



## Pittsfield Charter Township

6201 West Michigan Avenue, Ann Arbor, MI 48108  
Phone: (734) 822-3135 | Fax: (734) 944-6103  
Website: [www.pittsfield-mi.gov](http://www.pittsfield-mi.gov)

### *Office of the Supervisor*

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#### **MEMORANDUM**

**TO:** Pittsfield Charter Township Board of Trustees

**THROUGH:** Mandy Grewal, Supervisor

**FROM:** Belinda Kingsley, Zoning & Code Enforcement Administrator

**DATE:** May 13, 2020

**SUBJECT:** Authorize the Township Attorney to file a nuisance abatement lawsuit against the owner of 4025 Packard

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#### **BOARD ACTION REQUESTED:**

Authorize the Township Attorney to file a nuisance abatement lawsuit against the owner of 4025 Packard.

#### **BACKGROUND:**

This property has been the source of numerous complaints by residents of Pittsfield Township for several years due to the presence of multiple blighting factors in violation of the Pittsfield Township Code of Ordinances.

This site was last used as a gas station, closing in 2002. Since that time the above ground structures have deteriorated, maintenance has been sporadic, and numerous code enforcement actions have been taken, including phone calls to the owner, notice of violation letters, and citations. The site has become a haven for criminal behavior, an invitation and attractive nuisance to children, and a blight on neighboring properties.

This property is currently in violation of the Code of Ordinances.

#### **IMPACT ON TOWNSHIP'S HUMAN RESOURCES:**

No impact

#### **IMPACT ON TOWNSHIP'S BUDGET:**

No impact

#### **IMPACT ON INDIRECT COST:**

No impact

#### **IMPACT ON OTHER TOWNSHIP DEPARTMENTS OR OUTSIDE AGENCIES:**

No impact

**CONFORMITY TO TOWNSHIP POLICIES:**

Conforms

**ATTACHMENTS:**

Nuisance Abatement Filing

Exhibit A - Title Search

Exhibit B - Photos

Exhibit C - Citations

Board of Trustees Meeting, 3/25/2020

**STATE OF MICHIGAN  
IN THE 22<sup>ND</sup> JUDICIAL CIRCUIT COURT**

PITTSFIELD CHARTER TOWNSHIP  
A Michigan Municipal Corporation,

Plaintiff,

vs

4025 PACKARD, LLC  
A Michigan Limited Liability Company,

Defendant.

File No. 20-  
Hon.

CZ

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FINK & FINK, PLLC  
Andrew F. Fink III (P74182)  
James A. Fink (P40386)  
Attorneys for Plaintiff  
320 North Main St., Ste 300  
Ann Arbor, MI 48104  
(734) 994-1077

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**VERIFIED COMPLAINT TO DECLARE PROPERTY A PUBLIC NUISANCE, FOR  
ISSUANCE OF AN ORDER TO SHOW CAUSE, PRELIMINARY INJUNCTION AND  
OTHER RELIEF**

There is no other pending or resolved civil action arising out of the same transaction or occurrence as alleged in the complaint. Plaintiff has issued Municipal Civil Infraction tickets to Defendant which have not yet been entered into the court's case management system. Those cases will be in the 14A1 District Court and are expected to be assigned to Hon. J. Cedric Simpson.

Plaintiff, the Charter Township of Pittsfield, through counsel and for its Complaint, states:

**General Allegations, Jurisdiction, and Venue**

1. Plaintiff, Pittsfield Charter Township ("Pittsfield"), is a Michigan municipal corporation located in Washtenaw County, Michigan.
2. Pittsfield brings this action pursuant to the Revised Judicature Act, MCL 600.2940; MCL 42.15; MCR 3.601; and the Pittsfield Charter Township Code of Ordinances.

3. The real property which is the subject of this lawsuit (“subject property”) is located at 4025 Packard, Pittsfield Township, Washtenaw County, Michigan and is more particularly described as follows:

Lots 1, 2, 31, and 32, Block 1, Subdivision of Lots 1 to 73 inclusive, excepting Lots 34 and 36, and Lots 109 to 111, inclusive of Oak Park, as recorded in Liber 8 of Plats, Page 6, Washtenaw County Records.

Tax I.D. No. L-12-01-354-015

4. A title search reveals the owner of the property to be 4025 Packard, LLC. **Exhibit A.**
5. 4025 Packard, LLC is a Michigan Limited Liability Company whose resident agent is Brian Najor, and whose registered address is 4036 Telegraph Rd., Ste. 206, Bloomfield Hills, MI.
6. On information and belief, the building on the property has been unoccupied for several years and has been the subject of numerous communications between the current and former owners and the Township.
7. Pittsfield has received numerous complaints about the run-down, unsightly, and unsafe condition of the property from residents of the area. Pittsfield Township’s Zoning & Code Enforcement personnel inspected the condition of the property on or about January 22, 2020, February 27, 2020, March 2, 2020, March 9, 2020, and April 6, 2020.
8. The inspections found several blighting factors and/or causes of blight under §8-3 of the Pittsfield Charter Township Code, including the following:
  - a. Commercial structures that, because of physical deterioration, appeared to be no longer useful for the purposes for which they may have been intended or lawfully used;

- b. A commercial structure that is completely vacant and not securely locked, with intact windows, or neatly boarded up;
  - c. Trash, litter, and other blighting factors visible to the public.
- 9. The inspection also revealed violations of the International Property Maintenance Code §302 relating to standards for maintaining exterior property and §304 relating to standards for the exterior of structures, as incorporated into the Township's Code of Ordinances by §6-19.
- 10. The photographs attached as **Exhibit B** show the property in substantially the same condition as it was in on the dates the tickets were issued and has been ever since.
- 11. Several Notices of Violation have been sent to Defendant in the years leading up to the issuance of the current tickets and filing of this Complaint.
- 12. Because the violations persisted, Township Code Enforcement personnel have issued a series of Municipal Civil Infraction tickets, and the violations continue with little abatement. **Exhibit C**, Civil Infraction Tickets.
- 13. The structures located on the subject property are vacant/abandoned and subject to break-ins. Such structures are well-known havens for criminal behavior, an invitation and attractive nuisance to children, and blight on neighboring properties. Not only is the value of the property greatly reduced, but so is that of the affected neighborhood.
- 14. This court has jurisdiction over nuisance cases regarding property within the county.

**Public Nuisance**

- 15. Pittsfield incorporates Paragraphs 1-14 as if fully restated.
- 16. MCL 600.2940 provides the authority for this court to declare the property a public nuisance and assess damages against those responsible:

600.2940 Nuisance; abatement; circuit court; injunction; private nuisance; damages; warrant to abate and remove nuisance; expense; actions.

(1) All claims based on or to abate nuisance may be brought in the circuit court. The circuit court may grant injunctions to stay and prevent nuisance.

17. The structure upon the subject property by Defendant clearly constitute a “nuisance in fact” and, with respect to those code violations, a “nuisance per se,” as defined in *Martin v Michigan*, 129 Mich App 100, 108; 341 N.W.2d 239 (1983):

“A nuisance per se is an act, occupation, or structure which is a nuisance at all times and under any circumstances.”

“...a nuisance in fact is a nuisance by reason of circumstances and surroundings, and an act may be found to be a nuisance in fact where its natural tendency is **to create danger and inflict injury to person or property.**” (Emphasis added).

18. MCL 600.2940 provides in pertinent part:

(3) If the judgment is that the nuisance shall be abated, the court may issue a warrant to the proper officer, requiring him to abate and remove the nuisance at the expense of defendant, in the manner that public nuisances are abated and removed. The court may stay the warrant for as long as 6 months to give the defendant an opportunity to remove the nuisance, upon the defendant giving satisfactory security to do so.

19. The subject property is in violation of section 8-3 of the Township Code which states in part that “[n]o person shall maintain or permit to be maintained any of these causes of blight or blighting factors upon any property in the Township.”
20. Causes of blight and blighting factors are defined under Section 8-3 of the Township Code and includes, among other things, all of the conditions described in Paragraph 8 above.
21. The subject property is in violation of section 6-35 of the Township Code which states in part that “[N]o owner or owner’s agent shall keep or maintain property that does not comply with the [property maintenance] standards of this article.”
22. The subject property is a nuisance per se because it is blighted, uninhabitable, and unsafe, in violation of the Township Code.
23. The subject property is a nuisance in fact because of its location at the intersection of major roads, its negative effect on local property values, and its continued deterioration.
24. Pittsfield has no adequate remedy at law.
25. Pittsfield and its residents, invitees, and anyone in the nearby neighborhood and vicinity of the subject property will suffer irreparable harm and damage unless this Court orders Defendant to abate the nuisance by removal of the building and all personal property.
26. Pittsfield and its residents would be harmed more by the absence of a Preliminary Injunction than Defendant would be by the granting of such relief.
27. No harm to the public interest will occur if a Preliminary Injunction is ordered following a hearing.

**Relief Requested**

WHEREFORE Plaintiff Pittsfield Charter Township respectfully requests this Court to:

- A. Issue an *Order to Show Cause* directed to Defendant requiring it to appear before this Court on a date and time fixed by this Court to show cause why the subject property should not be declared a public nuisance.
- B. After a Show Cause Hearing:
1. Declare the subject property a public nuisance.
  2. Enter a preliminary injunction not only prohibiting the occupancy or use of the premises for any purpose, but also requiring Defendant to, within thirty (30) days, obtain the necessary construction permits to bring the property into compliance with all applicable laws, or, in the alternative, obtain demolition permits and demolish all above ground structures, remove all debris and restore the property to surrounding grade level, or, in the alternative, appoint a receiver over the property.
- C. Should Defendant, after being served with the *Verified Complaint* and *Order to Show Cause*, fail to appear at the show cause hearing or otherwise defend himself in this action, grant Pittsfield and its authorized agents the right to enter upon the premises of the subject property, and cause same to be demolished, remove all debris and restore the surface to surrounding grade level, or, in the alternative, appoint a receiver over the property.
- D. Should Defendant appear but fail to comply with this Court's preliminary injunction, allow Pittsfield and its authorized agents the right to enter upon the subject property, and abate the nuisance as provided in paragraph C above, or, in the alternative, appoint a receiver.
- E. Order Defendant to pay all of the Township's reasonable costs associated with this lawsuit, including all costs incurred in the abatement of the nuisance itself, as well as the Township's reasonable attorney fees and to do so within thirty (30) days of being provided an invoice therefore.

F. In the event Defendant does not reimburse Pittsfield within thirty (30) days of having been provided an invoice therefore, order the entry of judicial lien in all such amounts to be recorded with the Washtenaw County Register of Deeds and enter a money judgment against Defendant in those same amounts which may be executed by Pittsfield in accordance with Michigan law.

I certify that the above statements are true to the best of my knowledge, information, and belief.

Dated May \_\_, 2020

\_\_\_\_\_  
Belinda Kingsley  
Zoning & Code Enforcement Administrator  
Pittsfield Charter Township

STATE OF MICHIGAN            )  
  )ss.  
COUNTY OF WASHTENAW    )

Subscribed and sworn to before me on May \_\_, 2020

\_\_\_\_\_  
\_\_\_\_\_  
Notary Public  
State of Michigan, County of \_\_\_\_\_  
My commission expires: \_\_\_\_\_  
Acting in County of \_\_\_\_\_

\_\_\_\_\_  
Andrew F. Fink III (P74182)  
James A. Fink (P40386)  
Fink & Fink, PLLC  
Attorneys for Plaintiff

Date: \_\_\_\_\_

# EXHIBIT A

**TITLE SEARCH  
ISSUED BY  
ABSOLUTE TITLE, INC.**

File No.: **87984**

Address reference:  
4025 Packard  
Ann Arbor, MI 48108

**SCHEDULE A**

1. Effective Date: February 26, 2020 at 5:00 P.M.
2. Policy or Policies to be issued: Amount  
2006 ALTA Owner's Policy NONE  
  
Proposed Insured:  
NONE
3. The estate or interest in the land described or referred to in the Search and covered herein is FEE SIMPLE and is at the effective date hereof vested in:  
  
**4025 Packard, LLC, a Michigan limited liability company**
4. The land referred to in this Search is situated in the Township of Pittsfield, Washtenaw County, Michigan, and is described as follows:  
  
Lots 1, 2, 31, and 32, Block 1, Subdivision of Lots 1 to 73 inclusive, excepting Lots 34 and 36, and Lots 109 to 111, inclusive of Oak Park, as recorded in Liber 8 of Plats, Page 6, Washtenaw County Records.

Due to the limited nature of the search, liability for inaccuracies or errors in the search is limited to refund of the search fee actually paid.

**Absolute Title, Inc.**

By:   
Authorized Signatory  
Phone 662-1050  
Fax 662-3608

# EXHIBIT B

02/27/20 09:51 AM





02/27/20 09:49 AM



02/27/20 09:49 AM



02/27/20 09:49 AM



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02/27/20 09:50 AM



02/27/20 09:51 AM

# EXHIBIT C



**Pittsfield Charter Township**  
**Department of Utilities & Municipal Services**

6201 West Michigan Avenue, Ann Arbor, MI 48108  
Phone: (734) 822-3101 • Fax: (734) 944-1103  
Website: [www.pittsfield-mi.gov](http://www.pittsfield-mi.gov)

**Mandy Grewal, Supervisor**

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March 19, 2020

Court Clerk  
14A-1 District Court  
PO Box 8645  
Ann Arbor, MI 48107

Dear Clerk:

Enclosed you will find three separate Civil Infraction Citations issued to the same Defendant (Citation nos. 3023, 3024 & 3025).

I would like to request a **formal** hearing with regard to each of the Citations.

This Citations were issued to:

4025 Packard LLC  
600 N. Old Woodward  
Suite 100  
Birmingham, MI 48009

Copies of the Citations have been mailed to the Defendant, as well as posted at the property.

Thank you, and do not hesitate to contact me if you have any questions.

Sincerely,

Daniel Egeler  
Code Enforcement Officer  
egelerd@pittsfield-mi.gov  
(734) 822-3108

Enclosures

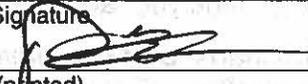
cc: Administration  
Fink & Fink, Township Attorneys

|  |  |   |   |
|--|--|---|---|
| <input checked="" type="checkbox"/> C.I.<br><input type="checkbox"/> MIS.<br><input type="checkbox"/> JUV.   | <b>State of Michigan<br/>Uniform Municipal<br/>Civil Infraction<br/>Citation</b> | <b>No 3023</b><br><b>Complaint No.</b><br><b>EN200103</b>                       | <b>Dept No.</b><br><b>Offense Code</b><br><b>§8-3</b> |
| The People of : <input type="checkbox"/> the State of Michigan<br><input checked="" type="checkbox"/> Township <input type="checkbox"/> City <input type="checkbox"/> Village <input type="checkbox"/> County<br>OF: <b>PITTSFIELD, WASHTENAW COUNTY</b> |  | <b>Local Use/ Arrest No</b><br><b>1 of 1</b>                                    |   |
| <b>THE UNDERSIGNED<br/>SAYS THAT ON:</b>   | <b>Month Day Year</b><br><b>03/19/2020</b>                                       | At approximately <input type="checkbox"/> A.M.<br><input type="checkbox"/> P.M. | Date Month Day Year<br>of Birth                       |
| State  | <input type="checkbox"/> Oper/ Chauff.<br><input type="checkbox"/> CDL           | Driver License Number   |   |
| Race   | Sex  | Height  | Weight  |
|  |  | Hair  | Eyes  |
| Business Name  |  |   |   |
| Name (First, Middle, Last)<br><b>4025 PACKARD LLC</b>  |  |   |   |
| Street<br><b>600 N OLD WOODWARD STE 100</b>  |  |   |   |
| City<br><b>BIRMINGHAM</b>  |  | State<br><b>MI</b>  | Zip<br><b>48009</b>                                   |

THE PERSON NAMED ABOVE, In violation of §8-3 Blight Code UPON 4025 PACKARD RD  
AT OR NEAR MR CARPENTER WITHIN THE TOWNSHIP OF PITTSFIELD COUNTY OF WASHTENAW  
DID THE FOLLOWING:

- |   |  |   |
|---|--|---|
| <input type="checkbox"/> Nuisance Ordinance | <input type="checkbox"/> Building Code                 | <input type="checkbox"/> Licenses Ordinance |
| <input type="checkbox"/> Plumbing Code      | <input type="checkbox"/> Zoning Ordinance              | <input type="checkbox"/> Electrical Code    |
| <input type="checkbox"/> Mechanical Code    | <input checked="" type="checkbox"/> Code of Ordinances | <input type="checkbox"/> Other              |

Describe: Trash, Tire, Hazardous Chemical Containers on the premises

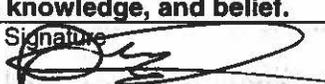
|  |  |
|--|--|
| Person in Active Military Service <input type="checkbox"/> Yes <input type="checkbox"/> No   | <input type="checkbox"/> C.I.<br><input type="checkbox"/> MIS.<br><input checked="" type="checkbox"/> JUV. |
| <b>THIS VIOLATION IS A CIVIL INFRACTION AND IS YOUR <u>FIRST</u> VIOLATION.</b><br><b>The fine for this violation is \$ <u>100.00</u> plus any ordered court costs and attorney fees.</b><br>I state that the above notice of violation was served on the defendant as required under Section 2-38 of the Pittsfield Charter Township Code of Ordinances. The defendant failed to pay the fine specified above and/or resolve the violation. A formal hearing is requested on this matter.<br>TO THE DEFENDANT: You are required to appear as follows to answer this citation.<br><b>SEE DATE BELOW. SEE BACK OF CITATION FOR EXPLANATION AND INSTRUCTIONS</b> | Ticket No.<br><b>EN200103</b>  |
| <input checked="" type="checkbox"/> Appearance Date on or before <u>04/18/2020</u><br><input checked="" type="checkbox"/> Hearing Date (if applicable) on <u>TBD</u> Contact Court   | Name<br><b>4025 PACKARD LLC</b>  |
| In the <b>14A DISTRICT</b> Court of <b>WASHTENAW COUNTY</b><br>Court address & phone number<br><b>4133 WASHTENAW AVE., ANN ARBOR, MI 48108</b><br><b>(734) 973-4545</b>  | Case No.   |
| I served a copy of this complaint upon the defendant by first class mail at the defendant's last known address and filed a copy of this complaint with the court.<br><b>I declare under the penalties of perjury that the statements above are true to the best of my information, knowledge, and belief.</b>  |  |
| Complainant's Signature   | Month Day Year<br><b>03/19/2020</b>  |
| Officer's Name (printed)<br><b>Dan Egeler</b>  | Officer's ID No.<br>Code Enforcement   |
| Agency ORI<br><b>MI- 8190600</b>   | Agency Name<br><b>PITTSFIELD CHARTER TOWNSHIP</b>  |
| UC-03 (rev. 5/06)  | <b>CIVIL INFRACTION COPY</b>   |

|   |  |                                     |   |                     |               |
|---|--|-------------------------------------|---|---------------------|---------------|
| <input checked="" type="checkbox"/> C.I.<br><input type="checkbox"/> MIS.<br><input type="checkbox"/> JUV.  | <b>State of Michigan<br/>Uniform Municipal<br/>Civil Infraction<br/>Citation</b> | <b>No 3024</b>                      | <b>Dept No.</b>   |                     |               |
|   |  | <b>Complaint No.</b><br>EN200103    | <b>Offense Code</b><br>IPMC §302  |                     |               |
| The People of : <input type="checkbox"/> the State of Michigan<br><input checked="" type="checkbox"/> Township <input type="checkbox"/> City <input type="checkbox"/> Village <input type="checkbox"/> County |  | <b>Local Use/ Arrest No</b>         |   |                     | <b>1 of 1</b> |
| OF: <b>PITTSFIELD, WASHTENAW COUNTY</b>   |  |                                     |   |                     |               |
| <b>THE UNDERSIGNED<br/>SAYS THAT ON:</b>  |  | <b>Month Day Year</b><br>03/19/2020 | At approximately <input type="checkbox"/> A.M.<br><input type="checkbox"/> P.M. | Date Month of Birth | Day Year      |
| State   | <input type="checkbox"/> Oper/ Chauff.<br><input type="checkbox"/> CDL           | Driver License Number               |   | SSN (last 4 digits) |               |
| Race  | Sex  | Height                              | Weight  | Hair                | Eyes          |
| Business Name   |  |                                     |   |                     |               |
| Name (First, Middle, Last)<br><b>4025 PACKARD LLC</b>   |  |                                     |   |                     |               |
| Street<br><b>600 N OLD WOODWARD STE 100</b>   |  |                                     |   |                     |               |
| City<br><b>BIRMINGHAM</b>   |  |                                     | State<br><b>MI</b>  | Zip<br><b>48009</b> |               |

THE PERSON NAMED ABOVE, In violation of IPMC §302 UPON 4025 PACKARD RD  
 AT OR NEAR CARPENTER WITHIN THE TOWNSHIP OF **PITTSFIELD** COUNTY OF **WASHTENAW**  
 DID THE FOLLOWING:

- |   |  |   |
|---|--|---|
| <input type="checkbox"/> Nuisance Ordinance | <input type="checkbox"/> Building Code                 | <input type="checkbox"/> Licenses Ordinance |
| <input type="checkbox"/> Plumbing Code      | <input type="checkbox"/> Zoning Ordinance              | <input type="checkbox"/> Electrical Code    |
| <input type="checkbox"/> Mechanical Code    | <input checked="" type="checkbox"/> Code of Ordinances | <input type="checkbox"/> Other              |

Describe: **Failure to maintain exterior property and premises in clean, safe and sanitary condition; sidewalks and driveways not kept in proper state of repair.**

|   |  |                              |
|---|--|------------------------------|
| Person in Active Military Service <input type="checkbox"/> Yes <input type="checkbox"/> No  | <input type="checkbox"/> C.I.<br><input type="checkbox"/> MIS.<br><input checked="" type="checkbox"/> JUV. |                              |
| <b>THIS VIOLATION IS A CIVIL INFRACTION AND IS YOUR <u>FIRST</u> VIOLATION.</b><br><b>The fine for this violation is \$ <u>100.00</u> plus any ordered court costs and attorney fees.</b><br>I state that the above notice of violation was served on the defendant as required under Section 2-38 of the Pittsfield Charter Township Code of Ordinances. The defendant failed to pay the fine specified above and/or resolve the violation. A formal hearing is requested on this matter.<br>TO THE DEFENDANT: You are required to appear as follows to answer this citation.<br>SEE DATE BELOW. SEE BACK OF CITATION FOR EXPLANATION AND INSTRUCTIONS | Ticket No.<br>EN200103   |                              |
| <input checked="" type="checkbox"/> Appearance Date on or before <u>04/18/2020</u><br><input checked="" type="checkbox"/> Hearing Date (if applicable) on <u>TBD</u> Contact Court  |  | Name <b>4025 PACKARD LLC</b> |
| In the <b>14A DISTRICT</b> Court of <b>WASHTENAW COUNTY</b>   |  | Case No.                     |
| Court address & phone number<br><b>4133 WASHTENAW AVE., ANN ARBOR, MI 48108</b><br><b>(734) 973-4545</b>  |  |                              |
| I served a copy of this complaint upon the defendant by first class mail at the defendant's last known address and filed a copy of this complaint with the court.<br><b>I declare under the penalties of perjury that the statements above are true to the best of my information, knowledge, and belief.</b>   |  |                              |
| Complainant's Signature<br>  | Month Day Year<br><b>03/19/2020</b>  |                              |
| Officer's Name (printed)<br><b>Dan Egeler</b>   | Officer's ID No.<br>Code Enforcement   |                              |
| Agency ORI<br><b>MI- 8190600</b>  | Agency Name<br><b>PITTSFIELD CHARTER TOWNSHIP</b>  |                              |
| UC-03 (rev. 5/06)   |  |                              |

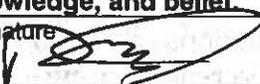
**CIVIL INFRACTION COPY**

|   |  |   |                                   |
|---|--|---|-----------------------------------|
| <input checked="" type="checkbox"/> C.I.<br><input type="checkbox"/> MIS.<br><input type="checkbox"/> JUV.  | <b>State of Michigan<br/>Uniform Municipal<br/>Civil Infraction<br/>Citation</b> | <b>No 3025</b>  | <b>Dept No.</b>                   |
|   |  | <b>Complaint No.<br/>EN200103</b>   | <b>Offense Code<br/>IPMC §304</b> |
| The People of : <input type="checkbox"/> the State of Michigan<br><input checked="" type="checkbox"/> Township <input type="checkbox"/> City <input type="checkbox"/> Village <input type="checkbox"/> County |  | <b>Local Use/ Arrest No</b>   | <b>1 of 1</b>                     |
| OF: <b>PITTSFIELD, WASHTENAW COUNTY</b>   |  |   |                                   |
| <b>THE UNDERSIGNED<br/>SAYS THAT ON:</b>  | <b>Month Day Year<br/>03/19/2020</b>   | At approximately <input type="checkbox"/> A.M.<br><input type="checkbox"/> P.M. | Date Month Day Year<br>of Birth   |
| State   | <input type="checkbox"/> Oper/ Chauff.<br><input type="checkbox"/> CDL           | Driver License Number   | SSN (last 4 digits)               |
| Race  | Sex  | Height  | Weight                            |
|   |  | Hair  | Eyes                              |
| Business Name   |  |   |                                   |
| <b>Name (First, Middle, Last)<br/>4025 PACKARD LLC</b>  |  |   |                                   |
| <b>Street<br/>600 N OLD WOODWARD STE 100</b>  |  |   |                                   |
| <b>City<br/>BIRMINGHAM</b>  |  | <b>State<br/>MI</b>   | <b>Zip<br/>48009</b>              |

