

#### PLANNING COMMISSION MEETING AGENDA REGULAR MEETING

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

March 14, 2023 7:00 P.M. Council Chambers

- ROLL CALL
- 2. APPROVAL OF AGENDA
- 3. APPROVAL OF MINUTES February 28, 2023
- 4. PUBLIC COMMENT For Items Not on the Agenda

#### SPECIAL USE AND PRELIMINARY SITE PLAN APPROVAL

- SPECIAL USE APPROVAL AND PRELIMINARY SITE PLAN REVIEW (File Number SU JPLN2022-0004) Proposed 2690 Crooks Road Apartments, East side of Crooks, South of Big Beaver (2690 Crooks), Section 28, Currently Zoned BB (Big Beaver) District.
- SPECIAL USE APPROVAL AND PRELIMINARY SITE PLAN REVIEW (File Number SU JPLN2022-0004) Proposed 911 & 999 W. Big Beaver Mixed Use Development, Southeast corner of Big Beaver and Crooks (PIN 88-20-28-101-032, -034 and -047), Section 28, Currently Zoned BB (Big Beaver) District.

#### OTHER ITEMS

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

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Chair Lambert called the Regular meeting of the Troy City Planning Commission to order at 7:00 p.m. on February 28, 2023, in the Council Chamber of the Troy City Hall. Chair Lambert and Vice Chair Perakis presented opening remarks relative to the role of the Planning Commission and procedure of tonight's meeting.

#### 1. ROLL CALL

#### Present:

Carlton M. Faison
Tyler Fox
Michael W. Hutson
Tom Krent
David Lambert
Lakshmi Malalahalli
Marianna Perakis
John J. Tagle

#### Absent:

Toby Buechner

#### Also Present:

R. Brent Savidant, Community Development Director Julie Quinlan Dufrane, Assistant City Attorney Kathy L. Czarnecki, Recording Secretary

#### 2. <u>APPROVAL OF AGENDA</u>

#### Resolution # PC-2023-02-015

Moved by: Krent Support by: Fox

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

Yes: All present (8) Absent: Buechner

#### **MOTION CARRIED**

#### 3. <u>APPROVAL OF MINUTES</u> – February 14, 2023

#### Resolution # PC-2023-02-016

Moved by: Faison Support by: Hutson

**RESOLVED**, To approve the minutes of the February 14, 2023 Regular meeting as submitted.

Yes: Faison, Fox, Hutson, Krent, Lambert, Perakis, Tagle

Abstain: Malalahalli Absent: Buechner

#### **MOTION CARRIED**

4. PUBLIC COMMENT – For Items Not on the Agenda

There was no one present who wished to speak.

#### PRELIMINARY SITE PLAN APPROVAL

 PRELIMINARY SITE PLAN REVIEW (File Number SP JPLN2022-0025) – Proposed Lange View Townhouses, Southeast corner of Livernois and Leetonia (4080 Livernois), Section 15, Currently Zoned NN Neighborhood Node (Node "H") District

Mr. Savidant reviewed the Preliminary Site Plan application for Lange View Townhouses. He said the Planning Commission considered and postponed the item at their December 13, 2022 meeting so that the applicant could return with a three-dimensional (3D) modeling, provide appropriate building materials, redesign the building to take away the flatness of the face and show the screen wall between the residential property to the east and the property in question.

Mr. Savidant reported the applicant revised the architectural style of the homes and added front elevation details to reduce the massing of the building. He noted the application does not appear to address the screen wall along the east property line. Mr. Savidant showed the comparison of the architectural details from the 2022 application to the application under consideration this evening and said the features are more of a traditional design.

Mr. Savidant said the Planning Commission should consider in its deliberation the elevations, screen wall along the east property line, and if the application meets the Design Standards (Section 5.06.E) and the Site Plan Review Standards (Section 8.06).

Discussion among administration and Planning Commission:

- Curb cuts on Livernois.
  - Vehicular direction.
  - New cuts to meet Oakland County standards.
  - Potential widening of Livernois.
- Confirmation of proposed number of units (9).

Applicant Gary Abitheira addressed the traditional architectural features and dimensional offset of units. Mr. Abitheira said they have discussed with the neighbors to the east alternative methods for screening residential and it is the neighbor's wish to install a concrete wall.

There was discussion, some comments related to:

- Alternative methods to screen residential.
- Home ownership; lease-to-own option.

Chair Lambert opened the floor for public comment. Acknowledging there was no one present who wished to speak, Chair Lambert closed the floor for public comment.

#### Resolution # PC-2023-02-017

Moved by: Malalahalli Seconded by: Tagle

**RESOLVED,** That Preliminary Site Plan Approval, pursuant to Article 8 of the Zoning Ordinance, as requested for the proposed Lange View Townhouses, 9 units, located on the Southeast corner of Livernois and Leetonia (4080 Livernois), Section 15, Zoned NN (Neighborhood Node "H") District, be granted, subject to the following:

1. The applicant provides a screen wall per the Zoning Ordinance requirements.

Yes: All present (8) Absent: Buechner

#### **MOTION CARRIED**

#### OTHER ITEMS

6. <u>POTENTIAL PLANNED UNIT DEVELOPMENT (PUD) APPLICATION</u> – Concept Plan Discussion, East of Livernois, North of Square Lake (PIN 88-20-03-301-088, 88-20-03-301-025, -024, -023), Section 35, Currently Zoned NN (Neighborhood Node "Q"), and R-1B (One Family Residential) Districts

Mr. Savidant said the applicant is back in front of the Planning Commission this evening for feedback on a potential Planned Unit Development application. He reported no action on the item would be taken this evening.

Mr. Savidant provided a brief background on the application. He addressed the proposed mix of housing types, preservation of two homes historic in nature and a previously approved 14 unit attached townhome project on the southern portion of the site. He compared the revisions to the application since last presented to the Planning Commission at its July 26, 2022 meeting. Mr. Savidant said the applicant reduced both the building height and proposed number of units, added a duplex type of housing, and added an internal park.

Mr. Savidant asked the Planning Commission to consider in its discussion:

- 1. Has the revised plan addressed the concerns of the Planning Commission?
- 2. Is the proposed plan consistent with the Master Plan?
- 3. Does the Planning Commission support the proposed mix of housing types? Are there additional housing types that the Planning Commission thinks should be considered?
- 4. Is the proposed plan consistent with the PUD Standards?

- 5. Are there site plan changes that the applicant should consider?
- 6. Are there other considerations that should be discussed with the applicant?

Mr. Savidant addressed the Square Lake and Livernois Neighborhood Node revised Master Plan statement.

Discussion among administration and Planning Commission:

- EVA (emergency vehicular access) on site.
- Potential to add another access to site.
- Fire Department review; EVA, emergency vehicular turnaround, fire protection for all units.
- Preservation of two historic homes in nature on site.
  - o Homes not listed on the historic home registry.
  - o Preservation/maintenance per PUD Agreement.
- Vacant PNC Bank building, as relates to future use in NN zoning district.

Applicant Gary Abitheira addressed access points, reduction in building height and number of units and the addition of green space. Mr. Abitheira said the two historic homes proposed to be preserved were built in 1910 and are beautiful and in great condition. He said the development offers a mix of housing types, open space, and substantial guest parking. He said they plan to lease-to-own the units and preserve the historic nature of the two homes.

There was discussion, some comments related to:

- Walkability of site.
- Potential traffic congestion at intersection(s), especially during school hours.
- Architectural features of historic homes in relation to new units.
- Environmental sustainability.
- Preservation/maintenance of historic homes as relates to PUD Agreement.
- Guest parking, as relates to front entrances of duplexes.
- Two car garages will be provided for all units.
- Application as relates to the PUD Standards.

Chair Lambert acknowledged there was no one present in the audience to speak on the item.

The applicant was encouraged to identify how the application meets the PUD Standards and to take into consideration sustainable resources.

#### 7. PUBLIC COMMENT – For Items on the Agenda

There was no one present who wished to speak.

#### 8. PLANNING COMMISSION COMMENT

There were general comments, some relating to:

- Consideration/flexibility in requiring sustainable resources in application review process.
- Status of Master Plan in approval process.
- · Review of Bylaws.
- Oakland County park plan near Turtle Woods development.

#### Mr. Savidant announced that:

- The City Council approved the Planned Unit Development application for the Village of Troy PUD located on the south side of Long Lake and west of Rochester by a 6-0 vote at their February 27, 2023 meeting.
- The proposed Concept Development Plan for Long Lake and Crooks Masterplan Development will be on a future City Council agenda.

#### 9. ADJOURN

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Respectfully submitted,	
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David Lambert, Chair	
Kathy L. Czarnecki, Recording Secretary	

https://d.docs.live.net/2f7ed4fe5f664ea8/Documents/Kathy/COT Planning Commission Minutes/2023/2023 02 28 Draft.docx

# ITEM #5

DATE: March 9, 2023

TO: Planning Commission

FROM: R. Brent Savidant, Community Development Director

SUBJECT: SPECIAL USE APPROVAL AND PRELIMINARY SITE PLAN REVIEW (File

<u>Number SU JPLN2022-0004</u>) – Proposed 2690 Crooks Road Apartments, East side of Crooks, South of Big Beaver (2690 Crooks), Section 28, Currently Zoned BB (Big

Beaver) District.

The petitioner Tower Construction, LLC submitted the above referenced Special Use Approval and Preliminary Site Plan Approval application to convert as existing 4-story office building into 62 residential units and construct a new 5-story, 94-unit multiple-family residential building on the parcel.

The owner of this property is the same owner as 911 and 999 W. Big Beaver, the other development project on the January 10, 2023 agenda.

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. Memo from City Traffic Consultant OHM, dated March 7, 2022.
- 4. Parking Study from Fleis & Vandenbrink, dated February 8, 2023.
- 5. Minutes from January 10, 2023 Planning Commission Regular meeting (excerpt).
- 6. Site Plan.

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#### PROPOSED RESOLUTION

SPECIAL USE APPROVAL AND PRELIMINARY SITE PLAN REVIEW (File Number SU JPLN2022-0004) – Proposed 2690 Crooks Road Apartments, East side of Crooks, South of Big Beaver (2690 Crooks), Section 28, Currently Zoned BB (Big Beaver) District.

#### Resolution # PC-2023-03-

Moved by: Seconded by:

**RESOLVED**, The Planning Commission hereby approves shared parking between 911 & 999 W. Big Beaver Road and 2690 Crooks Road; and,

**RESOLVED**, That Special Use Approval and Preliminary Site Plan Approval for the proposed 911 & 999 W. Big Beaver Mixed Use Development, southeast corner of Big Beaver and Crooks (PIN 88-20-28-101-032, -034 and -047), Section 28, Currently Zoned BB (Big Beaver) District, be (granted, subject to the following conditions):

- 1. Update Table of Land Use and Zoning calculations provided on sheet C-3 of the plan set.
- 2. Address OHMs comment.
- 3. Provide trash enclosure screening details that comply with section 13.02.
- 4. Provide a shared parking agreement to the satisfaction of the City Attorney.

	) or
(denied, for the following reasons:	) or
(postponed, for the following reasons:	)
Yes: No:	
Absent:	

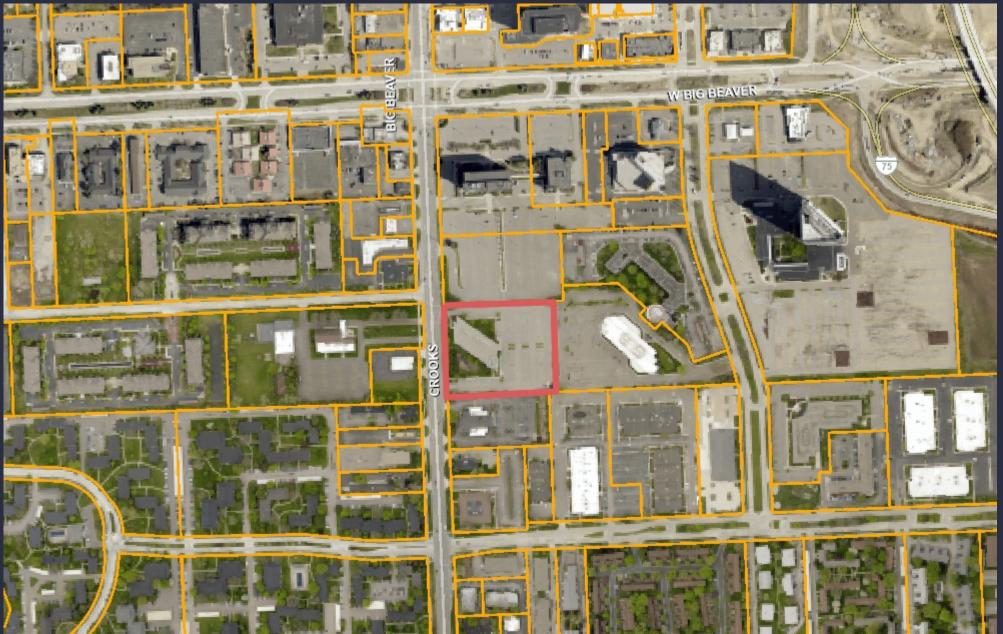
#### MOTION CARRIED / FAILED

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1,154

### **GIS Online**



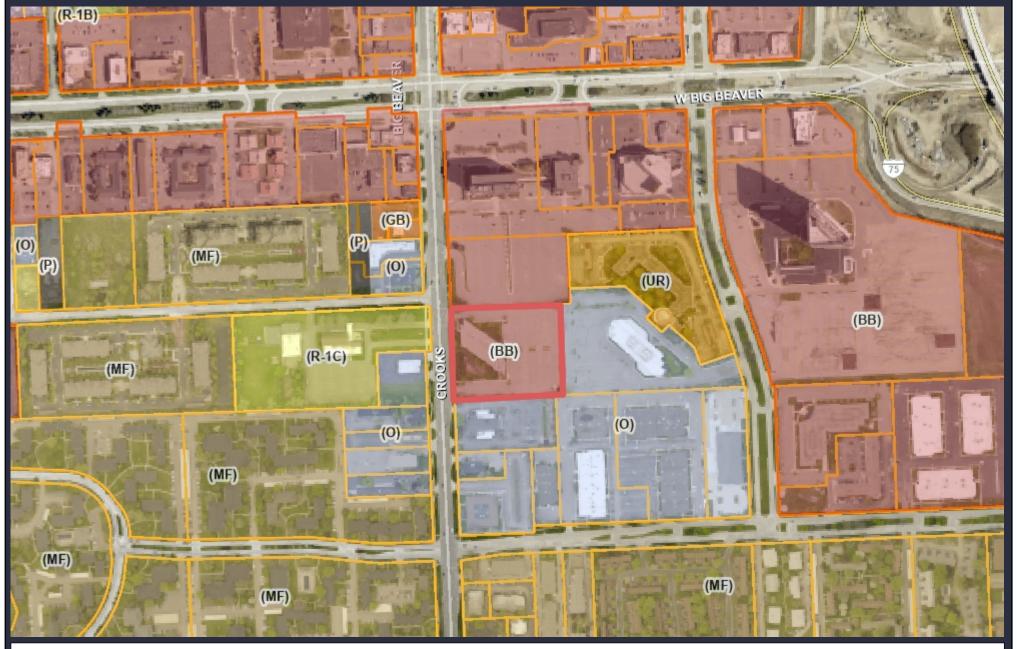
1,154 Feet

577

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.

## TROY

### **GIS Online**



1,154 0 577 1,154 Feet



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.



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

Date: June 23, 2022

January 4, 2023 March 7. 2023

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

**Applicant:** Jordan Jonna

**Project Name:** 2690 Crooks Road Multiple Family Residential

**Location:** 2690 Crooks Road

Plan Date: February 06, 2023

**Zoning:** BB, Big Beaver

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

#### SITE DESCRIPTION

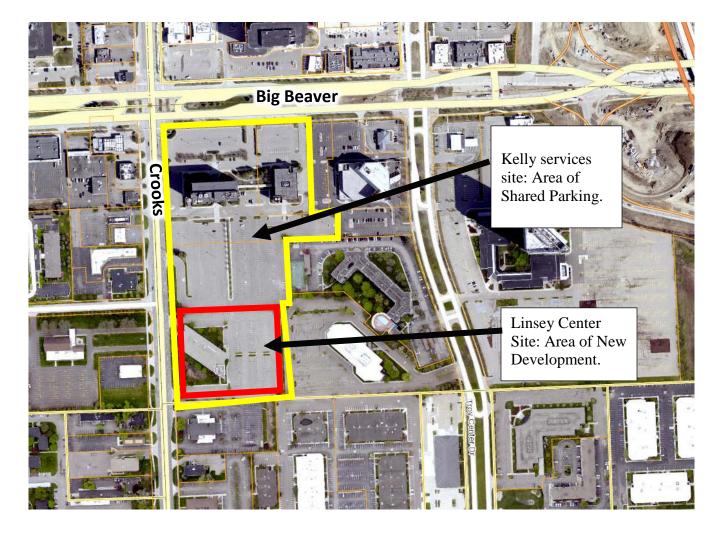
An application has been submitted to repurpose the existing 4-story building on site (Lindsey Center) to create 62 units and construct a new 4-story 82-unit multiple-family residential building at 2960 Crooks Road, for a total of 144 units. The new building is located to the east (rear) of the existing four-story building. The area of the newly proposed 4-story building is currently a parking lot.

Access will remain as is with two points of access off Crooks Road with cross-access to the north and east. The applicant is proposing shared parking for both buildings at 2690 Crooks with the Kelly Services site (north of proposed building).

The portion of the first floor that faces Crooks Road will include general amenity uses such as a pool and community center. The portion of the first floor that does not front Crooks is used for

residential uses. Residential uses on the first floor, not fronting on a public right-of-way, requires a Special Use permit.

#### Site Location:



#### **Detailed Location:**



#### **Proposed Uses of Subject Parcel:**

Existing building to be converted to 62 multi-family units and new building to include 82 multi-family dwelling units.

#### **Current Zoning:**

The property is currently zoned BB, Big Beaver Form Based District

#### **Surrounding Property Details:**

Direction	Zoning	Use
North	BB, Big Beaver	Office Parking
South	O, Office	Funeral Home
East	O, Office	Office
West	O, Office and R1-C, One	Office and Place of Worship
	Family Residential	

#### **REZONING AND ZONING TEXT AMENDMENT**

In the summer of 2021, 2690 Crooks was rezoned, in part, to allow for the conversion of the existing four-story building to be converted from office to residential. The previous zoning of O, Office did not permit residential uses. Please see our May 5, 2021 review memo for more information.

In the fall of 2021, a text amendment was adopted which permitted residential uses on the first floor as a Special Use for the section of the building that does not front on a public right-of-way.

#### PRIOR PLANNING COMMISSION REVIEW

The Planning Commission last discussed this matter at their January 10, 2023 meeting. At that meeting, there was discussion on:

- Building heights
- Green space deficiency
- Improve walkability for pedestrians
- Shared parking
  - Coordination of parking during construction phases
  - o Dynamics of shared parking among the various uses
  - 2690 Crooks is short on parking

The Planning Commission postponed action so that the applicant may comply with the Zoning Ordinance requirements of interior parking lot landscaping, enhance the pedestrian walkways and to provide information to this Commission with regard to the distance to the parking spots for the residential units in excess of what is currently around the building.

#### SITE PLAN CHANGES

The applicant has made the following changes to the site plan:

- Removed 1-story from rear building. Building is now 4-stories
- Removed first floor in-building parking for rear building
- Reduced number of units by 12. Site total is 144 units.
- Reconfigured units types by providing 41 studio/efficiently units. Zero (0) efficiency units were provided in previous plans.
- Decreased site landscaping by 1.8%
- Added internal parking lot landscape islands
- Revised pedestrian connection between site and northern property (Kelly Services site)

#### **NATURAL FEATURES**

The site has been graded and improved for an office building and an associated parking lot.

Items to be addressed: None.

#### SITE ARRANGEMENT

The new four-story building will be placed to the east (rear) of the existing four-story Lindsey Center building lot. Access to the site will be via one point of access on Crooks, and cross access to the site to the north and east. There is a row of shared parking between the existing and new building.

OHM has reviewed the site plan and offers the following comments:

The proposed sidewalk connection to the north is noted on the plans: "LIMIT OF PROPOSED CONCRETE SIDEWALK. REMAINDER OF ADA CROSS-ACCESS PATHWAY TO BE COORDINATED WITH ADJACENT SITE CONSTRUCTION" This implies that the two sites will be constructed concurrently. However, what if work on this site precedes the site to the north? Since this development proposes shared parking on the adjacent site, there must be suitable pedestrian connections constructed as part of this development in the event the two sites are not constructed concurrently.

Items to be addressed: Address OHMs comment.

#### AREA, WIDTH, HEIGHT, SETBACKS

The applicant does not propose any changes to the footprint of the existing building. The new building is being reviewed as Building Form D as set forth in Table 5.03.B.3:

	Required	Provided	Compliance
Front (Crooks)	10-foot build-to-line	Over 10 feet	Complies as Lindsey Center is legal non- conforming and new building is placed behind existing building
Side (north)	N/A, building may be placed up to property line	47.9-feet	Complies
Side (south)	N/A, building may be placed up to property line	57.9-feet	Complies
Rear (South)	30-foot minimum setback	54.4-feet	Complies
Building Height	6 stories, 66 feet	4 stories, less than 66 feet	Complies
Lot Coverage (Building, overall site)	30%	24.1	Complies
Parking Location	Cannot be located in front yard	Parking lots not in front yard	Complies

The applicant is proposing a pedestrian connection between the exiting Lindsey Center building and the new apartment complex and Lindsey Center to new residential buildings on 911 Big Beaver.

Though compliant with all dimensional requirements, the applicant did not update the Table of Land Use and Zoning calculations provided on sheet C-3 of the plan set.

**Items to be addressed:** Update Table of Land Use and Zoning calculations provided on sheet C-3 of the plan set.

#### **PARKING**

The applicant proposes to share parking for both buildings with the Kelly service buildings and parking areas.



The applicant is proposing shared parking to include both sites as noted. As set forth in Section 13.06, off-street parking for uses in all districts shall be on the same lot as the use or building served by the parking, unless joint parking with abutting properties and uses is provided in a form acceptable to the City Attorney and executed and recorded by the parties sharing the parking.

OHM has reviewed the shared parking. OHM has submitted memo for Planning Commission review. OHM plans on attending the Planning Commission meeting to discuss shared parking.

Items to be Addressed: Review OHM's memo regarding shared parking.

#### **TRAFFIC**

The applicant submitted a traffic study that was reviewed by both OHM and the Oakland County Road Commission.

**Items to be addressed:** None

#### LANDSCAPING

A landscaping plan has been provided on Sheet L101. The following table discusses the development's compliance with the landscape requirements set forth in Section 13.02.

	Required:	Provided:	Compliance:
Greenbelt Planting			
Crooks: 1 tree every 30 feet	369 / 30 = 13 trees	14 trees	Complies
Parking Lot Landscaping			
1 tree per every 8 parking	221 spaces / 8 = 28 trees	16 in parking	Complies, with
spaces		lot and 15 on	Planning
		perimeter	Commission approval
Overall			
Site landscaping:	20%	27.8%	Complies
A minimum of twenty			
percent (20%) of the site			
area shall be comprised of			
landscape material. Up to			
twenty-five percent (25%)			
of the required landscape			
area may be brink, stone,			
pavers, or other public plaza			
elements, but shall not			
include any parking area or			
required sidewalks.			

The applicant is required to provide 28 parking lot trees. Sixteen (16) of the required twenty-eight (28) trees are in parking lot and fifteen (15) are along perimeter of parking lot. Planning Commission may allow alternative location of parking lot trees.

#### <u>Transformer / Trash Enclosure:</u>

The applicant is proposing to reuse the existing trash enclosure and add an additional trash enclosure along the southern property line. As set forth in Section 13.02, trash enclosures shall be screened on all sides with a wall, and gate at least as high as the container, but no less than

2690 Crooks Road March 7, 2023

six (6) feet in height, and shall be constructed of durable material and construction which is compatible with the architectural materials used in the site development.

The applicant has noted that existing trash enclosure will be surrounded by chain-link fence with slats. The applicant should replace chain-link fence with wall. For the new trash enclosure, the applicant has not provided any trash enclosure screening details other than noting that they will screen with landscaping.

**Items to be Addressed**: 1). Planning Commission to discuss parking lot tree location; and 2). Provide trash enclosure screening details that comply with section 13.02.

#### **PHOTOMETRICS**

The applicant is proposing thirteen (13) parking lot lights. The lighting fixture and photometrics meet ordinance requirements. The applicant notes that no building lighting is proposed.

Items to be Addressed: None.

#### FLOOR PLAN AND ELEVATIONS

#### Existing Lindsey Building:

The applicant proposes the following:

- 1. Existing metal panel and glass to remain
- 2. New metal wrap and balconies to be added to exterior skin
- 3. Exterior metal and glass to be removed for new balcony doors and windows
- 4. Other elements of current façade to remain.

The proposed color scheme is dark and light greys, and orange accents.

#### New Building:

Floor plans and elevations have been provided on sheets A.201. The first three floors are utility brick of different grey colors and the fourth and fifth floors are hardie panel siding. The elevations provided show architectural details, variations in material and pattern (brick, hardie panel siding) as well as general color scheme of dark and light greys, and orange accents.

The applicant has provided a rendering of the buildings; however, it would be helpful if the applicant was able to show a 3-D model of the buildings in context to the site and to each other.

Items to be Addressed: None

#### 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.

#### **SPECIAL USE STANDARDS**

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, table 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.
- 7. Special Use Approval Specific Requirements.

#### **SUMMARY**

As part of the deliberation, the Planning Commission and applicant shall discuss:

- a. Compliance with Section 5.04.E Big Beaver Design Standards
- b. Compliance with Section 8.06 Site Plan Review Standards
- c. Compliance with 9.02.D Special Use Standards
- d. Architecture and material use:
  - a. Transparency for east, north, and south elevation on new building
  - b. Consideration of a 3-D model of the buildings in context to the site and to each other
- e. Parking lot tree location
- f. Shared parking

If Planning Commission approves preliminary site plan and special use, the following conditions shall be required as part of the final site plan submittal:

- 1. Update Table of Land Use and Zoning calculations provided on sheet C-3 of the plan set.
- 2. Address OHMs comment.

- 3. Provide trash enclosure screening details that comply with section 13.02.
- 4. Provide a shared parking agreement to the satisfaction of the City Attorney.

Sincerely,

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



#### memorandum

**Date:** March 7, 2023

To: R. Brent Savidant, AICP

Scott Finlay, PE

From: Stephen Dearing, PE, PTOE

CC: Sara Merrill, PE, PTOE

Re: 2690 Crooks Multi-Family Apartments

Traffic Review

PSUP2022-001, JPLN2022-0004

We have reviewed the preliminary site plans for 2690 Crooks Road. The plans propose renovating and repurposing the existing 4-story office building into a Multi-Family Apartment building (62-units), and also constructing a new proposed 5-story Multi-Family Apartment building (82-units) to the east of the existing building. The plans were prepared by Stonefield Engineering & Design and are dated February 6, 2023.

A shared parking analysis (for 991 & 999 Big Beaver and 2690 Crooks) was previously submitted by Rowe. This evaluation has been updated; a shared parking study has been provided by Fleis and Vandenbrink, dated February 8. 2023.

OHM offers the following comments:

#### 1. Shared Parking:

Our previous review noted that the proposed shared parking area is located on a separate parcel, regardless of ownership. We asked that a shared parking agreement must be in place in case either parcel is sold at a later date, as well as to preserve appropriate parking facilities in the event either parcel is redeveloped.

In the Preliminary Site Plan & Special Use Review response letter of February 10, 2023, the applicant stated "The properties are owned / controlled by the same entity and should not require a shared parking agreement." However, in the Traffic Review respond letter of the same date, the applicant stated "The applicant is aware and has no objections. A shared parking agreement will be recorded prior to final City approvals."

We believe a clarification is needed and continue to recommend that a shared parking agreement will be provided.

#### 2. Improve pedestrian connectivity.

The proposed sidewalk connection to the north is noted on the plans: "LIMIT OF PROPOSED CONCRETE SIDEWALK. REMAINDER OF ADA CROSS-ACCESS PATHWAY TO BE COORDINATED WITH ADJACENT SITE CONSTRUCTION" This implies that the two sites will be constructed concurrently. However, what if work on this site precedes the site to the north? Since this development proposes shared parking on the adjacent site, there must be suitable pedestrian connections constructed as part of this development in the event the two sites are not constructed concurrently.



## Мемо

VIA EMAIL mark@tower-construct.com

To: Mr. Mark Soma

**Tower Construction** 

From: Julie Kroll, PE, PTOE Fleis & VandenBrink

.....

Date: Revised February 8, 2023

Proposed Development
Re: 999 Big Beaver & 2690 Crooks Road, Troy, Michigan

**Parking Study** 

#### 1 Introduction

This memorandum presents the results of the Shared Parking Study for the proposed development project in the City of Troy, Michigan. The project site includes two properties located at 2690 Crooks Road and 999 Big Beaver Road as shown on the attached site plan.

- North Property: The Kelly site at 999 Big Beaver development includes the construction several new land uses adjacent to the existing Kelly Services building that include retail, multi-family and a parking garage.
- South Property: The Lindsay site at 2690 Crooks Road development includes the conversion of the
  existing four-story office building into multi-family units, and the construction of a five-story, multi-family
  housing building within the existing parking lot.

The purpose of this study is to provide a summary of the projected parking generation for the proposed developments and determine if there will be adequate parking to accommodate all uses

#### 2 PARKING ANALYSIS

#### 2.1 NORTH PROPERTY: KELLY SITE (999 W. BIG BEAVER ROAD)

The proposed development plan for the Kelly site was evaluated and the City of Troy Zoning Ordinance was reviewed and is summarized in **Table 1**. Based upon the results of this evaluation, the proposed development meets the parking requirements per the City Parking Ordinance.

**Table 1: City of Troy Parking Ordinance** 

Land Uses	Size	City Ordinance Rates	Parking Requirements Per Ordinance (spaces)
Multi-Family Housing	156 Units	2 spaces/dwelling unit	312
Kelly Services Office (General)	134,560 SF GFA	1 space per 300 SF GFA	449
Bank	2,000 SF GFA	1 space per 200 SF GFA	10
Retail	9,200 SF GFA	1 space per 250 SF GFA	37
Restaurant-Standard	300 Seats	1 space per 2 seats	150
Restaurant-Fast Food	2,560 SF	1 space per 70 SF	37
	995		
	1,021		
	Difference		26

#### 2.2 SOUTH PROPERTY: LINDSEY SITE (2690 CROOKS ROAD)

The proposed development plan for the Crooks Road site was evaluated to determine the recommended number of parking spaces for the project in an effort to "right-size" the parking for this use. The City of Troy Zoning Ordinance was reviewed and is summarized in **Table 2**.

- a.o.o =						
				Troy Zoning Ordinance		
Land Use	Land Use	Size	Independent Variable	Parking Supply Requirements	Parking Supply (spaces)	
Multiple femily	Dwelling Unit	103	D. U.	2 spaces/dwelling unit	206	
Multiple-family residential	Efficiency Unit	41	D. U.	1 spaces/dwelling unit	41	
residerillar	Total	144	D.U.		247	
			Pro	pposed Parking Supply	196	
				Difference	-51	

**Table 2: City of Troy Parking Ordinance** 

The results of the analysis shows that the proposed parking supply will not meet the parking ordinance requirements, therefore additional parking analysis was performed to determine how much parking should be provided and where the additional parking demand can be accommodated.

A parking analysis is a two-step process. The first step in determining the parking needs for a development is to calculate the projected parking *demand*. Parking demand calculations determine how much parking will be generated by the development. Step two in the parking analysis process is to determine if the parking supply is adequate to accommodate the projected parking demand; if the parking supply is not adequate, recommendations are to be provided to accommodate the projected parking demand.

A parking lot is typically designed to accommodate 85-95% occupancy, depending on the proposed land use(s), layout, and parking management (self-parking, valet, etc.). As vehicles traversing through the parking lot search for the open spaces or wait for vehicles to exit, a buffer is provided between supply and demand that allows for easier turnover in the parking lot and less congestion. For parking lots with a higher turnover (such as grocery stores and restaurants), the parking occupancy percentage should be lower, and for parking lots with less turnover (office buildings and residential), the parking occupancy percentage can be higher.

#### **Parking Demand**

The Institute of Transportation Engineers (ITE) *Parking Generation*, 5<sup>th</sup> *Edition* was used to determine the parking demand for this site. The ITE *Parking Generation* is an informational guide used by engineers and planners for the purposes of determining the parking demand associated with various land uses. The parking generation data included in *Parking Generation* are provided by various state and local government agencies, consulting firms, individual transportation professionals, universities, developers, associations, local sections, districts, and student chapters of ITE located throughout the U.S. The data is examined by ITE for validity and reasonableness before being entered into the comprehensive database. Therefore, the data presented by ITE in the *Parking Generation* provides a comprehensive average of parking demand for the various land uses throughout the country, and is a recommended resource for the calculation parking demand.

The ITE *Parking Generation, 5<sup>th</sup> Edition* has data associated with this land use for urban/suburban, dense urban and center city core. Regarding parking generation, an urban/suburban area is defined by ITE as, "an area of vehicle-centered access where nearly all person trips that enter or exit a development site are by personal passenger or commercial vehicle." Therefore, it was determined that this area of the City of Troy is a typical urban/suburban<sup>1</sup> environment and the parking demand calculations were based on this assumption.

The 85<sup>th</sup> percentile peak parking demand rates from ITE Parking Generation, 5<sup>th</sup> Edition were used in this analysis. An 85% percentile means that of 85% of similar sites survived for the calculation had peak parking demands at or below this rate. This provides a conservative evaluation when calculating the projected parking.

<sup>&</sup>lt;sup>1</sup> The primary difference between urban/suburban, dense urban and city core is the presence of transit. **General Urban/Suburban**-an area associated with almost homogeneous vehicle-centered access. **Dense Multi-Use Urban**— a fully developed area (or nearly so), with diverse and interacting complementary land uses, good pedestrian connectivity, <u>and convenient and frequent transit</u>. **Center City Core**— the downtown area for a major metropolitan region at the focal point of a <u>regional light- or heavy-rail transit system</u>.



Additionally. the Urban Land Institute (ULI) Shared Parking 3<sup>rd</sup> Edition recommends the 85<sup>th</sup> percentile parking demand as the appropriate metric for calculating the projected parking demands for a proposed development.

**Table 3: ITE Parking Generation Parking Demand Summary** 

	ITE				ITE Parking Generation 5th Ed		ITE Parking Generation 5th Edition		
Land Use	Land	Building	Size	Independent	Peak I	Period	Peak F	arking	
Land USE	Use	Dullullig	3126	Variable	Parking 85th%	Demand Rates	Deman	d (veh)	
	Code				Weekday	Weekend	Weekday	Weekend	
Multi-Family		Lindsey A	106	Bedrooms	0.87 space/bedroom	0.77 space/bedroom	92	82	
Housing:	221	Lindsey B	92	Bedrooms	0.87 space/bedroom	0.77 space/bedroom	80	71	
Mid-Rise		Total	198	Bedrooms	0.87 space/bedroom	0.77 space/bedroom	172	152	

The projected parking demand calculated was compared to the proposed parking supply for this site to determine if there is adequate parking to accommodate the proposed operations. The highest daily parking demands for this development are expected to occur on the weekdays. The results of this analysis are summarized in **Table 4** and show that the proposed parking supply on site will accommodate the projected parking demand as calculated based upon the ITE 85% peak parking demand.

**Table 4: Peak Hour Parking Analysis Summary** 

				Troy Zoning C	Proposed	
Methodology	Land Use	Size	Independent Variable	Parking Supply Requirements	Parking Supply (spaces)	Parking Supply
Spaces per DU	Multiple-family residential	156	D. U.	2 spaces/dwelling unit 1 space /Eff Unit	247	196
				Peak Parking Demand	172	172
			Pro	ojected Parking Surplus	75	24
	Total Parking Percent Occupancy				70%	88%

#### 2.3 TOTAL SITE (KELLY + LINDSAY) PARKING SUMMARY

A shared parking analysis was performed for the combined North Property: Kelly Site and South Property: Lindsey Site in accordance with the requirements outlined in the City of Troy Zoning Ordinance Section 13.06 which states that shared parking can be considered where the applicant can demonstrate that the peak usage will occur at different periods of the day. In order to demonstrate shared parking compatibility, a shared parking analysis is required utilizing the methodologies of the Urban Land Institute Shared Parking Manual (3<sup>rd</sup> Edition), however the underlying parking space requirements for each use shall be based on the City of Troy parking requirements.

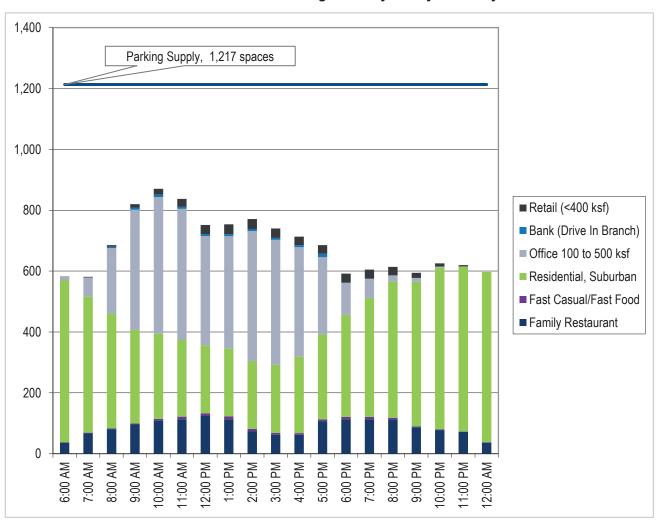
The shared parking for both projects is summarized in **Table 5** and shows that the peak parking demand for the site occurs during at 10:00 AM for this site. The peak hour variations in the parking demand are shown in Exhibit 1 and show the advantage of using shared parking to accommodate additional parking demand. As the office use parking demand decreases, the residential parking demand increases, thereby reducing the need for additional parking to accommodate both uses.



**Table 5: Shared Parking Summary** 

Location	Land Uses	Size	City Ordinance Rates	Ordinance Requirements (no shared parking)	Shared Parking Peak Demand (10:00 AM)
	Multi-Family Housing	156 Dwelling Unit	2 spaces/DU	312	156
	Kelly Services Office (General)	134,560 SF GFA	1 space per 300 SF GFA	449	449
North	Bank	2,000 SF GFA	1 space per 200 SF GFA	10	8
Property: Kelly Site	Retail	9,200 SF GFA	1 space per 250 SF GFA	37	20
,	Restaurant-Standard	300 Seats	1 space per 2 seats	150	108
	Restaurant-Fast Food	2,560 SF	1 space per 70 SF	37	6
South	Multi-Family Housing	103 Dwelling Unit	2 spaces/DU	206	103
Property: Lindsey Site	Multi-Family Housing	41 Efficient Unit	1 spaces/EU	41	21
	Total Parking D	1,242	871		
	Proposed Pa	1,217	1,217		
	Diffe	rence		-25	346

**Exhibit 1: Shared Parking Weekday Hourly Summary** 





#### **CONCLUSIONS**

The conclusions of this study are as follows:

- The proposed development plan for the North Property: Kelly Site meets the parking requirements per the City Parking Ordinance.
- The proposed development plan for the South Property: Lindsey Site does not meet ordinance requirements, however the 85% ITE parking demand for this site can be accommodate with the parking proposed for this property.
- Considering the City's shared parking analysis for the entire North and South properties, there will be adequate parking to accommodate both uses.

Questions related to this memorandum, study, analysis, and results should be addressed to Fleis & VandenBrink.



I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Michigan.

Digitally signed by Julie M.

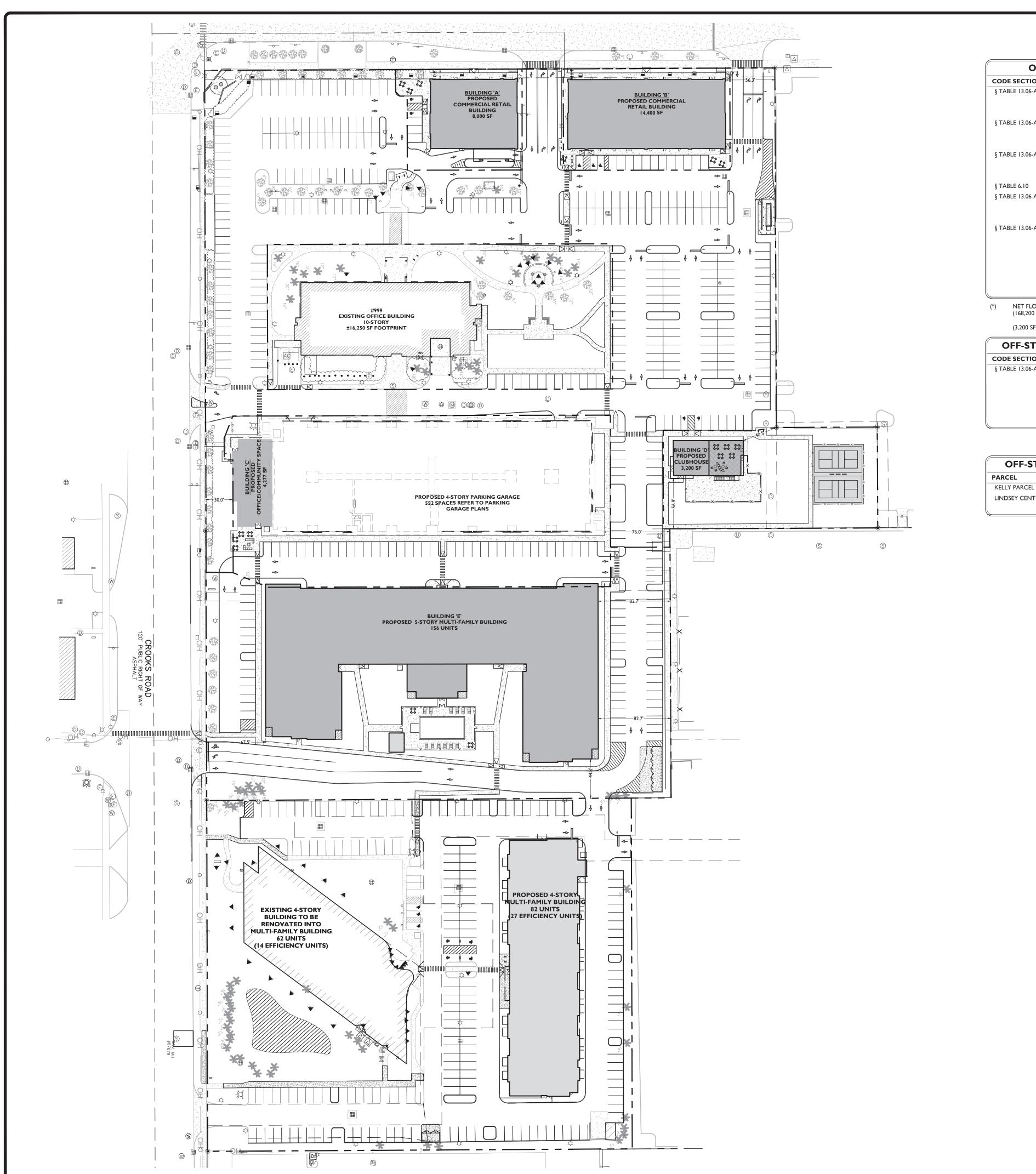
Julie M. Jucell Date: 2023.02.08 16:56:55 -05'00'

Attached: Site Concept Plan

ITE LUC Descriptions

**Shared Parking Data Summaries** 





OFF-STREET PARKING REQUIREMENTS - KELLY						
CODE SECTION	REQUIRED	PROPOSED				
§ TABLE 13.06-A	PROFESSIONAL OFFICE:	408 SURFACE SPACES				
	I SPACE PER 300 NFA	552 GARAGE SPACES				
	(134,560 NFA*)(1/300 NFA) = 449 SPACES	63 PODIUM SPACES				
§ TABLE 13.06-A	COMMERCIAL / RETAIL:	1,021 TOTAL SPACES				
	I SPACE PER 250 GFA					
	(9,200 GFA)(1/250 GFA) = 37 SPACES					
§ TABLE 13.06-A	BANK:					
	I SPACE PER 200 GFA					
	(2,000 GFA)(1/200 GFA) = 10 SPACES					
§ TABLE 6.10	4 STACKING SPACES PER LANE	4 SPACES PER LANE				
§ TABLE 13.06-A	restaurant (standard):					
	I SPACE PER 2 SEATS AT MAXIMUM CAPACITY					
	(300 SEATS)(1/2 SEATS) = 150 SPACES					
§ TABLE 13.06-A	RESTAURANT (FAST FOOD):					
	I SPACE PER 70 SF NET FLOOR AREA (*)					
	(2,560 SF NFA)(1/70 SF NFA) = 37 SPACES					
	MULTI-FAMILY RESIDENTIAL:					
	2 SPACES PER DWELLING UNIT					
	(156 UNITS)(2/1 UNITS) = 312 SPACES					
	TOTAL: 449+37+10+150+37+312 = 995 SPACES					

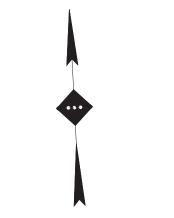
(\*) NET FLOOR AREA IS ASSUMED TO BE 80% GROSS FLOOR AREA (168,200 SF)(0.8) = 134,560 SF

(3,200 SF)(0.8) = 2,560 SF

### OFF-STREET PARKING REQUIREMENTS - LINDSEY CENTRE

CODE SECTION	REQUIRED	PROPOSED
§ TABLE 13.06-A	MULTI-FAMILY DWELLING:	196 SPACES
	2 SPACES PER DWELLING UNIT	
	(103 UNITS)(2 SPACES PER UNIT) = 206 SPACES	
	I SPACE PER EFFICIENCY UNIT	
	(41 UNITS)(1 SPACE PER UNIT) = 41 SPACES	
	<u>TOTAL:</u> 206 + 41 = <b>247 SPACES</b>	

OFF-STREET PARKING REQUIREMENTS - COMBINED								
PARCEL	REQUIRED	PROPOSED						
KELLY PARCEL	995 SPACES	1,021 SPACES						
LINDSEY CENTRE	247 SPACES	196 SPACES						
	TOTAL: 995 + 247 = 1,242 SPACES	TOTAL: 1,220 SPACES						



#### **SYMBOL DESCRIPTION**

PROPERTY LINE
EXISTING BUILDING
 PROPOSED CURB

PROPOSED BUILDING

PROPOSED CONCRETE

NOT APPROVED FOR CONSTRUCTION



S S

90

9

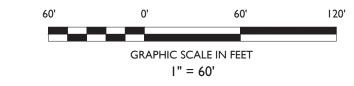
METHODS OF CONSTRUCTION. 6. THE CONTRACTOR SHALL NOT PERFORM ANY WORK OR CAUSE DISTURBANCE ON A PRIVATE PROPERTY NOT CONTROLLED BY THE PERSON OR ENTITY WHO HAS AUTHORIZED THE WORK WITHOUT PRIOR WRITTEN CONSENT FROM THE OWNER OF THE PRIVATE PROPERTY.

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 CONTRACTORS EXPENSE. 8. CONTRACTOR IS RESPONSIBLE TO PROVIDE THE APPROPRIATE SHOP DRAWINGS, PRODUCT DATA, AND OTHER REQUIRED SUBMITTALS

ACCORDANCE WITH MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.

10. THE CONTRACTOR IS REQUIRED TO PERFORM ALL WORK IN THE PROCUREMENT OF STREET OPENING PERMITS. 11. THE CONTRACTOR IS REQUIRED TO RETAIN AN OSHA CERTIFIED

SAFETY INSPECTOR TO BE PRESENT ON SITE AT ALL TIMES DURING 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.



### **GENERAL NOTES**

I. 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.

2. 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.

3. ALL CONTRACTORS WILL, TO THE FULLEST EXTENT PERMITTED BY LAW, INDEMNIFY AND HOLD HARMLESS STONEFIELD ENGINEERING & DESIGN, LLC. AND IT'S 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.

4. THE CONTRACTOR SHALL NOT DEVIATE FROM THE PROPOSED IMPROVEMENTS IDENTIFIED WITHIN THIS PLAN SET UNLESS APPROVAL IS PROVIDED IN WRITING BY STONEFIELD ENGINEERING & DESIGN,

5. THE CONTRACTOR IS RESPONSIBLE TO DETERMINE THE MEANS AND

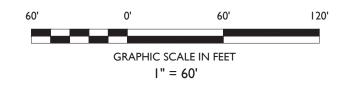
7. THE CONTRACTOR IS RESPONSIBLE TO RESTORE ANY DAMAGED OR

THE SUBMITTALS IN ACCORDANCE WITH THE DESIGN INTENT AS REFLECTED WITHIN THE PLAN SET. 9. THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL IN

FOR REVIEW. STONEFIELD ENGINEERING & DESIGN, LLC. WILL REVIEW

PUBLIC RIGHT-OF-WAY IN ACCORDANCE WITH THE APPROPRIATE GOVERNING AUTHORITY AND SHALL BE RESPONSIBLE FOR THE

CONSTRUCTION & DEMOLITION ACTIVITIES. 12. SHOULD AN EMPLOYEE OF STONEFIELD ENGINEERING & DESIGN, LLC.





J. REID COOKSEY, P.E.

I" = 60' PROJECT ID: M-19301.01

**OVERALL SITE PLAN** 

DRAWING:

### Land Use: 221 Multifamily Housing (Mid-Rise)

#### Description

Mid-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and with between three and 10 levels (floors) of residence. Multifamily housing (low-rise) (Land Use 220), multifamily housing (high-rise) (Land Use 222), and affordable housing (Land Use 223) are related land uses.

#### Time of Day Distribution for Parking Demand

The following table presents a time-of-day distribution of parking demand on a weekday (one general urban/suburban study site), a Saturday (two general urban/suburban study sites), and a Sunday (one dense multi-use urban study site).

	Percent of Peak Parking Demand								
Hour Beginning	Weekday	Saturday	Sunday						
12:00–4:00 a.m.	100	100	100						
5:00 a.m.	94	99	-						
6:00 a.m.	83	97	_						
7:00 a.m.	71	95	_						
8:00 a.m.	61	88	_						
9:00 a.m.	55	83	-						
10:00 a.m.	54	75	I						
11:00 a.m.	53	71	-						
12:00 p.m.	50	68	н						
1:00 p.m.	49	66	33						
2:00 p.m.	49	70	40						
3:00 p.m.	50	69	27						
4:00 p.m.	58	72	13						
5:00 p.m.	64	74	33						
6:00 p.m.	67	74	60						
7:00 p.m.	70	73	67						
8:00 p.m.	76	75	47						
9:00 p.m.	83	78	53						
10:00 p.m.	90	82	73						
11:00 p.m.	93	88	93						

#### **Additional Data**

In prior editions of *Parking Generation*, the mid-rise multifamily housing sites were further divided into rental and condominium categories. An investigation of parking demand data found no clear differences in parking demand between the rental and condominium sites within the ITE database. As more data are compiled for future editions, this land use classification can be reinvestigated.

The average parking supply ratios for the study sites with parking supply information are shown in the table below.

		Parking Su	ipply Ratio
Setting	Proximity to Rail Transit	Per Dwelling Unit	Per Bedroom
Center City Core	Within ½ mile of rail transit	1.1 (15 sites)	1.0 (12 sites)
Dense Multi-Use	Within ½ mile of rail transit	1.2 (39 sites)	0.9 (34 sites)
Urban	Not within ½ mile of rail transit	1.2 (65 sites)	0.8 (56 sites)
General Urban/	Within ½ mile of rail transit	1.5 (25 sites)	0.8 (12 sites)
Suburban	Not within ½ mile of rail transit	1.7 (62 sites)	1.0 (39 sites)

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in California, Colorado, District of Columbia, Maryland, Massachusetts, New Jersey, New York, Oregon, Virginia, Washington, and Wisconsin.

It is expected that the number of bedrooms and number of residents are likely correlated to the parking demand generated by a residential site. Parking studies of multifamily housing should attempt to obtain information on occupancy rate and on the mix of residential unit sizes (i.e., number of units by number of bedrooms at the site complex). Future parking studies should also indicate the number of levels contained in the residential building.

#### **Source Numbers**

21, 209, 247, 255, 277, 401, 402, 419, 505, 512, 522, 533, 535, 536, 537, 538, 545, 546, 547, 575, 576, 577, 579, 580, 581, 583, 584, 585, 587

# Multifamily Housing (Mid-Rise) (221)

Peak Period Parking Demand vs: Bedrooms

On a: Weekday (Monday - Friday)

Setting/Location: General Urban/Suburban (no nearby rail transit)

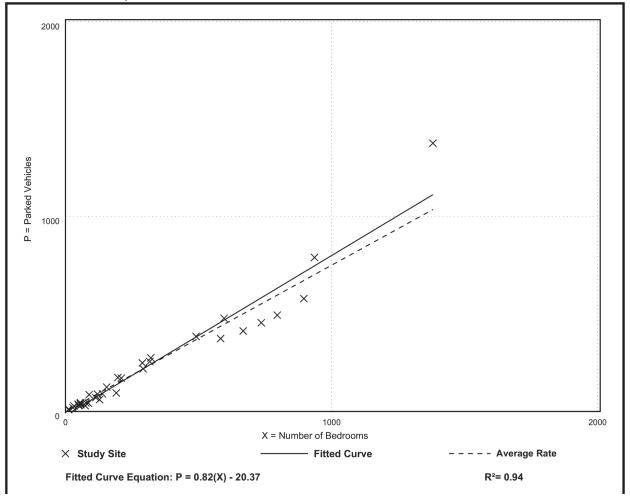
Peak Period of Parking Demand: 10:00 p.m. - 5:00 a.m.

Number of Studies: 35 Avg. Num. of Bedrooms: 294

#### Peak Period Parking Demand per Bedroom

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
0.75	0.41 - 1.00	0.65 / 0.87	0.70 - 0.80	0.15 ( 20% )

#### **Data Plot and Equation**



# Multifamily Housing (Mid-Rise) (221)

Peak Period Parking Demand vs: Bedrooms

On a: Saturday

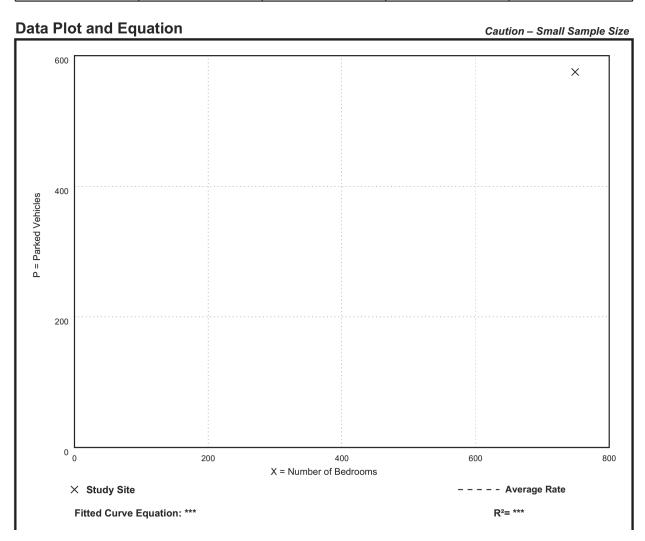
Setting/Location: General Urban/Suburban (no nearby rail transit)

Peak Period of Parking Demand: 11:00 p.m. - 7:00 a.m.

Number of Studies: 1 Avg. Num. of Bedrooms: 749

#### Peak Period Parking Demand per Bedroom

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
0.77	0.77 - 0.77	*** / ***	***	*** ( *** )



						Share	ed Parking	Demand S	ummary									
					Peak M	onth: DEC	EMBER	Peak Peric	d: 10 AM,	WEEKDAY								
					Weekday					Weekend				Weekday			Weekend	
Land Use	Projec	t Data	Base	Driving	Non-	Project	Unit For	Base	Driving	Non-	Project	Unit For	Peak Hr	Peak Mo	Estimated	Peak Hr	Peak Mo	Estimated
Land OSE			Ratio	Adj	Captive	Ratio	Ratio	Ratio	Adj	Captive	Ratio	Ratio	Adj	Adj	Parking	Adj	Adj	Parking
	Quantity	Unit	Hatio	Auj	Ratio	Hatio	Hatio	Hatio	Auj	Ratio	Hatio	Hatio	10 AM	December	Demand	10 AM	December	Demand
							R	etail										
Retail (<400 ksf)	9,200	sf GLA	3.12	100%	86%	2.67	ksf GLA	3.20	100%	90%	2.89	ksf GLA	55%	100%	14	60%	100%	16
Employee			0.78	100%	97%	0.76		0.80	100%	95%	0.76		75%	100%	6	85%	100%	6
							Food an	d Beverage										
Family Restaurant	300	sf GLA	0.42	100%	80%	0.34	ksf GLA	0.42	100%	90%	0.38	ksf GLA	85%	100%	86	90%	100%	103
Employee			0.07	100%	97%	0.07		0.07	100%	95%	0.07		100%	100%	22	100%	100%	22
Fast Casual/Fast Food	2,560	sf GLA	12.40	100%	10%	1.24	ksf GLA	12.70	100%	7%	0.85	ksf GLA	55%	96%	2	55%	96%	1
Employee			2.00	100%	97%	1.94		2.00	100%	95%	1.90		75%	100%	4	75%	100%	4
						Ent	tertainment	t and Instit	utions									
							Hotel and	l Residenti	al									
Residential, Suburban																0%		
Studio Efficiency	41	units	1.00	100%	100%	1.00	unit	1.00	100%	100%	1.00	unit	50%	100%	21	75%	100%	31
1 Bedroom	259	units	2.00	100%	100%	2.00	unit	2.00	100%	100%	2.00	unit	50%	100%	259	75%	100%	389
							0	ffice										
Office 100 to 500 ksf	134,560	sf GFA	0.23	100%	100%	0.23	ksf GFA	0.03	100%	100%	0.03	ksf GFA	100%	100%	32	90%	100%	4
Reserved		emp	0.00	100%	100%	0.00		0.00	100%	100%	0.00		100%	100%	-	100%	100%	-
Employee			3.10	100%	100%	3.10		0.31	100%	100%	0.31		100%	100%	417	90%	100%	39
Bank (Drive In Branch)	2,000	sf GFA	2.90	100%	48%	1.39	ksf GFA	3.00	100%	100%	3.00	ksf GFA	100%	100%	3	75%	100%	5
Employee			2.10	100%	97%	2.04		1.75	100%	97%	1.70		100%	100%	5	100%	100%	4
							Additiona	al Land Use	!S									
													Custom	er/Visitor	136	Cust	omer	129
													Employee	e/Resident	735	Employee	e/Resident	494
													Rese	erved	-	Rese	erved	-
													To	otal	871	To	otal	623

Shared Parking

Reduction 30% 26%

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landling				Maximum Parking Demand						
Land Use			intity	Weel Base Ratio	rday Max Spaces	Weel Base Ratio	end Max Spaces			
Retail (<400 ksf)		9,200	sf GLA	3.12	29	3.20	30			
Employee Retail (400 to 600 ksf)		0	sf GLA	0.78 2.96	8	0.80	8			
Employee				0.74	0	0.60	0			
Retail (600 ksf to 1,000 ksf) Employee		0	sf GLA	3.20 0.80	0	3.60 0.90	0			
Retail (1,000 ksf to 2,000 ksf)		0	sf GLA	3.50 0.90	0	4.00 1.00	0			
Employee Retail (over 2,000 ksf)		0	sf GLA	2.90	0	3.20	0			
Employee Supermarket/Grocery		0	sf GLA	0.70 4.00	0	0.80 4.00	0			
Employee				0.75	0	0.75	0			
Pharmacy Employee		0	sf GLA	3.00 0.40	0	3.00 0.40	0			
Discount Stores/Superstores Employee		0	sf GLA	3.40 0.85	0	3.80 0.95	0			
Iome Improvement Stores/Garden		0	sf GLA	3.10	0	3.45	0			
Employee		Food and E	Beverage	0.80	0	0.90	0			
ine/Casual Dining		0	sf GLA	0.42	0	0.42	0			
Employee amily Restaurant		300	sf GLA	0.07	127	0.07	127			
Employee				0.07	23	0.07	23			
ast Casual/Fast Food Employee		2,560	sf GLA	12.40 2.00	32 6	2.00	33 6			
Bar/Lounge/Night Club		0	sf GLA	15.25 1.25	0	17.50 1.50	0			
Employee	Enter	tainment a	ınd Institutio	ns 1.25			0			
amily Entertainment Employee		0	sf GLA	1.80 0.20	0	2.50 0.25	0			
Active Entertainment		0	sf GLA	1.50	0	1.80	0			
Employee unusement Park/Water Park		0	sf GLA	0.15 2.60	0	0.20 3.00	0			
Employee				0.26	0	0.30	0			
Adult Active Entertainment Employee		0	sf GLA	9.00 1.00	0	10.00 1.20	0			
Cineplex		0	seats	0.15	0	0.24	0			
Employee pecialty Movie Theatre		0	seats	0.01	0	0.01	0			
Employee				0.02	0	0.01	0			
ive Theater Employee		0	seats	0.30	0	0.33	0			
Outdoor Amphitheater		0	seats	0.30	0	0.33	0			
Employee Jublic Park/Destination Open Space		0	acre	0.07 4.00	0	5.00	0			
Employee			of GLA	0.40	0	0.50	0			
Vuseum/Aquarium Employee		0	sf GLA	4.00 0.40	0	4.50 0.50	0			
irena		0	seats	0.27	0	0.30	0			
Employee tro Football Stadium		0	seats	0.03	0	0.03	0			
Employee				0.01	0	0.01	0			
ro Baseball Stadium Employee		0	seats	0.31	0	0.34	0			
lealth Club		0	sf GLA	6.60 0.40	0	5.50	0			
Employee Public Library		0	sf GLA	2.00	0	0.25 1.90	0			
Employee Convention Center		0	sf GLA	0.25 5.50	0	0.20 5.50	0			
Employee				0.50	0	0.50	0			
		Hotel and R	tesidential	1.00	0	1.00	0			
totel-Business totel-Leisure		0	keys keys	1.00	0	1.00	0			
Hotel Employee		0	keys sf GLA	0.15 6.67	0	0.15 7.67	0			
Restaurant/Lounge Meeting/Banquet (0 to 20 sq ft/key)		0	sf GLA	0.00	0	0.00	0			
Meeting/Banquet (20 to 50 sq ft/key) Meeting/Banquet (50 to 100 sq ft/key)		0	sf GLA sf GLA	0.00	0	0.00	0			
Convention (100 to 200 sq ft/key)		0	sf GLA	0.00	0	5.50	0			
Convention (> 200 sq ft/key) Restaurant/Meeting Employees		0	sf GLA sf GLA	5.50 0.00	0	5.50 0.00	0			
Residential, Suburban										
Studio Efficiency 1 Bedroom		41 259	units	1.00 2.00	41 518	1.00 2.00	41 518			
2 Bedrooms		0	units	1.65	0	1.65	0			
3+ Bedrooms Reserved		0	units res spaces	2.50	0	2.50	0			
Visitor		J/8	res spaces units	0.00	0	0.00	0			
Residential, Urban Studio Efficiency		0	units	0.00	0	0.00	0			
1 Bedroom		0	units	0.00	0	0.00	0			
2 Bedrooms 3+ Bedrooms		0	units	0.00	0	0.00	0			
Reserved		100%	res spaces	0.00	0	0.00	0			
Visitor active Senior Housing		0	units	0.10	0	0.15	0			
tesidents				0.30	0	0.30	0			
Office <25 ksf		Offic	sf GFA	0.30	0	0.03	0			
Reserved weekday only =1, 24/7 2	2	0%	emp	0.00	0	0.00	0			
Employee Office 25 to 100 ksf		0	sf GFA	3.50 0.32	0	0.35	0			
Reserved weekday only =1, 24/7 2	2	0%	emp	0.00	0	0.00	0			
Employee Office =100 ksf		0	sf GFA	3.62 0.25	0	0.36	0			
Reserved weekday only =1, 24/7 2	2	0%	emp	0.00	0	0.00	0			
Employee Office 100 to 500 ksf		134,560	sf GFA	3.15 0.23	32	0.32	0 4			
Reserved weekday only =1, 24/7 2	2	0%	emp	0.00	0 417	0.00	0 43			
Employee Office >500 ksf		0	sf GFA	3.10 0.23	0	0.02	0			
Reserved weekday only =1, 24/7 2	2	10%	emp	0.32	0	0.32	0			
Employee Open Plan/High Density Office		0	sf GFA	2.78 0.25	0	0.00	0			
Reserved weekday only =1, 24/7 2	2	0%	emp	0.00	0	0.00	0			
Employee Medical/Dental Office		0	sf GFA	5.75 3.25	0	0.58	0			
Employee			4000	1.75	0	0.00	0			
kay Care Center Employee		0	sf GFA	1.75 2.00	0	0.00	0			
lank (Drive In Branch)		2,000	sf GFA	2.90 2.10	6	3.00 1.75	6			
Employee		Additional I	Land Uses	2.10			4			
dditional Land Use 1		0	0	0.00	0	0.00	0			
Employee udditional Land Use 2		0	0	0.00	0	0.00	0			
Employee additional Land Use 3		0	0	0.00	0	0.00	0			
Employee				0.00	0	0.00	0			
Additional Land Use 4		0	0	0.00	0	0.00	0			
Employee				0.00	0	0.00	0			

