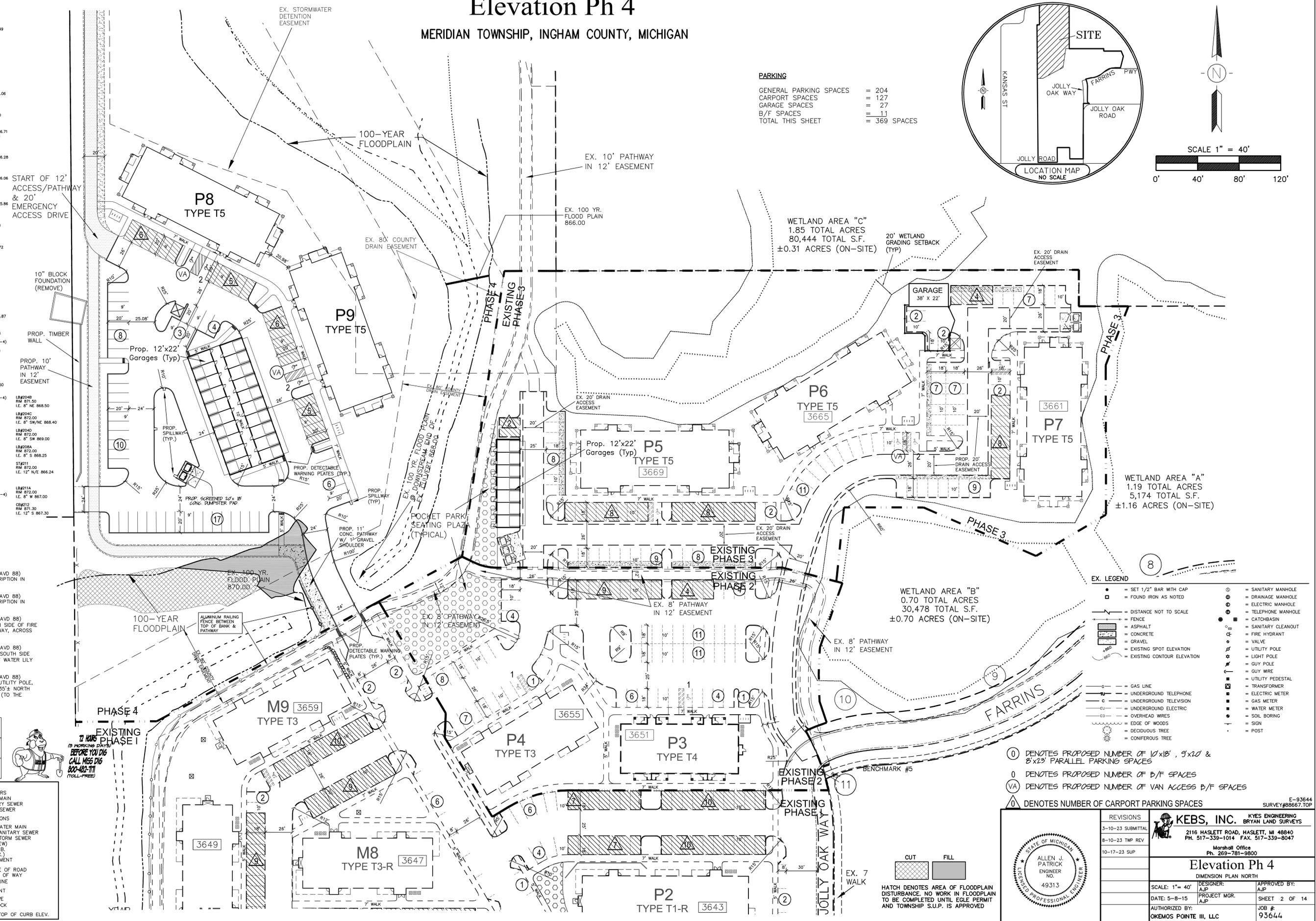
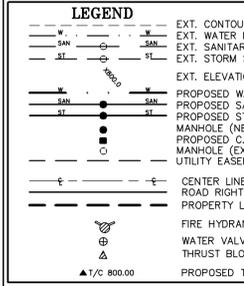


PARKING

GENERAL PARKING SPACES	= 204
CARPORT SPACES	= 127
GARAGE SPACES	= 27
B/F SPACES	= 11
TOTAL THIS SHEET	= 369 SPACES

- EX. INVENTORY:**
- SANITARY MANHOLE #1
T/CAS 873.59
12" CONC. N - 861.54
6" CONC. SW - 861.77
 - CATCH BASIN #1
INLET - 875.49
 - CATCH BASIN #2
INLET - 875.59
 - STORM MANHOLE #3
TOC - 872.67
12" CONC. NE - 866.78
18" CONC. WEST - 864.89
12" CONC. NE - 866.78
18" CONC. EAST - 864.89
 - CATCH BASIN #4
INLET - 871.75
12" CONC. NORTH - 867.59
12" CONC. SOUTH - 867.75
 - CATCH BASIN #5
INLET - 871.33
12" CONC. SW - 867.31
12" CONC. SOUTH - 867.57
 - STORM MANHOLE #6
TOC - 872.15
18" CONC. EAST - 864.16
38" CONC. SOUTH - 864.14
12" CONC. SE - 865.53
 - CATCH BASIN #8
(REDHIVE)
INLET - 873.75
18" CONC. SW - 865.14
 - SANITARY MANHOLE #9
TOC - 872.15
12" CONC. WEST - 860.87
12" CONC. SOUTH - 861.00
12" CONC. EAST - 862.30
 - STORM MANHOLE #10
RM - 874.50
12" RCP NE - INACCESSIBLE
18" RCP NE - 863.93
42" RCP EAST - 864.10
12" RCP SE - 861.19
42" RCP NW - 864.08
 - SANITARY MANHOLE #10
TOC - 872.50
12" RCP NORTH - 861.19
12" RCP NORTH - 861.19
8" CLAY EAST - 861.34
 - SANITARY MANHOLE #12
TOC - 873.75
12" CONC. NORTH - 860.28
12" CONC. EAST - 860.45
8" PVC SOUTH - 861.42
 - STORM MANHOLE #13
RM - 876.67
42" SC - 862.79
18" RCP SW - INACCESSIBLE
42" RCP NW - 862.77
 - CATCH BASIN #14
TOC - 873.00
12" CONC. NE - 864.17
12" CONC. WEST - 867.00
12" CONC. NE - 868.00
 - SANITARY MANHOLE #15
TOC - 873.82
8" PVC NORTH - 861.83
8" PVC SOUTH - 862.10
 - SANITARY MANHOLE #16
TOC - 880.83
12" CONC. NORTH - 861.99
12" CONC. SOUTH - 862.05
 - CATCH BASIN #17
INLET - 874.10
8" TILE NW - 840.45
 - CATCH BASIN #20
INLET - 878.59
12" CONC. SOUTH - 873.84
18" CONC. WEST - 873.71
 - CATCH BASIN #21
INLET - 876.78
18" CONC. EAST - 870.90
8" PVC SE - 872.90
12" PVC WEST - 871.10
 - CATCH BASIN #22
INLET - 880.02
12" CONC. SE - 875.70
12" CONC. WEST - 875.77
 - CATCH BASIN #23
INLET - 880.16
12" CONC. EAST - 875.81
 - CATCH BASIN #29
INLET - 875.05
12" CONC. EAST - 869.35
12" CONC. WEST - 869.20
 - CATCH BASIN #30
INLET - 870.06
12" CONC. NORTH - 867.31
24" CONC. NE - 867.31
12" CONC. EAST - 867.41
24" CONC. SOUTH - 867.42
 - SANITARY MANHOLE #31
TOC - 871.33
12" CONC. NORTH - 859.48
12" CONC. SOUTH - 859.52

- BENCHMARKS:**
- BENCHMARK #1 ELEVATION: 882.25 (NAVD 88)
I HAVE NO IDEA - OFFSITE WITH NO DESCRIPTION IN FIELD NOTES.
 - BENCHMARK #2 ELEVATION: 881.86 (NAVD 88)
I HAVE NO IDEA - OFFSITE WITH NO DESCRIPTION IN FIELD NOTES.
 - BENCHMARK #4 ELEVATION: 877.96 (NAVD 88)
CHISELED "X" ON FLANGE BOLT ON SOUTH SIDE OF FIRE HYDRANT, SOUTH SIDE OF FERRINS PARKWAY, ACROSS FROM UNFINISHED ROAD TO THE NORTH.
 - BENCHMARK #5 ELEVATION: 873.79 (NAVD 88)
CHISELED "X" ON FLANGE BOLT ON THE SOUTH SIDE OF FERRINS PARKWAY, 50'± EASTERLY OF WATER LILY WAY.
 - BENCHMARK #6 ELEVATION: 881.99 (NAVD 88)
60D NAIL IN THE NORTHEAST SIDE OF A UTILITY POLE, ON THE WEST SIDE OF WATER LILY WAY, 35'± NORTH OF THE CENTERLINE OF JOLLY OAK ROAD (TO THE EAST).
- NOTE: ALL PROPOSED SANITARY EXCEPT FOR LEADS SHALL HAVE A 20' EASEMENT**
- NOTE: ALL PROPOSED WATER MAIN EXCEPT FOR LEADS SHALL HAVE A 20' EASEMENT**
- NOTE: WATER SHALL HAVE 10' HORIZONTAL SEPARATION & 18" VERTICAL SEPARATION FROM ALL SEWERS.**



- EX. LEGEND**
- SET 1/2" BAR WITH CAP
 - FOUND IRON AS NOTED
 - DISTANCE NOT TO SCALE
 - FENCE
 - ASPHALT
 - CONCRETE
 - GRAVEL
 - EXISTING SPOT ELEVATION
 - EXISTING CONTOUR ELEVATION
 - SANITARY MANHOLE
 - DRAINAGE MANHOLE
 - ELECTRIC MANHOLE
 - TELEPHONE MANHOLE
 - CATCHBASIN
 - SANITARY CLEANOUT
 - FIRE HYDRANT
 - VALVE
 - UTILITY POLE
 - LIGHT POLE
 - GUY POLE
 - GUY WIRE
 - UTILITY PEDESTAL
 - TRANSFORMER
 - ELECTRIC METER
 - GAS METER
 - WATER METER
 - SOIL BORING
 - SIGN
 - POST
- DENOTES PROPOSED NUMBER OF 10'x18', 9'x10' & 8'x23' PARALLEL PARKING SPACES
- DENOTES PROPOSED NUMBER OF B/F SPACES
- VA DENOTES PROPOSED NUMBER OF VAN ACCESS B/F SPACES
- △ DENOTES NUMBER OF CARPORT PARKING SPACES

REVISIONS

3-10-23 SUBMITTAL	
8-10-23 TMP REV	
10-17-23 SUP	

KEBS, INC. KYES ENGINEERING
BRYAN LAND SURVEYS
2116 HASLETT ROAD, HASLETT, MI 48840
PH. 517-339-1014 FAX. 517-339-8047
Marshall Office
Ph. 269-781-9800

Elevation Ph 4
DIMENSION PLAN NORTH

SCALE: 1" = 40'
DATE: 5-8-15
AUTHORIZED BY: OKEMOS PROJECT III, LLC

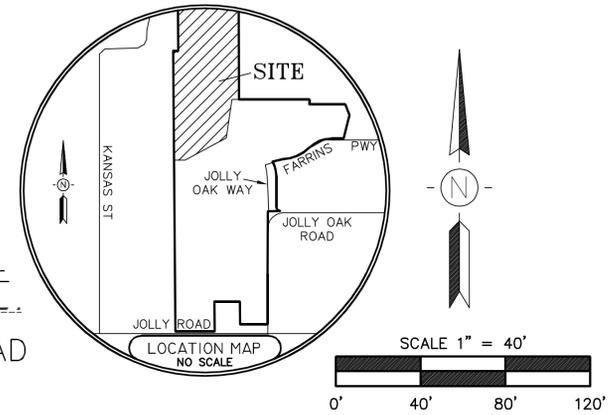
DESIGNER: AJP
PROJECT MGR: AJP
JOB #: 93644

APPROVED BY: AJP
SHEET 2 OF 14

STATE OF MICHIGAN
ALLEN J. PATRICK
ENGINEER NO. 49313
LICENSED PROFESSIONAL ENGINEER

CONSTRUCTION PLANS FOR: Elevation Ph 4

MERIDIAN TOWNSHIP, INGHAM COUNTY, MICHIGAN



PARKING

GENERAL PARKING SPACES	= 348
CARPORT SPACES	= 237
B/F SPACES	= 21
TOTAL THIS SHEET	= 606 SPACES

- MUPUD WAIVERS GRANTED**
- 100' SETBACK FROM RESIDENTIAL ZONED PROPERTY REDUCED TO 92' FOR BUILDING M2
 - 50' WATER FEATURE SETBACK AND 5' NATURAL VEGETATION STRIP REQUIRED FROM OP OF BANK OF OPEN COUNTY DRAIN WAIVERS RANTED
 - M2 - 0' GRADING & PATHWAY SETBACK
15' BUILDING SETBACK
 - M3 - 0' GRADING & PATHWAY SETBACK
20' BUILDING SETBACK

EX. LEGEND

- = SET 1/2" BAR WITH CAP
- = FOUND IRON AS NOTED
- = DISTANCE NOT TO SCALE
- = FENCE
- = ASPHALT
- = CONCRETE
- = GRAVEL
- = EXISTING SPOT ELEVATION
- = EXISTING CONTOUR ELEVATION
- = GAS LINE
- = UNDERGROUND TELEPHONE
- = UNDERGROUND TELEVISION
- = OVERHEAD ELECTRIC
- = OVERHEAD WIRES
- = EDGE OF WOODS
- = DECIDUOUS TREE
- = CONIFEROUS TREE
- ⊙ = SANITARY MANHOLE
- ⊕ = DRAINAGE MANHOLE
- ⊖ = ELECTRIC MANHOLE
- ⊗ = TELEPHONE MANHOLE
- ⊙ = CATCHBASIN
- ⊙ = SANITARY CLEANOUT
- ⊙ = FIRE HYDRANT
- ⊙ = VALVE
- ⊙ = UTILITY POLE
- ⊙ = LIGHT POLE
- ⊙ = GUY POLE
- ⊙ = UTILITY PEDESTAL
- ⊙ = TRANSFORMER
- ⊙ = ELECTRIC METER
- ⊙ = GAS METER
- ⊙ = WATER METER
- ⊙ = SOIL BORING
- ⊙ = SIGN
- ⊙ = POST

BENCHMARKS:

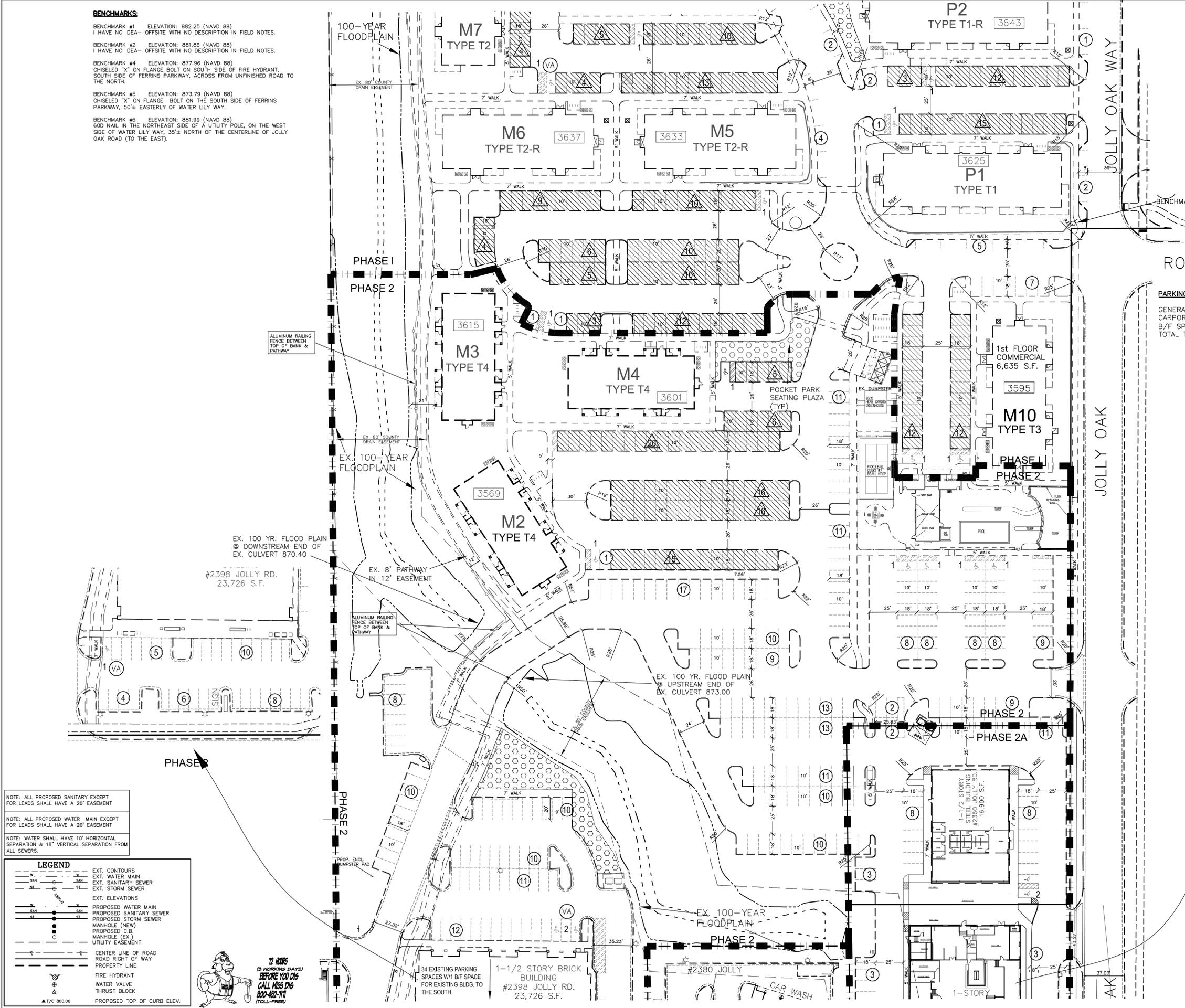
BENCHMARK #1 ELEVATION: 892.25 (NAVD 88)
I HAVE NO IDEA- OFFSITE WITH NO DESCRIPTION IN FIELD NOTES.

BENCHMARK #2 ELEVATION: 881.86 (NAVD 88)
I HAVE NO IDEA- OFFSITE WITH NO DESCRIPTION IN FIELD NOTES.

BENCHMARK #4 ELEVATION: 877.96 (NAVD 88)
CHISELED "X" ON FLANGE BOLT ON SOUTH SIDE OF FIRE HYDRANT, SOUTH SIDE OF FERRINS PARKWAY, ACROSS FROM UNFINISHED ROAD TO THE NORTH.

BENCHMARK #5 ELEVATION: 873.79 (NAVD 88)
CHISELED "X" ON FLANGE BOLT ON THE SOUTH SIDE OF FERRINS PARKWAY, 50'± EASTERLY OF WATER LILY WAY.

BENCHMARK #6 ELEVATION: 881.99 (NAVD 88)
60D NAIL IN THE NORTHEAST SIDE OF A UTILITY POLE, ON THE WEST SIDE OF WATER LILY WAY, 35'± NORTH OF THE CENTERLINE OF JOLLY OAK ROAD (TO THE EAST).



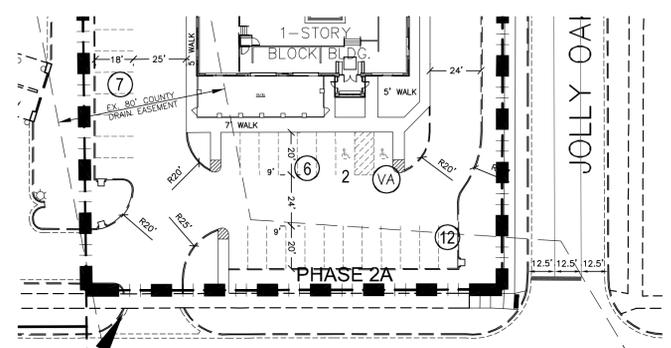
NOTE: ALL PROPOSED SANITARY EXCEPT FOR LEADS SHALL HAVE A 20' EASEMENT

NOTE: ALL PROPOSED WATER MAIN EXCEPT FOR LEADS SHALL HAVE A 20' EASEMENT

NOTE: WATER SHALL HAVE 10' HORIZONTAL SEPARATION & 18" VERTICAL SEPARATION FROM ALL SEWERS.

LEGEND

—	EXT. CONTOURS
—	EXT. WATER MAIN
—	EXT. SANITARY SEWER
—	EXT. STORM SEWER
—	EXT. ELEVATIONS
—	PROPOSED WATER MAIN
—	PROPOSED SANITARY SEWER
—	PROPOSED STORM SEWER
—	MANHOLE (NEW)
—	PROPOSED C.B. MANHOLE (EX.)
—	UTILITY EASEMENT
—	CENTER LINE OF ROAD
—	ROAD RIGHT OF WAY
—	PROPERTY LINE
—	FIRE HYDRANT
—	WATER VALVE
—	THRUST BLOCK
—	PROPOSED TOP OF CURB ELEV.



- DENOTES PROPOSED NUMBER OF 10'x18', 9'x10' & 8'x13' PARALLEL PARKING SPACES
- DENOTES PROPOSED NUMBER OF B/F SPACES
- VA DENOTES PROPOSED NUMBER OF VAN ACCESS B/F SPACES
- DENOTES NUMBER OF CARPORT PARKING SPACES

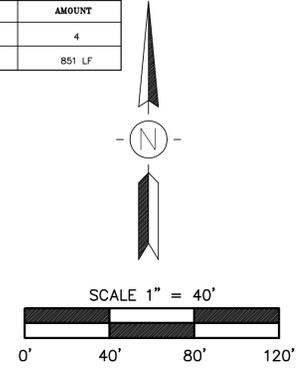
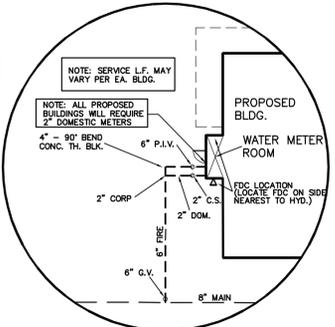
	REVISIONS 3-10-23 SUBMITTAL 8-10-23 TWP REV 10-17-23 SUP	KEBS, INC. KYES ENGINEERING BRYAN LAND SURVEYS 2116 HASLETT ROAD, HASLETT, MI 48840 PH. 517-339-1014 FAX. 517-339-8047 Marshall Office Ph. 269-781-9800	Elevation DIMENSION PLAN SOUTH DESIGNER: AJP PROJECT MGR. AJP APPROVED BY: AJP DATE: 5-8-15 AUTHORIZED BY: OKEMOS POINT III, LLC SHEET 3 OF 14 JOB #: 93644
	E-93644 SURVEY#88667.TOP		

CONSTRUCTION PLANS FOR: Elevation Ph 4

MERIDIAN TOWNSHIP, INGHAM COUNTY, MICHIGAN

WATER MAIN QUANTITIES		
ITEM	SIZE	AMOUNT
CL 54 W.M.	8"	1,212 LF
CL 54 W.M.	6"	59 LF
FIRE LINE	6"	176 LF
DOMESTIC	2"	18 LF
HYDRANTS	6"	2
CURB STOPS	2"	2
CORPS	2"	2
8" GV	8"	1
6" GV	6"	6
TEE	8" x 6"	6
CONNECTIONS	8"	2
45" BEND	8"	4
22.5" BEND	8"	2
90" BEND	6"	4
45" BEND	6"	2
22.5" BEND	6"	3

SANITARY QUANTITIES		
ITEM	SIZE	AMOUNT
MH'S	4' DIA	4
PVC SDR 26	8"	851 LF



NOTES PER MERIDIAN TOWNSHIP REQUIREMENTS:
ABANDON ALL EX. WATER LEADS NOT BEING USED.
ABANDON ALL EX. SANITARY SEWER LEADS NOT BEING USED.
ALL EX. HYDRANTS IN VICINITY OF PROJECT SHALL BE RETROFITTED WITH STORZ NOZZLES.

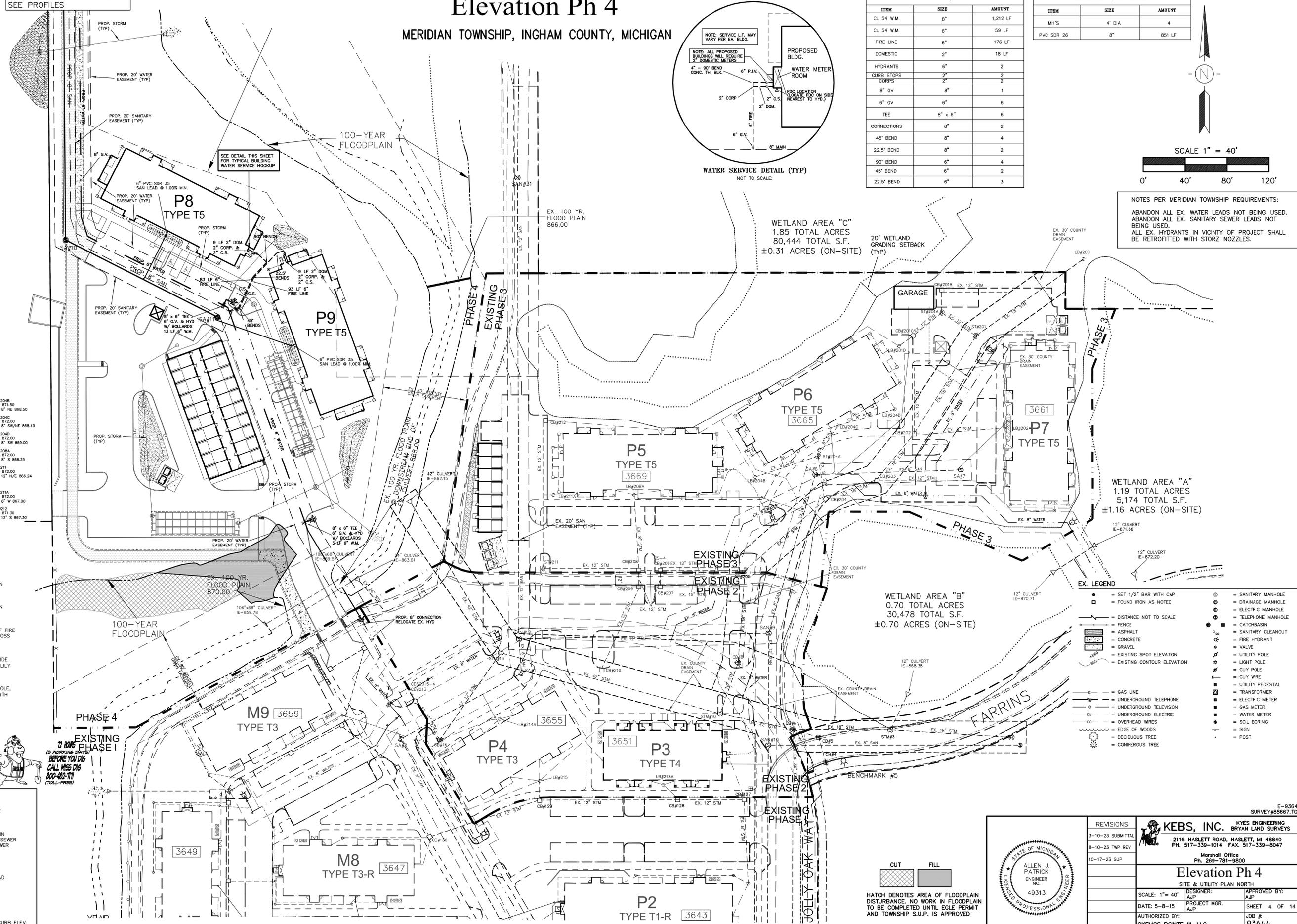
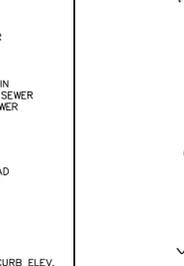
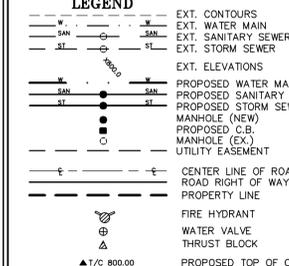
- EX. INVENTORY:**
- SANITARY MANHOLE #1
T/CAS 873.50
12" CONC. N - 861.54
12" CONC. SW - 861.77
 - CATCH BASIN #1
INLET - 875.49
 - CATCH BASIN #2
INLET - 875.59
 - STORM MANHOLE #3
T/C - 872.67
 - LB#28A
12" CONC. NE - 866.78
18" CONC. WEST - 864.89
12" CONC. NE - 866.78
18" CONC. EAST - 864.89
 - CATCH BASIN #4
INLET - 871.75
12" CONC. NORTH - 867.59
12" CONC. SOUTH - 867.75
 - CATCH BASIN #5
INLET - 871.37
12" CONC. SW - 867.31
12" CONC. SOUTH - 867.57
 - LB#200
STORM MANHOLE #6
T/CAS 871.00
12" CONC. NW - 864.08
18" CONC. EAST - 864.16
36" CONC. SOUTH - 864.14
12" CONC. SE - 865.53
 - CATCH BASIN #9
(BEDHEAD)
INLET - 873.75
18" CONC. SW - 865.14
 - SANITARY MANHOLE #9
T/C - 872.15
12" CONC. WEST - 860.87
12" CONC. SOUTH - 861.00
12" CONC. NE - 862.30
 - STORM MANHOLE #10
RM - 874.50
12" RCP NE - INACCESSIBLE
18" RCP NE - 865.93
42" RCP NE - 864.10
12" RCP SE - 861.19
42" RCP NW - 864.08
 - SANITARY MANHOLE #10
T/C - 872.50
12" RCP NORTH - 861.19
12" RCP NORTH - 861.19
8" CLAY EAST - 861.34
 - SANITARY MANHOLE #12
T/C - 871.25
12" CONC. NORTH - 860.28
12" CONC. EAST - 860.45
8" PVC SOUTH - 861.42
 - STORM MANHOLE #13
RM - 876.67
42" SC - 862.79
18" RCP SW - INACCESSIBLE
42" RCP NW - 862.77
 - CATCH BASIN #14
T/C - 873.00
12" CONC. NE - 864.17
12" CONC. NW - 867.00
12" CONC. NE - 868.00
 - SANITARY MANHOLE #15
T/C - 872.50
8" PVC NORTH - 861.83
8" PVC SOUTH - 862.10
 - SANITARY MANHOLE #16
T/C - 871.50
12" CONC. NORTH - 861.99
12" CONC. SOUTH - 862.05
 - CATCH BASIN #17
INLET - 874.10
8" TILE NW - 840.45
 - CATCH BASIN #20
INLET - 878.59
12" CONC. SOUTH - 873.84
18" CONC. WEST - 873.71
 - CATCH BASIN #21
INLET - 876.78
18" CONC. EAST - 870.90
8" PVC SE - 872.90
12" PVC WEST - 871.10
 - CATCH BASIN #22
INLET - 880.02
12" CONC. SE - 875.70
12" CONC. WEST - 875.77
 - CATCH BASIN #23
INLET - 880.16
12" CONC. EAST - 875.81
 - CATCH BASIN #29
INLET - 875.05
12" CONC. EAST - 869.35
12" CONC. NW - 869.20
 - CATCH BASIN #30
INLET - 870.06
12" CONC. NORTH - 867.31
24" CONC. NE - 867.31
12" CONC. EAST - 867.41
24" CONC. SOUTH - 867.42
 - SANITARY MANHOLE #31
T/C - 871.30
12" CONC. NORTH - 859.48
12" CONC. SOUTH - 859.52

- BENCHMARKS:**
- BENCHMARK #1 ELEVATION: 882.25 (NAVD 88)
I HAVE NO IDEA - OFFSITE WITH NO DESCRIPTION IN FIELD NOTES.
 - BENCHMARK #2 ELEVATION: 881.86 (NAVD 88)
I HAVE NO IDEA - OFFSITE WITH NO DESCRIPTION IN FIELD NOTES.
 - BENCHMARK #4 ELEVATION: 877.96 (NAVD 88)
CHISELED "X" ON FLANGE BOLT ON SOUTH SIDE OF FIRE HYDRANT, SOUTH SIDE OF FERRIS PARKWAY, ACROSS FROM UNFINISHED ROAD TO THE NORTH.
 - BENCHMARK #5 ELEVATION: 873.79 (NAVD 88)
CHISELED "X" ON FLANGE BOLT ON THE SOUTH SIDE OF FERRIS PARKWAY, 50'± EASTERLY OF WATER LILY WAY.
 - BENCHMARK #6 ELEVATION: 881.99 (NAVD 88)
60D NAIL IN THE NORTHEAST SIDE OF A UTILITY POLE, ON THE WEST SIDE OF WATER LILY WAY, 35'± NORTH OF THE CENTERLINE OF JOLLY OAK ROAD (TO THE EAST).

