



500 West Big Beaver  
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## **PLANNING COMMISSION MEETING AGENDA REGULAR MEETING**

Marianna Perakis, Chair, Lakshmi Malalahalli, Vice Chair  
Toby Buechner, Carlton Faison, Tyler Fox, Michael W. Hutson, Tom Krent,  
Dave Lambert and John J. Tagle

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**October 22, 2024**

**7:00 P.M.**

**Council Chambers**

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1. ROLL CALL
2. APPROVAL OF AGENDA
3. APPROVAL OF MINUTES – October 8, 2024
4. PUBLIC COMMENT – For Items Not on the Agenda

### **SPECIAL USE APPROVAL**

5. PUBLIC HEARING – SPECIAL USE APPROVAL AND PRELIMINARY SITE PLAN REVIEW (SU JPLN2024-0021) – Proposed Residence Inn Hotel, South side of Butterfield, East of Coolidge (2125 & 2155 Butterfield), Section 29, Currently zoned BB (Big Beaver) Zoning District.
6. PUBLIC HEARING – SPECIAL USE APPROVAL AND PRELIMINARY SITE PLAN REVIEW (SU JPLN2024-0007) – Proposed El CarWash, Northwest corner of Long Lake and Dequindre (2955 & 2995 E Long Lake), Section 12, Currently zoned NN (Neighborhood Node “J”) Zoning District.

### **OTHER ITEMS**

7. PUBLIC COMMENT – For Items on the Agenda
8. PLANNING COMMISSION COMMENT
9. ADJOURN

**NOTICE:** People with disabilities needing accommodations for effective participation in this meeting should contact the City Clerk by e-mail at [clerk@troymi.gov](mailto:clerk@troymi.gov) or by calling (248) 524-3317 at least two working days in advance of the meeting. An attempt will be made to make reasonable accommodations

Televised Live, Government Channel WTRY (10 WideOpenWest and 17 Comcast) Replayed Wednesdays 3:00 pm, 6:00 pm and 11:00 pm

Chair Perakis called the Regular meeting of the Troy City Planning Commission to order at 7:00 p.m. on October 8, 2024, in the Council Chamber of the Troy City Hall. Chair Perakis presented opening remarks relative to the role of the Planning Commission and procedure for tonight’s meeting.

1. ROLL CALL

Present:

- Toby Buechner
- Carlton M. Faison
- Tyler Fox
- Michael W. Hutson
- Tom Krent
- David Lambert
- Marianna Perakis
- John J. Tagle

Absent:

- Lakshmi Malalahalli

Also Present:

- Ben Carlisle, Carlisle Wortman & Associates
- R. Brent Savidant, Community Development Director
- Julie Quinlan Dufrane, Assistant City Attorney
- Kathy L. Czarnecki, Recording Secretary

2. APPROVAL OF AGENDA

**Resolution # PC-2024-10-058**

- Moved by: Fox
- Support by: Tagle

**RESOLVED**, To approve the agenda as prepared.

- Yes: All present (8)
- Absent: Malalahalli

**MOTION CARRIED**

3. APPROVAL OF MINUTES – September 10, 2024

**Resolution # PC-2024-10-059**

- Moved by: Faison
- Support by: Buechner

**RESOLVED**, To approve the minutes of September 10, 2024 Regular meeting as submitted.

Yes: All present (8)  
Absent: Malalahalli

**MOTION CARRIED**

4. PUBLIC COMMENT – For Items Not on the Agenda

There was no one present who wished to speak.

**PRELIMINARY SITE PLAN REVIEW**

5. PRELIMINARY SITE PLAN REVIEW (SP JPLN2024-0022) – Proposed Wilshire Center, Single Family Attached and Multifamily Development, North side of Wilshire, East of Crooks and North of Big Beaver (PIN 88-20-21-326-010), Section 21, Currently Zoned BB (Big Beaver) Zoning District

Mr. Carlisle reviewed the Preliminary Site Plan application for Wilshire Center. He addressed the unusually shaped property in relation to an existing berm, reconfiguration of the N.S. International (NSI) parking lot and creation of an access drive. Mr. Carlisle said a traffic memorandum prepared by the City Traffic Consultant OHM concludes the proposed development would have no significant impacts to traffic on Big Beaver, Crooks or the surrounding roadway network. He addressed landscaping relating to the NSI parking lot. Mr. Carlisle encouraged the applicant to provide more architectural variety to break up the monotony of the overall site layout and consider additional details to break up the garage door dominance.

Mr. Carlisle displayed several renderings provided by the applicant.

Mr. Savidant shared a video presentation provided by the applicant.

Present were Erion Nikolla of Eureka Innovation Development, James Butler of PEA Group and Attorney Ren Nushaj.

Mr. Butler addressed the housing variety, transition to surrounding properties, pedestrian connectivity, amenities, and compliance with the Planning Consultant report to revise landscaping of the NSI parking lot.

Mr. Nikolla said their focus is to connect the development to the City Center area. He said the plan preserves over 50% of the land as pertains to the overall use of the parcel. Mr. Nikolla addressed architectural design, building materials, and color and window schemes. He said the market target is to attract first-time home buyers. Mr. Nikolla addressed the small area to work with near the garage door passageways. He said natural plants might not survive and suggests it might be more practical to provide artificial plants.

There was discussion on:

- Variation of architectural design features and color scheme between units.
- Design features and/or landscaping to break up linear nature and garage door dominance.
- Consideration to provide natural landscaping located in garage door passageways.
- Potential to provide a boardwalk at northeast corner (wetland area) and connecting sidewalk.
- Guest parking.
- Fulfillment to meet parking requirements for NSI.
- Potential of pedestrian connection to NSI.
- Balcony arrangement for 2.5 story townhomes.

Chair Perakis opened the floor for public comment.

- Mark Duddles, 830 Muer, representing homeowners’ association; Mr. Duddles asked for consideration by the City and/or the developer in any approval resolution to include a guarantee that the natural berm area is maintained in its natural state and there is no future development to that area, in perpetuity.

Chair Perakis closed the floor for public comment.

Discussion continued:

- Compatibility with Site Plan Review Design Standards, Section 8.06 of the Zoning Ordinance.
- Consideration to provide more creative architectural design features of the overall site.
- Conservation agreement relating to existing natural berm.
- Construction timeline of development.
- Balcony arrangements on 2.5 story townhomes; applicant acknowledged mislabeling site plan.
- Consideration to provide natural plants and/or alternative landscaping options in garage door passageways.

Mr. Nushaj said the developer agrees to engage in an agreement to keep the existing berm in its natural state, in perpetuity.

**Resolution # PC-2024-10-060**

Moved by: Buechner  
 Seconded by: Fox

**RESOLVED**, That Preliminary Site Plan Approval, pursuant to Article 8 of the Zoning Ordinance, as requested for the proposed Wilshire Center, Single Family Attached and Multifamily Development, North side of Wilshire, East of Crooks and North of Big Beaver (PIN 88-20-21-326-010), Section 21, Currently Zoned BB (Big Beaver) Zoning District, be **postponed**, subject to the following conditions:

1. Revise the NSI parking lot layout so that all parking lot trees are more internal to the parking lot.
2. Clarify the balcony arrangement for the 2.5 story townhomes.
3. Detail a long-term maintenance plan for the shrubs located in the garage door passageways.
4. Neighbors’ protection of the existing berm in its natural state, in perpetuity.
5. Boardwalk connection to the northeast corner.
6. Improve garage doors to be more aesthetically pleasing.

Discussion on the motion on the floor.

There was discussion to allow the applicant flexibility with providing a boardwalk connection to the northeast corner.

Mr. Butler assured members a boardwalk/pedestrian connection to the wetland area is achievable.

Vote on the motion on the floor.

Yes:           All present (8)  
 Absent:       Malalahalli

**MOTION CARRIED**

**OTHER ITEMS**

6. PUBLIC COMMENT – For Items on the Agenda

There was no one present who wished to speak.

7. PLANNING COMMISSION COMMENT

There were general Planning Commission comments.

8. ADJOURN

The Regular meeting of the Planning Commission adjourned at 8:26 p.m.

Respectfully submitted,

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Marianna J. Perakis, Chair

Kathy L. Czarnecki, Recording Secretary

[https://d.docs.live.net/2f7ed4fe5f664ea8/Documents/Kathy/COT Planning Commission Minutes/2024/2024 10 08 Draft.docx](https://d.docs.live.net/2f7ed4fe5f664ea8/Documents/Kathy/COT%20Planning%20Commission%20Minutes/2024/2024%2010%2008%20Draft.docx)

**ITEM #5**

DATE: October 15, 2024

TO: Planning Commission

FROM: R. Brent Savidant, Community Development Director

SUBJECT: PUBLIC HEARING – SPECIAL USE APPROVAL AND PRELIMINARY SITE PLAN REVIEW (SU JPLN2024-0021) – Proposed Residence Inn Hotel, South side of Butterfield, East of Coolidge (2125 & 2155 Butterfield), Section 29, Currently zoned BB (Big Beaver) Zoning District.

The petitioner Troy Hotel Group, LLC submitted the above referenced Special Use Approval and Preliminary Site Plan Approval application for a proposed 4-story, 116-room extended stay Residence Inn Hotel.

Hotels are permitted in the BB district, subject to special use approval.

The attached report prepared by Carlisle/Wortman Associates, Inc. (CWA), the City's Planning Consultant, summarizes the application. CWA prepared the report with input from various City departments including Planning, Engineering, Public Works and Fire. City Management supports the findings of fact contained in the report and recommends approval of the project, as noted.

Attachments:

1. Maps
2. Report prepared by Carlisle/Wortman Associates, Inc.
3. Special Use/Preliminary Site Plan application

G:\SPECIAL USE\SU\_JPLN2024-0021\_TROY HOTEL GROUP LLC\PC Memo 10 22 2024.docx



**PROPOSED RESOLUTION**

PUBLIC HEARING – SPECIAL USE APPROVAL AND PRELIMINARY SITE PLAN REVIEW (SU JPLN2024-0021) – Proposed Residence Inn Hotel, South side of Butterfield, East of Coolidge (2125 & 2155 Butterfield), Section 29, Currently zoned BB (Big Beaver) Zoning District.

**Resolution # PC-2024-10-**

Moved by:

Seconded by:

**RESOLVED**, That Special Use Approval and Preliminary Site Plan Approval for the proposed Residence Inn Hotel, South side of Butterfield, East of Coolidge (2125 & 2155 Butterfield), Section 29, Currently Zoned BB (Big Beaver) District, be (granted, subject to the following conditions):

1. Label trees to be removed in tree inventory table and provide tree replacement calculations.
2. Bring site into compliance with parking standards or seek parking deviation through the Planning Commission.
3. Landscape plan and tree inventory shall be stamped by a licensed Landscape Architect.

\_\_\_\_\_ ) or

(denied, for the following reasons: \_\_\_\_\_) or

(postponed, for the following reasons: \_\_\_\_\_)

Yes:

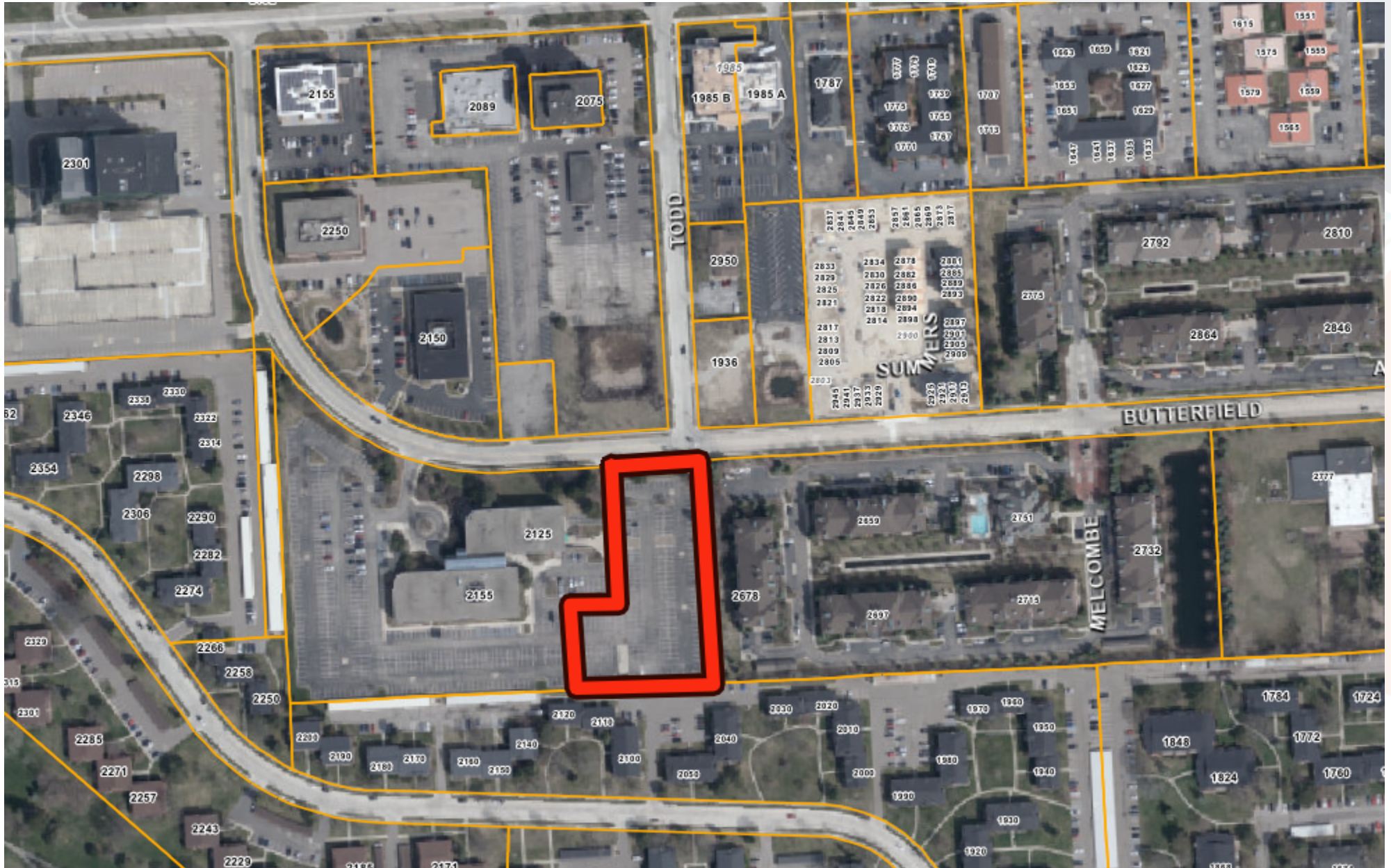
No:

Absent:

**MOTION CARRIED / FAILED**



# GIS Online



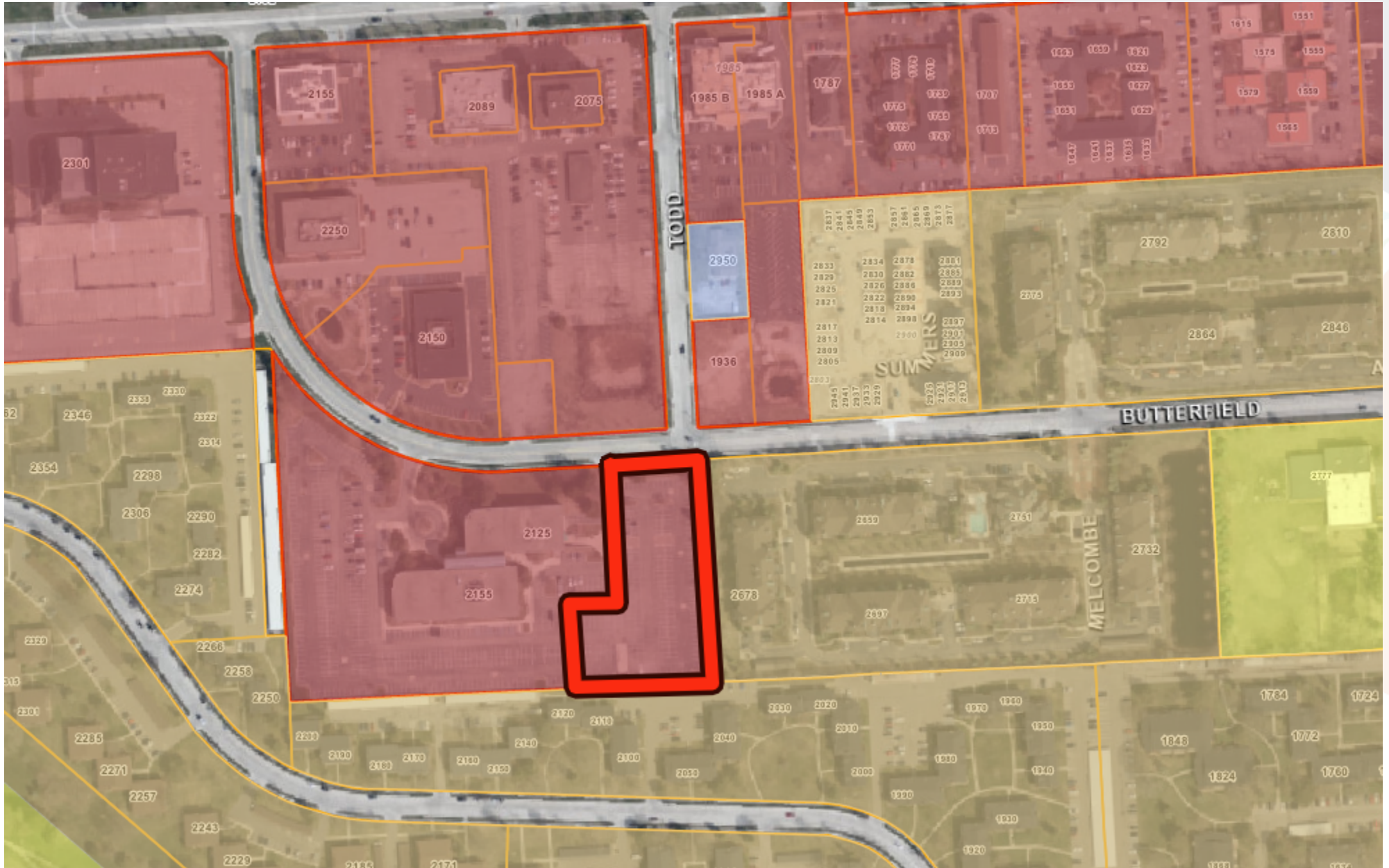
Print Date: 10/14/2024



Note: The information provided by this application has been compiled from recorded deeds, plats, tax maps, surveys, and other public records and data. It is not a legally recorded map survey. Users of this data are hereby notified that the source information represented should be consulted for verification.



# GIS Online



Print Date: 10/14/2024



Note: The information provided by this application has been compiled from recorded deeds, plats, tax maps, surveys, and other public records and data. It is not a legally recorded map survey. Users of this data are hereby notified that the source information represented should be consulted for verification.



**Carlisle | Wortman**  
ASSOCIATES, INC.

117 NORTH FIRST STREET SUITE 70 ANN ARBOR, MI 48104 734.662.2200 734.662.1935 FAX

Date: July 2, 2024  
August 23, 2024  
September 17, 2024  
October 15, 2024

## Special Use and Preliminary Site Plan For City of Troy, Michigan

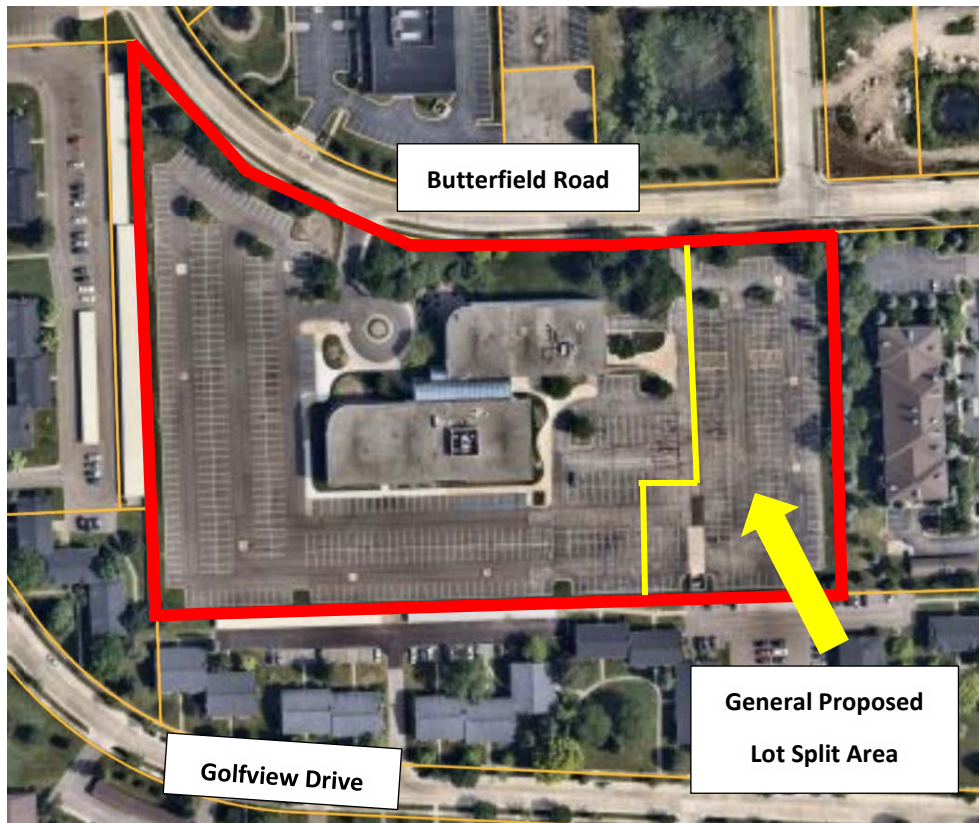
**Applicant:** Troy Hotel Group, LLC.  
**Project Name:** Residence Inn  
**Location:** 2125 Butterfield  
**Plan Date:** September 12, 2024  
**Zoning:** BB, Big Beaver  
**Action Requested:** Preliminary Site Plan & Special Use Approval

### PROJECT AND SITE DESCRIPTION

An application has been submitted to develop a Residence Inn hotel just south of Big Beaver along Butterfield Road. The Residence Inn is 4-stories tall (53 feet) and contains 116 guest room units. The proposed area of the building is 83,644 square feet. Amenities on-site include a fitness center, pool, dining/lounging rooms, and an outdoor patio area.

This development is proposed on a parcel with an existing office building. The applicant seeks a lot split and a shared parking agreement has been provided for the two (2) sites. The subject site is zoned BB, Big Beaver Formed Based District and qualifies as Site Type B, Street Type C. Hotels are a special use at this site.

Site Location:



Size of Subject Site:

Following a lot split, the subject site is 1.84 acres (80,136 square feet).

Proposed Use of Subject Site:

4-story Residence Inn hotel.

Current Zoning:

BB, Big Beaver Form Based District. Site Type B, Street Type C.

Surrounding Property Details:

Direction	Zoning	Use
North	BB, Big Beaver	Maggiano's Little Italy Restaurant St. Croix Hospice LR Property Management Services Vacant Parcel
South	MF, Multiple Family Residential	Somerset Park Apartments
East	MF, Multiple Family Residential	Regents Club Apartments
West	MF, Multiple Family Residential	Office Building (currently on same parcel)

		Somerset Park Apartments (next parcel over)
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**NATURAL FEATURES**

Although the site has been largely graded for previous development, there are several existing trees on site. A tree inventory has been provided; however, there is missing information. The tree inventory does not indicate which trees shall be removed or the DBH of those trees. We ask the applicant to clearly label trees to be removed in the tree inventory table, and provide calculations outlining the total DBH to be removed and the resulting DBH replacement required.

In addition, tree inventories are required to be prepared by a certified forester or Registered Landscape Architect.

**Items to be Addressed:** 1). Label trees to be removed in tree inventory table and provide tree replacement calculations.

**AREA, WIDTH, HEIGHT, SETBACKS**

The site is regulated by dimensional standards of Building Form D:

	Required	Provided	Compliance
Front (Butterfield)	10-foot build-to-line	30 feet Outdoor seating area provided	Complies with Planning Commission approval
Side (east, west)	N/A, building may be placed up to property line	East: 19 feet 10 inches West: N/A	Complies
Rear (south)	40 feet minimum	62 feet 1 inch	Complies
Building Height	35 feet minimum, 66 feet maximum	4 stories, 53 feet	Complies
Open Space	15%	21.03%	Complies
Parking Location	Surface parking shall be located in a rear yard or side yard; parking for residential tenants may be provided in integrated garages or below-grade parking.	Parking in rear and side yard	Complies

Front Setback:

The proposed front setback does not conform with the 10-foot build to line requirement; although, the Planning Commission may adjust the required building line to a maximum of 30-feet beyond the property line for projects incorporating a permanent space for an outdoor café, public space, or a cross-access drive with an adjacent parcel.

The applicant is proposing an outdoor patio area to serve the hotel guests. The patio area is bounded by a 2-foot tall masonry knee wall and shrubs.

**Items to be Addressed:** 1). Planning Commission consideration of 30-foot front setback with outdoor seating.

**PARKING**

	Required	Provided	Compliance
<u>Hotel:</u> 1 space for each guest room + 1 space per employee on largest typical shift + Any additional spaces required for dining establishments  <u>Office (Shared Parking):</u> 1 space per 300 SF of gross floor area	(116 guest rooms + 5 employees)= <b>121</b> hotel spaces  (112,217 SF/300)= <b>374</b> office spaces  (121+374)= <b>495 total spaces</b>	459 total spaces  (36 spaces located on hotel site)	Seeking shared parking relief through the Planning Commission.  See Discussion Below
Barrier Free	5 spaces	5 spaces	Complies
Bicycle	2 spaces	2 bike racks	Complies

Lot Split and Shared Parking Agreement:

Residence Inn is proposed on a parcel with an existing office building. The applicant seeks a lot split to separate the office building and Residence Inn into two (2) separate parcels, and then intends to utilize a shared parking agreement between the two (2) sites. A shared parking agreement has been provided; however, the proposed number of parking spaces is not compliant with ordinance standards.

Calculations provided by the applicant indicate that with the shared parking, a total of 495 parking spaces are required where only 459 spaces are provided. Therefore, we ask the applicant

to redesign the site to comply with parking requirements, or seek a parking deviation as described in Section 13.06.F.

**Items to be Addressed:** 1). Bring site into compliance with parking standards or seek parking deviation through the Planning Commission.

## ACCESS AND CIRCULATION

### Vehicular Access:

The subject site currently has two (2) points of access off Butterfield Road. No changes to vehicular access are proposed. Site plans show the future lot split taking place directly through the center of the eastern access point. Following the lot split, this access point will be utilized in the same fashion by both sites. Residence Inn will technically be accessible via the western access point as well, although users will be required to maneuver around the office building and approach the hotel from the rear.

### Pedestrian Access:

A 5-foot wide sidewalk is proposed around the building perimeter and connects to the existing sidewalk along Butterfield.

**Items to be Addressed:** None.

## TRAFFIC

The City Engineer is reviewing traffic.

**Items to be Addressed:** None.

## LANDSCAPING

A landscape plan has been provided on Sheet C3.2. The following table discusses the development's compliance with the landscape requirements set forth in Section 13.02.

	Required	Provided	Compliance
<b>Greenbelt</b>			
Big Beaver: 1 tree per every 30 lineal feet	$165.13/30$ = 6 trees	6 trees	Complies
<b>Parking Lot Trees</b>			
1 tree per every 8 parking spaces	$121 \text{ spaces}/8$ = 15 trees	23 trees	Complies
<b>Overall Site Landscaping</b>			



A minimum of 20% of the site area shall be comprised of landscape material	20%	28.1%	Complies
<b>Screening between Uses</b>			
1 large evergreen per three lineal feet or 1 narrow evergreen per five lineal feet		Existing Wall	Complies

**Parking Lot Trees:**

At least 15 trees are provided within the parking lot and additional trees are provided around the parking lot perimeter.

**Trash Enclosure:**

A trash enclosure is proposed at the rear of the site in the southeast corner. The trash enclosure will be screened with a 6-foot tall masonry wall matching the building exterior.

**Mechanical Equipment:**

A memo provided by the applicant dated August 5, 2024, states that existing mechanical equipment in the northeast corner of the site is provided with landscape screening. Additional mechanical units will be located on the roof and screened. The applicant shall ensure that all screening of mechanical equipment complies with Section 13.04.

**Landscape Architect Required:**

Section 13.02 requires all landscape plans to be prepared and stamped by a licensed landscape architect. In a memo dated September 11, 2024, the applicant stated that a stamped landscape plan will be provided “at a later date.” We emphasize that the professional seal of a landscape architect is a required component of a site plan application and preliminary site plan approval.

***Items to be Addressed:*** 1). *Landscape plan and tree inventory shall be stamped by a licensed Landscape Architect.*

**PHOTOMETRICS**

Photometric plans have been provided, including the subject site and the shared parking area on the site to the west. Twelve (12) wall-mounted lights are shown along the building and three (3) pole lights are shown in the parking area. All light fixtures are at compliant height. Lighting levels along the lot lines to the north, south, and east are compliant. Lighting levels along the west lot line exceed one (1) foot-candle where the shared parking area crosses property lines. This is acceptable as sufficient lighting is needed within the parking lot, and such lighting does not negatively impact any neighbors.

***Items to be Addressed:*** None.

**FLOOR PLAN AND ELEVATIONS**

The proposed development is 4-stories tall and includes 116 guest rooms. The applicant has provided the following table illustrating the quantity and types of rooms available on each floor. Five (5) types of rooms are available, although the Studio King accounts for the majority (78%).

GUESTROOM MATRIX							
TYPE	FLOOR 1	FLOOR 2	FLOOR 3	FLOOR 4	TOTAL	RATIO	AREA
Studio King	19	24	24	24	<b>91</b>	78%	436 SF
Studio Connect	2	3	3	3	<b>11</b>	9%	435 SF
Studio Accessible	0	1	1	1	<b>3</b>	3%	495 SF
One-Bedroom End	1	2	2	2	<b>7</b>	6%	588 SF
One-Bedroom Accessible	1	1	1	1	<b>4</b>	3%	588 SF
<b>Total</b>	<b>23</b>	<b>31</b>	<b>31</b>	<b>31</b>	<b>116</b>	100%	

First Floor:

Twenty-three (23) guest rooms are provided on the first floor. The first floor also features a reception area, dining area, living room, den, fitness area, laundry room, and a pool with pool store. Secondary rooms on this floor are shown for food prep and storage, staff office space, dry storage, and mechanical and electrical equipment.

We note that the difference between the Studio King and Studio Connect is unclear, and the One-Bedroom Accessible does not include a kitchen area. Moreover, we find that locating the dining area and living room between the front door and reception desk does not offer a comfortable setting for extended-stay guests.

Second, Third and Fourth Floor:

The second, third, and fourth floors appear to have identical layouts. Thirty-one (31) guest rooms are proposed on each of these floors. No other rooms are shown on these levels.

Elevations and Materials:

Primary building materials include stone masonry veneer, fiber cement siding and brick. Exterior colors will be a combination of white, light brown, brick red, and a dark green/gray color.

The proposed hotel is located in and around other apartment and office buildings. In previous site plan reviews and resubmittal meetings with the applicant, we had requested that the proposed elevations match a development style and the quality of adjacent properties, such as Regents of Troy, rather than typical Residence Inn hotel elevations.

In response to our requests, the applicant has since replaced EIFS with brick and expanded the front patio, but the overall look of the exterior remains the same. We still encourage the applicant to revise the proposed elevations and materials to match the quality of adjacent

properties, and make the hotel look more consistent of surrounding properties rather than a standard hotel.

**Items to be Addressed:** 1). *Planning Commission to consider whether the proposed design is consistent with architectural design standards of the Big Beaver form-based district.*

## DESIGN STANDARDS AND SITE PLAN REVIEW STANDARDS

The Big Beaver Node design standards as well as Site Plan review standards provide the Planning Commission with direction when reviewing the proposed site plan and design features of this development.

### Section 5.04.E. outlines Design Standards:

1. *Building Orientation and Entrance*
2. *Ground Story Activation*
3. *Transitional Features*
4. *Site Access, Parking, and Loading*

Please see Section 5.04.E for standard details.

### Section 8.06 outlines Site Plan Review Design Standards.

1. *Development shall ensure compatibility to existing commercial districts and provide a transition between land uses.*
  - a. *Building design shall enhance the character of the surrounding area in relation to building and parking placement, landscape and streetscape features, and architectural design.*
  - b. *Street fronts shall provide a variety of architectural expression that is appropriate in its context and prevents monotony.*
  - c. *Building design shall achieve a compatible transition between areas with different height, massing, scale, and architectural style.*
2. *Development shall incorporate the recognized best architectural building design practices.*
  - a. *Foster a lasting impact on the community through the provision of high quality design, construction, and detailing.*
  - b. *Provide high quality, durable materials, such as but not limited to stone, brick, glass, and metal. E.I.F.S. or material equivalent shall only be used as an accent material.*
  - c. *Develop buildings with creativity that includes balanced compositions and forms.*
  - d. *Design roofs that are appropriate to the architectural style of the building and create an appropriate visual exterior mass of the building given the context of the site.*

- e. *For commercial buildings, incorporate clearly defined, highly visible customer entrances using features such as canopies, porticos, arcades, arches, wing walls, ground plane elements, and/or landscape planters.*
  - f. *Include community amenities that add value to the development such as patio/seating areas, water features, art work or sculpture, clock towers, pedestrian plazas with park benches or other features located in areas accessible to the public.*
3. *Enhance the character, environment and safety for pedestrians and motorists.*
- a. *Provide elements that define the street and the pedestrian realm.*
  - b. *Create a connection between the public right of way and ground floor activities.*
  - c. *Create a safe environment by employing design features to reduce vehicular and pedestrian conflict, while not sacrificing design excellence.*
  - d. *Enhance the pedestrian realm by framing the sidewalk area with trees, awnings, and other features.*
  - e. *Improve safety for pedestrians through site design measures.*

CWA Response:

A goal of the Big Beaver district is to create a building wall along the front ROW that provides a high engaging building presence at the street and advance pedestrian amenities. We are not clear how a walled-in outdoor patio space for exclusive use of the hotel advances these objectives. In addition to the proposed elevations and material use, we do not find that the proposed design and layout meet the standards of Section 5.04.E and 8.06.

## SPECIAL USE APPROVAL STANDARDS

Section 9.03 states that the Planning Commission shall consider the following general standards when reviewing a special use request:

1. *Compatibility with Adjacent Uses.*
2. *Compatibility with the Master Plan.*
3. *Traffic Impact.*
4. *Impact on Public Services.*
5. *Compliance with Zoning Ordinance Standards.*
6. *Impact on the Overall Environment.*
7. *Special Use Approval Specific Requirements.*

## SUMMARY

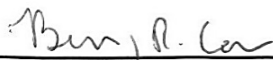
We ask the applicant to address the following items:


1. *Label trees to be removed in tree inventory table and provide tree replacement calculations.*
2. *Bring site into compliance with parking standards or seek parking deviation through the Planning Commission.*
3. *Landscape plan and tree inventory shall be stamped by a licensed Landscape Architect.*

The following site features shall be considered by the Planning Commission:

1. *Planning Commission consideration of 30-foot front setback with outdoor seating.*
2. *Planning Commission to consider whether the proposed design is consistent with architectural design standards of the Big Beaver form-based district.*

Respectfully,

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

  
\_\_\_\_\_  
**CARLISLE/WORTMAN ASSOC., INC.**  
**Shana Kot**  
**Community Planner**

# RESIDENCE INN SITE PLAN

2125 BUTTERFIELD  
TROY, MICHIGAN



BOWERS + ASSOCIATES, INC.  
2400 SOUTH HURON PARKWAY  
ANN ARBOR, MI 48104  
P: 734.975.2400  
WWW.BOWERSARCH.COM

CONSULTANT + NAME

PROJECT + INFORMATION  
RESIDENCE INN

2125 BUTTERFIELD  
TROY, MI

PROJECT + NUMBER

23-203

ISSUE + DATE

14 MAY 2024 SITE PLAN  
01 AUG 2024 SITE RESUB  
11 SEPT 2024 SITE RESUB

SHEET + TITLE

TITLE SHEET

23203T100.dwg

SHEET + NUMBER

T-100

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OWNER  
TROY HOTEL GROUP, LLC  
31100 STEPHENSON HIGHWAY,  
MADISON HEIGHTS, MI 48071

CIVIL ENGINEER  
S.M. ENGINEERS  
1939 LINCOLNSHIRE DRIVE  
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STRUCTURAL ENGINEER  
TBD

MEP ENGINEER  
TBD



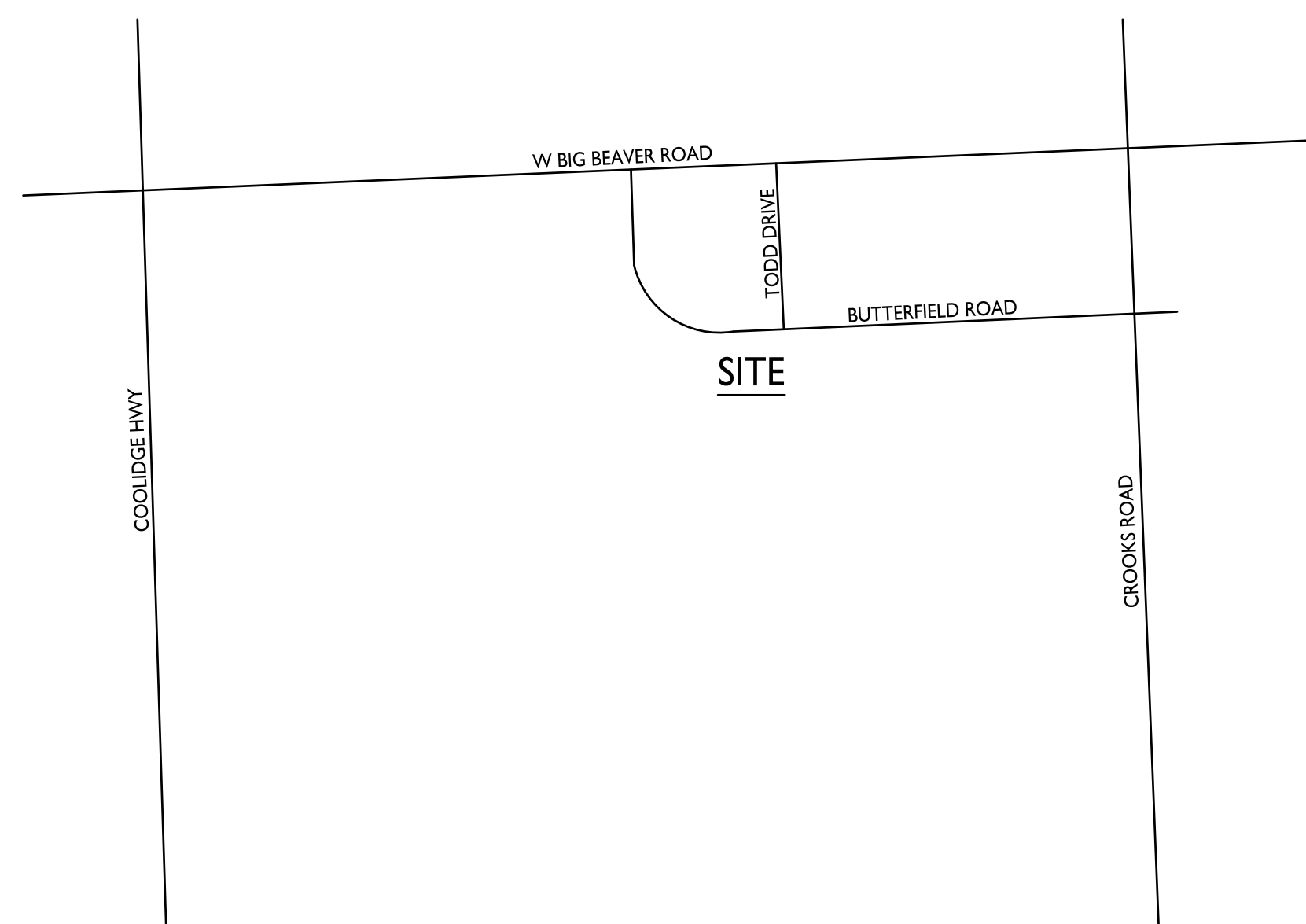
## SHEET INDEX:

### ARCHITECTURAL

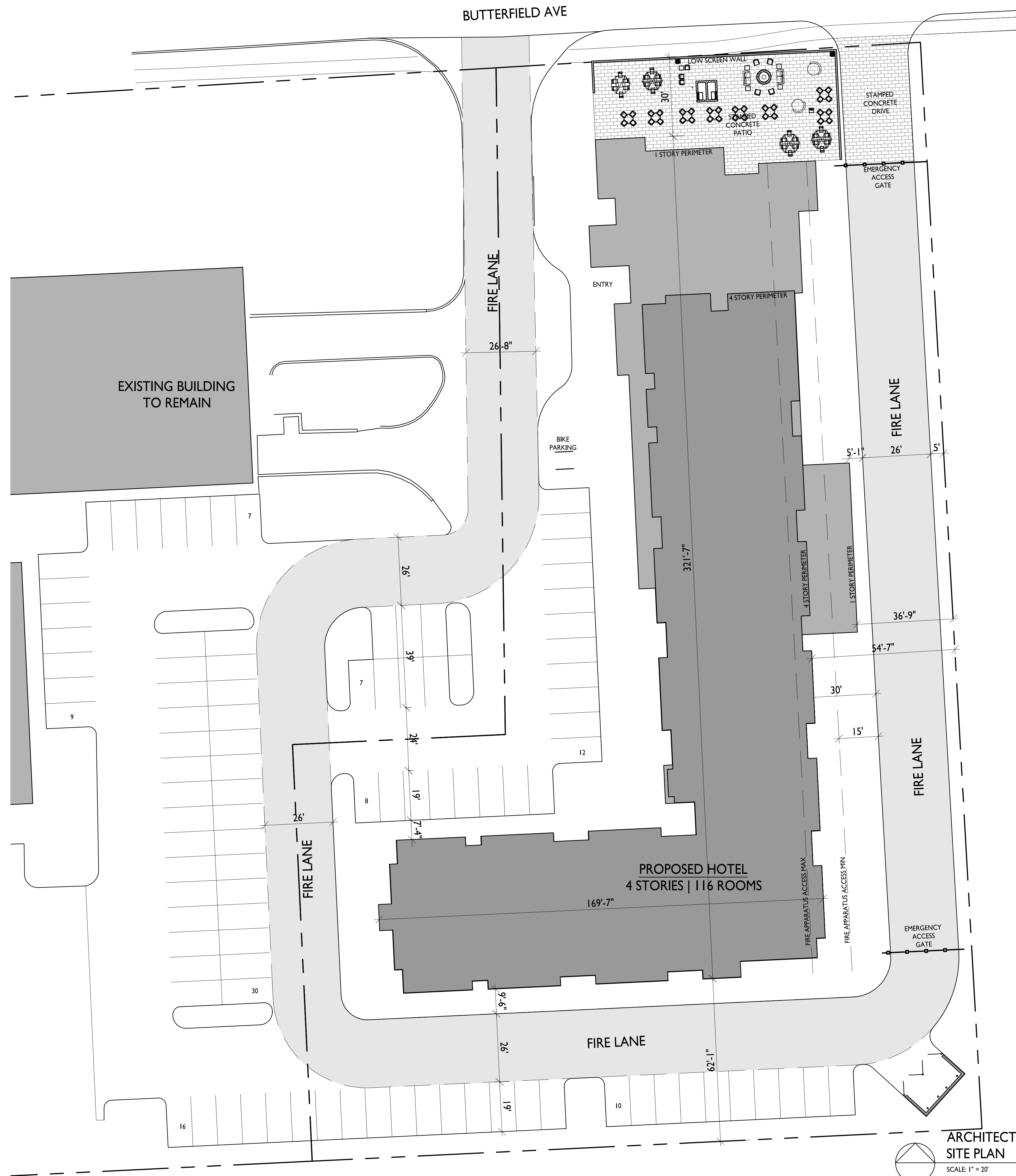
T-100 COVER SHEET  
A-001 ARCHITECTURAL SITE PLAN  
A-002 SITE DETAILS  
A-010 PHOTOMETRIC LIGHTING PLAN  
A-100 FIRST FLOOR PLAN  
A-101 TYPICAL UPPER LEVEL FLOOR PLANS  
A-300 EXTERIOR ELEVATIONS  
A-301 EXTERIOR ELEVATIONS

### CIVIL

C3.0 SITE LAYOUT & PAVING PLAN  
C3.1 OVERALL PARKING PLAN  
C3.2 LANDSCAPE PLAN  
C4.0 GRADING PLAN  
C5.0 UTILITY PLAN  
TOPOGRAPHIC / TREE SURVEY



LOCATION MAP  
N.T.S.



