Township Supervisor
Brenda L. Stumbo
Township Clerk
Debbie Swanson
Township Treasurer
Stan Eldridge

YPSILANTI TOWNSHIP
— PLANNING & ZONING DEPARTMENT —

Trustees
John Newman II
Gloria Peterson
Karen Lovejoy Roe
LaResha Thornton

REGULAR MEETING AGENDA

Tuesday, September 9, 2025
6:30 P.M.

If you need any assistance due to a disability, please contact the Planning Department at least 48 hours in advance of the meeting at planning@ypsitownship.org or 734-544-4000 ext. 1.

1. CALL TO ORDER
2. ROLL CALL
3. APPROVAL OF THE AUGUST 26, 2025, REGULAR MEETING MINUTES
4. APPROVAL OF AGENDA
5. PUBLIC HEARINGS
6. OLD BUSINESS
   A. **SPECIAL LAND USE - ZIPPY CAR WASH – 1822 W MICHIGAN – PARCEL K-11-39-252-022 –** TO CONSIDER THE SPECIAL LAND USE APPLICATION OF ZIPPY AUTO WASH/COREY WEAVER TO PERMIT A VEHICLE WASH ON A SITE ZONED REGIONAL CORRIDOR (RC) WITH A SITE TYPE C DESIGNATION.
   B. **PRELIMINARY SITE PLAN - ZIPPY CAR WASH – 1822 W MICHIGAN – PARCEL K-11-39-252-022 –** TO CONSIDER THE PRELIMINARY SITE PLAN APPLICATION OF ZIPPY AUTO WASH/COREY WEAVER TO PERMIT A VEHICLE WASH ON A SITE ZONED REGIONAL CORRIDOR (RC) WITH A SITE TYPE C DESIGNATION.
7. NEW BUSINESS
8. OPEN DISCUSSION FOR ISSUES NOT ON THE AGENDA
   A. CORRESPONDENCE RECEIVED
   B. PLANNING COMMISSION MEMBERS
   C. MEMBERS OF THE AUDIENCE
9. TOWNSHIP BOARD REPRESENTATIVE REPORT
10. ZONING BOARD OF APPEALS REPRESENTATIVE REPORT
11. TOWNSHIP ATTORNEY REPORT
12. PLANNING DEPARTMENT REPORT
13. OTHER BUSINESS
14. ADJOURNMENT

CHARTER TOWNSHIP OF YPSILANTI
PLANNING COMMISSION MEETING
Tuesday, August 26, 2025
6:30 pm

COMMISSIONERS PRESENT

Bill Sinkule
Elizabeth El-Assadi
Larry Doe
Darrell Kirby
Amy Kehrer

STAFF AND CONSULTANTS

Sally Elmiger - Carlisle Wortman
Dennis McLain – Township Attorney

- **CALL TO ORDER/ESTABLISH QUORUM**

  MOTION: Ms. El-Assadi called the meeting to order at 6:35 pm.

- **APPROVAL OF JULY 22, 2025, REGULAR MEETING MINUTES**

  MOTION: Mr. Kirby **MOVED** to approve the July 22, 2025, regular meeting minutes. The **MOTION** was **SECONDED** by Mr. Doe and **PASSED** by unanimous consent.

- **APPROVAL OF AGENDA**

  MOTION: Mr. Doe **MOVED** to approve the agenda as presented. The **MOTION** was **SECONDED** by Mr. Sinkule and **PASSED** by unanimous consent.

- **PUBLIC HEARINGS**

A. **SPECIAL LAND USE – CREEKSIDE VILLAGE NORTH – 6601 TUTTLE HILL – PARCEL K-11-26-300-009** – TO CONSIDER RECOMMENDATION TO THE TOWNSHIP BOARD OF TRUSTEES FOR THE SPECIAL LAND USE APPLICATION OF DIVERSE REAL ESTATE LLC TO PERMIT A 101-UNIT, SINGLE-FAMILY RESIDENTIAL SITE CONDOMINIUM ON A SITE ZONED R-3, ONE-FAMILY RESIDENTIAL.

The Planning Staff informed the Commission that the application is for special land use and a preliminary site plan. The proposal is for Creekside Village North, located at 6601 Tuttle Hill Road. The residential development consists of 101 single-family lots (1.85 lots per acre). Each lot will have a minimum lot area of 14,000 square feet. The proposed 54.70-acre site is located at the northeast corner of Tuttle Hill Road and Merritt Road. The site will be accessed with one access point off of Merritt Road and one of off Tuttle Hill Road. The internal roads will be private, and there will be a connection to the subdivision to the north, Creekside East. This site was previously approved in 2001.

The Planning Staff stated that the Traffic Impact Study has been reviewed by the Washtenaw County Road Commission (WCRC). In their review, the WCRC notes that the Traffic Impact Study does not warrant any additional turn lanes nor a traffic light at Merritt Road and Tuttle Hill Road; however, the Traffic Impact Study does require a future traffic study after the site is developed and built out. The Planning Department encourages the applicant to work with the Road Commission in establishing the necessary escrow to complete the study and install the light if warranted. The applicant has provided a Street Tree Plan and a Greenbelt and Entry Plan.

The Planning Staff stated that the applicant has met most parts of the special use standards, but the Planning Department has recommended that the applicant should provide functional and usable open space that would be satisfactory to the Planning Commission and Township Board so that additional traffic can be mitigated.

The Planning Staff talked about the Township's perspective on the zoning code and the decision to utilize and stabilize the neighborhood. The site consists of two existing detention ponds. The applicant would be protecting the wetland with an

easement. The applicant should perform an updated wetland delineation to confirm if it is Mississippi Department of Environmental Quality (MDEQ)-regulated. If regulated, the applicant would receive MDEQ approval.

The following are the Planning Department recommendations for the Planning Commission to discuss and consider:

- Open Space
- Traffic impact
- Wetland impacts
- Compliance with Standards for Special Use review as outlined in Section 1003.
- Provide wetland delineation to confirm if the wetland is MDEQ-regulated.
- Provide additional/functional open space. We encourage the applicant to reconfigure the site or remove a few lots to provide functional open space.
- Work with the Road Commission in establishing the necessary escrow to complete the study and install the light if warranted.
- Confirm siding material.

A commissioner inquired about the reason for the project not being developed in 2001;

The applicant (Aubrey Murray) talked about the team that includes representatives from Lombardo Homes and the engineering partner, working together to create a development that is consistent with township ordinances and designed to be beneficial to the community.

Lombardo Homes was founded in 1961, a family-owned business. Lombardo Homes has done many projects in Ypsilanti Township and across Michigan.

The Creek Side Village North project will be developed in two phases. The roads will be private with sidewalks on both sides. There is a 10-foot-wide bike path along Tuttle Hill Road and Merritt Road, with three access points from Tuttle Hill Road, Merritt Road, and the Lakewood estate subdivision.

The Traffic Impact Study indicated that there was no need for additional turn lights at Merritt Road and Tuttle Hill Road. The applicant has committed to

providing some funding for any sort of pedestrian or safety improvements that may need to be undertaken in the intersection in the future.

The project has some of the following positive impacts on the community:

- 101 new single-family homes.
- Contribution towards roadway upgrades and pedestrian safety improvements.
- Integration of green space and management of stormwater on-site to protect downstream properties.
- Expansion of the school district.
- Support of local business.

The price range for the new homes starts in the low $400,000 range. The timeline for the completion of the project depends on the zoning approval, with construction starting in March 2026.

Greg Windingland of Lombardo Homes stated that the building construction will be built by Lombardo Homes and not by a third-party developer. The applicant will contribute $185,000 towards the development.

Commissioner Kirby inquired if the applicant had conducted a survey gauging the interest of the community. The applicant has done a study based on Ypsilanti Township and the consolidation of the schools. Market research was conducted in different areas.

Commissioner Sinkule requested information on the open space requirement, with it currently being at 12% and the steps taken to move towards 50%. Studies have shown that families prefer not to go to a community playground or pool, but would rather have their own gym or pool in their backyards. The applicant is open to working with the Planning Department and reviewing the changes proposed.

Commissioner Kehrer inquired about the exterior cladding of the homes. The new homes will be consistent with the surrounding communities which would have a standard brick front on the first floor and a brick belt that goes around the perimeter of the home. The customer would have the option to purchase additional brick if they wanted to go for the four-sided brick. The builder will be using vinyl siding for the homes.

Commissioner Kirby inquired about the dues and the ownership of property. Creekside Village is all site condominiums. The residents would own the land and home and be responsible for everything, like an applied subdivision. They would pay dues to the association. The association would maintain the common landscaping along the two main roads; this would be supported and maintained by the dues paid.

PUBLIC HEARING OPENED AT 7:00 PM

- Rodney Fry (6806 Poplar Drive) shared his concern about the open land space with a 50% requirement, and the applicant has attained only 12%. The original plan in 2001 proposed more parks and an open area. The recommendation is to have more open areas. Another concern is the pipelines running right up to the property lines, since other subdivisions have dedicated areas for the pipelines.
- Brian Lance (9418 Country View Drive) supported the need for more open space and to have it developed.
- Quan Reese (9382 Country View Drive) advocated for the preservation of land that has trees and nature preserves.
- Violet Elder (Rosewood 3 on Poplar Drive) talked about the new development of access to the pool, keeping the size and maintenance in mind.
- Miller Delder (Poplar Drive) inquired about the water mitigation and private roads.

Commissioner Kehrer shared with the Planning Commission Board about advocating for the requirement of 50% of open space.

Commissioner El-Assadi requested the applicant to come forward to discuss certain recommendations/comments:

- Greg Windingland, from Lombardo Homes, stated that they could look at eliminating a certain number of lots and creating an internal park. Attaining 50% would be difficult since it would drastically reduce the density.
- The Wolverine Pipeline is through the property, which is an easement, so they have no actual ownership of the land.

- Lombardo Homes met with the Recreation Authority Board, which consists of Creekside Village West and East, regarding the pool. The Board did not want Lombardo Homes' residents to share the pool due to its capacity.
- The Road Commission is responsible for public roads (Tuttle Hill Road and Merritt Road). Lombardo Homes would be responsible for the neighborhood/streets along with annual maintenance, trash removal, and easements to the public road. The residents will pay the dues to the association.
- There is a relatively high ground water table. They have been monitoring and measuring the ground water relative to the surface of the ground. When it comes time to build the homes, they will know how high they must have the basement floors to make sure they are out of the water table.
- Lombardo Homes will try to save as many trees as possible during the progress of the development.
- The original site plan was created by Pulte Homes, consisting of 157 home sites (65-foot-wide lots). The original plan had a higher density.

PUBLIC HEARING CLOSED AT 7:11 PM

- **OLD BUSINESS**

None to Report.

- **NEW BUSINESS**

A. PRELIMINARY SITE PLAN - CREEKSIDE VILLAGE NORTH – 6601 TUTTLE HILL – PARCEL K-11-26-300-009 – TO CONSIDER RECOMMENDATION TO THE TOWNSHIP BOARD OF TRUSTEES FOR THE PRELIMINARY SITE PLAN APPLICATION OF DIVERSE REAL ESTATE LLC. TO PERMIT A 101-UNIT, SINGLE-FAMILY RESIDENTIAL SITE CONDOMINIUM ON A SITE ZONED R-3, ONE-FAMILY RESIDENTIAL.

The commissioners discussed placing a condition of 50% or it may have to be reviewed with a new configuration to be discussed between the Planning Department and the applicant. The site plan follows the zoning requirements, and the special land use is reviewed by the Planning Commission to verify whether the use is appropriate and whether other site plan elements that mitigate impacts to the

surrounding environment, since the open space is important to the community. The Planning Commission can act on the special land use request.

MOTION: Ms. Kehrer **MOVED** to recommend approval to the Township Board of the Special Land Use Permit submitted by Diverse Real Estate, LLC to permit construction of a 101-unit, single-family residential site condominium on a 54.70-acre site zoned R-3, One-Family Residential, located at 6601 Tuttle Hill Road, Ypsilanti, MI 48197, Parcel K-11-26-300-009, as the proposal meets the criteria in Article 10, Special Land Use with the following conditions:

1. The applicant shall address all outstanding comments from reviewing agencies prior to Final Site Plan Approval. The applicant shall revise all plan sheets to reflect the results of this evening's discussion.
2. The applicant shall obtain all applicable internal and outside agency permits prior to construction.
3. The applicant shall address the lack of usable open space in the Final Site Plan.

The **MOTION** was **SECONDED** by Mr. Kirby.

Roll Call Vote: Ms. Kehrer (Yes); Mr. Sinkule (Yes); Mr. Kirby (Yes); Mr. Doe (Yes); Ms. El-Assadi (Yes).

MOTION PASSED.

PRELIMINARY SITE PLAN:

MOTION: Ms. Kehrer **MOVED** to postpone the request for Preliminary Site Plan approval, submitted by Diverse Real Estate, LLC to permit construction of a 101-unit, single-family residential site condominium on a 54.70-acre site zoned R-3, One-Family Residential, located at 6601 Tuttle Hill Road, Ypsilanti, MI 48197, Parcel K-11-26-300-009, to give the applicant time to address the comments made at this evening's meeting and resubmit, and/or provide additional information, as discussed tonight.

The **MOTION** was **SECONDED** by Mr. Sinkule.

Roll Call Vote: Ms. Kehrer (Yes); Mr. Sinkule (Yes); Mr. Kirby (Yes); Mr. Doe (Yes); Ms. El-Assadi (Yes).

MOTION PASSED.

The applicant is requested to review the open space requirement before the next presentation with the Planning Commission.

B. PRELIMINARY SITE PLAN – U-HAUL YPSILANTI – U-BOX CONTAINER STORAGE–2251 AND 2269 PARKWOOD – PARCELS K-11-11-100-017 AND K-11-11-100-016 – TO CONSIDER THE PRELIMINARY SITE PLAN APPLICATION OF KIMLEY-HORN TO PERMIT A U-BOX CONTAINER STORAGE BUILDING ON A SITE ZONED LOGISTICS AND MANUFACTURING (L-M).

The Planning Staff informed the Planning Commission that the applicant, Kimley Horn, has proposed building a 24,000 square foot warehouse building for portage storage and moving containers. The zoning district is LM (Logistics and Manufacturing). The property is accessed by two driveways off Parkwood Avenue.

Planning Commission Staff recommends the following conditions for approval:

1. The applicant must combine the two easterly parcels before final site plan approval.
2. The applicant should comply with the site plan deficiencies and the staff report for lighting, landscaping, and natural features.

Planning Commission should consider the following:

1. Planning Commission should consider deferring the 13 additional required parking spaces; if so, deferred spaces shall be shown on the site plan.
2. Planning Commission should consider waiving the requirement for an outdoor trash enclosure, since trash will be stored inside the building.
3. Planning Commission should evaluate the proposed building design to determine if it is consistent with the desired image for this part of the township.

4. Planning Commission should consider conditioning any preliminary site plan approval on the applicant providing revised lighting information at final site plan review.

Scott Baker (applicant), Local President for U-Haul Southeast Michigan, informed the Planning Commission that the proposed building would be storage spaces for the portable storage boxes, which would not be accessible by customers. The dumpsters are five yards in size, on wheels. They are pushed out of the building to be emptied and stored inside the building. The light plan will be in accordance with the lighting code. Since 2012, the original site was operated from the adjacent parcel with 103 units. Customers can access their storage box with 24-hour notice, and the box will be moved to an adjacent site that is customer-friendly.

Commissioner Kehrer inquired about the parking spaces. Mr. Baker stated that the average number of workers on site is three, with a maximum of five. Parking space for six vehicles is what is needed. The commissioners suggested a revised lighting plan for final staff review.

MOTION: Mr. Sinkule **MOVED** to approve the Preliminary Site Plan, submitted by Kimley Horn of Michigan, Inc. (Representatives of U-Haul) to permit construction of 24,000 square foot U-Box storage building on two parcels totaling 5.17-acres that are zoned L-M, Logistics and Manufacturing, located at 2251 and 2269 Parkwood Ave., Ypsilanti, MI 48197, Parcels K-11-11-100-017 and K-11-11-100-016, with the following conditions:

1. The applicant shall address all outstanding comments from reviewing agencies during the Final Site Plan review. The applicant shall revise all plan sheets to reflect the results of this evening's discussion.
2. The applicant shall obtain all applicable internal and outside agency permits prior to construction.
3. The applicant shall combine the two parcels during the Final Site Plan stage of plan review.
4. The applicant shall provide revised lighting information as outlined in the Carlisle /Wortman memo of August 19, 2025, during the Final Site Plan stage.

5. The Planning Commission approves deferring 13 parking spaces, as shown on the Preliminary Site plan.
6. The Planning Commission waives the requirement for an outdoor dumpster and screen, as trash is stored inside the building.
7. The Planning Commission considers the proposed architecture to be consistent with the desired image for this part of the Township.

The **MOTION** was **SECONDED** by Mr. Doe.

Roll Call Vote: Mr. Sinkule (Yes); Mr. Doe (Yes); Ms. Kehrer (Yes); Mr. Kirby (Yes); Ms. El-Assadi (Yes).

MOTION PASSED.

- **OPEN DISCUSSIONS FOR ISSUES NOT ON AGENDA**
  - **CORRESPONDENCE RECEIVED**
    The Planning Staff talked about the correspondence received regarding the action from the Board, passing a resolution asking the Planning Commission to consider revisions to the existing zoning ordinance pertaining to data centers. The meeting is scheduled for September 23, 2025.
  - **PLANNING COMMISSION MEMBERS**
    None to Report.
  - **MEMBERS OF THE AUDIENCE**
    None to Report
- **TOWNSHIP BOARD REPRESENTATIVE REPORT**
  None to Report.
- **ZONING BOARD OF APPEALS REPRESENTATIVE REPORT**
  Zippy Car Wash got approval for the variances, which will be presented at the September 9, 2025, meeting.

  Commissioner Kirby shared that the Sheetz construction has started. Sheetz filed a motion with the court, moving towards a positive development.
- **TOWNSHIP ATTORNEY REPORT**
  None to Report.

- **PLANNING DEPARTMENT REPORT**
  None to Report.

- **OTHER BUSINESS**
  None to Report.

- **ADJOURNMENT**
  MOTION: Mr. Kirby **MOVED** to adjourn at 7:39 pm. The **MOTION** was **SECONDED** by Mr. Sinkule and **PASSED** by unanimous consent.

  ==========

  Respectively Submitted by Minutes Services

Planning Department Report

Project Name:	Zippy Car Wash
Location:	1822 W. Michigan Ave., Ypsilanti, MI 48197
Date:	September 3, 2025

- [x] Full Preliminary Site Plan Review # 2
- [ ] Sketch Preliminary Site Plan Review #
- [ ] Administrative Preliminary Site Plan Review #
- [ ] Detailed Engineering/Final Site Plan Review #
- [x] Special Use Permit
- [ ] Public Hearing
- [ ] Rezoning
- [ ] Tentative Preliminary Plat
- [ ] Final Preliminary Plat
- [ ] Final Plat Process
- [ ] Planned Development Stage I
- [ ] Planned Development Stage II

Contact / Reviewer	Consultants, Departments, & Agencies	Approved	Approved with Conditions	Denied	N/A	See email/letter attached or comments below
Planning Department	Township Planning Department	☐	☑	☐	☐	See comments below
Carlisle/Wortman Associates	Planning Consultant	☐	☑	☐	☐	See letter dated 09-03-2025
OHM / Stantec	Engineering Consultant	☐	☑	☐	☐	See letter dated 06-27-2025
Steven Wallgren, Fire Marshal	Township Fire Department	☐	☑	☐	☐	See letter dated 06-27-2025
Dave Bellers, Building Official	Township Building Department	☐	☐	☐	☑	
Brian McCleery, Deputy Assessor	Township Assessing Department	☐	☐	☐	☑	
Scott Westover, Engineering Manager	Ypsilanti Community Utilities Authority	☐	☑	☐	☐	See letter dated 06-27-2025
Gary Streight, Project Manager	Washtenaw County Road Commission	☐	☐	☐	☐	See email dated 07-07-2025
Theresa Marsik, Stormwater Engineer	Washtenaw County Water Resources Commission	☐	☑	☐	☐	See letter dated 06-17-2025
James Drury, Permit Agent	Michigan Department of Transportation	☐	☐	☐	☑	

Planning Department Recommended Action:

At this time, the Zippy Auto Wash project is eligible for Preliminary Site Plan and Special Land Use review by the Township Planning Commission and has been scheduled for the Commission's meeting on September 3, 2025. The Planning Commission held a Public Hearing regarding the Special Land Use at their July 22, 2025, meeting, and the project received the required variances from the Zoning Board of Appeals at their August 6, 2025, meeting. The project is now returning to the Planning Commission for consideration of the Special Land Use and Site Plan.

Please contact the Charter Township of Ypsilanti Planning Department if you have any questions or concerns.

Carlisle | Wortman
ASSOCIATES, INC.
117 NORTH FIRST STREET SUITE 70 ANN ARBOR, MI 48104 734.662.2200 734.662.1935 FAX

Date: July 2, 2025
Rev.: September 3, 2025

Preliminary Site Plan and Special Use Review
For
Ypsilanti Township, Michigan

Applicant:	Zippy Auto Wash / Corey Weaver
Project Name:	Zippy Car Wash
Plan Date:	June 2, 2025
Latest Revision:	August 8, 2025
Location:	1822 W. Michigan Ave. (W. Michigan Ave. and Ellsworth intersection)
Zoning:	RC, Regional Corridor – Form Based District
Action Requested:	Preliminary Site Plan and Special Use Approval

PROJECT AND SITE DESCRIPTION

The applicant is proposing to build a 4,900 s.f. automated tunnel car wash with two pay terminals and 12 vacuum stations/parking spaces. The parking lot will also offer five (5) employee parking spaces. This site was previously used as a car wash.

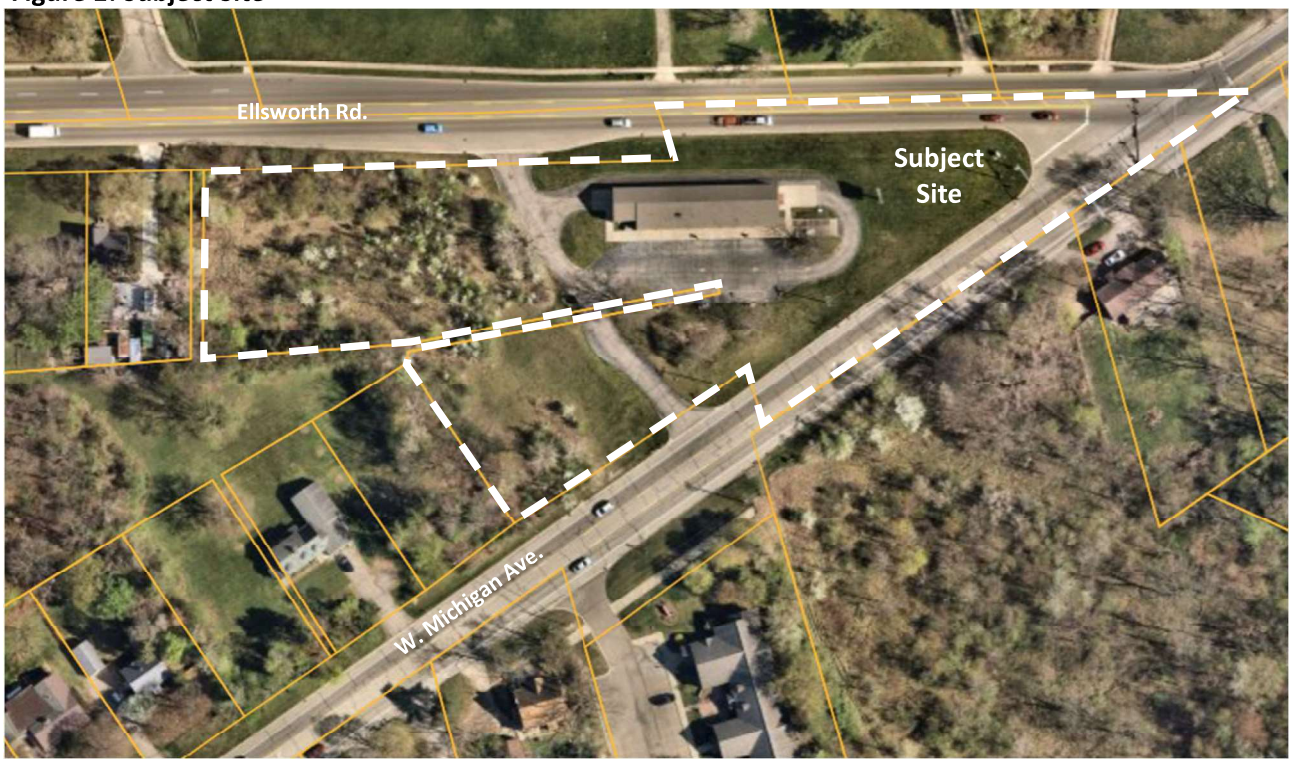
Access to the site occurs off W. Michigan Ave. and Ellsworth.

The subject site is zoned RC, Regional Corridor, which is a Form Based District. The site is categorized as a Site Type C on the Regulating Plan. Site Type C permits vehicle washes as a Special Land Use. The Building Type proposed is A.2.

An aerial of the proposed site is shown on the next page.

Benjamin R. Carlisle, *President* John L. Enos, *Vice President*
Paul Montagno, *Principal* Megan Masson-Minock, *Principal* Laura Kreps, *Principal* Brent Strong, *Principal*
David Scurto, *Principal* Sally M. Elmiger, *Principal* Craig Strong, *Principal* Douglas J. Lewan, *Principal*
Richard K. Carlisle, *Past President/Senior Principal* R. Donald Wortman, *Past Principal*

Figure 1: Subject Site



Source: Nearmap (Captured April 17, 2025)

Size of Subject Site:
Gross: 3.28 acres (143,072 s.f.); Net: 2.49 acres (108,535 s.f.)

Current Use of Subject Site:
Car wash

Table 1: Adjacent Zoning and Existing Land Uses

Direction	Zoning	Existing Use
North	**North Side of Ellsworth Rd.:** RC, Regional Corridor (Form Based District) & RM-LD, Multiple Family Low Density	Single- and two-family residential, vacant
South	**South Side of W. Michigan Ave.:** RC, Regional Corridor (Form Based District)	Residential, vacant & medical office
East	RC, Regional Corridor & RM-LD, Multiple Family (Low Density)	Single-family residential
West	RC, Regional Corridor & GB, General Business	Vacant & Single-family residential

This project was discussed at the July 22, 2025, Planning Commission meeting, where the Commissioner's hosted a Public Hearing and, as required by the ordinance, postponed any decisions on the Special Land Use and Site Plan so the applicant could request the needed variances from the Zoning

Board of Appeals (ZBA). The applicant presented the project to the ZBA at their August 6, 2025, meeting. The ZBA approved all of the requested variances, including the following:

1. To locate the building further back from E. Ellsworth than the required 10-foot "build-to" line.
2. To locate parking in the E. Ellsworth front yard.
3. To locate a trash receptacle screen in the E. Ellsworth front yard.

The project is returning to the Planning Commission for decisions on the requested Special Land Use and Site Plan.

MASTER PLAN

The site is designated as a Regional Mixed-Use Corridor along both road frontages. Regional Mixed-Use Corridors are located along the busiest corridors, which support a high volume of both local and regional traffic. This area may include auto-oriented uses that draw customers both regionally and locally. Compared to the Neighborhood Mixed-Use corridors, this area is intended for higher-intensity and the largest scale of commercial development. While an auto wash is not specifically listed in the Master Plan's Regional Corridor description, it does list auto-oriented commercial facilities. An auto wash could be considered consistent with this description, as it could serve the regional market and local neighborhoods.

Applicable design concepts included the Master Plan include:

- *Large parking lots shall be screened, landscaped, and provided with pedestrian connections and other design amenities to break up excessive pavement and reduce visual impact of parking areas.*
- *Architectural design must create an interesting visual experience for both sidewalk users and automobiles.*
- *Ensure appropriate transition to adjacent neighborhoods.*

We would consider the proposal to be consistent with the Master Plan for this site, and the site design and architectural considerations addressed in the proposal. Please see additional comments throughout this review.

NATURAL FEATURES

Topography:

The site was previously used as a car wash, and was almost fully graded to accommodate this use. The property very slightly slopes up from the intersection of W. Michigan Ave. to the west. The property is generally flat.

The proposed grading uses the existing developed portions of the site, and minimally modifies the topography by adding small, 2- to 3-foot-tall berms on the west side of the entry drives, a small berm on the east side (behind the decorative fence) and stormwater management basins across the site.

Woodlands/Trees:

The survey shows 24 existing "protected" trees on the site. The grading and construction activities will remove 12 of these trees; the other 12

trees will remain. Because all of the trees that will be removed are within the limits of construction and grading, replacement trees are not required.

The Landscape Plan has a note regarding the installation of tree protection fencing, as well as a detail specifying how the fencing is to be erected. As requested, a tree protection "symbol" has been added to the Site Plan, Grading Plan and Landscape Plan around trees proposed to remain. Also as requested, a note has been added that states: "No parking of equipment or vehicles, or storage of materials shall be allowed within the tree protection fencing" to the Grading Plan, and the Landscape Plan.

Items to be Addressed: *None.*

AREA, WIDTH, HEIGHT, SETBACKS

The table below evaluates the proposal against the bulk requirements in the ordinance.