NOTE: ALL PROPOSED SANITARY EXCEPT FOR LEADS SHALL HAVE A 20' EASEMENT

NOTE: ALL PROPOSED WATER MAIN EXCEPT FOR LEADS SHALL HAVE A 20' EASEMENT

NOTE: WATER SHALL HAVE 10' HORIZONTAL SEPARATION & 18" VERTICAL SEPARATION FROM ALL SEWERS.



- EX. LEGEND**
- SET 1/2" BAR WITH CAP
 - FOUND IRON AS NOTED
 - DISTANCE NOT TO SCALE
 - FENCE
 - ASPHALT
 - CONCRETE
 - GRAVEL
 - EXISTING SPOT ELEVATION
 - EXISTING CONTOUR ELEVATION
 - SANITARY MANHOLE
 - DRAINAGE MANHOLE
 - ELECTRIC MANHOLE
 - TELEPHONE MANHOLE
 - CATCHBASIN
 - SANITARY CLEANOUT
 - FIRE HYDRANT
 - VALVE
 - UTILITY POLE
 - LIGHT POLE
 - GUY POLE
 - GUY WIRE
 - UTILITY PEDESTAL
 - TRANSFORMER
 - ELECTRIC METER
 - GAS METER
 - WATER METER
 - SOIL BORING
 - SIGN
 - POST

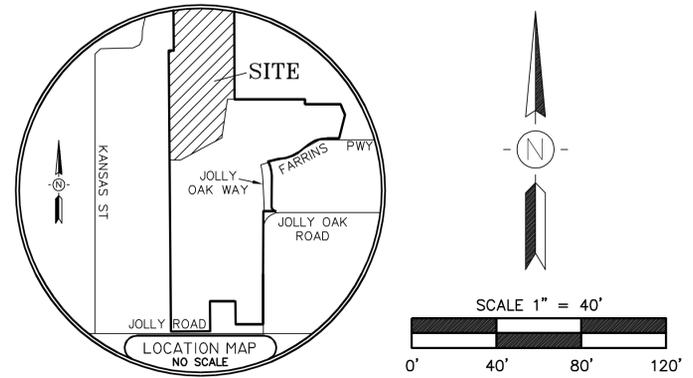
<p>REVISIONS</p> <p>3-10-23 SUBMITTAL</p> <p>8-10-23 TWP REV</p> <p>10-17-23 SUP</p>		<p>KEBS, INC. KYES ENGINEERING BRYAN LAND SURVEYS</p> <p>2116 HASLETT ROAD, HASLETT, MI 48840 PH. 517-339-1014 FAX. 517-339-8047</p> <p>Marshall Office Ph. 269-781-9800</p>	<p>Elevation Ph 4 SITE & UTILITY PLAN NORTH</p> <p>DESIGNER: AJP APPROVED BY: AJP</p> <p>DATE: 5-8-15 PROJECT MGR. AJP SHEET 4 OF 14</p> <p>AUTHORIZED BY: OKEMOS POINTE III, LLC JOB #: 93644</p>
<p>STATE OF MICHIGAN ALLEN J. PATRICK ENGINEER NO. 49313 LICENSED PROFESSIONAL ENGINEER</p>			

CONSTRUCTION PLANS FOR: Elevation Ph 4

MERIDIAN TOWNSHIP, INGHAM COUNTY, MICHIGAN

NOTE: ELEVATION CERTIFICATES WILL BE REQUIRED AFTER CONSTRUCTION OF THE BUILDINGS TO ENSURE COMPLIANCE WITH APPROVED SITE PLAN.

NOTE: 100 YR. DETENTION FOR THIS SITE PROVIDED IN SMITH DRAIN PONDS. REQUIREMENT FOR THIS PROJECT IS TO TREAT FIRST 1" OF RAINFALL FOR THE PHASE 4 SITE.



- EX. INVENTORY:**
- SANITARY MANHOLE#1
 - T/CAS 873.50
 - 12" CONC. N - 861.54
 - 8" CONC. SW - 861.77
 - CATCH BASIN #1
 - INLET - 875.49
 - CATCH BASIN #2
 - INLET - 875.58
 - STORM MANHOLE #3
 - TOC - 872.67
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 - 12" CONC. NE - 866.78
 - 18" CONC. WEST - 864.89
 - 12" CONC. NE - 866.78
 - 18" CONC. EAST - 864.89
 - CATCH BASIN #4
 - INLET - 871.75
 - 12" CONC. NORTH - 867.59
 - 12" CONC. SOUTH - 867.75
 - CATCH BASIN #5
 - INLET - 871.30
 - 12" CONC. SW - 867.31
 - 12" CONC. SOUTH - 867.57
 - STORM MANHOLE #6
 - TOC - 872.15
 - 42" CONC. NW - 864.08
 - 18" CONC. EAST - 864.16
 - 36" CONC. SOUTH - 864.14
 - 12" CONC. SE - 865.53
 - CATCH BASIN #8
 - (REDHILL)
 - CB#202
 - RM 872.40
 - 18" CONC. SW - 865.14
 - 18" NE/SW 866.28
 - 12" CONC. SOUTH - 861.00
 - 12" NE 862.30
 - 15" NE/SW 868.06
 - 12" CONC. SOUTH - 867.50
 - STORM MANHOLE #10
 - RM - 874.50
 - 12" RCP NE - INACCESSIBLE
 - 18" RCP NE - 864.93
 - 12" RCP EAST - 864.10
 - 12" RCP SE - 864.18
 - 42" RCP NW - 864.08
 - ST#205
 - T/CAS 872.05
 - 15" W 865.46
 - 18" NE 865.48
 - 18" S 865.48
 - 12" CONC. WEST - 860.87
 - 8" CLAY EAST - 861.34
 - CB#206 (CS-1)
 - T/C 871.25
 - 15" E/W 865.72
 - 12" S 866.75
 - CB#207
 - T/C 871.75
 - 15" E/W 865.72
 - 12" S 866.75
 - STORM MANHOLE #13
 - RM - 876.67
 - 12" RCP NW - 862.79
 - 18" RCP SW - INACCESSIBLE
 - 42" RCP NW - 862.77
 - CATCH BASIN #14
 - TOC - 872.00
 - 12" CONC. NE - 864.17
 - 12" CONC. NW - 867.00
 - 12" CONC. SOUTH - 867.50
 - 12" CONC. WEST - 873.71
 - CATCH BASIN #15
 - TOC - 873.80
 - 12" CONC. NORTH - 861.83
 - 8" PVC SOUTH - 862.10
 - SANITARY MANHOLE #16
 - TOC - 860.83
 - 12" CONC. NORTH - 861.99
 - 12" CONC. SOUTH - 862.05
 - CATCH BASIN #17
 - INLET - 874.10
 - 8" CONC. EAST - 874.45
 - 8" CONC. WEST - 873.71
 - CATCH BASIN #21
 - INLET - 876.78
 - 15" CONC. EAST - 870.90
 - 8" PVC SE - 872.90
 - 8" PVC WEST - 871.10
 - CATCH BASIN #22
 - INLET - 880.02
 - 12" CONC. SE - 875.70
 - 12" CONC. WEST - 875.77
 - CATCH BASIN #23
 - INLET - 880.16
 - 12" CONC. EAST - 875.81
 - CATCH BASIN #29
 - INLET - 875.05
 - 12" CONC. EAST - 869.35
 - 12" CONC. WEST - 869.20
 - 8" W 871.00
 - CATCH BASIN #30
 - INLET - 870.06
 - 12" CONC. NORTH - 867.31
 - 24" CONC. NE - 867.31
 - 12" CONC. EAST - 867.41
 - 24" CONC. SOUTH - 867.42
 - SANITARY MANHOLE #31
 - TOC - 871.30
 - 12" CONC. NORTH - 859.48
 - 12" CONC. SOUTH - 859.52

- EX. STORM (PHASE 1, 2, & 3)**
- CB#127
 - T/W 873.25
 - 12" CONC. N - 861.54
 - 8" CONC. SW - 861.77
 - CB#128
 - T/W 873.50
 - 12" CONC. NE - 866.78
 - 18" CONC. WEST - 864.89
 - 12" CONC. NE - 866.78
 - 18" CONC. EAST - 864.89
 - CB#129
 - T/W 872.80
 - 12" CONC. NORTH - 867.59
 - 12" CONC. SOUTH - 867.75
 - CB#130
 - T/W 873.45
 - 12" CONC. NW/E 867.06
 - 12" CONC. SOUTH - 867.57
 - CB#200
 - T/CAS 871.00
 - 18" SW 867.60
 - 42" CONC. NW - 864.08
 - 18" CONC. EAST - 864.16
 - 36" CONC. SOUTH - 864.14
 - 12" CONC. SE - 865.53
 - CB#201
 - RM 873.65
 - 15" SW/NE 866.71
 - 12" NE 867.75
 - CB#202
 - RM 872.40
 - 18" CONC. SW - 865.14
 - 18" NE/SW 866.28
 - 12" CONC. SOUTH - 861.00
 - 12" NE 862.30
 - 15" NE/SW 868.06
 - 12" CONC. SOUTH - 867.50
 - CB#203
 - RM 872.00
 - 12" RCP NE - INACCESSIBLE
 - 18" RCP NE - 864.93
 - 12" RCP EAST - 864.10
 - 12" RCP SE - 864.18
 - 42" RCP NW - 864.08
 - CB#204
 - RM 872.00
 - 15" W 865.46
 - 18" NE 865.48
 - 18" S 865.48
 - 12" CONC. WEST - 860.87
 - 8" CLAY EAST - 861.34
 - CB#206 (CS-1)
 - T/C 871.25
 - 15" E/W 865.72
 - 12" S 866.75
 - CB#207
 - T/C 871.75
 - 15" E/W 865.72
 - 12" S 866.75
 - CB#208
 - T/C 871.25
 - 15" E/W 865.72
 - 12" S 866.75
 - CB#209
 - T/C 871.75
 - 15" E/W 865.72
 - 12" S 866.75
 - CB#210
 - T/C 871.25
 - 15" E/W 865.72
 - 12" S 866.75
 - CB#211
 - T/C 871.75
 - 15" E/W 865.72
 - 12" S 866.75
 - CB#212
 - T/C 871.25
 - 15" E/W 865.72
 - 12" S 866.75
 - CB#213 (CDS2015-4)
 - T/C 871.80
 - 12" CONC. NORTH - 861.99
 - 12" CONC. SOUTH - 862.05
 - CB#214
 - T/CAS 872.50
 - 15" W 869.75
 - 8" CONC. EAST - 874.45
 - 8" CONC. WEST - 873.71
 - ST#201A (CDS2015-4)
 - RM 873.50
 - 12" CONC. EAST - 869.35
 - 12" CONC. WEST - 869.20
 - 8" W 871.00
 - CB#201B
 - RM 872.70
 - 12" CONC. SE - 875.70
 - 12" CONC. WEST - 875.77
 - CB#201C
 - RM 872.00
 - 12" CONC. SE - 875.70
 - 12" CONC. WEST - 875.77
 - CB#201D
 - RM 872.00
 - 12" CONC. SE - 875.70
 - 12" CONC. WEST - 875.77
 - CB#201E
 - RM 872.00
 - 12" CONC. SE - 875.70
 - 12" CONC. WEST - 875.77
 - CB#201F
 - RM 872.00
 - 12" CONC. SE - 875.70
 - 12" CONC. WEST - 875.77
 - CB#201G
 - RM 872.00
 - 12" CONC. SE - 875.70
 - 12" CONC. WEST - 875.77
 - CB#201H
 - RM 872.00
 - 12" CONC. SE - 875.70
 - 12" CONC. WEST - 875.77
 - CB#201I
 - RM 872.00
 - 12" CONC. SE - 875.70
 - 12" CONC. WEST - 875.77
 - CB#201J
 - RM 872.00
 - 12" CONC. SE - 875.70
 - 12" CONC. WEST - 875.77
 - CB#201K
 - RM 872.00
 - 12" CONC. SE - 875.70
 - 12" CONC. WEST - 875.77
 - CB#201L
 - RM 872.00
 - 12" CONC. SE - 875.70
 - 12" CONC. WEST - 875.77
 - CB#201M
 - RM 872.00
 - 12" CONC. SE - 875.70
 - 12" CONC. WEST - 875.77
 - CB#201N
 - RM 872.00
 - 12" CONC. SE - 875.70
 - 12" CONC. WEST - 875.77
 - CB#201O
 - RM 872.00
 - 12" CONC. SE - 875.70
 - 12" CONC. WEST - 875.77
 - CB#201P
 - RM 872.00
 - 12" CONC. SE - 875.70
 - 12" CONC. WEST - 875.77
 - CB#201Q
 - RM 872.00
 - 12" CONC. SE - 875.70
 - 12" CONC. WEST - 875.77
 - CB#201R
 - RM 872.00
 - 12" CONC. SE - 875.70
 - 12" CONC. WEST - 875.77
 - CB#201S
 - RM 872.00
 - 12" CONC. SE - 875.70
 - 12" CONC. WEST - 875.77
 - CB#201T
 - RM 872.00
 - 12" CONC. SE - 875.70
 - 12" CONC. WEST - 875.77
 - CB#201U
 - RM 872.00
 - 12" CONC. SE - 875.70
 - 12" CONC. WEST - 875.77
 - CB#201V
 - RM 872.00
 - 12" CONC. SE - 875.70
 - 12" CONC. WEST - 875.77
 - CB#201W
 - RM 872.00
 - 12" CONC. SE - 875.70
 - 12" CONC. WEST - 875.77
 - CB#201X
 - RM 872.00
 - 12" CONC. SE - 875.70
 - 12" CONC. WEST - 875.77
 - CB#201Y
 - RM 872.00
 - 12" CONC. SE - 875.70
 - 12" CONC. WEST - 875.77
 - CB#201Z
 - RM 872.00
 - 12" CONC. SE - 875.70
 - 12" CONC. WEST - 875.77

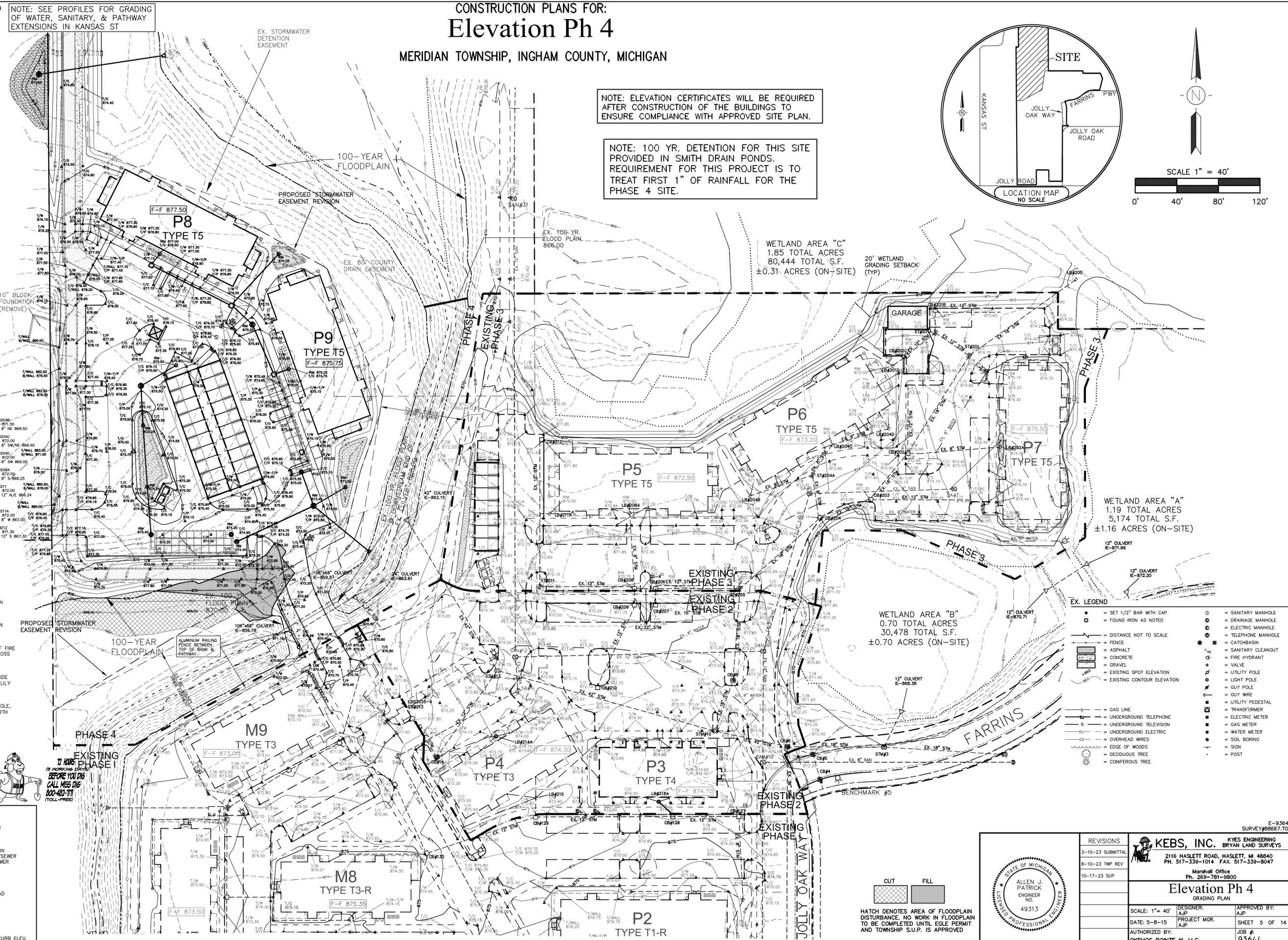
- EX. LEGEND**
- = SET 1/2" BAR WITH CAP
 - = FOUND IRON AS NOTED
 - = SANITARY MANHOLE
 - ⊙ = DRAINAGE MANHOLE
 - ⊙ = ELECTRIC MANHOLE
 - ⊙ = TELEPHONE MANHOLE
 - = CATCHBASIN
 - = SANITARY CLEANOUT
 - = FIRE HYDRANT
 - = VALVE
 - = UTILITY POLE
 - = LIGHT POLE
 - = GUY POLE
 - = GUY WIRE
 - = UTILITY PEDESTAL
 - = TRANSFORMER
 - = ELECTRIC METER
 - = GAS METER
 - = WATER METER
 - = SOIL BORING
 - = SIGN
 - = POST

- EX. LEGEND**
- = GAS LINE
 - = UNDERGROUND TELEPHONE
 - = UNDERGROUND TELEVISION
 - = UNDERGROUND ELECTRIC
 - = OVERHEAD WIRES
 - = EDGE OF WOODS
 - = DECIDUOUS TREE
 - = CONIFEROUS TREE

- EX. LEGEND**
- = EXT. CONTOURS
 - = EXT. WATER MAIN
 - = EXT. SANITARY SEWER
 - = EXT. STORM SEWER
 - = EXT. ELEVATIONS
 - = PROPOSED WATER MAIN
 - = PROPOSED SANITARY SEWER
 - = PROPOSED STORM SEWER
 - = MANHOLE (NEW)
 - = PROPOSED C.B. MANHOLE (EX.)
 - = UTILITY EASEMENT
 - = CENTER LINE OF ROAD
 - = ROAD RIGHT OF WAY
 - = PROPERTY LINE
 - = FIRE HYDRANT
 - = WATER VALVE
 - = THRUST BLOCK
 - = PROPOSED TOP OF CURB ELEV.

- EX. LEGEND**
- = 10' HORIZONTAL SEPARATION & 18" VERTICAL SEPARATION FROM ALL SEWERS.
 - = 10' HORIZONTAL SEPARATION & 18" VERTICAL SEPARATION FROM ALL SEWERS.
 - = 10' HORIZONTAL SEPARATION & 18" VERTICAL SEPARATION FROM ALL SEWERS.

- EX. LEGEND**
- = 10' HORIZONTAL SEPARATION & 18" VERTICAL SEPARATION FROM ALL SEWERS.
 - = 10' HORIZONTAL SEPARATION & 18" VERTICAL SEPARATION FROM ALL SEWERS.
 - = 10' HORIZONTAL SEPARATION & 18" VERTICAL SEPARATION FROM ALL SEWERS.



- EX. LEGEND**
- = SET 1/2" BAR WITH CAP
 - = FOUND IRON AS NOTED
 - = SANITARY MANHOLE
 - ⊙ = DRAINAGE MANHOLE
 - ⊙ = ELECTRIC MANHOLE
 - ⊙ = TELEPHONE MANHOLE
 - = CATCHBASIN
 - = SANITARY CLEANOUT
 - = FIRE HYDRANT
 - = VALVE
 - = UTILITY POLE
 - = LIGHT POLE
 - = GUY POLE
 - = GUY WIRE
 - = UTILITY PEDESTAL
 - = TRANSFORMER
 - = ELECTRIC METER
 - = GAS METER
 - = WATER METER
 - = SOIL BORING
 - = SIGN
 - = POST

REVISIONS	DATE	DESCRIPTION
3-10-23	3-10-23	SUBMITTAL
8-10-23	8-10-23	TWP REV
10-17-23	10-17-23	SUP

KEBS, INC. KYES ENGINEERING
BRYAN LAND SURVEYS
2116 HASLETT ROAD, HASLETT, MI 48840
PH. 517-339-1014 FAX. 517-339-8047
Marshall Office
Ph. 269-781-9800

Elevation Ph 4
GRADING PLAN

SCALE: 1" = 40'
DATE: 5-8-15
AUTHORIZED BY: OKEMOS POINTE III, LLC

DESIGNER: ALLEN J. PATRICK
ENGINEER NO. 49313
APPROVED BY: AJP
PROJECT MGR. AJP
SHEET 5 OF 14
JOB #: 93644

CONSTRUCTION PLANS FOR: Elevation Ph 4

MERIDIAN TOWNSHIP, INGHAM COUNTY, MICHIGAN

PROPOSED STORM INVENTORY:

LB#401
RIM 871.00
T/G 870.00
I.E. 15° E 866.00

CB#402
RIM 876.50
I.E. 12° SE/NE 872.00

LB#402B
RIM 877.00
T/G 876.50
I.E. 12° SW 872.25

CB#403
RIM 875.05
I.E. 12° NW/SE/NE 871.05

LB#404
RIM 875.25
I.E. 12° NW/SE 870.91

LB#404A
RIM 874.25
T/G 873.75
I.E. 12° SW 871.25

CB#405
RIM 874.80
I.E. 12° NW/SE/NE 869.25

LB#405A
RIM 875.00
I.E. 12° SW 870.50

CB#406
RIM 874.65
I.E. 12° NW/SE 869.30

ST#406A
RIM 875.25
I.E. 6° N 871.86
I.E. 6° SW 871.78
I.E. 6° SW 868.36
I.E. 12° SE 868.36

ST#407
RIM 873.45
I.E. 12° NW/SW/NE 867.49
I.E. 15° SE 867.49

LB#407A
RIM 871.00
T/G 870.25
I.E. 12° SW 867.75

ST#408
RIM 875.15
I.E. 12° NE/S 871.15

LB#408A
RIM 875.50
I.E. 12° SW 871.50

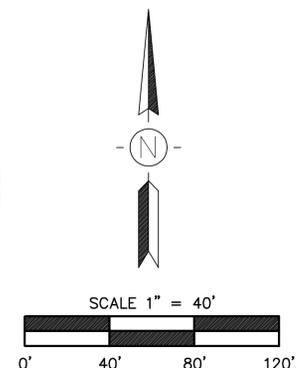
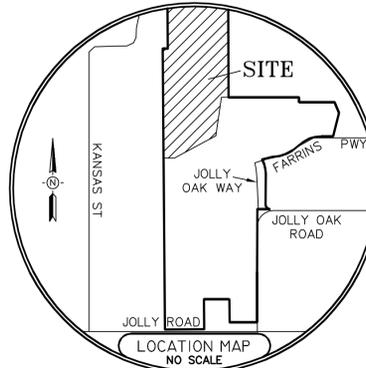
LB#409
RIM 874.25
T/G 873.25
I.E. 12° N/S 869.75

LB#410
RIM 874.25
T/G 873.25
I.E. 12° N/S 869.45

ST#410A
RIM 875.40
I.E. 12° N 869.20
I.E. 12° E 868.86
I.E. 12° S 870.95

CB#411
RIM 874.20
I.E. 12° W 868.82

ST#411A
RIM 874.40
I.E. 6° S 871.33
I.E. 6° W 871.40
I.E. 6° S 867.91
I.E. 12° NE 867.91



EX. INVENTORY:

SANITARY MANHOLE #1
T/CAS 873.50
12" CONC. N - 861.54
6" CONC. SW - 861.77

CATCH BASIN #1
INLET - 875.49

CATCH BASIN #2
INLET - 873.50

STORM MANHOLE #3
TOC - 872.67
12" CONC. NE - 866.78
12" CONC. WEST - 864.89
12" CONC. NE - 866.78
18" CONC. EAST - 864.89

CATCH BASIN #4
INLET - 871.75
12" CONC. NORTH - 867.59
12" CONC. SOUTH - 867.75

CATCH BASIN #5
INLET - 871.30
12" CONC. SW - 867.31
12" CONC. SOUTH - 867.57

STORM MANHOLE #6
TOC - 872.15
18" CONC. EAST - 864.16
36" CONC. SOUTH - 864.14
12" CONC. SE - 865.53

CATCH BASIN #8
(BEDHIVE)
INLET - 873.75
18" CONC. SW - 865.14

SANITARY MANHOLE #9
TOC - 872.15
12" CONC. WEST - 860.87
12" CONC. SOUTH - 861.00
12" CONC. NE - 862.30

STORM MANHOLE #10
RIM - 874.50
12" RCP NE - INACCESSIBLE
18" RCP NE - 864.93
42" RCP EAST - 864.10
12" RCP SE - 861.19
42" RCP NW - 864.08