			Combine	d Monthly	Adjustment	s							
Land Use	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Late Dec
Retail (<400 ksf)	59%	61%	70%	Retail 67%	72%	72%	70%	73%	66%	69%	76%	100%	85%
Employee Retail (400 to 600 ksf)	69% 59%	71% 61%	79% 70%	77% 67%	82% 72%	82% 72%	80% 70%	83% 73%	76% 66%	78% 69%	86% 76%	100%	95% 85%
Employee	69%	71%	79%	77%	82%	82%	80%	83%	76%	78%	86%	100%	95%
Retail (600 ksf to 1,000 ksf) Employee	59% 69%	61% 71%	70% 79%	67% 77%	72% 82%	72% 82%	70% 80%	73% 83%	66% 76%	69% 78%	76% 86%	100%	85% 95%
Retail (1,000 ksf to 2,000 ksf) Employee	59% 69%	61% 71%	70% 79%	67% 77%	72% 82%	72% 82%	70% 80%	73% 83%	66% 76%	69% 78%	76% 86%	100%	85% 95%
Retail (over 2,000 ksf)	59%	61%	70%	67%	72%	72%	70%	73%	66%	69%	76%	100%	85%
Employee Supermarket/Grocery	69% 93%	71% 86%	79% 94%	77% 92%	82% 97%	82% 94%	80% 96%	83% 95%	76% 92%	78% 95%	86% 95%	100%	95% 95%
Employee	100%	96%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Pharmacy Employee	89% 99%	85% 95%	92% 100%	89% 99%	91% 100%	89% 98%	89% 98%	90% 99%	88% 98%	92% 100%	89% 98%	100% 100%	95% 100%
Discount Stores/Superstores	72% 82%	72% 82%	79% 88%	76% 86%	81% 91%	79% 89%	79% 89%	81% 91%	74% 84%	79% 89%	85% 95%	100% 100%	90% 100%
Employee Home Improvement Stores/Garden	63%	62%	79%	90%	100%	92%	87%	84%	80%	85%	80%	75%	65%
Employee	72%	71%	89% Fo	100% od and Bev	100% erage	100%	97%	94%	90%	94%	90%	85%	75%
Fine/Casual Dining	88%	87%	98%	94%	99%	94%	96%	96%	89%	93%	89%	100%	95%
Employee Family Restaurant	99%	98% 87%	100% 98%	100% 94%	100% 99%	100% 94%	100% 96%	100% 96%	99% 89%	100% 93%	100% 89%	100%	100%
Employee Fast Casual/Fast Food	99% 85%	98% 85%	100% 97%	100% 95%	100% 99%	100% 98%	100%	100%	99% 93%	100% 96%	100% 92%	100% 96%	100%
Employee	96%	96%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Bar/Lounge/Night Club Employee	87% 95%	87% 96%	100% 100%	93% 100%	97% 100%	94% 100%	97% 100%	96% 100%	94% 100%	98% 100%	92% 100%	96% 100%	95% 100%
			Entertai	nment and	Institutions								
Family Entertainment Employee	20% 50%	26% 50%	36% 50%	50% 60%	23% 50%	45% 55%	87% 97%	68% 78%	22% 50%	25% 50%	20% 50%	48% 58%	100%
Active Entertainment	79%	90%	91%	100%	60%	70%	72%	76%	70%	72%	74%	60%	100%
Employee Amusement Park/Water Park	89% 79%	100% 90%	100% 91%	100%	70% 60%	80% 70%	82% 72%	86% 76%	80% 70%	82% 72%	84% 74%	70% 60%	100%
Employee Adult Active Entertainment	89% 85%	100% 86%	100% 95%	100% 92%	70% 96%	80% 95%	82% 98%	86% 99%	80% 91%	82% 96%	84% 93%	70% 100%	100%
Employee	95%	96%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Cineplex Employee	50% 60%	50% 60%	45% 55%	33% 50%	55% 65%	50% 60%	75% 85%	55% 65%	25% 50%	25% 50%	55% 65%	55% 65%	100%
Specialty Movie Theatre	50%	50%	45%	33%	55%	50%	75%	55%	25%	25%	55%	55%	100%
Employee Live Theater	60% 90%	60% 90%	55% 90%	50% 90%	65% 90%	60% 90%	85% 90%	65% 90%	50% 90%	50% 90%	65% 90%	65% 100%	100%
Employee Outdoor Amphitheater	75% 0%	70% 0%	90%	100%	95% 100%	90%	85% 100%	80% 100%	75% 100%	85% 50%	90%	85% 10%	100%
Employee	10%	10%	10%	50%	100%	100%	100%	100%	100%	60%	50%	50%	10%
Public Park/Destination Open Space Employee	25% 50%	25% 50%	50% 60%	75% 85%	100%	100%	100%	100%	100%	100%	75% 85%	75% 85%	25% 50%
Museum/Aquarium	20%	26%	36%	50%	23%	45%	87%	68%	22%	25%	20%	48%	100%
Employee Arena	50% 90%	50% 100%	50% 100%	60% 100%	50% 100%	55% 75%	97%	78% 0%	50% 60%	50% 65%	50% 90%	58% 100%	100%
Employee Pro Football Stadium	100%	100%	100%	100%	100%	100%	10%	10%	75%	75%	100%	100%	100%
Pro Football Stadium Employee	10%	0% 10%	0% 10%	0% 10%	67% 10%	67% 10%	67% 10%	67% 100%	100%	100%	100%	100%	100%
Pro Baseball Stadium	0% 10%	0% 10%	0% 25%	100%	100% 100%	100% 100%	100% 100%	100% 100%	100% 100%	100% 100%	0% 10%	100% 100%	0% 10%
Employee Health Club	100%	95%	85%	90% 70%	65%	65%	65%	70%	80%	85%	85%	100%	95%
Employee Public Library	100% 75%	100% 75%	95% 80%	80% 85%	75% 90%	75% 90%	75% 90%	80% 90%	90%	95% 95%	95% 90%	100%	0% 50%
Employee	85%	85%	85%	90%	95%	95%	90%	95%	100%	100%	95%	65%	45%
Convention Center Employee	75% 85%	100% 100%	90% 100%	55% 65%	60% 70%	50% 60%	45% 55%	75% 85%	80% 90%	85% 95%	100% 100%	100% 100%	0%
Hotel-Business	60%	75%	90%	el and Resi 100%	dential 95%	95%	95%	85%	90%	95%	80%	60%	55%
Hotel-Leisure	80%	90%	100%	100%	90%	90%	100%	100%	75%	75%	75%	50%	100%
Hotel Employees Restaurant/Lounge	80% 85%	90% 86%	100% 95%	100% 92%	90% 96%	90% 95%	100% 98%	100% 99%	75% 91%	75% 96%	75% 93%	50% 100%	100%
Meeting/Banquet (0 to 20 sq ft/key)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Meeting/Banquet (20 to 50 sq ft/key) Meeting/Banquet (50 to 100 sq ft/key)	100% 100%	100% 100%	100%	100% 100%	100%	100% 100%	100% 100%	100% 100%	100% 100%	100% 100%	100% 100%	100% 100%	100%
Convention (100 to 200 sq ft/key) Convention (> 200 sq ft/key)	75% 75%	100% 100%	90% 90%	55% 55%	60% 60%	50% 50%	45% 45%	75% 75%	80% 80%	85% 85%	100% 100%	100% 100%	0%
Restaurant/Meeting Employees	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Residential, Suburban Studio Efficiency	100% 100%	100%	100%	100%	100%	100%	95% 95%	95% 95%	100%	100%	100%	100%	100%
1 Bedroom	100%	100%	100%	100%	100%	100%	95%	95%	100%	100%	100%	100%	100%
2 Bedrooms 3+ Bedrooms	100% 100%	100% 100%	100% 100%	100%	100%	100% 100%	95% 95%	95% 95%	100% 100%	100% 100%	100% 100%	100% 100%	100%
Reserved	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Visitor Residential, Urban	100%	100%	100%	100%	100%	100%	95% 95%	95% 95%	100%	100%	100%	100%	100%
Studio Efficiency 1 Bedroom	100%	100%	100%	100%	100%	100%	95% 95%	95% 95%	100%	100%	100%	100%	100%
2 Bedrooms	100%	100%	100%	100%	100%	100%	95%	95%	100%	100%	100%	100%	100%
3+ Bedrooms Reserved	100% 100%	100% 100%	100% 100%	100% 100%	100% 100%	100% 100%	95% 100%	95% 100%	100% 100%	100% 100%	100% 100%	100% 100%	100%
Visitor Active Senior Housing	100%	100%	100%	100%	100%	100%	95%	95%	100%	100%	100%	100%	100%
Active Senior Housing Residents	100% 100%	100% 100%	100% 100%	100% 100%	100% 100%	100% 100%	100%						
				Office									
Office <25 ksf Reserved	100% 100%	100% 100%	100% 100%	100% 100%	100% 100%	100% 100%	95% 100%	95% 100%	100% 100%	100% 100%	100% 100%	100% 100%	80% 100%
Employee Office 25 to 100 ksf	100% 100%	100% 100%	100% 100%	100% 100%	100%	100%	95% 95%	95% 95%	100% 100%	100%	100%	100% 100%	80%
Reserved	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Employee Office =100 ksf	100%	100%	100%	100%	100%	100%	95% 95%	95% 95%	100%	100%	100%	100%	80%
Reserved	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Employee Office 100 to 500 ksf	100% 100%	100% 100%	100%	100% 100%	100%	100%	95% 95%	95% 95%	100% 100%	100% 100%	100%	100% 100%	80%
Reserved	100% 100%	100% 100%	100%	100%	100%	100%	100%	100% 95%	100% 100%	100% 100%	100%	100% 100%	100%
Employee		100%	100%	100%	100%	100%	95%	95%	100%	100%	100%	100%	80%
Employee Office >500 ksf	100%	100%	100%	100% 100%	100% 100%	100% 100%	100% 95%	100% 95%	100% 100%	100% 100%	100% 100%	100% 100%	100% 80%
Office >500 ksf Reserved	100%		100%		-30/4		2270	95%	-00/0				80%
Office >500 ksf Reserved Employee Open Plan/High Density Office	100% 100% 100%	100% 100%	100%	100%	100%	100%	95%		100%	100%	100%	100%	
Office >500 ksf Reserved Employee	100% 100%	100%	100% 100% 100% 100%	100% 100% 100%	100% 100% 100%	100% 100% 100%	95% 100% 95%	95% 100% 95%	100% 100% 100%				100%
Office >500 ksf Reserved Employee Open Plan/high Density Office Reserved Employee Medical/Dental Office	100% 100% 100% 100% 100% 100%	100% 100% 100% 100%	100% 100% 100% 100%	100% 100% 100% 100%	100% 100% 100%	100% 100% 100%	100% 95% 95%	100% 95% 95%	100% 100% 100%	100% 100% 100% 100%	100% 100% 100% 100%	100% 100% 100% 100%	100% 80% 80%
Office > 500 std Reserved Employee Open Plan/High Density Office Reserved Employee Employee Medical/Dental Office Employee Day Care Center	100% 100% 100% 100% 100%	100% 100% 100% 100%	100% 100% 100%	100% 100% 100%	100% 100%	100% 100%	100% 95%	100% 95%	100% 100%	100% 100% 100%	100% 100% 100%	100% 100% 100%	100% 80% 80%
Office >500 ksf Reserved Employee Open Plan/high Density Office Reserved Employee Medical/Dental Office Employee Day Care Center Employee	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100%	100% 95% 95% 95% 95% 95%	100% 95% 95% 95% 95% 95%	100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100%	100% 80% 80% 80% 80% 80%
Office > 500 std Reserved Employee Open Plan/High Density Office Reserved Employee Employee Medical/Dental Office Employee Day Care Center	100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100%	100% 95% 95% 95% 95%	100% 95% 95% 95% 95%	100% 100% 100% 100% 100%	100% 100% 100% 100% 100%	100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100%	100% 80% 80% 80% 80% 80% 100%
Office >500 bil  Reserved  Employee  General Parking Density Office  Reserved  Employee  Needow JOSEAN Office  Reserved  Employee  Employee  Beneral Office  Employee  Employee  Employee  Benk (Dive in Branch)  Employee	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 95% 95% 95% 95% 95% 100% 95%	100% 95% 95% 95% 95% 95% 100% 95%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 80% 80% 80% 80% 100% 80%
Office 5-500 bil  Reserved  Employee  Gopen Planhigh Density Office  Reserved  Employee  Medical/Densit Office  Reserved  Employee  Dely Care Center  Dely Care	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 95% 95% 95% 95% 95% 100% 95%	100% 95% 95% 95% 95% 95% 100% 95%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 80% 80% 80% 80% 80% 100% 80%
Office >500 bit Reserved Employee Open Plan/Righ Denisty Office Reserved Medical/Denist Office Employee Day Care Center Employee	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 95% 95% 95% 95% 95% 100% 95%	100% 95% 95% 95% 95% 95% 100% 95%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 80% 80% 80% 80% 80% 100% 80%
Office >500 bil  Reserved  Employee  Open Plan/Righ Density Office  Reserved  Employee  General  Employee  Density Office  Reserved  Employee  Emp	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 95% 95% 95% 95% 95% 100% 95% 0% 0%	100% 95% 95% 95% 95% 100% 95% 0% 0% 0%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 80% 80% 80% 80% 100% 80% 0% 0% 0%
Office 500 bit Reserved Employee Dopen Planhigh Density Office Reserved Employee Medical/Densit Office Employee Day Care Center Employee Day Care Center Employee Dana (Doven in Branch) Employee Density Office Density	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 95% 95% 95% 95% 95% 100% 95% 0% 0%	100% 95% 95% 95% 95% 95% 100% 95% 0% 0%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 80% 80% 80% 80% 80% 100% 80% 0% 0% 0%

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	Land Use    Adjustment   AAA   AAA   BAA   9AA   10AA   11AA   12PM   1PM   2PM   3PM   4PM   5PM   4PM   7PM   8PM   9PM   10PM   1PM   12AM   10AM   10AM   2PM   10AM   10AM   10AM   2PM   10AM   10AM																							
									Weekday		eak-Hour Pa	rking Demar												
Land Use							11 AM	12 PM	1 PM						7 PM									Eve Peak H
										F	Retail													
Retail (<400 ksf)	100%	0	1	4	7	14	19	22	25	25	24	20	21	22	22	21	12	7	2	0	14	14	25	7
Employee		1	1	2	3	6	7	8	8	8	8	8	8	8	8	7	5	3	2	0	6	6	8	3
										Food an	d Beverage													
Family Restaurant	100%	25	51	61	76	86	91	101	91	51	46	46	86	92	92	92	69	63	58	29	86	86	51	63
Employee	100%	11	17	20	20	22	22	22	22	22	17	17	21	21	21	21	17	14	14	8	22	22	22	14
ast Casual/Fast Food	96%	0	0	1	1	2	3	3	3	3	2	2	2	3	2	2	1	1	0	0	2	2	3	1
Employee	100%	1	1	2	2	4	6	6	6	6	4	3	4	5	5	3	2	2	1	1	4	4	6	2
									E	ntertainmen	it and Institu	itions												
										Hotel an	d Residentia	I												
Residential, Suburban																					-	-	-	-
Studio Efficiency	100%	39	33	28	23	21	18	16	16	16	16	18	21	25	29	33	35	39	40	41	21	21	16	39
1 Bedroom	100%	492	414	350	285	259	233	207	207	207	207	233	259	311	363	414	440	492	502	518	259	259	207	492
2 Bedrooms	100%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
3+ Bedrooms	100%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
Reserved	100%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
Visitor	100%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
										C	Office													
Office 100 to 500 ksf		0	0	6	19	32	14	5	14	30	14	5	3	2	1	0	0	0	0	0	32	32	30	0
Reserved	100%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	- 1
Employee	100%	13	63	209	375	417	417	354	354	396	396	354	250	104	63	21	13	4	0	0	417	417	396	4
Bank (Drive In Branch)	100%	0	0	1	3	3	1	1	1	2	1	2	6	0	0	0	0	0	0	0	3	3	2	0
Employee	100%	0	0	3	5	5	5	5	5	5	5	5	5	0	0	0	0	0	0	0	5	5	5	0
										Addition	al Land Uses	3												
			53	73	106			133	135				118		117	115	82				136			71
	Employee/Resident	557	529	612	713	734	709	619	619	660	653	639	567	473	487	499	512	554	559	568	734	734	660	554
	Reserved	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		582	581	685	820	870	837	752	754	771	740	713	685	592	605	614	594	625	619	597	870	870	771	625

Retail (400 ksf)   100%   1   3   9   16   23   27   27   27   27   27   27   27																								
											eak-Hour Pa	rking Dema												
	Monthly																				Overall Pk	AM Peak Hr	PM Peak Hr	Eve Peak
Land Use	Adjustment	6 AM		8 AM			11 AM					4 PM	5 PM						11 PM	12 AM	10 AM	10 AM	12 PM	8 PM
											Retail													
Retail (<400 ksf)		0	1	3	9	16	23	27	27	27	27	24	20	16	15	14	13	9	4	0	16	16	27	14
Employee	100%	1	1	3	6	6	7	8	8	8	8	8	7	6	6	6	5	3	1	0	6	6	8	6
										Food ar	d Beverage										·			
	100%	11	29	52			103		97	74	46	52		80		74	34	28	17	11	103	103	114	74
Employee	100%	11	16	20	20	22	22	22	22	22	16	16	20	20	20	20	17	14	14	8	22	22	22	20
Fast Casual/Fast Food	96%	0	0	0	1	1	2	2	2	2	1	1	2	3	3	2	1	1	0	0	1	1	2	2
Employee	100%	1	1	2	2	4	6	6	6	5	4	3	4	5	5	3	2	2	1	1	4	4	6	3
									E	ntertainmer	t and Institu	tions												
										Hotel an	d Residentia	I												
Residential, Suburban																								
Studio Efficiency	100%	41	39	36	33	31	29	28	27	27	28	29	30	32	33	34	35	36	38	41	31	31	28	34
1 Bedroom	100%	518	492	456	414	389	363	352	337	337	352	368	383	399	414	430	445	461	477	518	389	389	352	430
2 Bedrooms	100%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	
3+ Bedrooms	100%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	
Reserved	100%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	
Visitor	100%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	
										(	Office													
Office 100 to 500 ksf	100%	0	1	2	3	4	4	4	3	2	2	1	0	0	0	0	0	0	0	0	4	4	4	0
Reserved	100%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	
Employee	100%	0	9	26	34	39	43	39	34	26	17	9	4	2	0	0	0	0	0	0	39	39	39	0
Bank (Drive In Branch)	100%	0	0	2	2	5	6	5	0	0	0	0	0	0	0	0	0	0	0	0	5	5	5	0
	100%	0	0	3	4	4	4	4	0	0	0	0	0	0	0	0	0	0	0	0	4	4	4	0
										Addition	al Land Uses													
	Customer/Visitor	12	31	59	96	129	138	153	130	106	76	78	91	99	97	89	48	38	21	12	129	129	153	89
	Employee/Resident	572	558	546	513	494	473	458	433	424	425	433	449	464	479	493	505	517	530	568	494	494	458	493
	Reserved	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		583	589	604	609	623	611	611	563	530	501	511	540	563	576	583	553	554	552	579	623	623	611	583

## SPECIAL USE AND PRELIMINARY SITE PLAN APPROVALS

6. <u>SPECIAL USE APPROVAL AND PRELIMINARY SITE PLAN REVIEW (File Number SU JPLN2022-0004)</u> – Proposed 2690 Crooks Road Apartments, East side of Crooks, South of Big Beaver (2690 Crooks), Section 28, Currently Zoned BB (Big Beaver) District

Mr. Carlisle reviewed the Special Use and Preliminary Site Plan application for 2690 Crooks Road Apartments. The applicant proposes to repurpose the existing 4-story Lindsey Center building and construct a new 5-story multiple family residential building. Mr. Carlisle addressed the number of units, access and circulation, site arrangement, shared parking with 911 and 999 W. Big Beaver sites, waiver to relocate required parking lot trees and architectural features. Mr. Carlisle explained the Special Use Approval relates to the proposed residential use on the first floor not facing a public right of way. He reported the application includes a traffic study reviewed by both the City Traffic Consultant OHM Advisors and Oakland County Road Commission (OCRC). Mr. Carlisle said OHM and OCRC representatives are present this evening to address traffic and proposed shared parking.

(Mr. Savidant exited the meeting at 7:31 p.m.; returned at 7:33 p.m.)

Mr. Carlisle said as part of the deliberation, the Planning Commission should consider compliance with Section 5.04E Big Beaver Design Standards, Section 8.06 Site Plan Review Standards and Section 9.02.D Special Use Standards, as well the required transparency for the east, north and south elevations, parking lot tree location, proposed shared parking and consideration of providing a three-dimensional (3-D) rendering of the entire development.

Mr. Carlisle reported any approval this evening should be subject to the conditions identified in his report dated January 4, 2023 as part of Final Site Plan approval. Mr. Carlisle reminded the Board there was no public comment at the Public Hearing conducted at their December 13, 2022 meeting.

Board members expressed confusion in the review and deliberation of this application because of its relationship to Agenda item # 7 on tonight's agenda.

It was determined the Planning Consultant would give a review on Agenda item #7, 911 and 999 W. Big Beaver Special Use Approval and Preliminary Site Plan application prior to taking any action on the 2690 Crooks Road application.

Applicant Jordan Jonna said the ownership structure of the subject parcels dictated the submission of individual applications. He noted that the south site (2690 Crooks) has sufficient parking to stand alone whether the north site (911 and 999 W. Big Beaver) is developed or not.

There was discussion, some comments related to:

- Building heights.
- Green recreational space deficiency.

Shared parking.

- o Coordination of parking during construction phases.
- Dynamics of shared parking among the various uses.

## Resolution # PC-2023-01-xxx (motion withdrawn)

Moved by: Krent Seconded by: Faison

**RESOLVED**, The Planning Commission hereby approves a reduction in the total number of required parking spaces for the proposed 2690 Crooks Road residential development to 221 when a total of 312 spaces are required on the site based on the off-street parking space requirements for multi-family residential. This 91-space reduction is sufficient to meet parking demands based on shared parking provided on the abutting site to the north; and,

**RESOLVED**, That Special Use Approval and Preliminary Site Plan Approval for the proposed 2690 Crooks Road Apartments, east side of Crooks, south of Big Beaver (2690 Crooks), Section 28, Currently Zoned BB (Big Beaver) District, be granted, subject to the following conditions:

- 1. Increase the drive-aisle width to at least 26 feet.
- 2. Improve pedestrian circulation based on OHM's comments.
- 3. Confirm existing screening of trash enclosure.
- Confirm building lighting.
- 5. Verify unit numbers.
- 6. Provide a shared parking agreement to the satisfaction of the City Attorney prior to Final Site Plan Approval.
- 7. Provide transparency calculations.

## Discussion on the motion on the floor.

Concerns discussed were:

- Required landscape trees in parking lot; impact to number of parking spaces.
- Non-friendly pedestrian walkability of site.
- Enhancement of green space.
- Improvements to access, circulation, and shared parking.

Mr. Krent withdrew his motion from the floor. Mr. Faison was in support of its withdrawal.

## Resolution # PC-2023-01-004

Moved by: Tagle Seconded by: Krent

**RESOLVED**, To postpone 2690 Crooks Road Apartments application so that the applicant may comply with the Zoning Ordinance requirements of interior parking lot landscaping, enhance the pedestrian walkways and to provide information to this

<sup>\*</sup>Refer to page 6, Agenda item #7 for additional comments that relate to both applications.

Commission with regard to the distance to the parking spots for the residential units in excess of what is currently around the building.

Yes: All present (9)

**MOTION CARRIED** 

# BOULAN DR SOURCE: USGS MAPS

# SITE DEVELOPMENT PLANS

**FOR** 

# **APPLICANT**

TROY KS DEVELOPMENT, LLC 036 TELEGRAPH ROAD, SUITE 201 **SLOOMFIELD HILLS, MI 48302** 

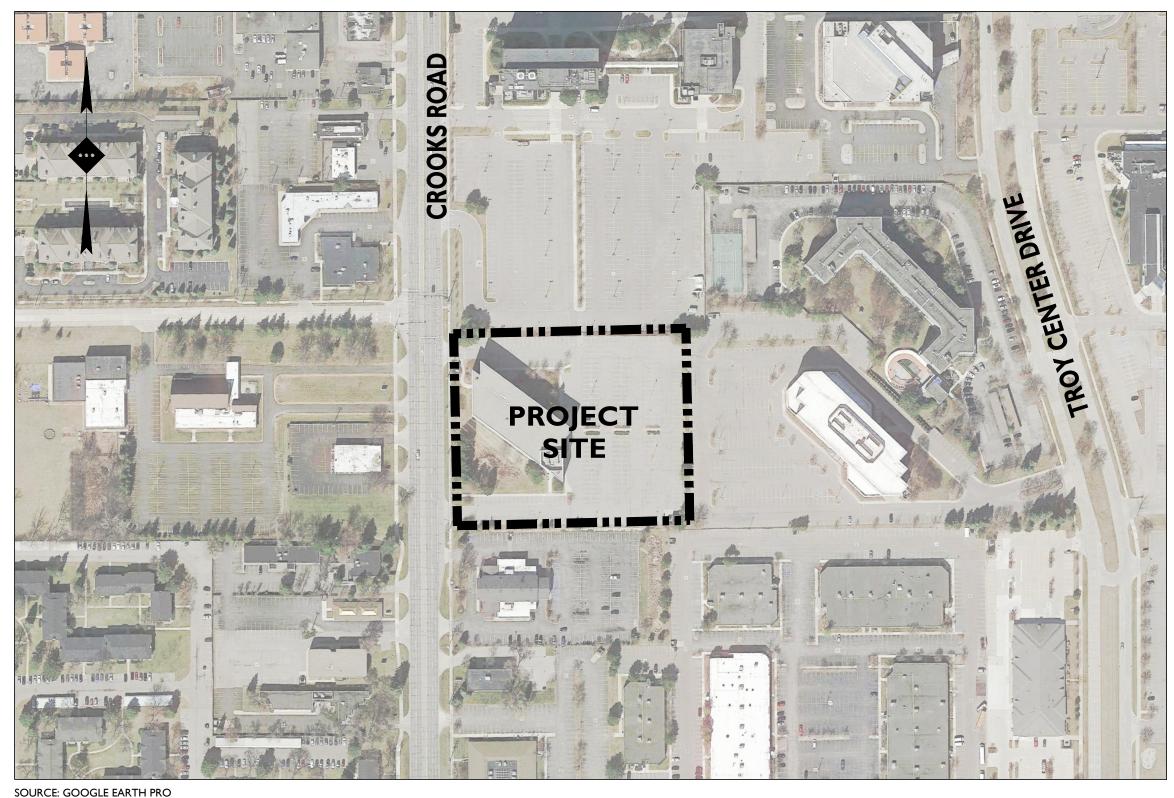
# 2690 CROOKS ROAD

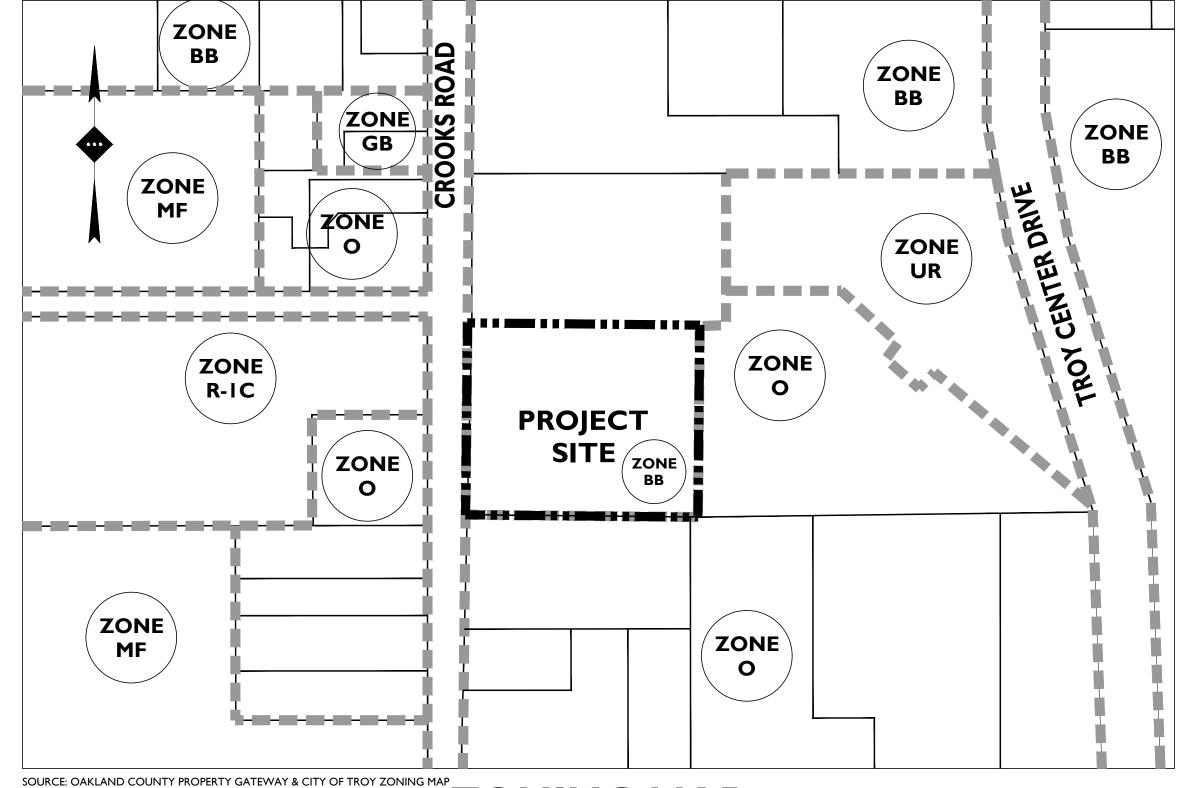
# **EXISTING BUILDING RENOVATION &** PROPOSED MULTI-FAMILY APARTMENTS

PARCEL ID: 20-28-101-003 2690 CROOKS ROAD CITY OF TROY, OAKLAND COUNTY, MICHIGAN

SCALE:  $I'' = 2,000' \pm$ 

**LOCATION MAP** 





**ZONING MAP** 

SCALE:  $I'' = 200' \pm$ 

**AERIAL MAP** 

SCALE:  $I'' = 200' \pm$ 

# PLANS PREPARED BY:

# **PLAN REFERENCE MATERIALS:**

- I. THIS PLAN SET REFERENCES THE FOLLOWING DOCUMENTS ALTA/TOPOGRAPHIC SURVEY PREPARED BY KEM-TEC
- **SURVEY DATED 03/16/2022** ARCHITECTURAL DRAWINGS PREPARED BY BIDDISON
- ARCHITECTURE + DESIGN, DATED 02-03-2023 **AERIAL MAP OBTAINED FROM GOOGLE EARTH PRO** LOCATION MAP OBTAINED FROM USGS ONLINE
- **ZONING INFORMATION OBTAINED FROM CITY OF TROY**
- 2. 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



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607 Shelby Suite 200, Detroit, MI 48226 Phone 248.247.1115

SHEET INDEX	
DRAWING TITLE	SHEET#
COVER SHEET	C-I
DEMOLITION PLAN	C-2
SITE PLAN	C-3
OVERALL SITE PLAN	C-4
GRADING PLAN	C-5
STORMWATER MANAGEMENT PLAN	C-6
UTILITY PLAN	C-7
LIGHTING PLAN	C-8
LANDSCAPING PLAN	C-9
LANDSCAPING DETAILS	C-10
SOIL EROSION AND SEDIMENT CONTROL PLAN	C-11
CONSTRUCTION DETAILS	C-12 & C-13

ADDITIONAL SHEETS					
RAWING TITLE	SHEET #				
LTA / TOPOGRAPHIC SURVEY	I OF I				

				RESUBMISSION FOR SITE PLAN APPROVAL	FOR RCOC / PLANNING APPROVAL	FOR ENGINEERING APPROVAL	FOR SITE PLAN APPROVAL	FOR SITE PLAN REVIEW & SPECIAL LAND USE SUMBISSIO	FOR CITY SUBMISSION	DESCRIPTION	
				КТН	КТН	КТН	КТН	КТН	RAC	ВУ	
				02/06/2023	10/11/2022	07/11/2022	05/31/2022	02/14/2022	02/09/2021	DATE	
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NOT APPROVED FOR CONSTRUCTION



ROAD

2690

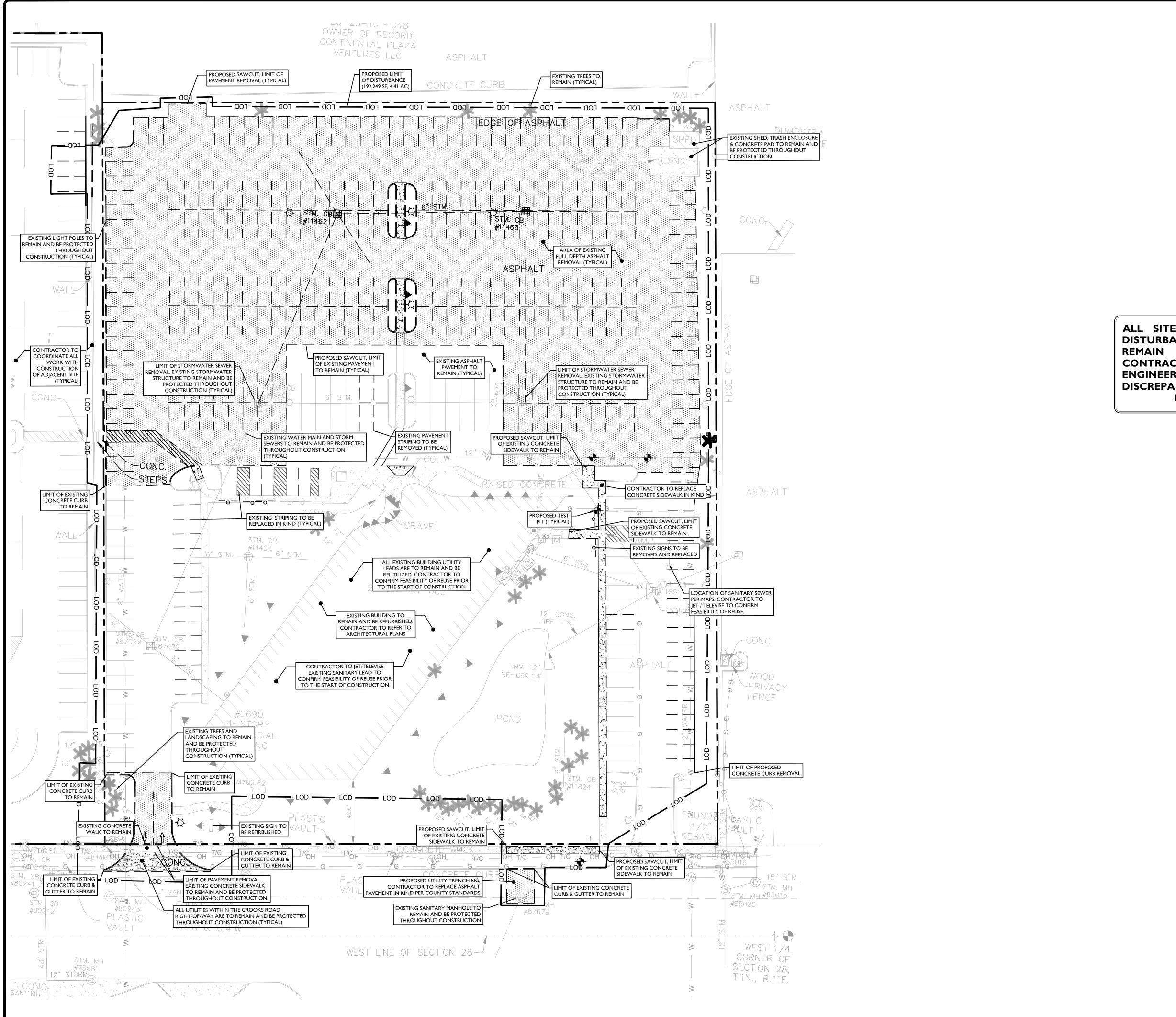


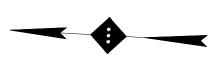
SCALE: AS SHOWN PROJECT ID: M-19301.01

**COVER SHEET** 

DRAWING:

C-I





## **SYMBOL DESCRIPTION**

FEATURE TO BE REMOVED / DEMOLISHED

LIMIT OF DISTURBANCE

AREA OF FULL-DEPTH ASPHALT REMOVAL

AREA OF CONCRETE REMOVAL

PROPOSED TEST PIT

ALL SITE FEATURES WITHIN THE LIMIT OF DISTURBANCE INDICATED ON THIS PLAN ARE TO REMAIN UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL NOTIFY STONEFIELD **ENGINEERING & DESIGN, LLC. IF SIGNIFICANT** DISCREPANCIES ARE DISCERNED BETWEEN THIS PLAN AND FIELD CONDITIONS

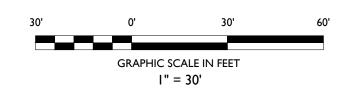


Know what's **below Call** before you dig.

# **DEMOLITION NOTES**

SITE IMPROVEMENTS.

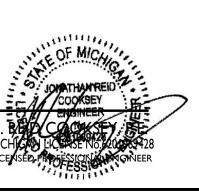
- I. THE WORK REFLECTED ON THE DEMOLITION PLAN IS TO PROVIDE GENERAL INFORMATION TOWARDS THE EXISTING ITEMS TO BE DEMOLISHED AND/OR REMOVED. THE CONTRACTOR IS RESPONSIBLE TO REVIEW THE ENTIRE PLAN SET AND ASSOCIATED REPORTS/REFERENCE DOCUMENTS INCLUDING ALL DEMOLITION ACTIVITIES AND INCIDENTAL TASKS NECESSARY TO COMPLETE THE
- THE CONTRACTOR IS RESPONSIBLE TO DETERMINE THE MEANS AND METHODS OF DEMOLITION ACTIVITIES.
   EXPLOSIVES SHALL NOT BE USED UNLESS WRITTEN CONSENT FROM BOTH THE OWNER AND ANY APPLICABLE GOVERNING AGENCY IS OBTAINED. BEFORE THE START OF ANY EXPLOSIVE PROGRAM, THE CONTRACTOR IS RESPONSIBLE TO OBTAIN ALL LOCAL, STATE, AND FEDERAL PERMITS. ADDITIONALLY, THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL SEISMIC TESTING AS REQUIRED AND ANY DAMAGES AS THE RESULT OF SAID DEMOLITION PRACTICES.
- 4. ALL DEMOLITION ACTIVITIES SHALL BE PERFORMED IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL CODES. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING ALL UTILITIES ARE DISCONNECTED IN ACCORDANCE WITH THE UTILITY AUTHORITY'S REQUIREMENTS PRIOR TO STARTING THE DEMOLITION OF ANY STRUCTURE. ALL EXCAVATIONS ASSOCIATED WITH DEMOLISHED STRUCTURES OR REMOVED TANKS SHALL BE BACKFILLED WITH SUITABLE MATERIAL AND COMPACTED TO SUPPORT SITE AND BUILDING IMPROVEMENTS. A GEOTECHNICAL ENGINEER SHOULD BE PRESENT DURING BACKFILLING ACTIVITIES TO OBSERVE AND CERTIFY THAT BACKFILL MATERIAL WAS COMPACTED TO A SUITABLE CONDITION.
- 5. DEMOLISHED DEBRIS SHALL NOT BE BURIED ON SITE. ALL WASTE/DEBRIS GENERATED FROM DEMOLITION ACTIVITIES SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REQUIREMENTS. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN ALL RECORDS OF THE DISPOSAL TO DEMONSTRATE COMPLIANCE WITH THE ABOVE REGULATIONS.



			RESUBMISSION FOR SITE PLAN APPROVAL	FOR RCOC / PLANNING APPROVAL	FOR ENGINEERING APPROVAL	FOR SITE PLAN APPROVAL	FOR SITE PLAN REVIEW & SPECIAL LAND USE SUMBISS	FOR CITY SUBMISSION	DESCRIPTION
			КТН	КТН	КТН	КТН	КТН	RAC	ВУ
			02/06/2023	10/11/2022	07/11/2022	05/31/2022	02/14/2022	02/09/2021	DATE
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8 ROOKS





I" = 30' PROJECT ID: M-19301.01

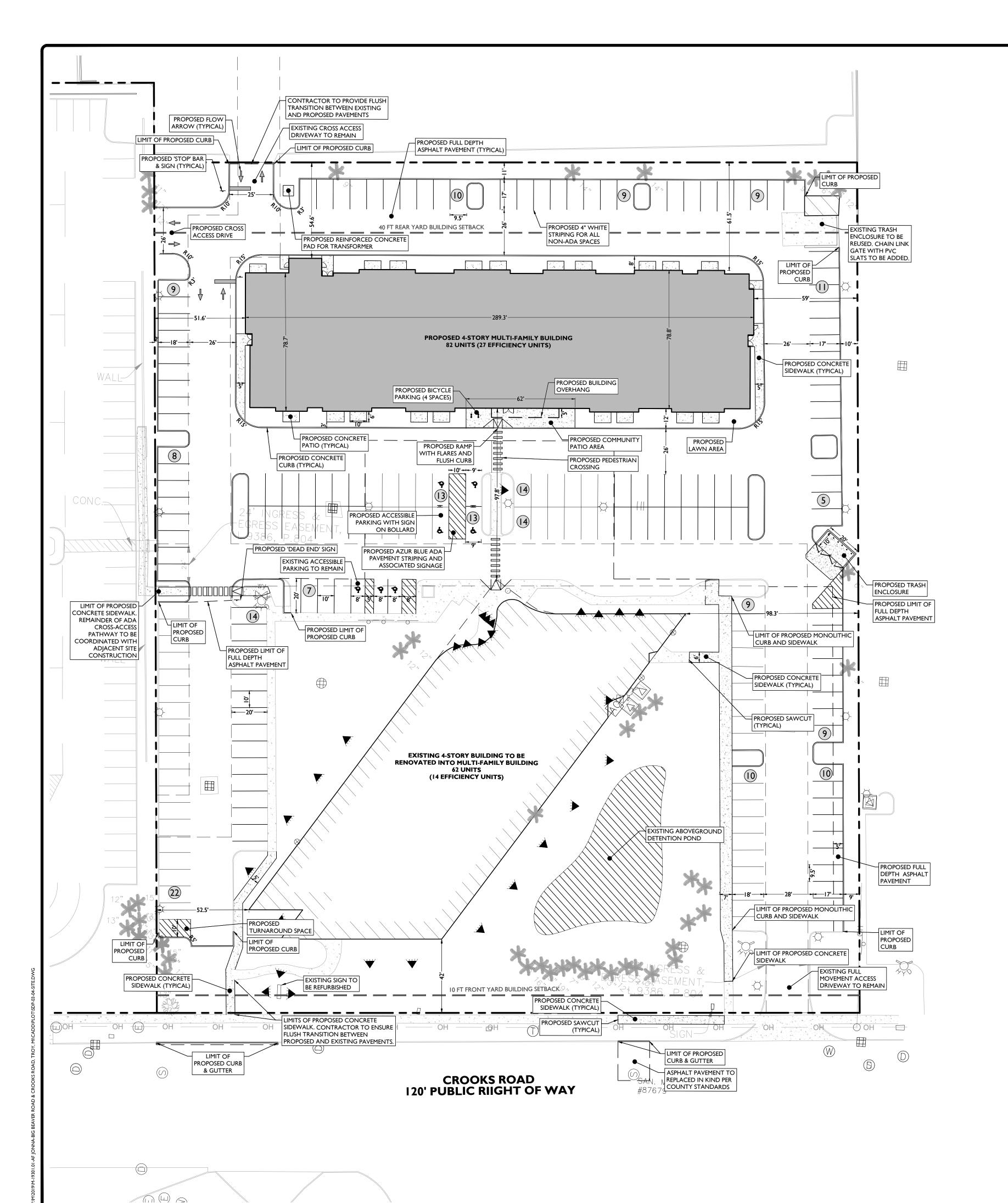
**DEMOLITION PLAN** 

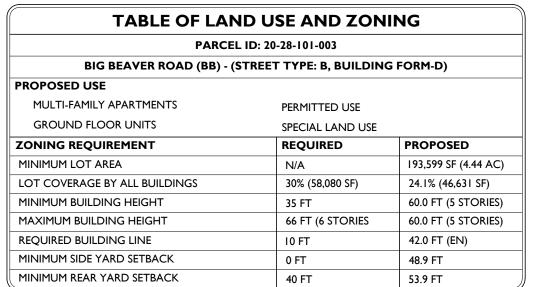
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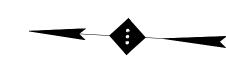
**C-2** 





(EN) EXISTING NON-CONFORMITY

DDE SECTION	REQUIRED	PROPOSED
TABLE 13.06-A	MULTI-FAMILY DWELLING:	196 SPACES
	2 SPACES PER DWELLING UNIT	
	(103 UNITS)(2 SPACES PER UNIT) = 206 SPACES	
	I SPACE PER EFFICIENCY UNIT	
	(41 UNITS)(1 SPACE PER UNIT) = 41 SPACES	
	<u>TOTAL:</u> 206 + 41 = <b>247 SPACES</b>	
ΓABLE 13.06-B	90° PARKING:	9.5 FT X 19 FT
	9.5 FT X 19 FT W/ 24 FT AISLE	W/ 24 FT AISLE
3.06.F.3	MAXIMUM PARKING:	196 SPACES
	120% OF REQUIRED PARKING	
	(247 SPACES)(1.2) = 296 SPACES	
3.11.C.4	BICYCLE PARKING:	TO BE PROVIDED
	2 SPACES PER BUILDING	
	(2 BUILDINGS)(2 SPACES/BUILDING) = 4 SPACES	
3.02.E-I	SITE LANDSCAPING:	27.8% (XX SF)
	15% OF THE SITE AREA SHALL BE LANDSCAPED	
	(193,599 SF)(0.15) = 29,040 SF	
.09.D.5	RECREATIONAL AREA:	50,655 SF
	300 SF RECREATIONAL AREA PER UNIT	
	(144 UNITS)(300 SF/UNIT) = 43,200 SF	

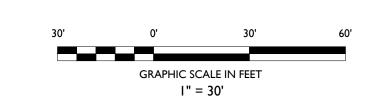


SYMBOL	DESCRIPTION
	PROPERTY LINE
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	EXISTING BUILDING
	PROPOSED CURB
	PROPOSED BUILDING
	PROPOSED CONCRETE
= = = =	PROPOSED FLUSH CURB
<del></del>	PROPOSED SIGNS / BOLLARDS

PROPOSED BIKE RACK

# **GENERAL NOTES**

- I. 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.
- 2. 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.
- 3. ALL CONTRACTORS WILL, TO THE FULLEST EXTENT PERMITTED BY LAW, INDEMNIFY AND HOLD HARMLESS STONEFIELD ENGINEERING & DESIGN, LLC. AND IT'S 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. 4. THE CONTRACTOR SHALL NOT DEVIATE FROM THE PROPOSED IMPROVEMENTS IDENTIFIED WITHIN THIS PLAN SET UNLESS APPROVAL IS PROVIDED IN WRITING BY STONEFIELD ENGINEERING & DESIGN,
- 5. THE CONTRACTOR IS RESPONSIBLE TO DETERMINE THE MEANS AND
- METHODS OF CONSTRUCTION. 6. 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.
- 7. 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 CONTRACTORS EXPENSE. 8. CONTRACTOR IS RESPONSIBLE TO PROVIDE THE APPROPRIATE SHOP
- DRAWINGS, PRODUCT DATA, AND OTHER REQUIRED SUBMITTALS FOR REVIEW. STONEFIELD ENGINEERING & DESIGN, LLC. WILL REVIEW THE SUBMITTALS IN ACCORDANCE WITH THE DESIGN INTENT AS REFLECTED WITHIN THE PLAN SET. 9. THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL IN
- ACCORDANCE WITH MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION. 10. 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. II. THE CONTRACTOR IS REQUIRED TO RETAIN AN OSHA CERTIFIED SAFETY INSPECTOR TO BE PRESENT ON SITE AT ALL TIMES DURING
- CONSTRUCTION & DEMOLITION ACTIVITIES. 12. 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.



DESCRII  PROPERTY LINE	PTION			RESUBMISSION FOR SITE PLAN APPROVAL	FOR RCOC / PLANNING APPROVAL	FOR ENGINEERING APPROVAL	FOR SITE PLAN APPROVAL	FOR SITE PLAN REVIEW & SPECIAL LAND USE S	FOR CITY SUBMISSION	
EXISTING BUILDI	NG			КТН	КТН	КТН	КТН	КТН	RAC	20
				2023	2022	2022	2022	2022	2021	Į.

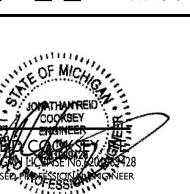
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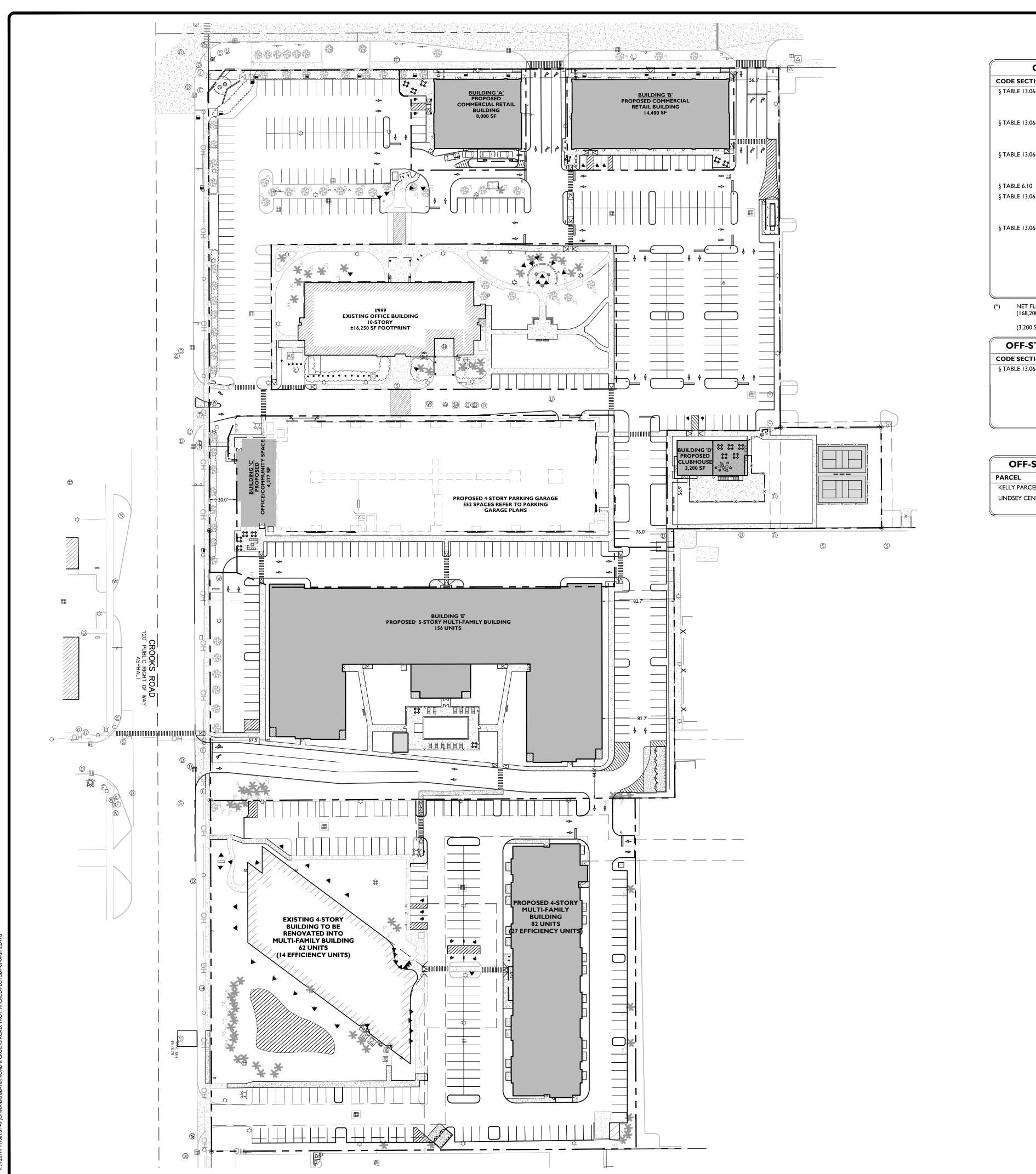




I" = 30' PROJECT ID: M-19301.01

**SITE PLAN** 

**DRAWING:** 



OFF	-STREET PARKING REQUIREMENT	rs - KELLY
CODE SECTION	REQUIRED	PROPOSED
§ TABLE 13.06-A	PROFESSIONAL OFFICE:	408 SURFACE SPACES
	I SPACE PER 300 NFA	552 GARAGE SPACES
	(134,560 NFA*)(1/300 NFA) = 449 SPACES	61 PODIUM SPACES
§ TABLE 13.06-A	COMMERCIAL / RETAIL:	1,021 TOTAL SPACES
	I SPACE PER 250 GFA	
	(9,200 GFA)(1/250 GFA) = 37 SPACES	
§ TABLE 13.06-A	BANK:	
	I SPACE PER 200 GFA	
	(2,000 GFA)(1/200 GFA) = 10 SPACES	
§ TABLE 6.10	4 STACKING SPACES PER LANE	4 SPACES PER LANE
§ TABLE 13.06-A	RESTAURANT (STANDARD):	
	I SPACE PER 2 SEATS AT MAXIMUM CAPACITY	
	(300 SEATS)(1/2 SEATS) = 150 SPACES	
§ TABLE 13.06-A	RESTAURANT (FAST FOOD):	
	I SPACE PER 70 SF NET FLOOR AREA (*)	
	(2,560 SF NFA)(1/70 SF NFA) = 37 SPACES	
	MULTI-FAMILY RESIDENTIAL:	
	2 SPACES PER DWELLING UNIT	
	(156 UNITS)(2/1 UNITS) = 312 SPACES	
	<u>TOTAL:</u> 449+37+10+150+37+312 = 995 SPACES	

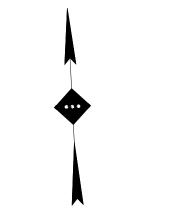
(\*) NET FLOOR AREA IS ASSUMED TO BE 80% GROSS FLOOR AREA (168,200 SF)(0.8) = 134,560 SF

(3,200 SF)(0.8) = 2,560 SF

# **OFF-STREET PARKING REQUIREMENTS - LINDSEY CENTRE**

CODE SECTION	REQUIRED	PROPOSED
§ TABLE 13.06-A	MULTI-FAMILY DWELLING:	196 SPACES
	2 SPACES PER DWELLING UNIT	
	(103 UNITS)(2 SPACES PER UNIT) = 206 SPACES	
	I SPACE PER EFFICIENCY UNIT	
	(41 UNITS)(1 SPACE PER UNIT) = 41 SPACES	
	<u>TOTAL:</u> 206 + 41 = <b>247 SPACES</b>	

OFF-STREI	ET PARKING REQUIREMEN	TS - COMBINED
PARCEL	REQUIRED	PROPOSED
KELLY PARCEL	995 SPACES	1,021 SPACES
LINDSEY CENTRE	247 SPACES	196 SPACES
	TOTAL: 995 + 247 = 1,242 SPACES	TOTAL: 1,217 SPACES



PROPERTY LINE

## **SYMBOL DESCRIPTION**

EXISTING BUILDING
PROPOSED CURB
PROPOSED BUILDING

PROPOSED CONCRETE

**GENERAL NOTES** 

LIABILITY INSURANCE.

PROPERTY.

METHODS OF CONSTRUCTION.

CONTRACTORS EXPENSE.

DEVICES, LATEST EDITION.

REFLECTED WITHIN THE PLAN SET.

PROCUREMENT OF STREET OPENING PERMITS.

CONSTRUCTION & DEMOLITION ACTIVITIES.

I. THE CONTRACTOR SHALL VERIFY AND FAMILIARIZE THEMSELVES

WITH THE EXISTING SITE CONDITIONS AND THE PROPOSED SCOPE

EXISTING SITE CONDITIONS AND THE PROPOSED WORK THE

CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN,

LAW, INDEMNIFY AND HOLD HARMLESS STONEFIELD ENGINEERING & DESIGN, LLC. AND IT'S 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

4. THE CONTRACTOR SHALL NOT DEVIATE FROM THE PROPOSED IMPROVEMENTS IDENTIFIED WITHIN THIS PLAN SET UNLESS APPROVAL IS PROVIDED IN WRITING BY STONEFIELD ENGINEERING & DESIGN,

5. THE CONTRACTOR IS RESPONSIBLE TO DETERMINE THE MEANS AND

6. THE CONTRACTOR SHALL NOT PERFORM ANY WORK OR CAUSE

7. THE CONTRACTOR IS RESPONSIBLE TO RESTORE ANY DAMAGED OR

8. CONTRACTOR IS RESPONSIBLE TO PROVIDE THE APPROPRIATE SHOP DRAWINGS, PRODUCT DATA, AND OTHER REQUIRED SUBMITTALS FOR REVIEW. STONEFIELD ENGINEERING & DESIGN, LLC. WILL REVIEW THE SUBMITTALS IN ACCORDANCE WITH THE DESIGN INTENT AS

9. THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL IN ACCORDANCE WITH MANUAL ON UNIFORM TRAFFIC CONTROL

10. THE CONTRACTOR IS REQUIRED TO PERFORM ALL WORK IN THE

11. THE CONTRACTOR IS REQUIRED TO RETAIN AN OSHA CERTIFIED SAFETY INSPECTOR TO BE PRESENT ON SITE AT ALL TIMES DURING

12. 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.

> GRAPHIC SCALE IN FEET I" = 60'

PUBLIC RIGHT-OF-WAY IN ACCORDANCE WITH THE APPROPRIATE GOVERNING AUTHORITY AND SHALL BE RESPONSIBLE FOR THE

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

UNDERMINED STRUCTURE OR SITE FEATURE THAT IS IDENTIFIED TO

TO RESTORE THE FEATURE TO ITS EXISTING CONDITION AT THE

REMAIN ON THE PLAN SET. ALL REPAIRS SHALL USE NEW MATERIALS

2. 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.

3. ALL CONTRACTORS WILL, TO THE FULLEST EXTENT PERMITTED BY

LLC. PRIOR TO THE START OF CONSTRUCTION.

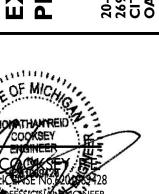
OF WORK (INCLUDING DIMENSIONS, LAYOUT, ETC.) PRIOR TO INITIATING THE IMPROVEMENTS IDENTIFIED WITHIN THESE DOCUMENTS. SHOULD ANY DISCREPANCY BE FOUND BETWEEN THE NOT APPROVED FOR CONSTRUCTION



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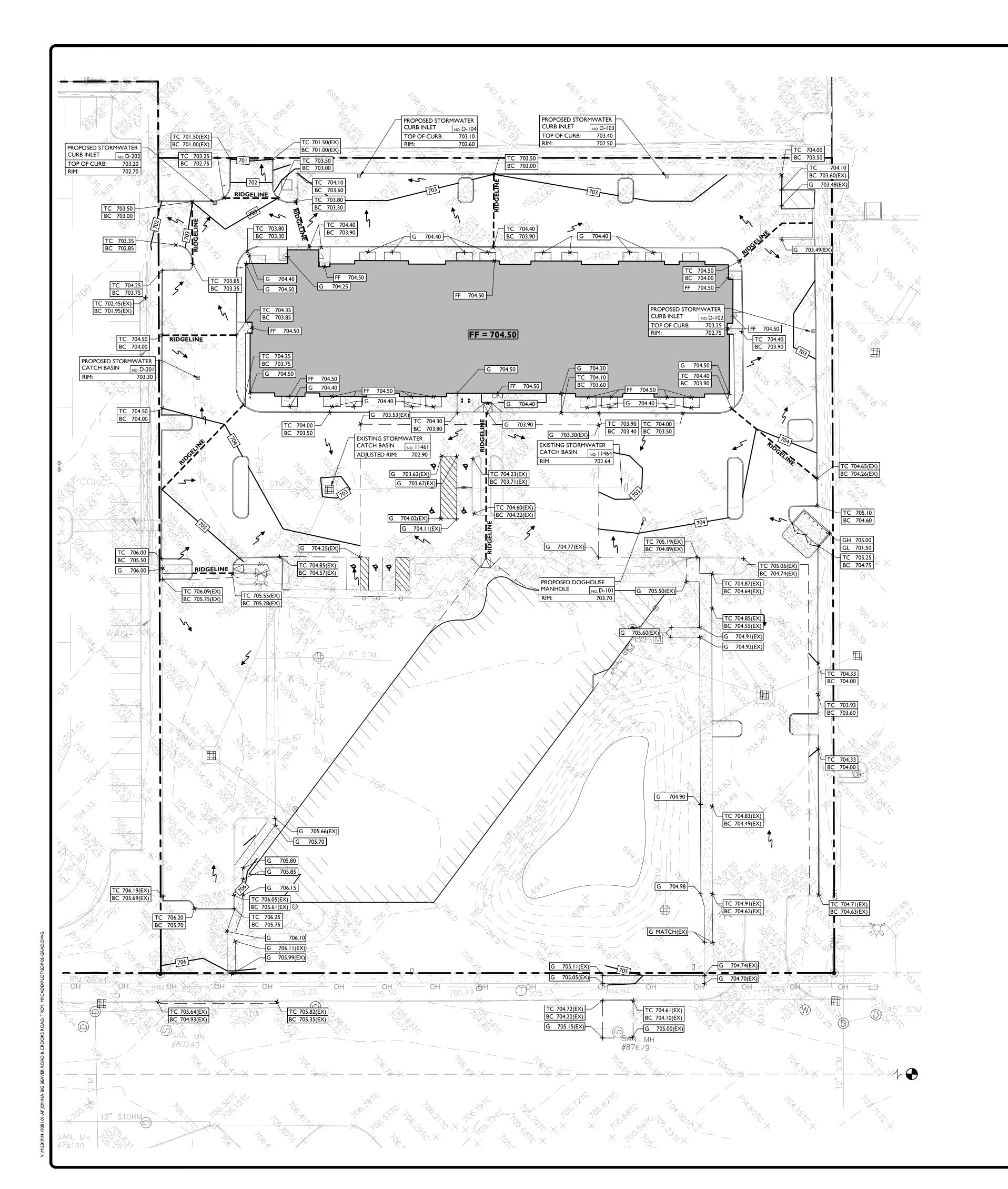


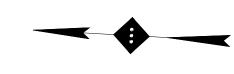


I" = 60' PROJECT ID: M-19301.01

**OVERALL SITE PLAN** 

DRAWING:





# PROPERTY LINE PROPOSED GRADING CONTOUR PROPOSED GRADING RIDGELINE PROPOSED DIRECTION OF DRAINAGE FLOW PROPOSED TOP OF CURB / BC 100.00 PROPOSED TOP OF CURB / BOTTOM OF CURB SPOT SHOT PROPOSED FINISHED FLOOR SPOT SHOT

# MANHOLE SCHEDULE

<u>#</u>	<u>TYPE</u>	RIM (FT)	SIZE (IN)	DIRECTION	DIP	INVERT (FT
1297	STORM MANHOLE	705.38	12	N	4.2	701.18
1355	CATCH BASIN	704.21	6	NE	3.7	700.51
			6	SW	3.95	700.26
			6	SE	3.8	700.41
1403	BEEHIVE CATCH BASIN	704.55	6	S	3.85	700.70
			6	W	3.9	700.65
			6	NW	4.05	700.50
1461	CATCH BASIN	702.66	6	N	2.75	699.91
			6	SE	2.85	699.81
			6	NW	3	699.66
			6	S	3.2	699.46
1462	CATCH BASIN	702.51	6	NE	3.2	699.31
			6	S	3.15	699.36
			6	SW	3.25	699.26
			6	NW	3.05	699.46
1463	CATCH BASIN	702.57	6	N	3.25	699.32
			6	Е	3.15	699.42
			6	S	3.05	699.52
			6	W	3.15	699.32
1464	CATCH BASIN	702.64	6	E	4.4	698.24
			6	SW	3.85	698.80
			6	NW	3.75	698.89
1824	BEEHIVE CATCH BASIN	703.48	6	E	6	697.48
			T,	/PIPE	4.2	699.28
			T/V	VATER	4.25	699.23
			B/STF	RUCTURE	7.4	696.08
1851	CATCH BASIN	702.9	6	NE	4.25	698.65
			6	N	4.15	698.75
			12	NW	5.8	697.10
			6	SE	4.3	698.60
5015	STORM MANHOLE	703.39	12	NW	5	698.39
			15	S	6.5	696.89
5016	CATCH BASIN	703.37	12	SW	4.45	698.92
5025	STORM MANHOLE	703.59	12	S	4	699.59
			12	W	5.2	698.39
			12	E	4.85	698.74
			6	NE	4.6	698.99
7679	SANITARY MANHOLE	705.04	8	N	11.45	693.59
			8	S	11.5	693.54
			8	NW	11	694.04

SITE BENCHMARK #3
ARROW ON HYDRANT, ±40' SW OF SW CORNER OF POND.
ELEVATION = 707.24' (NAVD 88 DATUM)

SITE BENCHMARK #4

ARROW ON HYDRANT, NEAR NE
CORNER OF BUILDING.
ELEVATION = 708.34' (NAVD 88 DATUM)

# GRADING NOTES

- I. ALL SOIL AND MATERIAL REMOVED FROM THE SITE SHALL BE DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REQUIREMENTS. ANY GROUNDWATER DE-WATERING PRACTICES SHALL BE PERFORMED UNDER THE SUPERVISION OF A QUALIFIED PROFESSIONAL. THE CONTRACTOR 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.
- 2. 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.
- 3. 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.
- 4. 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.
- AUTHORITY REGULATIONS.

  5. 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.

  6. 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 SUMP 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

- I. 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.

  4. 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.

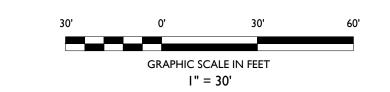
  5. THE CONTRACTOR SHALL MAINTAIN A MAXIMUM 8.33% RUNNING SLOPE AND A MAXIMUM 2.00% CROSS SLOPE ON ANY CURB RAMPS ALONG THE ACCESSIBLE PATH OF TRAVEL. WHERE PROVIDED, CURB RAMP FLARES SHALL NOT HAVE A SLOPE GREATER THAN 10.00% IF A LANDING AREA IS PROVIDED AT THE TOP OF THE RAMP. FOR ALTERATIONS, A CURB RAMP FLARES 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.

  6. 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.
- ALSO BE PROVIDED AT THE TOP AND BOTTOM OF THE RAMP.

  7. A SLIP RESISTANT SURFACE SHALL BE CONSTRUCTED ALONG THE ACCESSIBLE PATH AND WITHIN ADA PARKING AREAS.

  8. 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 I UNIT VERTICAL AND 2 UNITS HORIZONTAL (2:I SLOPE).

  9. THE CONTRACTOR SHALL ENSURE THAT ANY OPENINGS (GAPS OR HORIZONTAL SEPARATION) ALONG THE ACCESSIBLE PATH SHALL



NOT ALLOW PASSAGE OF A SPHERE GREATER THAN 1/2 INCH.

NOT APPROVED FOR CONSTRUCTION

FIELD esign Itherford, NJ oston, MA

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Detroit, MI ·
Princeton,
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UIDLING RENOVATION & MULTI-FAMILY APARTMEN

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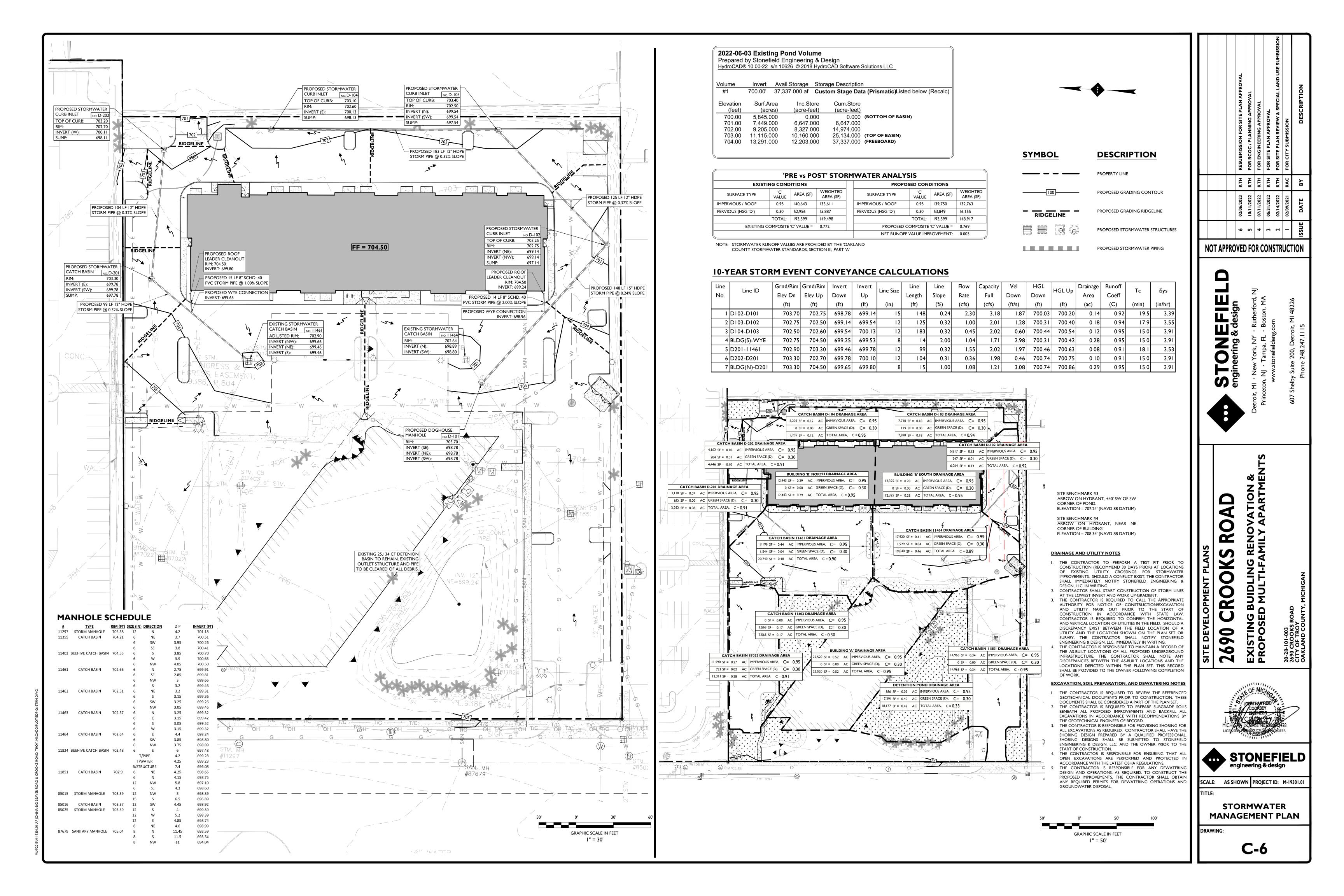
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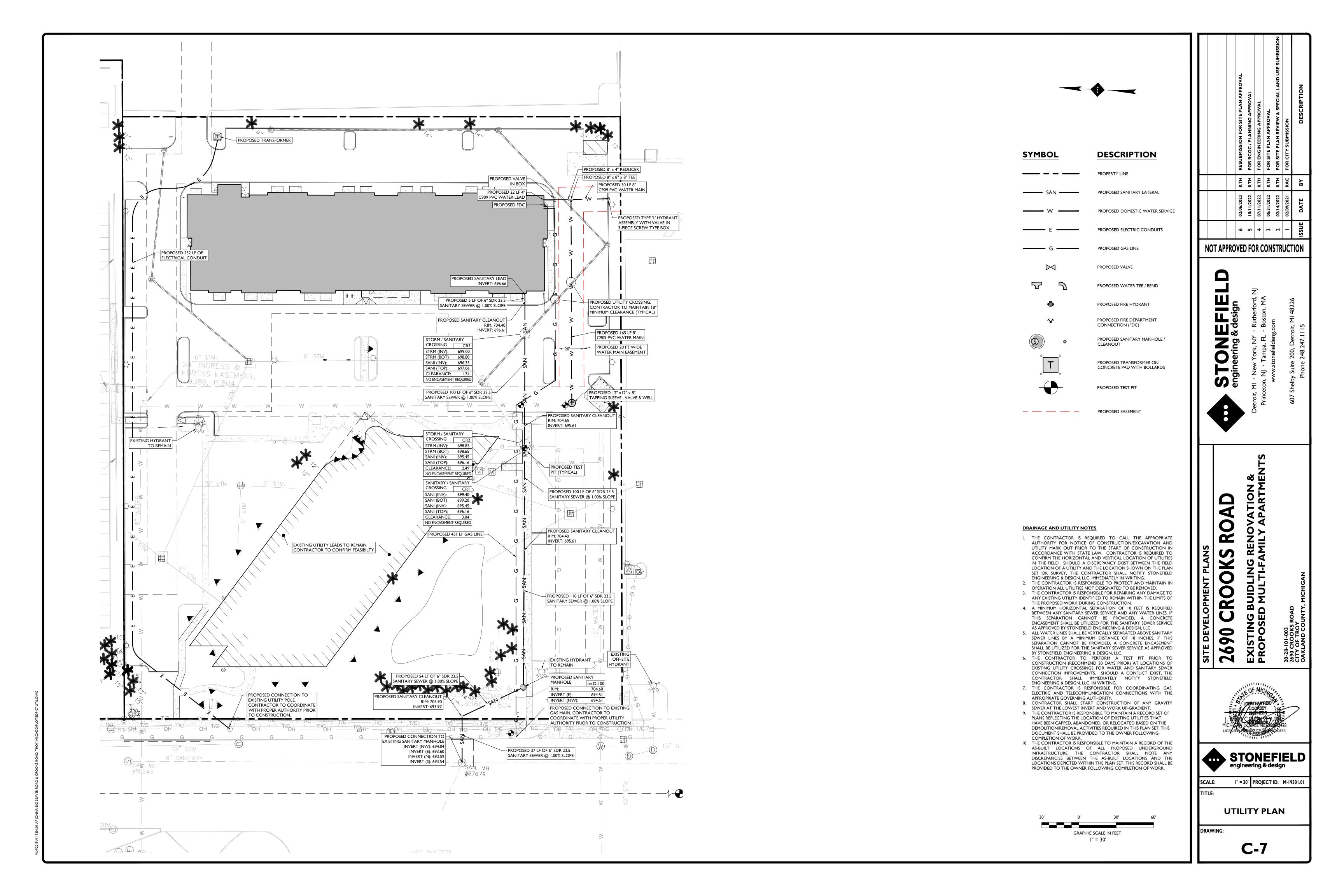
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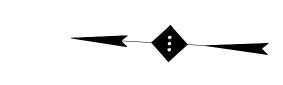
GRADING PLAN

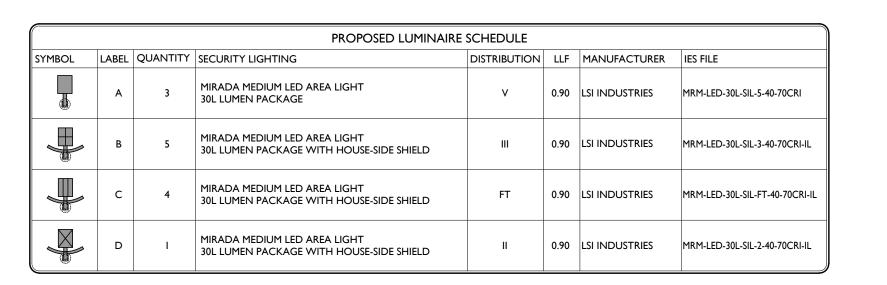
DRAWING:

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SYMBOL	DESCRIPTION
A (XX')	PROPOSED LIGHTING FIXTURE (MOUNTING HEIGHT)
<sup>+</sup> X.X	PROPOSED LIGHTING INTENSITY (FOOTCANDLES)
	PROPOSED AREA LIGHT

Mirada Medium - MRM Outdoor LED Area Light . State-of-the-Art one piece silicone optic sheet delivers industry leading Proprietary silicone refractor optics provide exceptional coverage and uniformity in IES Types 2, 3, 5W, FT and FTA. C78.377. Also Available in Phosphor Converted Amber with Peak intensity . Integral Louver (IL) option available for improved back-light control without 0-10V dimming (10% - 100%) standard. B3 Pole Drill Pattern • L80 Calculated Life: >100k Hours (See Lumen Maintenance on Page 2) Total harmonic distortion: <20%</li> package rated to +40°C. Power factor: >.90 · Input power stays constant over life. High-efficacy LEDs mounted to metal-core circuit board to maximize heat dissination. . Components are fully encased in potting material for moisture resistance. Driver complies with FCC standards. Driver and key electronic components

, <sup>†</sup>1.2 <sup>†</sup>5.8 <sup>†</sup>8.9 <sup>+</sup>

1.3 +4.7 +6.9 +4.8

1.3 <sup>+</sup>3.4 <sup>+</sup>4.8 <sup>+</sup>3.8

1.0 <sup>+</sup>2.1 <sup>+</sup>2.7 <sup>+</sup>2.2

0.7 1.2 1.4 1.2

ı).6 ⁺0.9 †1.0 ⁺0.7

↑0.0 ↑0.0 ↑0.0 ↑0.0 ↑0.1 ↑0.3 ↑1.0 ↑2.7 ↑2.9 ↑1.6

<sup>+</sup>0.0 <sup>+</sup>0.0 <sup>+</sup>0.0 <sup>+</sup>0.0 <sup>+</sup>0.1 <sup>+</sup>0.\ 0.5 <sup>+</sup>2.4 6.6 ↑1.8 ↑43

†q.0 | †0.1 †0.4 †3.2 †8.0 <u>†10.7</u>

<sup>†</sup>0.2 <sup>†</sup>1.1 <sup>†</sup>4.9 <sup>†</sup>11.9 <sup>L</sup>

⁺0.0 ⁺0.0 ⁺0.0

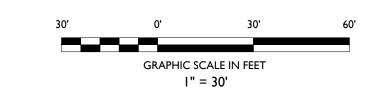
AREA LIGHTS 'A', 'B' & 'C'

LIGHTING REQUIREMENTS						
CODE SECTION	REQUIRED	PROPOSED				
§ 13.05.C.1.A	FIXTURE SHIELDING:					
	ALL PROPOSED FIXTURES ARE TO BE FULLY SHIELDED FROM	PROVIDED				
	ADJACENT PROPERTIES AND RIGHTS-OF-WAY					
§ 13.05.C.2.A-C	FREESTANDING POLE LIGHTING:					
	MAXIMUM 20 FC DURING BUSINESS HOURS (10 FC AFTER HOURS)	14.3 FC				
	MAXIMUM 1.0 FC AT NON-RESIDENTIAL PROPERTY LINES	0.8 FC				
	MAXIMUM 0.1 FC AT ABUTTING RESIDENTIAL PROPERTY LINES	N/A				
§ 13.05.C.3	MAXIMUM FIXTURE HEIGHT OF 25'	25.0 FT				

NOTE: ALL LIGHTING IS TO BE MEASURED AT 60" ABOVE GRADE

# **GENERAL LIGHTING NOTES**

- I. 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 ARE WEATHER, VOLTAGE SUPPLY, LAMP TOLERANCE, EQUIPMENT SERVICE LIFE AND OTHER VARIABLE FIELD CONDITIONS.
- 2. 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.
- 3. 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: `
- METAL HALIDE: 4. 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.
- 5. 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.