BUTTERFIELD AVE

**SITE/BUILDING DATA**

PARCEL SIZE  
EXISTING ZONING

83,244 SF | 1.91 ACRES  
BB BIG BEAVER FORM BASED  
SITE TYPE B  
STREET TYPE C

BUILDING SQUARE FOOTAGE

83,644 SF

**PARKING DATA**

PARKING REQUIRED

116 SPACES @ 1 SPACE PER ROOM  
5 SPACES @ 1 SPACE PER EMPLOYEE  
121 SPACES REQUIRED

PARKING PROVIDED

SEE CIVIL SHEET C.1 FOR CALCULATIONS

ARCHITECTURAL  
SITE PLAN

SCALE: 1" = 20'



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CONSULTANT + NAME

PROJECT + INFORMATION  
**RESIDENCE INN**  
2125 BUTTERFIELD  
TROY, MI

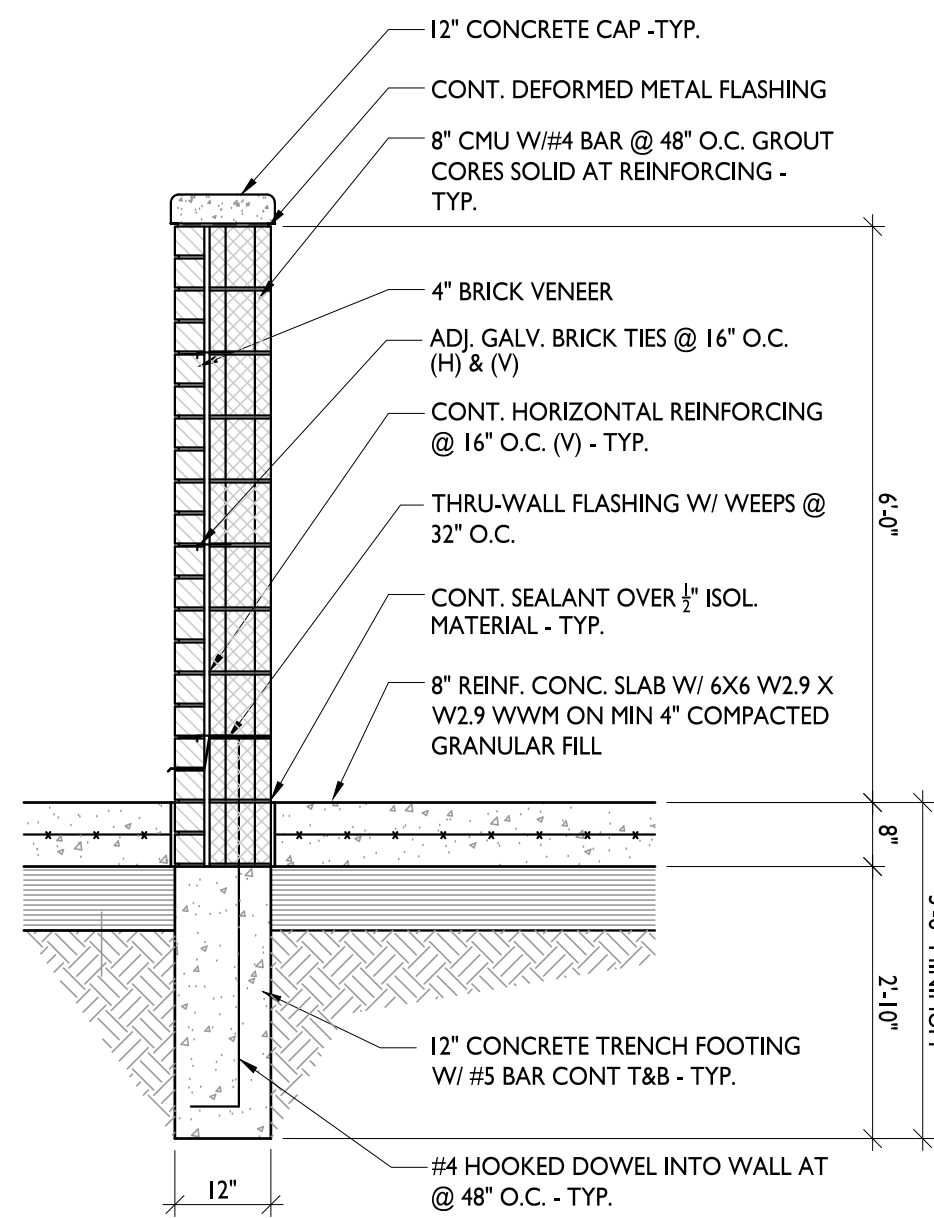
PROJECT + NUMBER  
**23-203**

ISSUE + DATE  
14 MAY 2024 SITE PLAN  
01 AUG 2024 SITE RESUB  
11 SEPT 2024 SITE RESUB

SHEET + TITLE  
ARCHITECTURAL  
SITE PLAN  
23203\_2100.dwg

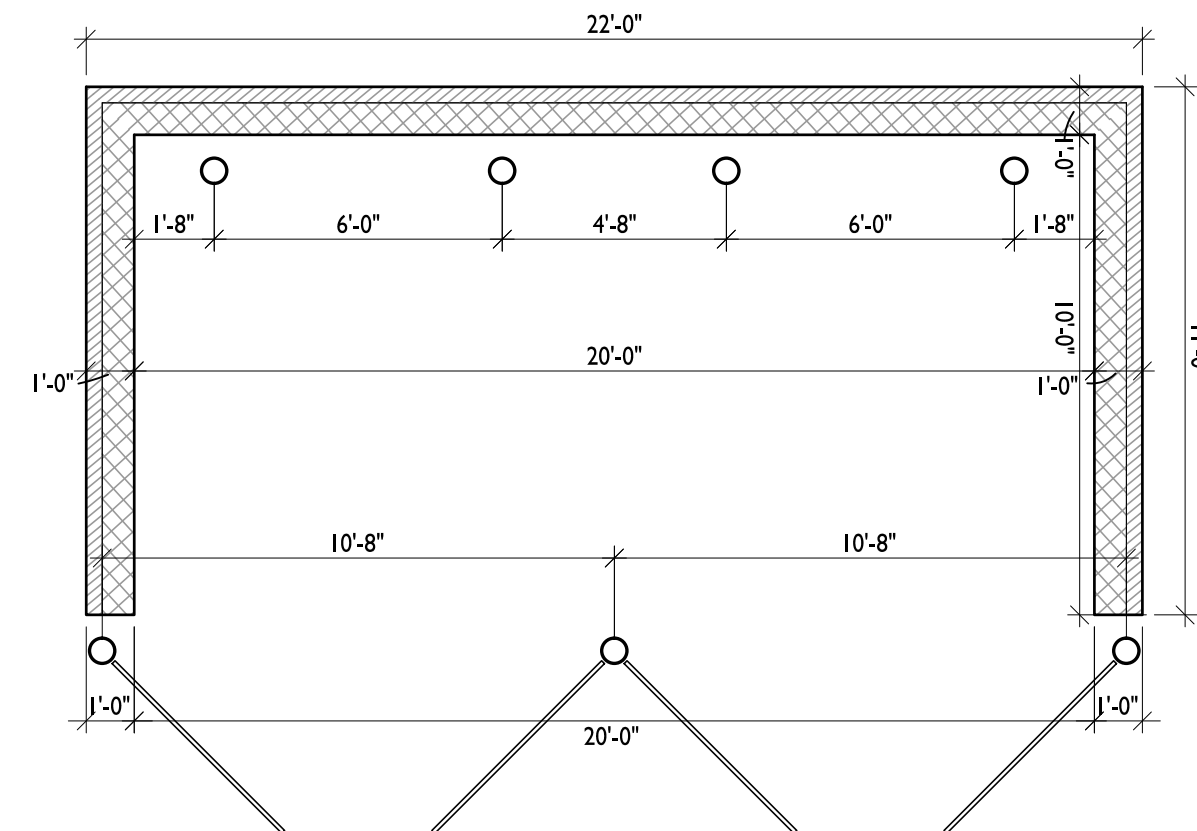
SHEET + NUMBER  
**A-001**

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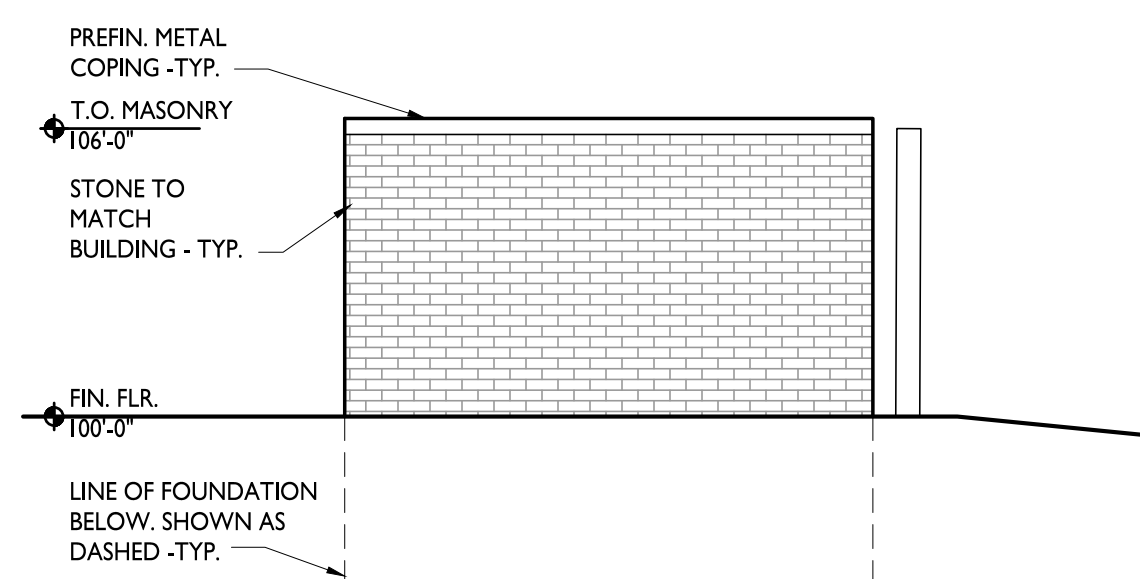
**TRASH ENCLOSURE SECTION**

1  
A-001 | A-001 SCALE: 1/2" = 1'-0"



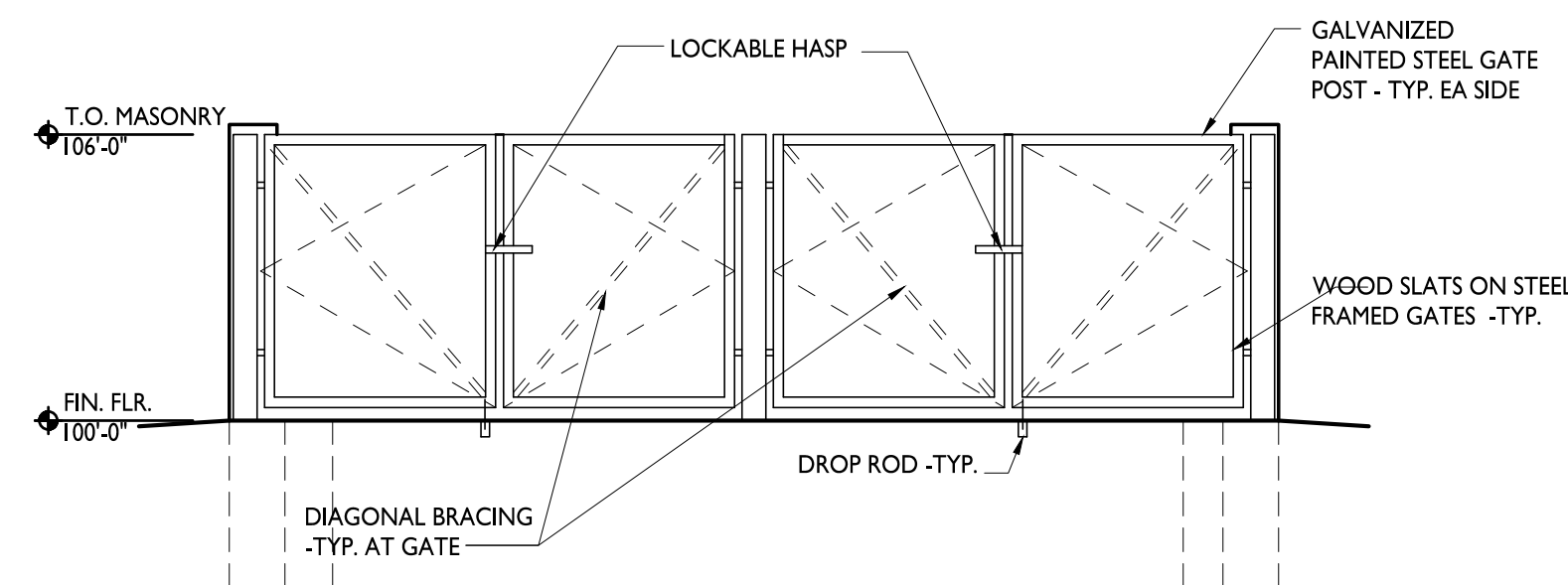
**TRASH ENCLOSURE PLAN**

2  
A-001 | A-001 SCALE: 1/2" = 1'-0"



**TRASH ENCLOSURE ELEVATION**

3  
A-001 | A-001 SCALE: 1/2" = 1'-0"



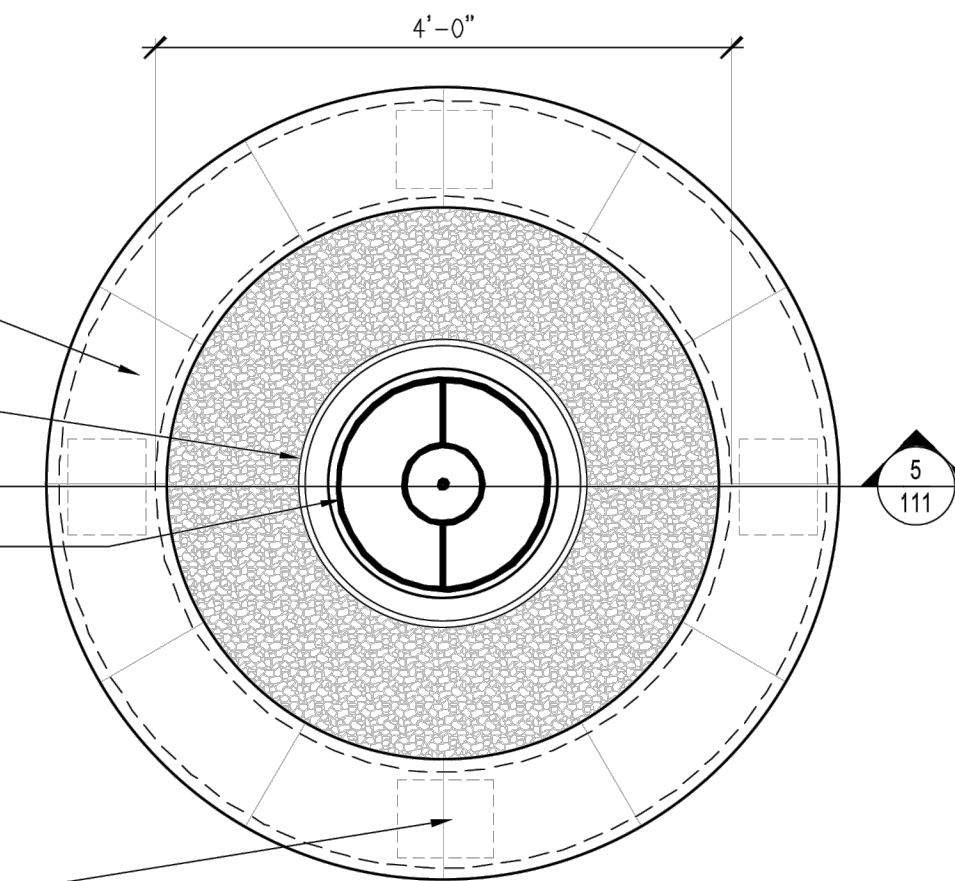
**TRASH ENCLOSURE ELEVATION**

4  
A-001 | A-001 SCALE: 1/2" = 1'-0"

**FIRE PIT NOTES:**  
GAS SHUTOFF LOCATION PER LOCAL CODE. ELECTRONIC IGNITION SWITCH 1-HOUR TIMER, LOCATION PER LOCAL CODE INSTALL PER MANUFACTURER'S SPECIFICATION.

10-1/4" CLASSIC WALL CAP ON 2'R WALL  
STAINLESS STEEL COLLAR  
19" DELUXE FIRE PIT KIT

"NOTICE: DO NOT LEAVE CHILDREN UNATTENDED"  
GRAPHICS (2) REFER TO EXTERIOR SIGNAGE SPECIFICATIONS FOR INFORMATION



**FIRE PIT PLAN**

5  
A-001 | A-001 SCALE: 3/4" = 1'-0"

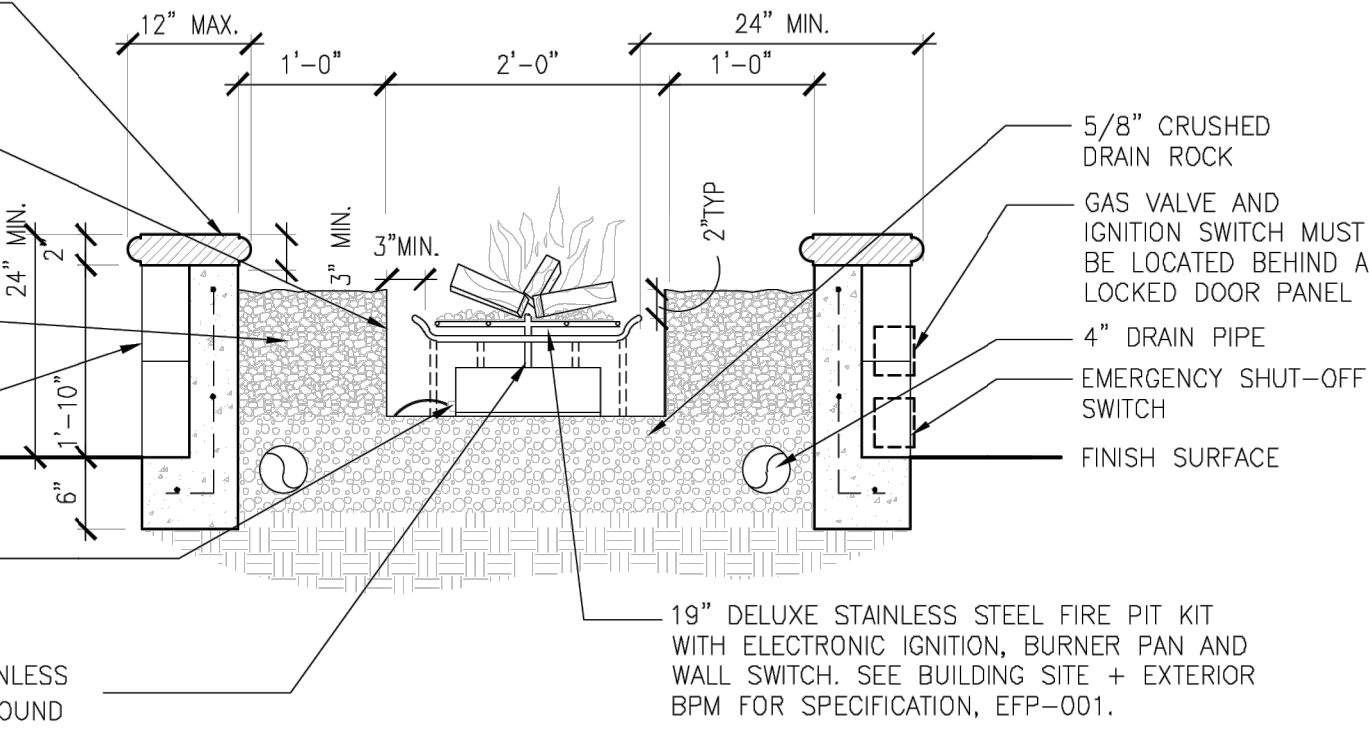
EDS-001, 10-1/4" PRECAST CONCRETE WALL CAP ON 3'R WALL

PROVIDE 24" DIAMETER, 11" HIGH STAINLESS STEEL COLLAR SURROUNDING ENTIRE PAN SYSTEM FOR VENTILATION. HEIGHT OF COLLAR TO BE 2" ABOVE HEIGHT OF PAN EDGE. THIS IS NOT A PART OF THE FIRE PIT KIT. CONTRACTOR TO FABRICATE SEPARATELY

LAVA ROCK  
UM-001 REGIONAL MASONRY FACING

CONTRACTOR TO PROVIDE GAS LINE AND ELECTRICAL CONNECTIONS INCLUDING ALL VALVES AND SWITCHES PER LOCAL CODE REQUIREMENTS.

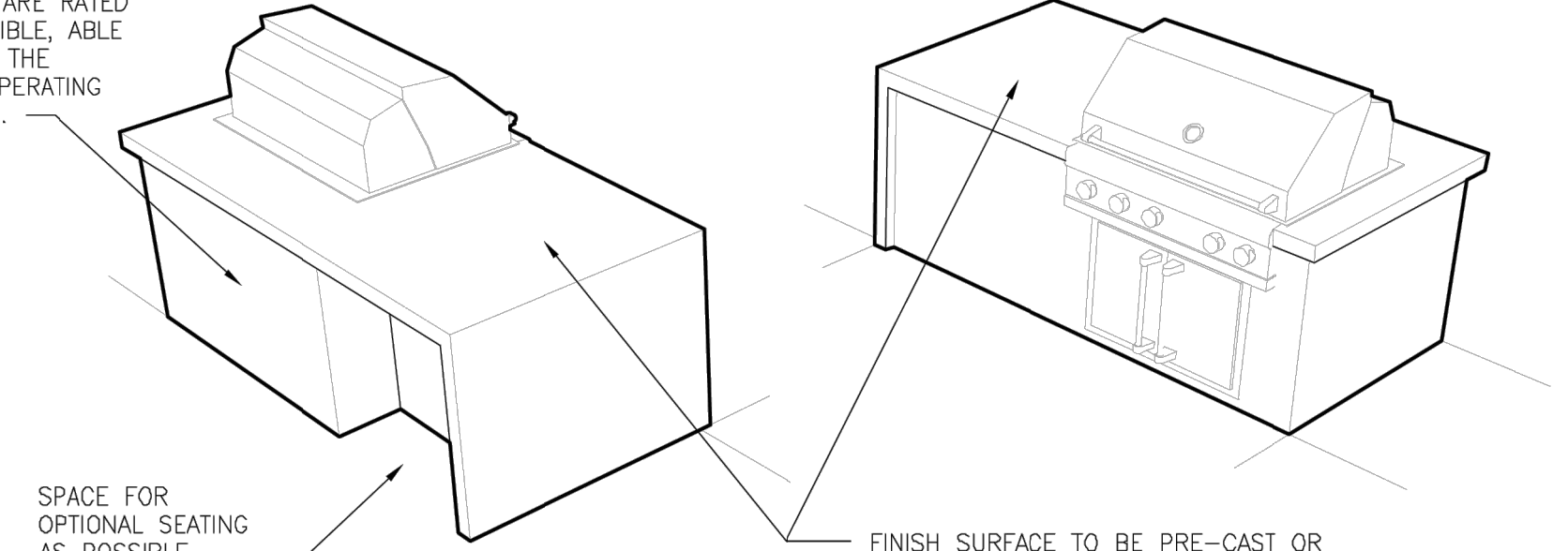
CONTRACTOR TO FABRICATE AND INSTALL STAINLESS STEEL 3/4" SQUARE BAR STOCK SUPPORTS AROUND EDGE OF PAN, 6 PLACES EQUALLY SPACED.



**FIRE PIT SECTION**

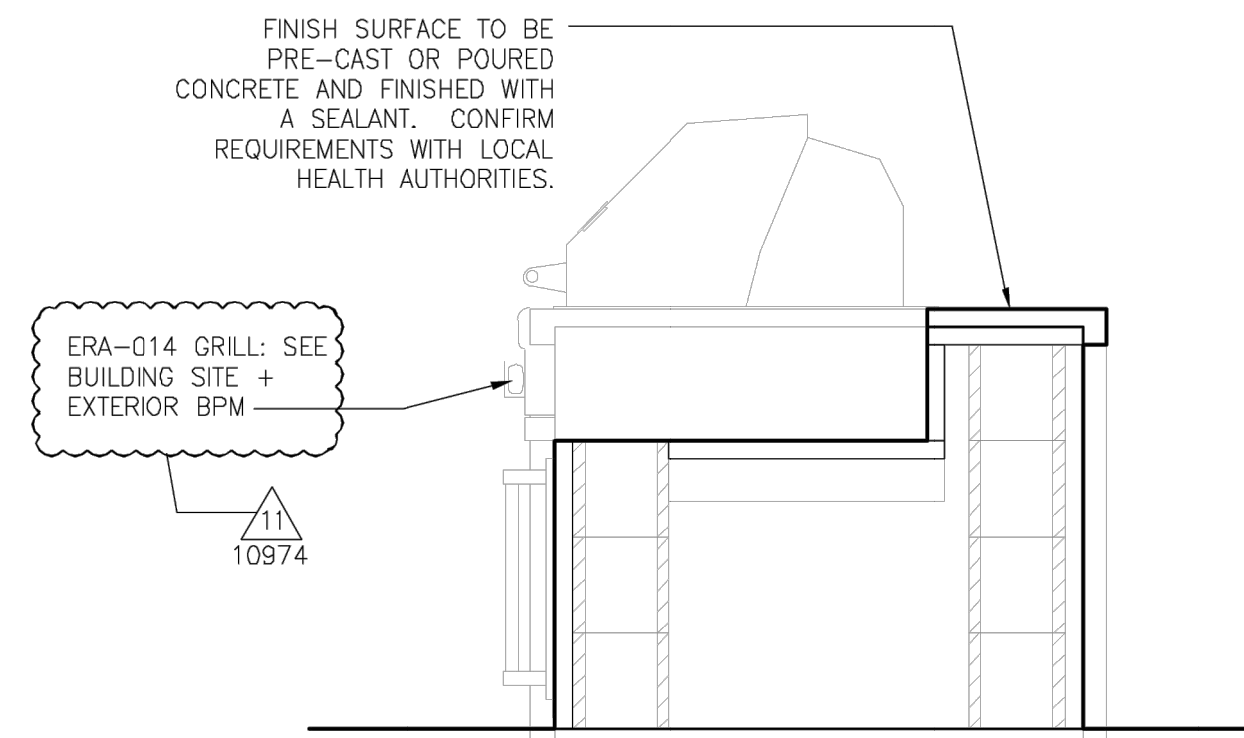
6  
A-001 | A-001 SCALE: 3/4" = 1'-0"

FACE WITH MASONRY MATERIALS WHICH COORDINATE WITH EXISTING BUILDING AND ARE RATED NON-COMBUSTIBLE, ABLE TO WITHSTAND THE ANTICIPATED OPERATING TEMPERATURES.



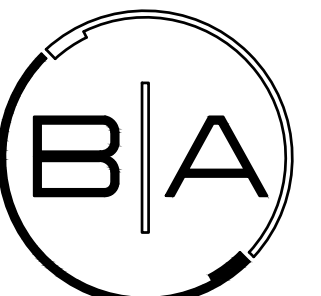
**BBQ PERSPECTIVE**

7  
A-001 | A-001 SCALE: NOT TO SCALE



**BBQ SECTION**

7  
A-001 | A-001 SCALE: 3/4" = 1'-0"



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CONSULTANT + NAME

PROJECT + INFORMATION  
**RESIDENCE INN**  
2125 BUTTERFIELD  
TROY, MI

PROJECT + NUMBER

23-203

ISSUE + DATE

14 MAY 2024 SITE PLAN  
01 AUG 2024 SITE RESUB  
11 SEPT 2024 SITE RESUB

SHEET + TITLE

SITE  
DETAILS

23203\_2100.dwg

SHEET + NUMBER

A-002





PHOTOMETRIC LIGHTING PLAN  
SCALE 1" = 20'

### D-Series Size 1 LED Wall Luminaire

**Specifications**  
Luminaire: 13.34" (344 mm) W x 12.16" (309 mm) H  
Depth: 2.5" (64 mm)  
Height: 4.33" (110 mm)

**Back Box (BBW, E20WC)**  
Width: 13.34" (344 mm)  
Depth: 2.5" (64 mm)  
Height: 4.33" (110 mm)

**Ordering Information**  
EXAMPLE: DSXW1 LED 20C 1000 40K T3M MVOLT DBDXTD

Site	LED	Color Temp	Color Rendering	Manufacturer	Finish	Mounting	Shipped Included	Shipped Excluded
DSXW1 LED	1K	1000	90	OSRAM	White	DBDXTD	DBDXTD	DBDXTD

### D-Series Size 2 LED Area Luminaire

**Specifications**  
Luminaire: 68.5" (1741 mm) W x 36.5" (927 mm) H  
Depth: 4.5" (114 mm)  
Height H1: 61.1" (1557 mm)  
Height H2: 3.95" (100 mm)  
Weight: 46.1 lbs (20.9 kg)

**Ordering Information**  
EXAMPLE: DSX2 LED P 740K 70CRI T3M MVOLT SPA NLTAR2 PIRHN DBDXX

Site	LED	Color Temperature	Color Rendering	Manufacturer	Finish	Mounting	Shipped Included	Shipped Excluded
DSX2 LED	Forward optics	7400K	90	OSRAM	White	DBDXX	DBDXX	DBDXX

LITHONIA LIGHTING  
One Lithonia Way • Cary, Georgia 30013 • Phone: 1-800-755-SERV (7378) • www.lithonia.com

### D-Series Size 1 LED Wall Luminaire

**Specifications**  
Luminaire: 13.34" (344 mm) W x 12.16" (309 mm) H  
Depth: 2.5" (64 mm)  
Height: 4.33" (110 mm)

**Ordering Information**  
EXAMPLE: DSXW1 LED 20C 1000 40K T3M MVOLT DBDXTD

Site	LED	Color Temp	Color Rendering	Manufacturer	Finish	Mounting	Shipped Included	Shipped Excluded
DSXW1 LED	1K	1000	90	OSRAM	White	DBDXTD	DBDXTD	DBDXTD

### D-Series Size 2 LED Area Luminaire

**Specifications**  
Luminaire: 68.5" (1741 mm) W x 36.5" (927 mm) H  
Depth: 4.5" (114 mm)  
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Site	LED	Color Temperature	Color Rendering	Manufacturer	Finish	Mounting	Shipped Included	Shipped Excluded
DSX2 LED	Forward optics	7400K	90	OSRAM	White	DBDXX	DBDXX	DBDXX

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EXAMPLE: DSXW1 LED 20C 1000 40K T3M MVOLT DBDXTD

Site	LED	Color Temp	Color Rendering	Manufacturer	Finish	Mounting	Shipped Included	Shipped Excluded
DSXW1 LED	1K	1000	90	OSRAM	White	DBDXTD	DBDXTD	DBDXTD

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EXAMPLE: DSX2 LED P 740K 70CRI T3M MVOLT SPA NLTAR2 PIRHN DBDXX

Site	LED	Color Temperature	Color Rendering	Manufacturer	Finish	Mounting	Shipped Included	Shipped Excluded
DSX2 LED	Forward optics	7400K	90	OSRAM	White	DBDXX	DBDXX	DBDXX

SYMBOL	LABEL	QTY	MANUFACTURER	CATALOG	DESCRIPTION	NUMBER LAMPS	LAMP OUTPUT	LF	INPUT POWER
A		8	LITHONIA LIGHTING	DSXW1 LED 20C 700 30K T3M MVOLT	DSXW1 LED WITH (D) IO LED LIGHT ENGINES, TYPE T3M OPTIC, 3000K, @ 700MA.	1	5078	1	457
B		4	LITHONIA LIGHTING	DSXW1 LED 20C 350 30K T3M MVOLT	DSXW1 LED WITH (D) IO LED LIGHT ENGINES, TYPE T3M OPTIC, 3000K, @ 350MA.	1	2760	1	233
C		2	LITHONIA LIGHTING	DSX2 LED PS 30K 70CRI T3M HS	D-SERIES SIZE 2 AREA LUMINAIRE PS PERFORMANCE PACKAGE 3000K CCT 70 CRI TYPE 3 MEDIUM HOUSESIDE SHIELD	1	33424	1	653.1682
D		1	LITHONIA LIGHTING	DSX2 LED PS 30K 70CRI T3M HS	D-SERIES SIZE 2 AREA LUMINAIRE PS PERFORMANCE PACKAGE 3000K CCT 70 CRI TYPE 3 MEDIUM HOUSESIDE SHIELD	1	33424	1	326.5841

DESCRIPTION	SYMBOL	AVG	MAX	MIN
OVERALL SITE	+	20 FC	11.1 FC	0.0 FC
ADJ RES PROP LINE	□	0.03 FC	0.09 FC	0.00 FC

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PROJECT + INFORMATION  
**RESIDENCE INN**  
2125 BUTTERFIELD TROY, MI

PROJECT + NUMBER  
**23-203**

ISSUE + DATE  
14 MAY 2024 SITE PLAN  
01 AUG 2024 SITE RESUB  
11 SEPT 2024 SITE RESUB

SHEET + TITLE  
PHOTOMETRIC LIGHTING PLAN

SHEET + NUMBER  
23203ph100.dwg  
**A-010**



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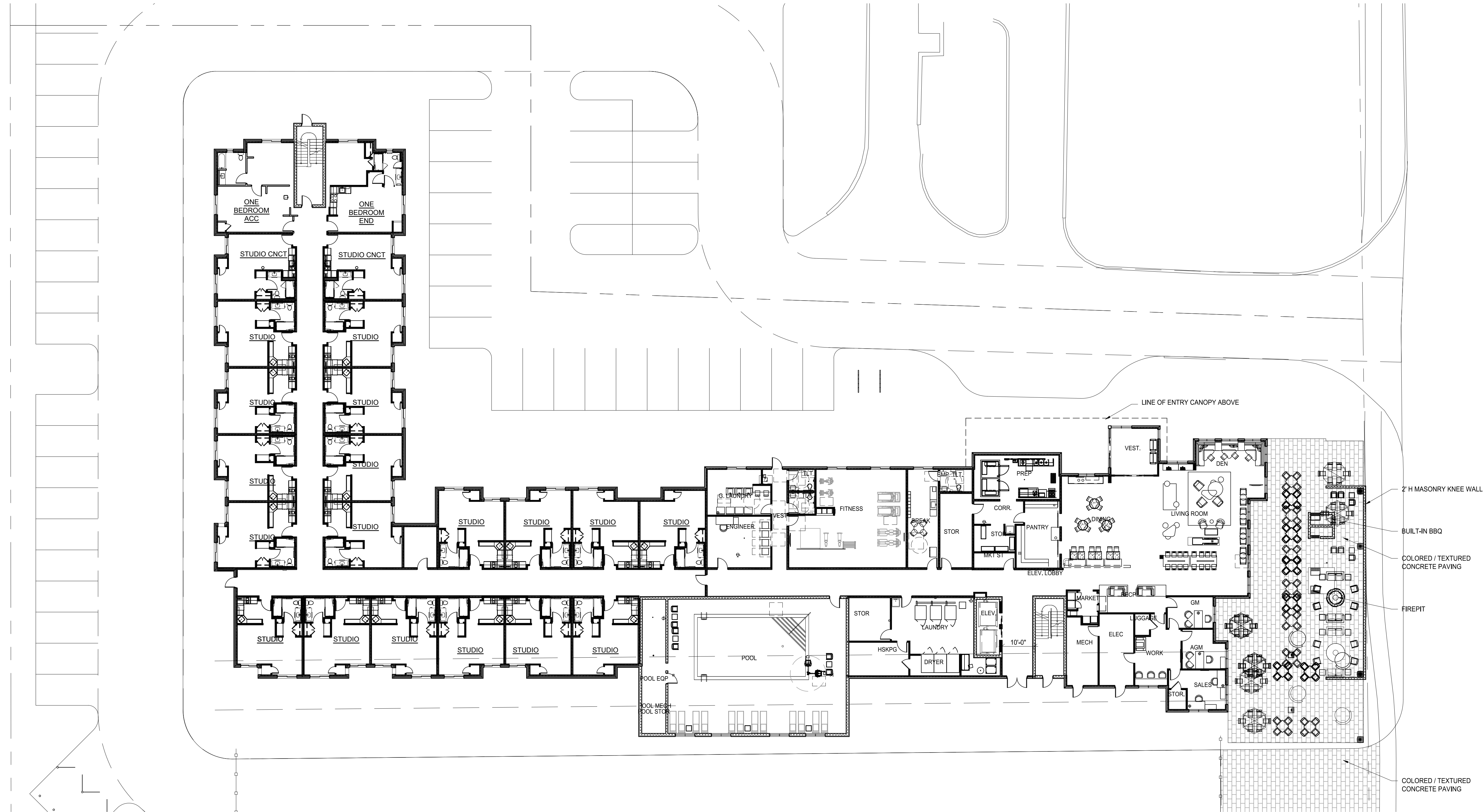
SHEET + TITLE

PRELIMINARY  
 FIRST FLOOR  
 PLAN

23203mast.dwg

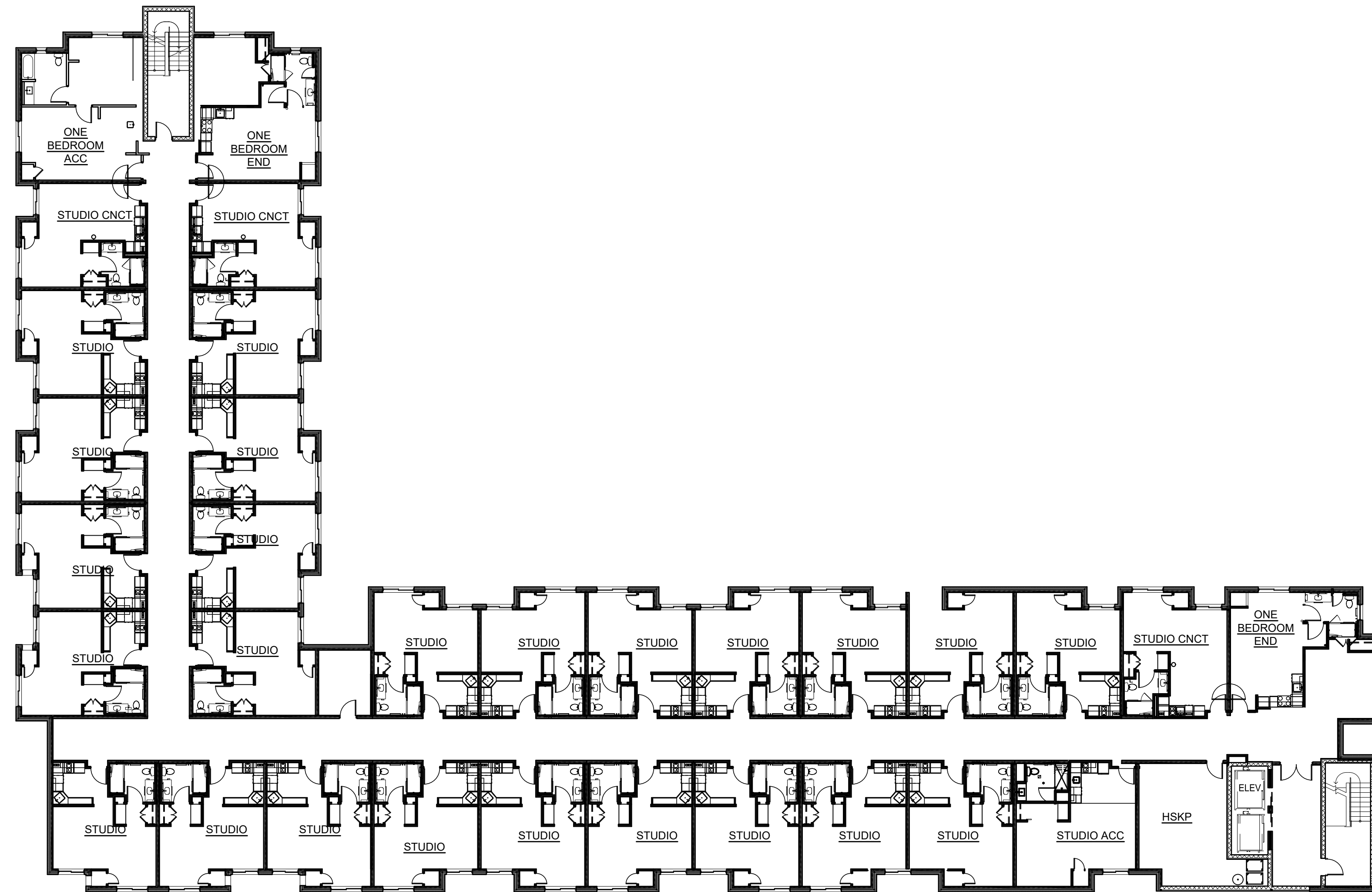
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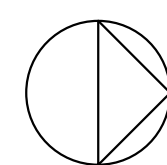
A-100



**FIRST LEVEL FLOOR PLAN**  
 SCALE: 1/8" = 1'-0"

PRELIMINARY GUESTROOM MATRIX							
TYPE	FLOOR 1	FLOOR 2	FLOOR 3	FLOOR 4	TOTAL	RATIO	AREA
STUDIO KING	19	24	24	24	91	78%	436 SF
STUDIO CONNECT	2	3	3	3	11	9%	435 SF
STUDIO ACC	0	1	1	1	3	3%	495 SF
ONE BEDROOM END	1	2	2	2	7	6%	588 SF
ONE BEDROOM ACC	1	1	1	1	4	3%	588 SF
<b>TOTAL</b>	<b>23</b>	<b>31</b>	<b>31</b>	<b>31</b>	<b>116</b>	<b>100%</b>	




**UPPER LEVEL FLOOR PLAN**  
 SCALE: 1/8" = 1'-0"



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**RESIDENCE INN**  
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 TROY, MI

PROJECT + NUMBER

23-203

ISSUE + DATE

14 MAY 2024 SITE PLAN  
 01 AUG 2024 SITE RESUB  
 11 SEPT 2024 SITE RESUB

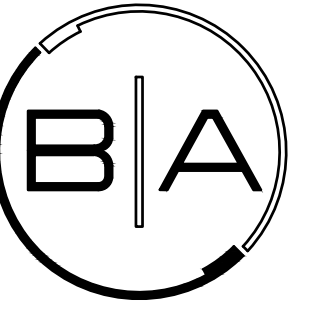
SHEET + TITLE

PRELIMINARY  
 UPPER FLOOR  
 PLAN

23203mast.dwg

SHEET + NUMBER

A-101



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 TROY, MI

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23-203

ISSUE + DATE

14 MAY 2024 SITE PLAN  
 01 AUG 2024 SITE RESUB  
 11 SEPT 2024 SITE RESUB

SHEET + TITLE

EXTERIOR  
 ELEVATIONS

23203a300.dwg

SHEET + NUMBER

A-300



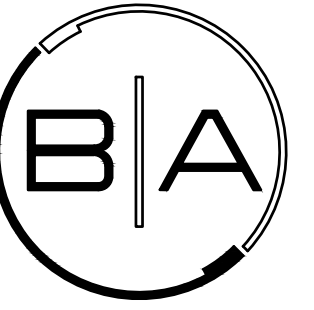
**EAST ELEVATION**  
 1  
 A-300 | A-300 SCALE: 3/8" = 1'-0"



**SOUTH ELEVATION**  
 2  
 A-300 | A-300 SCALE: 3/8" = 1'-0"

**EXTERIOR FINISH LEGEND**

TAG	MATERIAL	MANUF	STYLE	COLOR
A	STONE MASONRY VENEER	BORAL CULTURED STONE	PRO-FIT SERIES	ALPINE LEDGESTONE
B	BRICK	TBD	TBD	TBD
C	STONE ACCENT BAND	READING ROCK	ROCKCAST SMOOTH	BUFFSTONE
D	FIBER CEMENT SIDING	HARDIEPLANK	10.75" LAP SIDING	SW0054 TWILIGHT GRAY
E	FIBER CEMENT SIDING	HARDIEPLANK	6" LAP SIDING	SW6187 ROSEMARY
F	ROOF SHINGLES	TBD	TBD	TBD



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SHEET + TITLE  
 EXTERIOR  
 ELEVATIONS

23203a300.dwg

SHEET + NUMBER

A-300



1  
 WEST  
 ELEVATION  
 A-301 A-301 SCALE: 3/8" = 1'-0"



2  
 NORTH  
 ELEVATION  
 A-301 A-301 SCALE: 3/8" = 1'-0"

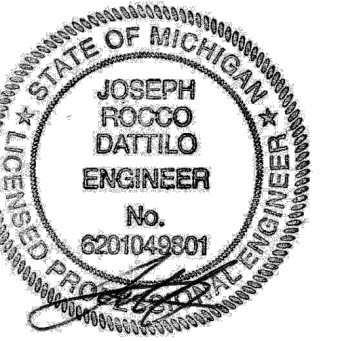
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C	STONE ACCENT BAND	READING ROCK	ROCKCAST SMOOTH	BUFFSTONE
D	FIBER CEMENT SIDING	HARDIEPLANK	10.75" LAP SIDING	SW0054 TWILIGHT GRAY
E	FIBER CEMENT SIDING	HARDIEPLANK	6" LAP SIDING	SW6187 ROSEMARY
F	ROOF SHINGLES	TBD	TBD	TBD

# S.M. ENGINEERS

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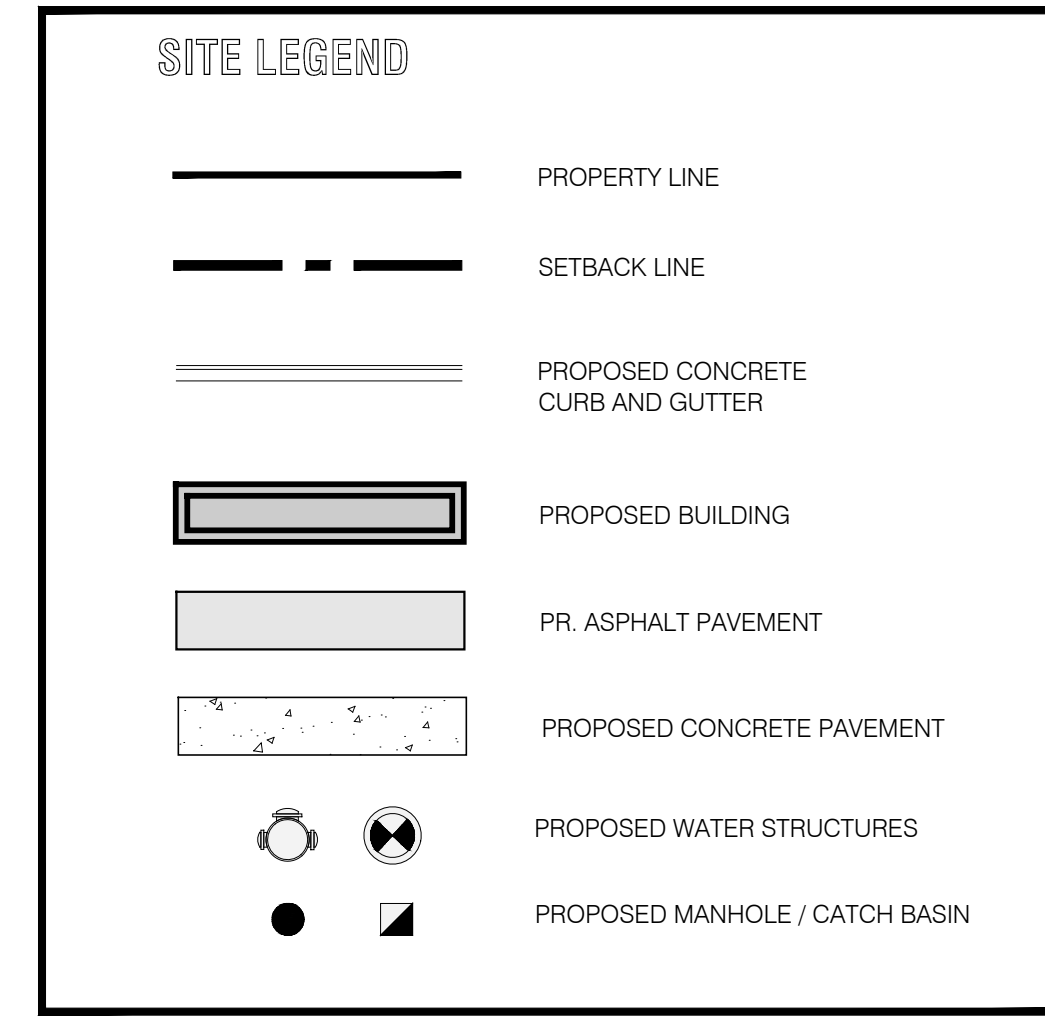
NO.	SUBMITTAL	DATE
4	SPA REVIEW	09.09.2024
3	SPA REVIEW	07.11.2024
2	SPA REVIEW	03.15.2024
1	SPA REVIEW	01.05.2024

**CFM BUTTERFIELD**  
2125-2155 BUTTERFIELD DRIVE,  
CITY OF TROY,  
OAKLAND COUNTY, MICHIGAN

## SITE LAYOUT PLAN

# C3.0

23036



### SITE NOTES

- ALL LIGHTING SHALL BE SHIELDED AND DIRECTED DOWNWARD AND AWAY FROM ADJACENT PROPERTIES. LIGHTING SHALL MEET REQUIREMENTS OF THE LOCAL ZONING ORDINANCE. SEE LIGHTING PLAN FOR ADDITIONAL INFORMATION.
- GROUND MOUNTED TRANSFORMERS AND ROOF MOUNTED MECHANICAL EQUIPMENT SHALL BE SCREENED AS REQUIRED IN THE LOCAL ZONING ORDINANCE.
- ALL SIGNS TO MEET REQUIREMENTS OF CITY CODE OF ORDINANCES AND BE APPROVED BY BUILDING DEPARTMENT
- PARKING SPACES SHALL BE STRIPPED PER LOCAL ZONING ORDINANCE

### SHARED PARKING CALCULATIONS

EXISTING PARKING COUNT: 587 SPACES TOTAL  
PROPOSED PARKING COUNT: 435 SPACES TOTAL

OFF-STREET PARKING (PER ZONING ORDINANCE TABLE 13.06-A):  
1 SPACE FOR EACH GUEST ROOM + 1 SPACE PER EMPLOYEE ON LARGEST SHIFT + ANY ADDITIONAL SPACE REQUIRED FOR DINING ESTABLISHMENTS.

116 GUEST ROOMS + 5 EMPLOYEES = 121 REQUIRED SPACES

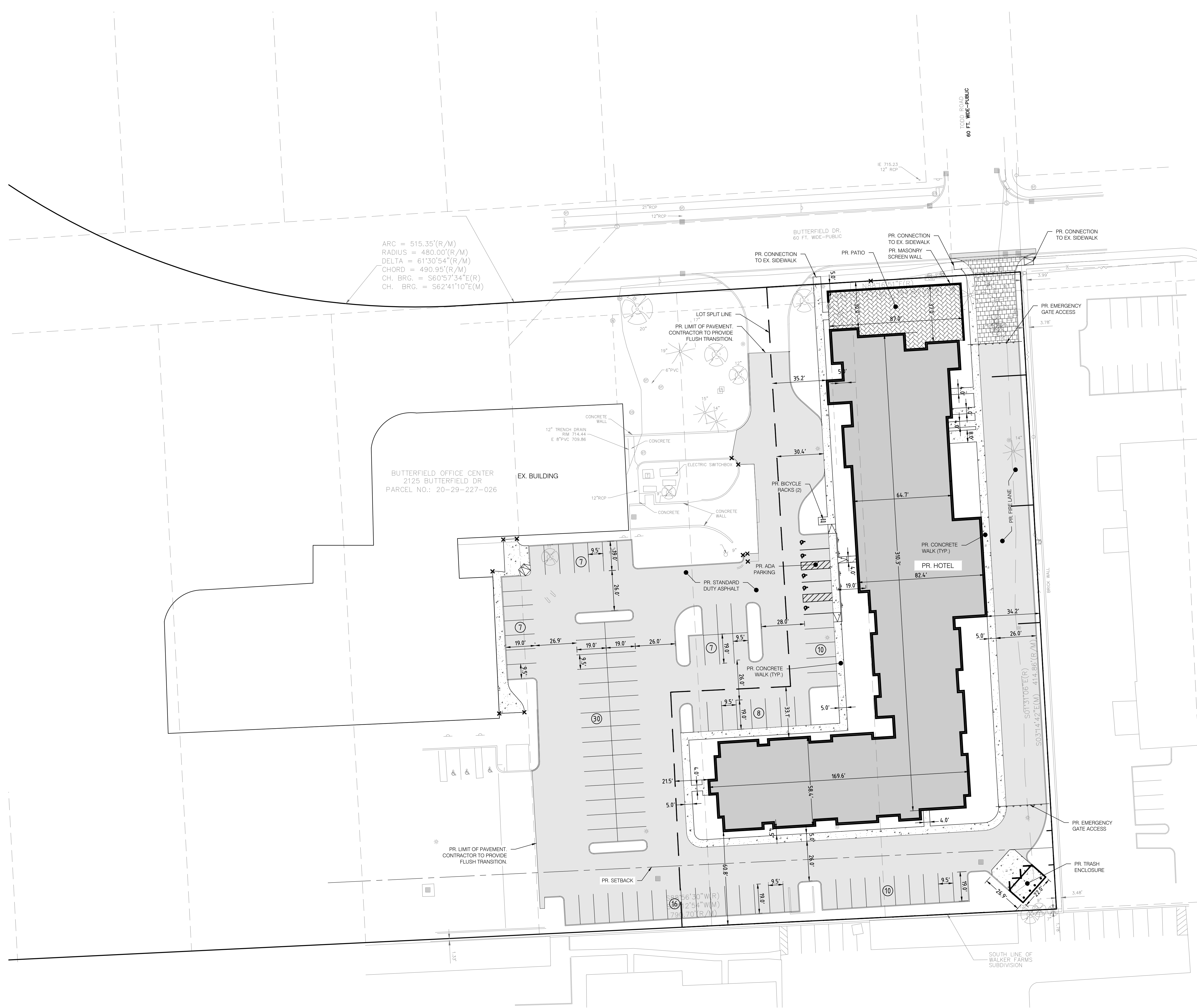
121 PARKING SPACES PROVIDED (36 SPACES PROVIDED ON SITE)

BARRIER FREE PARKING:  
5 SPACES REQUIRED ; 5 SPACES PROVIDED.

BICYCLE PARKING:  
2 SPACES REQUIRED ; 2 SPACES PROVIDED.