SANITARY MANHOLE #10
TOC - 872.50
12" RCP NORTH - 861.19
12" RCP NORTH - 861.19
8" CLAY EAST - 861.34

SANITARY MANHOLE #12
TOC - 873.75
12" CONC. NORTH - 860.28
12" CONC. EAST - 860.45
8" PVC SOUTH - 861.42

STORM MANHOLE #13
RIM - 876.67
42" SC - 862.79
18" RCP SW - INACCESSIBLE
42" RCP NW - 862.77

CATCH BASIN #14
TOC - 873.00
12" CONC. NE - 864.17
I.E. 12° NW 867.00
I.E. 8° NE 868.00

CATCH BASIN #15
TOC - 873.82
8" PVC NORTH - 861.83
8" PVC SOUTH - 862.10

SANITARY MANHOLE #16
TOC - 860.83
12" CONC. NORTH - 861.99
12" CONC. SOUTH - 862.05

CATCH BASIN #17
INLET - 874.10
6" TILE NW - 840.45

CATCH BASIN #20
INLET - 878.59
12" CONC. SOUTH - 873.84
18" CONC. WEST - 873.71

CATCH BASIN #21
INLET - 876.78
18" CONC. EAST - 870.90
8" PVC SE - 872.90
8" PVC WEST - 871.10

CATCH BASIN #22
INLET - 880.12
12" CONC. EAST - 875.81

CATCH BASIN #23
INLET - 870.06
12" CONC. NORTH - 867.31
24" CONC. NE - 867.31
12" CONC. EAST - 867.41
24" CONC. SOUTH - 867.42

SANITARY MANHOLE #31
TOC - 871.30
12" CONC. NORTH - 859.48
12" CONC. SOUTH - 859.52

EX. STORM (PHASE 1, 2, & 3)

CB#127
T/W 873.25
I.E. 12° N 868.75
I.E. 8° S 868.75
I.E. 4° N 869.25

CB#128
T/W 873.50
I.E. 12° E/W 868.49
I.E. 6° N 869.50

LB#128A
T/CAS 874.00
I.E. 4° S 869.00

CB#129
T/W 872.80
I.E. 12° E 867.87
I.E. 12° W 867.49
I.E. 8° N 868.50

CB#130
T/W 873.45
I.E. 12° NW/E 867.06
I.E. 4° W 869.30

LB#200
T/CAS 871.00
I.E. 18° SW 867.60

ST#200
RIM 873.85
I.E. 18° SW/NE 866.71
I.E. 12° NW 866.71

CB#202
RIM 872.40
I.E. 8° E 868.60
I.E. 18° NE/SW 866.28
I.E. 12° N 868.40

CB#203
RIM 871.30
I.E. 18° NE/SW 868.06
I.E. 12° E 867.30

CB#204
RIM 871.15
I.E. 8° E 866.45
I.E. 18° NE/SW 865.86

ST#205
T/CAS 872.05
I.E. 15° W 865.46
I.E. 18° NE 865.48
I.E. 18° NE 865.48

CB#206 (CS-4)
T/C 871.25
I.E. 12° E/W 865.72
I.E. 12° S 866.75

CB#207
T/C 871.75
I.E. 12° N 867.25

CB#208
T/C 871.25
I.E. 10° E 865.79
I.E. 12° S 865.79
I.E. 8° N 867.05
I.E. 12° W 865.79

CB#209
T/C 871.75
I.E. 12° N/W 865.87

CB#210
T/C 872.55
I.E. 12° NE 866.38

CB#213 (CDS2015-4)
T/C 871.80
I.E. 12° SE 867.30

LB#213A
T/CAS 873.50
I.E. 8° W 869.75

LB#214
T/CAS 872.50
I.E. 8° S/NE 869.50

ST#201A (CDS2015-4)
RIM 873.40
I.E. 12° SE 866.87
I.E. 12° N 868.15
I.E. 12° SW 868.15

CB#201B
RIM 872.00
I.E. 8° SW/NE 868.40

LB#204D
RIM 872.00
I.E. 8° SW 869.00

LB#208A
RIM 872.00
I.E. 8° SW 868.60
I.E. 12° NE 868.35

LB#2010
RIM 872.00
I.E. 8° NE 869.00

LB#202A
RIM 874.75
I.E. 8° W 871.00

ST#204A (CDS2015-4)
RIM 874.00
I.E. 8° N 867.00
I.E. 8° S 867.82
I.E. 8° SW 867.82
I.E. 8° NE 868.00

CB#212
RIM 871.30
I.E. 12° S 867.30

LB#208B
RIM 872.50
I.E. 8° NE 868.50

LB#204C
RIM 872.00
I.E. 8° SW/NE 868.40

LB#204D
RIM 872.00
I.E. 8° SW 869.00

LB#208A
RIM 872.00
I.E. 8° SW 868.60
I.E. 12° NE 868.35

ST#211
RIM 872.00
I.E. 12° N/E 866.24

LB#211A
RIM 872.00
I.E. 8° W 867.00

CB#212
RIM 871.30
I.E. 12° S 867.30

EX. STORM (PHASE 1, 2, & 3)

CB#202
RIM 872.40
I.E. 8° E 868.60
I.E. 18° NE/SW 866.28
I.E. 12° N 868.40

CB#203
RIM 871.30
I.E. 18° NE/SW 868.06
I.E. 12° E 867.30

CB#204
RIM 871.15
I.E. 8° E 866.45
I.E. 18° NE/SW 865.86

ST#205
T/CAS 872.05
I.E. 15° W 865.46
I.E. 18° NE 865.48
I.E. 18° NE 865.48

CB#206 (CS-4)
T/C 871.25
I.E. 12° E/W 865.72
I.E. 12° S 866.75

CB#207
T/C 871.75
I.E. 12° N 867.25

CB#208
T/C 871.25
I.E. 10° E 865.79
I.E. 12° S 865.79
I.E. 8° N 867.05
I.E. 12° W 865.79

CB#209
T/C 871.75
I.E. 12° N/W 865.87

CB#210
T/C 872.55
I.E. 12° NE 866.38

CB#213 (CDS2015-4)
T/C 871.80
I.E. 12° SE 867.30

LB#213A
T/CAS 873.50
I.E. 8° W 869.75

LB#214
T/CAS 872.50
I.E. 8° S/NE 869.50

ST#201A (CDS2015-4)
RIM 873.40
I.E. 12° SE 866.87
I.E. 12° N 868.15
I.E. 12° SW 868.15

CB#201B
RIM 872.00
I.E. 8° SW/NE 868.40

LB#204D
RIM 872.00
I.E. 8° SW 869.00

LB#208A
RIM 872.00
I.E. 8° SW 868.60
I.E. 12° NE 868.35

LB#2010
RIM 872.00
I.E. 8° NE 869.00

LB#202A
RIM 874.75
I.E. 8° W 871.00

ST#204A (CDS2015-4)
RIM 874.00
I.E. 8° N 867.00
I.E. 8° S 867.82
I.E. 8° SW 867.82
I.E. 8° NE 868.00

CB#212
RIM 871.30
I.E. 12° S 867.30

LB#208B
RIM 872.50
I.E. 8° NE 868.50

LB#204C
RIM 872.00
I.E. 8° SW/NE 868.40

LB#204D
RIM 872.00
I.E. 8° SW 869.00

LB#208A
RIM 872.00
I.E. 8° SW 868.60
I.E. 12° NE 868.35

ST#211
RIM 872.00
I.E. 12° N/E 866.24

LB#211A
RIM 872.00
I.E. 8° W 867.00

CB#212
RIM 871.30
I.E. 12° S 867.30

EX. STORM (PHASE 1, 2, & 3)

CB#202
RIM 872.40
I.E. 8° E 868.60
I.E. 18° NE/SW 866.28
I.E. 12° N 868.40

CB#203
RIM 871.30
I.E. 18° NE/SW 868.06
I.E. 12° E 867.30

CB#204
RIM 871.15
I.E. 8° E 866.45
I.E. 18° NE/SW 865.86

ST#205
T/CAS 872.05
I.E. 15° W 865.46
I.E. 18° NE 865.48
I.E. 18° NE 865.48

CB#206 (CS-4)
T/C 871.25
I.E. 12° E/W 865.72
I.E. 12° S 866.75

CB#207
T/C 871.75
I.E. 12° N 867.25

CB#208
T/C 871.25
I.E. 10° E 865.79
I.E. 12° S 865.79
I.E. 8° N 867.05
I.E. 12° W 865.79

CB#209
T/C 871.75
I.E. 12° N/W 865.87

CB#210
T/C 872.55
I.E. 12° NE 866.38

CB#213 (CDS2015-4)
T/C 871.80
I.E. 12° SE 867.30

LB#213A
T/CAS 873.50
I.E. 8° W 869.75

LB#214
T/CAS 872.50
I.E. 8° S/NE 869.50

ST#201A (CDS2015-4)
RIM 873.40
I.E. 12° SE 866.87
I.E. 12° N 868.15
I.E. 12° SW 868.15

CB#201B
RIM 872.00
I.E. 8° SW/NE 868.40

LB#204D
RIM 872.00
I.E. 8° SW 869.00

LB#208A
RIM 872.00
I.E. 8° SW 868.60
I.E. 12° NE 868.35

LB#2010
RIM 872.00
I.E. 8° NE 869.00

LB#202A
RIM 874.75
I.E. 8° W 871.00

ST#204A (CDS2015-4)
RIM 874.00
I.E. 8° N 867.00
I.E. 8° S 867.82
I.E. 8° SW 867.82
I.E. 8° NE 868.00

CB#212
RIM 871.30
I.E. 12° S 867.30

LB#208B
RIM 872.50
I.E. 8° NE 868.50

LB#204C
RIM 872.00
I.E. 8° SW/NE 868.40

LB#204D
RIM 872.00
I.E. 8° SW 869.00

LB#208A
RIM 872.00
I.E. 8° SW 868.60
I.E. 12° NE 868.35

ST#211
RIM 872.00
I.E. 12° N/E 866.24

LB#211A
RIM 872.00
I.E. 8° W 867.00

CB#212
RIM 871.30
I.E. 12° S 867.30

BENCHMARKS:

BENCHMARK #1 ELEVATION: 882.25 (NAVD 88)
I HAVE NO IDEA - OFFSITE WITH NO DESCRIPTION IN FIELD NOTES.

BENCHMARK #2 ELEVATION: 881.86 (NAVD 88)
I HAVE NO IDEA - OFFSITE WITH NO DESCRIPTION IN FIELD NOTES.

BENCHMARK #4 ELEVATION: 877.96 (NAVD 88)
CHISELED "X" ON FLANGE BOLT ON SOUTH SIDE OF FIRE HYDRANT, SOUTH SIDE OF FERRINS PARKWAY, ACROSS FROM UNFINISHED ROAD TO THE NORTH.

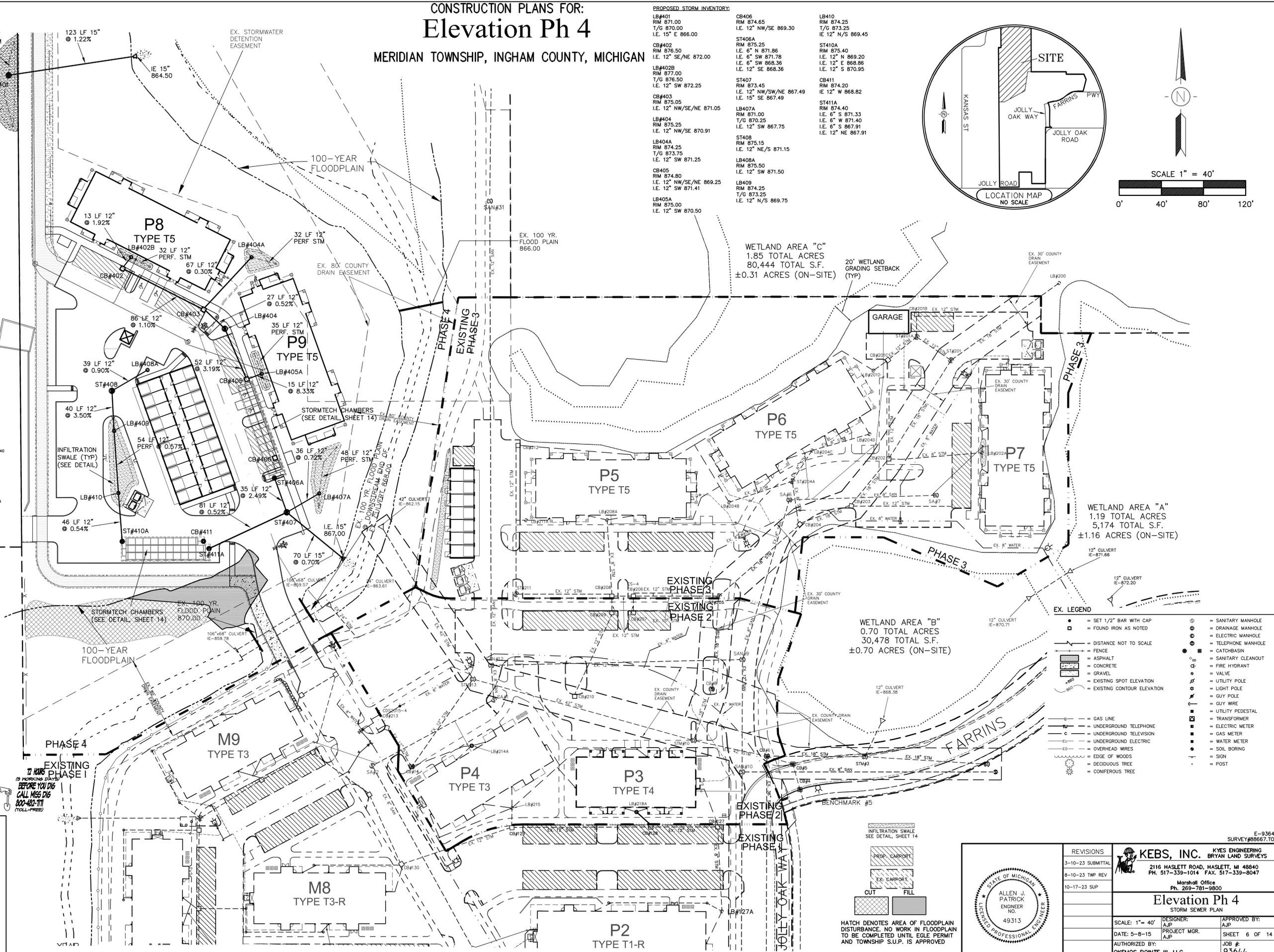
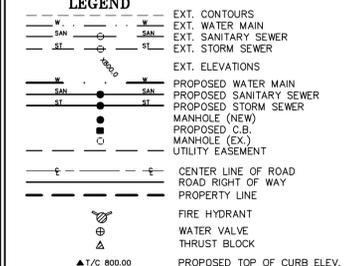
BENCHMARK #5 ELEVATION: 873.79 (NAVD 88)
CHISELED "X" ON FLANGE BOLT ON THE SOUTH SIDE OF FERRINS PARKWAY, 50'± EASTERLY OF WATER LILY WAY.

BENCHMARK #6 ELEVATION: 881.99 (NAVD 88)
60D NAIL IN THE NORTHEAST SIDE OF A UTILITY POLE, ON THE WEST SIDE OF WATER LILY WAY, 35'± NORTH OF THE CENTERLINE OF JOLLY OAK ROAD (TO THE EAST).

NOTE: ALL PROPOSED SANITARY EXCEPT FOR LEADS SHALL HAVE A 20' EASEMENT

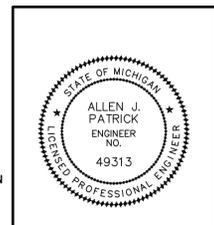
NOTE: ALL PROPOSED WATER MAIN EXCEPT FOR LEADS SHALL HAVE A 20' EASEMENT

NOTE: WATER SHALL HAVE 10' HORIZONTAL SEPARATION & 18" VERTICAL SEPARATION FROM ALL SEWERS.



EX. LEGEND

●	= SET 1/2" BAR WITH CAP	⊙	= SANITARY MANHOLE
□	= FOUND IRON AS NOTED	⊙	= DRAINAGE MANHOLE
○	= DISTANCE NOT TO SCALE	⊙	= TELEPHONE MANHOLE
—	= FENCE	⊙	= CATCHBASIN
▨	= ASPHALT	⊙	= SANITARY CLEANOUT
▩	= CONCRETE	⊙	= FIRE HYDRANT
▧	= GRAVEL	⊙	= VALVE
—	= EXISTING SPOT ELEVATION	⊙	= UTILITY POLE
—	= EXISTING CONTOUR ELEVATION	⊙	= LIGHT POLE
—		⊙	= GUY POLE
—		⊙	= GUY WIRE
—		⊙	= UTILITY PEDESTAL
—		⊙	= TRANSFORMER
—		⊙	= ELECTRIC METER
—		⊙	= GAS METER
—		⊙	= WATER METER
—		⊙	= SOIL BORING
—		⊙	= SIGN
—		⊙	= POST



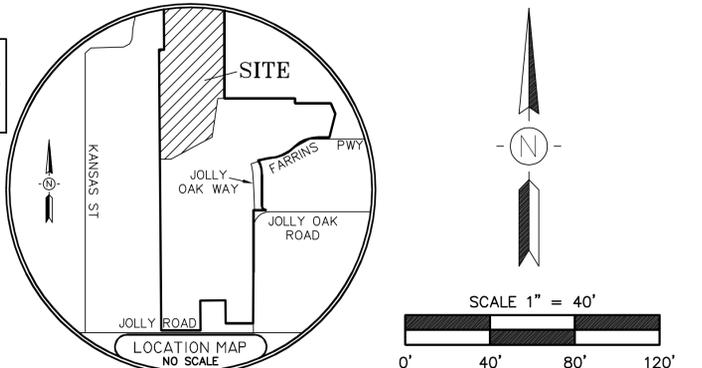
E-93644 SURVEY#88667.TOP		
REVISIONS	KEBS, INC. KYES ENGINEERING BRYAN LAND SURVEYS 2116 HASLETT ROAD, HASLETT, MI 48840 PH. 517-339-1014 FAX. 517-339-8047 Marshall Office Ph. 269-781-9800	
3-10-23 SUBMITTAL	Elevation Ph 4 STORM SEWER PLAN	
8-10-23 TMP REV		
10-17-23 SUP		
SCALE: 1" = 40'	DESIGNER: AJP	APPROVED BY: AJP
DATE: 5-8-15	PROJECT MGR. AJP	SHEET 6 OF 14
AUTHORIZED BY: OKEMOS POINTE III, LLC	JOB #:	93644

CONSTRUCTION PLANS FOR: Elevation Ph 4

MERIDIAN TOWNSHIP, INGHAM COUNTY, MICHIGAN

SS8 DENOTES ALL LAWNBASINS & CATCHBASINS (TYP)

SOIL TYPE:
 Sb Sebewa loam, 0 to 2 percent slopes
 AnA Aubbeenaubee-Capac sandy loams, 0 to 3 percent slopes.
 OsB Oshtemo sandy loam, 0 to 6 percent slopes
 MbB Metea loamy sand, 2 to 6 percent slopes
 Ovc Ovcosso-Marlette sandy loams, 6 to 12 percent slopes



LEGAL DESCRIPTION:
 Phase 4: A parcel of land in the Southwest 1/4 of Section 33, T4N, R1W, Meridian Township, Ingham County, Michigan, the boundary of said parcel described as: Commencing at the Southwest corner of said Section 33; thence N89°46'20"E along the South line of said Section 33 a distance of 858.00 feet; thence N00°36'06"W parallel with the West line of Section 33 a distance of 1217.85 feet to the point of beginning of this description; thence continuing N00°36'06"W parallel with said West line 778.71 feet; thence N89°46'12"E 35.84 feet; thence N00°27'14"W 642.58 feet to the East-West 1/4 line of said Section 33; thence N89°44'23"E along said East-West 1/4 line 433.70 feet to the West line of Fieldstone Village Condominium, Subdivision Plan No. 184, Ingham County Records; thence S00°18'07"E along said West line and the West line of Coyote Creek Condominium, Subdivision Plan No. 82, Ingham County Records, a distance of 989.98 feet; thence S89°45'08"W 49.74 feet; thence S08°19'09"W 276.80 feet; thence S61°38'16"W 333.53 feet; thence S89°23'54"W 78.22 feet to the point of beginning.

- EX. INVENTORY:**
- SANITARY MANHOLE #1
T/CAS 873.65
12" CONC. N - 861.54
6" CONC. SW - 861.77
 - CATCH BASIN #1
INLET - 875.49
 - CATCH BASIN #2
INLET - 873.58
 - STORM MANHOLE #3
T/C - 872.67
12" CONC. N - 866.78
18" CONC. WEST - 864.89
12" CONC. NE - 866.78
18" CONC. EAST - 864.89
 - CATCH BASIN #4
INLET - 871.75
12" CONC. NORTH - 867.59
12" CONC. SOUTH - 867.75
 - CATCH BASIN #5
INLET - 871.38
12" CONC. SW - 867.31
12" CONC. SOUTH - 867.57
 - STORM MANHOLE #6
T/C - 872.15
42" CONC. NW - 864.08
18" CONC. EAST - 864.18
38" CONC. SOUTH - 864.14
12" CONC. SE - 865.53
 - CATCH BASIN #8
(BEDHEAD)
RM 873.85
INLET - 873.75
18" CONC. SW - 865.14
 - SANITARY MANHOLE #9
T/C - 872.15
12" CONC. WEST - 860.87
12" CONC. SOUTH - 861.00
12" CONC. NE - 862.30
 - STORM MANHOLE #10
RM - 874.50
12" RCP NE - INACCESSIBLE
18" RCP NW - 864.93
42" RCP EAST - 864.10
12" RCP SE - 861.18
42" RCP NW - 864.08
 - SANITARY MANHOLE #10
T/C - 872.50
12" RCP NORTH - 861.19
12" RCP NORTH - 861.19
8" CLAY EAST - 861.34
 - SANITARY MANHOLE #12
T/C - 871.25
12" CONC. NORTH - 860.28
18" PVC SOUTH - 861.42
 - STORM MANHOLE #13
RM - 876.67
42" RCP NW - 862.79
18" RCP SW - INACCESSIBLE
42" RCP NW - 862.77
 - CATCH BASIN #14
T/C - 873.00
12" CONC. NE - 864.17
12" NW 867.00
12" NE 868.00
 - SANITARY MANHOLE #15
T/C - 873.85
8" PVC NORTH - 861.83
8" PVC SOUTH - 862.10
 - SANITARY MANHOLE #16
T/C - 860.83
12" CONC. NORTH - 861.99
12" CONC. SOUTH - 862.95
 - CATCH BASIN #17
INLET - 874.10
8" TILE NW - 840.45
 - CATCH BASIN #20
T/CAS 872.50
INLET - 878.58
 - CATCH BASIN #21
INLET - 876.78
12" CONC. EAST - 870.90
8" PVC SE - 872.90
12" PVC WEST - 871.10
 - CATCH BASIN #22
INLET - 880.02
12" CONC. WEST - 875.77
 - CATCH BASIN #23
INLET - 880.16
12" CONC. EAST - 875.81
 - CATCH BASIN #29
INLET - 875.00
12" CONC. EAST - 869.35
12" CONC. NW - 869.20
 - CATCH BASIN #30
INLET - 870.06
12" CONC. NORTH - 867.31
24" CONC. NE - 867.31
12" CONC. EAST - 867.41
24" CONC. SOUTH - 867.42
 - SANITARY MANHOLE #31
T/C - 871.38
12" CONC. NORTH - 859.48
12" CONC. SOUTH - 859.52

- BENCHMARKS:**
- BENCHMARK #1 ELEVATION: 882.25 (NAVD 88)
I HAVE NO IDEA - OFFSITE WITH NO DESCRIPTION IN FIELD NOTES.
 - BENCHMARK #2 ELEVATION: 881.86 (NAVD 88)
I HAVE NO IDEA - OFFSITE WITH NO DESCRIPTION IN FIELD NOTES.
 - BENCHMARK #4 ELEVATION: 877.96 (NAVD 88)
CHISELED "X" ON FLANGE BOLT ON SOUTH SIDE OF FIRE HYDRANT, SOUTH SIDE OF FERRINS PARKWAY, ACROSS FROM UNFINISHED ROAD TO THE NORTH.
 - BENCHMARK #5 ELEVATION: 873.79 (NAVD 88)
CHISELED "X" ON FLANGE BOLT ON THE SOUTH SIDE OF FERRINS PARKWAY, 50'± EASTERLY OF WATER LILY WAY.
 - BENCHMARK #6 ELEVATION: 881.99 (NAVD 88)
60D NAIL IN THE NORTHEAST SIDE OF A UTILITY POLE, ON THE WEST SIDE OF WATER LILY WAY, 35'± NORTH OF THE CENTERLINE OF JOLLY OAK ROAD (TO THE EAST).

NOTE: ALL PROPOSED SANITARY EXCEPT FOR LEADS SHALL HAVE A 20' EASEMENT

NOTE: ALL PROPOSED WATER MAIN EXCEPT FOR LEADS SHALL HAVE A 20' EASEMENT

NOTE: WATER SHALL HAVE 10' HORIZONTAL SEPARATION & 18" VERTICAL SEPARATION FROM ALL SEWERS.



LEGEND

W	EXT. CONTOURS
WM	EXT. WATER MAIN
SW	EXT. SANITARY SEWER
ST	EXT. STORM SEWER
EL	EXT. ELEVATIONS
W	PROPOSED WATER MAIN
SW	PROPOSED SANITARY SEWER
ST	PROPOSED STORM SEWER
○	MANHOLE (NEW)
○	PROPOSED C.B. MANHOLE (EX.)
○	UTILITY EASEMENT
—	CENTER LINE OF ROAD
—	ROAD RIGHT OF WAY
—	PROPERTY LINE
⊕	FIRE HYDRANT
⊕	WATER VALVE
⊕	THRUST BLOCK
▲	PROPOSED TOP OF CURB ELEV.

KEY BEST MANAGEMENT PRACTICES

KEY	BEST MANAGEMENT PRACTICES	SYMBOL	WHERE USED
E8	PERMANENT SEEDING		Stabilization method utilized on sites where earth change has been completed (final grading attained).
E9	MULCH BLANKET		On exposed slopes, newly seeded areas, new ditch bottoms, or areas subject to erosion.
E12	RIPRAP		Use along shorelines, waterways, or where concentrated flows occur. Slows velocity, reduces sediment load, and reduces erosion.
S51	SILT FENCE		Use adjacent to critical areas, to prevent sediment laden sheet flow from entering these areas.
S53	STABILIZED CONSTRUCTION ACCESS		Used at every point where construction traffic enters or leaves a construction site.
S58	INLET PROTECTION FABRIC DROP		Use at stormwater inlets, especially at construction sites.

CONSTRUCTION SCHEDULE & SEQUENCING:

CONSTRUCTION SCHEDULE & SEQUENCING:	2023	2024
	AUGUST	SEPTEMBER
PLACE AND MAINTAIN TEMPORARY EROSION CONTROLS	██████████	██████████
TOPSOIL STRIPPING & STOCKPILING	██████████	██████████
ON-SITE UTILITIES CONSTRUCTION	██████████	██████████
SITE GRADING & EARTHWORK	██████████	██████████
PARKING LOT CONSTRUCTION	██████████	██████████
TOPSOIL SPREADING	██████████	██████████
PERMANENT SEEDING	██████████	██████████
FINAL INSPECTIONS & REMOVE TEMPORARY EROSION CONTROLS	██████████	██████████

AREA DISTURBED = 3.55 ACRES

—●— SILT FENCE (TYP.)

--- LIMITS OF EARTH DISTURBANCE (TYP.)