THE PERSON NAMED ABOVE, In violation of IPMC §304 UPON 4025 PACKARD RD  
AT OR NEAR CARPENTER WITHIN THE TOWNSHIP OF **PITTSFIELD** COUNTY OF **WASHTENAW**  
DID THE FOLLOWING:

Nuisance Ordinance     Building Code     Licenses Ordinance  
 Plumbing Code         Zoning Ordinance     Electrical Code  
 Mechanical Code         Code of Ordinances     Other

Describe: Structure exterior not maintained, peeling & flaking paint, masonry joints not maintained, roof flashing defects, canopy in disrepair, windows in disrepair

|   |   |                             |  |
|---|---|-----------------------------|--|
| Person in Active Military Service   | <input type="checkbox"/> Yes  | <input type="checkbox"/> No | <input type="checkbox"/> C.I.<br><input type="checkbox"/> MIS.<br><input checked="" type="checkbox"/> JUV. |
| <b>THIS VIOLATION IS A CIVIL INFRACTION AND IS YOUR <u>FIRST</u> VIOLATION.</b>   |   |                             | Ticket No.<br>EN200103<br><br>Name<br>4025 PACKARD LLC<br><br>Case No.                                     |
| <b>The fine for this violation is \$ <u>100.00</u> plus any ordered court costs and attorney fees.</b>  |   |                             |  |
| I state that the above notice of violation was served on the defendant as required under Section 2-38 of the Pittsfield Charter Township Code of Ordinances. The defendant failed to pay the fine specified above and/or resolve the violation. A formal hearing is requested on this matter.                 |   |                             |  |
| TO THE DEFENDANT: You are required to appear as follows to answer this citation.  |   |                             |  |
| SEE DATE BELOW. SEE BACK OF CITATION FOR EXPLANATION AND INSTRUCTIONS   |   |                             |  |
| <input checked="" type="checkbox"/> Appearance Date on or before <u>04/18/2020</u>  |   |                             |  |
| <input checked="" type="checkbox"/> Hearing Date (if applicable) on <u>TBD</u> Contact Court  |   |                             |  |
| In the <b>14A DISTRICT</b> Court of <b>WASHTENAW COUNTY</b>   |   |                             |  |
| Court address & phone number<br><b>4133 WASHTENAW AVE., ANN ARBOR, MI 48108<br/>(734) 973-4545</b>  |   |                             |  |
| I served a copy of this complaint upon the defendant by first class mail at the defendant's last known address and filed a copy of this complaint with the court.<br><b>I declare under the penalties of perjury that the statements above are true to the best of my information, knowledge, and belief.</b> |   |                             |  |
| Complainant's Signature   |  | Month                       | Day  |
|   |   | <b>03/19/2020</b>           |  |
| Officer's Name (printed)<br>Dan Egeler  | Officer's ID No.<br>Code Enforcement  |                             |  |
| Agency ORI<br>MI- 8190600   | Agency Name<br><b>PITTSFIELD CHARTER TOWNSHIP</b>                                   |                             |  |
| UC-03 (rev. 5/06)   | <b>CIVIL INFRACTION COPY</b>  |                             |  |

**PITTSFIELD CHARTER TOWNSHIP  
WASHTENAW COUNTY, MICHIGAN**

**RES #20-15**

**RESOLUTION REQUIRING DEMOLITION  
OF ABOVEGROUND STRUCTURES AT 4025 PACKARD**

**March 25, 2020**

At a Regular Meeting of the Township Board of Pittsfield Charter Township, Washtenaw County, Michigan, held at the Township Administration Building located at 6201 W. Michigan Avenue, in said Township, on March 25, 2020 at 6:30 PM.

Present:

Absent:

The following preamble and resolution were offered by \_\_\_\_\_ and supported by \_\_\_\_\_.

**WHEREAS**, the gas station, located at 4025 Packard, ceased operations many years ago following the great recession; and

**WHEREAS**, Pittsfield Township's Planning staff has been working with the property owner of 4025 Packard since 2012 to redevelop the property; and

**WHEREAS**, five years ago, in 2015, as part of the 2020 Sustainable Vision Master Plan update process, an overwhelming number of Pittsfield Township residents living in the northeastern part of our community, raised major concerns about the blight conditions at 4025 Packard; and

**WHEREAS**, since then, Pittsfield Township's Planning and Code Enforcement staff began, even more proactively, engaging with the property owner to assist in rehabilitating and revitalizing the property (see attachment); and

**WHEREAS**, the property owner finally submitted a site plan and received preliminary site plan approval from the Pittsfield Township Planning Commission on December 12, 2019, it is our understanding that the process for final site plan approval, which includes coordination with outside agencies such as the Washtenaw County Road Commission and Washtenaw County Water Resources Commission and, in this case, the Washtenaw County Office of Community & Economic Development will make it unlikely that the long-standing blight issues are addressed any time soon; and

**WHEREAS**, The Washtenaw County Office of Community & Economic Development is working to provide the property owner, since the property qualifies as a Brownfield Redevelopment Project, Tax Increment Financing incentives to facilitate redevelopment/revitalization; they understand the mounting concern Pittsfield Township has regarding blight and have, as such, issued their opinion insofar as they believe that demolition of above-ground structures will not hinder the ongoing process for approval of the property owner's Brownfield Plan (see attachment); and

**WHEREAS**, we understand and appreciate that the final site plan approval process must follow established procedures and take its requisite time and we, furthermore, fully understand and appreciate the concerns of the overwhelming number of Pittsfield Township residents that have patiently waited for nearly 8 (eight) years to have the ongoing blight issue addressed;

**NOW THEREFORE BE IT RESOLVED**, that the Pittsfield Charter Township Board of Trustees, hereby requires the property owner to demolish the aboveground structures at 4025 Packard and provide evidence of proceeding with the same to Pittsfield Township Planning staff in the next six-week period, no later than April 22<sup>nd</sup> 2020; and

**BE IT FURTHER RESOLVED**, that if the property owner is unable to meet the afore-mentioned requirement of submitting proof of undertaking removal of the aboveground structures at 4025 Packard by 4/22/2020, the Pittsfield Township Board of Trustees will instruct its legal counsel to undertake the process of filing a nuisance abatement lawsuit for 4025 Packard, which will come before the Board of Trustees for consideration at the Board meeting scheduled for May 13<sup>th</sup>, 2020.

**ROLL CALL VOTE:**

**AYES:**

**NAYS:**

**ABSENT:**

**ABSTAIN:**

**RESOLUTION DECLARED** \_\_\_\_\_.

\_\_\_\_\_  
Mandy Grewal, Supervisor  
Pittsfield Charter Township

DATED:

*CERTIFICATE*

I, Michelle L. Anzaldi, hereby certify that the foregoing is a true and complete copy of a resolution adopted by the Township Board of Pittsfield Charter Township, County of Washtenaw, State of Michigan, at a Regular Meeting held on March 25, 2020 and that said meeting was conducted and public notice of said meeting was given pursuant to and in full compliance with the Open Meetings Act, being Act 267, Public Acts of Michigan, 1976, and that the minutes of said meeting were kept and will be or have been made available as required by said Act.

---

Michelle L. Anzaldi, Clerk  
Pittsfield Charter Township

DATED:

**ATTACHMENTS:**

4025 Packard Violation List

4025 Packard Brownfield Redevelopment Project Letter



**Pittsfield Charter Township**  
**Department of Utilities & Municipal Services**

6201 West Michigan Avenue, Ann Arbor, MI 48108  
Phone: (734) 822-3101 • Fax: (734) 944-1103  
Website: [www.pittsfield-mi.gov](http://www.pittsfield-mi.gov)

**Mandy Grewal, Supervisor**

---

**MEMORANDUM**

**TO:** Mandy Grewal, Supervisor

**FROM:** Belinda Kingsley, Zoning & Code Enforcement Administrator  
Benjamin R. Carlisle, Township Planning Consultant

**DATE:** March 19, 2020

**SUBJECT:** 4025 Packard Road

---

**DEVELOPMENT STATUS:**

**2012:** Concept meeting with Craig Lyon, Paul Montagno, Ben Carlisle, and Nathan Vought (county) with property owner and applicant (DFCU) for a credit union drive-through. It was noted during meeting that proposed site plan was not consistent with Master Plan and did not meet zoning requirements.

**2014:** Property owner emails Candice Briere (township planning and zoning administrator) and Matt Payne (Planning Commission Chairman) expressing concern regarding potential zoning ordinance amendments.

**2017:** Ben Carlisle and Craig Lyon met with Najor and his team regarding potential development scenarios. Concept plan shown by applicant was not consistent with Master Plan and did not meet zoning requirements.

**10/16/19:** Preliminary Site Plan and Conditional Use Permit Application to demo existing building and construct an addition to the building to the north was submitted and reviewed.

**11/06/19:** Ben Carlisle emails applicant noting deficiencies in application.

**11/21/19:** Planning Department completes first site plan review.

**12/04/19:** Planning Department completes second site plan review.

**12/06/19:** Engineering Department completes first site plan review.

**12/12/19:** Planning Commission approves conditional use and site plan with conditions.

**01/15/20:** Ben Carlisle email's applicant asking for project update status.

**02/12/20:** Water Resources Commission completes first review of site plan.

**02/12/20**: Meeting with Najor, OP Engineer, Ben Carlisle, Laura Kreps, WCWR Theresa Marsik, Belinda Kingsley to discuss current redevelopment plan and establish a timeline for completion of Brownfield application review. WCRC invited but unable to attend.

**02/27/20**: Telephone call to Najor regarding township's desire to have the building demolished or a nuisance abatement lawsuit will be taken to the Board of Trustees on 3/25/20.

**02/27/19**: Email from Najor with a copy of OP Environmental' s "Proposal for Supplemental Site Investigation and Soil Characterization" and Washtenaw County Brownfield Development Authority Environmental Assessment Grant Program Application Form.

**03/03/20**: Email to Najor confirming deadline of 3/11/20 to comply with demo request or nuisance abatement lawsuit will be taken to the Board of Trustees on 3/25/20.

**03/04/20**: Road Commission completes first review of site plan.

### **ENFORCEMENT ACTION 2014-2020:**

**EN140071**: Zoning Violation. This action was filed on March 25, 2014, based upon donation bins being located on the site. Written notice was sent to Brian Najor on that date, requesting the bins be removed in 14 days. By May 15 the bins had not been removed, and a second written notice was sent to Brian Najor on that date, requesting the bins be removed by May 24. On June 2, Belinda Kingsley called one of the bin owners and requested they remove the bin. On July 21 the property was re-inspected, and all of the bins had been removed. The action was closed on that date.

**EN150065**: Snow Covered Sidewalk. This action was filed on March 2, 2015, regarding plowed snow/ice blocking the sidewalks and the sidewalks not being shoveled. Telephone contact was made on that date. On March 11, the site was re-inspected and found to be in partial compliance. The action was closed on that date.

**EN150133**: Tall Grass & Weeds. This action was filed on May 13, 2015, regarding the lack of mowing at the site. Written notice was sent to Brian Najor on that date. The property was re-inspected on June 10, and the matter was closed on that date.

**EN150235**: Tall Grass & Weeds. This action was filed on August 7, 2015, regarding a tree branch that had fallen onto the property. Written notice was sent to the owner on that date, seeking removal of the tree within 7 days. The property was re-inspected on September 4 and found to be in compliance. The action was closed on that date.

**EN160042**: Blight Violation. This action was filed on April 18, 2016, regarding trash on the property, overgrown vegetation, and homeless people living in the brush on the site. The complaint stemmed from a neighborhood meeting on April 11 where several individuals complained about the status of the property. Belinda Kingsley and Craig Lyons called Brian Najor about the condition of the property. He said he was not interested in doing anything that would cost him money. Craig Lyon said the township would conduct the clean-up and bill the property owner for the cost. =The work was performed by the Township and an invoice was issued in the amount of \$1,794.84. The matter was closed on November 9 2016.

**EN180061:** Blight Violation. This action was filed on April 23, 2018, regarding paint peeling, pump canopies in bad shape, trash, and old light post bases. It was initiated as a result of complaints from the public. Written notice was sent on that date to the owner, with a request that the pump islands be removed, and the other matters be resolved through maintenance. There is no record of any other action being taken, or communication, regarding the matter, and it remains open.

**EN190098:** Blight Violation. This action was filed on June 3, 2019, after receiving numerous complaints from the neighbors regarding the property, and a light pole observed laying on the ground. Written notice was sent to the owner on that date, requesting removal of the light pole within 7 days. There is no record of any other action being taken, or communication, regarding the matter, and it remains open.

**EN200053:** Blight Violation. This action was filed on January 22, 2020, regarding broken windows on the front of the building. Written notice was sent to the owner on that date, requesting the violation be removed in 7 days. By February 27 the windows had not been repaired, and a municipal civil infraction citation was issued in the amount of \$100. The citation was mailed and emailed to Brian Najor on that date. Brian Najor claimed he had not received the original notice. The windows were boarded up during the weekend of February 29 – March 1, but the wood hasn't been painted yet. The action remains open.

Update: Closed and citation dismissed. Owner advised he did not receive the Notice of Violation sent prior to issuing a citation. The violation was emailed and he addressed the broken windows.

**EN200103:** Three Civil Infraction Tickets issued on March 19, 2020. Ticket No. 3023 issued under §8-3 of the Blight Code, for trash, a tire, and hazardous chemical containers on the property. Ticket No. 3024 issued under IPMC §302, for failure to maintain exterior property and premises in clean, safe and sanitary condition; sidewalks and driveways not kept in proper state of repair. Ticket No. 3025 issued under IPMC §304, for structure exterior not maintained, peeling and flaking paint, masonry joints not maintained, roof flashing defects, canopy in disrepair, windows in disrepair.

Formal hearing requested for all three tickets, with a date to be established by the Court.



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Website|www.ewashtenaw.org/oced

Mandy Grewal  
Supervisor  
Pittsfield Charter Township  
6201 W. Michigan  
Ann Arbor, MI 48108

March 9, 2020

RE: 4025 Packard Brownfield Redevelopment Project

Dear Supervisor Grewal,

The property known as 4025 Packard Road, a former gas station at the northeast corner of Carpenter and Packard, is an Eligible Brownfield Property. This office has had ongoing discussions with the property owner and Township over the years regarding potential for Brownfield Tax Increment Financing (TIF) incentives to facilitate redevelopment. TIF can be used to reimburse the developer for various Eligible Activities, such as demolition, soil remediation, and Due Care measures, such as Vapor Intrusion Mitigation for the future building.

We've learned that the Township has issued preliminary approval of a redevelopment proposal. In a recent meeting with the developer and Township officials more specific discussions took place regarding potential for approving a Brownfield Plan to allow for reimbursement of specific brownfield costs, including those mentioned. We are aware that demolition of the existing structure is a Township priority. Typically, a Brownfield Plan must be approved prior to any Eligible Activities included the Plan taking place. However, in addition to Environmental Due Diligence activities, Demolition may also occur prior to Brownfield Plan approval, and then subsequently be included in an approved Brownfield Plan, which would allow for reimbursement of those costs.

The developer could proceed with demolition of the above-ground structures at this time, and then later include that cost in an approved Brownfield Plan for reimbursement. Any demolition of structures on an existing contaminated site would have to observe Due Care requirements, where an owner must not exacerbate existing environmental conditions. This is the responsibility of the property owner.

We look forward to working further with the developer and Township in redeveloping this long-vacant property. Please don't hesitate to contact me if you have any questions.

Regards,

Nathan Voght, AICP  
Brownfield Redevelopment Coordinator  
Washtenaw County Brownfield Redevelopment Authority  
Washtenaw County Office of Community and Economic Development

cc: Trevor Woollatt, WCBRA Chair

**BENCHMARKS**  
(GPS DERIVED - NAVD88)

BM #300  
ARROW ON A HYDRANT AT THE NORTHWEST CORNER OF PACKARD ROAD AND CRYSTAL DRIVE, APPROX. 50'± NORTH OF THE CENTERLINE OF PACKARD ROAD, AND APPROX. 30'± WEST OF THE CENTERLINE OF CRYSTAL DRIVE.  
ELEV. - 838.20

BM #301  
NAIL AND TAG ON THE EAST SIDE OF A LIGHT POLE LOCATED AT THE NORTHEAST CORNER OF PACKARD ROAD AND CARPENTER ROAD, APPROX. 45'± EAST OF THE CENTERLINE OF CARPENTER ROAD AND APPROX. 90'± NORTH OF THE CENTERLINE OF PACKARD ROAD.  
ELEV. - 835.89

PRELIMINARY SITE PLAN DRAWINGS FOR

# NAJOR PITTSFIELD

PART OF THE SOUTHWEST 1/4 OF SECTION 1, T3S, R6E  
PITTSFIELD TOWNSHIP, WASHTENAW COUNTY, MICHIGAN

EXISTING TAX ID NUMBERS: L-12-01-354-015      L-12-01-354-029  
4025 PACKARD ROAD      2835 CARPENTER ROAD  
ANN ARBOR, MI 48108      ANN ARBOR, MI 48108

**OWNER/APPLICANT/DEVELOPER:**

NAJOR COMPANIES  
600 N. OLD WOODWARD, SUITE 100  
BIRMINGHAM, MI 48009  
CONTACT: KEITH MAZIASZ  
PHONE: (248) 433-7000  
EMAIL: KEITH@NAJORCOMPANIES.COM

**ARCHITECT:**

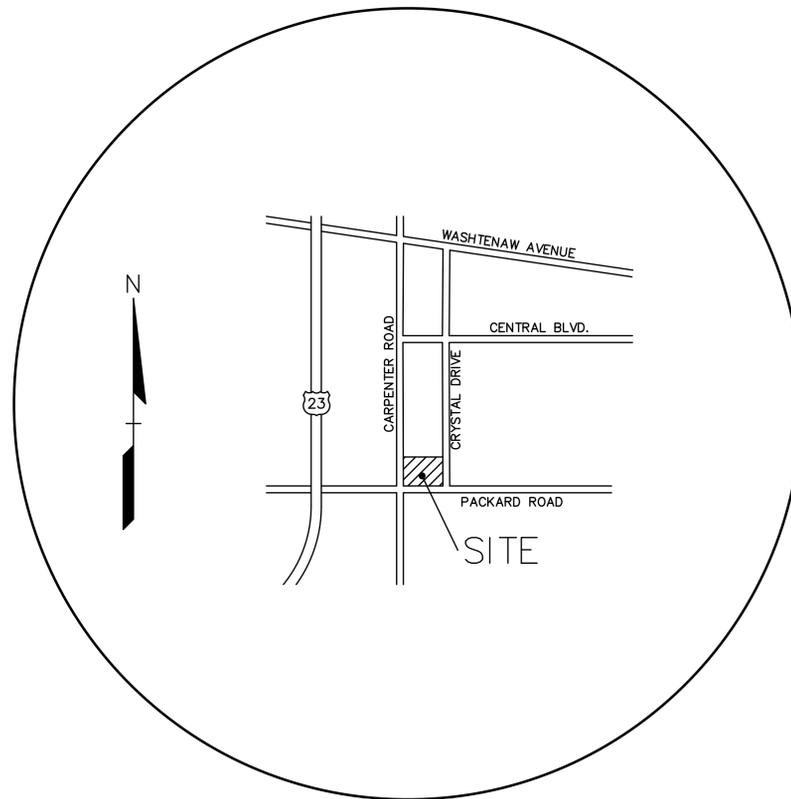
NORR  
150 W. JEFFERSON AVENUE, SUITE 1300  
DETROIT, MI 48226  
CONTACT: BRAD SMITH  
PHONE: (313) 426-9688  
FAX: (313) 324-3111  
EMAIL: BRAD.SMITH@NORR.COM

**CIVIL ENGINEER:**

PEA, INC.  
7927 NEMCO WAY, SUITE 115  
BRIGHTON, MI 48116  
CONTACT: TRISTAN LARSON, PE  
PHONE: (517) 546-8583  
FAX: (517) 546-8973  
EMAIL: TLARSON@PEAINC.COM

**LANDSCAPE ARCHITECT:**

PEA, INC.  
7927 NEMCO WAY, SUITE 115  
BRIGHTON, MI 48116  
CONTACT: JEFF SMITH, R.L.A., LEED AP  
PHONE: (517) 546-8583  
FAX: (517) 546-8973  
EMAIL: JSMITH@PEAINC.COM



LOCATION MAP  
NO SCALE

DATE: OCTOBER 24, 2019

**INDEX OF DRAWINGS:**

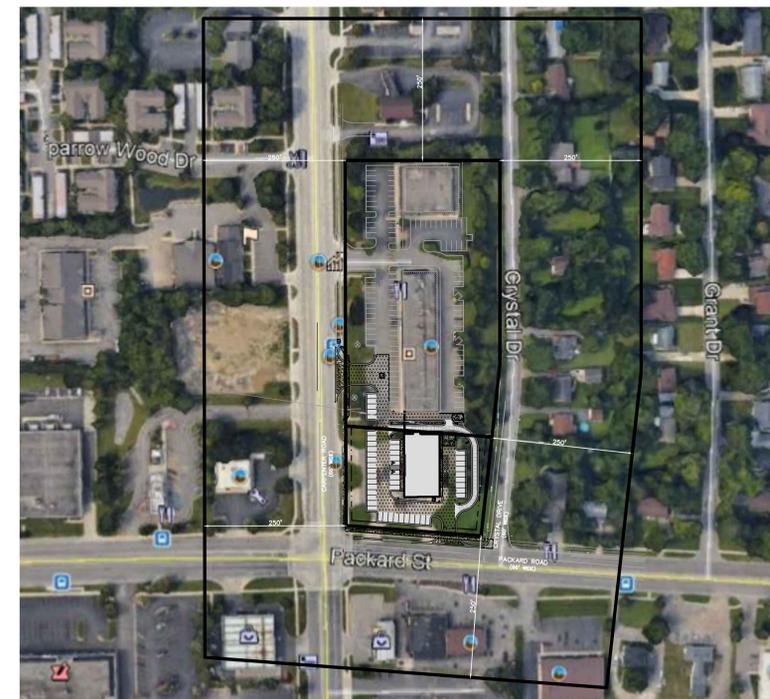
**CIVIL PLANS**

- 1 - COVER SHEET
- 2 - TOPOGRAPHIC SURVEY
- 3 - NATURAL FEATURES PLAN
- 4 - OVERALL SITE PLAN
- 5 - PRELIMINARY SITE PLAN
- 6 - PRELIMINARY GRADING PLAN
- 7 - PRELIMINARY UTILITY PLAN
- 8 - STORMWATER MANAGEMENT PLAN
- 9 - WCWRC CALCULATIONS
- 10 - WCWRC CALCULATIONS
- 11 - PRELIMINARY DETAILS
- 12 - PRELIMINARY DETAILS
- 13 - FIRE PROTECTION PLAN
- 14 - PRELIMINARY LANDSCAPE PLAN
- 15 - LANDSCAPE DETAILS

**ARCHITECTURAL PLANS**

- 16 - A2-01 FLOOR PLAN
- 17 - A3-01 COLORED ELEVATIONS

**NOTE:**  
1. THE CONSTRUCTION COVERED BY THESE PLANS SHALL BE IN CONFORMANCE WITH THE PITTSFIELD TOWNSHIP STANDARDS.



NOT FOR CONSTRUCTION

**LEGAL DESCRIPTION**  
(Per Washtenaw County)

PARCEL ID 1-12-01-354-015  
Land in the Township of Pittsfield, Washtenaw County, Michigan, described as follows:

HOLD SID - L 12-145-002-00 PI 47-1, 2, 31, 32 LOTS 1, 2, 31, 32 BHK 1 SUBDIVISION OF LOTS 1 TO 73 INCLUSIVE EXCEPT LOTS 34 & 36 AND LOTS 109 TO 111 INCLUSIVE OF OAK PARK.