### OPEN SPACE CALCULATIONS

15% (12,023 SF) OPEN SPACE REQUIRED  
21.03% (16,852 SF) PROVIDED

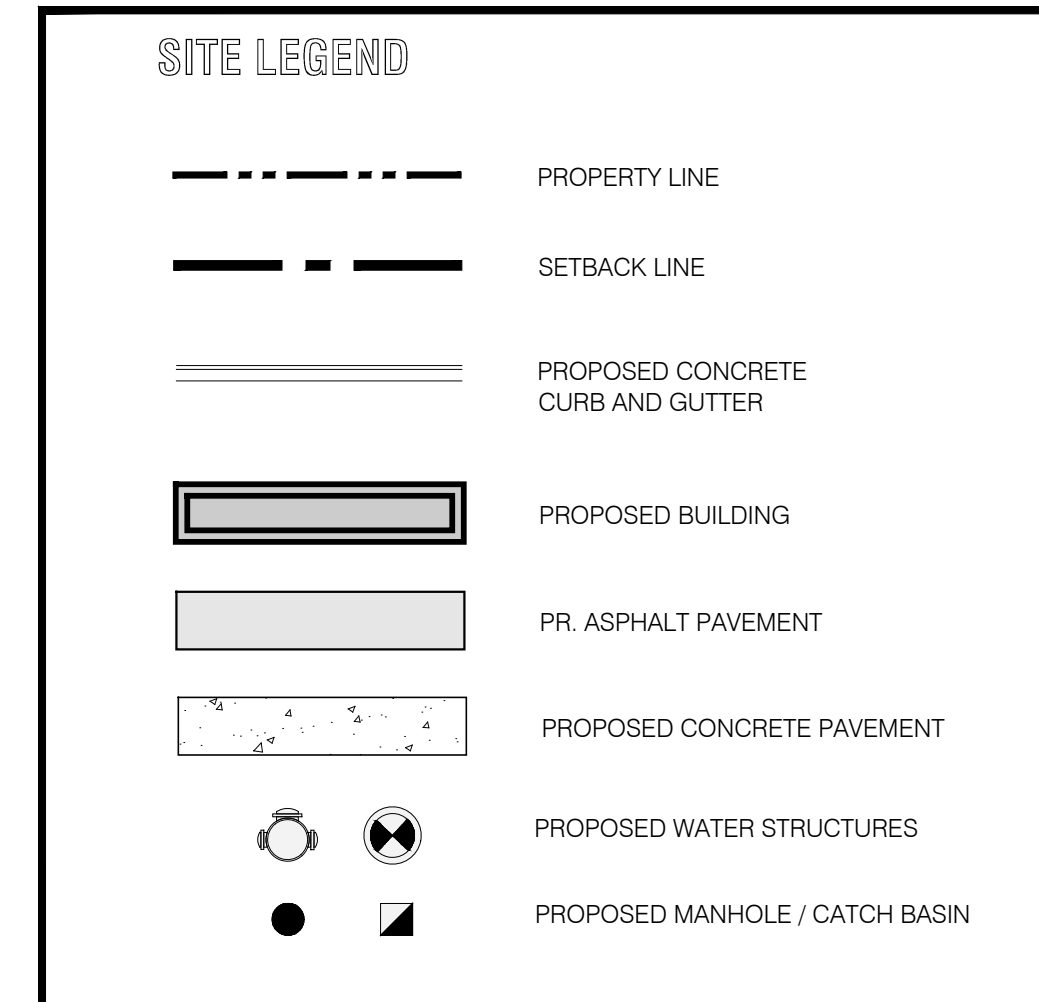
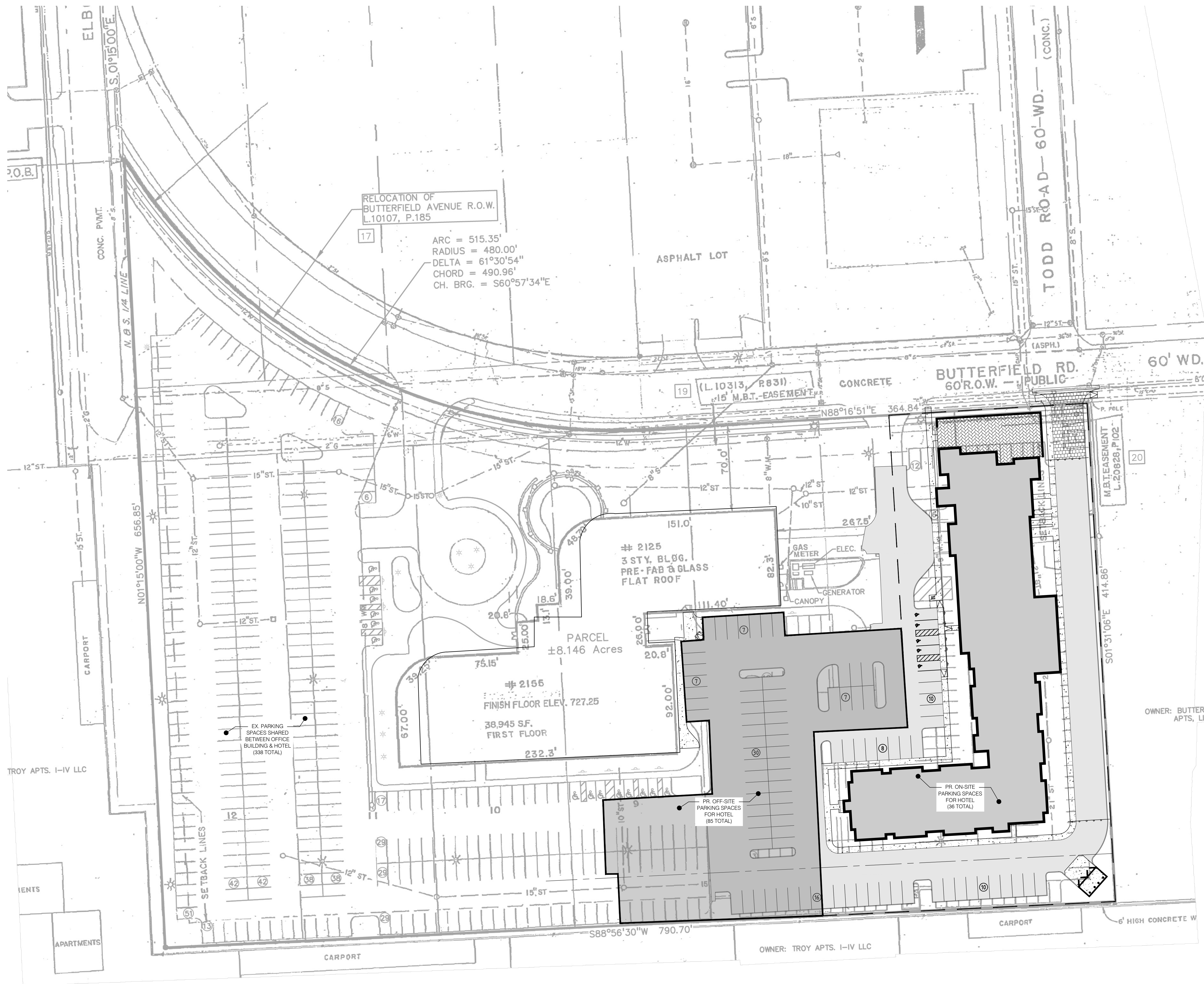


ARC = 515.35'(R/M)  
RADIUS = 480.00'(R/M)  
DELTA = 61°30'54"(R/M)  
CHORD = 490.95'(R/M)  
CH. BRG. = S60°57'34"E(R)  
CH. BRG. = S62°41'10"E(M)

BUTTERFIELD OFFICE CENTER  
2125 BUTTERFIELD DR  
PARCEL NO.: 20-29-227-026



C3.0 Site Layout & Paving Plan.dwg  
9/9/2024  
GregEzzo



- ### SITE NOTES
- ALL LIGHTING SHALL BE SHIELDED AND DIRECTED DOWNWARD AND AWAY FROM ADJACENT PROPERTIES. LIGHTING SHALL MEET REQUIREMENTS OF THE LOCAL ZONING ORDINANCE. SEE LIGHTING PLAN FOR ADDITIONAL INFORMATION.
  - GROUND MOUNTED TRANSFORMERS AND ROOF MOUNTED MECHANICAL EQUIPMENT SHALL BE SCREENED AS REQUIRED IN THE LOCAL ZONING ORDINANCE.
  - ALL SIGNS TO MEET REQUIREMENTS OF CITY CODE OF ORDINANCES AND BE APPROVED BY BUILDING DEPARTMENT
  - PARKING SPACES SHALL BE STRIPPED PER LOCAL ZONING ORDINANCE

### SHARED PARKING CALCULATIONS

EXISTING PARKING COUNT: 587 SPACES  
PROPOSED PARKING COUNT AFTER HOTEL DEVELOPMENT: 459 SPACES

OFF-STREET PARKING (PER ZONING ORDINANCE TABLE 13.06-A):  
1 SPACE FOR EACH GUEST ROOM + 1 SPACE PER EMPLOYEE ON LARGEST SHIFT + ANY ADDITIONAL SPACE REQUIRED FOR DINING ESTABLISHMENTS.

116 GUEST ROOMS + 5 EMPLOYEES = 121 REQUIRED SPACES

121 PARKING SPACES PROVIDED FOR HOTEL.  
36 SPACES ON-SITE  
85 SPACES OFF-SITE

EXISTING OFFICE PARKING:  
1 SPACE PER 300 SF = 112,217 SF / 300 SF = 374 PARKING SPACES  
REQUIRED FOR OFFICE BUILDING

# S.M. ENGINEERS

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LAND PLANNER /  
LANDSCAPE ARCHITECT

1939 LINCOLNSHIRE DRIVE,  
ROCHESTER HILLS, MI  
T: 248.835.3553

NO. SUBMITTAL DATE

4	SPA REVIEW	09.09.2024
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2	SPA REVIEW	03.15.2024
1	SPA REVIEW	01.05.2024

**CFM BUTTERFIELD**  
2125-2155 BUTTERFIELD DRIVE,  
CITY OF TROY,  
OAKLAND COUNTY, MICHIGAN

**OVERALL PARKING PLAN**

C3.0 Site Layout & Paving Plan.dwg  
9/10/2024  
GregEzzo

**IRRIGATION NOTE:**

IRRIGATION CONTRACTOR TO PROVIDE A DESIGN FOR AN IRRIGATION SYSTEM SEPARATING PLANTING BEDS FROM LAWN AREA. PRIOR TO CONSTRUCTION, DESIGN IS TO BE SUBMITTED TO THE PROJECT LANDSCAPE DESIGNER FOR REVIEW AND APPROVAL. WHERE POSSIBLE, DRIP IRRIGATION AND OTHER WATER CONSERVATION TECHNIQUES SUCH AS RAIN SENSORS SHALL BE IMPLEMENTED. CONTRACTOR TO VERIFY MAXIMUM ON SITE DYNAMIC WATER PRESSURE AVAILABLE MEASURED IN PSI. PRESSURE REDUCING DEVICES OR BOOSTER PUMPS SHALL BE PROVIDED TO MEET SYSTEM PRESSURE REQUIREMENTS. DESIGN TO SHOW ALL VALVES, PIPING, HEADS, BACKFLOW PREVENTION, METERS, CONTROLLERS, AND SLEEVES WITHIN HARDSCAPE AREAS.

**LANDSCAPE REQUIREMENTS**

**INTERIOR LANDSCAPING**  
 20% OF TOTAL SITE AREA TO BE LANDSCAPED MATERIAL:  
 80,151.62 SF X 0.20 = 16,030.32 SF REQUIRED  
 3,779 SF GROUND COVER/PERENNIAL PLANTINGS  
 13,073 SF LAWN AREA  
 3,779 + 13,073 = 16,852 SF LANDSCAPED MATERIAL COVERAGE PROVIDED.

**PARKING LOT LANDSCAPING**  
 1 DECIDUOUS/ORNAMENTAL TREE EVERY 8 PARKING SPACES:  
 122 PARKING SPACE X 1/8 TREES PER SPACES = 22 TREES REQUIRED; PROPOSED: 23 TREES  
 PARKING LOT TREES INDICATED WITH ASTERISK\*

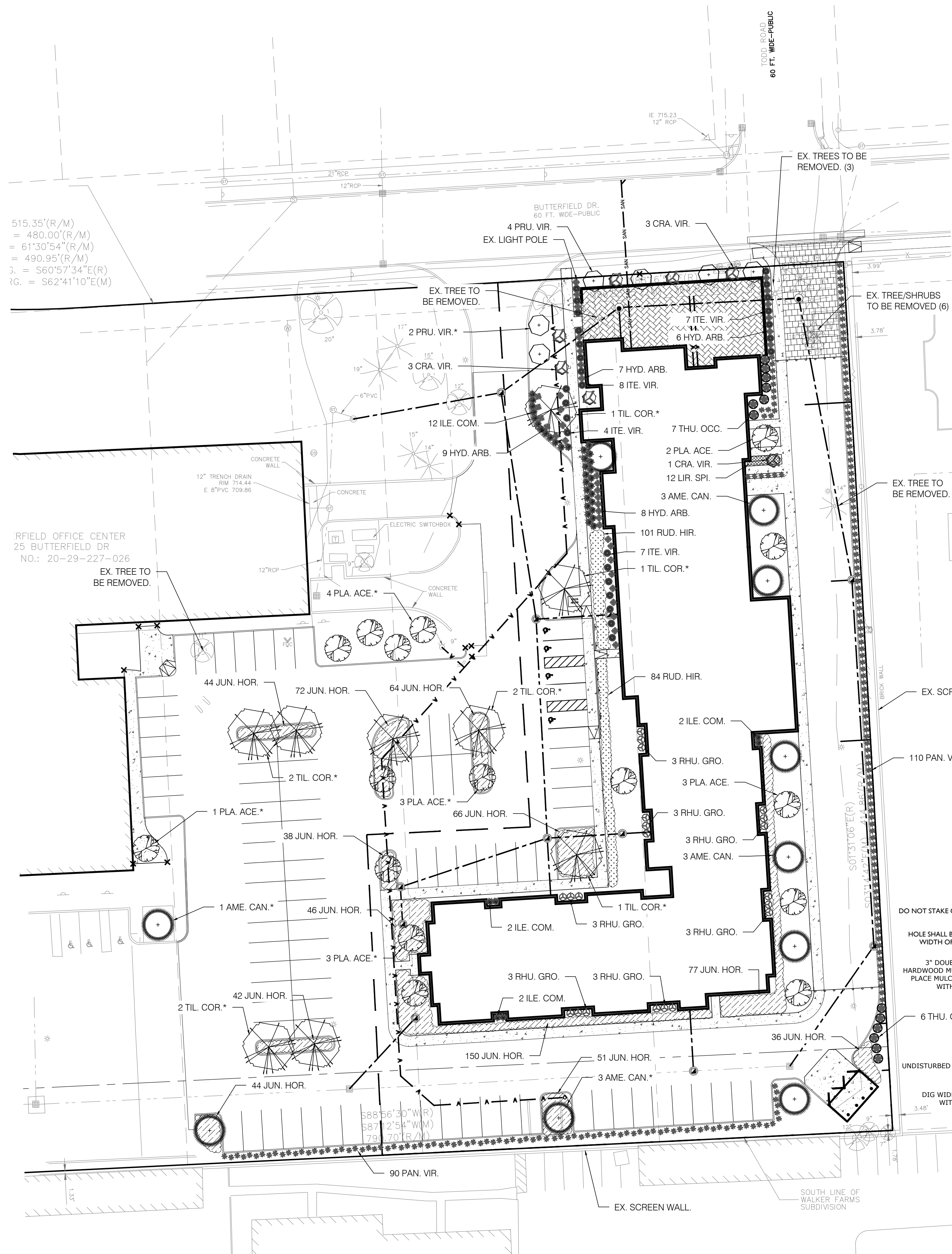
**GREENBELT LANDSCAPING**  
 MINIMUM 10' WIDTH ALONG FRONTAGE OF R.O.W.  
 1 DECIDUOUS TREE PER 30 LF REQUIRED.  
 165.13 LF / 30 LF = 5.5 TREES REQUIRED; 8 TREES PROVIDED (1 EXISTING)

PLANT SCHEDULE					
PLANT KEY	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
<b>DECIDUOUS TREES (TOTAL: 25)</b>					
TIL. COR.	9	TILIA CORDATA 'GREENSPIRE'	GREENSPIRE LINDEN	3" CAL.	B&B
PLA. ACE	16	PLATANUS X ACERIFOLIA 'BLOODGOOD'	BLOODGOOD LONDON PLANETREE	3-3.5" CAL.	B&B
<b>ORNAMENTAL TREES (TOTAL: 23)</b>					
AME. CAN.	10	AMELANCHIER CANADENSIS	CANADIAN SERVICEBERRY	10'-12'	B&B
CRA. VIR.	7	CRATAEGUS VIRIDIS	WINTER KING HAWTHORN	10'-12'	B&B
PRU. VIR.	6	PRUNUS VIRGINIANA	CHOKEBERRY	10'-12'	B&B
<b>SHRUBS (TOTAL: 138)</b>					
RHU. GRO.	21	RHUS AROMATICA 'GRO LOW'	FRAGRANT SUMAC	3 GAL.	CONT. 36" O.C.
ILE. COM.	39	ILEX GLABRA 'COMPACTA'	COMPACT INKBERRY	24"-30"	CONT.
ITE. VIR.	26	ITEA VIRGINICA	VIRGINIA SWEETSPIRE	36"-48"	CONT.
HYD. ARB.	39	HYDRANGEA ARBORESCENS	SMOOTH HYDRANGEA	24"-30"	CONT.
THU. OCC.	13	THUJA OCCIDENTALIS	AMERICAN ARBORVITAE	10'-15'	CONT. 36" O.C.
<b>PERENNIALS / GRASSES (TOTAL: 927)</b>					
JUN. HOR.	730	JUNIPERUS HORIZONTALIS 'BAR HARBOR'	BAR HARBOR CREEPING JUNIPER	15"-18"	CONT. 3' O.C.
LIR. SPL.	12	LIRIOPE SPICATA	CREEPING LILY TURF	12"-18"	CONT. 1.5' O.C.
RUD. HIR.	185	RUDEBECKIA HIRTA	BLACK-EYED SUSAN	1'-2' WIDE	CONT.

**S.M. ENGINEERS**

CIVIL ENGINEER / SURVEY / LAND PLANNER / LANDSCAPE ARCHITECT

1939 LINCOLNSHIRE DRIVE, ROCHESTER HILLS, MI T: 248.835.3553

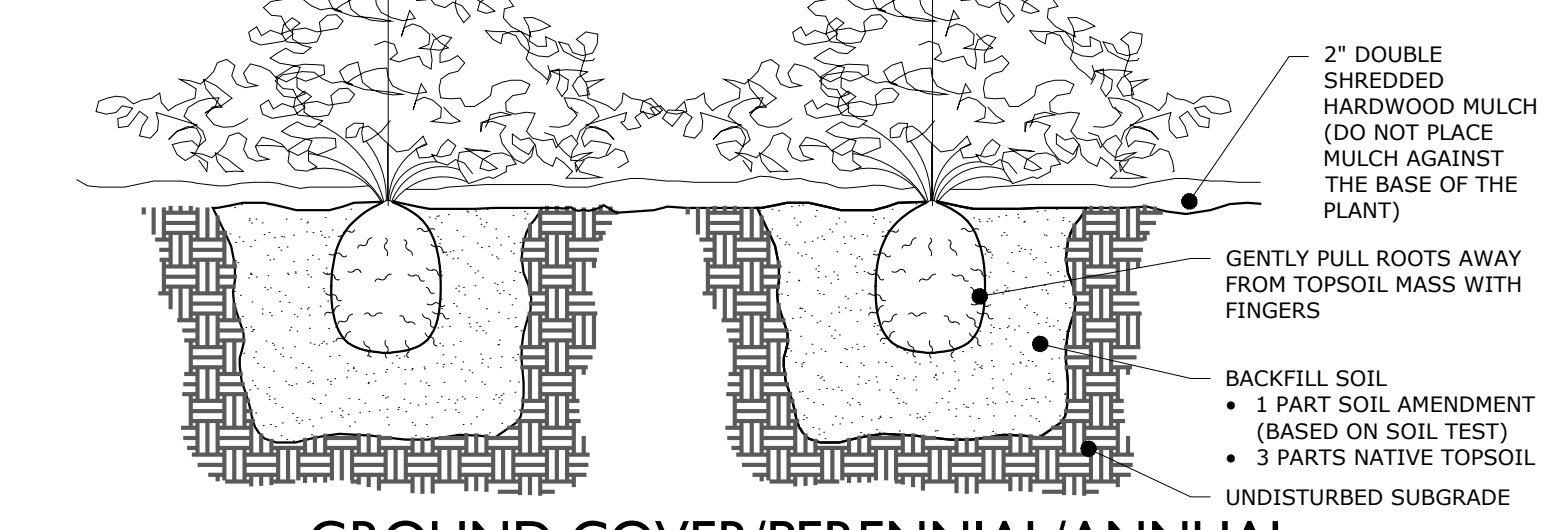
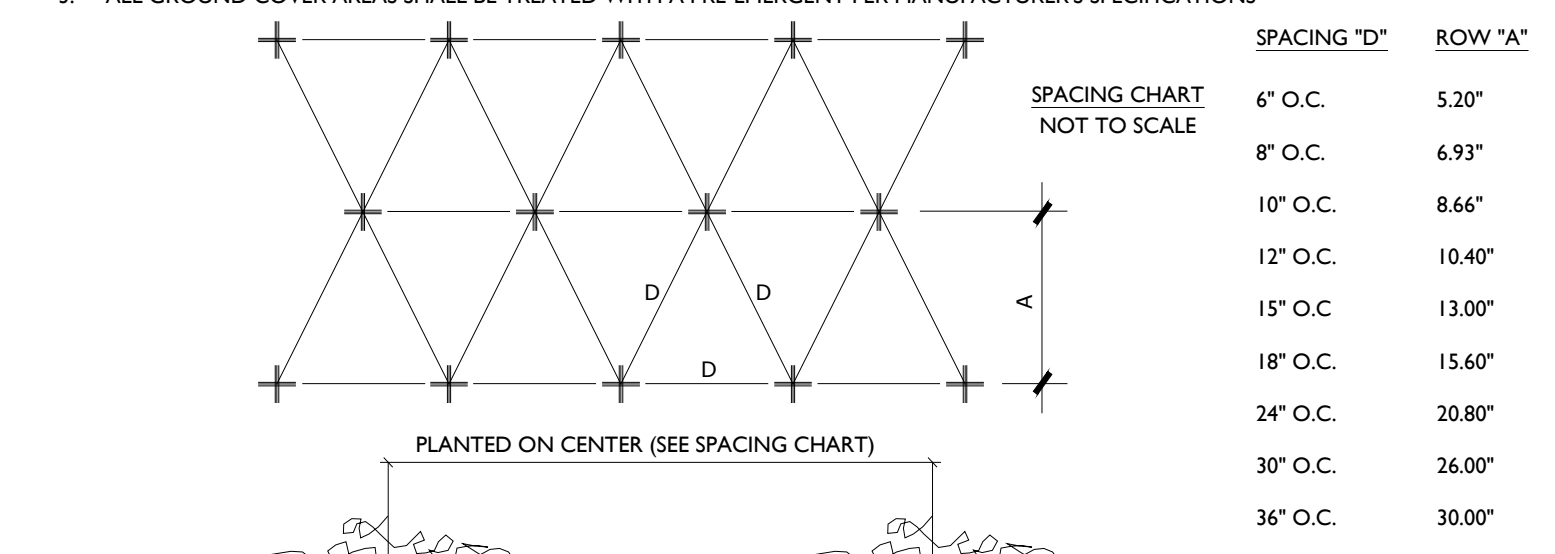


**LANDSCAPE NOTES**

- THE CONTRACTOR SHALL RESTORE ALL DISTURBED GRASS AND LANDSCAPED AREAS TO MATCH EXISTING CONDITIONS UNLESS INDICATED OTHERWISE WITHIN THE PLAN SET.
- THE CONTRACTOR SHALL RESTORE ALL DISTURBED LAWN AREAS WITH A MINIMUM 4 INCH LAYER OF TOPSOIL AND SEED.
- THE CONTRACTOR SHALL RESTORE MULCH AREAS WITH A MINIMUM 3 INCH LAYER OF MULCH.
- THE MAXIMUM SLOPE ALLOWABLE IN LANDSCAPE RESTORATION AREAS SHALL BE 3 FEET HORIZONTAL TO 1 FOOT VERTICAL (3:1 SLOPE) UNLESS INDICATED OTHERWISE WITHIN THE PLAN SET.
- THE CONTRACTOR IS REQUIRED TO LOCATE ALL SPRINKLER HEADS IN AREA OF LANDSCAPING DISTURBANCE PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL RELOCATE SPRINKLER HEADS AND LINES IN ACCORDANCE WITH OWNER'S DIRECTION WITHIN AREAS OF DISTURBANCE.
- THE CONTRACTOR SHALL ENSURE THAT ALL DISTURBED LANDSCAPED AREAS ARE GRADED TO MEET FLUSH AT THE ELEVATION OF WALKWAYS AND TOP OF CURB ELEVATIONS EXCEPT UNLESS INDICATED OTHERWISE WITHIN THE PLAN SET. NO ABRUPT CHANGES IN GRADE ARE PERMITTED IN DISTURBED LANDSCAPING AREAS.

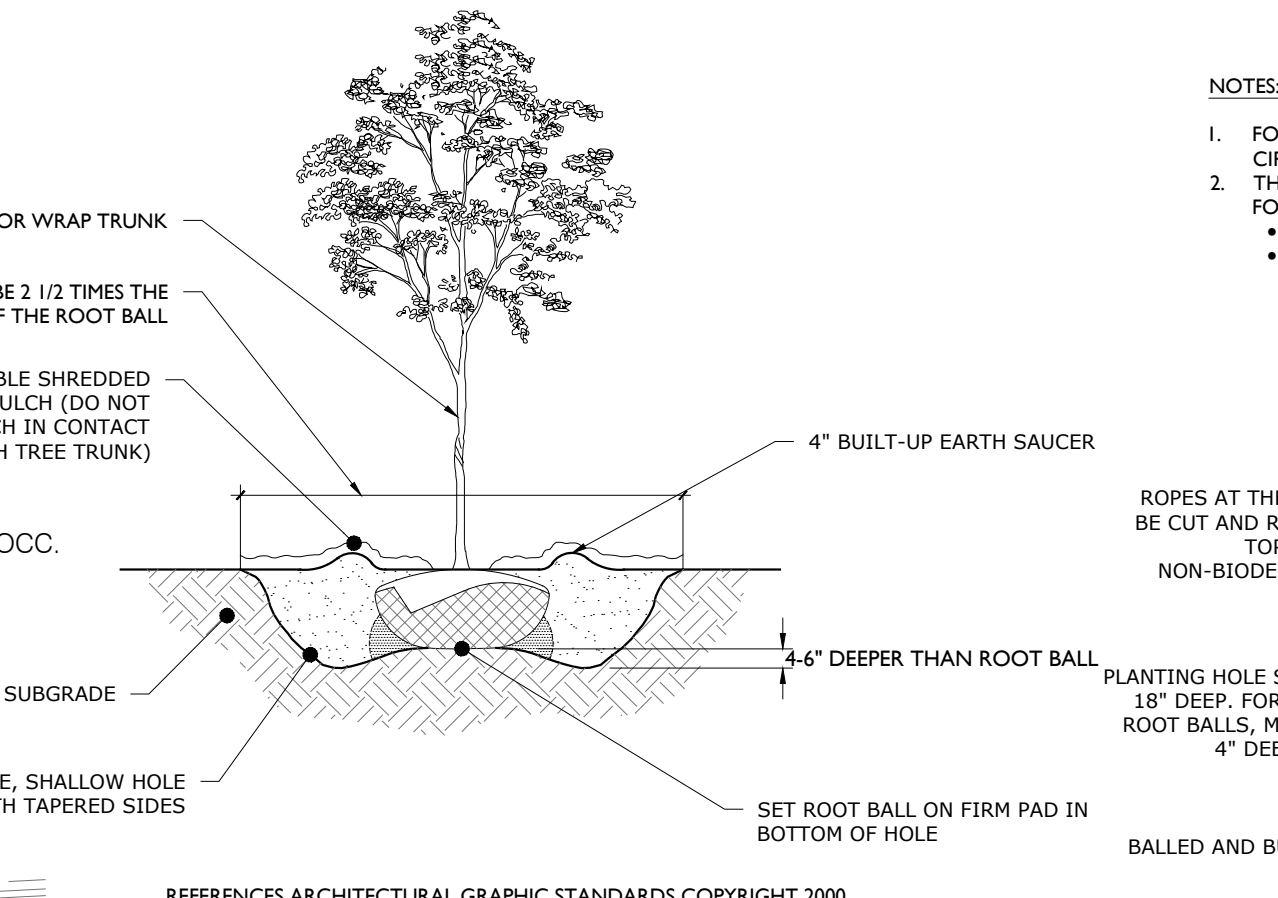
NOTE: IF ANY DISCREPANCIES OCCUR BETWEEN AMOUNTS SHOWN ON THE LANDSCAPE PLAN AND WITHIN THE PLANT LIST, THE PLAN SHALL DICTATE.

- NOTES:**
- THOROUGHLY SOAK THE GROUND COVER ROOT BALL AND ADJACENT PREPARED SOIL SEVERAL TIMES DURING THE FIRST MONTH AFTER PLANTING AND REGULARLY THROUGHOUT THE FOLLOWING TWO SUMMERS.
  - SOIL AMENDMENTS:
    - MODIFY HEAVY CLAY OR SILT SOILS (MORE THAN 40% CLAY OR SILT) BY ADDING COMPOSTED PINE BARK (UP TO 30% BY VOLUME) OR GYPSUM
    - MODIFY EXTREMELY SANDY SOILS (MORE THAN 85% SAND) BY ADDING ORGANIC MATTER AND/OR DRY, SHREDDED CLAY LOAM UP TO 30% OF THE TOTAL MIX
  - ALL GROUND COVER AREAS SHALL BE TREATED WITH A PRE-EMERGENT PER MANUFACTURER'S SPECIFICATIONS

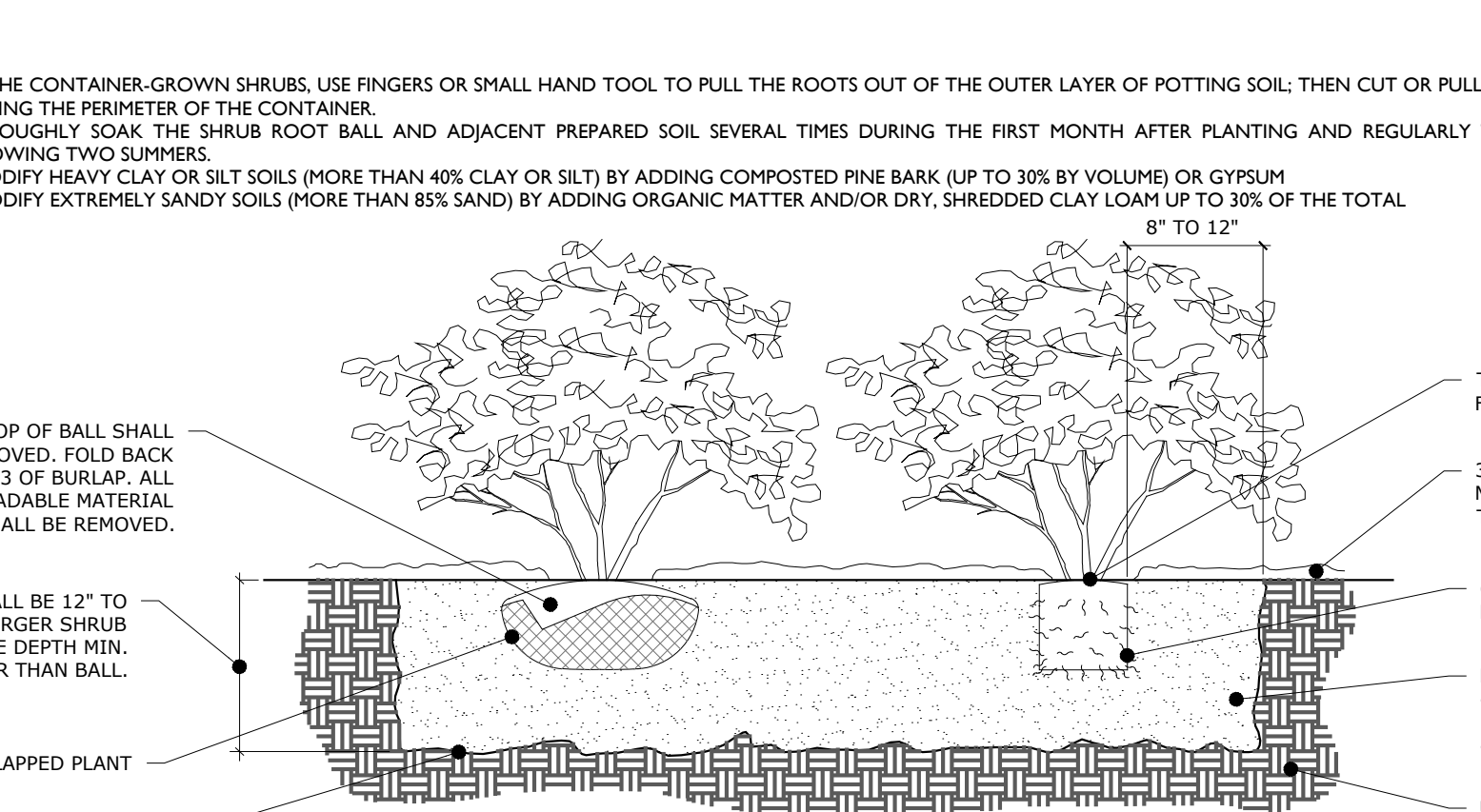


**GROUND COVER/PERENNIAL/ANNUAL PLANTING DETAIL**  
NOT TO SCALE

- NOTES:**
- FOR CONTAINER-GROWN TREES, USE FINGERS OR SMALL HAND TOOLS TO PULL THE ROOTS OUT OF THE OUTER LAYER OF POTTING SOIL, THEN CUT OR PULL APART ANY ROOTS CIRCLING THE PERIMETER OF THE CONTAINER.
  - THOROUGHLY SOAK THE TREE ROOT BALL AND ADJACENT PREPARED SOIL SEVERAL TIMES DURING THE FIRST MONTH AFTER PLANTING AND REGULARLY THROUGHOUT THE FOLLOWING TWO SUMMERS.
  - SOIL AMENDMENTS:
    - MODIFY HEAVY CLAY OR SILT SOILS (MORE THAN 40% CLAY OR SILT) BY ADDING COMPOSTED PINE BARK (UP TO 30% BY VOLUME) OR GYPSUM
    - MODIFY EXTREMELY SANDY SOILS (MORE THAN 85% SAND) BY ADDING ORGANIC MATTER AND/OR DRY, SHREDDED CLAY LOAM UP TO 30% OF THE TOTAL MIX



**DECIDUOUS TREE PLANTING DETAIL**  
NOT TO SCALE



**DECIDUOUS AND EVERGREEN SHRUB PLANTING DETAIL**  
NOT TO SCALE



4	SPA REVIEW	09.09.2024
3	SPA REVIEW	07.11.2024
2	SPA REVIEW	03.15.2024
1	SPA REVIEW	01.05.2024
NO.	SUBMITTAL	DATE

**CFM BUTTERFIELD**  
 2125-2155 BUTTERFIELD DRIVE, CITY OF TROY, OAKLAND COUNTY, MICHIGAN

**LANDSCAPE PLAN**

**C3.2** 23036



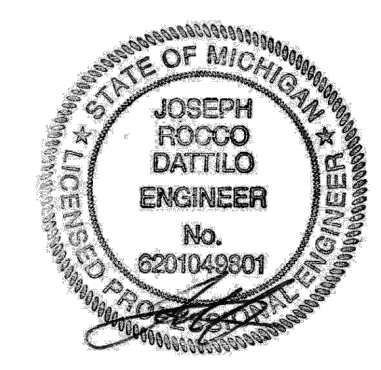


**GRADING LEGEND**

×	900.00	EXISTING GRADES
×	100.00	PROPOSED GRADES
---		PROPERTY LINE
---		PROPOSED RIDGE LINE

**GRADING NOTES**

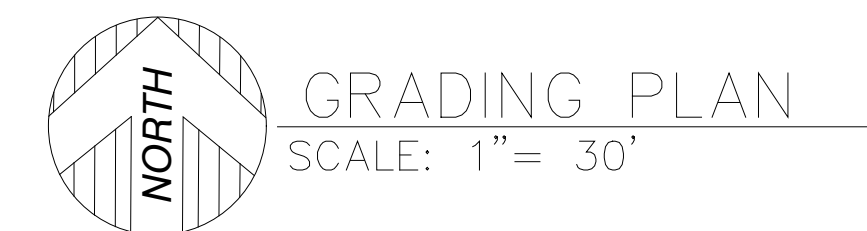
- ALL WORKMANSHIP AND MATERIAL SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF CITY OF TROY AND OAKLAND COUNTY
- IN AREAS WHERE NEW PAVEMENTS ARE BEING CONSTRUCTED, THE TOPSOIL AND SOIL CONTAINING ORGANIC MATTER SHALL BE REMOVED PRIOR TO PAVEMENT CONSTRUCTION.
- ON-SITE FILL CAN BE USED IF THE SPECIFIED COMPACTION REQUIREMENTS CAN BE ACHIEVED. IF ON-SITE SOIL IS USED, IT SHOULD BE CLEAN AND FREE OF FROZEN SOIL, ORGANICS, OR OTHER DELETERIOUS MATERIALS.
- THE FINAL SUBGRADE/EXISTING AGGREGATE BASE SHOULD BE THOROUGHLY PROOF ROLLED USING A FULLY LOADED TANDEM AXLE TRUCK OR FRONT END LOADER UNDER THE OBSERVATION OF A GEOTECHNICAL/ PAVEMENT ENGINEER. LOOSE OR YIELDING AREAS THAT CANNOT BE MECHANICALLY STABILIZED SHOULD BE REINFORCED USING GEOGRIDS OR REMOVED AND REPLACED WITH ENGINEERED FILL OR AS DICTATED BY FIELD CONDITIONS.
- SUBGRADE UNDERCUTTING, INCLUDING BACKFILLING SHALL BE PERFORMED TO REPLACE MATERIALS SUSCEPTIBLE TO FROST HEAVING AND UNSTABLE SOIL CONDITIONS. ANY EXCAVATIONS THAT MAY BE REQUIRED BELOW THE TOPSOIL IN FILL SECTIONS OR BELOW SUBGRADE IN CUT SECTIONS, WILL BE CLASSIFIED AS SUBGRADE UNDERCUTTING.
- SUBGRADE UNDERCUTTING, INCLUDING BACKFILLING SHALL BE PERFORMED WHERE NECESSARY AND THE EXCAVATED MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR. ANY SUBGRADE UNDERCUTTING SHALL BE BACKFILLED WITH SAND OR OTHER SIMILAR APPROVED MATERIAL. BACKFILL SHALL BE COMPACTED TO 95% OF THE MAXIMUM UNIT WEIGHT (PER ASTM D-1557) UNLESS OTHERWISE SPECIFIED.
- BACKFILL UNDER PAVED AREAS SHALL BE AS SPECIFIED ON DETAILS.
- ANY SUB-GRADE WATERING REQUIRED TO ACHIEVE REQUIRED DENSITY SHALL BE CONSIDERED INCIDENTAL TO THE JOB.
- FINAL PAVEMENT ELEVATIONS SHOULD BE SO DESIGNED TO PROVIDE POSITIVE SURFACE DRAINAGE. A MINIMUM SURFACE SLOPE OF 1.0 PERCENT IS RECOMMENDED.
- CONSTRUCTION TRAFFIC SHOULD BE MINIMIZED ON THE NEW PAVEMENT. IF CONSTRUCTION TRAFFIC IS ANTICIPATED ON THE PAVEMENT STRUCTURE, THE INITIAL LIFT THICKNESS COULD BE INCREASED AND PLACEMENT OF THE FINAL LIFT COULD BE DELAYED UNTIL THE MAJORITY OF THE CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED. THIS ACTION WILL ALLOW REPAIR OF LOCALIZED FAILURE, IF ANY DOES OCCUR, AS WELL AS REDUCE LOAD DAMAGE ON THE PAVEMENT SYSTEM.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF TROY AND SPECIFICATIONS.
- SPOT ELEVATIONS INDICATE TOP OF PAVEMENT UNLESS OTHERWISE INDICATED:  
TC = TOP OF CURB  
BC = BOTTOM OF CURB
- REFER TO LANDSCAPE PLAN FOR LANDSCAPE TREATMENT AND PLACEMENT.



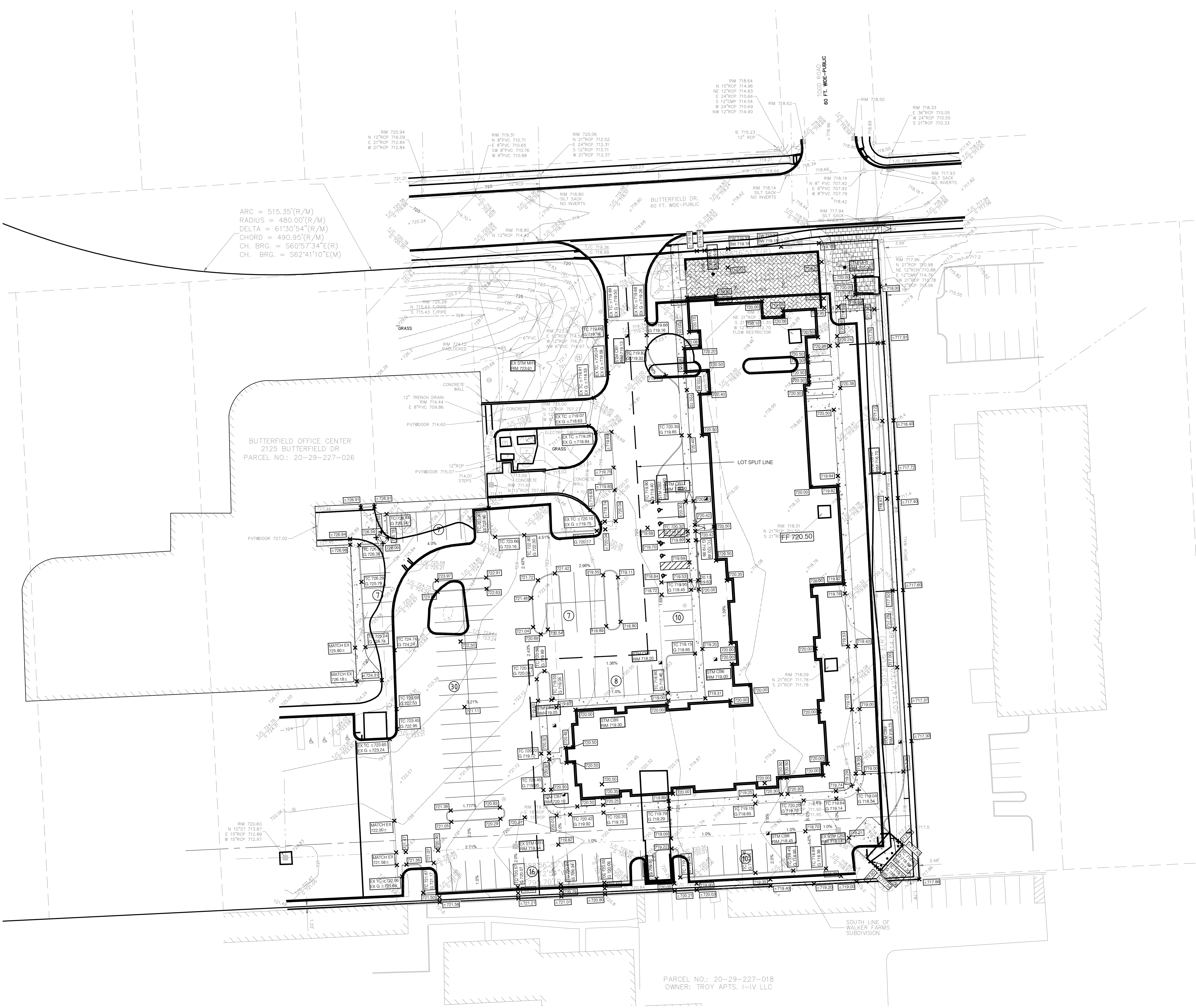
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**CFM BUTTERFIELD**  
2125-2195 BUTTERFIELD DRIVE,  
CITY OF TROY  
OAKLAND COUNTY, MICHIGAN

**GRADING PLAN**



**C4.0** **23036**



C4.0 Grading Plan.dwg

9/9/2024

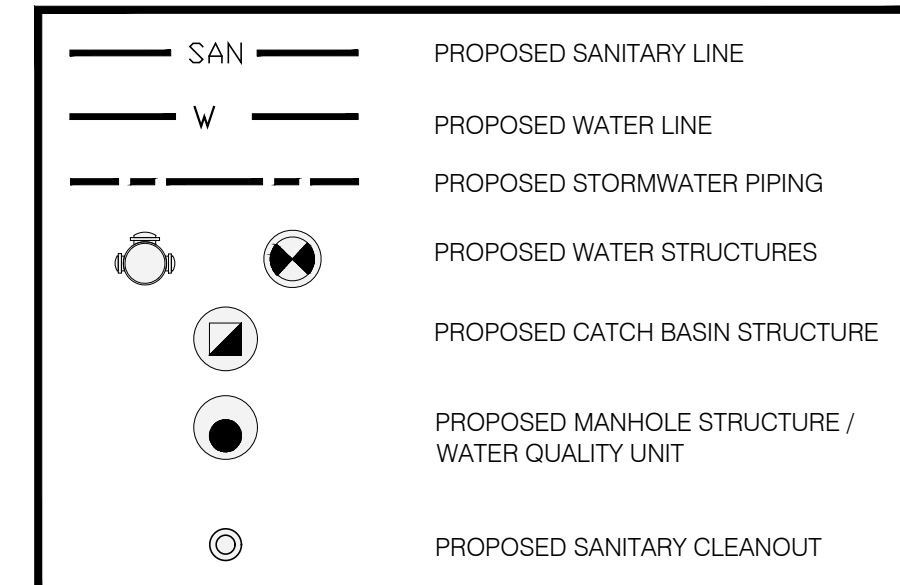
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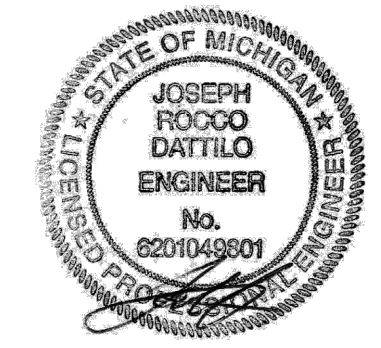
1939 LINCOLNSHIRE DRIVE,  
ROCHESTER HILLS, MI  
T: 248.835.3553

## UTILITY LEGEND



## GENERAL UTILITY NOTES

- ALL CONSTRUCTION PROCEDURES AND MATERIALS SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF CITY OF TROY A PRE-CONSTRUCTION MEETING SHALL BE SCHEDULED BY CITY OF TROY AND HELD PRIOR TO THE START OF CONSTRUCTION.
- CONTRACTOR MUST CONTACT MISS DIG (811) AT LEAST THREE WORKING DAYS PRIOR TO THE START OF CONSTRUCTION FOR UNDERGROUND UTILITY LOCATIONS. ALL UTILITIES SHALL BE STAKED BEFORE CONSTRUCTION BEGINS.
- ALL WATER MAIN EASEMENTS SHALL BE PROVIDED PRIOR TO CONSTRUCTION AND ACCEPTANCE OF THE WATER DISTRIBUTION SYSTEM.
- WATER MAINS SHALL BE CONSTRUCTED WITH A MINIMUM COVER OF 6 FEET BELOW FINISHED GRADES, INCLUDING OPEN DRAINAGE COURSES.
- ALL TRENCHES UNDER OR WITHIN A 1:1 RATIO OF EXISTING OR PROPOSED PAVEMENT OR DRIVEWAYS, SHALL BE BACKFILLED WITH COMPACTED CLASS II SAND TO GRADE (95% MAXIMUM UNIT DENSITY).
- WHERE TWO UTILITIES CROSS, PROVIDE CLASS II BACKFILL MATERIAL IN SIX (6) INCH COMPACTED LAYERS TO TOP HIGHEST UTILITY.
- WHERE WATER MAINS DIP UNDER OTHER UTILITIES, THE SECTIONS WHICH ARE DEEPER THAN NORMAL SHALL BE CONSTRUCTED WITH 11-1/4" VERTICAL BENDS, 22 1/2" OR 45° BENDS MUST BE RODDED AND PROPERLY ANCHORED.
- ALL PRECAST CONCRETE GATE WELL SECTIONS SHALL BE IN ACCORDANCE WITH A.S.T.M. C478, STANDARD SPECIFICATIONS FOR PRECAST REINFORCED CONCRETE MANHOLE SECTIONS. WALL THICKNESS SHALL BE AS SHOWN ON THESE DETAILS. ALL JOINTS FOR PRECAST CONCRETE GATE WELL SECTIONS SHALL BE "MODIFIED GROOVE TONGUE" WITH GASKET MANUFACTURED TO CONFORM WITH A.S.T.M. C443, STANDARD SPECIFICATION FOR JOINTS FOR CIRCULAR CONCRETE SEWER AND CULVERT PIPE USING RUBBER GASKETS.
- CONTRACTOR SHALL INSTALL VALVES, TAPPING SLEEVES, AND GATE WELL STRUCTURES IN STRICT COMPLIANCE WITH MEASUREMENTS PROVIDED ON SHEET 1 (2'-0" BETWEEN GATE WELL WELL AND CENTERLINE OF OPERATING NUT) TO ALLOW PROPER OPERATION OF VALVE THROUGH GATE WELL OPENING.
- ALL CROSS-CONNECTION CONTROL DEVICES SHALL BE INSTALLED AS REQUIRED BY THE CITY OF TROY PLUMBING INSPECTOR AND IN ACCORDANCE WITH THE STANDARDS OF THE OAKLAND COUNTY DRAIN COMMISSIONER OPERATION AND MAINTENANCE DIVISION AND THE MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY, DIVISION OF DRINKING WATER AND RADIOLOGICAL PROTECTION.
- ALL WATER SERVICE CONNECTIONS TWO (2) INCHES AND SMALLER SHALL BE MADE BY CITY OF TROY, DEPARTMENT OF PUBLIC SERVICES AFTER WATER MAIN ACCEPTANCE AND APPLICABLE PERMITS ARE OBTAINED.
- ALL FITTINGS AND BENDS SHOULD BE BLOCKED IN ACCORDANCE WITH THRUST BLOCK DETAILS, UNLESS ALTERNATE THRUST RESTRAINT SYSTEM, AS INDICATED PLANS AND SPECIFICATIONS, IS APPROVED BY CITY OF TROY DEPARTMENT OF PUBLIC SERVICES.