PHASE 4
EXISTING PHASE I

M9 TYPE T3

P8 TYPE T5

P9 TYPE T5

- SOIL EROSION CONTROL NOTES:**
- ALL SOIL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH MERIDIAN TOWNSHIP PUBLIC WORKS AND ENGINEERING REQUIREMENTS AND PROJECT SPECIFICATIONS.
 - ANY EROSION OR SEDIMENT FROM WORK ON THIS SITE SHALL BE CONTAINED ON THE SITE AND NOT BE ALLOWED TO COLLECT ON ANY OFF-SITE AREAS, OR IN WATERWAYS, WATERWAYS INCLUDE BOTH NATURAL AND MANMADE OPEN DITCHES, STREAMS, STORM DRAINS, LAKES AND PONDS.
 - ALL CONSTRUCTION TRAFFIC SHALL USE THE CLEAN STONE EXIT. SEE DETAIL SHEET FOR DETAIL.
 - DUST CONTROL WILL BE EXERCISED AT ALL TIMES WITHIN THE PROJECT BY THE CONTRACTORS. SPRINKLING TANK TRUCKS SHALL BE AVAILABLE AT ALL TIMES TO BE USED ON HAUL ROUTES OR OTHER PLACES WHERE DUST BECOMES A PROBLEM.
 - SEDIMENT @ C.B.'s SHALL BE REMOVED AFTER EVERY STORM. SEEDING OF EXPOSED AREAS SHALL BE COMPLETED WITHIN 5 DAYS OF FINAL GRADING.
 - ALL DISTURBED AREAS WILL RECEIVE PERMANENT EROSION CONTROL WITHIN 5 DAYS OF FINAL GRADING. AREAS NOT STABILIZED SHALL BE DIVERTED TOWARD TEMPORARY SEDIMENT BASINS.
 - ANY CONSTRUCTION ACCESS ROAD WILL BE PROTECTED WITH PULVERIZED ASPHALT, CRUSHED STONE OR CRUSHED CONCRETE AGGREGATE SIZE 2"-3".
 - WEATHER AND UNFORESEEN DELAYS MAY RESULT IN EXTENSION OF CONSTRUCTION SCHEDULE.
 - SITE DEVELOPMENT CONTRACTOR SHALL INSPECT SOIL EROSION CONTROL MEASURES ON A DAILY BASIS, MORE OFTEN IF NECESSARY. ANY NEEDED REPAIRS SHALL BE PROMPTLY MADE.
 - SITE DEVELOPMENT CONTRACTOR SHALL MEET WITH SOIL EROSION ENFORCEMENT OFFICER PRIOR TO START OF
 - ALL TEMPORARY SEDIMENT CONTROL MEASURES ARE TO BE INSTALLED PRIOR TO EARTH DISTURBANCE ACTIVITY. CHECK DAILY FOR EFFECTIVENESS AND REPAIR AS NEEDED. A MERIDIAN TOWNSHIP INSPECTOR IS TO VERIFY PROPER INSTALLATION OF APPROVED SECS MEASURES PRIOR TO COMMENCEMENT OF EARTH DISTURBANCE ON SITE.
 - ROLLED EROSION CONTROL MATTING SHALL BE INSTALLED AS THE MULCH.

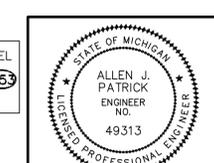
- SEQUENCE OF CONSTRUCTION**
- INSTALL ALL TEMPORARY SILT FENCE PER PLAN AND AS SHOWN ON DETAIL.
 - CONSTRUCT THE TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT AT DRAIN CROSSING AT NW CORNER OF PHASE 2
 - INSTALL INLET PROTECTION FABRIC DROPS BETWEEN THE FRAME AND COVER OF ALL EXISTING YARD BASINS OR INLETS WHICH MAY BE SUSCEPTIBLE TO SEDIMENT EROSION FROM THE PROPOSED CONSTRUCTION AS SHOWN IN THESE PLANS.
 - WHILE MAINTAINING A VEGETATIVE BUFFER WHENEVER POSSIBLE STRIP AND STOCKPILE TOPSOIL ABOVE AREAS OF PROPOSED EXCAVATION OR GRADING FOR LATER USE ON SITE PLACE STOCKPILED TOPSOIL IN AREAS WHICH ARE NEITHER SUBJECT TO HIGH RUNOFF NOR ALONG STEEP SLOPES SEED AND MULCH STOCKPILES IMMEDIATELY TO PREVENT WIND BLOWN SEDIMENT POLLUTION AND EXCESSIVE DUST.
 - EXCAVATE FOR PROPOSED PARKING LOT AND UTILITY CONSTRUCTION AS NECESSARY. DO NOT EXPOSE AREAS FAR IN ADVANCE OF THE PROPOSED CONSTRUCTION FOR THAT AREA. ROUGHEN AND SCARIFY EXPOSED SURFACES TO REDUCE RUNOFF VELOCITY AND SEDIMENTATION. MAINTAIN VEGETATION WHENEVER POSSIBLE TO PROVIDE A NATURAL BUFFER.
 - AFTER COMPLETION OF THE PROPOSED UTILITIES, INSTALL INLET PROTECTION FABRIC DROPS IN ALL INLETS. PLACE INLET PROTECTION FENCE AROUND ALL INLETS.
 - INSTALL TEMPORARY STONE FILTER BERMS PERPENDICULAR TO EXPOSED STEEP SLOPES AS NECESSARY ALONG THE PROPOSED STREETS TO REDUCE RUNOFF VELOCITY AND SEDIMENTATION.
 - TOPSOIL, SEED, APS SILT STOP, FERTILIZE AND MULCH ALL EXPOSED AREAS AS SOON AS FEASIBLE TO PROTECT AND RESTORE PERMANENT VEGETATION, ESPECIALLY BERMS/SLOPES.
 - WATER EXPOSED GROUND REGULARLY TO CONTROL AIRBORNE PARTICULATE MATTER.
 - THE SITE WILL BE PERIODICALLY INSPECTED BY MERIDIAN TOWNSHIP PUBLIC WORKS AND ENGINEERING. THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE RULES AND REGULATIONS OF THAT OFFICE.
 - THE CONTRACTOR SHALL REMOVE ALL TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROL MEASURES AFTER PERMANENT MEASURES ARE IN PLACE AND THE AREA IS STABILIZED.

STREET SWEEPING NOTES:
 ADJACENT STREETS SHALL BE KEPT CLEAN AND FREE OF TRACKED SEDIMENT. A STREET SWEEPER OR A BOBCAT WITH A BROOM ATTACHMENT SHOULD BE KEPT ON SITE TO DEAL WITH ANY OFF-SITE TRACKING AS IT OCCURS.

ADD ADVANCED INLET PROTECTION TO ALL CATCHBASINS & LAWNBASINS.

NOTE: STORM WATER RUNOFF FROM THIS SITE WILL NOT ADVERSELY AFFECT ADJACENT PROPERTIES.

NOTE: ANY STOCKPILING OF SOIL SHALL BE SURROUNDED BY SILT FENCE, SEEDING IF LEFT OVER 30 DAYS.

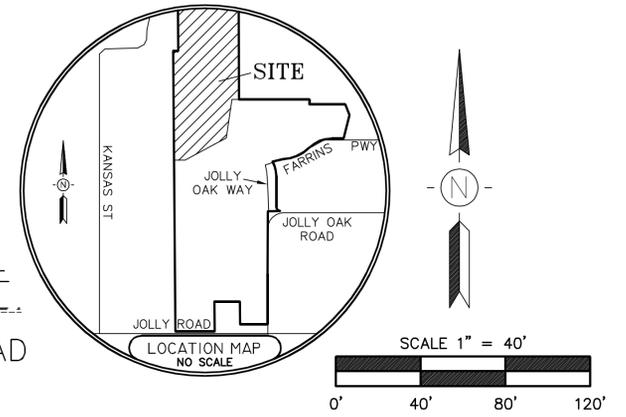


REVISIONS:

NO.	DATE	DESCRIPTION
3-10-23	3-10-23	SUBMITTAL
8-10-23	8-10-23	TWP REV
10-17-23	10-17-23	SUP

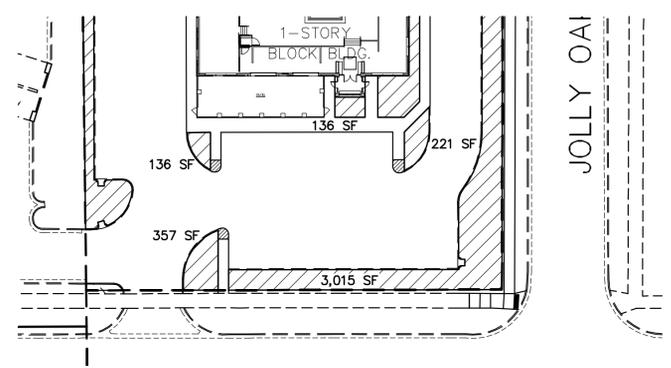
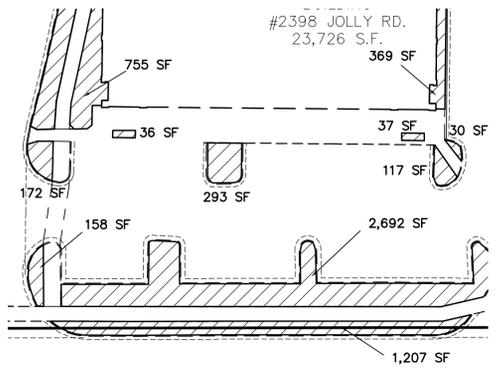
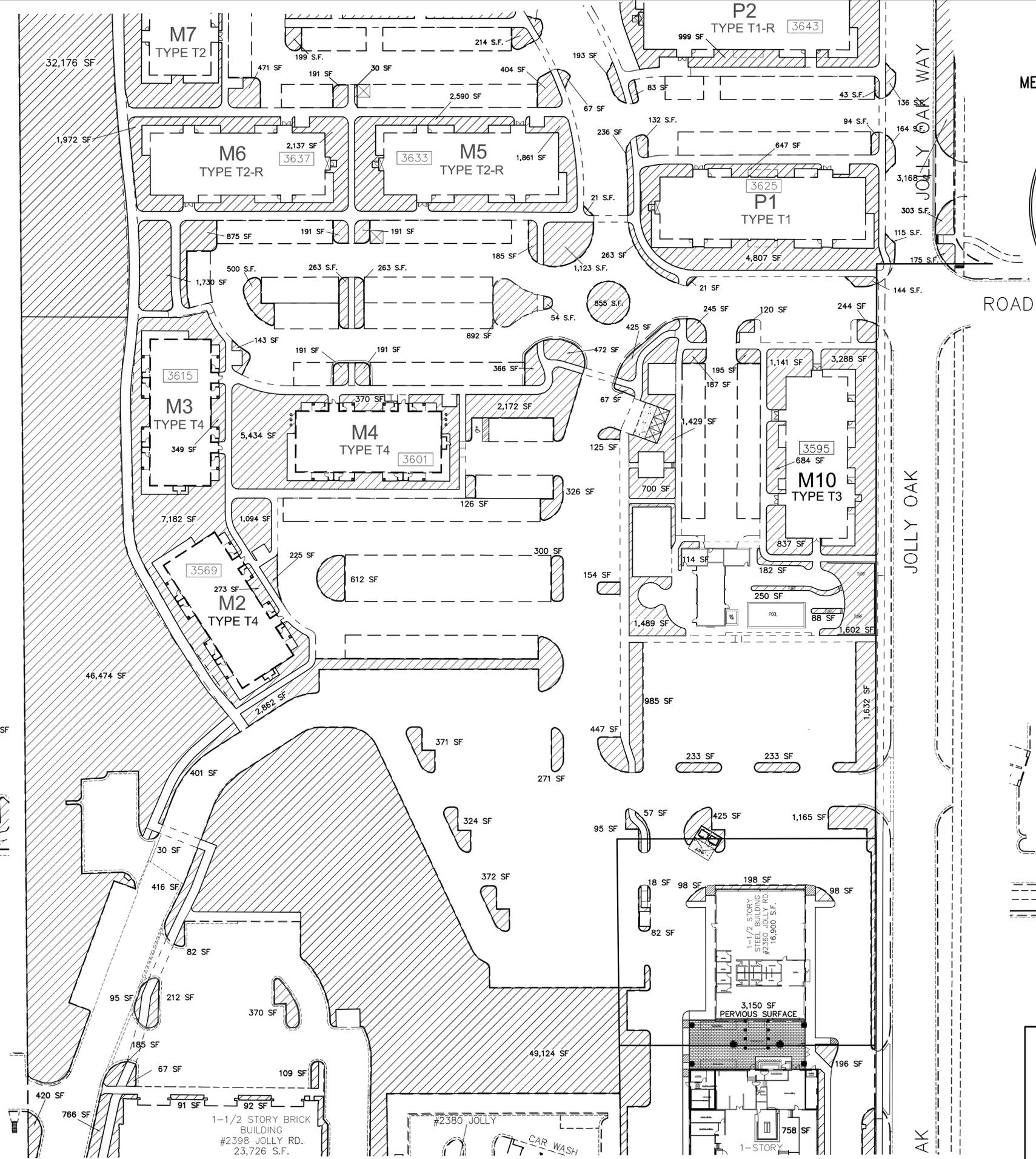
DESIGNER: ALLEN J. PATRICK
PROJECT MGR.: A.J.P.
APPROVED BY: A.J.P.
DATE: 5-8-15
JOB #: 93644

CONSTRUCTION PLANS FOR:
Elevation Ph 4
 MERIDIAN TOWNSHIP, INGHAM COUNTY, MICHIGAN



MAX. ALLOWED IMPERVIOUS AREA = 70%
 PROPOSED PERVIOUS/IMPERVIOUS AREAS:
 TOTAL PROPERTY = 1,699,859 S.F.
 TOTAL PERVIOUS = 938,214 S.F.
 - 1/2 OF DETENTION = 234,341/2 = (-117,170 S.F.)
 NET PERVIOUS = 821,044 S.F. = 48.30%
 NET IMPERVIOUS = 878,815 SF = 51.70%

BENCHMARKS:
 BENCHMARK #1 ELEVATION: 882.25 (NAVD 88)
 I HAVE NO IDEA- OFFSITE WITH NO DESCRIPTION IN FIELD NOTES.
 BENCHMARK #2 ELEVATION: 881.86 (NAVD 88)
 I HAVE NO IDEA- OFFSITE WITH NO DESCRIPTION IN FIELD NOTES.
 BENCHMARK #4 ELEVATION: 877.96 (NAVD 88)
 CHISELED "X" ON FLANGE BOLT ON SOUTH SIDE OF FIRE HYDRANT,
 SOUTH SIDE OF FERRINS PARKWAY, ACROSS FROM UNFINISHED ROAD TO
 THE NORTH.
 BENCHMARK #5 ELEVATION: 873.79 (NAVD 88)
 CHISELED "X" ON FLANGE BOLT ON THE SOUTH SIDE OF FERRINS
 PARKWAY, 50'± EASTERLY OF WATER LILY WAY.
 BENCHMARK #6 ELEVATION: 881.99 (NAVD 88)
 600 NAIL IN THE NORTHEAST SIDE OF A UTILITY POLE, ON THE WEST
 SIDE OF WATER LILY WAY, 35'± NORTH OF THE CENTERLINE OF JOLLY
 OAK ROAD (TO THE EAST).



NOTE: ALL PROPOSED SANITARY EXCEPT FOR LEADS SHALL HAVE A 20' EASEMENT
 NOTE: ALL PROPOSED WATER MAIN EXCEPT FOR LEADS SHALL HAVE A 20' EASEMENT
 NOTE: WATER SHALL HAVE 10" HORIZONTAL SEPARATION & 18" VERTICAL SEPARATION FROM ALL SEWERS.

LEGEND

---	EXT. CONTOURS
---	EXT. WATER MAIN
---	EXT. SANITARY SEWER
---	EXT. STORM SEWER
---	EXT. ELEVATIONS
---	PROPOSED WATER MAIN
---	PROPOSED SANITARY SEWER
---	PROPOSED STORM SEWER
○	MANHOLE (NEW)
○	PROPOSED C.B. MANHOLE (EX.)
---	UTILITY EASEMENT
---	CENTER LINE OF ROAD
---	ROAD RIGHT OF WAY
---	PROPERTY LINE
○	FIRE HYDRANT
○	WATER VALVE
○	THRUST BLOCK
▲	PROPOSED TOP OF CURB ELEV.

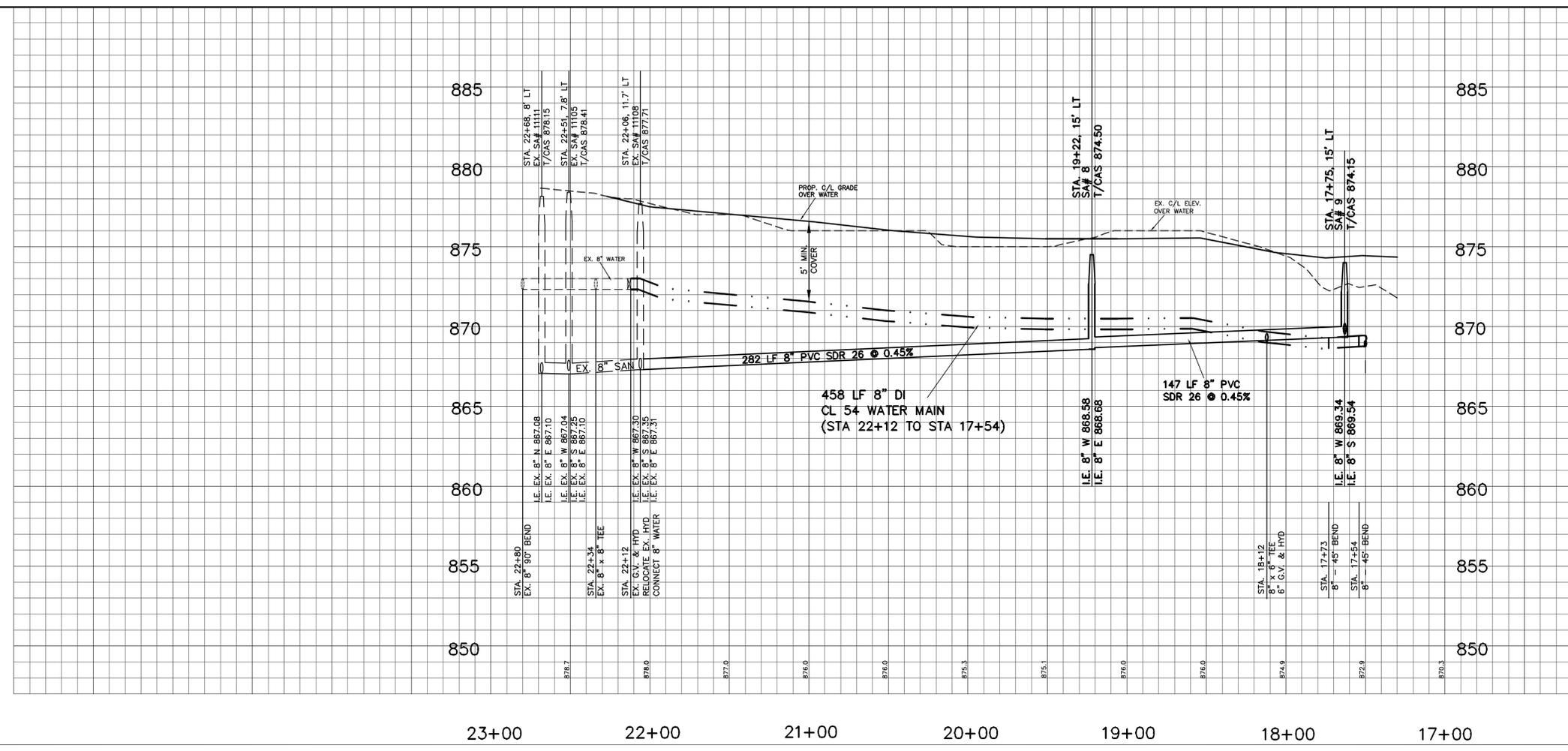
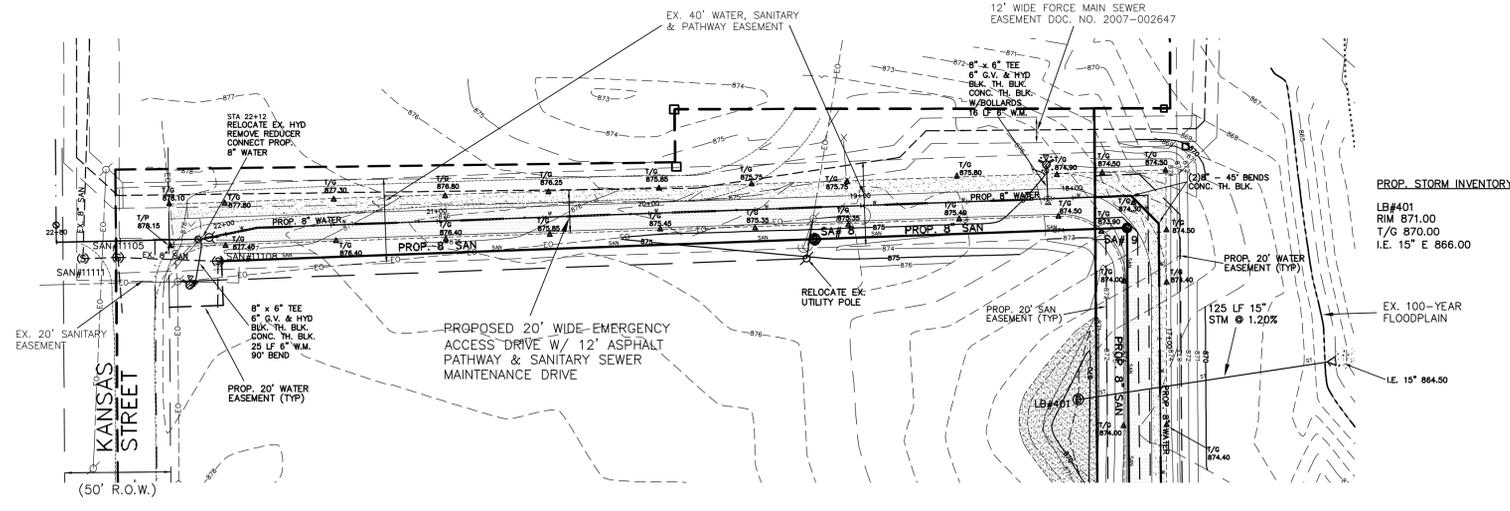
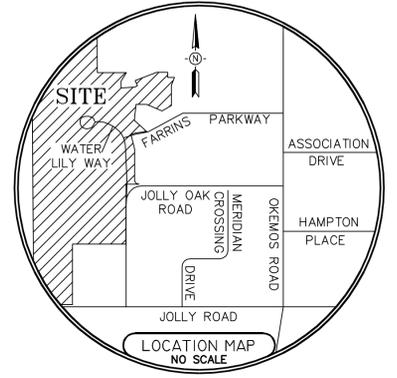
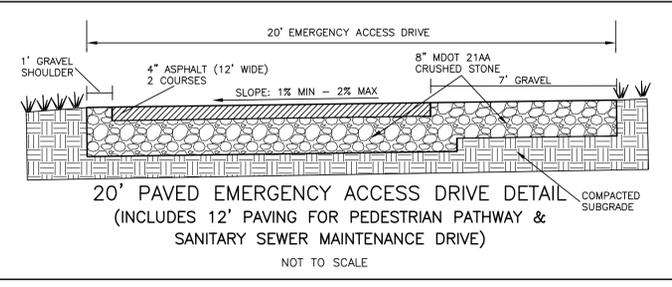
EX. LEGEND

●	= SET 1/2" BAR WITH CAP	○	= SANITARY MANHOLE
□	= FOUND IRON AS NOTED	○	= DRAINAGE MANHOLE
---	= DISTANCE NOT TO SCALE	○	= ELECTRIC MANHOLE
---	= FENCE	○	= TELEPHONE MANHOLE
---	= ASPHALT	○	= CATCHBASIN
---	= CONCRETE	○	= SANITARY CLEANOUT
---	= GRAVEL	○	= FIRE HYDRANT
---	= EXISTING SPOT ELEVATION	○	= UTILITY POLE
---	= EXISTING CONTOUR ELEVATION	○	= LIGHT POLE
---	= GAS LINE	○	= GUY WIRE
---	= UNDERGROUND TELEPHONE	○	= UTILITY PEDESTAL
---	= UNDERGROUND TELEVISION	○	= TRANSFORMER
---	= OVERHEAD ELECTRIC	○	= ELECTRIC METER
---	= EDGE OF WOODS	○	= GAS METER
---	= DECIDUOUS TREE	○	= WATER METER
---	= CONIFEROUS TREE	○	= SOIL BORING
		○	= SIGN
		○	= POST

	REVISIONS 3-10-23 SUBMITTAL 8-10-23 TWP REV 10-17-23 SUP	KEBS, INC. KYES ENGINEERING BRYAN LAND SURVEYS 2116 HASLETT ROAD, HASLETT, MI 48840 PH. 517-339-1014 FAX. 517-339-8047 Marshall Office Ph. 269-781-9800	E-93644 SURVEY#88667.TOP
	PERVIOUS/IMPERVIOUS PLAN SOUTH		
	SCALE: 1" = 40' DATE: 5-8-15 AUTHORIZED BY: OKEMOS POINTE III, LLC	DESIGNER: PROJECT MGR. A.J.P.	APPROVED BY: A.J.P. SHEET 9 OF 14 JOB #: 93644



NOTE: WATER SHALL HAVE 10' HORIZONTAL SEPARATION & 18" VERTICAL SEPARATION FROM ALL SEWERS.



BENCHMARKS

BENCHMARK #4 ELEVATION: 877.96 (NAVD 88)
CHISELED "X" ON FLANGE BOLT ON SOUTH SIDE OF FIRE HYDRANT, SOUTH SIDE OF FERRIS PARKWAY, ACROSS FROM UNFINISHED ROAD TO THE NORTH.

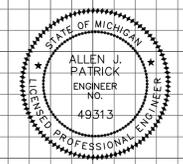
BENCHMARK #5 ELEVATION: 873.79 (NAVD 88)
CHISELED "X" ON FLANGE BOLT ON THE SOUTH SIDE OF FERRIS PARKWAY, 50'E. EASTERLY OF WATER LILY WAY.

BENCHMARK #6 ELEVATION: 881.99 (NAVD 88)
800 NAIL IN THE NORTHEAST SIDE OF A UTILITY POLE, ON THE WEST SIDE OF WATER LILY WAY, 35'E. NORTH OF THE CENTERLINE OF JOLLY OAK ROAD (TO THE EAST).



LEGEND

- EXT. CONTOURS
- EXT. WATER MAIN
- EXT. SANITARY SEWER
- EXT. STORM SEWER
- EXT. ELEVATIONS
- PROPOSED WATER MAIN
- PROPOSED SANITARY SEWER
- PROPOSED STORM SEWER
- PROPOSED (NEW) MANHOLE (EX.)
- UTILITY EASEMENT
- CENTER LINE OF ROAD
- ROAD RIGHT OF WAY
- PROPERTY LINE
- FIRE HYDRANT
- WATER VALVE
- THRUST BLOCK
- PROPOSED TOP OF CURB ELEV.



ENGINEER
FEES, INC.
2116 HASLETT RD.
HASLETT, MICHIGAN
5172 339-1014 48840

DEVELOPER
OKEMOS POINTE III, LLC
P.O. BOX 523
GRAND LEDGE, MI 48837
PH(517) 290-4650

CONTRACTOR

Meridian Charter Township
ingham county, michigan

UTILITIES

Elevation Ph 4

PLAN & PROFILE
MERIDIAN TOWNSHIP

DESIGNER: AJP CHECKED BY: AJP

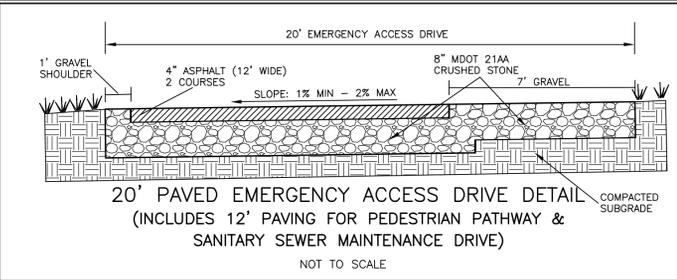
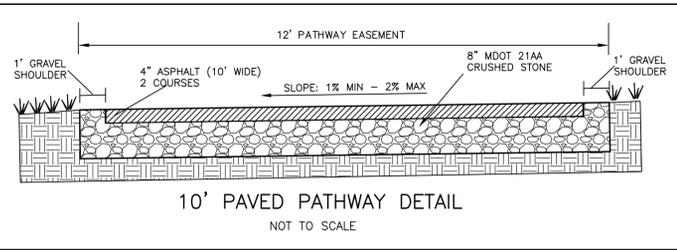
REVISIONS:		
DATE:	BY:	COMMENTS:
3-10-23	AJP	SUBMITTAL
8-10-23	AJP	TWP REV
10-17-23	AJP	TWP SUP

SCALE: 1" = 40' HORIZ.
1" = 4' VERT.