	RESUBMISSION FOR SITE PLAN APPROVAL	FOR RCOC / PLANNING APPROVAL	FOR ENGINEERING APPROVAL	FOR SITE PLAN APPROVAL	FOR SITE PLAN REVIEW & SPECIAL LAND USE SU	FOR CITY SUBMISSION	DESCRIPTION	
	KTH	KTH	KTH	КТН	KTH	RAC	ВҮ	
	02/06/2023	10/11/2022	07/11/2022	05/31/2022	02/14/2022	02/09/2021	DATE	
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STON| engineering &

ROAD **CROOKS** 

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I" = 30' PROJECT ID: M-19301.01

**LIGHTING PLAN** 

DRAWING:

**C-8** 

1.8 <sup>+</sup>4.2 <sup>+</sup>6.1 <sup>+</sup>4.8 <sup>+</sup>1.8 <sup>+</sup>0.5 | 0.2 | -<sup>+</sup>0.1 <sup>+</sup>0.0 | <del>--</del>0.0

B (EX-25') +6.4 +5.9 +3.0

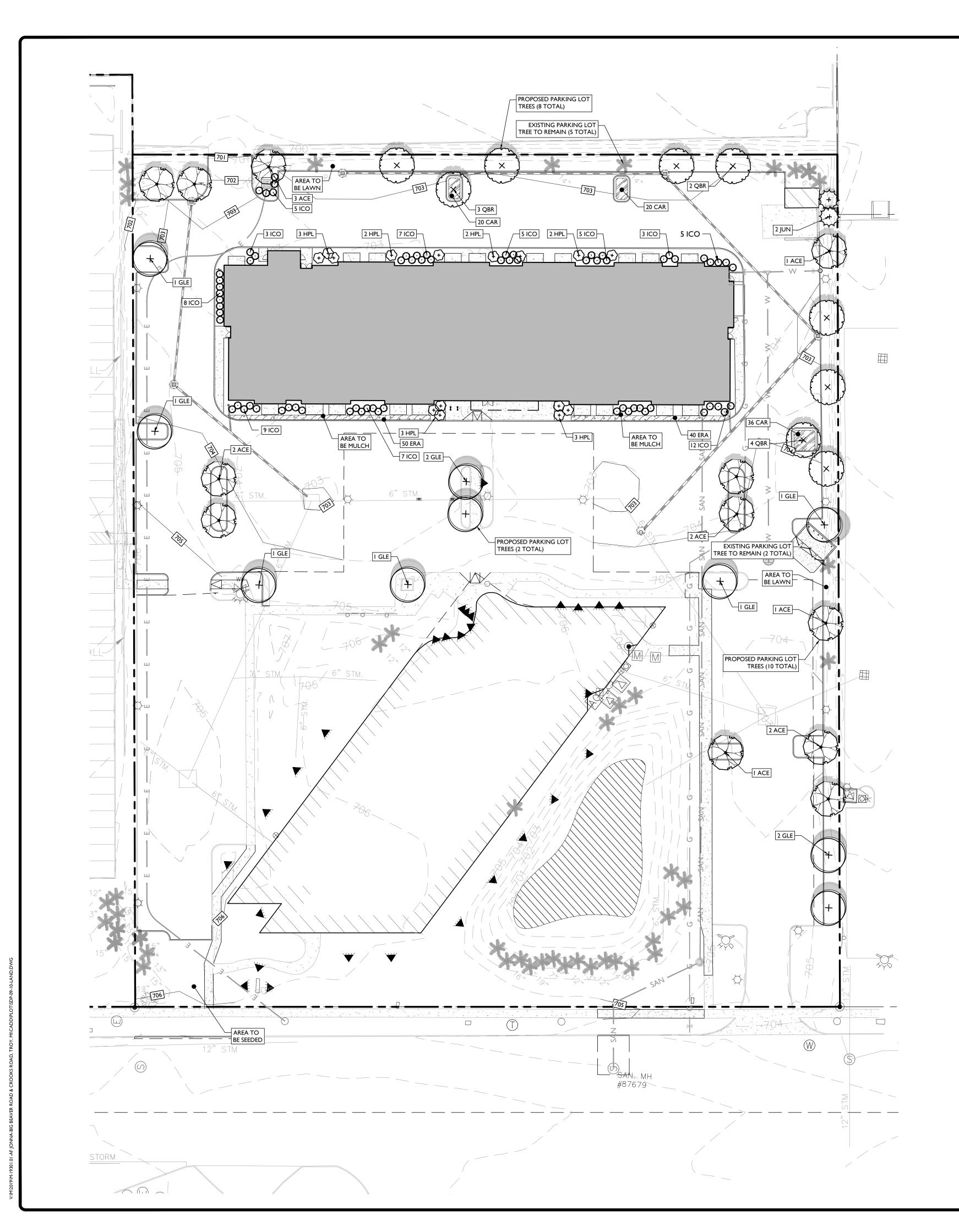
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<sup>+</sup>0.0 <sup>+</sup>0.0 <sup>+</sup>0.0 <sup>+</sup>0.0

<sup>†</sup>0.0 <sup>†</sup>0.0 <sup>†</sup>0.0 <sup>†</sup>0.0

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†0.0 †0.0 ↑0.0 | 0.0 |

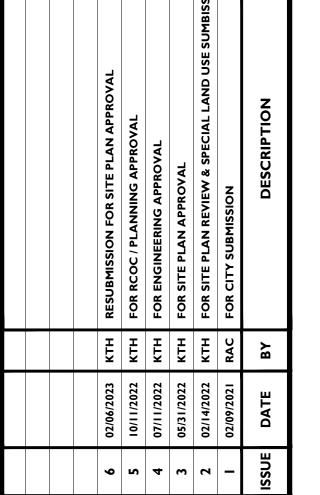


CODE SECTION	REQUIRED	PROPOSED		
§ 13.02.C-2	PARKING LOT LANDSCAPING:			
	CURBED ISLANDS SHALL BE A MINIMUM OF 200 SF	COMPLIES		
	I TREE PER EVERY 8 PARKING SPACES			
	(206 SURFACE SPACES)(I TREE / 8 SPACES) = 26 TREES	31 PROPOSED TREES		
§ 13.02.D-2	ROW GREENBELT:			
	MINIMUM WIDTH: 10 FT	37.70 FT		
	I DECIDUOUS TREE* PER 30 LF			
	(369 LF) (I TREE / 30 LF) = I3 TREES	13 EXISTING TREES		
§ 13.02.E-1	SITE LANDSCAPING:(**)			
	15% OF THE SITE AREA SHALL BE LANDSCAPED			
	(193,599 SF)(0.15) = 29,040 SF	27.8% (53,849 SF)		
§ 13.03.B	TRASH ENCLOSURE SCREENING:			
	MINIMUM HEIGHT 6 FT	PROPOSED		
	CANNOT BE LOCATED IN A FRONT YARD SETBACK	COMPLIES		

- (\*) DECIDUOUS TREES WITHIN GREENBELT SHALL BE A MINIMUM CALIPER OF TWO AND A HALF (2 1/2) INCHES OR GREATER
- (\*\*) UP TO 25% OF THE REQUIRED LANDSCAPE AREA MAY BE BRINK, STONE, PAVERS, OR OTHER PUBLIC PLAZA ELEMENTS

			PLANT SC	CHEDULE			
DECIDUOUS TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	SPACING
	ACE	12	ACER SACCHARUM	SUGAR MAPLE	2.5" - 3" CAL	B&B	AS SHOWN
+	GLE	10	GLEDITSIA TRIACANTHOS	HONEY LOCUST	2.5" - 3" CAL	B&B	AS SHOWN
×	QBR	9	QUERCUS BOREALIS	NORTHEN RED OAK	2.5" - 3" CAL	B&B	AS SHOWN
EVERGREEN TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	SPACING
<del>+</del> + +	JUN	2	JUNIPERUS VIRGINIANA	EASTERN RED CEDAR	6` - 7` HT	B&B	AS SHOWN
SHRUBS	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	SPACING
<b>(+)</b>	HPL	15	HYDRANGEA PANICULATA 'LIMELIGHT'	LIMELIGHT PANICLE HYDRANGEA	24" - 30"	РОТ	AS SHOWN
EVERGREEN SHRUBS	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	SPACING
0	ICO	69	ILEX GLABRA 'COMPACTA'	COMPACT INKBERRY	18" - 24"	РОТ	AS SHOWN
GRASSES	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	SPACING
	ERA	93	ERAGROSTIS SPECTABILIS	PURPLE LOVE GRASS	I GAL.	РОТ	30" o.c.
	CAR	76	CAREX PENSYLVANICA	PENNSYLVANIA SEDGE	I GAL.	РОТ	24" o.c.

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



NOT APPROVED FOR CONSTRUCTION



2690 CROOKS ROAD



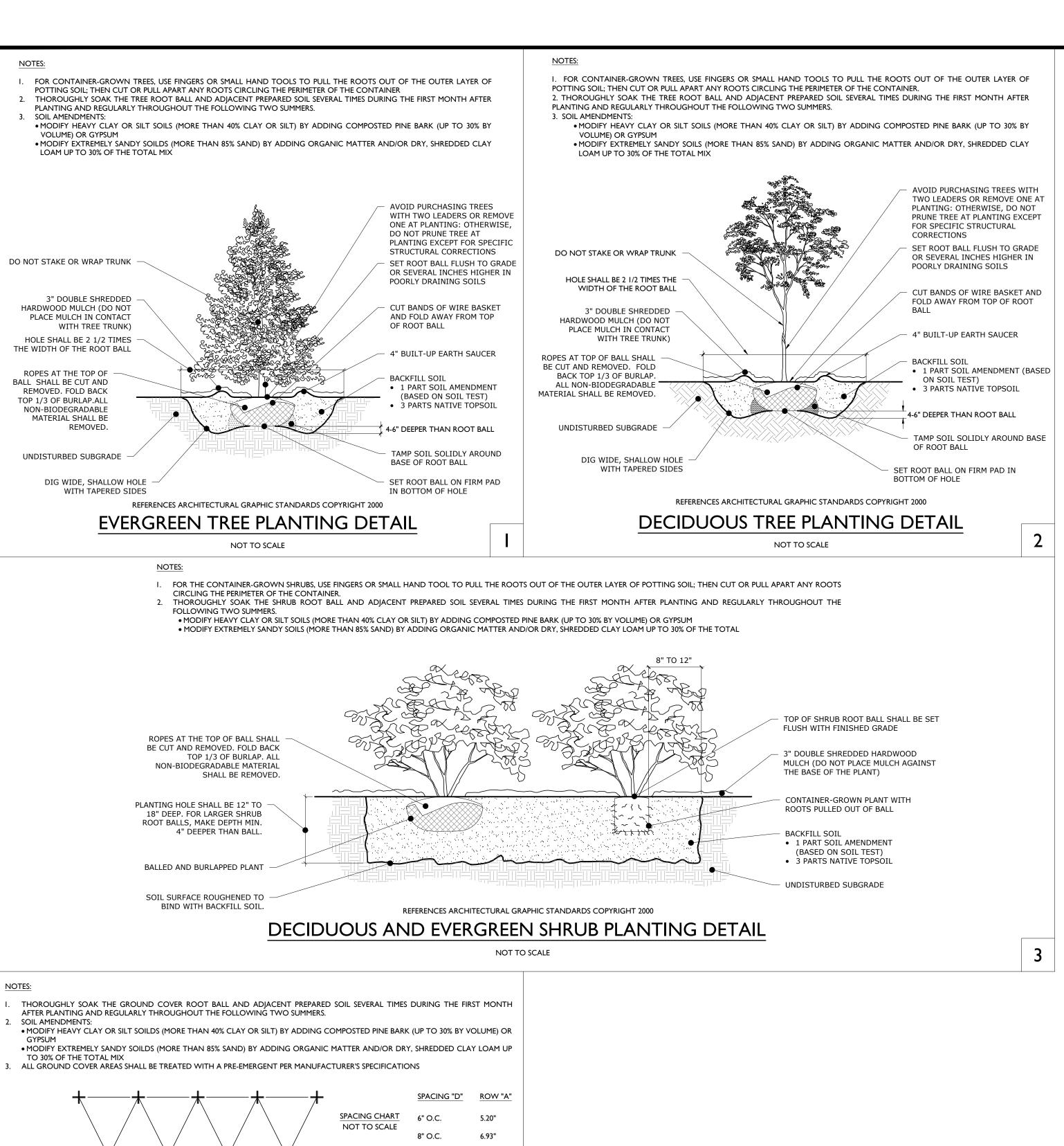
I" = 30 PROJECT ID: M-19301.01

LANDSCAPING PLAN

DRAWING:

**C-9** 

GRAPHIC SCALE IN FEET I" = 30'



10.40

13.00

20.80

30.00

2" DOUBLE

SHREDDED

PLANT) GENTLY PULL ROOTS AWAY FROM TOPSOIL MASS WITH

 1 PART SOIL AMENDMENT (BASED ON SOIL TEST)

3 PARTS NATIVE TOPSOIL

**FINGERS** 

**BACKFILL SOIL** 

HARDWOOD MULCH (DO NOT PLACE MULCH AGAINST THE BASE OF THE

PLANTED ON CENTER (SEE SPACING CHART

GROUND COVER/PERENNIAL/ANNUAL

PLANTING DETAIL

NOT TO SCALE

- I. THE LANDSCAPE CONTRACTOR SHALL FURNISH ALL MATERIALS AND PERFORM ALL WORK IN ACCORDANCE WITH THESE I. ALL PLANT MATERIAL SHALL CONFORM TO THE AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.1-2004) OR LATEST SPECIFICATIONS, APPROVED OR FINAL DRAWINGS, AND INSTRUCTIONS PROVIDED BY THE PROJECT LANDSCAPE DESIGNER, MUNICIPAL OFFICIALS, OR OWNER/OWNER'S REPRESENTATIVE. ALL WORK COMPLETED AND MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH THE INTENTION OF THE SPECIFICATIONS, DRAWINGS, AND INSTRUCTIONS AND EXECUTED WITH THE STANDARD LEVEL OF CARE FOR THE LANDSCAPE INDUSTRY.
- . WORK MUST BE CARRIED OUT ONLY DURING WEATHER CONDITIONS FAVORABLE TO LANDSCAPE CONSTRUCTION AND TO THE HEALTH AND WELFARE OF PLANTS. THE SUITABILITY OF SUCH WEATHER CONDITIONS SHALL BE DETERMINED BY THE PROJECT LANDSCAPE DESIGNER OR GOVERNING MUNICIPAL OFFICIAL.
- 3. IT IS THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR, BEFORE ORDERING OR PURCHASING MATERIALS, TO PROVIDE SAMPLES OF THOSE MATERIALS TO THE PROJECT LANDSCAPE DESIGNER OR GOVERNING MUNICIPAL OFFICIAL FOR APPROVAL,
- 4. IF SAMPLES ARE REQUESTED, THE LANDSCAPE CONTRACTOR IS TO SUBMIT CERTIFICATION TAGS FROM TREES, SHRUBS AND SEED VERIFYING TYPE AND PURITY. 5. UNLESS OTHERWISE AUTHORIZED BY THE PROJECT LANDSCAPE DESIGNER OR GOVERNING MUNICIPAL OFFICIAL, THE
- VARIETIES AND SIZES OF MATERIALS INCLUDED FOR EACH SHIPMENT SHALL BE FURNISHED TO THE PROJECT LANDSCAPE DESIGNER, OR GOVERNING MUNICIPAL OFFICIAL 6. THE PROJECT LANDSCAPE DESIGNER OR GOVERNING MUNICIPAL OFFICIAL RESERVES THE RIGHT TO INSPECT AND REJECT

LANDSCAPE CONTRACTOR SHALL PROVIDE NOTICE AT LEAST FORTY-EIGHT HOURS (48 HRS.) IN ADVANCE OF THE

ANTICIPATED DELIVERY DATE OF ANY PLANT MATERIALS TO THE PROJECT SITE. A LEGIBLE COPY OF THE INVOICE, SHOWING

# PROTECTION OF EXISTING VEGETATION NOTES

PLANTS AT ANY TIME AND AT ANY PLACE.

GENERAL LANDSCAPING NOTES

- . BEFORE COMMENCING WORK, ALL EXISTING VEGETATION WHICH COULD BE IMPACTED AS A RESULT OF THE PROPOSED CONSTRUCTION ACTIVITIES MUST BE PROTECTED FROM DAMAGE BY THE INSTALLATION OF TREE PROTECTION FENCING. FENCING SHALL BE LOCATED AT THE DRIP-LINE OR LIMIT OF DISTURBANCE AS DEPICTED WITHIN THE APPROVED OR FINAL PLAN SET, ESTABLISHING THE TREE PROTECTION ZONE. FENCE INSTALLATION SHALL BE IN ACCORDANCE WITH THE PROVIDED "TREE PROTECTION FENCE DETAIL." NO WORK MAY BEGIN UNTIL THIS REQUIREMENT IS FULFILLED. THE FENCING SHALL BE INSPECTED REGULARLY BY THE LANDSCAPE CONTRACTOR AND MAINTAINED UNTIL ALL CONSTRUCTION
- 9. ALL PLANT MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH THE CORRESPONDING LANDSCAPE PLAN AND PLANTING 2. IN ORDER TO AVOID DAMAGE TO ROOTS, BARK OR LOWER BRANCHES, NO VEHICLE, EQUIPMENT, DEBRIS, OR OTHER MATERIALS SHALL BE DRIVEN, PARKED OR PLACED WITHIN THE TREE PROTECTION ZONE. ALL ON-SITE CONTRACTORS SHALL USE ANY AND ALL PRECAUTIONARY MEASURES WHEN PERFORMING WORK AROUND TREES, WALKS, PAVEMENTS, UTILITIES, AND ANY OTHER FEATURES EITHER EXISTING OR PREVIOUSLY INSTALLED UNDER THIS CONTRACT. 3. IN RARE INSTANCES WHERE EXCAVATING, FILL, OR GRADING IS REQUIRED WITHIN THE DRIP-LINE OF TREES TO REMAIN, THE
- WORK SHALL BE PERFORMED AS FOLLOWS: • TRENCHING: WHEN TRENCHING OCCURS AROUND TREES TO REMAIN, THE TREE ROOTS SHALL NOT BE CUT, BUT THE TRENCH SHALL BE TUNNELED UNDER OR AROUND THE ROOTS BY CAREFUL HAND DIGGING AND WITHOUT INJURY TO THE ROOTS. NO ROOTS, LIMBS, OR WOODS ARE TO HAVE ANY PAINT OR MATERIAL APPLIED TO ANY SURFACE.
- RAISING GRADES: WHEN THE GRADE AT AN EXISTING TREE IS BELOW THE NEW FINISHED GRADE, AND FILL NOT EXCEEDING 6 INCHES (6") IS REQUIRED, CLEAN, WASHED GRAVEL FROM ONE TO TWO INCHES (1" - 2") IN SIZE SHALL BE PLACED DIRECTLY AROUND THE TREE TRUNK. THE GRAVEL SHALL EXTEND OUT FROM THE TRUNK ON ALL SIDES A MINIMUM OF 18 INCHES (18") AND FINISH APPROXIMATELY TWO INCHES (2") ABOVE THE FINISH GRADE AT TREE. INSTALL GRAVEL BEFORE ANY FARTH FILL IS PLACED. NEW FARTH FILL SHALL NOT BE LEFT IN CONTACT WITH THE TRUNK OF ANY TREE REQUIRING FILL. WHERE FILL EXCEEDING 6 INCHES (6") IS REQUIRED, A DRY LAID TREE WELL SHALL BE CONSTRUCTED.

IF APPLICABLE, TREE WELL INSTALLATION SHALL BE IN ACCORDANCE WITH THE PROVIDED "TREE WELL DETAIL."

 LOWERING GRADES: EXISTING TREES LOCATED IN AREAS WHERE THE NEW FINISHED GRADE IS TO BE LOWERED, SHALL HAVE RE-GRADING WORK DONE BY HAND TO THE INDICATED ELEVATION, NO GREATER THAN SIX INCHES (6"). ROOTS SHALL BE CUT CLEANLY THREE INCHES (3") BELOW FINISHED GRADE UNDER THE DIRECTION OF A LICENSED ARBORIST WHERE CUT EXCEEDING 6 INCHES (6") IS REQUIRED, A DRY LAID RETAINING WALL SHALL BE CONSTRUCTED. IF APPLICABLE, THE RETAINING WALL INSTALLATION SHALL BE IN ACCORDANCE WITH THE PROVIDED "TREE RETAINING WALL DETAIL."

## **SOIL PREPARATION AND MULCH NOTES:**

- I. LANDSCAPE CONTRACTOR SHALL OBTAIN A SOIL TEST OF THE IN-SITU TOPSOIL BY A CERTIFIED SOIL LABORATORY PRIOR TO PLANTING. LANDSCAPE CONTRACTOR SHALL ALLOW FOR A TWO WEEK TURNAROUND TIME FROM SUBMITTAL OF SAMPLE TO NOTIFICATION OF RESULTS
- 2. BASED ON SOIL TEST RESULTS, ADJUST THE RATES OF LIME AND FERTILIZER THAT SHALL BE MIXED INTO THE TOP SIX INCHES (6") OF TOPSOIL. THE LIME AND FERTILIZER RATES PROVIDED WITHIN THE "SEED SPECIFICATION" OR "SOD SPECIFICATION" IS APPROXIMATE AND FOR BIDDING PURPOSES ONLY. IF ADDITIONAL AMENDMENTS ARE NECESSARY, ADJUST THE TOPSOIL AS
- 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%) BY ADDING ORGANIC MATTER AND/OR DRY, SHREDDED CLAY LOAM
- UP TO 30% OF THE TOTAL MIX. . TOPSOIL SHALL BE FERTILE, FRIABLE, NATURAL TOPSOIL OF LOAMING CHARACTER, WITHOUT ADMIXTURE OF SUBSOIL
- MATERIAL OBTAINED FROM A WELL-DRAINED ARABLE SITE, FREE FROM ALL CLAY, LUMPS, COARSE SANDS, STONES, PLANTS, ROOTS, STICKS, AND OTHER FOREIGN MATERIAL GREATER THAN ONE INCH (1"). 4. TOPSOIL SHALL HAVE A PH RANGE OF 5.0-7.0 AND SHALL NOT CONTAIN LESS THAN 6% ORGANIC MATTER BY WEIGHT
- 5. OBTAIN TOPSOIL ONLY FROM LOCAL SOURCES OR FROM AREAS HAVING SIMILAR SOIL CHARACTERISTICS TO THAT FOUND AT THE PROIECT SITE 6. CONTRACTOR SHALL PROVIDE A SIX INCH (6") DEEP LAYER OF TOPSOIL IN ALL PLANTING AREAS. TOPSOIL SHALL BE SPREAD
- OVER A PREPARED SURFACE IN A UNIFORM LAYER TO ACHIEVE THE DESIRED COMPACTED THICKNESS. THE SPREADING OF TOPSOIL SHALL NOT BE CONDUCTED UNDER MUDDY OR FROZEN SOIL CONDITIONS.
- . UNLESS OTHERWISE NOTED IN THE CONTRACT, THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF TOPSOIL AND THE ESTABLISHMENT OF FINE-GRADING WITHIN THE DISTURBED AREA OF THE SITE. LANDSCAPE CONTRACTOR SHALL VERIFY THAT THE SUB-GRADE ELEVATION MEETS THE FINISHED GRADE ELEVATION (LESS REQUIRED TOPSOIL), IN ACCORDANCE WITH THE APPROVED OR FINAL GRADING PLAN.
- 9. ALL LAWN AND PLANTING AREAS SHALL BE GRADED TO A SMOOTH, EVEN AND UNIFORM PLANE WITH NO ABRUPT CHANGE OF SURFACE AS DEPICTED WITHIN THE APPROVED OR FINAL CONSTRUCTION SET UNLESS OTHERWISE DIRECTED BY THE PROIECT LANDSCAPE DESIGNER OR MUNICIPAL OFFICIAL
- 10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER SURFACE AND SUBSURFACE PLANT BED DRAINAGE PRIOR TO THE INSTALLATION OF PLANTINGS. IF POOR DRAINAGE CONDITIONS EXIST, CORRECTIVE ACTION SHALL BE TAKEN PRIOR TO INSTALLATION. ALL PLANTING AND LAWN AREAS SHALL BE GRADED AND MAINTAINED TO ALLOW A FREE FLOW OF SURFACE
- II. DOUBLE SHREDDED HARDWOOD MULCH OR APPROVED EQUAL SHALL BE USED AS A THREE INCH (3") TOP DRESSING IN ALL SHRUB PLANTING BEDS AND AROUND ALL TREES PLANTED BY LANDSCAPE CONTRACTOR, GROUND COVER, PERENNIAL, AND ANNUAL PLANTING BEDS SHALL BE MULCHED WITH A TWO INCH (2") TOP DRESSING. SINGLE TREES OR SHRUBS SHALL BE
- MULCHED TO AVOID CONTACT WITH TRUNK OR PLANT STEM. MULCH SHALL BE OF SUFFICIENT CHARACTER AS NOT TO BE EASILY DISPLACED BY WIND OR WATER RUNOFF WHENEVER POSSIBLE, THE SOIL PREPARATION AREA SHALL BE CONNECTED FROM PLANTING TO PLANTING. 13. SOIL SHALL BE LOOSENED WITH A BACKHOE OR OTHER LARGE COARSE-TILING EQUIPMENT UNLESS THE SOIL IS FROZEN OR EXCESSIVELY WET. TILING THAT PRODUCES LARGE, COARSE CHUNKS OF SOIL IS PREFERABLE TO TILING THAT RESULTS IN FINE
- GRAINS UNIFORM IN TEXTURE. AFTER THE AREA IS LOOSENED IT SHALL NOT BE DRIVEN OVER BY ANY VEHICLE. 14. APPLY PRE-EMERGENT WEED CONTROL TO ALL PLANT BEDS PRIOR TO MULCHING. ENSURE COMPATIBILITY BETWEEN PRODUCT AND PLANT MATERIAL

# `5. ALL PLANTING SOIL SHALL BE AMENDED WITH THE FOLLOWING:

- MYCRO® TREE SAVER A DRY GRANULAR MYCORRHIZAL FUNGI INOCULANT THAT IS MIXED IN THE BACKFILL WHEN PLANTING TREES AND SHRUBS. IT CONTAINS SPORES OF BOTH ECTOMYCORRHIZAL AND VA MYCORRHIZAL FUNGI (VAM), BENEFICIAL RHIZOSPHERE BACTERIA, TERRA-SORB SUPERABSORBENT HYDROGEL TO REDUCE WATER LEACHING, AND SELECTED ORGANIC MICROBIAL NUTRIENTS
- DIRECTIONS FOR USE: USE 3-OZ PER EACH FOOT DIAMETER OF THE ROOT BALL, OR 3-OZ PER INCH CALIPER. MIX INTO THE BACKFILL WHEN TRANSPLANTING TREES AND SHRUBS. MIX PRODUCT IN A RING-SHAPED VOLUME OF SOIL AROUND THE UPPER PORTION OF THE ROOT BALL, EXTENDING FROM THE SOIL SURFACE TO A DEPTH OF ABOUT 8 INCHES, AND EXTENDING OUT FROM THE ROOT BALL ABOUT 8 INCHES INTO THE BACKFILL. APPLY WATER TO SOIL SATURATION. MYCOR® TREE SAVER® IS EFFECTIVE FOR ALL TREE AND SHRUB SPECIES EXCEPT RHODODENDRONS, AZALEAS, AND MOUNTAIN LAUREL. WHICH REQUIRE ERICOID MYCORRHIZAE.
- SOIL PH: THE FUNGI IN THIS PRODUCT WERE CHOSEN BASED ON THEIR ABILITY TO SURVIVE AND COLONIZE PLANT ROOTS IN A PH RANGE OF 3 TO 9. • FUNGICIDES: THE USE OF CERTAIN FUNGICIDES CAN HAVE A DETRIMENTAL EFFECT ON THE INOCULATION PROGRAM. SOIL
- APPLICATION OF ANY FUNGICIDE IS NOT RECOMMENDED FOR TWO WEEKS AFTER APPLICATION. OTHER PESTICIDES: HERBICIDES AND INSECTICIDES DO NOT NORMALLY INTERFERE WITH MYCORRHIZAL FUNGAL DEVELOPMENT, BUT MAY INHIBIT THE GROWTH OF SOME TREE AND SHRUB SPECIES IF NOT USED PROPERLY.

• FERTILIZER TABLETS ARE PLACED IN THE UPPER 4 INCHES OF BACKFILL SOIL WHEN PLANTING TREES AND SHRUBS. • TABLETS ARE FORMULATED FOR LONG-TERM RELEASE BY SLOW BIODEGRADATION, AND LAST UP TO 2 YEARS AFTER PLANTING. TABLETS CONTAIN 12-8-8 NPK FERTILIZER, AS WELL AS A MINIMUM OF SEVEN PERCENT (7%) HUMIC ACID BY WEIGHT, MICROBIAL NUTRIENTS DERIVED FROM SEA KELP, PROTEIN BYPRODUCTS, AND YUCCA SCHIDIGERA, AND A COMPLEMENT OF BENEFICIAL RHIZOSPHERE BACTERIA. THE STANDARD 21 GRAM TABLET IS SPECIFIED HERE. DIRECTIONS FOR USE: FOR PLANTING BALLED & BURLAPPED (B&B) TREES AND SHRUBS, MEASURE THE THICKNESS OF THE TRUNK, AND USE ABOUT I TABLET (21-G) PER HALF-INCH. PLACE THE TABLETS DIRECTLY NEXT TO THE ROOT BALL, EVENLY DISTRIBUTED AROUND ITS PERIMETER, AT A DEPTH OF ABOUT 4 INCHES.

## PLANT QUALITY AND HANDLING NOTES

- REVISION AS PUBLISHED BY THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION. 2. IN ALL CASES, BOTANICAL NAMES LISTED WITHIN THE APPROVED OR FINAL PLANT LIST SHALL TAKE PRECEDENCE OVER
- COMMON NAMES. 3. ALL PLANTS SHALL BE OF SELECTED SPECIMEN QUALITY, EXCEPTIONALLY HEAVY, TIGHTLY KNIT, SO TRAINED OR FAVORED IN
- THEIR DEVELOPMENT AND APPEARANCE AS TO BE SUPERIOR IN FORM, NUMBER OF BRANCHES, COMPACTNESS AND SYMMETRY. ALL PLANTS SHALL HAVE A NORMAL HABIT OR SOUND. HEALTHY, VIGOROUS PLANTS WITH WELL DEVELOPED ROOT SYSTEM. PLANTS SHALL BE FREE OF DISEASE, INSECT PESTS, EGGS OR LARVAE.
- 4. PLANTS SHALL NOT BE PRUNED BEFORE DELIVERY. TREES WITH ABRASION OF THE BARK, SUNSCALDS, DISFIGURING KNOTS OR FRESH CUTS OF LIMBS OVER ONE AND ONE-FOURTH INCHES (I-I/4") WHICH HAVE NOT COMPLETELY CALLOUSED SHALL BE
- 5. ALL PLANTS SHALL BE TYPICAL OF THEIR SPECIES OR VARIETY AND SHALL HAVE A NORMAL HABIT OF GROWTH AND BE LEGIBLY
- TAGGED WITH THE PROPER NAME AND SIZE. 6. THE ROOT SYSTEM OF EACH PLANT SHALL BE WELL PROVIDED WITH FIBROUS ROOTS. ALL PARTS SHALL BE SOUND, HEALTHY, VIGOROUS, WELL-BRANCHED AND DENSELY FOLIATED WHEN IN LEAF.
- 7. ALL PLANTS DESIGNATED BALL AND BURLAP (B&B) MUST BE MOVED WITH THE ROOT SYSTEM AS SOLID UNITS WITH BALLS OF EARTH FIRMLY WRAPPED WITH BURLAP. THE DIAMETER AND DEPTH OF THE BALLS OF EARTH MUST BE SUFFICIENT TO encompass the fibrous root feeding systems necessary for the healthy development of the plant. No plant SHALL BE ACCEPTED WHEN THE BALL OF EARTH SURROUNDING ITS ROOTS HAS BEEN BADLY CRACKED OR BROKEN PREPARATORY TO OR DURING THE PROCESS OF PLANTING. THE BALLS SHALL REMAIN INTACT DURING ALL OPERATIONS. ALL PLANTS THAT CANNOT BE PLANTED AT ONCE MUST BE HEELED-IN BY SETTING IN THE GROUND AND COVERING THE BALLS WITH SOIL OR MULCH AND THEN WATERING. HEMP BURLAP AND TWINE IS PREFERABLE TO TREATED. IF TREATED BURLAP IS USED, ALL TWINE IS TO BE CUT FROM AROUND THE TRUNK AND ALL BURLAP IS TO BE REMOVED.
- 8. PLANTS TRANSPORTED TO THE PROJECT IN OPEN VEHICLES SHALL BE COVERED WITH TARPS OR OTHER SUITABLE COVERS securely fastened to the body of the vehicle to prevent iniury to the plants. Closed vehicles shall be ADEQUATELY VENTILATED TO PREVENT OVERHEATING OF THE PLANTS, EVIDENCE OF INADEQUATE PROTECTION FOLLOWING DIGGING, CARELESSNESS WHILE IN TRANSIT, OR IMPROPER HANDLING OR STORAGE SHALL BE CAUSE FOR REJECTION OF PLANT MATERIAL. ALL PLANTS SHALL BE KEPT MOIST, FRESH, AND PROTECTED. SUCH PROTECTION SHALL ENCOMPASS THE ENTIRE PERIOD DURING WHICH THE PLANTS ARE IN TRANSIT, BEING HANDLED, OR ARE IN TEMPORARY STORAGE.
- 10. LANDSCAPE CONTRACTOR SHALL MAKE BEST EFFORT TO INSTALL PLANTINGS ON THE SAME DAY AS DELIVERY. IF PLANTS ARE NOT PLANTED IMMEDIATELY ON SITE, PROPER CARE SHALL BE TAKEN TO PLACE THE PLANTINGS IN PARTIAL SHADE WHEN possible. The root ball shall be kept moist at all time and covered with moistened mulch or aged WOODCHIPS. PROPER IRRIGATION SHALL BE SUPPLIED SO AS TO NOT ALLOW THE ROOT BALL TO DRY OUT. PLANTINGS
- HALL BE UNTIED AND PROPER SPACING SHALL BE ALLOTTED FOR AIR CIRCULATION AND TO PREVENT DISEASE, WILTING, AND LEAF LOSS. PLANTS THAT REMAIN UNPLANTED FOR A PERIOD OF TIME GREATER THAN THREE (3) DAYS SHALL BE HEALED IN WITH TOPSOIL OR MULCH AND WATERED AS REQUIRED TO PRESERVE ROOT MOISTURE. II. NO PLANT MATERIAL SHALL BE PLANTED IN MUDDY OR FROZEN SOIL.
- 12. PLANTS WITH INJURED ROOTS OR BRANCHES SHALL BE PRUNED PRIOR TO PLANTING UTILIZING CLEAN, SHARP TOOLS. ONLY DISEASED OR INIURED PLANTS SHALL BE REMOVED. 13. IF ROCK OR OTHER UNDERGROUND OBSTRUCTION IS ENCOUNTERED, THE LANDSCAPE DESIGNER RESERVES THE RIGHT TO
- RELOCATE OR ENLARGE PLANTING PITS OR DELETE PLANT MATERIAL FROM THE CONTRACT. 14. IF PLANTS ARE PROPOSED WITHIN SIGHT TRIANGLES, TREES SHALL BE LIMBED AND MAINTAINED TO A HEIGHT OF EIGHT FEET (8') ABOVE GRADE, AND SHRUBS, GROUND COVER, PERENNIALS, AND ANNUALS SHALL BE MAINTAINED TO A HEIGHT NOT TO EXCEED TWO FEET (2") ABOVE GRADE UNLESS OTHERWISE NOTED OR SPECIFIED BY THE GOVERNING MUNICIPALITY OR
- 15. INSTALLATION SHALL OCCUR DURING THE FOLLOWING SEASONS: PLANTS (MARCH 15 - DECEMBER 15)
- LAWNS (MARCH 15 JUNE 15 OR SEPTEMBER 1 DECEMBER 1) 16. THE FOLLOWING TREES ARE SUSCEPTIBLE TO TRANSPLANT SHOCK AND SHALL NOT BE PLANTED DURING THE FALL SEASON (STARTING SEPTEMBER 15)

IAKTING SEFTENBEK 13).		
BIES CONCOLOR	CORNUS VARIETIES	OSTRYA VIRGINIANA
CER BUERGERIANUM	CRATAEGUS VARIETIES	PINUS NIGRA
CER FREEMANII	CUPRESSOCYPARIS LEYLANDII	PLATANUS VARIETIES
CER RUBRUM	FAGUS VARIETIES	POPULUS VARIETIES
CER SACCHARINUM	HALESIA VARIETIES	PRUNUS VARIETIES
TULA VARIETIES	ILEX X FOSTERII	PYRUS VARIETIES
ARPINUS VARIETIES	ILEX NELLIE STEVENS	QUERCUS VARIETIES (NOT Q. PALUSTRIS)
EDRUS DEODARA	ILEX OPACA	SALIX WEEPING VARIETIES
ELTIS VARIETIES	JUNIPERUS VIRGINIANA	SORBUS VARIETIES
PCIDIPHYLLIM VARIETIES	KOELBELITERIA PANICLII ATA	TAYODII IM VARIETIES

CERCIS CANADENSIS LIQUIDAMBAR VARIETIES TAXUX B REPANDENS **CORNUS VARIETIES** LIRIODENDRON VARIETIES TILIA TOMENTOSA VARIETIES **CRATAEGUS VARIETIES** MALUS IN LEAF **ULMUS PARVIFOLIA VARIETIES** 

NYSSA SYLVATICA ZELKOVA VARIETIES 17. IF A PROPOSED PLANT IS UNATTAINABLE OR ON THE FALL DIGGING HAZARD LIST, AN EQUIVALENT SPECIES OF THE SAME SIZE MAY BE REQUESTED FOR SUBSTITUTION OF THE ORIGINAL PLANT. ALL SUBSTITUTIONS SHALL BE APPROVED BY THE PROJECT LANDSCAPE DESIGNER OR MUNICIPAL OFFICIAL PRIOR TO ORDERING AND INSTALLATION.

20. A 90-DAY MAINTENANCE PERIOD SHALL BEGIN IMMEDIATELY AFTER ALL PLANTS HAVE BEEN SATISFACTORILY INSTALLED.

18. DURING THE COURSE OF CONSTRUCTION/PLANT INSTALLATION. EXCESS AND WASTE MATERIALS SHALL BE CONTINUOUSLY AND PROMPTLY REMOVED AT THE END OF EACH WORK DAY. ALL DEBRIS, MATERIALS, AND TOOLS SHALL BE PROPERLY

STORED, STOCKPILED OR DISPOSED OF AND ALL PAVED AREAS SHALL BE CLEANED. 19. THE LANDSCAPE CONTRACTOR SHALL DISPOSE OF ALL RUBBISH AND EXCESS SOIL AT HIS EXPENSE TO AN OFF-SITE LOCATION AS APPROVED BY THE LOCAL MUNICIPALITY.

- 21. MAINTENANCE SHALL INCLUDE, BUT NOT BE LIMITED TO, REPLACING MULCH THAT HAS BEEN DISPLACED BY EROSION OR DTHER MEANS, REPAIRING AND RESHAPING WATER RINGS OR SAUCERS, MAINTAINING STAKES AND GUYS IF ORIGINALI REQUIRED, WATERING WHEN NEEDED OR DIRECTED, WEEDING, PRUNING, SPRAYING, FERTILIZING, MOWING THE LAWN, AND PERFORMING ANY OTHER WORK REQUIRED TO KEEP THE PLANTS IN A HEALTHY CONDITION. 2. Mow all grass areas at regular intervals to keep the grass height from exceeding three inches (3"). Mowing
- SHALL BE PERFORMED ONLY WHEN GRASS IS DRY. MOWER BLADE SHALL BE SET TO REMOVE NO MORE THAN ONE THIRD (1/3) OF THE GRASS LENGTH. WHEN THE AMOUNT OF GRASS IS HEAVY, IT SHALL BE REMOVED TO PREVENT DESTRUCTION OF THE UNDERLYING TURF. MOW GRASS AREAS IN SUCH A MANNER AS TO PREVENT CLIPPINGS FROM BLOWING ON PAVED AREAS, AND SIDEWALKS. CLEANUP AFTER MOWING SHALL INCLUDE SWEEPING OR BLOWING OF PAVED AREAS AND SIDEWALKS TO CLEAR THEM FROM MOWING DEBRIS.
- 23. GRASSED AREAS DAMAGED DURING THE PROCESS OF THE WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, WHO SHALL RESTORE THE DISTURBED AREAS TO A CONDITION SATISFACTORY TO THE PROJECT LANDSCAPE DESIGNER, MUNICIPAL OFFICIAL, OR OWNER/OWNER'S REPRESENTATIVE. THIS MAY INCLUDE FILLING TO GRADE, FERTILIZING, SEEDING, AND
- 24. SHOULD THE OWNER REQUIRE MAINTENANCE BEYOND THE STANDARD 90-DAY MAINTENANCE PERIOD, A SEPARATE
- CONTRACT SHALL BE ESTABLISHED. 25. LANDSCAPE CONTRACTOR SHALL WATER NEW PLANTINGS FROM TIME OF INSTALL AND THROUGHOUT REQUIRED 90-DAY MAINTENANCE PERIOD UNTIL PLANTS ARE ESTABLISHED. IF ON-SITE WATER IS NOT AVAILABLE AT THE PROJECT LOCATION, THE LANDSCAPE CONTRACTOR SHALL FURNISH IT BY MEANS OR A WATERING TRUCK OR OTHER ACCEPTABLE MANNER.
- 26. THE QUANTITY OF WATER APPLIED AT ONE TIME SHALL BE SUFFICIENT TO PENETRATE THE SOIL TO A MINIMUM OF EIGHT INCHES (8") IN SHRUB BEDS AND SIX INCHES (6") IN TURF AREAS AT A RATE WHICH WILL PREVENT SATURATION OF THE SOIL. 27. IF AN AUTOMATIC IRRIGATION SYSTEM HAS BEEN INSTALLED, IT CAN BE USED FOR WATERING PLANT MATERIAL. HOWEVER, FAILURE OF THE SYSTEM DOES NOT ELIMINATE THE LANDSCAPE CONTRACTOR'S RESPONSIBILITY OF PLANT HEALTH AND
- **PLANT MATERIAL GUARANTEE NOTES**

# THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF ONE YEAR (I YR.) FROM APPROVAL OF LANDSCAPE INSTALLATION BY THE PROJECT LANDSCAPE DESIGNER, MUNICIPAL OFFICIAL, OR OWNER/OWNER'S

- REPRESENTATIVE I. THE LANDSCAPE CONTRACTOR SHALL REMOVE AND REPLACE DYING, DEAD, OR DEFECTIVE PLANT MATERIAL AT HIS EXPENSE. THE LANDSCAPE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR ANY DAMAGES CAUSED BY HIS COMPANY'S OPERATIONS. 3. ALL REPLACEMENT PLANTS SHALL BE OF THE SAME SPECIES AND SIZE AS SPECIFIED ON THE APPROVED OR FINAL PLANT LIST.
- REPLACEMENTS RESULTING FROM REMOVAL, LOSS, OR DAMAGE DUE TO OCCUPANCY OF THE PROJECT IN ANY PART, VANDALISM, PHYSICAL DAMAGE BY ANIMALS, VEHICLES, ETC., AND LOSSES DUE TO CURTAILMENT OF WATER BY LOCAL AUTHORITIES SHALL BE APPROVED AND PAID FOR BY THE OWNER.
- 4. THE CONTRACTOR SHALL INSTRUCT THE OWNER AS TO THE PROPER CARE AND MAINTENANCE OF ALL PLANTINGS.

# LAWN (SEED OR SOD) NOTES:

- I. SEED MIXTURE SHALL BE FRESH, CLEAN, NEW CROP SEED. SOD SHALL BE STRONGLY ROOTED, UNIFORM IN THICKNESS, AND FREE OF WEEDS, DISEASE, AND PESTS. L SEED OR SOD SHALL BE PURCHASED FROM A RECOGNIZED DISTRIBUTOR AND SHALL BE COMPOSED OF THE MIX OR BLEND
- WITHIN THE PROVIDED "SEED SPECIFICATION" OR "SOD SPECIFICATION."
- 3. REFERENCE LANDSCAPE PLAN FOR AREAS TO BE SEEDED OR LAID WITH SOD.
- 4. SEEDING SHALL NOT BE PERFORMED IN WINDY WEATHER. IF THE SEASON OF THE PROJECT COMPLETION PROHIBITS PERMANENT STABILIZATION, TEMPORARY STABILIZATION SHALL BE PROVIDED IN ACCORDANCE WITH THE "TEMPORARY SEEDING SPECIFICATION.'
- 5. PROTECT NEW LAWN AREAS AGAINST TRESPASSING WHILE THE SEED IS GERMINATING. FURNISH AND INSTALL FENCES, SIGNS, BARRIERS OR ANY OTHER NECESSARY TEMPORARY PROTECTIVE DEVICES. DAMAGE RESULTING FROM TRESPASS. EROSION. WASHOUT, SETTLEMENT OR OTHER CAUSES SHALL BE REPAIRED BY THE LANDSCAPE CONTRACTOR AT HIS EXPENSE. REMOVE ALL FENCES, SIGNS, BARRIERS OR OTHER TEMPORARY PROTECTIVE DEVICES ONCE LAWN HAS BEEN ESTABLISHED.

			RESUBMISSION FOR SITE PLAN APPROVAL	FOR RCOC / PLANNING APPROVAL	FOR ENGINEERING APPROVAL	FOR SITE PLAN APPROVAL	FOR SITE PLAN REVIEW & SPECIAL LAND USE SUME	FOR CITY SUBMISSION	DESCRIPTION
			КТН	КТН	КТН	КТН	КТН	RAC	ВУ
			02/06/2023	10/11/2022	07/11/2022	05/31/2022	02/14/2022	02/09/2021	DATE
			9	2	4	٣	2	_	ISSUE
OT	OT APPROVED FOR CONSTRUCTION						ΓΙΟΝ		



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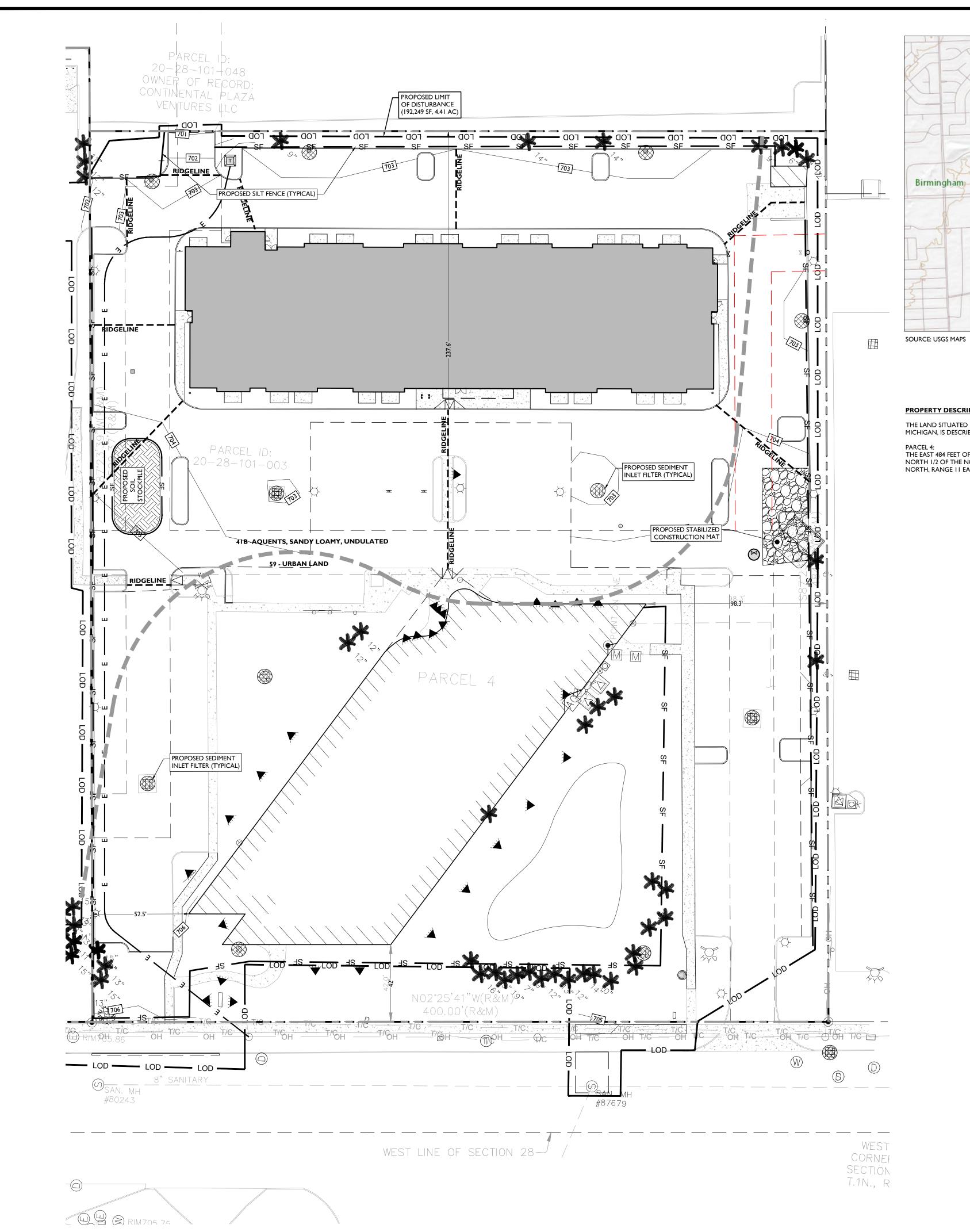


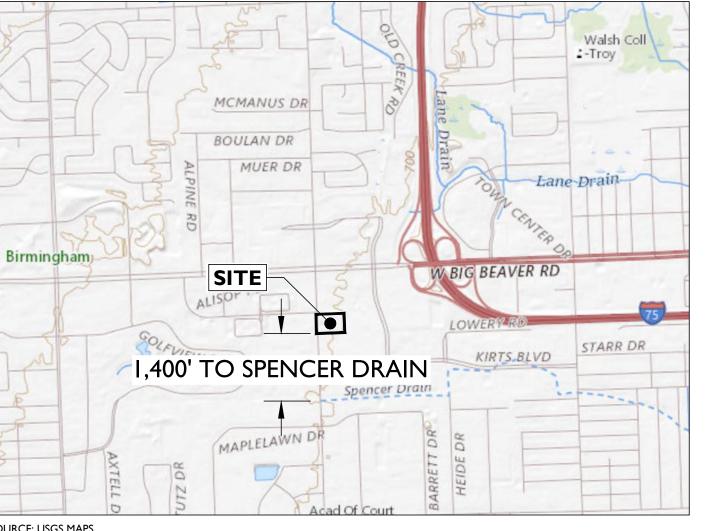


SCALE: AS SHOWN PROJECT ID: M-19301.01

LANDSCAPING DETAILS

**DRAWING:** 





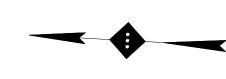
# **LOCATION MAP**

SCALE:  $I'' = 2,000' \pm$ 

# PROPERTY DESCRIPTION

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

THE EAST 484 FEET OF THE WEST 544 FEET OF THE SOUTH 400 FEET OF THE NORTH I/2 OF THE NORTHWEST I/4 CORNER OF SECTION 28, TOWN 2 NORTH, RANGE I I EAST, CITY OF TROY, OAKLAND COUNTY, MICHIGAN.



SYMBOL	DESCRIPTION
	PROPERTY BOUNDARY
	ADJACENT PROPERTY BOUNDARY
LOD	PROPOSED LIMIT OF DISTURBANCE
SF	PROPOSED SILT FENCE
	PROPOSED STOCKPILE & EQUIPMENT STORAGE
	PROPOSED STABILIZED CONSTRUCTION ENTRANCE
	PROPOSED INLET PROTECTION FILTER

# SOIL EROSION AND SEDIMENT CONTROL NOTES

- I. THE CONTRACTOR IS RESPONSIBLE FOR SOIL EROSION AND SEDIMENT CONTROL IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL
- REQUIREMENTS.

  2. THE CONTRACTOR IS RESPONSIBLE FOR DUST CONTROL IN COMPLIANCE WITH LOCAL, STATE, AND FEDERAL AIR QUALITY
- 3. THE CONTRACTOR IS RESPONSIBLE TO INSPECT ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES WEEKLY AND AFTER A PRECIPITATION EVENT GREATER THAN I INCH. THE CONTRACTOR SHALL MAINTAIN AN INSPECTION LOG ON SITE AND DOCUMENT CORRECTIVE ACTION TAKEN THROUGHOUT THE COURSE OF CONSTRUCTION AS REQUIRED.

# **ENVIROMENTAL NOTES:**

- THERE ARE NO RIPARIAN ZONES ON SITE NO PORTION OF THIS SITE LIES WITHIN A FLOOD HAZARD AREA THERE ARE NO WETLANDS ON SITE

SITE BENCHMARK #3
ARROW ON HYDRANT, ±40' SW OF SW CORNER OF POND. ELEVATION = 707.24' (NAVD 88 DATUM)

SITE BENCHMARK #4

ARROW ON HYDRANT, NEAR NE
CORNER OF BUILDING.

ELEVATION = 708.34' (NAVD 88 DATUM)

# SEQUENCE OF CONSTRUCTION

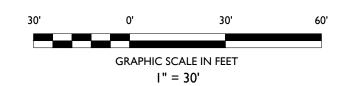
- INSTALL SILT FENCE AND CONSTRUCTION ENTRANCE (2 DAYS).
- SITE DEMOLITION (20 DAYS).

  ROUGH GRADING AND TEMPORARY SEEDING (20 DAYS).

  EXCAVATE AND INSTALL DRAINAGE PIPING, AND INLETS (10 DAYS).
- INSTALL INLET FILTERS (I DAY).
- BUILDING CONSTRUCTION AND SITE IMPROVEMENTS (100 DAYS).
  LANDSCAPING IMPROVEMENTS AND FINAL SEEDING (10 DAYS).
  REMOVE SOIL EROSION MEASURES (1 DAY).
- NOTE: TIME DURATIONS ARE APPROXIMATE AND ARE INTENDED TO ACT AS A GENERAL GUIDE TO THE CONSTRUCTION TIMELINE. ALL DURATIONS ARE SUBJECT TO CHANGE BY CONTRACTOR. CONTRACTOR SHALL SUBMIT CONSTRUCTION SCHEDULE TO TOWNSHIP AND ENGINEER. CONTRACTOR SHALL PHASE CONSTRUCTION ACCORDINGLY

SOIL CHARACTE	RISTICS CHART
TYPE OF SOIL	59 - URBAN LAND
PERCENT OF SITE COVERAGE	47.3%
HYDROLOGIC SOIL GROUP	D
DEPTH TO RESTRICTIVE LAYER	> 80 INCHES
SOIL PERMEABILITY	0.00 TO 0.00 IN / HR
DEPTH TO WATER TABLE	> 80 INCHES

SOIL CHARACTE	RISTICS CHART
TYPE OF SOIL	41B - AQUENTS, SANDY LOAMY, UNDULATED
PERCENT OF SITE COVERAGE	52.6%
HYDROLOGIC SOIL GROUP	A/D
DEPTH TO RESTRICTIVE LAYER	> 80 INCHES
SOIL PERMEABILITY	5.95 TO 19.98 IN
DEPTH TO WATER TABLE	ABOUT 0 INCHES



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<b>nn∧</b>				
\/FF	9	02/06/2023	КТН	RESUBMISSION FOR SITE PLAN APPROVAL
\ F^	22	10/11/2022	КТН	FOR RCOC / PLANNING APPROVAL
\D	4	07/11/2022	КТН	FOR ENGINEERING APPROVAL
AN	m	05/31/2022	КТН	FOR SITE PLAN APPROVAL
CT D	2	02/14/2022	КТН	FOR SITE PLAN REVIEW & SPECIAL LAND US
	_	02/09/2021	RAC	FOR CITY SUBMISSION
FIAN	ISSUE	DATE	ВҮ	DESCRIPTION

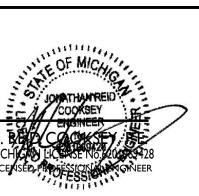
NOT APPROVED FOR CONSTRUCTION



80

**CROOKS** 

2690



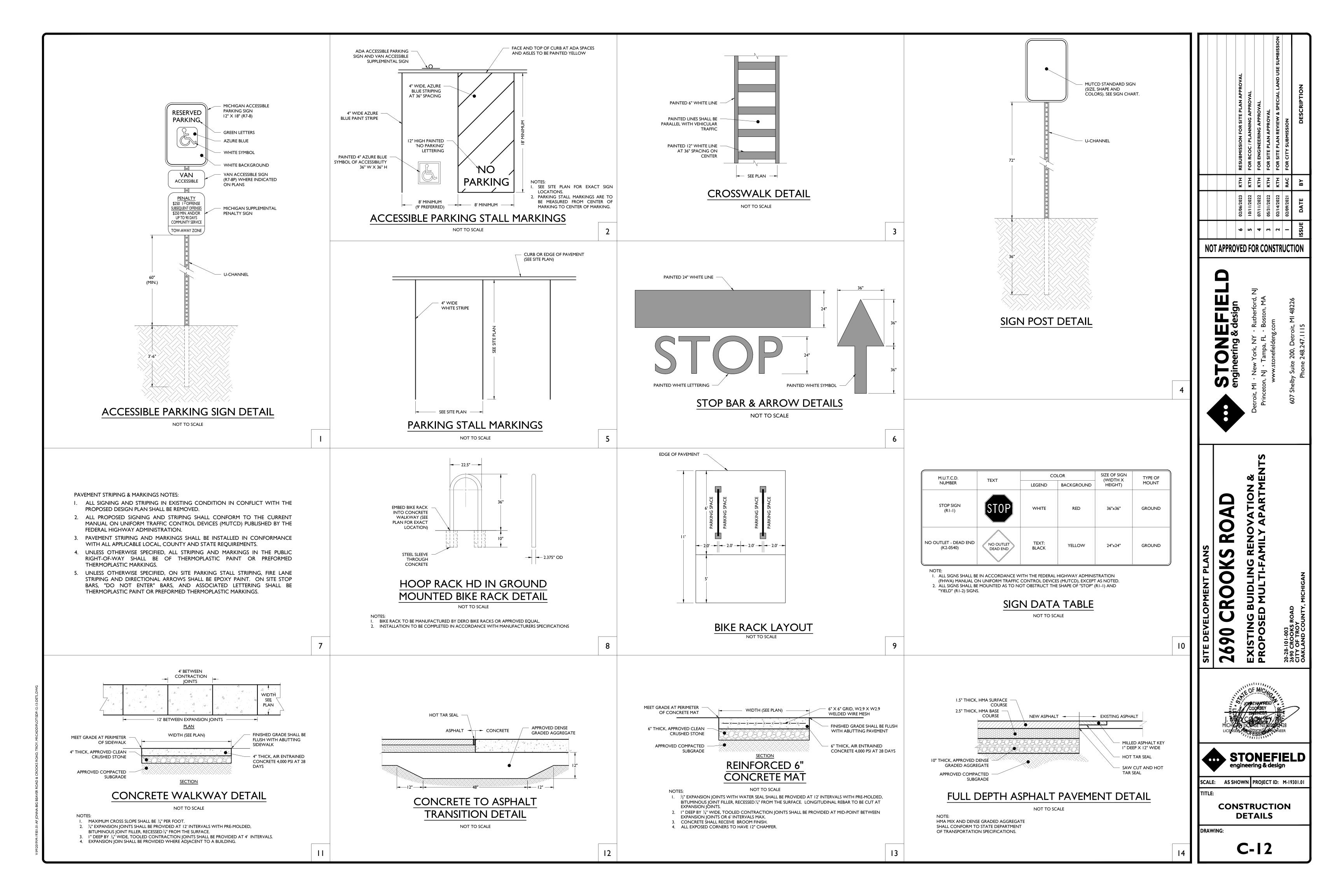


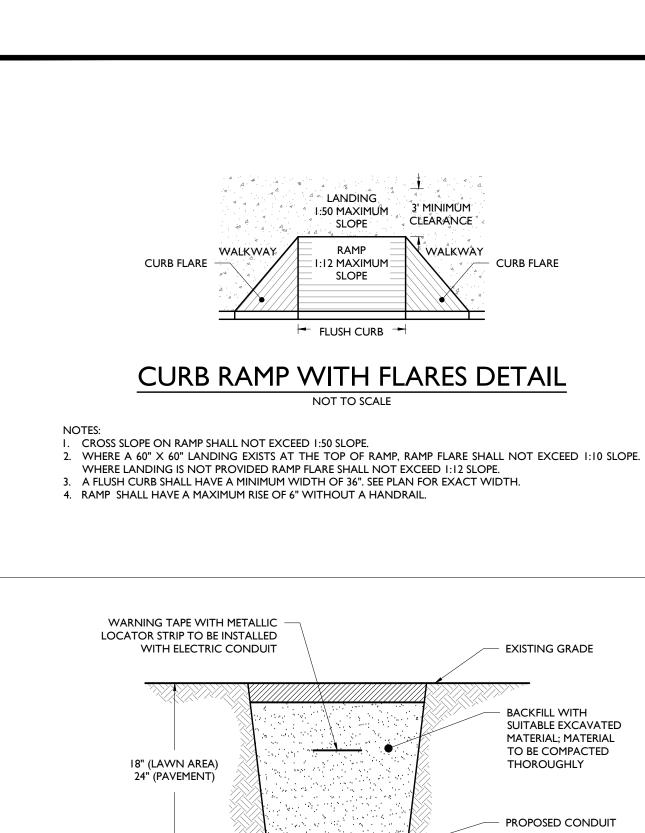
I" = 30' PROJECT ID: M-19301.01

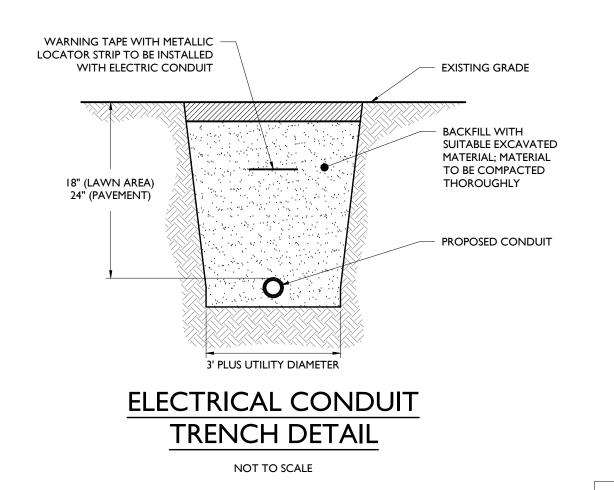
**SOIL EROSION &** 

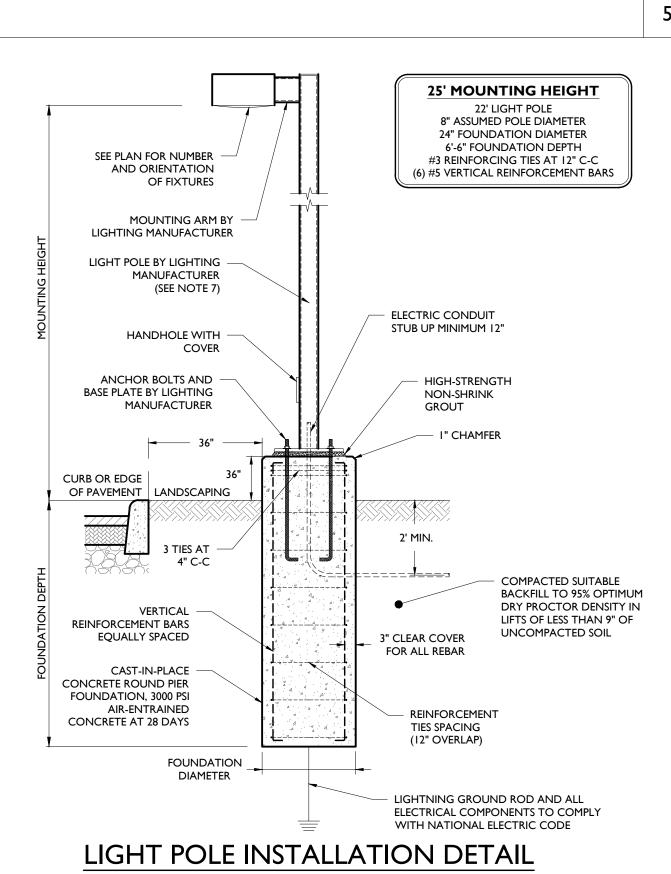
**SEDIMENT CONTROL PLAN** DRAWING:

C-II









I. 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.

4. 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 I" TOLERANCE).