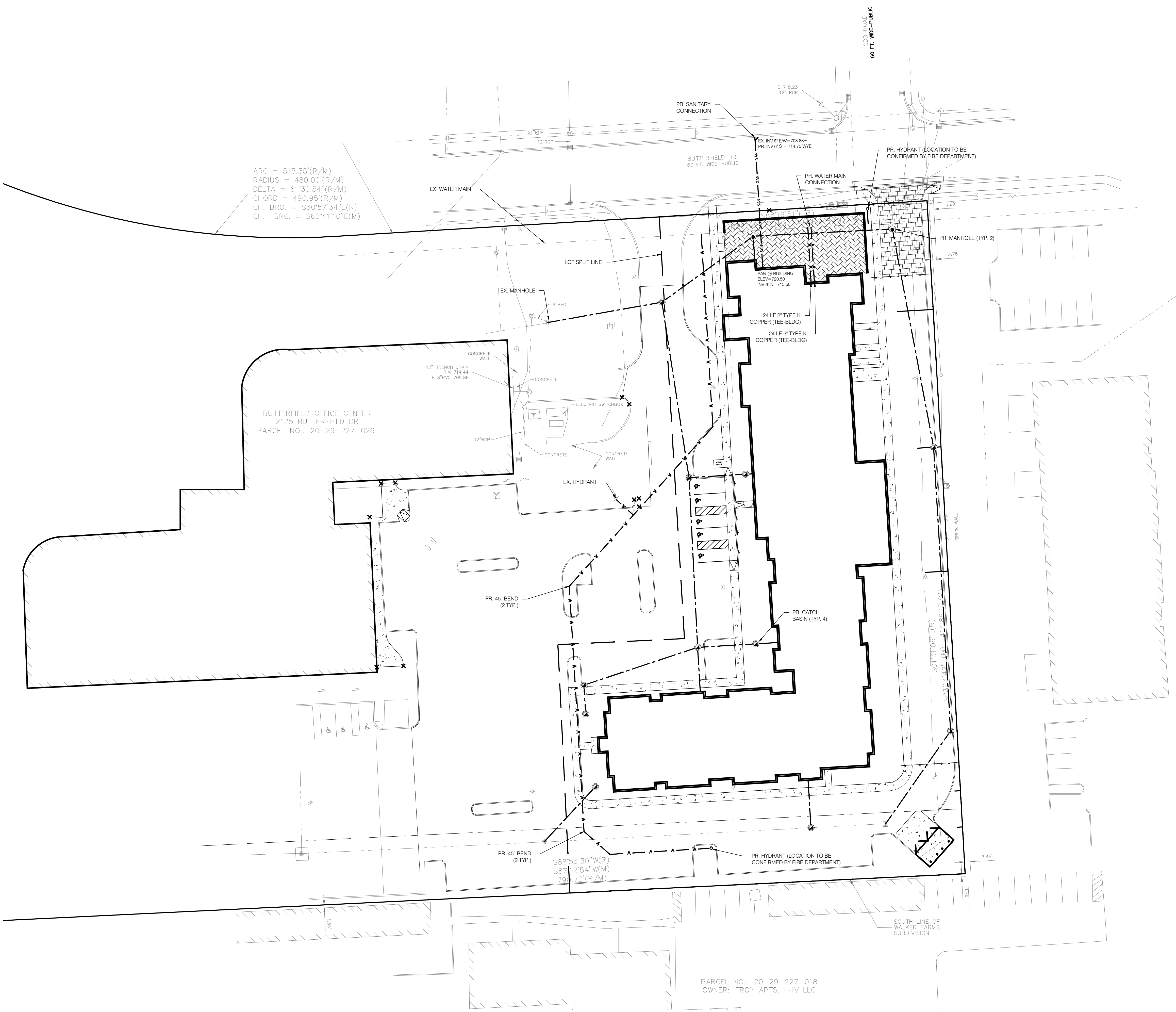


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**CFM BUTTERFIELD**  
2125-2155 BUTTERFIELD,  
CITY OF TROY  
OAKLAND COUNTY, MICHIGAN

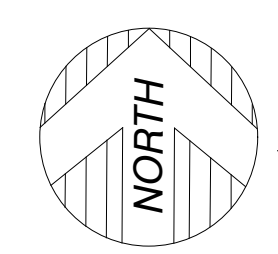
## UTILITY PLAN

**C5.0** **23036**



ARC = 515.35'(R/M)  
RADIUS = 480.00'(R/M)  
DELTA = 61°30'54"(R/M)  
CHORD = 490.95'(R/M)  
CH. BRG. = S60°57'34"E(R)  
CH. BRG. = S62°41'10"E(M)

PARCEL NO.: 20-29-227-018  
OWNER: TROY APTS. I-IV LLC



UTILITY PLAN  
SCALE: 1" = 30'

C5.0 Utility Plan.dwg

9/9/2024

GregEzzo



0 15 30 60  
SCALE: 1" = 30'



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



**CLIENT**  
**COMMERCIAL FINANCIAL MANAGEMENT**  
850 STEPHENSON HIGHWAY, SUITE 509  
TROY, MI 48063

**PROJECT TITLE**  
**BUTTERFIELD OFFICE CENTER**  
2125-2155 BUTTERFIELD DRIVE  
TROY, MI 48064

**REVISIONS**

**ORIGINAL ISSUE DATE:**  
DECEMBER 22, 2023

**DRAWING TITLE**  
**TOPOGRAPHIC SURVEY**

**PEA JOB NO.** 23-0359

**P.M.** DLC

**DN.** MH

**DES.**

**DRAWING NUMBER:**

- LEGEND:**
- OH-ELEC-W-O- EX. OH. ELEC. POLE & GUY WIRE
  - UG-CATV- EX. U.G. CABLE TV & PEDESTAL
  - UG-COMM- EX. U.G. COMMUNICATION LINE, PEDESTAL & MANHOLE
  - UG-ELEC- EX. U.G. ELEC. MANHOLE, METER & HANDHOLE
  - GAS LINE EX. GAS LINE
  - EX. GAS VALVE & GAS LINE MARKER
  - EX. TRANSFORMER & IRRIGATION VALVE
  - EX. WATER MAIN
  - EX. HYDRANT, GATE VALVE & POST INDICATOR VALVE
  - EX. WATER VALVE BOX & SHUTOFF
  - EX. SANITARY SEWER
  - EX. SANITARY CLEANOUT & MANHOLE
  - EX. COMBINED SEWER MANHOLE
  - EX. STORM SEWER
  - EX. CLEANOUT & MANHOLE
  - EX. SQUARE, ROUND & BEEHIVE CATCH BASIN
  - EX. YARD DRAIN, U.G. ROOF DRAIN & DOWNSPOUT
  - EX. UNIDENTIFIED STRUCTURE
  - EX. MAILBOX, SIGN, LIGHTPOLE & GUARD POST
  - EX. FENCE
  - EX. GUARD RAIL
  - EX. DEC. TREE, CONIFEROUS TREE & SHRUB
  - EX. TREE TAG & TREE LINE
  - EX. SPOT ELEVATION
  - EX. CONTOUR
  - EX. WETLAND
  - IRON FOUND / SET
  - NAIL FOUND / NAIL & CAP SET
  - BRASS PLUG SET
  - MONUMENT FOUND / SET
  - SECTION CORNER FOUND
  - RECORDED / MEASURED / CALCULATED

**REFERENCE DRAWINGS:**

- COMMUNICATION VERICON EMAIL DATED 12/18/23
- STORM VERICON EMAIL DATED 12/18/23
- WATER CITY OF TROY EMAIL DATED 12/19/23
- CITY OF TROY EMAIL DATED 12/19/23
- CITY OF TROY EMAIL DATED 12/19/23

**LEGAL DESCRIPTION**  
(Per First American Title Insurance Company Commitment #5030025(05-18-17))

PARCEL ID 20-29-227-026  
Land in the County of Oakland, City of Troy, State of Michigan, is described as follows:

Lots 6 through 12, inclusive, part of Lots 13 and 14 and part of vacated Butterfield Road, SUPERVISOR'S PLAT OF WALKER FARMS, a resubdivision of Lot 47, Supervisor's Plat of Butterfield Farm, a subdivision of part of the Northeast 1/4 of Section 29, Town 2 North, Range 11 East, City of Troy, Oakland County, Michigan as recorded in Liber 65, Page 36 of plats, Oakland County Records, described as: Commencing at the North 1/4 corner of Section 29; thence along the North and South 1/4 line South 01 degrees 15 minutes 00 seconds East, 662.18 feet to the South line of Butterfield Road (60' Wide - Public); thence along said South line of Butterfield Road following two(2) courses: 1) 515.36 feet along a curve to the left, Radius 480.00 feet, chord bearing South 62 degrees 41 minutes 10 seconds East 490.95 feet; and 2) North 88 degrees 33 minutes 15 seconds East 364.84 feet; thence South 03 degrees 14 minutes 42 seconds East 414.85 feet to the South line of the aforementioned Supervisor's Plat of Butterfield Farm; thence along said line South 87 degrees 12 minutes 54 seconds West 780.70 feet to the West line of said Supervisor's Plat of Walker Farms; thence along said line North 02 degrees 58 minutes 36 seconds West 656.85 feet to the Point of Beginning. Containing ± 8.13 Acres of land.

**BENCHMARKS**  
(MAVD 88 - GPS DERIVED)

BM #301  
ARROW ON HYDRANT LOCATED ON THE SOUTH SIDE OF THE INTERSECTION OF BUTTERFIELD ROAD AND TODD ROAD.  
ELEV. - 720.93

BM #301  
ARROW ON HYDRANT LOCATED ON THE SOUTH SIDE OF THE TRUCK DOCK ON THE WEST SIDE OF BUTTERFIELD OFFICE CENTER.  
ELEV. - 722.66

TAG NO.	CODE	DBH	COMMON NAME	LATIN NAME	COND	COMMENTS
1001	HS	14	Norway Spruce	Picea Abies	Far	
1002	HS	14	Norway Spruce	Picea Abies	Far	
1003	BS	13	Blue Spruce	Picea pungens	Far	
1004	BS	16	Blue Spruce	Picea pungens	Poor	
1005	HS	13	Norway Spruce	Picea Abies	Good	
1006	BS	14	Blue Spruce	Picea pungens	Far	
1007	BS	17	Blue Spruce	Picea pungens	Far	
1008	WS	13	White Spruce	Picea glauca	Good	
1009	NM	16	Norway Maple	Acer platanoides	Far	
1010	NM	14	Norway Maple	Acer platanoides	Good	
1011	CA	13	Crab Apple	Malus caroliniana	Good	
1012	CA	12	Crab Apple	Malus caroliniana	Good	
1013	CA	12	Crab Apple	Malus caroliniana	Good	
1014	CA	12	Crab Apple	Malus caroliniana	Far	
1015	CA	13	Crab Apple	Malus caroliniana	Good	X2
1016	HL	10	Honeylocust	Gleditsia tricanthos	Good	
1017	HL	8	Honeylocust	Gleditsia tricanthos	Good	
1018	HL	8	Honeylocust	Gleditsia tricanthos	Far	
1019	NM	18	Norway Maple	Acer platanoides	Good	
1020	HL	13	Honeylocust	Gleditsia tricanthos	Good	
1021	HL	8	Honeylocust	Gleditsia tricanthos	Good	
1022	HL	10	Honeylocust	Gleditsia tricanthos	Good	
1023	HL	10	Honeylocust	Gleditsia tricanthos	Good	
1024	HL	13	Honeylocust	Gleditsia tricanthos	Good	
1025	HL	14	Honeylocust	Gleditsia tricanthos	Good	
1026	NM	8	Norway Maple	Acer platanoides	Good	
1027	HL	11	Honeylocust	Gleditsia tricanthos	Good	
1028	CA	7	Crab Apple	Malus caroliniana	Good	X2
1029	CA	7	Crab Apple	Malus caroliniana	Good	X2
1030	CA	8	Crab Apple	Malus caroliniana	Good	
1031	CA	8	Crab Apple	Malus caroliniana	Far	
1032	CA	7	Crab Apple	Malus caroliniana	Far	
1033	CA	8	Crab Apple	Malus caroliniana	Far	
1034	RM	10	Red Maple	Acer rubrum	Good	
1035	RM	9	Red Maple	Acer rubrum	Good	
1036	HS	23	Norway Spruce	Picea Abies	Good	
1037	HL	19	Honeylocust	Gleditsia tricanthos	Good	
1038	HS	24	Norway Spruce	Picea Abies	Good	
1039	HS	19	Norway Spruce	Picea Abies	Good	
1040	HS	16	Norway Spruce	Picea Abies	Good	
1041	HL	15	Honeylocust	Gleditsia tricanthos	Good	
1042	HL	13	Honeylocust	Gleditsia tricanthos	Good	
1043	HS	18	Norway Spruce	Picea Abies	Good	
1044	HS	13	Norway Spruce	Picea Abies	Good	
1045	NM	10	Norway Maple	Acer platanoides	Good	
1046	HL	9	Honeylocust	Gleditsia tricanthos	Good	
1047	HL	15	Honeylocust	Gleditsia tricanthos	Good	
1048	HL	9	Honeylocust	Gleditsia tricanthos	Good	
1049	HL	9	Honeylocust	Gleditsia tricanthos	Good	
1050	HL	16	Honeylocust	Gleditsia tricanthos	Good	
1051	HS	18	Norway Spruce	Picea Abies	Good	
1052	HS	22	Norway Spruce	Picea Abies	Good	
1053	HS	12	Norway Spruce	Picea Abies	Good	
1054	HS	18	Norway Spruce	Picea Abies	Good	
1055	MV	13	White Mulberry	Morus alba	Good	
1056	MV	9	White Mulberry	Morus alba	Good	
1057	MV	8	White Mulberry	Morus alba	Good	
1058	MV	15	White Mulberry	Morus alba	Good	
1059	HL	9	Honeylocust	Gleditsia tricanthos	Good	
1060	BS	16	Blue Spruce	Picea pungens	Far	
No TTAG	BS	8	Blue Spruce	Picea pungens	Good	
No TTAG	BS	9	Blue Spruce	Picea pungens	Good	
No TTAG	HL	10	Honeylocust	Gleditsia tricanthos	Good	
No TTAG	BS	9	Blue Spruce	Picea pungens	Good	
No TTAG	WS	8	White Spruce	Picea glauca	Good	
No TTAG	BS	9	Blue Spruce	Picea pungens	Good	
No TTAG	BS	9	Blue Spruce	Picea pungens	Good	
No TTAG	CT	13	Cottonwood	Populus deltoides	Good	
1061	CT	11	Cottonwood	Populus deltoides	Good	
1062	CT	9	Cottonwood	Populus deltoides	Good	X1
No TTAG	WC	12	White Cedar	Thuja occidentalis	Good	
1063	WC	10	White Cedar	Thuja occidentalis	Far	

**FLOODPLAIN NOTE:**  
BY GRAPHICAL PLOTTING, SITE IS WITHIN ZONE 'X'. AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN PER FLOOD INSURANCE RATE MAP NUMBER 26125C0541F DATED SEPTEMBER 29, 2006.

PARCEL NO.: 20-29-227-018  
OWNER: TROY APTS. I-IV LLC

P.O.C.  
NORTH 1/4  
CORNER  
SECTION 29  
T.02N.,R.11E.

501°15'00"E(R) N02°58'36"W(M)  
662.18'(R)

P.O.B.

PARCEL NO.: 20-29-227-026  
OWNER: TROY APTS. I-IV LLC

N01°15'00"W(R) N02°58'36"W(M) 656.85'(R/M)

CENTER OF  
SECTION 29  
T.02N.,R.11E.

ARC = 515.35'(R/M)  
RADIUS = 480.00'(R/M)  
DELTA = 61°30'54"(R/M)  
CHORD = 490.95'(R/M)  
CH. BRG. = S60°57'34"E(R)  
CH. BRG. = S62°41'10"E(M)

BUTTERFIELD OFFICE CENTER  
2125 BUTTERFIELD DR  
PARCEL NO.: 20-29-227-026

SUPERVISOR'S PLAT OF  
WALKER FARMS

S88°56'30"W(R)  
S87°12'54"W(M)  
790.70'(R/M)



**RESIDENCE INN**  
TROY, MICHIGAN

**BOWERS+ASSOCIATES**  
ARCHITECTURE DESIGN



**RESIDENCE INN**  
TROY, MICHIGAN

**BOWERS+ASSOCIATES**  
ARCHITECTURE DESIGN



**RESIDENCE INN**  
TROY, MICHIGAN

**BOWERS+ASSOCIATES**  
ARCHITECTURE DESIGN



**RESIDENCE INN**  
TROY, MICHIGAN

**BOWERS+ASSOCIATES**  
ARCHITECTURE DESIGN

**ITEM #6**



DATE: October 15, 2024

TO: Planning Commission

FROM: R. Brent Savidant, Community Development Director

SUBJECT: PUBLIC HEARING – SPECIAL USE APPROVAL AND PRELIMINARY SITE PLAN REVIEW (SU JPLN2024-0007) – Proposed EI Car Wash, Northwest corner of Long Lake and Dequindre (2955 & 2995 E Long Lake), Section 12, Currently zoned NN (Neighborhood Node “J”) Zoning District.

The petitioner Alrig USA submitted the above referenced Special Use Approval and Preliminary Site Plan Approval application for a proposed EI Car Wash with a second-floor office space. Vehicle washes are permitted in the NN district, subject to special use approval.

The attached report prepared by Carlisle/Wortman Associates, Inc. (CWA), the City's Planning Consultant, summarizes the application. CWA prepared the report with input from various City departments including Planning, Engineering, Public Works and Fire. City Management supports the findings of fact contained in the report and recommends approval of the project, as noted.

Attachments:

1. Maps
2. Report prepared by Carlisle/Wortman Associates, Inc.
3. Special Use/Preliminary Site Plan application

G:\SPECIAL USE\SU\_JPLN2024-0007\_EL CAR WASH LONG LAKE\PC Memo 10 22 2024.docx

**PROPOSED RESOLUTION**

PUBLIC HEARING – SPECIAL USE APPROVAL AND PRELIMINARY SITE PLAN REVIEW (SU JPLN2024-0007) – Proposed El CarWash, Northwest corner of Long Lake and Dequindre (2955 & 2995 E Long Lake), Section 12, Currently zoned NN (Neighborhood Node “J”) Zoning District.

**Resolution # PC-2024-10-**

Moved by:

Seconded by:

**RESOLVED**, That Special Use Approval and Preliminary Site Plan Approval for the proposed El Car Wash, Northwest corner of Long Lake and Dequindre (2955 and 2995 East Long Lake), Section 12, Currently Zoned NN (Neighborhood Node “J”) District, be (granted, subject to the following conditions):

- 1. Provide improved pedestrian access, particularly for the second floor office use.

\_\_\_\_\_ ) or

(denied, for the following reasons: \_\_\_\_\_) or

(postponed, for the following reasons: \_\_\_\_\_)

Yes:

No:

Absent:

**MOTION CARRIED / FAILED**



# GIS Online



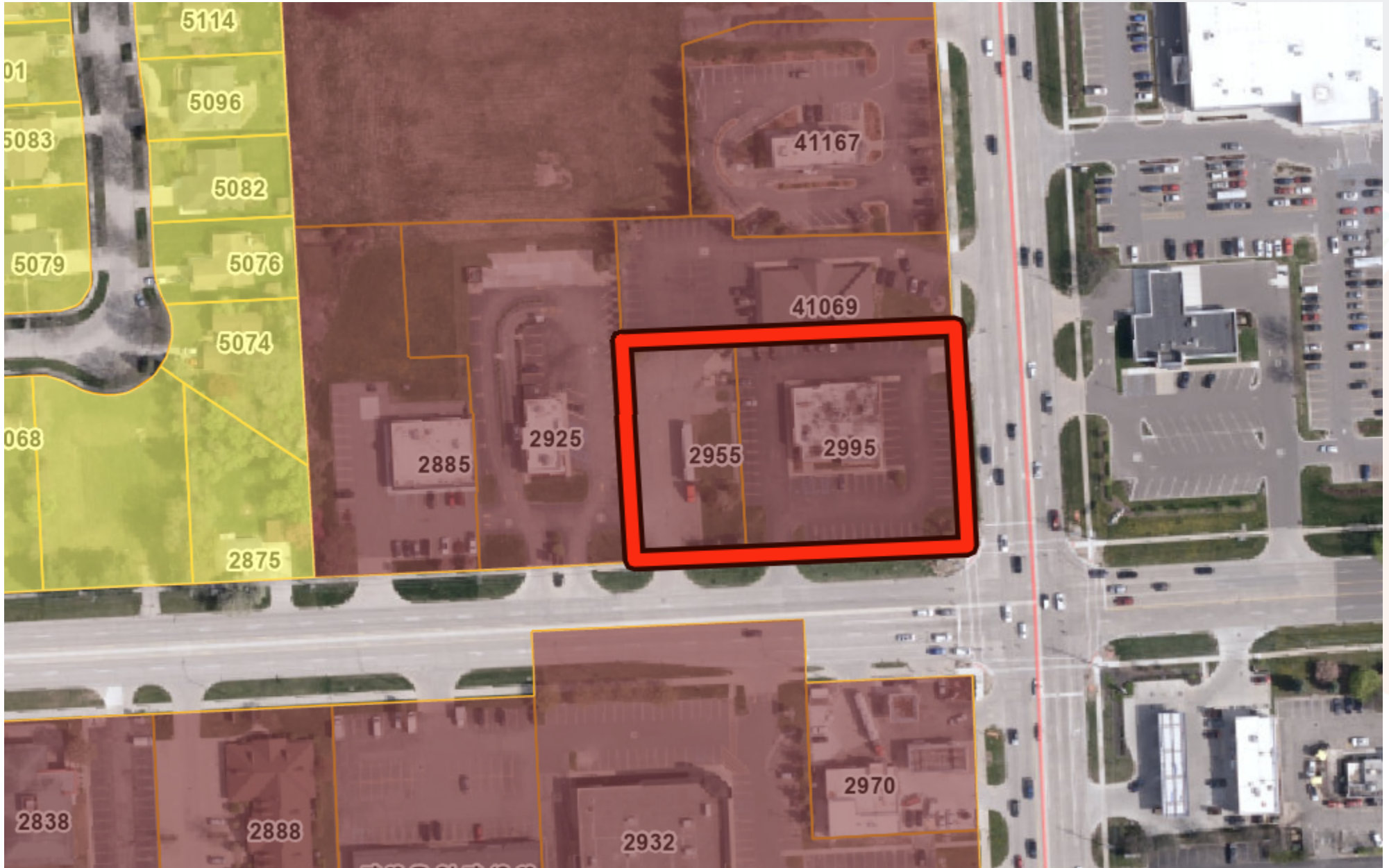
Print Date: 10/14/2024



Note: The information provided by this application has been compiled from recorded deeds, plats, tax maps, surveys, and other public records and data. It is not a legally recorded map survey. Users of this data are hereby notified that the source information represented should be consulted for verification.



# GIS Online



Print Date: 10/14/2024



Note: The information provided by this application has been compiled from recorded deeds, plats, tax maps, surveys, and other public records and data. It is not a legally recorded map survey. Users of this data are hereby notified that the source information represented should be consulted for verification.



**Carlisle | Wortman**  
ASSOCIATES, INC.

117 NORTH FIRST STREET SUITE 70 ANN ARBOR, MI 48104 734.662.2200 734.662.1935 FAX

Date: April 25, 2024  
June 19, 2024  
August 27, 2024  
September 13, 2024

## Special Use and Preliminary Site Plan For City of Troy, Michigan

**Applicant:** Samantha Burgner, Alrig USA

**Project Name:** EL Carwash

**Location:** 2955 & 2995 E Long Lake Road

**Plan Date:** September 10, 2024

**Zoning:** NN, Neighborhood Nodes (“J”)

**Action Requested:** Special Use and Preliminary Site Plan Approval

### SITE DESCRIPTION

An application has been submitted to construct a two-story building at the corner of Long Lake and Dequindre. The applicant intends to remove an existing restaurant and redevelop the 1.5-acre site with a new 6,000 square foot building. The two-story building features an auto wash on the first floor and a small office space on the second floor. Other site features include twenty-five (25) covered vacuum spaces and a public seating area in the southeast corner. Several sustainable design features are incorporated throughout the site, such as permeable pavers, solar panels, recycled water, and environmentally safe detergents.

The site includes two (2) parcels, each zoned NN-Neighborhood Nodes, Site Type A. Under the existing zoning, office space is permitted by right and auto washes require Special Use Approval.

Site Location:



Proposed Use of Subject Parcel:

Two-story 5,000 square foot building, with an auto wash on the first floor and office space on the second floor.

Current Zoning:

The property is currently zoned NN, Neighborhood Nodes (J) Form Based District, Site Type A.

Surrounding Property Details:

Direction	Zoning	Use
North	NN, Neighborhood Nodes (J)	Dental/Medical Offices
South	NN, Neighborhood Nodes (J)	Shell Gas Station
East	City of Sterling Heights	Comerica Bank
West	NN, Neighborhood Nodes (J)	Arby's

**NATURAL FEATURES**

**Topography/Wetlands/Drain:** The subject site is not located in a floodplain and contains no wetlands. Most of the site has already been graded for previous development.

**Woodlands:** A tree inventory provided by the applicant identifies six (6) existing trees on site. Of these, three (3) trees will remain and three (3) trees will be removed. None of the trees on site were found to be Landmark or Woodland, and therefore no tree replacement is required.

Replacement Details		
Protected Tree	Inches Removed	Replacement Required
Landmark	0 inches	0 inches
Woodland	0 inches	0 inches
Preservation/Mitigation	Inches Preserved	Credit
Landmark	0 inches	0 inches
Woodland	0 inches	0 inches
<b>Total</b>	<b>Zero (0) inches required for replacement.</b>	

**Items to be Addressed:** None.

**AREA, WIDTH, HEIGHT, SETBACKS**

The applicant is proposing to develop this building as a Building Form B. Table 5.03.B.2 outlines standards for Building Form A:

	Required	Provided	Compliance
Front (E. Long Lake)	60-foot build-to line	30 feet	Requires Planning Commission consideration. See comments below
Front (Dequindre)	60-foot build-to line	10 to 50.9 feet	Requires Planning Commission consideration. See comments below
Side (West)	N/A, building may be placed up to property line	118.7 feet	Complies
Rear (North)	30-foot minimum setback	144 feet	Complies
Building Height (Neighborhood Nodes)	3 stories, 38 feet	2 stories, 32.2 feet / 37.6 feet (for elevator tower, permitted)	Complies

Open Space	15%	32.9%	Complies
------------	-----	-------	----------

In previous reviews, we have requested that the applicant review the standards detailed in Table 5.03.B.1 and modify the site plan to comply with these standards. The applicant’s proposing a Building Form B building, which permits a build-to-line up to 60 feet in order to provide a mixed use, 2 story building. As set forth in Section 5.03.B.2, the intent statement for Building Form B is “Smaller, multiple-tenant buildings for retail, restaurant, office, service, or residential uses. This category also includes multiple-tenant “strip mall” style development, although it requires a second story to encourage a mix of use.”

In order to comply the applicant is proposing a two-story mixed-use building. The first submittal included a second story, however the office was only approximately, 1,230 square feet, and 730 square feet of that is the equipment room for the car wash. Only 500 sq/ft was dedicated for a functional second story office space. Furthermore, access to the second story is from the lobby of the car wash and does not have direct access without going through the car wash business. A limited office space for the carwash operations is not considered mixed use.

Since our preliminary review the applicant has increased the second floor to 2,120 sq.ft. The applicant notes that the intent is to rent the space to a community organization. As stated in the applications supplemental letter:

*The second floor, as noted in the Office Renderings, will be accessible from a dedicated entry located on the north side of the building and is intended to be used for general office purposes not associated with the auto wash; Applicant's preference is for the office space to be leased to a non-profit organization. Applicant has contacted local non-profit organizations regarding the second-floor office space, including the following:*

- *United Community Family Services CALC*
- *Arc of Oakland County*
- *Jenna Kast Believe in Miracles Foundation*
- *The Bottomless Toy Chest*

We note that to be considered mixed use, the use cannot be affiliated with the car wash operation. The applicant should provide some form of assurance (lease, agreement, etc) that ensure use of the second story is independent of the car wash operation. The applicant has provided perspective renderings of second floor interior.

**Items to be Addressed:** *Provide additional details or provide evidence to the Planning Commissions satisfaction that confirm the use of the second story is a not affiliated with car wash use*



**PARKING**

	Required	Provided	Compliance
<u>Vehicle Wash:</u> 2 spaces, plus 12 stacking spaces per bay  PLUS  1 space per employee on largest typical shift  <u>Office:</u> 1 space for each 300 square feet of gross floor area	(2 spaces + 12 stacking spaces per bay) = 14 spaces  +  (1 space * 4 employees) = 4 spaces  +  (2,100 SF/300) = 7 spaces  <b>= 25 spaces total</b>	11 standard spaces + 21 stacking + 25 vacuum spaces  <b>= 57 spaces total</b>	See Below
Loading	1 space	“To occur off hours”	N/A
Barrier Free	1 space	2 spaces	Complies

Excess Parking:

The amount of parking proposed by the applicant greatly exceeds the required number. We recognize that excessive parking reduces aesthetic standards and contributes to high rates of stormwater runoff. For these reasons, the City requires applicants to receive approval when exceeding parking requirements by over 20%. Documented evidence justifying the parking need is required to receive approval from the Planning Commission.

The applicant has provided a Traffic Impact Assessment by Fleis & Vandenbrink. In a supplemental memo to the City dated June 5, 2024, the applicant states that:

*“El Car Wash is open from 7am – 9pm which would indicate there are 50 average vehicles per hour, more during peak hours, less during end of day/early morning. We estimate approximately 50% of these customers will utilize the vacuum spaces before or after their car wash, which accounts for 25 vacuum spaces being required and 25 being proposed on our Site Development Plans.”*

However, in their Assessment, Fleis & Vandenbrink note that trip generation data indicates that the peak vehicles per hour for this use will be roughly 53 in and 52 out of the site. These numbers do not align with the applicant’s suggestion that there will be 50 average vehicles per hour and

more during peak hours and further suggests that all 50 cars will arrive at the same time in that hour period.

The Planning Commission should review the Traffic Impact Assessment and discuss the proposed excess parking with the applicant. The full Traffic Impact Assessment by Fleis & Vandenberg is available under separate cover.

Loading/Unloading:

We asked the applicant to clarify expectation for on-site loading/unloading, to which the following response was received:

*“Any deliveries or drop-offs will be from a box truck which can easily park on site. Second floor space will be used primarily for office space requiring minimal to no loading. In addition, deliveries and drop-offs are typically scheduled outside of peak business hours.”*

**Items to be Addressed:** *Planning Commission evaluation of documented evidence of excess parking.*

**TRAFFIC and CIRCULATION**

Vehicular Traffic:

The site includes one (1) point of access via Long Lake and one (1) point of access via Dequindre. Two-way traffic is utilized throughout the site, with the exception of the wash tunnel entrance and exit. One concern with circulation is that patrons entering the site via Long Lake might have a difficult time turning into the stacking lanes for the car wash.

One (1) 15-foot wide emergency exit is proposed within the car wash stacking lane(s). The emergency exit’s close proximity to the Long Lake entrance would require the driver to cautiously check for incoming traffic and then drive across the Long Lake entrance before turning south to exit the site.

The applicant has fulfilled the Fire Department’s requests to add fire lane signage and a second fire hydrant. The City Engineer noted that Long Lake and Dequindre are both RCOC roads and will require the applicable permits; the applicant has shared that a review from RCOC has been received and all comments have been addressed.

Pedestrian Access:

One (1) pedestrian sidewalk is proposed, connecting the existing sidewalk on Long Lake to the subject site; however, the sidewalk does not continue throughout the site. While extensive pedestrian access might not be required for a car wash, proper pedestrian access should be provided for users of the second-floor office space.

**Items to be Addressed:** *Provide improved pedestrian access, particularly for the second-floor office use.*

## CARWASH USE

We have noted a significant increase in the number of carwash applications in Troy and the region. Recently, the City approved a carwash at Oakland Mall, considered a Jax Carwash on Big Beaver, and received an application for a carwash at Long Lake and Livernois.

The proliferation in carwashes is due to private equity funding and shift to monthly subscription based model:

<https://www.bloomberg.com/news/features/2024-02-21/car-washes-are-taking-over-the-us-here-s-why?embedded-checkout=true>

Carwashes often reuse dilapidated and vacant sites, but they are also land consumptive, generate few jobs, and can lead to increased traffic congestion and environmental concerns. Of particular concern is that carwash buildings require heavy ongoing investments and are singular use and cannot be repurposed, such as a retail store, office, or hotel.

We've requested that the applicant provide evidence of consumer demand for this site and how the building could be repurposed if the use were to fail. In response, the applicant has provided a feasibility analysis report conducted by BBG Real Estate Services, dated May 21, 2024. The full feasibility analysis report is available under separate cover. Along with the report, the applicant provided the following comments:

*"We have completed our own market research and feasibility studies to confirm the need and expected success for our use. Please refer to the feasibility study we have provided done by BBG, Inc. for evidence of customer demand for this site and the overall feasibility of a car wash at this location. We are investing several million dollars into the redevelopment and operations of the property and will be the sole owner of the property.*

*Car washes are typically extremely resilient and long-lasting community businesses. If for any reason this use is not successful, the car wash building could be repurposed for other drive through use, or someone could redevelop the property just as we are by spending a small amount of money to demolish the building due to the improved site infrastructure that we will be providing."*

**Items to be Addressed:** None.

**LANDSCAPING**

A landscaping plan has been provided on Sheet C-7. The following table discusses the development’s compliance with the landscape requirements set forth in Section 13.02.

	<b>Required</b>	<b>Provided</b>	<b>Compliance</b>
<u>Greenbelt Landscaping:</u> One (1) deciduous tree for every thirty (30) lineal feet, or fraction thereof, of frontage abutting a public road right-of-way.	Long Lake: (310/30)= 10 trees  Dequindre: (205/30)= 7 trees	Long Lake: 10 trees  Dequindre: 7 trees	Complies
<u>Site Landscaping:</u> A minimum of 20% of the site area shall be comprised of landscape material.	20%	32.9%	Complies
<u>Screening Between Uses:</u> North/Medical office: One (1) large evergreen tree per ten (10) lineal feet and/or wall <b>OR</b> One (1) narrow evergreen tree per five (5) lineal feet and/or wall  West/Restaurant: One (1) narrow evergreen tree per three (3) lineal feet and/or wall	North: (310 LF/10)= 31 large trees <b>OR</b> (310 LF/5)= 62 narrow trees  West: (210 LF/3)= 68 narrow trees	North: 20 large evergreen trees + 62 narrow evergreen trees = 82 trees  West: 68 trees	South: Complies  West: Complies
<u>Parking Lot Trees:</u> 1 per 8 spaces	5 trees required for 60 parking spaces	5 trees	Complies

In regard to **landscape screening**, rather than choose between large or narrow evergreen trees, the applicant has proposed the utilization of both. Sixty-two (62) narrow evergreen trees are proposed across the midsection of the north lot line. Near the west side of the north lot line, seven (7) large evergreen trees are proposed in addition to an existing thirteen (13) “large buffer trees.” No tree inventory has been provided detailing the species or condition of the existing trees. Finally, near the east side of the north lot line, one (1) large deciduous tree is proposed.

Mechanical Equipment:

The vacuum producer will be screened with an 8-foot tall masonry wall. The masonry wall will be largely comprised of brick, powder coated aluminum slats, and a pre-cast concrete cap. At the

same time, a separate concrete transformer pad is proposed near the southwest corner of the site, for which no screening is provided. Additional landscape screening has been provided for the equipment pad.

Trash Enclosure:

The dumpster will be screened with a masonry wall measuring 6 feet 8 inches in height. This masonry wall will be largely comprised of brick, cedar wooden slats, and a pre-cast concrete cap.

Stormwater Management/Environmental Impact:

The applicant has gone beyond stormwater management requirements and incorporated several additional design features to reduce their environmental impact. For starters, the site features a bioretention pond along the south lot line and an underground detention basin along the west lot line. Three (3) stormwater catch basins are proposed throughout the site, as well as one (1) stormwater trench drain, which lies on the west side of the building near the auto wash entrance.

Permeable pavers are provided underneath standard parking spaces and vacuum stalls; plus, each vacuum stall is covered by a solar canopy. “Environmentally safe” detergents and sound reducing equipment are also proposed. Lastly, a “state of the art” water regulating and reclamation system is proposed, in which 90% of water used is recycled. The applicant states that “El Car Wash uses approximately 20 gallons of water per wash as opposed to over 100 gallons of water used by other car washes or those washing cars at home.”

***Items to be Addressed: None.***

**PHOTOMETRICS**

The site utilizes four (4) freestanding light poles and one (1) wall mounted light, which combined contain a total of thirteen (13) light fixtures. The proposed height of each light is compliant; however, spec sheets indicate that light produced by each pole will spread up to 30 feet in any given direction. We have informed the applicant that exterior light fixtures shall be fully cut-off or fully shielded and downward directed to prevent glare, to which the applicant responded:

*“All light fixtures provided are fully cut off/shielded and downwards directed.”*

***Items to be Addressed: None.***

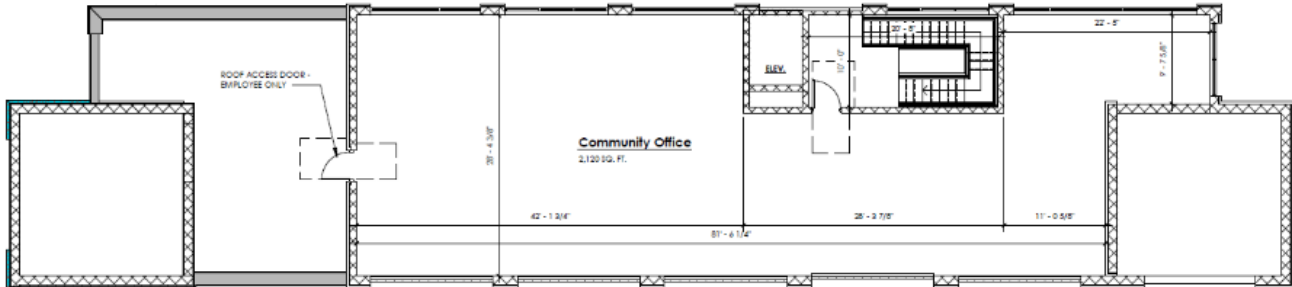
**FLOOR PLAN AND ELEVATIONS**

Floor Plans:

The proposed building is two (2) stories with an auto wash on the first floor and office space on the second floor. The first floor is approximately 3,900 square feet and the functional second floor is approximately 2,120 square feet.

On the first floor, the car wash tunnel is roughly 140 feet wide and 20 feet deep. An enclosed exit tunnel is attached to the car wash tunnel on the east side of the building. Behind the car wash tunnel (on the north side of the building) there is an office, restroom, vestibule, lobby, storage room, motor control center, and equipment room.

Floor plans of the second floor include one (1) community office, elevator, and stairwell. Proposed floor plans of the second floor are shown below:



**Elevations:**

The applicant states that the peak building height shall be 32.2 feet. The first floor is roughly 16 feet in height and the second floor is roughly 11 feet in height. The remaining 5.2 feet in height comes from a tower housing the second-floor elevator.

**Transparency:**

Transparency calculations have been provided, in which transparency alternatives are proposed to account for 60% of the requirement. The square footage of transparency required and proposed for each façade is displayed in the table below.

Facade	Transparency Required	Provided	Compliance
North (side)	2,844 SF * 30%= 853.2 SF	352 SF glazing/door + Wall design alternatives (b), (d), and (f) for remaining 576 SF	Complies with approval of transparency alternative.
South (E. Long Lake)	2843 SF * 50%= 1,421.5 SF	524 SF glazing/door + Wall design alternatives (b), (d), and (f) for remaining 733.5 SF	Complies with approval of transparency alternative.

East (Dequindre)	827 SF * 50%= 413.5 SF	87 SF glazing/door + Wall design alternatives (b), (d), and (f) for full 413.5 SF	Complies with approval of transparency alternative.
West (side)	502 SF * 30%= 150.6 SF	205 SF glazing/door	Complies

Section 5.06(E)(2)(b) regulates the use of transparency alternatives:

*b. Transparency Alternatives. The following alternatives may be used singularly or in combination. If used in combination, they may count toward no more than eighty (80) percent of the transparency requirement set forth in Section 5.04 E-4. The wall design alternative may count toward one hundred (100) percent of the side street transparency requirement, provided the entirety of the length and height of the wall is considered.*

*i. Wall Design. Wall designs that provide visual interest and pedestrian scale may count toward no more than fifty (50) percent of primary street and fifty (50) percent of side street transparency requirements. Wall designs must provide a minimum of three (3) of the following elements, occurring at intervals no greater than twenty-five (25) feet horizontally and ten (10) feet vertically:*

- (a) Expression of structural system and infill panels through change in plane not less than three (3) inches.*
- (b) System of horizontal and vertical scaling elements such as: belt course, string courses, cornice, pilasters.*
- (c) System of horizontal and vertical reveals not less than one (1) inch in width/depth.*
- (d) Variations in material module, pattern, and/or color.*
- (f) Green screen or planter walls.*
- (g) Translucent, fritted, patterned, or colored glazing.*

*ii. Outdoor Dining/Seating. Outdoor dining/seating located between the building and the primary street zone lot line may count toward no more than sixty (60) percent of the transparency requirement. Outdoor dining/ seating located between the building and side street zone lot line may count toward no more than eighty (80) percent of the transparency requirement.*

The applicant has provided a narrative on the proposed elevation sheet to indicate how they use transparency alternatives to comply with transparency requirements.

**Building Materials:**

Building materials are largely comprised of brick, aluminum composite panel, and EIFs. Secondary materials include metal flashings, wall accent tile, and prefab canopies. The building's exterior is mostly white and gray in color, accented with magenta and bright blue. Planning Commission should discuss use of EIFs.

***Items to be Addressed:*** Planning Commission should discuss use of EIFs.

**COLORED RENDERINGS**

**South/West Building Facades**





**South/East Building Facades**



**Aerial View (from southwest perspective)**



## SPECIAL USE APPROVAL STANDARDS

Table 5.06.C-1 illustrates that auto/transportation uses are considered a special use for Neighborhood Nodes Site Type NN:A.

For any special use, according to Section 9.02.D, the Planning Commission shall “...review the request, supplementary materials either in support or opposition thereto, as well as the Planning Department’s report, at a Public Hearing established for that purpose, and shall either grant or deny the request, take action on the request, or grant the request subject to specific conditions.” Section 9.03 states that before approving any requests for Special Use Approval, the Planning Commission shall consider:

1. *Compatibility with Adjacent Uses.*
2. *Compatibility with the Master Plan.*
3. *Traffic Impact.*
4. *Impact on Public Services.*
5. *Compliance with Zoning Ordinance Standards.*
6. *Impact on the Overall Environment. The proposed Special Use shall no*
7. *Special Use Approval Specific Requirements.*

**Items to be Addressed:** Address items noted in report.

## DESIGN STANDARDS AND SITE PLAN REVIEW STANDARDS

Section 8.06 outlines Site Plan Review Design Standards.

1. *Development shall ensure compatibility with existing commercial districts and provide a transition between land uses.*
  - a. *Building design shall enhance the character of the surrounding area in relation to building and parking placement, landscape and streetscape features, and architectural design.*
  - b. *Street fronts shall provide a variety of architectural expression that is appropriate in its context and prevents monotony.*
  - c. *Building design shall achieve a compatible transition between areas with different height, massing, scale, and architectural style.*
2. *Development shall incorporate the recognized best architectural building design practices.*
  - a. *Foster a lasting impact on the community through the provision of high quality design, construction, and detailing.*
  - b. *Provide high quality, durable materials, such as but not limited to stone, brick, glass, and metal. E.I.F.S. or material equivalent shall only be used as an accent material.*
  - c. *Develop buildings with creativity that includes balanced compositions and forms.*

- d. *Design roofs that are appropriate to the architectural style of the building and create an appropriate visual exterior mass of the building given the context of the site.*
  - e. *For commercial buildings, incorporate clearly defined, highly visible customer entrances using features such as canopies, porticos, arcades, arches, wing walls, ground plane elements, and/or landscape planters.*
  - f. *Include community amenities that add value to the development such as patio/seating areas, water features, art work or sculpture, clock towers, pedestrian plazas with park benches or other features located in areas accessible to the public.*
3. *Enhance the character, environment and safety for pedestrians and motorists.*
    - a. *Provide elements that define the street and the pedestrian realm.*
    - b. *Create a connection between the public right of way and ground floor activities.*
    - c. *Create a safe environment by employing design features to reduce vehicular and pedestrian conflict, while not sacrificing design excellence.*
    - d. *Enhance the pedestrian realm by framing the sidewalk area with trees, awnings, and other features.*
    - e. *Improve safety for pedestrians through site design measures.*

**Items to be Addressed:** None.

## SUMMARY

We recommend that the Planning Commission hold a public hearing, consider public commentary and discuss the following:

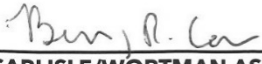
1. The use and function of the second story.
2. Does the application comply with Section 9.02.D Special Use Standards?
3. Does the application comply with Section 8.06 Site Plan Review Design Standards?
4. Evaluation of documented evidence of excess parking.
5. Use of EIFS.

If the Planning Commission approves the preliminary site plan and special use, we suggest the following conditions:

1. Provide improved pedestrian access, particularly for the second floor office use.
2. Other conditions based on the discussion above.

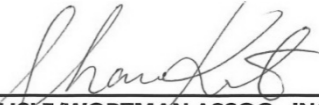
EL Carwash  
September 13, 2024

Respectfully,



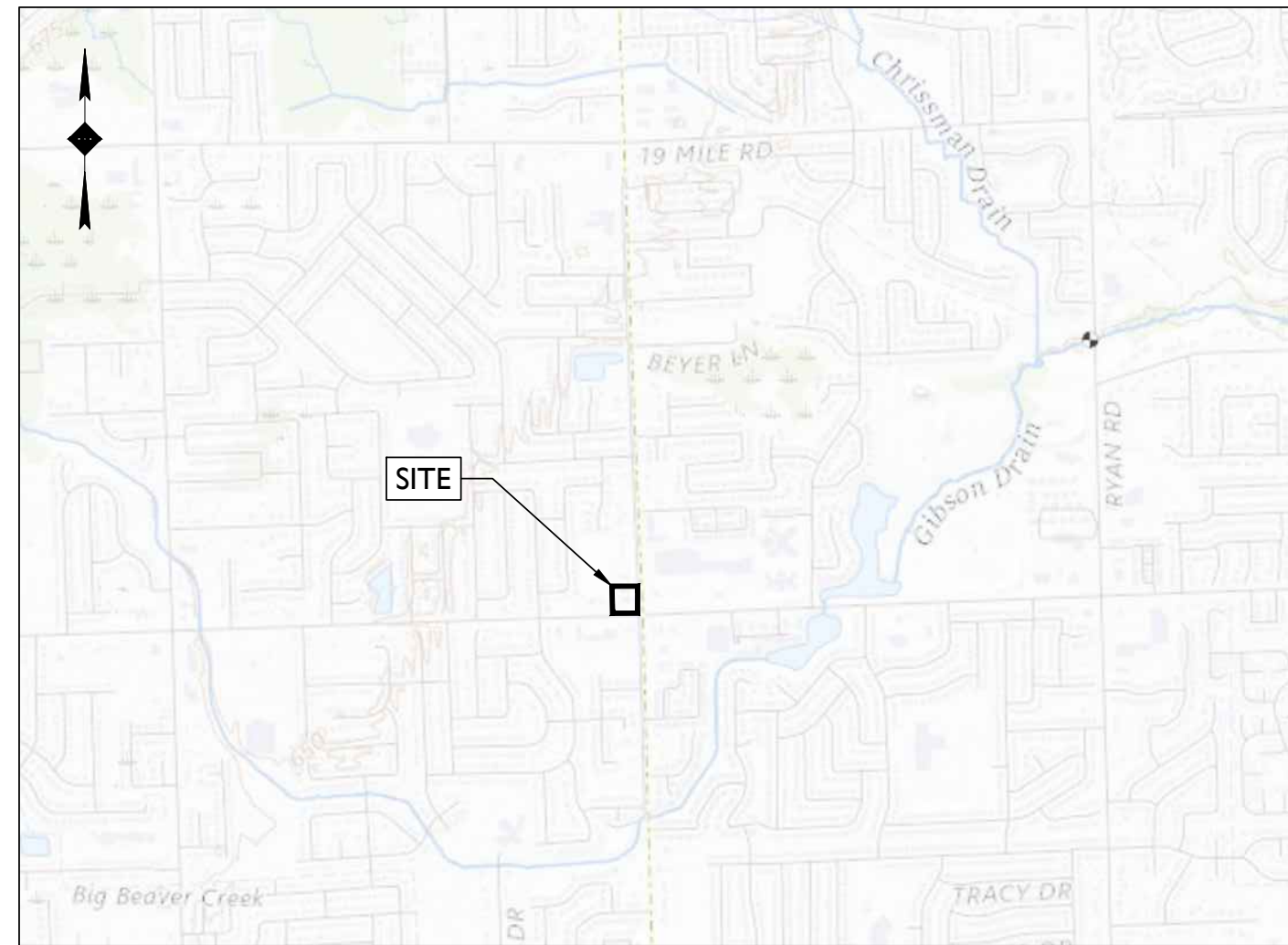
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**CARLISLE/WORTMAN ASSOC., INC.**  
**Benjamin R. Carlisle, AICP, LEED AP**  
**President**



---

**CARLISLE/WORTMAN ASSOC., INC.**  
**Shana Kot**  
**Community Planner**



SOURCE: USGS ONLINE MAPS

**LOCATION MAP**

SCALE: 1" = 2,000'±

# SITE DEVELOPMENT PLANS FOR EL CARWASH - E. LONG LAKE PROPOSED AUTO WASH & OFFICE SPACE

PARCEL ID: 20-12-479-045 & 20-12-476-049  
2955 & 2995 EAST LONG LAKE ROAD  
CITY OF TROY, OAKLAND COUNTY, MI 48085

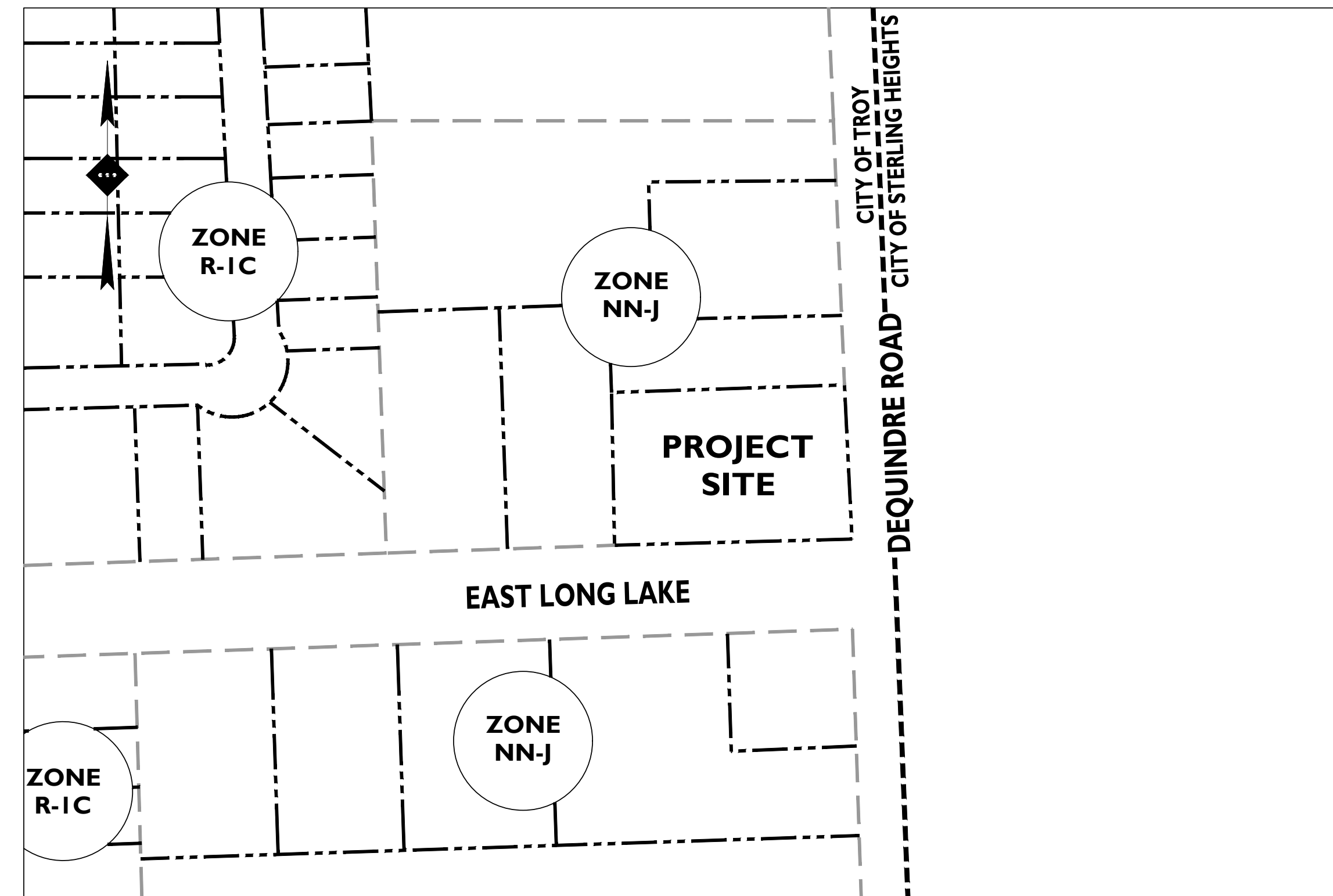
**APPLICANT**  
NATIONAL EXPRESS WASH HOLDCO, LLC  
30200 TELEGRAPH ROAD SUITE 205  
BINGHAM FARMS, MI 48025  
248-646-9999  
SBURGNER@ALRIGUSA.COM



SOURCE: GOOGLE EARTH PRO

**AERIAL MAP**

SCALE: 1" = 150'±



SOURCE: CITY OF TROY ZONING MAP

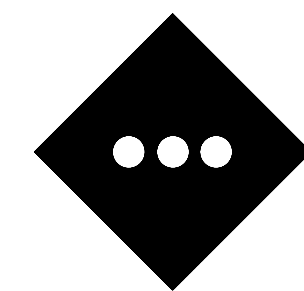
**ZONING MAP**

SCALE: 1" = 150'±

PLANS PREPARED BY:



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Phone 248.247.1115

**PLAN REFERENCE MATERIALS:**

- THIS PLAN SET REFERENCES THE FOLLOWING DOCUMENTS INCLUDING, BUT NOT LIMITED TO:
  - ALTA/INSPS TOPOGRAPHIC SURVEY PREPARED BY KEM-TEC A GROUP OF COMPANIES, DATED: 09-27-2023; UPDATED 05-03-2024
  - ARCHITECTURAL PLANS PREPARED BY KREIGER KLATT ARCHITECTS, DATED: 01-19-2024; UPDATED 05-23-2024
  - GEOTECHNICAL REPORT
  - AERIAL MAP OBTAINED FROM GOOGLE EARTH PRO
  - LOCATION MAP OBTAINED FROM USGS ONLINE MAPS
- ALL REFERENCE MATERIAL LISTED ABOVE SHALL BE CONSIDERED A PART OF THIS PLAN SET AND ALL INFORMATION CONTAINED WITHIN THESE MATERIALS SHALL BE UTILIZED IN CONJUNCTION WITH THIS PLAN SET. THE CONTRACTOR IS RESPONSIBLE TO OBTAIN A COPY OF EACH REFERENCE AND REVIEW IT THOROUGHLY PRIOR TO THE START OF CONSTRUCTION.