**LEGAL DESCRIPTION**  
(Per Washtenaw County)

PARCEL ID 1-12-01-354-029  
Land in the Township of Pittsfield, Washtenaw County, Michigan, described as follows:

PI 47-3A (014, 016 TO 021) LOTS 3, 4, 5, 6, 7, 8, 25, 26, 27, 28, 29, 30 IN BLOCK 1, SUBDIVISION OF LOTS 1 TO 73 INCLUSIVE, EXCEPT LOTS 34 & 36 & LOTS 109 TO 111 INCLUSIVE OF OAK PARK.

| NO. | DATE | DESCRIPTION                               | REVISIONS |
|-----|------|---|-----------|
| 1   |      | PER TOWNSHIP PLANNING CONSULTANT COMMENTS |           |



**CAUTION!**  
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

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CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERAL ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR SHALL BE RESPONSIBLE FOR SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THE CONTRACTOR SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPT LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

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|   |  |   |
|---|--|---|
| NAJOR COMPANIES<br>600 N. OLD WOODWARD, SUITE 100<br>BIRMINGHAM, MICHIGAN 48009 | COVER SHEET<br>NAJOR PITTSFIELD<br>PART OF THE SOUTHWEST 1/4 OF SECTION 1, T3S, R6E<br>PITTSFIELD TOWNSHIP, WASHTENAW COUNTY, MICHIGAN | DES. TJL<br>TUL<br>DN. VBC<br>SUR. JWMH<br>P.M. JPB |
| ORIGINAL ISSUE DATE:<br>OCTOBER 24, 2019  |  |   |
| PEA JOB NO. 2017-228  |  |   |
| SCALE: N.T.S.   |  |   |
| DRAWING NUMBER:<br><b>1</b>   |  |   |

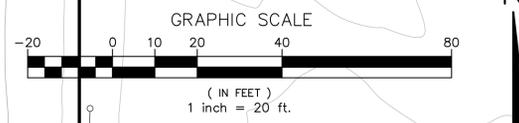
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**BENCHMARKS**  
(GPS DERIVED - NAVD88)

BM #300  
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PARCEL NO. L-12-02-480-020  
2910 CARPENTER ROAD



| NO. | DATE | DESCRIPTION                              |
|-----|------|--|
| 1   |      | PRELIMINARY PLANNING CONSULTANT COMMENTS |
| 2   |      | DATE DESCRIPTION                         |

REVISIONS



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**FLOODPLAIN NOTE:**  
BY GRAPHICAL PLOTTING, SITE IS WITHIN ZONE 'X', AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN PER FLOOD INSURANCE RATE MAP NUMBER 26161C0406E, DATED APRIL 3, 2012.



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Troy, MI 48063-1872  
t: 248.689.9090  
f: 248.689.1044  
www.peainc.com

**NAJOR COMPANIES**  
600 N. OLD WOODWARD, SUITE 100  
BIRMINGHAM, MICHIGAN 45209

**TOPOGRAPHIC SURVEY**  
**NAJOR PITTSFIELD**  
PART OF THE SOUTHWEST 1/4 OF SECTION 1, T35.80E  
PITTSFIELD TOWNSHIP, WASHTENAW COUNTY, MICHIGAN

DES. T.J.L. DN. VBC SUR. J.W.M.H. P.M. J.P.B.

ORIGINAL ISSUE DATE:  
OCTOBER 24, 2019

PEA JOB NO. 2017-228

SCALE: 1" = 20'

DRAWING NUMBER:  
**2**

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(Per Washtenaw County)

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- LEGEND**
- IRON FOUND
  - ⊗ IRON SET
  - ⊗ NAIL FOUND
  - ⊗ NAIL & CAP SET
  - ⊗ BRASS PLUG SET
  - ⊗ MONUMENT FOUND
  - ⊗ MONUMENT SET
  - ⊗ SEC. CORNER FOUND
  - ⊗ RECORDED
  - ⊗ MEASURED
  - ⊗ CALCULATED
- EXISTING**
- OH-ELEC-W-O ELEC. PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE
  - UG-CATV UNDERGROUND CABLE TV, CTV PEDESTAL
  - UG-PHONE TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
  - UG-ELEC-ELEC. U.G. CABLE, MANHOLE, METER & HANDHOLE
  - ⊗ GAS MAN. VALVE & GAS LINE MARKER
  - ⊗ WATERMAN. HYD. GATE VALVE, TAPPING SLEEVE & VALVE
  - ⊗ SANITARY SEWER, CLEANOUT & MANHOLE
  - ⊗ STORM SEWER, CLEANOUT & MANHOLE
  - ⊗ COMBINED SEWER & MANHOLE
  - ⊗ SQUARE ROUND & BEDDING CATCH BASIN, YARD DRAIN
  - ⊗ POST INDICATOR VALVE
  - ⊗ WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF
  - ⊗ MALBOX, TRANSFORMER, IRRIGATION CONTROL VALVE
  - ⊗ UNIDENTIFIED STRUCTURE
  - ⊗ SPOT ELEVATION
  - ⊗ CONTOUR LINE
  - ⊗ FENCE
  - ⊗ GUARD RAIL
  - ⊗ STREET LIGHT
  - ⊗ SIGN
  - CONC. CONCRETE
  - ASPH. ASPHALT
  - GRAVEL GRAVEL SHOULDER
  - WETLAND WETLAND

**REFERENCE DRAWINGS**  
FEMA F.I.R.M. NO. 26161C0406E, DATED APRIL 3, 2012  
OAK PARK SUBDIVISION PLAT

**FLOODPLAIN NOTE:**  
BY GRAPHICAL PLOTTING, SITE IS WITHIN ZONE 'X', AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN PER FLOOD INSURANCE RATE MAP NUMBER 26161C0406E, DATED APRIL 3, 2012.

**NOT FOR CONSTRUCTION**

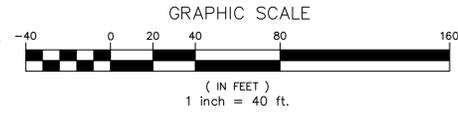
REF: S:\PROJECTS\2017\2017228\DWG\TOPBASE-17228.DWG  
REF: S:\PROJECTS\2017\2017228\DWG\SITE PLANS\VA-BASE-17228.DWG  
REF: S:\PROJECTS\2017\2017228\DWG\SITE PLANS\VA-TBLK-17228.DWG



**BENCHMARKS**  
(GPS DERIVED - NAVD88)

BM #300  
ARROW ON A HYDRANT AT THE NORTHWEST CORNER OF PACKARD ROAD AND CRYSTAL DRIVE, APPROX. 50'± NORTH OF THE CENTERLINE OF PACKARD ROAD, AND APPROX. 30'± WEST OF THE CENTERLINE OF CRYSTAL DRIVE.  
ELEV. - 838.20

BM #301  
NAIL AND TAG ON THE EAST SIDE OF A LIGHT POLE LOCATED AT THE NORTHEAST CORNER OF PACKARD ROAD AND CARPENTER ROAD, APPROX. 45'± EAST OF THE CENTERLINE OF CARPENTER ROAD AND APPROX. 90'± NORTH OF THE CENTERLINE OF PACKARD ROAD.  
ELEV. - 835.89



| NO. | DATE     | DESCRIPTION                               |
|-----|----------|---|
| 1.  | 10/24/19 | PER TOWNSHIP PLANNING CONSULTANT COMMENTS |
| 2.  | 11/14/19 | DATE                                      |

REVISIONS

**SITE DATA TABLE:**

4025 PACKARD ROAD - PARCEL 'A'  
2835 CARPENTER ROAD - PARCEL 'B'

**SITE AREA:** PARCEL 'A' - 43,697 SF (1.003 ACRES) (NET & GROSS)  
PARCEL 'B' - 138,130 SF (3.171 ACRES) (NET & GROSS)  
TOTAL AREA - 181,827 SF (4.174 ACRES) (NET & GROSS)

**ZONING:** PARCEL 'A' - FB - FORM BASED MIXED USE DISTRICT  
PARCEL 'B' - FB - FORM BASED MIXED USE DISTRICT  
PARCEL 'A' & 'B' - CARPENTER RD. MIXED USE DISTRICT  
PARCEL 'A' & 'B' - SITE TYPE A

**PARCEL 'A'**  
EXISTING USE: GAS STATION (NON-OPERATIONAL)  
PROPOSED USE: MIXED USE COMMERCIAL/RETAIL

**PARCEL 'B'**  
EXISTING USE: MIXED USE COMMERCIAL/RETAIL  
PROPOSED USE: MIXED USE COMMERCIAL/RETAIL

**BUILDING INFORMATION:**  
BUILDING HEIGHT: 1-STORY, 14' MIN  
3-STORY, 38' MAX

**PARCEL 'A'**  
PROPOSED BUILDING HEIGHT: 1-STORY, 14' MIN. AND 23' MAX.

**PARCEL 'B'**  
EXISTING BUILDING HEIGHT: 1-STORY, 13' FOR THE NORTH BUILDING  
EXISTING BUILDING HEIGHT: 1-STORY, 15' FOR THE SOUTH BUILDING

**PARCEL 'A'**

|                         |             |
|-------------------------|-------------|
| BUILDING FOOTPRINT AREA | = 6,932 SF  |
| LOT COVERAGE            | = 16%       |
| TOTAL FLOOR AREA        | = 6,932 SF  |
| FLOOR AREA RATIO        | = 16%       |
| OPEN SPACE              | = 11,843 SF |

**PARCEL 'B'**

|                         |                                    |
|-------------------------|------------------------------------|
| BUILDING FOOTPRINT AREA | = 14,700 SF + 7,708 SF = 22,408 SF |
| LOT COVERAGE            | = 16%                              |
| TOTAL FLOOR AREA        | = 22,408 SF                        |
| FLOOR AREA RATIO        | = 16%                              |
| OPEN SPACE              | = 58,576 SF                        |

**TOTAL FOR BOTH PARCEL 'A' AND 'B'**

|                         |                        |
|-------------------------|------------------------|
| BUILDING FOOTPRINT AREA | = 6,932 SF + 22,408 SF |
| LOT COVERAGE            | = 16%                  |
| TOTAL FLOOR AREA        | = 29,340 SF            |
| FLOOR AREA RATIO        | = 16%                  |
| OPEN SPACE              | = 70,419 SF            |

**SETBACK REQUIREMENTS:**

| REQUIRED              | PROVIDED | PARCEL 'A' | PARCEL 'B' |
|-----------------------|----------|------------|------------|
| FRONT (CARPENTER RD.) | 10'      | 103.32'    | 104.75'    |
| FRONT (PACKARD RD.)   | 10'      | 57.87'     | NA         |
| SIDE:                 | 0'       | 0.59'      | 11.28'     |
| REAR:                 | 10'      | 80.46'     | 100.48'    |
| SIDE (SOUTH)          | 0'       | NA         | 34.99'     |

**IMPERVIOUS SURFACE:**

**PARCEL 'A'**  
REQUIRED: 80% MAX  
PROVIDED: 73%

**PARCEL 'B'**  
REQUIRED: 80% MAX  
PROVIDED: 58%

**TOTAL FOR BOTH PARCELS**  
REQUIRED: 80% MAX  
PROVIDED: 61%

**PARKING CALCULATIONS:**

REQUIRED:  
ALL COMMERCIAL/RETAIL 1 SPACE/250 SF GROSS FLOOR AREA  
STANDARD RESTAURANT 1 SPACE/100 SF GROSS FLOOR AREA (70 SF NET FLOOR AREA)  
RESTAURANT 10 STACKING SPACES (DRIVE THRU)

**PARCEL 'A'**  
4,400 SF COMMERCIAL/RETAIL  
2,530 SF RESTAURANT

= 4,400/250 + 2,530/100 = 17.6 + 25.3 = 42.9 ~ 43 SPACES

PROVIDED: 43 SPACES  
PROVIDED: 13 STACKING SPACES (DRIVE THRU)

**PARCEL 'B'**  
20,008 SF COMMERCIAL/RETAIL  
2,400 SF RESTAURANT

= 20,008/250 + 2,400/100 = 80.0 + 24.0 = 104 ~ 104 SPACES

PROVIDED: 106 SPACES

**LOADING CALCULATIONS:**

REQUIRED:  
INSTITUTIONAL, COMMERCIAL, AND OFFICE USES 5,001 TO 60,000 SF GROSS FLOOR AREA IS EQUAL TO 1 SPACE, PLUS 1 SPACE PER EACH ADDITIONAL 20,000 SF GROSS FLOOR AREA.

**PARCEL 'A'**  
= 1 SPACE + 1 (6932 SF/20,000 SF) = 1 + 0.35 ~ 1.35 SPACES

PROVIDED: 2 SPACES

**PARCEL 'B'**  
= 1 SPACE + (22,408 SF/20,000 SF) = 1 + 1.12 ~ 2.12 SPACES

PROVIDED: 3 SPACES

**LEGEND**

|                  |                  |                     |
|------------------|------------------|---------------------|
| ● IRON FOUND     | ○ BRASS PLUG SET | ○ SEC. CORNER FOUND |
| ⊗ IRON SET       | ⊗ MONUMENT FOUND | ⊗ RECORDED          |
| ⊗ NAIL FOUND     | ⊗ MONUMENT SET   | ⊗ MEASURED          |
| ⊗ NAIL & CAP SET |                  | ⊗ CALCULATED        |

**EXISTING**

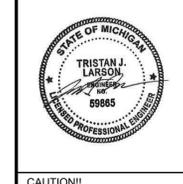
- OH-ELEC-44-0 ELEC. PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE
- UG-CATV-12 UNDERGROUND CABLE TV, CATV PEDESTAL
- UG-PHONE-12 TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
- ELEC-UG-12 ELECTRIC U.G. CABLE, MANHOLE, METER & MANHOLE
- UG-GAS-12 GAS MAIN, VALVE & GAS LINE MARKER
- WATER-12 WATERMAIN, HYD. GATE VALVE, TAPPING SLICE & VALVE
- SANITARY-12 SANITARY SEWER, CLEANOUT & MANHOLE
- STORM-12 STORM SEWER, CLEANOUT & MANHOLE
- COMBINED-12 COMBINED SEWER & MANHOLE
- SEWER-12 SEWER, ROUND & BEDDING CATCH BASIN, YARD DRAIN
- POST-12 POST INDICATOR VALVE
- WATER-12 WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF
- MALBOX-12 MALBOX, TRANSFORMER, IRRIGATION CONTROL VALVE
- UNIDENTIFIED-12 UNIDENTIFIED STRUCTURE
- SPOT-12 SPOT ELEVATION
- CONTOUR-12 CONTOUR LINE
- FENCE-12 FENCE
- GUARD-12 GUARD RAIL
- STREET-12 STREET LIGHT
- SON-12 SON

**PROPOSED**

- CONC. CONCRETE
- ASPH. ASPHALT
- GRAVEL GRAVEL SHOULDER
- WETLAND WETLAND
- STD. HEAVY ROW DUTY ONLY
- STD. HEAVY DEEP DUTY ONLY
- STD. HEAVY DEEP DUTY STRENGTH

**REFERENCE DRAWINGS**  
FEMA F.I.R.M. NO. 26161C0406E, DATED APRIL 3, 2012  
OAK PARK SUBDIVISION PLAN

**FLOODPLAIN NOTE:**  
BY GRAPHICAL PLOTTING, SITE IS WITHIN ZONE 'X', AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN PER FLOOD INSURANCE RATE MAP NUMBER 26161C0406E, DATED APRIL 3, 2012.



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BIRMINGHAM, MICHIGAN 45209

**OVERALL SITE PLAN**  
**NAJOR PITTSFIELD**  
PART OF THE SOUTHWEST 1/4 OF SECTION 17, T3S, R1E  
PITTSFIELD TOWNSHIP, WASHTENAW COUNTY, MICHIGAN

DES. TJL DN. VBC SUR. JWMH JPB  
S:\PROJECTS\2017\2017228\DWG\SITE PLANS\VA-BASE-17228.DWG  
S:\PROJECTS\2017\2017228\DWG\SITE PLANS\VA-TLBK-17228.DWG

ORIGINAL ISSUE DATE:  
OCTOBER 24, 2019

PEA JOB NO. 2017-228

SCALE: 1" = 40'

DRAWING NUMBER:  
**4**

**LEGAL DESCRIPTION**  
(Per Washtenaw County)

PARCEL ID 1-12-01-354-015  
Land in the Township of Pittsfield, Washtenaw County, Michigan, described as follows:

\*OLD SID - L 12-145-002-00 P1 47-1, 2, 31, 32 LOTS 1, 2, 31, 32 BHK 1 SUBDIVISION OF LOTS 1 TO 73 INCLUSIVE EXCEPT LOTS 34 & 36 AND LOTS 109 TO 111 INCLUSIVE OF OAK PARK.

**LEGAL DESCRIPTION**  
(Per Washtenaw County)

PARCEL ID 1-12-01-354-029  
Land in the Township of Pittsfield, Washtenaw County, Michigan, described as follows:

P1 47-3A (014, 016 TO 021) LOTS 3, 4, 5, 6, 7, 8, 25, 26, 27, 28, 29, 30 IN BLOCK 1, SUBDIVISION OF LOTS 1 TO 73 INCLUSIVE, EXCEPT LOTS 34 & 36 & LOTS 109 TO 111 INCLUSIVE OF OAK PARK.

ADJACENT ZONING:  
ZONED FB  
"FORM BASED MIXED USE" DISTRICT  
ADJACENT USE:  
COMMERCIAL/RETAIL

ADJACENT ZONING:  
ZONED R1B  
"SINGLE FAMILY SUBURBAN RESIDENTIAL" DISTRICT  
ADJACENT USE:  
SINGLE FAMILY

ADJACENT ZONING:  
ZONED FB  
"FORM BASED MIXED USE" DISTRICT  
ADJACENT USE:  
COMMERCIAL/RETAIL

ADJACENT ZONING:  
ZONED FB  
"FORM BASED MIXED USE" DISTRICT  
ADJACENT USE:  
COMMERCIAL/RETAIL

ADJACENT ZONING:  
ZONED FB  
"FORM BASED MIXED USE" DISTRICT  
ADJACENT USE:  
COMMERCIAL/RETAIL

**NOT FOR CONSTRUCTION**

**BENCHMARKS**  
(GPS DERIVED - NAVD88)

BM #300  
ARROW ON A HYDRANT AT THE NORTHWEST CORNER OF PACKARD ROAD AND CRYSTAL DRIVE, APPROX. 50'± NORTH OF THE CENTERLINE OF PACKARD ROAD, AND APPROX. 30'± WEST OF THE CENTERLINE OF CRYSTAL DRIVE.  
ELEV. - 838.20

BM #301  
NAIL AND TAG ON THE EAST SIDE OF A LIGHT POLE LOCATED AT THE NORTHEAST CORNER OF PACKARD ROAD AND CARPENTER ROAD, APPROX. 45'± EAST OF THE CENTERLINE OF CARPENTER ROAD AND APPROX. 30'± NORTH OF THE CENTERLINE OF PACKARD ROAD.  
ELEV. - 835.89

**GENERAL NOTES:**  
THESE NOTES APPLY TO ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT.

- ALL DIMENSIONS SHOWN ARE TO BACK OF CURB, FACE OF SIDEWALK, OUTSIDE FACE OF BUILDING, PROPERTY LINE, CENTER OF MANHOLE/CATCH BASIN OR CENTERLINE OF PIPE UNLESS OTHERWISE NOTED.
- REFER TO NOTES & DETAILS SHEET FOR ON-SITE PAVING DETAILS.
- REFER TO NOTES & DETAILS SHEET FOR ON-SITE SIDEWALK RAMP DETAILS.
- 'NO PARKING-FIRE LANE' SIGNS SHALL BE POSTED ALONG ALL FIRE LANES AT 75 FOOT INTERVALS OR AS DIRECTED BY THE FIRE OFFICIAL.
- ALL CONSTRUCTION, WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH CURRENT OSHA, MDOT AND MUNICIPALITY STANDARDS AND REGULATIONS.
- THE CONTRACTOR SHALL NOTIFY THE TOWNSHIP ENGINEER AND/OR THE AUTHORITY HAVING JURISDICTION 3 BUSINESS DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
- THE CONTRACTOR MUST CONTACT THE ENGINEER SHOULD THEY ENCOUNTER ANY DESIGN ISSUES DURING CONSTRUCTION. IF THE CONTRACTOR MAKES DESIGN MODIFICATIONS WITHOUT THE WRITTEN DIRECTION OF THE DESIGN ENGINEER, THE CONTRACTOR DOES SO AT HIS OWN RISK.
- ALL NECESSARY PERMITS, TESTING, BONDS AND INSURANCES ETC., SHALL BE PAID FOR BY THE CONTRACTOR. THE OWNER SHALL PAY FOR ALL TOWNSHIP INSPECTION FEES.
- ANY WORK WITHIN THE STREET OR HIGHWAY RIGHTS-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AGENCIES HAVING JURISDICTION AND SHALL NOT BEGIN UNTIL ALL NECESSARY PERMITS HAVE BEEN ISSUED FOR THE WORK.
- ALL PROPERTIES OR FACILITIES IN THE SURROUNDING AREAS, PUBLIC OR PRIVATE, DESTROYED OR OTHERWISE DISTURBED DUE TO CONSTRUCTION, SHALL BE REPLACED AND/OR RESTORED TO THE ORIGINAL CONDITION BY THE CONTRACTOR.
- THE CONTRACTOR SHALL PROVIDE ALL NECESSARY BARRICADING, SIGNAGE, LIGHTS AND TRAFFIC CONTROL DEVICES TO PROTECT THE WORK AND SAFELY MAINTAIN TRAFFIC IN ACCORDANCE WITH LOCAL REQUIREMENTS AND THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (LATEST EDITION). THE DESIGN ENGINEER, OWNER, PITTSFIELD TOWNSHIP AND STATE SHALL NOT BE HELD LIABLE FOR ANY CLAIMS RESULTING FROM ACCIDENTS OR DAMAGES CAUSED BY THE CONTRACTOR'S FAILURE TO COMPLY WITH TRAFFIC AND PUBLIC SAFETY REGULATIONS DURING THE CONSTRUCTION PERIOD.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ADJUST THE TOP OF ALL EXISTING AND PROPOSED STRUCTURES (MANHOLES, CATCH BASINS, INLETS, GATE WELLS ETC.) WITHIN GRADED AND/OR PAVED AREAS TO FINAL GRADE SHOWN ON THE PLANS. ALL SUCH ADJUSTMENTS SHALL BE INCIDENTAL TO THE JOB AND WILL NOT BE PAID FOR SEPARATELY.
- IN AREAS WHERE NEW PAVEMENTS ARE BEING CONSTRUCTED, THE TOPSOIL AND SOIL CONTAINING ORGANIC MATTER SHALL BE REMOVED PRIOR TO PAVEMENT CONSTRUCTION.
- PROVIDE EXPANSION JOINTS AND JOINT SEALANT AT TWO "END-OF-RADIUS" LOCATIONS (OPPOSITE SIDES AT EACH LONG END) OF CONCRETE CURB ISLANDS.
- REFER TO ARCHITECTURAL PLANS FOR DETAILS OF FROST SLAB AT EXTERIOR BUILDING DOORS.
- CONSTRUCTION TRAFFIC SHOULD BE MINIMIZED ON THE NEW PAVEMENT. IF CONSTRUCTION TRAFFIC IS ANTICIPATED ON THE PAVEMENT STRUCTURE, THE INITIAL LIFT THICKNESS COULD BE INCREASED AND PLACEMENT OF THE FINAL LIFT COULD BE DELAYED UNTIL THE MAJORITY OF THE CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED. THIS ACTION WILL ALLOW REPAIR OF LOCALIZED FAILURE, IF ANY DOES OCCUR, AS WELL AS REDUCE LOAD DAMAGE ON THE PAVEMENT SYSTEM.
- PAVEMENT MIX DESIGNS SUBMITTED FOR REVIEW BY THE ENGINEER MUST FOLLOW THE CURRENT MDOT REVIEW CHECKLISTS AS SUMMARIZED BELOW:
  - CONCRETE MIX DESIGN REVIEW CHECKLIST (FORM 2000)
  - SUPERPAVE MIX DESIGN CHECKLIST (FORM 1862)
  - MARSHALL MIX DESIGN CHECKLIST (FORM 1849)

**SIGN LEGEND:**

- 'NO PARKING FIRE LANE' SIGN [1]
- 'STOP' SIGN [2]
- 'BARRIER FREE PARKING' SIGN [3]
- 'VAN ACCESSIBLE' SIGN [4]
- 'ONE WAY' SIGN [5]
- 'DO NOT ENTER' SIGN [6]
- 'NO PARKING LOADING ZONE' SIGN [7]

REFER TO DETAIL SHEET FOR SIGN DETAILS

**SIDEWALK RAMP LEGEND:**

- SIDEWALK RAMP 'TYPE P' [P]
- SIDEWALK RAMP 'TYPE R' [R]