Table 2. Bulk Requirements

	Required / Allowed	Provided	Complies with Ordinance
Min. Lot Area	Site Type C: Larger than 1 acre	Net: 2.49 acres (108,535 s.f.)	Complies
Front Build-to-Line (W. Michigan Ave.)	10-foot to 30-foot build-to-line; 75% of the building must meet the required build-to line.	Building located 10 feet from the W. Michigan Ave. ROW.	Complies
Front Build-to-Line (Ellsworth)		Building located 83.5 feet from the Ellsworth ROW	**See Below**
Side Setback – West Property Line	Building Setback = 1.5 times building height (18 ft. x 1.5 = 27 ft.) 20-foot greenbelt	Building setback: +360 feet Greenbelt: 35 feet	Building Complies Greenbelt Complies
Rear Setback	10 feet 20-foot greenbelt	+10 feet setback 43 feet	Building Complies Greenbelt Complies
Impervious Surface	80% maximum	42.2%	Complies
Building Height	Minimum: 1 story / 14 feet Maximum: 3 stories / 38 feet	1 story / 18 feet	Complies

Parking	Located in side or rear yard; if abutting a required "build-to" line, screened with a minimum 30-inch masonry wall on the required build-to line, or within 5 feet of the required building line.	W. Michigan Ave: Parking is located in the rear yard. Ellsworth: Parking is located in the front yard.	**See Below**

Table 3. Bulk Requirements for Vehicle Wash Operations

Requirements of 1129.5, Specific Use Provisions for Vehicle Wash Operations			
	Required / Allowed	**Provided**	**Complies with Ordinance**
Min. Front Yard	50 feet; however, the Form Based Code requirements supersede this requirement	W. Michigan Ave.: 10 feet Ellsworth Rd.: 83.5 feet	**See "Build-To" Discussion Below**
Wash facilities within completely enclosed building	--	--	Complies
Vacuuming and drying areas may be outside, but no closer than 25-feet from residential district	25 feet from west property lines	145 - 310 feet	Complies
Stacking/Parking complies with Sec. 1205 and 1118	See Parking Section of this review		
Stacking/Parking hard-surfaced and dust free	--	Proposing concrete pavement	Complies
Prevent freezing at exit ramp		Project Description (Cover Sheet) states that entrance and exit pavement slabs shall be heated to prevent freezing; areas beyond shall be deiced regularly	Complies
Six-foot tall obscuring wall when abutting a residential district. Alternative screening materials may be approved by Planning Commission		Landscape screen	**See Below**

Front Build-To Line/Setback

The ordinance requires that at least 75% of the building must meet the front build-to line. Build-to lines are different than a "setback" line, in that the build-to line is the desired location for the front façade of the building. The proposal meets the build-to-line requirement along W. Michigan Ave., but due to the odd shape of the lot, not along Ellsworth. The project was granted a variance for this non-conformity.

Parking Location
The parking is located behind the building (rear yard) from the W. Michigan Ave. frontage. However, due to the unusual shape of the lot, the parking is located in the front yard from the Ellsworth frontage. Again, the project was granted the needed a variance for this condition.

Screen of Residential Properties
Sheet C-6, *Landscape Plan*, shows preservation of a large, vegetated area along Ellsworth Rd. between the car wash and the residence to the west. It also shows a staggered line of 16 Norway Spruce trees on a 3- to 4-foot-tall berm along the west property line adjacent to W. Michigan Ave., between the car wash and the vacant residential lot to the west. The Planning Commission may consider the proposed landscape screen sufficient as an alternative to a 6-foot-tall wall. If landscaping isn't sufficient on its own, the Commissioners may also consider additional alternatives (such as a fence in addition to the landscaping) if necessary.

Items to be Addressed: *1) Planning Commission to consider landscape screen/berm as alternative to six-foot-tall wall requirement, or additional alternatives if necessary.*

PARKING, LOADING

The ordinance requires a vehicle wash use to meet the minimum parking space requirement in Sec. 1205, *Access, Parking and Loading Requirements*, as well as the drive-through requirements in Sec. 1118, *Drive-In and Drive-Through Facilities*.

Table 4. Parking and Stacking Spaces

	Required	Provided	Complies with Ordinance
Parking Spaces	**1 space for each employee** or 3-5 employees = 5 spaces	5 spaces	Complies **See Below**
Stacking Spaces	**Entry per lane: 8 spaces** **Exit per lane: 2 spaces**	Entry: +12 spaces Exit: +2 spaces	Complies
Barrier-Free Spaces	**1 space**	0 spaces	See Below
Loading spaces	**1 space**	0 spaces	See Below
Bicycle parking	**2 spaces**	4 spaces	Complies

Parking Spaces
Five spaces are shown on the plans. However, one of these spaces must be designed as a barrier-free, "van accessible" space. The location of the spaces is not ideal for barrier-free access, being so far away from the building. However, it may be acceptable since a barrier-free route is established between the parking and the building.

Parking Lot Design
The proposed employee parking spaces meet the dimensional requirements in the ordinance. The proposed vacuum stations exceed the minimum width by 4-feet, giving users enough space to keep their doors open to vacuum the inside. Maneuvering lanes in the parking/vacuum station area also meet ordinance requirements. The proposed escape lane also meets the minimum width requirement. The

plans have been revised to include a "DO NOT ENTER" sign to the escape lane so that people using the vacuums don't enter the car wash lane.

Loading Space
One 10' x 25' loading space has been added and labeled on the plans. The Cover Sheet also describes trucks making deliveries will be box-van type, and will make deliveries when prior to the car wash open hours.

Items to be Addressed: *1) Add one (1) barrier-free, van-accessible space to the employee parking area.*

SITE ACCESS, CIRCULATION, TRAFFIC

The site is accessed from both W. Michigan Ave. and Ellsworth Rd. The project is re-using the existing driveway from Ellsworth. A new driveway from W. Michigan Ave. is proposed further west than the existing driveway.

Stacking Lanes
Vehicles for this use enter the car wash stacking lanes from both access driveways. Vehicles stack into two pay station lanes.

The location of the stacking lanes will not interfere with traffic on the street. The location of the lanes also does not interfere with vehicular circulation on the rest of the site, or parking maneuvers. There is an "escape" lane just to the east of the stacking lanes that would allow a car to exit the stacking before being washed. We consider this circulation system acceptable.

Sec. 1118 states that multi-lane drive-throughs shall be located in a manner that will be the least visible from a public thoroughfare. Given that this site has two "front" yards, it's challenging to locate the service components of the project so that they aren't visible from one of the two streets. The proposal shows three Prairiefire Crabapple trees, augmented with shrubs, on the west side of the Ellsworth entry drive, between Ellsworth and the stacking lanes. We consider the landscaping to meet this requirement.

Vacuum Station Access
A separate maneuvering lane allows vehicles into and out of the vacuum stations. It also allows washed vehicles to enter the vacuum stations, and exit the site. We consider the circulation into and out of the vacuum stations acceptable.

Sidewalks
As required, the plans show a new 8-foot-wide sidewalk/safety path along W. Michigan Ave., and Ellsworth Rd. As required by the Road Commission, these public walks do not extend to the tip of the site. This change will discourage a pedestrian from trying to cross the Ellsworth/Michigan Ave. angled intersection.

The Form Based Districts require pedestrian pathways between the site and the road right-of-way. As requested, a short 5-foot-wide sidewalk segment has been added between the safety path along W. Michigan and Ellsworth and the pedestrian access door on the north side of the building.

The plans also show a sidewalk segment that creates a "short-cut" between the pathway along W. Michigan Ave., and the pathway along Ellsworth Rd. We consider this a positive feature of the proposal.

Items to be Addressed: *None.*

SCREENING & LANDSCAPING

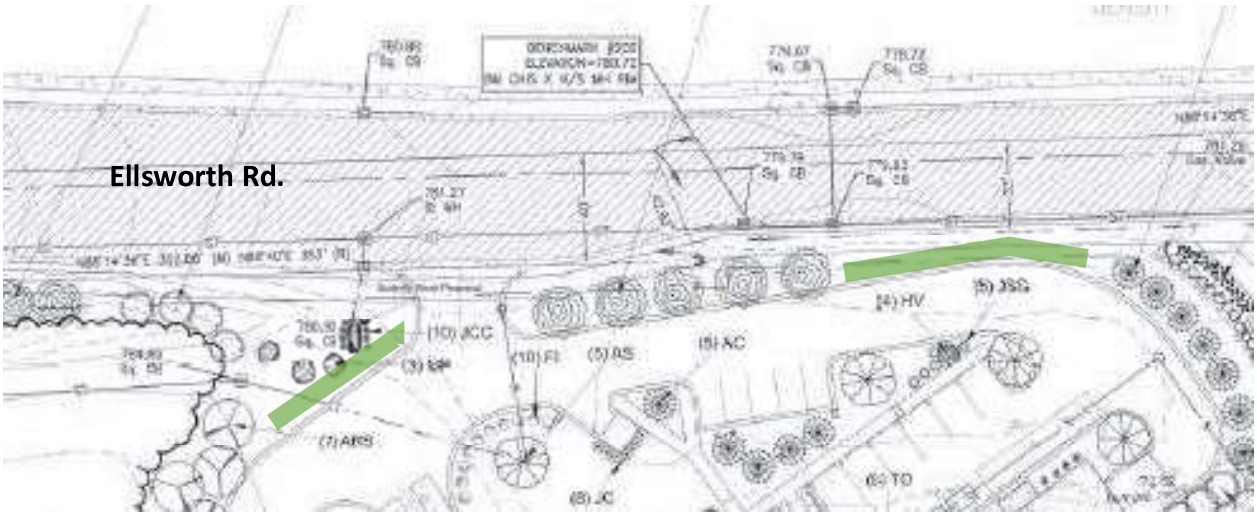
Table 5. Landscaping

	Required	Provided	Complies with Ordinance
General Landscaping: • 1 tree per 1,000 s.f. lawn • 1 shrub per 500 s.f. lawn	16,781 s.f. lawn = 17 trees and 34 shrubs	17 trees and 34 shrubs	Complies
Street Yard Landscaping: • 1 large deciduous tree per 40 l.f. of frontage • 1 ornamental tree per 100 l.f. of frontage • 1 shrub per 10 l.f. of frontage	W. Michigan Ave.: 511 L.F. / 40 = 13 trees 511 l.f. / 100 = 5 ornamental trees 511 l.f. / 10 = 51 shrubs Ellsworth Rd.: 527 l.f. / 40 = 13 trees 527 l.f. / 100 = 5 ornamental trees 527 l.f. / 10 = 53 shrubs	W. Michigan Ave.: 13 trees 5 ornamental trees +51 shrubs Ellsworth Rd.: 13 trees 6 ornamental trees +53 shrubs	Complies with Trees Complies with Ornamental Trees Complies with Shrubs
Parking Lot Landscaping: • 1 large deciduous tree per 2,000 s.f. of pavement • 1 large deciduous tree per 40 l.f. of parking lot perimeter	33,378 s.f. / 2,000 s.f. = 17 interior trees 535 l.f. / 40 = 13 perimeter trees	17 interior trees and 0 perimeter trees	Complies with Interior Trees **See Below**

Perimeter Parking Lot Landscaping

The Landscape Requirements Chart on the Landscape Plan does not indicate that any parking lot perimeter trees have been proposed. We acknowledge that with the other requirements, it may be difficult to locate additional trees on the site. The ordinance gives the Planning Commission the ability to waive or modify the standards of Sec. 1301, *Landscape Requirements*, where the addition of new landscape material would serve no good purpose.

In our previous review, we stated that we don't see space for additional trees; however, we suggested that 3-foot-tall shrubs along the maneuvering lane along Ellsworth Rd. could be installed to screen the vehicle lane from view of the road. The revised plans show the addition of shrubs along Ellsworth Rd., in the suggested locations (shown in **green** on the next page). The Planning Commission should discuss this alternative and decide if it addresses the lack of perimeter parking lot trees.



Parking Lot Islands
Sec. 1301(3)(D) requires the following:

1) There shall be no more than twelve (12) parking spaces in a row without a landscape break. The plans comply with this requirement.
2) Parking lot end islands shall be a minimum of five (5) feet wide, and provided at the intersection of any parking aisles. The islands are the minimum dimensions, and their location complies with the ordinance.

Plant Material
The proposed sizes of the plant material meet the minimum ordinance requirements.

Trash and Recycling Containers
The dumpster is located in a "front" yard along Ellsworth Rd., and is clearly visible from this street. Sec. 1302, *Trash and Recycling Receptacle*, requires that dumpsters be located in a side or rear yard, and not be adjacent to a public or private street. The project received a variance for the location of the screen. In addition, the revised Site Plan has revolved the screen so that more of the screen wall faces the street (vs. the screen gate).

The dumpster screen detail (shown on Sheet C-8) will be a three-sided, 6-foot-tall masonry screen made of 8" masonry to match the building. The gate will be made of wood siding with a steel tube frame. The landscape plan shows that the dumpster screen itself will be shielded from south and west views with landscaping.

Items to be Addressed: *1) Planning Commission to consider the additional shrubs along the northerly maneuvering lane to screen Ellsworth Rd., and this addition to justify modification of the perimeter parking lot landscaping requirement.*

LIGHTING

A Lighting Plan (Sheet C-7) has been provided. The applicant is proposing to install six (6) single-luminaire pole-mounted fixtures. The building will be illuminated with two types of building-mounted fixtures.

The plans have been revised to show linear luminaires on the vacuum station arms.

Table 6. Lighting

	Required	Proposed
Fixture is downward facing and shielded		Pole mounted: Complies Building mounted: Complies
Maximum illumination levels:		
Along residential property lines	0.5 footcandles	Complies
Along non-residential property lines	1.0 footcandles	N.A.
Anywhere on the ground	20 footcandles	Complies
Minimum illumination levels of parking lots	0.4 footcandles	Average Complies
Maximum height of pole-mounted fixtures (including base)	25 feet/ 18 feet adjacent to residential	**See Below**
Fixture color standard	Maximum 3500k	Pole mounted: Non-compliant Building mounted: Complies and non-compliant

Pole-Mounted Fixtures:
The pole-mounted fixtures away from the residential lots to the west are 22 feet tall, where as the one pole-mounted fixture at the W. Michigan Ave. driveway is 18-feet tall, as required.

The ordinance calls for lighting to create the minimal interference with residential users. As discussed at the July Planning Commission meeting, the applicant has shifted the pole-mounted fixture at the W. Michigan Ave. driveway to the west side of the driveway. This way, the light will be directed away from any future residence to the west.

Fixture Color Standard
All of the proposed light fixtures meet the maximum kelvin (or color) temperature requirement of 3500k.

Reduction in Nighttime Lighting
The ordinance requires that all outdoor lighting is reduced to at least 50% of the light level at full illumination one (1) hour after closing. A note on the Lighting Plan has been revised to reflect Ypsilanti Township's requirement for nighttime lighting reductions.

Items to be Addressed: *None.*

ELEVATIONS AND FLOOR PLANS

Floor plans and elevations have been provided.

Floor Plans
The floor plans show one (1) car wash tunnel on the south side of the building. The north side of the building is occupied by an equipment room, office, and break room (with a restroom).

Elevations
The Form Based District includes architectural standards to create a character with visual interest, architectural consistency, and high-quality material use. Color renderings of the proposed building were included in the previous plan set. We have also provided an image from the Zippy Car Wash site on Carpenter Road:

Source: Google images

Elevations are comprised of the following material, and help to provide façade variation as follows:

- The façade materials are eight-inch and twelve-inch, split-face concrete block. Windows are trimmed with 8" single-score block, painted white.
- Gables are faced with "siding." The type of siding has been specified on the revised elevations as vinyl siding.
- The roof is a metal roof.
- The south façade (facing W. Michigan Ave.) is occupied by eight divided-light windows. The north façade (facing the parking lot and Ellsworth Rd.) is occupied by two entry doors into the "service" side of the building, two divided-light windows, and an enclosed alcove for mat washing.

Transparency
First floors facades facing a right-of-way are required to provide 50% transparency. First floor facades facing a parking area are required to provide 30% transparency. Transparency calculations have been provided, and show that all elevations meet the minimum requirements except for the north (parking lot)

façade. Two hundred seventy (270) square feet of transparency are required, and 147 s.f. is proposed. The ordinance offers flexibility in this transparency requirement. Up to 50% of the transparency requirement (or in this case 135 s.f. of transparency) could be addressed by providing architectural wall design features, outdoor dining/seating, or permanent, non-commercial art. The Planning Commission could consider the architectural design features toward the deficient transparency along the parking lot side of the building.

We also asked if the windows will be clear glass, or if they will be tinted, reflective or opaque. The plans specify that the windows will be transparent, as required.

Items to be Addressed: *1) Planning Commission to consider the architectural features of the building toward the deficient transparency on the north side of the building.*

SPECIAL USE

In the Regional Corridor District, a vehicle wash requires a special use. Standards for Special Use review are set forth in Section 1003. The Planning Commission shall review the particular circumstances and facts of each proposed use in terms of the following standards and required findings, and with respect to any additional standards set forth in this Ordinance. The Planning Commission shall find and report adequate data, information, and evidence showing that the proposed use meets all required standards:

1. Will be harmonious, and in accordance with the objectives, intent, and purpose of this Ordinance.
2. Will be compatible with the natural environment and existing and future land uses in the vicinity.
3. Will be compatible with the Township master plans.
4. Will be served adequately by essential public facilities and services, such as highways, streets, police and fire protection, drainage ways and structures, refuse disposal, or that the persons or agencies responsible for the establishment of the proposed use shall be able to provide adequately for such services
5. Will not be detrimental, hazardous, or disturbing to existing or future neighboring uses, persons, property, or the public welfare.
6. Will not create additional requirements at public costs for public facilities and services that will be detrimental to the economic welfare of the community.

To confirm that the proposal meets the standard that the use is not disturbing to the existing residential neighbors, we asked the applicant to provide the following information in our previous review:

1. *Proposed hours of operation*. This information is provided on the Cover Sheet of the revised plans. The proposed hours of operation are:
   - Monday – Saturday: 7am – 8pm
   - Sunday: 8am – 8pm
2. *Will vacuums be available when the car wash tunnel is closed for the night?* The Cover Sheet on the revised plans state that the vacuums and car mat wash will not be available when the vehicle wash building closed.

Regarding the other criteria, we find that the standards have been met. Our comments regarding how this proposal compares to the remaining Special Land Use standards follow:

- The intersection of W. Michigan Ave. and Ellsworth are designated as a Regional Corridor, intended to support a high volume of both local and regional traffic. This corridor type accommodates large national chains and auto-oriented uses that draw customers both regionally and locally. The proposed use is consistent with the intent of this district.
- The proposed use of the site as a vehicle wash can serve both the regional market, but also local neighborhoods, making this use consistent with the Master Plan.
- The project will redevelop the site, including sidewalk installation along both road frontages, landscaping, and lighting.
- The site was previously used by a car wash, and can adequately be served with public facilities and services
- The development of this site will not be detrimental to the future use and development of the corridor.

Items to be Addressed: *None.*

RECOMMENDATIONS

The applicant has responded to almost all of the comments from our previous review. The Township Engineer's comments will be addressed during the Final Site Plan/Detailed Engineering Review stage. In our opinion, the proposal meets the Special Land Use standards in the ordinance, and complies with the Site Plan requirements. The ordinance allows some flexibility to the Planning Commission in a few areas, and we list these items below. We would recommend Preliminary Site Plan approval if the alternatives are acceptable to the Commissioners. A summary of our comments follow.

PLANNING COMMISSION: Alternatives for Consideration –

1) Planning Commission to consider landscape/berm screen as alternative to six-foot-tall wall requirement, or additional alternatives if necessary.
2) Planning Commission to consider the additional shrubs along the northerly maneuvering lane to screen Ellsworth Rd., and this addition to justify modification of the perimeter parking lot landscaping requirement.
3) Planning Commission to consider the architectural features of the building toward the deficient transparency on the north side of the building.

APPLICANT: Revisions to Site Plan Submission/Variances – The applicant should make the following change in their Final Site Plan submission:

Parking and Loading

1) Add one (1) barrier-free, van-accessible space to the employee parking area.

Benjamin R. Carlisle

CARLISLE/WORTMAN ASSOC.,INC
Benjamin R. Carlisle, AICP, LEED AP
President

Sally M. Elmiger

CARLISLE/WORTMAN ASSOC., INC.
Sally M. Elmiger, AICP, LEED AP
Principal

Township Supervisor
Brenda L. Stumbo
Township Clerk
Debbie Swanson
Township Treasurer
Stan Eldridge

Trustees
John Newman II
Gloria Peterson
Karen Lovejoy Roe
LaResha Thornton

SUGGESTED MOTIONS:

Special Land Use:

Motion to Postpone:
"I move to postpone the Special Land Use Permit submitted by Zippy Auto Wash (Represented by Corey Weaver) to permit construction of a 4,900 s.f. automated tunnel car wash with two pay terminals and 12 vacuum stations/parking spaces on a 2.49-acre site zoned RC, Regional Corridor, located at 1822 W. Michigan Avenue, Ypsilanti, MI 48197, Parcel K-11-38-252-022, to give the applicant time to address the comments made at this evening's meeting and resubmit, and/or provide additional information, as discussed tonight."

Motion to Approve:
"I move to approve the Special Land Use Permit submitted by Zippy Auto Wash (Represented by Corey Weaver) to permit construction of a 4,900 s.f. automated tunnel car wash with two pay terminals and 12 vacuum stations/parking spaces on a 2.49-acre site zoned RC, Regional Corridor, located at 1822 W. Michigan Avenue, Ypsilanti, MI 48197, Parcel K-11-38-252-022, as the proposal meets the criteria in Article 10, Special Land Use, with the following conditions:

1. The applicant shall address all outstanding comments from reviewing agencies prior to Final Site Plan Approval.
2. The applicant shall revise all plan sheets to reflect the results of this evening's discussion.
3. The applicant shall obtain all applicable internal and outside agency permits prior to construction.
4. *(Any other conditions based upon Planning Commission discussion.)*"

Motion to Deny:
"I move to deny the Special Land Use Permit submitted by Zippy Auto Wash (Represented by Corey Weaver) to construct a 4,900 s.f. automated tunnel car wash with two pay terminals and 12 vacuum stations/parking spaces on a 2.49-acre site zoned RC, Regional Corridor, located at 1822 W. Michigan Avenue, Ypsilanti, MI 48197, Parcel K-11-38-252-022, due to the following reasons:"

1._____

2._____

3._____

Township Supervisor
Brenda L. Stumbo
Township Clerk
Debbie Swanson
Township Treasurer
Stan Eldridge

Trustees
John Newman II
Gloria Peterson
Karen Lovejoy Roe
LaResha Thornton

Preliminary Site Plan:

Motion to Postpone:
"I move to postpone the request for Preliminary Site Plan approval, submitted by Zippy Auto Wash (Represented by Corey Weaver) to permit construction of a 4,900 s.f. automated tunnel car wash with two pay terminals and 12 vacuum stations/parking spaces on a 2.49-acre site zoned RC, Regional Corridor, located at 1822 W. Michigan Avenue, Ypsilanti, MI 48197, Parcel K-11-38-252-022, to give the applicant time to address the comments made at this evening's meeting and resubmit, and/or provide additional information, as discussed tonight."

Motion to Approve:
"I move to approve the Preliminary Site Plan submitted by Zippy Auto Wash (Represented by Corey Weaver) to permit construction of a 4,900 s.f. automated tunnel car wash with two pay terminals and 12 vacuum stations/parking spaces on a 2.49-acre site zoned RC, Regional Corridor, located at 1822 W. Michigan Avenue, Ypsilanti, MI 48197, Parcel K-11-38-252-022, with the following modifications and conditions:

1. The Planning Commission considers the proposed landscape/berm screen along the west property line as an acceptable alternative to the required six-foot-tall masonry screen wall.
2. The Planning Commission considers the additional shrubs along the northerly maneuvering lane to justify the modification to the perimeter parking landscaping requirement.
3. The Planning Commission considers the architectural features of the building to count toward the deficient transparency on the north side of the building.
4. The applicant shall address all outstanding comments from reviewing agencies prior to Final Site Plan approval.
5. The applicant shall revise all plan sheets to reflect the results of this evening's discussion.
6. The applicant shall obtain all applicable internal and outside agency permits prior to construction.
7. *(Any other conditions based upon Planning Commission discussion.)*"

Motion to Deny:
"I move to deny the Preliminary Site Plan submitted by Zippy Auto Wash (Represented by Corey Weaver) to permit construction of a 4,900 s.f. automated tunnel car wash with two pay terminals and 12 vacuum stations/parking spaces on a 2.49-acre site zoned RC, Regional Corridor, located at 1822 W. Michigan Avenue, Ypsilanti, MI 48197, Parcel K-11-38-252-022, due to the following reasons:"

1._____

Township Supervisor
Brenda L. Stumbo
Township Clerk
Debbie Swanson
Township Treasurer
Stan Eldridge

YPSILANTI TOWNSHIP
— PLANNING & ZONING DEPARTMENT —

Trustees
John Newman II
Gloria Peterson
Karen Lovejoy Roe
LaResha Thornton

2._____

3._____

ARCHITECTS. ENGINEERS. PLANNERS.

OHM Advancing Communities®

June 27, 2025

Mr. Mark Yandrick
Township Planning Director
Charter Township of Ypsilanti
7200 S. Huron River Drive
Ypsilanti, MI 48197

RE: Zippy
Preliminary Site Plan Review #1

Dear Ms. Doppke:

We have completed the first preliminary site plan review of the plans dated June 2, 2025 and received by OHM Advisors on June 25, 2025.

At this time, the plans are recommended for consideration by the Township Planning Commission, contingent on the following comments being addressed. Preliminary detailed engineering comments have been provided to the applicant as a courtesy and shall be addressed prior to submitting detailed engineering plans for review.

A brief description of the project has been provided below, followed by our comments and a list of anticipated required permits and approvals. Comments in Section C are detailed in nature, do not influence the overall site layout, and can be addressed during the detailed engineering drawing submittal.

A. PROJECT AND SITE DESCRIPTION

The applicant is proposing a Zippy car wash at 1822 W Michigan Avenue. The existing building will be demolished. Associated site improvements, including parking, landscaping, utilities, and stormwater management, are also being proposed.

The site will be serviced by connection to the existing water main and sanitary sewer along W Michigan Avenue. The stormwater runoff will be managed by an underground detention basin and conveyance system.

B. SITE PLAN COMMENTS

Utilities

1. The applicant shall verify that all utilities shown on the Landscape Plan match the proposed Site Plan as there currently appear to be discrepancies.

Paving and Grading

2. The applicant shall provide truck turning templates (fire truck, garbage truck, etc.) to ensure sufficient space for maneuverability has been provided. The applicant shall also label the proposed loading zone.

3. The applicant shall note that all sidewalk perpendicular to parking spaces shall be seven (7) feet wide.

4. The applicant shall label the proposed barrier-free parking space and access aisle for clarity.

OHM Advisors
34000 PLYMOUTH ROAD
LIVONIA, MICHIGAN 48150
T 734.522.6711
F 734.522.6427
OHM-Advisors.com

C. PRELIMINARY DETAILED ENGINEERING COMMENTS

The following comments shall be addressed by the applicant during the detailed engineering drawing submittal, and do not affect the recommendation for approval to the Township of Ypsilanti Planning Commission. It should be noted that this is not an all-inclusive list and additional comments may be generated as new information is presented.

1. The applicant shall provide spot elevations at all four (4) corners of all barrier-free parking spaces, access aisles, ramps, and level landings, as well as along both sides of all proposed sidewalk/pathway at 50-foot intervals. The applicant shall note that the cross-slope shall not exceed 2%, per ADA Standards.

2. The applicant shall provide utility pipe profiles, including pipe diameter, material, length, slope, and hydraulic grade line for all proposed storm sewer.

3. The applicant shall provide a detailed drainage area map that provides drainage areas corresponding to each catch basin, including their acreages, C-factors, and C-factor calculations.

4. The applicant shall review and revise the outlet orifice calculations as it currently appears the minimum time of detention for the first flush storm (24 hours) was not met. The applicant shall update all subsequent calculations accordingly.

5. The applicant shall provide conveyance calculations for the proposed stormwater management system on the plans.

6. The applicant shall provide a Certificate of Outlet, signed and sealed by a registered engineer in the State of Michigan, on the plans.

7. The applicant shall clarify if soil borings/test pits were performed. If so, their logs and locations shall be provided on the plans and a copy of the geotechnical report shall be provided to this office.

8. The applicant shall include the heated slab with the trench drain within the maintenance schedule(s). The applicant shall also remove the wetlands and other components from the maintenance schedule(s) that are not present on-site for clarity.

9. The applicant shall note that storm sewer pipe shall be RCP C-76, per Township Standards, or the load carrying design analysis for use of other materials for the proposed depth conditions shall be provided on the plans.

10. The applicant shall provide the proposed size and material of all storm sewer.

11. The applicant shall locate the curb stop box and all sanitary cleanouts outside of pavement areas.

12. The applicant shall provide a detail of the water reclaim/sediment removal system.

13. The applicant shall provide a quantity list for all proposed utilities (water, sanitary, storm) on the Cover Sheet, delineated by existing or proposed road right-of-way or easement, per Township Standards.

14. It is recommended that a different HMA mix design is utilized (i.e. 4E) due to experience with 13A mix designs prematurely failing.

15. The applicant shall provide the Ypsilanti Township Standard Detail Sheets, including the SESC Detail Sheet, within the plan set. These can be obtained by emailing stacie.monte@ohm-advisors.com.

D. REQUIRED PERMITS & APPROVALS

The following outside agency reviews and permits will be required for the project. Copies of any correspondence between the applicant and the review agencies, as well as the permit or waiver, shall be sent to both the Township and OHM Advisors (email: stacie.monte@ohm-advisors.com).

- **Ypsilanti Community Utilities Authority (YCUA):** Review and approval of all water main and sanitary sewer improvements is required.
- **Ypsilanti Township Fire Department:** Review and approval is required.
- **Washtenaw County Water Resources Commissioner's Office (WCWRC):** Review and approval is required.
- **Washtenaw County Road Commission (WCRC):** Review and approval is required.
- **Ypsilanti Township Office of Community Standards:** A Soil Erosion and Sedimentation Control permit shall be secured from the Ypsilanti Township Office of Community Standards.

Should you have any questions regarding this matter, please contact this office at (734) 466-4580.

Sincerely,
OHM Advisors

Stacie L. Monte

Matthew D. Parks, P.E.

SLM/MDP

cc: Lauren Doppke, Township Staff Planner
Doug Winters, Township Attorney
Sally Elmiger, CWA, Township Planning Consultant
Steven Wallgren, Township Fire Marshall
Scott Westover, P.E., YCUA
File

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CHARTER TOWNSHIP OF YPSILANTI FIRE DEPARTMENT

BUREAU OF FIRE PREVENTION

222 South Ford Boulevard, Ypsilanti, MI 48198

June 27, 2025

Sally Elmiger, Planning and Development Consultant
Charter Township of Ypsilanti
7200 S. Huron River Drive
Ypsilanti, MI 48197

RE: Preliminary (non-residential) Site Plan Review #1

Project Name:	Zippy Auto Wash
Project Location:	1822 W. Michigan Ypsilanti, MI 48197
Plan Date:	6/2/2025
Applicable Codes:	IFC 2018
Designer:	Vanston/O'Brien, Inc. Builders
Engineering address:	8150 Jackson Road, Suite A, Ann Arbor, MI 48103

Status of Review

Status of review: Approved as Submitted

All pages were reviewed.

Site Coverage - Access

Comments: Fire department access is adequate.