POUR TO BE TERMINATED AT A FORM.

ON ANSI/ASCE 7-93. ). Work shall conform to aci best practices for appropriate temperature and weather conditions.

10. CONTRACTOR TO TEMPORARILY SUPPORT ADJACENT SOIL AND STRUCTURES DURING EXCAVATION IF REQUIRED.

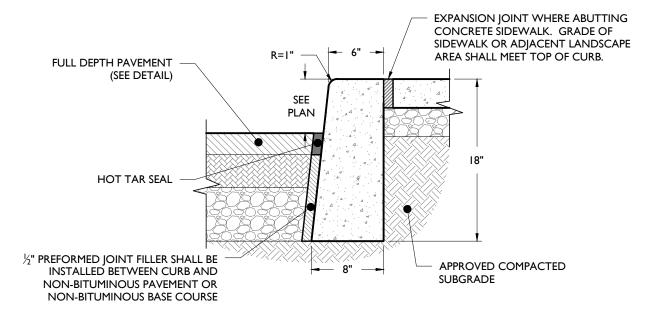
POLE SHALL BE RATED FOR 10 MPH HIGHER THAN MAXIMUM WIND SPEED 33FT ABOVE GROUND FOR THE AREA BASED

FLUSH CURB DIMENSIONS A B C 72" 6" 12" 60" 5" 13" 36" 3" 15" TOP OF CURB FINAL PAVEMENT GRADE SEE PLAN B (MAXIMUM TOP OF 48" CURB PAVEMENT BELOW PAVEMENT **ELEVATION** 

# FLUSH CURB DETAIL

NOT TO SCALE

SANITARY SEWER



# **CONCRETE CURB DETAIL**

PRIVATE WATER MANHOLE COVERS

NOT TO SCALE

WATER

7

NOT TO SCALE

CONCRETE SHALL BE 3500 PSI AT 28 DAYS, AIR-ENTRAINED. TRANSVERSE EXPANSION JOINTS SHALL BE PROVIDED AT 20 FOOT INTERVALS WITH PRE-MOLDED.

BITUMINOUS JOINT FILLER, RECESSED  $\frac{1}{4}$ " FROM SURFACE.

HALF DEPTH CONTRACTION JOINTS SHALL BE PROVIDED AT 10 FOOT INTERVALS.

 FRAME AND COVER TO BE CAST-IRON AND SUPPORT MINIMUM H-25 LOADING.

ALL JOINTS TO BE WATER-TIGHT.

OR APPROVED EQUIVALENT.

FRAME AND COVER TO BE E.J.I.W. 1040

MANHOLE COVER TO BE LABELED / DEFINED PER

REGULATIONS. PRIVATE MANHOLES SHALL NOT

CONTAIN ANY REFERENCE TO THE CITY OF

LOCAL COMMUNITY STANDARDS AND

. 18" CURB DEPTH SHALL BE MAINTAINED AT DEPRESSED OR FLUSH CURBED AREAS.

CONCRETÉ SIDEWALK. GRADE OF SIDEWALK OR ADJACENT LANDSCAPE AREA SHALL MEET TOP OF CURB. #4 BARS **APPROVED** COMPACTED PITCH-OUT CURB PITCH-IN CURB COMPACTED SUBGRADE

# CONCRETE CURB AND GUTTER DETAIL

NOT TO SCALE

CONCRETE SHALL BE 3500 PSI AT 28 DAYS, AIR-ENTRAINED. TRANSVERSE EXPANSION JOINTS SHALL BE PROVIDED AT 20 FOOT INTERVALS WITH PRE-MOLDED, BITUMINOUS JOINT FILLER, RECESSED 1/4" FROM SURFACE.

HALF DEPTH CONTRACTION JOINTS SHALL BE PROVIDED AT 10 FOOT INTERVALS. 14" CURB DEPTH SHALL BE MAINTAINED AT DEPRESSED OR FLUSH CURBED AREAS.

> Fire lane signs. Approved "No Parking Fire Lane" sign must be installed and maintained in compliance with the criteria set forth in the Michigan Manual of Uniform Traffic Control Devices. Some of the criteria

 Sign shall be red lettering on white background and shall read, "FIRE LANE. NO PARKING, NO STOPPING, NO STANDING, TOW AWAY ZONE". Signs shall be spaced no further than 100 feet apart. Signs shall be installed at a right angle or 90° to ourt.

CITY OF TROY FIRE LANE SIGN DETAIL

NOT TO SCALE

**FIRE LANE NO PARKING NO STOPPING** NO STANDING **TOW AWAY** ZONE

is as follows: (Troy City Code Chapter 108)

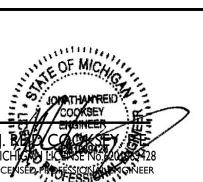
 Sign shall be seven (7) feet from the bottom of sign to grade. Signs shall be double faced where the possibility exists for left wheel to curb parking.

Signs shall be 12 inches in width and 18 inches in height.

NOT APPROVED FOR CONSTRUCTION

8

ROOKS 2690



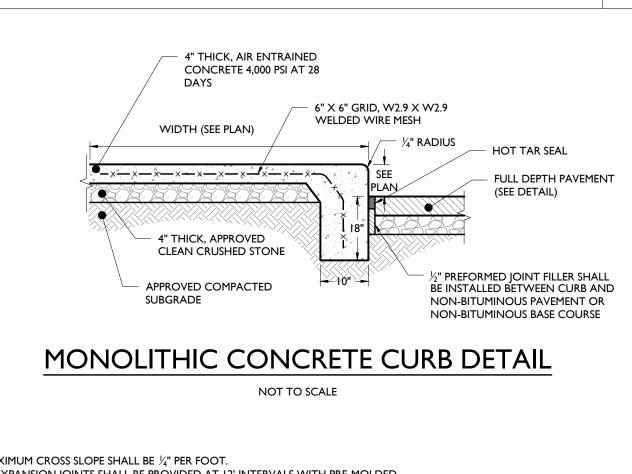


SCALE: AS SHOWN PROJECT ID: M-19301.01

CONSTRUCTION **DETAILS** 

**DRAWING:** 

**C-13** 



PRIVATE SANITARY MANHOLE COVERS

NOT TO SCALE

MAXIMUM CROSS SLOPE SHALL BE  $\frac{1}{4}$ " PER FOOT. 2. \( \frac{1}{4}\)" EXPANSION JOINTS SHALL BE PROVIDED AT 12' INTERVALS WITH PRE-MOLDED,

I. FRAME AND COVER TO BE CAST-IRON

. ALL JOINTS TO BE WATER-TIGHT.

OR APPROVED EQUIVALENT.

AND SUPPORT MINIMUM H-25 LOADING.

FRAME AND COVER TO BE E.J.I.W. 1040

MANHOLE COVER TO BE LABELED / DEFINED PER

REGULATIONS. PRIVATE MANHOLES SHALL NOT

CONTAIN ANY REFERENCE TO THE CITY OF

LOCAL COMMUNITY STANDARDS AND

BITUMINOUS JOINT FILLER, RECESSED 1/4" FROM THE SURFACE. 3. I" DEEP BY 1/4" WIDE, TOOLED CONTRACTION JOINTS SHALL BE PROVIDED AT 4' INTERVALS.

# LEGEND

(NOT TO SCALE) FOUND MONUMENT (AS NOTED) lacktriangleFOUND SECTION CORNER (AS NOTED) (R&M) RECORD AND MEASURED DIMENSION (R) RECORD DIMENSION MEASURED DIMENSION (M) (E) ELECTRIC MANHOLE ELECTRIC PANEL Δ TRANSFORMER UTILITY POLE 0 GAS METER GV GAS VALVE ① TELEPHONE MANHOLE ELECTRIC OUTLET CABLE TV RISER TRAFFIC SIGNAL CROSSWALK SIGNAL CLEANOUT SANITARY MANHOLE ROUND CATCH BASIN SQUARE CATCH BASIN STORM DRAIN MANHOLE FIRE HYDRANT FIRE DEPARTMENT CONNECTION **Z** WATER GATE MANHOLE  $\bowtie$ WATER VALVE AIR CONDITIONING UNIT BOLLARD FLAGPOLE FLOOD LIGHT LIGHTPOST/LAMP POST MAIL BOX SINGLE POST SIGN DOUBLE POST SIGN HANDICAP PARKING PARCEL BOUNDARY LINE ADJOINER PARCEL LINE SECTION LINE EASEMENT (AS NOTED) BUILDING BUILDING OVERHANG ASPHALT CURB CONCRETE CURB ---- RAISED CONCRETE PARKING EDGE OF CONCRETE (CONC.) EDGE OF ASPHALT (ASPH.) EDGE OF GRAVEL FENCE (AS NOTED) WALL (AS NOTED) LANDSCAPING (AS NOTED)

OVERHEAD UTILITY LINE

BUILDING AREA

**ASPHALT** 

CONCRETE

UNDERGROUND PIPE (AS NOTED)

# **PARKING**

WALL

CONC

WALL

△12" STORM

HANDICAP PARKING = 8 STALLS STANDARD PARKING = 328 STALLS

# BASIS OF BEARING

SOUTH 02°25'41" EAST, BEING THE WEST LINE OF SECTION 28, AS SHOWN.

24' INGRESS &

L.9630, P.559

EGRESS EASEMENT,

ASPHALT

BENCHMARK #

24" INGRESS & EGRESS EASEMENT,

L.9386, P.804

MOTORCYCLE//

ARKING ONL

# PARCEL AREA

PARCEL 4: 193.599± SQUARE FEET = 4.444± ACRES

# SURVEYOR'S NOTE

PARCEL ID:

20-28-101-048

OWNER OF RECORD: CONTINENTAL PLAZA

VENTURES LLC

NO2'25'41"W(R&M) 400.00'(R&M)

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.

ASPHALT,

CONCRETE CURE

# **BENCHMARK**

SITE BENCHMARK #3

WALL

CONC.

DUMPSTER

RAISED CONCRE

≪/ INV. 12°

NE=699.24'

S ASEMENT,

L29386, P.804

PARCEL 4

PARCEL ID:

20-28-101-003

NO2\*25'41" (R&M)

400.00(R&M)

WEST LINE OF SECTION 28

CONCRETE CURB

#2690

4-STORY

COMMERCIAL BUILDING

VAULT

VAU

STM. MH #11297

ENCLOSURE

ASPHALT

POND

ASRHALT

₩OOD.

SITE

PRIVACY FENCE

BENCHMARK #3

STM. MH #85015

WEST 1/4

CORNER OF

SECTION 28,

/T.1N., R.11E.

8" SANITARY

CONC-

DUMPSTER

ENCLOSURE

ARROW ON HYDRANT, ±40' SW OF SW CORNER OF POND. ELEVATION = 707.24' (NAVD 88 DATUM)

# SITE BENCHMARK #4

ARROW ON HYDRANT, NEAR NE CORNER OF BUILDING. ELEVATION = 708.34' (NAVD 88 DATUM)



GRAPHIC SCALE

( IN FEET ) 1 inch = 50 ft.

# PROPERTY DESCRIPTION

THE LAND SITUATED IN THE TROY, COUNTY OF OAKLAND, STATE OF MICHIGAN, IS DESCRIBED

## PARCEL 4:

THE EAST 484 FEET OF THE WEST 544 FEET OF THE SOUTH 400 FEET OF THE NORTH 1/2 OF THE NORTHWEST 1/4 CORNER OF SECTION 28, TOWN 2 NORTH, RANGE 11 EAST, CITY OF TROY,

# TITLE REPORT NOTE

ONLY THOSE EXCEPTIONS CONTAINED WITHIN THE STEWART TITLE GUARANTY COMPANY FILE No. 63-19650824-SCM, REVISION 4, DATED SEPTEMBER 03, 2019, AND RELISTED BELOW WERE CONSIDERED FOR THIS SURVEY. NO OTHER RECORDS RESEARCH WAS PERFORMED BY THE CERTIFYING SURVEYOR.

27. TERMS AND PROVISIONS CONTAINED WITHIN, AND EASEMENTS CREATED BY CROSS-ACCESS OR JOINT-DRIVE EASEMENT RECORDED IN LIBER 9386, PAGE 804, OAKLAND COUNTY RECORDS (AFFECTS PARCELS 4). (AS SHOWN)

28. TERMS AND PROVISIONS CONTAINED WITHIN, AND EASEMENTS CREATED BY CROSS—ACCESS OR JOINT—DRIVE EASEMENT RECORDED IN LIBER 9630, PAGE 559, OAKLAND COUNTY RECORDS (AFFECTS PARCELS 4). (AS SHOWN)

# MANHOLE SCHEDULE

<u>#</u>	<u>TYPE</u>	RIM (FT)	SIZE (IN)	<b>DIRECTION</b>	DIP	INVERT (FT
11297	STORM MANHOLE	705.38	12	N	4.2	701.18
11355	CATCH BASIN	704.21	6	NE	3.7	700.51
			6	SW	3.95	700.26
			6	SE	3.8	700.41
11403	BEEHIVE CATCH BASIN	704.55	6	S	3.85	700.70
			6	W	3.9	700.65
			6	NW	4.05	700.50
11461	CATCH BASIN	702.66	6	N	2.75	699.91
			6	SE	2.85	699.81
			6	NW	3	699.66
			6	S	3.2	699.46
11462	CATCH BASIN	702.51	6	NE	3.2	699.31
			6	S	3.15	699.36
			6	SW	3.25	699.26
			6	NW	3.05	699.46
11463	CATCH BASIN	702.57	6	N	3.25	699.32
			6	Е	3.15	699.42
			6	S	3.05	699.52
			6	W	3.15	699.32
L1464	CATCH BASIN	702.64	6	Е	4.4	698.24
			6	SW	3.85	698.80
			6	NW	3.75	698.89
1824	BEEHIVE CATCH BASIN	703.48	6	Е	6	697.48
			T/	/PIPE	4.2	699.28
			T/V	VATER	4.25	699.23
			B/STR	RUCTURE	7.4	696.08
11851	CATCH BASIN	702.9	6	NE	4.25	698.65
			6	N	4.15	698.75
			12	NW	5.8	697.10
			6	SE	4.3	698.60
85015	STORM MANHOLE	703.39	12	NW	5	698.39
			15	S	6.5	696.89
35016	CATCH BASIN	703.37	12	SW	4.45	698.92
35025	STORM MANHOLE	703.59	12	S	4	699.59
			12	W	5.2	698.39
			12	Е	4.85	698.74
			6	NE	4.6	698.99
37679	SANITARY MANHOLE	705.04	8	N	11.45	693.59
			8	S	11.5	693.54
			8	NW	11	694.04

# SURVEYOR'S CERTIFICATION

TO A.F. JONNA; CIBC BANK USA, AN ILLINOIS CHARTERED BANK, ITS SUCCESSORS AND/OR ASSIGNS; STEWART TITLE GUARANTY COMPANY; AND ATA NATIONAL TITLE GROUP, LLC:

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDED ITEMS 2, 4, 7A, 8, AND 9 OF TABLE A, THEREOF. THE FIELD WORK WAS COMPLETED ON DECEMBER 05, 2019.

DATE OF PLAT OR MAP: DECEMBER 10, 2019



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

>				
_	REV. 5	REV. 5 03/16/22	MRJ	REVISED PER REVIEW CON
	REV. 4	REV. 4 02/21/22	MRJ	REVISED PER REVIEW CON
.;	REV. 3	REV. 3 01/31/22	MRJ	REVISED WATER MAI
	REV. 2	REV. 2 12/30/21	MRJ	ADDED TOPO
	REV. 1	REV. 1 03/18/20	80	ADDED CERTIFIED PAF
	REVISION	N DATE	ВҮ	DESCRIPTION

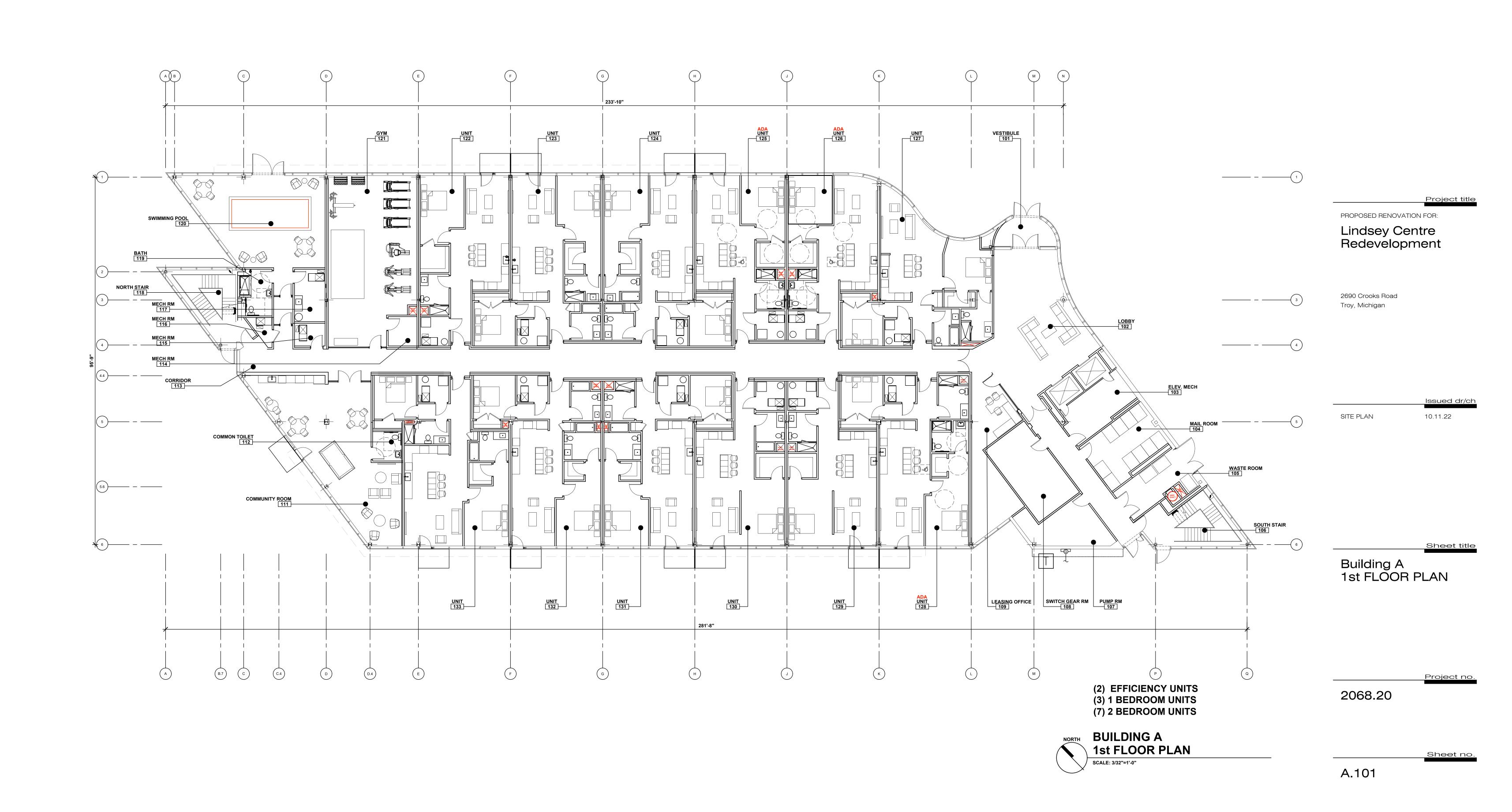
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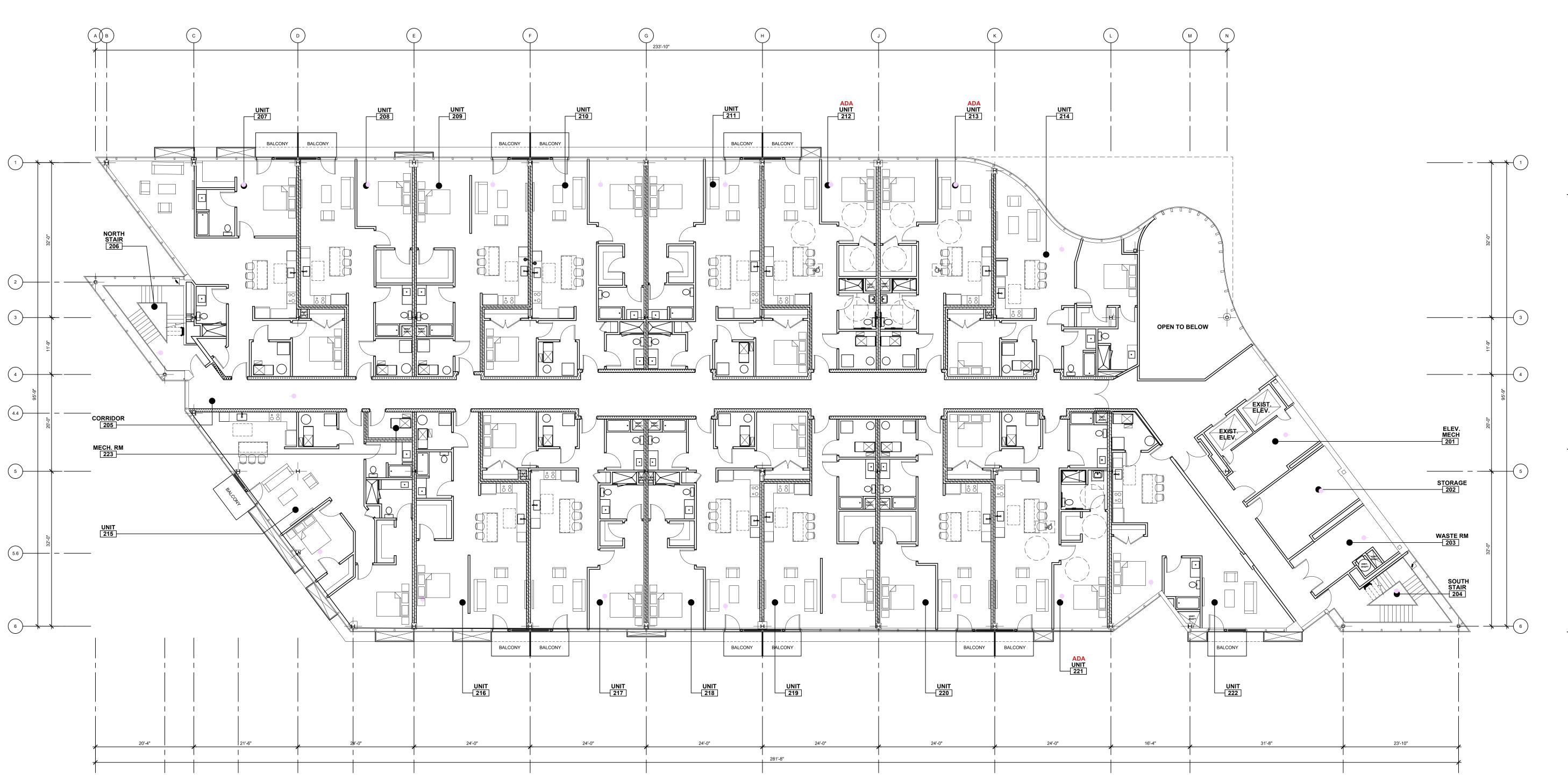
1 OF 1 SHEETS











PROPOSED RENOVATION FOR:

Lindsey Centre Redevelopment

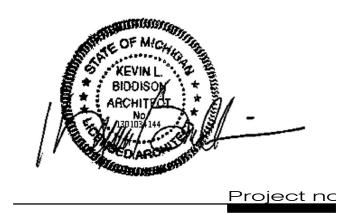
2690 Crooks Road Troy, Michigan

Issued dr/c

SITE PLAN APPROVAL 02.07.23

Sheet title

Building A 2nd FLOOR PLAN



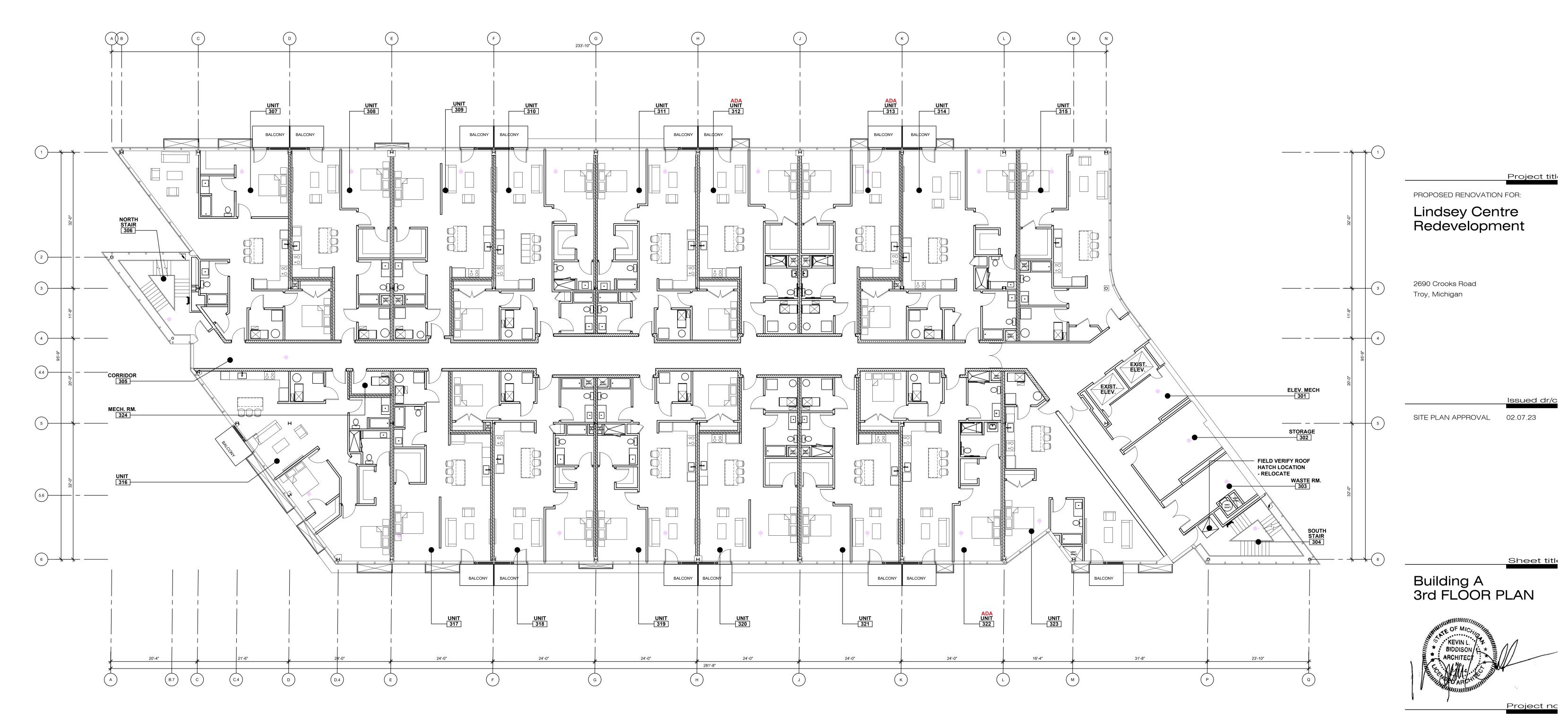
2068.20

**BUILDING A** 2nd FLOOR PLAN SCALE: 3/32"=1'-0"

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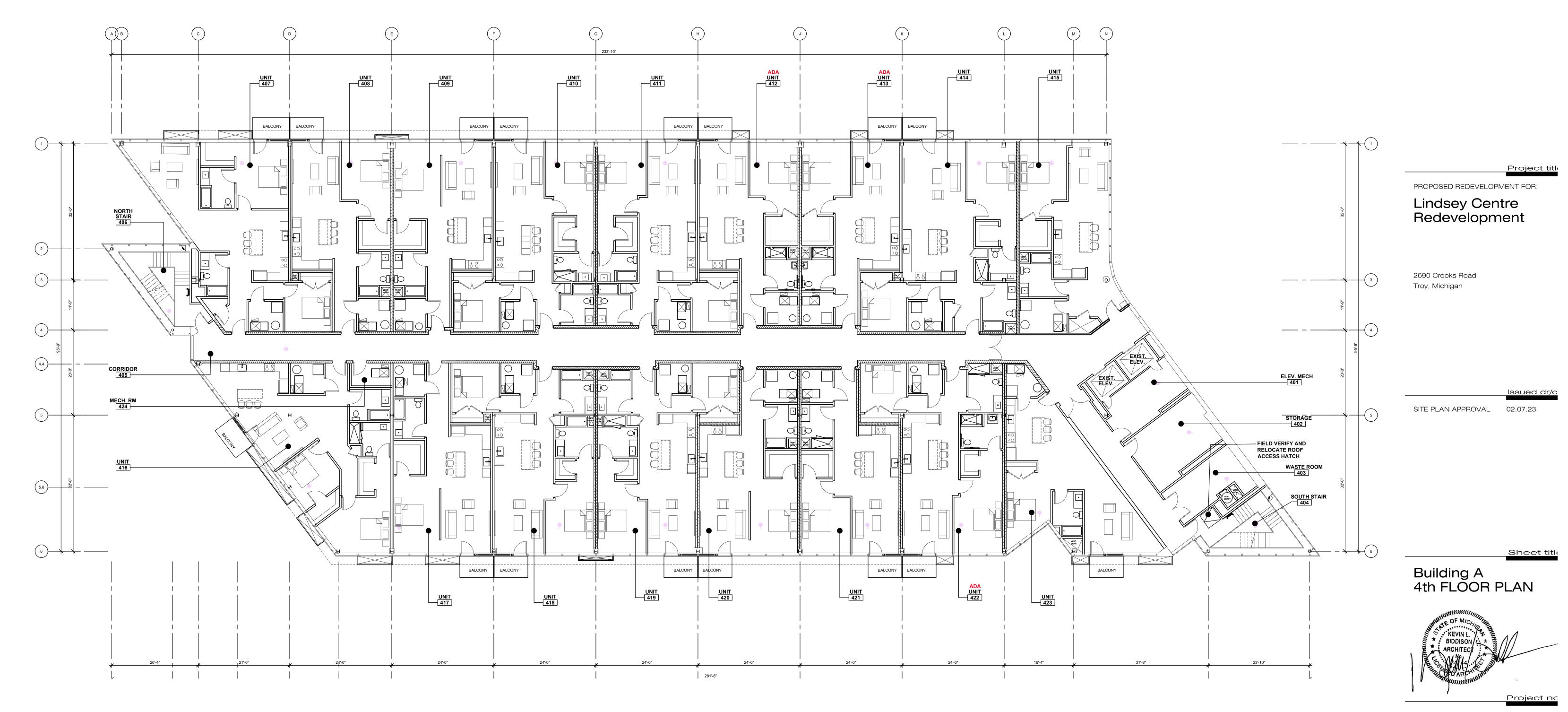


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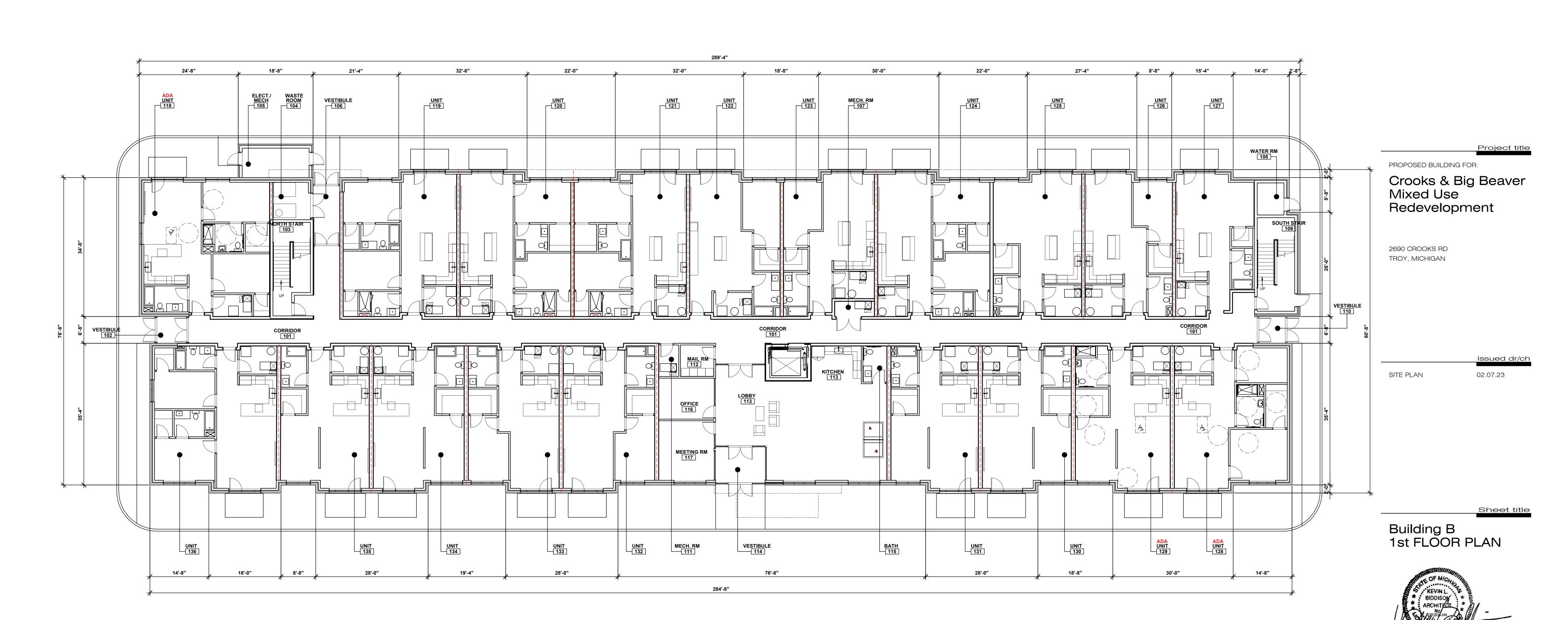




2068.20







1ST FLOOR - 19 UNITS EFFICIENCY - 06 UNITS 1BR - 07 UNITS 2BR - 06 UNITS

BUILDING B OVERALL

1st FLOOR PLAN

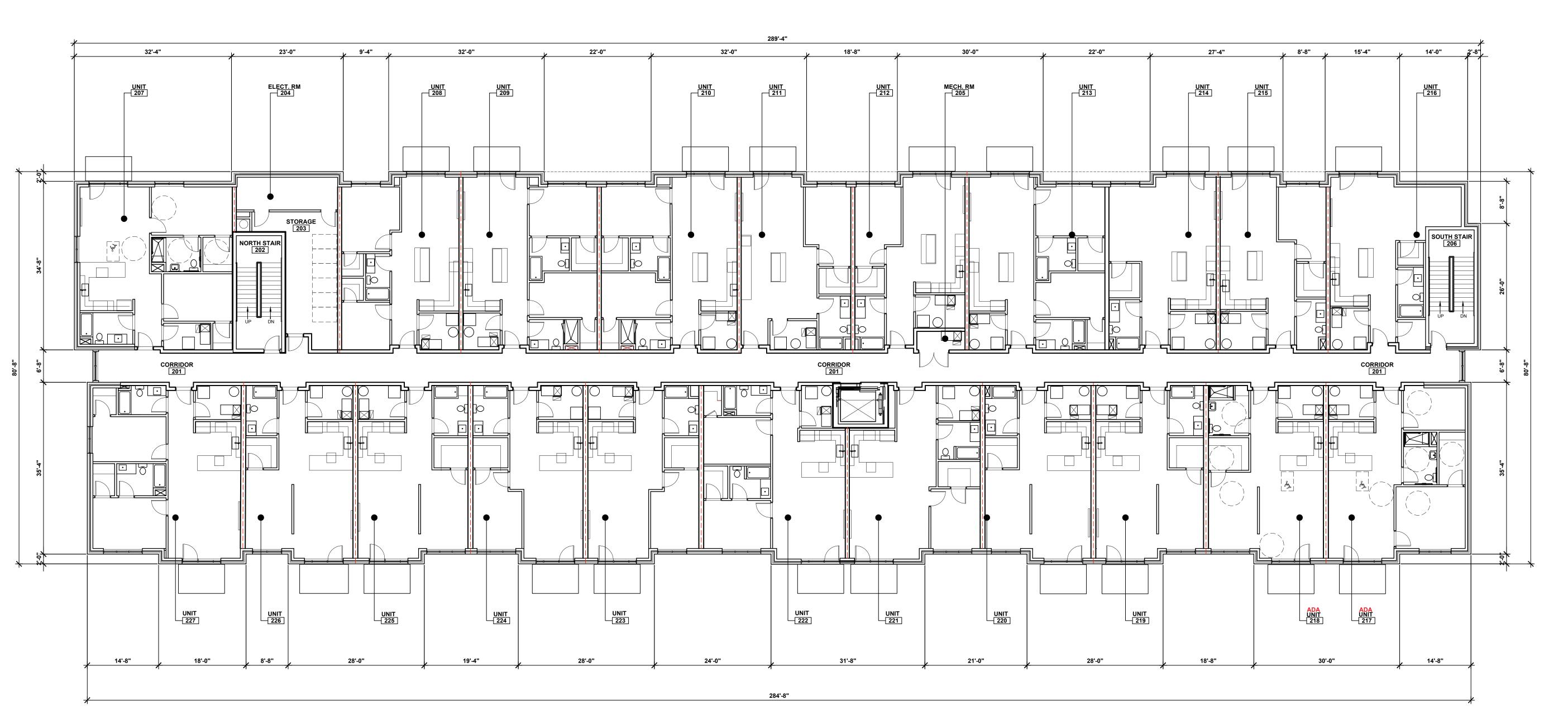
SCALE: 3/32"=1'-0"

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Project title

PROPOSED BUILDING FOR:

# Crooks & Big Beaver RESIDENTIAL

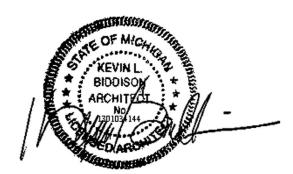
2690 CROOKS RD TROY, MICHIGAN

SITE PLAN

1ssued dr/ch 02.07.23

Sheet title

Building B 2nd FLOOR PLAN



Project no

2068.20

2ND FLOOR - 21 UNITS EFFICIENCY - 07 UNITS 1BR - 08 UNITS 2BR - 06 UNITS

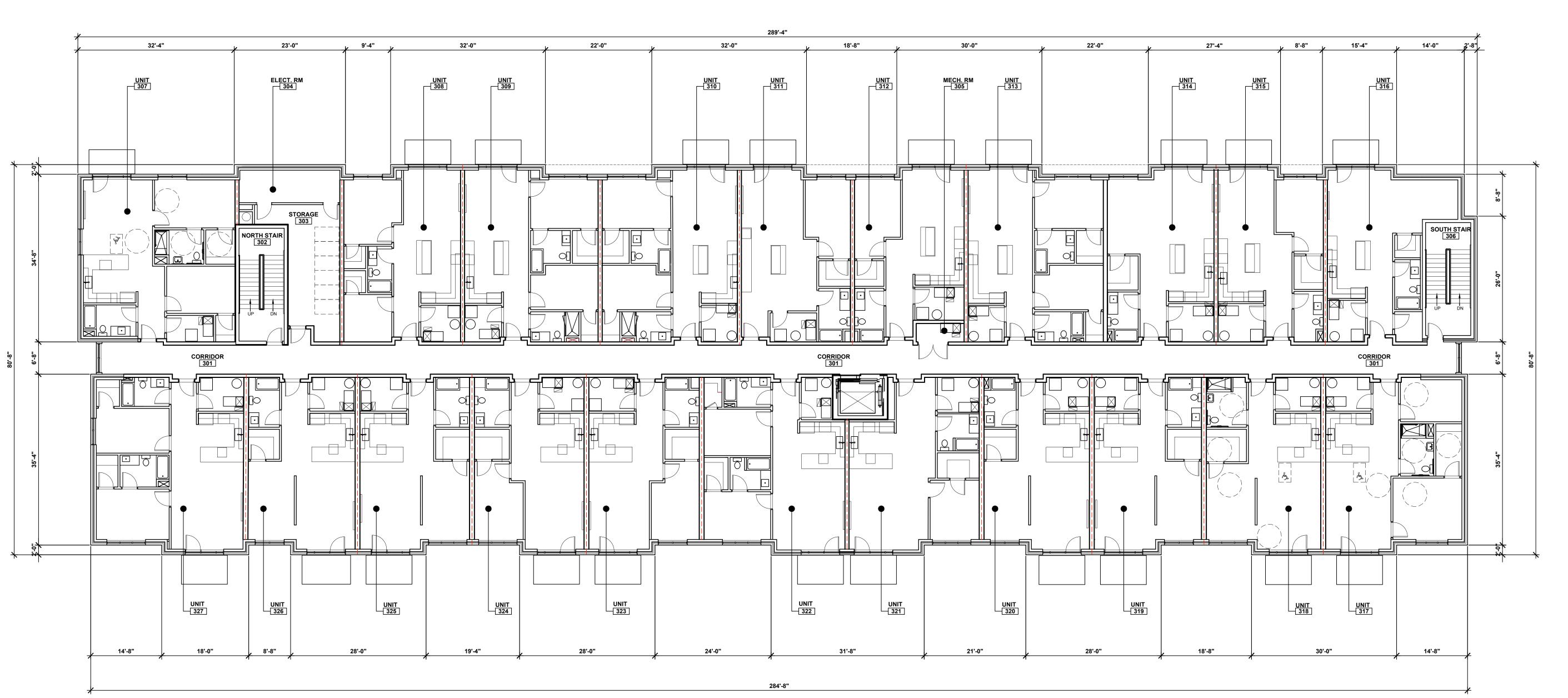
**BUILDING B OVERALL** 

2nd FLOOR PLAN

SCALE: 3/32"=1'-0"

Sheet no.





Project title

PROPOSED BUILDING FOR:

# Crooks & Big Beaver Mixed Use Redevelopment

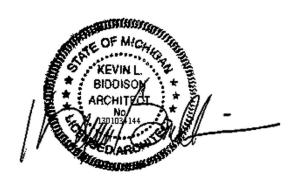
2690 CROOKS RD TROY, MICHIGAN

SITE PLAN

1ssued dr/ch 02.07.23

Sheet title

Building B 3RD FLOOR PLAN



Project no

2068.20

3RD FLOOR - 21 UNITS EFFICIENCY - 07 UNITS 1BR - 08 UNITS 2BR - 06 UNITS

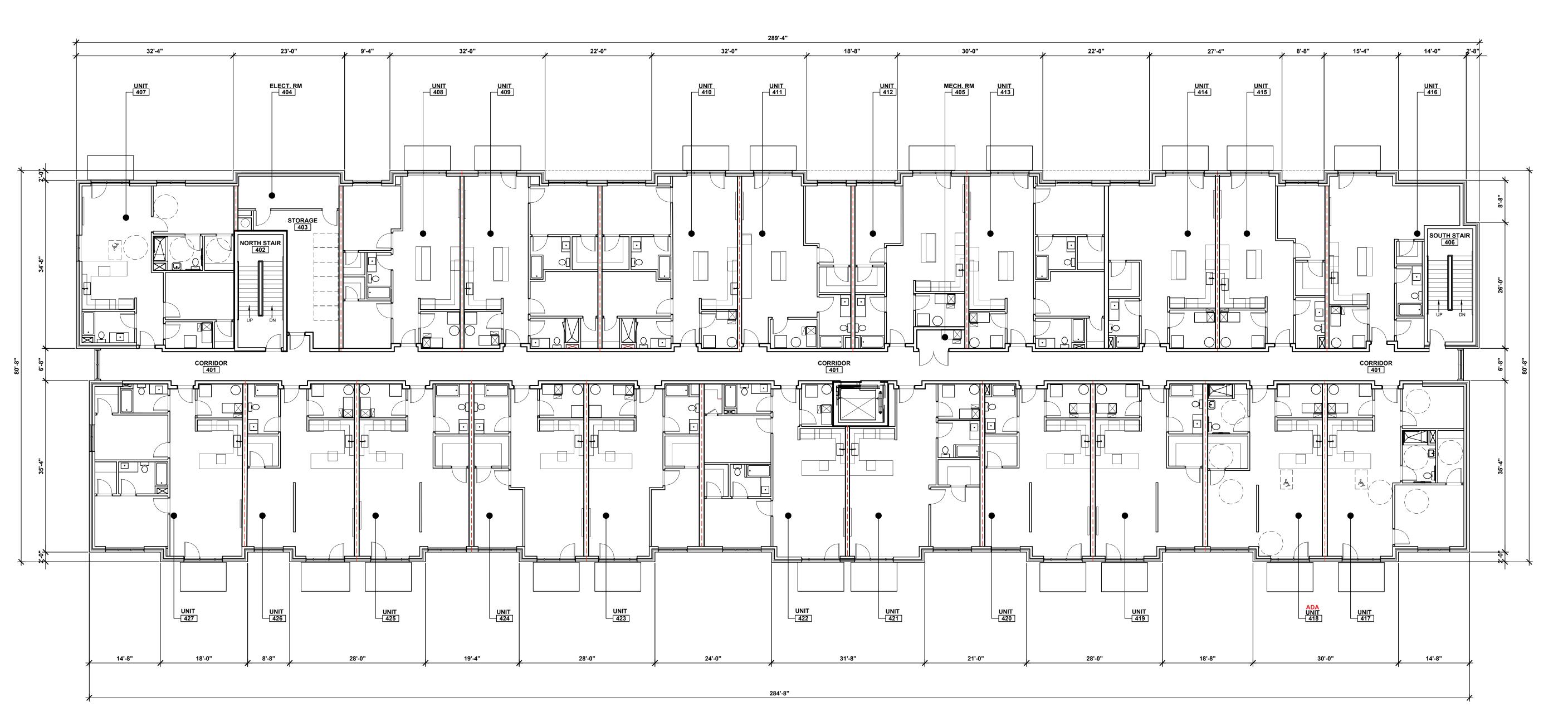
**BUILDING B OVERALL** 

3rd FLOOR PLAN

SCALE: 3/32"=1'-0"

Sheet no.





Project title

PROPOSED BUILDING FOR:

# Crooks & Big Beaver Mixed Use Redevelopment

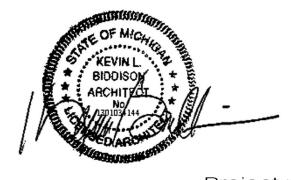
2690 CROOKS RD TROY, MICHIGAN

SITE PLAN

1ssued dr/ch 02.07.23

Sheet title

Building B 4th FLOOR PLAN



Project n

2068.20

4TH FLOOR - 21 UNITS EFFICIENCY - 07 UNITS 1BR - 08 UNITS 2BR - 06 UNITS

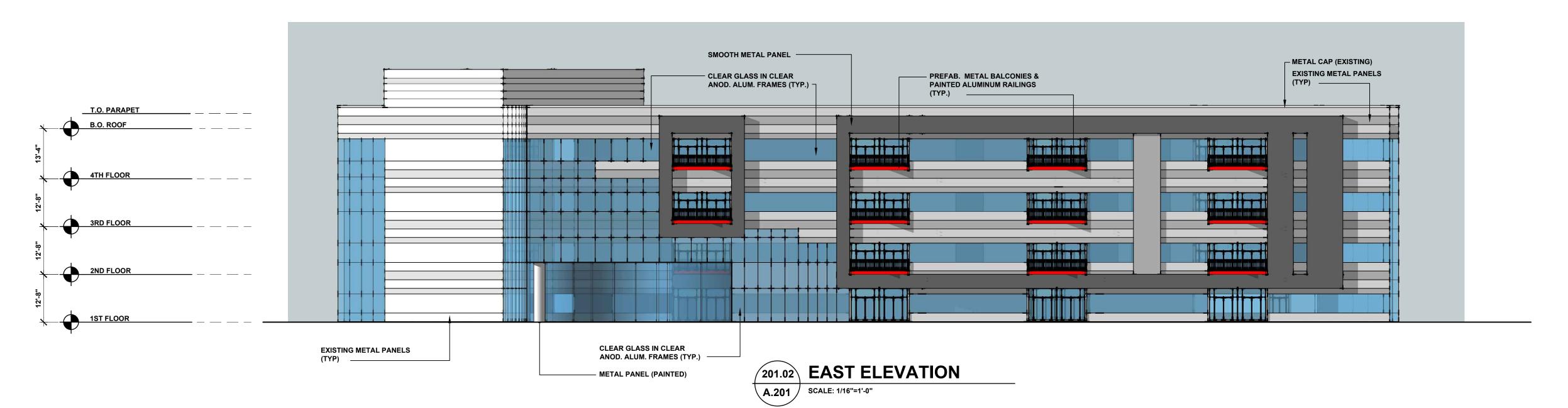
**BUILDING B OVERALL** 

4TH FLOOR PLANS

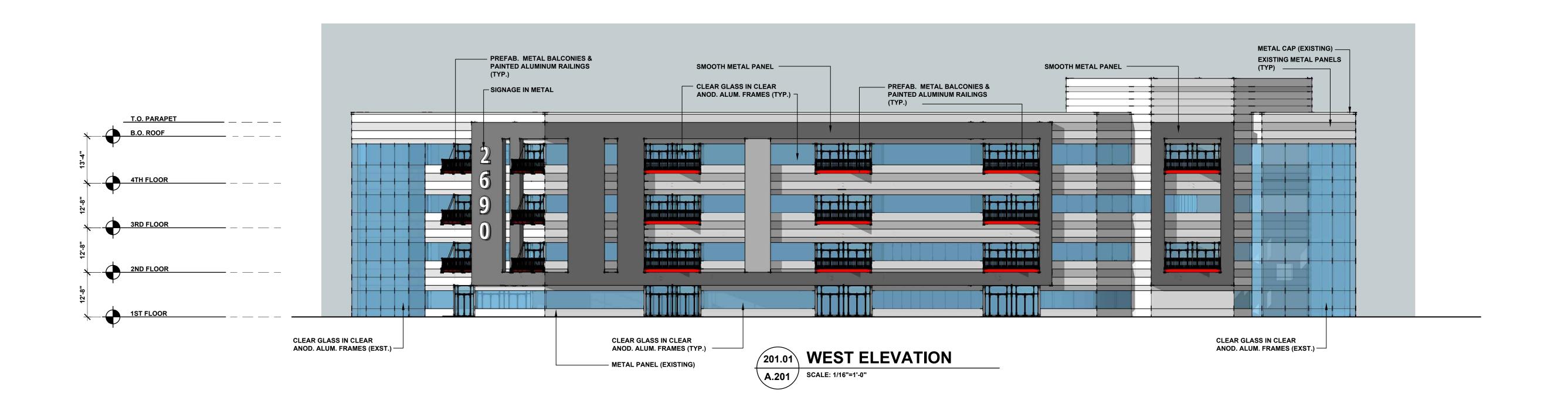
SCALE: 3/32"=1'-0"

Shoot no





GENERAL PROJECT NOTES: 1) EXISTING METAL PANEL AND GLASS TO REMAIN
2) NEW METAL WRAP AND BALCONIES TO BE ADDED TO EXTERIOR SKIN 3) EXTERIOR METAL AND GLASS TO BE REMOVED FOR NEW BALCONY DOORS AND WINDOWS
4) OTHER ELEMENTS OF CURRENT FACADE TO REMAIN AS



Project title

PROPOSED RENOVATION FOR:

Lindsey Centre Redevelopment

2690 Crooks Road Troy, Michigan

Issued dr/ch

SITE PLAN 10.11.22 SITE PLAN APPROVAL 02.07.23

Sheet title

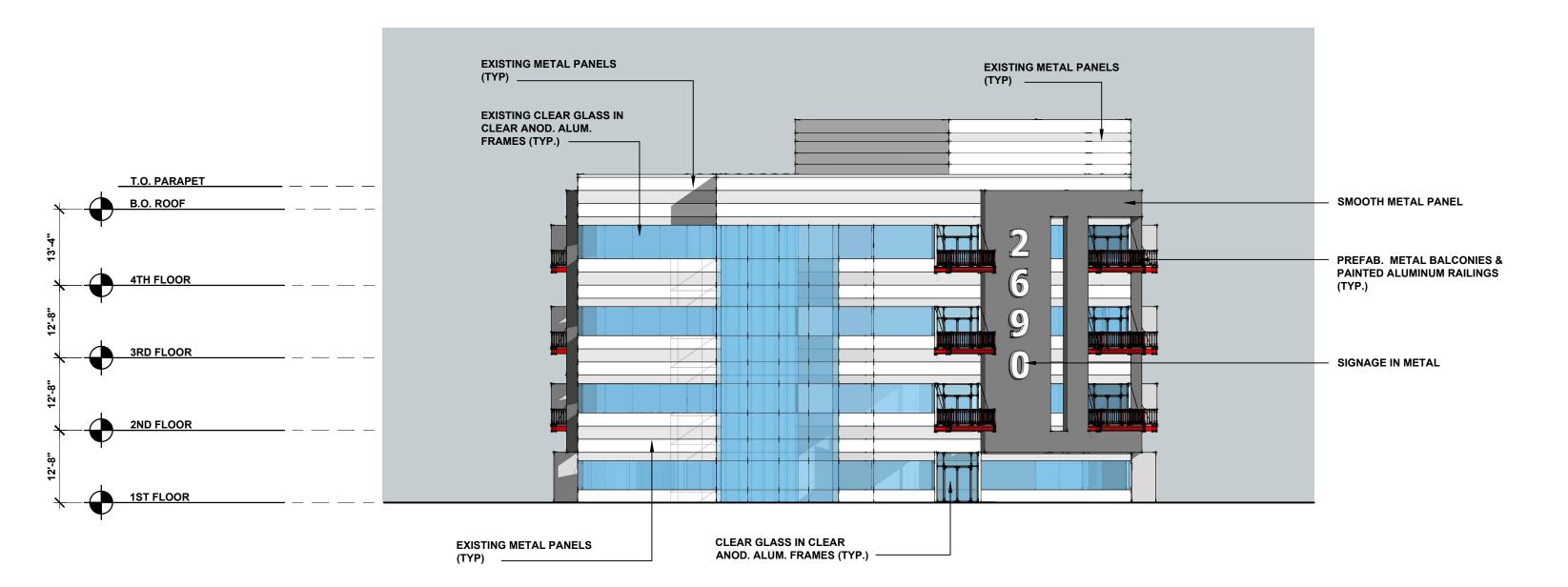


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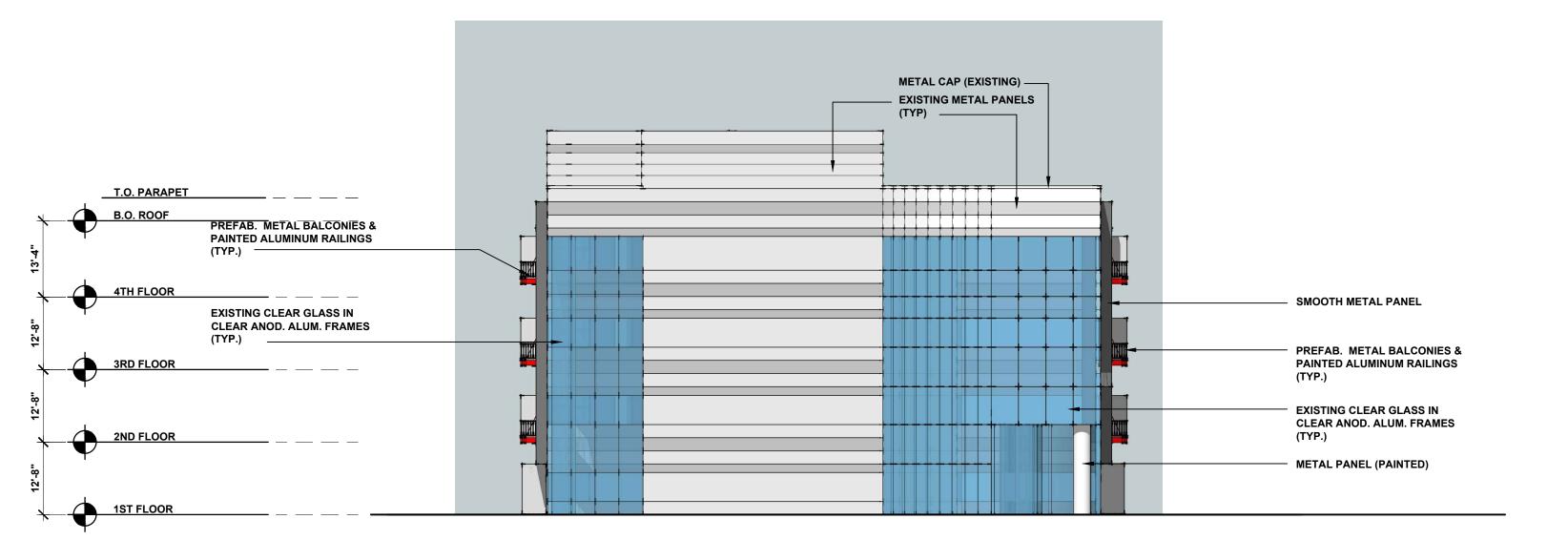
Project no.





201.02 NORTH ELEVATION A.202 | SCALE: 1/16"=1'-0"

GENERAL PROJECT NOTES: 1) EXISTING METAL PANEL AND GLASS TO REMAIN
2) NEW METAL WRAP AND BALCONIES TO BE ADDED TO EXTERIOR SKIN 3) EXTERIOR SKIN
3) EXTERIOR METAL AND GLASS TO BE REMOVED FOR NEW
BALCONY DOORS AND WINDOWS
4) OTHER ELEMENTS OF CURRENT FACADE TO REMAIN AS



201.01 SOUTH ELEVATION A.202 SCALE: 1/16"=1'-0"

Project title

PROPOSED RENOVATION FOR:

Lindsey Centre Redevelopment

2690 Crooks Road Troy, Michigan

Issued dr/ch

10.11.22 SITE PLAN SITE PLAN APPROVAL 02.07.23

Sheet title

Building A EXTERIOR ELEVATIONS

2068.20

Sheet no.

Project no.



MTL PANEL PARAPET -MATCH

HARDIE PANEL VERTICAL SIDING -TYP. AT 3rd-4th FLOOR) — CLEAR INSUL. GLASS IN BLK.

VINYL EXTERIOR (PAINTED

WD INTERIOR) FRAMES -TYP

PREFAB ALUM. BALCONY &

UTILITY BRICK GRAY -TYP ON

UTILITY BRICK ( MANGANESE

RIBBED METAL

ACM METAL CANOPY -

1" CLEAR TEMP. INSUL. GLASS

ENTRY DOOR IN CLEAR ANOD. BLACK FRAMES -TYP —

A.202 SCALE: 1/16"=1'-0"

PANEL -TYP -

IRON SPOT SMOOTH) -TYP

GUARDRAIL POWERCOATED, TYP-

CANOPY -TYP.

2nd-4th FLOOR)

2nd FLOOR —

6" ALUMN. FRAME

FROM 1st FLOOR

EXTENSIONS IN BLK.

ANOD. FINISH -TYP-

T.O. PARAPET

4TH FLOOR

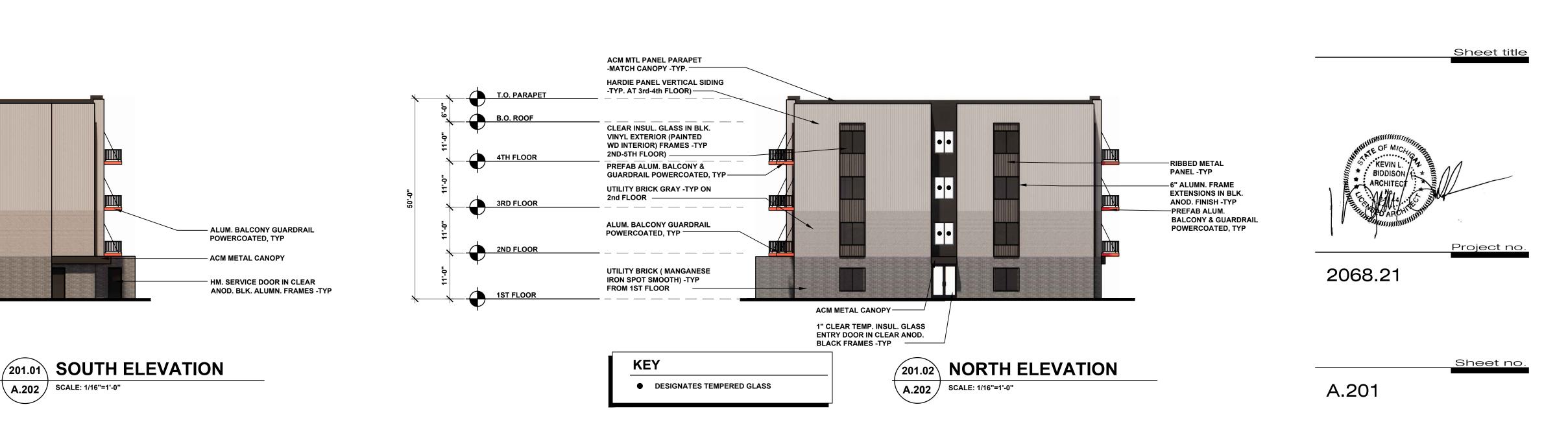




ARCHITECTURE

320 MARTIN ST. LL 10 BIRMINGHAM MI 48009 248.554.9500

Consultants



**∖** A.201 ∕

SCALE: 1/16"=1'-0"



PERSPECTIVE IMAGE

N.T.S. FOR REFERENCE



PERSPECTIVE IMAGE

N.T.S. FOR REFERENCE



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Project tit

PROPOSED BUILDING FOR

CROOK & BIG BEAVER

MIXED USE

REDEVELOPMENT

2690 CROOKS ROAD, TROY, MI

issued di/C

SITE PLAN APPROVAL 12.06.22

Sheet tit

SITE PERSPECTIVES

Project r

2068-20

Sheet n



PERSPECTIVE IMAGE

N.T.S. FOR REFERENCE



PERSPECTIVE IMAGE

N.T.S. FOR REFERENCE



Project tit

PROPOSED BUILDING FOR

CROOK & BIG BEAVER

MIXED USE

REDEVELOPMENT

2690 CROOKS ROAD, TROY, MI

Issued dr/c

SITE PLAN APPROVAL 12.06.22

Sheet tit

SITE PERSPECTIVES

Project no.

2068-20

Sheet r



PERSPECTIVE IMAGE

N.T.S. FOR REFERENCE





Project title

PROPOSED BUILDING FOR

CROOK & BIG BEAVER

MIXED USE

REDEVELOPMENT

2690 CROOKS ROAD, TROY, MI

Issued dr/cl

SITE PLAN APPROVAL 12.06.22

Sheet tit

SITE PERSPECTIVES

Project no.

2068-20

Sheet r

PERSPECTIVE IMAGE

N.T.S. FOR REFERENCE



PERSPECTIVE IMAGE

N.T.S. FOR REFERENCE



PERSPECTIVE IMAGE

N.T.S. FOR REFERENCE



Consultants

Project title

PROPOSED BUILDING FOR

CROOK & BIG BEAVER

MIXED USE

REDEVELOPMENT

2690 CROOKS ROAD, TROY, MI

Issued dr/d

SITE PLAN APPROVAL 12.06.22

Sheet ti

SITE PERSPECTIVES

Project no.

2068-20

Sheet r

# **STONEFIELD**

February 8, 2023

Brent Savidant Community Development Director City of Troy 500 W. Big Beaver Road Troy, MI 48084

**RE:** Traffic Review

Proposed Mixed Use Redevelopment
Parcel ID: 88-20-28-101-034, 88-20,101-032 & 88-20-101-047
911 & 999 West Big Beaver Road & 2690 Crooks Road
City of Troy, Oakland County, Michigan

## Brent:

Our office is submitting documents on behalf of the Applicant to address the outstanding conditions of the Board's Resolution including comments contained within the latest Board Professional's review letter. Please find the following items enclosed:

ITEM DESCRIPTION	DATED	COPIES	PREPARED BY
Site Development Plans	02-06-2023	2	Stonefield Engineering & Design
Shared Parking Study	02-07-2023	2	Fleis & Vandenbrink

The following is an itemized response to the comments contained within the Traffic Review Letter dated December 22, 2022. For the sake of brevity, any comments that are statements of fact or have been previously addressed are not included in the response below:

## Traffic Impact Study:

1. Table 3 shows 312 dwelling units for the multi-family housing; however, the site plan shows 156 units. These documents need to match. It appears that the 2690 Crooks development is proposed to include an additional 156 dwelling units. If so, add a footnote to Table 3 to add clarity.

## The tables have been clarified.

2. OHM notes a level of service F with a delay of 73.1 seconds for NBR vehicles at Big Beaver Road and W. Site Drive during the PM peak hour. Traffic congestion and backups may occur within the site. It is expected that many of these vehicles will instead utilize one of the signalized driveways to exit the site.

### Noted.

# **STONEFIELD**

Traffic Review Response Letter
911 & 999 West Big Beaver Road & 2690 Crooks Road
Troy, MI
February 8, 2023

3. The plans provide a parking phasing plan that show available parking for each phase of development (during construction, when large portions of the existing surface lots are unavailable and/or before the proposed parking structure is constructed). As each phase of development proceeds, there must be sufficient parking to satisfy parking demand. Interim parking calculations should be reviewed with engineering plans for each phase of development on the 999 Big Beaver and 2690 Crooks sites. It is unclear when 2690 Crooks development will occur relative to the proposed phased construction for 999 Big Beaver.

The project team will work closely with City staff to ensure adequate parking is provided throughout each phase of construction.

## Site Plan:

1. We note that adjacent site, 2690 Crooks, proposes to utilize shared parking and requires a pedestrian sidewalk connection between the sites. This pedestrian route must be ADA-accessible.

The pathway has been revised to be ADA compliant.

2. As a part of Building E, the four parking stalls adjacent to the common area should be hatched out since it is impossible for a vehicle to exit this area if all of the parking spaces are occupied.

Two parking stalls have been striped out to aid in vehicles leaving parking spaces.

3. For the parking provided within Building E, an active parking management sign displaying the number of available spaces should be provided for both parking areas. This will alert drivers if these lots are full. There is not an easy way for vehicles to exit these areas if they are full.

This system is not necessary, residents will quickly become accustomed to what parking spaces are available at any point in time. Adequate turnaround areas are provided to ensure vehicles can exit the are as necessary.

Should you have any questions regarding the submission items or responses above please do not hesitate to contact our office.

Regards,

Eric Williams, PE

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Stonefield Engineering and Design, LLC

Kevin Heffernan, PE

The Iller

Stonefield Engineering and Design, LLC

V:\M\2019\M-19301-AF Jonna-Big Beaver Road & Crooks Road, Troy, MI\Correspondence\Outgoing\City or Township\2023-02-08\_Traffic Review Response Letter.docx

# **STONEFIELD**

February 10, 2023

Brent Savidant Community Development Director City of Troy 500 W. Big Beaver Road Troy, MI 48084

RE: Preliminary Site Plan & Special Use Review

**Existing Building Renovation & Proposed Multi-Family Apartments** 

Parcel ID: 20-28-101-003 2690 Crooks Road City of Troy, Oakland County, Michigan

### Brent:

Our office is submitting documents on behalf of the Applicant to address the outstanding conditions of the Board's Resolution including comments contained within the latest Board Professional's review letter. Please find the following items enclosed:

ITEM DESCRIPTION	DATED	COPIES	PREPARED BY
Site Development Plans	02-08-2023	2	Stonefield Engineering & Design
Architectural Plans	10-11-2022	2	Biddison Architecture
Shared Parking Study	02-08-2023	2	Fleis & Vandenbrink

The following is an itemized response to the comments contained within the Preliminary Site Plan and Special Use Review dated December 6, 2023. For the sake of brevity, any comments that are statements of fact or have been previously addressed are not included in the response below:

1. Provide 26-foot-wide drive aisles per Fire Department.

All proposed drive aisles have been widened to 26'-wide to allow for proper emergency vehicle circulation. Refer to Sheets C-3 & C-4.

2. Improve pedestrian circulation based on OHMs comments.

The pedestrian connection between the 999/991 Big Beaver site and 2690 Crooks site has been revised to both better align with the southern crosswalk, and provide an ADA-accessible connection between the sites at all times.

3. Confirm existing screening of trash enclosure.

4 existing evergreen trees currently screen the east side of the trash enclosure, and an additional 2 evergreen trees and I deciduous tree are proposed along the south side for further screening.

STONEFIELDENG.COM

# **STONEFIELD**

4. Confirm building lighting.

No building lights are proposed at this time. Adequate site lighting is achieved by way of light pole fixtures placed throughout the site. Any building fixtures will be of decorative nature, or to provide emergency lighting.

5. Provide a shared parking agreement to the satisfaction of the City Attorney.

The properties are owned / controlled by the same entity and should not require a shared parking agreement.

6. Provide transparency calculations.

Please see below for transparency calculations.

TRANSPARENCY %	NORTH	SOUTH	EAST	WEST
RETAIL BUILDING A	86%	77%	44%	42%
RETAIL BUILDING B	85%	65%	43%	42%
COMMUNITY SPACE BUILDING C	73%	66%	-	75%
CLUBHOUSE BUILDING D	35%	28%	55%	43%
RESIDENTIAL BUILDING E	33%	41%	41%	42%
LINDSEY BUILDING A	87%	53%	70%	80%
LINDSEY BUILDING B	16%	12%	39%	46%

Should you have any questions regarding the submission items or responses above please do not hesitate to contact our office.