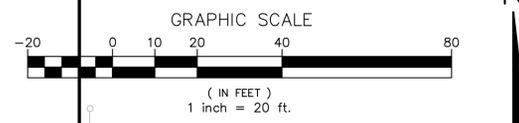
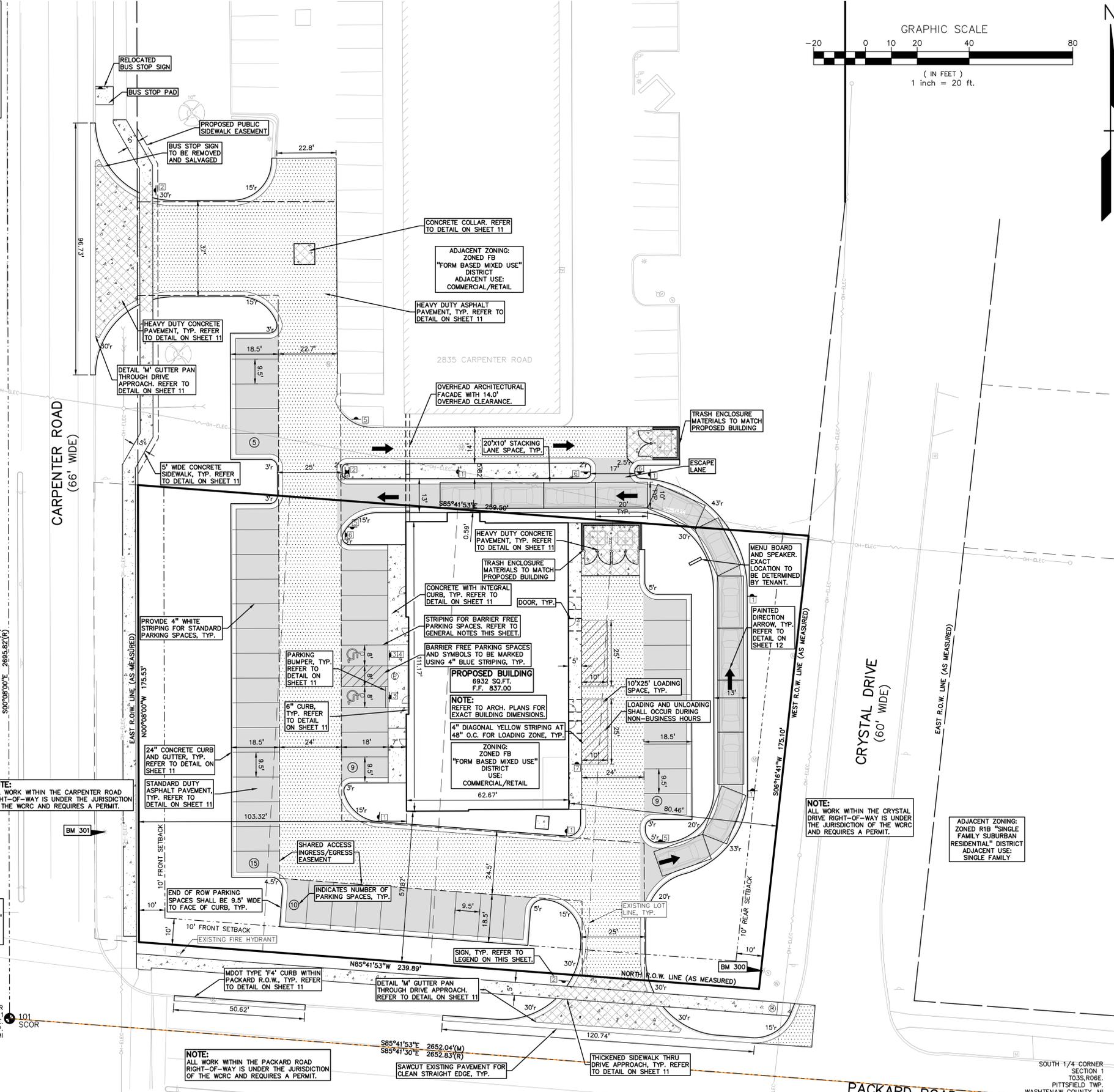
REFER TO LATEST MDOT R-28 STANDARD RAMP AND DETECTABLE WARNING DETAILS AND SHEET 11

**LEGAL DESCRIPTION**  
(Per Washtenaw County)

PARCEL ID 1-12-01-354-015  
Land in the Township of Pittsfield, Washtenaw County, Michigan, described as follows:  
HOLD SID - L 12-145-002-00 Pl 47-1, 2, 31, 32 LOTS 1, 2, 31, 32 BHK 1 SUBDIVISION OF LOTS 1 TO 73 INCLUSIVE EXCEPT LOTS 34 & 36 AND LOTS 100 TO 111 INCLUSIVE OF OAK PARK.

**LEGAL DESCRIPTION**  
(Per Washtenaw County)

PARCEL ID 1-12-01-354-029  
Land in the Township of Pittsfield, Washtenaw County, Michigan, described as follows:  
Pl 47-3A (014, 016 to 021) LOTS 3, 4, 5, 6, 7, 8, 25, 26, 27, 28, 29, 30 IN BLOCK 1, SUBDIVISION OF LOTS 1 TO 73 INCLUSIVE, EXCEPT LOTS 34 & 36 & LOTS 109 TO 111 INCLUSIVE OF OAK PARK.



**LEGEND**

| EXISTING     | PROPOSED   |
|--------------|--|
| OH-ELEC-W    | ELEC. PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE |
| UG-CATV      | UNDERGROUND CABLE TV, CATV PEDESTAL                |
| UG-PHONE     | TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE           |
| UG-ELEC      | ELECTRIC U.G. CABLE, MANHOLE, WIRE & HANDHOLE      |
| W-MAN        | GAS MAIN, VALVE & GAS LINE MARKER                  |
| W-SAN        | SANITARY SEWER, CLEANOUT & MANHOLE                 |
| W-STM        | STORM SEWER, CLEANOUT & MANHOLE                    |
| W-CMB        | COMBINED SEWER & MANHOLE                           |
| W-SQB        | SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN    |
| W-PIV        | POST INDICATOR VALVE                               |
| W-WVB        | WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF |
| W-MAL        | MALIBO, TRANSFORMER, BRIDGON CONTROL VALVE         |
| W-UNID       | UNIDENTIFIED STRUCTURE                             |
| SPOT         | SPOT ELEVATION                                     |
| CONTOUR      | CONTOUR LINE                                       |
| FENCE        | FENCE  |
| GUARD RAIL   | GUARD RAIL   |
| STREET LIGHT | STREET LIGHT                                       |
| SON          | SON  |
| CONC.        | CONCRETE   |
| ASPH.        | ASPHALT  |
| GRAVEL       | GRAVEL SHOULDER                                    |
| WETLAND      | WETLAND  |

**REFERENCE DRAWINGS**  
FEMA F.I.R.M. NO. 26161C0406E, DATED APRIL 3, 2012  
OAK PARK SUBDIVISION PLAN

**FLOODPLAIN NOTE:**  
BY GRAPHICAL PLOTTING, SITE IS WITHIN ZONE 'X', AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN PER FLOOD INSURANCE RATE MAP NUMBER 26161C0406E, DATED APRIL 3, 2012.

**REVISIONS**

| NO. | DATE | DESCRIPTION |
|-----|------|-------------|
| 1   |      |             |
| 2   |      |             |
| 3   |      |             |
| 4   |      |             |
| 5   |      |             |

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600 N. OLD WOODWARD, SUITE 100  
BIRMINGHAM, MICHIGAN 45209

**PRELIMINARY SITE PLAN**  
**NAJOR PITTSFIELD**  
PART OF THE SOUTHWEST 1/4 OF SECTION 1, T3S. R1E. PITTSFIELD TOWNSHIP, WASHTENAW COUNTY, MICHIGAN

DES. T.J.L. DN. VBC. SUR. J.W.M.H. | P.M. | J.P.B.  
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ORIGINAL ISSUE DATE:  
OCTOBER 24, 2019

PEA JOB NO. 2017-228

SCALE: 1" = 20'

DRAWING NUMBER:  
**5**

**NOT FOR CONSTRUCTION**

**BENCHMARKS**  
(GPS DERIVED - NAVD83)

BM #300  
ARROW ON A HYDRANT AT THE NORTHWEST CORNER OF PACKARD ROAD AND CRYSTAL DRIVE, APPROX. 50'± NORTH OF THE CENTERLINE OF PACKARD ROAD, AND APPROX. 30'± WEST OF THE CENTERLINE OF CRYSTAL DRIVE.  
ELEV. - 838.20

BM #301  
NAIL AND TAG ON THE EAST SIDE OF A LIGHT POLE LOCATED AT THE NORTHEAST CORNER OF PACKARD ROAD AND CARPENTER ROAD, APPROX. 45'± EAST OF THE CENTERLINE OF CARPENTER ROAD AND APPROX. 30'± NORTH OF THE CENTERLINE OF PACKARD ROAD.  
ELEV. - 835.89

**GENERAL GRADING AND EARTHWORK NOTES:**  
THESE NOTES APPLY TO ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT

- CONTRACTOR TO FIELD VERIFY ALL EXISTING TREES AND BRUSH AND REMOVE ALL THAT ARE NECESSARY TO GRADE SITE.
- ALL GRADES ARE TO TOP OF PAVEMENT UNLESS OTHERWISE NOTED.
- THE STAGING OF CONSTRUCTION ACTIVITIES SHALL OCCUR ONLY WITHIN THE SITE BOUNDARIES. ANY CONSTRUCTION ACTIVITIES OUTSIDE OF THE SITE BOUNDARIES SHALL BE AT THE SOLE RESPONSIBILITY AND RISK OF THE CONTRACTOR.
- ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL MEET THE REQUIREMENTS OF THE AUTHORIZED PUBLIC AGENCY OF JURISDICTION. AN EROSION CONTROL PERMIT MUST BE SECURED FROM WASHTENAW COUNTY PRIOR TO CONSTRUCTION.
- ALL EARTHWORK AND GRADING OPERATIONS SHALL BE PERFORMED IN ACCORDANCE WITH THE SOILS INVESTIGATION AND REPORT.
- REFER TO SOIL EROSION CONTROL PLAN FOR ADDITIONAL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES AND NOTES.
- THE DETENTION BASIN SIDE SLOPES AND ALL SLOPE EXCEEDING 1:6 MUST BE STABILIZED BY SODDING OR BY PLACING A MULCH BLANKET PEGGED IN PLACE OVER SEED.
- ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED OR SODDED IN ACCORDANCE WITH THE LANDSCAPE PLANS. PROVIDE A MINIMUM OF 3" OF TOPSOIL IN THESE AREAS UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL NOTE EXISTING UNDERGROUND UTILITIES WITHIN AND ADJACENT TO THE SITE. BACKFILL FOR EXISTING UTILITY TRENCHES SHALL BE EXAMINED CRITICALLY. ANY TRENCHES FOUND TO HAVE SOFT, UNSTABLE OR UNSUITABLE BACKFILL MATERIAL, IN THE OPINION OF THE THIRD PARTY TESTING COMPANY, THAT ARE TO BE WITHIN THE ZONE OF INFLUENCE OF PROPOSED BUILDINGS OR PAVEMENT SHALL BE COMPLETELY EXCAVATED AND BACKFILLED WITH SUITABLE MATERIAL.
- ON-SITE FILL CAN BE USED IF THE SPECIFIED COMPACTION REQUIREMENTS CAN BE ACHIEVED. IF ON-SITE SOIL IS USED, IT SHOULD BE CLEAN AND FREE OF FROZEN SOIL, ORGANICS, OR OTHER DELETERIOUS MATERIALS.
- THE FINAL SUBGRADE/EXISTING AGGREGATE BASE SHOULD BE THOROUGHLY PROFFERED USING A FULLY LOADED TANDEM AXLE TRUCK OR FRONT END LOADER UNDER THE OBSERVATION OF A GEOTECHNICAL/PAVEMENT ENGINEER. LOOSE OR YIELDING AREAS THAT CANNOT BE MECHANICALLY STABILIZED SHOULD BE REINFORCED USING GEORIGS OR REMOVED AND REPLACED WITH ENGINEERED FILL OR AS DICTATED BY FIELD CONDITIONS.
- SUBGRADE UNDERCUTTING, INCLUDING BACKFILLING SHALL BE PERFORMED TO REPLACE MATERIALS SUSCEPTIBLE TO FROST HEAVING AND UNSTABLE SOIL CONDITIONS. ANY EXCAVATIONS THAT MAY BE REQUIRED BELOW THE TOPSOIL IN FILL AREAS OR BELOW SUBGRADE IN CUT AREAS WILL BE CLASSIFIED AS SUBGRADE UNDERCUTTING.
- SUBGRADE UNDERCUTTING SHALL BE PERFORMED WHERE NECESSARY AND THE EXCAVATED MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR. ANY SUBGRADE UNDERCUTTING SHALL BE BACKFILLED AS RECOMMENDED IN THE GEOTECHNICAL ENGINEERING REPORT FOR THE PROJECT.
- ANY SUB-GRADE WATERING REQUIRED TO ACHIEVE REQUIRED DENSITY SHALL BE CONSIDERED INCIDENTAL TO THE JOB.

**LEGAL DESCRIPTION**  
(Per Washtenaw County)

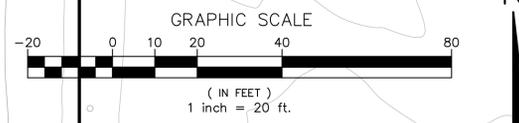
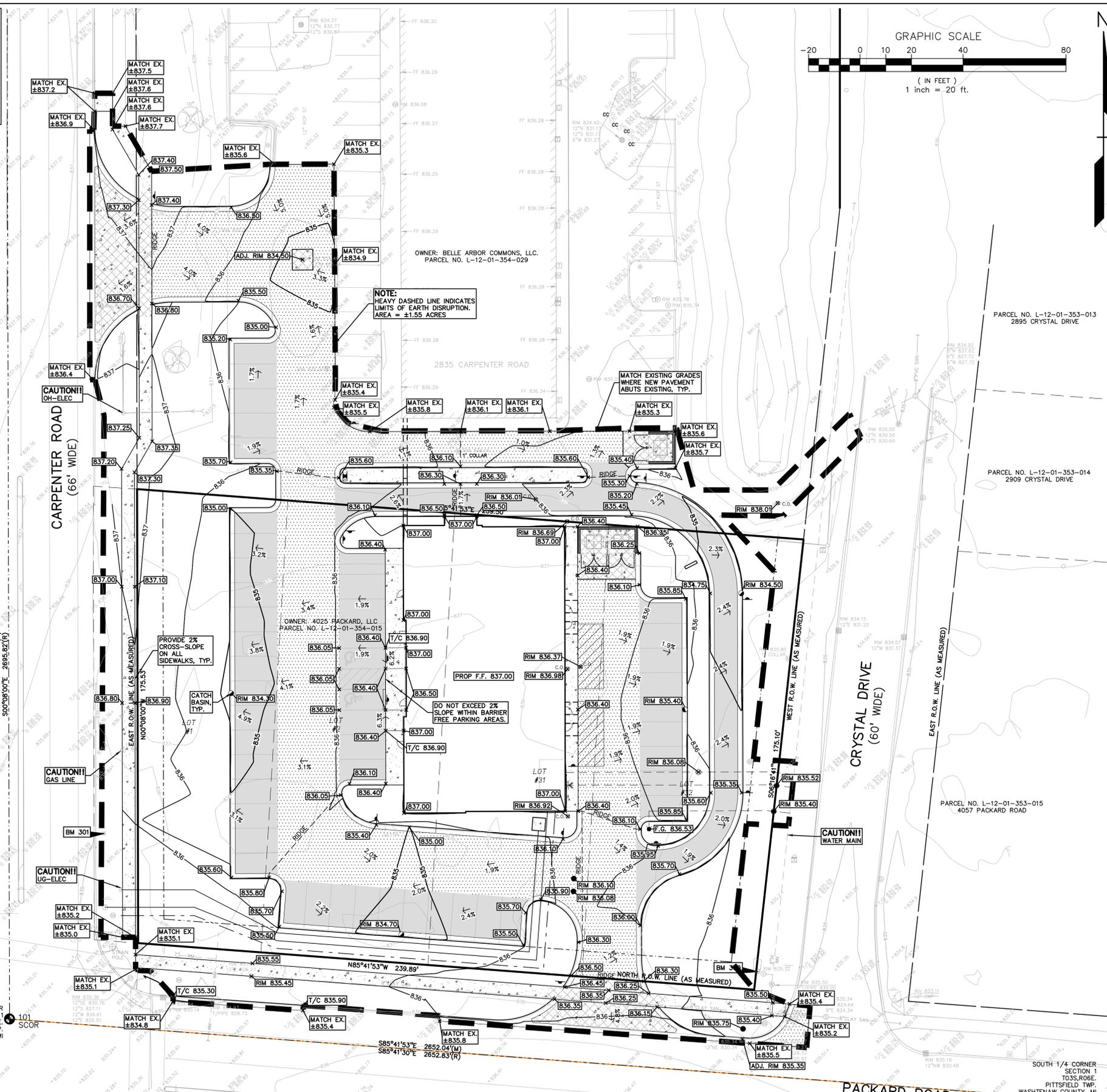
PARCEL ID 1-12-01-354-015  
Land in the Township of Pittsfield, Washtenaw County, Michigan, described as follows:

HOLD SID - L 12-145-002-00 PI 47-1, 2, 31, 32 LOTS 1, 2, 31, 32 BHK 1 SUBDIVISION OF LOTS 1 TO 73 INCLUSIVE EXCEPT LOTS 34 & 36 AND LOTS 109 TO 111 INCLUSIVE OF OAK PARK.

**LEGAL DESCRIPTION**  
(Per Washtenaw County)

PARCEL ID 1-12-01-354-029  
Land in the Township of Pittsfield, Washtenaw County, Michigan, described as follows:

PI 47-3A (014, 016 to 021) LOTS 3, 4, 5, 6, 7, 8, 25, 26, 27, 28, 29, 30 IN BLOCK 1, SUBDIVISION OF LOTS 1 TO 73 INCLUSIVE, EXCEPT LOTS 34 & 36 & LOTS 109 TO 111 INCLUSIVE OF OAK PARK.



**LEGEND**

|                  |                  |                     |
|------------------|------------------|---------------------|
| ● IRON FOUND     | ○ BRASS PLUG SET | ● SEC. CORNER FOUND |
| ⊗ IRON SET       | ⊗ MONUMENT FOUND | ⊕ RECORDED          |
| ⊗ NAIL FOUND     | ⊗ MONUMENT SET   | ⊕ MEASURED          |
| ⊗ NAIL & CAP SET |                  | ⊕ CALCULATED        |

**EXISTING**

- OH-ELEC-W-C: ELEC. PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE
- UG-CATV: UNDERGROUND CABLE TV, CTV PEDESTAL
- UG-PHONE: TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
- UG-ELEC: ELECTRIC U.G. CABLE, MANHOLE, WIRE & MANHOLE
- WATER: GAS MAIN, VALVE & GAS LINE MANHOLE
- WATER: WATERMAIN, HYD. GATE VALVE, TAPPING SLAVE & VALVE
- SEWER: SANITARY SEWER, CLEANOUT & MANHOLE
- SEWER: STORM SEWER, CLEANOUT & MANHOLE
- SEWER: COMBINED SEWER & MANHOLE
- SEWER: SQUARE ROUND & RECT. CATCH BASIN, YARD DRAIN
- SEWER: FRET INDICATOR VALVE
- SEWER: WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF
- SEWER: MALBOX, TRANSFORMER, IRRIGATION CONTROL VALVE
- SEWER: UNIDENTIFIED STRUCTURE
- SEWER: SPOT ELEVATION
- SEWER: CONTOUR LINE
- SEWER: FENCE
- SEWER: GUARD RAIL
- SEWER: STREET LIGHT
- SEWER: SIGN

**PROPOSED**

- CONC: CONCRETE
- ASPH: ASPHALT
- GRAVEL: GRAVEL SHOULDER
- WETLAND: WETLAND
- STB: STB HEAVY ROW DUTY ONLY
- STB: STB HEAVY DEEP DUTY STRENGTH

**REFERENCE DRAWINGS**  
FEMA F.I.R.M. NO. 26161C0406E, DATED APRIL 3, 2012  
OAK PARK SUBDIVISION PLAN

**FLOODPLAIN NOTE:**  
BY GRAPHICAL PLOTTING, SITE IS WITHIN ZONE 'X', AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN PER FLOOD INSURANCE RATE MAP NUMBER 26161C0406E, DATED APRIL 3, 2012.

**EARTHWORK BALANCING NOTE:**  
THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPORTING OR EXPORTING ALL MATERIALS AS REQUIRED TO PROPERLY GRADE THIS PROJECT TO THE FINISHED ELEVATIONS SHOWN ON THE APPROVED PLANS. THE CONTRACTOR SHALL MAKE THEIR OWN DETERMINATION OF CUT AND FILL QUANTITIES AND ALLOW FOR REMOVAL OF EXCESS OR IMPORTATION OF ADDITIONAL MATERIAL AT NO ADDITIONAL COST TO THE OWNER.

**SYMBOLS: GRADING**  
PROPOSED SPOT GRADE ELEVATION: 836.50  
ALL GRADES ARE TOP OF PAVEMENT UNLESS OTHERWISE NOTED.  
PROPOSED CONTOUR LINE: 836  
ABBREVIATIONS:  
TOP OF CURB = T/C  
GUTTER GRADE = G  
RIM = RIM ELEVATION  
FINISH GRADE = F.G.

| NO. | DATE | DESCRIPTION                               | BY | CHKD. |
|-----|------|---|----|-------|
| 1   |      | PER TOWNSHIP PLANNING CONSULTANT COMMENTS |    |       |



**CAUTION!**  
THE LOCATION AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS GIVEN FOR THE ACCURACY OF THESE UTILITIES. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

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CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERAL AND SPECIFIC CONSTRUCTION PRACTICES, CONSTRUCTION SHALL BE COMPLETED WITHIN THE SPECIFIED TIME AND COMPLETE RESPONSIBILITY FOR JOB SITE SAFETY AND PROTECTION DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THE REQUIREMENT OF THE CONTRACTOR TO PROTECT EXISTING UTILITIES AND STRUCTURES SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO THE PERIOD OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HOLDING DESIGN PROFESSIONALS OR ANY OTHER PERSONS FROM ANY AND ALL LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONALS.

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f: 248.689.1044  
www.peainc.com

**NAJOR COMPANIES**  
600 N. OLD WOODWARD, SUITE 100  
BIRMINGHAM, MICHIGAN 45209

**PRELIMINARY GRADING PLAN**  
**NAJOR PITTSFIELD**  
PART OF THE SOUTHWEST 1/4 OF SECTION 1, T3S, R1E  
PITTSFIELD TOWNSHIP, WASHTENAW COUNTY, MICHIGAN

DES. T.J.L. DN. VBC SUR. J.W.M.H. P.M. J.P.B.

ORIGINAL ISSUE DATE:  
OCTOBER 24, 2019

PEA JOB NO. 2017-228

SCALE: 1" = 20'

DRAWING NUMBER:  
**6**

**NOT FOR CONSTRUCTION**

**BENCHMARKS**  
(GPS DERIVED - NAVD88)

BM #300  
ARROW ON A HYDRANT AT THE NORTHWEST CORNER OF PACKARD ROAD AND CRYSTAL DRIVE, APPROX. 50'± NORTH OF THE CENTERLINE OF PACKARD ROAD, AND APPROX. 30'± WEST OF THE CENTERLINE OF CRYSTAL DRIVE.  
ELEV. - 838.20

BM #301  
NAIL AND TAG ON THE EAST SIDE OF A LIGHT POLE LOCATED AT THE NORTHEAST CORNER OF PACKARD ROAD AND CARPENTER ROAD, APPROX. 45'± EAST OF THE CENTERLINE OF CARPENTER ROAD AND APPROX. 30'± NORTH OF THE CENTERLINE OF PACKARD ROAD.  
ELEV. - 835.89

**GENERAL UTILITY NOTES:**

1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE PITTSFIELD TOWNSHIP AND WASHTENAW COUNTY ROAD COMMISSION.
2. ALL TRENCHES UNDER OR WITHIN THREE (3) FEET OR THE FORTY-FIVE (45) DEGREE ZONE OF INFLUENCE LINE OF EXISTING AND/OR PROPOSED PAVEMENT, BUILDING PAD OR DRIVE APPROACH SHALL BE BACKFILLED WITH SAND COMPACTED TO AT LEAST NINETY-FIVE (95) PERCENT OF MAXIMUM UNIT WEIGHT (ASTM D-1557). ALL OTHER TRENCHES TO BE COMPACTED TO 90% OR BETTER.
3. WHENEVER EXISTING MANHOLES OR SEWER PIPE ARE TO BE TAPPED, DRILL HOLES 4" CENTER TO CENTER, AROUND PERIPHERY OF OPENING TO CREATE A PLANE OF WEAKNESS JOINT BEFORE BREAKING SECTION OUT.
4. THE LOCATIONS AND DIMENSIONS SHOWN ON THE PLANS FOR EXISTING UTILITIES ARE IN ACCORDANCE WITH AVAILABLE INFORMATION WITHOUT UNCOVERING AND MEASURING. THE DESIGN ENGINEER DOES NOT GUARANTEE THE ACCURACY OF THIS INFORMATION OR THAT ALL EXISTING UNDERGROUND FACILITIES ARE SHOWN. CONTRACTOR TO FIELD VERIFY UTILITIES.
5. THE CONTRACTOR MUST COORDINATE TO ENSURE ALL REQUIRED PIPES, CONDUITS, CABLES AND SLEEVES ARE PROPERLY PLACED FOR THE INSTALLATION OF GAS, ELECTRIC, PHONE, CABLE, IRRIGATION, ETC. IN SUCH A MANNER THAT WILL FACILITATE THEIR PROPER INSTALLATION PRIOR TO THE PLACEMENT OF THE PROPOSED PAVEMENT AND LANDSCAPING.