**SHEET INDEX**

DRAWING TITLE	SHEET #
COVER SHEET	C-1
SITE PLAN	C-2
GRADING PLAN	C-3
STORMWATER MANAGEMENT PLAN	C-4
UTILITY PLAN	C-5
LIGHTING PLAN	C-6
LANDSCAPING PLAN	C-7
CONSTRUCTION DETAILS	C-8 & C-9

**ADDITIONAL SHEETS**

DRAWING TITLE	SHEET #
ALTA/INSPS TOPOGRAPHIC SURVEY	I OF I

ISSUE	DATE	BY	DESCRIPTION
4	09/10/2024	VF	REVISED PER SPECIAL LAND USE & SITE PLAN COMMENTS
3	07/29/2024	AF	FOR SPECIAL LAND USE & SITE PLAN APPROVAL
2	06/05/2024	VF	REVISED PER CITY COMMENTS
1	02/26/2024	VF & AF	FOR CLIENT REVIEW

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**SITE DEVELOPMENT PLANS  
EL CARWASH - E. LONG LAKE  
PROPOSED AUTO WASH  
& OFFICE SPACE**

PARCEL ID: 20-12-476-045 & 20-12-476-049  
2955 & 2995 EAST LONG LAKE ROAD  
CITY OF TROY  
OAKLAND COUNTY, MI 48085



SCALE: AS SHOWN PROJECT ID: DET-2300163

TITLE:  
**COVER SHEET**

DRAWING:  
**C-1**

LAND USE AND ZONING		
PARCEL ID: 20-12-476-045 & 20-12-476-049		
NEIGHBORHOOD NODE J DISTRICT (NN-J) BUILDING FORM (B)		
<b>PROPOSED USE</b>	SPECIAL APPROVAL LAND USE PERMITTED USE	
AUTO WASH COMMUNITY OFFICE		
<b>ZONING REQUIREMENT</b>	<b>REQUIRED</b>	<b>PROPOSED</b>
MINIMUM LOT AREA	15,000 SF	64,524 SF (± 1.5 AC)
MAXIMUM BUILDING HEIGHT	72 FT (6 STORIES)	32.2 FT (2 STORIES)
MINIMUM BUILDING HEIGHT	24 FT (2 STORIES)	32.2 FT (2 STORIES)
MAXIMUM BUILDING SETBACK	60 FT	30.0 FT
MINIMUM REAR YARD SETBACK	30 FT	118.7 FT
MINIMUM OPEN SPACE	15% (9,679 SF)	32.9% (21,247 SF)
MINIMUM LANDSCAPING	20% (12,905 SF)	32.9% (21,247 SF)
MINIMUM ROW GREENBELT	10 FT	10.2 FT
MINIMUM DRIVEWAY TO INTERSECTION SPACING*	125 FT	233.4 FT
MAXIMUM BUILDING LINE PARKING <sup>(1)</sup>	100 FT	0 FT
MINIMUM CLEAR VISION	25 FT	25 FT

OFF-STREET PARKING REQUIREMENTS		
CODE SECTION	REQUIRED	PROPOSED
§ 13.06.G	<b>AUTO WASH:</b> 2 SPACES PLUS 1 SPACE PER EMPLOYEE (4 EMPLOYEES) (1 SPACE / EMPLOYEE) = 4 SPACES <b>OFFICE:</b> 1 SPACES PER 300 SF OF GFA (2,120 SF) (1 SPACE / 300 SF) = 7 SPACES <b>TOTAL: 2 + 4 + 7 = 13 SPACES</b>	11 SPACES (REG.) 25 SPACES (VAC.) <b>TOTAL: 36 SPACES</b>
§ 13.06.F.3	MAXIMUM PARKING SPACE REQUIREMENT: 20% ABOVE MINIMUM = 16 SPACES <sup>(1)</sup>	11 SPACES
§ 13.06.G	STACKING SPACE REQUIREMENT: 12 SPACES PER BAY (1 BAY) (12 SPACES / BAY) = 12 SPACES <b>PLUS 2 SPACES AT EXIT FOR DRYING</b>	LANE 1 : 7 SPACES LANE 2 : 7 SPACES LANE 3 : 7 SPACES <b>TOTAL: 21 SPACES</b> 3 EXIT SPACES
§ 13.06.J.4.A	90° PARKING REQUIREMENT: 9.5 FT X 19 FT W/ 24 FT AISLE	12 FT X 19 FT W/ 24 FT AISLE
§ 13.06.J.7	MINIMUM SIDEWALK WIDTH: 7 FT	7 FT
§ 13.10.D	LOADING SPACE REQUIREMENT: 10 FT X 50 FT OR 500 SF	TO OCCUR OFF HOURS

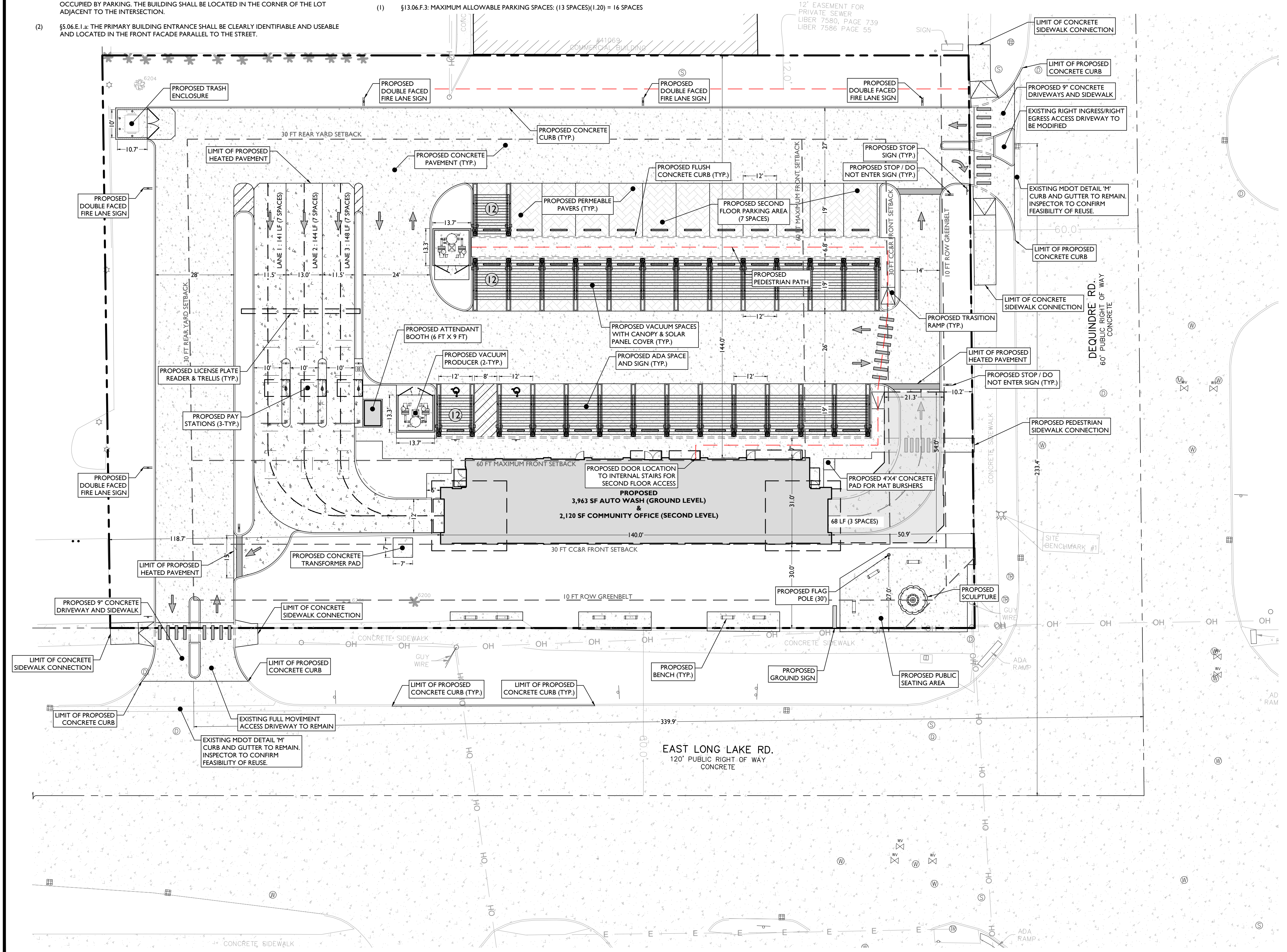
SIGNAGE REQUIREMENTS		
CODE SECTION	REQUIRED	PROPOSED
TABLE 85.02.05	MINIMUM SIGN SETBACK: 0 FT MAXIMUM SIGN HEIGHT: 10 FT	0 FT ≤ 10 FT
§ 85.03.05	<b>FLAG POLE REQUIREMENTS:</b> SETBACK : TBD MAXIMUM HEIGHT : 30 FT	27.0 FT 30 FT

(EN) EXISTING NON-CONFORMITY  
(TBD) TO BE DETERMINED

CC&R REQUIREMENTS		
CC&R REQUIREMENT	REQUIRED	PROPOSED
MINIMUM FIRST FLOOR AREA	600 SF	3,963 SF
30 FT FRONT BUILDING SETBACK (E. LONG LAKE)	30 FT	30.0 FT
30 FT FRONT BUILDING SETBACK (DEQUINDRE)	30 FT	10.2 FT (D)

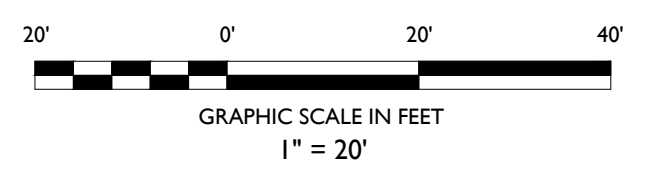
(D) DEVIANCE

- (\*) MEASURED FROM CENTERLINE TO CENTERLINE
- (1) §5.06.E.4.II: FOR A CORNER LOT, SHALL BE NO MORE THAN 50% OF THE SITE'S CUMULATIVE LINEAR FEET ALONG THE REQUIRED BUILDING LINES OR 100 FT, WHICHEVER IS LESS, SHALL BE OCCUPIED BY PARKING. THE BUILDING SHALL BE LOCATED IN THE CORNER OF THE LOT ADJACENT TO THE INTERSECTION.
- (2) §5.06.E.1.a: THE PRIMARY BUILDING ENTRANCE SHALL BE CLEARLY IDENTIFIABLE AND USEABLE AND LOCATED IN THE FRONT FACADE PARALLEL TO THE STREET.



SYMBOL	DESCRIPTION
---	PROPERTY LINE
- - - -	SETBACK LINE
====	PROPOSED CURB
=====	PROPOSED FLUSH CURB
=====	PROPOSED MOUNTABLE CURB
⊕	PROPOSED SIGNS / BOLLARDS
▭	PROPOSED BUILDING
▭	PROPOSED CONCRETE
▭	PROPOSED BUILDING DOORS
▭	PROPOSED HEATED CONCRETE
▭	PROPOSED PERVIOUS CONCRETE PAVERS

- GENERAL NOTES**
- THE CONTRACTOR SHALL VERIFY AND FAMILIARIZE THEMSELVES WITH THE EXISTING SITE CONDITIONS AND THE PROPOSED SCOPE OF WORK (INCLUDING DIMENSIONS, LAYOUT, ETC.) PRIOR TO INITIATING THE IMPROVEMENTS IDENTIFIED WITHIN THESE DOCUMENTS. SHOULD ANY DISCREPANCY BE FOUND BETWEEN THE EXISTING SITE CONDITIONS AND THE PROPOSED WORK, THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC PRIOR TO THE START OF CONSTRUCTION.
  - THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND ENSURE THAT ALL REQUIRED APPROVALS HAVE BEEN OBTAINED PRIOR TO THE START OF CONSTRUCTION. COPIES OF ALL REQUIRED PERMITS AND APPROVALS SHALL BE KEPT ON SITE AT ALL TIMES DURING CONSTRUCTION.
  - ALL CONTRACTORS WILL, TO THE FULLEST EXTENT PERMITTED BY LAW, INDEMNIFY AND HOLD HARMLESS STONEFIELD ENGINEERING & DESIGN, LLC, AND ITS SUB-CONSULTANTS FROM AND AGAINST ANY DAMAGES AND LIABILITIES INCLUDING ATTORNEY'S FEES ARISING OUT OF CLAIMS BY EMPLOYEES OF THE CONTRACTOR IN ADDITION TO CLAIMS CONNECTED TO THE PROJECT AS A RESULT OF NOT CARRYING THE PROPER INSURANCE FOR WORKERS COMPENSATION, LIABILITY INSURANCE, AND LIMITS OF COMMERCIAL GENERAL LIABILITY INSURANCE.
  - THE CONTRACTOR SHALL NOT DEVIATE FROM THE PROPOSED IMPROVEMENTS IDENTIFIED WITHIN THIS PLAN SET UNLESS APPROVAL IS PROVIDED IN WRITING BY STONEFIELD ENGINEERING & DESIGN, LLC.
  - THE CONTRACTOR IS RESPONSIBLE TO DETERMINE THE MEANS AND METHODS OF CONSTRUCTION.
  - THE CONTRACTOR SHALL NOT PERFORM ANY WORK OR CAUSE DISTURBANCE ON A PRIVATE PROPERTY NOT CONTROLLED BY THE PERSON OR ENTITY WHO HAS AUTHORIZED THE WORK WITHOUT PRIOR WRITTEN CONSENT FROM THE OWNER OF THE PRIVATE PROPERTY.
  - THE CONTRACTOR IS RESPONSIBLE TO RESTORE ANY DAMAGED OR UNDERMINED STRUCTURE OR SITE FEATURE THAT IS IDENTIFIED TO REMAIN ON THE PLAN SET. ALL REPAIRS SHALL USE NEW MATERIALS TO RESTORE THE FEATURE TO ITS EXISTING CONDITION AT THE CONTRACTOR'S EXPENSE.
  - CONTRACTOR IS RESPONSIBLE TO PROVIDE THE APPROPRIATE SHOP DRAWINGS, PRODUCT DATA, AND OTHER REQUIRED SUBMITTALS FOR REVIEW BY STONEFIELD ENGINEERING & DESIGN, LLC. WILL REVIEW THE SUBMITTALS IN ACCORDANCE WITH THE DESIGN INTENT AS REFLECTED WITHIN THE PLAN SET.
  - THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL IN ACCORDANCE WITH MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
  - THE CONTRACTOR IS REQUIRED TO PERFORM ALL WORK IN THE PUBLIC RIGHT-OF-WAY IN ACCORDANCE WITH THE APPROPRIATE GOVERNING AUTHORITY AND SHALL BE RESPONSIBLE FOR THE PROCUREMENT OF STREET OPENING PERMITS.
  - THE CONTRACTOR IS REQUIRED TO RETAIN AN OSHA CERTIFIED SAFETY INSPECTOR TO BE PRESENT ON SITE AT ALL TIMES DURING CONSTRUCTION & DEMOLITION ACTIVITIES.
  - SHOULD AN EMPLOYEE OF STONEFIELD ENGINEERING & DESIGN, LLC, BE PRESENT ON SITE AT ANY TIME DURING CONSTRUCTION, IT DOES NOT RELIEVE THE CONTRACTOR OF ANY OF THE RESPONSIBILITIES AND REQUIREMENTS LISTED IN THE NOTES WITHIN THIS PLAN SET.



REVISED PER SPECIAL LAND USE & SITE PLAN COMMENTS	DATE	BY	DESCRIPTION
FOR SPECIAL LAND USE & SITE PLAN APPROVAL			
REVISED PER CITY COMMENTS			
FOR CLIENT REVIEW			
4	09/10/2024	VF	
3	07/29/2024	AF	
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1	02/26/2024	VF & AF	

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**SITE DEVELOPMENT PLANS**

**EL CARWASH - E. LONG LAKE**  
**PROPOSED AUTO WASH**  
**& OFFICE SPACE**

PARCEL ID: 20-12-476-045 & 20-12-476-049  
2955 & 2995 EAST LONG LAKE ROAD  
CITY OF TROY  
OAKLAND COUNTY, MI 48068

STATE OF MICHIGAN  
JONATHAN B. COOPER  
MICHIGAN LICENSE NO. 00925428  
LICENSED PROFESSIONAL ENGINEER

**STONEFIELD**  
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SCALE: 1" = 20' PROJECT ID: DET-2300163

TITLE: **SITE PLAN**

DRAWING: **C-2**

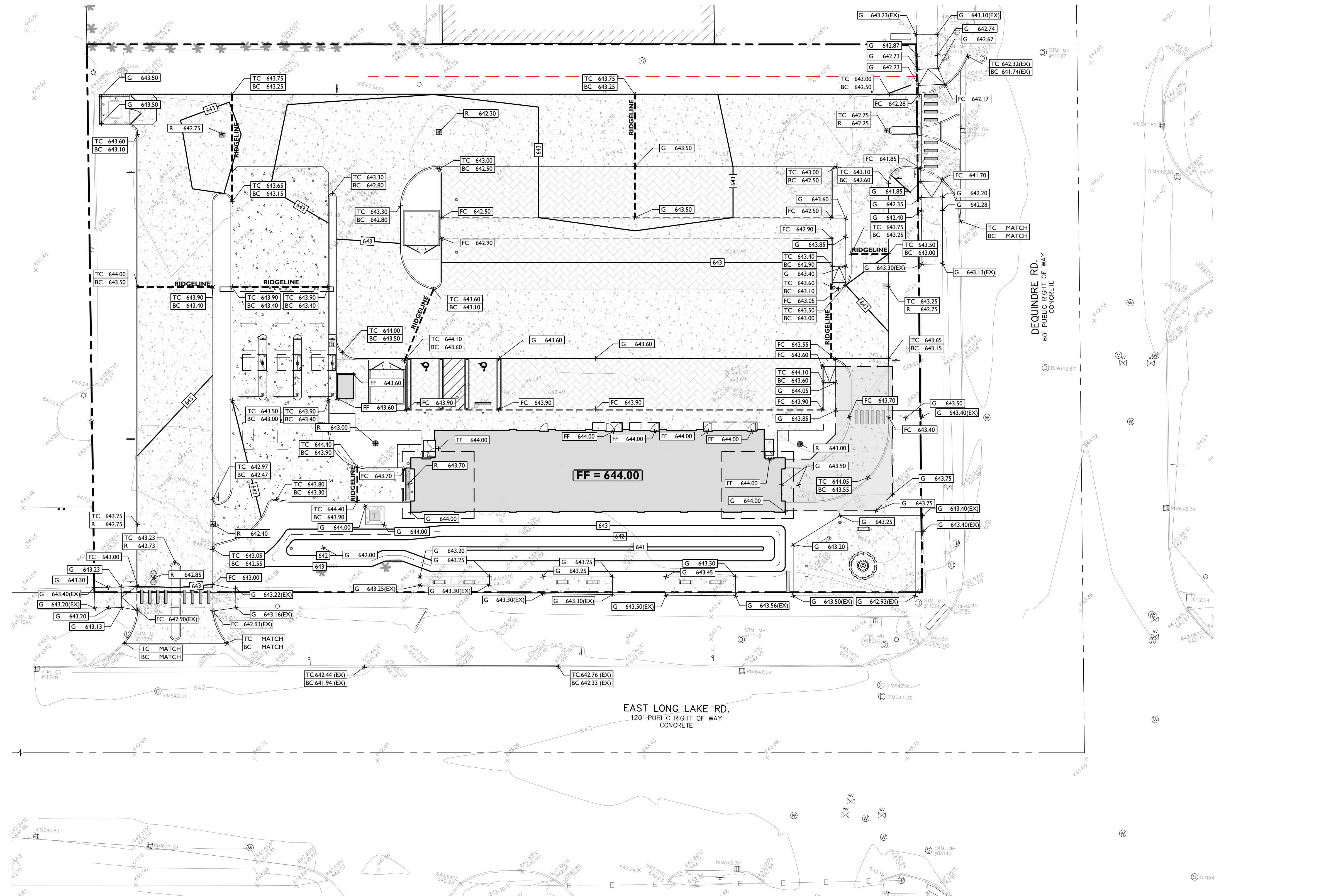
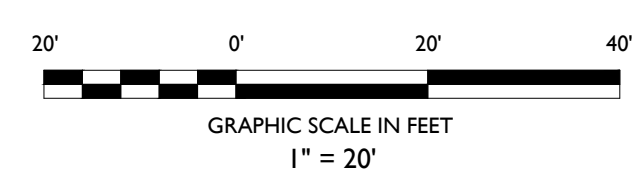
**MANHOLE SCHEDULE**

NUM	TYPE	RIM (FT)	SIZE (IN)	DIR	INV ELEV (FT)	NUM	TYPE	RIM (FT)	SIZE (IN)	DIR	INV ELEV (FT)
11069	STORM MANHOLE	642.68	15	NW	638.43	11734	STORM MANHOLE	642.87	12	SE	636.47
		642.68	15	SW	638.38			642.87	15	NE	636.23
11079	STORM MANHOLE	643.56	12	E	636.44	11740	CATCH BASIN	642.87	12	W	638.17
		643.56	15	S	636.46	15000	CATCH BASIN	642.68	12	E	639.68
11438	CATCH BASIN	641.95	12	E	631.30			642.68	12	N	639.68
11467	CATCH BASIN	642.06	12	N	639.11	15002	CATCH BASIN	641.44	T/WATER		637.94
		642.06	12	W	639.16	15007	STORM MANHOLE	643.41	15	NE	638.31
		642.06	15	SE	638.76			643.41	12	S	636.61
11490	CATCH BASIN	642.45	12	S	639.75	85137	STORM MANHOLE	642.50	12	W	636.66
11571	CATCH BASIN	642.71	12	W	640.31			642.50	54	S	626.40
11601	CATCH BASIN	642.30	12	S	639.95			642.50	12	W	635.40
		642.30	12	S	638.65	85138	SANITARY MANHOLE	643.24	15	N	634.14
11638	CATCH BASIN	642.42	12	N	639.82			643.24	15	S	634.09
		642.42	15	SW	639.72			643.24	8	W	635.19
11666	CATCH BASIN	642.72	12	S	640.52	85140	STORM MANHOLE	641.85	12	NW	637.85
11695	STORM MANHOLE	643.35	12	N	638.95			641.85	12	E	635.25
		643.35	12	E	636.65			641.85	12	SE	637.70
		643.35	12	SE	636.75	85143	SANITARY MANHOLE	643.11	15	N	633.46
								643.11	18	W	633.41

SYMBOL		DESCRIPTION
---		PROPERTY LINE
100		PROPOSED GRADING CONTOUR
---		PROPOSED GRADING RIDGELINE
X	G 100.00	PROPOSED GRADE SPOT SHOT
X	TC 100.50 BC 100.00	PROPOSED TOP OF CURB / BOTTOM OF CURB SPOT SHOT
X	FC 100.00	PROPOSED FLUSH CURB SPOT SHOT
X	FF 100.00	PROPOSED FINISHED FLOOR SPOT SHOT

- GRADING NOTES**
- ALL SOIL AND MATERIAL REMOVED FROM THE SITE SHALL BE DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REQUIREMENTS. ALL GROUNDWATER DE-WATERING PRACTICES SHALL BE PERFORMED UNDER THE SUPERVISION OF A QUALIFIED PROFESSIONAL ENGINEER WHO IS REQUIRED TO OBTAIN ALL NECESSARY PERMITS FOR THE DISCHARGE OF DE-WATERED GROUNDWATER. ALL SOIL IMPORTED TO THE SITE SHALL BE CERTIFIED CLEAN FILL. CONTRACTOR SHALL MAINTAIN RECORDS OF ALL FILL MATERIALS BROUGHT TO THE SITE.
  - THE CONTRACTOR IS REQUIRED TO PROVIDE TEMPORARY AND/OR PERMANENT SHORING WHERE REQUIRED DURING EXCAVATION ACTIVITIES INCLUDING BUT NOT LIMITED TO UTILITY TRENCHES TO ENSURE THE STRUCTURAL INTEGRITY OF NEARBY STRUCTURES AND STABILITY OF THE SURROUNDING SOILS.
  - PROPOSED TOP OF CURB ELEVATIONS ARE GENERALLY 4 INCHES TO 7 INCHES ABOVE EXISTING GRADES UNLESS OTHERWISE NOTED. THE CONTRACTOR WILL SUPPLY ALL STAKEOUT CURB GRADE SHEETS TO STONEFIELD ENGINEERING & DESIGN, LLC. FOR REVIEW AND APPROVAL PRIOR TO POURING CURBS.
  - THE CONTRACTOR IS RESPONSIBLE TO SET ALL PROPOSED UTILITY COVERS AND RESET ALL EXISTING UTILITY COVERS WITHIN THE PROJECT LIMITS TO PROPOSED GRADE IN ACCORDANCE WITH ANY APPLICABLE MUNICIPAL, COUNTY, STATE AND/OR UTILITY AUTHORITY REGULATIONS.
  - MINIMUM SLOPE REQUIREMENTS TO PREVENT PONDING SHALL BE AS FOLLOWS:
    - CURB GUTTER: 0.50%
    - CONCRETE SURFACES: 1.00%
    - ASPHALT SURFACES: 1.00%
  - A MINIMUM SLOPE OF 1.00% SHALL BE PROVIDED AWAY FROM ALL BUILDINGS. THE CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE FROM THE BUILDING IS ACHIEVED AND SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC IF THIS CONDITION CANNOT BE MET.
  - FOR PROJECTS WHERE BASEMENTS ARE PROPOSED, THE DEVELOPER IS RESPONSIBLE TO DETERMINE THE DEPTH TO GROUNDWATER AT THE LOCATION OF THE PROPOSED STRUCTURE. IF GROUNDWATER IS ENCOUNTERED WITHIN THE BASEMENT AREA, SPECIAL CONSTRUCTION METHODS SHALL BE UTILIZED AND REVIEWED/APPROVED BY THE CONSTRUCTION CODE OFFICIAL. IF SLUMP PUMPS ARE UTILIZED, ALL DISCHARGES SHALL BE CONNECTED DIRECTLY TO THE PUBLIC STORM SEWER SYSTEM WITH APPROVAL FROM THE GOVERNING STORM SEWER SYSTEM AUTHORITY.

- ADA NOTES**
- THE CONTRACTOR SHALL MAINTAIN A MAXIMUM 2.00% SLOPE IN ANY DIRECTION WITHIN THE ADA PARKING SPACES AND ACCESS AISLES.
  - THE CONTRACTOR SHALL PROVIDE COMPLIANT SIGNAGE AT ALL ADA PARKING AREAS IN ACCORDANCE WITH STATE GUIDELINES.
  - THE CONTRACTOR SHALL MAINTAIN A MAXIMUM 5.00% RUNNING SLOPE AND A MAXIMUM OF 2.00% CROSS SLOPE ALONG WALKWAYS WITHIN THE ACCESSIBLE PATH OF TRAVEL (SEE THE SITE PLAN FOR THE LOCATION OF THE ACCESSIBLE PATH). THE CONTRACTOR IS RESPONSIBLE TO ENSURE THE ACCESSIBLE PATH OF TRAVEL IS 36 INCHES WIDE OR GREATER UNLESS INDICATED OTHERWISE WITHIN THE PLAN SET.
  - THE CONTRACTOR SHALL MAINTAIN A MAXIMUM 2.00% SLOPE IN ANY DIRECTION AT ALL LANDINGS, LANDINGS INCLUDE, BUT ARE NOT LIMITED TO, THE TOP AND BOTTOM OF AN ACCESSIBLE RAMP. AT ACCESSIBLE BUILDING ENTRANCES, AT AN AREA IN FRONT OF A WALK-UP ATM, AND AT TURNING SPACES ALONG THE ACCESSIBLE PATH OF TRAVEL THE LANDING AREA SHALL HAVE A MINIMUM CLEAR AREA OF 60 INCHES BY 60 INCHES UNLESS INDICATED OTHERWISE WITHIN THE PLAN SET.
  - THE CONTRACTOR SHALL MAINTAIN A MAXIMUM 8.33% RUNNING SLOPE AND A MAXIMUM 2.00% CROSS SLOPE ON ANY CURB RAMPS ALONG THE ACCESSIBLE PATH OF TRAVEL. WHERE PROVIDED, CURB RAMP FLARES SHALL NOT HAVE A SLOPE GREATER THAN 10.00%. IF A LANDING AREA IS PROVIDED AT THE TOP OF THE RAMP, FOR ALTERATIONS, A CURB RAMP FLARE SHALL NOT HAVE A SLOPE GREATER THAN 8.33% IF A LANDING AREA IS NOT PROVIDED AT THE TOP OF THE RAMP. CURBS RAMPS SHALL NOT RISE MORE THAN 6 INCHES IN ELEVATION WITHOUT A HANDRAIL. THE CLEAR WIDTH OF A CURB RAMP SHALL BE NO LESS THAN 36 INCHES WIDE.
  - ACCESSIBLE RAMPS WITH A RISE GREATER THAN 6 INCHES SHALL CONTAIN COMPLIANT HANDRAILS ON BOTH SIDES OF THE RAMP AND SHALL NOT RISE MORE THAN 30" IN ELEVATION WITHOUT A LANDING AREA IN BETWEEN RAMP RUNS. LANDING AREAS SHALL ALSO BE PROVIDED AT THE TOP AND BOTTOM OF THE RAMP.
  - A SLIP RESISTANT SURFACE SHALL BE CONSTRUCTED ALONG THE ACCESSIBLE PATH AND WITHIN ADA PARKING AREAS.
  - THE CONTRACTOR SHALL ENSURE A MAXIMUM OF 1/4 INCHES VERTICAL CHANGE IN LEVEL ALONG THE ACCESSIBLE PATH. WHERE A CHANGE IN LEVEL BETWEEN 1/4 INCHES AND 1/2 INCHES EXISTS, CONTRACTOR SHALL ENSURE THAT THE TOP 1/4 INCH CHANGE IN LEVEL IS BEVELED WITH A SLOPE NOT STEEPER THAN 1 UNIT VERTICAL AND 2 UNITS HORIZONTAL (2:1 SLOPE).
  - THE CONTRACTOR SHALL ENSURE THAT ANY OPENINGS (GAPS OR HORIZONTAL SEPARATIONS) ALONG THE ACCESSIBLE PATH SHALL NOT ALLOW PASSAGE OF A SPHERE GREATER THAN 1/4 INCH.



REVISED PER SPECIAL LAND USE & SITE PLAN COMMENTS FOR SPECIAL LAND USE & SITE PLAN APPROVAL	DATE	ISSUE	BY	DESCRIPTION
REVISED PER CITY COMMENTS FOR CLIENT REVIEW	07/10/2024	1	VF & AF	
	07/29/2024	2	VF	
	06/05/2024	3	AF	
	09/10/2024	4	VF	

**NOT APPROVED FOR CONSTRUCTION**

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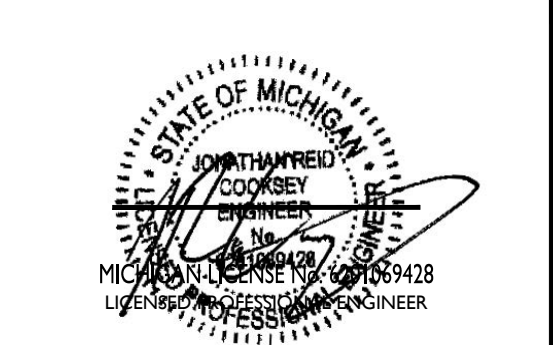
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**SITE DEVELOPMENT PLANS**

**EL CARWASH - E. LONG LAKE**  
PROPOSED AUTO WASH  
& OFFICE SPACE

PARCEL ID: 20-12-476-046 & 20-12-476-049  
2955 & 2995 EAST LONG LAKE ROAD  
CITY OF TROY  
OAKLAND COUNTY, MI 48068



**STONEFIELD**  
engineering & design

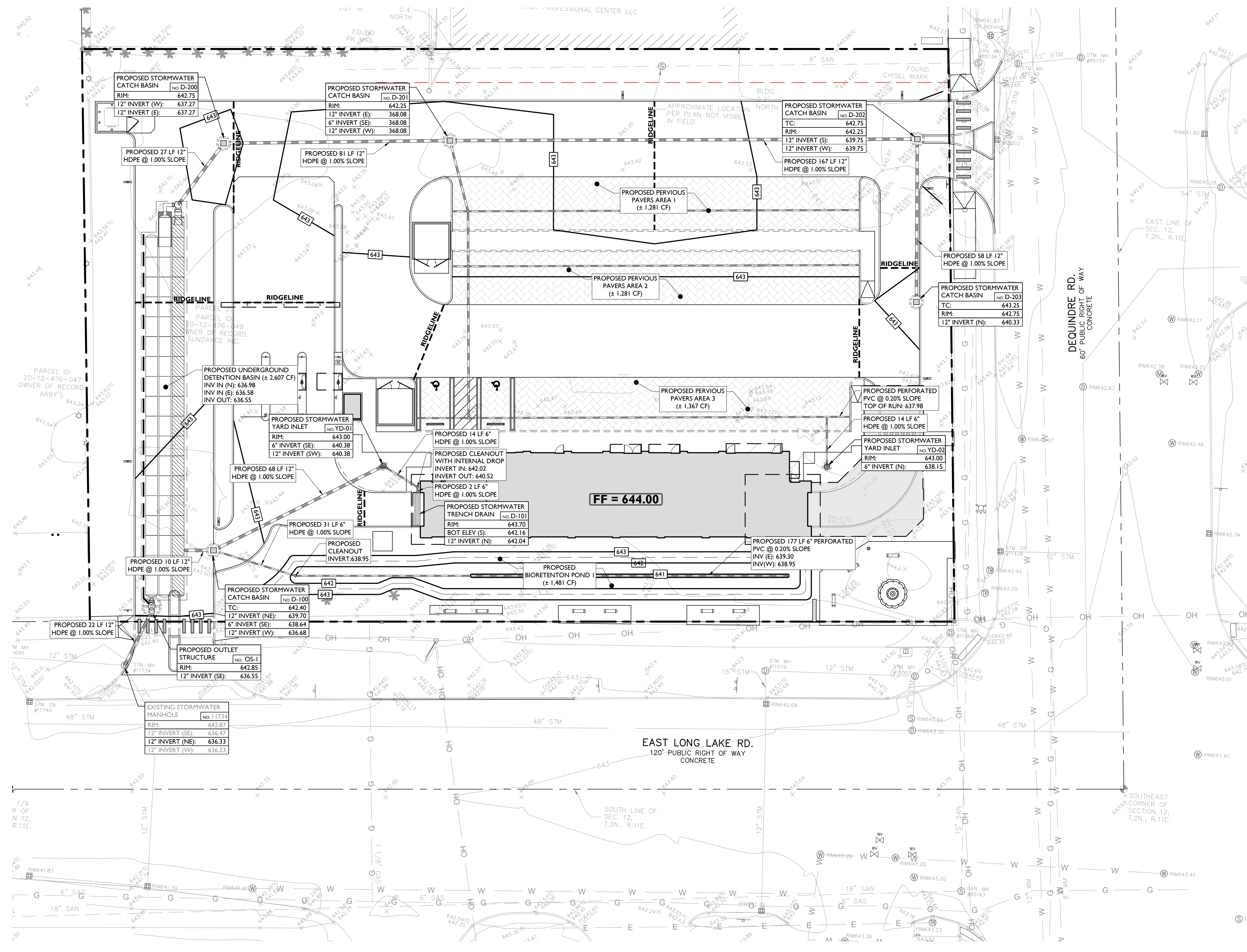
SCALE: 1" = 20' PROJECT ID: DET-2300163

TITLE: **GRADING PLAN**

DRAWING: **C-3**

**MANHOLE SCHEDULE**

NUM	TYPE	RIM (FT)	SIZE (IN)	DIR	INV ELEV (FT)	NUM	TYPE	RIM (FT)	SIZE (IN)	DIR	INV ELEV (FT)
11069	STORM MANHOLE	642.68	15	NW	638.43	11734	STORM MANHOLE	642.87	12	SE	636.47
		642.68	15	SW	638.38			642.87	15	NE	639.62
11079	STORM MANHOLE	643.56	12	E	636.44	11740	CATCH BASIN	642.87	12	W	636.23
		643.56	15	S	636.46	15000	CATCH BASIN	642.68	12	E	639.68
11438	CATCH BASIN	641.95	12	E	631.30	15002	CATCH BASIN	642.68	12	N	639.68
11467	CATCH BASIN	642.06	12	N	639.11	15007	STORM MANHOLE	643.41	15	NE	638.31
		642.06	12	W	639.16			643.41	12	S	636.61
11490	CATCH BASIN	642.45	12	S	639.75	85137	STORM MANHOLE	643.41	12	W	636.66
11571	CATCH BASIN	642.71	12	W	640.31			642.50	54	N	636.70
11601	CATCH BASIN	642.30	12	E	639.95			642.50	12	W	635.40
		642.30	12	S	638.85	85138	SANITARY MANHOLE	643.24	15	N	634.14
11638	CATCH BASIN	642.42	12	N	639.82			643.24	15	S	634.09
		642.42	15	SW	639.72			643.24	8	W	635.19
11666	CATCH BASIN	642.72	12	S	640.52	85140	STORM MANHOLE	641.85	12	NW	637.85
11695	STORM MANHOLE	643.35	12	N	638.95			641.85	12	E	635.25
		643.35	12	E	636.65	85143	SANITARY MANHOLE	643.11	15	N	633.46
		643.35	12	SE	636.75			643.11	18	W	633.41



SYMBOL	DESCRIPTION
---	PROPERTY LINE
---	PROPOSED GRADING CONTOUR
---	PROPOSED GRADING RIDGELINE
---	PROPOSED STORMWATER STRUCTURES
---	PROPOSED STORMWATER PIPING
---	PROPOSED UNDERGROUND OUTLET STRUCTURE

**DRAINAGE AND UTILITY NOTES**

- THE CONTRACTOR TO PERFORM A TEST PIT PRIOR TO CONSTRUCTION (RECOMMEND 30 DAYS PRIOR) AT LOCATIONS OF EXISTING UTILITY CROSSINGS FOR STORMWATER IMPROVEMENTS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC IN WRITING.
- CONTRACTOR SHALL START CONSTRUCTION OF STORM LINES AT THE LOWEST INVERT AND WORK UP GRADIENT.
- THE CONTRACTOR IS REQUIRED TO CALL THE APPROPRIATE AUTHORITY FOR NOTICE OF CONSTRUCTION/EXCAVATION AND UTILITY MARK OUT PRIOR TO THE START OF CONSTRUCTION IN ACCORDANCE WITH STATE LAW. CONTRACTOR IS REQUIRED TO CONFIRM THE HORIZONTAL LOCATION OF UTILITIES IN THE FIELD. SHOULD A DISCREPANCY EXIST BETWEEN THE FIELD LOCATION OF A UTILITY AND THE LOCATION SHOWN ON THE PLAN SET OR SURVEY, THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC IMMEDIATELY IN WRITING.
- THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN A RECORD OF THE AS-BUILT LOCATIONS OF ALL PROPOSED UNDERGROUND INFRASTRUCTURE. THE CONTRACTOR SHALL NOTE ANY DISCREPANCIES BETWEEN THE AS-BUILT LOCATIONS AND THE LOCATIONS DEPICTED WITHIN THE PLAN SET. THIS RECORD SHALL BE PROVIDED TO THE OWNER FOLLOWING COMPLETION OF WORK.

**EXCAVATION, SOIL PREPARATION, AND DEWATERING NOTES**

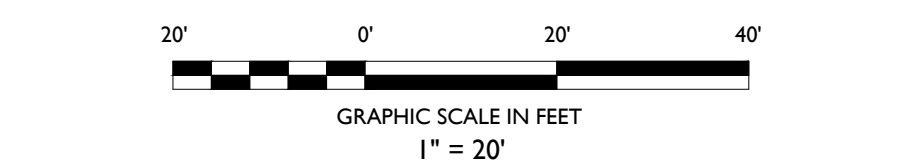
- THE CONTRACTOR IS REQUIRED TO REVIEW THE REFERENCED GEOTECHNICAL DOCUMENTS PRIOR TO CONSTRUCTION, THESE DOCUMENTS SHALL BE CONSIDERED A PART OF THE PLAN SET.
- THE CONTRACTOR IS REQUIRED TO PREPARE SUBGRADE SOILS BENEATH ALL PROPOSED IMPROVEMENTS AND BACKFILL ALL EXCAVATIONS IN ACCORDANCE WITH RECOMMENDATIONS BY THE GEOTECHNICAL ENGINEER OF RECORD.
- THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING SHORING FOR ALL EXCAVATIONS AS REQUIRED. CONTRACTOR SHALL HAVE THE SHORING DESIGN PREPARED BY A QUALIFIED PROFESSIONAL SHORING DESIGNER. THIS DESIGN SHALL BE SUBMITTED TO STONEFIELD ENGINEERING & DESIGN, LLC AND THE OWNER PRIOR TO THE START OF CONSTRUCTION.
- THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL OPEN EXCAVATIONS ARE PERFORMED AND PROTECTED IN ACCORDANCE WITH THE LATEST OSHA REGULATIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR ANY DEWATERING DESIGN AND OPERATIONS, AS REQUIRED, TO CONSTRUCT THE PROPOSED IMPROVEMENTS. THE CONTRACTOR SHALL OBTAIN ANY REQUIRED PERMITS FOR DEWATERING OPERATIONS AND GROUNDWATER DISPOSAL.

**STORMWATER INFILTRATION BMP CONSTRUCTION NOTES**

- PRIOR TO THE START OF CONSTRUCTION, ANY AREA DESIGNATED TO BE USED FOR AN INFILTRATION BMP (BIORETENTION AREA, ETC.) SHALL BE FENCED OFF AND SHALL NOT BE UTILIZED AS STORAGE FOR CONSTRUCTION EQUIPMENT OR AS A STOCKPILE AREA FOR CONSTRUCTION MATERIALS. NO ACTIVITY SHALL BE PERMITTED WITHIN THE INFILTRATION BASIN AREA UNLESS RELATED TO THE CONSTRUCTION OF THE INFILTRATION BASIN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY ALL SUBCONTRACTORS OF BASIN AREA RESTRICTIONS.
- THE CONTRACTOR SHALL MAKE EVERY EFFORT, WHERE PRACTICAL, TO AVOID SUBGRADE SOIL COMPACTION IN THE AREAS DESIGNATED TO BE USED FOR AN INFILTRATION BMP.
- ALL EXCAVATION WITHIN THE LIMITS OF ANY INFILTRATION BMP SHALL BE PERFORMED WITH THE LIGHTEST PRACTICAL EXCAVATION EQUIPMENT. ALL EXCAVATION EQUIPMENT SHALL BE PLACED OUTSIDE THE LIMITS OF THE BASIN WHERE FEASIBLE. THE USE OF LIGHT-WEIGHT, RUBBER-TIRED EQUIPMENT (LESS THAN 8 PSI APPLIED TO THE GROUND SURFACE) IS RECOMMENDED WITHIN THE BASIN LIMITS.
- THE SEQUENCE OF SITE CONSTRUCTION SHALL BE COORDINATED WITH BASIN CONSTRUCTION TO ADHERE TO SEQUENCING LIMITATIONS.
- DURING THE FINAL GRADING OF AN INFILTRATION BASIN, THE BOTTOM OF THE BASIN SHALL BE DEEPLY TILLED WITH A ROTARY TILLER OR DISC HARROW AND THEN SMOOTHED OUT WITH A LEVELING DRAW OR EQUIVALENT GRADING EQUIPMENT. ALL GRADING EQUIPMENT SHALL BE LOCATED OUTSIDE OF THE BASIN BOTTOM WHERE FEASIBLE.
- FOLLOWING CONSTRUCTION OF AN INFILTRATION BASIN, SOIL INFILTRATION TESTING BY A LICENSED GEOTECHNICAL ENGINEER IS REQUIRED TO CERTIFY COMPLIANCE WITH THE DESIGN INFILTRATION RATES IN ACCORDANCE WITH APPENDIX E OF THE NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION'S BEST MANAGEMENT PRACTICES MANUAL, LATEST EDITION. IF THE FIELD INFILTRATION RATES ARE LOWER THAN THE RATE USED DURING DESIGN, THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC IN WRITING IMMEDIATELY TO DETERMINE THE APPROPRIATE COURSE OF ACTION.
- THE CONTRACTOR SHALL NOTIFY THE MUNICIPALITY TO DETERMINE IF WITNESS TESTING IS REQUIRED DURING INFILTRATION BASIN EXCAVATION AND/OR SOIL INFILTRATION TESTING.

**STORMWATER UNDERGROUND BMP CONSTRUCTION NOTES**

- THE CONTRACTOR SHALL INSTALL AND BACKFILL THE UNDERGROUND BMP IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
- UNDERGROUND BASINS SHALL UTILIZE A STONE BACKFILL WITH A MINIMUM VOID RATIO OF 40%.
- NO CONSTRUCTION LOADING OVER UNDERGROUND BASINS IS PERMITTED UNTIL BACKFILL IS COMPLETE PER THE MANUFACTURER'S SPECIFICATIONS. NO VEHICLES SHALL BE STAGED OR OPERATE FROM A FIXED POSITION OVER THE BASIN.