Knox Box:

Comments: Knox box location is accessible.

Hydrant

Comments: Hydrant location is acceptable.

Best regards,

Steve Wallgren, Fire Marshal
Charter Township of Ypsilanti Fire Department
CFPS, CFI I

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YPSILANTI COMMUNITY UTILITIES AUTHORITY

2777 STATE ROAD
YPSILANTI, MICHIGAN 48198-9112
TELEPHONE: 734-484-4600
WEBSITE: www.ycua.org

June 25, 2025

VIA ELECTRONIC MAIL

Mr. Mark Yandrick, Planning Director
Office of Community Standards
CHARTER TOWNSHIP OF YPSILANTI
7200 S. Huron River Drive
Ypsilanti, MI 48197

Re: Preliminary (non-residential) Site Plan Review #1
Zippy Auto Wash
Charter Township of Ypsilanti (Plan Date: 06-02-2025)

Dear Mr. Yandrick:

In response to the electronic mail message from your office dated June 25, 2025, we have reviewed the referenced plans with regards to water supply and wastewater system design. The plans are acceptable to YCUA for this stage of review. However, the following comment is offered for the Detailed Engineering phase of the project.

1. The existing building has a 4" diameter water service connected to the existing 8" diameter just south of the fire hydrant near the westerly property line. As it appears the existing water service will not be used as part of the proposed redevelopment of the site, the project will be responsible for disconnecting the service from the existing water main.

Connection fees do not apply to the proposed project. However, please note that **the construction phase escrow deposit, YCUA administration fee, and record plan guarantee**, must be paid to YCUA by the Applicant, with a receipt delivered to the Township, before either the building or soil and grading permit is issued. The construction phase escrow deposit and associated fees and deposits and the entity responsible for maintaining those accounts will be determined during the Detailed Engineering phase of the project in conjunction with your office and the Township Engineer. Should there be any questions please contact this office.

Sincerely,

SDW Digital Signature

SCOTT D. WESTOVER, P.E., Director of Engineering
Ypsilanti Community Utilities Authority

cc: Mr. Luke Blackburn, Mr. Sean Knapp, File, YCUA
Ms. Sally Elmiger, Ms. Lauren Doppke, Township Planning Department
Mr. Steve Wallgren, Township Fire Department
Mr. Matt Parks, P.E., Ms. Stacie Monte, Township Engineer
Mr. Corey Weaver, Applicant
Mr. Greg Heim, P.E., Applicant's design engineer

Outlook

WCRC App# 21423 Corey Weaver Ellsworth Rd Ypsilanti Twp - Zippys Car Wash

From Taylor, Elizabeth <taylore@wcroads.org>
Date Mon 7/7/2025 1:35 PM
To mrweaver@comcast.net <mrweaver@comcast.net>
Cc Streight, Gary <streightg@wcroads.org>; Sally Elmiger <selmiger@ypsitownship.org>; Brenda Stumbo <bstumbo@ypsitownship.org>; Debbie Swanson <dswanson@ypsitownship.org>; Matt Parks <matt.parks@ohm-advisors.com>; Permits <permits@wcroads.org>

2 attachments (14 MB)
App 21423 Plans Rec. 06-04-25.pdf; App 21423 Rec. 06-04-25.pdf;

Some people who received this message don't often get email from taylore@wcroads.org. Learn why this is important

Dear Applicant:
I have reviewed your plans for the two commercial driveway approaches at 1822 West Michigan Avenue and require the following revisions:

1. Our preliminary field evaluation of the new driveway approach along the south side of the property along Michigan Avenue revealed that the “as-staked” proposed location does not make site distancing requirements as per Section 3.6 of **WCRC’s Procedures & Regulations for Permit Activities** (attached to this email).

2. The existing driveway on the north side of the property also does not meet the WCRC the site distancing requirements, due to vegetation.

3. Both areas will likely require substantial clearing in the right-of-way (ROW) and may even require clearing the ROW of the adjacent property.

4. In accordance with Section 3.6, please revise drawings to include the “site distancing area” on either side of the drive approaches with a notation that these areas must remain free of obstructions that might block a driver’s view.

5. Clearing for site distancing in these areas may impact trees. Any trees with a diameter of 6” or greater that are being removed will have to be specifically indicated in the plan along with the species.

6. WCRC will also require a signed wood disposal agreement from property owners whose trees will be impacted by the project.

7. If clearing and/or grading is required outside of the property boundaries, but still within the ROW, WCRC with require the applicant apply for a separate grading permit.

8. For the existing driveway approach along Ellsworth Road, WCRC requires the following notes be added to the approved permit drawings:
    a. The Contractor shall rebuild the existing driveway in-kind, meaning without alterations to the driveway elevation, configuration, dimensions, and geometrics to

the greatest extent possible.

9. Drawing C3 shows a “monument sign” along Ellsworth Road, on the west side of the driveway approach, please provide dimension in relation to the ROW and/or curb and gutter for this sign.

10. The WCRC Traffic and Safety Department reviewed the sidewalk layout on the east side of the development with ADA compliance. WCRC is concerned that at the intersection of Ellsworth and Michigan Avenue there is currently not an ADA compliant pedestrian crossing. The proposed sidewalk extending to the easternmost tip of the property at the intersection presents an issue because it appears to “tempt” pedestrians to cross Ellsworth take refuge on the Zippy Car Wash property and then proceed to walk across Michigan Avenue. WCRC proposes ending the sidewalk at the proposed picnic table area and not having it continue to the tip of the easternmost edge of the property. Otherwise, there are significant safety concerns with extending the sidewalk to wrap around the tip of the property and remediating the pedestrian safety issues would substantial alterations to this intersection (including but not limited to ADA compliant pedestrian crossings and signalized intersections).
11. Please provide the following General Notes (C-1) acknowledging the following:
    a. Note 6 should be revised to include Washtenaw County Road Commission (WCRC)
    b. Add the following comments:
        i. Contractor/Permit Holder shall restore disturbed areas within the road right-of-way in accordance with WCRC standards.
        ii. All material used within the WCRC road right-of-way shall conform with current WCRC and MDOT specifications.
        iii. The driveway approach shall be constructed so that the existing drainage is not adversely affected.
        iv. Contractor/Applicant must maintain access to adjacent driveways during construction.
        v. The two driveway approaches shall be constructed so that the existing roadway drainage is not adversely affected.
        vi. The two driveway approaches shall match the grade of the existing edge of pavement.
        vii. The driveway approach shall be constructed of materials that comply with MDOT and WCRC standards.
        viii. All traffic control devices shall be maintained in accordance with Part 6 of the current MMUTCD and shall be MASH compliant.

12. Final acceptance of work in the right-of-way and subsequent permit closure are subject to WCRC approval.

13. Provide a cost estimate for all work within the ROW.

14. An inspection fee equal to 3% of the approved estimate, $500 minimum, along with a deposit equal to the full amount of the estimate in the form of a letter of credit or check is required.

We ask that all questions and revised plans be submitted to permits@wcroads.org. No work shall occur until a permit has been issued.

Respectfully Submitted,
Beth

Elizabeth Taylor, P.E.
Project Manager - Permits

Washtenaw County Road Commission
555 N. Zeeb Road, Ann Arbor, Michigan

Direct: (734) 327-6671 | Main: (734) 761-1500 | Cell: (734) 845-2066
wcroads.org | Follow us on Facebook

GRETCHEN DRISKELL

Water Resources Commissioner
705 N Zeeb Road
Ann Arbor, MI 48103
734-222-6860

Drains@washtenaw.org

Harry Sheehan
Chief Deputy Water Resources Commissioner

Scott Miller P.E.
Deputy Water Resources Commissioner

Theo Eggermont
Public Works Director

June 16, 2025

Mr. Greg Heim, P.E.
Vanston/O'Brien Inc.
8150 Jackson Road, Suite A
Ann Arbor, Michigan 48103

RE: Zippy Auto Wash
W. Michigan Ave and E. Ellsworth Rd
Ypsilanti Township, Michigan
WCWRC Project No. 12367

Dear Mr. Heim:

This office has reviewed the preliminary site plans for the above-referenced project to be located in Ypsilanti Township. These plans have a date of June 2, 2025 and were received via e-mail on June 2, 2025. As a result of our review, we would like to offer the following comments:

1. The engineer's certificate of outlet, accompanied by corresponding calculations and documentation, should be submitted to our office for review.
    a. The certificate of outlet is to be provided by the design engineer during the review process to certify that the receiving channel has adequate capacity to receive the detention basin discharge.
2. Since the stormwater management system will be private, any reference to inspection, maintenance, or assessment by the County must be removed from the plan set in general, and specifically from note C of the maintenance tasks shown on plan sheet C-5.
3. The minimum time of detention of 24 hours for the first flush storm was not met with the selected outlet orifice configuration.
4. Please see the attached invoice for the current fees and remit these fees upon receipt. As requested, the invoice is being submitted directly to Zippy Auto Wash.

At your convenience, please send us a complete set of revised plans and the additional information requested above so that we may continue our review. If you have any questions, please contact our office.

Sincerely,

Theresa M. Marsik, P.E.
Stormwater Engineer
(approval\Zippy Auto Wash W. Michigan Ave and E. Ellsworth rev1)

cc: Corey Weaver, Zippy Auto Wash
Brenda Stumbo, Ypsilanti Township Supervisor
Lauren Doppke, Ypsilanti Township Staff Planner
Sally Elmiger, Ypsilanti Township Planning Department (Carlisle Wortman Associates)
Doug Winters, McLain and Winters
Matt Parks, P.E., Ypsilanti Township Engineer (OHM)
Stacie Monte, Ypsilanti Township Engineer (OHM)

Washtenaw County Water Resources
PO Box 8645
Ann Arbor, MI 48107-8645
drains@washtenaw.org 734-222-6860

General Invoice

Customer Copy

CUSTOMER	INVOICE DATE	INVOICE NUMBER	AMOUNT PAID	DUE DATE	INVOICE TOTAL DUE
ZIPPY AUTOWASH	06/16/2025	16244	$0.00	**07/16/2025**	**$1,181.25**

DESCRIPTION	QUANTITY	PRICE	UOM	ORIGINAL BILL	ADJUSTED	PAID	AMOUNT DUE
Engineering Site Inspection Fees WO 12367 Engineering Site Inspection Fees	2.00	$135.000000	EACH	$270.00	$0.00	$0.00	$270.00
Engineering Review Fees WO 12367 Engineering Review Fees	6.75	$135.000000	EACH	$911.25	$0.00	$0.00	$911.25
				Invoice Total:			**$1,181.25**

WATER RESOURCES
ZIPPY AUTO WASH
WCWRC PROJECT #12367

DETACH AND RETURN THE PORTION BELOW WITH YOUR PAYMENT

Washtenaw County Water Resources
PO Box 8645
Ann Arbor, MI 48107-8645
drains@washtenaw.org 734-222-6860

General Invoice

Remit Portion

Invoice Date	**06/16/2025**
Invoice Number	**16244**
Customer Number	**10430**
Amount Paid	
Due Date	**07/16/2025**
Invoice Total Due	**$1,181.25**

Please note your invoice number on your payment.

ZIPPY AUTOWASH
WEAVER, COREY
233 W ELLSWORTH
ANN ARBOR, MI 48108

Charter Township of Ypsilanti
Office of Community Standards
7200 S. Huron Drive, Ypsilanti, MI 48197
Phone: (734) 544-4000 ext. #1
Website: https://ypsitownship.org

RECEIVED BY
JUN 03 2025
YPSILANTI TOWNSHIP OCS

SPECIAL CONDITIONAL USE/ USES SUBJECT TO SPECIAL CONDITIONS APPLICATION

I. PROJECT LOCATION

Address: 1822 W Michigan Ave Parcel ID #: K-11- 39-252-022 Zoning RC
Lot Number: _____ Subdivision: _____
Describe proposed use: Drive Thru Automatic Vehicle Wash facility with exterior vacuum services

II. APPLICANT/PROPERTY OWNER

Applicant: Zippy Auto Wash Phone: 734-424-0661
Address: P.O. Box 550 City: Saline State: MI Zip: 48176
Property Owner (if different than applicant): _____ Phone: _____
Address: _____ City: _____ State: ____ Zip: _____

III. FEES

Total: $ 1000

Breakdown of fee:

Non-refundable:	**$1,000**
Refundable:	**$1,000**

IV. APPLICANT SIGNATURE

The following are attached to this application:

- [x] Name(s) and address(es) of all record owner(s) and proof of ownership.
  - [ ] If applicant is not the fee-simple owner, the owner's signed authorization for application must be attached to this application.
- [x] Scaled and accurate survey drawing, correlated with a legal description and showing all existing buildings, drives and other improvements.
- [x] Section of Zoning Ordinance involved in this request 2122.(1): 1129.5 - Vehicle wash

[Daycare only]

- [ ] Copy of State license.
- [ ] Copy of inspection reports.
- [ ] Drawing or pictures of the house layout, showing the rooms that you will utilize for the daycare.

Applicant Signature	Print Name	Date
E. Weaver	Corey Weaver	6/2/25

- [ ] Approved
- [ ] Denied

Zoning Administrator Signature	Print Name	Date

Please note: Application cannot be appealed to the Board of Appeals. If denied by the Planning Commission, re-application can be made to the Planning Commission after 365 days, after the date of this application, except on the grounds of new evidence or proof of changed conditions found by the Planning Commission to be valid.

Charter Township of Ypsilanti
Office of Community Standards
7200 S. Huron Drive, Ypsilanti, MI 48197
Phone: (734) 544-4000 ext. #1
Website: https://ypsitownship.org

OFFICE USE ONLY

All special conditional use applications	
☐ The application is filled out in its entirety and includes the signature of the applicant and, if different than the applicant, the property owner. ☐ Name(s) and address(es) of all record owner(s) and proof of ownership. If the applicant is not the property owner, written and signed permission from the property owner is required ☐ A detailed description of the proposed use. ☐ A site plan, if requested by the planning commission ☐ Fees	☐ Scaled and accurate survey drawing, correlated with a legal description and showing: ☐ All property lines and dimensions ☐ All existing and proposed structures and dimensions ☐ Locations of drives, sidewalks, and other paved areas on the property and on the adjacent streets ☐ Location and dimensions of the nearest structures on adjacent properties ☐ Easements and dimensions, if applicable

Charter Township of Ypsilanti
Office of Community Standards
7200 S. Huron Drive, Ypsilanti, MI 48197
Phone: (734) 544-4000 ext. #1
Website: https://ypsitownship.org

RECEIVED BY CO
JUN 03 2025
YPSILANTI TOWNSHIP
OCS

SITE PLAN REVIEW APPLICATION

I. APPLICATION/DEVELOPMENT TYPE

Development:

- ☐ Subdivision
- ☐ Multi-family/Condominium
- ☐ Site Condominium
- ☑ Planned Development
- ☐ Non-residential

Application:

- ☐ Administrative Site Plan Review
- ☐ Sketch Site Plan Review
- ☑ Full Site Plan Review
- ☐ Revisions to approved plan
- ☐ Tentative Preliminary Plat
- ☐ Final Preliminary Plat
- ☐ Final Plat Process
- ☐ Stage I (for Planned Development)
- ☐ Stage II (for Planned Development)

II. PROJECT LOCATION

Address: 1822 W Michigan Ave City: Ypsilanti State: MI Zip: 48197
Parcel ID #: K-11- 39-252-022 Zoning RC
Lot Number: _____ Subdivision: _____
Property dimensions: 300x700 Acreage: 3.28
Name of project/Proposed development: Zippy Auto Wash
Legal description of Property:

Land in the Township of Ypsilanti, County of Washtenaw, Michigan, described as: Lots 19 through 24, inclusive, TRIANGLE PARK SUBDIVISION, a part of French Claim No. 690, Washtenaw County, Michigan,as recorded in Liber 7 of Plats, Page 26, Washtenaw County Records. Also, the vacated walkway ~~between Lots 19, 20, 21 and 22 of said Subdivision. Also, beginning in the centerline of Chicago Road (now Michigan Avenue) at a point which is South~~ 20°06'00" East 51.20 feet from the Southeast corner of Triangle Park Subdivision, as recorded in Liber 7 of Plats, Page 26, Washtenaw County Records; ~~thence North 20°06'00" West 280.87 feet; thence South 88°40'00" East 491.95 feet to the center of Chicago Road (now Michigan Avenue); thence South 57°27'00" West 468.95 feet to the PLACE OF BEGINNING, being part of French Claim No. 690, Town 3 South, Range 7 East, Ypsilanti Township,~~ Washtenaw County, Michigan.

Describe Proposed Project (including buildings/ structures/ # units):
Automatic vehicle wash facility with on site vacuums, employee parking and underground detention.

III. APPLICANT INFORMATION

Applicant: Zippy Auto Wash - Corey Weaver Phone: 734-904-3869
Address: P.O.Box 550 City: Saline State: MI Zip: 48176
Fax: _____ Email: mrweaver@comcast.net
Property owner (if different than applicant): _____ Phone: _____
Address: _____ City: _____ State: ____ Zip: _____
Fax: _____ Email: _____
Engineer: Vanston/O'Brien Inc. - Greg Heim Phone: 734-424-0661
Address: 8150 Jackson Road City: Ann Arbor State: MI Zip: 48103
Fax: _____ Email: greg.heim@vanston.com

Charter Township of Ypsilanti
Office of Community Standards
7200 S. Huron Drive, Ypsilanti, MI 48197
Phone: (734) 544-4000 ext. #1
Website: https://ypsitownship.org

SITE PLAN REVIEW APPLICATION

VI. SCHEDULE OF FEES

Preliminary Site Plan Review		
	Non-refundable fee	Refundable deposit
Full	$500	Less than one (1) acre: $2,000 One (1) acre to five acres: $4,000 Over five (5) acres to ten (10) acres: $5,500 Greater than ten (10) acres: $5,500 + $50 per acre over ten (10) acres
Sketch	$500	Less than one (1) acre: $1,500 One (1) acre to five acres: $2,000 Over five (5) acres to ten (10) acres: $2,500 Greater than ten (10) acres: 25,500 + $50 per acre over ten (10) acres
Administrative	$100	Less than one (1) acre: $1,000 One (1) acre to five acres: $1,200 Over five (5) acres to ten (10) acres: $1,500 Greater than ten (10) acres: $1,500 + $50 per acre over ten (10) acres
Planned Development Stage I and Rezoning	$1,500 + $20 per acre	Less than one (1) acre: $3,000 One (1) acre to five acres: $4,000 Over five (5) acres to ten (10) acres: $5,500 Greater than ten (10) acres: $5,500 + $50 per acre over ten (10) acres
Final Site Plan Review		
	Non-refundable fee	Refundable deposit
Full	$500	Less than one (1) acre: $3,000 One (1) acre to five acres: $4,000 Over five (5) acres to ten (10) acres: $5,500 Greater than ten (10) acres: $5,500 + $50 per acre over ten (10) acres
Sketch	$500	Less than one (1) acre: $1,500 One (1) acre to five acres: $2,000 Over five (5) acres to ten (10) acres: $2,500 Greater than ten (10) acres: $2,500 + $50 per acre over ten (10) acres
Administrative	$100	Less than one (1) acre: $1,000 One (1) acre to five acres: $1,200 Over five (5) acres to ten (10) acres: $1,500 Greater than ten (10) acres: $1,500 + $50 per acre over ten (10) acres
Planned Development Stage I and Rezoning	$1,500 + $20 per acre	Less than one (1) acre: $3,000 One (1) acre to five acres: $4,000 Over five (5) acres to ten (10) acres: $5,500 Greater than ten (10) acres: $5,500 + $50 per acre over ten (10) acres

$ 4500 **FEE TOTAL**

V. APPLICANT SIGNATURE

Applicant Signature	Corey Weaver	6/2/25
	Print Name	Date

Charter Township of Ypsilanti
Office of Community Standards
7200 S. Huron Drive, Ypsilanti, MI 48197
Phone: (734) 544-4000 ext. #1
Website: https://ypsitownship.org

SITE PLAN REVIEW APPLICATION

Site Plan Review applications

- [x] The application is filled out in its entirety and includes the signature of the applicant and, if different than the applicant, the property owner.
- [x] Fees
  - [x] Check made out to Ypsilanti Township with appropriate fees. *Please note: The same preliminary site plan review fee will be charged for each subsequent submittal*
  - [x] Fees paid separately to Ypsilanti Community Utilities Authority
  - [x] Fees paid separately to Washtenaw County Road Commission and Water Resources Commissioner's Office
- [ ] Additional Documents:
  - [ ] Woodland Protection application or the No Tree Affidavit, if applicable
  - [ ] Traffic Impact Questionnaire
  - [ ] Appropriate application and plans submitted to the Washtenaw County Road Commission and Water Resources Commissioner's Office
- [x] Proposed Plans
  - [x] One (1) signed and sealed copies (24"x36") of the proposed plan
  - [x] One (1) copy (11"x17") of the proposed plan
  - [x] One (1) PDF digital copy of the proposed plan
  - [x] All contents detailed on the next pages for administrative, sketch, and full site plans.

DESIGNERS
Vanston/O'Brien, Inc.
BUILDERS

August 13, 2025

Ms. Sally Elmiger
Ypsilanti Township Planning Consultant
7200 S Huron River Drive
Ypsilanti, Michigan 48197

RE: Zippy Auto Wash
Site Plan Review

Dear Ms. Elmiger:

I have reviewed and revised the plans per your comments dated July 2, 2025 and the OHM Comments review dated June 27, 2025. As a result, I would like to offer the following comments and revisions:

Comments on Carlisle/ Wortman letter followed by *responses*:

PLANNING COMMISSION: Alternatives for Consideration –

1) Consider proposed landscape screen (next to west property line that abuts W. Michigan Ave.) as an alternative to the six-foot-tall wall requirement, or propose additional screening alternatives. *This Screen also includes a 3' to 4' high berm.*
2) Consider requiring shrubs along the northerly maneuvering lane to screen Ellsworth Rd. See Pg. 9 for illustration. *Shrubs have been added to provide a better visual screen to the site.*
3) Consider alternative dumpster location that is not directly in view of Ellsworth Rd. *The dumpster has been rotated to provide a better visual screen from the entryway, the additional shrubs added along Ellsworth Road will also provide a screen to the front of the enclosure.*
4) Discuss with applicant the possibility of relocating the pole-mounted light fixture at W. Michigan Ave. driveway from the east side of the driveway to the west side of the driveway to direct light away from the adjacent residential lot. *This light pole location has been revised as noted.*
5) Consider counting the picnic table along the sidewalk shortcut between the W. Michigan Ave. safety path and the Ellsworth Rd. safety path for the deficient transparency on the north side of the building. *The Table has been removed at the recommendation of the commission. We believe that the vertical and horizontal building features provided meet the alternates allowed for reduction of the required glass as provided in the ordinance.*

Special Land Use

1) Provide proposed hours of operation. *Hours of operation have been added to the cover sheet.*

2) Describe if vacuum stations are available when the car wash building is closed for the night. *Note confirming the vacuum shall only be operational during operating hours has been added to the cover sheet.*

Natural Features

1) Add "symbol" indicating the location of tree protection fencing to the site plan around trees to remain on the Demolition Plan (if any), Grading Plan, and Landscape Plan. *Tree Protection has been added to the plans.*

2) Add note stating: "No parking of equipment or vehicles, or storage of materials shall be allowed within the tree protection fencing" to the Demolition Plan (if any), Grading Plan, and Landscape Plan. *Noted on plans.*

Area, Width, Height, Setbacks (Bulk Requirements)

1) Seek variance for the proposed building location relative to the Ellsworth Rd. build-to line. *Variance Approved.*

2) Correct impervious surface calculation, per ordinance definition. *Corrected on the cover sheet.*

3) Seek a variance for parking location in Ellsworth Rd. front yard. *Variance Approved.*

Parking and Loading

1) Add one (1) barrier-free, van-accessible space to the employee parking area. *The barrier free space is provided.*

2) Show barrier-free route between employee parking area and building on plans. *The barrier free space is provided.*

3) Will a "DO NOT ENTER" sign be installed to keep vacuum users out of the car wash lane? *Sign noted and shown on plans.*

4) Add one (1) 10' x 25' loading space to the plans. *Space has been depicted.*

5) Describe the type and size of delivery truck that will deliver supplies to the site. *A description has been added to the cover sheet.*

Site Access, Circulation, Traffic

1) Add sidewalk connections from the safety path along the W. Michigan Ave. and Ellsworth Rd. rights-of-way to the pedestrian door on the north façade of the building. *Sidewalk connections are provided.*

Screening and Landscaping

1) Increase size of "Show Off" Forsythia to minimum 5-gallon container. *Revised.*

2) Seek variance for locating dumpster screen in a "front" yard. *Variance Approved.*

Lighting

1) Confirm if linear light fixtures will be mounted to the vacuum arms; if so, then linear light fixtures, and their light levels, need to be added to the photometric plan. *These fixtures have been added to the plan.*

2) Lower the height of the pole-mounted fixture at the W. Michigan Ave. driveway to 18 feet (including base). *Pole has been lowered moved and shielded from the west.*

3) Modify fixtures "A" and "B" so color temperature does not exceed 3500k. *Revised.*
4) Revise note on Lighting Plan regarding nighttime lighting reductions to reflect Ypsilanti Township's ordinance requirements. *Revised.*

Elevations and Floor Plans

1) Specify the type of siding on Architectural Plans to confirm that high-quality materials are being used. *Materials are noted on a table on the plans.*
2) Add transparency calculations for north and south facades to Architectural Plans. *Calculations have been provided.*
3) Specify on Architectural Plans that windows and doors are transparent (and not tinted, reflective or opaque glass). *Noted.*

Comments on OHM letter followed by *responses*:

Utilities

1. The applicant shall verify that all utilities shown on the Landscape Plan match the proposed Site Plan as there currently appear to be discrepancies. *Revised.*

Paving and Grading

2. The applicant shall provide truck turning templates (fire truck, garbage truck, etc.) to ensure sufficient space for maneuverability has been provided. The applicant shall also label the proposed loading zone. *Provided.*
3. The applicant shall note that all sidewalk perpendicular to parking spaces shall be seven (7) feet wide. *Revised.*
4. The applicant shall label the proposed barrier-free parking space and access aisle for clarity. *Revised.*

Additional revisions have been made to address some comments from the Water Resources Commissioner and Road Commission.

Sincerely,

Greg Heim, P.E.

Vanston/O'Brien Inc.

SITE PLAN

ZIPPY AUTO WASH

1822 W Michigan Avenue
Ypsilanti Township, Michigan

ABBREVIATIONS

A	A.F.F.	ABOVE FINISH FLOOR
	AC.	ACRE
	A/C	AIR CONDITION
	ALUM.	ALUMINUM
	ASPH.	ASPHALT
B	B.F.F.	BELOW FINISH FLOOR
	BIT.	BITUMINOUS
	BLDG.	BUILDING
C	CB	CATCH BASIN
	C.O.	CLEAN OUT
	COMP.	COMPRESSOR
	CONC.	CONCRETE
	CMU	CONCRETE MASONRY UNIT
	C.J.	CONTROL JOINT
D	DIA.	DIAMETER
	DIM.	DIMENSION
	DWG.	DRAWING
	D.I.	DUCTILE IRON
E	EA.	EACH
	ELEC.	ELECTRIC
	EL. / ELEV.	ELEVATION
	EQ.	EQUAL
	EXIST. / EX.	EXISTING
	EXP.	EXPANSION
	E.J.	EXPANSION JOINT
	EXT.	EXTERIOR
F	FT.	FEET
	F.F.	FINISH FLOOR
	F.H.	FIRE HYDRANT
	FIXT.	FIXTURE
	FLR.	FLOOR
	F.A.R.	FLOOR/AREA RATIO
G	GA.	GAUGE
	GALV.	GALVANIZED
	GL.	GLASS
H	HT.	HEIGHT
	H.P.	HIGH POINT
	H.M.	HOLLOW METAL
	HORIZ.	HORIZONTAL
I	I.D.	INSIDE DIAMETER
	INT.	INTERIOR
	INV.	INVERT
J	JT.	JOINT
L	L.L.	LIVE LOAD
	L.L.H.	LONG LEG HORIZONTAL
	L.L.V.	LONG LEG VERTICAL
	L.P.	LOW POINT
M	MFR.	MANUFACTURER
	MH	MANHOLE
	MAS.	MASONRY
	M.O.	MASONRY OPENING
	MAX.	MAXIMUM
	MIL.	MILLIMETER
	MIN.	MINIMUM
	MTD	MOUNTED
N	NOM.	NOMINAL
	N.I.C.	NOT IN CONTRACT
	NO.	NUMBER
O	O.C.	ON CENTER
	O.D.	OUTSIDE DIAMETER
	O.H.	OVERHEAD
	OE	OVERHEAD ELECTRIC
	OTE	OVERHEAD TELEPHONE & ELECTRIC
P	PTD.	PAINTED
	PSF	POUNDS PER SQUARE FOOT
	PSI	POUNDS PER SQUARE INCH
	PEMB	PRE-ENGINEERED METAL BUILDING
	PREFAB.	PREFABRICATED
R	RAD.	RADIUS
	REV.	REVISED
	R.O.W.	RIGHT OF WAY
	RTU	ROOF TOP UNIT
	RM.	ROOM
S	SAN.	SANITARY
	SCHED./SCH.	SCHEDULE
	SIM.	SIMILAR
	S.P.A.	SITE PLAN APPROVAL
	SQ. FT./ S.F.	SQUARE FEET
	STD.	STANDARD
	ST. MH	STORM MANHOLE
T	TV&S	TAPPING VALVE & SLEEVE
	T/C	TOP OF CURB
	T/GR	TOP OF GRADE
	T/P	TOP OF PAVEMENT
	T/W	TOP OF WALK
	TBR	TO BE REMOVED
	TYP.	TYPICAL
U	UE	UNDERGROUND ELECTRICAL
	UTE	UNDERGROUND TELEPHONE & ELECTRICAL
	U.N.O.	UNLESS NOTED OTHERWISE
	U.P.	UTILITY POLE
V	VERT.	VERTICAL
W	W/	WITH
	W/O	WITHOUT

LEGAL DESCRIPTION

PROPERTY TAX ID: K-11-39-252-022
PROPERTY DESCRIPTION PER AMERICAN TITLE COMPANY OF WASHTENAW, ISSUED FOR STEWART TITLE GUARANTY COMPANY,
COMMITMENT NO: 116879, WITH AN EFFECTIVE DATE OF APRIL 11, 2025 AT 5:00 P.M.:
Land in the Township of Ypsilanti, County of Washtenaw, Michigan, described as:
Lots 19 through 24, inclusive, TRIANGLE PARK SUBDIVISION, a part of French Claim No. 690, Washtenaw County, Michigan, as recorded in Liber 7 of
Plats, Page 26, Washtenaw County Records.
Also, the vacated walkway between Lots 19, 20, 21 and 22 of said Subdivision.
Also, beginning in the centerline of Chicago Road (now Michigan Avenue) at a point which is South 20°06'00" East 51.20 feet from the Southeast
corner of Triangle Park Subdivision, as recorded in Liber 7 of Plats, Page 26, Washtenaw County Records; thence North 20°06'00" West 280.87 feet;
thence South 88°40'00" East 491.95 feet to the center of Chicago Road (now Michigan Avenue);
thence South 57°27'00" West 468.95 feet to the PLACE
OF BEGINNING, being part of French Claim No. 690, Town 3 South, Range 7 East, Ypsilanti Township, Washtenaw County, Michigan.