**STORM SEWER NOTES:**

1. ALL STORM SEWER 12" AND LARGER SHALL BE RCP CLASS IV UNLESS OTHERWISE NOTED. REFER TO PITTSFIELD TOWNSHIP STANDARD DETAILS SHEETS FOR STANDARD BEDDING DETAILS.
2. JOINTS FOR ALL STORM SEWER 12" AND LARGER SHALL BE MODIFIED TONGUE AND GROOVE JOINT WITH RUBBER GASKETS UNLESS SPECIFIED OTHERWISE (ASTM C-443)
3. ALL STORM SEWER LEADS SHALL BE CONSTRUCTED AT 1.00% MINIMUM SLOPE
4. ALL STORM SEWER 12" DIAMETER OR LARGER SHALL BE REINFORCED CONCRETE PIPE (RCP C-76) CLASS IV WITH MODIFIED TONGUE AND GROOVE JOINT WITH RUBBER GASKETS UNLESS SPECIFIED OTHERWISE (ASTM C-443).
5. ALL STORM SEWER 10" OR LESS AND/OR LEADS SHALL BE SDR 26.
6. JOINTS FOR P.V.C. PIPE SHALL BE ELASTOMERIC (RUBBER GASKET) AS SPECIFIED IN A.S.T.M. DESIGNATION D-3212.

**WATER MAIN NOTES:**

4. ALL WATER MAIN SHALL BE INSTALLED WITH A MINIMUM COVER OF 5.5' BELOW FINISH GRADE. WHEN WATER MAINS MUST DIP TO PASS UNDER A STORM SEWER OR SANITARY SEWER, THE SECTIONS WHICH ARE DEEPER THAN NORMAL SHALL BE KEPT TO A MINIMUM LENGTH BY THE USE OF VERTICAL TWENTY TWO AND A HALF (22.5) DEGREE BENDS, PROPERLY ANCHORED.
5. ALL TEE'S, BENDS, CONNECTIONS, ETC. ARE CONSIDERED INCIDENTAL TO THE JOB.
6. PHYSICAL CONNECTIONS SHALL NOT BE MADE BETWEEN EXISTING AND NEW WATER MAINS UNTIL REQUIRED TESTING IS SATISFACTORILY COMPLETED.
7. MAINTAIN 10' HORIZONTAL CLEARANCE BETWEEN OUTER EDGE OF WATERMAIN AND ANY SANITARY/STORM SEWER OR STRUCTURE.
8. NO PHYSICAL CONNECTION TO THE EXISTING WATER MAIN CAN BE MADE UNTIL ALL NEW WATER MAINS PASS PRESSURE AND BACTERIOLOGICAL TESTS TO THE SATISFACTION OF THE PITTSFIELD TOWNSHIP.
9. ALL WATER MAIN AND FITTINGS (3" DIAMETER AND LARGER) SHALL BE DUCTILE IRON, CLASS 54.
10. WATER MAIN SERVICE LEADS SHALL BE TYPE 'K' ANNEALED SEAMLESS COPPER WITH FLARED FITTINGS, UNLESS OTHERWISE NOTED.
11. ALL WATER MAIN SHALL BE PROVIDED WITH 5.5' OF COVER UNLESS OTHERWISE NOTED.
12. ALL FIRE HYDRANTS SHALL BE EJ 58R250 PER PITTSFIELD TOWNSHIP STANDARDS.
13. ALL HYDRANTS TO BE 3 TO 10 FEET FROM BACK OF CURB, TYP.
14. ALL NECESSARY FITTINGS, THRUST BLOCKS, RESTRAINING GLANDS, BLOW OFFS, ETC. FOR WATER MAIN ARE CONSIDERED INCIDENTAL TO THIS PROJECT. THE CONTRACTOR SHALL INSTALL THESE ITEMS AS NECESSARY AND AS REQUIRED BY THE TOWNSHIP.

**SANITARY SEWER NOTES:**

1. DOWNSPOUTS, WEEP TILE, FOOTING DRAINS OR ANY CONDUIT THAT CARRIES STORM OR GROUND WATER SHALL NOT BE ALLOWED TO DISCHARGE INTO A SANITARY SEWER.
2. ALL SANITARY LEADS SHALL BE CONSTRUCTED AT 2.00% MINIMUM SLOPE.
3. ALL SANITARY SEWER SHALL BE CONSTRUCTED OF PVC TRUSS PIPE WITH A MINIMUM DIAMETER OF 10" PER TOWNSHIP REQUIREMENTS.
4. JOINTS FOR P.V.C. SOLID WALL PIPE SHALL BE ELASTOMERIC (RUBBER GASKET) AS SPECIFIED IN A.S.T.M. DESIGNATION D-3212.
5. ALL SANITARY SEWER 10" OR LARGER SHALL BE P.V.C. TRUSS PIPE (ASTM D2680) AND FITTINGS, WITH ELASTOMERIC GASKET JOINTS PER ASTM D3212 UNLESS OTHERWISE NOTED.
6. ALL SANITARY SEWER LEADS SHALL BE POLYVINYL CHLORIDE (PVC) SDR 26 PIPE AND FITTINGS. ALL JOINTS TO BE ELASTOMERIC GASKET JOINTS PER ASTM D3212 UNLESS OTHERWISE NOTED.
7. SANITARY LEADS SHALL BE PROVIDED WITH CLEANOUTS EVERY 100 FEET AND AT EVERY BEND AS SHOWN. ALL CLEANOUTS TO BE PROVIDED WITH E.J.I.W. #1565 BOX OR EQUAL.

**LEGAL DESCRIPTION**  
(Per Washtenaw County)

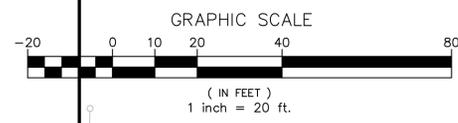
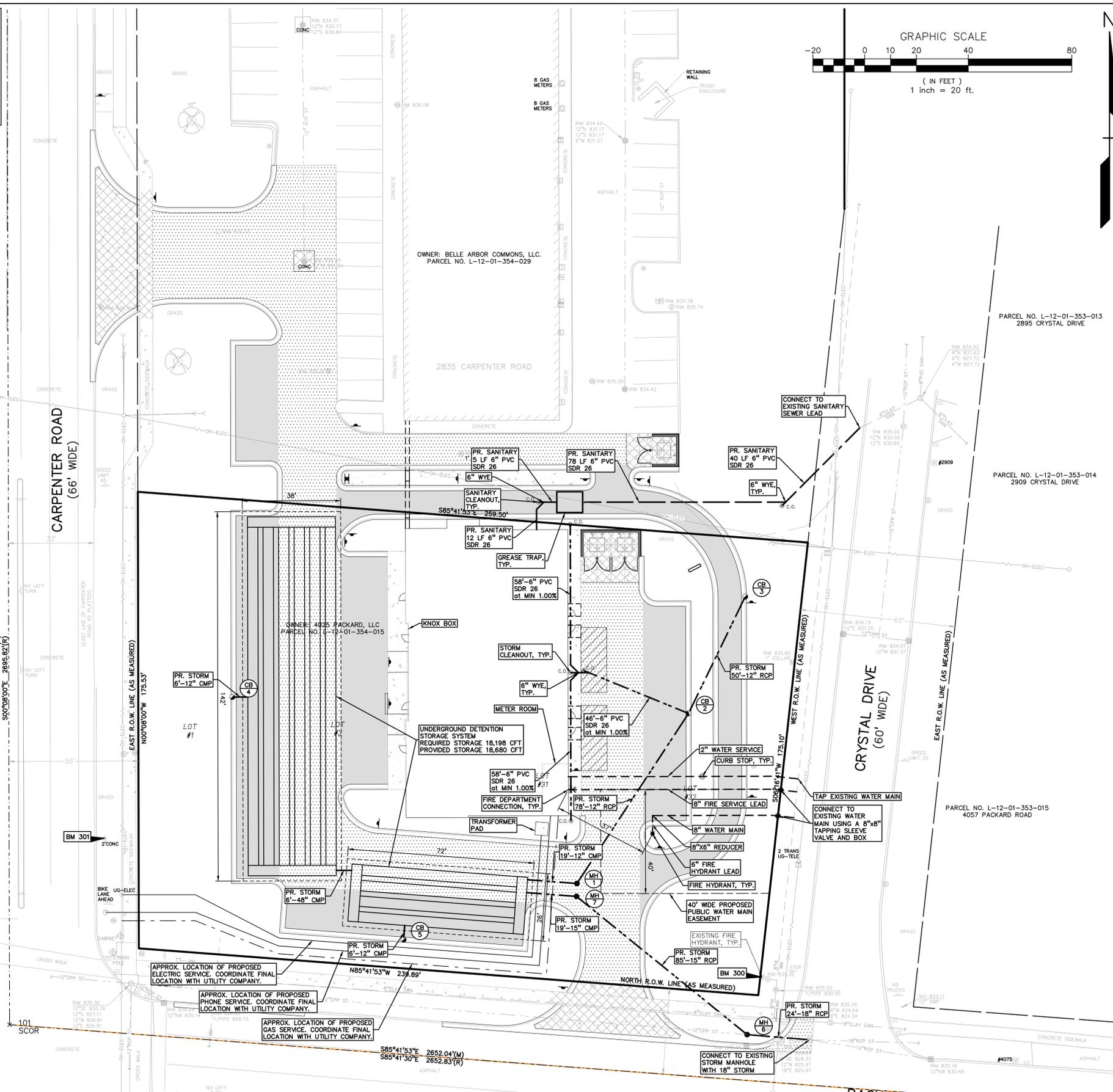
PARCEL ID 1-12-01-354-015  
Land in the Township of Pittsfield, Washtenaw County, Michigan, described as follows:

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**LEGAL DESCRIPTION**  
(Per Washtenaw County)

PARCEL ID 1-12-01-354-029  
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**LEGEND**

|                  |                  |                     |
|------------------|------------------|---------------------|
| ● IRON FOUND     | ○ MONUMENT FOUND | ○ SEC. CORNER FOUND |
| ⊗ IRON SET       | ⊗ MONUMENT SET   | ⊗ RECORDED          |
| ⊗ NAIL FOUND     | ⊗ NAIL & CAP SET | ⊗ MEASURED          |
| ⊗ NAIL & CAP SET |                  | ⊗ CALCULATED        |

**EXISTING**

- OH-ELEC-W-C: ELEC. PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE
- UG-CATV: UNDERGROUND CABLE TV, CATV PEDESTAL
- UG-ELEC: TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
- UG-ELEC: ELECTRIC U.G. CABLE, MANHOLE, WETER & HANDHOLE
- UG-ELEC: GAS MAIN VALVE & GAS LINE MARKER
- WATERMAIN, HYD. GATE VALVE, TAPPING SLEEVE & VALVE
- SANITARY SEWER, CLEANOUT & MANHOLE
- STORM SEWER, CLEANOUT & MANHOLE
- COMBINED SEWER & MANHOLE
- SOAKAWAY & BEDDING CATCH BASIN, YARD DRAIN
- POST INDICATOR VALVE
- WATER VALVE BOX/HYDRANT VALVE BOX SERVICE SHUTOFF
- MALBOX, TRANSFORMER, IRRIGATION CONTROL VALVE
- UNIDENTIFIED STRUCTURE
- SPOT ELEVATION
- CONTOUR LINE
- FENCE
- GUARD RAIL
- STREET LIGHT
- SON

**PROPOSED**

- CONCRETE
- ASPHALT
- GRAVEL SHOULDER
- WETLAND

**REFERENCE DRAWINGS**  
FEMA F.I.R.M. NO. 26161C0406E, DATED APRIL 3, 2012  
OAK PARK SUBDIVISION PLAN

**FLOODPLAIN NOTE:**  
BY GRAPHICAL PLOTTING, SITE IS WITHIN ZONE 'X', AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN PER FLOOD INSURANCE RATE MAP NUMBER 26161C0406E, DATED APRIL 3, 2012.

**NOTE:**  
CONTRACTOR TO VERIFY ALL QUANTITIES. ANY DEVIATIONS TO THE PLAN QUANTITIES SHALL BE BROUGHT TO THE ATTENTION OF PEA, INC. FOR VERIFICATION, PRIOR TO BIDDING.

**PREMIUM TRENCH BACKFILL NOTE:**  
ALL UTILITIES UNDER PAVEMENT OR WITHIN 3' OF THE EDGE OF PAVEMENT (OR WITHIN THE 45° LINE OF INFLUENCE OF PAVEMENT) SHALL HAVE MDOT CLASS II GRANULAR BACKFILL COMPACTED TO 95% MAX. DRY DENSITY (ASTM D-1557).

**REVISIONS**

| NO. | DATE | DESCRIPTION |
|-----|------|-------------|
| 1.  |      |             |
| 2.  |      |             |
| 3.  |      |             |
| 4.  |      |             |
| 5.  |      |             |
| 6.  |      |             |
| 7.  |      |             |
| 8.  |      |             |
| 9.  |      |             |
| 10. |      |             |

**CAUTION!**  
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**PRELIMINARY UTILITY PLAN**  
**NAJOR PITTSFIELD**  
PART OF THE SOUTHWEST 1/4 OF SECTION 17, T3S, R1E  
PITTSFIELD TOWNSHIP, WASHTENAW COUNTY, MICHIGAN

DES. T.J.L. DN. VBC SUR. J.W.M.H. P.M. J.P.B.

ORIGINAL ISSUE DATE:  
OCTOBER 24, 2019

PEA JOB NO. 2017-228

SCALE: 1" = 20'

DRAWING NUMBER:  
**7**

**NOT FOR CONSTRUCTION**

REF: S:\PROJECTS\2017\2017228\DWG\TOPBASE-17228.DWG  
REF: S:\PROJECTS\2017\2017228\DWG\SITE PLANS\VA-BASE-17228.DWG  
REF: S:\PROJECTS\2017\2017228\DWG\SITE PLANS\VA-TLBK-17228.DWG

**BENCHMARKS**  
(GPS DERIVED - NAVD88)

BM #300  
ARROW ON A HYDRANT AT THE NORTHWEST CORNER OF PACKARD ROAD AND CRYSTAL DRIVE, APPROX. 50'± NORTH OF THE CENTERLINE OF PACKARD ROAD, AND APPROX. 30'± WEST OF THE CENTERLINE OF CRYSTAL DRIVE.  
ELEV. - 838.20

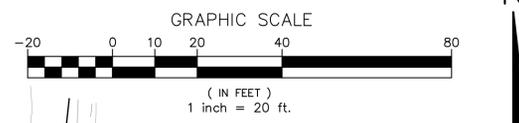
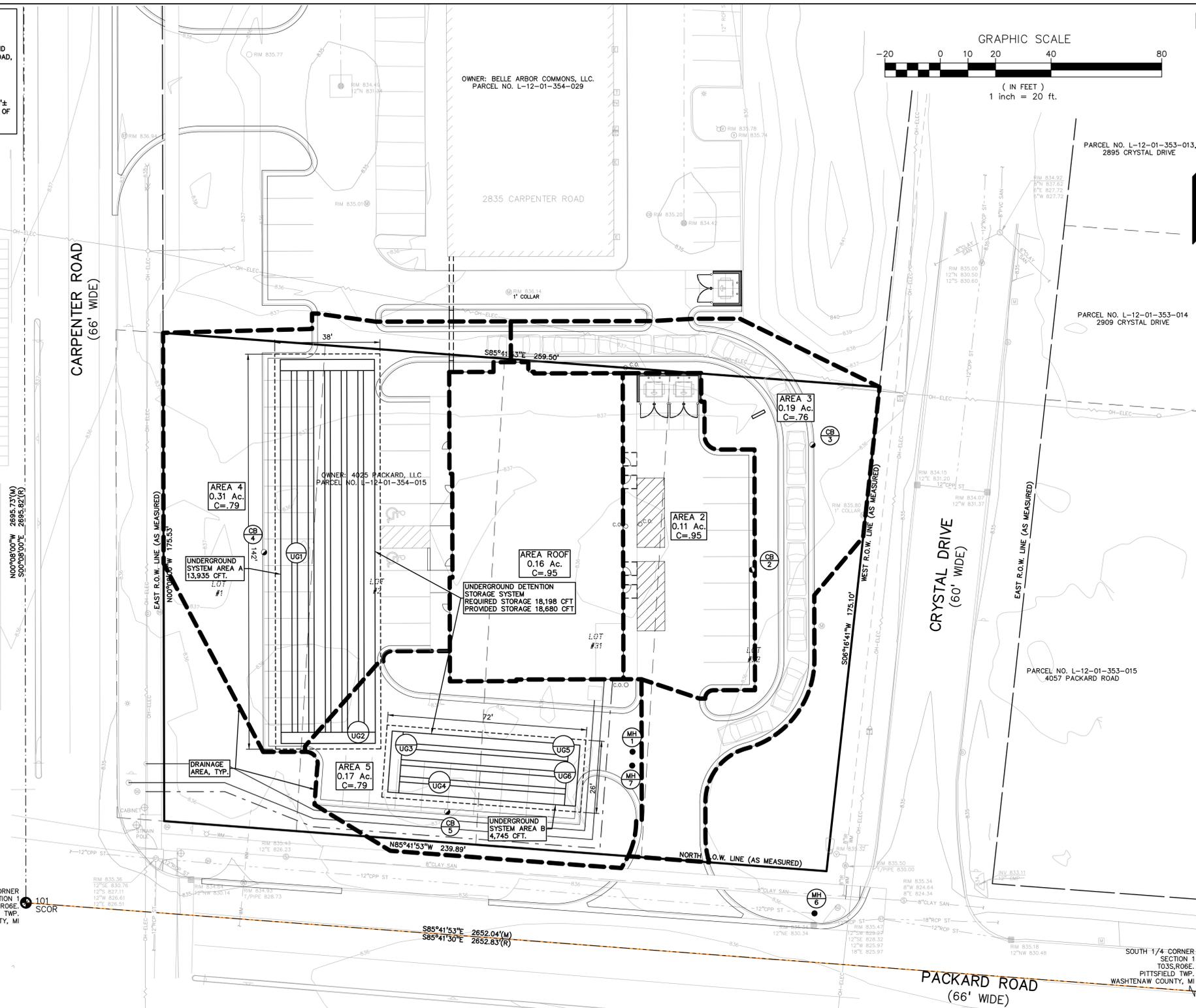
BM #301  
NAIL AND TAG ON THE EAST SIDE OF A LIGHT POLE LOCATED AT THE NORTHEAST CORNER OF PACKARD ROAD AND CARPENTER ROAD, APPROX. 45'± EAST OF THE CENTERLINE OF CARPENTER ROAD AND APPROX. 90'± NORTH OF THE CENTERLINE OF PACKARD ROAD.  
ELEV. - 835.89

**Underground Detention System-(AREA A)**

|   |                   |
|---|-------------------|
| Perf. Pipe Diameter:                                      | 48 in             |
| Perf. Pipe Volume per Linear Foot:                        | 12,566 cft        |
| Total Pipe Length:  | 848 ft            |
| Total Pipe Volume:  | 10,656 cft        |
| Length of Detention Field:                                | 142 ft            |
| Width of Detention Field:                                 | 38 ft             |
| Area of Detention Field:                                  | 5396 sft          |
| Height of Detention Field:                                | 4 ft              |
| Volume of Detention Field:                                | 21,584 cft        |
| Volume of Aggregate:                                      | 10,928 cft        |
| Volume of Detention Field - Total Pipe Volume             | 0 cft             |
| Percent Voids of Aggregate:                               | 30 %              |
| Void Volume:  | 3,278 cft         |
| *Infiltration Rate of Site Soils:                         | 0 in/hr           |
| Infiltration Design Rate (1/2 or Infiltration Rate):      | 0 in/hr           |
| Infiltration Volume:                                      | 0 cft             |
| = Bottom Area x Infiltration Design Rate x 6 hr x (1/12)  | 0 cft             |
| Total Detention Volume:                                   | 13,935 cft        |
| Total Pipe Volume + Void Volume                           | 13,935 cft        |
| Total Detention Volume per L.F. of Pipe:                  | 16.43 cft         |
| <b>Total Storage (Bio-Swales &amp; Detention System):</b> | <b>13,935 cft</b> |

**Underground Detention System-(AREA B)**

|   |                  |
|---|------------------|
| Perf. Pipe Diameter:                                      | 48 in            |
| Perf. Pipe Volume per Linear Foot:                        | 12,566 cft       |
| Total Pipe Length:  | 284 ft           |
| Total Pipe Volume:  | 3,569 cft        |
| Length of Detention Field:                                | 72 ft            |
| Width of Detention Field:                                 | 26 ft            |
| Area of Detention Field:                                  | 1872 sft         |
| Height of Detention Field:                                | 4 ft             |
| Volume of Detention Field:                                | 7,488 cft        |
| Volume of Aggregate:                                      | 3,919 cft        |
| Volume of Detention Field - Total Pipe Volume             | 0 cft            |
| Percent Voids of Aggregate:                               | 30 %             |
| Void Volume:  | 1,176 cft        |
| *Infiltration Rate of Site Soils:                         | 0 in/hr          |
| Infiltration Design Rate (1/2 or Infiltration Rate):      | 0 in/hr          |
| Infiltration Volume:                                      | 0 cft            |
| = Bottom Area x Infiltration Design Rate x 6 hr x (1/12)  | 0 cft            |
| Total Detention Volume:                                   | 4,745 cft        |
| Total Pipe Volume + Void Volume                           | 4,745 cft        |
| Total Detention Volume per L.F. of Pipe:                  | 16.71 cft        |
| <b>Total Storage (Bio-Swales &amp; Detention System):</b> | <b>4,745 cft</b> |



**LEGEND**

|                  |                  |                     |
|------------------|------------------|---------------------|
| ● IRON FOUND     | ○ BRASS PLUG SET | ○ SEC. CORNER FOUND |
| ○ IRON SET       | ○ MONUMENT FOUND | ○ RECORDED          |
| ○ NAIL FOUND     | ○ MONUMENT SET   | ○ MEASURED          |
| ○ NAIL & CAP SET |                  | ○ CALCULATED        |

**EXISTING**

- OH-ELEC- W-C: ELEC. PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE
- UG-CATV-: UNDERGROUND CABLE TV, CITY PEDESTAL
- UG-PHONE-: TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
- UG-ELEC-: ELECTRIC U.G. CABLE, MANHOLE, METER & MANHOLE
- UG-INDICATOR-: GAS MAIN VALVE & GAS LINE MARKER
- WATERMAN-: WATERMAN, HYD. GATE VALVE, TAPPING SLAVE & VALVE
- SANITARY-: SANITARY SEWER, CLEANOUT & MANHOLE
- STORM-: STORM SEWER, CLEANOUT & MANHOLE
- COMBINED-: COMBINED SEWER & MANHOLE
- SQUARE-: SQUARE ROAD & BEDDING CATCH BASIN, YARD DRAIN
- POST-: POST INDICATOR VALVE
- WATER-: WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF
- MALBOX-: MALBOX, TRANSFORMER, IRRIGATION CONTROL VALVE
- UNIDENTIFIED-: UNIDENTIFIED STRUCTURE
- SPOT-: SPOT ELEVATION
- CONTOUR-: CONTOUR LINE
- FINISH-: FINISH
- RAIL-: GROUND RAIL
- STREET-: STREET LIGHT
- SON-: SON
- CONC-: CONCRETE
- ASPH-: ASPHALT
- GRAVEL-: GRAVEL SHOULDER
- WETLAND-: WETLAND