SHEET: 10 OF 14

93644
FILE NAME

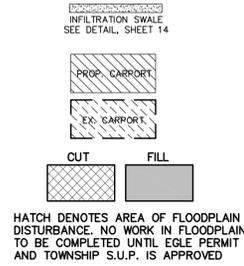
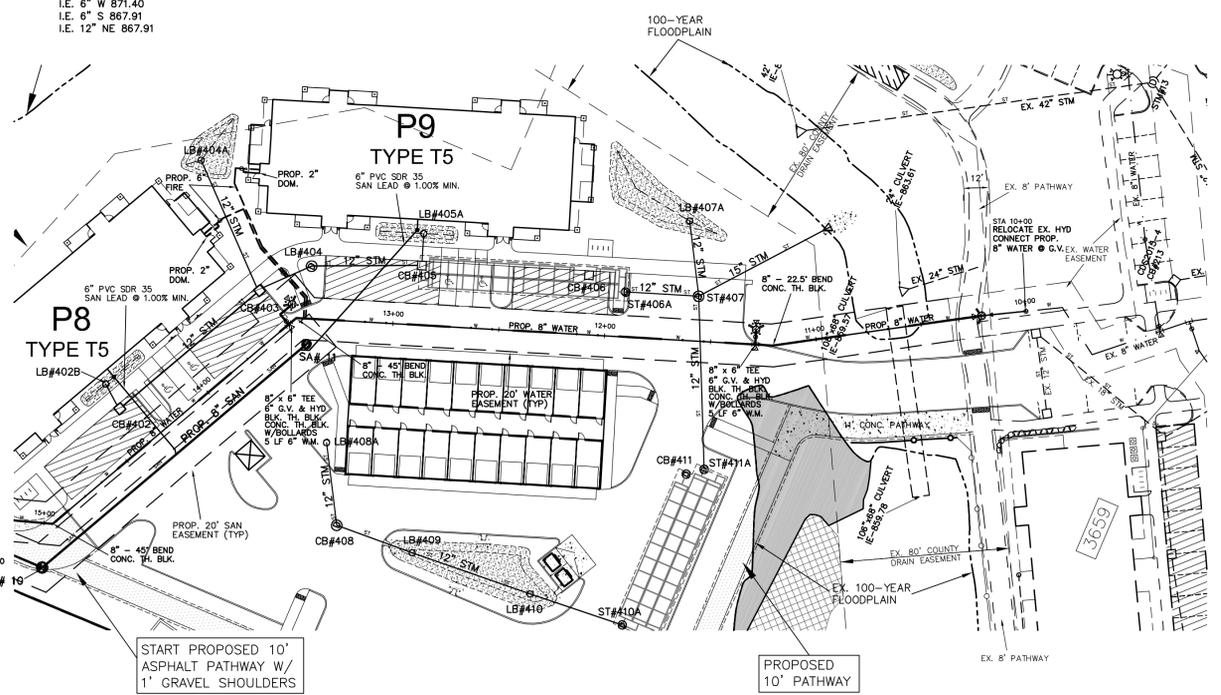
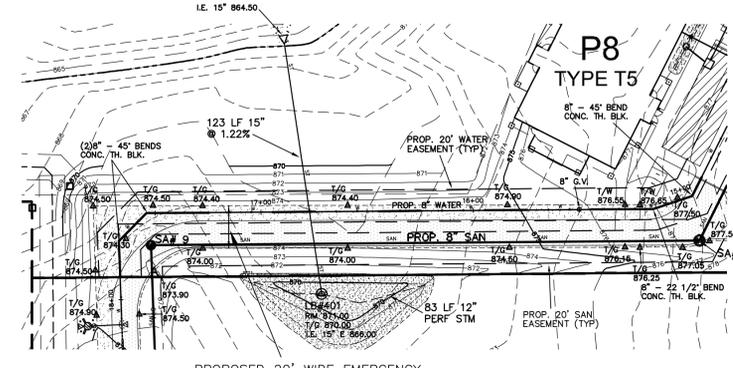
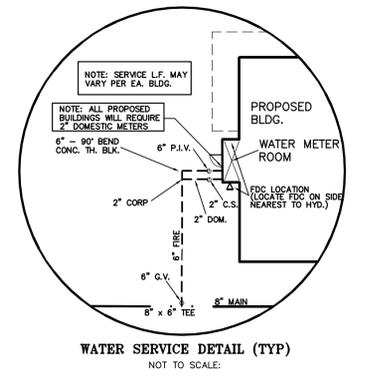
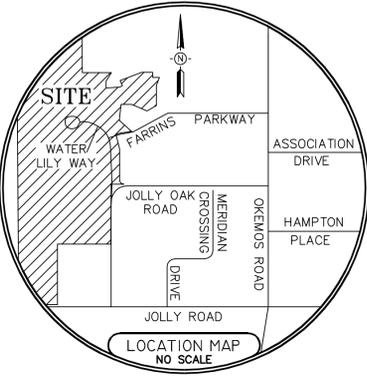
E-93644-PRO-PH4



PROPOSED STORM INVENTORY:

LB#401 RIM 871.00 T/G 870.00 I.E. 15° E 866.00	CB406 RIM 874.65 I.E. 12° NW/SE 869.30	LB410 RIM 874.25 T/G 873.25 I.E. 12° N/S 869.45
CB#402 RIM 876.50 T/G 877.00 I.E. 12° SE/NE 872.00	ST406A RIM 875.25 I.E. 6° N 871.86 I.E. 6° SW 871.78 I.E. 6° SW 868.36 I.E. 12° SE 868.36	ST410A RIM 875.40 I.E. 12° N 869.20 I.E. 12° E 868.86 I.E. 12° S 870.95
LB#402B RIM 877.00 T/G 876.50 I.E. 12° SW 872.25	ST407 RIM 873.45 I.E. 12° NW/SW/NE 867.49 I.E. 15° SE 867.49	CB411 RIM 874.20 IE 12° W 868.82
CB#403 RIM 875.05 I.E. 12° NW/SE/NE 871.05	LB407A RIM 871.00 T/G 870.25 I.E. 12° SW 867.75	ST411A RIM 874.40 I.E. 6° S 871.33 I.E. 6° W 871.40 I.E. 6° S 867.91 I.E. 12° NE 867.91
LB#404 RIM 875.25 I.E. 12° NW/SE 870.91	ST408 RIM 875.15 I.E. 12° NE/S 871.15 I.E. 12° SW 871.25	
LB404A RIM 874.25 T/G 873.75 I.E. 12° SW 871.25	CB405 RIM 874.80 I.E. 12° NW/SE/NE 869.25 I.E. 12° SW 871.41	
CB#405 RIM 874.80 I.E. 12° NW/SE/NE 869.25 I.E. 12° SW 871.41	LB409 RIM 874.25 T/G 873.25 I.E. 12° N/S 869.75	
LB#405A RIM 875.00 I.E. 12° SW 870.50		

NOTE: WATER SHALL HAVE 10' HORIZONTAL SEPARATION & 18" VERTICAL SEPARATION FROM ALL SEWERS.

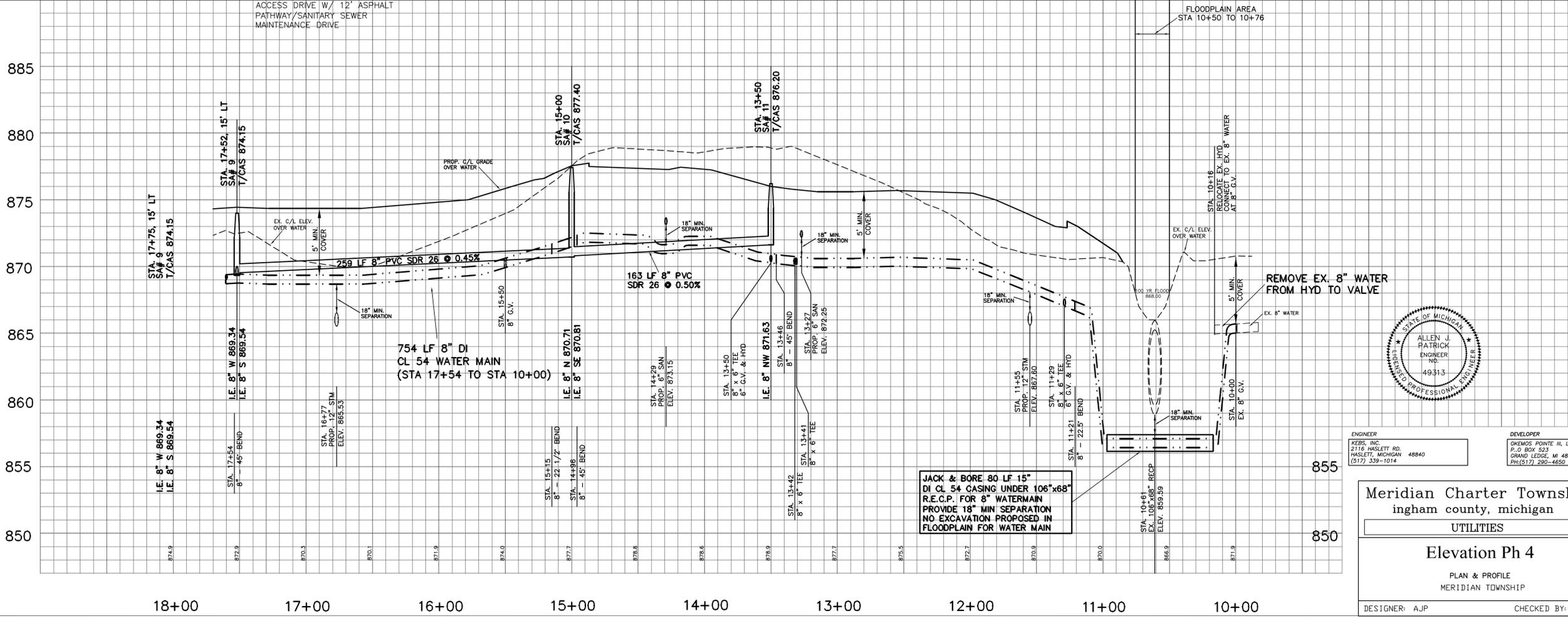


PROPOSED 20' WIDE EMERGENCY ACCESS DRIVE W/ 12' ASPHALT PATHWAY/SANITARY SEWER MAINTENANCE DRIVE

START PROPOSED 10' ASPHALT PATHWAY W/ 1' GRAVEL SHOULDERS

PROPOSED 10' PATHWAY

FLOODPLAIN AREA STA 10+50 TO 10+76



BENCHMARKS

BENCHMARK #4 ELEVATION: 877.96 (NAVD 88)
CHISEL "X" ON FLANGE BOLT ON SOUTH SIDE OF FIRE HYDRANT, SOUTH SIDE OF FERRIS PARKWAY, ACROSS FROM UNFINISHED ROAD TO THE NORTH.

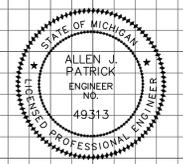
BENCHMARK #5 ELEVATION: 873.79 (NAVD 88)
CHISEL "X" ON FLANGE BOLT ON THE SOUTH SIDE OF FERRIS PARKWAY, 50± EASTERLY OF WATER LILY WAY.

BENCHMARK #6 ELEVATION: 881.99 (NAVD 88)
600 NAIL IN THE NORTHEAST SIDE OF A UTILITY POLE, ON THE WEST SIDE OF WATER LILY WAY, 35± NORTH OF THE CENTERLINE OF JOLLY OAK ROAD (TO THE EAST).



LEGEND

—	EXT. CONTOURS
—	EXT. WATER MAIN
—	EXT. SANITARY SEWER
—	EXT. STORM SEWER
—	EXT. ELEVATIONS
—	PROPOSED WATER MAIN
—	PROPOSED SANITARY SEWER
—	PROPOSED STORM SEWER
—	PROPOSED (NEW) MANHOLE (EX.)
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—	CENTER LINE OF ROAD
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—	THRUST BLOCK
—	PROPOSED TOP OF CURB ELEV.



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DEVELOPER
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P.O. BOX 523
GRAND LEDGE, MI 48837
PH(517) 290-4650

JACK & BORE 80 LF 15" DI CL 54 CASING UNDER 106"x68" R.E.C.P. FOR 8" WATERMAIN PROVIDE 18" MIN SEPARATION NO EXCAVATION PROPOSED IN FLOODPLAIN FOR WATER MAIN

Meridian Charter Township
ingham county, michigan

UTILITIES

Elevation Ph 4

PLAN & PROFILE
MERIDIAN TOWNSHIP

DESIGNER: AJP CHECKED BY: AJP

REVISIONS:

DATE:	BY:	COMMENTS:
3-10-23	AJP	SUBMITTAL
8-10-23	AJP	TWP REV
10-17-23	AJP	TWP SUP

SCALE:
1" = 40' HORIZ.
1" = 4' VERT.

SHEET:
11 OF 11

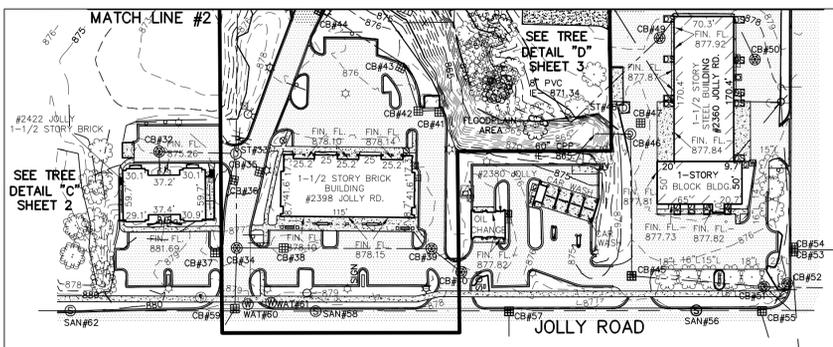
93644
FILE NAME

FOR: WEST PAC CAMPUS COMMUNITIES

SURVEYOR'S NOTES:

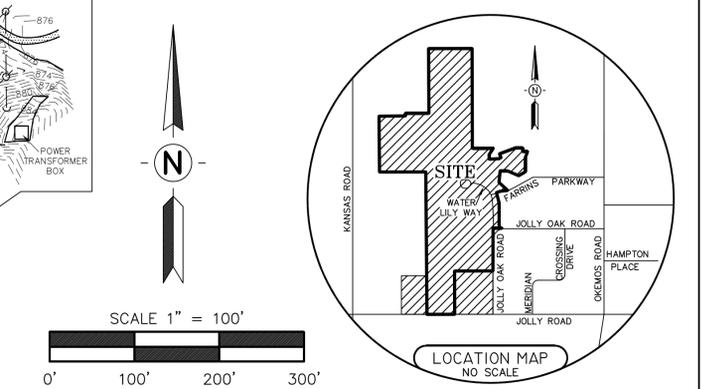
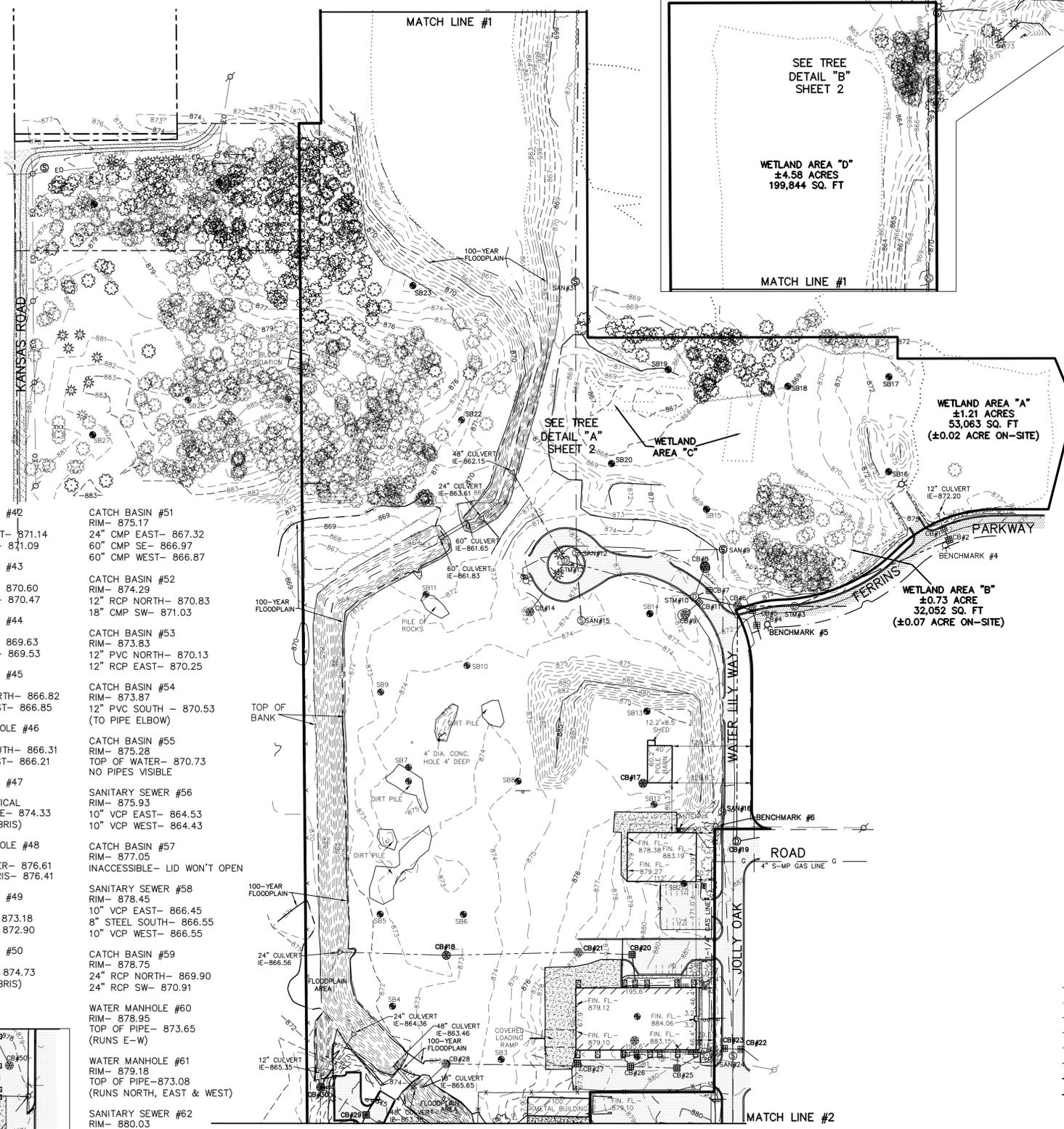
1. This plan was made at the direction of the parties named hereon and is intended solely for their immediate use. Survey prepared from fieldwork performed in February 2015.
2. All bearings and distances on the survey are record and measured unless otherwise noted. Bearings are based on Michigan State Plane South Zone grid bearings obtained from GPS observations using corrections obtained from the Lansing C.O.R.S.
3. All dimensions are in feet and decimals thereof.
4. No building tie dimensions are to be used for establishing the property lines.
5. By scaled map location and graphic plotting only, this property lies entirely within Flood Zone "X", areas outside the 0.2% annual chance floodplain, according to the National Flood Insurance Program, Flood Insurance Rate Map for the Charter Township of Meridian, Ingham County, Michigan, Community Panel No. 260093 0170 D, dated August 16, 2011.
6. Utility information as shown was obtained from available public records and from supporting field observations, where possible, and is subject to verification in the field by the appropriate authorities prior to use for construction.

- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|--|--|---|--|--|---|--|--|--|---|---|--|--|--|--|---|---|--|---|--|---|--|---|---|--|--|--|--|--|---|---|---|---|
| CATCH BASIN #1
RIM- 875.65
12" RCP SE- 872.22
12" RCP NW- 872.20 | CATCH BASIN #14
(BEEHIVE)
RIM- 871.71
12" RCP NE- 864.17 | CATCH BASIN #28
(BEEHIVE)
RIM- 872.84
12" RCP EAST- 868.99
18" RCP SW- 868.64 | CATCH BASIN #29
RIM- 875.05
12" RCP EAST- 869.35
12" RCP WNW- 869.20 | CATCH BASIN #30
RIM- 870.06
12" RCP NORTH- 867.31
24" RCP NE- 867.31
12" RCP EAST- 867.41
24" RCP SOUTH- 867.42 | CATCH BASIN #31
RIM- 871.36
12" RCP NORTH- 859.48
12" RCP SOUTH- 859.52 | CATCH BASIN #32
RIM- 873.87
12" RCP EAST- 869.25
6" PVC SOUTH- 870.87
6" PVC SW- 869.30 | CATCH BASIN #33
RIM- 875.92
24" RCP NORTH- 867.78
12" RCP SE- 870.36
24" RCP SOUTH- 867.82
12" RCP SW- 870.42
12" RCP WEST- 869.07 | CATCH BASIN #34
RIM- 880.02
12" RCP SE- 875.70
12" RCP WEST- 875.77 | CATCH BASIN #35
RIM- 875.07
60" CMP NORTH- 866.82
60" CMP EAST- 866.85 | CATCH BASIN #36
RIM- 875.60
?? NORTH- 862.91
?? SOUTH- 862.92 | CATCH BASIN #37
RIM- 880.11
8" PVC NORTH- ±878.00
8" PVC NE- ±877.94
12" RCP WEST- ±877.55 | CATCH BASIN #38
RIM- 876.35
12" RCP EAST- 872.64
12" RCP WEST- 872.61 | CATCH BASIN #39
RIM- 876.68
6" PVC SE- 873.63
12" RCP WEST- 873.44 | CATCH BASIN #40
RIM- 876.48
6" PVC NW- 874.70 | CATCH BASIN #41
RIM- 875.95
12" RCP WEST- 872.41 | CATCH BASIN #42
RIM- 876.39
12" RCP EAST- 871.14
60" CMP SE- 866.97
60" CMP WEST- 866.87 | CATCH BASIN #43
RIM- 875.16
12" RCP SE- 870.60
12" RCP NW- 870.47 | CATCH BASIN #44
RIM- 875.08
12" RCP SE- 869.63
12" RCP NW- 869.53 | CATCH BASIN #45
RIM- 875.07
60" CMP NORTH- 866.82
60" CMP EAST- 866.85 | CATCH BASIN #46
RIM- 876.61
60" CMP SOUTH- 866.31
60" CMP WEST- 866.21 | CATCH BASIN #47
RIM- 877.52
12" RCP EAST- 873.56
6" PVC WNW- 873.73
(FULL OF DEBRIS) | CATCH BASIN #48
RIM- 876.61
TOP OF WATER- 876.61
TOP OF DEBRIS- 876.41 | CATCH BASIN #49
RIM- 877.26
8" PVC NE- 873.18
8" PVC SW- 872.90 | CATCH BASIN #50
RIM- 877.53
4" PVC NW- 874.73
(FULL OF DEBRIS) | CATCH BASIN #51
RIM- 875.17
24" CMP EAST- 867.32
60" CMP SE- 866.97
60" CMP WEST- 866.87 | CATCH BASIN #52
RIM- 874.29
12" RCP NORTH- 870.83
18" CMP SW- 871.03 | CATCH BASIN #53
RIM- 873.83
12" PVC NORTH- 870.13
12" RCP EAST- 870.25 | CATCH BASIN #54
RIM- 873.87
12" PVC SOUTH- 870.53
(TO PIPE ELBOW) | CATCH BASIN #55
RIM- 875.28
TOP OF WATER- 870.73
NO PIPES VISIBLE | CATCH BASIN #56
RIM- 875.93
10" VCP EAST- 864.53
10" VCP WEST- 864.43 | CATCH BASIN #57
RIM- 877.05
INACCESSIBLE- LID WON'T OPEN | CATCH BASIN #58
RIM- 878.45
10" VCP EAST- 866.45
8" STEEL SOUTH- 866.55
10" VCP WEST- 866.55 | CATCH BASIN #59
RIM- 878.75
24" RCP NORTH- 869.90
24" RCP SW- 870.91 | WATER MANHOLE #60
RIM- 878.95
TOP OF PIPE- 873.65
(RUNS E-W) | WATER MANHOLE #61
RIM- 879.18
TOP OF PIPE-873.08
(RUNS NORTH, EAST & WEST) | SANITARY SEWER #62
RIM- 880.03
10" VCP EAST- 867.83
10" VCP WEST- 867.91 |
|---|---|---|---|--|--|---|--|--|---|--|--|--|---|---|--|--|--|--|---|---|--|---|--|---|--|---|---|--|--|--|--|--|---|---|---|---|



EXISTING FEATURES PLAN

Elevation



LEGAL DESCRIPTION:
REZONING DESCRIPTION:
 A parcel of land in the Southwest 1/4 of Section 33, T4N, R1W, Meridian Township, Ingham County, Michigan, the boundary of said parcel described as: Commencing at the Southwest corner of said Section 33; thence N89°46'20"E along the South line of said Section 33 a distance of 858.00 feet; thence N00°36'06"W parallel with the West line of Section 33 a distance of 480.25 feet to the point of beginning of this description; thence continuing N00°36'06"W parallel with said West line 1516.31 feet; thence N89°46'12"E 35.84 feet; thence N00°27'14"W 642.58 feet to the East-West 1/4 line of said Section 33; thence N89°44'23"E along said East-West 1/4 line 433.70 feet to the West line of Fieldstone Village Condominium, Subdivision Plan No. 184, Ingham County Records; thence S00°18'07"E along said West line and the West line of Coyote Creek Condominium, Subdivision Plan No. 82, Ingham County Records, a distance of 989.98 feet; thence along the South line of said Coyote Creek Condominium the following three courses: N89°45'08"E 503.25 feet, South 34.97 feet and N89°45'09"E 255.61 feet to the West line of Unit 1 of Okemos Pointe Office Park Condominium, Subdivision Plan No. 267, Ingham County Records; thence along said West line the following two courses: S22°44'37"E 82.61 feet and S14°02'26"W 172.95 feet to the North line of Ferrins Parkway; thence along said North line the following four courses: S89°51'41"W 85.18 feet, Southwesterly 180.54 feet on a curve to the left, said curve having a radius of 232.50 feet, a delta angle of 44°29'30" and a chord length of 176.04 feet bearing S67°37'04"W, Southwesterly 206.25 feet on a curve to the right, said curve having a radius of 277.50 feet, a delta angle of 42°35'09" and a chord length of 201.54 feet bearing S66°39'56"W and Southwesterly 77.04 feet on a curve to the left, said curve having a radius of 197.50 feet, a delta angle of 22°20'57" and a chord length of 76.55 feet bearing S76°47'04"W to the East line of Water Lily Way; thence along said East line the following three courses: Southeasterly 106.18 feet on a curve to the right, said curve having a radius of 205.00 feet, a delta angle of 29°40'31" and a chord length of 104.99 feet bearing S14°50'20"E, S00°00'04"E 221.47 feet and Southeasterly 47.24 feet on a curve to the left, said curve having a radius of 30.00 feet, a delta angle of 90°13'36" and a chord length of 42.51 feet bearing S45°06'52"E to the North line of Jolly Oak Road; thence S89°46'20"W along the extension of said North line 90.12 feet to the West line of Jolly Oak Road; thence S00°00'04"E along said West line 425.00 feet; thence S89°46'10"W 382.90 feet; thence S00°48'30"E along a line parallel with the West line of Lots 1 and 2 of the plot of "Jolly-Okemos Industrial Park" as recorded in Liber 27 of Plats, Pages 20-21, Ingham County Records 145.60 feet; thence N44°25'45"W 274.03 feet; thence S89°23'28"W 89.27 feet to the point of beginning; said parcel containing 33.73 acres, more or less; said parcel subject to all easements and restrictions if any.

BENCHMARKS:
 BENCHMARK #4 ELEVATION: 877.96 (NAVD 88)
 CHISELED "X" ON FLANGE BOLT ON SOUTH SIDE OF FIRE HYDRANT, SOUTH SIDE OF FERRINS PARKWAY, ACROSS FROM UNFINISHED ROAD TO THE NORTH.
 BENCHMARK #5 ELEVATION: 873.79 (NAVD 88)
 CHISELED "X" ON FLANGE BOLT ON THE SOUTH SIDE OF FERRINS PARKWAY, 50'± EASTERLY OF WATER LILY WAY.
 BENCHMARK #6 ELEVATION: 881.99 (NAVD 88)
 60D NAIL IN THE NORTHEAST SIDE OF A UTILITY POLE, ON THE WEST SIDE OF WATER LILY WAY, 35'± NORTH OF THE CENTERLINE OF JOLLY OAK ROAD (TO THE EAST).

LEGEND

● = SET 1/2" BAR WITH CAP	⊙ = SANITARY MANHOLE
□ = FOUND IRON AS NOTED	⊕ = DRAINAGE MANHOLE
— = DEED LINE	⊖ = ELECTRIC MANHOLE
— = DISTANCE NOT TO SCALE	Ⓣ = TELEPHONE MANHOLE
— = FENCE	⊗ = CATCHBASIN
— = ASPHALT	⊙ = SANITARY CLEANOUT
— = CONCRETE	⊕ = FIRE HYDRANT
— = GRAVEL	⊖ = VALVE
— = EXISTING SPOT ELEVATION	⊙ = UTILITY POLE
— = EXISTING CONTOUR ELEVATION	⊕ = LIGHT POLE
— = SANITARY SEWER	⊖ = GUY POLE
— = STORM SEWER	⊙ = GUY WIRE
— = GAS LINE	⊕ = WATER LINE
— = UNDERGROUND TELEPHONE	⊖ = TRANSFORMER
— = UNDERGROUND ELECTRIC	⊙ = ELECTRIC METER
— = OVERHEAD WIRES	⊕ = GAS METER
— = EDGE OF WOODS	⊖ = WATER METER
— = DECIDUOUS TREE	⊙ = SOIL BORING
— = CONIFEROUS TREE	⊕ = SIGN
	⊖ = POST

REVISIONS	COMMENTS	DATE	BY	SECTION
3/30/15	ORIGINAL			33, T4N, R1W
8/28/19	PHASE 2 SUBMITTAL			
9-25-19	TWP REV			
12-12-19	ICDC SUBMITTAL			
3-16-22	TWP REV			
4-11-22	ICDC REV			

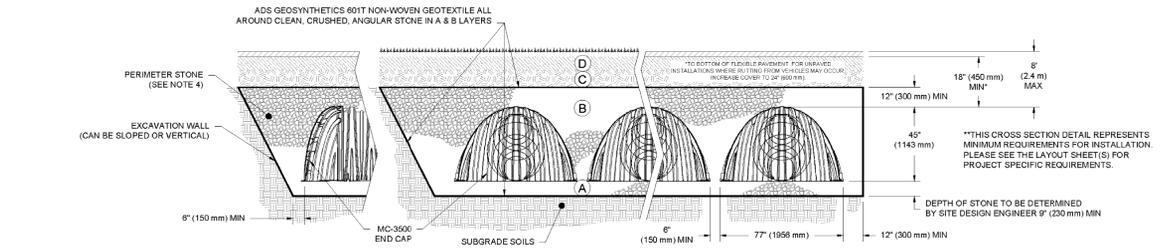
KEBS, INC. ENGINEERING AND LAND SURVEYING 2116 HASLETT ROAD, HASLETT, MI 48840 PH. 517-339-1014 FAX. 517-339-8047 Marshall Office Ph. 269-781-9800	DRAWN BY: SLH FIELD WORK BY: AH SHEET 12 OF 14	JOB NUMBER: 88667.TOP
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ERICK R. FRIESTROM
 PROFESSIONAL SURVEYOR
 DATE NO. 53497

ACCEPTABLE FILL MATERIALS: STORMTECH MC-3500 CHAMBER SYSTEMS

MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 2" (50 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'C' LAYER.	AASHTO M145 ¹ A-1, A-2.4, A-3 OR AASHTO M43 ² 3, 357, 4, 487, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 2" (50 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 92% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 96% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE	AASHTO M43 ³ 3, 4	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	AASHTO M43 ³ 3, 4	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE ^{2,3}

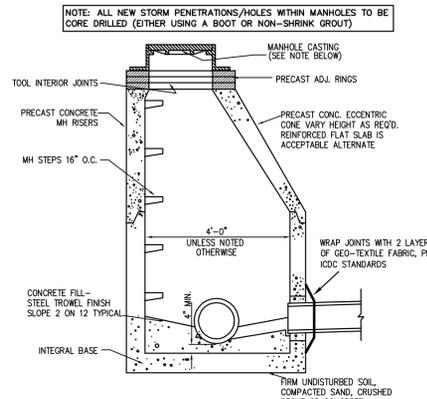
PLEASE NOTE:
 1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
 2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 4" (100 mm) MAX LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
 3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
 4. ONCE LAYER 'C' IS PLACED, ANY SOIL MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.