PROJECT DESCRIPTION

The proposed use is a modern express exterior auto wash – defined as a conveyorized wash with automated pay terminals, unlimited plans, free vacuums and other complimentary services. The proposed site plan is substantially similar to other operational Zippy Auto Wash sites in the nearby Ann Arbor / Ypsilanti area. The proposed site plan consists of a 4900 square foot building, including a 150 foot automated wash process with high power, heated mechanical drying, 2 automated pay terminals located behind the building, ample stacking spaces located on site, 12 vacuum stations and customer & employee parking, located adjacent to the building. The entrance & exit slabs adjacent to the building shall be heated to prevent freezing; areas beyond the slabs shall be deiced regularly to prevent freezing.

GENERAL NOTES:

1. All site work shall meet all applicable codes, laws and regulations including Michigan Barrier-Free Design Requirements and ADA Accessibility Guidelines (ADAAG).
2. Verify existing conditions on site. Notify architect/engineer of discrepancies prior to proceeding with construction.
3. Provide signs per Michigan Barrier-Free Requirements at handicapped spaces. Van spaces shall have an additional sign, "VAN ACCESSIBLE" per ADAAG requirements.
4. All work in R.O.W. shall conform to MDOT and/or County Standards and permitting guidelines.
5. All roads leading to the site are designated Class A for all season travel.
6. All work done shall be performed in accordance with the WCRC'S current ordinances, standards and regulations.
7. Existing utility information and locations are per existing records and may or may not have been field verified.
8. Contractor/permit holder shall restore disturbed areas within the road right-of-way in accordance with WCRC standards.
9. All material used within the WCRC road right-of-way shall conform with current WCRC and MDOT specifications.
10. The driveway approach shall be constructed so that the existing drainage is not adversely affected.
11. Contractor/Applicant must maintain access to adjacent driveways during construction.
12. The two driveway approaches shall be constructed so that the existing roadway drainage is not adversely affected.
13. The two driveway approaches shall match the grade of the existing edge of pavement.
14. The driveway appoach shall be constructed of materials that comply with MDOT and WCRC standards.
15. All traffic control devices shall be maintained in accordance with part 6 of the current MMUTCD and shall be MASH compliant.

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

SITE INFORMATION

CURRENT ZONING: RC – Regional Corridor, SITE TYPE C, BUILDING TYPE A.2
SITE AREA: GROSS/NET = 143,072 SF/108,535 SF NET – 3.28 AC./ 2.49 AC. NET
EXISTING USE: Car Wash
PROPOSED BUILDING USE: Automatic Car Wash
PROPOSED BUILDING AREA: 4,900 SF – 1 Story

	REQUIRED	PROPOSED
MIN. LOT AREA	24,000 SF	Net 108,535 SF/2.49 Acres
MIN. LOT WIDTH	150'	493'
IMPERVIOUS COVERAGE		45,339.15 SF/1.04AC
IMP AREA COVERAGE	80%	42.26%
MAX. BUILDING HEIGHT	14' Min., 1 story	18', 1 story
MAX. BUILDING HEIGHT	30' max., 2 stories	18', 1 story
FRONT BUILD TO LINE (MICHIGAN AVE)	10'	10'
FRONT BUILD TO LINE (ELLSWORTH RD)	10'	83.5'
REAR YARD SETBACK	10'	178'
RESIDENTIAL USE SETBACK	27'	178'

PARKING & LOADING:
Parking Spaces Required:
Vehicle Wash: 1 space for each (1) employee.
3-5 employees
Total Required Parking Spaces: 5 spaces
Parking Spaces Provided:
12 vacuum spaces are provided with 5 employee spaces, Including 1 barrier-free space

Loading Spaces:
1 Loading Spaces Provided. Deliveries made mostly by box-van type trucks or prior to open hours.

Stacking Spaces:
Required: Auto Washes: Entry 8 – Exit 2
Provided: 10+ each

HOURS OF OPERATION
MONDAY-SATURDAY 7AM TO 8PM
SUNDAY 8AM TO 8PM

ALL SERVICES INCLUDING VACUUMS AND MAT WASHING ARE AVAILABLE ONLY DURING OPERATING HOURS.

SOILS INFORMATION:
MoC Morley loam, 6 to 12 percent slopes Soil Group C
StB St Clair clay loam, 2 to 6 percent slopes Group D

NATURAL FEATURES:
The site is contains an existing car wash facility with paving utilities landscape and detention which shall be removed for the new development. Trees along western property lines shall be maintained to the extent possible for construction.

SANITARY SEWER BASIS OF DESIGN
THE AVERAGE FLOW RATE DURING HOURS OF OPERATION IS 0.025 CFS WITH A PEAK RATE OF 0.065 CFS. ESTIMATED AT 5000 GPD

UTILITY NOTES

The existing utilities shown on the drawings represent the best information available as obtained by field surveys and from existing records. This information does not relieve the contractor of the responsibility to contact Miss Dig or to satisfy himself as to the accuracy of the location shown.

SEWER AND WATER
YCUA
2777 State Road
Ypsilanti, MI 48198
(734)484-4600

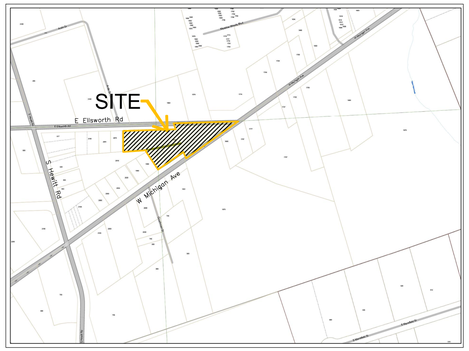
TELEPHONE
AT&T
5500 South Maple Road
Ann Arbor, Michigan 48103
(734) 996-5351

ELECTRIC
DTE
8001 Haggerty Road
Belleville, MI 48111
(734) 397-4321

GAS
DTE Gas
17150 Allen Rd.
Melvindale, MI 48122
(800) 338-0178

For protection of underground utilities, the contractor shall notify the Miss Dig Utility Location Service a minimum of 72 hours prior to excavation.

The improvements covered by these plans shall be done in accordance with the City of Saline's standards and supplemental specifications.



LOCATION MAP
SCALE: 1" = 500'-0"

GENERAL INFORMATION

PROPERTY LOCATION:
1822 W Michigan Ave
Ypsilanti, Michigan 48197

DEVELOPER/OWNER:
Zippy Real Estate, LLC
P.O. Box 550
Saline, Michigan 48176
734-904-3869

SITE PLANNER/ENGINEER/CONTRACTOR:
Vanston/O'Brien, Inc.
8150 Jackson Road, Ste. A
Ann Arbor, Mi 48103
(734) 424-0661

DRAWING INDEX:

C-1	TITLE SHEET
C-2	EXISTING CONDITIONS PLAN
C-3	SITE PLAN
C-4	GRADING PLAN
C-5	DRAINAGE & SESC PLAN
C-6	LANDSCAPE PLAN
C-7	LIGHTING PLAN
C-8	DETAIL SHEET
C-9	STORM WATER CALCULATIONS
C-10	ADS STORMTECH DETAILS
A-1	FLOOR PLAN & ELEVATIONS
A-2	SITE & BUILDING RENDERING
	BOUNDARY & TOPOLOGICAL SURVEY (by others)

STATE OF MICHIGAN
GREGORY HAM
ENGINEER
No. 56447
LICENSED PROFESSIONAL ENGINEER

ZIPPY AUTO WASH

DESIGNERS
Vanston/O'Brien, Inc.
BUILDERS
8150 Jackson Road, Ste. A Tel: (734) 424-0661
Ann Arbor, MI 48103 Fax: (734) 424-0677
e-mail: design@vanston.com • www.vanston.com

Zippy Auto Wash
1822 W Michigan Ave
Ypsilanti Township, Michigan

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PRELIMINARY	6-2-25
WCWRC REVISED	6-18-25
REVISED	8-8-25

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JOB NO.: ---

TITLE SHEET

SHEET NO.
C-1

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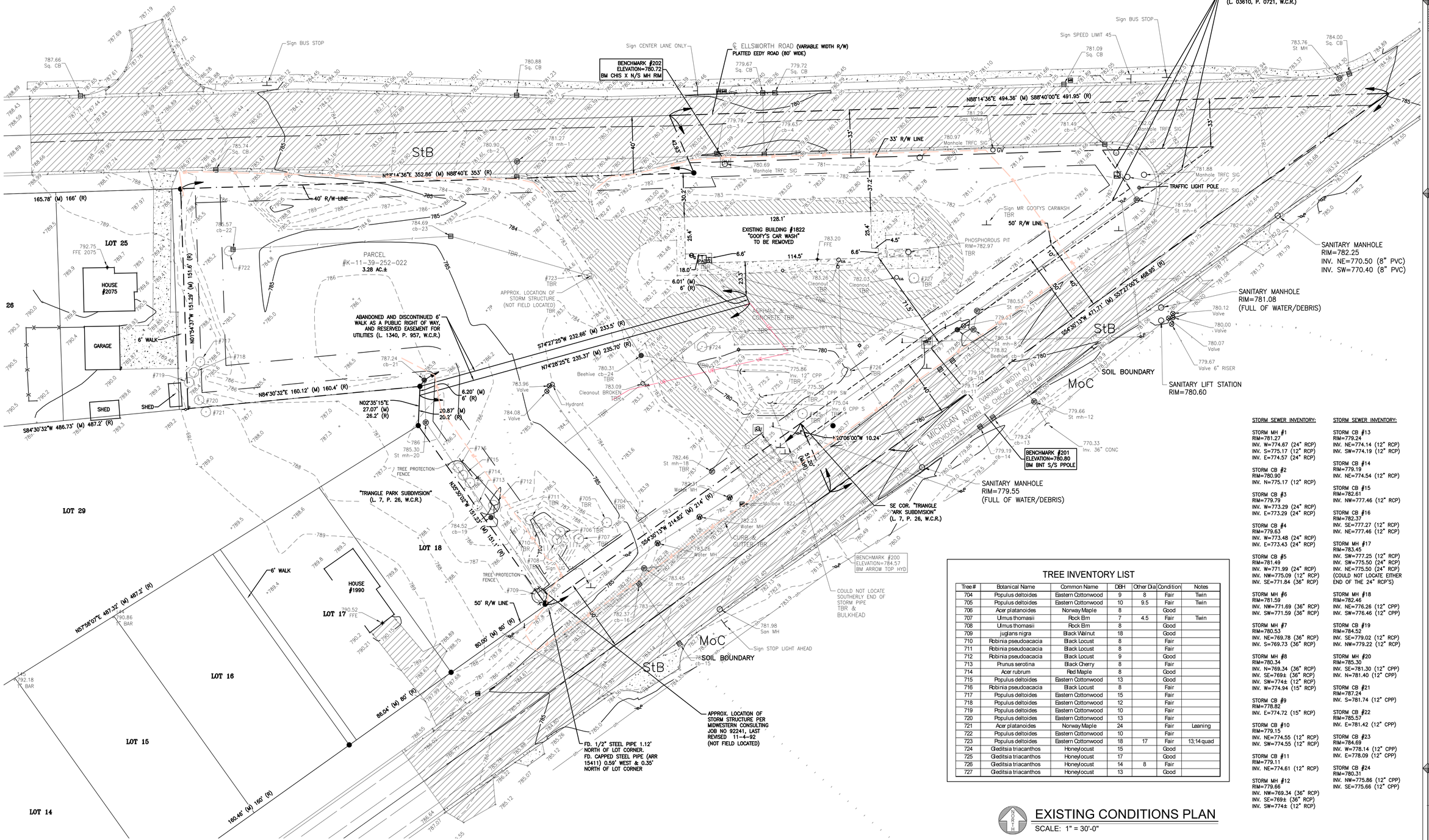

STORM SEWER INVENTORY:

STORM MH #1
RIM=781.27
INV. W=774.67 (24" RCP)
INV. S=775.17 (12" RCP)
INV. E=774.57 (24" RCP)

STORM CB #2
RIM=780.90
INV. N=775.17 (12" RCP)

STORM CB #3
RIM=779.79
INV. W=773.29 (24" RCP)
INV. E=773.29 (24" RCP)

STORM CB #4
RIM=779.63
INV. W=773.48 (24" RCP)
INV. E=773.43 (24" RCP)

STORM CB #5
RIM=781.49
INV. W=771.99 (24" RCP)
INV. NW=775.09 (12" RCP)
INV. SE=771.84 (36" RCP)

STORM MH #6
RIM=781.59
INV. NW=771.69 (36" RCP)
INV. SW=771.59 (36" RCP)

STORM MH #7
RIM=780.53
INV. NE=769.78 (36" RCP)
INV. S=769.73 (36" RCP)

STORM MH #8
RIM=780.34
INV. N=769.34 (36" RCP)
INV. SE=769± (36" RCP)
INV. SW=774± (12" RCP)
INV. W=774.94 (15" RCP)

STORM CB #9
RIM=778.82
INV. E=774.72 (15" RCP)

STORM CB #10
RIM=779.15
INV. NE=774.55 (12" RCP)
INV. SW=774.55 (12" RCP)

STORM CB #11
RIM=779.11
INV. NE=774.61 (12" RCP)

STORM MH #12
RIM=779.66
INV. NW=769.34 (36" RCP)
INV. SE=769± (36" RCP)
INV. SW=774± (12" RCP)

STORM SEWER INVENTORY:

STORM CB #13
RIM=779.24
INV. NE=774.14 (12" RCP)
INV. SW=774.19 (12" RCP)

STORM CB #14
RIM=779.19
INV. NE=774.54 (12" RCP)

STORM CB #15
RIM=782.61
INV. NW=777.46 (12" RCP)

STORM CB #16
RIM=782.37
INV. SE=777.27 (12" RCP)
INV. NE=777.46 (12" RCP)

STORM MH #17
RIM=783.45
INV. SW=777.25 (12" RCP)
INV. SW=775.50 (24" RCP)
INV. NE=775.50 (24" RCP)
(COULD NOT LOCATE EITHER END OF THE 24" RCP'S)

STORM MH #18
RIM=782.46
INV. NE=776.26 (12" CPP)
INV. SW=776.46 (12" CPP)

STORM CB #19
RIM=784.52
INV. SE=779.02 (12" RCP)
INV. NW=779.22 (12" RCP)

STORM MH #20
RIM=785.30
INV. SE=781.30 (12" CPP)
INV. N=781.40 (12" CPP)

STORM CB #21
RIM=787.24
INV. S=781.74 (12" CPP)

STORM CB #22
RIM=785.57
INV. E=781.42 (12" CPP)

STORM CB #23
RIM=784.69
INV. W=778.14 (12" CPP)
INV. E=778.09 (12" CPP)

STORM CB #24
RIM=780.31
INV. NW=775.86 (12" CPP)
INV. SE=775.66 (12" CPP)

TREE INVENTORY LIST

Tree #	Botanical Name	Common Name	DBH	Other Dia	Condition	Notes
704	Populus deltoides	Eastern Cottonwood	9	8	Fair	Twin
705	Populus deltoides	Eastern Cottonwood	10	9.5	Fair	Twin
706	Acer platanoides	Norway Maple	8		Good	
707	Ulmus thomasii	Rock Elm	7	4.5	Fair	Twin
708	Ulmus thomasii	Rock Elm	8		Good	
709	juglans nigra	Black Walnut	18		Good	
710	Robinia pseudoacacia	Black Locust	8		Fair	
711	Robinia pseudoacacia	Black Locust	8		Fair	
712	Robinia pseudoacacia	Black Locust	9		Good	
713	Prunus serotina	Black Cherry	8		Fair	
714	Acer rubrum	Red Maple	8		Good	
715	Populus deltoides	Eastern Cottonwood	13		Good	
716	Robinia pseudoacacia	Black Locust	8		Fair	
717	Populus deltoides	Eastern Cottonwood	15		Fair	
718	Populus deltoides	Eastern Cottonwood	12		Fair	
719	Populus deltoides	Eastern Cottonwood	10		Fair	
720	Populus deltoides	Eastern Cottonwood	13		Fair	
721	Acer platanoides	Norway Maple	24		Fair	Leaning
722	Populus deltoides	Eastern Cottonwood	10		Fair	
723	Populus deltoides	Eastern Cottonwood	18	17	Fair	13,14 quad
724	Gleditsia triacanthos	Honeylocust	15		Good	
725	Gleditsia triacanthos	Honeylocust	17		Good	
726	Gleditsia triacanthos	Honeylocust	14	8	Fair	
727	Gleditsia triacanthos	Honeylocust	13		Good	

NOTE: NO PARKING OF EQUIPMENT OR VEHICLES, OR STORAGE OF ANY MATERIALS SHALL BE ALLOWED WITHIN THE TREE PROTECTION FENCING.

EXISTING CONDITIONS PLAN

SCALE: 1" = 30'-0"

LEGEND

- PROPERTY LINE
- SETBACK
- EASEMENT
- PROPOSED STORM
- PROPOSED WATER
- PROPOSED ELECTRIC
- PROPOSED GAS
- PROPOSED SANITARY
- EXISTING STORM
- EXISTING WATER
- EXISTING OVERHEAD
- EXISTING ELECTRIC
- EXISTING CABLE
- EXISTING GAS
- EXISTING SANITARY
- EXISTING DITCH
- EXISTING CONTOUR
- PROPOSED CONTOUR
- LINE OF SILT FENCE DRAINAGE AREA
- EXISTING LIGHT FIXTURE
- NEW BUILDING MOUNTED LIGHTING
- NEW POLE-MOUNTED LIGHT
- EX.UP EXISTING UTILITY POLE
- EXISTING CATCH BASIN/MANHOLE
- EX.CO EXISTING CLEAN OUT
- MH S-1 NEW SANITARY MANHOLE
- CB R-1 NEW CATCH BASIN
- PR.GV-1 NEW GATE VALVE
- EX. FH EXISTING FIRE HYDRANT
- NEW FH #3 NEW FIRE HYDRANT
- EXISTING ELEVATION
- PROPOSED ELEVATION
- GRADING BOUNDARY
- EXISTING BUILDING
- EXISTING ASPHALT PAVING
- EXISTING ASPHALT PAVING TO BE REMOVED
- PROPOSED BUILDING
- PROPOSED ASPHALT PAVING
- PROPOSED CONCRETE

ZIPPY AUTO WASH

DESIGNERS
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EXISTING CONDITIONS PLAN

SHEET NO.

C-2

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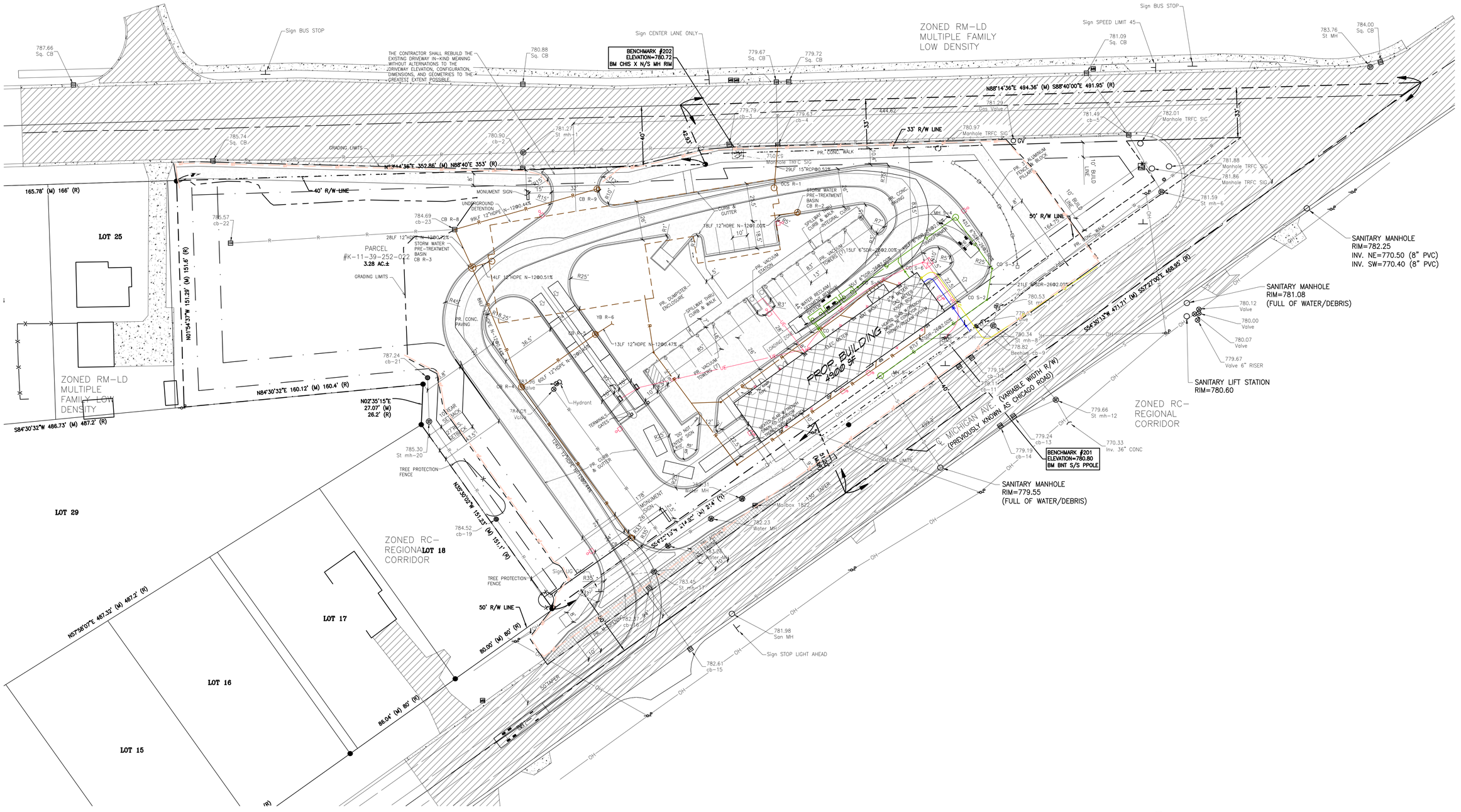

SITE PLAN

SCALE: 1" = 30'-0"

NORTH

LEGEND

- PROPERTY LINE
- SETBACK
- EASEMENT
- PROPOSED STORM
- PROPOSED WATER
- PROPOSED ELECTRIC
- PROPOSED GAS
- PROPOSED SANITARY
- EXISTING STORM
- EXISTING WATER
- EXISTING OVERHEAD
- EXISTING ELECTRIC
- EXISTING CABLE
- EXISTING GAS
- EXISTING SANITARY
- EXISTING DITCH
- EXISTING CONTOUR
- PROPOSED CONTOUR
- LINE OF SILT FENCE DRAINAGE AREA
- EXISTING LIGHT FIXTURE
- NEW BUILDING MOUNTED LIGHTING
- NEW POLE-MOUNTED LIGHT
- EXISTING UTILITY POLE
- EXISTING CATCH BASIN/MANHOLE
- EXISTING CLEAN OUT
- NEW SANITARY MANHOLE
- NEW CATCH BASIN
- NEW GATE VALVE
- EXISTING FIRE HYDRANT
- NEW FIRE HYDRANT
- EXISTING ELEVATION
- PROPOSED ELEVATION
- GRADING BOUNDARY
- EXISTING BUILDING
- EXISTING ASPHALT PAVING
- EXISTING ASPHALT PAVING TO BE REMOVED
- PROPOSED BUILDING
- PROPOSED ASPHALT PAVING
- PROPOSED CONCRETE

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SITE PLAN

SHEET NO.
C-3

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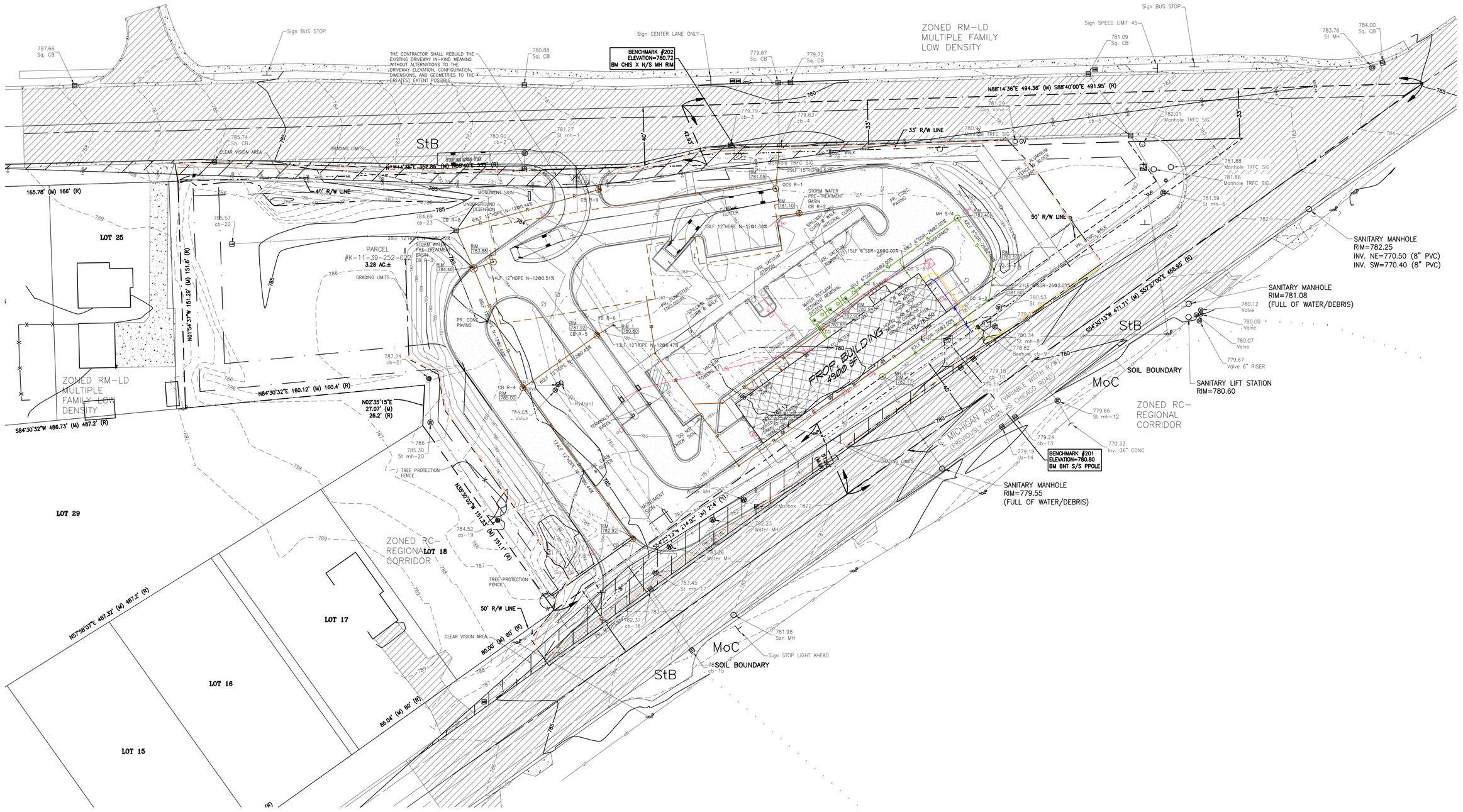

NOTE: NO PARKING OF EQUIPMENT OR VEHICLES, OR STORAGE OF ANY MATERIALS SHALL BE ALLOWED WITHIN THE TREE PROTECTION FENCING.