**PROPOSED**

- 18" CP ST-: 18" CONCRETE PIPE
- 12" CP ST-: 12" CONCRETE PIPE
- 8" CP ST-: 8" CONCRETE PIPE
- 6" CP ST-: 6" CONCRETE PIPE
- 4" CP ST-: 4" CONCRETE PIPE
- 3" CP ST-: 3" CONCRETE PIPE
- 2" CP ST-: 2" CONCRETE PIPE
- 1.5" CP ST-: 1.5" CONCRETE PIPE
- 1" CP ST-: 1" CONCRETE PIPE
- 0.75" CP ST-: 0.75" CONCRETE PIPE
- 0.5" CP ST-: 0.5" CONCRETE PIPE
- 0.25" CP ST-: 0.25" CONCRETE PIPE
- 18" NCP ST-: 18" NON-CONCRETE PIPE
- 12" NCP ST-: 12" NON-CONCRETE PIPE
- 8" NCP ST-: 8" NON-CONCRETE PIPE
- 6" NCP ST-: 6" NON-CONCRETE PIPE
- 4" NCP ST-: 4" NON-CONCRETE PIPE
- 3" NCP ST-: 3" NON-CONCRETE PIPE
- 2" NCP ST-: 2" NON-CONCRETE PIPE
- 1.5" NCP ST-: 1.5" NON-CONCRETE PIPE
- 1" NCP ST-: 1" NON-CONCRETE PIPE
- 0.75" NCP ST-: 0.75" NON-CONCRETE PIPE
- 0.5" NCP ST-: 0.5" NON-CONCRETE PIPE
- 0.25" NCP ST-: 0.25" NON-CONCRETE PIPE
- 18" SAN-: 18" SANITARY SEWER
- 12" SAN-: 12" SANITARY SEWER
- 8" SAN-: 8" SANITARY SEWER
- 6" SAN-: 6" SANITARY SEWER
- 4" SAN-: 4" SANITARY SEWER
- 3" SAN-: 3" SANITARY SEWER
- 2" SAN-: 2" SANITARY SEWER
- 1.5" SAN-: 1.5" SANITARY SEWER
- 1" SAN-: 1" SANITARY SEWER
- 0.75" SAN-: 0.75" SANITARY SEWER
- 0.5" SAN-: 0.5" SANITARY SEWER
- 0.25" SAN-: 0.25" SANITARY SEWER
- 18" ST-: 18" STORM SEWER
- 12" ST-: 12" STORM SEWER
- 8" ST-: 8" STORM SEWER
- 6" ST-: 6" STORM SEWER
- 4" ST-: 4" STORM SEWER
- 3" ST-: 3" STORM SEWER
- 2" ST-: 2" STORM SEWER
- 1.5" ST-: 1.5" STORM SEWER
- 1" ST-: 1" STORM SEWER
- 0.75" ST-: 0.75" STORM SEWER
- 0.5" ST-: 0.5" STORM SEWER
- 0.25" ST-: 0.25" STORM SEWER
- 18" S&W-: 18" S&W
- 12" S&W-: 12" S&W
- 8" S&W-: 8" S&W
- 6" S&W-: 6" S&W
- 4" S&W-: 4" S&W
- 3" S&W-: 3" S&W
- 2" S&W-: 2" S&W
- 1.5" S&W-: 1.5" S&W
- 1" S&W-: 1" S&W
- 0.75" S&W-: 0.75" S&W
- 0.5" S&W-: 0.5" S&W
- 0.25" S&W-: 0.25" S&W
- 18" UG-: 18" UNDERGROUND DETENTION
- 12" UG-: 12" UNDERGROUND DETENTION
- 8" UG-: 8" UNDERGROUND DETENTION
- 6" UG-: 6" UNDERGROUND DETENTION
- 4" UG-: 4" UNDERGROUND DETENTION
- 3" UG-: 3" UNDERGROUND DETENTION
- 2" UG-: 2" UNDERGROUND DETENTION
- 1.5" UG-: 1.5" UNDERGROUND DETENTION
- 1" UG-: 1" UNDERGROUND DETENTION
- 0.75" UG-: 0.75" UNDERGROUND DETENTION
- 0.5" UG-: 0.5" UNDERGROUND DETENTION
- 0.25" UG-: 0.25" UNDERGROUND DETENTION
- 18" MH-: 18" MANHOLE
- 12" MH-: 12" MANHOLE
- 8" MH-: 8" MANHOLE
- 6" MH-: 6" MANHOLE
- 4" MH-: 4" MANHOLE
- 3" MH-: 3" MANHOLE
- 2" MH-: 2" MANHOLE
- 1.5" MH-: 1.5" MANHOLE
- 1" MH-: 1" MANHOLE
- 0.75" MH-: 0.75" MANHOLE
- 0.5" MH-: 0.5" MANHOLE
- 0.25" MH-: 0.25" MANHOLE
- 18" CB-: 18" CHECK BASIN
- 12" CB-: 12" CHECK BASIN
- 8" CB-: 8" CHECK BASIN
- 6" CB-: 6" CHECK BASIN
- 4" CB-: 4" CHECK BASIN
- 3" CB-: 3" CHECK BASIN
- 2" CB-: 2" CHECK BASIN
- 1.5" CB-: 1.5" CHECK BASIN
- 1" CB-: 1" CHECK BASIN
- 0.75" CB-: 0.75" CHECK BASIN
- 0.5" CB-: 0.5" CHECK BASIN
- 0.25" CB-: 0.25" CHECK BASIN
- 18" DRAINAGE-: 18" DRAINAGE AREA
- 12" DRAINAGE-: 12" DRAINAGE AREA
- 8" DRAINAGE-: 8" DRAINAGE AREA
- 6" DRAINAGE-: 6" DRAINAGE AREA
- 4" DRAINAGE-: 4" DRAINAGE AREA
- 3" DRAINAGE-: 3" DRAINAGE AREA
- 2" DRAINAGE-: 2" DRAINAGE AREA
- 1.5" DRAINAGE-: 1.5" DRAINAGE AREA
- 1" DRAINAGE-: 1" DRAINAGE AREA
- 0.75" DRAINAGE-: 0.75" DRAINAGE AREA
- 0.5" DRAINAGE-: 0.5" DRAINAGE AREA
- 0.25" DRAINAGE-: 0.25" DRAINAGE AREA

**REFERENCE DRAWINGS**  
FEMA F.I.R.M. NO. 26161C0406E, DATED APRIL 3, 2012  
OAK PARK SUBDIVISION PLAN

**FLOODPLAIN NOTE:**  
BY GRAPHICAL PLOTTING, SITE IS WITHIN ZONE 'X', AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN PER FLOOD INSURANCE RATE MAP NUMBER 26161C0406E, DATED APRIL 3, 2012.

**NOTE:**  
REFER TO WQWRC CALCULATIONS SHEETS 9 AND 10 FOR REQUIRED STORAGE VOLUME CALCULATIONS.

**STORMWATER DRAINAGE NARRATIVE:**  
THE EXISTING DRAINAGE PATTERNS FROM THE SITE TO BE DEVELOPED CONSIST PRIMARILY OF OVERLAND RUNOFF TO THE ADJACENT ROADS. THE INTERIOR ON-SITE IMPERVIOUS AREA IS CONVEYED THROUGH STORM SEWER THAT OUTLETS TO THE ADJACENT ROADS.  
THE PROPOSED DEVELOPMENT COLLECTS ALL OF THE STORM RUNOFF FROM THE PROPOSED DEVELOPED IMPERVIOUS AREAS AND ROUTES IT VIA PROPOSED ENCLOSED STORM SEWER TO AN UNDERGROUND DETENTION STORAGE SYSTEM DESIGNED PER THE RULES OF THE WASHTENAW COUNTY WATER RESOURCES COMMISSIONER. SOME PORTIONS OF THE LANDSCAPED AREAS WILL REMAIN UNDETAINED FLOWING TO THE ADJACENT ROADS. THE UNDERGROUND DETENTION STORAGE DISCHARGES TO THE EXISTING STORM SEWER IN PACKARD ROAD.

**REVISIONS**

| NO. | DATE | DESCRIPTION                               |
|-----|------|---|
| 1.  |      | PER TOWNSHIP PLANNING CONSULTANT COMMENTS |



**CAUTION!**  
THE LOCATION AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.  
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f: 248.689.1044  
www.peainc.com

**NAJOR COMPANIES**  
600 N. OLD WOODWARD, SUITE 100  
BIRMINGHAM, MICHIGAN 35209

**STORMWATER MANAGEMENT PLAN**  
**NAJOR PITTSFIELD**  
PART OF THE SOUTHWEST 1/4 OF SECTION 1, T3S, R1E  
PITTSFIELD TOWNSHIP, WASHTENAW COUNTY, MICHIGAN

DES. T.J.L. DN. SUR. J.W.M.H. P.M. J.P.B.  
S:\PROJECTS\2017\2017228\DWG\SITE PLANS\VC-10 (FINAL)-17228.dwg

ORIGINAL ISSUE DATE:  
OCTOBER 24, 2019

PEA JOB NO. 2017-228

SCALE: 1" = 20'

DRAWING NUMBER:  
**8**

**STORM SEWER SYSTEM DESIGN**

$I = \frac{B(T+D)^E}{C}$   
C = varies  
T = 20 (min.)  
Pipe "n" Value = 0.013

| FROM STR | TO STR | AREA (A) (Acres) | COEF. C | A x C | TOTAL AREA (AxC) (Acres) | TOTAL TIME t (min.) | INT. I (in/hr) | FLOW Q (cfs) | PIPE CAP. (cfs) | PIPE DIA. (in.) | PIPE LENGTH (ft.) | PIPE SLOPE (%) | MIN HG PER "Q" | VEL. FULL (ft/sec) | TIME FLOW (min.) | H.G.L. ELEV. |             | RIM ELEV. |             | INVERT ELEV. |             | PIPE COVER |             | HGL COVER |             |      |
|----------|--------|------------------|---------|-------|--------------------------|---------------------|----------------|--------------|-----------------|-----------------|-------------------|----------------|----------------|--------------------|------------------|--------------|-------------|-----------|-------------|--------------|-------------|------------|-------------|-----------|-------------|------|
|          |        |                  |         |       |                          |                     |                |              |                 |                 |                   |                |                |                    |                  | UP STREAM    | DOWN STREAM | UP STREAM | DOWN STREAM | UP STREAM    | DOWN STREAM | UP STREAM  | DOWN STREAM | UP STREAM | DOWN STREAM |      |
| 3        | 2      | 0.19             | 0.76    | 0.15  | 0.15                     | 20.00               | 3.89           | 0.57         | 2.34            | 12              | 50                | 0.43           | 0.03%          | 3.0                | 0.3              | 831.03       | 830.82      | 834.50    | 835.41      | 830.23       | 830.02      | 3.10       | 4.23        | 3.47      | 4.59        |      |
| 2        | 1      | 0.11             | 0.95    | 0.11  | 0.25                     | 20.30               | 3.86           | 0.98         | 2.34            | 12              | 78                | 0.43           | 0.08%          | 3.0                | 0.4              | 830.82       | 830.48      | 835.41    | 836.10      | 830.02       | 829.68      | 4.23       | 5.25        | 4.59      | 5.61        |      |
| 1        | UG5    | 0.00             | 0.00    | 0.00  | 0.25                     | 20.70               | 3.83           | 0.98         | 2.34            | 12              | 19                | 0.43           | 0.08%          | 3.0                | 0.1              | 830.48       | 830.40      | 836.10    | 835.80      | 829.68       | 829.60      | 5.25       | 5.03        | 5.61      | 5.40        |      |
| 4        | UG1    | 0.31             | 0.79    | 0.25  | 0.31                     | 20.00               | 3.89           | 0.97         | 2.34            | 12              | 6                 | 0.43           | 0.07%          | 3.0                | 0.0              | 830.83       | 830.80      | 834.30    | 834.57      | 830.03       | 830.00      | 3.11       | 3.40        | 3.47      | 3.77        |      |
| 5        | UG4    | 0.17             | 0.79    | 0.13  | 0.13                     | 20.00               | 3.89           | 0.52         | 2.34            | 12              | 6                 | 0.43           | 0.02%          | 3.0                | 0.0              | 831.32       | 831.30      | 834.70    | 834.75      | 830.52       | 830.50      | 3.01       | 3.08        | 3.38      | 3.45        |      |
| UG6      | 7      | 0.95             | 0.85    | 0.80  | 0.80                     | 0.95                | 20.00          | 3.89         | 3.12            | 4.09            | 15                | 19             | 0.40           | 0.23%              | 3.3              | 0.1          | 828.25      | 829.17    | 835.75      | 836.08       | 828.25      | 828.17     | 6.07        | 6.47      | 6.50        | 6.91 |
| 7        | 6      | 0.00             | 0.00    | 0.00  | 0.80                     | 20.10               | 3.88           | 3.12         | 4.09            | 15              | 85                | 0.40           | 0.23%          | 3.3                | 0.4              | 827.36       | 827.02      | 836.08    | 835.70      | 828.36       | 828.02      | 8.28       | 8.24        | 8.72      | 8.68        |      |

**LEGAL DESCRIPTION**  
(Per Washtenaw County)

PARCEL ID L-12-01-354-015  
Land in the Township of Pittsfield, Washtenaw County, Michigan, described as follows:

SOLD SID - L-12-145-002-00 Pl 47-1, 2, 31, 32 LOTS 1, 2, 31, 32 BHK 1 SUBDIVISION OF LOTS 1 TO 73 INCLUSIVE EXCEPT LOTS 34 & 36 AND LOTS 109 TO 111 INCLUSIVE OF OAK PARK.

**LEGAL**  
Land in Block follows:  
Pl 47-1  
IN BLOCK 7  
36 & LOTS 109 TO 111 INCLUSIVE OF OAK PARK.

**NOT FOR CONSTRUCTION**

S:\PROJECTS\2017\2017228\DWG\TOPBASE-17228.DWG  
S:\PROJECTS\2017\2017228\DWG\SITE PLANS\VC-BASE-17228.DWG  
S:\PROJECTS\2017\2017228\DWG\SITE PLANS\VC-TBLK-17228.DWG

Section IV Computational Requirements For Stormwater Management Systems



Part E. STANDARD METHOD RUNOFF VOLUME WORK SHEETS

W1 Determining Post-Development Cover Types, Areas, Curve Numbers, and Runoff Coefficients

Total Site Area = 0.95 ac  
Total Site Area Excluding "Self-Crediting" BMPs = 0.95 ac<sup>a</sup>

| Cover Type | Soil Type | Area (ft <sup>2</sup> ) | Area(ac) | Runoff Coefficient (C) | (C)(Area) |
|------------|-----------|-------------------------|----------|------------------------|-----------|
| Lawn       | D         | 10,843                  | 0.25     | 0.50                   | 5422      |
| Pavt./Roof | N/A       | 30,438                  | 0.70     | 0.95                   | 28,916    |

Total - Σ(C)(Area) = 34,338  
Area Total - Σ ac or Σ sf = 41,281  
Weighted C - Σ(C)(Area)/Σ ac or Σ sf = 0.83

| Pervious Cover Type | Soil Type | Area (ft <sup>2</sup> ) | Area(ac) | Curve Number | (CN)(Area) |
|---------------------|-----------|-------------------------|----------|--------------|------------|
| Lawn                | D         | 10,843                  | 0.25     | 84           | 910,812    |

Total - Σ(CN)(Area) = 910,812  
Area Total - Σ ac or Σ sf = 10,843  
Weighted CN - Σ(CN)(Area)/Σ ac or Σ sf = 84

| Impervious Cover Type | Soil Type | Area (ft <sup>2</sup> ) | Area(ac) | Curve Number | (CN)(Area) |
|-----------------------|-----------|-------------------------|----------|--------------|------------|
| Pavt./Roof            | N/A       | 30,438                  | 0.70     | 98           | 2,982,924  |

Total - Σ(CN)(Area) = 2,982,924  
Area Total - Σ ac or Σ sf = 30,438  
Weighted CN - Σ(CN)(Area)/Σ ac or Σ sf = 98

<sup>a</sup> Use this area for the remainder of the runoff calculations  
<sup>b</sup> Required for first flush runoff calculations  
<sup>c</sup> Required for bankfull and 100-year runoff calculations

Section IV Computational Requirements For Stormwater Management Systems

W2 Standard Method Runoff Volume Calculations

First Flush Runoff Calculations (V<sub>ff</sub>)

A.

$$V_{ff} = (1") \left( \frac{1"}{12"} \right) \left( \frac{43560 ft^2}{1 ac} \right) AC$$

$$V_{ff} = (1") \left( \frac{1"}{12"} \right) \left( \frac{43560 ft^2}{1 ac} \right) (0.95) (0.83)$$

$$V_{ff} = 2881 ft^3$$

A = Total Site Areas (ac) excluding "Self-Crediting" BMPs from Worksheet 1  
C = Weighted Runoff Coefficient from Worksheet 1

Section IV Computational Requirements For Stormwater Management Systems

W3 Standard Method Runoff Volume Calculations

Pre-development Bankfull Runoff Calculations (V<sub>sf,pre</sub>)

A. 2 year/24 hour storm event P = 2.35in

B. The pre-development land cover will be **Good Cover Woods or Meadow**. Determine the associated soil hydrologic group for the entire site and choose the curve number. CN = 79

C.  $S = \frac{1000}{CN} - 10$  S =  $\frac{1000}{79} - 10$  S = 2.66 in

D.  $Q = \frac{(P-0.2S)^2}{(P+0.8S)}$   $Q = \frac{(2.35-(0.2)(2.66))^2}{(2.35+(0.8)(2.66))}$  Q = 0.74 in

E. Total Site Area (sf) excluding "Self-Crediting" BMPs Area = 41,281 sf

F.  $V_{sf,pre} = Q \left( \frac{1}{12} \right) Area$   $V_{sf,pre} = (0.74) \left( \frac{1}{12} \right) (41,281)$   $V_{sf,pre} = 2541 ft^3$

Section IV Computational Requirements For Stormwater Management Systems

W4 Standard Method Runoff Volume Calculations

Pervious Cover Post-Development Bankfull Runoff Calculations (V<sub>sf,post</sub>)

A. 2 year/24 hour storm event P = 2.35in

B. Pervious Cover CN From Worksheet 1 CN = 84

C.  $S = \frac{1000}{CN} - 10$  S =  $\frac{1000}{84} - 10$  S = 1.90 in

D.  $Q = \frac{(P-0.2S)^2}{(P+0.8S)}$   $Q = \frac{(2.35-(0.2)(1.90))^2}{(2.35+(0.8)(1.90))}$  Q = 1.00 in

E. Pervious Cover Area from Worksheet 1 Area = 10,843 sf

F.  $V_{sf,post} = Q \left( \frac{1}{12} \right) Area$   $V_{sf,post} = (1.00) \left( \frac{1}{12} \right) (10,843)$   $V_{sf,post} = 904 ft^3$

Section IV Computational Requirements For Stormwater Management Systems



W5 Standard Method Runoff Volume Calculations

Impervious Cover Post-Development Bankfull Runoff Calculations (V<sub>sf,imp,post</sub>)

A. 2 year/24 hour storm event P = 2.35in

B. Impervious Cover CN From Worksheet 1 CN = 98

C.  $S = \frac{1000}{CN} - 10$  S =  $\frac{1000}{98} - 10$  S = 0.20 in

D.  $Q = \frac{(P-0.2S)^2}{(P+0.8S)}$   $Q = \frac{(2.35-(0.2)(0.2))^2}{(2.35+(0.8)(0.2))}$  Q = 2.12 in

E. Impervious Cover Area from Worksheet 1 Area = 30,438 sf

F.  $V_{sf,imp,post} = Q \left( \frac{1}{12} \right) Area$   $V_{sf,imp,post} = (2.12) \left( \frac{1}{12} \right) (30,438)$   $V_{sf,imp,post} = 5382 ft^3$

Section IV Computational Requirements For Stormwater Management Systems

W6 Standard Method Runoff Volume Calculations

Pervious Cover Post-Development 100-year Storm Runoff Calculations (V<sub>100,post</sub>)

A. 100-year Storm Event P = 5.11in

B. Pervious Cover CN From Worksheet 1 CN = 84

C.  $S = \frac{1000}{CN} - 10$  S =  $\frac{1000}{84} - 10$  S = 1.90 in

D.  $Q_{100,post} = \frac{(P-0.2S)^2}{(P+0.8S)}$   $Q_{100,post} = \frac{(5.11-(0.2)(1.90))^2}{(5.11+(0.8)(1.90))}$   $Q_{100,post} = 3.37 in$

E. Pervious Cover Area from Worksheet 1 Area = 10,843 sf

F.  $V_{100,post} = Q_{100,post} \left( \frac{1}{12} \right) Area$   $V_{100,post} = (3.37) \left( \frac{1}{12} \right) (10,843)$   $V_{100,post} = 3046 ft^3$

Section IV Computational Requirements For Stormwater Management Systems



W7 Standard Method Runoff Volume Calculations

Impervious Cover Post-Development 100-year Storm Runoff Calculations (V<sub>100,imp,post</sub>)

A. 100-year Storm Event P = 5.11in

B. Impervious Cover CN From Worksheet 1 CN = 98

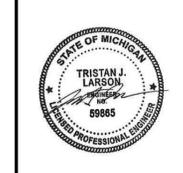
C.  $S = \frac{1000}{CN} - 10$  S =  $\frac{1000}{98} - 10$  S = 0.20 in

D.  $Q_{100,imp} = \frac{(P-0.2S)^2}{(P+0.8S)}$   $Q_{100,imp} = \frac{(5.11-(0.2)(0.2))^2}{(5.11+(0.8)(0.2))}$   $Q_{100,imp} = 4.87 in$

E. Impervious Cover Area from Worksheet 1 Area = 30,438 sf

F.  $V_{100,imp,post} = Q_{100,imp} \left( \frac{1}{12} \right) Area$   $V_{100,imp,post} = (4.87) \left( \frac{1}{12} \right) (30,438)$   $V_{100,imp,post} = 12,360 ft^3$

| NO. | DATE | DESCRIPTION |
|-----|------|-------------|
| 1.  |      |             |



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BIRMINGHAM, MICHIGAN 45209

WCWRC CALCULATIONS  
NAJOR PITTSFIELD  
PART OF THE SOUTHWEST 1/4 OF SECTION 17, T3S, R9E  
PITTSFIELD TOWNSHIP, WASHINGTON COUNTY, MICHIGAN

DES. TJL DN. VBC SUR. JWMH JPB  
S:\PROJECTS\PART-228 MAJOR PITTSFIELD-WCWRCSITE PLANS-V0-03 WCWR-17228.dwg

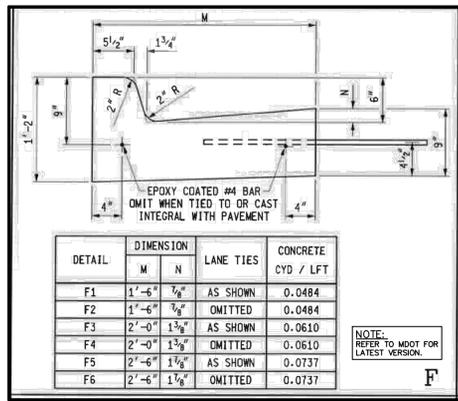
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OCTOBER 24, 2019

PEA JOB NO. 2017-228

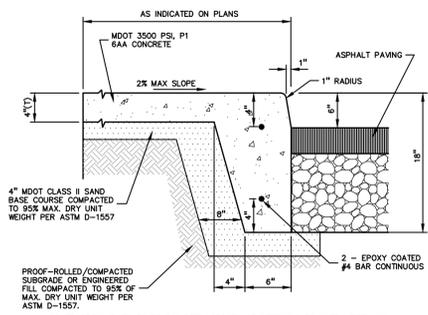
SCALE: N.T.S.