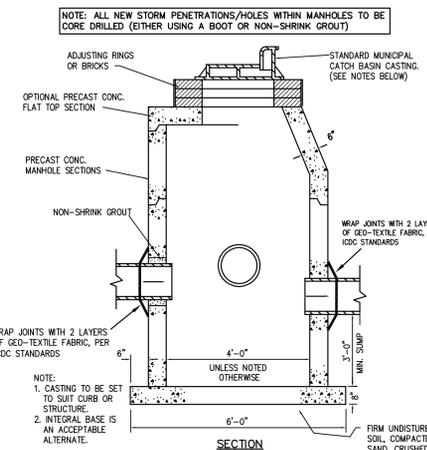
NOTES:

- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x78 DESIGNATION SS.
- MC-3500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, A) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 9.2.9 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 500 LBS/FT² AND B) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES ABOVE 72° F / 23° C, CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

MC-3500
 STANDARD CROSS SECTION
 DATE: 08/22/2014
 PROJECT: 18-0362-001
 CHECKED: KLU
 DRAWN: JKL
 APPROVED: JKL
 StormTech Chamber System
 4400 TRILEMAN BLVD
 HILLIARD, OH 43009
 888-802-2884 WWW.STORMTECH.COM
 1 SHEET OF 1

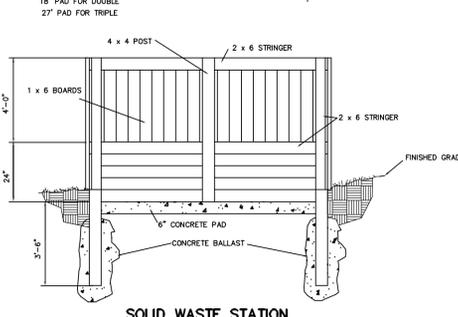
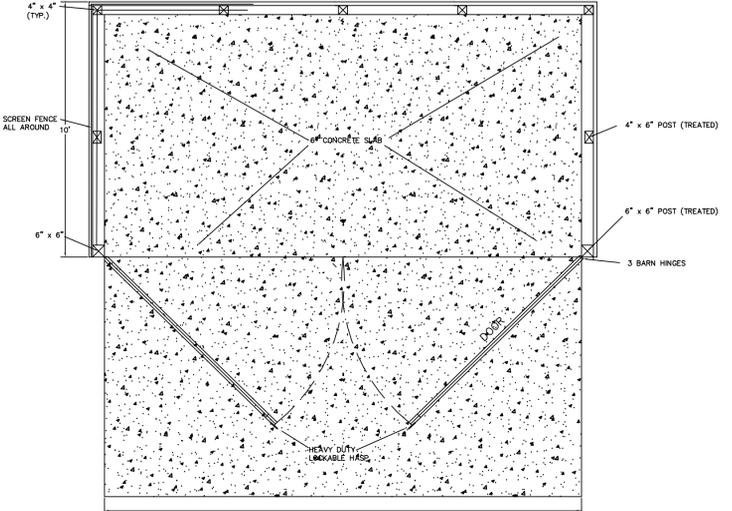


STANDARD STORM MANHOLE
 NO SCALE
 TO BE USED ONLY WHERE SPECIFIED AS 4' OR 5' DIAM. (MH)

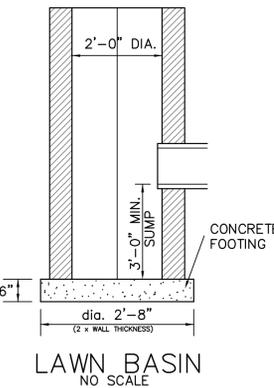


STANDARD CATCH BASIN
 NO SCALE
 TO BE USED ONLY WHERE SPECIFIED AS 4' OR 5' DIAM. (CB)

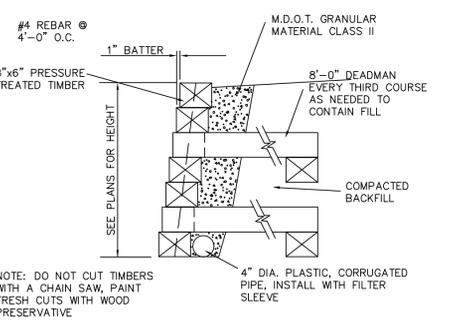
NOTE: CATCH BASINS SHALL INCLUDE STEPS AND REQUIRE CASTINGS E.J.I.W. 7045 OR 1040 (M1) PER INGHAM AND CO. DRAIN COMMISSION STANDARDS.
 NOTE: MANHOLE COVERS AND CATCH BASIN COVERS SHALL HAVE THE FISH SYMBOL AND THE "DUMP NO WASTE... DRAINS TO WATERWAY" LOGO.



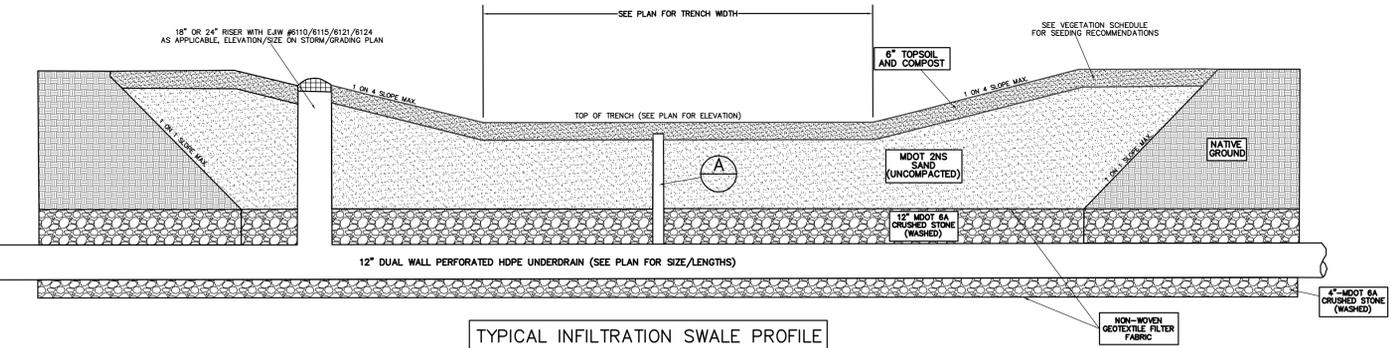
SOLID WASTE STATION
 NO SCALE



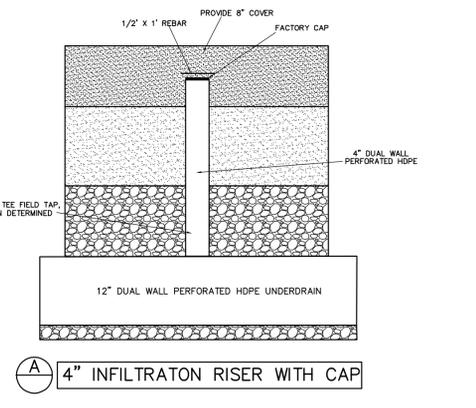
LAWN BASIN
 NO SCALE



TIMBER WALL DETAIL
 NO SCALE

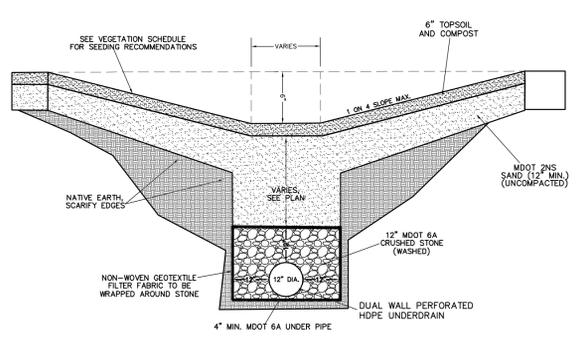


TYPICAL INFILTRATION SWALE PROFILE

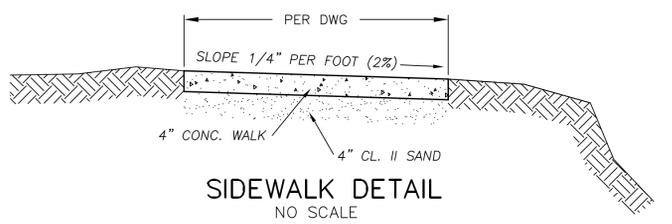


4" INFILTRATION RISER WITH CAP

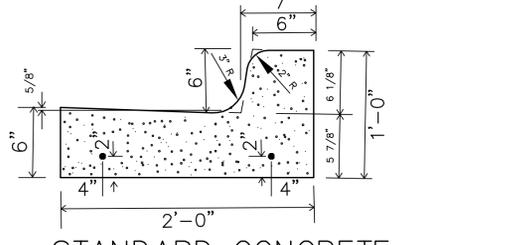
SEED MIX:
 25% TITANIUM LS TURF-TYPE TALL FESCUE
 20% SPEEDWAY TURF-TYPE TALL FESCUE
 20% EINSTEIN TURF-TYPE TALL FESCUE
 20% SPEEDWAY TALL FESCUE
 15% ANNUAL RYEGRASS



TYPICAL INFILTRATION SWALE CROSS-SECTION



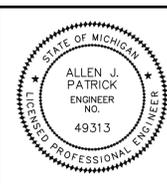
INTEGRAL SIDEWALK AND CURB DETAIL
 NO SCALE



STANDARD CONCRETE CURB & GUTTER
 NO SCALE

CONSTRUCTION NOTES:

- TOPSOIL COMPOSITION: <5% CLAY, 5-30% SILT, 65-80% SAND, 4-6% ORGANIC
- COMPOST TO BE BLENDED WITH TOPSOIL IN A RATION OF 1 TO 1 (50% EACH)
- SEEDING, TALL FESCUE (APPLY AT A MINIMUM RATE OF 4.35 LBS/ACRE)
- INLET GRATES TO BE SCREWED TO THE HDPE RISER USING 2 STAINLESS STEEL SELF TAPPING SCREWS LOCATED 180 DEGREES APART FROM EACH OTHER



REVISIONS	DATE	BY	DESCRIPTION
3-10-23			SUBMITTAL
8-10-23			TWP REV
10-17-23			SUP

KEBS, INC. KYES ENGINEERING
 2116 HASLETT ROAD, HASLETT, MI 48840
 PH. 517-339-1014 FAX. 517-339-8047
 Marshall Office
 Ph. 269-781-9800

Elevation Ph 4
 DETAIL SHEET

SCALE: NONE	DESIGNER: AJP	APPROVED BY: AJP
DATE: 3-7-19	PROJECT MGR: AJP	SHEET 13 OF 14
AUTHORIZED BY: OKEMOS POINT III, LLC	JOB #: 93644	

E8 PERMANENT SEEDING SPECIFICATIONS

When

- To finalize stabilization of temporary seeding areas or when an area needs permanent stabilization following completion of construction. Also used when vegetative establishment can correct existing soil erosion or sedimentation problem.
- Within 5 days of final grade.

Why

- To stabilize soil and prevent or reduce soil erosion/sedimentation problems from developing.

Where

- Used on construction and earth change sites which require permanent vegetative stabilization.

How

- Review SESC plan and construction phasing to identify areas in need of permanent vegetative stabilization.
- Select perennial grass and ground cover for permanent cover.
- Seed mixes vary. However, they should contain native species.
- Seed mixes should be selected through consultation with a certified seed provider and with consideration of soil type, light, moisture, use applications, and native species content.
- Soil tests should be performed to determine the nutrient and pH levels in the soil. The pH may need to be adjusted to between 6.5 and 7.0.
- Prepare a 3-5" deep seedbed, with the top 3-4" consisting of topsoil.
- Slopes steeper than 1:3 should be roughened.
- Apply seed as soon as possible after seedbed preparation. Seed may be broadcast by hand, hydroseeding, or by using mechanical drills.
- Mulch immediately after seeding.
- Dormant seed mixes are for use after the growing season, using seed which lies dormant in the winter and begins growing as soon as site conditions become favorable.



PERMANENT SEEDING SPECIFICATIONS (E8)

How (cont.)

- Protect seeded areas from pedestrian or vehicular traffic.
- Divert concentrated flows away from the seeded area until vegetation is established.

Maintenance

- Inspect weekly and within 24 hours following each rain event in the first few months following installation to be sure seed has germinated and permanent vegetative cover is being established.
- Add supplemental seed as necessary.

Limitations

- Seeds need adequate time to establish.
- May not be appropriate in areas with frequent traffic.
- Seeded areas may require irrigation during dry periods.
- Seeding success is site specific, consider mulching or sodding when necessary.

PERMANENT SEEDING SPECIFICATION
 SEED ALL DISTURBED AREAS WITH THE FOLLOWING SEED MIXTURE OR APPROVED EQUAL.
 MICHIGAN GREEN - 15% BLUEGRASS, 40% FESCUE, 45% RYEGRASS
 APPLY AT A RATE OF 5 LBS./1000 SF

-APPLY SILT STOP OR APPROVED TACKIFIER TO SEED MIX.



PERMANENT SEEDING (E8)

Planting Zones:	Lower Peninsula (South of 120N) Zone 1	Lower Peninsula (North of 120N) Zone 2	Upper Peninsula Zone 3
Seeding Window Permanent Seeding	4/15 - 10/10	5/1 - 10/1	5/1 - 9/20
Seeding Window Dormant Seeding	11/15 - Freeze	11/01 - Freeze	11/01 - Freeze

Source: Adapted from MDOT Interim 2003 Standard Specifications for Construction

	Zone 1 Lower Peninsula (South of U.S. 10)	Zone 2 Lower Peninsula (North of U.S. 10)	Zone 3 Upper Peninsula
Seeding Dates (with Irrigation or Mulch)	4/1 - 8/1	5/1 - 9/20	5/1 - 9/10
Seeding Dates (w/o Irrigation or Mulch)	4/1 - 5/20 8/10 - 10/1	5/1 - 6/10 8/1 - 9/20	5/1 - 6/15 8/1 - 9/20
Dormant Seeding Dates	11/1 - Freeze	10/25 - Freeze	10/25 - Freeze

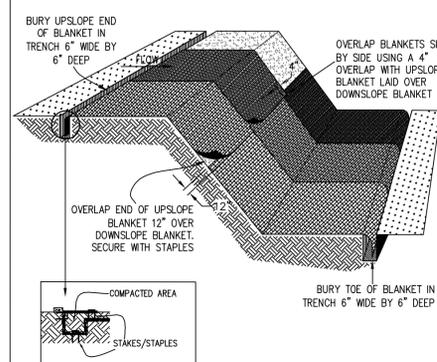
Source: Adapted from USDA NRCS Technical Guide #342 (1999)

* Dormant seeding is for use in the late fall after the soil temperature remains consistently below 50°F, prior to the ground freezing. This practice is appropriate if construction on a site is completed in the fall but the seed was not planted prior to recommended seeding dates. No seed germination will take place until spring. A cool season annual grass may be added in an attempt to have some fall growth.

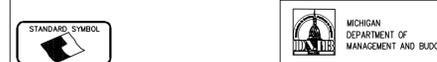
- Mulch must be used with dormant seed.
- Do not seed when the ground is frozen or snow covered.
- Do not use a dormant seed mix on grassed waterways.



E9 MULCH BLANKETS



- NOTES:
- PLACE MULCH BLANKET PARALLEL TO FLOW AND ANCHOR SECURELY.
 - WHEN BLANKETS ARE USED IN FLOWING DITCH, BLANKETS SHOULD NOT OVERLAP IN DITCH CENTER PARALLEL TO FLOW.
 - STAPLES INSTALLED/SECURED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
 - WHERE POSSIBLE, CONSTRUCT WITH BIODEGRADABLE MATERIAL.



E9 MULCH BLANKETS SPECIFICATIONS

When

- When seeded areas are subject to erosive surface flows, severe wind, or to protect non-vegetated slopes or areas during the winter.

Why

- Protects seeded areas and slopes against erosion from rain or wind. Holds soil moisture to allow for seed germination and reduces wind desiccation of germinated seeds.

Where

- Use on exposed slopes, newly seeded areas, new ditch bottoms, and other areas subject to erosion.

How

- Prepare subgrade to proper grade and compaction requirements.
- Remove ruts, roots, soil clods, or other debris from surface subject to mulch blanket installation.
- Spread or drill seed.
- Consult with erosion control material supplier to select mulch blanket based on slope gradient, expected surface run-off, and protection term necessary (long or short term).
- Position selected mulch blanket as close as possible to intended use location.
- Install blanket at top of slope, first anchoring toe in trench 6" wide X 6" deep, progressing down-slope or down-gradient with approximately 12" of blanket extended beyond the up-slope portion of the trench.
- Anchor the blanket with staples/staples placed approximately 12" apart in the bottom of the trench. Backfill and compact the trench after securing.
- Apply seed to compacted soil and fold the 12" portion of the blanket over compacted area and secure with a row of staples/staples placed 12" apart across the width of the blanket.
- Unroll the blankets down or horizontally across the slope.



E9 MULCH BLANKETS SPECIFICATIONS (cont.)

How (cont.)

- Overlap blanket edges by a minimum of 4" and blanket ends by a minimum of 12". Overlaps should be in the direction of expected flow with the up-slope blanket placed over the down-slope blanket edge.
- Secure down-slope end of blanket with staples/stakes and trench in.

Maintenance

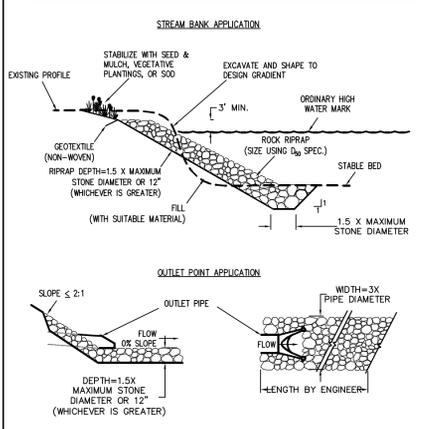
- Check after a rain event to ensure the blanket is still in place.
- Keep eroded soil, vehicular and pedestrian traffic, and concentrated runoff away from the blanketed area.

Limitations

- Mulch blankets and anchors may inhibit mowing.



E12 RIPRAP



RIPRAP SPECIFICATIONS (E12)

When

- When concentrated water flows have the potential to create scour, down-cutting, or lateral cutting.

Why

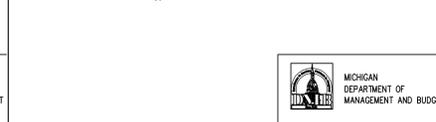
- To prevent loss of land or damage to utilities or structures. In aquatic applications, riprap is used to control channel meander and maintain capacity, protect against wave attack, and reduce sediment load.

Where

- In natural or constructed channels with areas susceptible to erosion from the action of water, ice, or debris, or to damage by livestock or vehicular traffic.
- In shoreline areas where the erosion problem may be solved through simple structural measures.
- On slopes with profiles measuring 1:1.5 or less.

How

- Review subject site to identify areas subject to concentrated flows or wave/current attack.
- The appropriateness and extent of riprap placement is site specific and should be determined in the field.
- The area under review for riprap placement must be shaped and contoured appropriately by grading prior to material placement.
- Non-woven geotextile fabric should be installed prior to riprap placement, with upper end and toe end of fabric buried or anchored to prevent movement.
- Riprap placement should be started at a stabilized location and ended at a stabilized or contoured point.
- Material selected for riprap should be hard, angular, and resistant to weathering. Appropriate material size depends on expected water energy and intended function of the material.



E12 RIPRAP SPECIFICATIONS (cont.)

How (cont.)

- Riprap mixture should be an even mixture of stone sizes based on the average, or D_{50} . This means 50% of the stone, by size, will be larger than the diameter specified, and 50% will be smaller than the size specified. The diameter of the largest stone should not be more than 1.5 times the D_{50} stone size.
- See table on the following page for typical riprap stone sizes.
- Rock shall be placed so that larger rocks are uniformly distributed and in contact with one another. Smaller rocks should fill the voids.
- When in contact with moving water, riprap will tie into a stable bank at the downstream end and will be keyed into the bank at the upstream end. Riprap should extend 3' ft. above the ordinary high water mark or to the top of the bank on short slopes. Extend riprap a minimum 10 ft. beyond active erosion area.

Maintenance

- All installations should be inspected immediately after the first rainfall to confirm the stability of the placed material. Follow-up inspections should occur regularly and provisions made for prompt repair if needed.

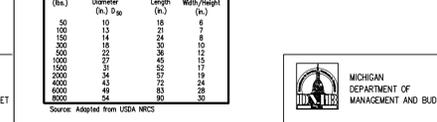
Limitations

- Area is cleared prior to the addition of riprap, therefore no areas are preserved with native vegetation.

SIZE OF TYPICAL RIPRAP STONES

Weight (lbs.)	Average Spherical Diameter (in.) D_{50}	Typical Rectangular Stone Length (in.)	Typical Rectangular Stone Width/Height (in.)
50	10	18	8
100	13	21	7
150	14	24	8
300	18	30	10
500	22	36	12
1000	27	45	15
1500	31	52	17
2000	34	57	19
4000	43	72	24
6000	49	83	28
8000	54	90	32

Source: Adapted from USDA NRCS



S51 SILT FENCE SPECIFICATIONS

When

- A temporary measure for preventing sediment movement.

Why

- Used to prevent sediment suspended in runoff from leaving an earth change area.

Where

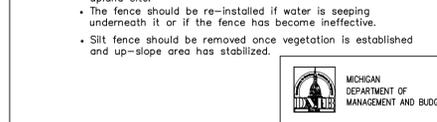
- Use adjacent to critical areas, wetlands, base of slopes, and watercourses.

How

- Install parallel to a contour.
- The silt fence should be made of woven geotextile fabric.
- Silt fence should accommodate no more than 1/2 to 1 acre of drainage per 100' of fence and on slopes less than 1:2 (v:h).
- Dig a 6" trench along the area where the fence is to be installed.
- Place 6" of the silt fence bottom flap into the trench.
- Backfill the trench with soil and compact the soil on both sides. Create a small ridge on the up-slope side of the fence.
- Install wooden stakes 6 - 10' apart and drive into the ground a minimum of 12".
- Staple the geotextile fabric to the wooden stakes.
- Join sections of silt fence by wrapping ends together (See drawing).

Maintenance

- Inspect frequently and immediately after each storm event. Check several times during prolonged storm events. If necessary, repair immediately.
- If the sediment has reached 1/3 the height of the fence, the soil should be removed and disposed of in a stable upland site.
- The fence should be re-installed if water is seeping underneath it or if the fence has become ineffective.
- Silt fence should be removed once vegetation is established and up-slope area has stabilized.



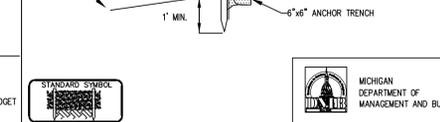
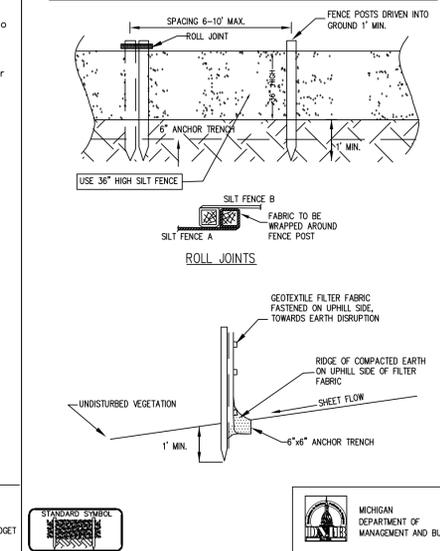
S51 SILT FENCE SPECIFICATIONS (cont.)

Limitations

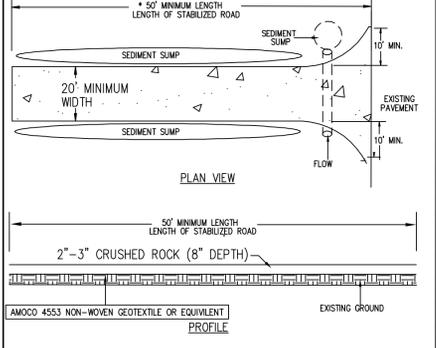
- Silt fence may cause temporary ponding and could fail if too much water flows through the area.
- Do not use in areas with concentrated flows.
- Chance of failure increases if fence is installed incorrectly or if sediment accumulation is not removed.



S51 SILT FENCE



S53 STABILIZED CONSTRUCTION ACCESS



NOTES:

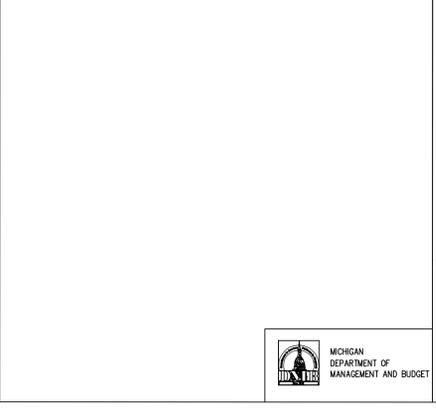
- Establish stabilized construction entrance prior to the initiation of site construction activities.
- Care should be taken to prevent material movement into adjacent wetlands/waterbodies.
- Care should be taken to maintain existing roadside drainage via culvert installation, with sediment sump placed downflow of culvert.



STABILIZED CONSTRUCTION ACCESS SPECIFICATIONS (S53)

Maintenance (cont.)

- Sediment deposited on public rights-of-way shall be removed immediately and returned to the construction site.
- If soils are such that washing of tires is required, it shall be done in a wash rock area, stabilized with stone, immediately prior to the construction access stabilized corridor.
- At the project completion, rock access road should be removed and disposed of unless utilized as subgrade for final road.
- Effectiveness limited, sediment may be tracked onto roads requiring additional action.



STABILIZED CONSTRUCTION ACCESS SPECIFICATIONS (S53)

When

- Construction traffic is expected to leave a construction site.
- Stabilization of interior construction roads is desired.

Why

- To minimize tracking of sediment onto public roadways and to minimize disturbance of vegetation.

Where

- Stabilized construction entrances shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must be routed over the rock ingress/egress corridor.

How

- Stabilized construction access road should be established at the onset of the construction activities and maintained in place for the duration of the construction project.
- Installation of this practice should be the responsibility of the site clearing or excavating contractor.
- Access location should be cleared of woody vegetation.
- Non-woven geotextile fabric shall be placed over the existing ground prior to placing stone.
- Access size should be a minimum of 50', (30' for single residence lot).
- Access width should be 12" minimum, flared at the existing road to provide a turning radius.
- Crushed aggregate (2" to 3"), or reclaimed or recycled concrete equivalent, shall be placed at least 8" deep over the length and width of the ingress/egress corridor.

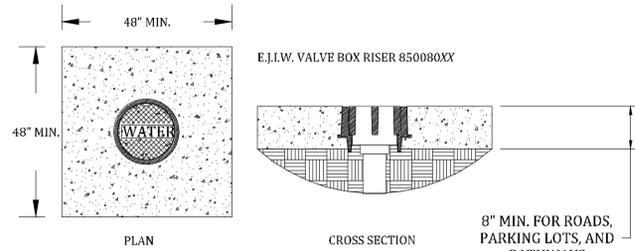
Maintenance

- Periodic inspection and needed maintenance shall be provided after each rain event.
- Stabilized entrances shall be repaired and rock added as necessary.