GRADING PLAN

SCALE: 1" = 30'-0"

LEGEND

PROPERTY LINE	EXISTING LIGHT FIXTURE
SETBACK	NEW BUILDING MOUNTED LIGHTING
EASEMENT	NEW POLE-MOUNTED LIGHT
PROPOSED STORM	EXISTING UTILITY POLE
PROPOSED WATER	EXISTING CATCH BASIN/MANHOLE
PROPOSED ELECTRIC	EXISTING CLEAN OUT
PROPOSED GAS	NEW SANITARY MANHOLE
PROPOSED SANITARY	NEW CATCH BASIN
EXISTING STORM	NEW GATE VALVE
EXISTING WATER	EXISTING FIRE HYDRANT
EXISTING OVERHEAD	NEW FIRE HYDRANT
EXISTING ELECTRIC	EXISTING ELEVATION
EXISTING CABLE	PROPOSED ELEVATION
EXISTING GAS	GRADING BOUNDARY
EXISTING SANITARY	EXISTING BUILDING
EXISTING DITCH	EXISTING ASPHALT PAVING
EXISTING CONTOUR	EXISTING ASPHALT PAVING TO BE REMOVED
PROPOSED CONTOUR	PROPOSED BUILDING
LINE OF SILT FENCE DRAINAGE AREA	PROPOSED ASPHALT PAVING
	PROPOSED CONCRETE

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GRADING PLAN

SHEET NO.
C-4

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SOIL EROSION CONTROL NOTES

1. ALL EROSION AND SEDIMENT CONTROL WORK SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE CITY/COUNTY.
2. DAILY INSPECTIONS SHALL BE MADE BY THE CONTRACTOR FOR EFFECTIVENESS OF EROSION AND SEDIMENTATION CONTROL MEASURES AND WHEN NECESSARY, REPAIRS SHALL BE PERFORMED WITHOUT DELAY.
3. EROSION AND ANY SEDIMENTATION FROM WORK ON THIS SITE SHALL BE CONTAINED ON THE SITE AND NOT ALLOWED TO COLLECT ON ANY OFF-SITE AREAS OR IN WATERWAYS, WHICH INCLUDE BOTH NATURAL AND MAN-MADE OPEN DITCHES, STREAMS, STORM DRAINS, LAKES AND PONDS.
4. EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CONSTRUCTION - SEDIMENT CONTROL PRACTICES WILL BE APPLIED AS A PERIMETER DEFENSE AGAINST ANY TRANSPORTING OF SILT OFF THIS SITE.
5. THE OWNER SHALL OBTAIN OR CAUSE HIS CONTRACTOR TO OBTAIN ALL REQUIRED PERMITS, PAY ALL FEES AND POST ALL BONDS TO EACH AND ALL GOVERNMENTAL AGENCIES HAVING JURISDICTION OVER EROSION CONTROL MEASURES ON THIS PROJECT.
6. THE CONTRACTOR SHALL APPLY TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES WHEN REQUIRED AND AS DIRECTED ON THIS PLAN - HE SHALL REMOVE TEMPORARY MEASURES AS SOON AS PERMANENT STABILIZATION OF SLOPES, DITCHES AND OTHER CHANGES HAVE BEEN ACCOMPLISHED.
7. SILT FENCE SHALL BE INSTALLED & MAINTAINED AROUND THE PERIMETER OF TOP SOIL STOCK PILE AND BROUGHT IN FILL AREA IF STOCK PILE WILL BE LARGE AND IS EXPECTED TO BE ON-SITE FOR A PERIOD OF TIME.
8. TOP SOIL STOCK PILE SHALL BE SEEDED FOR TEMPORARY STABILIZATION AND WRAPPED WITH SILT FENCE DURING THE FILL OPERATION. AT THE COMPLETION OF THE FILL OPERATION THE FILL SHALL BE LEVELED OUT AND SEEDED WITH A MIN. 4" OF TOPSOIL.
9. ALL MUD, DIRT AND DEBRIS TRACKED ONTO EXISTING ROADS FROM THIS SITE SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR AND/OR BUILDER. ALL MUD, DIRT AND DEBRIS TRACKED OR SPILLED ONTO PAVED SURFACES WITHIN THIS SITE SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR AND/OR BUILDER.
10. ANY SOIL EROSION CONTROL MEASURES DAMAGED BY THEIR CONTRACTORS OPERATION SHALL BE REPLACED THE SAME DAY.
11. THE CONTRACTOR IS TO PROTECT AS MUCH EXISTING VEGETATION AS POSSIBLE. WHERE EXCAVATION HAS BEEN THROUGH LAWN AREAS, THE CONTRACTOR SHALL RESTORE THE DISTURBED AREA BY PLACING TOPSOIL AND SEEDING OR SODDING OVER FINAL BACKFILL MATERIAL.
12. THE CONTINUED MAINTENANCE OF THE PERMANENT EROSION CONTROL DEVICES WILL INCLUDE REMOVAL OF ANY SEDIMENT IN THE CATCH BASIN SUMPS AND IN THE SEDIMENTATION BASIN ON A YEARLY BASIS OR AS REQUIRED. THE MAINTENANCE WILL BE PERFORMED BY THE OWNER WE EXPECT THAT ONCE THE VEGETATIVE COVER IS ESTABLISHED THAT LITTLE, IF ANY, MAINTENANCE OF THE PERMANENT EROSION CONTROL DEVICES WILL BE REQUIRED.
13. LONG TERM MAINTENANCE OF THE UNDER GROUND DETENTION BASIN: BASIN WILL REQUIRE PERIODIC CHECKS AND REMOVAL OF ACCUMULATED DEBRIS AND SEDIMENT. COSTS ASSOCIATED WITH REMOVAL SHOULD BE APPROX. $5200. BUT WILL VARY BASED ON EXTENT.
14. AREA OF DISTURBANCE EQUALS 2.3 AC.
15. SEE LANDSCAPE PLAN FOR ADDITIONAL SITE STABILIZATION DETAILS (C-6).

PERMANENT MAINTENANCE TASKS AND SCHEDULE:

OWNER'S RESPONSIBILITY TASKS	STREETS	STORM DRAINAGE SYSTEM	CATCH BASIN SUMPS	CATCH BASIN INLET CASTINGS	CHANNELS	OUTFLOW CONTROL STRUCTURES	RIP-RAP	FILTRATION BASIN	INFILTRATION/DETENTION BASINS	WETLANDS	EMERGENCY OVERFLOW	SCHEDULE
INSPECT FOR PROPER OPERATION							X	X	X			AFTER STORM EVENTS OF 1" OR MORE
INSPECT FOR SEDIMENT ACCUMULATION		X	X		X	X	X	X	X			ANNUALLY
REMOVAL OF SEDIMENT ACCUMULATION		X	X		X	X	X	X	X			EVERY 5-10 YEARS AS NEEDED (SEE NOTE)
INSPECT FOR FLOATABLES AND DEBRIS		X	X	X	X	X	X	X	X			ANNUALLY
CLEANING FOR FLOATABLES AND DEBRIS		X	X	X	X	X	X	X	X			ANNUALLY
INSPECT FOR EROSION						X	X	X	X			AS NEEDED (SEE NOTE)
REESTABLISH PERMANENT VEGETATION ON ERODED SLOPES						X			X	X		EVERY 3-5 YEARS AS NEEDED (SEE NOTE)
REPLACEMENT OF GRAVEL JOINTS							X					SEMI-ANNUALLY
MOWING						X			X	X		Ø TO 2 TIMES PER YEAR
INSPECT STRUCTURAL ELEMENTS DURING WET WEATHER AND COMPARE TO AS-BUILT PLANS (BY PROFESSIONAL ENGINEER REPORTING TO THE OWNER)		X	X	X	X	X	X	X	X	X	X	ANNUALLY
MAKE ADJUSTMENTS OR REPLACEMENTS AS DETERMINED BY ANNUAL WET WEATHER INSPECTION		X	X	X	X	X	X	X	X	X	X	AS NEEDED (SEE NOTE)
KEEP RECORDS OF ALL INSPECTIONS AND MAINTENANCE ACTIVITIES AND REPORT TO OWNER		X	X	X	X	X	X	X	X	X	X	ANNUALLY
KEEP RECORDS OF ALL COSTS FOR INSPECTIONS, MAINTENANCE AND REPAIRS. REPORT TO OWNER		X	X	X	X	X	X	X	X	X	X	ANNUALLY
REVIEW COST EFFECTIVENESS OF THE PREVENTATIVE MAINTENANCE PROGRAM AND MAKE ADJUSTMENTS AS NEEDED		X	X	X	X	X	X	X	X	X	X	ANNUALLY
OWNER TO HAVE A PROFESSIONAL ENGINEER CARRY OUT EMERGENCY INSPECTIONS UPON IDENTIFICATION OF SEVERE PROBLEMS.		X	X	X	X	X	X	X	X	X	X	AS NEEDED (SEE NOTE)

NOTE: "AS NEEDED" MEANS WHEN SEDIMENT HAS ACCUMULATED TO A MAXIMUM OF ONE FOOT DEPTH OR THE JACKET HAS BEEN CLOGGED WITH SEDIMENT DUE TO CONSTRUCTION ACTIVITIES.
NO CHEMICALS SHALL BE USED WITHIN STORM WATER FEATURES OR BUFFER ZONES EXCEPT FOR INVASIVE SPECIES MAY BE TREATED BY A CERTIFIED APPLICATOR. MOWING IS ONLY ALLOWED TWICE PER YEAR

RESPONSIBILITY AND MAINTENANCE
A. DURING CONSTRUCTION, IT IS THE DEVELOPER'S RESPONSIBILITY TO PERFORM THE MAINTENANCE.
B. FOLLOWING CONSTRUCTION IT WILL BE THE RESPONSIBILITY OF THE OWNER TO PERFORM MAINTENANCE.
C. ROUTINE MAINTENANCE SHALL BE COMPLETED AT THE OWNERS EXPENSE.

MAINTENANCE TASKS AND SCHEDULE DURING CONSTRUCTION:

CONTRACTOR'S RESPONSIBILITY TASKS	STREETS	STORM DRAINAGE SYSTEM	CATCH BASIN SUMPS	CATCH BASIN INLET CASTINGS	CHANNELS	OUTFLOW CONTROL STRUCTURES	RIP-RAP	FILTRATION BASIN	INFILTRATION/DETENTION BASINS	WETLANDS	EMERGENCY OVERFLOW	SCHEDULE
INSPECT FOR SEDIMENT ACCUMULATION		X	X		X	X		X	X			WEEKLY
REMOVAL OF SEDIMENT ACCUMULATION		X	X		X	X		X	X			AS NEEDED (SEE NOTE) & PRIOR TO TURNOVER
INSPECT FOR FLOATABLES AND DEBRIS				X	X	X		X	X			QUARTERLY
CLEANING FOR FLOATABLES AND DEBRIS				X	X	X		X	X			QUARTERLY & AT TURNOVER
INSPECT FOR EROSION						X	X		X	X		WEEKLY
REESTABLISH PERMANENT VEGETATION ON ERODED SLOPES						X			X	X		AS NEEDED (SEE NOTE) & PRIOR TO TURNOVER
REPLACEMENT OF GRAVEL JOINTS							X					AS NEEDED (SEE NOTE)
MOWING						X	X	X	X	X		Ø TO 2 TIMES PER YEAR
INSPECT STRUCTURAL ELEMENTS DURING WET WEATHER AND COMPARE TO AS-BUILT PLANS (BY PROFESSIONAL ENGINEER REPORTING TO THE OWNER)					X	X		X	X			ANNUALLY & AT TURNOVER
MAKE ADJUSTMENTS OR REPLACEMENTS AS DETERMINED		X	X	X	X	X	X	X	X	X	X	AS NEEDED (SEE NOTE)

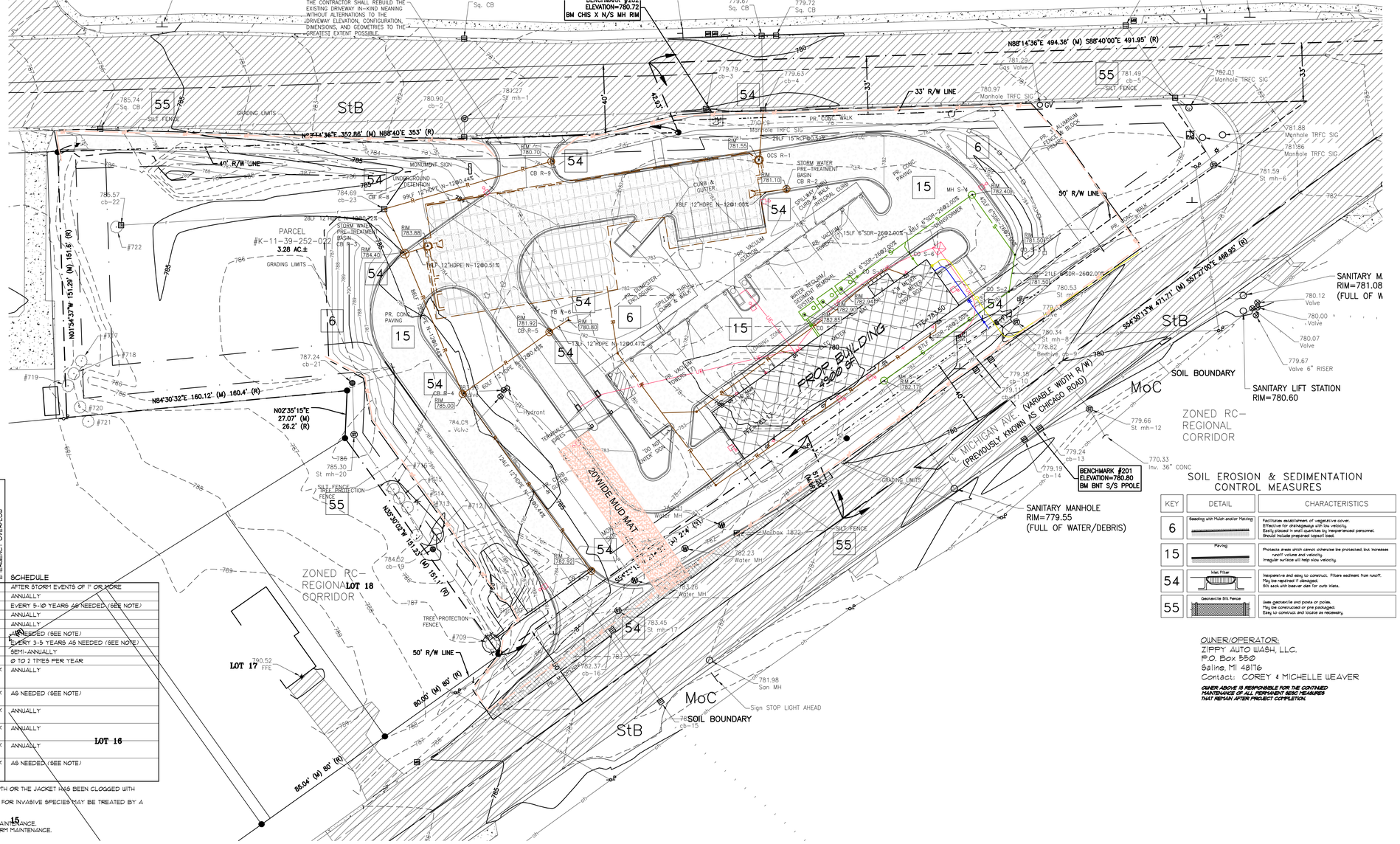
NOTE: "AS NEEDED" MEANS WHEN SEDIMENT HAS ACCUMULATED TO A MAXIMUM OF ONE FOOT DEPTH OR THE JACKET HAS BEEN CLOGGED WITH SEDIMENT DUE TO CONSTRUCTION ACTIVITIES.
NO CHEMICALS SHALL BE USED WITHIN STORM WATER FEATURES OR BUFFER ZONES EXCEPT FOR INVASIVE SPECIES MAY BE TREATED BY A CERTIFIED APPLICATOR. MOWING IS ONLY ALLOWED TWICE PER YEAR

SOIL EROSION CONTROL SEQUENCE:

1. Install all perimeter erosion and sedimentation control measures. 2. Install storm drainage system, including rip-rap and parking lot inlet filter.
3. Rough grade site, stock pile top soil in location approved by owner and engineer.
4. Install sanitary sewer and water services.
5. Maintain Erosion and Sedimentation control measures, as required.
6. Install all utilities (Phone, Gas and Electric).
7. Bring pavement areas to sub-base grade and install concrete curb and gutter.
8. Install pavement complete, repair or replace inlet filter as required.
9. Finish grade, redistribute top soil, seed and mulch in all distributed areas.
10. Complete construction of building.
11. Remove all temporary soil erosion and sedimentation control measures after stabilization.

MAINTENANCE PLAN BUDGET:

Annual inspection for sedimentation accumulation	$ 100.00
Removal of sediment accumulation every 5 years as needed	$ 1000.00
Inspect for floatables and debris annually and after major storms	$ 100.00
Removal of floatables and debris annually and after major storms	$ 150.00
Inspect system for erosion annually and after major storms	$ 100.00
Reestablish permanent vegetation of eroded slopes as needed	$ 350.00
Replacement of gravel jackets every 3-5 years as needed	$ 400.00
Mowing Ø-2 times per year	$ 100.00
Inspect structural elements during wet weather and compare to as built plans every 2 years.	$ 150.00
Make structural adjustments or replacements as determined by inspection as needed	$ 400.00
Have Professional Engineer carry out emergency inspections upon identification of severe problems.	$ 200.00
TOTAL ANNUAL BUDGET:	$ 3050.00



NOTE: NO PARKING OF EQUIPMENT OR VEHICLES, OR STORAGE OF ANY MATERIALS SHALL BE ALLOWED WITHIN THE TREE PROTECTION FENCING.

STORM WATER NARRATIVE
This developed site shall be redeveloped as a proposed auto wash facility with underground storm water collection and detention. Soil infiltration tests pits revealed predominately clay soils with no infiltration capability. Therefore the detention volume was increased by 20% providing for 39,797 cubic ft of detention storage. Inlets to the system shall be pre-treated with ADS Barracuda Hydrodynamic Separators

DRAINAGE & SESC PLAN
SCALE: 1" = 40'-0"

LEGEND

PROPERTY LINE	EXISTING LIGHT FIXTURE
SETBACK	NEW BUILDING MOUNTED LIGHTING
EASEMENT	NEW POLE-MOUNTED LIGHT
PROPOSED STORM	EXISTING UTILITY POLE
PROPOSED WATER	EXISTING CATCH BASIN/MANHOLE
PROPOSED ELECTRIC	EXISTING CLEAN OUT
PROPOSED GAS	NEW SANITARY MANHOLE
PROPOSED SANITARY	NEW CATCH BASIN
EXISTING STORM	NEW GATE VALVE
EXISTING WATER	EXISTING FIRE HYDRANT
EXISTING OVERHEAD	NEW FIRE HYDRANT
EXISTING ELECTRIC	EXISTING ELEVATION
EXISTING CABLE	PROPOSED ELEVATION
EXISTING GAS	EXISTING CONTOUR
EXISTING SANITARY	PROPOSED CONTOUR
EXISTING DITCH	LINE OF SILT FENCE
DRAINAGE AREA	GRADING BOUNDARY
EXISTING BUILDING	
EXISTING ASPHALT PAVING	
EXISTING ASPHALT PAVING TO BE REMOVED	
PROPOSED BUILDING	
PROPOSED ASPHALT PAVING	
PROPOSED CONCRETE	

ZIPPY AUTO WASH

DESIGNERS
Vanston/OBrien, Inc.
BUILDERS
8150 Jackson Road, Ste. A Tel: (734) 424-0661
Ann Arbor, MI 48103 Fax: (734) 424-0677
e-mail: design@vanston.com • www.vanston.com

Zippy Auto Wash
1822 W Michigan Ave
Ypsilanti Township, Michigan

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ISSUED FOR:	DATE:
PRELIMINARY	6-2-25
WCWRC REVISED	6-18-25
REVISED	8-8-25

DRAWN BY: GAH
JOB NO.: ---

DRAINAGE & SESC PLAN

SHEET NO.
C-5

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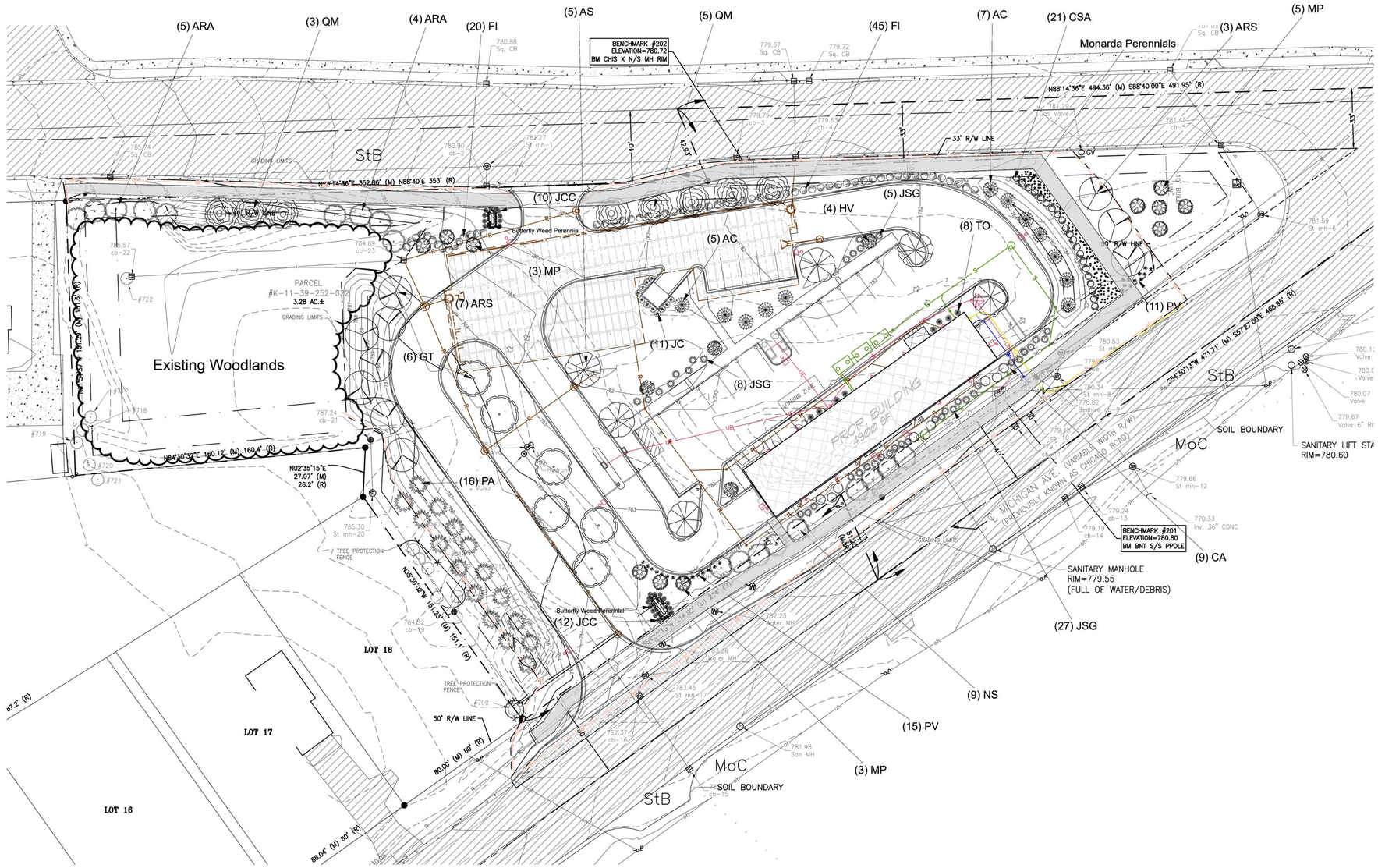


Landscape Notes

1. All plant material shall meet current American Association of Nurserymen, Inc. (AAN) standard for nursery stock. (ANSI 260.1 – 1973)
2. Landscape installation shall be in accordance with the American Association of Nursery standards and with the Township/City's landscape requirements.
3. Planting schedules:
   1) Deciduous material shall be planted from April 1 for spring planting and from October 1 until no later than November 30th for fall planting.
   2) Evergreen material shall be planted from April 1 through May 31 for Spring plantings and from August 1 through September 30 for all fall planting.
4. Mulch plant beds, individual tree and shrub planting pits uniform depth of 4 inches.
5. Provide weed mat for greenbelt and foundation plantings.
6. All planting beds are to be edged. Recommended either "Permaloc Aluminum" edging or "Black Diamond" plastic edging.
7. All areas with stone cover shall have weed mat.
8. All landscaping to be continuously maintained.
9. All site improvements detailed on this plan are to be completed prior to issuance of final certificate of occupancy.
10. All construction to conform to the latest applicable Township/City regulations.
11. R.O.W. areas to be seeded or sod.
12. Tree protection consists of:
   A. Yellow ribbon barriers for large areas not disturbed by construction.
   B. Stakes 10' on center and wood snow fence around individual and groups of individual trees.
   C. Trees to be removed will be tagged with red ribbon. The barrier or fence surrounding the tree or group of trees shall be located no closer to the tree than the tree's drip line. If this is not possible, the barrier shall be no closer than 6 feet from the trunk of the tree or group of trees.
13. There will be no outside storage on site.
14. All diseased, damaged, or dead materials shall be replaced in accordance with the standards of this Ordinance
15. Seed Mix

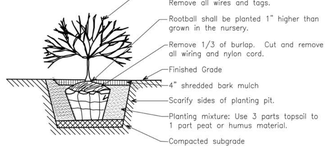
* Temporary planting mixture for erosion control.

–Seed Oats	30 pounds per acre
–Annual Rye	10 pounds per acre

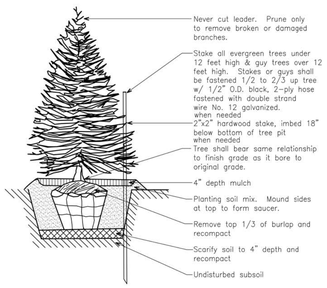
* Permanent planting mixture on all disturbed areas excluding BMPs.

–Scaldis Hard Fescue	12 pounds per acre
–Danson's Creeping Red Fescue	6 pounds per acre
–Perennial Rye	20 pounds per acre
–Buffalo Grass	20 pounds per acre
–Creeping Bent	0.5 pounds per acre
–Little Blue Stem	20 pounds per acre
–Sheep Fescue	15 pounds per acre

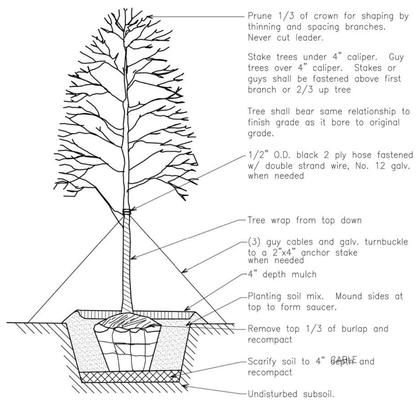
Existing soil nutrient levels shall be tested by an independent soil testing laboratory before fertilizers are appied.



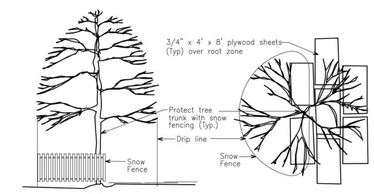
SHRUB BED PLANTING DETAIL



EVERGREEN TREE PLANTING DETAIL



DECIDUOUS TREE PLANTING DETAIL



STANDARD TREE PROTECTION

NOTE: Pull back fencing to install plywood when access in root zone is necessary.

NOTE: NO PARKING OF EQUIPMENT OR VEHICLES, OR STORAGE OF ANY MATERIALS SHALL BE ALLOWED WITHIN THE TREE PROTECTION FENCING.

LANDSCAPE PLAN

SCALE: 1" = 30'-0"

LEGEND

PROPERTY LINE	EXISTING LIGHT FIXTURE		EXISTING BUILDING
SETBACK	NEW BUILDING MOUNTED LIGHTING		EXISTING ASPHALT PAVING
EASEMENT	NEW POLE–MOUNTED LIGHT		EXISTING ASPHALT PAVING TO BE REMOVED
PROPOSED STORM	EXISTING UTILITY POLE		PROPOSED BUILDING
PROPOSED WATER	EXISTING CATCH BASIN/MANHOLE		PROPOSED ASPHALT PAVING
PROPOSED ELECTRIC	EXISTING CLEAN OUT		PROPOSED CONCRETE
PROPOSED GAS	NEW SANITARY MANHOLE		
PROPOSED SANITARY	NEW CATCH BASIN		
EXISTING STORM	NEW GATE VALVE		
EXISTING WATER	EXISTING FIRE HYDRANT		
EXISTING OVERHEAD	NEW FIRE HYDRANT		
EXISTING ELECTRIC	EXISTING ELEVATION		
EXISTING CABLE	PROPOSED ELEVATION		
EXISTING GAS	GRADING BOUNDARY		
EXISTING SANITARY			
EXISTING DITCH			
EXISTING CONTOUR			
PROPOSED CONTOUR			
LINE OF SILT FENCE			
DRAINAGE AREA			

PLANT LIST

Plant Legend

Symbol	Key	Qty	Common	Botanical	Size	Spec	Note: Req
	CSA	21	Artic Fire Red-Osier Dogwood	Cornus stolonifera 'Artic Fire'	No. 3	Cont	Street Yard
		t.b.d.	Bee Balm	Monarda didyma	No. 1	Cont	
	FI	65	Border Forsythia	Forsythia xinertmedia 'Show Off'	No. 5	Cont	Street Yard
	QM	8	Bur Oak	Quercus macrocarpa	2.5" cal.	B&B	Street Yard
		t.b.d.	Butterfly Weed	Asclepias tuberosa	No. 1	Cont	
	JCC	23	Calgary Carpet Spreading Juniper	Juniperus spp. 'Calgary Carpet'	No. 3	Cont	Street Yard
	JC	11	Chinese Juniper	Juniperus chinensis	5-6' ht.	B&B	Site Landscaping
	PV	26	Dallas Blues Switch Grass	Panicum virgatum 'Dallas Blues'	No. 2	Cont	Street Yard
	TO	8	Emerald Green Arborvitae	Thuja Occidentalis 'Emerald Green'	5-6' ht.	B&B	Site Landscaping
	GT	6	Honey Locust	Gleditsia triacanthos 'Shademaster'	2.5" cal.	B&B	Site Landscaping
	PA	16	Norway Spruce	Picea abies	6-7' ht.	B&B	Screening
	MP	11	Prairiefire crabapple	Malus 'Prairiefire'	2.5" cal.	B&B	Street Yard
	NS	9	Green Gable Blackgum	Nyssa sylvatica 'Green Gable'	2.5" cal.	B&B	Street Yard
	ARA	9	Red Maple 'Armstrong'	Acer Rubrum 'Armstrong'	2.5" cal.	B&B	Street Yard
	ARS	10	Red Maple	Acer rubrum 'Red Sunset'	2.5" cal.	B&B	Site Landscaping
	JSG	40	Sea Green Chinese Juniper	Juniperus chinensis 'Sea Green'	No. 5	Cont	Street Yard and Site Landscaping
	CA	9	Siberian Dogwood	Cornus alba 'Ivory Halo'	No. 5	Cont	Street Yard
	AS	6	Sugar Maple	Acer saccharinum 'Green Mountain'	2.5" cal.	B&B	Parking Lot
	HV	4	Vernal Witch-Hazel	Hamamelis vernalis	No. 5	Cont	Site Landscaping
	AC	12	White Fir	Abies concolor	6-7' ht.	B&B	Parking Lot

LANDSCAPE REQUIREMENT CHART

		Required	Proposed	Total Provided
STREET YARD LANDSCAPING				
Street frontage	1038			
1 Canopy Tree per 40 lineal feet		26	26	26
1 Ornamental Tree per 100 lineal feet		11	11	11
1 Shrub per 10 lineal feet		104	159	159
PARKING LOT LANDSCAPING				
Paved driveway and parking lot surface	33,378 s.f.			
1 Tree per 2,000 square feet		17	17	17
SITE LANDSCAPING				
1 Tree per 1,000 square feet of lawn area	16,781 s.f.	17	17	17
1 Shrub per 500 square feet of lawn area		34	34	34
SCREENING BETWEEN LAND USES (Screen 2)	152 lf.			
1 Large Evergreen per 10 lineal foot		16	16	16
ENTRANCE SIGN LANDSCAPING	See Plans			
DUMPSTER SCREENING LANDSCAPING	See Plans			