DRAWING NUMBER:  
9

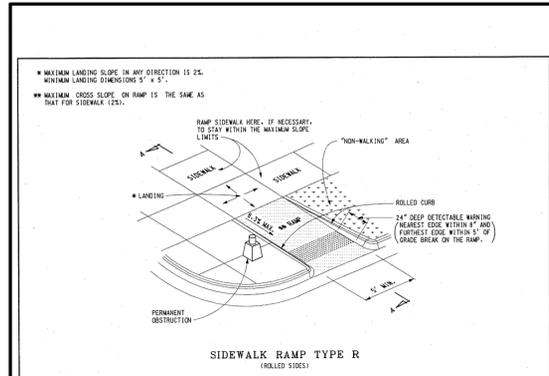




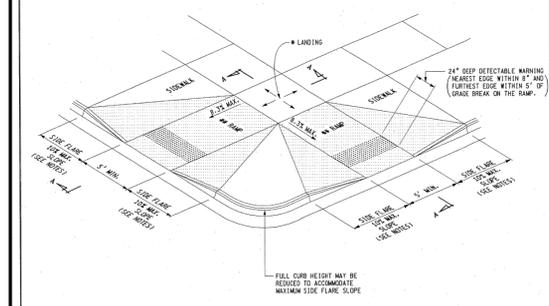
**24 INCH MDOT F4 CURB**  
NOT TO SCALE



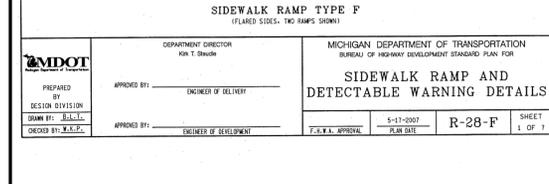
**INTEGRAL CURB AND SIDEWALK**  
NOT TO SCALE



**SIDEWALK RAMP TYPE R**  
(ROLLED SIDES)

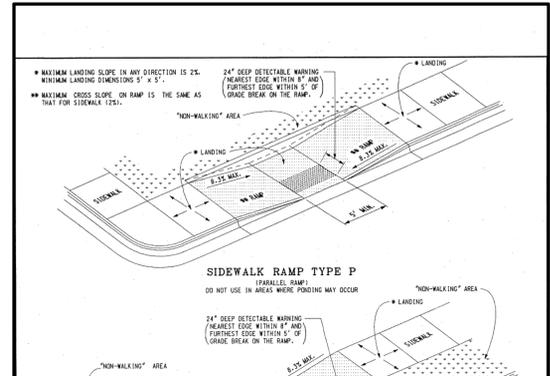


**SIDEWALK RAMP TYPE P**  
(PARALLEL RAMP)

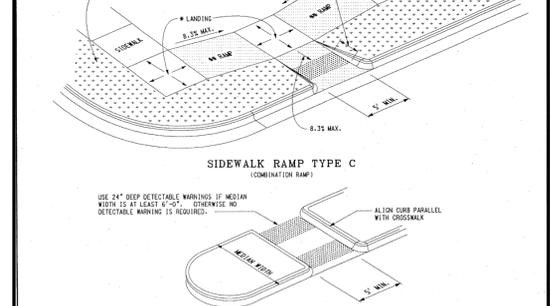


**SIDEWALK RAMP TYPE F**  
(FLARED SIDES, TWO RAMP SHOWN)

DEPARTMENT DIRECTOR: Kim T. Shook  
MICHIGAN DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR  
**SIDEWALK RAMP AND DETECTABLE WARNING DETAILS**  
PREPARED BY: SECTION 011310N  
DRAWN BY: J.L.L./J.L.L.  
CHECKED BY: J.L.L./J.L.L.  
APPROVED BY: ENGINEER OF DISTRICT  
APPROVED BY: ENGINEER OF DEVELOPMENT  
M.D.O.T. APPROVAL: 5-11-2007  
PLAN DATE: 5-11-2007  
R-28-F  
SHEET 1 OF 7

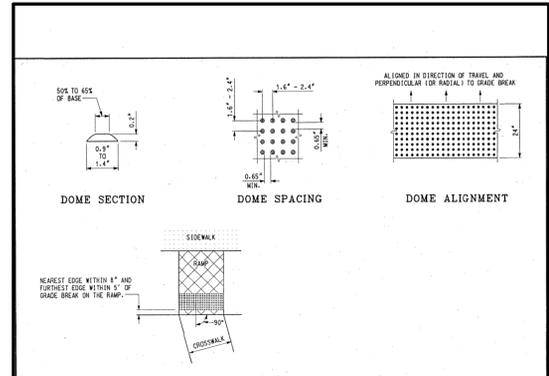


**SIDEWALK RAMP TYPE C**  
(COMBINATION RAMP)



**SIDEWALK RAMP TYPE M**  
(MIDIAN ISLAND)

DEPARTMENT DIRECTOR: Kim T. Shook  
MICHIGAN DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR  
**SIDEWALK RAMP AND DETECTABLE WARNING DETAILS**  
PREPARED BY: SECTION 011310N  
DRAWN BY: J.L.L./J.L.L.  
CHECKED BY: J.L.L./J.L.L.  
APPROVED BY: ENGINEER OF DISTRICT  
APPROVED BY: ENGINEER OF DEVELOPMENT  
M.D.O.T. APPROVAL: 5-11-2007  
PLAN DATE: 5-11-2007  
R-28-F  
SHEET 3 OF 7



**DETECTABLE WARNING DETAILS**

NOTES:  
DETAILS SPECIFIED ON THIS PLAN APPLY TO ALL CONSTRUCTION, RECONSTRUCTION OR ALTERATION OF STREETS, CURBS, OR SIDEWALKS BY ALL PUBLIC AGENCIES AND BY ALL PRIVATE ORGANIZATIONS CONSTRUCTING FACILITIES FOR PUBLIC USE.  
SIDEWALK RAMP ARE TO BE LOCATED AS SPECIFIED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.  
RAMP SHALL BE PROVIDED AT ALL CORNERS OF AN INTERSECTION WHERE THERE IS EXISTING OR PROPOSED SIDEWALK AND CURB. RAMP SHALL ALSO BE PROVIDED AT WALK LOCATIONS IN MID-CROSSING IN THE VICINITY OF HOSPITALS, MEDICAL CENTERS, AND LARGE ATHLETIC FACILITIES.  
SURFACE TEXTURE OF THE RAMP SHALL BE THAT OBTAINED BY A COURSE BROOKING THROUGH TO THE SLOPE OF RAMP.  
SIDEWALK SHALL BE RAMPED WHERE THE DRIVEWAY CURB IS EXTENDED ACROSS THE WALK.  
CURB SHALL BE TAKEN TO ASSURE A UNIFORM GRADE ON THE RAMP. FILL OF SAND AND SHORT GRADE CHANGES. WHERE CONDITIONS PERMIT, IT IS DESIRABLE THAT THE SLOPE OF THE RAMP BE IN ONLY ONE DIRECTION, PARALLEL TO THE DIRECTION OF TRAVEL.  
RAMP WIDTH SHALL BE INCREASED, IF NECESSARY, TO ACCOMMODATE SIDEWALK SHOW REMOVAL EQUIPMENT NORMALLY USED BY THE MUNICIPALITY.  
IF POSSIBLE, DRAINAGE STRUCTURES SHOULD NOT BE PLACED IN LINE WITH RAMP. EXCEPT WHERE EXISTING DRAINAGE STRUCTURES ARE BEING UTILIZED IN THE NEW CONSTRUCTION, LOCATION OF THE RAMP SHOULD TAKE PRECEDENCE OVER LOCATION OF DRAINAGE STRUCTURE.  
THE SLOPE OF THE GUTTER PAN SHALL BE TRANSMITTED TO A MAXIMUM OF 5% IN THE AREA OF THE CURB OUT OF THE SIDEWALK RAMP. MAINTAIN THE NORMAL GUTTER PAN SLOPE ACROSS THE DRAINAGE STRUCTURE INLETS.  
THE TOP OF THE JOINT FILLER FOR ALL RAMP TYPES SHALL BE FLUSH WITH THE ADJACENT CONCRETE.  
CROSSWALK AND STOP LINE MARKINGS, IF USED, SHALL BE SO LOCATED AS TO STOP TRAFFIC SHORT OF RAMP CROSSINGS. SPECIFIC DETAILS FOR MARKING APPLICATIONS ARE GIVEN IN THE "MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES".  
DETECTABLE WARNING SHALL EXTEND THE FULL WIDTH OF THE CURB RAMP. THEY SHALL BE LOCATED SO THAT THE NEAREST EDGE OF THE DETECTABLE WARNING IS WITHIN 8" AND THE FURTHEST EDGE WITHIN 5' OF THE GRADE BREAK ON THE RAMP.  
FLARED SIDES WITH A SLOPE OF 10% MAXIMUM, MEASURED ALONG THE CURB LINE, SHALL BE PROVIDED WHERE A COLLECTION PAN COVERS THE SIDEWALK RAMP. LANDED SIDES AND NOT INCLUDING WHERE THE EDGE OF A SIDEWALK RAMP IS PROTECTED BY LANDSCAPING OR OTHER MEASURES TO TRAVEL IF WHEELCHAIR USERS OR PEDESTRIANS CROSS THE EDGE OF THE SIDEWALK RAMP.  
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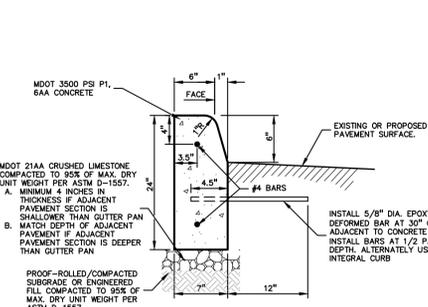
MICHIGAN DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR  
**SIDEWALK RAMP AND DETECTABLE WARNING DETAILS**  
M.D.O.T. APPROVAL: 5-11-2007  
PLAN DATE: 5-11-2007  
R-28-F  
SHEET 1 OF 7



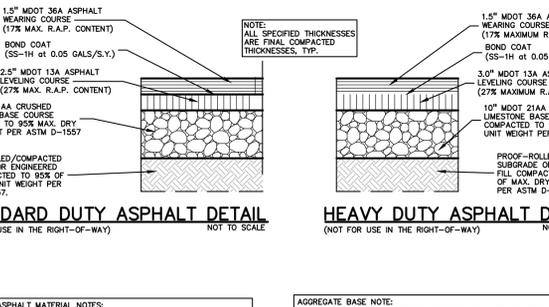
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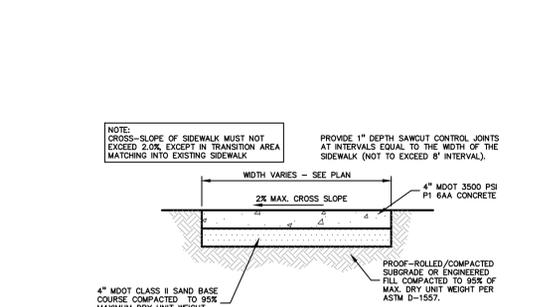


**CONCRETE STRAIGHT CURB**  
NOT TO SCALE

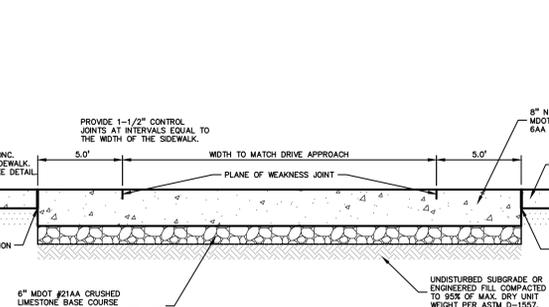


ASPHALT MATERIAL NOTES:  
HOT-MIX ASPHALT MIXTURES UTILIZING RECYCLED ASPHALT PAVEMENT (RAP) MUST MEET MDOT SPECIAL PROVISION 125(SPECIAL). THE BINDER GRADE FOR THIS WORK IS PG58-22. IF CRUSHED CONCRETE AGGREGATE BASE IS PROPOSED IN LIEU OF THE SPECIFIED CRUSHED LIMESTONE MATERIAL, PEA, INC. WILL REQUIRE A MINIMUM 25% INCREASE IN MOOT TIER 1 OR TIER 2 REQUIREMENTS (RAP CONTENT UP TO 27% MAXIMUM). TIER 3 MIXES ARE NOT ACCEPTABLE ON THIS PROJECT. AN ASPHALT MIX DESIGN FOR ALL SPECIFIED MIXES SHOULD BE FORWARDED TO PEA, INC. FOR REVIEW PRIOR TO CONSTRUCTION.

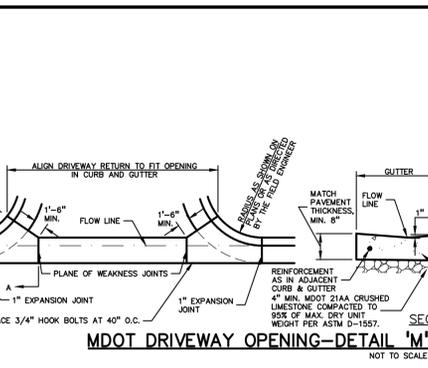
AGGREGATE BASE NOTE:  
THIS PAVEMENT SECTION DESIGN ASSUMES THE USE OF MDOT 21AA CRUSHED LIMESTONE BASE MATERIAL THAT MEETS THE REQUIREMENTS OF MDOT STANDARD SPECIFICATION SECTION 902 FOR AGGREGATES. IF CRUSHED CONCRETE AGGREGATE BASE IS PROPOSED IN LIEU OF THE SPECIFIED CRUSHED LIMESTONE MATERIAL, PEA, INC. WILL REQUIRE A MINIMUM 25% INCREASE IN MOOT TIER 1 OR TIER 2 REQUIREMENTS (RAP CONTENT UP TO 27% MAXIMUM). TIER 3 MIXES ARE NOT ACCEPTABLE ON THIS PROJECT. AN ASPHALT MIX DESIGN FOR ALL SPECIFIED MIXES SHOULD BE FORWARDED TO PEA, INC. FOR REVIEW PRIOR TO CONSTRUCTION.



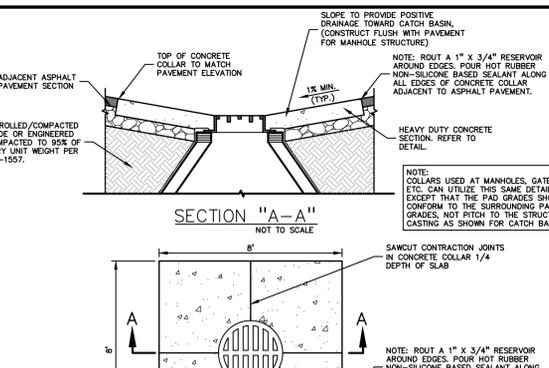
**CONCRETE SIDEWALK**  
NOT TO SCALE



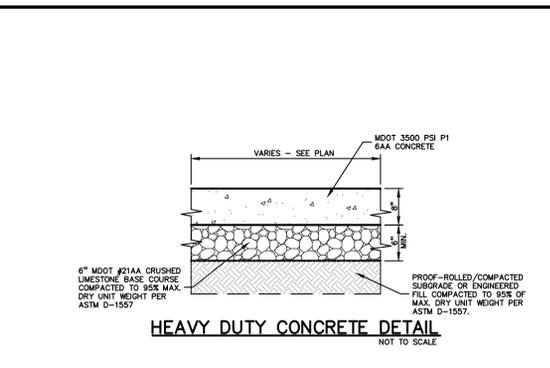
**THICKENED SIDEWALK AT DRIVE APPROACH DETAIL**  
NOT TO SCALE



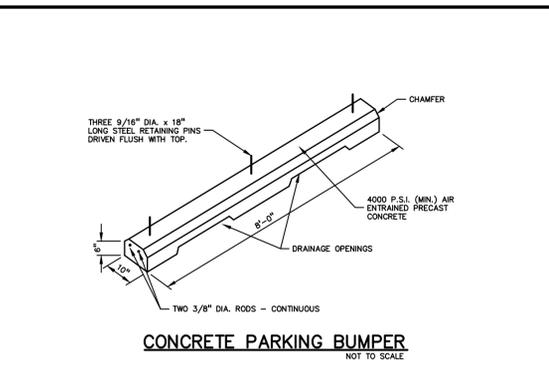
**MDOT DRIVEWAY OPENING-DETAIL 'M'**  
NOT TO SCALE



**CONCRETE COLLAR DETAIL**  
NOT TO SCALE



**HEAVY DUTY CONCRETE DETAIL**  
NOT TO SCALE



**CONCRETE PARKING BUMPER**  
NOT TO SCALE

**NOT FOR CONSTRUCTION**

ORIGINAL ISSUE DATE:  
OCTOBER 24, 2019  
PEA JOB NO. 2017-228  
SCALE: N.T.S.  
DRAWING NUMBER:  
**11**

PROJECTS\2017\2017228\DWG\TOP\BASE-17228.DWG  
PROJECTS\2017\2017228\DWG\SITE\PLANS\VA-BASE-17228.DWG  
PROJECTS\2017\2017228\DWG\SITE\PLANS\VA-TLBK-17228.DWG

| NO. | DATE     | DESCRIPTION                               | BY  | DATE |
|-----|----------|---|-----|------|
| 1   | 10/24/19 | PER TOWNSHIP PLANNING CONSULTANT COMMENTS | JPB |      |



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BIRMINGHAM, MICHIGAN 48009

**PRELIMINARY DETAILS**  
**NAJOR PITTSFIELD**  
PART OF THE SOUTHWEST 1/4 OF SECTION 17, T3S, R9E  
PITTSFIELD TOWNSHIP, WASHINGTON COUNTY, MICHIGAN

DES. T.J.L. DN. VBC SUR. JWMH | P.M. JPB  
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ORIGINAL ISSUE DATE:  
OCTOBER 24, 2019  
PEA JOB NO. 2017-228  
SCALE: N.T.S.  
DRAWING NUMBER:  
**11**

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REVISIONS

| NO. | DATE         | DESCRIPTION                               |
|-----|--------------|---|
| 1.  | JUL 11, 2017 | PER TOWNSHIP PLANNING CONSULTANT COMMENTS |

**REVISIONS**



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**PRELIMINARY DETAILS**  
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PART OF THE SOUTHWEST 1/4 OF SECTION 17, T3S, R9E  
PITTSFIELD TOWNSHIP, WASHINGTON COUNTY, MICHIGAN

DES. T.J.L. DN. VBC SUR. JWMH | P.M. JPB

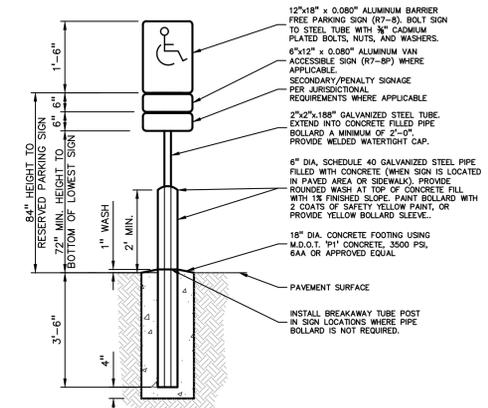
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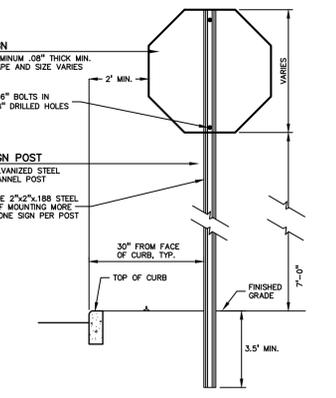
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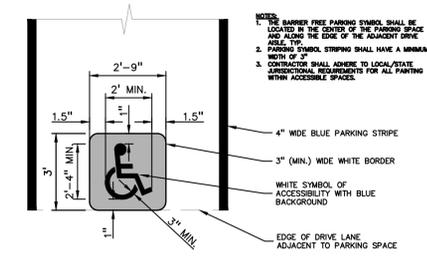


**BARRIER FREE SIGN AND POST DETAIL**  
NOT TO SCALE

- BARRIER FREE SIGN NOTES:**
- ONE SIGN IS REQUIRED AT EACH BARRIER FREE PARKING SPACE.
  - ALL SIGNS SHALL COMPLY WITH THE LATEST STANDARDS OF THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD).
  - WHEN TWO BARRIER FREE PARKING SPACES ARE ADJACENT AND FACING EACH OTHER, TWO SIGNS ARE REQUIRED, BUT CAN BE MOUNTED ON THE SAME POST.
  - SIGN POSTS SHALL BE 2" NOM. SQUARE 14-GAUGE GALVANIZED STEEL TUBE WITH 7/16" HOLES AT 1" CENTERS. POSTS SHALL TELESCOPE INSIDE ANCHOR POSTS A MINIMUM OF 12".
  - ANCHOR POSTS SHALL BE 2.25" NOM. SQUARE 12-GAUGE GALVANIZED STEEL POST, A MINIMUM OF 3 FEET LONG.
  - IF THESE NOTES AND DETAILS CONFLICT WITH LOCAL, CODES AND ORDINANCES, THE STRICTER REQUIREMENT SHOULD BE USED.
  - ALTERNATE MATERIALS MAY BE USED IF IN COMPLIANCE WITH A.D.A. GUIDELINES AND LOCAL REQUIREMENTS.



**SIGN AND POST INSTALLATION IN LANDSCAPED AREAS**  
NOT TO SCALE



**BARRIER FREE PARKING SYMBOL DETAIL (INTERNATIONAL SYMBOL OF ACCESSIBILITY)**  
NOT TO SCALE



**DO NOT ENTER SIGN DETAIL**  
NOT TO SCALE



**STOP SIGN DETAIL**  
NOT TO SCALE



**NO PARKING SIGN DETAIL**  
NOT TO SCALE



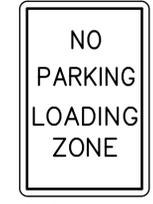
**BARRIER FREE PARKING SIGN DETAIL**  
NOT TO SCALE



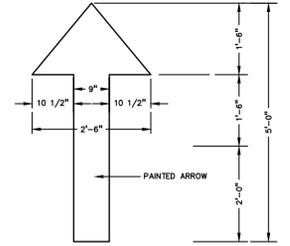
**VAN ACCESSIBLE PARKING SIGN DETAIL**  
NOT TO SCALE



**ONE WAY SIGN DETAIL**  
NOT TO SCALE



**NO PARKING LOADING ZONE SIGN DETAIL**  
NOT TO SCALE



**PAINTED DIRECTIONAL ARROW**  
NOT TO SCALE

**NOT FOR CONSTRUCTION**

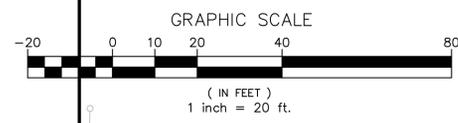
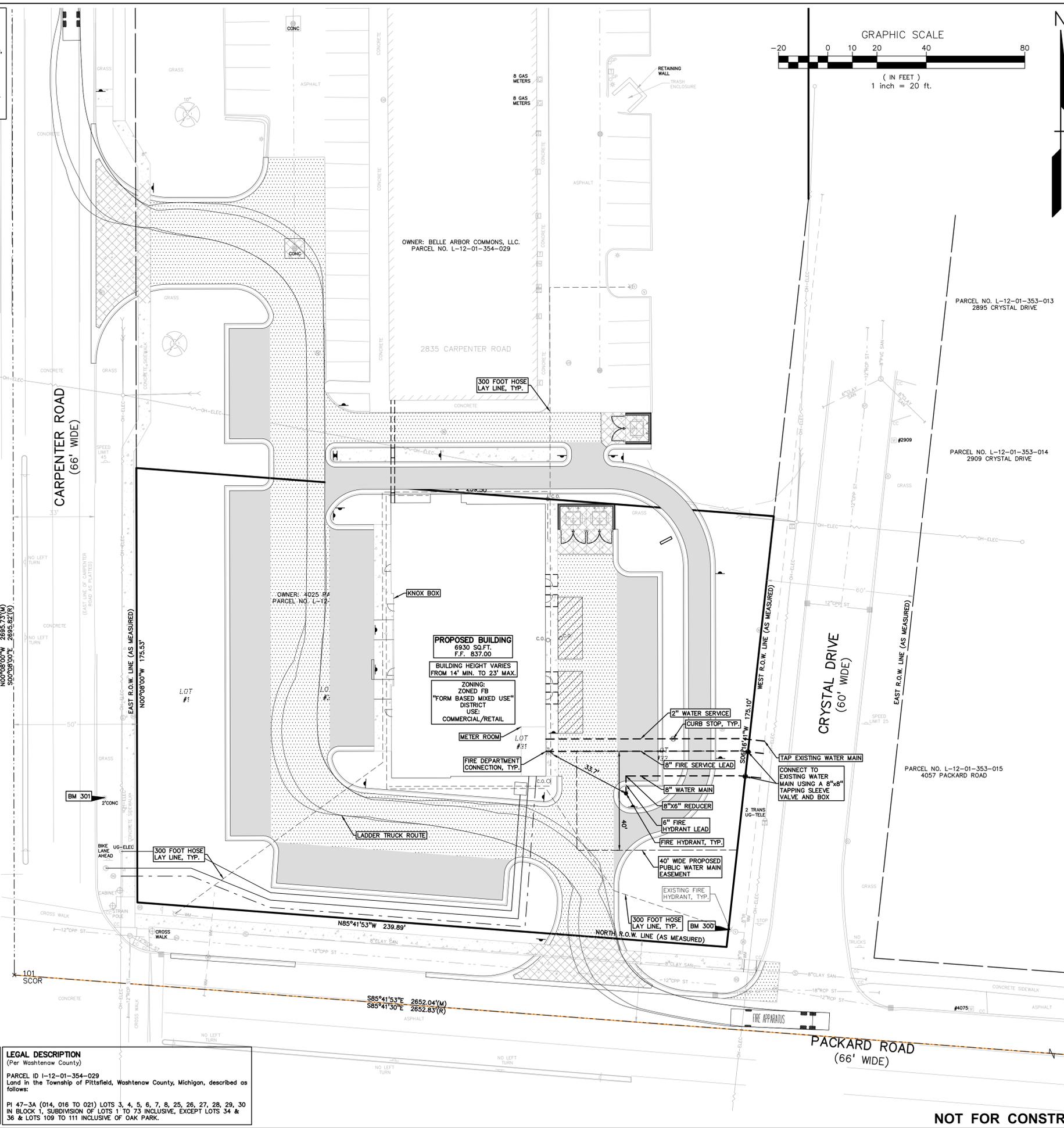
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**BENCHMARKS**  
(GPS DERIVED - NAVD88)

BM #300  
ARROW ON A HYDRANT AT THE NORTHWEST CORNER OF PACKARD ROAD AND CRYSTAL DRIVE, APPROX. 50'± NORTH OF THE CENTERLINE OF PACKARD ROAD, AND APPROX. 30'± WEST OF THE CENTERLINE OF CRYSTAL DRIVE.  
ELEV. - 838.20

BM #301  
NAIL AND TAG ON THE EAST SIDE OF A LIGHT POLE LOCATED AT THE NORTHEAST CORNER OF PACKARD ROAD AND CRYSTAL DRIVE, APPROX. 45'± EAST OF THE CENTERLINE OF CRYSTAL DRIVE AND APPROX. 90'± NORTH OF THE CENTERLINE OF PACKARD ROAD.  
ELEV. - 835.89

PARCEL NO. L-12-01-480-020  
2910 CARPENTER ROAD



**LEGEND**

|                  |                  |                     |
|------------------|------------------|---------------------|
| ● IRON FOUND     | ○ BRASS PLUG SET | ○ SEC. CORNER FOUND |
| ⊗ IRON SET       | ⊗ MONUMENT FOUND | ⊗ RECORDED          |
| ⊗ NAIL FOUND     | ⊗ MONUMENT SET   | ⊗ MEASURED          |
| ⊗ NAIL & CAP SET |                  | ○ CALCULATED        |

**EXISTING**

- OH-ELEC-4V-0 ELEC. PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE
- UG-CATV-12 UNDERGROUND CABLE TV, CATV PEDESTAL
- UG-PHONE-12 TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
- UG-ELEC-12 ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE
- UG-GAS-12 GAS MAIN, VALVE & GAS LINE MARKER
- WATERMAIN, HYD. GATE VALVE, TAPPING SLEEVE & VALVE
- SANITARY SEWER, CLEANOUT & MANHOLE
- STORM SEWER, CLEANOUT & MANHOLE
- COMBINED SEWER & MANHOLE
- SQUARE, ROUND & BEDDIE CATCH BASIN, YARD DRAIN
- POST INDICATOR VALVE
- WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF
- MALBOX, TRANSFORMER, IRRIGATION CONTROL VALVE
- UNIDENTIFIED STRUCTURE
- SPOT ELEVATION
- CONTOUR LINE
- FENCE
- GUARD RAIL
- STREET LIGHT
- SON

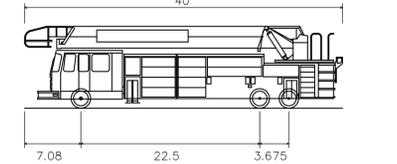
**PROPOSED**

- CONCRETE
- ASPH.
- GRAVEL SHOULDER
- WETLAND

**REFERENCE DRAWINGS**

FEMA F.I.R.M. NO. 26161C0406E, DATED APRIL 3, 2012  
OAK PARK SUBDIVISION PLAN

**FLOODPLAIN NOTE:**  
BY GRAPHICAL PLOTTING, SITE IS WITHIN ZONE 'X', AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN PER FLOOD INSURANCE RATE MAP NUMBER 26161C0406E, DATED APRIL 3, 2012.