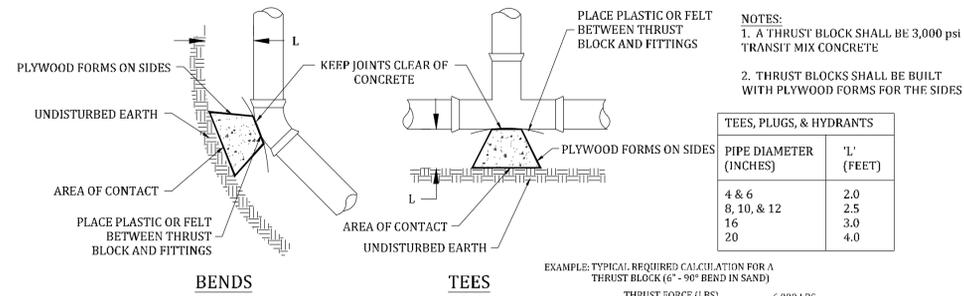


E-93644-PH4-SESC-STORMDETAILS
 E-93644
 SURVEY#88667.TOP

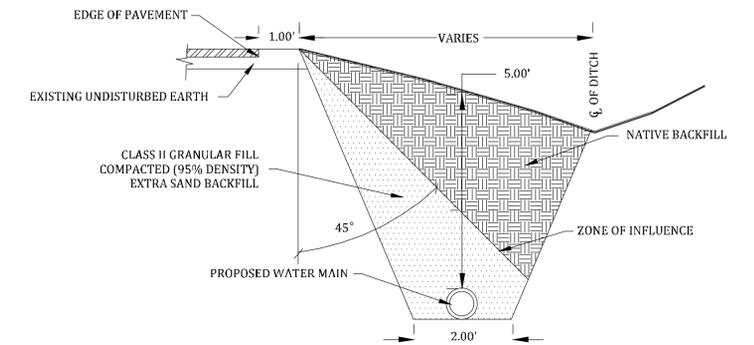
	REVISIONS 3-10-23 SUBMITTAL 8-10-23 TWP REV 10-17-23 SUP	KYES ENGINEERING BRYAN LAND SURVEYS 2116 HASLETT ROAD, HASLETT, MI 48840 PH. 517-339-1014 FAX. 517-339-8047 Marshall Office Ph. 269-781-9800		
	Elevation Ph 4 SESC DETAIL SHEET			
	SCALE: NONE DATE: 3-7-19 AUTHORIZED BY: OKEMOS POINTE III, LLC		DESIGNER: A.J.P. PROJECT MGR. A.J.P. JOB #: 93644	APPROVED BY: A.J.P. SHEET 14 OF 14 JOB #: 93644



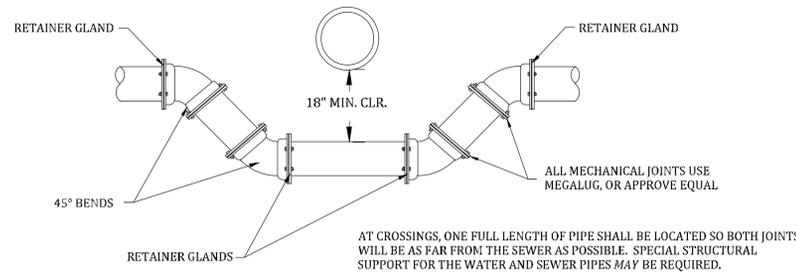
VALVES & CURB STOP BOXES IN CONCRETE



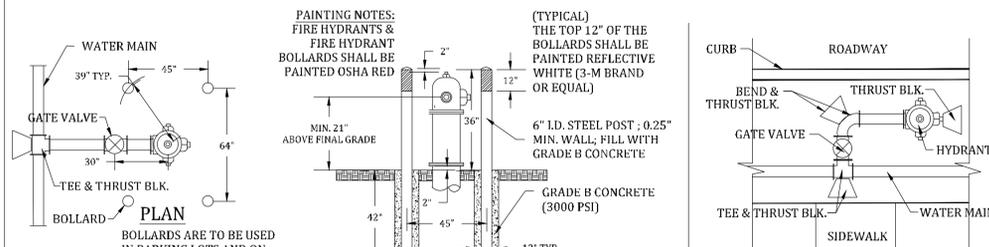
THRUST BLOCK PLAN VIEWS



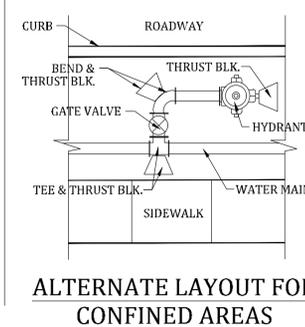
TYPE-1 TRENCH CROSS SECTION



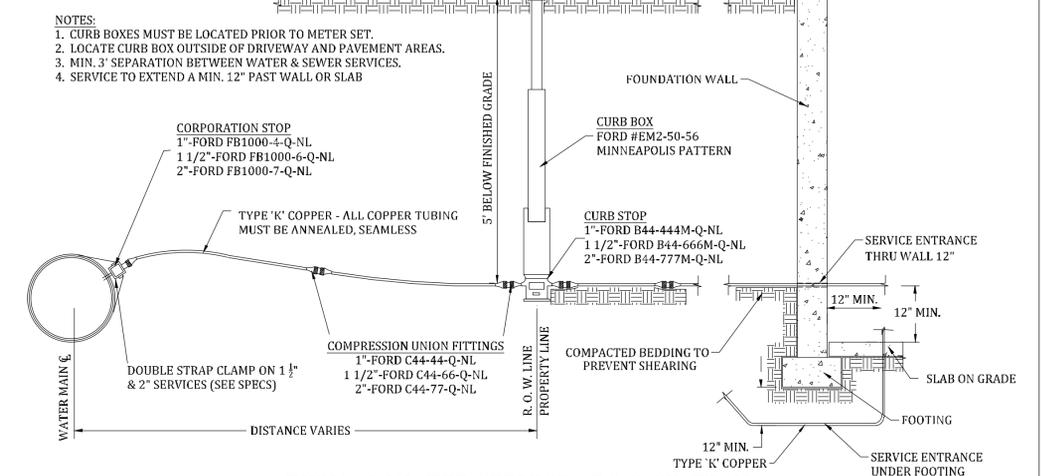
LOWERING WATER MAIN CROSS SECTION



BOLLARDS AROUND FIRE HYDRANT



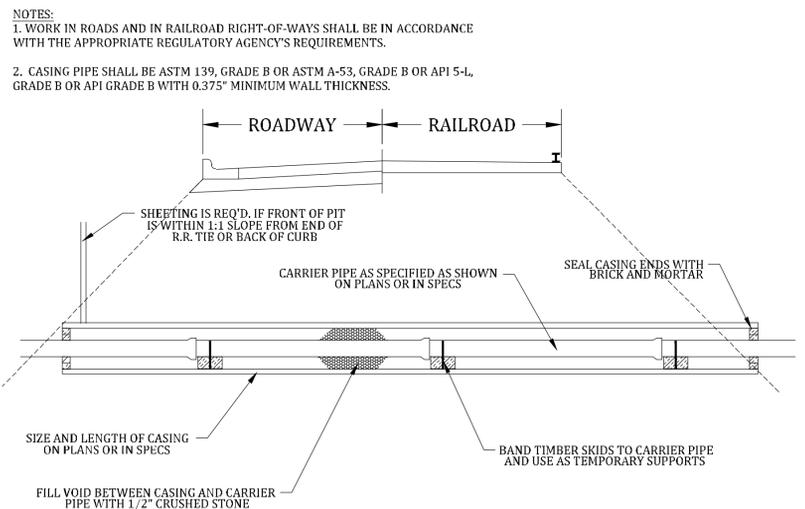
ALTERNATE LAYOUT FOR CONFINED AREAS



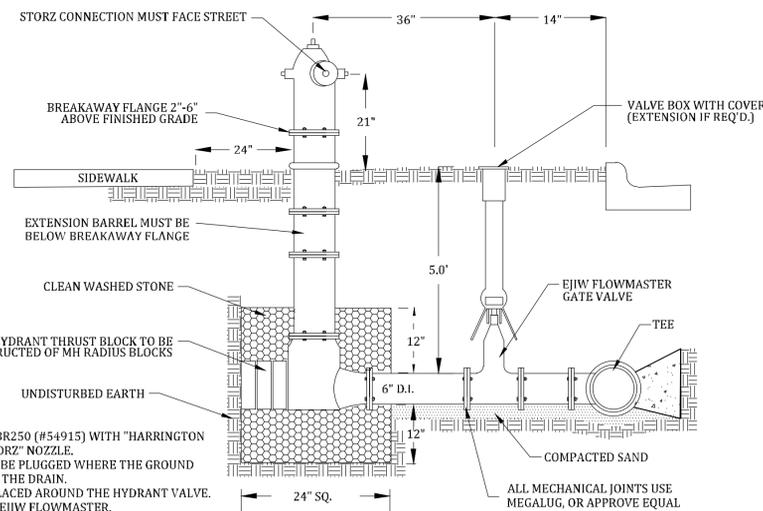
TYPICAL WATER SERVICE CROSS SECTION

GENERAL NOTES:

1. ALL WATER PIPES, PING FITTINGS, PLUMBING FITTINGS AND FIXTURES THAT ARE USED FOR POTABLE WATER MUST COMPLY WITH NEW LEAD-FREE REQUIREMENT AND MUST BEAR THE MARK NSF/ANSI STANDARD 61, ANNEX G OR NSF-61-G.
2. ALL VALVES SHALL BE EJIW FLOWMASTER GATE VALVES, OPEN LEFT.
3. POLYETHYLENE ENCASEMENT IS REQUIRED AROUND ALL PIPES, FITTINGS, AND VALVES. THE ENCASEMENT SHALL BE V-BIO@ ENHANCED POLYETHYLENE ENCASEMENT, INSTALLED PER THE MANUFACTURER'S INSTRUCTIONS.



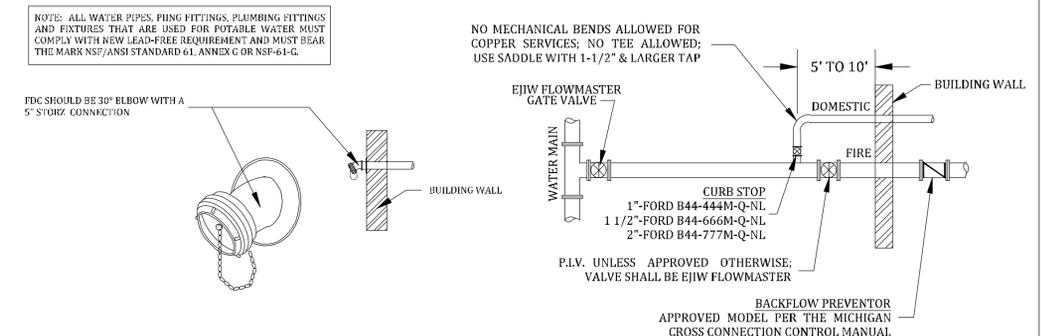
CASING INSTALLATION DETAIL FOR ROADS & RAILROADS



NOTES:

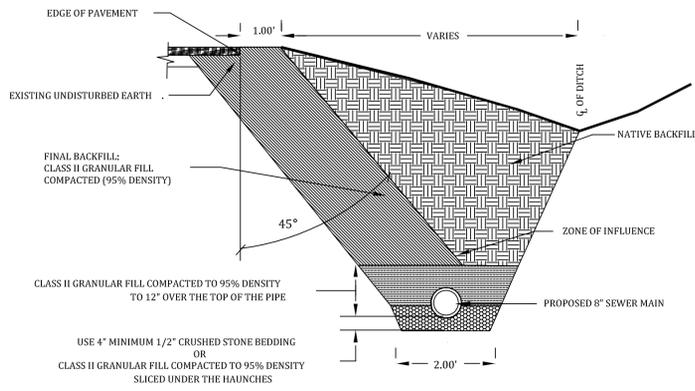
1. HYDRANT TO BE EJIW 5BR250 (#54915) WITH "HARRINGTON INTEGRAL HYDRANT STORZ" NOZZLE.
2. HYDRANT DRAIN SHALL BE PLUGGED WHERE THE GROUND WATER LEVEL IS ABOVE THE DRAIN.
3. STONE SHALL NOT BE PLACED AROUND THE HYDRANT VALVE.
4. GATE VALVES SHALL BE EJIW FLOWMASTER.

TYPICAL HYDRANT ASSEMBLY DETAIL



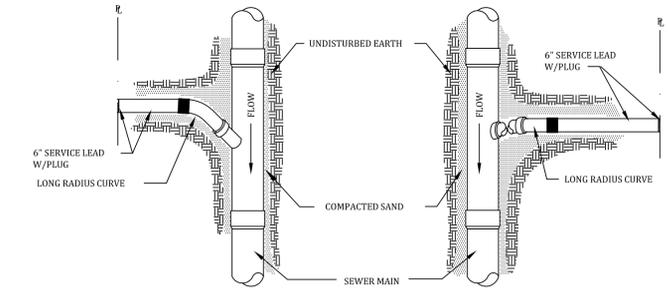
FIRE PROTECTION VALVING PLAN VIEW

<p>Meridian Charter Township Ingham County, Michigan Public Works Department</p>		<p>REVISIONS:</p>	
		DATE:	BY: COMMENTS:
		01/13/07	JG Add Fire Hydrant Bollards
<p>STANDARD DETAILS FOR WATER DISTRIBUTION SYSTEM</p>		03/31/09	JG Clarify Curb Stop Models
		01/12/10	JG Clarify PIV
		10/22/12	JG Clarify Water Service Make & Size
		06/13/14	JG Clarify Curb Box Manufacturer & Model
		10/13/17	JG Water Crossing Note - Full Length Pipe
		01/10/20	NN Reorganize
		04/02/21	NN Add 30° Elbow & Storz to FDC
		06/11/21	NN General Notes incl. GV & V-Bio Encasement
		SCALE:	FILE:
		NTS	* OF * Water Detail Sheet 2021.dwg
DRAWN BY:	CHECKED BY:		



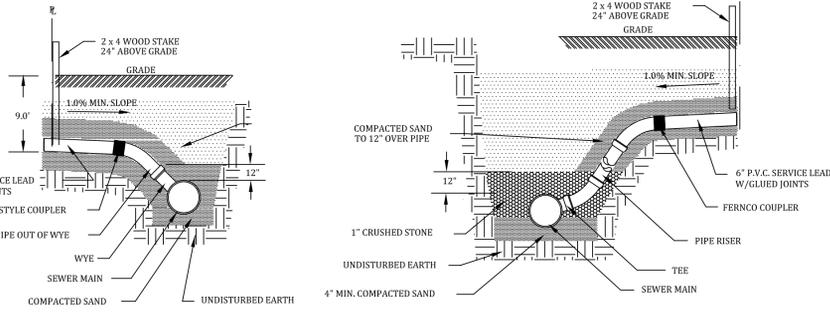
CLASS-B TRENCH DETAIL

- NOTES:**
- LEADS AND RISERS SHALL BE CONSTRUCTED OF MATERIALS AS SPECIFIED AND OF SIZES AS SHOWN ON THE PLANS.
 - DEPTH AT PROPERTY LINE SHALL BE 9' UNLESS OTHERWISE SHOWN ON THE PLANS.
 - IF CONCRETE PIPE IS USED, AN ASBESTOS CEMENT BELLS TO BE CAST IN THE WALL OF THE PIPE FOR USE AS A TIE BRANCH.
 - FERRO-STYLE FLEXIBLE COUPLINGS SHALL BE USED WHEN CONNECTING THE HOUSE TO THE STUB.
 - MIN. 3" SEPARATION BETWEEN WATER & SEWER SERVICES.
 - ALL REFERENCES TO STONE BEDDING SHALL MEAN CRUSHED STONE.



PLAN WITHOUT RISER

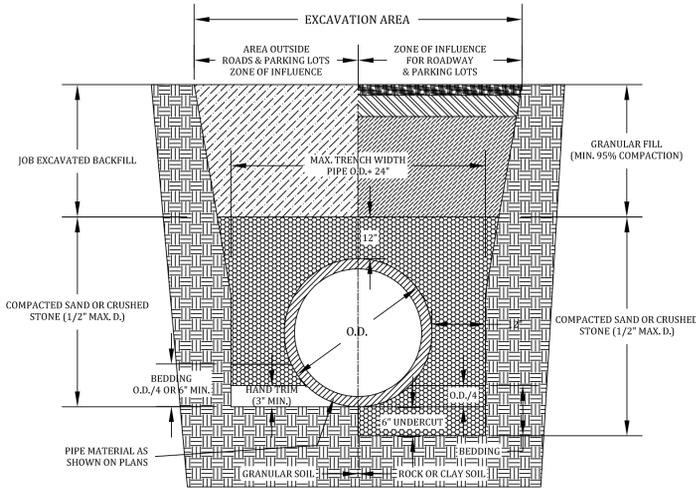
PLAN WITH RISER



SECTION WITHOUT RISER

SECTION WITH RISER

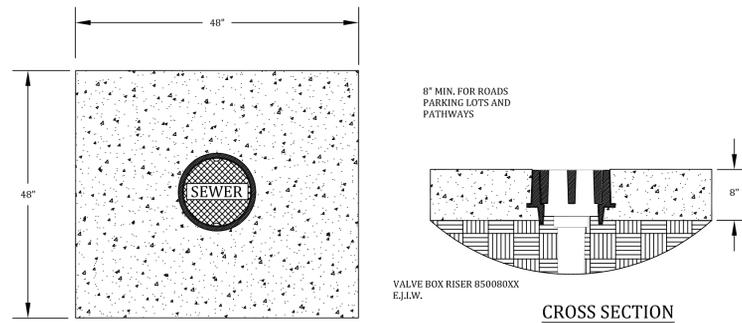
SERVICE/CONNECTION DETAIL



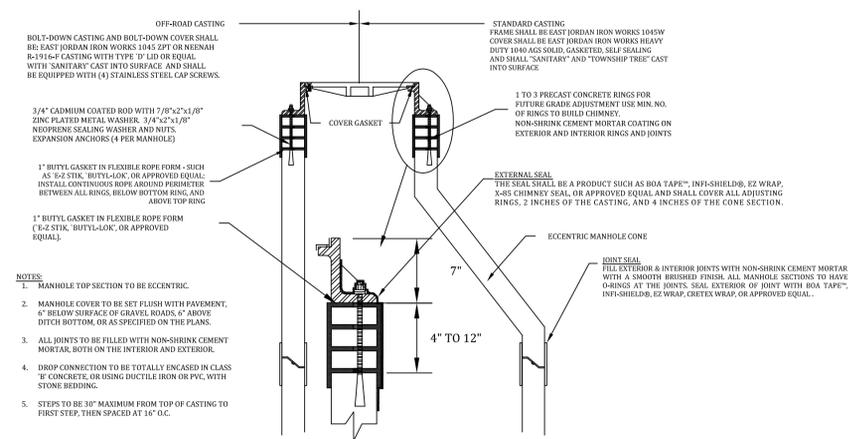
TYPICAL TRENCH DETAIL (SDR26 PVC ONLY)

THE PVC (SDR-26) PIPE MATERIAL SHALL CONFIRM TO ASTM D 2241, WITH BELL AND SPIGOT JOINTS IN ACCORDANCE WITH ASTM F 47. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH ASTM D 2321. ALL PIPE SHALL BE MARKED TO PROVIDE ASTM DESIGNATIONS, SDR NUMBER, MANUFACTURER'S NAME AND PIPE DIAMETER.

THE CONTRACTOR SHALL TEST THE MAIN FOR DEFLECTION BY PULLING A MANDREL THROUGH THE SEWER AFTER ALL BACKFILL HAS BEEN PLACED AND COMPACTED OVER THE PIPE. THE MAXIMUM ALLOWABLE DEFLECTION SHALL NOT EXCEED 5% OF THE PIPE'S INSIDE DIAMETER. THE OUTSIDE DIAMETER OF THE TEST MANDREL SHALL BE EQUAL TO THE TO THE INSIDE DIAMETER OF THE PIPE LESS 5%. THE INITIAL TEST SHALL BE PERFORMED AT LEAST 30 DAYS AFTER PIPE INSTALLATION. A SECOND TEST SHALL BE PERFORMED AFTER 10 MONTHS OF PIPE INSTALLATION.

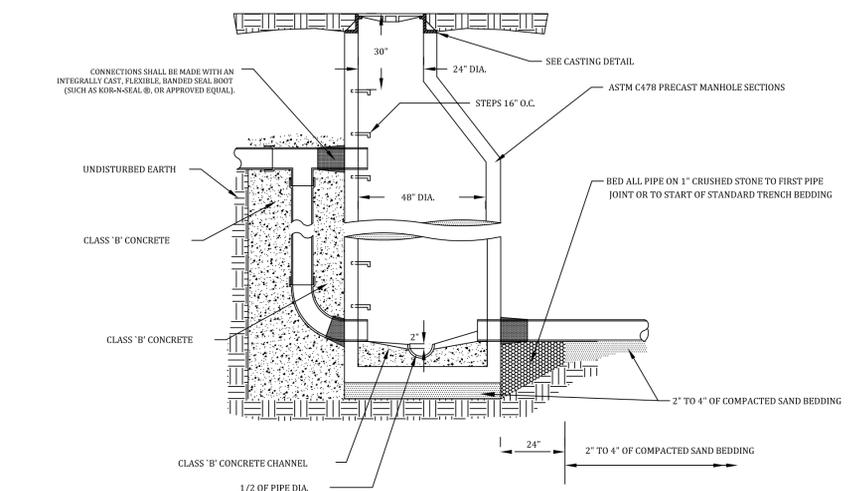


CLEANOUT BOXES IN CONCRETE

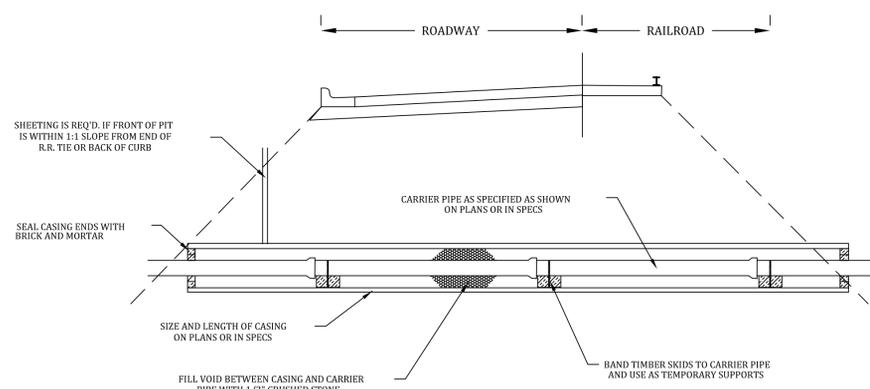


MANHOLE CASTING DETAIL

- NOTES:**
- MANHOLE TOP SECTION TO BE ECCENTRIC.
 - MANHOLE COVER TO BE SET FLUSH WITH PAVEMENT, 6\"/>

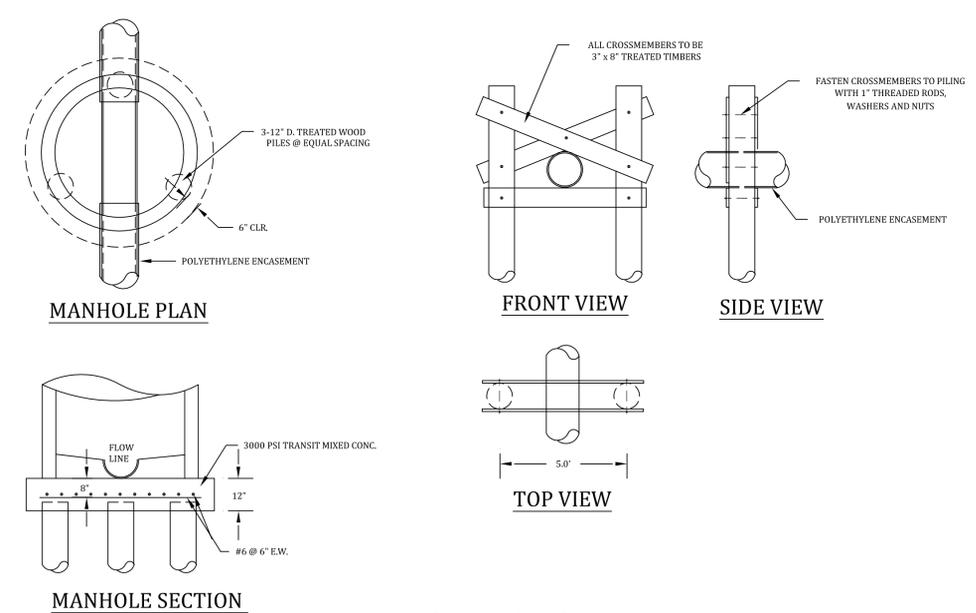


MANHOLE-SECTION DETAIL

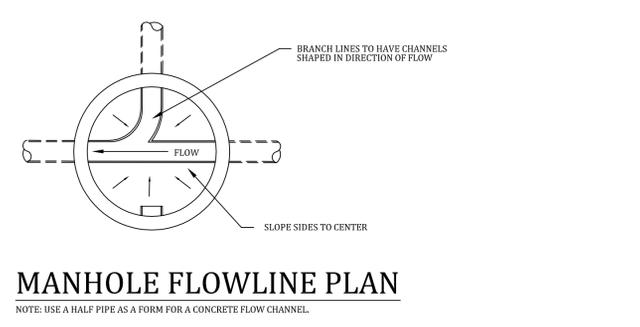


CASING INSTALLATION DETAIL FOR ROADS & RAILROADS

- NOTES:**
- WORK IN ROAD OR RAILROAD RIGHTS-OF-WAY SHALL BE IN ACCORDANCE WITH THE APPROPRIATE REGULATORY AGENCY'S REQUIREMENTS.
 - CASING PIPE SHALL BE MEET THE GRADE B REQUIREMENTS OF ASTM 139, ASTM A-53, OR API 5-L, WITH 0.375\"/>

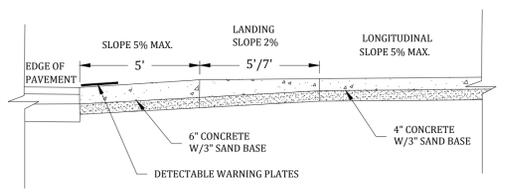
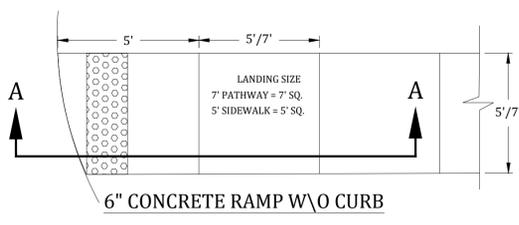


PILING DETAILS

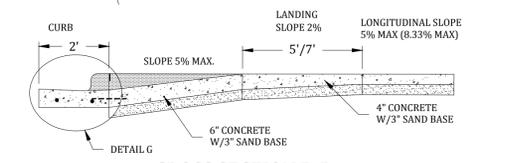
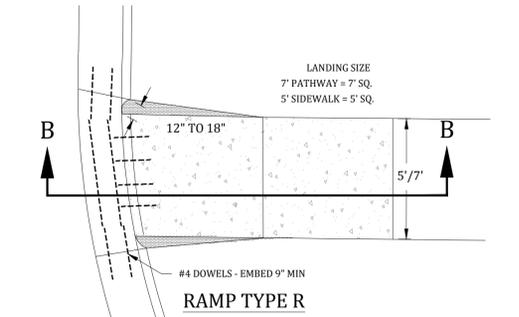


MANHOLE FLOWLINE PLAN

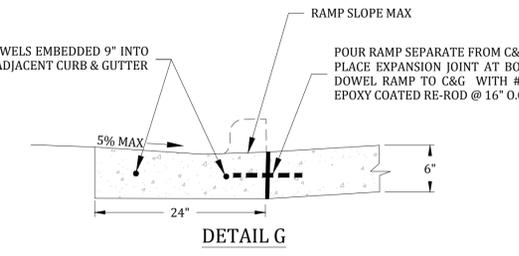
Meridian Charter Township		REVISIONS:	
Ingham County, Michigan		DATE:	BY:
Public Works Department		04/1996	JG
		07/02/99	JG
		01/13/00	JG
		05/12/08	JG
		07/31/12	JG
		05/15/15	JG
		01/10/20	NN
		03/09/21	NN
		03/23/21	NN
STANDARD DETAILS FOR SANITARY SEWER SYSTEM		SCALE:	COMMENTS:
DRAWN BY: MK 03/1983		NTS	Computer Generated
CHECKED BY: JB 03/1983			Add Bolts to Casting Detail
			Add SDR 26 Detail
			Add "Wrapidseal" & Grout to Casting Detail
			Clarified "Crushed Stone"
			Add Cleanout in Concrete
			Reorganize
			Butyl btwn Rings
			Additional Chimney/Join Seal
			PAGE: 4 OF 4
			FILE: Sewer Detail Sheet 2018.dwg



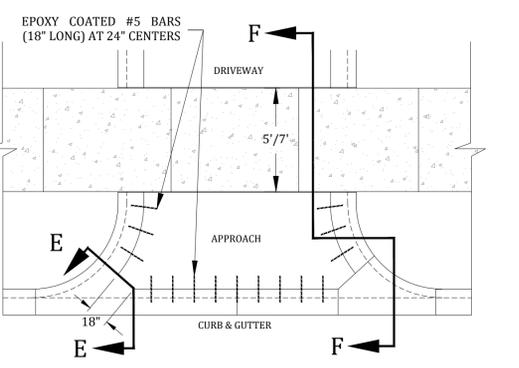
CROSS SECTION A-A



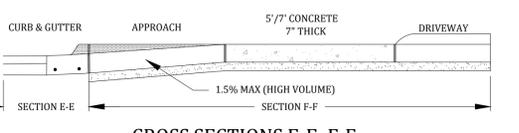
CROSS SECTION B-B



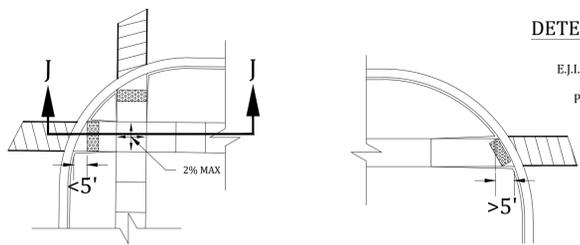
DETAIL G



TYP. COMMERCIAL DRIVEWAY PLAN

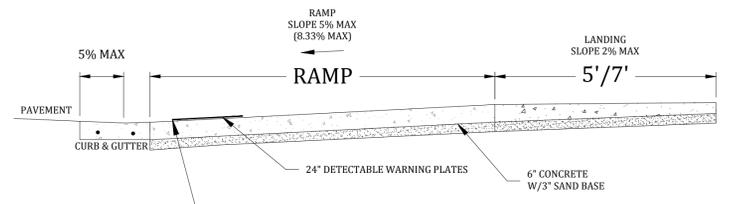


CROSS SECTIONS E-E, F-F



RAMPS LOCATED IN RADIUS

RAMP LOCATED IN RADIUS

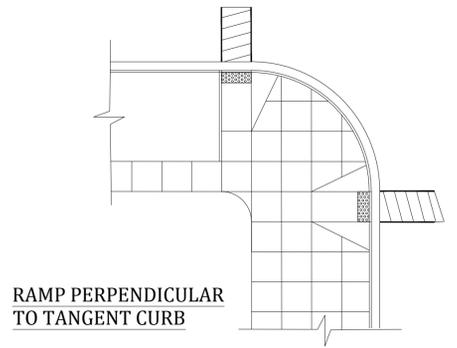


SECTION J-J

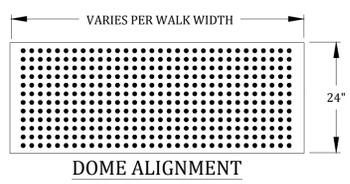
GRADE BREAKS AT THE TOP AND BOTTOM OF PERPENDICULAR CURB RAMPS SHALL BE PERPENDICULAR TO THE DIRECTION OF TRAVEL. AT LEAST ONE END OF THE BOTTOM GRADE BREAK SHALL BE AT THE BACK OF CURB.