Regards,

Eric Williams, PE

Eric William

Stonefield Engineering and Design, LLC

Kevin Heffernan, PE

Stonefield Engineering and Design, LLC

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# ITEM #6

DATE: March 9, 2023

TO: Planning Commission

FROM: R. Brent Savidant, Community Development Director

SUBJECT: SPECIAL USE APPROVAL AND PRELIMINARY SITE PLAN REVIEW (File

Number SU JPLN2022-0004) – Proposed 911 & 999 W. Big Beaver Mixed Use Development, Southeast corner of Big Beaver and Crooks (PIN 88-20-28-101-032, -

034 and -047), Section 28, Currently Zoned BB (Big Beaver) District.

The petitioner Tower Construction, LLC submitted the above referenced Special Use Approval and Preliminary Site Plan Approval application for a mixed-use development. Proposed improvements include 5-story apartment building, 4-story parking deck, clubhouse building, two new commercial buildings including financial institution drive-thru, and site amenities. The drive-thru and first floor apartments require Special Use Approval. The applicant proposes to demolish the 5-story building but retain the existing 15-story building.

The owner of this property is the same owner as 2690 Crooks, the other development project on the March 14, 2023 agenda.

The Planning Commission considered this item at the January 10, 2023 Planning Commission Regular meeting and postponed the item. The applicant revised the site plan based on feedback from the Planning Commission, staff and consultants.

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. Memo from City Traffic Consultant OHM, dated March 7, 2023.
- 4. Parking Study from Fleis & Vandenbrink, dated February 8, 2023.
- 5. Minutes from January 10, 2023 Planning Commission Regular meeting (excerpt).
- 6. Site Plan.

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### PROPOSED RESOLUTION

<u>SPECIAL USE APPROVAL AND PRELIMINARY SITE PLAN REVIEW (File Number SU JPLN2022-0004)</u> – Proposed 911 & 999 W. Big Beaver Mixed Use Development, Southeast corner of Big Beaver and Crooks (PIN 88-20-28-101-032, -034 and -047), Section 28, Currently Zoned BB (Big Beaver) District.

# Resolution # PC-2023-03-

Moved by: Seconded by:

**RESOLVED**, The Planning Commission hereby approves shared parking between 911 & 999 W. Big Beaver Road and 2690 Crooks Road; and,

**RESOLVED**, That Special Use Approval and Preliminary Site Plan Approval for the proposed 911 & 999 W. Big Beaver Mixed Use Development, southeast corner of Big Beaver and Crooks (PIN 88-20-28-101-032, -034 and -047), Section 28, Currently Zoned BB (Big Beaver) District, be (granted, subject to the following conditions)

- 1. Review and revise site plan based on OHMs comments.
- 2. For Building E, replace use of first floor residential along eastern elevation (Crooks)
- 3. Provide transparency calculations on the elevation plan set.
- 4. Provide a shared parking agreement to the satisfaction of the City Attorney.

)	or
(denied, for the following reasons:	) or
(postponed, for the following reasons:	)
Yes: No:	
Absent:	

# **MOTION CARRIED / FAILED**

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1,154

# **GIS Online**



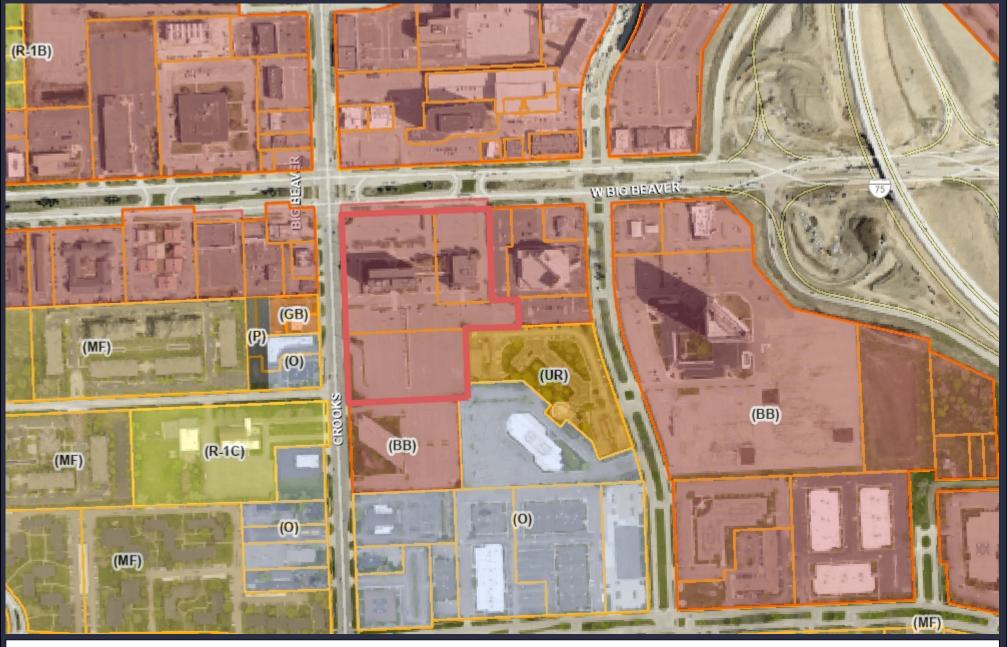
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577

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.

# TROY

# **GIS Online**



1,154 0 577 1,154 Feet



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.



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

Date: March 7, 2023

# For City of Troy, Michigan

**Applicant:** Jordan Jonna

**Project Name:** 911 and 999 W. Big Beaver Mixed Use Development

**Location:** 911 and 999 W. Big Beaver

Plan Date: February 6, 2023

**Zoning:** BB, Big Beaver

Action Requested: Preliminary Site Plan and Special Use

# SITE DESCRIPTION

An application has been submitted to convert the existing Kelly Services site into a mixed-use development. Proposed improvements include:

- New Building (Building A): 8,000 sq/ft commercial retail building, with financial institution drive-thru, that fronts on Big Beaver
- New Building (B): 14,400 sq/ft commercial retail building that fronts on Big Beaver
- New 4-story, 552 space parking garage located to the rear of the Kelly Services Building
- New Building (C): 4,200 sq/ft office/community center attached to new parking garage
- New Building (D): 3,200 sq/ft clubhouse for new residential uses on site
- New Building (E): 5-story, 156-unit multiple family building
- Improved landscaping, lighting, and other site amenities

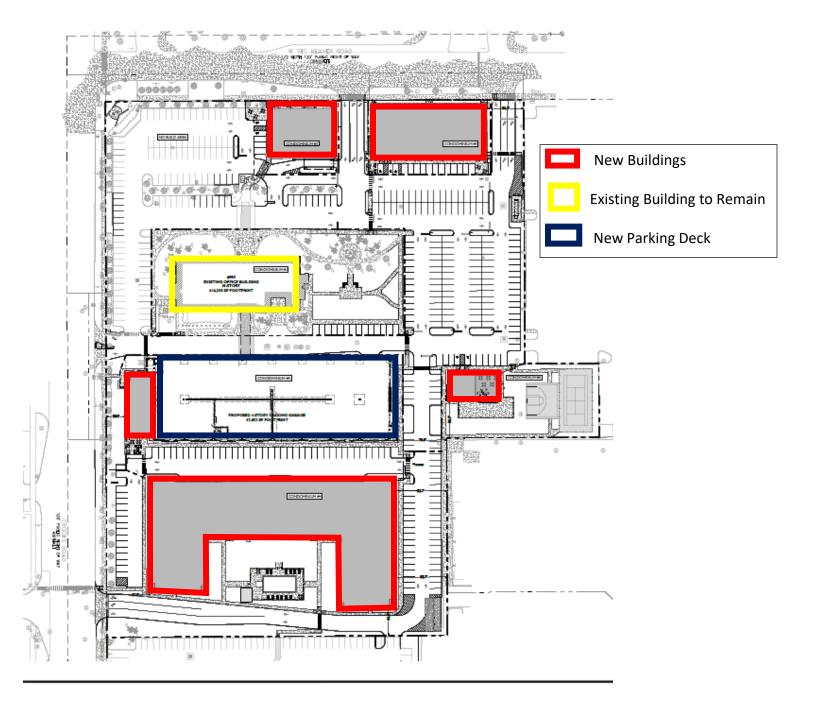
They propose to demolish the existing 5 story (911 Big Beaver) but keep the existing 10-story Kelly Service building (999 Big Beaver) as an office building.

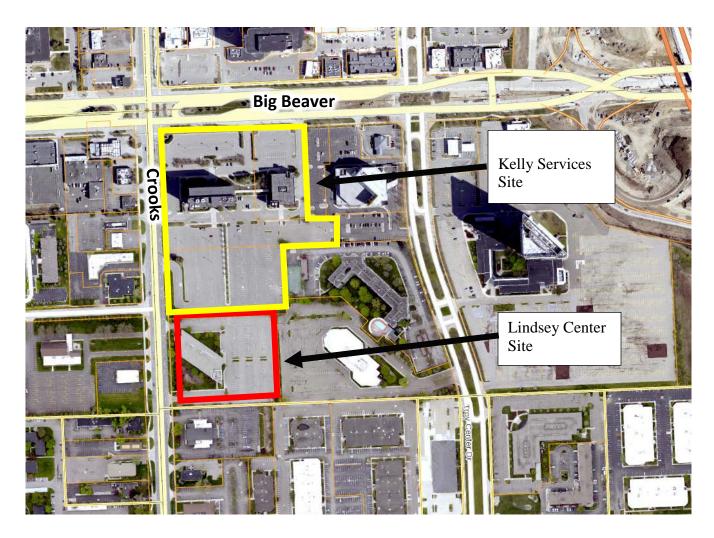
Overall site parking will be shared with the 2960 Crooks (Lindsey Center site). Both sites are under the same ownership.

Applicant is seeking the following approvals:

- 1. Preliminary stie plan approval
- 2. Special Use approval
  - a. Financial Institution Drive-thru
  - b. Residential use on first floor of area not facing right of way
- 3. Waivers (as noted in review)

# **Summary of Improvements:**





# <u>Proposed Uses of Subject Parcel:</u>

Convert the existing Kelly Services site into a mixed-use development.

# **Current Zoning:**

The property is currently zoned BB, Big Beaver Form Based District

# **Surrounding Property Details:**

Direction	Zoning	Use
North	BB, Big Beaver	Big Beaver Road, Mixed Use
South	BB, Big Beaver	Lindsey Center
East	BB, Big Beaver and UR, Urban Residential	Office and Commercial
West	BB, Big Beaver, CB, Commercial, O, Office	Mix of Commercial Uses

# NATURAL FEATURES

The site has been graded and improved for an office building and an associated parking lot.

Items to be addressed: None.

# PRIOR PLANNING COMMISSION REVIEW

The Planning Commission last discussed this matter at their January 10, 2023 meeting. At that meeting, there was discussion on:

- Shared parking and parking deck.
  - o Distance to residential.
  - Location of parking deck for all users.
  - o Parking calculations.
  - o 2690 Crooks sufficient parking on its own.
- Improve walkability for pedestrians.
- Alternative site arrangement; access, circulation.
- Drive-through for financial institution.
- Open space deficiencies.
- Requirement for parking lot trees to break up pavement, create islands.
- Environmental resources.
- Recorded easement(s).
- Trash collection.

The Planning Commission postponed action in order to allow the applicant to:

- Review and revise site plan based on OHMs comments.
- Flip the parking for Building E to be adjacent to the building.
- Address OHM and Road Commission comments.
- Show drive-through stacking spaces and provide dimensions
- For Building E, replace use of first floor residential along eastern elevation (Crooks)
- Provide one (1) additional green belt tree
- Applicant shall either increase overall landscaping or seek a variance from the Zoning Board of Appeals.
- Provide transparency calculations.
- Provide a shared parking agreement to the satisfaction of the City Attorney.

After the motion there was discussion on the floor.

- Easement to Tower Center Drive and to neighboring properties as relates to flow and connectivity.
- Drive-through facility as relates to environment, green space, walkability.
- Location of parking deck pursuant to Zoning Ordinance requirements
- Concerns with pedestrian and vehicular circulation.

• Alternative commercial/retail uses other than drive-through financial institution.

# CHANGES SINCE LAST PLANNING COMMISSION REVIEW

The applicant has made the following changes to the site plan:

- Added parking lot landscaping by reducing parking by 13 parking spaces to the overall site
- Increased site landscaping to 15.5%
- Reconfigured parking between Crooks Road and Building E
- Added some additional internal pedestrian crosswalks
- Demonstrated stacking space and dimensions for drive-through use

# SITE ARRANGEMENT

Access will be provided via two points on Big Beaver, two on Crooks, and cross-access to the 2690 Crooks (Lindsey Center site). The applicant is proposing shared parking for both buildings at Lindsey Center site and the Kelly Services site.

Two new small commercial buildings will be placed fronting on Big Beaver. The new five (5) story parking deck and five (5) story multiple family building is placed behind the existing Kelly Services office tower. The residential clubhouse building will be placed interior to the rear of the site.

OHM has reviewed site circulation and some additional changes:

- 1. There is an implication that the 999 Big Beaver and the 2690 Crooks sites will be constructed concurrently. However, we question what if work on the Crooks site precedes the Big Beaver site? Since this development proposes shared parking on the adjacent site, there must be suitable pedestrian connections constructed as part of this development in the event the two sites are not constructed concurrently.
- 2. At the eastern site driveway to Big Beaver Rd, there is a note PROPOSED 'STOP' & 'NO TURN ON RED' SIGNS. Provide the correct sign legends and call out codes so there is no confusion as to what is needed:
  - a. STOP HERE ON RED, R10-6b
  - b. NO TURN ON RED, R10-11 or R10-11b
- 3. At the western site driveway to Big Beaver Rd, it shows a stop bar pavement marking immediately adjacent to the pedestrian cross markings for the driveway. Show the stop bar a minimum of 5' offset from ped crossing.
- 4. The existing 999 Big Beaver office building has two access drives along its south side for loading zones. They should be configured such that the sidewalk paralleling the south side of the building is continuous through these loading zone drives.
- 5. The main entrance /exit for the 4-story parking garage has sight triangles identified to show what exiting traffic may be able to see prior to exiting. This is important as the aisle used is the northern site driveway to Crooks Rd and thus likely to have relatively high traffic

flows. However, it appears that the sight lines are not being shown correctly, overstating the available sight distances looking east or west. Verify the sight distances.

The applicant should review and revised based on OHMs comments.

Items to be addressed: Review and revise site plan based on OHMs comments.

# AREA, WIDTH, HEIGHT, SETBACKS

The applicant does not propose any changes to the footprint of the existing building. The Kelly Services building is an existing non-conforming structure. By placing the new buildings on Big Beaver and the small office/community building (Building C) that fronts on Crooks, the applicant is making the site more conforming.

	Required	Provided	Compliance
Front (Big Beaver)	10-foot build-to-line	10.8-feet (building A)	Complies with Planning Commission approval
Front (Crooks)	10-foot build-to-line	30 feet (building C)	Complies with Planning Commission approval.
Side (east)	N/A, building may be placed up to property line	56-feet	Complies
Rear (South)	30-foot minimum setback	44-feet	Complies
Building Height	6 stories, 72 feet	5 stories, 62 feet	Complies
Open Space	20%	22%	Complies
Parking Location	Cannot be located in front yard	Located adjacent to Building E.	Complies

The applicant is seeking the following waivers from the Planning Commission:

• Building A build-to-line: 10.8' when 10.0' is required

• Building C build-to-line: 30' when 10.0' is required

**Items to be addressed:** Planning Commission to consider the two request waivers

# **PARKING**

The applicant proposes shared parking for both buildings with the Kelly service buildings and parking areas.



The applicant is proposing shared parking to include both sites as noted. As set forth in Section 13.06, off-street parking for uses in all districts shall be on the same lot as the use or building served by the parking, unless joint parking with abutting properties and uses is provided in a form acceptable to the City Attorney and executed and recorded by the parties sharing the parking.

OHM has reviewed the shared parking. OHM has submitted a memo for Planning Commission review. A representative from OHM will attend the meeting to discuss shared parking and other issues.

**Items to be Addressed:** Planning Commission to consider shared parking.

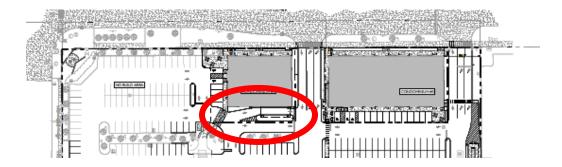
# TRAFFIC

The applicant submitted a traffic study that was reviewed by both OHM and the Oakland County Road Commission.

**Items to be addressed**: None

# SPECIAL USE: FINANCIAL INSTITUTION DRIVE-THROUGH

The applicant is proposing a financial institution drive-through located on the rear side of Building A. A financial institution drive-through is permitted as a special use in the Big Beaver district.



# **Drive-Through Standards (15.05.E.5.d):**

- i. A drive-through and associated structure cannot be a primary use or principal building.
  - <u>CWA Comment:</u> The drive-through is an accessory use to the principal use of the building.
- ii. Ingress and egress to drive-through facilities shall be part of the internal circulation of the site and integrated with the overall site design. Clear identification and delineation between the drive-through facility and the parking lot shall be provided. Drivethrough facilities shall be designed in a manner which promotes pedestrian and vehicular safety.
  - <u>CWA Comment:</u> Through the use of curbing, landscaping islands, and pedestrian stripping, the applicant has clearly delineated the drive-through use.
- iii. Drive-throughs must be located behind façade opposite Big Beaver Road or detached from principal structure and shall be located in a manner that will be the least visible from a public thoroughfare.
  - a. If detached, the point-to-point tube transport system (pneumatic tubes) must be located underground to serve the drive-through kiosk or canopy.
  - b. Canopy design shall be compatible with the design of the principal building and incorporate similar materials and architectural elements.

<u>CWA Comment:</u> The drive-through is located on the opposite façade of Big Beaver. The applicant shows a canopy with a stone column and metal covering that matches the primary building.

- iv. Each drive-through facility shall provide stacking space meeting the following standards:
  - a. Each stacking lane shall be one-way, and each stacking lane space shall be a minimum of ten (10) feet in width and twenty (20) feet in length.
  - b. If proposed, an escape lane shall be a minimum of twelve (12) feet in width to allow other vehicles to pass those waiting to be served.
  - c. Four (4) stacking spaces per drive-through lane.
  - d. All stacking lanes must be clearly delineated through the use of striping, landscaping, curbs, or signage.

<u>CWA Comment:</u> The applicant has provided dimensions and shown stacking spaces.

v. A drive-through aisle shall not be directly accessed from or exit onto Big Beaver Road.

<u>CWA Comment:</u> The drive-through is not directly access from or exits to Big Beaver Road.

**Items to be Addressed:** Planning Commission to consider Special Use

# SPECIAL USE: FIRST FLOOR RESIDENTIAL

In the fall of 2021, a text amendment was adopted which permitted residential uses on the first floor as a Special Use for the section of the building that does not front on a public right-of-way. New Building E has first floor residential uses along the eastern (Crooks) and western property line. The residential uses on the western property line is permitted via Special Use; however the residential use on the first floor is not permitted and the use must be converted to a non-residential use.

**Items to be Addressed:** 1). For Building E, replace use of first floor residential along eastern elevation (Crooks); and 2). Planning Commission to consider Special Use.

# LANDSCAPING

A landscaping plan has been provided on Sheet L101. The following table discusses the development's compliance with the landscape requirements set forth in Section 13.02.

	Required:	Provided:	Compliance:
<b>Greenbelt Planting</b>			
Crooks and Big Beaver: 1 tree	1,483 / 30 = 50 trees	50	Complies
every 30 feet			
Parking Lot Landscaping			
1 tree per every 8 parking spaces	408 spaces / 8 = 51 trees	107	Complies, with Planning Commission
			approval
Overall			
Site landscaping:  A minimum of fifteen percent (15%) of the site area shall be comprised of landscape material. Up to twenty-five percent (25%) of the required landscape area may be brink, stone, pavers, or other public plaza elements, but shall not	15% = 106,623 sq/ft	15.5% (110,226 sq.ft)	Complies
include any parking area or required sidewalks.			

The applicant is providing double the amount of required parking lot landscaping and has increased the amount of landscaping in the parking lot. However, we note there are a few long stretches of parking, particularly along Crooks Road, with no internal parking lot landscaping. The Planning Commission may allow alternative location of parking lot trees.

# <u>Transformer / Trash Enclosure:</u>

The applicant has indicated they propose to screen the trash enclosure with a masonry block.

Items to be Addressed: Planning Commission to discuss parking lot tree location

911 and 999 Big Beaver March 7, 2023

# **PHOTOMETRICS**

The applicant is proposing twenty (20) new parking lot lights, fourteen (14) wall scones, and fifteen (15) lighted bollards. There are existing lights that will remain on site. The lighting fixture and photometrics meet ordinance requirements.

**Items to be Addressed:** None

# FLOOR PLAN AND ELEVATIONS

# **Existing Kelly Services Building:**

The building will remain as is.

# New Buildings (A and B) Commercial:

Brown and tan tone color scheme, with brick, glass, and limestone veneer. Please note that the labeling on the elevations is different than the building labeling on the site plan set. Building A is building B on the site plan and vice-versa.

# New Parking Structure

Proposed brick and masonry block. The color scheme is gray and black, with a brown brick elevator tower.

# New Buildings (C) Office/Community Space:

Proposed brick and glass material use. Color scheme is browns and tans.

# New Buildings (D) Clubhouse:

Proposed burnished block and glass material use. Color scheme is greys.

# New Buildings (E) Multiple Family:

Proposed brick, masonry block, and metal panels. and glass material use. Color scheme is greys.

The applicant has provided a supplemental letter indicating that transparency requirements have been met. The calculations should be provided on the elevation plan set.

Items to be Addressed: Provide transparency calculations on the elevation plan set.

# 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.

# **SPECIAL USE STANDARDS**

The applicant is seeking two special uses:

- 1. Financial Institution Drive-thru
- 2. Residential use on first floor of area not facing right of way.

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, table 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.
- 7. Special Use Approval Specific Requirements.

# **SUMMARY**

As part of the deliberation, the Planning Commission and the applicant shall discuss:

- a. Two (2) building placement waiver requests
- b. Compliance with Section 5.04.E Big Beaver Design Standards
- c. Compliance with Section 8.06 Site Plan Review Standards
- d. Compliance with 9.02.D Special Use Standards
- e. Architecture and material use
- f. Parking lot tree location
- g. Shared parking

If Planning Commission approves the preliminary site plan and special uses, the following conditions shall be required as part of the final site plan submittal:

- 1. Review and revise site plan based on OHMs comments.
- 2. For Building E, replace use of first floor residential along eastern elevation (Crooks)
- 3. Provide transparency calculations on the elevation plan set.
- 4. Provide a shared parking agreement to the satisfaction of the City Attorney.

Sincerely,

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



# memorandum

**Date:** March 7, 2023

To: R. Brent Savidant, AICP

Scott Finlay, PE

From: Stephen Dearing, PE, PTOE

CC: Sara Merrill, PE, PTOE

Re: Multi-Family/ Mixed Use at Crooks Rd & Big Beaver Rd

(a.k.a. 911/999 Big Beaver, Kelly Properties PUD)

JPLN2022-0006

We have reviewed the planned development. Phase 1 of the mixed-use development at the southeast corner of Crooks Road & Big Beaver Road proposes to redevelop a portion of the site, demolishing the existing 4-story commercial building at 911 Big Beaver Road and constructing two commercial/retail buildings totaling 22,008 SFT and surface parking. Future phases of this development will retain an existing 10-story office building, and will also construct a 4,277 SFT office building, a 156-unit 5-story multi-family building, a clubhouse, and a 4-story parking structure. The site plans were prepared by Stonefield Engineering, Inc., and dated February 6, 2023.

The previously submitted Traffic Impact Study was prepared by Fleis & Vanderbrink, Inc and dated December 7, 2022. Fleis & Vanderbrink also prepared a shared parking study for the 2690 Crooks Rd (Lindsey Center) site, dated February 8, 2023, which utilizes the 911/999 Big Beaver site.

At this time, OHM recommends approval the site plan subject to corrections of a few minor items noted below.

OHM's comments are as follows:

#### Traffic Impact Study:

In our review of the TIS dated December 22, 2022, we noted a few minor corrections to be made that would not impact the conclusions and recommendations of the study. In their response letter of February 8, 2023, the applicant indicated that these corrections were made. However, a revised copy of the TIS has not been provided to verify the changes.

# **Shared Parking Study:**

The shared parking study is acceptable and does not need to be corrected or changed.

### Site Plan:

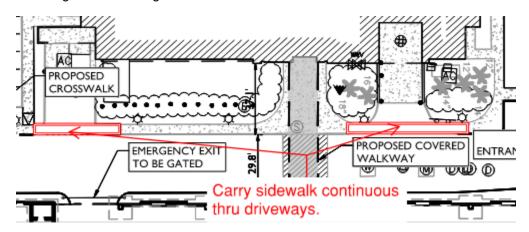
1. There is an implication that the 999 Big Beaver and the 2690 Crooks sites will be constructed concurrently. However, we question what if work on the Crooks site precedes the Big Beaver site? Since this development proposes shared parking on the adjacent site, there must be suitable

LIVONIA, MICHIGAN 48150

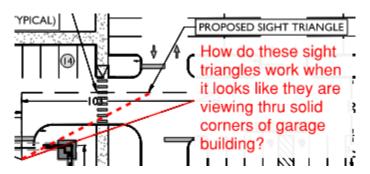


pedestrian connections constructed as part of this development in the event the two sites are not constructed concurrently.

- 2. At the eastern site driveway to Big Beaver Rd, there is a note PROPOSED 'STOP' & 'NO TURN ON RED' SIGNS. Provide the correct sign legends and call out codes so there is no confusion as to what is needed:
  - a. STOP HERE ON RED, R10-6b
  - b. NO TURN ON RED, R10-11 or R10-11b
- 3. At the western site driveway to Big Beaver Rd, it shows a stop bar pavement marking immediately adjacent to the pedestrian cross markings for the driveway. Show the stop bar a minimum of 5' offset from ped crossing.
- 4. The existing 999 Big Beaver office building has two access drives along its south side for loading zones. They should be configured such that the sidewalk paralleling the south side of the building is continuous through these loading zone drives.



5. The main entrance /exit for the 4-story parking garage has sight triangles identified to show what exiting traffic may be able to see prior to exiting. This is important as the aisle used is the northern site driveway to Crooks Rd and thus likely to have relatively high traffic flows. However, it appears that the sight lines are not being shown correctly, overstating the available sight distances looking east or west. Verify the sight distances.





# Мемо

VIA EMAIL mark@tower-construct.com

To: Mr. Mark Soma

**Tower Construction** 

From: Julie Kroll, PE, PTOE Fleis & VandenBrink

.....

Date: Revised February 8, 2023

Proposed Development
Re: 999 Big Beaver & 2690 Crooks Road, Troy, Michigan

**Parking Study** 

### 1 Introduction

This memorandum presents the results of the Shared Parking Study for the proposed development project in the City of Troy, Michigan. The project site includes two properties located at 2690 Crooks Road and 999 Big Beaver Road as shown on the attached site plan.

- North Property: The Kelly site at 999 Big Beaver development includes the construction several new land uses adjacent to the existing Kelly Services building that include retail, multi-family and a parking garage.
- South Property: The Lindsay site at 2690 Crooks Road development includes the conversion of the
  existing four-story office building into multi-family units, and the construction of a five-story, multi-family
  housing building within the existing parking lot.

The purpose of this study is to provide a summary of the projected parking generation for the proposed developments and determine if there will be adequate parking to accommodate all uses

#### 2 PARKING ANALYSIS

# 2.1 NORTH PROPERTY: KELLY SITE (999 W. BIG BEAVER ROAD)

The proposed development plan for the Kelly site was evaluated and the City of Troy Zoning Ordinance was reviewed and is summarized in **Table 1**. Based upon the results of this evaluation, the proposed development meets the parking requirements per the City Parking Ordinance.

**Table 1: City of Troy Parking Ordinance** 

Land Uses	Size	City Ordinance Rates	Parking Requirements Per Ordinance (spaces)
Multi-Family Housing	156 Units	2 spaces/dwelling unit	312
Kelly Services Office (General)	134,560 SF GFA	1 space per 300 SF GFA	449
Bank	2,000 SF GFA	1 space per 200 SF GFA	10
Retail	9,200 SF GFA	1 space per 250 SF GFA	37
Restaurant-Standard	300 Seats	1 space per 2 seats	150
Restaurant-Fast Food	2,560 SF	1 space per 70 SF	37
	995		
	1,021		
	Difference		26

# 2.2 SOUTH PROPERTY: LINDSEY SITE (2690 CROOKS ROAD)

The proposed development plan for the Crooks Road site was evaluated to determine the recommended number of parking spaces for the project in an effort to "right-size" the parking for this use. The City of Troy Zoning Ordinance was reviewed and is summarized in **Table 2**.

- a.o.o = - o.o, o o o					
				Troy Zoning C	Ordinance
Land Use	Land Use	Size	Independent Variable	Parking Supply Requirements	Parking Supply (spaces)
Multiple femily	Dwelling Unit	103	D. U.	2 spaces/dwelling unit	206
Multiple-family residential	Efficiency Unit	41	D. U.	1 spaces/dwelling unit	41
residerillar	Total	144	D.U.		247
			Pro	pposed Parking Supply	196
Difference					-51

**Table 2: City of Troy Parking Ordinance** 

The results of the analysis shows that the proposed parking supply will not meet the parking ordinance requirements, therefore additional parking analysis was performed to determine how much parking should be provided and where the additional parking demand can be accommodated.

A parking analysis is a two-step process. The first step in determining the parking needs for a development is to calculate the projected parking *demand*. Parking demand calculations determine how much parking will be generated by the development. Step two in the parking analysis process is to determine if the parking supply is adequate to accommodate the projected parking demand; if the parking supply is not adequate, recommendations are to be provided to accommodate the projected parking demand.

A parking lot is typically designed to accommodate 85-95% occupancy, depending on the proposed land use(s), layout, and parking management (self-parking, valet, etc.). As vehicles traversing through the parking lot search for the open spaces or wait for vehicles to exit, a buffer is provided between supply and demand that allows for easier turnover in the parking lot and less congestion. For parking lots with a higher turnover (such as grocery stores and restaurants), the parking occupancy percentage should be lower, and for parking lots with less turnover (office buildings and residential), the parking occupancy percentage can be higher.

# **Parking Demand**

The Institute of Transportation Engineers (ITE) *Parking Generation*, 5<sup>th</sup> *Edition* was used to determine the parking demand for this site. The ITE *Parking Generation* is an informational guide used by engineers and planners for the purposes of determining the parking demand associated with various land uses. The parking generation data included in *Parking Generation* are provided by various state and local government agencies, consulting firms, individual transportation professionals, universities, developers, associations, local sections, districts, and student chapters of ITE located throughout the U.S. The data is examined by ITE for validity and reasonableness before being entered into the comprehensive database. Therefore, the data presented by ITE in the *Parking Generation* provides a comprehensive average of parking demand for the various land uses throughout the country, and is a recommended resource for the calculation parking demand.

The ITE *Parking Generation, 5<sup>th</sup> Edition* has data associated with this land use for urban/suburban, dense urban and center city core. Regarding parking generation, an urban/suburban area is defined by ITE as, "an area of vehicle-centered access where nearly all person trips that enter or exit a development site are by personal passenger or commercial vehicle." Therefore, it was determined that this area of the City of Troy is a typical urban/suburban<sup>1</sup> environment and the parking demand calculations were based on this assumption.

The 85<sup>th</sup> percentile peak parking demand rates from ITE Parking Generation, 5<sup>th</sup> Edition were used in this analysis. An 85% percentile means that of 85% of similar sites survived for the calculation had peak parking demands at or below this rate. This provides a conservative evaluation when calculating the projected parking.

<sup>&</sup>lt;sup>1</sup> The primary difference between urban/suburban, dense urban and city core is the presence of transit. **General Urban/Suburban**-an area associated with almost homogeneous vehicle-centered access. **Dense Multi-Use Urban**— a fully developed area (or nearly so), with diverse and interacting complementary land uses, good pedestrian connectivity, <u>and convenient and frequent transit</u>. **Center City Core**— the downtown area for a major metropolitan region at the focal point of a <u>regional light- or heavy-rail transit system</u>.



Additionally. the Urban Land Institute (ULI) Shared Parking 3<sup>rd</sup> Edition recommends the 85<sup>th</sup> percentile parking demand as the appropriate metric for calculating the projected parking demands for a proposed development.

**Table 3: ITE Parking Generation Parking Demand Summary** 

	ITE				ITE Parking Generation 5th Edition			
Land Use	Land	Building	Size	Independent	Peak Period		Peak F	arking
Land USE	Use	Dullullig	3126	Variable	Parking 85th% Demand Rates		Deman	d (veh)
	Code				Weekday	Weekend	Weekday	Weekend
Multi-Family		Lindsey A	106	Bedrooms	0.87 space/bedroom	0.77 space/bedroom	92	82
Housing:	221	Lindsey B	92	Bedrooms	0.87 space/bedroom	0.77 space/bedroom	80	71
Mid-Rise		Total	198	Bedrooms	0.87 space/bedroom	0.77 space/bedroom	172	152

The projected parking demand calculated was compared to the proposed parking supply for this site to determine if there is adequate parking to accommodate the proposed operations. The highest daily parking demands for this development are expected to occur on the weekdays. The results of this analysis are summarized in **Table 4** and show that the proposed parking supply on site will accommodate the projected parking demand as calculated based upon the ITE 85% peak parking demand.

**Table 4: Peak Hour Parking Analysis Summary** 

				Troy Zoning Or		rdinance	Proposed
Methodology	Land Use	Size	Independent Variable	Parking Supply Requirements	Parking Supply (spaces)	Parking Supply	
Spaces per DU	Multiple-family residential	156	D. U.	2 spaces/dwelling unit 1 space /Eff Unit	247	196	
				Peak Parking Demand	172	172	
	Projected Parking Surplus				75	24	
	Total Parking Percent Occupancy				70%	88%	

# 2.3 TOTAL SITE (KELLY + LINDSAY) PARKING SUMMARY

A shared parking analysis was performed for the combined North Property: Kelly Site and South Property: Lindsey Site in accordance with the requirements outlined in the City of Troy Zoning Ordinance Section 13.06 which states that shared parking can be considered where the applicant can demonstrate that the peak usage will occur at different periods of the day. In order to demonstrate shared parking compatibility, a shared parking analysis is required utilizing the methodologies of the Urban Land Institute Shared Parking Manual (3<sup>rd</sup> Edition), however the underlying parking space requirements for each use shall be based on the City of Troy parking requirements.

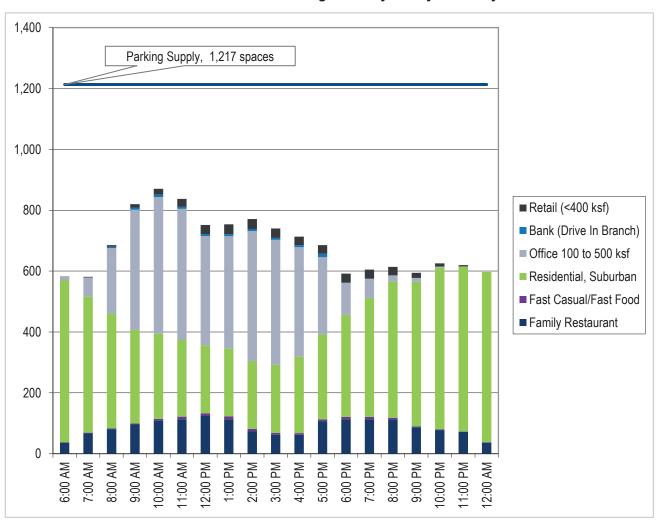
The shared parking for both projects is summarized in **Table 5** and shows that the peak parking demand for the site occurs during at 10:00 AM for this site. The peak hour variations in the parking demand are shown in Exhibit 1 and show the advantage of using shared parking to accommodate additional parking demand. As the office use parking demand decreases, the residential parking demand increases, thereby reducing the need for additional parking to accommodate both uses.



**Table 5: Shared Parking Summary** 

Location	Land Uses	Size	City Ordinance Rates	Ordinance Requirements (no shared parking)	Shared Parking Peak Demand (10:00 AM)
	Multi-Family Housing	156 Dwelling Unit	2 spaces/DU	312	156
	Kelly Services Office (General)	134,560 SF GFA	1 space per 300 SF GFA	449	449
North	Bank	2,000 SF GFA	1 space per 200 SF GFA	10	8
Property: Kelly Site	Retail	9,200 SF GFA	1 space per 250 SF GFA	37	20
,	Restaurant-Standard	300 Seats	1 space per 2 seats	150	108
	Restaurant-Fast Food	2,560 SF	1 space per 70 SF	37	6
South	Multi-Family Housing	103 Dwelling Unit	2 spaces/DU	206	103
Property: Lindsey Site	Multi-Family Housing	41 Efficient Unit	1 spaces/EU	41	21
	Total Parking D	1,242	871		
	Proposed Pa	1,217	1,217		
	Diffe	rence		-25	346

**Exhibit 1: Shared Parking Weekday Hourly Summary** 





### **CONCLUSIONS**

The conclusions of this study are as follows:

- The proposed development plan for the North Property: Kelly Site meets the parking requirements per the City Parking Ordinance.
- The proposed development plan for the South Property: Lindsey Site does not meet ordinance requirements, however the 85% ITE parking demand for this site can be accommodate with the parking proposed for this property.
- Considering the City's shared parking analysis for the entire North and South properties, there will be adequate parking to accommodate both uses.

Questions related to this memorandum, study, analysis, and results should be addressed to Fleis & VandenBrink.



I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Michigan.

Digitally signed by Julie M.

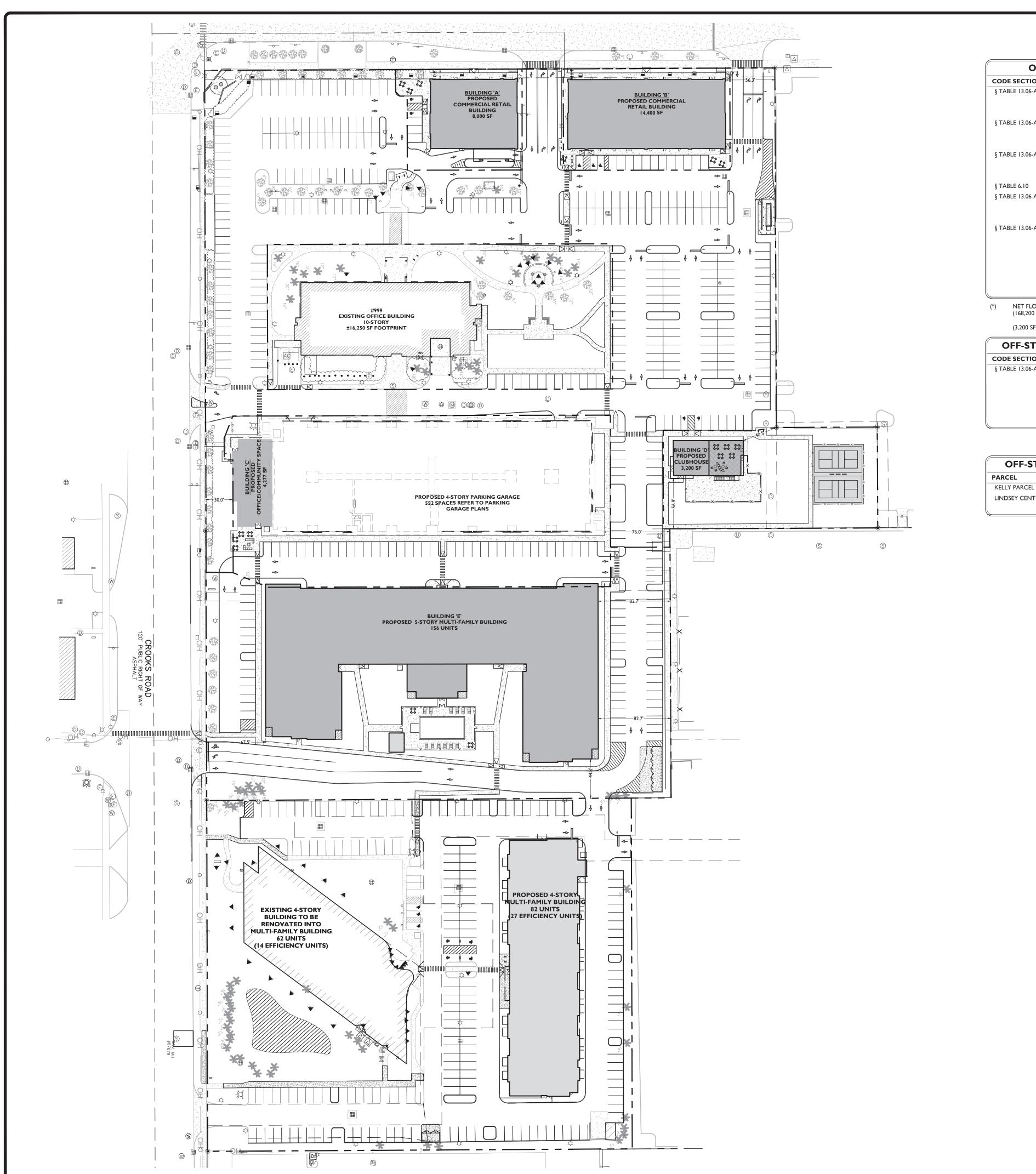
Julie M. Jucell Date: 2023.02.08 16:56:55 -05'00'

Attached: Site Concept Plan

ITE LUC Descriptions

**Shared Parking Data Summaries** 





OFF-STREET PARKING REQUIREMENTS - KELLY				
CODE SECTION	REQUIRED	PROPOSED		
§ TABLE 13.06-A	PROFESSIONAL OFFICE:	408 SURFACE SPACES		
	I SPACE PER 300 NFA	552 GARAGE SPACES		
	(134,560 NFA*)(1/300 NFA) = 449 SPACES	63 PODIUM SPACES		
§ TABLE 13.06-A	COMMERCIAL / RETAIL:	1,021 TOTAL SPACES		
	I SPACE PER 250 GFA			
	(9,200 GFA)(1/250 GFA) = 37 SPACES			
§ TABLE 13.06-A	BANK:			
	I SPACE PER 200 GFA			
	(2,000 GFA)(1/200 GFA) = 10 SPACES			
§ TABLE 6.10	4 STACKING SPACES PER LANE	4 SPACES PER LANE		
§ TABLE 13.06-A	restaurant (standard):			
	I SPACE PER 2 SEATS AT MAXIMUM CAPACITY			
	(300 SEATS)(1/2 SEATS) = 150 SPACES			
§ TABLE 13.06-A	RESTAURANT (FAST FOOD):			
	I SPACE PER 70 SF NET FLOOR AREA (*)			
	(2,560 SF NFA)(1/70 SF NFA) = 37 SPACES			
	MULTI-FAMILY RESIDENTIAL:			
	2 SPACES PER DWELLING UNIT			
	(156 UNITS)(2/1 UNITS) = 312 SPACES			
	TOTAL: 449+37+10+150+37+312 = 995 SPACES			

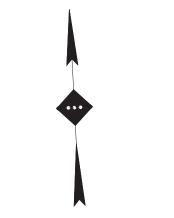
(\*) NET FLOOR AREA IS ASSUMED TO BE 80% GROSS FLOOR AREA (168,200 SF)(0.8) = 134,560 SF

(3,200 SF)(0.8) = 2,560 SF

# OFF-STREET PARKING REQUIREMENTS - LINDSEY CENTRE

CODE SECTION	REQUIRED	PROPOSED
§ TABLE 13.06-A	MULTI-FAMILY DWELLING:	196 SPACES
	2 SPACES PER DWELLING UNIT	
	(103 UNITS)(2 SPACES PER UNIT) = 206 SPACES	
	I SPACE PER EFFICIENCY UNIT	
	(41 UNITS)(1 SPACE PER UNIT) = 41 SPACES	
	<u>TOTAL:</u> 206 + 41 = <b>247 SPACES</b>	

OFF-STREI	ET PARKING REQUIREMEN	TS - COMBINED
PARCEL	REQUIRED	PROPOSED
KELLY PARCEL	995 SPACES	1,021 SPACES
LINDSEY CENTRE	247 SPACES	196 SPACES
	TOTAL: 995 + 247 = 1,242 SPACES	TOTAL: 1,220 SPACES



# **SYMBOL DESCRIPTION**

PROPERTY LINE
EXISTING BUILDING
 PROPOSED CURB

PROPOSED BUILDING

PROPOSED CONCRETE

NOT APPROVED FOR CONSTRUCTION



S S

90

9

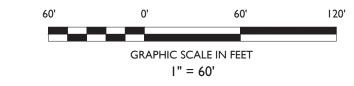
METHODS OF CONSTRUCTION. 6. THE CONTRACTOR SHALL NOT PERFORM ANY WORK OR CAUSE DISTURBANCE ON A PRIVATE PROPERTY NOT CONTROLLED BY THE PERSON OR ENTITY WHO HAS AUTHORIZED THE WORK WITHOUT PRIOR WRITTEN CONSENT FROM THE OWNER OF THE PRIVATE PROPERTY.

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 CONTRACTORS EXPENSE. 8. CONTRACTOR IS RESPONSIBLE TO PROVIDE THE APPROPRIATE SHOP DRAWINGS, PRODUCT DATA, AND OTHER REQUIRED SUBMITTALS

ACCORDANCE WITH MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.

10. THE CONTRACTOR IS REQUIRED TO PERFORM ALL WORK IN THE PROCUREMENT OF STREET OPENING PERMITS. 11. THE CONTRACTOR IS REQUIRED TO RETAIN AN OSHA CERTIFIED

SAFETY INSPECTOR TO BE PRESENT ON SITE AT ALL TIMES DURING 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.



# **GENERAL NOTES**

I. 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.

2. 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.

3. ALL CONTRACTORS WILL, TO THE FULLEST EXTENT PERMITTED BY LAW, INDEMNIFY AND HOLD HARMLESS STONEFIELD ENGINEERING & DESIGN, LLC. AND IT'S 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.

4. THE CONTRACTOR SHALL NOT DEVIATE FROM THE PROPOSED IMPROVEMENTS IDENTIFIED WITHIN THIS PLAN SET UNLESS APPROVAL IS PROVIDED IN WRITING BY STONEFIELD ENGINEERING & DESIGN,

5. THE CONTRACTOR IS RESPONSIBLE TO DETERMINE THE MEANS AND

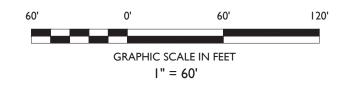
7. THE CONTRACTOR IS RESPONSIBLE TO RESTORE ANY DAMAGED OR

THE SUBMITTALS IN ACCORDANCE WITH THE DESIGN INTENT AS REFLECTED WITHIN THE PLAN SET. 9. THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL IN

FOR REVIEW. STONEFIELD ENGINEERING & DESIGN, LLC. WILL REVIEW

PUBLIC RIGHT-OF-WAY IN ACCORDANCE WITH THE APPROPRIATE GOVERNING AUTHORITY AND SHALL BE RESPONSIBLE FOR THE

CONSTRUCTION & DEMOLITION ACTIVITIES. 12. SHOULD AN EMPLOYEE OF STONEFIELD ENGINEERING & DESIGN, LLC.





J. REID COOKSEY, P.E.

I" = 60' PROJECT ID: M-19301.01

**OVERALL SITE PLAN** 

DRAWING:

# Land Use: 221 Multifamily Housing (Mid-Rise)

# Description

Mid-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and with between three and 10 levels (floors) of residence. Multifamily housing (low-rise) (Land Use 220), multifamily housing (high-rise) (Land Use 222), and affordable housing (Land Use 223) are related land uses.

# Time of Day Distribution for Parking Demand

The following table presents a time-of-day distribution of parking demand on a weekday (one general urban/suburban study site), a Saturday (two general urban/suburban study sites), and a Sunday (one dense multi-use urban study site).

	Per	cent of Peak Parking Der	mand
Hour Beginning	Weekday	Saturday	Sunday
12:00–4:00 a.m.	100	100	100
5:00 a.m.	94	99	-
6:00 a.m.	83	97	_
7:00 a.m.	71	95	_
8:00 a.m.	61	88	_
9:00 a.m.	55	83	-
10:00 a.m.	54	75	I
11:00 a.m.	53	71	-
12:00 p.m.	50	68	н
1:00 p.m.	49	66	33
2:00 p.m.	49	70	40
3:00 p.m.	50	69	27
4:00 p.m.	58	72	13
5:00 p.m.	64	74	33
6:00 p.m.	67	74	60
7:00 p.m.	70	73	67
8:00 p.m.	76	75	47
9:00 p.m.	83	78	53
10:00 p.m.	90	82	73
11:00 p.m.	93	88	93

#### **Additional Data**

In prior editions of *Parking Generation*, the mid-rise multifamily housing sites were further divided into rental and condominium categories. An investigation of parking demand data found no clear differences in parking demand between the rental and condominium sites within the ITE database. As more data are compiled for future editions, this land use classification can be reinvestigated.

The average parking supply ratios for the study sites with parking supply information are shown in the table below.

		Parking Su	ipply Ratio
Setting	Proximity to Rail Transit	Per Dwelling Unit	Per Bedroom
Center City Core	Within ½ mile of rail transit	1.1 (15 sites)	1.0 (12 sites)
Dense Multi-Use	Within ½ mile of rail transit	1.2 (39 sites)	0.9 (34 sites)
Urban	Not within ½ mile of rail transit	1.2 (65 sites)	0.8 (56 sites)
General Urban/	Within ½ mile of rail transit	1.5 (25 sites)	0.8 (12 sites)
Suburban	Not within ½ mile of rail transit	1.7 (62 sites)	1.0 (39 sites)

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in California, Colorado, District of Columbia, Maryland, Massachusetts, New Jersey, New York, Oregon, Virginia, Washington, and Wisconsin.

It is expected that the number of bedrooms and number of residents are likely correlated to the parking demand generated by a residential site. Parking studies of multifamily housing should attempt to obtain information on occupancy rate and on the mix of residential unit sizes (i.e., number of units by number of bedrooms at the site complex). Future parking studies should also indicate the number of levels contained in the residential building.

### **Source Numbers**

21, 209, 247, 255, 277, 401, 402, 419, 505, 512, 522, 533, 535, 536, 537, 538, 545, 546, 547, 575, 576, 577, 579, 580, 581, 583, 584, 585, 587

# Multifamily Housing (Mid-Rise) (221)

Peak Period Parking Demand vs: Bedrooms

On a: Weekday (Monday - Friday)

Setting/Location: General Urban/Suburban (no nearby rail transit)

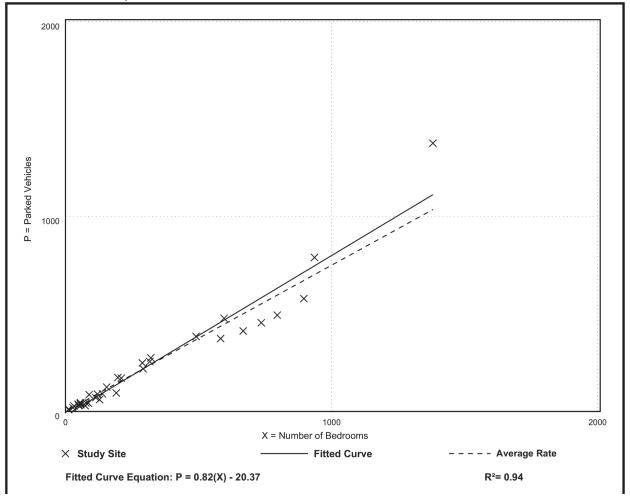
Peak Period of Parking Demand: 10:00 p.m. - 5:00 a.m.

Number of Studies: 35 Avg. Num. of Bedrooms: 294

# Peak Period Parking Demand per Bedroom

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
0.75	0.41 - 1.00	0.65 / 0.87	0.70 - 0.80	0.15 ( 20% )

# **Data Plot and Equation**



# Multifamily Housing (Mid-Rise) (221)

Peak Period Parking Demand vs: Bedrooms

On a: Saturday

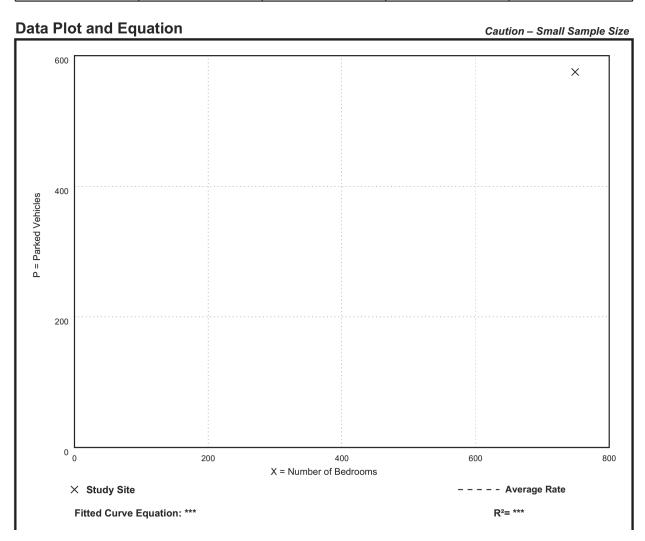
Setting/Location: General Urban/Suburban (no nearby rail transit)

Peak Period of Parking Demand: 11:00 p.m. - 7:00 a.m.

Number of Studies: 1 Avg. Num. of Bedrooms: 749

# Peak Period Parking Demand per Bedroom

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
0.77	0.77 - 0.77	*** / ***	***	*** ( *** )



						Share	ed Parking	Demand S	ummary									
					Peak M	onth: DEC	EMBER	Peak Peric	d: 10 AM,	WEEKDAY								
					Weekday					Weekend				Weekday		Weekend		
Land Use	Projec	Project Data		Driving	Non-	Project	Unit For	Base	Driving	Non-	Project	Unit For	Peak Hr	Peak Mo	Estimated	Peak Hr	Peak Mo	Estimated
Land OSE			Base Ratio	Adj	Captive	Ratio	Ratio	Ratio	Adj	Captive	Ratio	Ratio	Adj	Adj	Parking	Adj	Adj	Parking
	Quantity	Unit	Hatio	Auj	Ratio	Hatio	Hatio	Hatio	Auj	Ratio	Hatio	1.00.0	10 AM	December	Demand	10 AM	December	Demand
	Retail																	
Retail (<400 ksf)	9,200	sf GLA	3.12	100%	86%	2.67	ksf GLA	3.20	100%	90%	2.89	ksf GLA	55%	100%	14	60%	100%	16
Employee			0.78	100%	97%	0.76		0.80	100%	95%	0.76		75%	100%	6	85%	100%	6
							Food an	d Beverage										
Family Restaurant	300	sf GLA	0.42	100%	80%	0.34	ksf GLA	0.42	100%	90%	0.38	ksf GLA	85%	100%	86	90%	100%	103
Employee			0.07	100%	97%	0.07		0.07	100%	95%	0.07		100%	100%	22	100%	100%	22
Fast Casual/Fast Food	2,560	sf GLA	12.40	100%	10%	1.24	ksf GLA	12.70	100%	7%	0.85	ksf GLA	55%	96%	2	55%	96%	1
Employee			2.00	100%	97%	1.94		2.00	100%	95%	1.90		75%	100%	4	75%	100%	4
						Ent	tertainment	t and Instit	utions									
							Hotel and	l Residenti	al									
Residential, Suburban																0%		
Studio Efficiency	41	units	1.00	100%	100%	1.00	unit	1.00	100%	100%	1.00	unit	50%	100%	21	75%	100%	31
1 Bedroom	259	units	2.00	100%	100%	2.00	unit	2.00	100%	100%	2.00	unit	50%	100%	259	75%	100%	389
							0	ffice										
Office 100 to 500 ksf	134,560	sf GFA	0.23	100%	100%	0.23	ksf GFA	0.03	100%	100%	0.03	ksf GFA	100%	100%	32	90%	100%	4
Reserved		emp	0.00	100%	100%	0.00		0.00	100%	100%	0.00		100%	100%	-	100%	100%	-
Employee			3.10	100%	100%	3.10		0.31	100%	100%	0.31		100%	100%	417	90%	100%	39
Bank (Drive In Branch)	2,000	sf GFA	2.90	100%	48%	1.39	ksf GFA	3.00	100%	100%	3.00	ksf GFA	100%	100%	3	75%	100%	5
Employee			2.10	100%	97%	2.04		1.75	100%	97%	1.70		100%	100%	5	100%	100%	4
							Additiona	al Land Use	!S									
													Custom	er/Visitor	136	Cust	omer	129
													Employee	e/Resident	735	Employee	e/Resident	494
													Rese	erved	-	Rese	erved	-
													To	otal	871	To	otal	623

Shared Parking

Reduction 30% 26%

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					Maximum Par	king Demand	
Land Use			intity	Weel Base Ratio	day Max Spaces	Weel Base Ratio	end Max Spaces
Retail (<400 ksf)		9,200	sf GLA	3.12	29	3.20	30
Employee Retail (400 to 600 ksf)		0	sf GLA	0.78 2.96	8	0.80	8
Employee				0.74	0	0.60	0
Retail (600 ksf to 1,000 ksf) Employee		0	sf GLA	3.20 0.80	0	3.60 0.90	0
Retail (1,000 ksf to 2,000 ksf)		0	sf GLA	3.50 0.90	0	4.00 1.00	0
Employee Retail (over 2,000 ksf)		0	sf GLA	2.90	0	3.20	0
Employee Supermarket/Grocery		0	sf GLA	0.70 4.00	0	0.80 4.00	0
Employee				0.75	0	0.75	0
Pharmacy Employee		0	sf GLA	3.00 0.40	0	3.00 0.40	0
Discount Stores/Superstores Employee		0	sf GLA	3.40 0.85	0	3.80 0.95	0
Iome Improvement Stores/Garden		0	sf GLA	3.10	0	3.45	0
Employee		Food and E	Beverage	0.80	0	0.90	0
ine/Casual Dining		0	sf GLA	0.42	0	0.42	0
Employee amily Restaurant		300	sf GLA	0.07	127	0.07	127
Employee				0.07	23	0.07	23
ast Casual/Fast Food Employee		2,560	sf GLA	12.40 2.00	32 6	2.00	33 6
Bar/Lounge/Night Club		0	sf GLA	15.25 1.25	0	17.50 1.50	0
Employee	Enter	tainment a	ınd Institutio	ns 1.25			0
amily Entertainment Employee		0	sf GLA	1.80 0.20	0	2.50 0.25	0
Active Entertainment		0	sf GLA	1.50	0	1.80	0
Employee unusement Park/Water Park		0	sf GLA	0.15 2.60	0	0.20 3.00	0
Employee				0.26	0	0.30	0
Adult Active Entertainment Employee		0	sf GLA	9.00 1.00	0	10.00 1.20	0
Cineplex		0	seats	0.15	0	0.24	0
Employee pecialty Movie Theatre		0	seats	0.01	0	0.01	0
Employee				0.02	0	0.01	0
ive Theater Employee		0	seats	0.30	0	0.33	0
Outdoor Amphitheater		0	seats	0.30	0	0.33	0
Employee Jublic Park/Destination Open Space		0	acre	0.07 4.00	0	5.00	0
Employee			of GLA	0.40	0	0.50	0
Vuseum/Aquarium Employee		0	sf GLA	4.00 0.40	0	4.50 0.50	0
irena		0	seats	0.27	0	0.30	0
Employee tro Football Stadium		0	seats	0.03	0	0.03	0
Employee				0.01	0	0.01	0
ro Baseball Stadium Employee		0	seats	0.31	0	0.34	0
lealth Club		0	sf GLA	6.60 0.40	0	5.50	0
Employee Public Library		0	sf GLA	2.00	0	0.25 1.90	0
Employee Convention Center		0	sf GLA	0.25 5.50	0	0.20 5.50	0
Employee				0.50	0	0.50	0
		Hotel and R	tesidential	1.00	0	1.00	0
totel-Business totel-Leisure		0	keys keys	1.00	0	1.00	0
Hotel Employee		0	keys sf GLA	0.15 6.67	0	0.15 7.67	0
Restaurant/Lounge Meeting/Banquet (0 to 20 sq ft/key)		0	sf GLA	0.00	0	0.00	0
Meeting/Banquet (20 to 50 sq ft/key) Meeting/Banquet (50 to 100 sq ft/key)		0	sf GLA sf GLA	0.00	0	0.00	0
Convention (100 to 200 sq ft/key)		0	sf GLA	0.00	0	5.50	0
Convention (> 200 sq ft/key) Restaurant/Meeting Employees		0	sf GLA sf GLA	5.50 0.00	0	5.50 0.00	0
Residential, Suburban							
Studio Efficiency 1 Bedroom		41 259	units	1.00 2.00	41 518	1.00 2.00	41 518
2 Bedrooms		0	units	1.65	0	1.65	0
3+ Bedrooms Reserved		0	units res spaces	2.50	0	2.50	0
Visitor		J/8	res spaces units	0.00	0	0.00	0
Residential, Urban Studio Efficiency		0	units	0.00	0	0.00	0
1 Bedroom		0	units	0.00	0	0.00	0
2 Bedrooms 3+ Bedrooms		0	units	0.00	0	0.00	0
Reserved		100%	res spaces	0.00	0	0.00	0
Visitor active Senior Housing		0	units	0.10	0	0.15	0
tesidents				0.30	0	0.30	0
Office <25 ksf		Offic	sf GFA	0.30	0	0.03	0
Reserved weekday only =1, 24/7 2	2	0%	emp	0.00	0	0.00	0
Employee Office 25 to 100 ksf		0	sf GFA	3.50 0.32	0	0.35	0
Reserved weekday only =1, 24/7 2	2	0%	emp	0.00	0	0.00	0
Employee Office =100 ksf		0	sf GFA	3.62 0.25	0	0.36	0
Reserved weekday only =1, 24/7 2	2	0%	emp	0.00	0	0.00	0
Employee Office 100 to 500 ksf		134,560	sf GFA	3.15 0.23	32	0.32	0 4
Reserved weekday only =1, 24/7 2	2	0%	emp	0.00	0 417	0.00	0 43
Employee Office >500 ksf		0	sf GFA	3.10 0.23	0	0.02	0
Reserved weekday only =1, 24/7 2	2	10%	emp	0.32	0	0.32	0
Employee Open Plan/High Density Office		0	sf GFA	2.78 0.25	0	0.00	0
Reserved weekday only =1, 24/7 2	2	0%	emp	0.00	0	0.00	0
Employee Medical/Dental Office		0	sf GFA	5.75 3.25	0	0.58	0
Employee			4000	1.75	0	0.00	0
kay Care Center Employee		0	sf GFA	1.75 2.00	0	0.00	0
lank (Drive In Branch)		2,000	sf GFA	2.90 2.10	6	3.00 1.75	6
Employee		Additional I	Land Uses	2.10			4
dditional Land Use 1		0	0	0.00	0	0.00	0
Employee udditional Land Use 2		0	0	0.00	0	0.00	0
Employee additional Land Use 3		0	0	0.00	0	0.00	0
Employee				0.00	0	0.00	0
Additional Land Use 4		0	0	0.00	0	0.00	0
Employee				0.00	0	0.00	0