STATE OF MICHIGAN
ROBERT M. O'REILLY
LANDSCAPE ARCHITECT
NO. 3901001417
REGISTERED LANDSCAPE ARCHITECT

ZIPPY AUTO WASH

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e-mail: design@vanston.com ◊ www.vanston.com

Zippy Auto Wash

1822 W Michigan Ave

Ypsilanti Township, Michigan

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ISSUED FOR:	DATE:
PRELIMINARY	6-2-25
WCWRC REVISED	6-18-25
REVISED	8-8-25

DRAWN BY: GAH
JOB NO.: ---

LANDSCAPE PLAN

SHEET NO.
C-6

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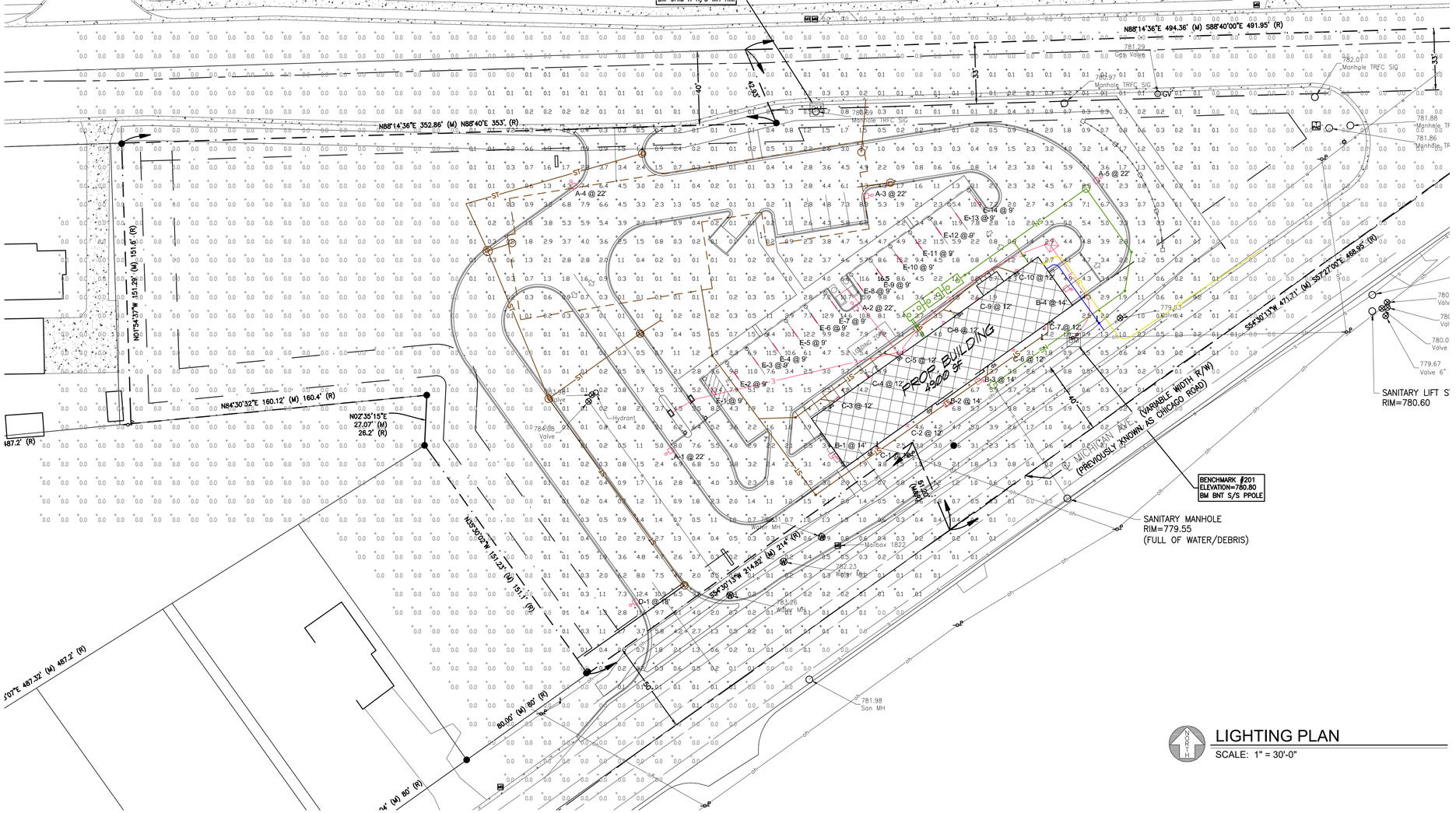
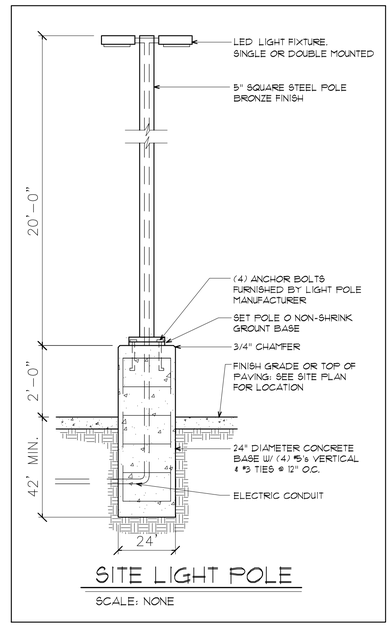




SITE LIGHT POLE

SCALE: NONE

NOTES:
1. Exterior lighting shall be a full cut-off fixture or a fully shielded fixture, downward directed with a flat lens to prevent glare.
2. All outdoor lighting fixtures, existing or hereafter installed and maintained upon private property, shall be turned off or reduced in lighting intensity to at least 50% of the light level at full illumination one (1) hour after closing (9pm)

Luminaire Locations

		Location						Aim		
No.	Label	X	Y	Z	MH	Orientation	Tilt	X	Y	Z
1	A	42.19	118.44	22.00	22.00	53.23	0.00	43.24	119.23	0.00
2	A	142.40	199.84	22.00	22.00	145.52	0.00	143.14	198.76	0.00
3	A	153.20	258.03	22.00	22.00	262.29	0.00	151.90	257.85	0.00
4	A	-9.03	265.45	22.00	22.00	143.97	0.00	-8.26	264.40	0.00
5	A	273.80	270.54	22.00	22.00	234.17	0.00	272.75	269.78	0.00
1	B	133.68	119.13	14.00	14.00	234.80	0.00	133.52	119.02	0.00
2	B	191.77	147.51	14.00	14.00	144.57	0.00	191.89	147.35	0.00
3	B	209.01	159.71	14.00	14.00	144.57	0.00	209.12	159.55	0.00
4	B	255.81	206.20	14.00	14.00	54.57	0.00	255.97	206.32	0.00
1	C	155.62	121.78	12.00	12.00	0.00	0.00	155.62	121.78	0.00
2	C	172.35	133.79	12.00	12.00	0.00	0.00	172.35	133.79	0.00
3	C	134.78	148.47	12.00	12.00	0.00	0.00	134.78	148.47	0.00
4	C	151.35	160.36	12.00	12.00	0.00	0.00	151.35	160.36	0.00
5	C	169.05	173.00	12.00	12.00	0.00	0.00	169.05	173.00	0.00
6	C	229.32	174.50	12.00	12.00	0.00	0.00	229.32	174.50	0.00
7	C	246.13	186.46	12.00	12.00	0.00	0.00	246.13	186.46	0.00
8	C	191.78	189.26	12.00	12.00	0.00	0.00	191.78	189.26	0.00
9	C	209.52	201.92	12.00	12.00	0.00	0.00	209.52	201.92	0.00
10	C	231.03	217.37	12.00	12.00	0.00	0.00	231.03	217.37	0.00
1	D	21.67	37.53	18.00	18.00	53.23	0.00	22.72	38.31	0.00
1	E	66.00	153.00	9.00	9.00	145.00	0.00	66.00	153.00	0.00
2	E	79.00	162.00	9.00	9.00	145.00	0.00	79.00	162.00	0.00
3	E	89.55	169.52	9.00	9.00	145.00	0.00	89.55	169.52	0.00
4	E	100.25	176.96	9.00	9.00	145.00	0.00	100.25	176.96	0.00
5	E	110.94	184.30	9.00	9.00	145.00	0.00	110.94	184.30	0.00
6	E	121.95	192.27	9.00	9.00	145.00	0.00	121.95	192.27	0.00
7	E	138.65	200.24	9.00	9.00	145.00	0.00	138.65	200.24	0.00
8	E	145.27	209.71	9.00	9.00	145.00	0.00	145.27	209.71	0.00
9	E	156.18	217.47	9.00	9.00	145.00	0.00	156.18	217.47	0.00
10	E	166.73	224.99	9.00	9.00	145.00	0.00	166.73	224.99	0.00
11	E	177.42	232.43	9.00	9.00	145.00	0.00	177.42	232.43	0.00
12	E	188.12	239.77	9.00	9.00	145.00	0.00	188.12	239.77	0.00
13	E	199.13	247.74	9.00	9.00	145.00	0.00	199.13	247.74	0.00
14	E	209.83	255.71	9.00	9.00	145.00	0.00	209.83	255.71	0.00

LIGHTING PLAN

SCALE: 1" = 30'-0"

Statistics

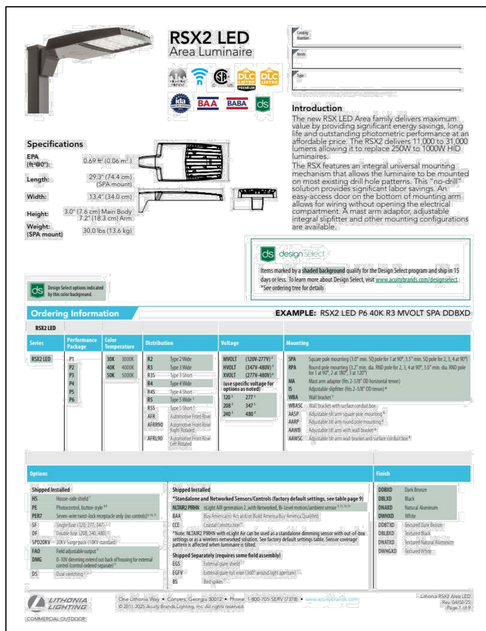
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
SITE CALCULATIONS	+	0.9 fc	16.5 fc	0.0 fc	N/A	N/A

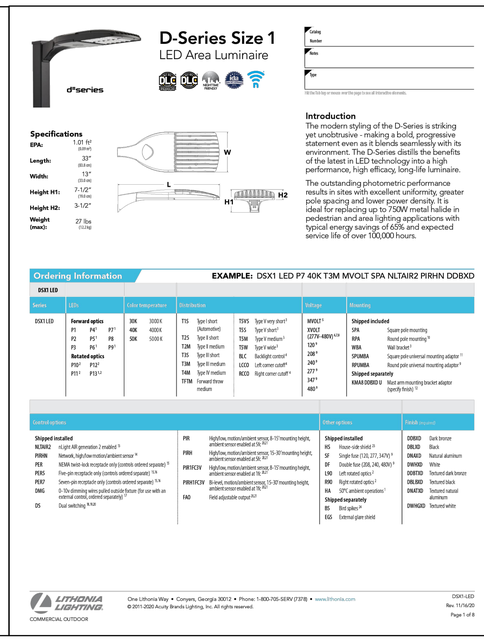
Schedule

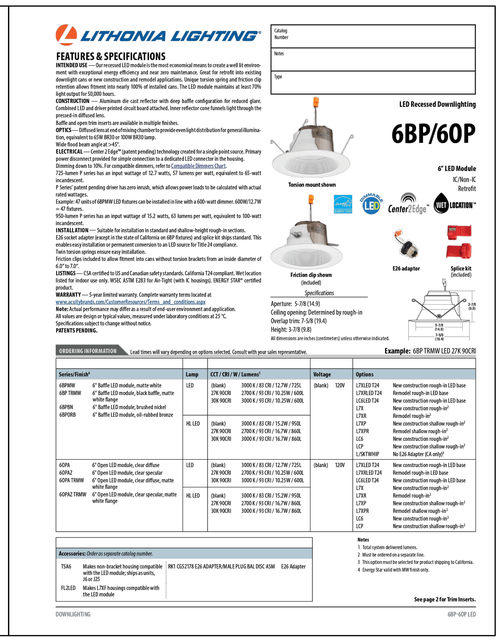
Symbol	Label	QTY	Catalog Number	Description	Number Lamps	Lumens per Lamp	LLF	Wattage
	A	5	RSX2 LED P4 30K R3S	RSX Area Luminaire Size 2 P4 Lumen Package 3000K CCT Type R3S Distribution	1	23363	0.82	189.5392
	B	4	DSXW1 P7 35K T4M	10000 3500K 70CRI Type 4 Medium	1	10111	0.82	72.52
	C	10	6BPMW HL LED	6' 3000K CCT, 950 Lumens 120v Matte White LED Module, 80CRI	1	944	0.82	15.26
	D	1	RSX2 LED P4 30K R3S EGS	RSX Area Luminaire Size 2 P4 Lumen Package 3000K CCT Type R3S Distribution with EGS Shield	1	22829	0.82	189.5392
	E	14	GPX6-SD	Driverless AC LED Luminaire Mounted on vacuum arches	1	3600	0.82	27

LEGEND

- PROPERTY LINE
- SETBACK
- EASEMENT
- ST — PROPOSED STORM
- WM — PROPOSED WATER
- E — PROPOSED ELECTRIC
- G — PROPOSED GAS
- SN — PROPOSED SANITARY
- STORM — EXISTING STORM
- W — EXISTING WATER
- OH — EXISTING OVERHEAD
- UE — EXISTING ELECTRIC
- C — EXISTING CABLE
- G — EXISTING GAS
- S — EXISTING SANITARY
- EXISTING DITCH
- 914 — EXISTING CONTOUR
- 914 — PROPOSED CONTOUR
- LINE OF SILT FENCE
- DRAINAGE AREA
- EXISTING LIGHT FIXTURE
- NEW BUILDING MOUNTED LIGHTING
- LP — NEW POLE-MOUNTED LIGHT
- EX.UP — EXISTING UTILITY POLE
- ex.CB — ex.MH — EXISTING CATCH BASIN/MANHOLE
- EX.CO — EXISTING CLEAN OUT
- MH S-1 — NEW SANITARY MANHOLE
- CB R-1 — NEW CATCH BASIN
- PR.GV-1 — NEW GATE VALVE
- EX. FH — EXISTING FIRE HYDRANT
- NEW FH — NEW FIRE HYDRANT
- 910.7 — EXISTING ELEVATION
- T/A 626.00 — PROPOSED ELEVATION
- GRADING BOUNDARY
- EXISTING BUILDING
- EXISTING ASPHALT PAVING
- EXISTING ASPHALT PAVING TO BE REMOVED
- PROPOSED BUILDING
- PROPOSED ASPHALT PAVING
- PROPOSED CONCRETE







ZIPPY AUTO WASH

DESIGNERS Vanston/OBrien, Inc. BUILDERS

8150 Jackson Road, Ste. A Ann Arbor, MI 48103 e-mail: design@vanston.com • www.vanston.com

Tel: (734) 424-0661 Fax: (734) 424-0677

Zippy Auto Wash
1822 W Michigan Ave
Ypsilanti Township, Michigan

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REVISED	8-8-25

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JOB NO.: ---

LIGHTING PLAN

SHEET NO.
C-7

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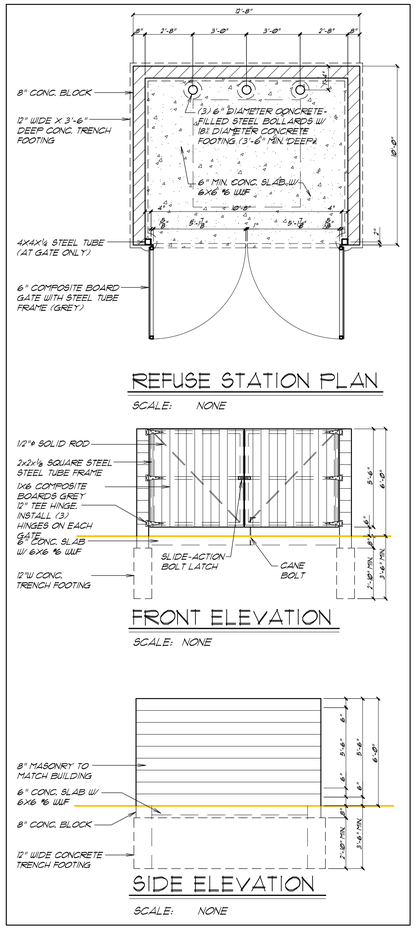

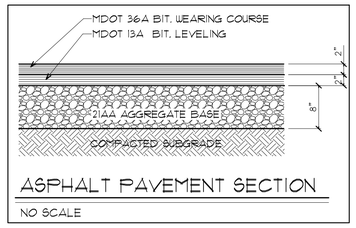

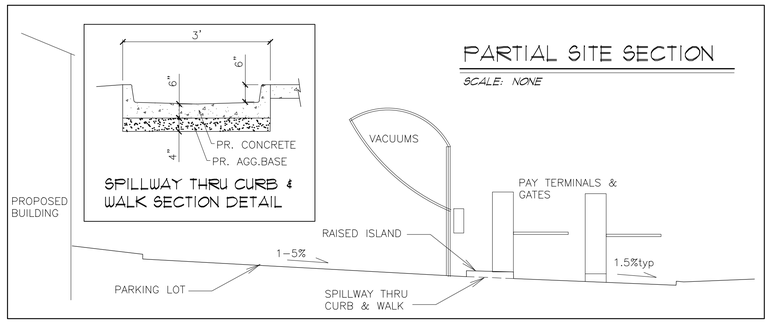

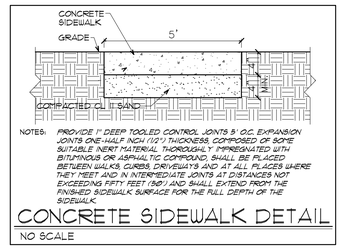

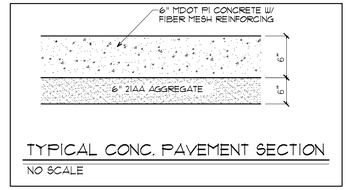

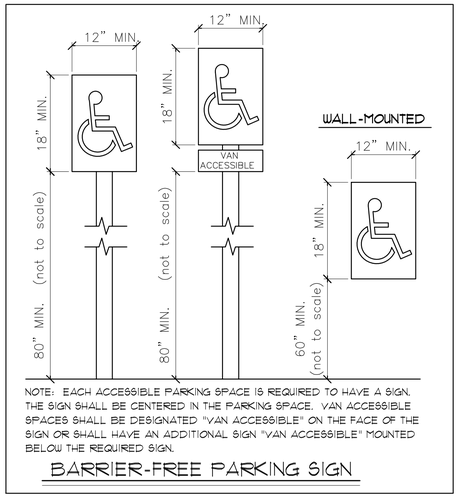

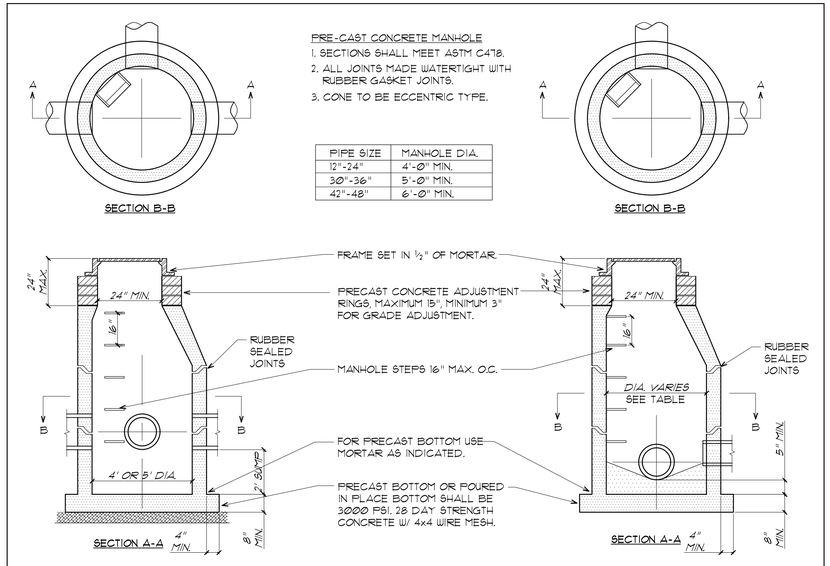

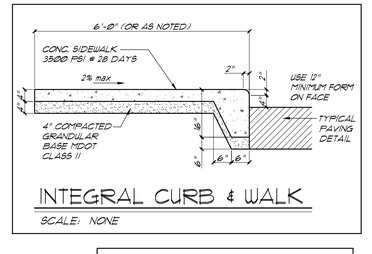

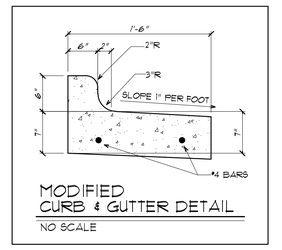

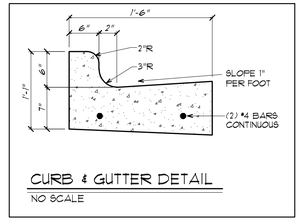

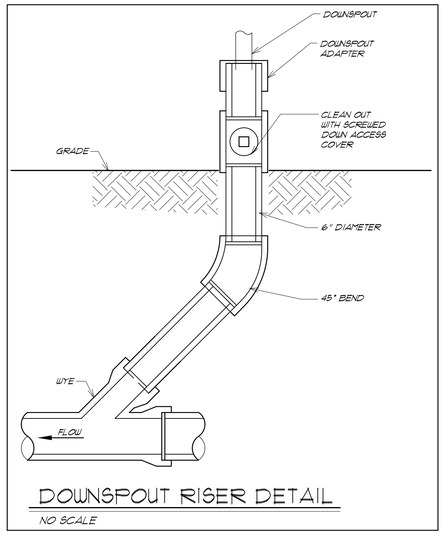

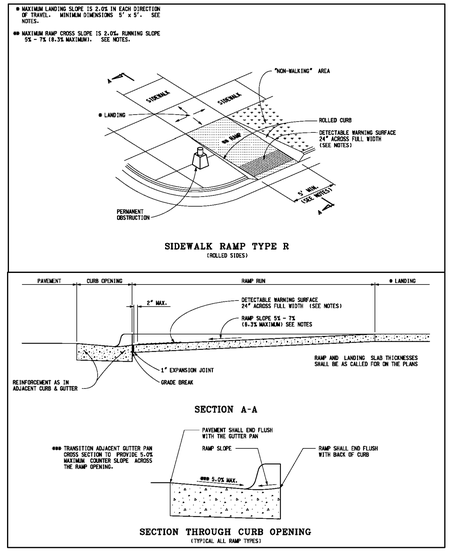

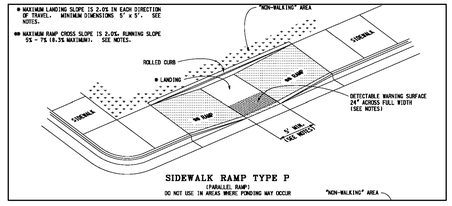

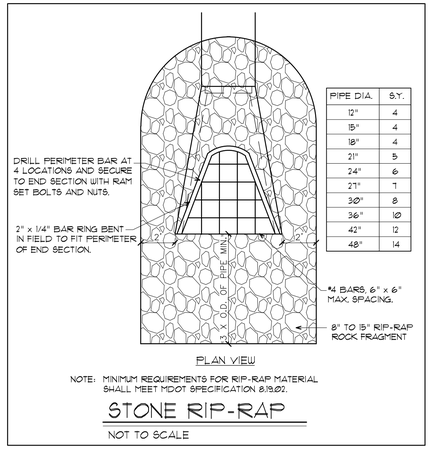

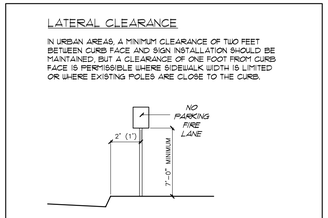

ZIPPY AUTO WASH

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DETAIL SHEET

SHEET NO.
C-8

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Basin 1: Detention Design

Project Name	Zippy Auto Wash
Project Number	3551
Completed By	GAH
Working Date	5/27/2025
Jurisdiction	Washtenaw County

Basin 1: Detention Design

Worksheet 1 Rational Method Variables for First Flush runoff

Total Site Area = A_{total} = 2.49 acres

Total Site Area Excluding "Self-Crediting" BMPs = A_i = 2.49 acres = 108,535 sf

Runoff Volume Work Sheets

Rational Method Variables for First Flush runoff

Cover Type	Soil Type	Area (ft²)	Area (ac)	Runoff Coefficient C	C x Area
Impervious Cover	St Clair/Morley	44,884	1.03	0.95	0.98
Open Space	St Clair	50,596	1.16	0.45	0.52
Open Space	Morley	13,055	0.30	0.35	0.10
Total			2.49		1.61
Weighted C=	Area x C	=	1.61	=	0.64
	Area		2.49		

NRCS Variables for bankfull and 100-year runoff calculations

Cover Type	Soil Type	Area (ft²)	Area (ac)	Curve Number	CN x Area
Open Space	St Clair	76,943	1.77	78	137.78
Water	Morley	31,591	0.73	71	51.49
Total		108,534	2.49		189.27
Weighted CN=	Area x CN	=	189.27	=	76
	Area		2.49		

NRCS Variables for bankfull and 100-year runoff calculations

Cover Type	Soil Type	Area (ft²)	Area (ac)	Curve Number	CN x Area
Impervious Cover	St Clair/Morley	44,884	1.03	98	100.98
Open Space	St Clair	50,596	1.16	80	92.92
Open Space	Morley	13,055	0.30	74	22.18
Total		63,651	2.49		216.08
Weighted CN=	Area x CN	=	216.08	=	87
	Area		2.49		

Worksheet 2 First Flush Volume

The first inch of rain in a 24-hour storm.

V_{ff} = 3,630 x A x C

= 3,630 x 2.49 x 0.64

= 5,831 cubic feet

Worksheet 3 Pre-Development Bankfull Runoff Calculations

Volume for the 2 year / 24 hour storm P = 2.35 in

The pre-development land cover will be

CN_{pre} = 76

$S = \frac{1000}{CN_{pre}} - 10 = \frac{1000}{76} - 10$

S = 3.158 in

$Q = \frac{(P-0.2S)^2}{(P+0.8S)} = \frac{(2.35 - 0.2 \times 3.158)^2}{(2.35 + 0.8 \times 3.158)}$

Q = 0.606 in

$V_{pre\ bf} = Q \times A \times 0.606$ x 63,651

= 12 12

= 3,212 cubic feet

Worksheets 4 and 5 Post-Development Bankfull Runoff Calculations

Pervious Cover Post-

Volume for the 2 year / 24 hour storm P = 2.35 in

$CN_{pervious}$ = 79 Pervious cover CN from NRCS Variables Worksheet

$S = \frac{1000}{CN_{pervious}} - 10 = \frac{1000}{79} - 10$

S = 2.658 in

$Q = \frac{(P-0.2S)^2}{(P+0.8S)} = \frac{(2.35 - 0.2 \times 2.658)^2}{(2.35 + 0.8 \times 2.658)}$

Q = 0.739 in

Pervious Cover Area, $A_{pervious}$ = 63,651 sf From NRCS Variable worksheet

$V_{pervious\ bf} = Q \times A \times 0.739$ x 63,651

= 12 12

= 3,918 cubic feet

Impervious Cover Post-

Volume for the 2 year / 24 hour storm P = 2.35 in

$CN_{impervious}$ = 98 Impervious cover CN from NRCS Variables Worksheet

$S = \frac{1000}{CN_{impervious}} - 10 = \frac{1000}{98} - 10$

S = 0.204 in

$Q = \frac{(P-0.2S)^2}{(P+0.8S)} = \frac{(2.35 - 0.2 \times 0.204)^2}{(2.35 + 0.8 \times 0.204)}$

Q = 2.122 in

Impervious Cover Area, $A_{impervious}$ = 44,884 sf From NRCS Variable worksheet

$V_{impervious\ bf} = Q \times A \times 2.122$ x 44,884

= 12 12

= 7,936 cubic feet

Worksheets 6 and 7 Post-Development 100 Year Storm Runoff Volume Calculations

Pervious Cover Post-

100 Year Storm Event P = 5.11 in

$CN_{pervious}$ = 79 Pervious cover CN from NRCS Variables Worksheet

$S = \frac{1000}{CN_{pervious}} - 10 = \frac{1000}{79} - 10$

S = 2.658 in

$Q_{100\ pre} = \frac{(P-0.2S)^2}{(P+0.8S)} = \frac{(5.11 - 0.2 \times 2.658)^2}{(5.11 + 0.8 \times 2.658)}$

$Q_{100\ pre}$ = 2.897 in

Pervious Cover Area, $A_{pervious}$ = 63,651 sf From NRCS Variable worksheet

$V_{pervious\ 100} = Q_{100\ pre} \times A \times 2.897$ x 63,651

= 12 12

= 15,364 cubic feet

Impervious Cover Post-

100 Year Storm Event P = 5.11 in

$CN_{impervious}$ = 98 Pervious cover CN from NRCS Variables Worksheet

$S = \frac{1000}{CN_{impervious}} - 10 = \frac{1000}{98} - 10$

S = 0.204 in

$Q_{100\ imp} = \frac{(P-0.2S)^2}{(P+0.8S)} = \frac{(5.11 - 0.2 \times 0.204)^2}{(5.11 + 0.8 \times 0.204)}$

$Q_{100\ imp}$ = 4.873 in

Impervious Cover Area, $A_{impervious}$ = 44,884 sf From NRCS Variable worksheet

$V_{impervious\ 100} = Q_{100\ imp} \times A \times 4.873$ x 44,884

= 12 12

= 18,227 cubic feet

Worksheet 8 Determine Time of Concentration for Applicible Flow Types (T_{+++++})

Flow Type	K	Change in Elevation (ft)	Length (L)	Slope % (S)	$S^{0.5}$	V=K*S^0.5	Tc=Li/(V*3600)
Sheet Flow (no more than 300')	0.48	2	200	1.00%	1.00	0.48	0.12
Waterway	1.20	2	250	0.80%	0.89	1.07	0.06
Waterway	1.20						
					Total Time of Concentration (Tc) =		0.18 hr

Worksheet 9 Runoff Summary & Onsite Infiltration Requirement

Runoff Summary

First Flush Volume (V_{ff}) =	5,831	cubic feet
Pre-Development Bankfull Runoff Volume ($V_{pre\ bf}$) =	3,212	cubic feet
Pervious Cover Post-Development Bankfull Volume ($V_{pervious\ bf}$) =	3,918	cubic feet
Impervious Cover Post-Development Bankfull Volume ($V_{impervious\ bf}$) =	7,936	cubic feet
Total Post-Development Bankfull Volume (V_{bf}) =	**11,854**	**cubic feet**
Pervious Cover Post-Development 100-year Volume ($V_{pervious\ 100}$) =	15,364	cubic feet
Impervious Cover Post-Development 100-year Volume ($V_{impervious\ 100}$) =	18,227	cubic feet
Total Post-Development 100-year Volume (V_{100}) =	**33,591**	**cubic feet**

Onsite Infiltration Requirement

Subtract the pre-development bankfull from the post-development bankfull volumes.