**FIRE APPARATUS**  
Overall Length 40.000ft  
Overall Width 7.000ft  
Overall Body Height 10.257ft  
Min Body Ground Clearance 0.687ft  
Track Width 7.000ft  
Lock-to-lock time 6.00s  
Max Wheel Angle 40.00°

**LEGAL DESCRIPTION**  
(Per Washtenaw County)

PARCEL ID L-12-01-354-015  
Land in the Township of Pittsfield, Washtenaw County, Michigan, described as follows:

HOLD SID - L 12-145-002-00 PI 47-1, 2, 31, 32 LOTS 1, 2, 31, 32 BHK 1 SUBDIVISION OF LOTS 1 TO 73 INCLUSIVE EXCEPT LOTS 34 & 36 AND LOTS 109 TO 111 INCLUSIVE OF OAK PARK.

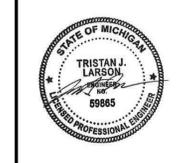
**LEGAL DESCRIPTION**  
(Per Washtenaw County)

PARCEL ID L-12-01-354-029  
Land in the Township of Pittsfield, Washtenaw County, Michigan, described as follows:

PI 47-3A (014, 016 TO 021) LOTS 3, 4, 5, 6, 7, 8, 25, 26, 27, 28, 29, 30 IN BLOCK 1, SUBDIVISION OF LOTS 1 TO 73 INCLUSIVE, EXCEPT LOTS 34 & 36 & LOTS 109 TO 111 INCLUSIVE OF OAK PARK.

**REVISIONS**

| NO. | DATE | DESCRIPTION |
|-----|------|-------------|
| 1   |      |             |
| 2   |      |             |
| 3   |      |             |
| 4   |      |             |
| 5   |      |             |
| 6   |      |             |
| 7   |      |             |
| 8   |      |             |
| 9   |      |             |
| 10  |      |             |



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CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERAL ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION SHALL BE COMPLETED WITHIN THE SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THE REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND CONSTRUCTION WORKERS SHALL HOLD DESIGN PROFESSIONAL LIABILITY AND HOLD DESIGN PROFESSIONAL LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

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**NAJOR COMPANIES**  
600 N. OLD WOODWARD, SUITE 100  
BIRMINGHAM, MICHIGAN 45209

**FIRE PROTECTION PLAN**  
**NAJOR PITTSFIELD**  
PART OF THE SOUTHWEST 1/4 OF SECTION 1, T3S. R1E  
PITTSFIELD TOWNSHIP, WASHTENAW COUNTY, MICHIGAN

DES. T.J.L. DN. VBC. SUR. J.W.M.H. P.M. J.P.B.

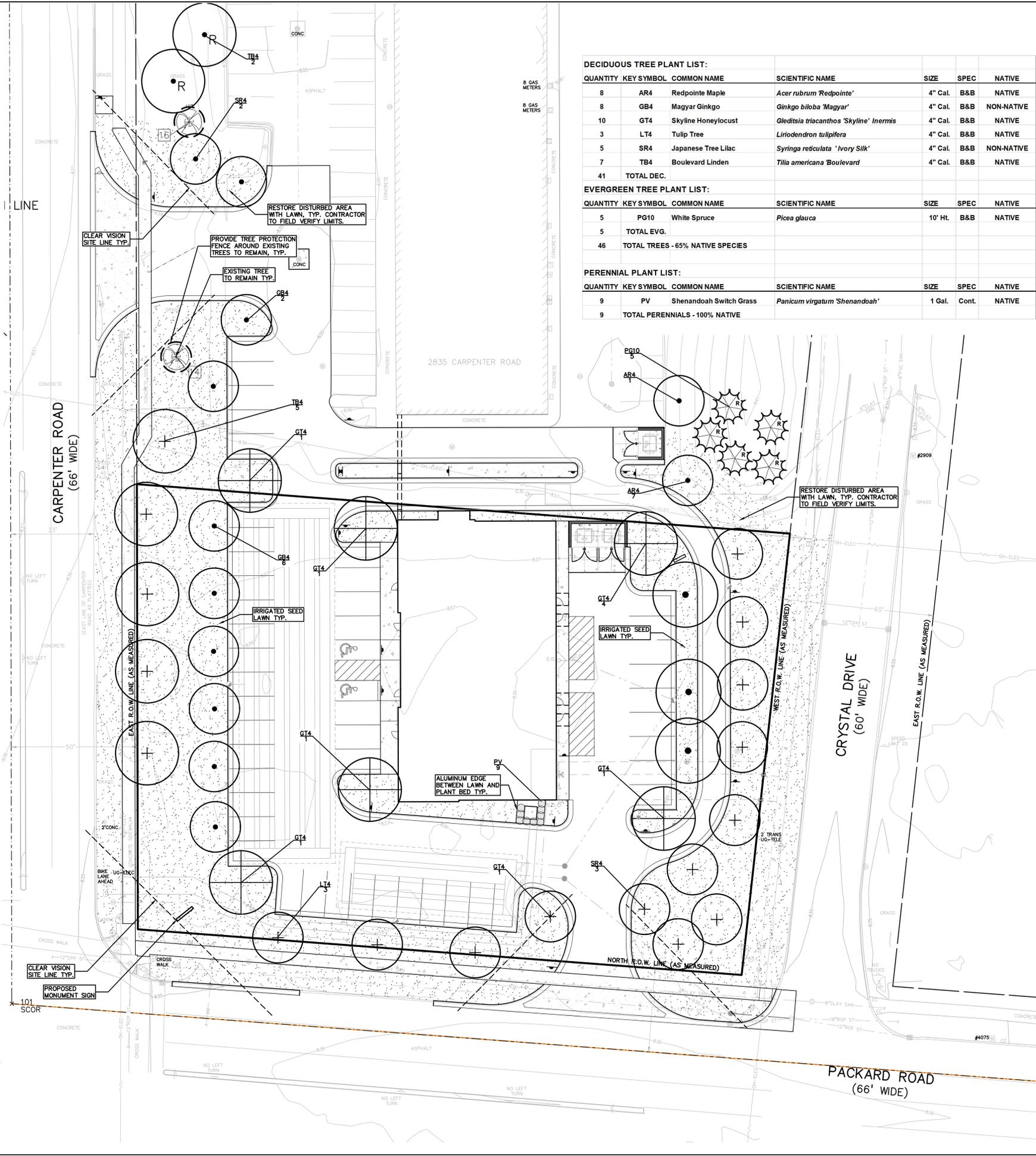
ORIGINAL ISSUE DATE:  
OCTOBER 24, 2019

PEA JOB NO. 2017-228

SCALE: 1" = 20'

DRAWING NUMBER:  
**13**

**NOT FOR CONSTRUCTION**



**DECIDUOUS TREE PLANT LIST:**

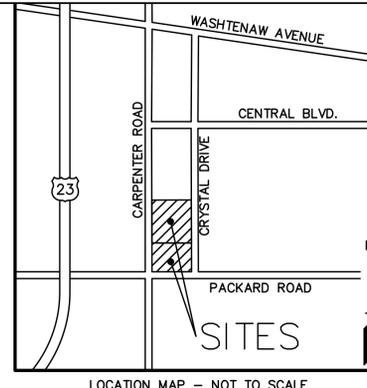
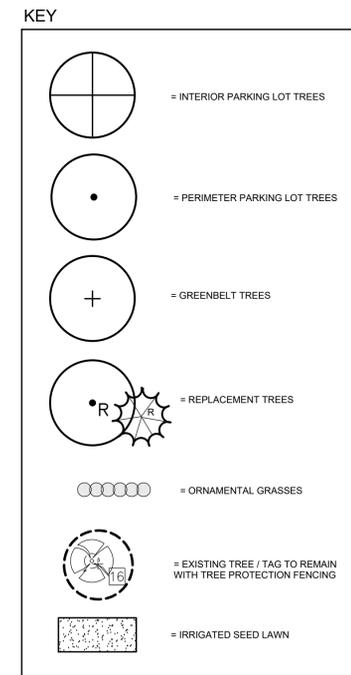
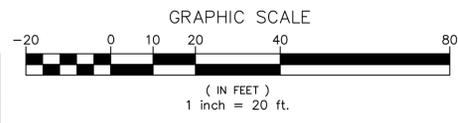
| QUANTITY | KEY SYMBOL | COMMON NAME         | SCIENTIFIC NAME                                  | SIZE    | SPEC | NATIVE     |
|----------|------------|---------------------|--|---------|------|------------|
| 8        | AR4        | Redpointe Maple     | <i>Acer rubrum 'Redpointe'</i>                   | 4" Cal. | B&B  | NATIVE     |
| 8        | GB4        | Magyar Ginkgo       | <i>Ginkgo biloba 'Magyar'</i>                    | 4" Cal. | B&B  | NON-NATIVE |
| 10       | GT4        | Skyline Honeylocust | <i>Gleditsia triacanthos 'Skyline' 'Inermis'</i> | 4" Cal. | B&B  | NATIVE     |
| 3        | LT4        | Tulip Tree          | <i>Liriodendron tulipifera</i>                   | 4" Cal. | B&B  | NATIVE     |
| 5        | SR4        | Japanese Tree Lilac | <i>Syringa reticulata 'Ivory Silk'</i>           | 4" Cal. | B&B  | NON-NATIVE |
| 7        | TB4        | Boulevard Linden    | <i>Tilia americana 'Boulevard'</i>               | 4" Cal. | B&B  | NATIVE     |
| 41       | TOTAL DEC. |                     |  |         |      |            |

**EVERGREEN TREE PLANT LIST:**

| QUANTITY | KEY SYMBOL                       | COMMON NAME  | SCIENTIFIC NAME     | SIZE    | SPEC | NATIVE |
|----------|----------------------------------|--------------|---------------------|---------|------|--------|
| 5        | PG10                             | White Spruce | <i>Picea glauca</i> | 10' Ht. | B&B  | NATIVE |
| 5        | TOTAL EVG.                       |              |                     |         |      |        |
| 46       | TOTAL TREES - 65% NATIVE SPECIES |              |                     |         |      |        |

**PERENNIAL PLANT LIST:**

| QUANTITY | KEY SYMBOL                     | COMMON NAME             | SCIENTIFIC NAME                      | SIZE   | SPEC  | NATIVE |
|----------|--------------------------------|-------------------------|--------------------------------------|--------|-------|--------|
| 9        | PV                             | Shenandoah Switch Grass | <i>Panicum virgatum 'Shenandoah'</i> | 1 Gal. | Cont. | NATIVE |
| 9        | TOTAL PERENNIALS - 100% NATIVE |                         |                                      |        |       |        |



- GENERAL PLANTING NOTES:**
- LANDSCAPE CONTRACTOR SHALL VISIT SITE, INSPECT EXISTING SITE CONDITIONS AND REVIEW PROPOSED PLANTING AND RELATED WORK. IN CASE OF DISCREPANCY BETWEEN PLAN AND PLANT LIST, PLAN SHALL GOVERN QUANTITIES. CONTACT LANDSCAPE ARCHITECT WITH ANY CONCERNS.
  - CONTRACTOR SHALL VERIFY LOCATIONS OF ALL ON SITE UTILITIES PRIOR TO BEGINNING CONSTRUCTION ON HIS/HER PHASE OF WORK. ELECTRIC, GAS, TELEPHONE, CABLE TELEVISION MAY BE LOCATED BY CALLING MISS DIG 1-800-452-7171. ANY DAMAGE OR INTERRUPTION OF SERVICES SHALL BE THE RESPONSIBILITY OF CONTRACTOR. CONTRACTOR SHALL COORDINATE ALL RELATED ACTIVITIES WITH OTHER TRADES ON THE JOB AND SHALL REPORT ANY UNACCEPTABLE JOB CONDITIONS TO OWNER'S REPRESENTATIVE PRIOR TO COMMENCING.
  - ALL PLANT MATERIAL TO BE PREMIUM GRADE NURSERY STOCK AND SHALL SATISFY AMERICAN ASSOCIATION OF NURSERYMEN STANDARD FOR NURSERY STOCK. ALL LANDSCAPE MATERIAL SHALL BE NORTHERN GROWN, NO. 1, GRADE.
  - CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON LANDSCAPE PLAN PRIOR TO PRICING THE WORK.
  - THE OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO REJECT ANY PLANT MATERIAL NOT MEETING SPECIFICATIONS.
  - ALL SINGLE STEM SHADE TREES TO HAVE STRAIGHT TRUNKS AND SYMMETRICAL CROWNS.
  - ALL SINGLE TRUNK SHADE TREES TO HAVE A CENTRAL LEADER; TREES WITH FORKED OR IRREGULAR TRUNKS WILL NOT BE ACCEPTED.
  - ALL MULTI STEM TREES SHALL BE HEAVILY BRANCHED AND HAVE SYMMETRICAL CROWNS. ONE SIDED TREES OR THOSE WITH THIN OR OPEN CROWNS SHALL NOT BE ACCEPTED.
  - ALL EVERGREEN TREES SHALL BE HEAVILY BRANCHED AND FULL TO THE GROUND, SYMMETRICAL IN SHAPE AND NOT SHEARED FOR THE LAST FIVE GROWING SEASONS.
  - ALL TREES TO HAVE CLAY OR CLAY LOAM BALLS, TREES WITH SAND BALLS WILL BE REJECTED.
  - NO MACHINERY IS TO BE USED WITHIN THE DRIP LINE OF EXISTING TREES. HAND GRADE ALL LAWN AREAS WITHIN THE DRIP LINE OF EXISTING TREES.
  - ALL TREE LOCATIONS SHALL BE STAKED BY LANDSCAPE CONTRACTOR AND ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION OF THE PLANT MATERIAL.
  - IT IS MANDATORY THAT POSITIVE DRAINAGE IS PROVIDED AWAY FROM ALL BUILDINGS.
  - ALL PLANTING BEDS SHALL RECEIVE 4" SHREDDED HARDWOOD BARK MULCH WITH PRE EMERGENT, SEE SPECIFICATIONS. SHREDDED PALLETTE AND DYED MULCH WILL NOT BE ACCEPTED.
  - ALL LANDSCAPED AREAS SHALL RECEIVE 3" COMPACTED TOPSOIL.
  - SEE SPECIFICATIONS FOR ADDITIONAL COMMENTS, REQUIREMENTS, PLANTING PROCEDURES AND WARRANTY STANDARDS.

**LANDSCAPE CALCULATIONS:**  
PER PITTSFIELD TOWNSHIP ZONING ORDINANCE (FB - FORM BASED MIXED USE DISTRICT)

**ALL LANDSCAPE REQUIRED TO BE 50% NATIVE SPECIES**

**PARKING LOT LANDSCAPE**  
REQUIRED: 1 TREE PER 8 SPACES & 5% OF PARKING PAVT. LANDSCAPED  
48 SPACES / 8 = 6 TREES REQUIRED & 5% OF 17,993 SF = 880 SF OF LANDSCAPE AREA  
PROVIDED: 6 TREES & 1,750 SF OF LANDSCAPE AREA

**PERIMETER PARKING LOT**  
REQUIRED: 1 TREE PER 40 LF OF PARKING LOT PERIMETER  
597 LF OF LOT PERIMETER / 40 = 14.9 TREES  
PROVIDED: 15 TREES

**SITE LANDSCAPE**  
REQUIRED: 20% OF ENTIRE SITE LANDSCAPED  
20% OF 43,690.68 SF = 8,739 SF  
PROVIDED: 20,750 SF OF ENTIRE SITE LANDSCAPED

**GREENBELT LANDSCAPE**  
REQUIRED: 1 DECIDUOUS TREE PER 30 LF OF PUBLIC RD. FRONTAGE  
CARPENTER RD: 175.52' / 30LF = 5.85 TREES REQUIRED  
PACKARD RD: 210.89' / 30LF = 7.02 TREES REQUIRED  
CRYSTAL DR: 175.10' / 30LF = 5.83 TREES REQUIRED  
PROVIDED: 1 EXISTING TREE + 5 PROPOSED TREES ALONG CARPENTER AND 6 TREES ALONG CRYSTAL DR.

**TREE REMOVAL / REPLACEMENT**  
13 TOTAL TREES REMOVED: (DOES NOT INCLUDE POOR OR DEAD TREES)  
REQUIRED: HERITAGE TREES: TOTAL DBH X 150% = CAL. INCHES TO REPLACE  
0" OF DBH X 150% = 0" CAL. / 3" CAL. = 0 TREES  
NON-HERITAGE TREES: TOTAL DBH 100% = CAL. INCHES TO REPLACE  
103" OF DBH X 100% = 103" CAL. / 4" CAL. = 25.75 TREES  
PROVIDED: 5, 10' HT. EVG. AND 2, 4" CAL. DECIDUOUS TREES = 28" REPLACEMENT  
ADDITIONALLY THE PARKING LOT INTERIOR, PERIMETER, AND GREENBELT TREES WERE UPSIZED FROM THE 2" REQ. TO 4" CAL.: 39 x 2" INCREASE = 78" ADDITIONAL REPLACEMENT  
28" REPLACEMENT TREES + 78" INCREASED STARTING SIZE = 106" REPLACEMENT PROVIDED

**REVISIONS**

| NO. | BY  | DATE     | DESCRIPTION                               |
|-----|-----|----------|---|
| 1   | JRG | 10/24/17 | PER TOWNSHIP PLANNING CONSULTANT COMMENTS |

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600 N. OLD WOODWARD, SUITE 100  
BIRMINGHAM, MICHIGAN 48009

**PRELIMINARY LANDSCAPE PLAN**  
**NAJOR PITTSFIELD**  
PART OF THE SOUTHWEST 1/4 OF SECTION 17, T3S, R1E  
PITTSFIELD TOWNSHIP, WASHTENAW COUNTY, MICHIGAN

DES: JRG DN: JRG SUR: JWMH P.M: JPB  
S:\PROJECTS\2017\2017228\DWG\SITE PLANS\LV-BASE-17228.DWG

ORIGINAL ISSUE DATE:  
OCTOBER 24, 2019

PEA JOB NO. 2017-228

SCALE: 1" = 20'

DRAWING NUMBER:  
**14**

| NO. | BY  | DATE     | DESCRIPTION                               |
|-----|-----|----------|---|
| 1   | JLB | 10/11/19 | PER TOWNSHIP PLANNING CONSULTANT COMMENTS |

REVISIONS



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|--|--|--|
| <b>NAJOR COMPANIES</b><br>600 N. OLD WOODWARD, SUITE 100<br>BIRMINGHAM, MICHIGAN 48009 | <b>LANDSCAPE DETAILS</b><br><b>NAJOR PITTSFIELD</b><br>PART OF THE SOUTHWEST 1/4 OF SECTION 17, T35S, R9E<br>PITTSFIELD TOWNSHIP, WASHTENAW COUNTY, MICHIGAN | DES. JRG<br>CHK. JRG<br>SUR. JRG<br>P.M. JPB |
|--|--|--|

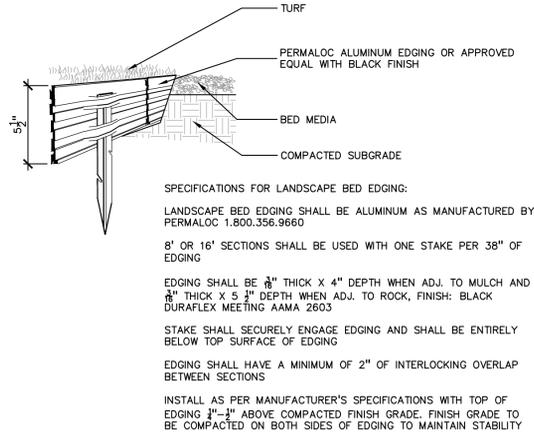
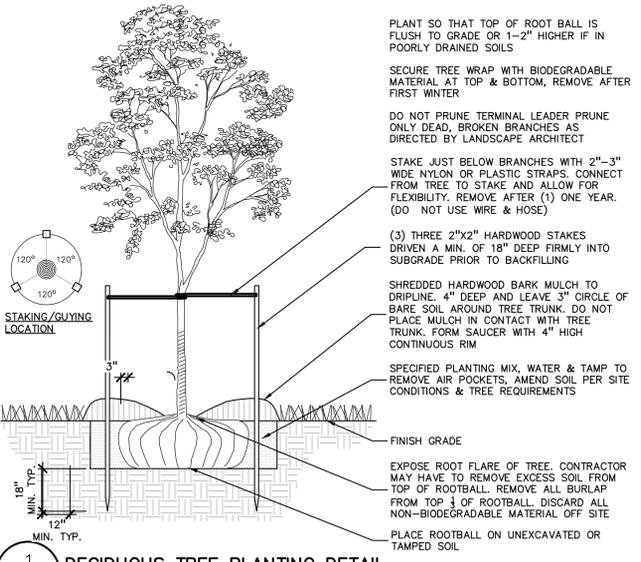
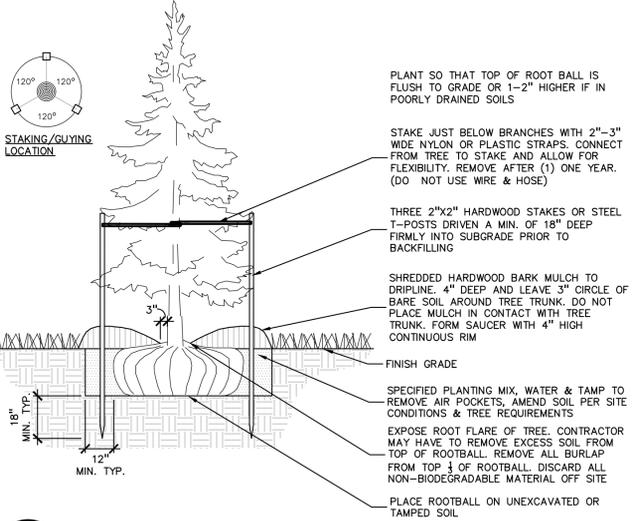
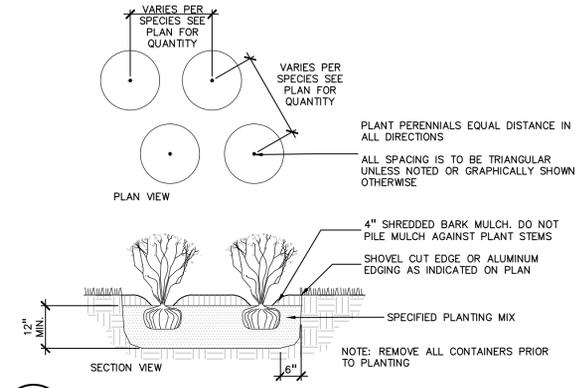
ORIGINAL ISSUE DATE:  
OCTOBER 24, 2019

PEA JOB NO. 2017-228

SCALE: N/A

DRAWING NUMBER:

15



**NOT FOR CONSTRUCTION**

XREF: S:\PROJECTS\2017\2017228\DWG\TOPBASE--17228.DWG  
XREF: S:\PROJECTS\2017\2017228\DWG\SITE PLANS\V-BASE--17228.DWG  
XREF: S:\PROJECTS\2017\2017228\DWG\SITE PLANS\V-TLX--17228.DWG