REVISED PER SPECIAL LAND USE & SITE PLAN COMMENTS	DATE	ISSUE	DESCRIPTION
REVISED PER SPECIAL LAND USE & SITE PLAN COMMENTS	07/10/2024	1	FOR SPECIAL LAND USE & SITE PLAN APPROVAL
REVISED PER CITY COMMENTS	07/29/2024	2	FOR CLIENT REVIEW
REVISED PER CITY COMMENTS	06/05/2024	3	
REVISED PER CITY COMMENTS	03/26/2024	4	

**NOT APPROVED FOR CONSTRUCTION**

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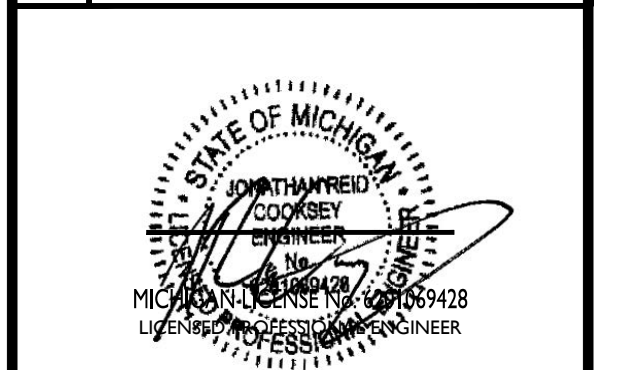
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**SITE DEVELOPMENT PLANS**

**EL CARWASH - E. LONG LAKE**  
**PROPOSED AUTO WASH**  
**& OFFICE SPACE**

PARCEL ID: 20-12-476-045 & 20-12-476-049  
2955 & 2995 EAST LONG LAKE ROAD  
CITY OF TROY  
OAKLAND COUNTY, MI 48068



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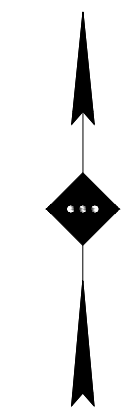
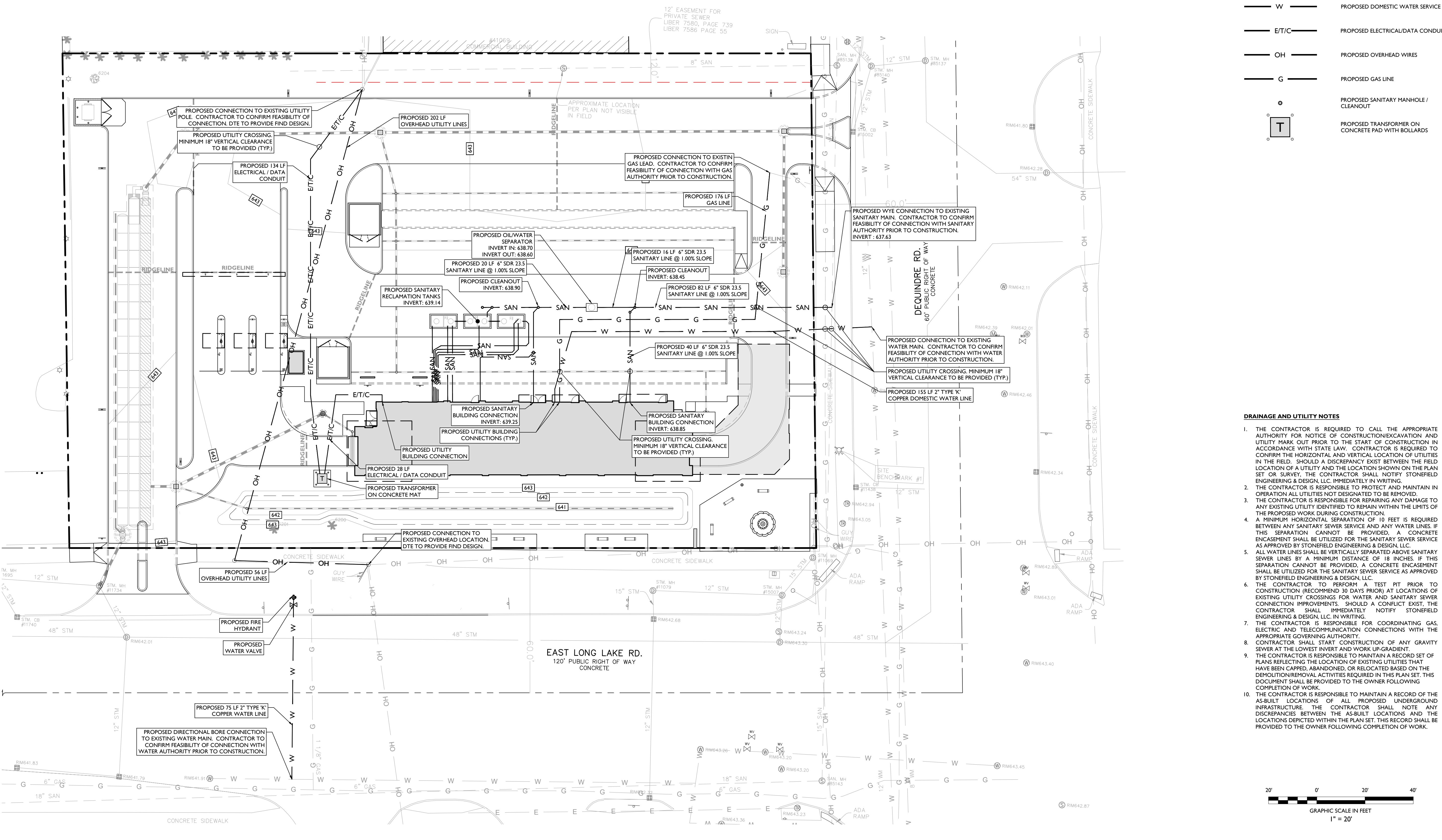
SCALE: 1" = 20' PROJECT ID: DET-2300163

TITLE: **STORMWATER MANAGEMENT PLAN**

DRAWING: **C-4**

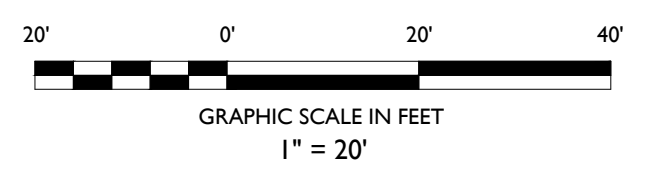


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SYMBOL	DESCRIPTION
---	PROPERTY LINE
— SAN —	PROPOSED SANITARY LATERAL
— W —	PROPOSED DOMESTIC WATER SERVICE
— ET/IC —	PROPOSED ELECTRICAL/DATA CONDUITS
— OH —	PROPOSED OVERHEAD WIRES
— G —	PROPOSED GAS LINE
○	PROPOSED SANITARY MANHOLE / CLEANOUT
□ T □	PROPOSED TRANSFORMER ON CONCRETE PAD WITH BOLLARDS

- DRAINAGE AND UTILITY NOTES**
- THE CONTRACTOR IS REQUIRED TO CALL THE APPROPRIATE AUTHORITY FOR NOTICE OF CONSTRUCTION EXCAVATION AND UTILITY MARK OUT PRIOR TO THE START OF CONSTRUCTION IN ACCORDANCE WITH STATE LAW. CONTRACTOR IS REQUIRED TO CONFIRM THE HORIZONTAL AND VERTICAL LOCATION OF UTILITIES IN THE FIELD. SHOULD A DISCREPANCY EXIST BETWEEN THE FIELD LOCATION OF A UTILITY AND THE LOCATION SHOWN ON THE PLAN SET OR SURVEY, THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC IMMEDIATELY IN WRITING.
  - THE CONTRACTOR IS RESPONSIBLE TO PROTECT AND MAINTAIN IN OPERATION ALL UTILITIES NOT DESIGNATED TO BE REMOVED.
  - THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE TO ANY EXISTING UTILITY IDENTIFIED TO REMAIN WITHIN THE LIMITS OF THE PROPOSED WORK DURING CONSTRUCTION.
  - A MINIMUM HORIZONTAL SEPARATION OF 10 FEET IS REQUIRED BETWEEN ANY SANITARY SEWER SERVICE AND ANY WATER LINES. IF THIS SEPARATION CANNOT BE PROVIDED, A CONCRETE ENCASUREMENT SHALL BE UTILIZED FOR THE SANITARY SEWER SERVICE AS APPROVED BY STONEFIELD ENGINEERING & DESIGN, LLC.
  - ALL WATER LINES SHALL BE VERTICALLY SEPARATED ABOVE SANITARY SEWER LINES BY A MINIMUM DISTANCE OF 18 INCHES. IF THIS SEPARATION CANNOT BE PROVIDED, A CONCRETE ENCASUREMENT SHALL BE UTILIZED FOR THE SANITARY SEWER SERVICE AS APPROVED BY STONEFIELD ENGINEERING & DESIGN, LLC.
  - THE CONTRACTOR TO PERFORM A TEST PIT PRIOR TO CONSTRUCTION (RECOMMEND 30 DAYS PRIOR) AT LOCATIONS OF EXISTING UTILITY CROSSINGS FOR WATER AND SANITARY SEWER CONNECTION IMPROVEMENTS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC IN WRITING.
  - THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING GAS, ELECTRIC AND TELECOMMUNICATION CONNECTIONS WITH THE APPROPRIATE GOVERNING AUTHORITY.
  - CONTRACTOR SHALL START CONSTRUCTION OF ANY GRAVITY SEWER AT THE LOWEST INVERT AND WORK UP-GRADE.
  - THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN A RECORD SET OF PLANS REFLECTING THE LOCATION OF EXISTING UTILITIES THAT HAVE BEEN CAPPED, ABANDONED, OR RELOCATED BASED ON THE DEMOLITION/REMOVAL ACTIVITIES REQUIRED IN THIS PLAN SET. THIS DOCUMENT SHALL BE PROVIDED TO THE OWNER FOLLOWING COMPLETION OF WORK.
  - THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN A RECORD OF THE AS-BUILT LOCATIONS OF ALL PROPOSED UNDERGROUND INFRASTRUCTURE. THE CONTRACTOR SHALL NOTE ANY DISCREPANCIES BETWEEN THE AS-BUILT LOCATIONS AND THE LOCATIONS DEPICTED WITHIN THE PLAN SET. THIS RECORD SHALL BE PROVIDED TO THE OWNER FOLLOWING COMPLETION OF WORK.



REVISED PER SPECIAL LAND USE & SITE PLAN COMMENTS	DATE	ISSUE	BY	DESCRIPTION
REVISED PER CITY COMMENTS	07/29/2024	AF		
REVISED PER CITY COMMENTS	06/05/2024	VF		
REVISED PER CLIENT REVIEW	02/26/2024	VF & AF		

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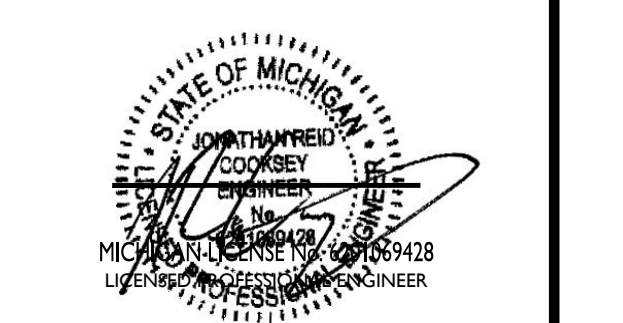
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SCALE: 1" = 20' PROJECT ID-DET-2300163

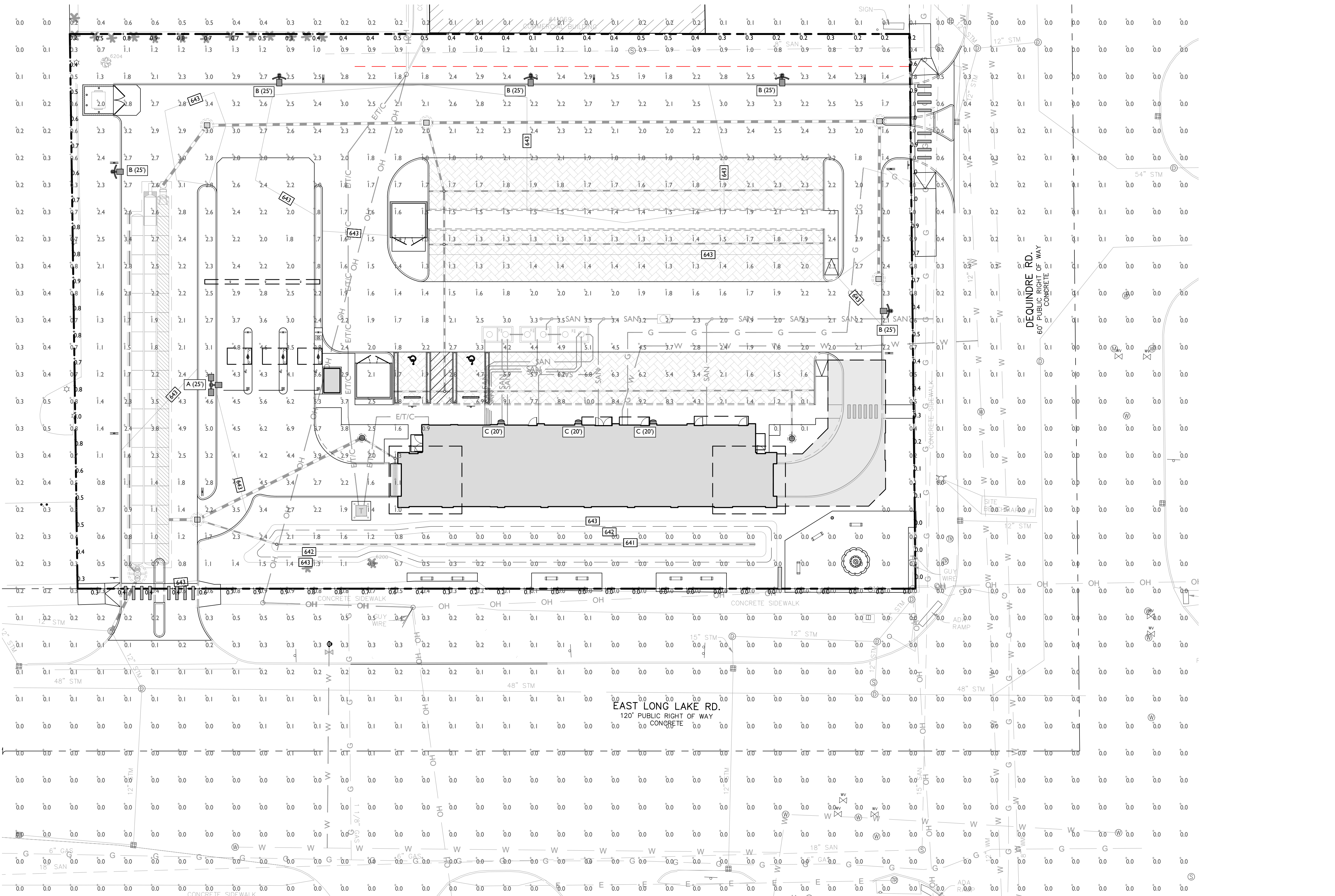
TITLE:  
**UTILITY PLAN**

DRAWING:  
**C-5**

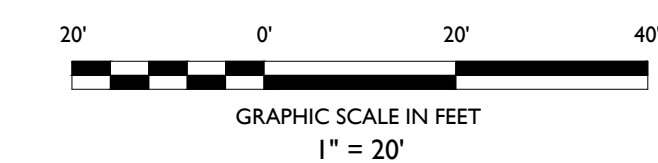
PROPOSED LUMINAIRE SCHEDULE							
SYMBOL	LABEL	QUANTITY	SECURITY LIGHTING	DISTRIBUTION	LLF	MANUFACTURER	IES FILE
	A	1	EATON LUMARK PREVAIL AND FIXTURE COMBO W/ HOUSE SIDE SHIELD (3 FIXTURES @ 90°)	TYPE IV	0.9	EATON	PRV-C40-D-UNV-T4-BZ-7030-HSS
	B	5	EATON LUMARK PREVAIL AND FIXTURE COMBO W/ HOUSE SIDE SHIELD	TYPE IV	0.9	EATON	PRV-C40-D-UNV-T4-BZ-7030-HSS
	C	3	XTOR CROSSTOUR MAXX LED WALL SCONCE (XTOR I2BRL)	TYPE II	0.9	EATON	XTOR I2BRL

LIGHTING REQUIREMENTS		
CODE SECTION	REQUIRED	PROPOSED
§13.05.C.2	LIGHT LEVELS:	
	MAXIMUM DURING BUSINESS HOURS: 20 FC	10.0 FC
	MAXIMUM AFTER BUSINESS HOURS: 10 FC	10.0 FC
§13.05.C.3	NON-RESIDENTIALLY ZONED PROPERTY LINE: 1 FC	1.0 FC
	MAXIMUM POLE HEIGHT: 25 FT	25 FT
§13.05.D.1	MAXIMUM BUILDING MOUNTING HEIGHT: 20 FT	20 FT

SYMBOL	DESCRIPTION
A (XX')	PROPOSED LIGHTING FIXTURE (MOUNTING HEIGHT)
XX	PROPOSED LIGHTING INTENSITY (FOOTCANDLES)



- GENERAL LIGHTING NOTES**
- THE LIGHTING LEVELS DEPICTED WITHIN THE PLAN SET ARE CALCULATED UTILIZING DATA OBTAINED FROM THE LISTED MANUFACTURER. ACTUAL ILLUMINATION LEVELS AND PERFORMANCE OF ANY PROPOSED LIGHTING FIXTURE MAY VARY DUE TO UNCONTROLLABLE VARIABLES SUCH AS WEATHER, VOLTAGE SUPPLY, LAMP TOLERANCE, EQUIPMENT SERVICE LIFE AND OTHER VARIABLE FIELD CONDITIONS.
  - WHERE APPLICABLE, THE EXISTING LIGHT LEVELS DEPICTED WITHIN THE PLAN SET SHALL BE CONSIDERED APPROXIMATE. THE EXISTING LIGHT LEVELS ARE BASED ON FIELD OBSERVATIONS AND THE MANUFACTURER'S DATA OF THE ASSUMED OR MOST SIMILAR LIGHTING FIXTURE MODEL.
  - UNLESS NOTED ELSEWHERE WITHIN THIS PLAN SET, THE LIGHT LOSS FACTORS USED IN THE LIGHTING ANALYSIS ARE AS FOLLOWS:
    - LIGHT EMITTING DIODES (LED): 0.90
    - HIGH PRESSURE SODIUM: 0.72
    - METAL HALIDE: 0.72
  - THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC IN WRITING, PRIOR TO THE START OF CONSTRUCTION, OF ANY PROPOSED LIGHTING LOCATIONS THAT CONFLICT WITH EXISTING PROPOSED DRAINAGE UTILITY, OR OTHER IMPROVEMENTS.
  - THE CONTRACTOR IS RESPONSIBLE TO PREPARE A WIRING PLAN AND PROVIDE ELECTRIC SERVICE TO ALL PROPOSED LIGHTING FIXTURES. THE CONTRACTOR IS REQUIRED TO PREPARE AN AS-BUILT PLAN OF WIRING AND PROVIDE COPIES TO THE OWNER AND STONEFIELD ENGINEERING & DESIGN, LLC.



REVISED PER SPECIAL LAND USE & SITE PLAN COMMENTS	DATE	ISSUE	DESCRIPTION
REVISED PER CITY COMMENTS <td>07/27/2024 <td>3 <td></td> </td></td>	07/27/2024 <td>3 <td></td> </td>	3 <td></td>	
REVISED PER CITY COMMENTS <td>06/05/2024 <td>2 <td></td> </td></td>	06/05/2024 <td>2 <td></td> </td>	2 <td></td>	
FOR CLIENT REVIEW <td>03/26/2024 <td>1 <td></td> </td></td>	03/26/2024 <td>1 <td></td> </td>	1 <td></td>	

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SCALE: 1" = 20' PROJECT ID: DET-2300163

TITLE:  
**LIGHTING PLAN**

DRAWING:  
**C-6**

TREE INVENTORY SCHEDULE <sup>(1)</sup>										
TREE #	SIZE (DBH)	CANOPY RADIUS (FT)	BOTANICAL NAME	COMMON NAME	CONDITION	COMMENTS	HEALTH SCORE	REGULATED <sup>(1)</sup>	LANDMARK <sup>(2)</sup>	INDICATION
6200	14"	±10'	PICEA GUNGENS	COLORADO SPRUCE	POOR	DYING TOP, STUNTED GROWTH, THINNING CANOPY, EXCESSIVE FITCH ON TRUNK	43%	N (C)	NO	TO REMAIN
6201	14"	±10'	PICEA GUNGENS	COLORADO SPRUCE	FAIR	STUNTED AND THINNING FOLIAGE	-	-	NO	TO REMAIN
6202	6'6"...	±15'	MALLUS SPP.	CRABAPPLE / APPLE	FAIR	CONTORTED CROWN	-	-	NO	TO BE REMOVED
6203	7"	±10'	ULMUS PUMILA	SIBERIAN ELM	FAIR	DEAD BRANCHES	-	N (SP)	NO	TO BE REMOVED
6204	10"	±7'	ACER PLATANOIDES	NORWAY MAPLE	POOR	50% OR MORE DEAD AND STUNTED NEW GROWTH	40%	N (C, SP)	NO	TO REMAIN
6205	5.5"	-	MALLUS SPP.	CRABAPPLE / APPLE	-	-	-	N (S)	NO	TO BE REMOVED

(1) TREE INVENTORY WAS COMPLETED BY KEM-TEC 05/03/2024.  
 (1) N (C) - NOT REGULATED DUE TO CONDITION  
 N (SP) - NOT REGULATED DUE TO SPECIES  
 N (S) - NOT REGULATED DUE TO SIZE  
 (2) PER § 13.07.E.1., ONLY LANDMARK OR WOODLAND TREES REQUIRE REPLACEMENT.  
 NO LANDMARK OR WOODLAND TREES ARE INDICATED TO BE REMOVED.

TREE REPLACEMENT REQUIREMENTS		
CODE SECTION	REQUIRED	PROPOSED
§ 13.07.E.1.a.	WOODLAND TREES 50% OF THE ORIGINAL DBH OF WOODLAND TREES REMOVED SHALL BE REPLACED	N/A: NO WOODLAND TREES TO BE REMOVED
§ 13.07.E.1.b.	LANDMARK TREES 100% OF THE ORIGINAL DBH OF LANDMARK TREES REMOVED SHALL BE REPLACED	N/A: NO LANDMARK TREES TO BE REMOVED

N/A NOT APPLICABLE

PLANT SCHEDULE						
SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER
DECIDUOUS TREES						
	ACE	4	ACER RUBRUM	RED MAPLE	2.5" - 3" CAL	B&B
	GIN	12	GINKGO BILOBA 'PRINCETON SENTRY'	PRINCETON SENTRY MAIDENHAIR TREE	2.5" - 3" CAL	B&B
	GLE	3	GLEDITSIA TRIACANTHOS 'ENERMIS'	HONEY LOCUST	2.5" - 3" CAL	B&B
	TIL	2	TILIA AMERICANA	AMERICAN LINDEN	2.5" - 3" CAL	B&B
EVERGREEN TREES						
	ABI	4	ABIES CONCOLOR	WHITE FIR	5' - 6' HT	B&B
	JSG	130	JUNIPERUS VIRGINIANA 'J.N. SELECT GREEN'	EMERALD FEATHER™ EASTERN REDCEDAR	5' - 6' HT	B&B
	PIC	3	PICEA ABIES	NORWAY SPRUCE	5' - 6' HT	B&B
EVERGREEN SHRUBS						
	PRU	16	PRUNUS LAUROCERASUS 'OTTO LUYKEN'	OTTO LUYKEN ENGLISH LAUREL	24" - 30"	B&B

NOTE: IF ANY DISCREPANCIES OCCUR BETWEEN AMOUNTS SHOWN ON THE LANDSCAPE PLAN AND WITHIN THE PLANT LIST, THE PLAN SHALL DICTATE.

LANDSCAPING AND BUFFER REQUIREMENTS		
CODE SECTION	REQUIRED	PROPOSED
§ 13.02.D.2.b	FRONTAGE LANDSCAPING: MINIMUM 10 FT GREENBELT 1 TREE FOR EVERY 30 FT OF ROAD FRONTAGE EAST LONG LAKE (310 LF): (310 FT) / (1 TREE / 30 FT) = 11 TREES DEQUINDRE ROAD (205 LF): (205 FT) / (1 TREE / 30 FT) = 7 TREES	100 FT 11 TREES 7 TREES
§ 13.02.B.2.c	SCREENING BETWEEN LAND USES: NORTHERN USER SCREENING - USE GROUP 3: NARROW EVERGREEN TREE - 1 TREE PER 5 LINEAL FEET (310 LF) / (1 TREE / 5 LF) = 62 TREES LARGE EVERGREEN TREE - 1 TREE PER 10 LINEAL FEET (310 LF) / (1 TREE / 10 LF) = 31 TREES WESTERN USER SCREENING - USE GROUP 5: 1 TREE PER 10 LINEAL FEET OR 1 TREE PER 3 LINEAL FEET (205 LF) / (1 TREE / 3 LF) = 68 TREES	62 TREES 20 TREES (W) 68 TREES
§ 13.02.C.2.a	1 TREE PER 8 PARKING SPACES (36 SPACES) / (1 TREE / 8 SPACES) = 5 TREES	5 TREES
§ 13.02.C.b	MINIMUM CURBED ISLAND AREA - 200 SF	COMPLIES
§ 13.02.E.1.a	MINIMUM SITE LANDSCAPING - 20% (64,538 SF) * (0.2) = 12,907 SF	21,247 SF (32.9%)

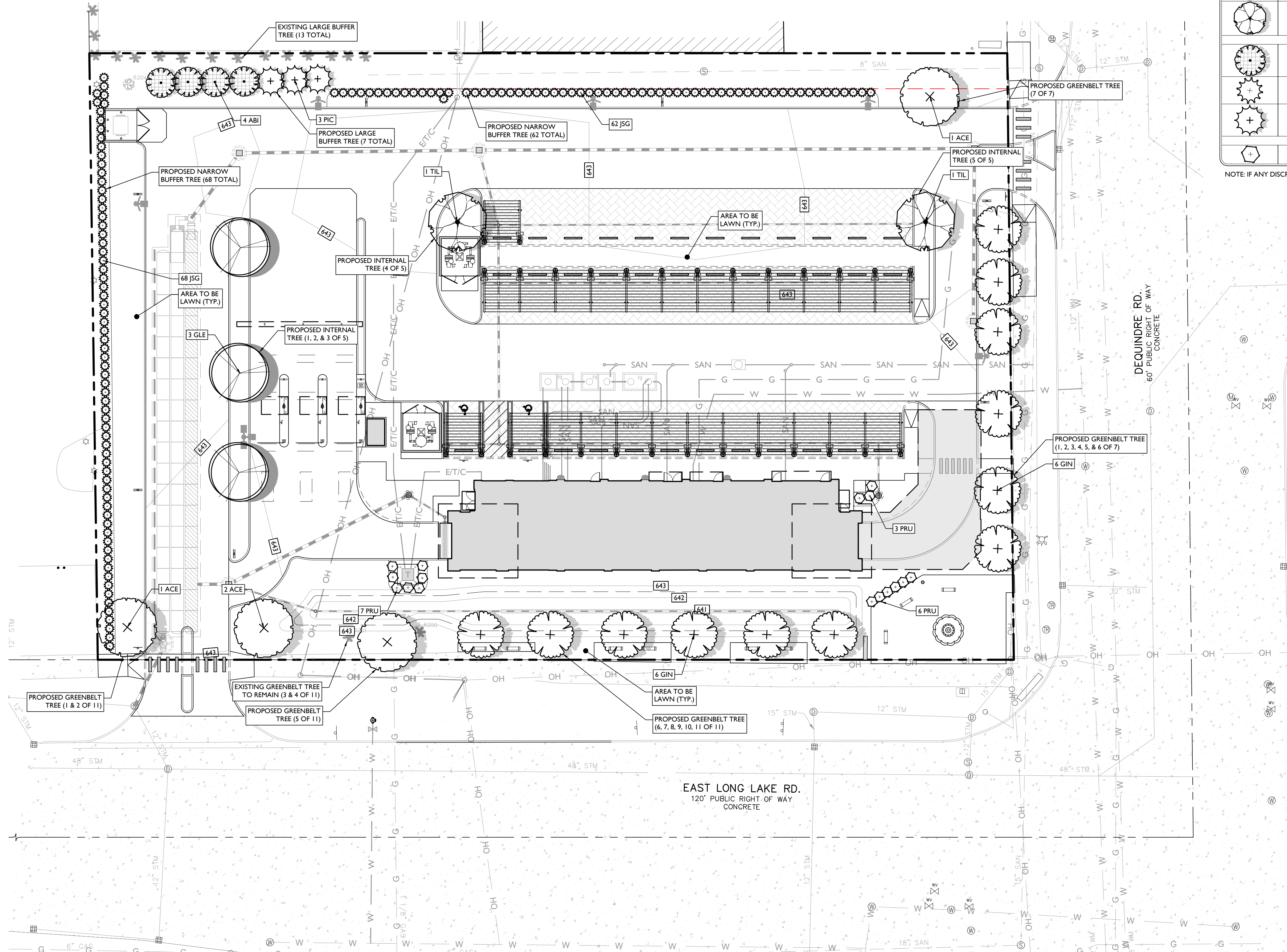
(W) DESIGN WAIVER

**IRRIGATION NOTE:**

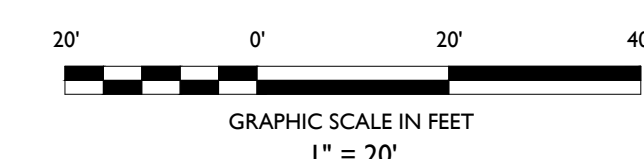
IRRIGATION CONTRACTOR TO PROVIDE A DESIGN FOR AN IRRIGATION SYSTEM SEPARATING PLANTING BEDS FROM LAWN AREA PRIOR TO CONSTRUCTION. DESIGN IS TO BE SUBMITTED TO THE PROJECT LANDSCAPE DESIGNER FOR REVIEW AND APPROVAL. WHERE POSSIBLE, DRIP IRRIGATION AND OTHER WATER CONSERVATION TECHNIQUES SUCH AS RAIN SENSORS SHALL BE IMPLEMENTED. CONTRACTOR TO VERIFY MAXIMUM ON-SITE DYNAMIC WATER PRESSURE AVAILABLE MEASURED IN PSI. PRESSURE REDUCING DEVICES OR BOOSTER PUMPS SHALL BE PROVIDED TO MEET SYSTEM PRESSURE REQUIREMENTS. DESIGN TO SHOW ALL VALVES, PIPING, HEADS, BACKFLOW PREVENTION, METERS, CONTROLLERS, AND SLEEVES WITHIN HARDSCAPE AREAS.

**LANDSCAPING NOTES**

- THE CONTRACTOR SHALL RESTORE ALL DISTURBED GRASS AND LANDSCAPED AREAS TO MATCH EXISTING CONDITIONS UNLESS INDICATED OTHERWISE WITHIN THE PLAN SET.
- THE CONTRACTOR SHALL RESTORE ALL DISTURBED LAWN AREAS WITH A MINIMUM 4 INCH LAYER OF TOPSOIL AND SEED.
- THE CONTRACTOR SHALL RESTORE MULCH AREAS WITH A MINIMUM 3 INCH LAYER OF MULCH.
- THE MAXIMUM SLOPE ALLOWABLE IN LANDSCAPE RESTORATION AREAS SHALL BE 3 FEET HORIZONTAL TO 1 FOOT VERTICAL (3:1 SLOPE) UNLESS INDICATED OTHERWISE WITHIN THE PLAN SET.
- THE CONTRACTOR IS REQUIRED TO LOCATE ALL SPRINKLER HEADS IN AREA OF LANDSCAPING DISTURBANCE PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL RELOCATE SPRINKLER HEADS AND LINES IN ACCORDANCE WITH OWNER'S DIRECTION WITHIN AREAS OF DISTURBANCE.
- THE CONTRACTOR SHALL ENSURE THAT ALL DISTURBED LANDSCAPED AREAS ARE GRADED TO MEET FLUSH AT THE ELEVATION OF WALKWAYS AND TOP OF CURB ELEVATIONS EXCEPT UNLESS INDICATED OTHERWISE WITHIN THE PLAN SET. NO ABRUPT CHANGES IN GRADE ARE PERMITTED IN DISTURBED LANDSCAPING AREAS.



Know what's below  
Call before you dig.



REVISED PER SPECIAL LAND USE & SITE PLAN APPROVAL	REVISED PER CITY COMMENTS	FOR CLIENT REVIEW	DATE	ISSUE	DESCRIPTION
YF	AF	VF	BY		
4	3	2	1		
09/10/2024	07/29/2024	06/05/2024	02/26/2024		

NOT APPROVED FOR CONSTRUCTION

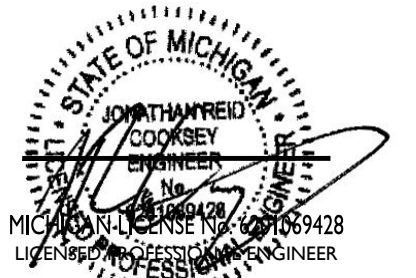


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SITE DEVELOPMENT PLANS  
**EL CARWASH - E. LONG LAKE**  
 PROPOSED AUTO WASH  
 & OFFICE SPACE

PARCEL ID: 20-12-476-045 & 20-12-476-049  
 2955 & 2995 EAST LONG LAKE ROAD  
 CITY OF TROY  
 OAKLAND COUNTY, MI 48065



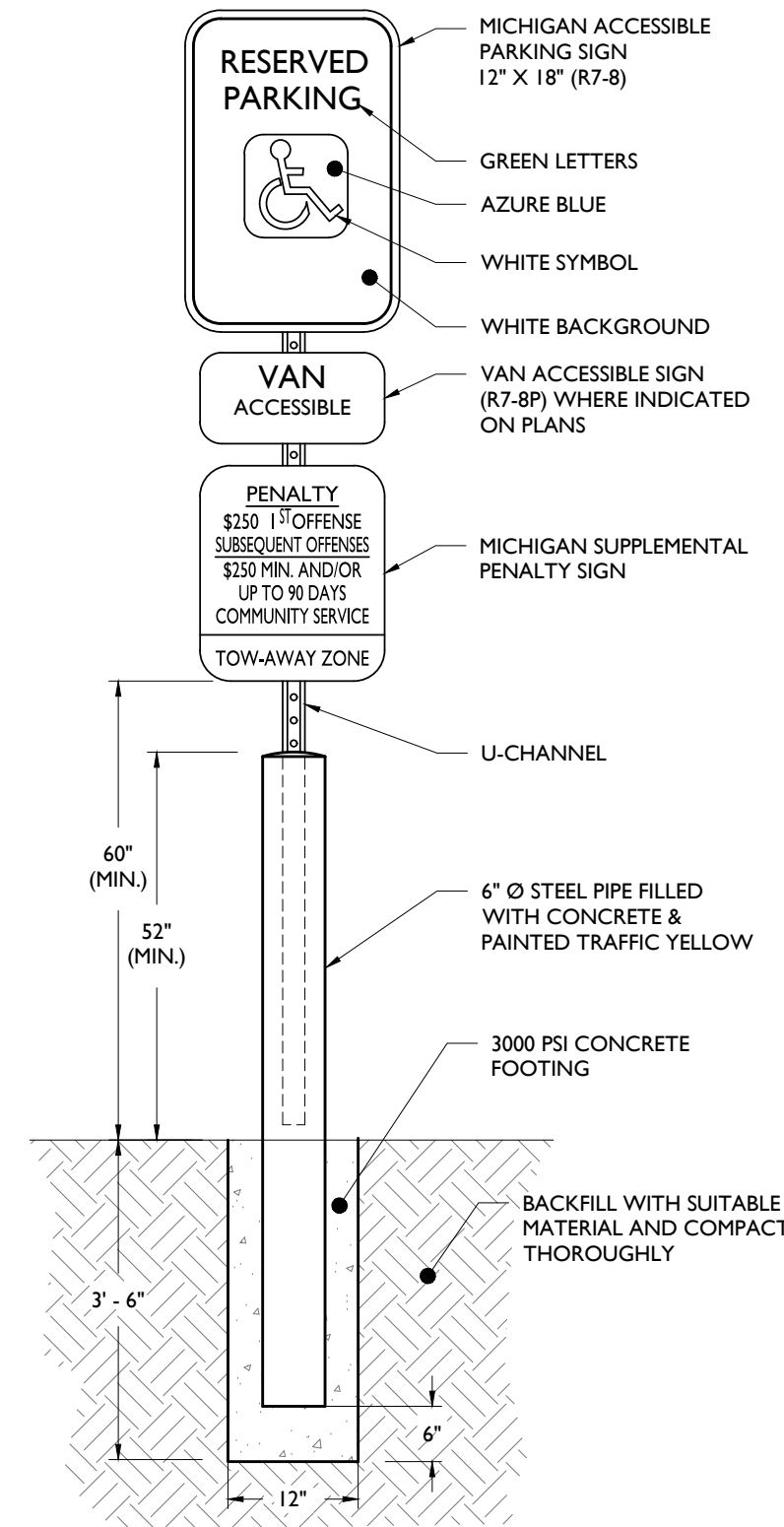
SCALE: 1" = 20' PROJECT ID: DET-2300163

TITLE:

LANDSCAPING PLAN

DRAWING:

C-7



**ACCESSIBLE PARKING SIGN WITH BOLLARD DETAIL**

NOT TO SCALE

M.U.T.C.D. NUMBER	TEXT	COLOR		SIZE OF SIGN (WIDTH X HEIGHT)	TYPE OF MOUNT
		LEGEND	BACKGROUND		
STOP SIGN (R1-1)		RED	WHITE	36"x36"	GROUND
DO NOT ENTER (R5-1)		RED	WHITE	30"x30"	GROUND

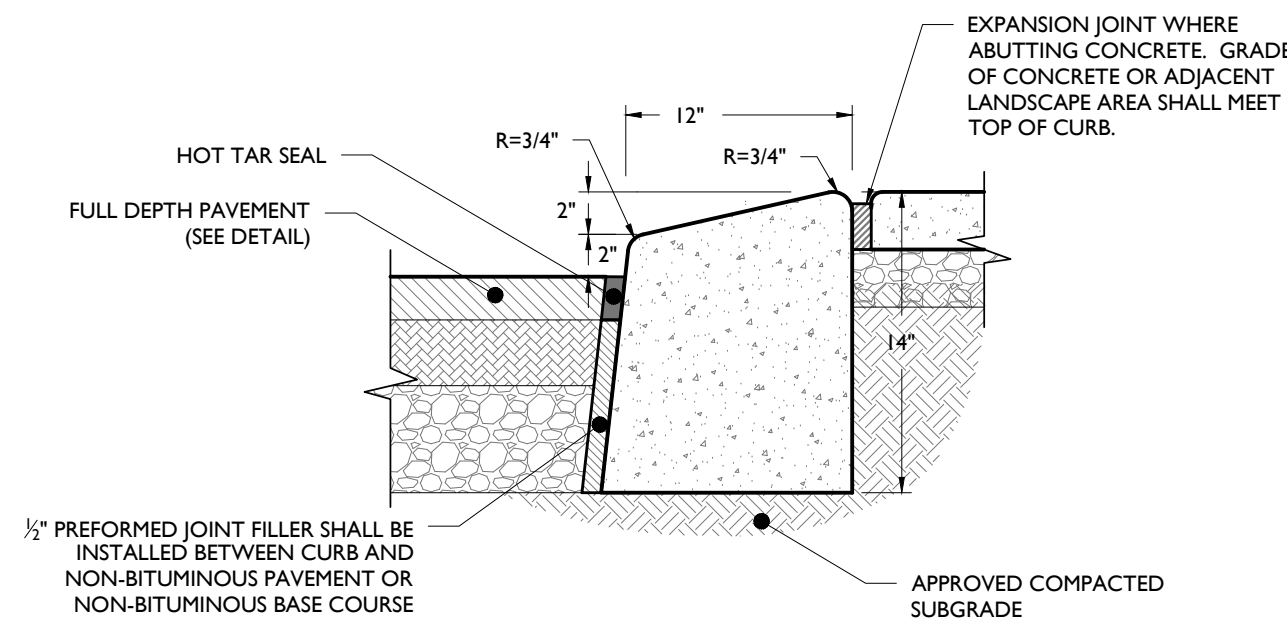
**SIGN POST DETAIL & SIGN DATA TABLE**

NOT TO SCALE

NOTE:

1. ALL SIGNS SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION (FHWA) MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), EXCEPT AS NOTED.
2. ALL SIGNS SHALL BE MOUNTED AS TO NOT OBSTRUCT THE SHAPE OF "STOP" (R1-1) AND "YIELD" (R1-2) SIGNS.

2



**MOUNTABLE CONCRETE CURB DETAIL**

NOT TO SCALE

NOTE:

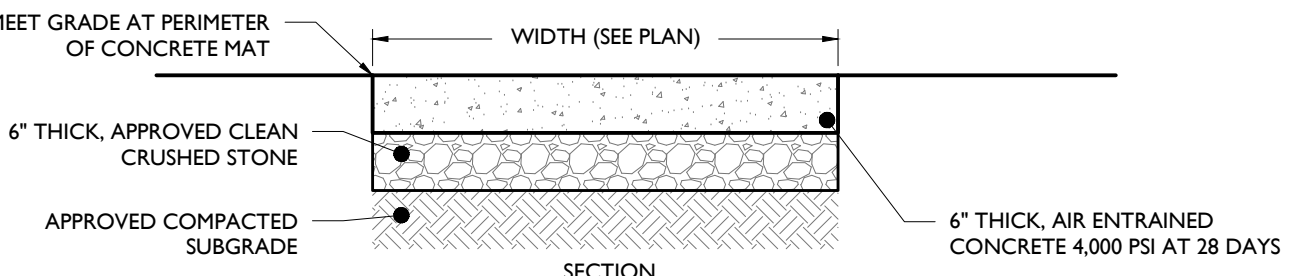
1. CONCRETE SHALL BE 3500 PSI AT 28 DAYS, AIR-ENTRAINED.
2. TRANSVERSE EXPANSION JOINTS SHALL BE PROVIDED AT 20 FOOT INTERVALS WITH PRE-MOLDED, BITUMINOUS JOINT FILLER, RECESSED 1/2" FROM SURFACE.
3. HALF DEPTH CONTRACTION JOINTS SHALL BE PROVIDED AT 10 FOOT INTERVALS.
4. 18" CURB DEPTH SHALL BE MAINTAINED AT DEPRESSED OR FLUSH CURBED AREAS.

9

**PAVEMENT STRIPING & MARKINGS NOTES:**

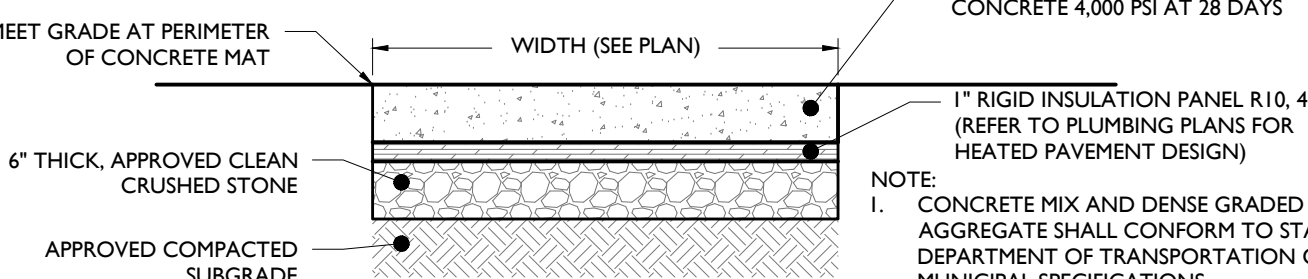
1. ALL SIGNING AND STRIPING IN EXISTING CONDITION IN CONFLICT WITH THE PROPOSED DESIGN PLAN SHALL BE REMOVED.
2. ALL PROPOSED SIGNING AND STRIPING SHALL CONFORM TO THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION.
3. PAVEMENT STRIPING AND MARKINGS SHALL BE INSTALLED IN CONFORMANCE WITH ALL APPLICABLE LOCAL, COUNTY AND STATE REQUIREMENTS.
4. UNLESS OTHERWISE SPECIFIED, ALL STRIPING AND MARKINGS IN THE PUBLIC RIGHT-OF-WAY SHALL BE OF THERMOPLASTIC PAINT OR PREFORMED THERMOPLASTIC MARKINGS.
5. UNLESS OTHERWISE SPECIFIED, ON SITE PARKING STALL STRIPING, FIRE LANE STRIPING AND DIRECTIONAL ARROWS SHALL BE EPOXY PAINT. ON SITE STOP BARS, "DO NOT ENTER" BARS, AND ASSOCIATED LETTERING SHALL BE THERMOPLASTIC PAINT OR PREFORMED THERMOPLASTIC MARKINGS.

13



**CONCRETE PAVEMENT**

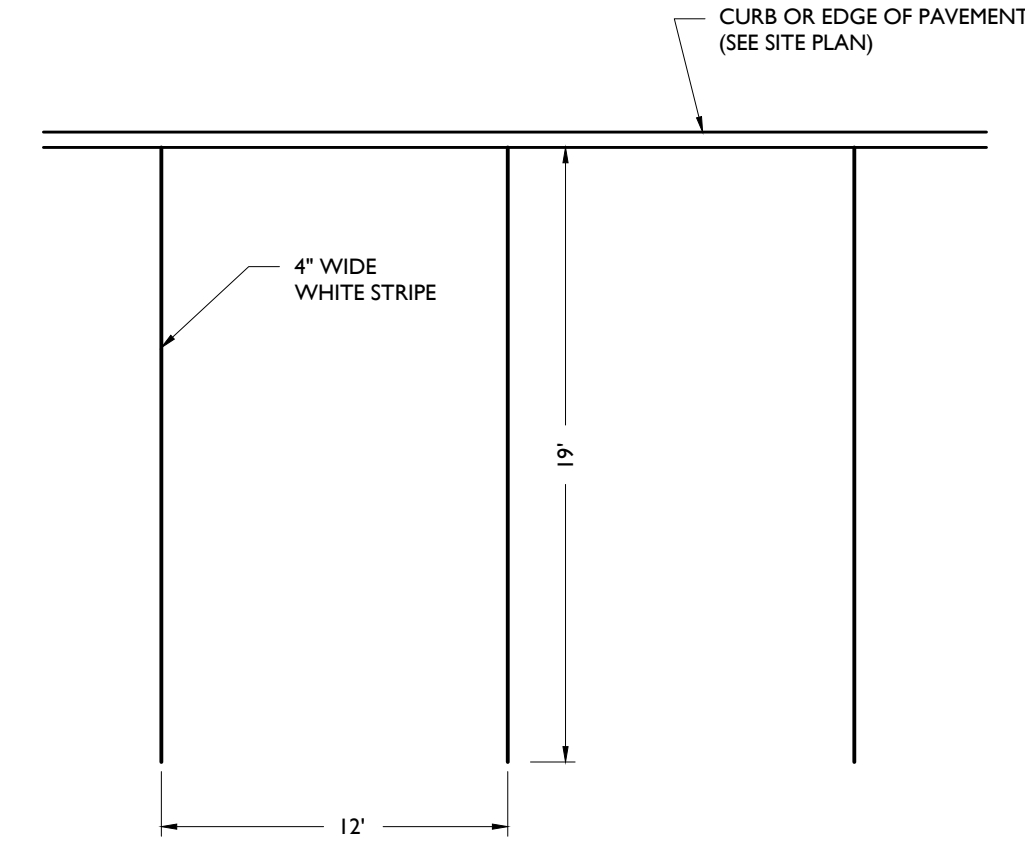
NOT TO SCALE



**HEATED CONCRETE PAVEMENT**

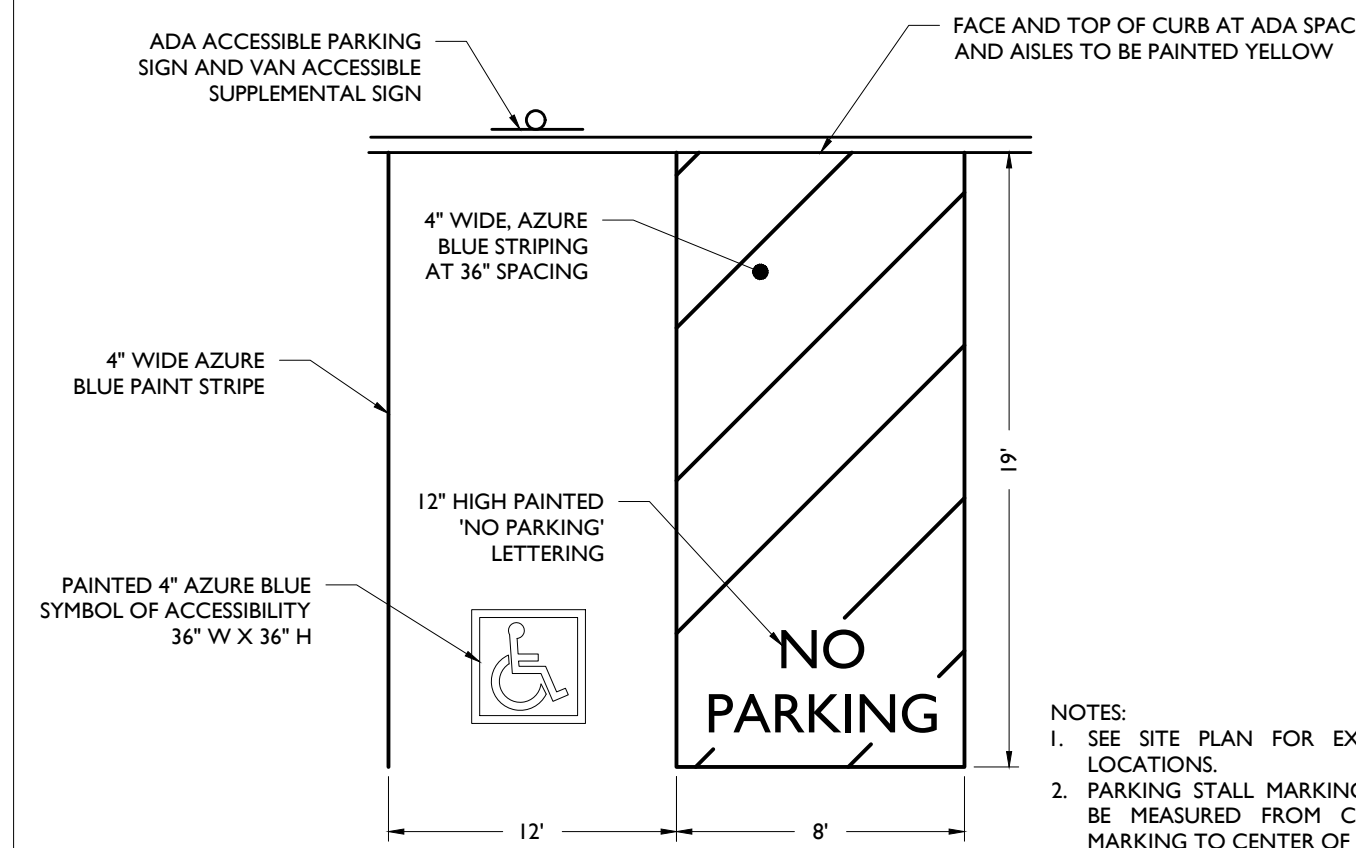
\*HEATED PAVEMENT TO BE DESIGN BY OTHERS  
NOT TO SCALE

14



**PARKING STALL MARKINGS**

NOT TO SCALE

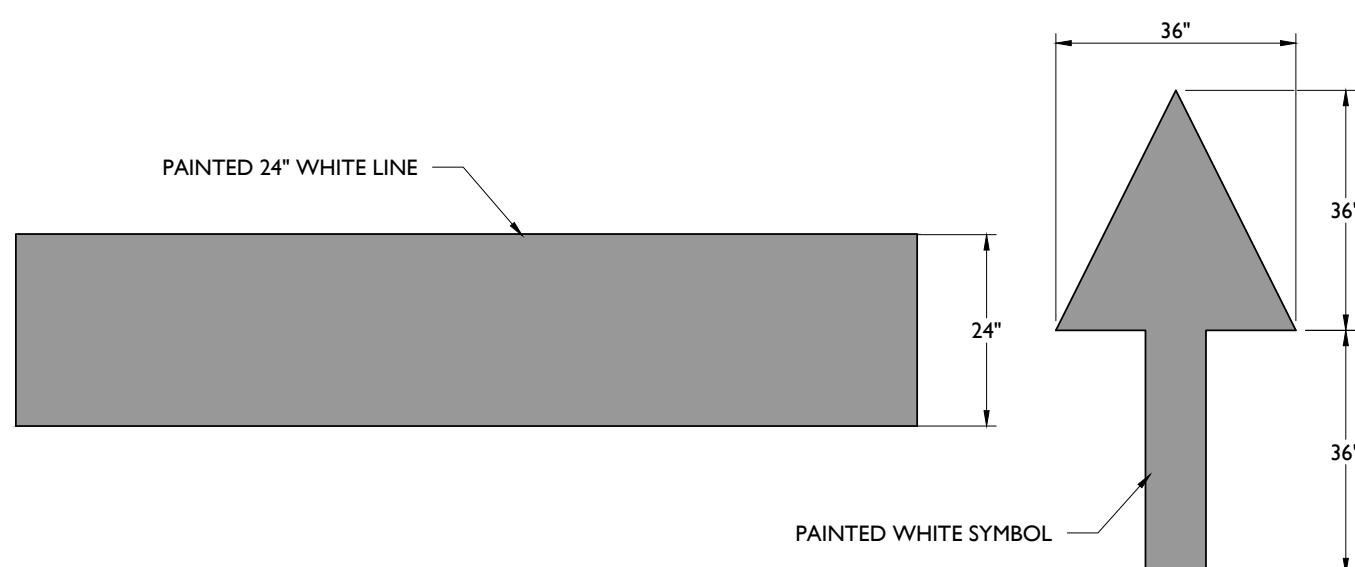


**ACCESSIBLE PARKING STALL MARKINGS**

NOT TO SCALE

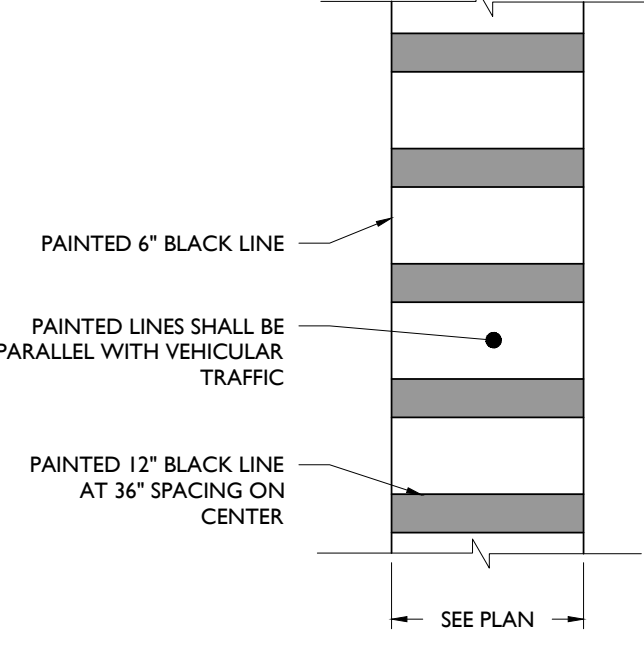
- NOTES:
1. SEE SITE PLAN FOR EXACT SIGN LOCATIONS.
  2. PARKING STALL MARKINGS ARE TO BE MEASURED FROM CENTER OF MARKING TO CENTER OF MARKING.