Total Post-Development Bankfull Volume (V_{bf}) =	11,854	cubic feet
Total Pre-Development Bankfull Runoff Volume ($V_{pre\ bf}$) =	3,212	cubic feet
Bankfull Volume Difference	**8,642**	**cubic feet**

Compare the Bankfull Volume Difference with the First Flush Volume. The GREATER of the two is the on-site infiltration.

Onsite Infiltration Requirement (V_{inf}) = 8,642 cubic feet

Worksheet 10 Detention / Retention Requirement

Detention

Peak of Unit Hydrograph, Q_u = 238.6 * $(Tc)^{-0.62}$ = 238.6 * 0.18 $^{-0.62}$

Q_u = 971.57 cfs/in-mi²

Total Site Area (ac) excluding "Self-Crediting" BMPs, A= 2.49 ac

Q_{pre} = $Q_{bf\ pre}$ + $Q_{ff\ pre}$ = 2.897 + 4.873

Q_{pre} = 7.770 in

Peak Flow, PF = Qp*Q100*A = 971.57 * 7.770 * 2.49

640

Peak Flow, PF = 29.39 cfs

Δ = PF - 0.15 * A

Δ = 29.39 - 0.15 * 2.49

Δ = 29.01 cfs

V_{det} = Δ * V_{100} = 29.01 * 33,591

PF 29.39

V_{det} = 33,164 cubic feet **Not including infiltration reduction credit or penalty

Retention

V_{ret} = 2 * V_{100} = 2 * 33,591

V_{ret} = 67,182 cubic feet

Worksheet 11 Determine Applicable BMP and Associated Volume Credits

Proposed BMP[A]	Area (ft²)	Storage Volume[B] (ft³) Surface	Storage Volume[B] (ft³) Soil	Avg. Design Infiltration Rate (in/hr)	Infiltration Volume During Storm[C] (ft³)	Total Volume Reduction[D] (ft³)
Pervious Pavt. w/Infiltration Bed	0	0	0	0.00	0	0
Infiltration Basin	0	0	0	0.00	0	0
Subsurface Infiltration Bed	0	0	0	0.00	0	0
Infiltration Trench	0	0	0	0.00	0	0
Bioretention systems	0	0	0	0.00	0	0
Rain Gardens	0	0	0	0.00	0	0
Dry Well	0	0	0	0.00	0	0
Bioswale	0	0	0	0.00	0	0
Vegetated Filter Strip	0	0	0	0.00	0	0
Green Roof	0	0	0	0.00	0	0
			Total Reduction Credit by Proposed Structural BMPs (V_{ct}) =		0	
				Runoff Volume Infiltration Requirement (V_{inf}) =	8,642	* Requirement provided by Basin 2
				Runoff Volume Credit (V_{ct}) =	0	

[A] Complete checklist from Section VI for each structural BMP type

[B] Storage volume as defined in individual BMP write-ups

[C] Approximated as the average design infiltration rate over 6 hours multiplied by the BMP area. infiltration rate x 6 hours x BMP area x Unit conversions - Infiltration Volume (ft^3)

[D] Total Volume Reduction Credit is the sum of storage volume and the infiltration volume during storm.

Worksheet 12 Natural Features Inventory

Existing Natural Resources	Mapped (Y, N, N/A)	Total Area (ac)	Protected / Undisturbed
Waterbodies	N	0.00	0.00
Floodplains	N	0.00	0.00
Riparian Areas	N	0.00	0.00
Wetlands	N	0.00	0.00
Woodlands	N	0.00	0.00
Natural Drainage Area	N	0.00	0.00
Steep Slopes, 15%-25%	N	0.00	0.00
Steep Slopes, over 25%	N	0.00	0.00
Special Habitat Areas	N	0.00	0.00
Other	N	0.00	0.00
Total Existing		**0.00**	**0.00**

Worksheet 13 Summary

Stormwater Management Summary

Minimum Onsite Infiltration requirements, V_{inf} =	8,642	cubic feet
Designed/Provided Infiltration Volume =	0	cubic feet
Site Credit Infiltration Volume in Basin =	0	cubic feet
% Minimum Required Infiltration Provided =	0%	
Total Calculated Detention Volume, V_{det} =	33,164	cubic feet
Net Required Detention Volume (V_{det} - Design/Provided Infiltration Volume) =	**33,164**	**cubic feet**
Detention Volume Increase for site where the required infiltration volume cannot be achieved		
% Required Infiltration NOT provided (100%-Min. Req. Infiltration provided) =	100%	
Net % Penalty (20% x % Reduced infiltration NOT provided) =	20.0%	
Total Required Detention Volume, inc. penalty	**39,797**	**cubic feet**
[(100% + Net % Penalty) x V_{det}]		

Basin Stage Storage Voume Summary

Required First Flush Volume, V_{ff} =	5,831	cubic feet
Required Bankfull Volume, V_{bf} =	11,854	cubic feet
Total Required Detention Volume =	39,797	cubic feet

Project: Zippy Auto Wash

ADS StormTech

Chamber Model -	MC-4500	
Units -	Imperial	
Number of Chambers -	251	
Number of End Caps -	18	
Voids in the stone (porosity) -	30	%
Base of Stone Elevation -	773.75	ft
Amount of Stone Above Chambers -	12	in
Amount of Stone Below Chambers -	9	in
Area of system -	10245	sf Min. Area - 9787 sf min. area

StormTech MC-4500 Cumulative Storage Volumes

Height of System (inches)	Incremental Single Chamber (cubic feet)	Incremental Single End Cap (cubic feet)	Incremental Chambers (cubic feet)	Incremental End Cap (cubic feet)	Incremental Stone (cubic feet)	Incremental Ch. EC and Stone (cubic feet)	Cumulative System (cubic feet)	Elevation (feet)
81	0.00	0.00	0.00	0.00	256.13	256.13	39957.59	780.50
80	0.00	0.00	0.00	0.00	256.13	256.13	39701.47	780.42
79	0.00	0.00	0.00	0.00	256.13	256.13	39445.34	780.33
78	0.00	0.00	0.00	0.00	256.13	256.13	39189.22	780.25
77	0.00	0.00	0.00	0.00	256.13	256.13	38933.09	780.17
76	0.00	0.00	0.00	0.00	256.13	256.13	38676.97	780.08
75	0.00	0.00	0.00	0.00	256.13	256.13	38420.84	780.00
74	0.00	0.00	0.00	0.00	256.13	256.13	38164.72	779.92
73	0.00	0.00	0.00	0.00	256.13	256.13	37908.59	779.83
72	0.00	0.00	0.00	0.00	256.13	256.13	37652.47	779.75
71	0.00	0.00	0.00	0.00	256.13	256.13	37396.34	779.67
70	0.00	0.00	0.00	0.00	256.13	256.13	37140.22	779.58
69	0.04	0.01	10.28	0.23	252.97	263.49	36884.09	779.50
68	0.12	0.03	29.14	0.61	247.20	276.95	36620.61	779.42
67	0.16	0.05	41.35	0.93	243.44	285.72	36343.66	779.33
66	0.21	0.07	52.39	1.19	240.05	293.63	36057.94	779.25
65	0.27	0.08	67.35	1.50	235.47	304.32	35764.31	779.17
64	0.45	0.11	113.65	1.90	221.46	337.01	35459.99	779.08
63	0.67	0.13	166.98	2.38	205.32	374.68	35122.98	779.00
62	0.80	0.16	200.55	2.90	195.09	398.54	34748.30	778.92
61	0.91	0.19	227.94	3.40	186.72	418.06	34349.76	778.83
60	1.00	0.22	251.73	3.93	179.43	435.09	33931.70	778.75
59	1.09	0.25	272.92	4.44	172.92	450.28	33496.61	778.67
58	1.16	0.28	292.03	4.96	167.03	464.02	33046.33	778.58
57	1.23	0.30	309.74	5.43	161.57	476.74	32582.31	778.50
56	1.30	0.33	326.22	5.90	156.49	488.61	32105.57	778.42
55	1.36	0.35	341.62	6.38	151.73	499.72	31616.96	778.33
54	1.42	0.38	356.10	6.91	147.22	510.23	31117.24	778.25
53	1.47	0.41	369.81	7.37	142.97	520.14	30607.01	778.17
52	1.53	0.44	382.81	7.94	138.90	529.65	30086.87	778.08
51	1.57	0.47	395.20	8.44	135.03	538.67	29557.22	778.00
50	1.62	0.50	406.97	8.91	131.36	547.24	29018.55	777.92
49	1.67	0.52	418.22	9.37	127.85	555.44	28471.30	777.83
48	1.71	0.54	428.98	9.80	124.49	563.28	27915.86	777.75
47	1.75	0.57	439.27	10.20	121.28	570.76	27352.59	777.67
46	1.79	0.59	449.11	10.59	118.21	577.92	26781.83	777.58
45	1.83	0.61	458.63	10.98	115.24	584.85	26203.91	777.50
44	1.86	0.63	467.72	11.38	112.39	591.50	25619.06	777.42
43	1.90	0.64	476.48	11.58	109.71	597.76	25027.56	777.33
42	1.93	0.68	484.89	12.19	107.00	604.08	24429.80	777.25
41	1.96	0.70	492.98	12.60	104.45	610.03	23825.72	777.17
40	2.00	0.72	500.77	13.00	101.99	615.77	23215.69	777.08
39	2.03	0.74	508.28	13.39	99.63	621.29	22599.92	777.00
38	2.05	0.76	515.50	13.76	97.35	626.61	21978.63	776.92
37	2.08	0.79	522.46	14.14	95.15	631.74	21352.02	776.83
36	2.11	0.80	529.13	14.45	93.05	636.63	20720.28	776.75
35	2.13	0.82	535.60	14.76	91.02	641.37	20083.65	776.67
34	2.16	0.84	541.83	15.09	89.05	645.97	19442.28	776.58
33	2.18	0.85	547.82	15.32	87.18	650.32	18796.31	776.50
32	2.21	0.86	553.59	15.47	85.41	654.47	18145.98	776.42
31	2.23	0.89	559.14	16.01	83.58	658.73	17491.52	776.33
30	2.25	0.90	564.47	16.28	81.90	662.64	16832.79	776.25
29	2.27	0.92	569.61	16.51	80.29	666.41	16170.14	776.17
28	2.29	0.92	574.54	16.56	78.80	669.89	15503.73	776.08
27	2.31	0.94	579.27	16.98	77.25	673.50	14833.84	776.00
26	2.33	0.96	583.81	17.21	75.82	676.84	14160.34	775.92
25	2.34	0.97	588.17	17.44	74.44	680.05	13483.50	775.83
24	2.36	0.98	592.34	17.68	73.12	683.13	12803.45	775.75
23	2.38	0.97	596.32	17.48	71.98	685.79	12120.33	775.67
22	2.39	1.00	600.14	18.06	70.67	688.86	11434.54	775.58
21	2.41	1.01	603.77	18.20	69.53	691.50	10745.68	775.50
20	2.42	1.02	607.23	18.37	68.44	694.05	10054.17	775.42
19	2.43	1.03	610.53	18.55	67.40	696.48	9360.13	775.33
18	2.44	1.04	613.65	18.70	66.42	698.77	8663.65	775.25
17	2.46	1.05	616.62	18.83	65.49	700.94	7964.88	775.17
16	2.47	1.05	619.41	18.97	64.61	703.00	7263.94	775.08
15	2.48	1.05	622.05	18.91	63.84	704.79	6560.94	775.00
14	2.49	1.06	624.55	19.02	63.05	706.63	5856.15	774.92
13	2.50	1.08	626.92	19.36	62.24	708.52	5149.52	774.83
12	2.51	1.08	629.13	19.49	61.54	710.16	4441.00	774.75
11	2.51	1.09	631.19	19.59	60.89	711.67	3730.84	774.67
10	2.53	1.11	634.26	19.91	59.87	714.05	3019.17	774.58
9	0.00	0.00	0.00	0.00	256.13	256.13	2305.13	774.50
8	0.00	0.00	0.00	0.00	256.13	256.13	2049.00	774.42
7	0.00	0.00	0.00	0.00	256.13	256.13	1792.88	774.33
6	0.00	0.00	0.00	0.00	256.13	256.13	1536.75	774.25
5	0.00	0.00	0.00	0.00	256.13	256.13	1280.63	774.17
4	0.00	0.00	0.00	0.00	256.13	256.13	1024.50	774.08
3	0.00	0.00	0.00	0.00	256.13	256.13	768.38	774.00
2	0.00	0.00	0.00	0.00	256.13	256.13	512.25	773.92
1	0.00	0.00	0.00	0.00	256.13	256.13	256.13	773.83

Storage Volume Provided

Underground Storage *See Manufacturer stage storage detail Sheet C-10

Elevation	Cumulative Volume (cft)
780.50	39957.59
780.00	39420.84
779.50	36884.09
779.00	35122.98
778.50	32582.31
778.00	29557.22
777.50	26203.91
777.00	22599.92
776.50	18796.31
776.00	14833.84
775.50	10745.68
775.00	6560.94
774.50	2305.13
773.75	0

Detention Volume Provided= 39,958 cubic feet

Detention Volume Required= 39,797 cubic feet

First Flush Elevation

First Flush storage volume required= $^{T}V_{ff}$ = 5,831 $^{T}E_{ff} = E_1 + (V_{ff} - V_1) \times (E_2 - E_1) / (V_2 - V_1)$

First Flush storage volume just below required amount= V_1 = 5,150

First Flush storage volume just above required amount= V_2 = 5,856

Elevation at First Flush storage volume V_1= E_1 = 774.63 $^{T}E_{ff}$ = 774.91

Elevation at First Flush storage volume V_2= E_2 = 774.92

Bankfull Elevation Calculation

Bankfull storage volume required= $^{T}V_{bf}$ = 11,854 $^{T}E_{bf} = E_1 + (V_{bf} - V_1) \times (E_2 - E_1) / (V_2 - V_1)$

Bankfull storage volume just below required amount= V_1 = 11,435

Bankfull storage volume just above required amount= V_2 = 12,120

Elevation at Bankfull storage volume V_1= E_1 = 775.58 $^{T}E_{bf}$ = 775.63

Elevation at Bankfull storage volume V_2= E_2 = 775.67

100-Year Elevation Calculation

100-Year storage volume required= V_{100} = 39,797 $^{T}E_{det} = E_1 + (V_{det} - V_1) \times (E_2 - E_1) / (V_2 - V_1)$

100-Year storage volume just below required amount= V_1 = 39,701

100-Year storage volume just above required amount= V_2 = 39,958

Elevation at 100-Year storage volume V_1= E_1 = 780.42 $^{T}E_{det}$ = 780.45

Elevation at 100-Year storage volume V_2= E_2 = 780.50

Allowable Outflow Calculation

Based on Acreage: Properly Area= 2.49 acres

Q_a= 0.15 cfs/acre

= 0.15 cfs/acre x 2.49 acres

= 0.37 cfs

Outlet Structure Calculations

First Flush Outlet

$^{T}h_{avg} = 2/3(X_{ff} - X_{ch})$ = 0.667 * (774.91 - 773.75)

$^{T}h_{avg}$ = 0.78 ft

$^{T}q_{ff}$ = 0.067 cfs

$^{A}n_{ff}$ = $q_{max\ ff} / (0.62(64.4 \times h_{avg})^{0.5})$ = 0.067 / (0.62(64.4 x 0.78)^0.5) = 0.01540 ft²

Use 5 - 3/4" holes at outlet elevation $A_{o\ ff}$ = 0.01534 ft²

$^{T}act\ ff = 0.62 \times A_{of} \times (64.4 \times h_{avg})^{0.5}$ = 0.067 cfs

Bankfull Discharge

$^{h}_{avg\ bf} = 2/3(X_{bf} - X_{ch})$ = 0.667 * (775.63 - 773.75)

$^{h}_{avg\ bf}$ = 1.26 ft

Check to confirm that the Bankfull storm volume discharged through first flush in less than approx. 40 hours. If it exceeds 40 hrs, additional holes shall be place at the first flush elevation

$Q_{bf} = 0.62 \times A_{of} \times (64.4 \times h_{avg\ bf})^{0.5}$ = 0.086 cfs

Dewatering Time = V_{bf} = 11,854 = 38.48 hr

Q_{bf} = 0.086

100-Year Storm

$Q_{ch} = 0.62 * A_{of} (2 * g * (X_{ch} - X_{orifice}))^{0.5}$

Q_{ch} = 0.62 * 0.0153 * (64.4 * (780.45 - 773.75))^0.5

Q_{ch} = 0.198 cfs

$Q_{orifice}$ = Q_{ch} - $^{T}q_{bf}$ = 0.374 - 0.198

$Q_{orifice}$ = 0.176 cfs

$A_{orifice}$ = $Q_{orifice\ 100} / (0.62(64.4 \times (X_{ch} - X_o))^{0.5})$ = 0.176 / (0.62(64.4 x (X_ch - X_o))^0.5) = 0.0161 ft²

Use 2 - 1" holes at outlet elevation $A_{o\ 100}$ = 0.01091 ft²

$Q_{100} = 0.62 * A_{orifice} (2 * g * (X_{ch} - X_{orifice}))^{0.5}$

Q_{100} = 0.62 * 0.0109 * (64.4 * (780.45 - 775.63))^0.5

Q_{100} = 0.119 cfs < $Q_{orifice\ 100}$ = 0.176 cfs

$^{h}_{avg\ bottom} = 2/3(X_{ch100} - X_{ch}) + (X_{ch} - X_{bottom})$

$^{h}_{avg\ bottom} = 2/3 * (780.45 - 775.63) + (775.63 - 773.75)$

$^{h}_{avg\ bottom}$ = 5.09 ft

$Q_{bottom} = 0.62 * A_{of} (2 * g * h_{avg\ bottom})^{0.5}$

Q_{bottom} = 0.62 * 0.0153 * (64.4 * 5.09)^0.5

Q_{bottom} = 0.172 cfs

The average discharge through the 100-year storm orifice(s) while the other orifice(s) are contributing should be determined.

$^{h}_{avg\ 100} = 2/3 (X_{100} - X_{bf})$

$^{h}_{avg\ 100} = 2/3 (780.45 - 775.63)$

$^{h}_{avg\ 100}$ = 3.21 ft

$Q_{avg\ 100} = 0.62 * A_{of} (2 * g * h_{avg\ 100})^{0.5}$

$Q_{avg\ 100}$ = 0.62 * 0.0109 * (64.4 * 3.21)^0.5

$Q_{avg\ 100}$ = 0.097 cfs

Check to confirm that the 100-year storm volume is discharged in less than 72 hours.

$V_{vent} = V_{100} - V_{bf}$

V_{vent} = 39,797 - 11,854

V_{vent} = 27,943 cubic feet

$T_{100} = T_{bf} + T_{vent} = T_{bottom} + T_{orifice}$

T_{100} = 38.48 + 27,943 / (0.172 + 0.097)

T_{100} = 67.29 hr < 72 hr

ZIPPY AUTO WASH

DESIGNERS BUILDERS

Vanston/OBrien, Inc.

8150 Jackson Road, Ste. A Ann Arbor, MI 48103

Tel: (734) 424-0661 Fax: (734) 424-0677

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Zippy Auto Wash

1822 W Michigan Ave

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ISSUED FOR:	DATE:
PRELIMINARY	6-2-25
WCWRC REVISED	6-16-25
REVISED	8-6-25

DRAWN BY: GAH

JOB NO.: ---

STORM WATER CALCULATIONS

SHEET NO.

C-9

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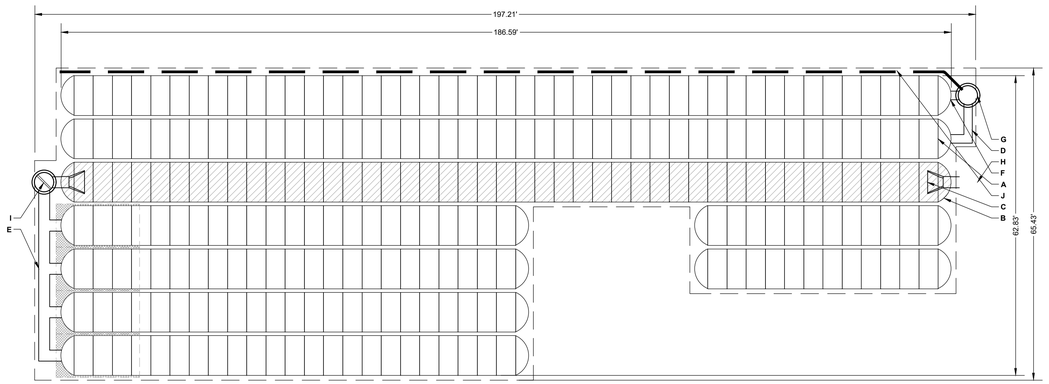
PROPOSED LAYOUT		PROPOSED ELEVATIONS	
251	STORMTECH MC-4500 CHAMBERS	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):	786.50
18	STORMTECH MC-4500 END CAPS	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):	782.00
12	STONE ABOVE (in)	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):	781.50
9	STONE BELOW (in)	MINIMUM ALLOWABLE GRADE (TOP OF RIGID CONCRETE PAVEMENT):	781.50
30	STONE VOID	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):	781.50
40408	INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED) (COVER STONE INCLUDED) (BASE STONE INCLUDED)	TOP OF STONE:	780.50
		TOP OF MC-4500 CHAMBER:	779.50
		15" x 15" TOP MANIFOLD INVERT:	777.23
		24" ISOLATOR ROW PLUS INVERT:	774.68
10245	SYSTEM AREA (SF)	15" x 15" BOTTOM MANIFOLD INVERT:	774.64
423.1	SYSTEM PERIMETER (ft)	15" BOTTOM CONNECTION INVERT:	774.64
		BOTTOM OF MC-4500 CHAMBER:	774.50
		UNDERDRAIN INVERT:	773.75
		BOTTOM OF STONE:	773.75

*INVERT ABOVE BASE OF CHAMBER

PART TYPE	ITEM ON LAYOUT	DESCRIPTION	INVERT*	MAX FLOW
PREFABRICATED END CAP	A	15" TOP PARTIAL CUT END CAP, PART#: MC4500IEPP15T / TYP OF ALL 15" TOP CONNECTIONS	32.72"	
PREFABRICATED END CAP	B	24" BOTTOM PARTIAL CUT END CAP, PART#: MC4500IEPP24B / TYP OF ALL 24" BOTTOM CONNECTIONS AND ISOLATOR PLUS ROWS	2.26"	
PREFABRICATED END CAP	C	15" BOTTOM PARTIAL CUT END CAP, PART#: MC4500IEPP15B / TYP OF ALL 15" BOTTOM CONNECTIONS	1.70"	
FLAMP	D	INSTALL FLAMP ON 24" ACCESS PIPE / PART#: MCFLAMP		
MANIFOLD	E	15" x 15" TOP MANIFOLD, ADS N-12	32.72"	
MANIFOLD	F	15" x 15" BOTTOM MANIFOLD, ADS N-12	1.70"	
PIPE CONNECTION	G	15" BOTTOM CONNECTION	1.70"	
CONCRETE STRUCTURE	H	(DESIGN BY ENGINEER / PROVIDED BY OTHERS)		12.0 CFS IN
CONCRETE STRUCTURE	I	OCS (DESIGN BY ENGINEER / PROVIDED BY OTHERS)		5.4 CFS OUT
UNDERDRAIN	J	6" ADS N-12 DUAL WALL PERFORATED HDPE UNDERDRAIN		



ISOLATOR ROW PLUS (SEE DETAIL)

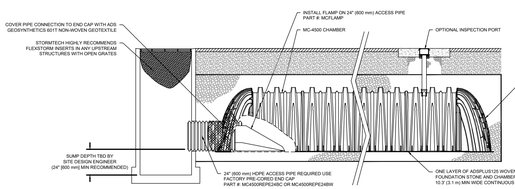
PLACE MINIMUM 17.50' OF ADSPLUS125 WOVEN GEOTEXTILE OVER BEDDING STONE AND UNDERNEATH CHAMBER FEET FOR SCOUR PROTECTION AT ALL CHAMBER INLET ROWS

BED LIMITS

NOTES

- THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET.
- **NOT FOR CONSTRUCTION** THIS LAYOUT IS FOR DIMENSIONAL PURPOSES ONLY TO PROVE CONCEPT & THE REQUIRED STORAGE VOLUME CAN BE ACHIEVED ON SITE.

3 MC-4500 ISOLATOR ROW PLUS DETAIL



MC-4500 ISOLATOR ROW PLUS DETAIL
NTS

INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
  - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
  - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
  - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - A.4. LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR PLUS ROWS
  - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
  - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
    - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
    - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
  - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED

STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

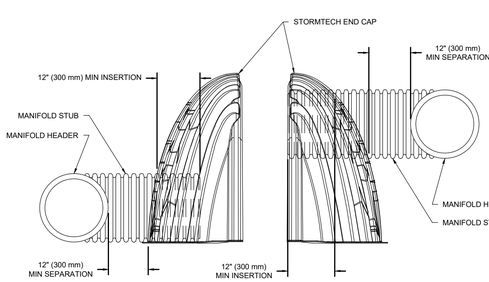
STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

SPACE INTENTIONALLY LEFT BLANK

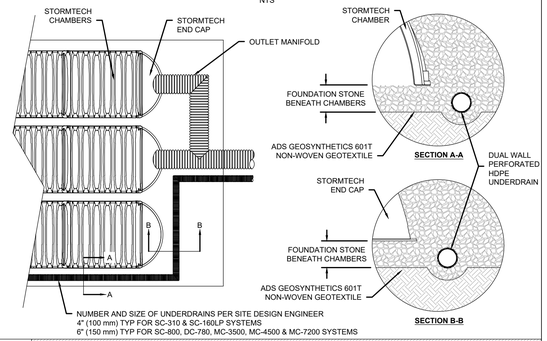
MC-SERIES END CAP INSERTION DETAIL
NTS



NOTE: MANIFOLD STUB MUST BE LAID HORIZONTAL FOR A PROPER FIT IN END CAP OPENING.

5 MC-SERIES END CAP INSERTION DETAIL

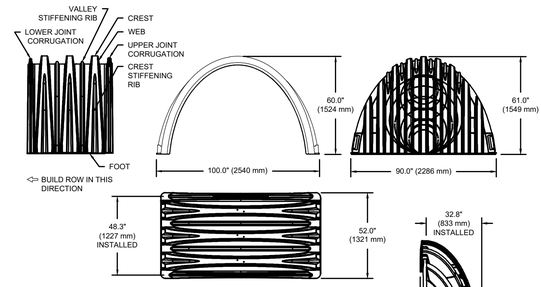
UNDERDRAIN DETAIL
NTS



4 UNDERDRAIN DETAIL

SPACE INTENTIONALLY LEFT BLANK

MC-4500 TECHNICAL SPECIFICATION
NTS



NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	100.0" X 60.0" X 48.3"	(2540 mm X 1524 mm X 1227 mm)
CHAMBER STORAGE	106.5 CUBIC FEET	(3.01 m³)
MINIMUM INSTALLED STORAGE*	162.6 CUBIC FEET	(4.60 m³)
WEIGHT (NOMINAL)	125.0 lbs.	(56.7 kg)

NOMINAL END CAP SPECIFICATIONS

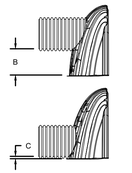
SIZE (W X H X INSTALLED LENGTH)	90.0" X 61.0" X 32.8"	(2286 mm X 1549 mm X 833 mm)
END CAP STORAGE	39.5 CUBIC FEET	(1.12 m³)
MINIMUM INSTALLED STORAGE*	115.3 CUBIC FEET	(3.26 m³)
WEIGHT (NOMINAL)	90 lbs.	(40.8 kg)

*ASSUMES 12" (305 mm) STONE ABOVE, 9" (229 mm) STONE FOUNDATION AND BETWEEN CHAMBERS, 12" (305 mm) STONE PERIMETER IN FRONT OF END CAPS AND 40% STONE POROSITY.

PARTIAL CUT HOLES AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
PARTIAL CUT HOLES AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"
END CAPS WITH A PREFABRICATED WELDED STUB END WITH "W"

PART #	STUB	B	C
MC4500IEPP06T	6" (150 mm)	42.54" (1081 mm)	---
MC4500IEPP06B		---	0.86" (22 mm)
MC4500IEPP08T	8" (200 mm)	40.50" (1029 mm)	---
MC4500IEPP08B		---	1.01" (26 mm)
MC4500IEPP10T	10" (250 mm)	38.37" (975 mm)	---
MC4500IEPP10B		---	1.33" (34 mm)
MC4500IEPP12T	12" (300 mm)	35.69" (907 mm)	---
MC4500IEPP12B		---	1.55" (39 mm)
MC4500IEPP15T	15" (375 mm)	32.72" (831 mm)	---
MC4500IEPP15B		---	1.70" (43 mm)
MC4500IEPP18T	18" (450 mm)	29.36" (746 mm)	---
MC4500IEPP18TW			
MC4500IEPP18B		---	1.97" (50 mm)
MC4500IEPP18BW			
MC4500IEPP24T	24" (600 mm)	23.05" (585 mm)	---
MC4500IEPP24TW			
MC4500IEPP24B		---	2.26" (57 mm)
MC4500IEPP24BW			
MC4500IEPP30BW	30" (750 mm)	---	2.95" (75 mm)
MC4500IEPP36BW	36" (900 mm)	---	3.25" (83 mm)
MC4500IEPP42BW	42" (1050 mm)	---	3.55" (90 mm)

NOTE: ALL DIMENSIONS ARE NOMINAL



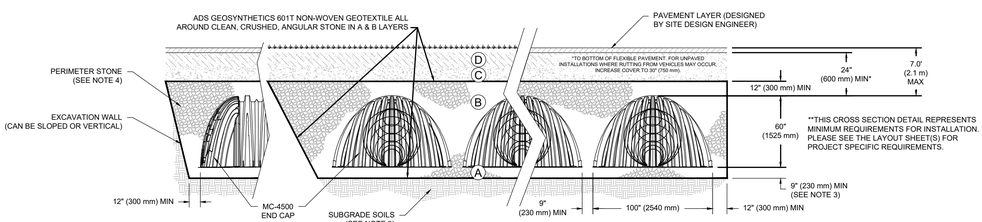
CUSTOM PARTIAL CUT INVERTS ARE AVAILABLE UPON REQUEST. INVENTORIED MANIFOLDS INCLUDE 12-24" (300-600 mm) SIZE ON SIZE AND 15-48" (375-1200 mm) ECCENTRIC MANIFOLDS. CUSTOM INVERT LOCATIONS ON THE MC-4500 END CAP CUT IN THE FIELD ARE NOT RECOMMENDED FOR PIPE SIZES GREATER THAN 10" (250 mm). THE INVERT LOCATION IN COLUMN 'B' ARE THE HIGHEST POSSIBLE FOR THE PIPE SIZE.