			Combine	d Monthly	Adjustment	s							
Land Use	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Late Dec
Retail (<400 ksf)	59%	61%	70%	Retail 67%	72%	72%	70%	73%	66%	69%	76%	100%	85%
Employee Retail (400 to 600 ksf)	69% 59%	71% 61%	79% 70%	77% 67%	82% 72%	82% 72%	80% 70%	83% 73%	76% 66%	78% 69%	86% 76%	100%	95% 85%
Employee	69%	71%	79%	77%	82%	82%	80%	83%	76%	78%	86%	100%	95%
Retail (600 ksf to 1,000 ksf) Employee	59% 69%	61% 71%	70% 79%	67% 77%	72% 82%	72% 82%	70% 80%	73% 83%	66% 76%	69% 78%	76% 86%	100%	85% 95%
Retail (1,000 ksf to 2,000 ksf) Employee	59% 69%	61% 71%	70% 79%	67% 77%	72% 82%	72% 82%	70% 80%	73% 83%	66% 76%	69% 78%	76% 86%	100%	85% 95%
Retail (over 2,000 ksf)	59%	61%	70%	67%	72%	72%	70%	73%	66%	69%	76%	100%	85%
Employee Supermarket/Grocery	69% 93%	71% 86%	79% 94%	77% 92%	82% 97%	82% 94%	80% 96%	83% 95%	76% 92%	78% 95%	86% 95%	100%	95% 95%
Employee	100%	96%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Pharmacy Employee	89% 99%	85% 95%	92% 100%	89% 99%	91% 100%	89% 98%	89% 98%	90% 99%	88% 98%	92% 100%	89% 98%	100% 100%	95% 100%
Discount Stores/Superstores	72% 82%	72% 82%	79% 88%	76% 86%	81% 91%	79% 89%	79% 89%	81% 91%	74% 84%	79% 89%	85% 95%	100% 100%	90% 100%
Employee Home Improvement Stores/Garden	63%	62%	79%	90%	100%	92%	87%	84%	80%	85%	80%	75%	65%
Employee	72%	71%	89% Fo	100% od and Bev	100% erage	100%	97%	94%	90%	94%	90%	85%	75%
Fine/Casual Dining	88%	87%	98%	94%	99%	94%	96%	96%	89%	93%	89%	100%	95%
Employee Family Restaurant	99%	98% 87%	100% 98%	100% 94%	100% 99%	100% 94%	100% 96%	100% 96%	99% 89%	100% 93%	100% 89%	100%	100%
Employee Fast Casual/Fast Food	99% 85%	98% 85%	100% 97%	100% 95%	100% 99%	100% 98%	100%	100%	99% 93%	100% 96%	100% 92%	100% 96%	100%
Employee	96%	96%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Bar/Lounge/Night Club Employee	87% 95%	87% 96%	100% 100%	93% 100%	97% 100%	94% 100%	97% 100%	96% 100%	94% 100%	98% 100%	92% 100%	96% 100%	95% 100%
			Entertai	nment and	Institutions								
Family Entertainment Employee	20% 50%	26% 50%	36% 50%	50% 60%	23% 50%	45% 55%	87% 97%	68% 78%	22% 50%	25% 50%	20% 50%	48% 58%	100%
Active Entertainment	79%	90%	91%	100%	60%	70%	72%	76%	70%	72%	74%	60%	100%
Employee Amusement Park/Water Park	89% 79%	100% 90%	100% 91%	100%	70% 60%	80% 70%	82% 72%	86% 76%	80% 70%	82% 72%	84% 74%	70% 60%	100%
Employee Adult Active Entertainment	89% 85%	100% 86%	100% 95%	100% 92%	70% 96%	80% 95%	82% 98%	86% 99%	80% 91%	82% 96%	84% 93%	70% 100%	100%
Employee	95%	96%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Cineplex Employee	50% 60%	50% 60%	45% 55%	33% 50%	55% 65%	50% 60%	75% 85%	55% 65%	25% 50%	25% 50%	55% 65%	55% 65%	100%
Specialty Movie Theatre	50%	50%	45%	33%	55%	50%	75%	55%	25%	25%	55%	55%	100%
Employee Live Theater	60% 90%	60% 90%	55% 90%	50% 90%	65% 90%	60% 90%	85% 90%	65% 90%	50% 90%	50% 90%	65% 90%	65% 100%	100%
Employee Outdoor Amphitheater	75% 0%	70% 0%	90%	100%	95% 100%	90%	85% 100%	80% 100%	75% 100%	85% 50%	90%	85% 10%	100%
Employee	10%	10%	10%	50%	100%	100%	100%	100%	100%	60%	50%	50%	10%
Public Park/Destination Open Space Employee	25% 50%	25% 50%	50% 60%	75% 85%	100%	100%	100%	100%	100%	100%	75% 85%	75% 85%	25% 50%
Museum/Aquarium	20%	26%	36%	50%	23%	45%	87%	68%	22%	25%	20%	48%	100%
Employee Arena	50% 90%	50% 100%	50% 100%	60% 100%	50% 100%	55% 75%	97%	78% 0%	50% 60%	50% 65%	50% 90%	58% 100%	100%
Employee Pro Football Stadium	100%	100%	100%	100%	100%	100%	10%	10%	75%	75%	100%	100%	100%
Pro Football Stadium Employee	10%	0% 10%	0% 10%	0% 10%	67% 10%	67% 10%	67% 10%	67% 100%	100%	100%	100%	100%	100%
Pro Baseball Stadium	0% 10%	0% 10%	0% 25%	100%	100% 100%	100% 100%	100% 100%	100% 100%	100% 100%	100% 100%	0% 10%	100% 100%	0% 10%
Employee Health Club	100%	95%	85%	90% 70%	65%	65%	65%	70%	80%	85%	85%	100%	95%
Employee Public Library	100% 75%	100% 75%	95% 80%	80% 85%	75% 90%	75% 90%	75% 90%	80% 90%	90%	95% 95%	95% 90%	100%	0% 50%
Employee	85%	85%	85%	90%	95%	95%	90%	95%	100%	100%	95%	65%	45%
Convention Center Employee	75% 85%	100% 100%	90% 100%	55% 65%	60% 70%	50% 60%	45% 55%	75% 85%	80% 90%	85% 95%	100% 100%	100% 100%	0%
Hotel-Business	60%	75%	90%	el and Resi 100%	dential 95%	95%	95%	85%	90%	95%	80%	60%	55%
Hotel-Leisure	80%	90%	100%	100%	90%	90%	100%	100%	75%	75%	75%	50%	100%
Hotel Employees Restaurant/Lounge	80% 85%	90% 86%	100% 95%	100% 92%	90% 96%	90% 95%	100% 98%	100% 99%	75% 91%	75% 96%	75% 93%	50% 100%	100%
Meeting/Banquet (0 to 20 sq ft/key)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Meeting/Banquet (20 to 50 sq ft/key) Meeting/Banquet (50 to 100 sq ft/key)	100% 100%	100% 100%	100%	100% 100%	100%	100% 100%	100% 100%	100% 100%	100% 100%	100% 100%	100% 100%	100% 100%	100%
Convention (100 to 200 sq ft/key) Convention (> 200 sq ft/key)	75% 75%	100% 100%	90% 90%	55% 55%	60% 60%	50% 50%	45% 45%	75% 75%	80% 80%	85% 85%	100% 100%	100% 100%	0%
Restaurant/Meeting Employees	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Residential, Suburban Studio Efficiency	100% 100%	100%	100%	100%	100%	100%	95% 95%	95% 95%	100%	100%	100%	100%	100%
1 Bedroom	100%	100%	100%	100%	100%	100%	95%	95%	100%	100%	100%	100%	100%
2 Bedrooms 3+ Bedrooms	100% 100%	100% 100%	100% 100%	100%	100%	100% 100%	95% 95%	95% 95%	100%	100% 100%	100% 100%	100% 100%	100%
Reserved	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Visitor Residential, Urban	100%	100%	100%	100%	100%	100%	95% 95%	95% 95%	100%	100%	100%	100%	100%
Studio Efficiency 1 Bedroom	100%	100%	100%	100%	100%	100%	95% 95%	95% 95%	100%	100%	100%	100%	100%
2 Bedrooms	100%	100%	100%	100%	100%	100%	95%	95%	100%	100%	100%	100%	100%
3+ Bedrooms Reserved	100% 100%	100% 100%	100% 100%	100% 100%	100% 100%	100% 100%	95% 100%	95% 100%	100% 100%	100% 100%	100% 100%	100% 100%	100%
Visitor Active Senior Housing	100%	100%	100%	100%	100%	100%	95%	95%	100%	100%	100%	100%	100%
Active Senior Housing Residents	100% 100%	100% 100%	100% 100%	100% 100%	100% 100%	100% 100%	100%						
				Office									
Office <25 ksf Reserved	100% 100%	100% 100%	100% 100%	100% 100%	100% 100%	100% 100%	95% 100%	95% 100%	100% 100%	100% 100%	100% 100%	100% 100%	80% 100%
Employee Office 25 to 100 ksf	100% 100%	100% 100%	100% 100%	100% 100%	100%	100%	95% 95%	95% 95%	100% 100%	100%	100%	100% 100%	80%
Reserved	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Employee Office =100 ksf	100%	100%	100%	100%	100%	100%	95% 95%	95% 95%	100%	100%	100%	100%	80%
Reserved	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Employee Office 100 to 500 ksf	100% 100%	100% 100%	100%	100% 100%	100%	100%	95% 95%	95% 95%	100% 100%	100% 100%	100%	100% 100%	80%
Reserved	100% 100%	100% 100%	100%	100%	100%	100%	100%	100% 95%	100% 100%	100% 100%	100%	100% 100%	100%
Employee		100%	100%	100%	100%	100%	95%	95%	100%	100%	100%	100%	80%
Employee Office >500 ksf	100%	100%	100%	100% 100%	100% 100%	100% 100%	100% 95%	100% 95%	100% 100%	100% 100%	100% 100%	100% 100%	100% 80%
Office >500 ksf Reserved	100%		100%		-30/4		2270	95%	-00/0				80%
Office >500 ksf Reserved Employee Open Plan/High Density Office	100% 100% 100%	100% 100%	100%	100%	100%	100%	95%		100%	100%	100%	100%	
Office >500 ksf Reserved Employee	100% 100%	100%	100% 100% 100% 100%	100% 100% 100%	100% 100% 100%	100% 100% 100%	95% 100% 95%	95% 100% 95%	100% 100% 100%				100%
Office >500 ksf Reserved Employee Open Plan/high Density Office Reserved Employee Medical/Dental Office	100% 100% 100% 100% 100% 100%	100% 100% 100% 100%	100% 100% 100% 100%	100% 100% 100% 100%	100% 100% 100%	100% 100% 100%	100% 95% 95%	100% 95% 95%	100% 100% 100%	100% 100% 100% 100%	100% 100% 100% 100%	100% 100% 100% 100%	100% 80% 80%
Office > 500 std Reserved Employee Open Plan/High Density Office Reserved Employee Employee Medical/Dental Office Employee Day Care Center	100% 100% 100% 100% 100%	100% 100% 100% 100%	100% 100% 100%	100% 100% 100%	100% 100%	100% 100%	100% 95%	100% 95%	100% 100%	100% 100% 100%	100% 100% 100%	100% 100% 100%	100% 80% 80%
Office >500 ksf Reserved Employee Open Plan/high Density Office Reserved Employee Medical/Dental Office Employee Day Care Center Employee	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100%	100% 95% 95% 95% 95% 95%	100% 95% 95% 95% 95% 95%	100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100%	100% 80% 80% 80% 80% 80%
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Office >500 bil  Reserved  Employee  General Parking Density Office  Reserved  Employee  Needow JOSEAN Office  Reserved  Employee  Employee  Beneral Office  Employee  Employee  Employee  Benk (Dive in Branch)  Employee	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 95% 95% 95% 95% 95% 100% 95%	100% 95% 95% 95% 95% 95% 100% 95%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 80% 80% 80% 80% 100% 80%
Office 5-500 bil  Reserved  Employee  Gopen Planhigh Density Office  Reserved  Employee  Medical/Densit Office  Reserved  Employee  Dely Care Center  Dely Care	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 95% 95% 95% 95% 95% 100% 95%	100% 95% 95% 95% 95% 95% 100% 95%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 80% 80% 80% 80% 80% 100% 80%
Office >500 bit Reserved Employee Open Plan/Righ Denisty Office Reserved Medical/Denist Office Employee Day Care Center Employee	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 95% 95% 95% 95% 95% 100% 95%	100% 95% 95% 95% 95% 95% 100% 95%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 80% 80% 80% 80% 80% 100% 80%
Office >500 bil  Reserved  Employee  Open Plan/Righ Density Office  Reserved  Employee  Graphy of the  Reserved  Employee  Density Office  Reserved  Employee  Base (Pore in Reserve)  Employee  Additional Land Use 1  Employee  Employee  Employee  Employee  Additional Land Use 1  Employee  Employe	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 95% 95% 95% 95% 95% 100% 95% 0% 0%	100% 95% 95% 95% 95% 100% 95% 0% 0% 0%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100% 100% 100%	100% 80% 80% 80% 80% 100% 80% 0% 0% 0%
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										De	cember													
									Weekday	Estimated P	eak-Hour Pa	rking Demar												
Land Use	Monthly Adjustment						11 AM		1 PM				5 PM								Overall Pk 10 AM	AM Peak Hr 10 AM	PM Peak Hr 2 PM	Eve Peak H
										F	Retail													
Retail (<400 ksf)	100%	0	1	4	7	14	19	22	25	25	24	20	21	22	22	21	12	7	2	0	14	14	25	7
Employee	100%	1	1	2	3	6	7	8	8	8	8	8	8	8	8	7	5	3	2	0	6	6	8	3
										Food ar	d Beverage													
Family Restaurant	100%	25	51	61	76	86	91	101	91	51	46	46	86	92	92	92	69	63	58	29	86	86	51	63
Employee	100%	11	17	20	20	22	22	22	22	22	17	17	21	21	21	21	17	14	14	8	22	22	22	14
Fast Casual/Fast Food	96%	0	0	1	1	2	3	3	3	3	2	2	2	3	2	2	1	1	0	0	2	2	3	1
Employee	100%	1	1	2	2	4	6	6	6	6	4	3	4	5	5	3	2	2	1	1	4	4	6	2
									E	ntertainmer	it and Institu	itions												
										Hotel an	d Residentia	I												
Residential, Suburban																					-	-	-	-
Studio Efficiency	100%	39	33	28	23	21	18	16	16	16	16	18	21	25	29	33	35	39	40	41	21	21	16	39
1 Bedroom	100%	492	414	350	285	259	233	207	207	207	207	233	259	311	363	414	440	492	502	518	259	259	207	492
2 Bedrooms	100%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
3+ Bedrooms	100%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
Reserved	100%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
Visitor	100%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
										(	Office													
Office 100 to 500 ksf	100%	0	0	6	19	32	14	5	14	30	14	5	3	2	1	0	0	0	0	0	32	32	30	0
Reserved	100%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
Employee	100%	13	63	209	375	417	417	354	354	396	396	354	250	104	63	21	13	4	0	0	417	417	396	4
Bank (Drive In Branch)	100%	0	0	1	3	3	1	1	1	2	1	2	6	0	0	0	0	0	0	0	3	3	2	0
Employee	100%	0	0	3	5	5	5	5	5	5	5	5	5	0	0	0	0	0	0	0	5	5	5	0
										Addition	al Land Uses	3												
	Customer/Visitor	26	53	73	106	136	128	133	135	111	87	74	118	119	117	115	82	71	60	29	136	136	111	71
	Employee/Resident	557	529	612	713	734	709	619	619	660	653	639	567	473	487	499	512	554	559	568	734	734	660	554
	Reserved	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		582	581	685	820	870	837	752	754	771	740	713	685	592	605	614	594	625	619	597	870	870	771	625

										De	cember													
											eak-Hour Pa	rking Dema												
	Monthly															0.011					Overall Pk	AM Peak Hr	PM Peak Hr	Eve Peak
	Adjustment																				10 AM	10 AM	12 PM	8 PM
											Retail													
Retail (<400 ksf)	100%	0	1	3	9	16	23	27	27	27	27	24	20	16	15	14	13	9	4	0	16	16	27	14
Employee	100%	1	1	3	6	6	7	8	8	8	8	8	7	6	6	6	5	3	1	0	6	6	8	6
										Food ar	d Beverage										·			
Family Restaurant	100%	11	29	52	80	103	103	114	97	74	46	52	68	80	80	74	34	28	17	11	103	103	114	74
Employee	100%	11	16	20	20	22	22	22	22	22	16	16	20	20	20	20	17	14	14	8	22	22	22	20
Fast Casual/Fast Food	96%	0	0	0	1	1	2	2	2	2	1	1	2	3	3	2	1	1	0	0	1	1	2	2
Employee	100%	1	1	2	2	4	6	6	6	5	4	3	4	5	5	3	2	2	1	1	4	4	6	3
									E	ntertainmer	t and Institu	tions												
										Hotel an	d Residentia	I												
Residential, Suburban																								
Studio Efficiency	100%	41	39	36	33	31	29	28	27	27	28	29	30	32	33	34	35	36	38	41	31	31	28	34
1 Bedroom	100%	518	492	456	414	389	363	352	337	337	352	368	383	399	414	430	445	461	477	518	389	389	352	430
2 Bedrooms	100%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	
3+ Bedrooms	100%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	
Reserved	100%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	
Visitor	100%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	
										(	Office													
Office 100 to 500 ksf	100%	0	1	2	3	4	4	4	3	2	2	1	0	0	0	0	0	0	0	0	4	4	4	0
Reserved	100%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	
Employee	100%	0	9	26	34	39	43	39	34	26	17	9	4	2	0	0	0	0	0	0	39	39	39	0
Bank (Drive In Branch)	100%	0	0	2	2	5	6	5	0	0	0	0	0	0	0	0	0	0	0	0	5	5	5	0
Employee	100%	0	0	3	4	4	4	4	0	0	0	0	0	0	0	0	0	0	0	0	4	4	4	0
										Addition	al Land Uses													
	Customer/Visitor	12	31	59	96	129	138	153	130	106	76	78	91	99	97	89	48	38	21	12	129	129	153	89
	Employee/Resident	572	558	546	513	494	473	458	433	424	425	433	449	464	479	493	505	517	530	568	494	494	458	493
	Reserved	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		583	589	604	609	623	611	611	563	530	501	511	540	563	576	583	553	554	552	579	623	623	611	583

Chair Lambert called the Regular meeting of the Troy City Planning Commission to order at 7:01 p.m. on January 10, 2023, in the Council Chamber of the Troy City Hall. Chair Lambert and Vice Chair Perakis presented opening remarks relative to the role of the Planning Commission and procedure of tonight's meeting.

# 1. ROLL CALL

# Present:

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

# Also Present:

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

# 2. APPROVAL OF AGENDA

Mr. Savidant announced the applicant for a potential Planned Unit Development application that was postponed at the December 13, 2022 meeting to tonight's agenda would like to postpone the item indefinitely for personal reasons.

# Resolution # PC-2023-01-001

Moved by: Faison Support by: Tagle

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

Yes: All present (9)

# **MOTION CARRIED**

# 3. APPROVAL OF MINUTES – December 13, 2022

# Resolution # PC-2023-01-002

Moved by: Fox

Support by: Buechner

**RESOLVED**, To approve the minutes of the December 13, 2022 Regular meeting as submitted.

Yes: Buechner, Faison, Fox, Hutson, Krent, Lambert, Malalahalli, Tagle

Abstain: Perakis

#### **MOTION CARRIED**

4. <u>PUBLIC COMMENT</u> – For Items Not on the Agenda

There was no one present who wished to speak.

## **ZONING ORDINANCE TEXT AMENDMENT**

PUBLIC HEARING – ZONING ORDINANCE TEXT AMENDMENT (File Number ZOTA 257)
 Places of Worship

Ms. Dufrane introduced proposed revisions to the Zoning Ordinance relating to places of worship because of a Zoning Board of Appeals litigation decision. She stated a Federal District Court Judge made known that portions of Sections 4.21 and 6.21 of the Zoning Ordinance are not enforceable as written. Ms. Dufrane emphasized the proposed revised text is not a directive from the Court but that the proposed revisions were drafted by the administration after a comprehensive review.

There was discussion, some comments related to:

- Proposed revisions as relates to the protection of residentially zoned properties; i.e., parking, setbacks, frontage and access to major or minor arterial roads.
- Zoning Ordinance definition of places of worship.
- Charge of the Zoning Administrator to interpret the Zoning Ordinance.
- Intent is to apply similar treatment to both religious institutions and nonreligious places of assembly and institutions.

Ms. Perakis stated she is not personally prepared this evening to recommend the text revisions as proposed.

## PUBLIC HEARING OPENED

There was no one present who wished to speak.

## PUBLIC HEARING CLOSED

#### Resolution # PC-2023-01-003

Moved by: Faison Seconded by: Tagle

**RESOLVED**, That the Planning Commission hereby recommends to the City Council that Articles 4 and 6 of Chapter 39 of the Code of the City of Troy, which includes provisions related to places of worship, be amended as printed on the proposed Zoning Ordinance Text Amendment.

#### Discussion on the motion on the floor.

Chair Lambert said he is happy the City came forth with language that both eliminates some of the discriminatory language in the City's Zoning Ordinance and at the same time protects the residential areas that might be impacted.

## Vote on the motion on the floor.

Yes: Buechner, Faison, Fox, Hutson, Krent, Lambert, Malalahalli, Tagle

No: Perakis

## MOTION CARRIED

## SPECIAL USE AND PRELIMINARY SITE PLAN APPROVALS

6. <u>SPECIAL USE APPROVAL AND PRELIMINARY SITE PLAN REVIEW (File Number SU JPLN2022-0004)</u> – Proposed 2690 Crooks Road Apartments, East side of Crooks, South of Big Beaver (2690 Crooks), Section 28, Currently Zoned BB (Big Beaver) District

Mr. Carlisle reviewed the Special Use and Preliminary Site Plan application for 2690 Crooks Road Apartments. The applicant proposes to repurpose the existing 4-story Lindsey Center building and construct a new 5-story multiple family residential building. Mr. Carlisle addressed the number of units, access and circulation, site arrangement, shared parking with 911 and 999 W. Big Beaver sites, waiver to relocate required parking lot trees and architectural features. Mr. Carlisle explained the Special Use Approval relates to the proposed residential use on the first floor not facing a public right of way. He reported the application includes a traffic study reviewed by both the City Traffic Consultant OHM Advisors and Oakland County Road Commission (OCRC). Mr. Carlisle said OHM and OCRC representatives are present this evening to address traffic and proposed shared parking.

(Mr. Savidant exited the meeting at 7:31 p.m.; returned at 7:33 p.m.)

Mr. Carlisle said as part of the deliberation, the Planning Commission should consider compliance with Section 5.04E Big Beaver Design Standards, Section 8.06 Site Plan Review Standards and Section 9.02.D Special Use Standards, as well the required transparency for the east, north and south elevations, parking lot tree location, proposed shared parking and consideration of providing a three-dimensional (3-D) rendering of the entire development.

Mr. Carlisle reported any approval this evening should be subject to the conditions identified in his report dated January 4, 2023 as part of Final Site Plan approval. Mr. Carlisle reminded the Board there was no public comment at the Public Hearing conducted at their December 13, 2022 meeting.

Board members expressed confusion in the review and deliberation of this application because of its relationship to Agenda item # 7 on tonight's agenda.

It was determined the Planning Consultant would give a review on Agenda item #7, 911 and 999 W. Big Beaver Special Use Approval and Preliminary Site Plan application prior to taking any action on the 2690 Crooks Road application.

Applicant Jordan Jonna said the ownership structure of the subject parcels dictated the submission of individual applications. He noted that the south site (2690 Crooks) has sufficient parking to stand alone whether the north site (911 and 999 W. Big Beaver) is developed or not.

There was discussion, some comments related to:

- Building heights.
- Green recreational space deficiency.
- · Shared parking.
  - Coordination of parking during construction phases.
  - o Dynamics of shared parking among the various uses.

## Resolution # PC-2023-01-xxx (motion withdrawn)

Moved by: Krent Seconded by: Faison

**RESOLVED**, The Planning Commission hereby approves a reduction in the total number of required parking spaces for the proposed 2690 Crooks Road residential development to 221 when a total of 312 spaces are required on the site based on the off-street parking space requirements for multi-family residential. This 91-space reduction is sufficient to meet parking demands based on shared parking provided on the abutting site to the north; and,

**RESOLVED**, That Special Use Approval and Preliminary Site Plan Approval for the proposed 2690 Crooks Road Apartments, east side of Crooks, south of Big Beaver (2690 Crooks), Section 28, Currently Zoned BB (Big Beaver) District, be granted, subject to the following conditions:

- 1. Increase the drive-aisle width to at least 26 feet.
- 2. Improve pedestrian circulation based on OHM's comments.
- Confirm existing screening of trash enclosure.
- 4. Confirm building lighting.
- 5. Verify unit numbers.
- Provide a shared parking agreement to the satisfaction of the City Attorney prior to Final Site Plan Approval.
- 7. Provide transparency calculations.

<sup>\*</sup>Refer to page 6, Agenda item #7 for additional comments that relate to both applications.

## Discussion on the motion on the floor.

Concerns discussed were:

- Required landscape trees in parking lot; impact to number of parking spaces.
- Non-friendly pedestrian walkability of site.
- Enhancement of green space.
- Improvements to access, circulation, and shared parking.

Mr. Krent withdrew his motion from the floor. Mr. Faison was in support of its withdrawal.

## Resolution # PC-2023-01-004

Moved by: Tagle Seconded by: Krent

**RESOLVED**, To postpone 2690 Crooks Road Apartments application so that the applicant may comply with the Zoning Ordinance requirements of interior parking lot landscaping, enhance the pedestrian walkways and to provide information to this Commission with regard to the distance to the parking spots for the residential units in excess of what is currently around the building.

Yes: All present (9)

#### **MOTION CARRIED**

7. PUBLIC HEARING - SPECIAL USE APPROVAL AND PRELIMINARY SITE PLAN REVIEW (File Number SU JPLN2022-0004) — Proposed 911 and 999 W. Big Beaver Mixed Use Development, Southeast corner of Big Beaver and Crooks (PIN 88-20-28-101-032, -034 and -047), Section 28, Currently Zoned BB (Big Beaver) District.

Mr. Carlisle reviewed the Special Use Approval and Preliminary Site Plan application for 911 and 999 W. Big Beaver that proposes to convert the existing Kelly Services site as a mixed use. He said the Special Use Approval relates to 1) a potential use of a financial institution drive-through, and 2) proposed residential use on the first floor not facing a public right of way. Mr. Carlisle said the applicant is seeking waivers for required setbacks for Buildings A and C. He noted the parking for Building E must be adjacent to the building.

Mr. Carlisle addressed access and site circulation, architectural features and deficiencies in the landscaping.

Mr. Carlisle reported as part of the deliberation, the Planning Commission should discuss compliance with Section 5.04.E Big Beaver Design Standards, Section 8.06 Site Plan Review Standards and Section 9.02D Special Use Standards, as well, architectural features, parking lot tree location, shared parking and setback waivers for placement of two buildings.

Mr. Carlisle said OHM and OCRC representatives are present this evening to address traffic and proposed shared parking.

Mr. Jonna addressed the relationship with Kelly Services Headquarters, complementary architectural features among buildings, development phases, current state of office space, parking deck and recreational amenities for all users of the sites. He addressed legal implications in the ownership structure of the subject parcels. Mr. Jonna said the project team is very comfortable with the proposed shared parking and briefly addressed parking calculations for both applications.

There was discussion, some comments related to:

- Shared parking and parking deck.
  - o Distance to residential.
  - Location of parking deck for all users.
  - Parking calculations.
  - o 2690 Crooks sufficient parking on its own.
- Improve walkability for pedestrians.
- Alternative site arrangement; access, circulation.
- Drive-through for financial institution.
- Open space deficiencies.
- Requirement for parking lot trees to break up pavement, create islands.
- Environmental resources.
- Recorded easement(s).
- Trash collection.

Project Architect Kevin Biddison addressed the subject parcels as relates to the residential use, public amenities and walking community.

Julie Kroll of Fleis & Vanderbrink addressed the parking study and analysis for both applications as relates to parking space calculations and number of parking spaces. She stated they are comfortable with the parking numbers.

## **PUBLIC HEAR OPENED**

There was no one present who wished to speak.

## PUBLIC HEARING CLOSED

Stephan Maxe of OHM Advisors addressed OHM comments on the traffic impact study as identified in their memorandum dated December 22, 0222 and their comments relating to the improvement of pedestrian circulation between the developments.

## Resolution # PC-2023-01-005

Moved by: Fox

Seconded by: Buechner

**RESOLVED**, To postpone 911 and 999 W. Big Beaver Mixed Use Development application per the reasons discussed in the previous motion and including conditions as listed in the proposed Resolution (number one through nine) and that the applicant come back with a simplistic explanation and diagrams of the shared parking and circulation plans that clearly shows pedestrian amenities and how the subject sites are tied together.

## Discussion on the motion on the floor.

- Easement to Tower Center Drive and to neighboring properties as relates to flow and connectivity.
- Drive-through facility as relates to environment, green space, walkability.
- Location of parking deck pursuant to Zoning Ordinance requirements.
- Concerns with pedestrian and vehicular circulation.
- Alternative commercial/retail uses other than drive-through financial institution.

## Vote on the motion on the floor.

Yes: All present (9)

## MOTION CARRIED

## OTHER ITEMS

## 8. ELECTION OF OFFICERS

Chair Lambert opened the floor for nominations for Chair.

Ms. Perakis nominated David Lambert. Mr. Krent supported the nomination.

Acknowledging there were no further nominations, Chair Lambert closed the floor to nominations.

## Roll Call vote on the nomination for **David Lambert as Chair**.

Yes: All present (9)

Chair Lambert opened the floor for nominations for Vice Chair.

Chair Lambert nominated Marianna Perakis. Mr. Buechner supported the nomination.

Acknowledging there were no further nominations, Chair Lambert closed the floor to nominations.

## Roll Call vote on the nomination on the floor for *Marianna Perakis as Vice Chair*.

Yes: All present (9)

Chair Lambert opened the floor for nominations for Zoning Board of Appeals Representative.

Chair Lambert nominated Tyler Fox. Mr. Krent supported the nomination.

Acknowledging there were no further nominations, Chair Lambert closed the floor to nominations.

Roll Call vote on the recommendation of appointment for Tyler Fox as ZBA Representative.

Yes: All present (9)

9. PUBLIC COMMENT - For Items on the Agenda

There was no one present who wished to speak.

## 10. PLANNING COMMISSION COMMENT

There were general comments, some relating to:

- Welcome to Planning Commissioner Fox.
- Well wishes for the New Year.
- Potential future study on sustainability.

Ms. Dufrane gave an update on litigation of the Tollbrook (McClure and Alpine) matters.

## 11. ADJOURN

The Regular meeting of the Planning Commission adjourned at 9:45 p.m.

Respectfully submitted,

David Lambert, Chair

Kathy L. Czarnecki, Recording Secretary

G:\PLANNING COMMISSION MINUTES\2023 PC MINUTES\FINAL\2023 01 10 FINAL.docx

# BOULAN DR SITE

# SITE DEVELOPMENT PLANS **FOR**

## **APPLICANT**

**4036 TELEGRAPH ROAD, SUITE 201 BLOOMFIELD HILLS, MI 48302** 

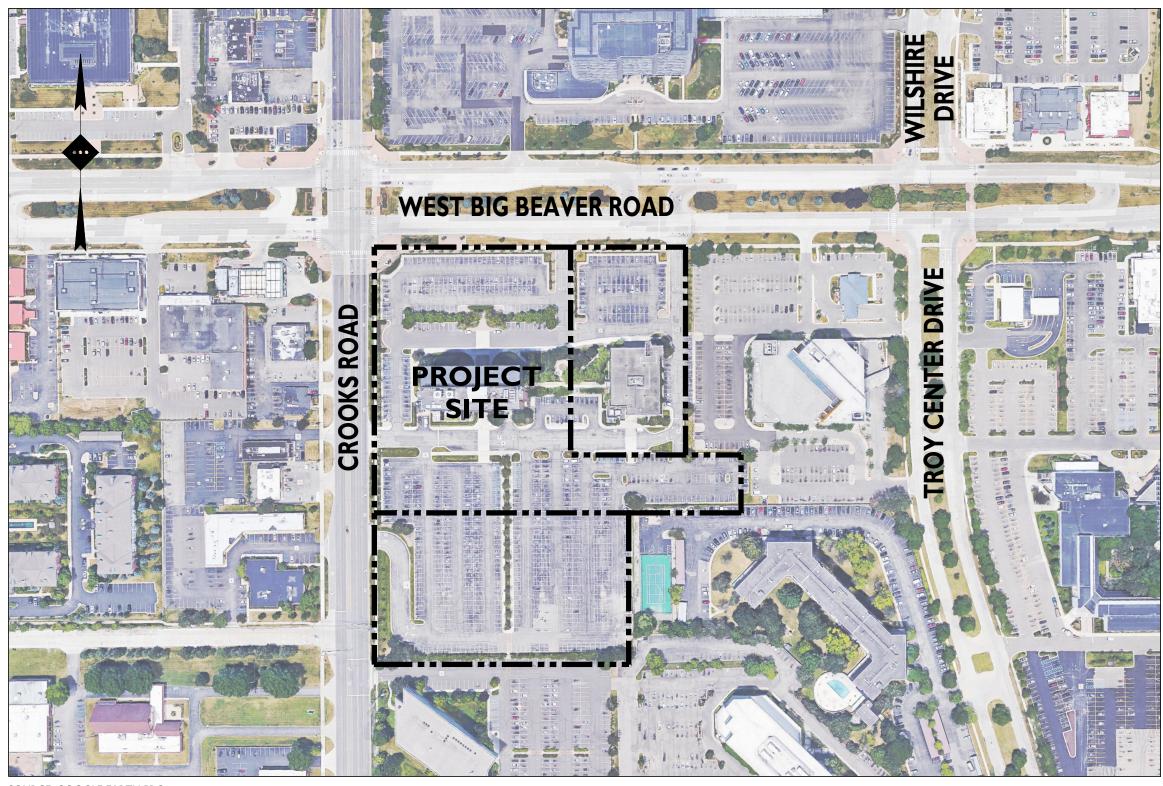
# CROOKS & BIG BEAVER PROPOSED MIXED USE REDEVELOPMENT

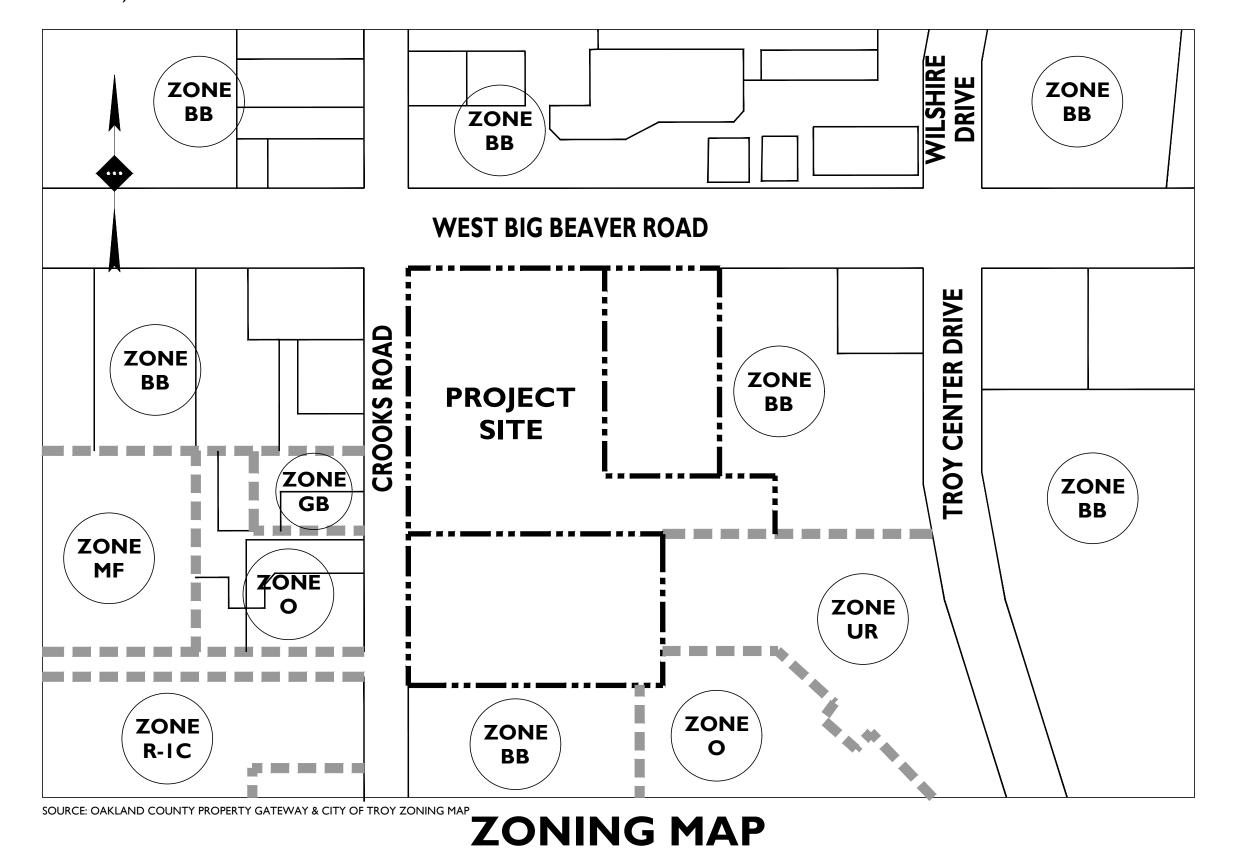
PARCEL ID: 88-20-28-101-034, 88-20-28-101-032, & 88-20-28-101-047 911 & 999 WEST BIG BEAVER ROAD & 2690 CROOKS ROAD CITY OF TROY, OAKLAND COUNTY, MICHIGAN

# **LOCATION MAP**

SOURCE: USGS MAPS

SCALE:  $I'' = 2,000' \pm$ 





**AERIAL MAP** 

SCALE: I" = 200'±

SCALE: I" = 200'±

## PLAN REFERENCE MATERIALS:

- I. THIS PLAN SET REFERENCES THE FOLLOWING DOCUMENTS **INCLUDING, BUT NOT LIMITED TO:**  ALTA/TOPOGRAPHIC SURVEY PREPARED BY KEM-TEC
  - **SURVEY DATED 02/21/20, REVISED 06/12/2020** ARCHITECTURAL PLANS PREPARED BY BIDDISON **ARCHITECTURE DATED 02/06/2023**
  - **GEOTECHNICAL REPORT**
  - AERIAL MAP OBTAINED FROM GOOGLE EARTH PRO LOCATION MAP OBTAINED FROM USGS ONLINE
  - **ZONING INFORMATION OBTAINED FROM CITY OF TROY**
- 2. 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





PLANS PREPARED BY:

Detroit, MI · Rutherford, NJ · New York, NY Princeton, NJ · Tampa, FL · Boston, MA www.stonefieldeng.com

607 Shelby Suite 200, Detroit, MI 48226 Phone 248.247.1115

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FLOOR PLAN - BUILDING C, COMMUNITY HOUSE	A.101C
FLOOR PLAN - BUILDING D, RECREATION CENTER	A.101D
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FLOOR PLAN - RESIDENTIAL BUILDING E, 2ND - 5TH FLOORS	A.102E
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ELEVATIONS - RETAIL BUILDING B	A.201B & A.202B
ELEVATIONS - PARKING / COMMUNITY	A.201C
ELEVATIONS - BUILDING C, COMMUNITY HOUSE	A.202C
ELEVATIONS - BUILDING D, RECREATION CENTER	A.201D
ELEVATIONS - RESIDENTIAL BUILDING E	A.201E & A.201F
3D PERSPECTIVE VIEWS	A.301 - A.315

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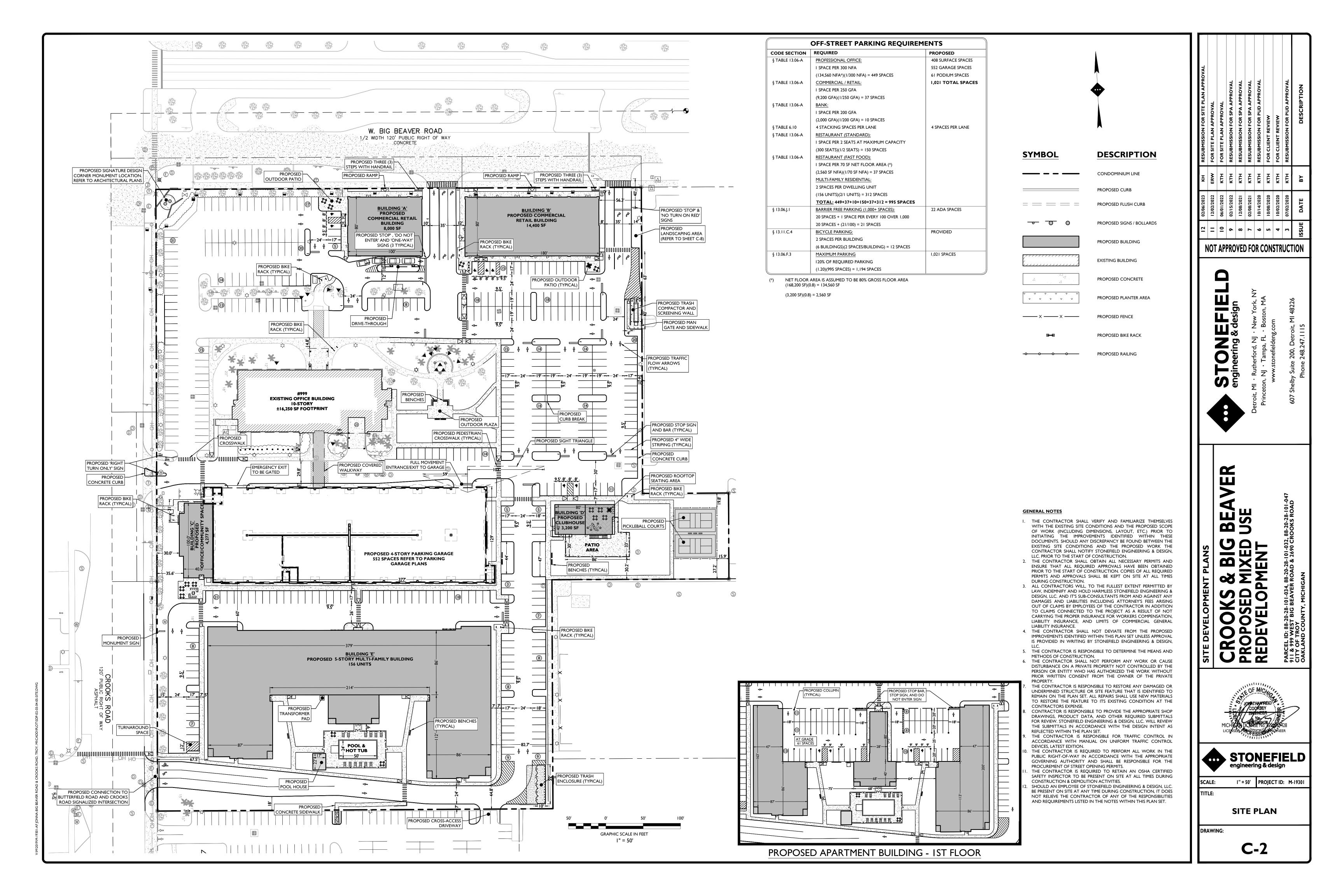


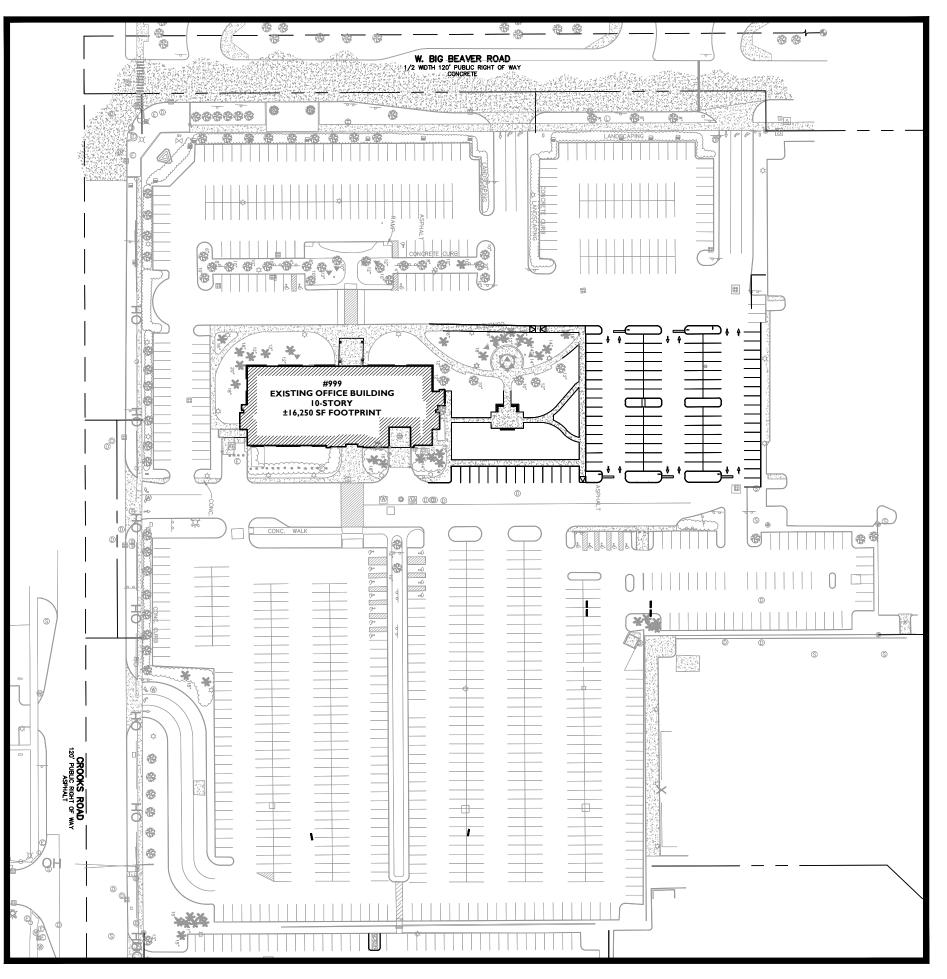


SCALE: AS SHOWN PROJECT ID: M-19301 **COVER SHEET** 

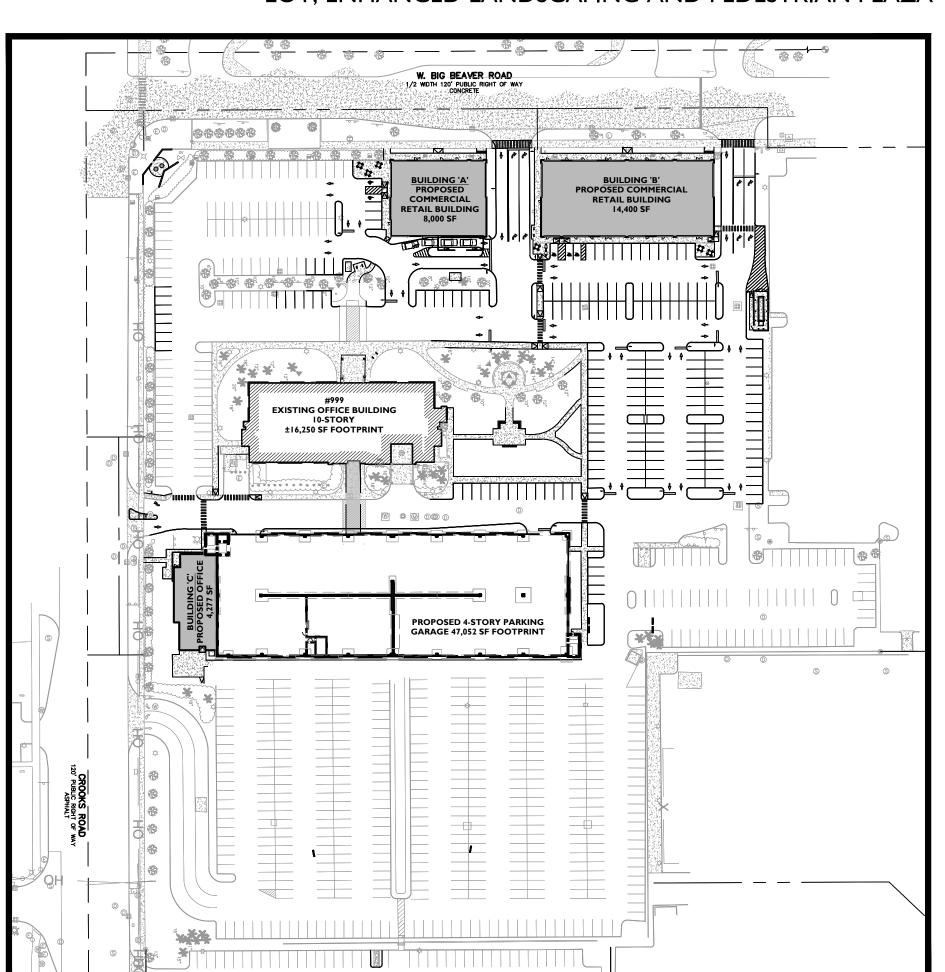
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C-I

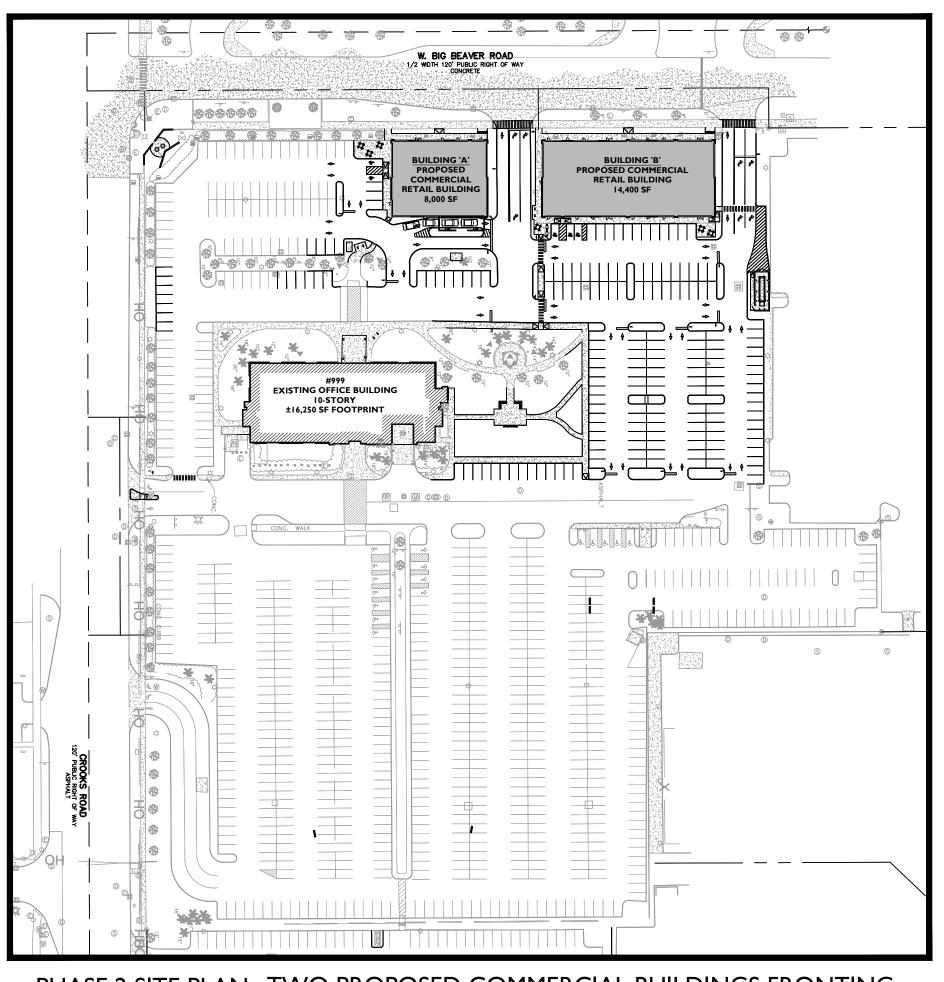




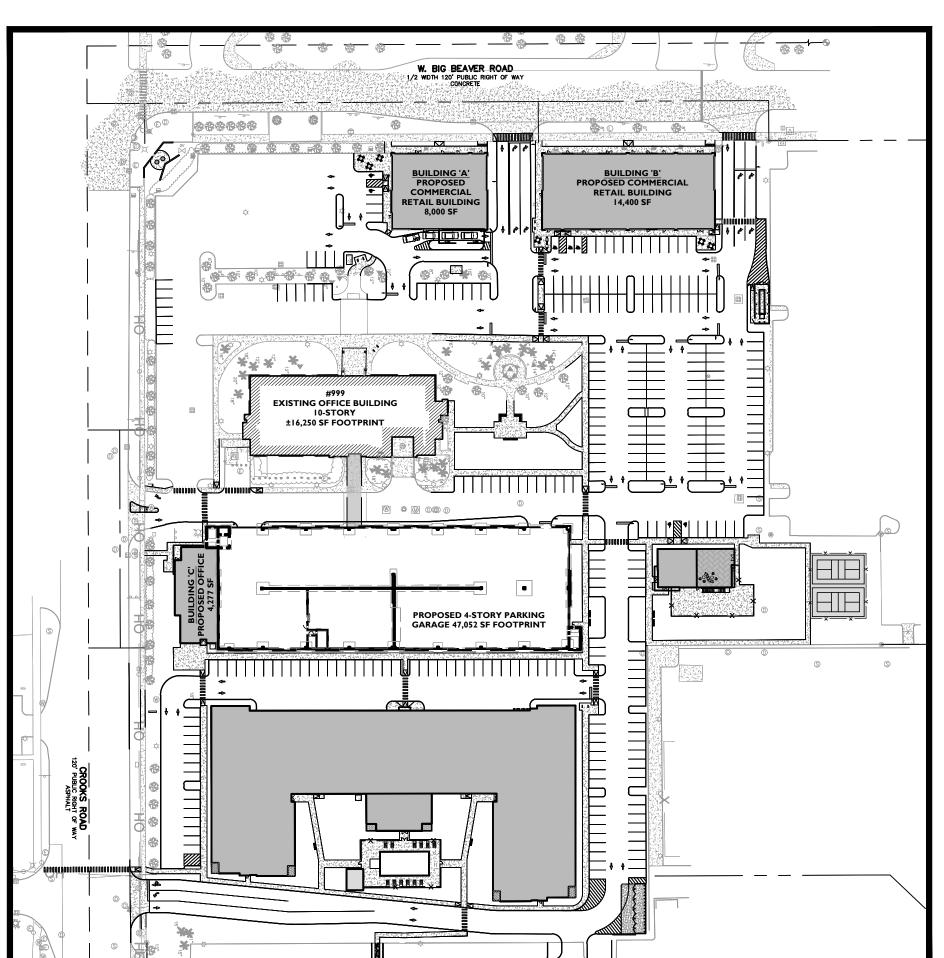
PHASE I SITE PLAN: DEMOLITION OF 911 W BIG BEAVER, PROPOSED PARKING LOT, ENHANCED LANDSCAPING AND PEDESTRIAN PLAZA



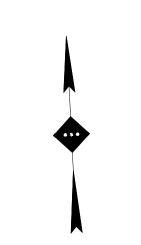
PHASE 3 SITE PLAN: PROPOSED 4-STORY PARKING GARAGE, 4,277 SF OFFICE FRONTING CROOKS ROAD



PHASE 2 SITE PLAN: TWO PROPOSED COMMERCIAL BUILDINGS FRONTING BIG BEAVER ROAD WITH ASSOCIATED SITE IMPROVEMENTS



PHASE 4 SITE PLAN: PROPOSED 5-STORY APARTMENT BUILDING WITH PODIUM PARKING, CLUBHOUSE WITH OUTDOOR AMENITIES AND CONNECTION TO CROOKS AND BUTTERFIELD ROAD INTERSECTION



	PARKING REQUIREME	NTS - PHASE I	
CODE SECTION	REQUIRED (POST-CONSTRUCTION)	PROPOSED POST-CONSTRUCTION	PROPOSED UNDER-CONSTRUCTION
§ TABLE 13.06-A	PROFESSIONAL OFFICE:	957 SPACES	851 SPACES
	I SPACE PER 300 NFA		(449 REQUIRED)
	(134,560 NFA*)(1/300 NFA) = 449 SPACES		
	TOTAL: 449 SPACES		

(\*) NET FLOOR AREA IS ASSUMED TO BE 80% GROSS FLOOR AREA (168,200 SF)(0.80) = 134,560 SF

	PARKING REQUIREME	NTS - PHASE 2	
CODE SECTION	REQUIRED (POST-CONSTRUCTION)	PROPOSED POST-CONSTRUCTION	PROPOSED UNDER-CONSTRUCTION
§ TABLE 13.06-A	PROFESSIONAL OFFICE:	896 SPACES	807 SPACES
	I SPACE PER 300 NFA		(449 REQUIRED)
	(134,560 NFA*)(1/300 NFA) = 449 SPACES		
	BANK:		
	I SPACE PER 200 GFA		
	(2,000 GFA)(1/200 GFA) = 10 SPACES		
	COMMERCIAL / RETAIL:		
	I SPACE PER 250 GFA		
	(9,200 GFA)(1/250 GFA) = 37 SPACES		
	RESTAURANT (STANDARD):		
	I SPACE PER 2 SEATS AT MAXIMUM CAPACITY		
	(300 SEATS)(1/2 SEATS) = 150 SPACES		
	RESTAURANT (FAST FOOD):		
	I SPACE PER 70 SF NET FLOOR AREA		
	(2,560 SF NFA*)(1/70 SF NFA) = 37 SPACES		
	TOTAL: 449+10+37+150+37 = 683 SPACES		

NET FLOOR AREA IS ASSUMED TO BE 80% GROSS FLOOR AREA (168,200 SF)(0.8) = 134,560 SF

(3,200 SF GFA)(0.8) = 2,560 SF

	PARKING REQUIREME	NTS - PHASE 3	
CODE SECTION	REQUIRED (POST-CONSTRUCTION)	PROPOSED POST-CONSTRUCTION	PROPOSED UNDER-CONSTRUCTION
§ TABLE 13.06-A	PROFESSIONAL OFFICE:	744 SURFACE SPACES	739 SURFACE SPACES
	I SPACE PER 300 NFA	552 GARAGE SPACES	(683 REQUIRED)
	(134,560 NFA*)(1/300 NFA) = 449 SPACES	1,296 TOTAL SPACES	
	BANK:		
	I SPACE PER 200 GFA		
	(2,000 GFA)(1/200 GFA) = 10 SPACES		
	COMMERCIAL / RETAIL:		
	I SPACE PER 250 GFA		
	(9,200 GFA)(1/250 GFA) = 37 SPACES		
	RESTAURANT (STANDARD):		
	I SPACE PER 2 SEATS AT MAXIMUM CAPACITY		
	(270 SEATS)(1/2 SEATS) = 135 SPACES		
	RESTAURANT (FAST FOOD):		
	I SPACE PER 70 SF NET FLOOR AREA		
	(2,560 SF NFA*)(1/70 SF NFA) = 37 SPACES		
	TOTAL: 449+10+37+150+37 = 683 SPACES		

NET FLOOR AREA IS ASSUMED TO BE 80% GROSS FLOOR AREA (168,200 SF)(0.8) = 134,560 SF

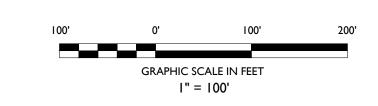
(3,200 SF GFA)(0.8) = 2,560 SF

NOTE: DURING CONSTRUCTION OF THE PROPOSED PARKING GARAGE, CONSTRUCTION FENCING

	PARKING REQUIREMEN	NTS - PHASE 4	
CODE SECTION	REQUIRED (POST-CONSTRUCTION)	PROPOSED POST-CONSTRUCTION	PROPOSED UNDER-CONSTRUCTIO
§ TABLE 13.06-A	PROFESSIONAL OFFICE:	408 SURFACE SPACES	310 SURFACE SPACES
	I SPACE PER 300 NFA	552 GARAGE SPACES	552 GARAGE SPACES
	(134,560 NFA*)(1/300 NFA) = 449 SPACES	61 BELOW APARTMENT	862 TOTAL SPACES
	BANK:	1,021 TOTAL SPACES	(683 REQUIRED)
	I SPACE PER 200 GFA		
	(2,000 GFA)(1/200 GFA) = 10 SPACES		
	COMMERCIAL / RETAIL:		
	I SPACE PER 250 GFA		
	(9,200 GFA)(1/250 GFA) = 37 SPACES		
	RESTAURANT (STANDARD):		
	I SPACE PER 2 SEATS AT MAXIMUM CAPACITY		
	(300 SEATS)(1/2 SEATS) = 150 SPACES		
	RESTAURANT (FAST FOOD):		
	I SPACE PER 70 SF NET FLOOR AREA		
	(2,560 SF NFA*)(1/70 SF NFA) = 37 SPACES		
	MULTI-FAMILY RESIDENTIAL:		
	2 SPACES PER DWELLING UNIT		
	(156 UNITS)(2/1 UNITS) = 312 SPACES		

NET FLOOR AREA IS ASSUMED TO BE 80% GROSS FLOOR AREA (168,200 SF)(0.8) = 134,560 SF

(3,200 SF GFA)(0.8) = 2,560 SF



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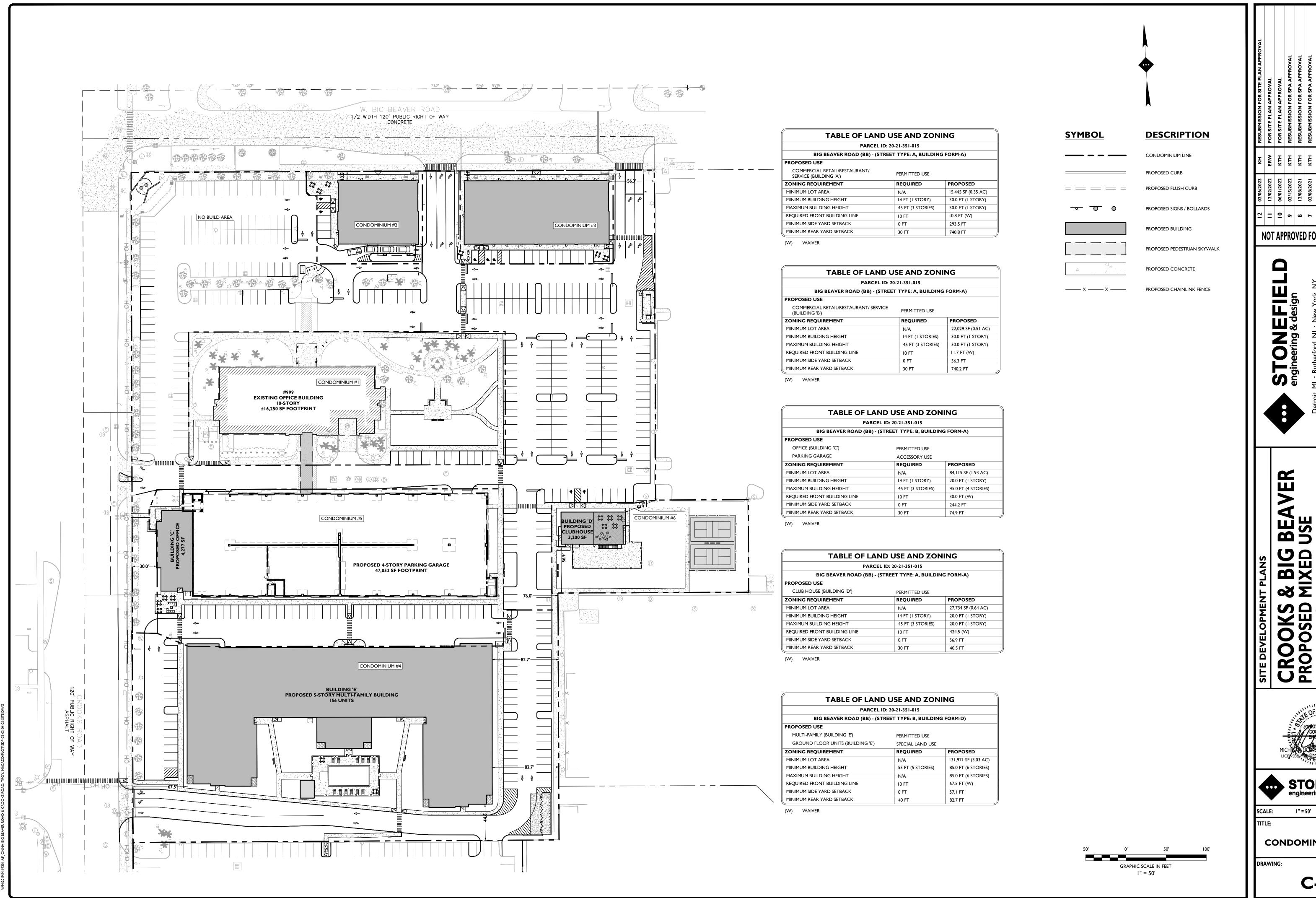


I" = 100' PROJECT ID: M-19301

**PHASING PLAN** 

**DRAWING:** 

**C-3** 

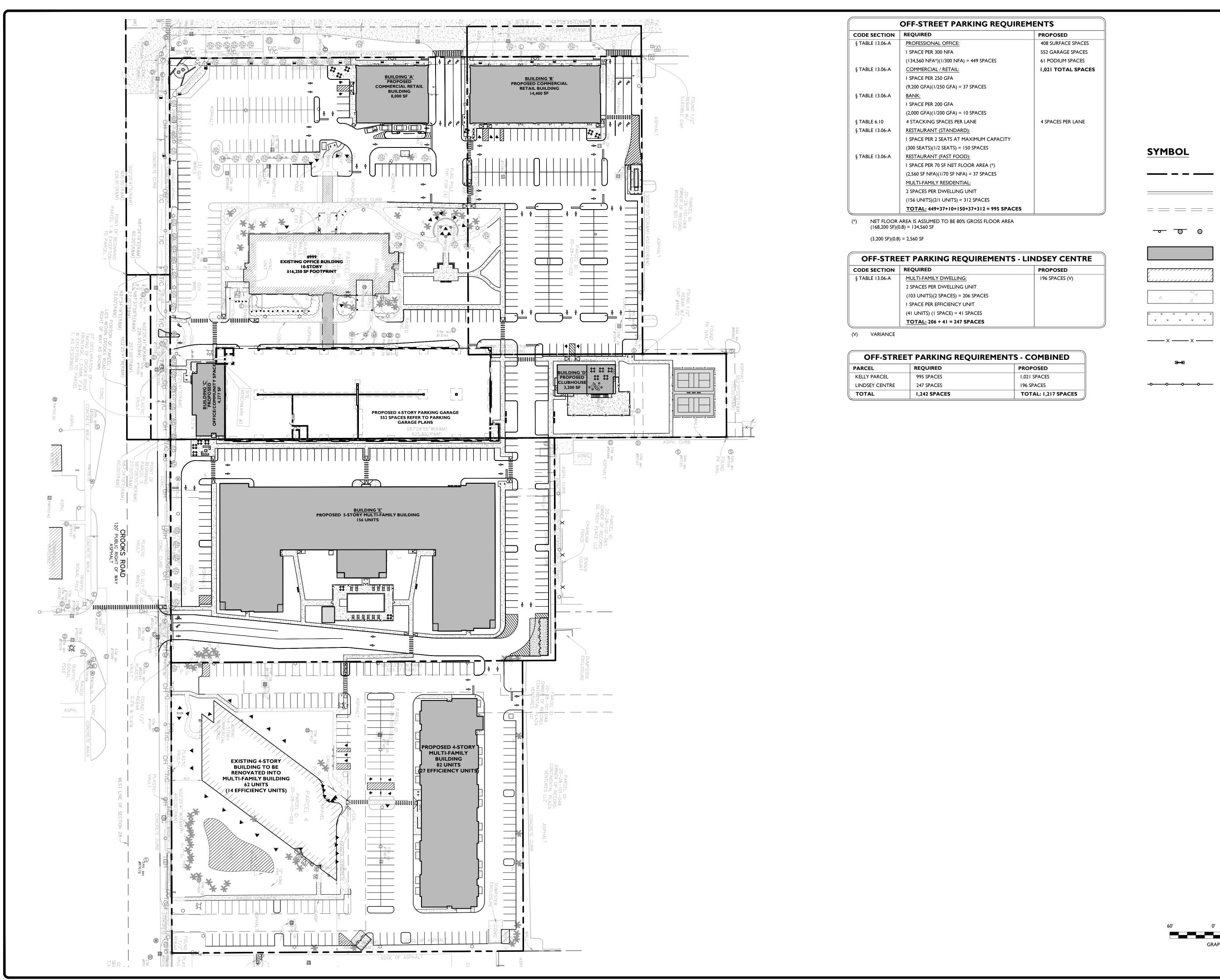


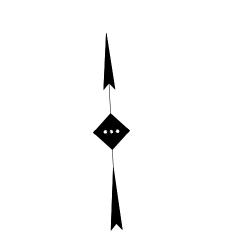
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I" = 50' PROJECT ID: M-19301

CONDOMINIUM PLAN





SYMBOL	DESCRIPTIO
<del></del>	

	PROPOSED CURB
_ = = =	PROPOSED FLUSH CURB

PROPOSED SIGNS / BOLLARDS

CONDOMINIUM LINE

PROPOSED BUILDING EXISTING BUILDING PROPOSED CONCRETE

PROPOSED PLANTER AREA **\* \* \* \*** 

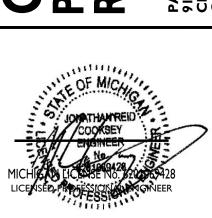
PROPOSED FENCE —— x —— x ——

> PROPOSED BIKE RACK PROPOSED RAILING

> > GRAPHIC SCALE IN FEET
> > I" = 60'

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**BEAVER**USE



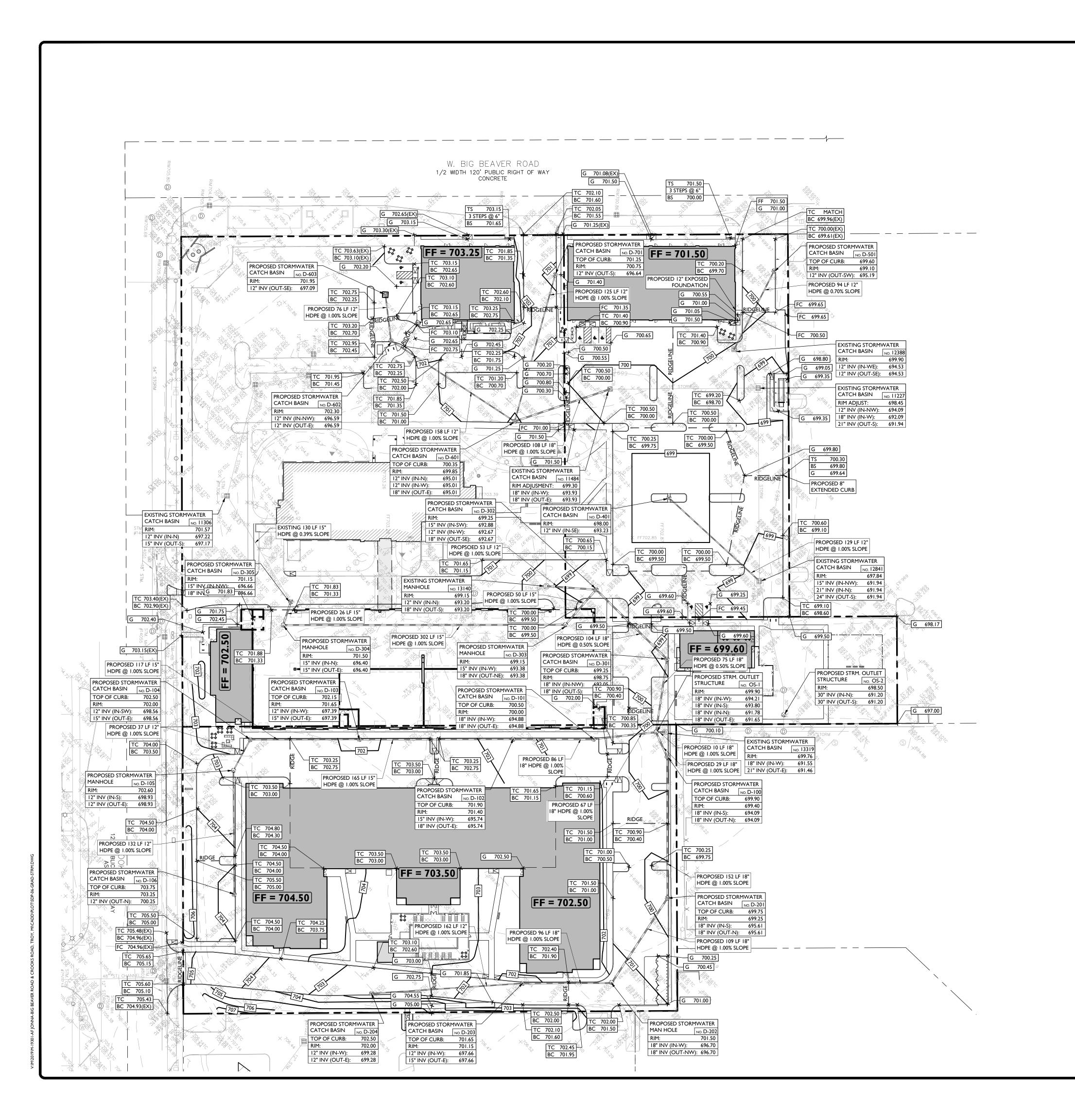


I" = 60' PROJECT ID: M-19301

**OVERALL SITE PLAN** 

DRAWING:

**C-5** 





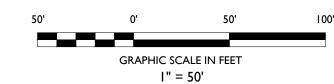
## **SYMBOL**

CONDOMINIUM LINE PROPOSED GRADING CONTOUR PROPOSED GRADING RIDGELINE RIDGELINE PROPOSED DIRECTION OF DRAINAGE FLOW **X** G 100.00 PROPOSED GRADE SPOT SHOT PROPOSED TOP OF CURB / BOTTOM OF CURB SPOT SHOT **X** FC 100.00 PROPOSED FLUSH CURB SPOT SHOT

## **GRADING NOTES**

- ALL FILL MATERIALS BROUGHT TO THE SITE. 2. 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.
- APPROVAL PRIOR TO POURING CURBS.
- 4. 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 ALITHORITY REGULATIONS
- 5. MINIMUM SLOPE REQUIREMENTS TO PREVENT PONDING SHALL BE AS
- 5. 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
- FROM THE GOVERNING STORM SEWER SYSTEM AUTHORITY.

- ANY DIRECTION WITHIN THE ADA PARKING SPACES AND ACCESS
- 2. THE CONTRACTOR SHALL PROVIDE COMPLIANT SIGNAGE AT ALL
- 3. THE CONTRACTOR SHALL MAINTAIN A MAXIMUM 5.00% RUNNING SLOPE AND A MAXIMUM OF 2.00% CROSS SLOPE ALONG WALKWAYS THE PLAN SET.
- 4. 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.
- 5. 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 FLARES 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.
- 6. 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.
- 8. THE CONTRACTOR SHALL ENSURE A MAXIMUM OF 1/4 INCHES VERTICAL AND 2 UNITS HORIZONTAL (2:1 SLOPE).
- 9. THE CONTRACTOR SHALL ENSURE THAT ANY OPENINGS (GAPS OR



## **DESCRIPTION**

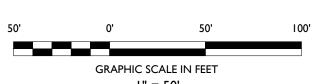
**X** G 100.00(EX) EXISTING GRADE SPOT SHOT

- I. ALL SOIL AND MATERIAL REMOVED FROM THE SITE SHALL BE DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REQUIREMENTS. ANY GROUNDWATER DE-WATERING PRACTICES SHALL BE PERFORMED UNDER THE SUPERVISION OF A QUALIFIED PROFESSIONAL. THE CONTRACTOR 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
- 3. 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

- CURB GUTTER: CONCRETE SURFACES: 1.00% • ASPHALT SURFACES:
- ENGINEERING & DESIGN, LLC. IF THIS CONDITION CANNOT BE MET. 6. 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 SUMP PUMPS ARE UTILIZED. ALL DISCHARGES SHALL BE CONNECTED DIRECTLY TO THE PUBLIC STORM SEWER SYSTEM WITH APPROVAL

- I. THE CONTRACTOR SHALL MAINTAIN A MAXIMUM 2.00% SLOPE IN
- ADA PARKING AREAS IN ACCORDANCE WITH STATE GUIDELINES.
- 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

- 7. A SLIP RESISTANT SURFACE SHALL BE CONSTRUCTED ALONG THE ACCESSIBLE PATH AND WITHIN ADA PARKING AREAS.
- 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 I UNIT
- HORIZONTAL SEPARATION) ALONG THE ACCESSIBLE PATH SHALL NOT ALLOW PASSAGE OF A SPHERE GREATER THAN ½ INCH.