8



**STOP BAR & ARROW DETAILS**

NOT TO SCALE

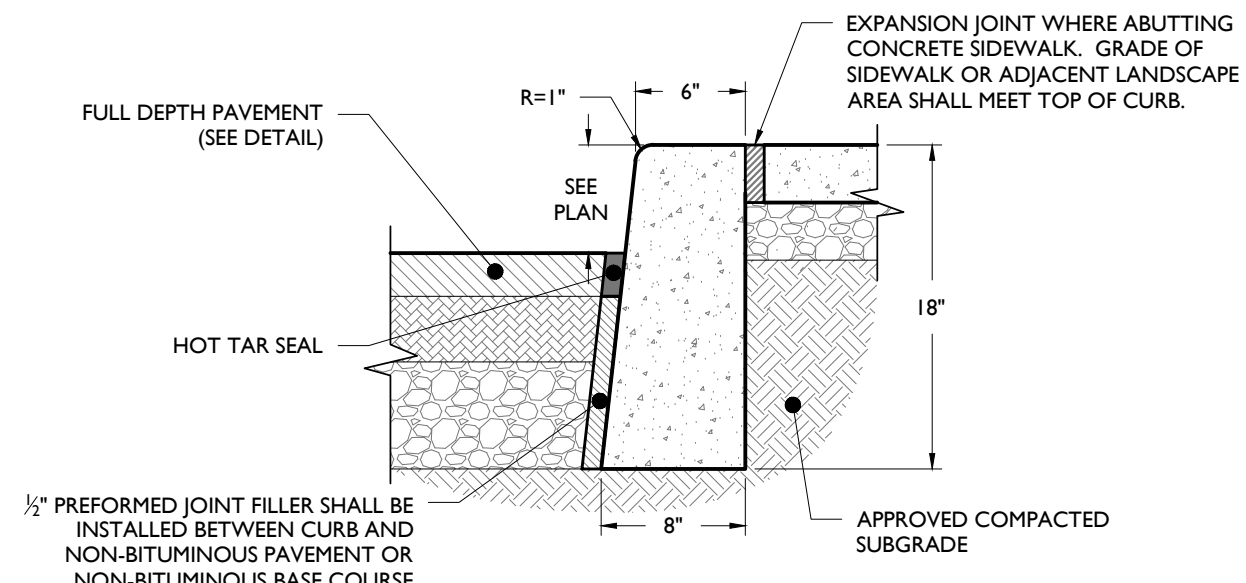


**CROSSWALK DETAIL**

NOT TO SCALE

11

12



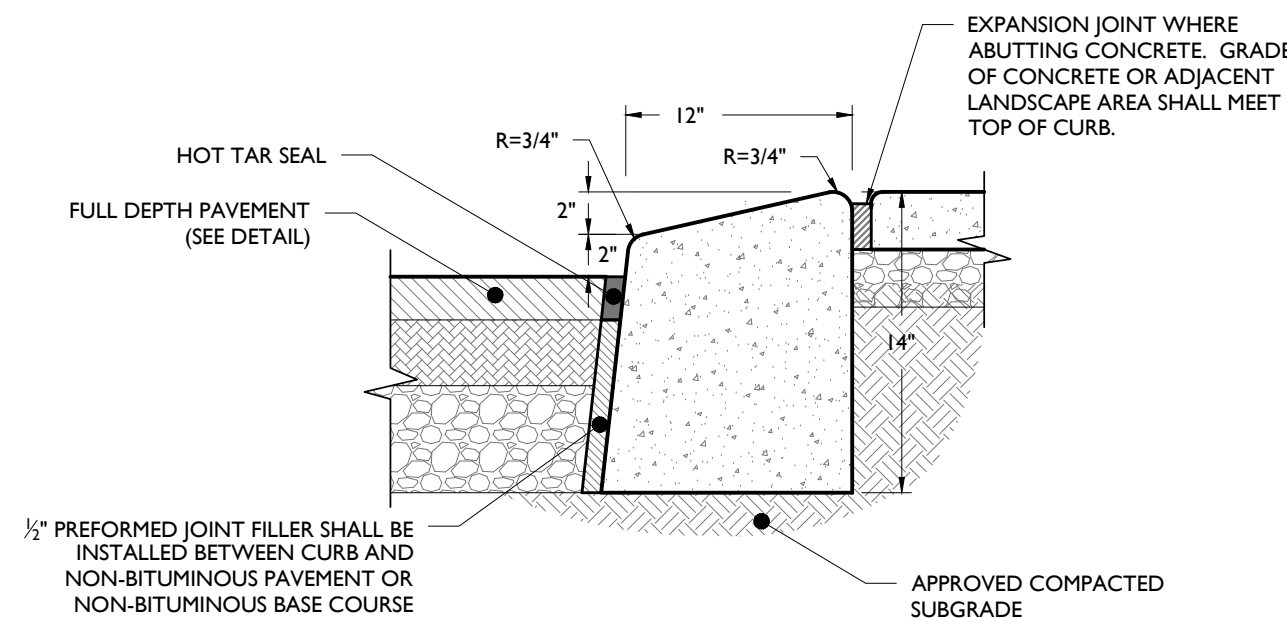
**CONCRETE CURB DETAIL**

NOT TO SCALE

NOTE:

1. CONCRETE SHALL BE 3500 PSI AT 28 DAYS, AIR-ENTRAINED.
2. TRANSVERSE EXPANSION JOINTS SHALL BE PROVIDED AT 20 FOOT INTERVALS WITH PRE-MOLDED, BITUMINOUS JOINT FILLER, RECESSED 1/2" FROM SURFACE.
3. HALF DEPTH CONTRACTION JOINTS SHALL BE PROVIDED AT 10 FOOT INTERVALS.
4. 18" CURB DEPTH SHALL BE MAINTAINED AT DEPRESSED OR FLUSH CURBED AREAS.

5



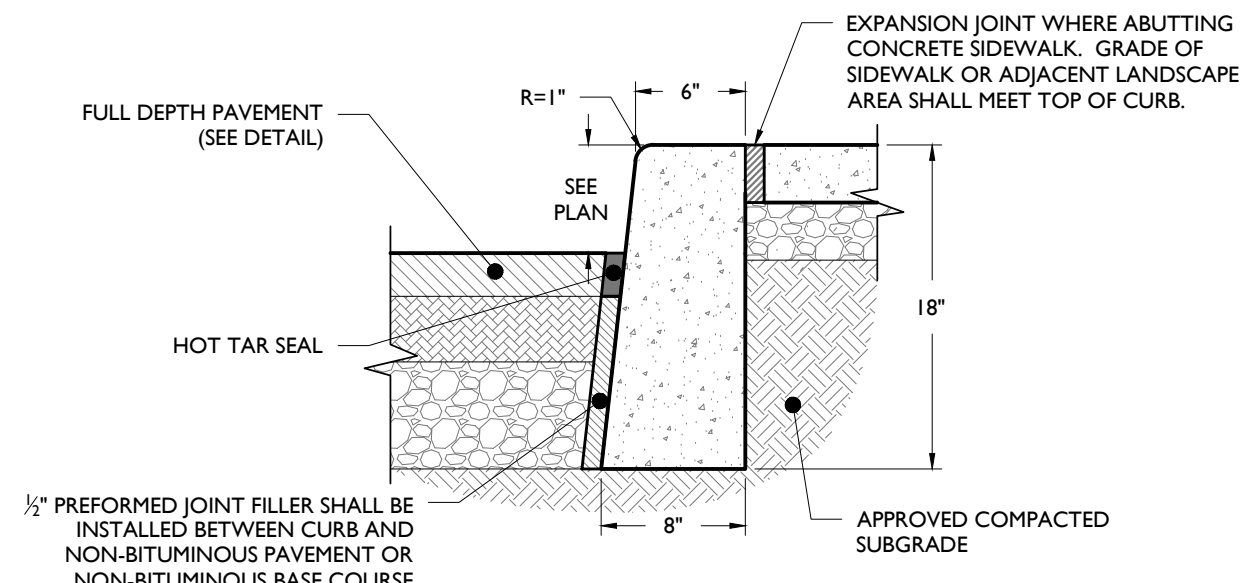
**CONCRETE CURB DETAIL**

NOT TO SCALE

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9



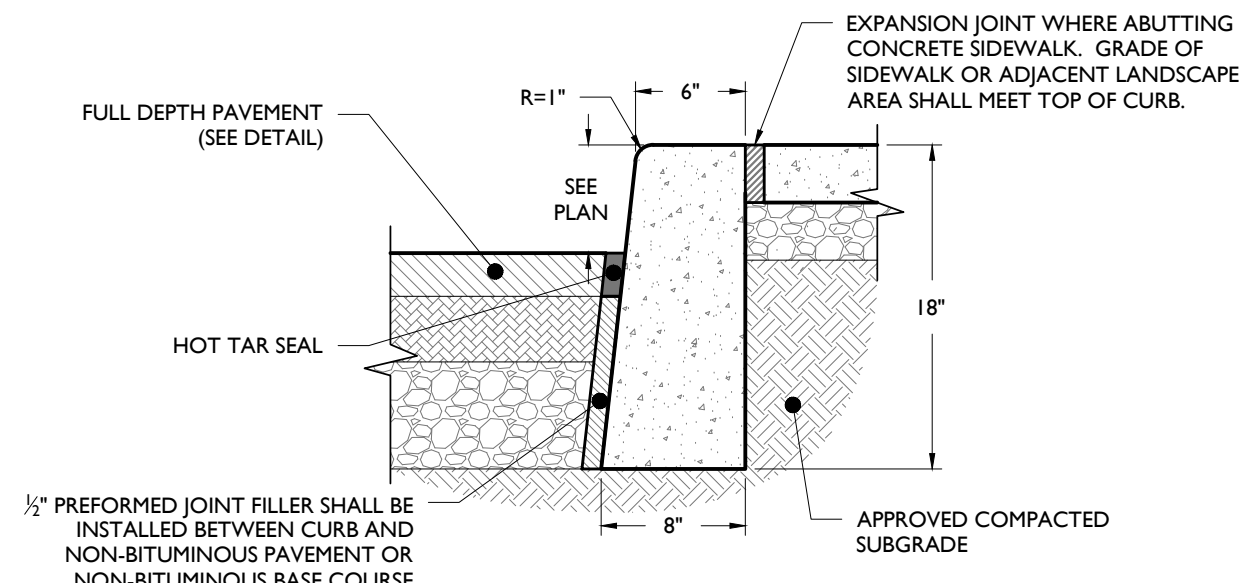
**CONCRETE CURB DETAIL**

NOT TO SCALE

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5



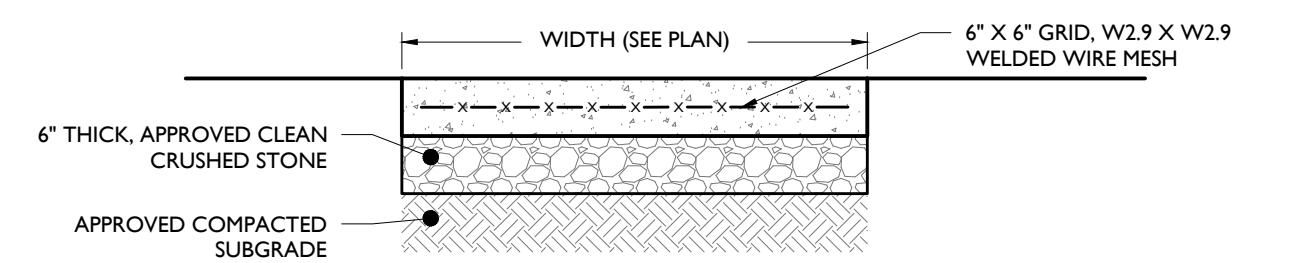
**CONCRETE CURB DETAIL**

NOT TO SCALE

NOTE:

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5



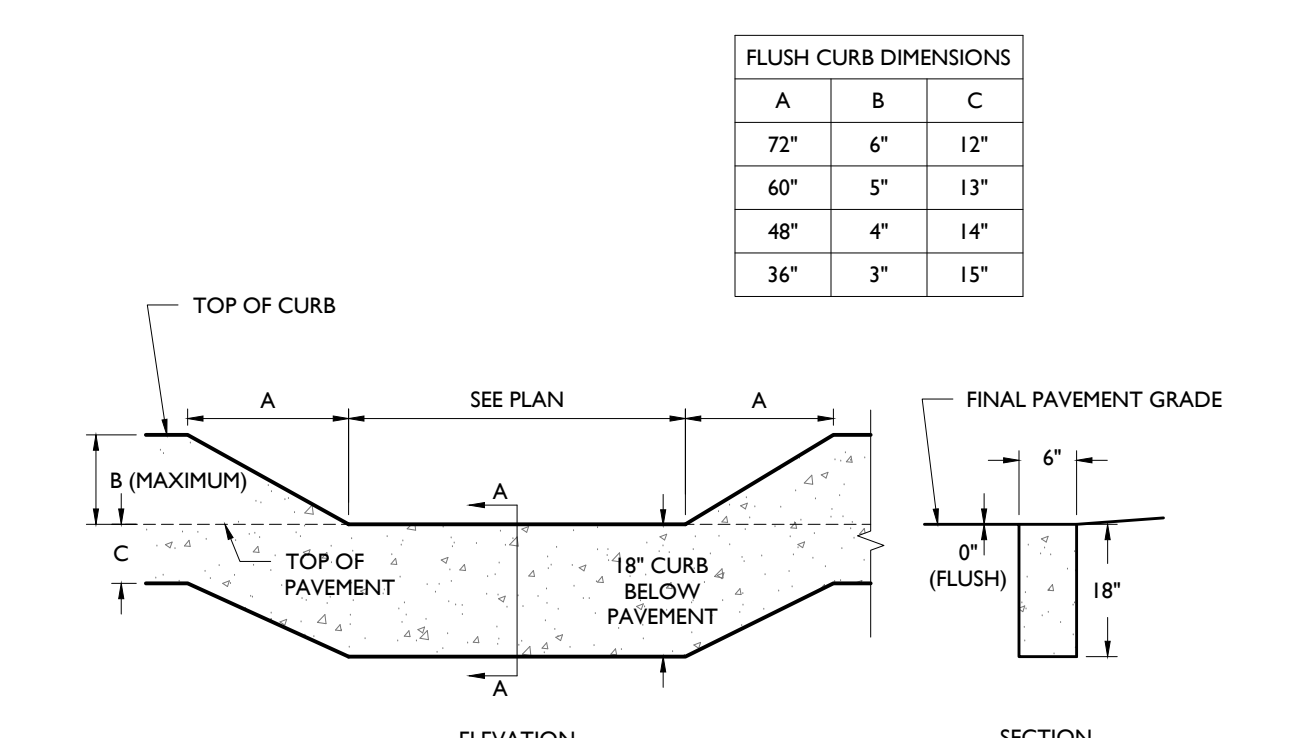
**REINFORCED 6" CONCRETE MAT**

NOT TO SCALE

NOTES:

1. 1/2" EXPANSION JOINTS WITH WATER SEAL SHALL BE PROVIDED AT 12' INTERVALS WITH PRE-MOLDED, BITUMINOUS JOINT FILLER, RECESSED 1/2" FROM THE SURFACE. LONGITUDINAL REBAR TO BE CUT AT EXPANSION JOINTS.
2. 1" DEEP BY 1/2" WIDE, TOOLED CONTRACTION JOINTS SHALL BE PROVIDED AT MID-POINT BETWEEN EXPANSION JOINTS OR 6' INTERVALS MAX.
3. CONCRETE SHALL RECEIVE BROOM FINISH.
4. ALL EXPOSED CORNERS TO HAVE 12' CHAMFER.

4

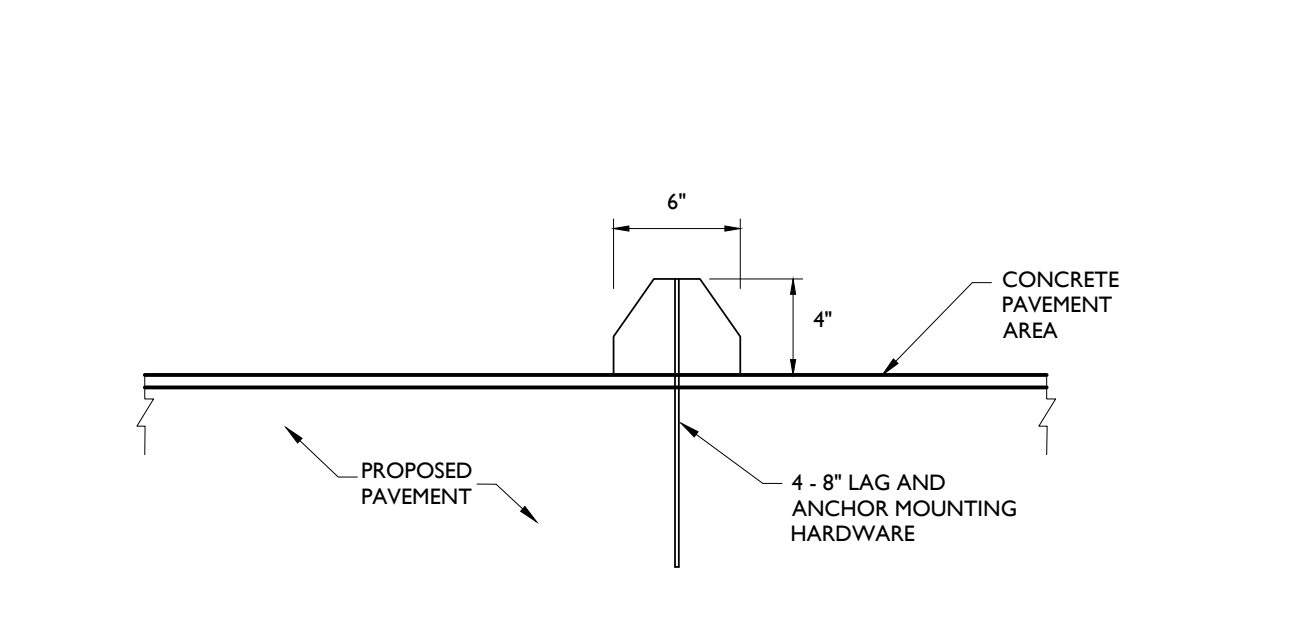


**FLUSH CURB DETAIL**

NOT TO SCALE

FLUSH CURB DIMENSIONS		
A	B	C
72"	6"	12"
60"	5"	13"
48"	4"	14"
36"	3"	15"

6



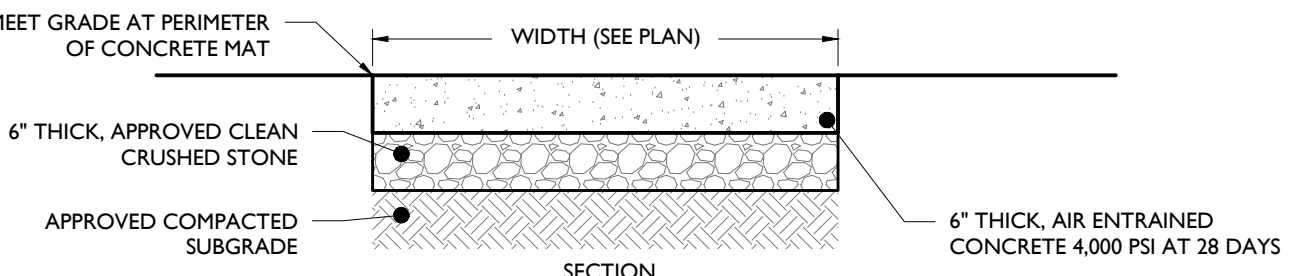
**RUBBER WHEEL STOP DETAIL**

NOT TO SCALE

NOTES:

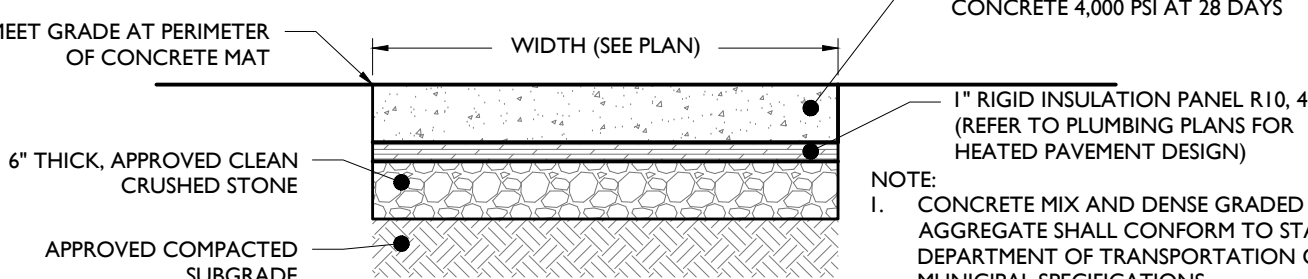
1. WHEEL STOP SHALL BE 6' LONG.
2. WHEEL STOP SHALL BE PREFABRICATED "6" TRAFFIC SAFETY STORE RUBBER PARKING BLOCK OR APPROVED EQUIVALENT.

10



**CONCRETE PAVEMENT**

NOT TO SCALE



**HEATED CONCRETE PAVEMENT**

\*HEATED PAVEMENT TO BE DESIGN BY OTHERS  
NOT TO SCALE

14

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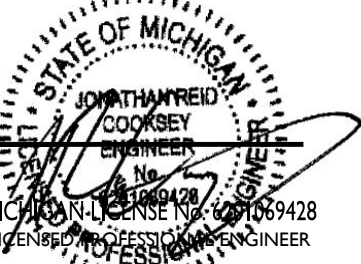
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**SITE DEVELOPMENT PLANS**  
**EL CARWASH - E. LONG LAKE**  
**PROPOSED AUTO WASH**  
**& OFFICE SPACE**

PARCEL ID: 20-12-476-045 & 20-12-476-049  
2955 & 2995 EAST LONG LAKE ROAD  
CITY OF TROY  
OAKLAND COUNTY, MI 48065



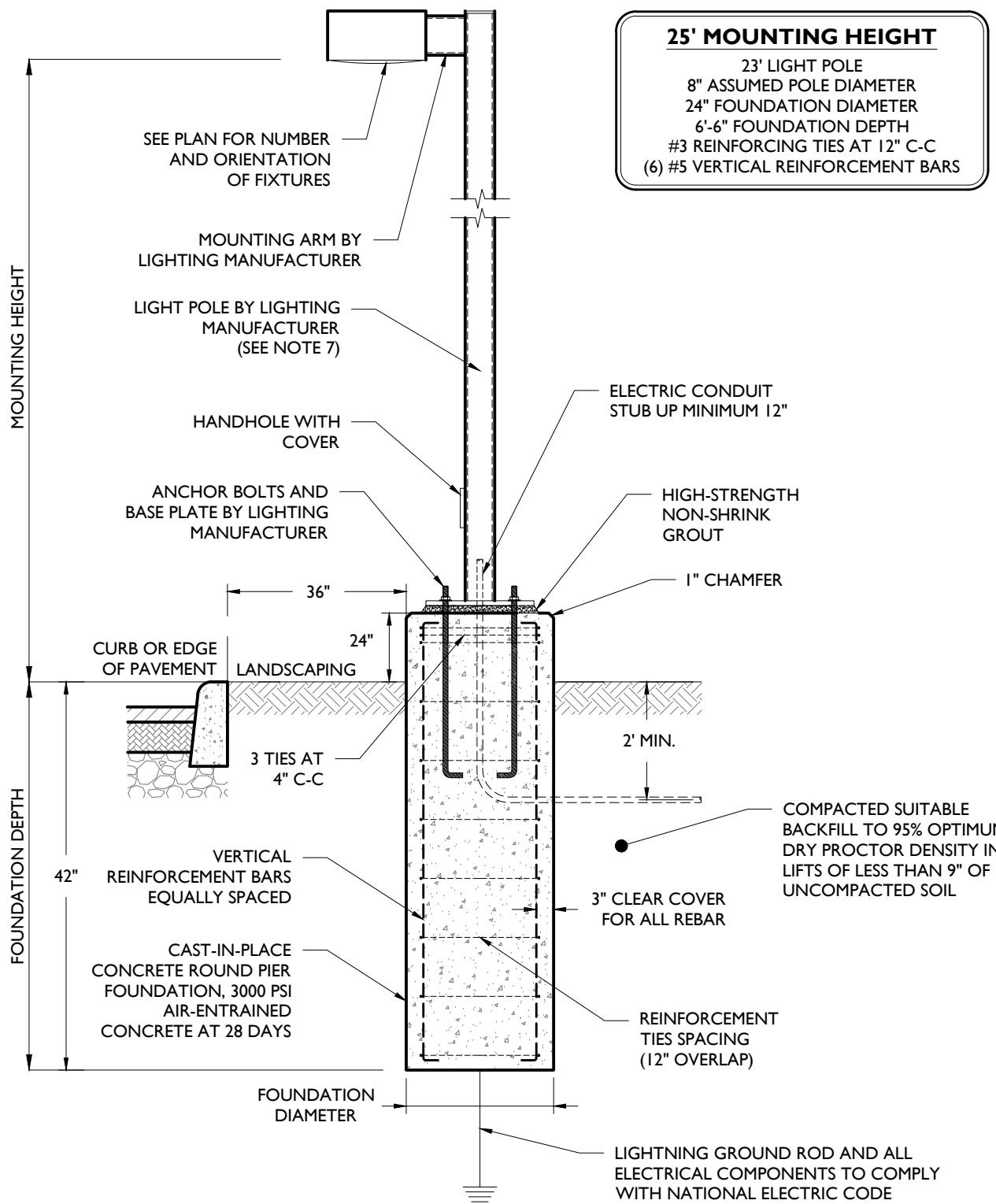
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SCALE: AS SHOWN PROJECT ID: DET-2300163

TITLE: **CONSTRUCTION DETAILS**

DRAWING:

**C-8**



**LIGHT POLE INSTALLATION DETAIL**

- NOT TO SCALE
- NOTES:
- MINIMUM SOIL BEARING PRESSURE OF 1500 PSF, SOIL FRICTION ANGLE OF 30 DEGREES, AND SOIL DRY UNIT WEIGHT OF 120 PCF SHALL BE CONFIRMED IN THE FIELD BY A QUALIFIED PROFESSIONAL.
  - CAST-IN-PLACE CONCRETE SHALL BE CONSOLIDATED USING VIBRATOR.
  - ALL REBAR TO BE NEW GRADE 60 STEEL.
  - PRE-CAST PIERS ACCEPTABLE UPON WRITTEN APPROVAL OF SHOP DRAWING BY ENGINEER.
  - CONCRETE TO BE INSTALLED A MINIMUM OF 7 DAYS PRIOR TO INSTALLING LIGHT POLE. POURED CONCRETE MIX REQUIRED TO OBTAIN 80% OF DESIGN STRENGTH PRIOR TO INSTALLING LIGHT POLE.
  - CONCRETE SHALL HAVE A MAXIMUM SLUMP OF 4" (WITHIN 1" TOLERANCE).
  - POLE SHALL BE RATED FOR 10 MPH HIGHER THAN MAXIMUM WIND SPEED 33FT ABOVE GROUND FOR THE AREA BASED ON ANS/JANICE 9-93.
  - POUR TO BE TERMINATED AT A FORM.
  - WORK SHALL CONFORM TO ACI BEST PRACTICES FOR APPROPRIATE TEMPERATURE AND WEATHER CONDITIONS.
  - CONTRACTOR TO TEMPORARILY SUPPORT ADJACENT SOIL AND STRUCTURES DURING EXCAVATION IF REQUIRED.

**Lumark**

**DESCRIPTION**  
 The Prevail™ LED pole and fixture combination makes selection and installation of poles and fixtures simple. Included in the die-cast Prevail area, site and roadway luminaire with standard mounting arm, square straight steel pole, anchor bolts, base cover, template and hardware. Back configurations are available in single and dual fixture combinations. The Prevail luminaire delivers a new level of versatility and value in patent pending, architectural design that delivers energy savings greater than 85% and replaces 100-400W metal halide fixtures. The Prevail fixture and pole combo is ideal for general area/white lighting applications.

**CONTROL OPTIONS**  
 0-10V (0)  
 This fixture is offered standard with 0-10V dimming wire leads for use with a lighting control panel or other control method.

**Phocentrol (PER and PER7)**  
 Phocentrol receptives provide a flexible solution to enable "dark-to-dawn" lighting by sensing light levels. Advanced control systems compatible with NEMA 7 pin standards can be utilized with the PER receptacle.

**Dimming Occupancy Sensor (MS/DIM-LXX)**  
 These sensors are factory installed in the luminaire housing. When a sensor for dimming operation (DIM) is selected, the luminaire will dim down to approximately 50 percent power after five minutes of no activity detected. When activity is detected, the luminaire returns to full light output.

**These occupancy sensors include an integral photocell that can be activated or inactivated with the programming remote / configuration tool for "dark-to-dawn" control or "daylight harvesting". Note: For MSP sensors, the factory preset is ON (Enabled). The programming remote / tool is a wireless tool that can be utilized to change the dimming level, time delay, sensitivity and other parameters. A variety of sensor lenses are available to optimized the coverage pattern for mounting heights from 8' to 30'.**

**POWER AND LUMENS**

Light Engine	CYS	CPS	Cd	CS
Nominal Power (Watts)	57W	87W	143W	163W
Input Current @ 120V (A)	0.43	0.60	1.09	1.32
Input Current @ 277V (A)	0.19	0.35	0.48	0.57
Lumens	7,111	13,183	17,144	20,560
Type III BUG Rating	E1-U0-G2	E2-U0-G3	E3-U0-G4	E3-U0-G4
Type IV BUG Rating	E1-U0-G3	E2-U0-G4	E2-U0-G4	E3-U0-G5

**LUMEN MAINTENANCE**

Ambient Temperature	TM-D1 Lumen Maintenance (90,000 Hours)	Theoretical L30 (Hours)
20°C	> 91.30%	> 184,000
40°C	> 87.59%	> 134,000

**LUMEN MULTIPLIER**

Ambient Temperature	Lumen Multiplier
10°C	1.02
20°C	1.00
40°C	0.99

**CERTIFICATION DATA**  
 UL and cUL Wet Location Listed  
 IP68  
 35 Vibration Rated  
 165,000

**ENERGY DATA**  
 ENERGY LED Driver  
 0.9 Power Factor  
 <2% Total Harmonic Distortion  
 120-277V/50 and 60Hz  
 347V/60Hz, 480V/60Hz  
 40°C Minimum Temperature Rating  
 40°C Ambient Temperature Rating

**EPA**  
 Effective Projected Area (Sq. Ft.) 0.75  
 (1 Fixture)

**SHIPPING DATA**  
 Approximate Net Weight: 20lbs. (9.09 kg) (1 Fixture)

**FFPRV PREVAIL POLE AND FIXTURE COMBO**

**POLE MOUNT ARM**

**Dimensions:**  
 15" (381mm)  
 20" (508mm)  
 25" (635mm)  
 30" (762mm)  
 35" (889mm)  
 40" (1016mm)  
 45" (1143mm)  
 50" (1270mm)

**Base View:**  
 4" (102mm)  
 6" (152mm)  
 8" (203mm)  
 10" (254mm)  
 12" (305mm)  
 15" (381mm)  
 20" (508mm)  
 25" (635mm)  
 30" (762mm)  
 35" (889mm)  
 40" (1016mm)  
 45" (1143mm)  
 50" (1270mm)

**Lumark**

**DESCRIPTION**  
 The patented Lumark Crosstour™ MAXX LED wall pack series of luminaires provides low profile architectural style with super bright, energy efficient LEDs. The rugged die-cast aluminum construction, back box with secure lock hinges, stainless steel hardware along with a sealed and gasketed optical compartment make Crosstour impervious to contaminants. The Crosstour MAXX wall luminaire is ideal for wall surface, inverted mount for facade/scenery illumination, perimeter and site lighting. Typical applications include pedestrian walkways, building entrances, multi-use facilities, industrial facilities, perimeter parking areas, storage facilities, institutions, schools and loading docks.

**CONTROL OPTIONS**  
 0-10V (0)  
 This fixture is offered standard with 0-10V dimming wire leads for use with a lighting control panel or other control method.

**Phocentrol (PER and PER7)**  
 Phocentrol receptives provide a flexible solution to enable "dark-to-dawn" lighting by sensing light levels. Advanced control systems compatible with NEMA 7 pin standards can be utilized with the PER receptacle.

**Dimming Occupancy Sensor (MS/DIM-LXX)**  
 These sensors are factory installed in the luminaire housing. When a sensor for dimming operation (DIM) is selected, the luminaire will dim down to approximately 50 percent power after five minutes of no activity detected. When activity is detected, the luminaire returns to full light output.

**These occupancy sensors include an integral photocell that can be activated or inactivated with the programming remote / configuration tool for "dark-to-dawn" control or "daylight harvesting". Note: For MSP sensors, the factory preset is ON (Enabled). The programming remote / tool is a wireless tool that can be utilized to change the dimming level, time delay, sensitivity and other parameters. A variety of sensor lenses are available to optimized the coverage pattern for mounting heights from 8' to 30'.**

**POWER AND LUMENS**

Light Engine	CYS	CPS	Cd	CS
Nominal Power (Watts)	57W	87W	143W	163W
Input Current @ 120V (A)	0.43	0.60	1.09	1.32
Input Current @ 277V (A)	0.19	0.35	0.48	0.57
Lumens	7,111	13,183	17,144	20,560
Type III BUG Rating	E1-U0-G2	E2-U0-G3	E3-U0-G4	E3-U0-G4
Type IV BUG Rating	E1-U0-G3	E2-U0-G4	E2-U0-G4	E3-U0-G5

**LUMEN MAINTENANCE**

Ambient Temperature	TM-D1 Lumen Maintenance (90,000 Hours)	Theoretical L30 (Hours)
20°C	> 91.30%	> 184,000
40°C	> 87.59%	> 134,000

**LUMEN MULTIPLIER**

Ambient Temperature	Lumen Multiplier
10°C	1.02
20°C	1.00
40°C	0.99

**CERTIFICATION DATA**  
 UL and cUL Wet Location Listed  
 IP68  
 35 Vibration Rated  
 165,000

**ENERGY DATA**  
 ENERGY LED Driver  
 0.9 Power Factor  
 <2% Total Harmonic Distortion  
 120-277V/50 and 60Hz  
 347V/60Hz, 480V/60Hz  
 40°C Minimum Temperature Rating  
 40°C Ambient Temperature Rating

**EPA**  
 Effective Projected Area (Sq. Ft.) 0.75  
 (1 Fixture)

**SHIPPING DATA**  
 Approximate Net Weight: 20lbs. (9.09 kg) (1 Fixture)

**XTOR CROSSTOUR MAXX LED**

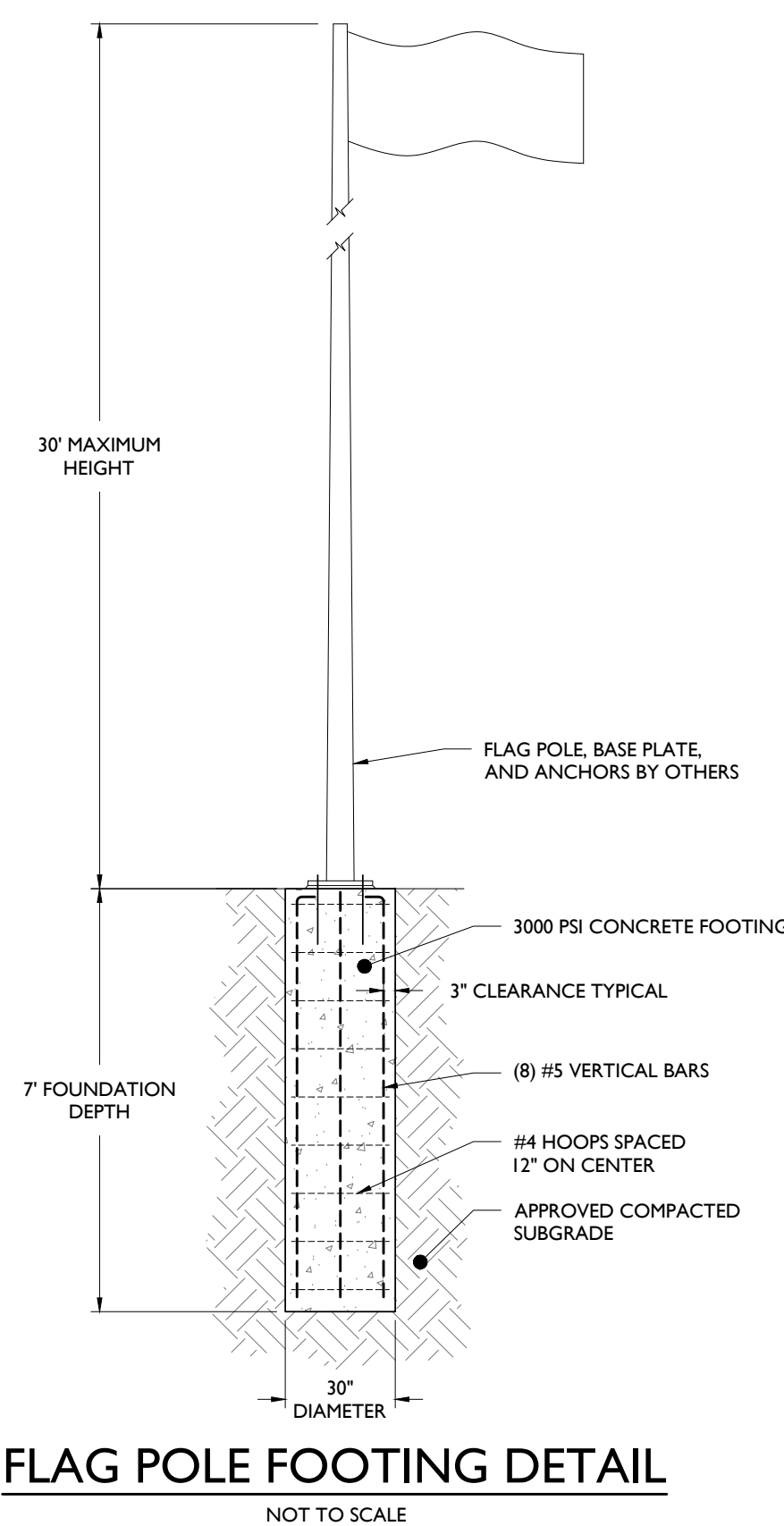
**Applications:** WALL / SURFACE INVERTED SITE LIGHTING

**Dimensions:**  
 15" (381mm)  
 20" (508mm)  
 25" (635mm)  
 30" (762mm)  
 35" (889mm)  
 40" (1016mm)  
 45" (1143mm)  
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**Base View:**  
 4" (102mm)  
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 8" (203mm)  
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 20" (508mm)  
 25" (635mm)  
 30" (762mm)  
 35" (889mm)  
 40" (1016mm)  
 45" (1143mm)  
 50" (1270mm)

**LIGHT FIXTURE SPECIFICATION (A, B, & C)**

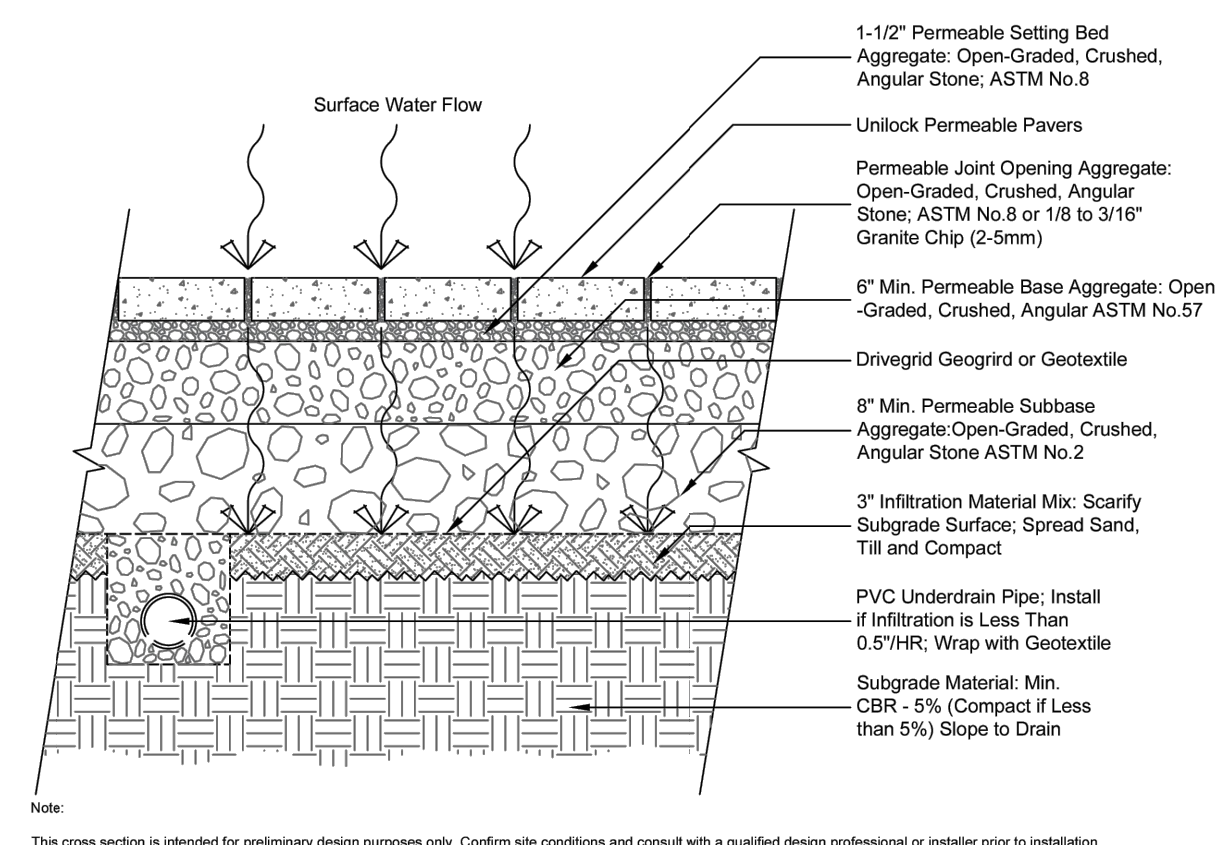
**LIGHT FIXTURE SPECIFICATION (D)**



**PERMEABLE PAVER** REF: CS\_COM\_Permeable\_Low\_Infiltration\_Underdrain\_Med\_Duty

**CROSS SECTION**

Permeable Paver Detail - Low Infiltration - Medium Duty with Underdrain



UNILOCK.COM | 1-800-UNILOCK

**UNILOCK**  
 PAVERS & WALLS

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 Phone 248.247.1115

**EL CARWASH - E. LONG LAKE**  
 PROPOSED AUTO WASH  
 & OFFICE SPACE

PARCEL ID: 20-12-476-045 & 20-12-476-049  
 2955 & 2995 EAST LONG LAKE ROAD  
 CITY OF TROY  
 OAKLAND COUNTY, MI 48065

**STATE OF MICHIGAN**  
 DEPARTMENT OF LAND AND NATURAL RESOURCES  
 DIVISION OF LAND AND WATER MANAGEMENT  
 MICHAEL J. GIBSON, REGISTERED PROFESSIONAL ENGINEER  
 LICENSE NO. 925428

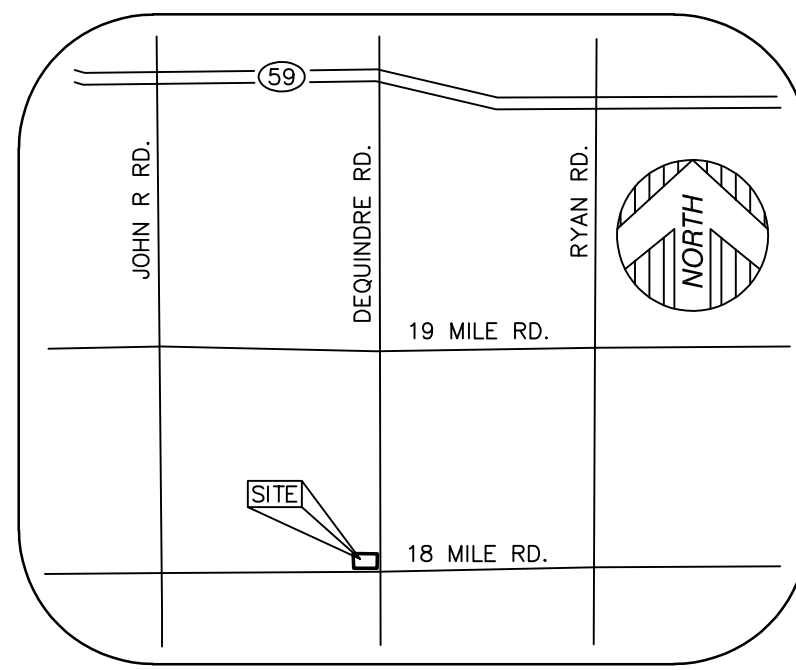
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SCALE: AS SHOWN PROJECT ID: DET-2300163

TITLE:  
**CONSTRUCTION DETAILS**

DRAWING:  
**C-9**

V:\PROJECTS\2012\2012-EL-CARWASH-2012 & 1995 EAST LONG LAKE ROAD.TXD: 11/16/2011 10:08:08 AM



VICINITY MAP  
(NOT TO SCALE)

**PARKING**

HANDICAP PARKING = 3 STALLS  
STANDARD PARKING = 64 STALLS

**PARCEL AREA**

**PARCEL 1:**  
42,027± SQUARE FEET = 0.97± ACRES

**PARCEL 2:**  
21,497± SQUARE FEET = 0.49± ACRES

TOTAL:  
63,524± SQUARE FEET = 1.46± ACRES

**BASIS OF BEARING**

NORTH 89°32'26" WEST, BEING THE NORTH LINE OF EAST LONG LAKE RD., AS DESCRIBED.

**BENCHMARK**

**SITE BENCHMARK #1**  
ARROW ON HYDRANT AT NORTHWEST CORNER OF LONG LAKE & DEQUINDE RD  
ELEVATION = 645.38' (NAVD 88)

**SURVEYOR'S NOTE**

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES OTHER THAN THE STRUCTURE INVENTORY SHOWN HEREON.