2 MC-4500 TECHNICAL SPECIFICATION

ACCEPTABLE FILL MATERIALS: STORMTECH MC-4500 CHAMBER SYSTEMS

	MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	**FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	**INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145[1] A-1, A-2-4, A-3 OR AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE[3]	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	**FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE[3]	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.[2,3]

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.
5. WHERE RECYCLED CONCRETE AGGREGATE IS USED IN LAYERS 'A' OR 'B' THE MATERIAL SHOULD ALSO MEET THE ACCEPTABILITY CRITERIA OUTLINED IN TECHNICAL NOTE 6.20 "RECYCLED CONCRETE STRUCTURAL BACKFILL".



NOTES:
1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 60x101
2. MC-4500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS. REFERENCE STORMTECH DESIGN MANUAL FOR BEARING CAPACITY GUIDANCE.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 500 LBS/FT/% THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

1 MC-4500 CROSS SECTION DETAIL

ZIPPY AUTO WASH

ZIPPY YPSI COPY
YPSILANTI, MI, USA

DRAWN: GH | DATE: 05/30/2025
CHECKED: N/A | PROJECT #:
REV: | NOT TO SCALE

StormTech® Chamber System
1-800-821-6710 | WWW.STORMTECH.COM

4640 TRUEMAN BLVD
HILLIARD, OH 43026
1-800-733-7473

ADS

THIS DRAWING HAS BEEN PREPARED BASED ON INFORMATION PROVIDED TO ADS/STORMTECH UNDER THE DIRECTION OF THE PROJECT'S ENGINEER OF RECORD (EOR'). OR OTHER PROJECT REPRESENTATIVE. THIS DRAWING IS NOT INTENDED FOR USE IN BIDDING OR CONSTRUCTION WITHOUT THE EOR'S PROVAL. EOR SHALL REVIEW THIS DRAWING PRIOR TO BIDDING AND/OR CONSTRUCTION. IT IS THE ULTIMATE RESPONSIBILITY OF THE EOR TO ENSURE THAT THE PRODUCT(S) DEPICTED AND ALL ASSOCIATED DETAILS MEET ALL APPLICABLE LAWS, REGULATIONS, AND PROJECT REQUIREMENTS.

SHEET
1 OF 1

ZIPPY AUTO WASH

DESIGNERS
Vanston/O'Brien, Inc.
BUILDERS
8150 Jackson Road, Ste. A Tel: (734) 424-0661
Ann Arbor, MI 48103 Fax: (734) 424-0677
e-mail: design@vanston.com • www.vanston.com

Zippy Auto Wash
1822 W Michigan Ave
Ypsilanti Township, Michigan

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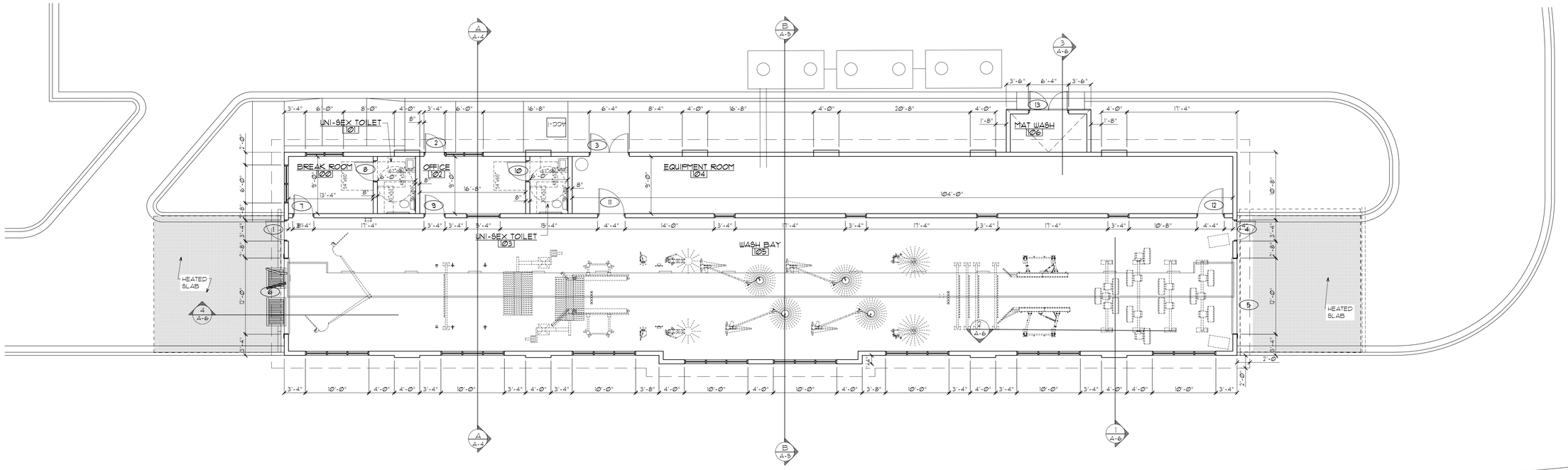
ISSUED FOR:	DATE:
PRELIMINARY	6-2-25
WCWRC REVISED	6-18-25
REVISED	8-8-25

DRAWN BY: GAH
JOB NO.: ---

DETAIL SHEET

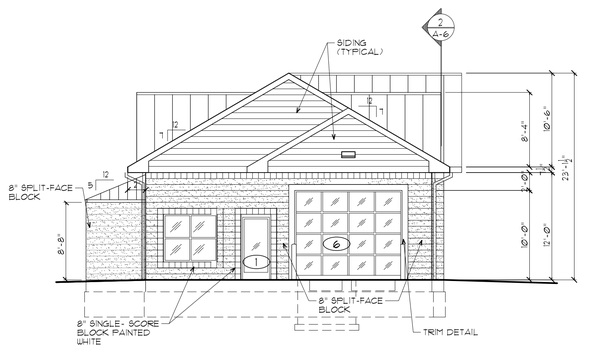
SHEET NO.
C-10

\\FILESRVER1\Design Dept\PROJECT FILES\Zippy- Michigan-Ellsworth\All\Dcad\3Site\C-10.dwg, 8/13/2025 11:13:11 AM



FLOOR PLAN

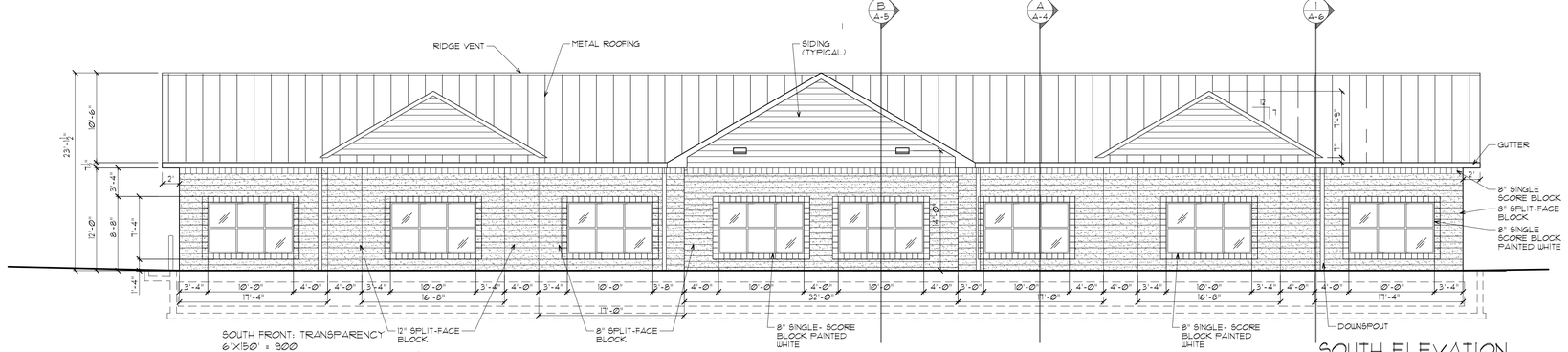
SCALE: 1/8" = 1'-0"



WEST SIDE: TRANSPARENCY
6'X40' = 240
•30% = 72 SQFT
32+72 •15=119 OK

WEST ELEVATION

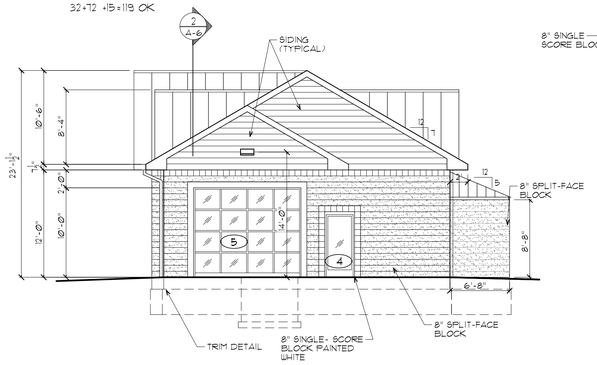
SCALE: 1/8" = 1'-0"



SOUTH FRONT: TRANSPARENCY
6'X150' = 900
•50% = 450 SQFT
6'X10 = 60 SF EA
60x8 =480 OK

SOUTH ELEVATION

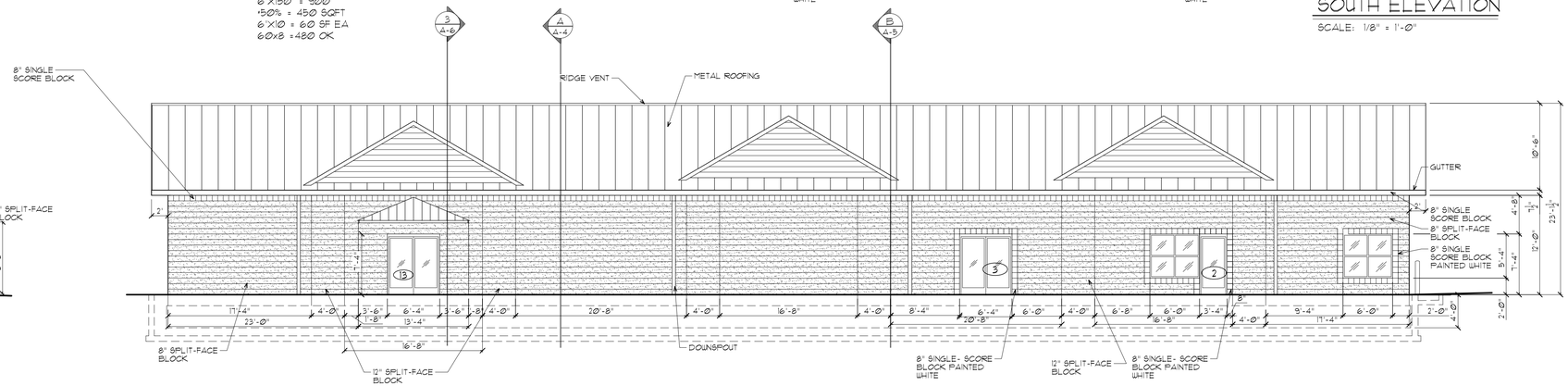
SCALE: 1/8" = 1'-0"



EAST SIDE: TRANSPARENCY
6'X40' = 240
•30% = 72 SQFT
72 •15=87 OK

EAST ELEVATION

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



NORTH ELEVATION

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

MATERIALS CHART	
MATERIAL	
SPLIT-FACE BLOCK	MATCH FENDT BUILDERS SUPPLY COLOR 408 COLOR OR EQUAL
GLASS	CLEAR - W/ ALUM ANODIZED FRAMES
SINGLE SCORE BLOCK	SINGLE SCORE 8" - WATERBORNE WHITE EPOXY
VINYL SIDING TRIM	WHITE VINYL SIDING
ROOFING	JENSEN OCEAN BLUE
SOFFIT	WHITE ALUMINUM - VENTED
TRIM	WATER BORN WHITE EPOXY

NORTH PARKING: TRANSPARENCY
6'X150' = 900
•30% = 270 SF
50% (135 SF) CAN BE MADE UP WITH ADDITIONAL FEATURES

34•2+ 32•2 + 15
=141 > 135 SF OK IF CITY ACCEPTS OTHER FEATURES

NOTES: GLAZING (WINDOWS AND DOORS) IS TO BE CLEAR & TRANSPARENT, NOT TINTED, REFLECTIVE OR OPAQUE

NOTES: TRIM DETAIL OVERHEAD DOORS, WRAP ENTRANCE JAM AND CASING WITH 1X8 DIMENSIONAL PLASTIC LUMBER. INSTALL WITH GRADE 410 STAINLESS STEEL, COUNTERSUNK HEAD TAPCONS

ZIPPY AUTO BAKER-JACKSON

DESIGNERS
Vanston/O'Brien, Inc.
BUILDERS
8150 Jackson Road, Ste. A
Ann Arbor, MI 48103
Tel: (734) 424-0661
Fax: (734) 424-0677
e-mail: design@vanston.com • www.vanston.com

Zippy Auto Wash

1822 W. Michigan Ave

Ypsilanti Township, Michigan

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ISSUED FOR:	DATE:
PLANNING	05-29-25
PLANNING	07-25-25

DRAWN BY: RL
JOB NO.: D80

BUILDING FLOOR PLAN & ELEVATIONS

SHEET NO.

A-1

SOUTHWEST ABOVE

NORTHWEST ABOVE

MICHIGAN AVE

NORTH CORNER ELLSWORTH

MICHIGAN AVE

ELLSWORTH SW

ZIPPY AUTO BAKER-JACKSON

DESIGNERS
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BUILDERS
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Ann Arbor, MI 48103
Tel: (734) 424-0661
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Zippy Auto Wash

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ISSUED FOR:	DATE:
PLANNING	05-29-25
PLANNING	08-14-25

DRAWN BY: RI
JOB NO.: D80

SITE & BUILDING RENDERING

SHEET NO.

A-2

BOUNDARY & TOPOGRAPHICAL SURVEY

PROPERTY DESCRIPTION PER WASHTENAW COUNTY TAX ROLL:

BEG IN THE CENT LINE OF CHICAGO ROAD AT A POINT WHICH IS S 20-06-00 E 51.20 FT FROM THE SE COR OF TRIANGLE PARK SUBDIVISION, A RECORDED PLAT; TH N 20-06-00 W 280.87 FT; TH S 88-40-00 E 491.95 FT TO THE CENT OF CHICAGO ROAD; TH S 57-27-00 W 468.95 FT TO THE PL OF BEG. ALSO INCLUDING LOTS 19 THROUGH 24 TRIANGLE PARK SUB. BEING A PART OF FRENCH CLAIM 690 CONT. 3.24 +/- AC T3S-R7E, WASHTENAW COUNTY EXCEPT THAT PT TAKEN FOR MICHIGAN AVE WIDENING.

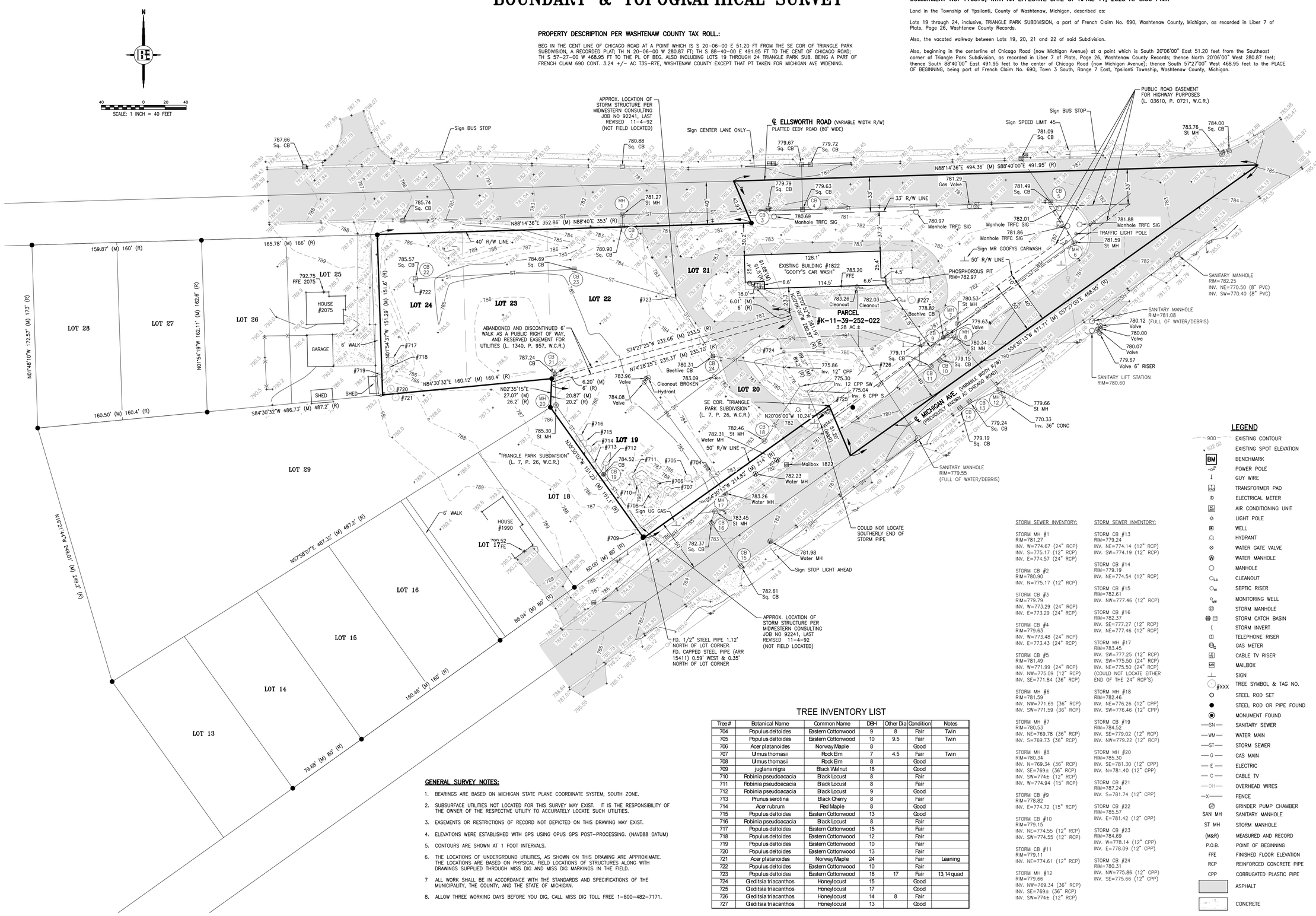
PROPERTY DESCRIPTION PER AMERICAN TITLE COMPANY OF WASHTENAW, ISSUED FOR STEWART TITLE GUARANTY COMPANY, COMMITMENT NO: 116879, WITH AN EFFECTIVE DATE OF APRIL 11, 2025 AT 5:00 P.M.:

Land in the Township of Ypsilanti, County of Washtenaw, Michigan, described as:

Lots 19 through 24, inclusive, TRIANGLE PARK SUBDIVISION, a part of French Claim No. 690, Washtenaw County, Michigan, as recorded in Liber 7 of Plats, Page 26, Washtenaw County Records.

Also, the vacated walkway between Lots 19, 20, 21 and 22 of said Subdivision.

Also, beginning in the centerline of Chicago Road (now Michigan Avenue) at a point which is South 20°06'00" East 51.20 feet from the Southeast corner of Triangle Park Subdivision, as recorded in Liber 7 of Plats, Page 26, Washtenaw County Records; thence North 20°06'00" West 280.87 feet; thence South 88°40'00" East 491.95 feet to the center of Chicago Road (now Michigan Avenue); thence South 57°27'00" West 468.95 feet to the PLACE OF BEGINNING, being part of French Claim No. 690, Town 3 South, Range 7 East, Ypsilanti Township, Washtenaw County, Michigan.



TREE INVENTORY LIST

Tree #	Botanical Name	Common Name	DBH	Other Dia	Condition	Notes
704	Populus deltoides	Eastern Cottonwood	9	8	Fair	Twin
705	Populus deltoides	Eastern Cottonwood	10	9.5	Fair	Twin
706	Acer platanoides	Norway Maple	8		Good	
707	Ulmus thomasii	Rock Elm	7	4.5	Fair	Twin
708	Ulmus thomasii	Rock Elm	8		Good	
709	juglans nigra	Black Walnut	18		Good	
710	Robinia pseudoacacia	Black Locust	8		Fair	
711	Robinia pseudoacacia	Black Locust	8		Fair	
712	Robinia pseudoacacia	Black Locust	9		Good	
713	Prunus serotina	Black Cherry	8		Fair	
714	Acer rubrum	Red Maple	8		Good	
715	Populus deltoides	Eastern Cottonwood	13		Good	
716	Robinia pseudoacacia	Black Locust	8		Fair	
717	Populus deltoides	Eastern Cottonwood	15		Fair	
718	Populus deltoides	Eastern Cottonwood	12		Fair	
719	Populus deltoides	Eastern Cottonwood	10		Fair	
720	Populus deltoides	Eastern Cottonwood	13		Fair	
721	Acer platanoides	Norway Maple	24		Fair	Leaning
722	Populus deltoides	Eastern Cottonwood	10		Fair	
723	Populus deltoides	Eastern Cottonwood	18	17	Fair	13;14 quad
724	Gleditsia triacanthos	Honeylocust	15		Good	
725	Gleditsia triacanthos	Honeylocust	17		Good	
726	Gleditsia triacanthos	Honeylocust	14	8	Fair	
727	Gleditsia triacanthos	Honeylocust	13		Good	

GENERAL SURVEY NOTES:

1. BEARINGS ARE BASED ON MICHIGAN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE.
2. SUBSURFACE UTILITIES NOT LOCATED FOR THIS SURVEY MAY EXIST. IT IS THE RESPONSIBILITY OF THE OWNER OF THE RESPECTIVE UTILITY TO ACCURATELY LOCATE SUCH UTILITIES.
3. EASEMENTS OR RESTRICTIONS OF RECORD NOT DEPICTED ON THIS DRAWING MAY EXIST.
4. ELEVATIONS WERE ESTABLISHED WITH GPS USING OPUS GPS POST-PROCESSING. (NAVD88 DATUM)
5. CONTOURS ARE SHOWN AT 1 FOOT INTERVALS.
6. THE LOCATIONS OF UNDERGROUND UTILITIES, AS SHOWN ON THIS DRAWING ARE APPROXIMATE. THE LOCATIONS ARE BASED ON PHYSICAL FIELD LOCATIONS OF STRUCTURES ALONG WITH DRAWINGS SUPPLIED THROUGH MISS DIG AND MISS DIG MARKINGS IN THE FIELD.
7. ALL WORK SHALL BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE MUNICIPALITY, THE COUNTY, AND THE STATE OF MICHIGAN.
8. ALLOW THREE WORKING DAYS BEFORE YOU DIG, CALL MISS DIG TOLL FREE 1-800-482-7171.

LEGEND

- 900 EXISTING CONTOUR
- 922.00 EXISTING SPOT ELEVATION
- BM BENCHMARK
- POWER POLE
- GUY WIRE
- TRANSFORMER PAD
- ELECTRICAL METER
- AIR CONDITIONING UNIT
- LIGHT POLE
- WELL
- HYDRANT
- WATER GATE VALVE
- WATER MANHOLE
- MANHOLE
- CLEANOUT
- SEPTIC RISER
- MONITORING WELL
- STORM MANHOLE
- STORM CATCH BASIN
- STORM INVERT
- TELEPHONE RISER
- GAS METER
- CABLE TV RISER
- MAILBOX
- SIGN
- #XXX TREE SYMBOL & TAG NO.
- STEEL ROD SET
- STEEL ROD OR PIPE FOUND
- MONUMENT FOUND
- SN SANITARY SEWER
- WM WATER MAIN
- ST STORM SEWER
- G GAS MAIN
- E ELECTRIC
- C CABLE TV
- OH OVERHEAD WIRES
- X FENCE
- GRINDER PUMP CHAMBER
- SAN MH SANITARY MANHOLE
- ST MH STORM MANHOLE
- (M&R) MEASURED AND RECORD
- P.O.B. POINT OF BEGINNING
- FFE FINISHED FLOOR ELEVATION
- RCP REINFORCED CONCRETE PIPE
- CPP CORRUGATED PLASTIC PIPE
- ASPHALT
- CONCRETE

STORM SEWER INVENTORY:

STORM MH #1
RIM=781.27
INV. W=774.67 (24" RCP)
INV. S=775.17 (12" RCP)
INV. E=774.57 (24" RCP)

STORM CB #2
RIM=780.90
INV. N=775.17 (12" RCP)

STORM CB #3
RIM=779.79
INV. W=773.29 (24" RCP)
INV. E=773.29 (24" RCP)

STORM CB #4
RIM=779.63
INV. W=773.48 (24" RCP)
INV. E=773.43 (24" RCP)

STORM CB #5
RIM=781.49
INV. W=771.99 (24" RCP)
INV. NW=775.09 (12" RCP)
INV. SE=771.84 (36" RCP)

STORM MH #6
RIM=781.59
INV. NW=771.69 (36" RCP)
INV. SW=771.59 (36" RCP)

STORM MH #7
RIM=780.53
INV. NE=769.78 (36" RCP)
INV. S=769.73 (36" RCP)

STORM MH #8
RIM=780.34
INV. N=769.34 (36" RCP)
INV. SE=769± (36" RCP)
INV. SW=774± (12" RCP)
INV. W=774.94 (15" RCP)

STORM CB #9
RIM=778.82
INV. E=774.72 (15" RCP)

STORM CB #10
RIM=779.15
INV. NE=774.55 (12" RCP)
INV. SW=774.55 (12" RCP)

STORM CB #11
RIM=779.11
INV. NE=774.61 (12" RCP)

STORM MH #12
RIM=779.66
INV. NW=769.34 (36" RCP)
INV. SE=769± (36" RCP)
INV. SW=774± (12" RCP)

STORM SEWER INVENTORY:

STORM CB #13
RIM=779.24
INV. NE=774.14 (12" RCP)
INV. SW=774.19 (12" RCP)

STORM CB #14
RIM=779.19
INV. NE=774.54 (12" RCP)

STORM CB #15
RIM=782.61
INV. NW=777.46 (12" RCP)

STORM CB #16
RIM=782.37
INV. SE=777.27 (12" RCP)
INV. NE=777.46 (12" RCP)

STORM MH #17
RIM=783.45
INV. SW=777.25 (12" RCP)
INV. SW=775.50 (24" RCP)
INV. NE=775.50 (24" RCP)
(COULD NOT LOCATE EITHER END OF THE 24" RCP'S)

STORM MH #18
RIM=782.46
INV. NE=776.26 (12" CPP)
INV. SW=776.46 (12" CPP)

STORM CB #19
RIM=784.52
INV. SE=779.02 (12" RCP)
INV. NW=779.22 (12" RCP)

STORM MH #20
RIM=785.30
INV. SE=781.30 (12" CPP)
INV. N=781.40 (12" CPP)

STORM CB #21
RIM=787.24
INV. S=781.74 (12" CPP)

STORM CB #22
RIM=785.57
INV. E=781.42 (12" CPP)

STORM CB #23
RIM=784.69
INV. W=778.14 (12" CPP)
INV. E=778.09 (12" CPP)

STORM CB #24
RIM=780.31
INV. NW=775.86 (12" CPP)
INV. SE=775.66 (12" CPP)

THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE DRAWINGS ARE ONLY APPROXIMATE. NO GUARANTEE IS MADE AS TO THE COMPLETENESS OR ACCURACY OF THE INFORMATION SHOWN THEREON. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR ESTABLISHING THE EXACT LOCATION AND ELEVATION OF ALL EXISTING AND PROPOSED UTILITY CROSSINGS IN THE FIELD PRIOR TO CONSTRUCTION AND SHALL PROTECT THE SAME FROM DAMAGE. IF ANY CONFLICTS ARE APPARENT OR IF THE LOCATION OR DEPTH DIFFERS SIGNIFICANTLY FROM THAT SHOWN, NOTIFY THE ENGINEER IMMEDIATELY.
3 WORKING DAYS BEFORE YOU DIG MISS DIG 1-800-482-7171 It's a state of Michigan mandate

STATE OF MICHIGAN
CHRISTOPHER S. FERGUS
License No. 4001047055
LICENSED PROFESSIONAL SURVEYOR

BE BOSS Engineering
Engineers Surveyors Planners Landscape Architects
3121 E. GRAND RIVER AVE.
HOWELL, MI. 48843
517.546.4836 FAX 517.548.1670

PROJECT: 1822 W. MICHIGAN AVE., YPSILANTI, MI
PREPARED FOR: YANSTON/O-BRIEN, INC.
8150 JACKSON ROAD, SUITE A
ANN ARBOR, MI. 48103
734-424-0661
TITLE: BOUNDARY & TOPOGRAPHICAL SURVEY

NO	BY	REVISION PER	DATE
1	AEB	TITLE COMMITMENT DATED 11-30-23	4-16-25
2	AEB	NEW TITLE COMMITMENT DATED 4-11-25	4-18-25

DRAWN BY: AEB
FIELD CREW: CE/CZ/PB/MB
CHECKED BY:
SCALE 1" = 40'
JOB NO. 25-094
DATE 4-15-25
SHEET NO. 1 OF 1

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