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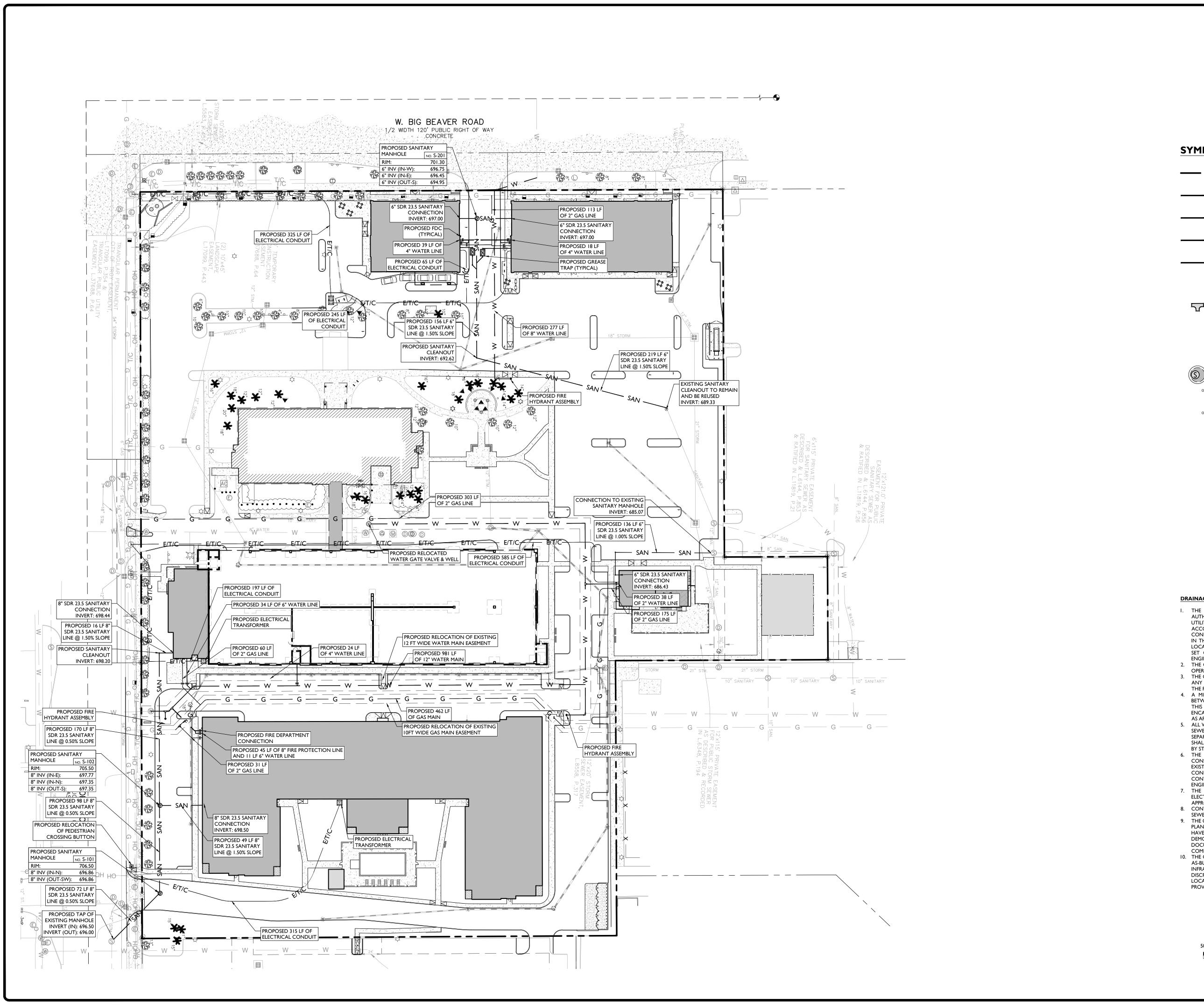
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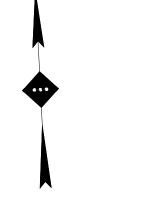


I" = 50' PROJECT ID: M-19301

**GRADING & STORMWATER MANAGEMENT PLAN** 

**DRAWING:** 

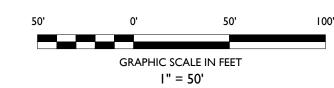




# **SYMBOL DESCRIPTION** CONDOMINIUM LINE PROPOSED SANITARY LATERAL PROPOSED ELECTRICAL/DATA CONDUITS PROPOSED GAS LINE PROPOSED VALVE PROPOSED WATER TEE / BEND PROPOSED FIRE HYDRANT PROPOSED FIRE DIRECT CONNECTION PROPOSED SANITARY MANHOLE / CLEANOUT PROPOSED TRANSFORMER ON

## **DRAINAGE AND UTILITY NOTES**

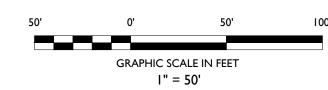
- OPERATION ALL UTILITIES NOT DESIGNATED TO BE REMOVED. ANY EXISTING UTILITY IDENTIFIED TO REMAIN WITHIN THE LIMITS OF
- 5. ALL WATER LINES SHALL BE VERTICALLY SEPARATED ABOVE SANITARY SEWER LINES BY A MINIMUM DISTANCE OF 18 INCHES. IF THIS SEPARATION CANNOT BE PROVIDED, A CONCRETE ENCASEMENT SHALL BE UTILIZED FOR THE SANITARY SEWER SERVICE AS APPROVED BY STONEFIELD ENGINEERING & DESIGN, LLC.
- EXISTING UTILITY CROSSINGS FOR WATER AND SANITARY SEWER CONNECTION IMPROVEMENTS. SHOULD A CONFLICT EXIST, THE ENGINEERING & DESIGN, LLC. IN WRITING.
- ELECTRIC AND TELECOMMUNICATION CONNECTIONS WITH THE APPROPRIATE GOVERNING AUTHORITY.
- SEWER AT THE LOWEST INVERT AND WORK UP-GRADIENT. 9. 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
- 10. 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.



PROPOSED DOMESTIC WATER SERVICE

CONCRETE PAD WITH BOLLARDS

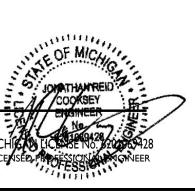
- I. THE CONTRACTOR IS REQUIRED TO CALL THE APPROPRIATE AUTHORITY FOR NOTICE OF CONSTRUCTION/EXCAVATION AND UTILITY MARK OUT PRIOR TO THE START OF CONSTRUCTION IN ACCORDANCE WITH STATE LAW. CONTRACTOR IS REQUIRED TO CONFIRM THE HORIZONTAL AND VERTICAL LOCATION OF UTILITIES IN THE FIELD. SHOULD A DISCREPANCY 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.
- 2. THE CONTRACTOR IS RESPONSIBLE TO PROTECT AND MAINTAIN IN 3. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE TO
- THE PROPOSED WORK DURING CONSTRUCTION. 4. 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 ENCASEMENT SHALL BE UTILIZED FOR THE SANITARY SEWER SERVICE AS APPROVED BY STONEFIELD ENGINEERING & DESIGN, LLC.
- 6. THE CONTRACTOR TO PERFORM A TEST PIT PRIOR TO CONSTRUCTION (RECOMMEND 30 DAYS PRIOR) AT LOCATIONS OF
- CONTRACTOR SHALL IMMEDIATELY NOTIFY STONEFIELD 7. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING GAS,
- 8. CONTRACTOR SHALL START CONSTRUCTION OF ANY GRAVITY
- COMPLETION OF WORK.



NEFIELD  19 & design  1, NJ · New York, NY	_ 0_	12/02/2022	_
٩	01		
		06/01/2022	
	6	02/15/2022	
	8	12/08/2021	
	7	02/08/2021	
	9	10/14/2020	
	2	10/08/2020	
STR	4	10/02/2020	
	3	07/02/2020	
	ISSUE	DATE	

**a** 5

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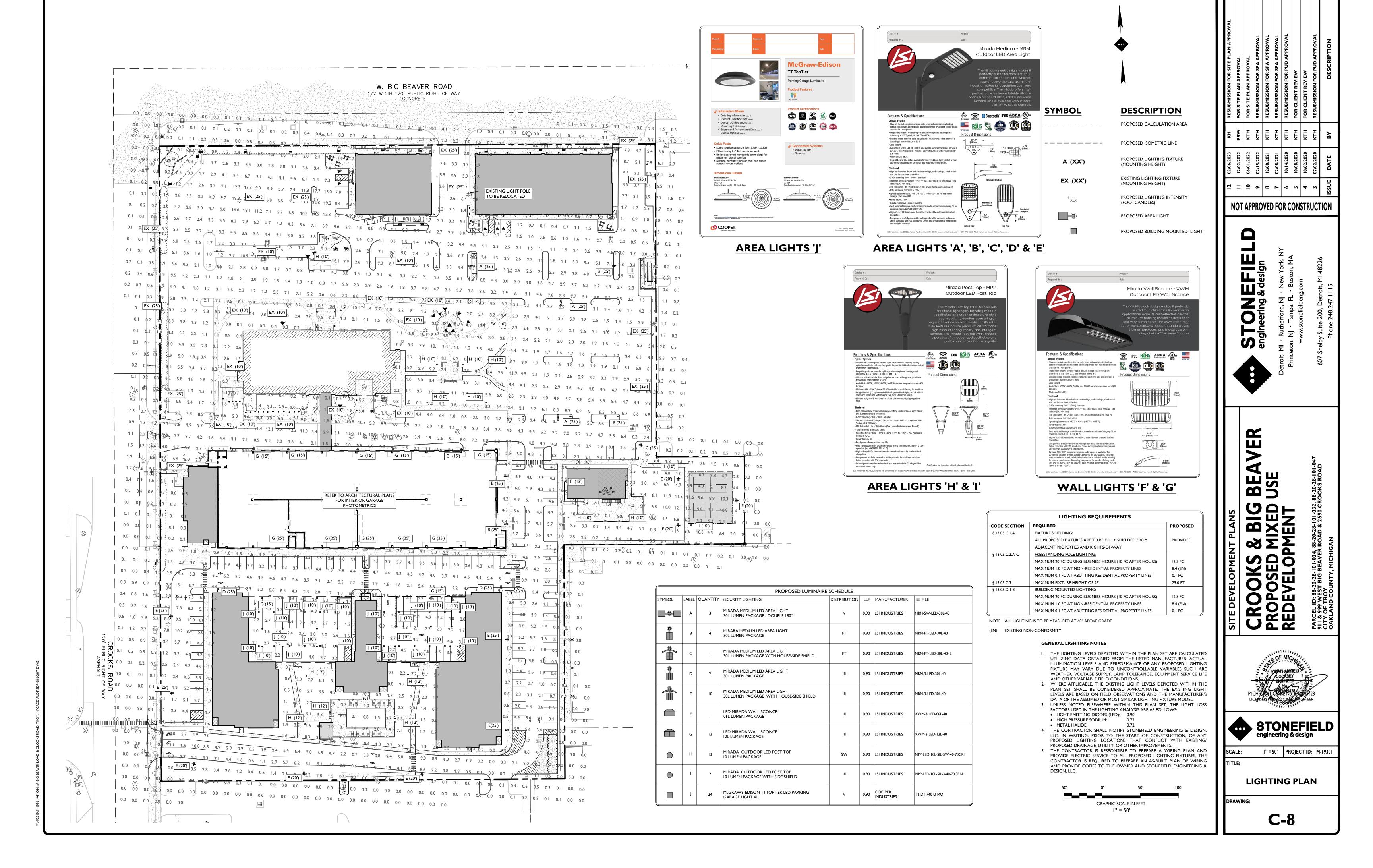


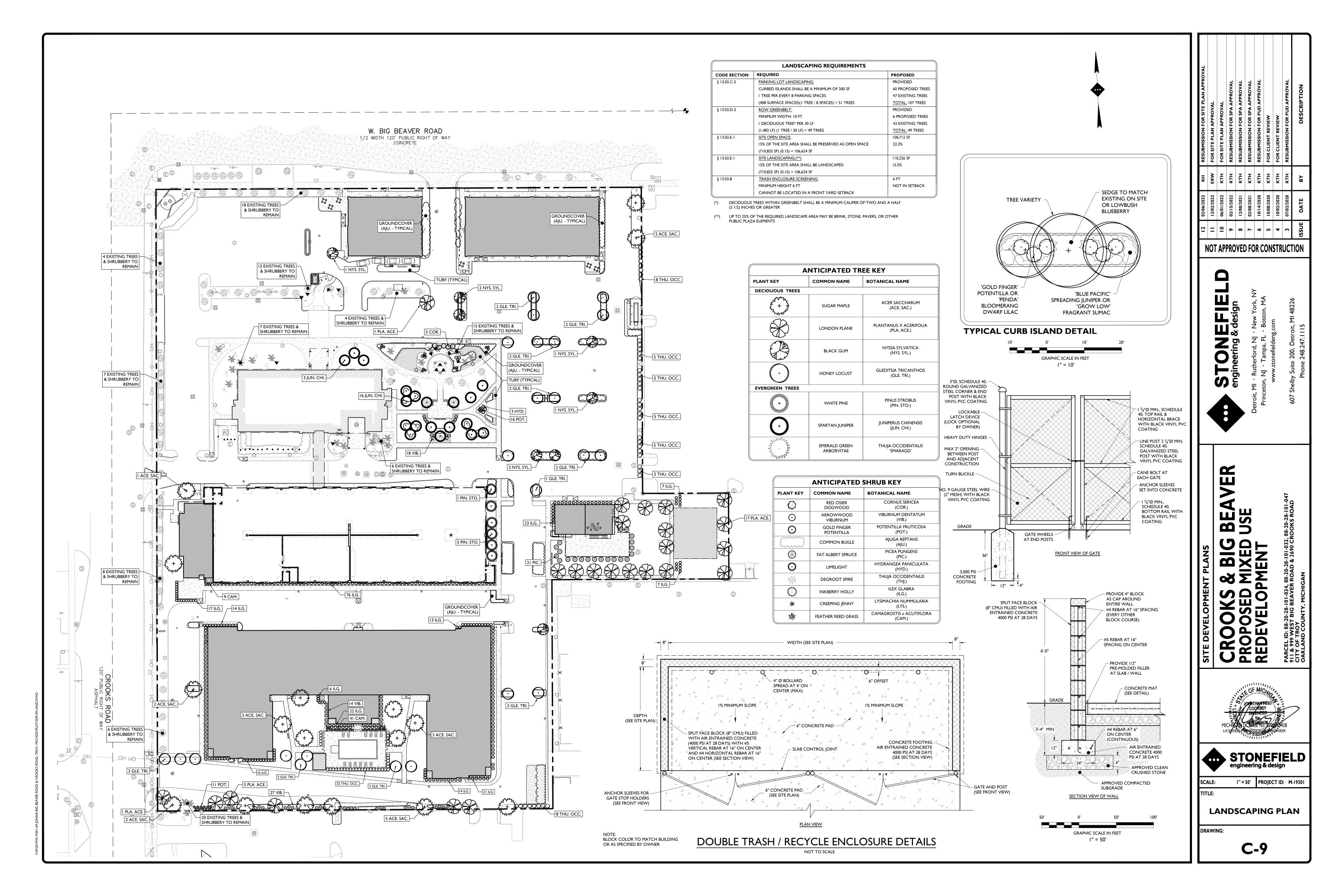
I" = 50' PROJECT ID: M-19301

**UTILITY PLAN** 

**DRAWING:** 

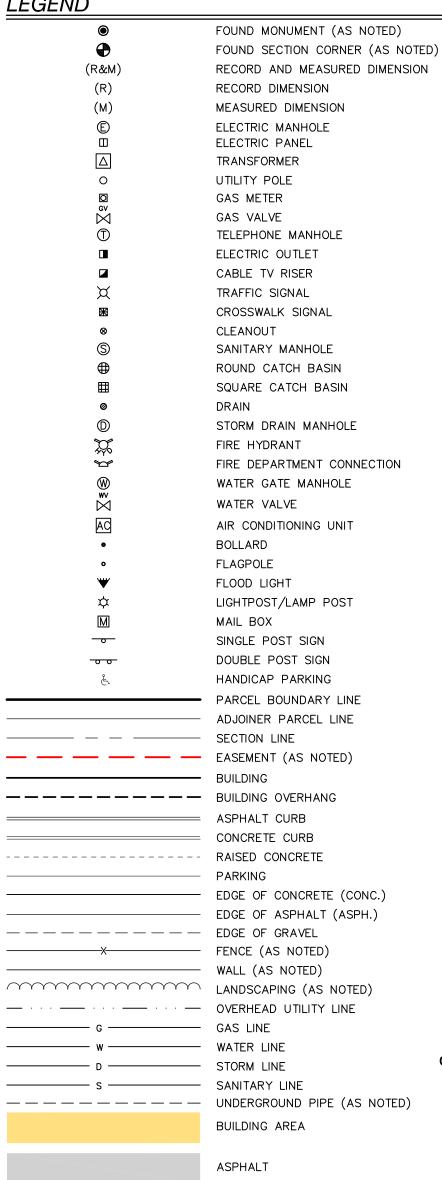
**C-7** 





UNDERGROUND UTILITIES OTHER THAN THE STRUCTURE INVENTORY SHOWN

## LEGEND



TOGETHER WITH THE FOLLOWING EASEMENTS: AND A TWELVE (12) FOOT PRIVATE EASEMENT FOR PUBLIC STORM SEWER. BEING A PART OF THE NORTHWEST 1/4 OF SECTION 28, TOWN 2 NORTH A SIX (6) FOOT PRIVATE EASEMENT FOR SANITARY SEWER, BEING A PART OF RANGE 11 EAST, CITY OF TROY, OAKLAND COUNTY, MICHIGAN, BEING MORE PARTICULARLY DESCRIBED AS: BEGINNING AT A POINT DISTANT SOUTH 2 THEE NORTHWEST 1/4 OF SECTION 28, TOWN 2 NORTH, RANGE 11 EAST, CITY DEGREES 25 MINUTES 41 SECONDS EAST 60 FEET AND NORTH 87 DEGREES 2 OF TROY, OAKLAND COUNTY, MICHIGAN, BEING MORE PARTICULARLY DESCRIBED AS: BEGINNING AT A POINT DISTANT SOUTH 02 DEGREES 25 MINUTES 41 MINUTES 55 SECONDS EAST 470 FEET AND SOUTH 2 DEGREES 31 MINUTES 5 SECONDS EAST 60.00 FEET, NORTH 87 DEGREES 28 MINUTES 55 SECONDS SECONDS EAST 452 FEET AND NORTH 87 DEGREES 28 MINUTES 55 SECONDS EAST 710 FEET AND SOUTH 02 DEGREES 31 MINUTES 05 SECONDS EAST EAST 228 FEET FROM THE NORTHWEST CORNER OF SECTION 28; THENCE 446.00 FFFT FROM THE NORTHWEST CORNER OF SAID SECTION 28: THENCE NORTH 87 DEGREES 28 MINUTES 55 SECONDS EAST 12 FEET: THENCE SOUTH : NORTH 87 DEGREES 28 MINUTES 55 SECONDS FAST 115 00 FEET. THENCE DEGREES 31 MINUTES 5 SECONDS EAST 115 FEET; THENCE SOUTH 87 DEGREES 28 MINUTES 55 SECONDS WEST 12 FEET; THENCE NORTH 2 DEGREES 31 SOUTH 02 DEGREES 31 MINUTES 05 SECONDS EAST 6.00 FEET: THENCE SOUTH MINUTES 5 SECONDS WEST 115 FEET TO THE POINT OF BEGINNING IN FAVOR OF 87 DEGREES 28 MINUTES 55 SECONDS WEST 115.00 FEET; THENCE NORTH 02 DEGREES 31 MINUTES 05 SECONDS WEST 6.00 FEET TO THE POINT OF AND A TWELVE (12) FOOT PRIVATE EASEMENT FOR PUBLIC SANITARY SEWER, A PART OF THE NORTHWEST 1/4 OF SECTION 28, TOWN 2 NORTH, RANGE 11 EAST, CITY OF TROY, OAKLAND COUNTY, MICHIGAN, BEING MORE PARTICULARLY BEING A PART OF THE NORTHWEST 1/4 OF SECTION 28, TOWN 2 NORTH,

DESCRIBED AS BEGINNING AT A POINT ON THE EAST LINE OF CROOKS ROAD RANGE 11 EAST, CITY OF TROY, OAKLAND COUNTY, MICHIGAN, BEING MORE PARTICULARLY DESCRIBED AS: BEGINNING AT A POINT DISTANT SOUTH 02 (120 FEET WIDE) DISTANT SOUTH 02 DEGREES 25 MINUTES 41 SECONDS EAST DEGREES 25 MINUTES 41 SECONDS EAST 60.00 FEET, NORTH 87 DEGREES 28

MINUTES 55 SECONDS EAST 710.00 FEET, SOUTH 02 DEGREES 31 MINUTES 05 SECONDS EAST 446.00 FEET AND NORTH 87 DEGREES 28 MINUTES 55 SECONDS EAST 115.00 FEET FROM THE NORTHWEST CORNER OF SAID SECTION 28: THENCE NORTH 87 DEGREES 28 MINUTES 55 SECONDS FAST 12:00 FEET THENCE SOUTH 02 DEGREES 21 MINUTES 05 SECONDS EAST 121.00 FEET: THENCE SOUTH 87 DEGREES 28 MINUTES 55 SECONDS WEST 12.00 FEET; THENCE 02 DEGREES 31 MINUTES 05 SECONDS WEST 121.00 FEET TO THE JENCLOSURE **PARKING** HANDICAP PARKING = 19 STALLS STANDARD PARKING = 810 STALLS 12'x121.0' PRIVATE BASIS OF BEARING EASEMENT FOR PUBLIC SOUTH 02°25'41" EAST, BEING THE WEST

PLANTER

LINE OF SECTION 28, AS SHOWN.

ASPHALT

FOUND 1/2"

-REBAR W/

ILLEGIBLE CAP

**ASPHALT** 

CONSUMERS

POWER EASEMENT, L.6248, P.216 &

10' CONSUMPES

\_.10447\_\_<del>P.61</del>

42' EXCEPTION TO

HIGHWAY PURPOSES

& L.6029, P.776

POINT OF

PARCEL 2

STORM SEWER

FASEMENT

L.5583, P.451

TO PARCEL 1

S02°25'41"E(R&M

60.00'(R&M)

POINT OF

NORTHWEST

SECTION 28

COMMENCEMENT

PARCEL 2 FOR

HAND RAIL

BENCHMARK ;

CONSTRUCTION #1746 田

ASEMENT

.37688, P.64

ASEMEN

ASPHAL<sup>7</sup>

TRIANGULAR PERMANENT 54" STORM

EASEMENT, L.37688, P.64 S02'25'41"E(R&M)

400.00'(R&M)

626.91'(R&M)

CITY OF DIROY EASEMENT.

TRIANGULAR PUBLIC UTILITY

–L.17099. P.354 &

PARCEL ID:

20-28-101-068

OWNER OF RECORD:

BOSTICK 801 LLC

S02'31'05"E(R&M) 452.00'(R&M)

PLANTER

PARCEL ID

20-28-101-032

4-STORY

COMMERCIAL

PARCEL

PARCEL ID

COMMERCIAL

COLUMN

N87°34'19"E(R&M)

POINT OF BEGINNING

PARCEL 1 & EXCEPTION-

60.00'(R&M)

TO PARCEL 1

DEGREES 31 MINUTES 05 SECONDS EAST 306.70 FEET: THENCE SOUTH 87 DEGREES 23 MINUTES 39 SECONDS WEST 529.37 FEET TO A POINT ON THE FAST LINE OF CROOKS ROAD. THENCE ALONG SAID FAST LINE OF CROOKS SANITARY SEWER AS FOUND SCRIBED & L.6144, P.856 PK NAIL & RATIFIED IN L.11819, P.26

ROAD NORTH 02 DEGREES 25 MINUTES 41 SECONDS WEST 307.51 FEET TO ASPHALT 810" SAN

6'x115' PRIVATE EASEMENT FOR SANITARY SEWER AS DESCRIBED & L.6144, P.853 & RATIFIED IN L.11819, P.21 FOUND 1/2" REBAR W/

DEGREES 28 MINUTES 55 SECONDS EAST 528.89 FEET; THENCE SOUTH 02

12'x122.89' STORM

SEWER EASEMENT,-

MICHIGAN' BELL

L.8561, P.278

NO2-25'41"W(R&M)STM. MH

LIES WITHIN CROOKS ROAD

RIGHT OF WAY AS SHOWN

N02°25'41"W(R&M)

27' DECLARATION OF-

TAKING OF CROOKS ROAD

FRONTAGE, L.37688, P.64

& EXCEPTION TO PARCEL

1, AS DESCRIBED

CONCRETE WANT

#14051 /18" STM.226.95'(R&M) #14055

33.00'(R&M) PORTION OF PARCEL 1

\\\[ \rightarrow \\ \rightarrow \rightarrow \\ \rig

N87°34'19"E(R&M)

EASEMENT,

L.8558, P.315

626.91 FEET AND NORTH 87 DEGREES 34 MINUTES 19 SECONDS EAST 60.00 FEET FROM THE NORTHWEST CORNER OF SAID SECTION 28; THENCE NORTH 87 COUNTY RECORDS (AFFECTS PARCELS 1, 2 AND 3). (BLANKET MASTER DRAIN RECORDED IN LIBER 6141. PAGE 542. OAKLAND

12. SANITARY SEWER EASEMENT RECORDED IN LIBER 6144, PAGE 853 AND RATIFICATION OF EASEMENT RECORDED IN LIBER 11819, PAGE 21, OAKLAND COUNTY RECORDS (AFFECTS PARCEL 2). (AS SHOWN) 13. EASEMENT GRANTED TO THE CITY OF TROY FOR CONSTRUCTION, OPERATION AND MAINTENANCE OF SANITARY SEWER RECORDED IN LIBER 6144, PAGE 856 AND RATIFICATION OF EASEMENT RECORDED IN LIBER 11819, PAGE 26, OAKLAND COUNTY RECORDS (AFFECTS PARCEL 2). (AS SHOWN) 14. EASEMENT GRANTED TO CONSUMERS POWER COMPANY FOR CONSTRUCTION, OPERATION AND MAINTENANCE OF GAS MAINS

TLE REPORT NOTE

PERFORMED BY THE CERTIFYING SURVEYOR.

NOT CROSS NOR ABUT SUBJECT PARCELS)

(AS SHOWN)

SUBJECT PARCELS)

AS DESCRIBED & RECORDED

PARCEL ID

20-28-101-065

OWNER OF RECORD

CHAINLINK

S02:31'05"E(R&M) 306.70'(R&M)

≚-SEWER EASEMENT

WATER MAIN

FEASEMENT

PARCEL 3

27.00'(R&M)

60.00'(R&M)

S87°28'55"W(R&M)

N87'34'19"E(R&M)

CROOKS ROAD

120' PUBLIC RIGHT OF WAY

L.8558, P.312

PARCEL ID:

EASEMENT

COURT

IN L.6348, P.194

ONLY THOSE EXCEPTIONS CONTAINED WITHIN THE STEWART TITLE

CONSIDERED FOR THIS SURVEY. NO OTHER RECORDS RESEARCH WAS

8. EASEMENT GRANTED TO THE OAKLAND COUNTY DEPARTMENT OF

PUBLIC WORKS FOR CONSTRUCTION, OPERATION AND MAINTENANCE

OAKLAND COUNTY RECORDS (AFFECTS PARCELS 1, 2 AND 3) (DOES

9. EASEMENT GRANTED TO THE CITY OF TROY FOR CONSTRUCTION, OPERATION AND MAINTENANCE OF STORM SEWER RECORDED IN LIBER

5583, PAGE 451, OAKLAND COUNTY RECORDS (AFFECTS PARCEL 2).

MATTERS CONTAINED IN RESTRICTIONS, COVENANTS AND AGREEMENTS

10. TERMS, PROVISIONS, COVENANTS, RESTRICTIONS AND OTHER

1. RIGHT OF WAY GRANTED TO THE MASTER DRAIN DRAINAGE

DISTRICT FOR CONSTRUCTION, OPERATION AND MAINTENANCE OF

COUNTY RECORDS (AFFECTS PARCELS 1, 2 AND 3), (ONE EASEMENT,

AS SHOWN; FOUR OTHER EASEMENTS DO NOT CROSS NOR ABUT

EASEMENT, SEE DOCUMENT FOR TERMS AND CONDITIONS)

RELATING TO LAND RECORDED IN LIBER 5614, PAGE 70, OAKLAND

GUARANTY COMPANY FILE No. 63-19650824-SCM, REVISION 4,

DATED SEPTEMBER 03, 2019, AND RELISTED BELOW WERE

OF SANITARY SEWER RECORDED IN LIBER 4609, PAGE 780.

RECORDED IN LIBER 6173, PAGE 516, OAKLAND COUNTY RECORDS (AFFECTS PARCEL 1). (AS SHOWN) 15. FASEMENT GRANTED TO CONSUMERS POWER COMPANY FOR CONSTRUCTION OPERATION AND MAINTENANCE OF GAS MAINS RECORDED IN LIBER 6248, PAGE 216, OAKLAND COUNTY RECORDS (AFFECTS PARCEL 2) (AS SHOWN)

16. STORM SEWER EASEMENT GRANTED TO KIMBERLY SCOTT CORPORATION RECORDED IN LIBER 6348, PAGE 194, OAKLAND COUNTY RECORDS (AFFECTS PARCELS 1 AND 2). (AS SHOWN)

12'x115' PRIVATE EASEMENT FOR PUBLIC STORM SEWER

TERMS AND PROVISIONS CONTAINED WITHIN, AND EASEMENTS CREATED BY CROSS-ACCESS OR JOINT-DRIVE EASEMENT RECORDED IN LIBER 9386, PAGE 804, OAKLAND COUNTY RECORDS (AFFECTS PARCELS 4). (AS SHOWN)

PARCEL ID:

20-28-101-003

24' INGRESS & -

L.9386, P.<u>804</u>

TEGRESS EASEMENT,

PARCEL I

20-28-101-048

OWNER OF RECORD:

CONTINENTAL PLAZA

VENTURES LLC

SCHEDULE CONT. STORM CATCH BASIN #75073

RIM=704.71' INV. 12" N=699.33' INV. 6" S=701.16' STORM MANHOLE #75076 RIM=704.60' INV. 12" N=698.55' INV. 48" CHANNEL E/W B/STRUCTURE=697.81'

STORM MANHOLE #75081 RIM=705.48' INV. 12" N=700.83'

STORM MANHOLE #75092 RIM = 704.97'INV. 12" ESE=699.27' INV. 3" W=699.29'

STORM MANHOLE #75093 RIM = 704.83'INV. 12" N=699.48' INV. 12" S=699.28' INV. 12" SW=699.48' INV. 12" W=699.48'

STORM CATCH BASIN #75098 RIM = 704.73'SANITARY MANHOLE #75130 RIM = 705.37'INV. 16" N=692.52' INV. 8" W=692.92'

STORM CATCH BASIN #75157

RIM = 704.76'INV. 12" S=699.58' INV. 12" NW=699.61' SANITARY MANHOLE #75229 RIM=704.67' INV. 16" N=690.72'

INV. 16" S=690.82'

INV. 12" W=694.62' INV. 18" NE=692.66' STORM MANHOLE #13141 INV. 12" W=693.91' RIM = 700.07'INV. 12" N=692.97' INV. 21" S=692.87' INV. 18" W=692.92' NO OTHER VISIBLE PIPES

STORM CATCH BASIN #13166 RIM=699.59'

INV. 12" E=695.69' STORM MANHOLE #13183 RIM = 701.21'INV. 18" W=693.31 INV. 18" S=698.11' INV. 12" N=697.41' INV. 18" E=694.26'

STORM MANHOLE #13184 RIM = 702.04'INV. 12" W=695.94' INV. 15" NW=696.54' INV. 12" NE=697.79' INV. 18" E=693.69' STORM CATCH BASIN #13185

RIM=700.18' INV. 12" E=695.88' STORM CATCH BASIN #13256 RIM = 696.73'INV. 12" W=692.63'

STORM MANHOLE #13296 RIM = 698.31'INV. 24" N=691.31" INV. 30" S=691.21' INV. 12" E=692.31' INV. 12" W=693.61' STORM MANHOLE #13319

INV. 21" E=691.46' INV. 21" W=691.41' INV. 18" SW=691.91

SURVEYOR'S CERTIFICATION

RIM=699.76'

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDED ITEMS 2, 4, 7A, 8, AND 9 OF TABLE

ANTHONY T. SYCKO, JR., P.S. PROFESSIONAL SURVEYOR MICHIGAN LICENSE NO. 47976 22556 GRATIOT AVE., EASTPOINTE, MI 48021

TSycko@kemtec-survey.com



GRAPHIC SCALE

1 inch = 50 ft.

( IN FEET

RIM=699.11

RIM=698.24'

RIM=700.50'

RIM = 704.12'

RIM = 703.78'

RIM = 704.39'

RIM=701.14'

RIM=705.00'

RIM = 705.38'

RIM=706.95'

RIM = 703.76'

RIM=701.99'

RIM = 699.32'

RIM = 698.46'

INV. 12" NE=695.36'

INV. 12" SE=694.24'

INV. 18" N=697.80'

INV. 18" NE=699.27'

INV. 18" W=699.37'

INV. 18" W=699.37'

INV. 12" W=698.68'

INV. 18" N=698.84'

INV. 12" W=699.04"

INV. 12" E=695.59'

INV. 12" W=696.34'

INV. 54" N=696.90'

INV. 48" W=697.00'

INV. 12" S=700.05'

INV. 12" SE=700.05'

INV. 12" NW=700.60'

INV. 12" SE=701.18'

INV. 8" S=696.00'

INV. 12" E=698.66'

INV. 12" E=696.79'

INV. 12" W=697.89'

INV. 12" E=694.42'

STORM MANHOLE #80242

SANITARY MANHOLE #80243

STORM CATCH BASIN #80268

STORM CATCH BASIN #80314

STORM CATCH BASIN #86156

STORM CATCH BASIN #86182

STORM CATCH BASIN #13926

STORM CATCH BASIN #13939

STORM MANHOLE #14051

STORM CATCH BASIN #14052

STORM MANHOLE #14055

STORM CATCH BASIN #80026

STORM CATCH BASIN #80240

INV. 12" NW (T/PIPE)=701.60

STORM MANHOLE #80241

7

MANHOLE SCHEDULE STORM CATCH BASIN #11227 INV. 12" NW=694.31" STORM CATCH BASIN #13920 RIM = 698.29'

INV. 21" S=691.94' INV. 18" W=692.09' INV. 12" NW=694.09" STORM CATCH BASIN #11306 RIM=701.57'

INV. 12" N=697.22'

INV. 12" W=693.93'

INV. 12" N=697.91'

INV. 12" W=697.86'

INV. 12" S=698.12'

STORM MANHOLE #12128

RIM = 700.86

RIM = 701.57'

STORM CATCH BASIN #11745

STORM CATCH BASIN #11746

22. WATER MAIN EASEMENT GRANTED TO THE CITY OF TROY RECORDED IN LIBER 8558, PAGE 310, OAKLAND COUNTY RECORDS INV. 15" SE=697.17' STORM CATCH BASIN #11484 23. EASEMENT FOR GAS PIPELINE GRANTED TO THE CITY OF TROY RIM = 698.03RECORDED IN LIBER 8558, PAGE 312, OAKLAND COUNTY RECORDS INV. 18" E=692.43'

(AFFECTS PARCEL 3). (AS SHOWN) 24. STORM DRAIN EASEMENT GRANTED TO THE CITY OF TROY RECORDED IN LIBER 8558, PAGE 315, OAKLAND COUNTY RECORDS (AFFECTS PARCEL 3). (AS SHOWN)

25. SANITARY SEWER EASEMENT GRANTED TO THE CITY OF TROY RECORDED IN LIBER 8558, PAGE 317, OAKLAND COUNTY RECORDS (AFFECTS PARCEL 3). (AS SHOWN)

7. EASEMENT GRANTED TO CONSUMERS POWER COMPANY FOR

DNSTRUCTION, OPERATION AND MAINTENANCE OF GAS MAINS

(AFFECTS PARCEL 2). (AS SHOWN)

(AFFECTS PARCEL 1). (AS SHOWN)

(AS SHOWN)

AND 2). (AS SHOWN)

DUMPSTER

**ENCLOSURE** 

(AFFECTS PARCEL 3). (AS SHOWN)

RECORDED IN LIBER 10447, PAGE 61, OAKLAND COUNTY RECORDS

18. PERMANENT EASEMENT GRANTED TO THE CITY OF TROY FOR

RECORDED IN LIBER 17099, PAGE 354, OAKLAND COUNTY RECORDS

TERMS AND PROVISIONS CONTAINED IN VOLUNTARY AGREEMENT

FOR LANDSCAPE INSTALLATION AND MAINTENANCE RECORDED IN LIBER

17099, PAGE 443, OAKLAND COUNTY RECORDS (AFFECTS PARCELS 1).

20. TERMS, CONDITIONS, PROVISIONS AND STIPULATIONS CONTAINED

PARTIAL CONSENT JUDGMENT ENTERED DECEMBER 29, 1994 IN

IN DECLARATION OF TAKING RECORDED IN LIBER 37688, PAGE 64 AND

OAKLAND COUNTY CIRCUIT COURT CASE NO. 94-480120-CC ENTITLED,

"CITY OF TROY, A MICHIGAN MUNICIPAL CORPORATION, PLAINTIFF VS.

KELLY PROPERTIES, INC., A MICHIGAN CORPORATION; ANDRIES-BUTLER

MASTIN DRAIN DRAINAGE DISTRICT, DEFENDANTS" (AFFECTS PARCELS 1

21. EASEMENT GRANTED TO THE CITY OF TROY FOR CONSTRUCTION,

OPERATION AND MAINTENANCE OF WATERMAIN RECORDED IN LIBER

6279, PAGE 509, OAKLAND COUNTY RECORDS (AFFECTS PARCEL 3).

PROPERTIES, A MICHIGAN REGISTERED CO-PARTNERSHIP; AND THE

CONSTRUCTION. OPERATION AND MAINTENANCE OF SIDEWALK

26. UNDERGROUND EASEMENT GRANTED TO THE DETROIT EDISON COMPANY AND MICHIGAN BELL TELEPHONE COMPANY FOR CONSTRUCTION, OPERATION AND MAINTENANCE OF UTILITY LINE AND COMMUNICATIONS FACILITIES RECORDED IN LIBER 8561 PAGE 278 OAKLAND COUNTY RECORDS. (AS SHOWN. LIBER 8561, PAGE 279 APPEARS TO BE A DIFFERENT DOCUMENT THAT CONVEYS ALL OF PARCEL 3 AND ADDITIONAL LAND TO THE SOUTHEAST)

RIM=703.87' INV. 54" N=697.07' INV. 54" S=696.57' STORM CATCH BASIN #12139 RIM = 703.30'INV. 12" W=698.95'

STORM CATCH BASIN #12263 RIM=704.85' RIM = 699.96INV. 12" E=695.06' STORM CATCH BASIN #12388 RIM = 698.68'INV. 12" SE=694.53'

STORM CATCH BASIN #12841 RIM=697.84' INV. 21" N=691.94' INV. 24" S=691.94' SANITARY MANHOLE #12842

RIM=699.99' INV. 12" S=688.19' INV. 12" E=688.14'

SANITARY MANHOLE #12843 RIM=700.48' INV. 12" S=689.58 INV. 12" W=689.88' INV. 12" NW=689.88'

INV. 8" E=694.48' INV. 8" NW=694.28' STORM CATCH BASIN #13138 RIM = 697.86INV. 12" W=694.96'

STORM MANHOLE #13140 RIM = 699.15'INV. 12" N=693.20' INV. 12" S=693.15' INV. 12" E=693.20'

STORM CATCH BASIN #86293 RIM = 697.90'INV. 12" E=693.85'

STORM MANHOLE #86488 RIM=698.85' INV. 21" E=691.65' INV. 21" W=691.65' SANITARY MANHOLE #86965 RIM=698.06'

INV. 12" W=684.56' INV. 8" N=684.61' INV. 8" S=684.46' NO OTHER VISIBLE PIPES STORM CATCH BASIN #87022 RIM=705.96' INV. 12" SW=700.81'

STORM MANHOLE #87147 RIM = 697.74'INV. 30" N=691.19" INV. 21" E=689.94' INV. 21" W=689.79" SANITARY MANHOLE #87153

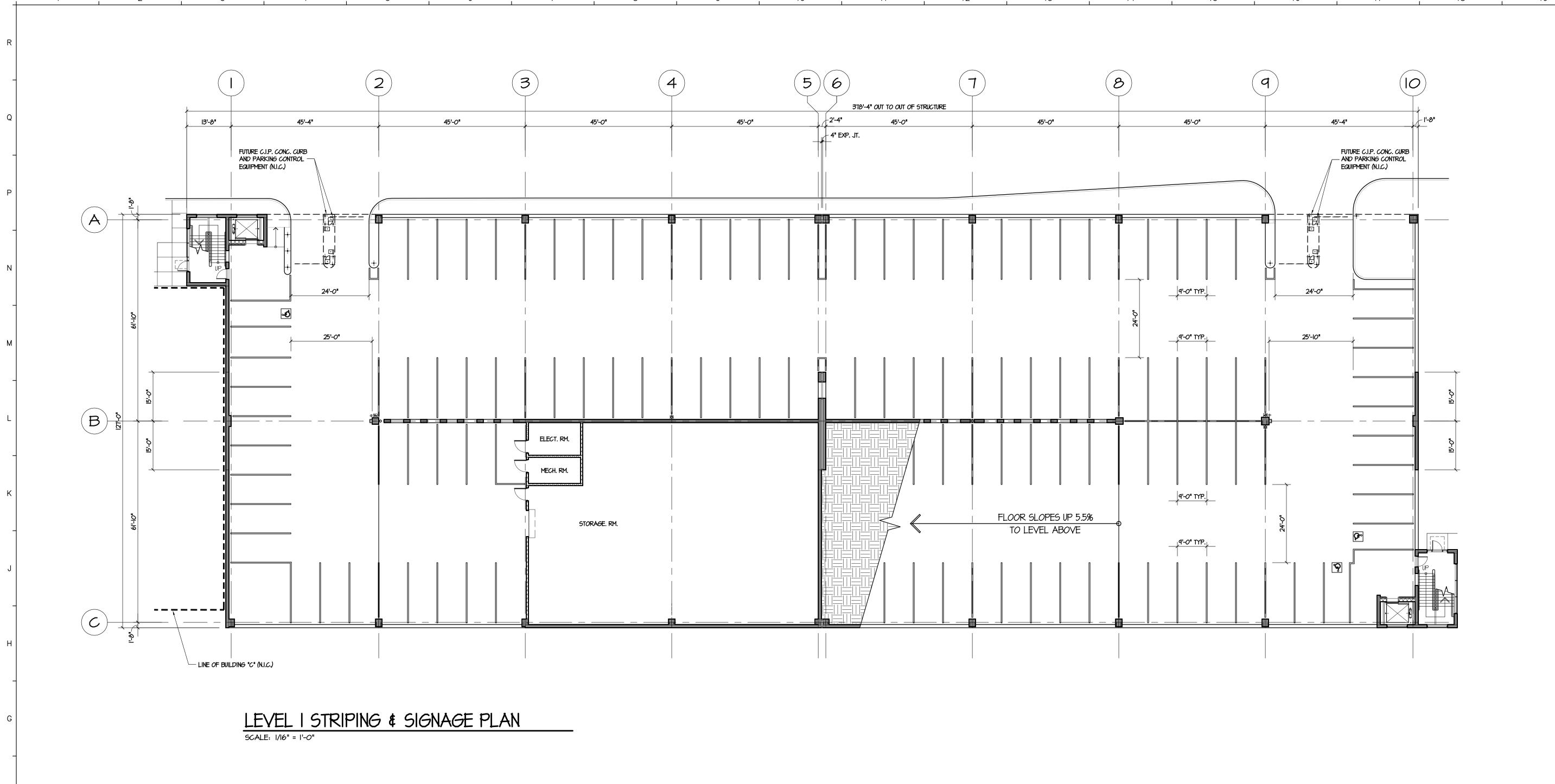
RIM=696.47' INV. 10" N=684.52 INV. 10" S=684.17' INV. 10" E=683.97' INV. 10" W=685.07' SANITARY MANHOLE #87159

RIM=694.79' INV. 8" N=683.74' INV. 10" E=683.39' INV. 10" W=683.44"

TO A.F. JONNA; STEWART TITLE GUARANTY COMPANY; AND ATA NATIONAL TITLE

A, THEREOF. THE FIELD WORK WAS COMPLETED ON DECEMBER 05, 2019.

1 OF 1 SHEETS



CAR COUNT SUMMARY BARRIER FREE LEVEL STANDARD 120 150 150 129 552

# **KELLY PARKING** STRUCTURE

## RICH & ASSOCIATES

PARKING CONSULTANTS ARCHITECTS · ENGINEERS · PLANNERS 26877 NORTHWESTERN HWY. SUITE 208 SOUTHFIELD, MI. 48033 **SOUTHFIELD, MI. LUTZ, FL.** (248) 353-5080 (813) 949-9860

WWW.RICHASSOC.COM

ISSUED FOR: 04-19-2022 100% SCHEMATIC DESIGN Sheet Title:

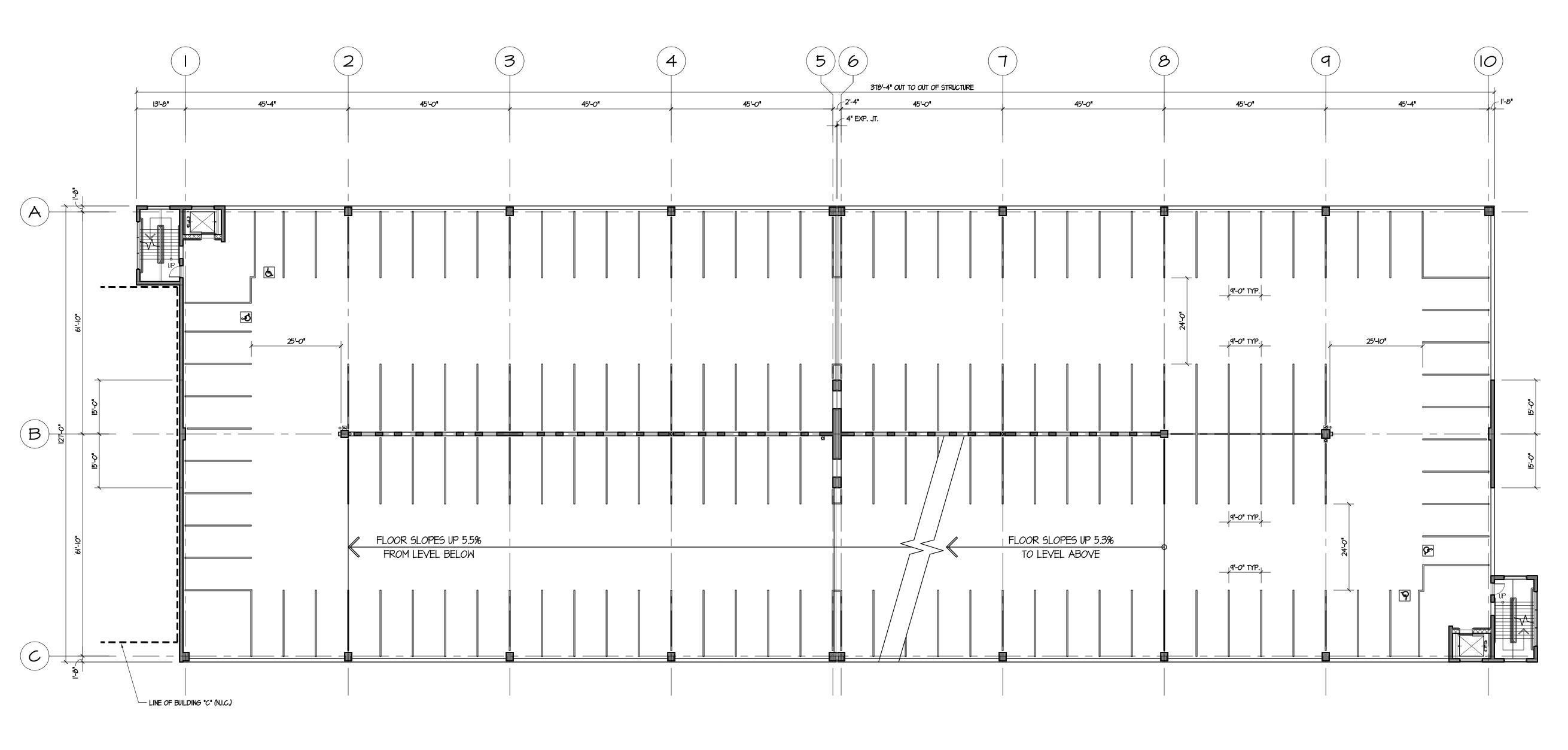
LEVEL 1 STRIPING + SIGNAGE PLAN

Drawn By	RTW	Detail
Checked By	RMK	Number
File Name	2225A-2_I	Detail Sheet
Plot Date		Sneet

All matter contained hereon, including drawings, written matter, ideas or conceptions, are the creation of Rich and Associates, Inc. for the specific project and shall remain the property of Rich and Associates, Inc.. No disclosure thereof in any form whatsoever shall be made to any person, firm, corporation, agency or organization, including news media without the written consent of Rich and Associates, Inc. except as required for the physical completion of the specific project.

Date Scale AS NOTED Last Rev.

Sheet Number:



LEVEL 2 STRIPING & SIGNAGE PLAN

SCALE: 1/16" = 1'-0"

 CAR COUNT SUMMARY

 LEVEL
 STANDARD
 BARRIER FREE
 TOTAL

 1
 120
 3
 123

 2
 146
 4
 150

 3
 146
 4
 150

 4
 127
 2
 129

 TOTAL
 539
 13
 552

# KELLY PARKING STRUCTURE

## RICH & ASSOCIATES

PARKING CONSULTANTS
ARCHITECTS · ENGINEERS · PLANNERS

26877 NORTHWESTERN HWY.
SUITE 208
SOUTHFIELD, MI. 48033

SOUTHFIELD, MI. LUTZ, FL.
(248) 353-5080 (813) 949-9860

WWW.RICHASSOC.COM

Date ISSUED FOR: By

O4-19-2022 IOO% SCHEMATIC DESIGN

Sheet Title:

LEVEL 2
STRIPING +
SIGNAGE PLAN

Drawn By	RTW	Datail
Checked By	RMK	Detail Number
File Name	2225A-2_2	Detail Sheet
Plot Date		Sileet

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File No 2225

Date

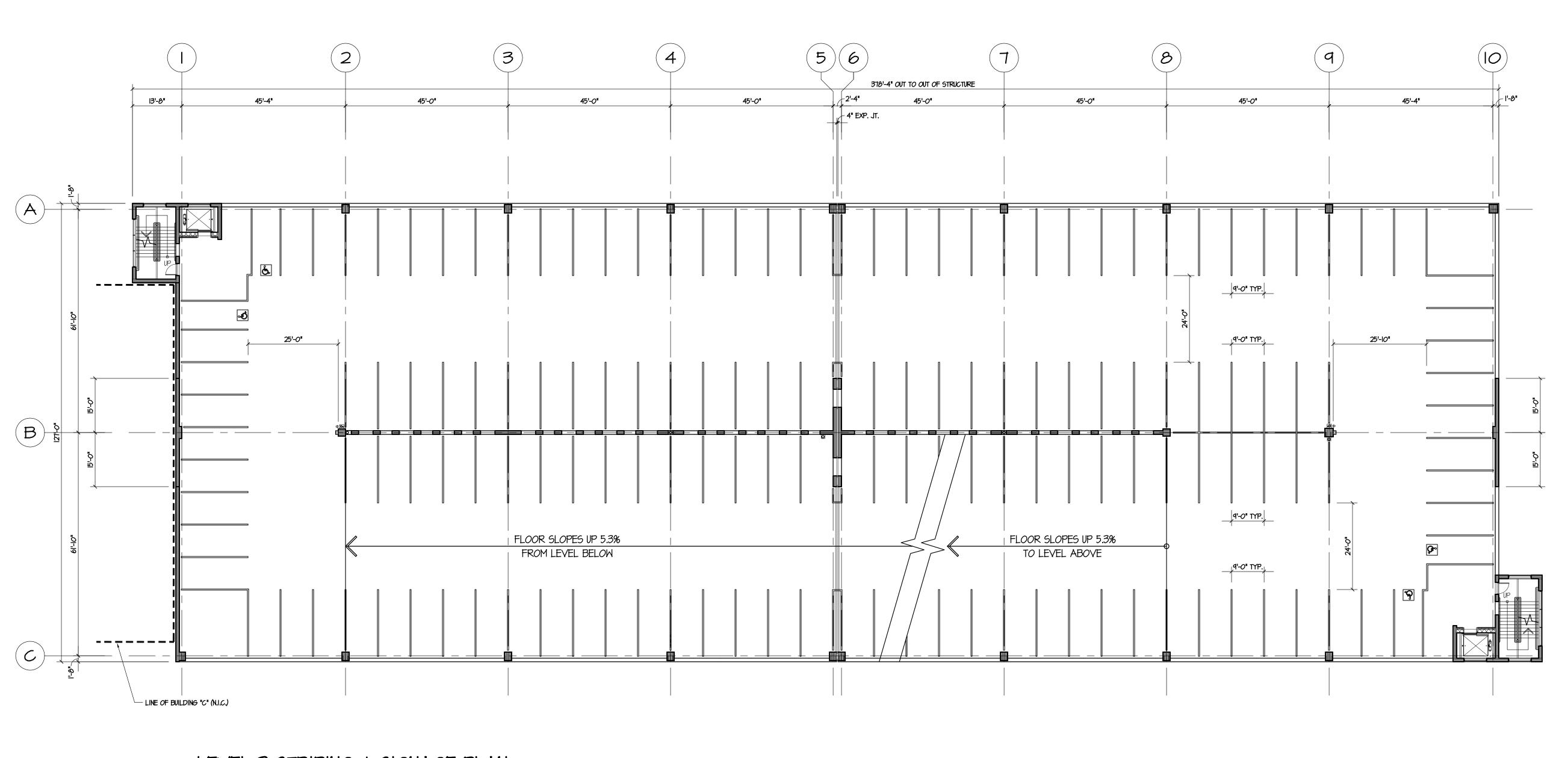
Scale

AS NOTED

Last Rev.

Last Rev.
Sheet Number:

A - 2.2



LEVEL 3 STRIPING & SIGNAGE PLAN SCALE: 1/16" = 1'-0"

> CAR COUNT SUMMARY BARRIER FREE LEVEL STANDARD 120 150 150 129 552

# **KELLY PARKING** STRUCTURE

## RICH & ASSOCIATES

PARKING CONSULTANTS ARCHITECTS · ENGINEERS · PLANNERS 26877 NORTHWESTERN HWY. SUITE 208 SOUTHFIELD, MI. 48033 **SOUTHFIELD, MI. LUTZ, FL.** (248) 353-5080 (813) 949-9860

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ISSUED FOR: 04-19-2022 100% SCHEMATIC DESIGN

LEVEL 3 STRIPING + SIGNAGE PALN

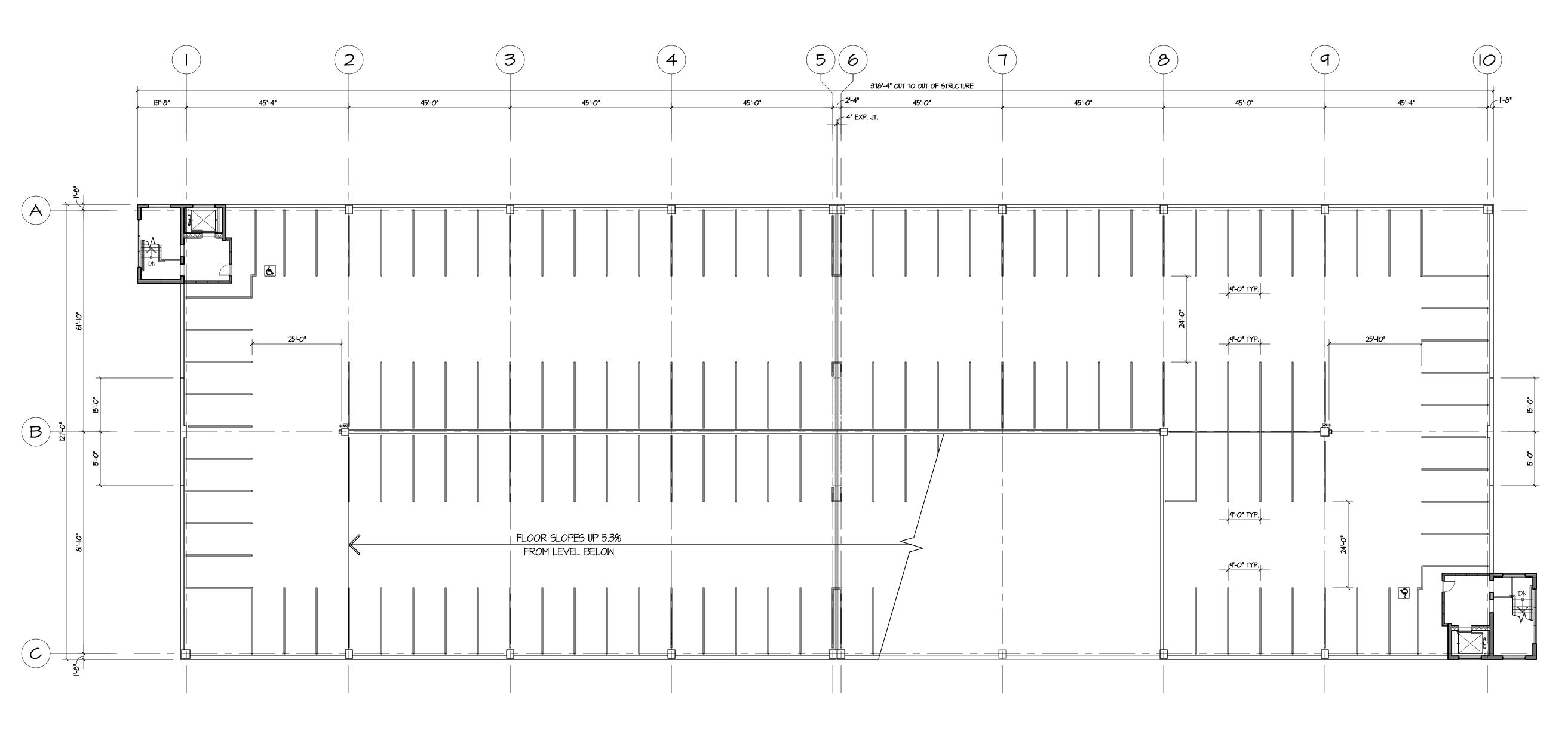
Drawn By	RTW
Checked By	RMK
File Name	2225A-2_3
Plot Date	

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Detail Number Detail Sheet

Date Scale AS NOTED Last Rev.

Sheet Number:



LEVEL 4 (ROOF) STRIPING & SIGNAGE PLAN

SCALE: 1/16" = 1'-0"

CAR COUNT SUMMARY BARRIER FREE LEVEL STANDARD 120 150 150 129 552

# **KELLY PARKING** STRUCTURE

## RICH & ASSOCIATES

PARKING CONSULTANTS ARCHITECTS · ENGINEERS · PLANNERS 26877 NORTHWESTERN HWY. SUITE 208 SOUTHFIELD, MI. 48033 **SOUTHFIELD, MI. LUTZ, FL.** (248) 353-5080 (813) 949-9860

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LEVEL 4 (ROOF) STRIPING + SIGNAGE PLAN

Drawn By	RTW	Datail
Checked By	RMK	Detail Number
File Name	2225A-2_4	Detail Sheet
Plot Date		Sileet

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Date AS NOTED Last Rev.