DETECTABLE WARNING DETAILS

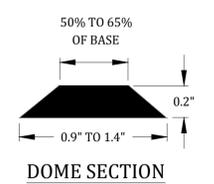
E.J.L.W. 7005 DETECTABLE WARNING PLATE
SIZES AVAILABLE 12", 18" & 24"
PLATES MUST BE ASPHALTIC COATED



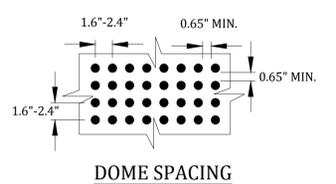
RAMP PERPENDICULAR TO TANGENT CURB



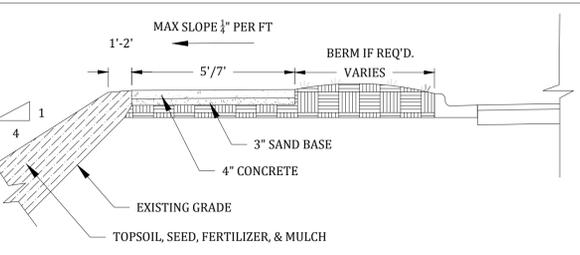
DOME ALIGNMENT



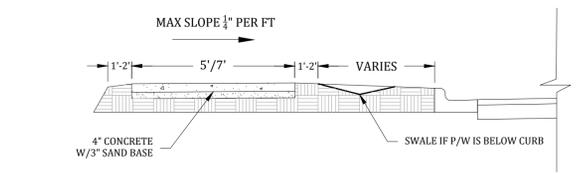
DOME SECTION



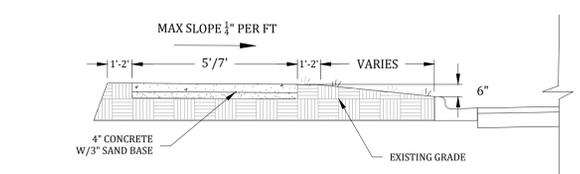
DOME SPACING



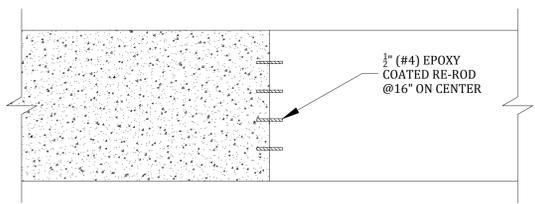
EMBANKMENT & BERM CROSS SECTION



SWALE CROSS SECTION



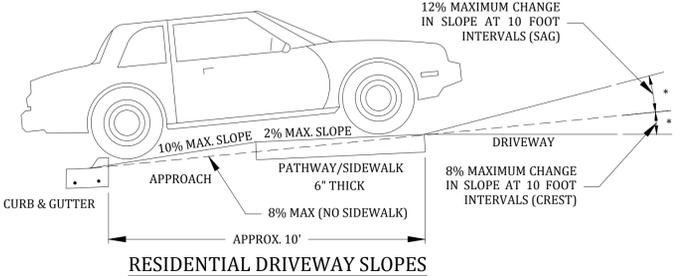
TYPICAL CROSS SECTION



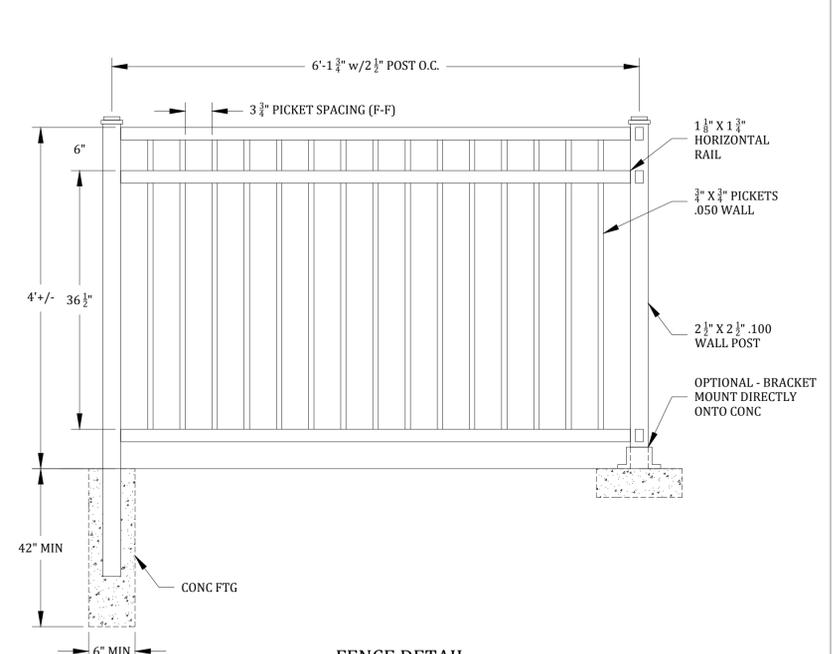
CONCRETE PINNING DETAIL

CROSS SECTION- (NO SCALE)

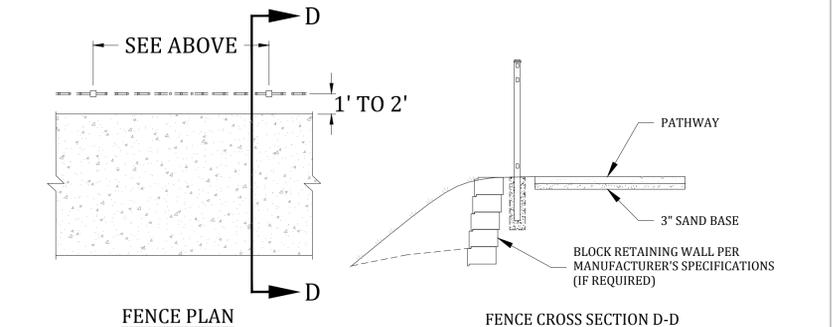
- GENERAL NOTES
1. SIDEWALKS/PATHWAYS SHALL BE 4" THICK CONCRETE EXCEPT AT DRIVEWAYS.
 2. SIDEWALKS/PATHWAYS THRU DRIVES SHALL BE: 6" (RESIDENTIAL); 7" (MULTI-RESIDENTIAL & COMMERCIAL)
 3. 3" OF COMPACTED SAND BASE SHALL BE PLACED UNDER ALL SIDEWALKS/PATHWAYS.
 4. ALL BITUMINOUS APRONS SHALL BE 2 1/2" THICK UNLESS NOTED OTHERWISE
 5. PROPERTY IRONS SHALL BE MAINTAINED BY THE CONTRACTOR.
 6. ALL EXISTING CONCRETE AND BITUMINOUS TO BE REMOVED SHALL BE SAWCUT. ALL CONCRETE AND BITUMINOUS REMOVAL SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION.
 7. ALL AGGREGATE BASE SHALL BE 22A, 4" THICK.
 8. ALL TREE AND BUSH REMOVAL SHALL BE CONSIDERED PART OF SUB-GRADE PREPARATION.
 9. LOCATION OF NEW PLANT MATERIAL SHALL BE AS DIRECTED BY THE ENGINEER, AND SHALL BE INSTALLED IN ACCORDANCE WITH GUIDELINES ESTABLISHED BY THE A.A.O.N.
 10. ALL PLANT MATERIAL NOT MARKED FOR REMOVAL SHALL BE PROTECTED.
 11. BITUMINOUS DRIVES SHALL BE SAWCUT 18" ON EITHER SIDE OF PROPOSED PATHWAY.



RESIDENTIAL DRIVEWAY SLOPES



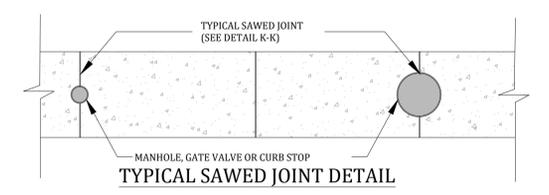
FENCE DETAIL



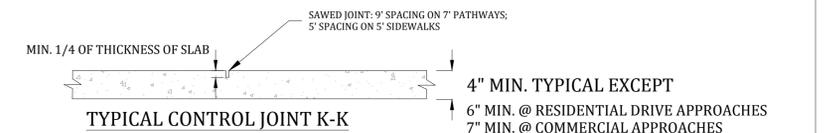
FENCE PLAN

FENCE CROSS SECTION D-D

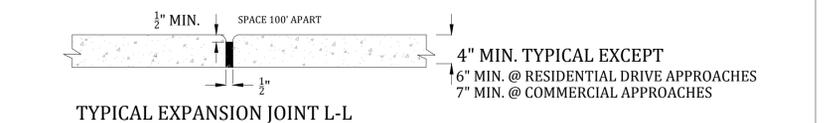
NOTE: FENCE POSTS CAN BE ANCHORED TO THE PATHWAY, THEN PATHWAY MUST BE WIDENED TO EIGHT FEET



TYPICAL SAWED JOINT DETAIL



TYPICAL CONTROL JOINT K-K



TYPICAL EXPANSION JOINT L-L

Meridian Charter Township
Ingham County, Michigan
ENGINEERING

5' SIDEWALK & 7' PATHWAY
DETAIL SHEET

REVISIONS:		
DATE:	BY:	COMMENTS:
04/30/03	JG	ADD REBAR TO CURB & GUTTER
08/01/05	JG	CLARIFY RAMP DETAILS
12/20/06	JG	FENCE POST IN PVC PIPE W/SAND
12/29/08	JG	RAMPS W/ DETECTABLE WARNING PLATES
08/14/09	NN	LANDING CROSS SECTIONS
03/18/16	JG	DOWEL DETAIL FOR NEW/EX CONCRETE
01/22/18	NN	SPEC & DETAIL SHEET OVERHAUL
04/12/19	NN	FENCE & RET. WALL REVISION
12/03/20	NN	FENCE REVISION

DRAWN BY: JG 08/01/05 CHECKED BY: YI 08/01/05

SCALE: NONE
PAGE: - OF -
PAGE: PATHWAY DETAIL SHEET 2021.DWG

Digital EGLE/USACE Joint Permit Application (JPA) for Inland Lakes and Streams, Great Lakes, Wetlands, Floodplains, Dams, Environmental Areas, High Risk Erosion Areas and Critical Dune Areas

version 1.40

(Submission #: HPY-F5EW-EP22G, version 1)

Details

Submission ID HPY-F5EW-EP22G
Submission Reason New
Status Draft

Form Input

Instructions

[To download a copy or print these instructions, please click this link \(recommended\).](#)

Contact Information

Applicant Information (Usually the property owner)**First Name Last Name**Patrick *Smith***Organization Name***Okemos Pointe III, LLC***Phone Type Number Extension**

Mobile 9709871413

Email

psmith@westpacinv.com

Address

P.O. Box 523

Grand Ledge, MI 48837

Is the Property Owner different from the Applicant?

No

Has the applicant hired an agent or cooperating agency (agency or firm assisting applicant) to complete the application process?

No

Are there additional property owners or other contacts you would like to add to the application?

Yes

Additional Contact Information (1 of 1)**Contact Role(s)**

Consultant

Contact Information**Prefix***NONE PROVIDED***First Name Last Name**Allen *Patrick***Title***NONE PROVIDED***Organization Name***KEBS, Inc.***Phone Type Number Extension**

Business 5173391014

Email

ajpatrick@kebs.com

Address

2116 Haslett Rd

Haslett, MI 48840

Project Location**EGLE Site Reference Number (Pre-Populated)**

4449589780470104733

Project Location

42.68652638308654,-84.43809995160642

Project Location Address

3655 Jolly Oak Rd

Okemos, MI 48864

County

Ingham

Is there a Property Tax ID Number(s) for the project area?

Yes

Please enter the Tax ID Number(s) for the project location

33-02-02-33-302-016

Is there Subdivision/Plat and Lot Number(s)?

No

Is this project within Indian Lands?

No

Local Unit of Government (LUG)

Meridian Township

Directions to Project Site

North on Okemos Rd 800 ft from Jolly Rd, turn west onto Jolly Oak Rd, 1,300 ft west to round-a-bout in Elevation development, north at round-a-bout 500 ft to crossing of Smith Consolidated Drain

Background Information**Has the Michigan Department of Environment, Great Lakes, and Energy (EGLE) and/or United States Army Corps of Engineers (USACE) conducted a pre-application meeting/inspection for this project?**

No

Has the EGLE completed a Wetland Identification Program (WIP) assessment for this site?

No

Environmental Area Number (if known):

NONE PROVIDED

Has the United States Army Corps of Engineers (USACE) completed either an approved or preliminary jurisdictional determination for this site?

No

Were any regulated activities previously completed on this site under an EGLE and/or USACE permit?

Yes

List the permit numbers.

2E4-28K3-HG8V

Describe the regulated activities that were previously permitted.

Wetland disturbance and 2 storm sewer outfalls

Have any activities commenced on this project?

No

Is this an after-the-fact application?

No

Are you aware of any unresolved violations of environmental law or litigation involving the property?

No

Is there a conservation easement or other easement, deed restriction, lease, or other encumbrance upon the property?

No

Are there any other federal, interstate, state, or local agency authorizations associated with this project?

Yes

List all other federal, interstate, state, or local agency authorizations.

Agency	Type of Approval	Number	Date Applied	Approved/Denied /Undetermined
Meridian Township	Floodplain SUP	NONE PROVIDED	10/17/2023	Undetermined
Ingham County Drain	Stormwater discharge design	NONE PROVIDED	03/31/2023	Undetermined
Meridian Townshipi	Soil Erosion	NONE PROVIDED	NONE PROVIDED	Undetermined

Comments

NONE PROVIDED

Permit Application Category and Public Notice Information

Indicate the type of permit being applied for.

Individual Permit for all other projects

This type of permit application requires that you include contact information for the adjacent landowners to this project. If you are only entering in a small number of bordering parcel owners contact information, please select "Enter list of recipients". If there is a rather large number of affected property owners such as a project that significantly affects lake levels, please upload a spreadsheet of the property owners. Please include names and mailing addresses.

Enter list of recipients.

This project may require public noticing. Please list the adjacent landowners to the project, along with any of the others that may apply:

Contact Type	Contact Person	Mailing Address	City	State	Zip Code
Adjacent Landowner	Rick & Charmaine Murphy	2414 Kansas Rd	Okemos	MI	48864
Adjacent Landowner	Forsberg Family LLC	2422 Jolly Rd, Suite 200	Okemos	MI	48864

Contact Type	Contact Person	Mailing Address	City	State	Zip Code
Adjacent Landowner	Steven Freemire	3622 Kansas Rd	Okemos	MI	48864
Adjacent Landowner	Okemos Pointe I, LLC	2410 Jolly Rd, Suite 440	Okemos	MI	48864
Adjacent Landowner	Okemos Pointe II SPE, LLC	P.O. Box 523	Grand Ledge	MI	48864
Adjacent Landowner	Okemos Pointe III, LLC	P.O. Box 523	Grand Ledge	MI	48864
Adjacent Landowner	Coyote Creek Condominium Association	950 CORPORATE OFFICE DR, STE 200	Milford	MI	48381
Adjacent Landowner	Consumers Energy CO, EP10 - Property Tax	One Energy Plaza	Jackson	MI	49201
Adjacent Landowner	Fieldstone Condominiums	2260 Fieldstone Dr	Okemos	MI	48864

Project Description

Project Use: (select all that apply - Private, Commercial, Public/Government/Tribal, Receiving Federal/State Transportation Funds, Non-profit, or Other)

Commercial

Project Type (select all that apply):

Development-Condominium/Subdivision-Residential

Project Summary (Purpose and Use): Provide a summary of all proposed activities including the intended use and reason for the proposed project.

The purpose of the project is to construct 2 residential apartment buildings, associated parking and drives, and extension of a township pathway. The project is the 4th and final phase of a multi-use development that includes commercial buildings and apartment buildings.

Project Construction Sequence, Methods, and Equipment: Describe how the proposed project timing, methods, and equipment will minimize disturbance from the project construction, including but not limited to soil erosion and sedimentation control measures.

Conventional construction methods are proposed including placement of SESC measures, land clearing, site grading, utility installation, storm sewer installation with outlet pipes, building and parking installation, and restoration of all impacted areas in accordance with the final approved plans. Construction is anticipated to start January 2024 with installation of temporary soil erosion measures and clearing/grubbing.

Project Alternatives: Describe all options considered as alternatives to the proposed project, and describe how impacts to state and federal regulated waters will be avoided and minimized. This may include other locations, materials, etc.

Development of the property requires utilizing the existing 108" x 68" elliptical culvert in the Smith Consolidated Drain as an entrance drive. Construction of the entrance drive will require fill in the existing floodplain. Extension of an existing Meridian Township pedestrian pathway through the project site to connect to another pathway NW of Francis Street will also require fill in the existing floodplain.

Alternatives:

- Development layouts were originally planned with 3 apartment buildings in the project area with parking and drives located within the existing floodplain. The layout was revised to eliminate a building, reduce parking totals, remove parking from the floodplain, and limit floodplain impacts to the entrance drive and Meridian Township pathway.
- Pathway configurations through the middle of the site were considered to limit floodplain disturbance, but separation of the pathway from parking and drives pushed other construction and grading into the floodplain. The current proposed pathway route was chosen to utilize the setback area between the west property line and the proposed parking/buildings for a more efficient layout that reduced south grading into the floodplain.
- Additional floodplain and drain easements for access and maintenance on the NE/East side of the proposed development precluded the pathway from being routed on the east side

Project Compensation: Describe how the proposed impacts to state and federal regulated waters will be compensated, OR explain why compensatory mitigation should not be required for the proposed impacts. Include amount, location, and method of compensation (i.e., bank, on-site, preservation, etc.)

The proposed floodplain fill(31.5 CYD) for the entrance drive and township pathway is proposed to be compensated with floodplain excavation(63.1 CYD) immediately adjacent to the impacted area.

The 2 storm outfalls, east and north, of the project site will be constructed to match the existing slope and grade of the drain banks. 7.43 CYD of material will be excavated from the floodplain and only 5.51 CYD of material will be placed in the floodplain to construct the storm outfalls and associated riprap(2 CYD per outfall).

Upload any additional information as needed to provide information applicable to your project regarding project purpose sequence, methods, alternatives, or compensation.

NONE PROVIDED

Comment

NONE PROVIDED

Resource and Activity Type

SELECT THE ACTIVITIES from the list below that are proposed in your project (check ALL that apply). If you don't see your project type listed, select "Other Project Type". These activities listed require additional information to be gathered later in the application.

Intake or Outfall Structures

The Proposed Project will involve the following resources (check ALL that apply).

100-year Floodplain

Major Project Fee Calculation Questions

Is filling of 10,000 cubic yards or more proposed (cumulatively) within wetlands, streams, lakes, or Great Lakes?

No

Is dredging of 10,000 cubic yards (cumulatively) or more proposed within streams, lakes, or Great Lakes? (wetlands not included)

No

Is new dredging or adjacent upland excavation in suspected contamination areas proposed by this application?

No

Is a subdivision, condominium, or new golf course proposed?

Yes

Intake or Outfall Structures

Is the intake structure associated with an authorized outfall structure?

NONE PROVIDED

Number of intakes or outfalls:

2

Pipe Description

Unique Identifier	Pipe Diameter (inches):	Invert Elevation:
LB#401 FES	15	864.50
ST#407 FES	15	867.00

Type of intake or outfall stabilization:

Riprap

Has the water been treated (outfall only)?

Yes

Floodplain

Proposed Activity

Fill

Excavation/Cut

100-Year Floodplain Elevation

Please provide a name for the stream, river, channel, or waterbody:	100-Year Floodplain Elevation (feet)	Datum	Source of Datum
Smith Consolidated Drain	870.00 - 866.00	NAVD88	onsite benchmark

Upload Documents for Datum Source

NONE PROVIDED

Comment

NONE PROVIDED

Excavation/Cut volume below the 100-year floodplain elevation (cubic yards)

70.53

Fill volume below the 100-year floodplain elevation (cubic yards)

37.01

Source of Fill Material:

On-site

Off-site

Type of Fill

Other: excavated material from pipe trench

Sand

Gravel

Calculations Upload

5 - 93644 - OUTLET CROSS SECTIONS.pdf - 10/17/2023 01:50 PM

Comment

NONE PROVIDED

Is this project located in the floodway?

No

Were one or more Hydraulic Analyses completed for this project?

No

Local Unit of Government (LUG) Acknowledgement Letter Upload

NONE PROVIDED

Comment

NONE PROVIDED

Is there an existing building on site?

No

Upload of Proposed Site Plans

Required on all Site Plan uploads. Please identify that all of the following items are included on your plans that you upload with this application.

Site Plan Features	Existing and Proposed Plan Set
Scale, Compass North, and Property Lines	Yes
Fill and Excavation areas with associated amounts in cubic yards	Yes
Any rivers, lakes, or ponds and associated Ordinary High Water Mark (OHWM)	Yes
Exterior dimensions of Structures, Fill and Excavation areas associated with the proposed project	Yes
Dimensions to other Structures and Lot Lines associated with the project	Yes
Topographic Contour Lines from licensed surveyor or engineer when applicable	Yes

Upload Site Plans and Cross Section Drawings for your Proposed Project

Elevation Phase 4 - Floodplain Disturbance Plans.pdf - 10/17/2023 01:49 PM

Elevation Ph 4 - Site Plans 10-17-23.pdf - 10/17/2023 01:50 PM

Comment

NONE PROVIDED

Additional Required and Supplementary Documents

NONE PROVIDED

Comment

NONE PROVIDED

Fees

Individual Permit Fee:
+\$500.00

Total Fee Amount:

\$500.00

Is the applicant or landowner a State of Michigan Agency?

No

Attachments

Date	Attachment Name	Context	User
10/17/2023 1:50 PM	5 - 93644 - OUTLET CROSS SECTIONS.pdf	Attachment	Allen Patrick
10/17/2023 1:50 PM	Elevation Ph 4 - Site Plans 10-17-23.pdf	Attachment	Allen Patrick
10/17/2023 1:49 PM	Elevation Phase 4 - Floodplain Disturbance Plans.pdf	Attachment	Allen Patrick



To: Members of Planning Commission

From: Timothy R. Schmitt, AICP

Date: December 8, 2023

Re: 2023 Master Plan DRAFT - Recommendation

The Planning Commission and Staff have been working throughout 2023 to finalize and update to the Township's Master Plan for Land Use. The final draft, which has been publicly noticed and distributed to surrounding communities, can be found here: <https://www.flipsnack.com/homtv214life/2023-meridian-township-master-plan/full-view.html>

There were a few outstanding questions raised at the last Planning Commission meeting that Staff would like to respond to at this time.

- Can we get the plan more prominently placed on the website? – Communications is running the master plan update as a 'spotlight' on the front page during the final stage of review and adoption.
- Is the flipbook format accessible to differently abled members of the public? – The format is the best way we've found to be able to share information with all members of the public. The pictures have alternative text that can be read for people with sight issues. Additionally, the document is set up much better than traditional pdfs for programs that convert to audio.
- Can we include a land acknowledgment in the document? – Staff set out to develop this for the final document and one of the big recommendations we discovered, from the National Museum of the American Indian, is that it is suggested that we reach out directly to local indigenous communities to discuss this recognition.

Although we could easily modify an existing land acknowledgment to include in the document, Staff would recommend that if the Planning Commission wishes to pursue this, a recommendation is made to the Township Board that the Board develop this, for all Township Boards and Commissions, in conjunction with indigenous populations. This will elevate the matter beyond a simple land use document, while also raising its profile and getting proper input into its development.

Absent any major concerns from the Planning Commission, Staff offers the following motion for the Planning Commission's use in discussing next steps.

Motion to recommend approval of the 2023 Meridian Township Master Plan update to the Township Board, with a further recommendation that the Township Board develop a land acknowledgement for use by all Boards and Commissions in the future.



To: Planning Commission
From: Brian Shorkey, AICP, Senior Planner
Date: December 8, 2023
Re: 2024 Meeting Schedule Correction

While putting together the application deadline, Staff noticed that the dates in May and October were not correct. The Planning Commission is being asked to reapprove the 2024 meeting schedule at this time. The corrected dates are shown in **bold**.

If the Planning Commission wishes to discuss a meeting time earlier than 6:30 p.m. for the 2024 calendar year, that can be changed by amending the resolution approving the schedule. For reference, Township Board meetings start at 6PM and Zoning Board of Appeals start at 6:30PM.

PROPOSED 2024 MEETING CALENDAR

- January 8 - regular meeting
 22 - regular meeting

- February 12 - regular meeting
 26 - regular meeting

- March 11 - regular meeting
 25 - regular meeting

- April 8 - regular meeting
 22 - regular meeting

- May **13** - regular meeting
 27 - regular meeting

- June 10 - regular meeting
 24 - regular meeting

- July 8 - regular meeting
 22 - regular meeting

- August 12 - regular meeting
 26 - regular meeting

2024 Meeting Schedule Correction
Planning Commission (October 23, 2023)
Page 2

September 9 - regular meeting
23 - regular meeting

October 14 - regular meeting
28 - regular meeting

November 11 - regular meeting

December 9 - regular meeting

A resolution is provided to adopt the above meeting schedule.

- **Motion to adopt the resolution approving the 2024 Planning Commission Meeting Schedule.**

Attachment

1. Resolution to approve 2024 Planning Commission Meeting Schedule.

2024 Planning Commission Meeting Schedule Correction

RESOLUTION

At a regular meeting of the Planning Commission of the Charter Township of Meridian, Ingham County, Michigan, held at the Meridian Municipal Building, in said Township on the 11th day of December, 2023 at 6:30 p.m., Local Time.

PRESENT:

ABSENT:

The following resolution was offered by _____ and supported by _____.

WHEREAS, the Planning Commission approved the 2024 Meeting Schedule at their regular meeting on October 23, 2023; and

WHEREAS, the Planning Staff discovered that the meeting dates in May and October were incorrectly listed as the first and third Mondays; and

WHEREAS, Public Act 267 of the Public Acts of 1976 requires the publication of the meeting schedule of every municipal board at least once a year; and

WHEREAS, the Planning Commission desires to announce the time, date, and place of all 2024 regular meetings of the Commission, pursuant to the provisions of Act 267 of the Public Act of 1976.

NOW, THEREFORE, BE IT RESOLVED BY THE PLANNING COMMISSION OF THE CHARTER TOWNSHIP OF MERIDIAN, INGHAM COUNTY, MICHIGAN as follows:

1. The Planning Commission will meet for regular meetings on certain Mondays, January through December in 2024 in the Town Hall Room of the Meridian Municipal Building, 5151 Marsh Road, Okemos, MI 48864, 517.853.4560.
2. The specific dates for meetings are as follows:

January	8 - regular meeting 22 - regular meeting
February	12 - regular meeting 26 - regular meeting
March	11 - regular meeting 25 - regular meeting
April	8 - regular meeting 22 - regular meeting
May	13 - regular meeting 27 - regular meeting
June	10 - regular meeting 24 - regular meeting
July	8 - regular meeting