**LEGEND**

SET 1/2" REBAR WITH CAP P.S. 47976	SET MAG NAIL
FOUND MONUMENT (AS NOTED)	FOUND SECTION CORNER (AS NOTED)
RECORD AND MEASURED DIMENSION	RECORD DIMENSION
MEASURED DIMENSION	GROUND ELEVATION
ELECTRIC PANEL	TRANSFORMER
UTILITY POLE	GAS VALVE
LIGHT POLE WITH STREET LAMP	CABLE TV RISER
TRAFFIC SIGNAL	TRAFFIC SIGNAL MANHOLE
SANITARY MANHOLE	ROUND CATCH BASIN
SQUARE CATCH BASIN	STORM DRAIN MANHOLE
FIRE HYDRANT	WATER GATE MANHOLE
UNKNOWN MANHOLE	BOLLARD
FLAGPOLE	LIGHTPOST/LAMP POST
SINGLE POST SIGN	DOUBLE POST SIGN
HANDICAP PARKING	DECIDUOUS TREE (AS NOTED)
CONIFEROUS TREE (AS NOTED)	PARCEL BOUNDARY LINE
PLATTED LOT LINE	ADJOINER PARCEL LINE
EASEMENT (AS NOTED)	EASEMENT CENTERLINE
BUILDING	BUILDING OVERHANG
ASPHALT CURB	CONCRETE CURB
RAISED CONCRETE	PARKING
EDGE OF CONCRETE (CONC.)	EDGE OF ASPHALT (ASPH.)
FENCE (AS NOTED)	WALL (AS NOTED)
OVERHEAD UTILITY LINE	UNDERGROUND CABLE
GAS LINE	SANITARY LINE
STORM LINE	WATER LINE
BUILDING AREA	ASPHALT
CONCRETE	

**MANHOLE SCHEDULE**

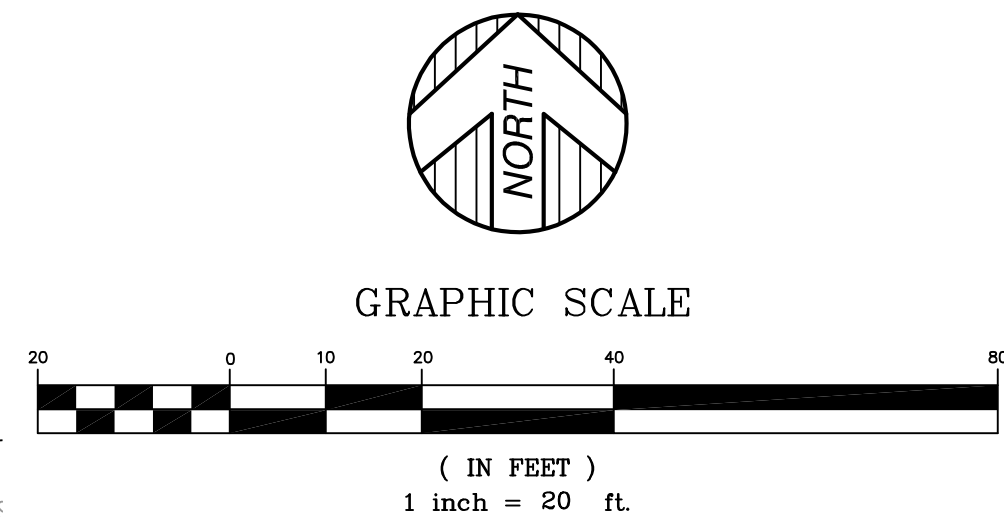
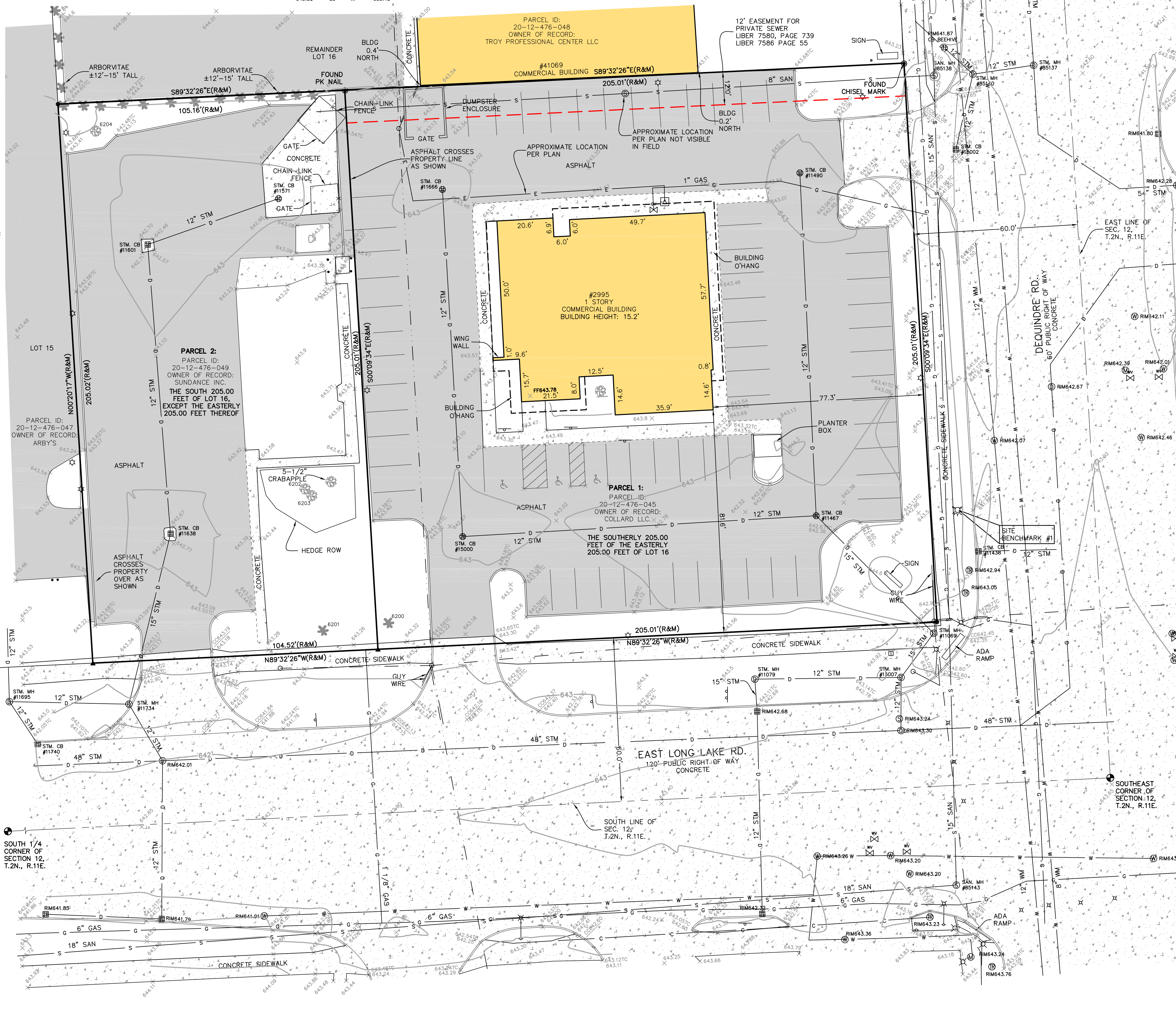
NUM	TYPE	RIM (FT)	SIZE (IN)	DIR	INV ELEV (FT)	NUM	TYPE	RIM (FT)	SIZE (IN)	DIR	INV ELEV (FT)
11069	STORM MANHOLE	642.68	15	NW	638.43	11734	STORM MANHOLE	642.87	12	SE	636.47
		642.68	15	SW	638.38			642.87	12	NE	639.62
11079	STORM MANHOLE	643.56	12	E	636.44	11740	CATCH BASIN	642.87	12	NW	638.17
		643.56	15	S	636.46	15000	CATCH BASIN	642.68	12	E	639.68
11438	CATCH BASIN	641.95	12	E	631.30			642.68	12	N	639.68
11467	CATCH BASIN	642.06	12	N	639.11	15002	CATCH BASIN	641.44	7	WATER	637.94
		642.06	12	W	639.16	15007	STORM MANHOLE	643.41	12	SE	638.31
		642.06	15	SE	638.76			643.41	12	W	636.61
11490	CATCH BASIN	642.45	12	S	639.75	85137	STORM MANHOLE	642.50	54	N	626.70
11571	CATCH BASIN	642.71	12	W	640.31			642.50	54	S	626.40
11601	CATCH BASIN	642.30	12	E	639.95			642.50	54	N	634.14
		642.30	12	S	638.65	85138	SANITARY MANHOLE	643.24	15	N	634.14
11638	CATCH BASIN	642.42	12	N	639.82			643.24	15	S	634.09
		642.42	15	SW	639.72			643.24	8	W	635.19
11666	CATCH BASIN	642.72	12	S	640.52	85140	STORM MANHOLE	641.85	12	NW	637.85
11695	STORM MANHOLE	643.35	12	N	638.95			641.85	12	E	635.25
		643.35	12	E	636.65			641.85	12	SE	637.70
		643.35	12	SE	636.75	85143	SANITARY MANHOLE	643.11	15	N	633.46
								643.11	18	W	633.41

**ZONING REGULATIONS**

GB - GENERAL BUSINESS DISTRICT

- \*MINIMUM LOT SIZE - N/A
- \*MINIMUM LOT WIDTH - N/A
- \*MAXIMUM LOT COVERAGE - N/A
- \*REQUIRED MINIMUM SETBACK LINES - FRONT - 10 FEET, LEAST ONE SIDE - 20 FEET, TOTAL TWO SIDES - 40 FEET, REAR - 30 FEET
- \*MAXIMUM HEIGHT - 40 FEET/3 STORIES

NOTE: ALL ZONING INFORMATION IS TAKEN FROM THE CITY OF TROY WEBSITE. ALL ZONING INFORMATION MUST BE VERIFIED FOR COMPLETENESS WITH CURRENT ZONING REGULATIONS.



**PROPERTY DESCRIPTION**

THE LAND SITUATED IN THE CITY OF TROY, COUNTY OF OAKLAND, STATE OF MICHIGAN, IS DESCRIBED AS FOLLOWS:

**PARCEL 1:** THE SOUTHERLY 205.00 FEET OF THE EASTERLY 205.00 FEET OF LOT 16, JENNINGS SUBDIVISION, ACCORDING TO THE PLAT THEREOF, AS RECORDED IN LIBER 59 OF PLATS, PAGE 8, OAKLAND COUNTY RECORDS.

**PARCEL 2:** THE SOUTHERLY 205 FEET OF LOT 16, EXCEPT THE EASTERLY 205 FEET THEREOF, ACCORDING TO THE PLAT THEREOF, AS RECORDED IN LIBER 59 OF PLATS, PAGE 8, OAKLAND COUNTY RECORDS, BEING MORE PARTICULARLY DESCRIBED AS: BEGINNING AT A POINT ON THE NORTHERLY LINE OF EAST LONG LAKE ROAD (120 FEET WIDE) DISTANT NORTH 89 DEGREES 32 MINUTES 26 SECONDS WEST, 205.01 FEET ALONG SAID NORTHERLY LINE, FROM THE SOUTHEAST CORNER OF LOT 16, SAID CORNER BEING ALSO THE INTERSECTION OF THE WESTERLY LINE OF DEQUINDE ROAD, (120 FEET WIDE) WITH THE NORTHERLY LINE OF SAID EAST LONG LAKE ROAD, PROCEEDING THENCE NORTH 89 DEGREES 32 MINUTES 26 SECONDS WEST, 104.52 FEET ALONG SAID NORTHERLY LINE, THENCE NORTH 00 DEGREES 20 MINUTES 17 SECONDS WEST, 205.02 FEET; THENCE SOUTH 89 DEGREES 32 MINUTES 26 SECONDS EAST, 105.16 FEET; THENCE SOUTH 00 DEGREES 09 MINUTES 34 SECONDS EAST, 205.01 FEET TO THE POINT OF BEGINNING.

**TITLE REPORT NOTE**

**PARCEL 1:** ONLY THOSE EXCEPTIONS CONTAINED WITHIN THE FIRST AMERICAN TITLE INSURANCE COMPANY COMMITMENT NO. 10135-109499, DATED 07/25/23, AND RELISTED BELOW WERE CONSIDERED FOR THIS SURVEY. NO OTHER RECORDS RESEARCH WAS PERFORMED BY THE CERTIFYING SURVEYOR.

7. COVENANTS, CONDITIONS AND RESTRICTIONS AND OTHER PROVISIONS AS CONTAINED IN INSTRUMENT RECORDED IN LIBER 2758, PAGE 663, OAKLAND COUNTY RECORDS, PLEASE BE ADVISED THAT ANY PROVISION CONTAINED IN THIS DOCUMENT, OR IN A DOCUMENT THAT IS ATTACHED, LINKED, OR REFERENCED IN THIS DOCUMENT, THAT UNDER APPLICABLE LAW ILLEGALLY DISCRIMINATES AGAINST A CLASS OF INDIVIDUALS BASED UPON PERSONAL CHARACTERISTICS SUCH AS RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, GENDER IDENTITY, FAMILIAL STATUS, DISABILITY, NATIONAL ORIGIN, OR ANY OTHER LEGALLY PROTECTED CLASS, IS ILLEGAL AND UNENFORCEABLE. (SEE DOCUMENT FOR TERMS AND CONDITIONS)

8. SUBJECT TO THE EASEMENTS, RESTRICTIONS AND RESERVATIONS CONTAINED IN THE JENNINGS SUBDIVISION PLAT RECORDED AT LIBER 59, PAGE(S) 8, OAKLAND COUNTY RECORDS,(NONE)

17. EASEMENT FOR PRIVATE SEWER, AND THE TERMS, CONDITIONS AND PROVISIONS CONTAINED THEREIN, RECORDED IN LIBER 7580, PAGE 739 AND LIBER 7586, PAGE 55, (AS SHOWN)

**PARCEL 2:** ONLY THOSE EXCEPTIONS CONTAINED WITHIN THE FIRST AMERICAN TITLE INSURANCE COMPANY COMMITMENT NO. 10135-109499, DATED 07/25/23, AND RELISTED BELOW WERE CONSIDERED FOR THIS SURVEY. NO OTHER RECORDS RESEARCH WAS PERFORMED BY THE CERTIFYING SURVEYOR.

7. COVENANTS, CONDITIONS AND RESTRICTIONS AND OTHER PROVISIONS AS CONTAINED IN INSTRUMENT RECORDED IN LIBER 2758, PAGE 663, OAKLAND COUNTY RECORDS, PLEASE BE ADVISED THAT ANY PROVISION CONTAINED IN THIS DOCUMENT, OR IN A DOCUMENT THAT IS ATTACHED, LINKED, OR REFERENCED IN THIS DOCUMENT, THAT UNDER APPLICABLE LAW ILLEGALLY DISCRIMINATES AGAINST A CLASS OF INDIVIDUALS BASED UPON PERSONAL CHARACTERISTICS SUCH AS RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, GENDER IDENTITY, FAMILIAL STATUS, DISABILITY, NATIONAL ORIGIN, OR ANY OTHER LEGALLY PROTECTED CLASS, IS ILLEGAL AND UNENFORCEABLE. (SEE DOCUMENT FOR TERMS AND CONDITIONS)

8. SUBJECT TO THE EASEMENTS, RESTRICTIONS AND RESERVATIONS CONTAINED IN THE JENNINGS SUBDIVISION PLAT RECORDED AT LIBER 59, PAGE(S) 8, OAKLAND COUNTY RECORDS,(NONE)

16. EASEMENT FOR PRIVATE SEWER, AND THE TERMS, CONDITIONS AND PROVISIONS CONTAINED THEREIN, RECORDED IN LIBER 7580, PAGE 739 AND LIBER 7586, PAGE 55, (AS SHOWN)

**SURVEYOR'S CERTIFICATION**

TO NATIONAL EXPRESS WASH II LLC, A DELAWARE LIMITED LIABILITY COMPANY, FIRST AMERICAN TITLE INSURANCE COMPANY & TITLE CONNECT, LLC

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 5, 6A, 6B, 7A, 7B1, 7C, 8, 9, 11A, 11B, 13, 14, 16, 17, 18 AND 19 OF TABLE A, THEREOF. THE FIELD WORK WAS COMPLETED ON 09/01/23.

DATE OF PLAT OR MAP: 09/15/23

ANTHONY T. SYCKO, JR., P.S.  
PROFESSIONAL SURVEYOR  
MICHIGAN LICENSE NO. 47976  
22556 GRATIOT AVE., EASTPOINTE, MI 48021  
TSycko@kemtec-survey.com

ALTA / NSPS LAND TITLE SURVEY  
PREPARED FOR: ALRIG USA  
2955 & 2995 EAST LONG LAKE RD., TROY, MICHIGAN,  
PART OF SECTION 12,  
TOWN 2 NORTH, RANGE 11 EAST

DATE	BY	REVISION	DESCRIPTION
09-15-23	LU	1	ADDED TREE SURVEY
05-03-24	JDM	2	UTILITIES REVISED PER REVIEW COMMENT
09-27-23	JO	1	DESCRIPTION

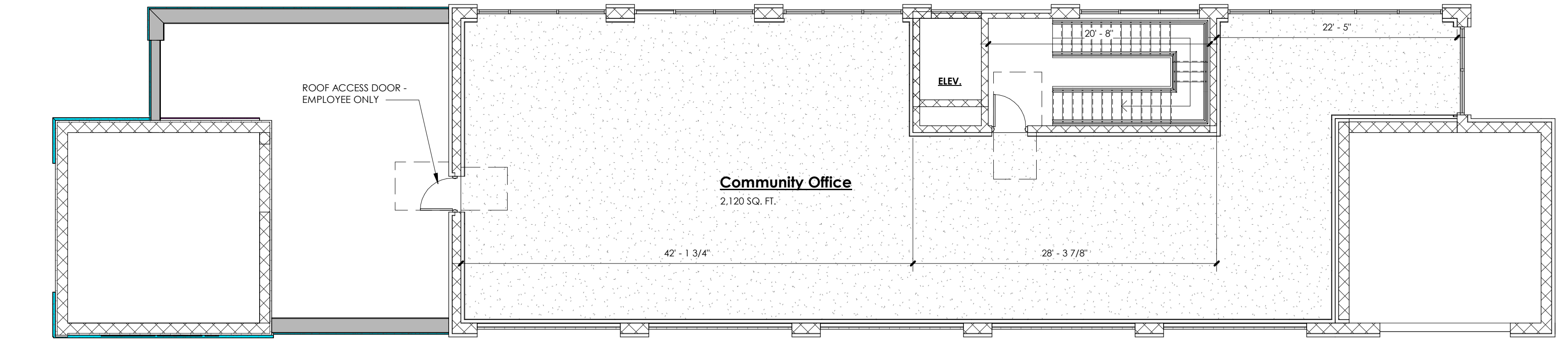
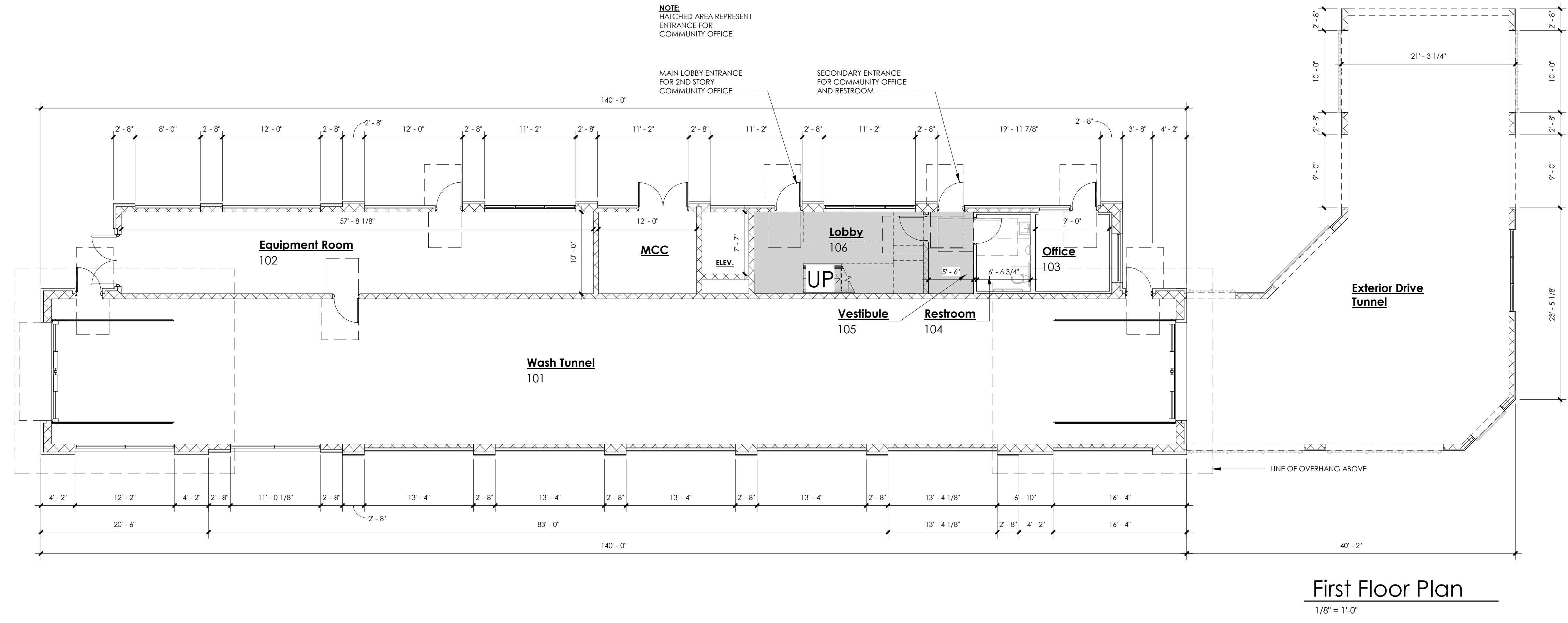
**KEM-TEC**  
A GROUP OF COMPANIES  
PROFESSIONAL ENGINEERING,  
SURVEYING & ENVIRONMENTAL  
SERVICES  
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Ann Arbor, MI 48106  
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(313) 758-0877  
(734) 994-0888  
Grand Blanc, MI 48031  
(800) 694-0001  
www.kemtecgroupprofessionals.com

Client:  
El Car Wash East Long Lake LLC  
30200 Telegraph Rd., Suite 205  
Bingham Farms, MI 48025

Project:  
El Car Wash  
2995 E. Long Lake  
Troy, MI 48065

Issued	Description	By
01.19.2024	Initial Client Review	
05.23.2024	Site Plan Review	
07.12.2024	Planning Comments	
08.02.2024	Site Plan Review	

PRELIMINARY NOT FOR CONSTRUCTION



Seal:

Note:  
Do not scale drawings. Use calculated dimensions only. Verify existing conditions in field.

North Arrow:

Sheet Title:  
Floor Plan

Project Number:  
23-132

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

Sheet Number:

**A.101**

TRANSPARENCY REQUIREMENTS						
FACADE	FRONT OR SIDE	TRANSPARENCY REQ.**	TOTAL AREA	GLAZING / DOOR SQ. FT. / %	GREEN SCREEN/CLEAR OPENING / %**	MEETS REQUIREMENTS: YES/NO
NORTH	SIDE YARD	30%	2,844 SQ. FT.	352 SQ. FT. / 12.4%	284 SQ. FT / 10.0%	YES - SEE COMMENTS BELOW
SOUTH	FRONT YARD	50%	2,843 SQ. FT.	524 SQ. FT / 18.4%	279 SQ. FT / 9.8%	YES - SEE COMMENTS BELOW
WEST	SIDE YARD	30%	502 SQ. FT.	205 SQ. FT / 40.6%	0 SQ. FT / 0%	YES
EAST	FRONT YARD	50%	827 SQ. FT.	87 SQ. FT / 10.5%	204 SQ. FT / 24.7%	YES - SEE COMMENTS BELOW

**NOTES:**

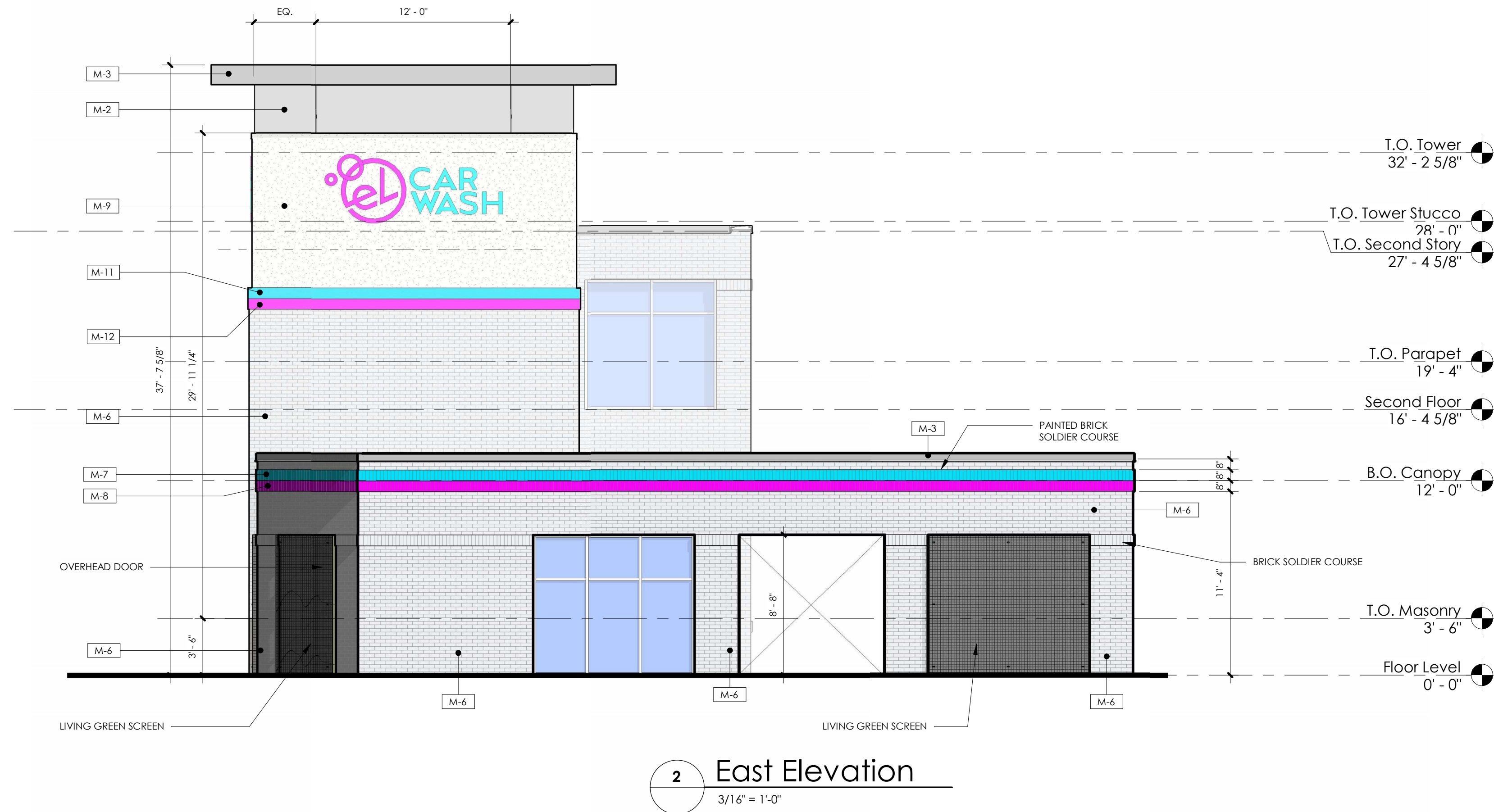
\* Transparency Requirements: Per Section 5.06 - Neighborhood Nodes District, section E.2.A states the transparency requirement apply to the first floor of a building only. Additionally, "Transparency Alternatives" may be used for up to 80% of the requirements on front facades when used in combination and the wall design may be used for up to 100% of the requirement for side street/yard requirements.  
 \*\* Green Screens or planter walls count towards one of the wall design alternatives per Section 2.8.1.F.

- North Facade.
  - The additional 501 sq. ft. required to meet the 30% requirement is completed using the wall design alternatives. This takes into account a series of green living wall screens (l), variations in material module, pattern, and/or color (d), and a system of horizontal and vertical scaling elements such as: soldier courses, horizontal bands, and brick pilasters. The wall design alternative can account for up to 80% of the transparency requirement.
- South Facade.
  - The additional 897.5 sq. ft. required to meet the 50% requirement is completed using the wall design alternatives and outdoor seating, which can account for 80% of the required transparent area. This takes into account a series of green living wall screens (l), variations in material module, pattern, and/or color (d), and a system of horizontal and vertical scaling elements such as: soldier courses, horizontal bands, and brick pilasters. The wall design alternative can account for up to 710.5 sq. ft. while the outdoor seating accounts for the remaining.
- West Facade.
  - The West facade is covered by the percentage of glazing/door currently shown.
- East Facade.
  - The 413.5 sq. ft. required to meet the 50% requirement is completed using the wall design alternatives and outdoor seating of the corner. Transparency requirements may account for 80% of the required wall space. Glazing/Door space is required to be at least 82.7 sq. ft. which we meet. The Wall design alternatives take into account a series of green living wall screens (l), variations in material module, pattern, and/or color (d), and a system of horizontal and vertical scaling elements such as: soldier courses, horizontal bands, and brick pilasters. The wall design alternative can account for up to 50% of the transparency requirement. The remaining square footage is covered by outdoor seating areas.

**EXTERIOR MATERIAL SCHEDULE :**

M-1	DESCRIPTION: DOUBLE TITAN BRICK (GLEN-GERY) FINISH / COLOR: PAINTED "GAUNTLET GREY"
M-2	DESCRIPTION: ALUM. COMPOSITE PANEL BASIS OF DESIGN: APOLIC FINISH / COLOR: REFLECTIVE MIRROR
M-3	DESCRIPTION: METAL FLASHINGS BASIS OF DESIGN: PAC-CLAD (24 GA) FINISH / COLOR: SILVER
M-4	DESCRIPTION: BRICK BASIS OF DESIGN: GLEN-GERY FINISH / COLOR: PAINTED "GAUNTLET GREY"
M-5	DESCRIPTION: PREF-AB CANOPY BASIS OF DESIGN: MASA FINISH / COLOR: EXTNULOCK B' J 366 FLAT SORTIE FEDERAL STANDARD GREY
M-6	DESCRIPTION: BRICK BASIS OF DESIGN: GLEN-GERY FINISH / COLOR: SEASPRAY KLAYCOAT
M-7	DESCRIPTION: BRICK (SOLDIER COURSE) FINISH / COLOR: PAINTED - PANTONE 3252 (CYAN)
M-8	DESCRIPTION: BRICK (SOLDIER COURSE) FINISH / COLOR: PAINTED - LOGO COLOR (MAGENTA)
M-9	DESCRIPTION: EIFS BASIS OF DESIGN: STO CORP. FINISH / COLOR: HIGH REFLECTIVE WHITE SW 7527 (WHITE)
M-10	DESCRIPTION: HORIZONTAL FLAT FIN BASIS OF DESIGN: MICELPRO FINISH / COLOR: SLATE GRAY
M-11	DESCRIPTION: EIFS BASIS OF DESIGN: STO CORP. FINISH / COLOR: PANTONE 3252 (CYAN)
M-12	DESCRIPTION: EIFS BASIS OF DESIGN: STO CORP. FINISH / COLOR: PAINTED LOGO COLOR (MAGENTA)
M-13	DESCRIPTION: ALUM. COMPOSITE PANEL BASIS OF DESIGN: APOLIC FINISH / COLOR: RHINESTONE SW7656

**NOTE:** SUBMIT SAMPLES OF ALL SELECTED MATERIALS TO OWNER & ARCHITECT FOR APPROVAL PRIOR TO ORDERING.



**2 East Elevation**  
3/16" = 1'-0"



**1 North Elevation**  
3/16" = 1'-0"

**KRIEGER KLATT ARCHITECTS**  
2120 E. 11 Mile Rd., | Royal Oak, MI 48067  
P: 248.414.9270 F: 248.414.9275  
www.kriegerklatt.com

**Client:**  
El Car Wash East Long Lake LLC  
30200 Telegraph Rd., Suite 205  
Bingham Farms, MI 48025

**Project:**  
El Car Wash  
2995 E. Long Lake  
Troy, MI 48065

Issued	Description	By
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**Seal:**

**Note:**  
Do not scale drawings. Use calculated dimensions only. Verify existing conditions in field.

**North Arrow:**

**Sheet Title:**  
Exterior Elevations

**Project Number:**  
23-132

**Scale:**  
As Indicated

**Sheet Number:**

**A.200**

PRELIMINARY NOT FOR CONSTRUCTION



TRANSPARENCY REQUIREMENTS						
FACADE	FRONT OR SIDE	TRANSPARENCY REQ.*	TOTAL AREA	GLAZING / DOOR SQ. FT. / %	GREEN SCREEN/CLEAR OPENING / %**	MEETS REQUIREMENTS, YES/NO
NORTH	SIDE YARD	30%	2,844 SQ. FT	352 SQ. FT / 12.4%	284 SQ. FT / 10.0%	YES - SEE COMMENTS BELOW
SOUTH	FRONT YARD	50%	2,843 SQ. FT	524 SQ. FT / 18.4%	279 SQ. FT / 9.8%	YES - SEE COMMENTS BELOW
WEST	SIDE YARD	30%	502 SQ. FT	205 SQ. FT / 40.6%	0 SQ. FT / 0%	YES
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**NOTES:**

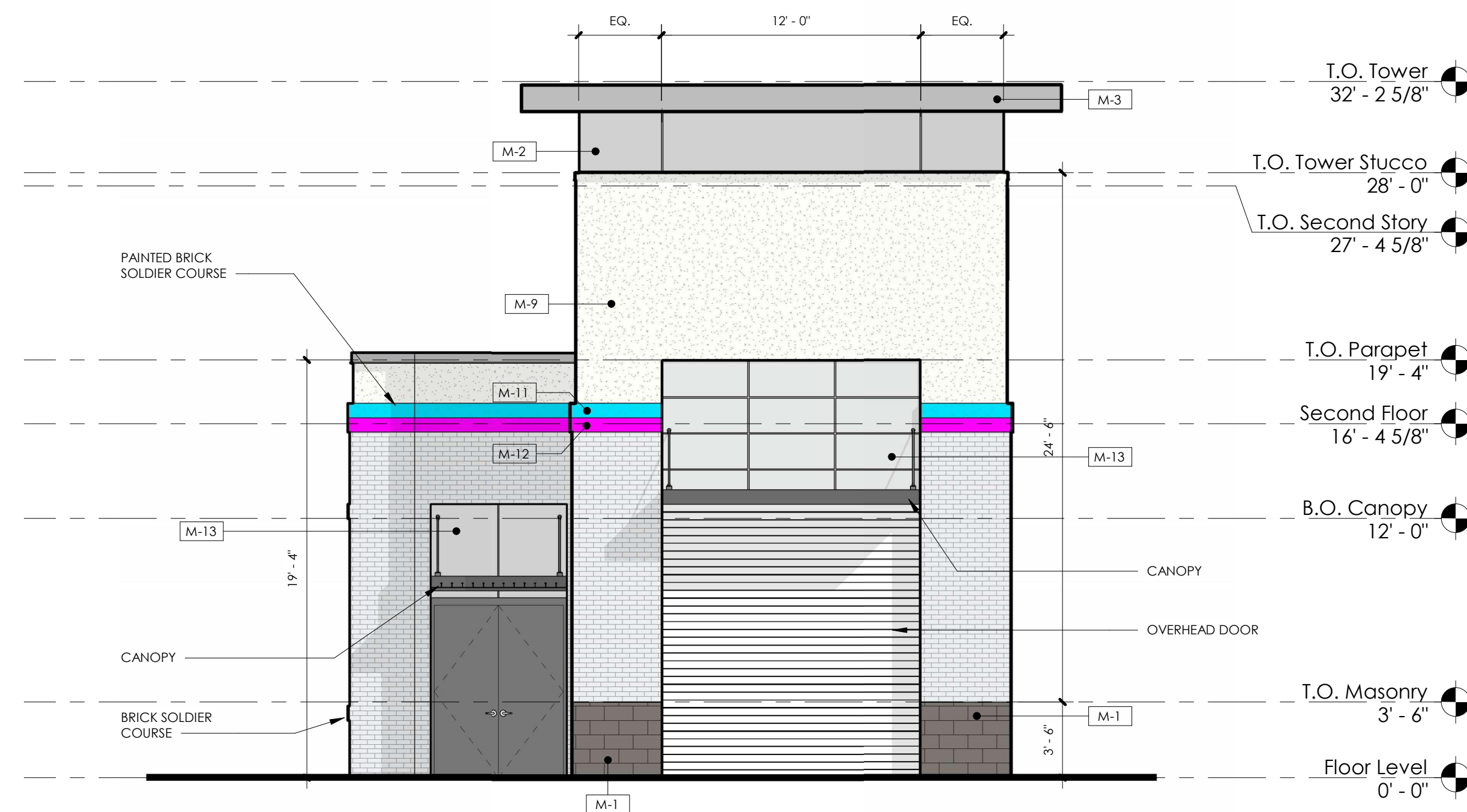
\* Transparency Requirements: Per Section 5.04 - Neighborhood Nodes District, section E.2.A. states the transparency requirement apply to the first floor of a building only. Additionally, "Transparency Alternatives" may be used for up to 80% of the requirements on front facades when used in combination and the wall design may be used for up to 100% of the requirement for side street/yard requirements.  
 \*\* Green Screens or planter walls count towards one of the wall design alternatives per Section 2.8.J.F.

- North Facade:
  - A. The additional 501 sq. ft. required to meet the 30% requirement is completed using the wall design alternatives. This takes into account a series of green living wall screens (L), variations in material module, pattern, and/or color (d), and a system of horizontal and vertical scaling elements such as: soldier courses, horizontal bands, and brick pilasters. The wall design alternative can account for up to 80% of the transparency requirement.
- South Facade:
  - A. The additional 897.5 sq. ft. required to meet the 50% requirement is completed using the wall design alternatives and outdoor seating, which can account for 80% of the required transparent area. This takes into account a series of green living wall screens (L), variations in material module, pattern, and/or color (d), and a system of horizontal and vertical scaling elements such as: soldier courses, horizontal bands, and brick pilasters. The wall design alternative can account for up to 710.5 sq. ft. while the outdoor seating accounts for the remaining.
- West Facade:
  - A. The West facade is covered by the percentage of glazing/door currently shown.
- East Facade:
  - A. The 413.5 sq. ft. required to meet the 50% requirement is completed using the wall design alternatives and outdoor seating of the corner. Transparency requirements may account for 80% of the required wall space. Glazing/Door space is required to be at least 82.7 sq. ft. which we meet. The wall design alternatives take into account a series of green living wall screens (L), variations in material module, pattern, and/or color (d), and a system of horizontal and vertical scaling elements such as: soldier courses, horizontal bands, and brick pilasters. The wall design alternative can account for up to 30% of the transparency requirement. The remaining square footage is covered by outdoor seating areas.

**EXTERIOR MATERIAL SCHEDULE:**

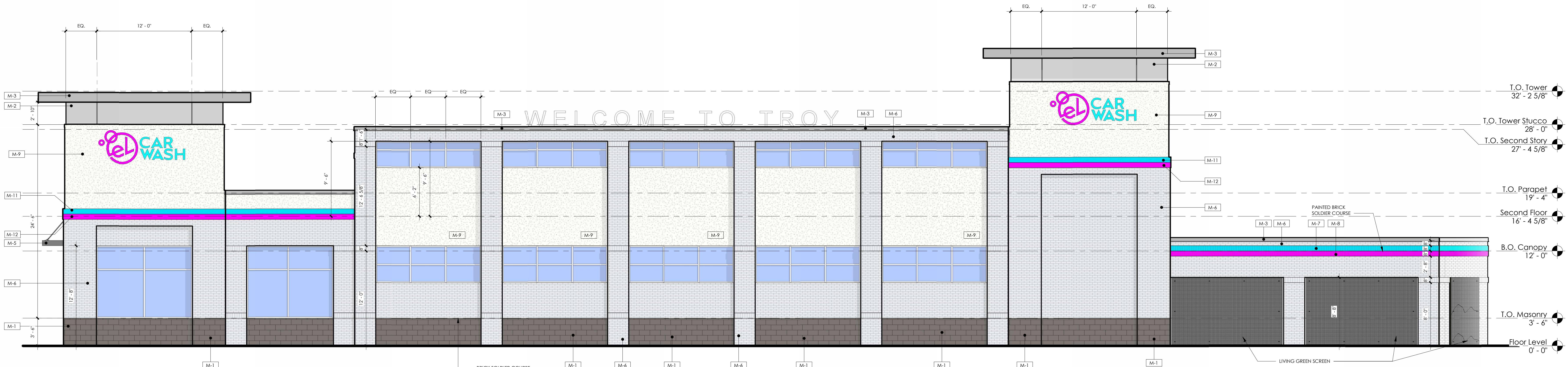
M-1	DESCRIPTION: DOUBLE TITAN BRICK BASE OF DESIGN: GLEN-GERY FINISH / COLOR: PAINTED "GAINTLET GREY"
M-2	DESCRIPTION: ALUM. COMPOSITE PANEL BASE OF DESIGN: APOLIC FINISH / COLOR: REFLECTIVE MIRROR
M-3	DESCRIPTION: METAL FLASHINGS BASE OF DESIGN: PAC-CLAD (24 GA) FINISH / COLOR: SILVER
M-4	DESCRIPTION: BRICK BASE OF DESIGN: GLEN-GERY FINISH / COLOR: PAINTED "GAINTLET GREY"
M-5	DESCRIPTION: PRE-FAB CANOPY BASE OF DESIGN: AUSA FINISH / COLOR: EXTRUDECK 8" J 3X6 FLAT SOFFIT FEDERAL STANDARD GREY
M-6	DESCRIPTION: BRICK BASE OF DESIGN: GLEN-GERY FINISH / COLOR: SEARAY KLAYCOAT
M-7	DESCRIPTION: BRICK (SOLDIER COURSE) FINISH / COLOR: PAINTED - PANTONE 3252 (CYAN)
M-8	DESCRIPTION: BRICK (SOLDIER COURSE) FINISH / COLOR: PAINTED - LOGO COLOR (MAGENTA)
M-9	DESCRIPTION: EPS BASE OF DESIGN: STO CORP. FINISH / COLOR: HIGH REFLECTIVE WHITE SW 7737 (WHITE)
M-10	DESCRIPTION: HORIZONTAL FLAT FW BASE OF DESIGN: METAL SIDING PANELS FINISH / COLOR: SLATE GRAY
M-11	DESCRIPTION: EPS BASE OF DESIGN: STO CORP. FINISH / COLOR: PANTONE 3252 (CYAN)
M-12	DESCRIPTION: EPS BASE OF DESIGN: STO CORP. FINISH / COLOR: PAINTED LOGO COLOR (MAGENTA)
M-13	DESCRIPTION: ALUM. COMPOSITE PANEL BASE OF DESIGN: APOLIC FINISH / COLOR: RHINESTONE SW7656

**NOTE:** SUBMIT SAMPLES OF ALL SELECTED MATERIALS TO OWNER & ARCHITECT FOR APPROVAL PRIOR TO ORDERING.



**West Elevation**

3/16" = 1'-0"



**South Elevation**

3/16" = 1'-0"

**KRIEGER KLATT ARCHITECTS**

2120 E. 11 Mile Rd. | Royal Oak, MI 48067  
P: 248.414.9270 F: 248.414.9275  
www.kriegerklatt.com

**Client:**

El Car Wash East Long Lake LLC  
30200 Telegraph Rd., Suite 205  
Bingham Farms, MI 48025

**Project:**

El Car Wash  
2995 E. Long Lake  
Troy, MI 48065

Issued	Description	By
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05.23.2024	Site Plan Review	
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**Seal:**

**Note:**

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**North Arrow:**

**Sheet Title:**

Exterior Elevations

**Project Number:**

23-132

**Scale:**

As Indicated

**Sheet Number:**

**A.201**

PRELIMINARY NOT FOR CONSTRUCTION



e CAR WASH

WELCOME TO TROY

e CAR WASH



WELCOME TO TROY

ed CAR WASH

ed CAR WASH

ed CAR WASH

TROY









PORT OF SMOOJEW





**D** CAR WASH





CAR WASH

CAR WASH

WELCOME TO TROY

TROY

CAR WASH



WELCOME TO TROY

CAR WASH

CAR WASH

CAR WASH

TROY

**CARSON FISCHER, P.L.C.**

4111 ANDOVER ROAD  
WEST - SECOND FLOOR  
BLOOMFIELD HILLS, MICHIGAN 48302-1924

ROBERT M. CARSON  
ROBERT A. WEISBERG  
JEFFREY B. SCHLUSSEL  
CHRISTOPHER A. GROSMAN  
DAVID E. SCHLACKMAN

OF COUNSEL  
AMY CARSON SCHLUSSEL  
TELEPHONE  
(248) 644-4840  
FACSIMILE  
(248) 644-1832

September 11, 2024

VIA Email

City of Troy  
Planning Department  
500 West Big Beaver Road  
Troy, Michigan 48084  
Attn: Brent Savidant, Community Development Director

**Re: Proposed Auto Wash to be located at 2955 & 2995 East Long Lake Road,  
Troy, Michigan (the Property")**

Dear Brent,

Our office is counsel to El Car Wash ("Applicant"). Applicant is pleased to present to the City of Troy (the "City") an application (the "Application") for the Property located on the northwest corner of Long Lake Road and Dequindre Road. Accordingly, attached to this letter are the following documents:

1. Site Development Plans dated September 4, 2024, prepared by Stonefield Engineering & Design (the "Site Plan");
2. Proposed Elevations of the auto wash (the "Elevations"); and
3. Interior Second Floor Office Renderings (the "Office Renderings").

The Application is made to request the recommendation by the City's Planning Commission, and approval by the City Council, for the right to construct an auto wash facility on the Property that includes a separate and distinct second floor office space in the proposed building to be preferably leased to a community partner or a local non-profit. If the Application is approved the existing building currently located at the Property will be demolished. As demonstrated on the Elevations, the proposed new building contains unique, attractive and minimalist design elements that will serve as a welcoming gateway to the City, enhance the respective Long Lake Road and Dequindre Road corridors, and cater to both the residents of Troy and those traversing these two major arterial roadways.

El Car Wash is unlike the conventional car washes that are common to the area. Because of its commitment to limiting the environmental impact of its use, El Car Wash invests in the latest technologies and innovations in the industry, uses environmentally safe detergents, employs state-of-the-art water regulating and reclamation systems (90% of water used is recycled), and installs sound reducing equipment in its operations. It is worth noting that El Car Wash uses approximately 20 gallons of water per wash as opposed to over 100 gallons of water used by other car washes or those washing cars at home. Additionally, other design elements and operational features, as noted on the Site Plan, allows for a reduction in energy use compared to other car washes, including pervious pavers, solar canopies above the vacuum stalls, and additional aboveground stormwater infrastructure.

As reflected on the Site Plan, the proposed building is approximately 6,083 square feet, with the ground-level auto wash comprising 3,963 square feet and the separate second-floor office space containing approximately 2,120 square feet. The second floor, as noted in the Office Renderings, will be accessible from a dedicated entry located on the north side of the building and is intended to be used for general office purposes not associated with the auto wash; Applicant's preference is for the office space to be leased to a non-profit organization. Applicant has contacted local non-profit organizations regarding the second-floor office space, including the following:

- United Community Family Services CALC
  - Arjan Kallou - [akallou@ucfamilyservices.org](mailto:akallou@ucfamilyservices.org) (248)-528-0130
- Arc of Oakland County
  - Christie Kay - [ckay@thearcoakland.org](mailto:ckay@thearcoakland.org) (248)-816-1900
- Jenna Kast Believe in Miracles Foundation
  - Paula - [paula@believeinmiracles.org](mailto:paula@believeinmiracles.org) (248)-633-5109
- The Bottomless Toy Chest
  - Ashley Leslie - [ashley@bottomlesstoychest.org](mailto:ashley@bottomlesstoychest.org) (248)-646-8931

As you will note on the Site Plan, Applicant addresses any stacking concerns of the City or the Road Commission for Oakland County by including three stacking lanes that can accommodate up to 21 on-site stacking spaces, exceeding the City's requirement of 12. The long access drive from each public right of way and Applicant's use of an automated payment system and expedited automobile drying process further alleviates any stacking concerns.

Given that Applicant is proposing to redevelop the Property with a state-of-the-art car wash that will be a welcome and needed addition to this area of the City, Applicant is sensitive to the necessity to balance the proposed aesthetics against the need for sufficient parking spaces for employees, customers, and the second-floor office users and guests, stacking for those using the car wash, and necessary vacuum areas for those car wash customers wishing to avail themselves of their use. The parking, as proposed on the Site Plan, is based on Applicant's experience of developing and operating over 48 car washes nationally to ensure sufficient parking while not overburdening the site.

Additionally, the robust landscape plan included in the Site Plan meets all City requirements and will transform the current landscaping, nearly bereft of trees or greenery, with approximately 170 trees and nearly 33% of the Property landscaped.

More particularly, the Site Plan satisfies the design standards of Section 8.06 of the City's Zoning Ordinance by complimenting and enhancing the surrounding commercial establishments through its unique and minimalist design that enlivens this significant intersection that serves as a gateway to the City. The design and architecture of the proposed building, which is similar in scope, size, quality and configuration to other sites of Applicant in Michigan and other states, has proven successful and is well-received for its clean lines, harmonious color schemes, fine details, and understated features. By adopting and incorporating modern design best practices that includes an exterior comprised primarily of brick, aluminum and a significant window and glazing package, with additional unique design features, such as the vacuum canopies, along with the robust landscape plan, public art installations and communal amenities, Applicant believes the El Car Wash will become a favorite destination in the City and will foster further redevelopment within this Neighborhood Node.

The proposed automated car wash meets the special use general standards as set forth in Section 9.03 of the City's Zoning Ordinance. More specifically, as related to each of the following criteria to be evaluated by the Planning Commission:

1. **Compatibility with Adjacent Uses.** The proposed car wash will complement the neighboring retail and service establishments. There is a drive-thru fast-food restaurant to the immediate west of the Property, a medical-services building to the immediate north, and a second fast food restaurant north of that. To the south, across Long Lake Road, is an automobile service and fueling station, with a drug store immediately adjacent to it. East of Dequindre, in Sterling Heights, is a large retail strip center containing various commercial establishments with two separate banking outparcels. An approximately Ten Million Dollar (\$10,000,000) investment in a new state of the art car wash will

not unreasonably detract from or reduce the economic viability of any other uses within its vicinity, and in all likelihood, will generate additional investment in this Neighborhood Node and provide an economic boost to its neighbors and the surrounding area.

2. **Compatibility with the Master Plan.** Troy's Master Plan designates the Property and surrounding properties as a "Neighborhood Node" to serve as a "go to" place to meet the basic needs of the community and to "play a critical role in the daily function, image and quality of life and continued viability of the City." This particular Neighborhood Node (Node "J"), designated under the Ordinance as a Site Type NN:A, is designed to allow for certain service uses. "Auto Uses," in this specific Site Type, are deemed a special use. According to data compiled by the US Census Bureau, each household in the City has an average of two cars. With a paucity of car washes in this portion of the City, the proposed development will provide a much needed service and amenity for the residents of this specific Neighborhood Node and those commuters traversing the arterial roads.
3. **Traffic Impact.** As noted above and in the Site Plan, the design of the proposed car wash attempts to minimize the negligible impact on traffic it may cause. The Site Plan was designed to account for traffic circulation. From the long access drive, the three stacking lanes, and with the ingress/egress to the Property intentionally located at the furthest points from the intersection, Applicant has gone to great lengths to address any concerns related to traffic. The accompanying traffic study from Fleis & Vandenbrink confirms that the car wash will not materially increase car volumes on the arterial roads or create any vehicular traffic congestion.
4. **Impact on Public Services.** Based on preliminary investigations, Applicant believes all water, sewer and related utilities are available at the Property or the lot line and are adequate for Applicant's proposed car wash facility and office space. The proposed water reclamation system will minimize the amount of used water from going into the City's storm drainage system.
5. **Compliance with Zoning Ordinance Standards.** The proposed car wash will not create any additional burden to the municipality or its resources. It is not anticipated that there will be an additional need for public safety, public works or other municipal services. The re-development of the Property, and the

ability to provide a needed amenity to this area of the City, will be a benefit to the City's residents and the overall economic welfare of the City.

6. **Impact on the Overall Environment.** The redevelopment of the Property can potentially serve as a catalyst for the redevelopment of this particular Neighborhood Node as envisioned by the City's Master Plan. The design and features of the El Car Wash will vastly improve the neglected and dated building currently on the Property. As set forth above in greater detail, El Car Wash's commitment to the environment is evidenced by its investment in the latest technologies and innovations to conserve and reclaim water, its use of only biodegradable chemicals, and its removal of most waste solids from the limited amounts that are discharged into the sanitary sewer system.
7. **Special Use Approval Specific Requirements.** As detailed on the Site Plan, the proposed car wash satisfies all specific requirements of the City's Zoning Ordinance as it relates the Property or the operation of a car wash thereon.

Please expeditiously process this submission and the Application. Applicant looks forward to presenting the Site Plan to the City's Planning Commission. Thank you for your attention to this matter and please feel free to contact me with any questions or concerns.

Very Truly Yours,

**Carson Fischer PLC**



Jeffrey B. Schlussel

cc: Client (w/o enc.)  
Stonefield Engineering & Design (w/o enc.)