Sheet Number:

A - 2.4

# FIRST FLOOR

# SECOND FLOOR

	42 51 MH.	95.9 52.80 41.5 P2 P2 8 MH 3.5 8 MH : 38.5	• 11.7	° P1 °7.7 MH 6.8.5	· 3.9	P1 5.6 MH 5.86.5	•3.6	P1 5.5 MH 5.85.5 3.6	• P1 • 5.5 MH • 5.85.5 • 3.6	• P1 •5.5 MH •5.8.5 •3.6	P1 5.5 MH 5.85.5 3.6	° P1 °5.5 MH °5.86.5 °3.7	P1 5.8 MH 6.84.5 6.2	• P1 15.7MH 2	46 53.1 6 P2 428 15 MH 8	**************************************	10.2
•12.	7 33.1 P2.7		10.9							•4.2 •4.1 •3.4					34.40 PŽ3 •		•9.7
•11.				•7.0 •6.1 •	•4.0	•5.5 •5.5 • P1	•3.7	•5.4 •5.4 •3.7 •	•5.3 •5.4 •3.7 • • • • • • • • • • • • • • • • • • •	•5.3 •5.4 •3.7 • P1	•5.3 •5.4 •3.7 • • • • • • • • • • • • • • • • • • •	•5.3 •5.5 •3.8 • P1	•5.5 •6.0 •5.4 • P1	•10.7 •1 • P1			
										MH: 8.5 5.4 5.2 3.8							
•4.1	•4.5 •4.4	4.8 4.5	•4.2	•5.5 •5.2	•3.9	•5.1 •5.0	<b>9</b> 3.7	•5.1 •4.9 •3.7	•5.0 •4.9 •3.7	•5.0 •4.9 •3.7	•5.0 •4.9 •3.7	•5.0 •4.9 •3.3	•3.7 •3.8 •3.5	•4.5 •4	4.8 4.6	•5.0 •4.4	<b>2.</b> 5
										5.6 P1 5.4 3.5							
•5.8	MH • 8.5 5.3 3.8	• MH • 8.5 5.5 5.3	3.5	•5.8 P1•5.6 MH: 8.5	3.7	•5.8 P1•5.6 MH: 8.5	<b>3</b> .7	5.8 P1 5.6 3.7 MH: 8.5	•5.8 P1•5.6 3.7 MH: 8.5	•5.8 P1•5.6 3.7 MH: 8.5	•5.8 P1•5.6 •3.7 MH: 8.5	•5.7 P1•5.3 •3.3 MH: 8.5	MH: 8.5 • 5.0 4.9 • 3.5	MH: 5.1	: 8.5 5.0 <sup>9</sup> 3.5	MH: 8.5 4.9 4.5	1.9
•4.0	4.0 3.4	4.1 4.0	•3.6	•5.0 •5.0	•3.9	•5.1 •5.0	•3.9	•5.1 •5.0 •3.9	•5.1 •5.0 •3.9	•5.1 •5.0 •3.9	•5.1 •5.0 •3.9	•5.1 •4.9 •3.4	•3.8 •3.7 •3.1	3.8	3.7 3.1	3.6 3.2	•1.6
•5.6										5.5 5.5 3.8 P1 MH: 8.5							
•5.1	4.8 3.5	•4.9 •4.8	•3.6	5.0 4.9	•3.6	5.0 4.9	•3.6	•5.0 •4.9 •3.6	•5.0 •4.9 •3.6	•5.0 •4.9 •3.6	•5.0 •4.9 •3.6	•5.0 •4.8 •3.5	•4.9 •4.8 •3.5	4.9	4.7 3.4	•4.7 •4.2	<b>1</b> .7
										•4.5 •4.4 •3.4						-	
5.6	P15.0 3.4 MH: 8.5	5.1 P15.0 MH: 8.	*3.4 5	5.2 P15.0 MH: 8.5	*3.4	5.2 P15.0 MH: 8.5	•3.4	5.2 P1 5.0 3.4 MH: 8.5	5.2 P15.0 3.4 MH: 8.5	5.2 P1 5.0 3.4 MH: 8.5	5.2 P15.0 3.4 MH: 8.5	5.2 P15.0 3.4 MH: 8.5	5.1 P1 5.0 3.4 MH: 8.5	5.1 P1 4 MH:	4.9 <sup>9</sup> 3.3 8.5	5.0 P14.6 MH: 8.5	ō

	•2.0	• P1 •5.1 MH 5:58	.5• <sub>3.8</sub>	• P1 •5.5 MH3:6 <sup>8.5</sup> •3.8	• P1 •5.5 Mg: 6 <sup>8.5</sup> •3.8	• P1 •5.5 M\$:6 <sup>8.5</sup> •3.8	• P1 •5.5 Mg: 6 <sup>8.5</sup> •3.8	• P1 •5.5 MH: 6 <sup>8.5</sup> •3.8	• P1 •5.5 M4:5:58.5 •3.8	• P1 •5.5 M#3:6 <sup>8.5</sup> •3.8	• P1 •5.4 M#3:5 <sup>8.5</sup> •3.8	• P1 •5.4 M\$:5 <sup>8.5</sup> •3.8	• P1 •5.4 M#:5:5 <sup>8.5</sup> •3.8	• p1 MH: 8
•2.6	•2.6	•3.9 •4.3	•3.5	•4.2 •4.4 •3.6	•4.3 •4.4 •3.6	•4.3 •4.4 •3.6	•4.3 •4.4 •3.6	•4.3 •4.4 •3.6	4.3 4.4 3.6	•4.3 •4.4 •3.6	•4.2 •4.3 •3.6	•4.2 •4.3 •3.5	•4.2 •4.3 •3.6	•4.3
• 5.4 • P1	•3.5	•5.3  •5.4 • P1 • MH: 8	•3.8	•5.5 •5.5 •3.9 P1 MH: 8.5	•5.5 •5.5 •3.9 • P1 • MH: 8.5	•5.5 •5.5 •3.9 • P1 • MH· 8.5	•5.5 •5.5 •3.9 • P1 • MH• 8.5	•5.5 •5.5 •3.9 P1 MH• 8.5	5.5 5.5 3.9 P1	5.5 5.5 3.9 P1	5.5 5.5 3.8 P1	5.4 5.4 3.8 P1 MH: 8.5	5.4 5.4 3.8 P1	•5.8 • P1
													MH: 8.5 •4.7 •5.0 •3.5	
													*3.5 *3.6 *3.1	
5.5 • P1 MH: 8	3.6	5.1 5.2 • P1 MH: 8	3.6	5.7 Ph.2 3.9	5.8 PE.3 3.9 MH: 8.5	5.9 Pb.3 3.9 MII: 8.5	5.8 Pb.3 3.9 MII: 8.5	5.9 Pf.3 3.9 MII: 8.5	5.9 P.6.3 3.9 MH: 8.5	5.9 Pf. 3 3.9 MII: 8.5	5.8 Pb.0 5.1 MH: 8.5	5.6 5.3 3.5 P1 MH: 8.5	5.2 5.2 3.6 o P1 MH: 8.5 4.7 5.0 3.5	5.6 P1 MH: 8
													*3.4 *3.4 *3.0	
P1 MH: 8 5.8	.5	P1 MH: 8 5.2 5.6	.5	P1 MH: 8.5 5.3 5.6 3.9	P1 MH: 8.5 5.3 5.7 3.9	P1 MH: 8.5 5.3 5.7 3.9	P1 MH: 8.5 5.3 5.7 3.9	P1 MH: 8.5 5.3 5.7 3.9	P1 MH: 8.5 5.3 5.7 3.9	P1 MH: 8.5 5.3 5.7 3.9	P1 MH: 8.5 5.3 5.6 3.8	P1 MH: 8.5 5.2 5.5 3.7	5.1 5.2 3.6 • P1 • MH: 8.5 • 5.1 5.4 3.4	P1 MH: 8
4.6	•3.7	•4.4 •4.5	•3.6	•4.4 •4.5 •3.6	•4.4 •4.5 •3.6	•4.4 •4.5 •3.6	•4.4 •4.5 •3.6	•4.4 •4.5 •3.6	•4.4 •4.5 •3.6	•4.4 •4.5 •3.6	•4.4 •4.5 •3.6	•4.3 •4.4 •3.5	•4.3 •4.2 •2.7	2.0
• • 6.0	•3.8	5.3 • p5.6	•3.7	5.3 ° <sub>P</sub> 5.5 3.7	5.3 • <sub>P</sub> 5.5 3.7	5.3 • <sub>P</sub> 5.6 3.7	5.3 ° <sub>P</sub> 5.6 3.7	•5.3 <b>o</b> p•5.5 •3.7	5.3 ° <sub>P</sub> 5.6 3.7	5.3 ° <sub>P</sub> 5.5 3.7	5.3 ° <sub>P</sub> 5.5 3.7	•5.3 • <sub>P</sub> •5.5 •3.6	•5.2 • •5.2 •2.4	

	1.3	•3.6																			<b>o</b> 5.4 4.3														
•1.3	1.8	•3.6																			MH: 8.5 5.0 4.2														
																					•4.9 •4.1														
																					© 5.21 4.4 MH: 8.5														
																					•4.6 •4.0														
•4.4	•3.6	•3.7	•4.3	•3.8	•4.5																•5.7 •4.6						5.4	4.3	•4.5 •3	3.6	3.7	4.3	•3.6	•3.7	•4 . 4
<b>♀</b> 5 ₽4 МН	4.2 : 8.5	•4.2	SPĐ MH:	4.2 8.5	4.8	•6.3 • P1	8•45.7	4.8	•6MH: 6.3 • P1	8• <u>4</u> 5.6	4.7	•6.4 • 6.4 • P1	8•4 <sup>5</sup> .7	4.9	•6.4 • 6.4 • P1	8• <u>4</u> 5.7	4.7	•6.2 • 6.2 • P1	8•45 4.6	4.8	P1 • MH: 8•5 • 6.4 4.8	4.8	• MH: 6.3 • P1	8•4 <sup>5</sup> . 6	4.7	● MH: 8 • P1	6 <sup>5</sup> . 7	4.9	5P.6 4 MH: 8.	1.0 5	4.2	4 På MH: 8	4.1 8.5	•4.3	<b>9</b> 5₽∄ MH:
<b>4</b> .0	•3.4	•3.5	<b>4</b> .0	•3.6	<b>4</b> .6	MH: 5.9	8.5 •4.7	<b>4</b> .8	MH: 6.0	8.5 •4.7	•4.8	MH: •6.0	8.5 •4.7	•4.8	MH: 6.0	8.5 4.7	•4.8	MH: 6.0	8.5 4.7	•4.8	MH: 8.5 6.0 4.7	•4.8	MH: 6.0	8.5 4.7	•4.7	MH: 8.	5 5.5	4.0	•4.1 •3	3.4	3.4	3.9	•3.4	•3.4	•3.9
•4.1	•3.6	•3.6	4.2	•3.7	•4.1	•4.9	•4.2	•4.3	•4.9	4.2	4.3	•4.9	4.2	<b>4</b> .3	4.9	•4.2	<b>4</b> .3	•4.9	4.2	4.3	•4.9 •4.2	•4.3	<b>4</b> .9	<b>4</b> .2	•4.2	4.8	4.3	3.9	4.2	3.5	3.5	4.0	•3.4	•3.5	•4.0
<b>9</b> 5 ₽ <b>©</b> MH	•4.3 : 8.5	•4.4	•5 ₽Q MH:	4.3 8.5	•4.5	•5 P1 MH:	4.5 8.5	•4.6	•5 ₽1 MH:	4.5 8.5	4.6	¶5 p2 MH:	4.5 8.5	4.6	•5 p2 MH:	4.5 8.5	•4.6	•5 ₽2 MH:	4.5 8.5	4.6	•5 P2 •4.5 MH: 8.5	•4.6	•5 ₽1 MH:	4.5 8.5	•4.5	¶5 <b>P1</b> MH: 8.	4.5 5	4.4	•4 <sub>P</sub> 9	1.2 5	4.3	4 p8 MH: 8	•4.0 8.5	•4.1	¶5 ₽3 MH:
•4.7	•4.0	<b>4</b> .1	<b>4</b> .7	•4.0	•4.1	<b>4</b> .7	<b>4</b> .0	•4.1	<b>4</b> .7	•4.1	4.1	•4.7	•4.1	4.1	•4.7	4.1	•4.1	<b>4</b> .7	•4.1	4.1	•4.7 •4.1	4.1	•4.7	•4.0	<b>4</b> .1	•4.7	4.0	4.1	4.7	3.9	4.0	4.5	•3.6	•3.1	·3.6
•5.5	<b>4</b> .3	•4.4	• <b>5.</b> 3	<b>4</b> .3	•4.4	• <b>5.</b> 3	<b>4</b> .3	•4.4	• <b>5.</b> 3	•4.3	•4 . 4	•5.4	•4.3	•4 . 4	5.3	<b>4</b> .3	•4.4	•5.3	<b>4</b> .3	•4 . 4	•5.4 •4.3	•4.4	•5.3	•4.3	•4.4	•5.3	4.3	4.3	5.3	1.2	4.2	5.1	•3.5	1.7	
o P1	. 9 5		o P1	0.5		• <sub>P1</sub>	9.5		o P1	0.5		o P1	0.5		o <sub>P1</sub>	9.5		o <sub>P1</sub>	9.5		• P1		• P1	0.5		• P1	5	ı	• P1	5	c	P1	9 5		

# FOURTH FLOOR/ROOF

# THIRD FLOOR

Luminaire	Schedule				
Symbol	Qty	Label	LLF	Description	Lum. Watts
$\odot$	206	P1	0.920	COOPER MCGRAW-EDISON# TT-D1-740-U-WQ	28
$\odot$	18	P2	0.920	COOPER MCGRAW-EDISON# TT-D5-740-U-WQ	74.7
<del></del>	4	S2	0.920	COOPER LUMARK# PRV-PA2A-740-U-T4W (TWIN ASSEMBLY)	112

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
1st Floor - At Grade	Illuminance	Fc	5.79	42.4	1.6	3.62	26.50
1st Floor Entrance & Exit A	Illuminance	Fc	55.72	70.2	41.3	1.35	1.70
1st Floor Entrance & Exit B	Illuminance	Fc	55.21	69.8	41.5	1.33	1.68
2nd Floor - At Grade	Illuminance	Fc	4.64	6.5	2.0	2.32	3.25
3rd Floor - At Grade	Illuminance	Fc	4.50	6.7	1.3	3.46	5.15
4th Floor - At Grade	Illuminance	Fc	2.37	7.4	0.5	4.74	14.80

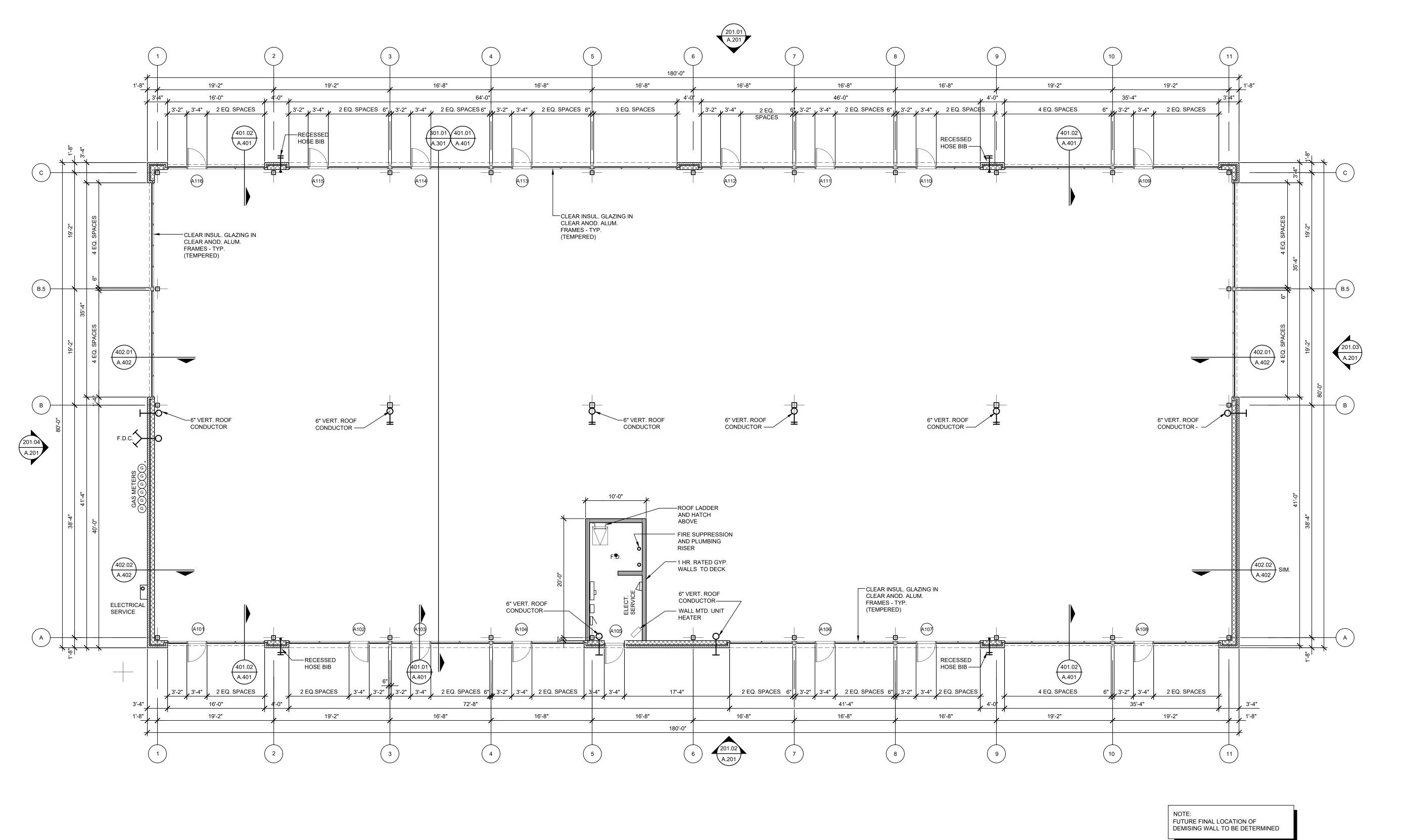
CLIGHTING & CONTROLS

Comments					
Date					
# 1	_				
	Re	vis	ion	IS	
	Date	# Date	# Date	# Date	Date

CROOKS & BIG BEAVER MIXED USED SITE 4 STORY PARKING STRUCTURE
---

Page 1 of 1





PROPOSED BUILDING FOR:

Crooks & Big Beaver Mixed Use Redevelopment

Project title

**BIG BEAVER** TROY, MICHIGAN

Issued dr/c PUD APPROVAL
SITE PLAN REVIEW
SITE PLAN REVIEW
SITE PLAN APPROVAL
BIDS
OWNER REVISIONS
PERMITS
SITE PLAN APPROVAL 03.06.20 04.10.20 07.02.20 02.11.22 02.22.22 03.24.22 05.11.22 05.31.22 SITE PLAN APPROVAL 02.07.23

Sheet title RETAIL BUILDING A FLOOR PLAN KEVIN L. Project nc

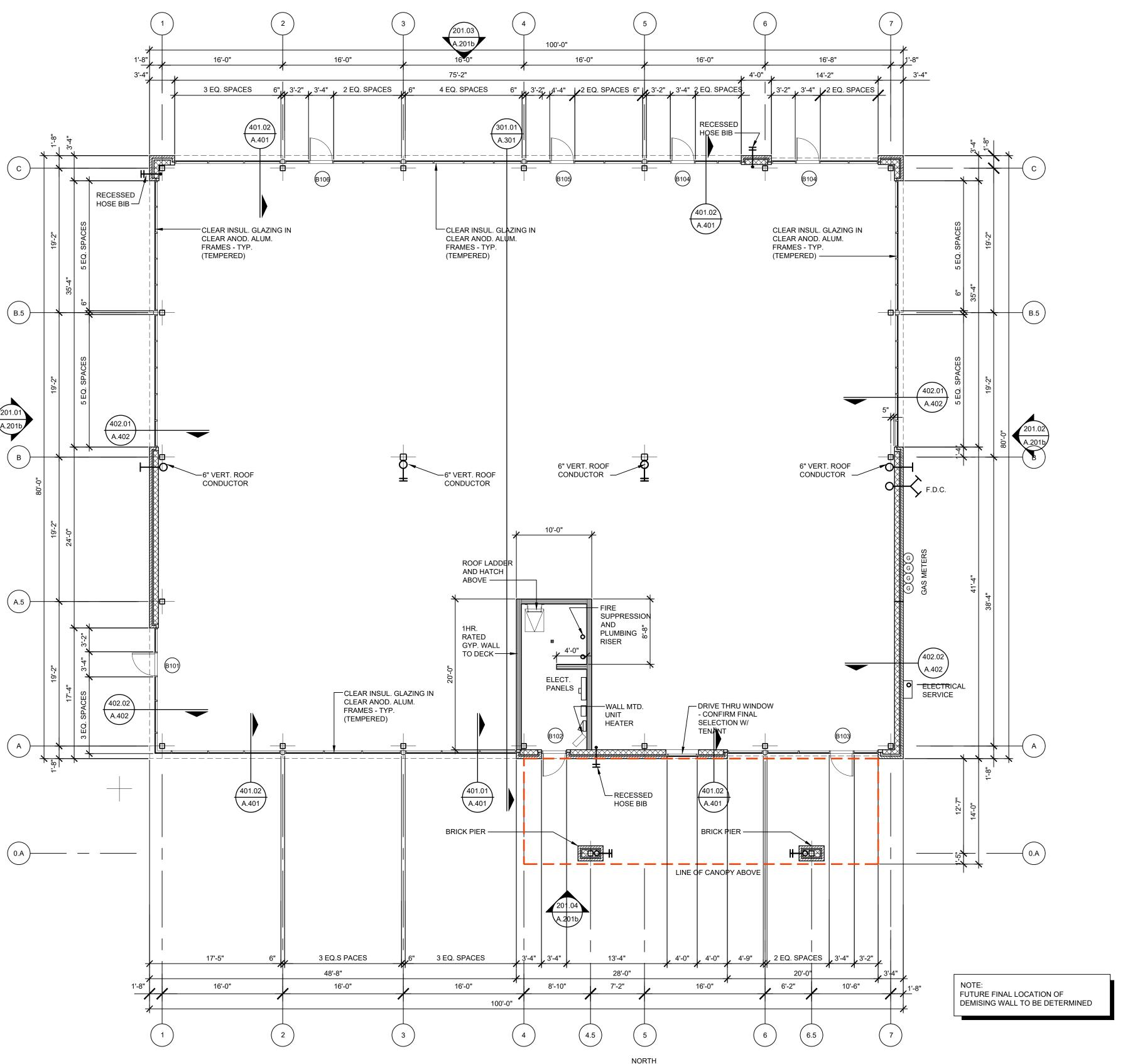
2058.20

Sheet nc

A.101a

RETAIL BUILDING A - FLOOR PLAN SCALE: 1/8"=1'-0"





BUILDING B - FLOOR PLAN

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

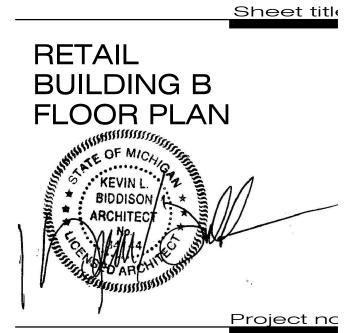
Project title

PROPOSED BUILDING FOR:

## Crooks & Big Beaver Mixed Use Redevelopment

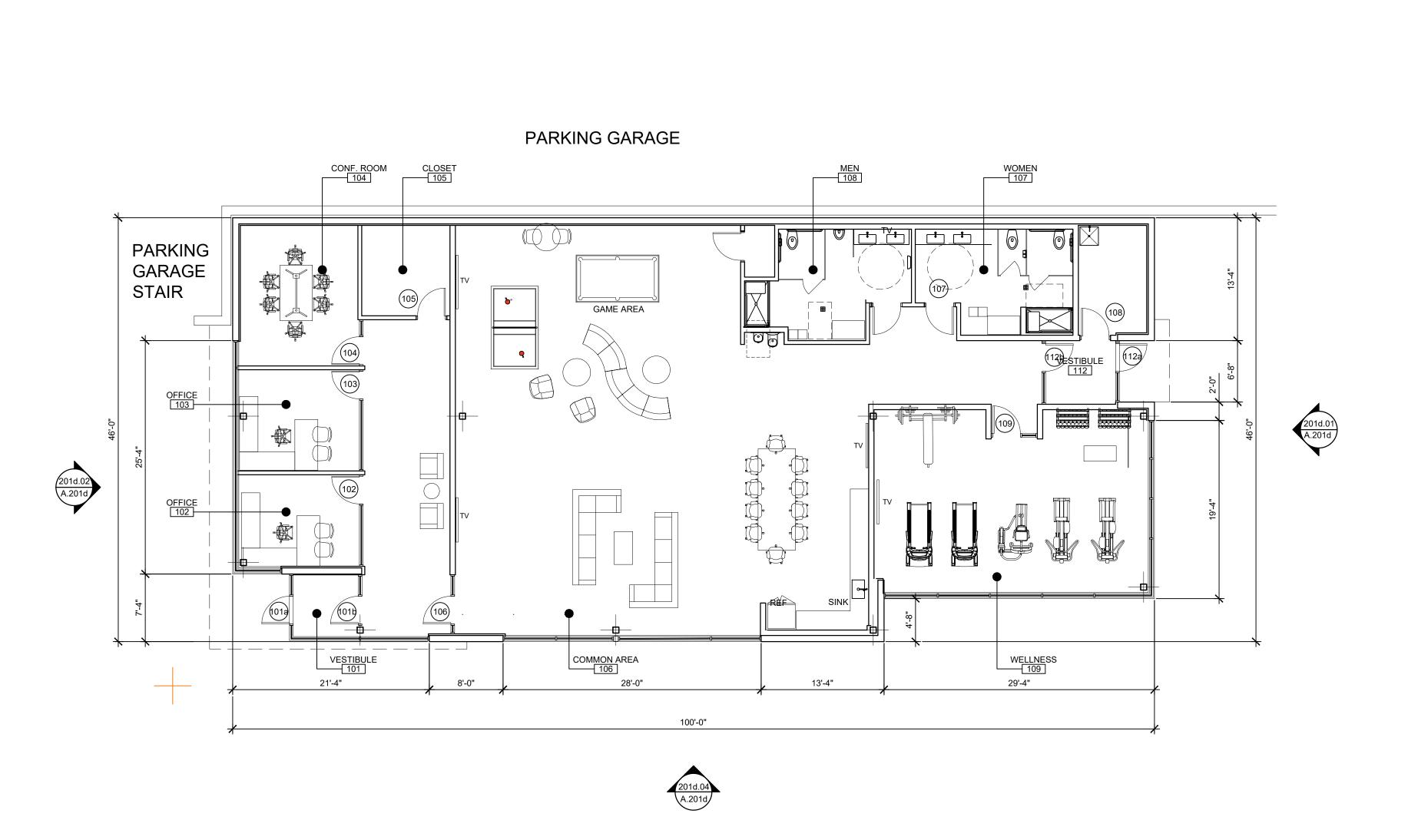
BIG BEAVER TROY, MICHIGAN

PUD APPROVAL 03.06.20
SITE PLAN REVIEW 04.10.20
SITE PLAN REVIEW 07.02.20
SITE PLAN APPROVAL 02.11.22
REVIEW 02.17.22
BIDS 02.22.22
OWNER REVISIONS 03.25.22
PERMITS 05.11.22
SITE PLAN APPROVAL 05.31.22
SITE PLAN APPROVAL 02.07.23



2058.20

Sheet nc







Project title

PROPOSED BUILDING FOR:

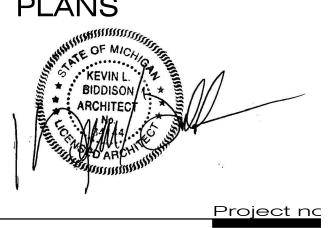
# Crooks & Big Beaver Mixed Use Redevelopment

**BIG BEAVER** TROY, MICHIGAN

Issued dr/c SITE PLAN REVIEW SITE PLAN REVIEW SITE PLAN APPROVAL SITE PLAN APPROVAL 04.10.20 07.02.20 02.11.22 05.31.22 SITE PLAN APPROVAL 02.07.23

Sheet title

BUILDING C COMMUNITY HOUSE PLANS

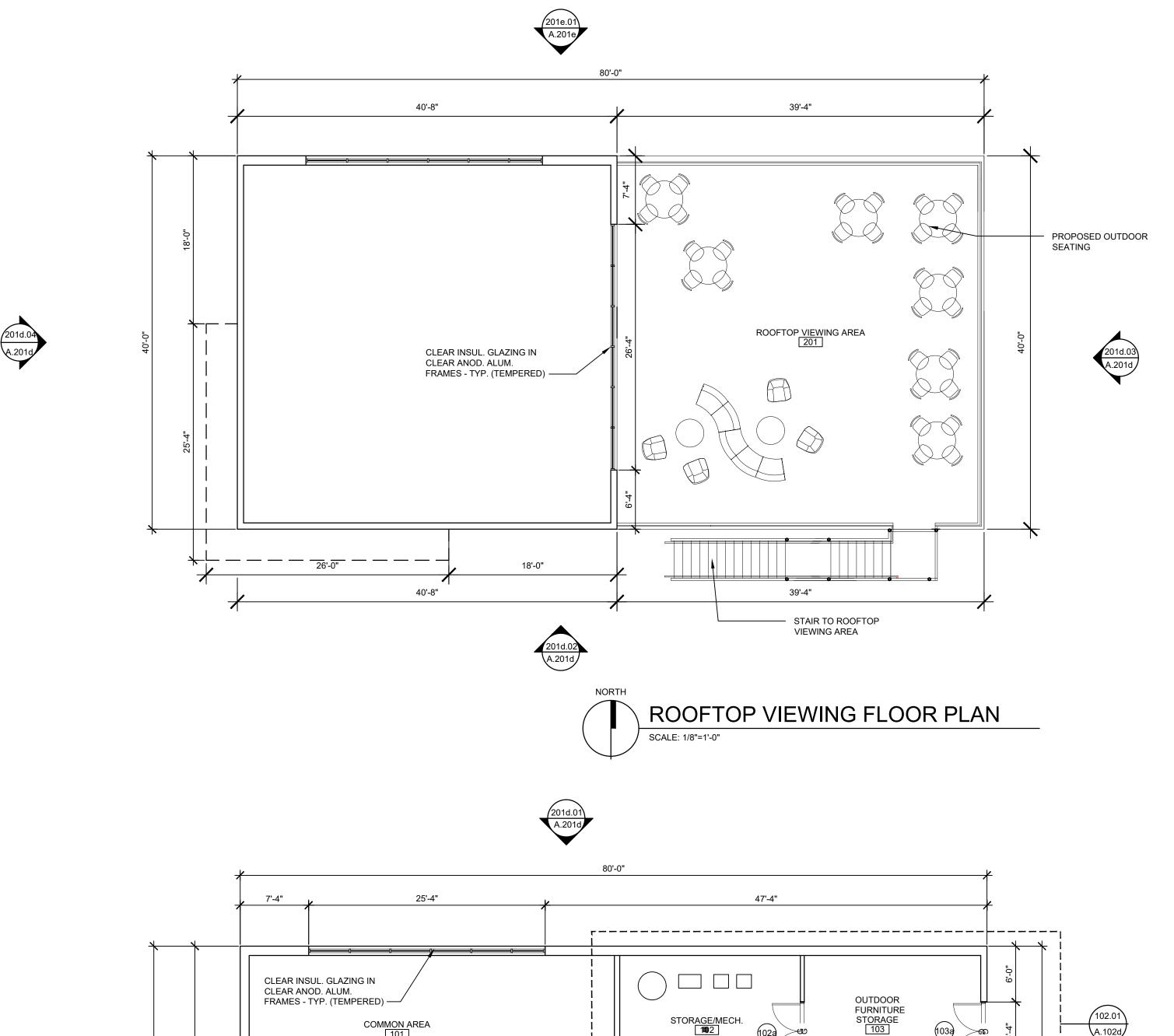


2058.20

Sheet nc

A.101c

Project title



102.01 A.102d

— HOSEBIB

— BARRIER-FREE SHOWER W/ TEMPERED WATER

CLEAR INSUL. GLAZING IN CLEAR ANOD. ALLM. FRAMES

- TYP. (TEMPERED) —

6'-4"

201d.03 A.201d

STAIR TO ROOFTOP VIEWING AREA

Issued dr/c SITE PLAN REVIEW SITE PLAN REVIEW SITE PLAN APPROVAL 04.10.20 07.02.20 02.11.22 05.31.22 SITE PLAN APPROVAL SITE PLAN APPROVAL 02.07.23

PROPOSED BUILDING FOR:

**BIG BEAVER** TROY, MICHIGAN

Redevelopment

Crooks & Big Beaver Mixed Use

Sheet title BUILDING D RECREATION CNTR. **PLANS** 

2058.20

Project nc

Sheet nc

A.101d

RECREATION CENTER/CLUBHOUSE FLOOR PLAN SCALE: 1/8"=1'-0"

STAIR TO ROOFTOP VIEWING

33'-4"

GLAZING IN CLEAR

ANOD. ALUM. FRAMES - TYP. (TEMPERED) —



2058.20



75'-0"

87'-0"

Project title

PROPOSED BUILDING FOR:

# Crooks & Big Beaver Mixed Use Redevelopment

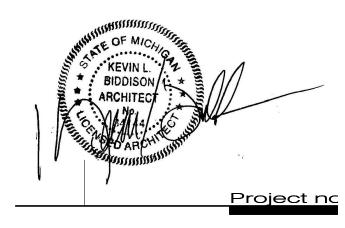
2690 CROOKS RD TROY, MICHIGAN

Issued dr/c

PUD APPROVAL 03.06.20
SITE PLAN REVIEW 04.10.20
SITE PLAN REVIEW 07.02.20
SITE PLAN APPROVAL 02.11.22
SITE PLAN APPROVAL 05.31.22
SITE PLAN APPROVAL 02.07.23

Sheet title

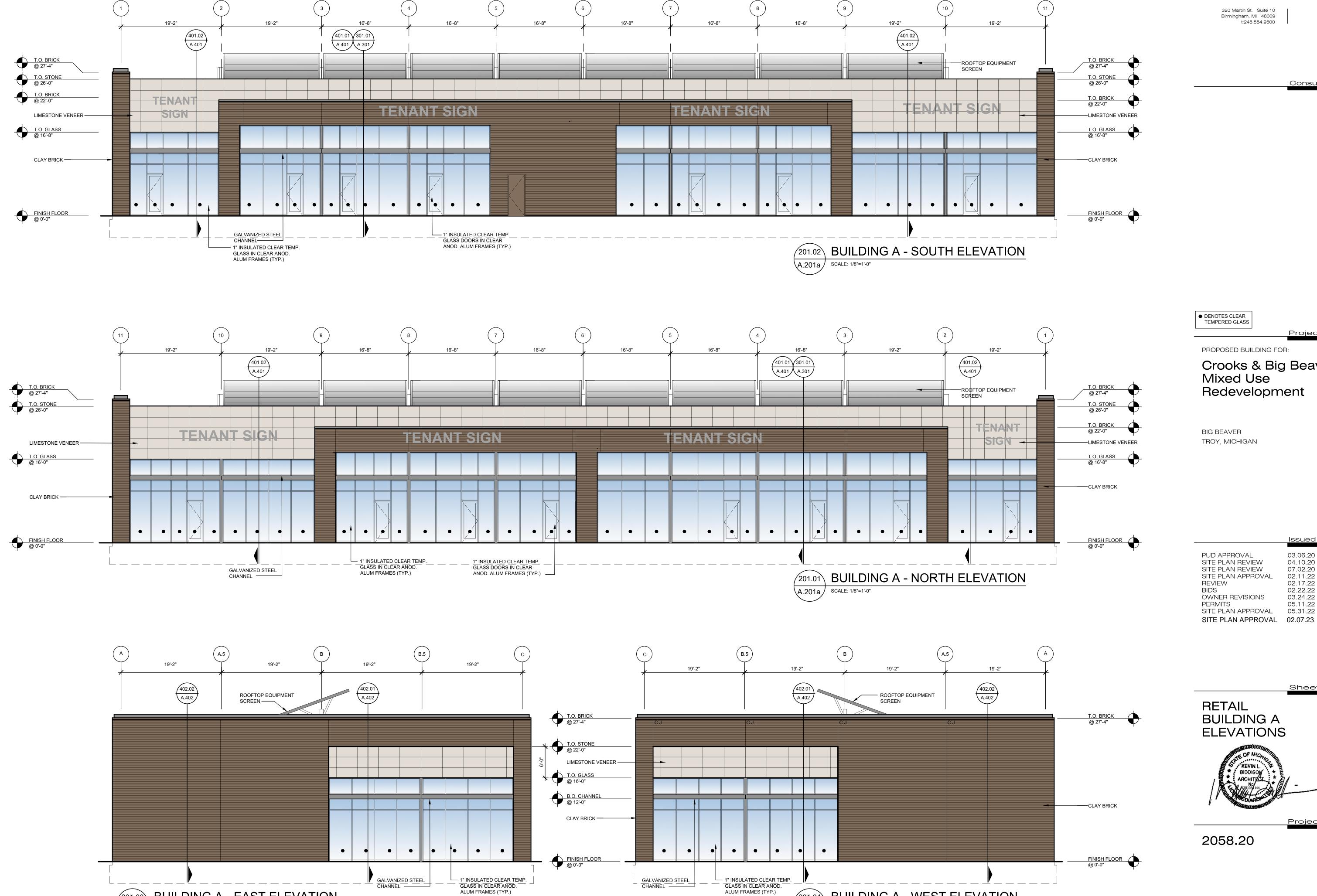
RESIDENTIAL 2ND-5TH FLOOR PL/



2058.20

Sheet nc

A.102e



**BUILDING A - EAST ELEVATION** 

A.201a SCALE: 1/8"=1'-0"



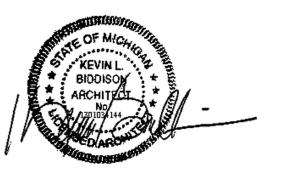
Consultant

Project title

Crooks & Big Beaver Mixed Use Redevelopment

Issued dr/c PUD APPROVAL SITE PLAN REVIEW SITE PLAN REVIEW SITE PLAN APPROVAL REVIEW BIDS 03.06.20 04.10.20 07.02.20 02.11.22 02.17.22 02.22.22 03.24.22 OWNER REVISIONS 05.11.22 SITE PLAN APPROVAL 05.31.22

RETAIL BUILDING A ELEVATIONS



Sheet title

Project nc

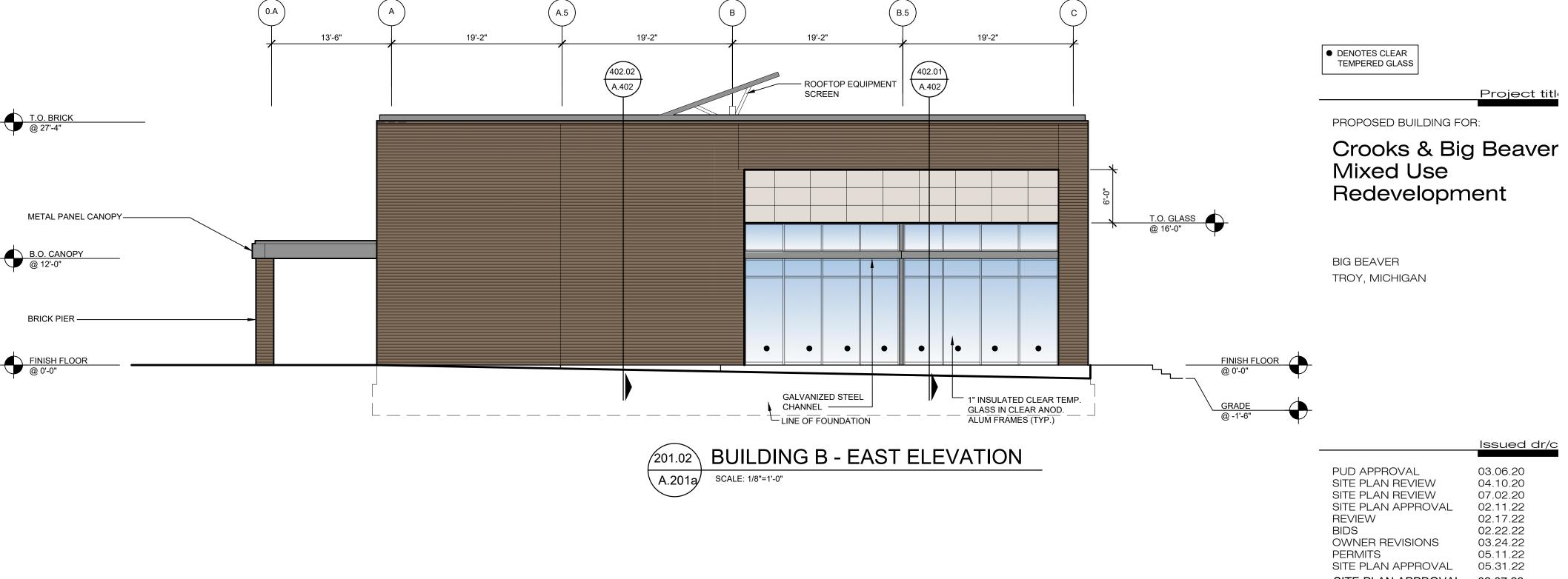
Sheet nc

A.201A

201.04 BUILDING A - WEST ELEVATION

A.201a SCALE: 1/8"=1'-0"





BUILDING B - EAST ELEVATION A.201a SCALE: 1/8"=1'-0"

(B.5)  $\left(0.A\right)$ 19'-2" 19'-2" 19'-2" 19'-2" 13'-6" ROOFTOP EQUIPMENT SCREEN 402.02 A.402 402.01 A.402 402.01 A.402 — 1" INSULATED CLEAR TEMP. GLASS IN CLEAR ANOD. ALUM FRAMES (TYP.) LIMESTONE VENEER — — CLAY BRICK - METAL PANEL CANOPY B.O. CANOPY @ 12'-0" CLAY BRICK — BRICK PIER • • - 1" INSULATED CLEAR TEMP.

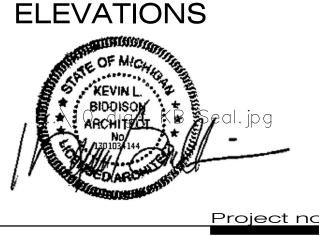
GLASS IN CLEAR ANOD.

ALUM FRAMES (TYP.) GALVANIZED STEEL
CHANNEL LINE OF FOUNDATION —

BUILDING B - WEST ELEVATION A.201a SCALE: 1/8"=1'-0"

Sheet title RETAIL BUILDING B ELEVATIONS

SITE PLAN APPROVAL 02.07.23

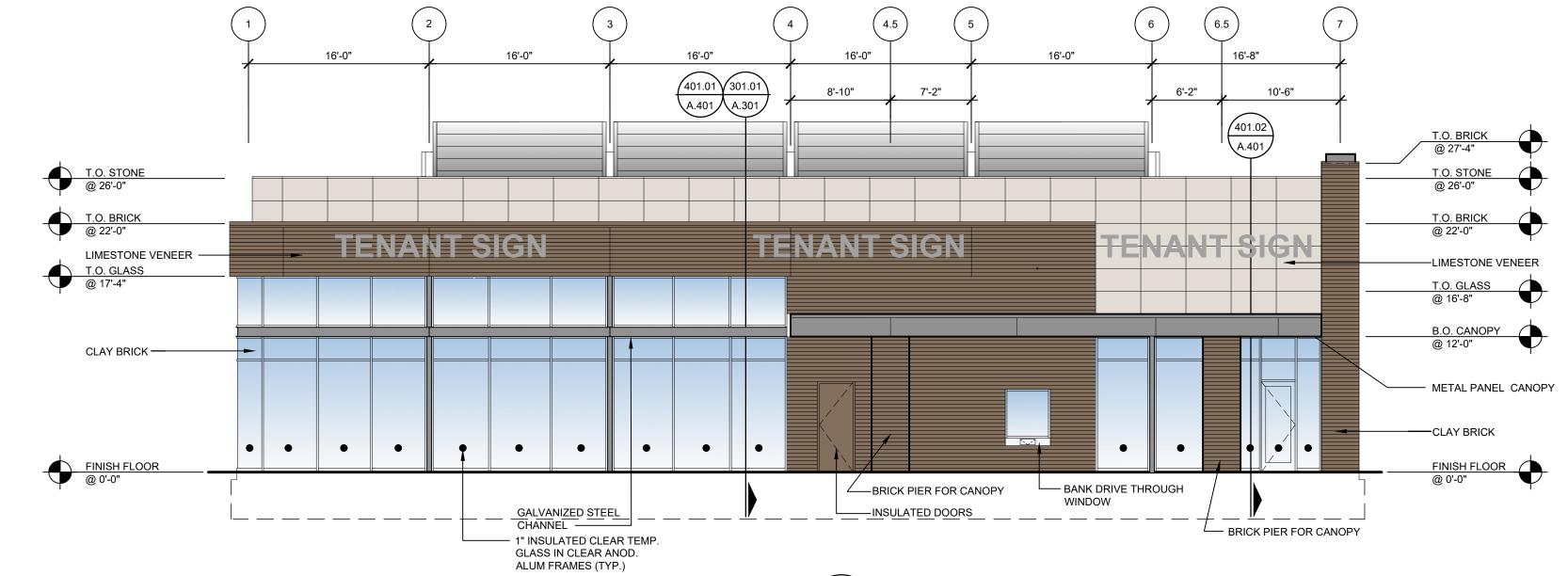


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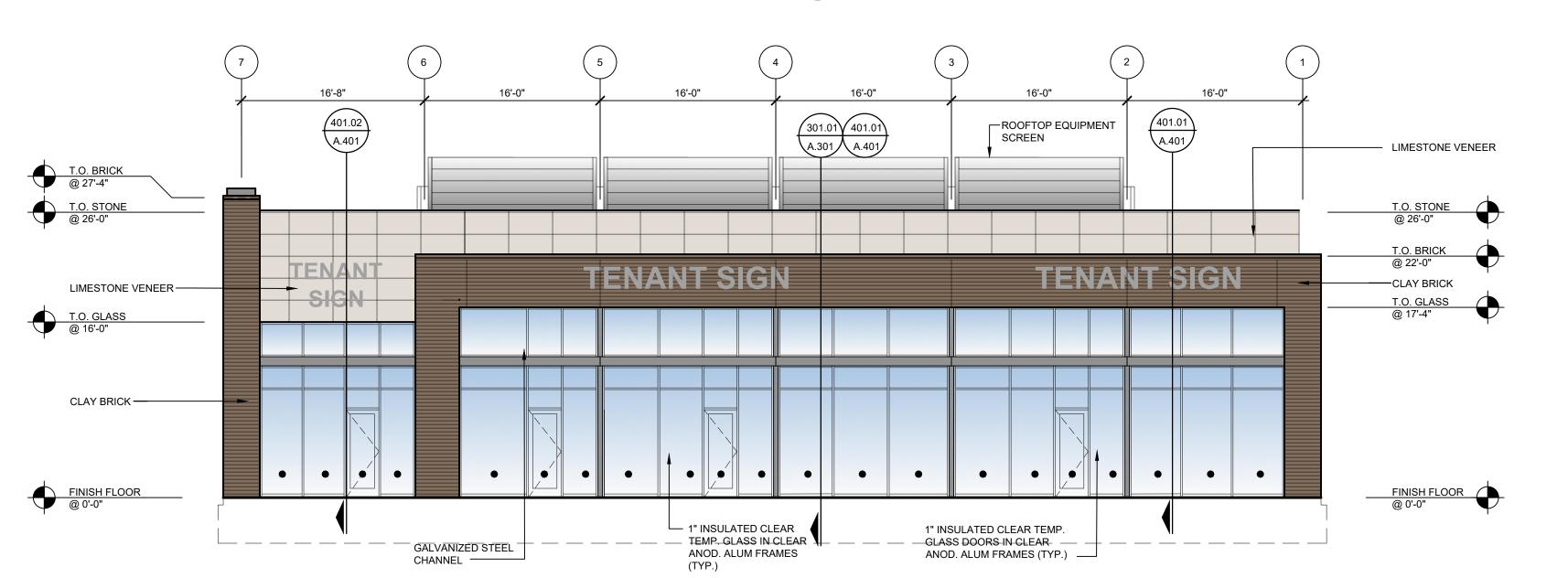
2058.20

Sheet nc

A.202b



201.04\ BUILDING B - SOUTH ELEVATION A.201a SCALE: 1/8"=1'-0"



BUILDING B - NORTH ELEVATION A.201a SCALE: 1/8"=1'-0"

DENOTES CLEAR
 TEMPERED GLASS

Project title

PROPOSED BUILDING FOR:

Crooks & Big Beaver Mixed Use Redevelopment

**BIG BEAVER** TROY, MICHIGAN

Issued dr/c PUD APPROVAL
SITE PLAN REVIEW
SITE PLAN REVIEW
SITE PLAN APPROVAL
REVIEW
BIDS
OWNER REVISIONS
PERMITS
SITE PLAN APPROVAL 03.06.20 04.10.20 07.02.20 02.11.22 02.17.22 02.22.22 03.24.22 05.11.22 05.31.22 SITE PLAN APPROVAL 02.07.23

Sheet title RETAIL BUILDING B ELEVATIONS

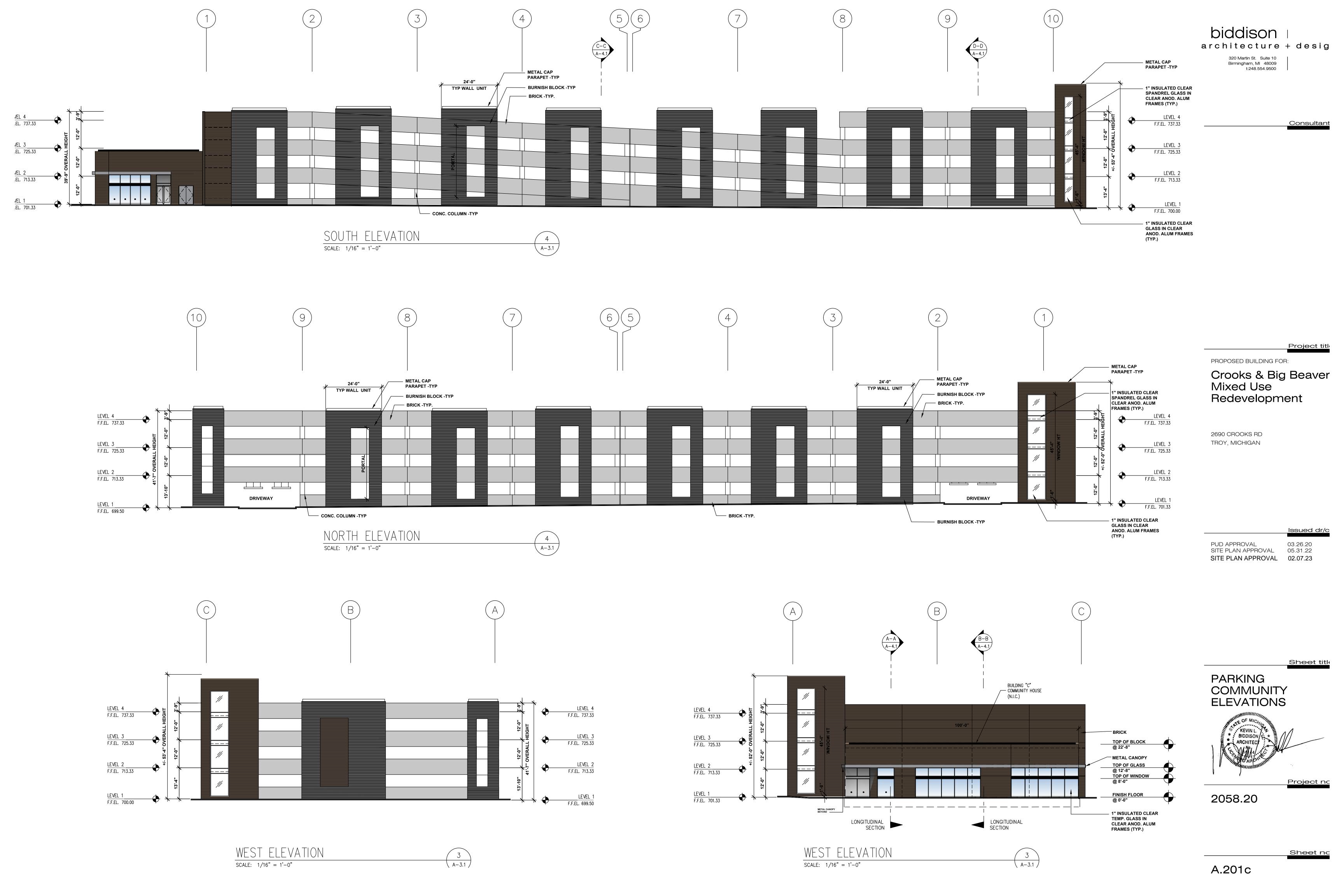


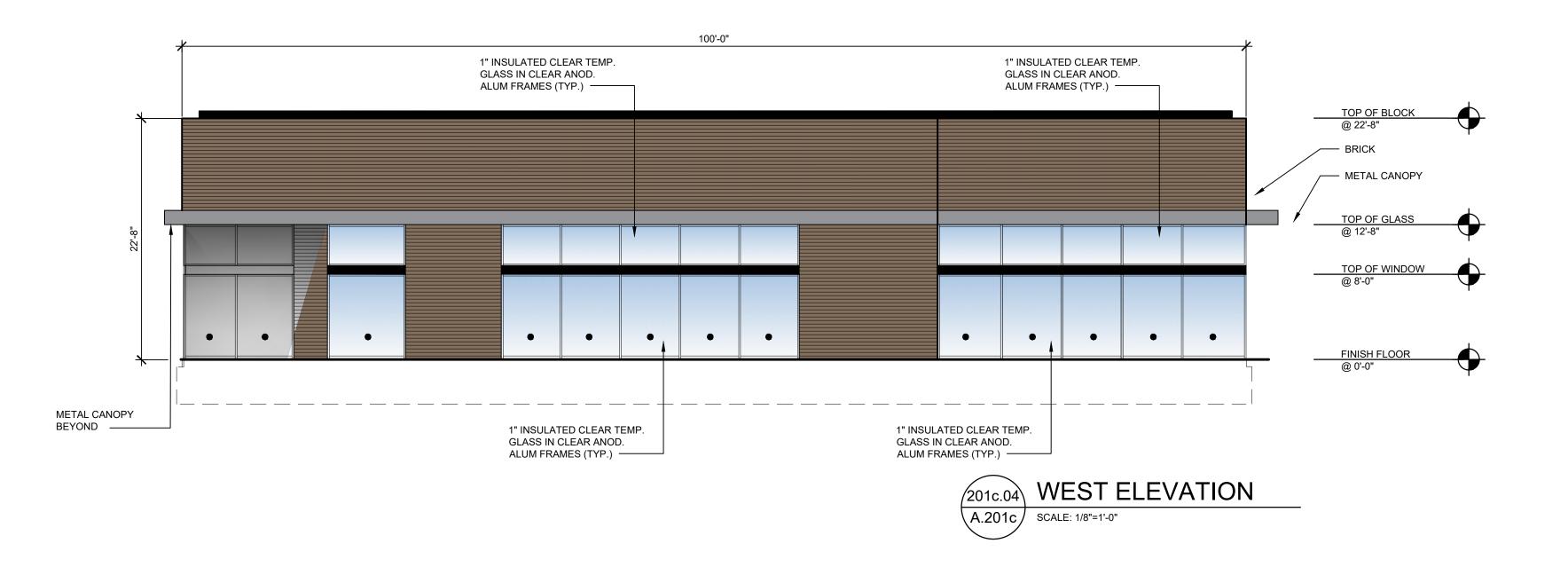
2058.20

Sheet nc

Project nc

A.201b





PROPOSED BUILDING FOR:

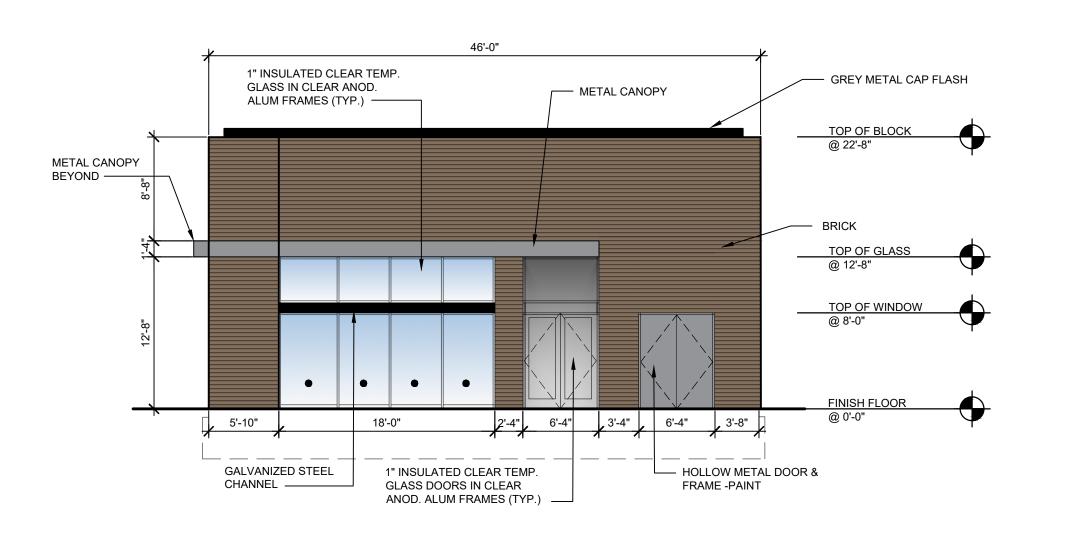
Crooks & Big Beaver Mixed Use Redevelopment

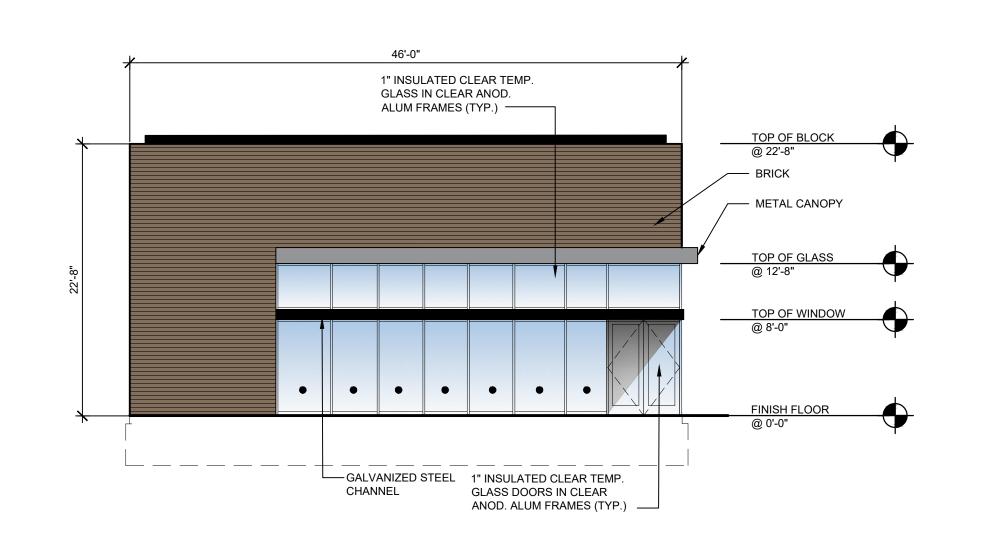
BIG BEAVER TROY, MICHIGAN

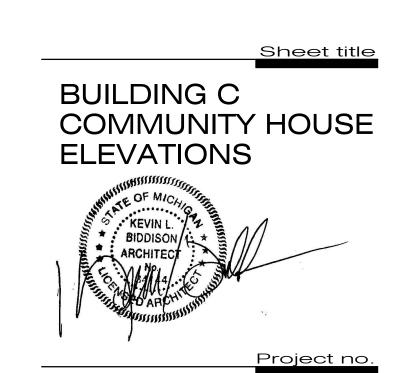
DENOTES CLEAR
 TEMPERED GLASS

Issued dr/ch

SITE PLAN REVIEW 04.10.20 SITE PLAN APPROVAL 02.11.22 SITE PLAN APPROVAL 05.31.22 SITE PLAN APPROVAL 02.07.23







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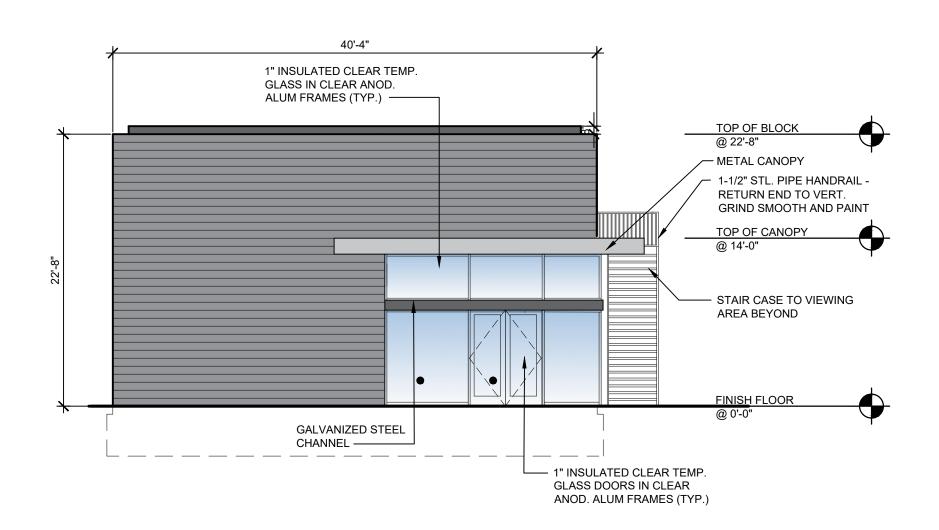
201c.02 NORTH ELEVATION
A.201c SCALE: 1/8"=1'-0"

Sheet no.

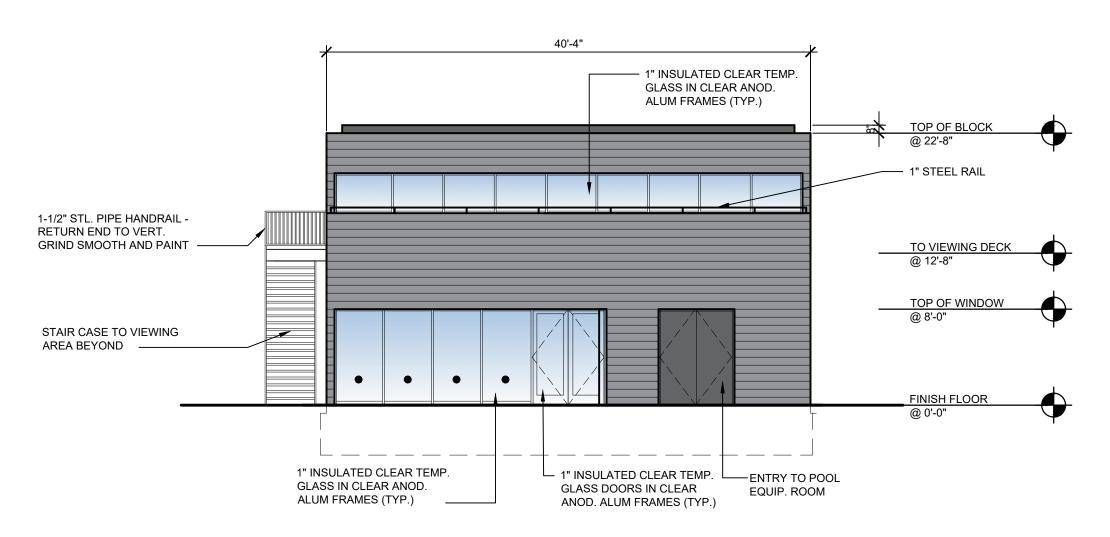
A.202c

t:248.554.9500

Consultant









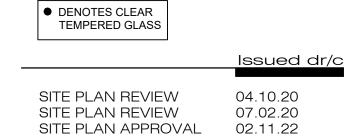


Crooks & Big Beaver Mixed Use

PROPOSED BUILDING FOR:

Redevelopment

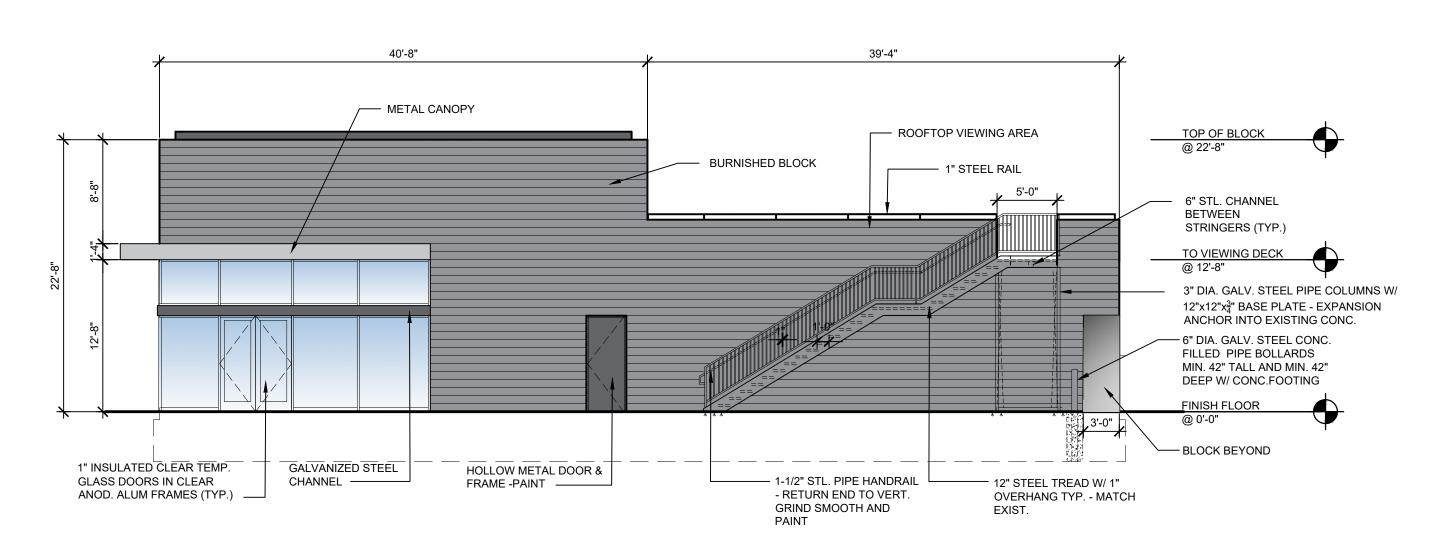
Project title

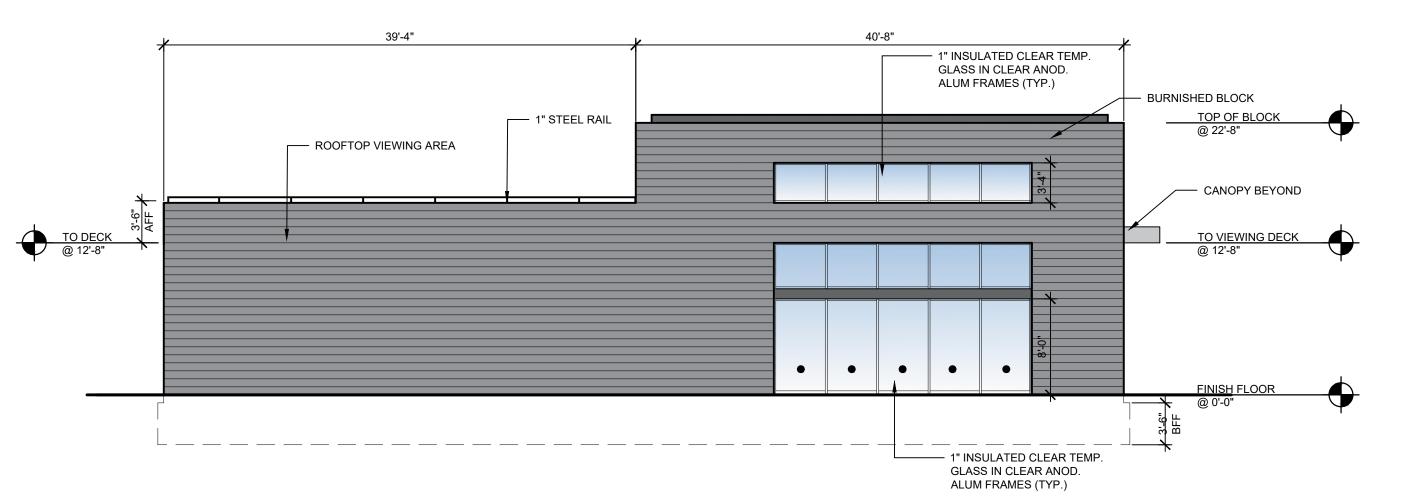


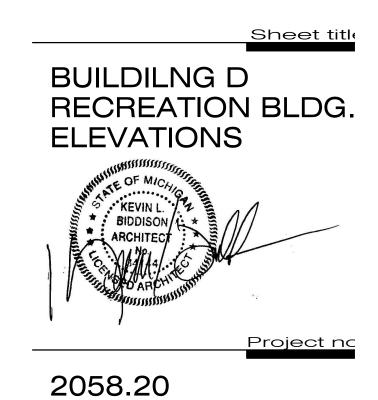
SITE PLAN APPROVAL 02.07.23

05.31.22

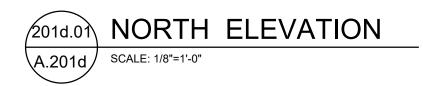
SITE PLAN APPROVAL







201d.02 SOUTH ELEVATION
A.201d SCALE: 1/8"=1'-0"



Sheet no

A.201d

Project title



2690 CROOKS RD

TROY, MICHIGAN

PUD APPROVAL 03.06.20 SMOOTH METAL PANEL SMOOTH SITE PLAN REVIEW 04.10.20 WRAP AROUND WINDOWS PAINTED ALUMINUM METAL PANEL — 02.11.22 SITE PLAN APPROVAL RAILING SITE PLAN APPROVAL 05.31.22 **VERTICAL RIB** — CLEAR GLASS IN CLEAR - CLEAR GLASS IN CLEAR METAL PANEL SITE PLAN APPROVAL 02.07.23 - METAL CAP ANOD. ALUM. FRAMES (TYP.) ANOD. ALUM. FRAMES (TYP.) TREX — T.O. ROOF 5TH FLOOR RESIDENTIAL **ELEVATIONS BUILDING E** 3RD FLOOR KEVIN L. BIDDISON/12 \* ARCHITECT BRICK -BRICK -└─ TREX - CONCRETE BLOCK

MASONRY **VERTICAL RIB** 

3'-0" HIGH WALL- BRICK

**METAL PANEL** 

CANOPY W/ METAL WRAP

Sheet title Project no.

Sheet no.

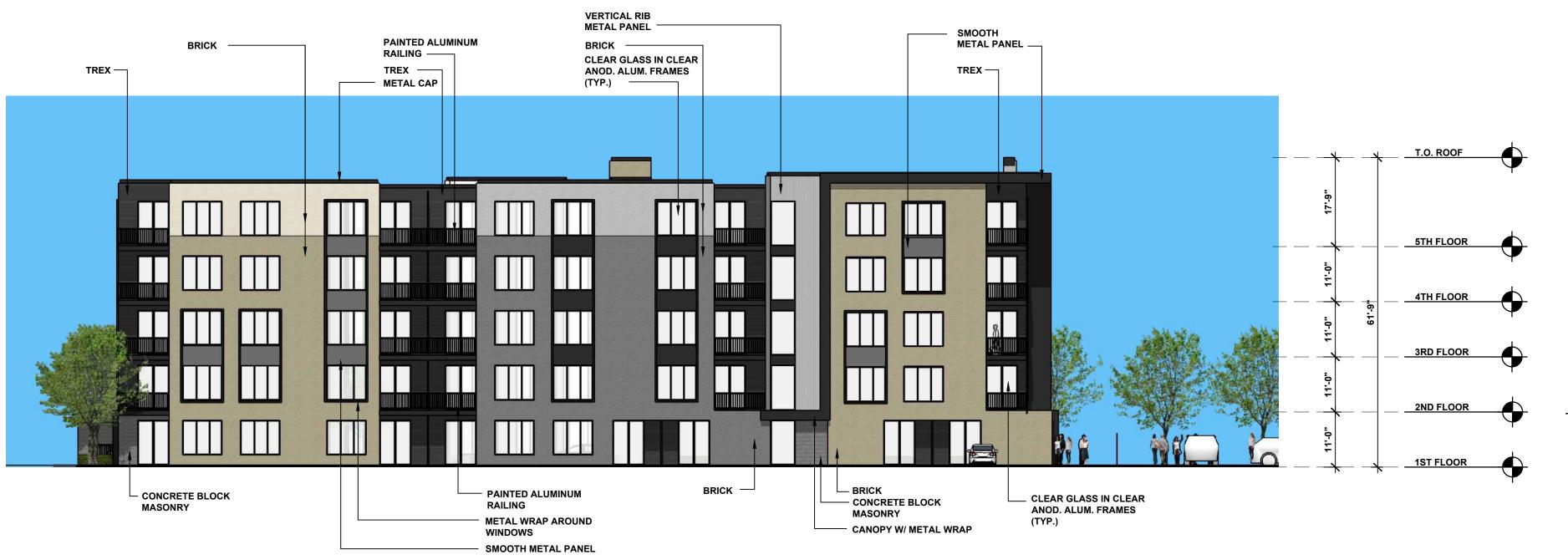
2058.20



CANOPY W/ METAL WRAP

201c.02 SOUTH ELEVATION

A.201c | SCALE: 1/16"=1'-0"



PROPOSED BUILDING FOR:

Crooks & Big Beaver Mixed Use Redevelopment

2690 CROOKS RD TROY, MICHIGAN

201f.02 **EAST ELEVATION**A.201f SCALE: 1/16"=1'-0"

\_ SMOOTH METAL PANEL WRAP **VERTICAL RIB** METAL PANEL **CLEAR GLASS IN CLEAR** - SMOOTH METAL PANEL ---ANOD. ALUM. FRAMES PAINTED ALUMINUM RAILING METAL CAP T.O. ROOF 5TH FLOOR 4TH FLOOR 3RD FLOOR 2ND FLOOR PAINTED ALUMINUM CONCRETE BLOCK MASONRY CONCRETE BLOCK TREX — RAILING, TYP MASONRY METAL WRAP AROUND WINDOWS, TYP — SMOOTH METAL PANEL 2058.20

PUD APPROVAL 03.06.20
SITE PLAN REVIEW 04.10.20
SITE PLAN APPROVAL 02.11.22
SITE PLAN APPROVAL 05.31.22

SITE PLAN APPROVAL 02.07.23

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RESIDENTIAL ELEVATIONS BUILDING E

Project no.

Sheet no.





PERSPECTIVE IMAGE

FOR REFERENCE



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architecture + design

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Consultants

Project title

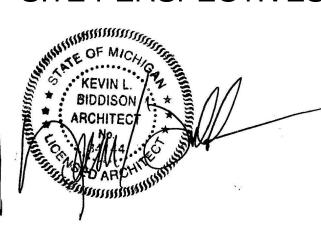
PROPOSED BUILDING FOR:

Crooks & Big Beaver Mixed Use Redevelopment

2690 CROOKS RD TROY, MICHIGAN

PUD APPROVAL 03.06.20
SITE PLAN REVIEW 04.10.20
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SITE PLAN REVIEW 02.11.22
SITE PLAN REVIEW 05.31.22
SITE PLAN APPROVAL 02.07.23

SITE PERSPECTIVES



2058.20

Sheet no.



PERSPECTIVE IMAGE

FOR REFERENCE



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PROPOSED BUILDING FOR:

Crooks & Big Beaver Mixed Use Redevelopment

2690 CROOKS RD TROY, MICHIGAN

PUD APPROVAL 03.06.20
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SITE PERSPECTIVES

2058.20

Sheet no.



FOR REFERENCE



PERSPECTIVE IMAGE

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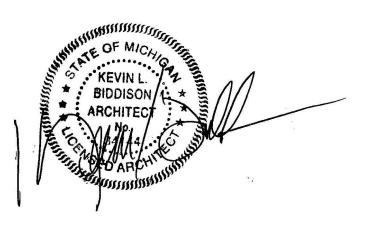
Project title

PROPOSED BUILDING FOR:

Crooks & Big Beaver Mixed Use Redevelopment

2690 CROOKS RD TROY, MICHIGAN

PUD APPROVAL 03.06.20
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SITE PLAN REVIEW 05.31.22
SITE PLAN APPROVAL 02.07.23



2058.20

A.310

PERSPECTIVE IMAGE FOR REFERENCE





PERSPECTIVE IMAGE
FOR REFERENCE

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Consultants

### Project title

PROPOSED BUILDING FOR:

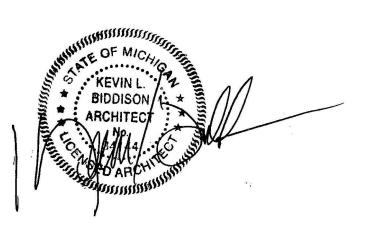
Crooks & Big Beaver Mixed Use Redevelopment

2690 CROOKS RD TROY, MICHIGAN

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PUD APPROVAL 03.06.20
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SITE PLAN REVIEW 05.31.22
SITE PLAN APPROVAL 02.07.23

### Sheet tit



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Sheet no

A.311



FOR REFERENCE



PERSPECTIVE IMAGE

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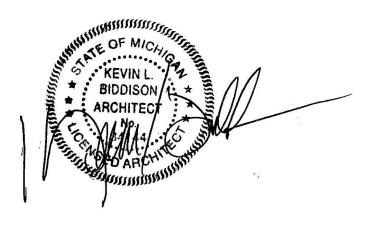
Project title

PROPOSED BUILDING FOR:

Crooks & Big Beaver Mixed Use Redevelopment

2690 CROOKS RD TROY, MICHIGAN

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SITE PLAN APPROVAL 02.07.23



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A.312





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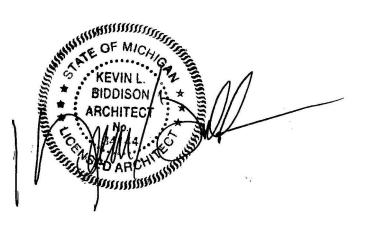
Project title

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Crooks & Big Beaver Mixed Use Redevelopment

2690 CROOKS RD TROY, MICHIGAN

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SITE PLAN REVIEW 05.31.22
SITE PLAN APPROVAL 02.07.23

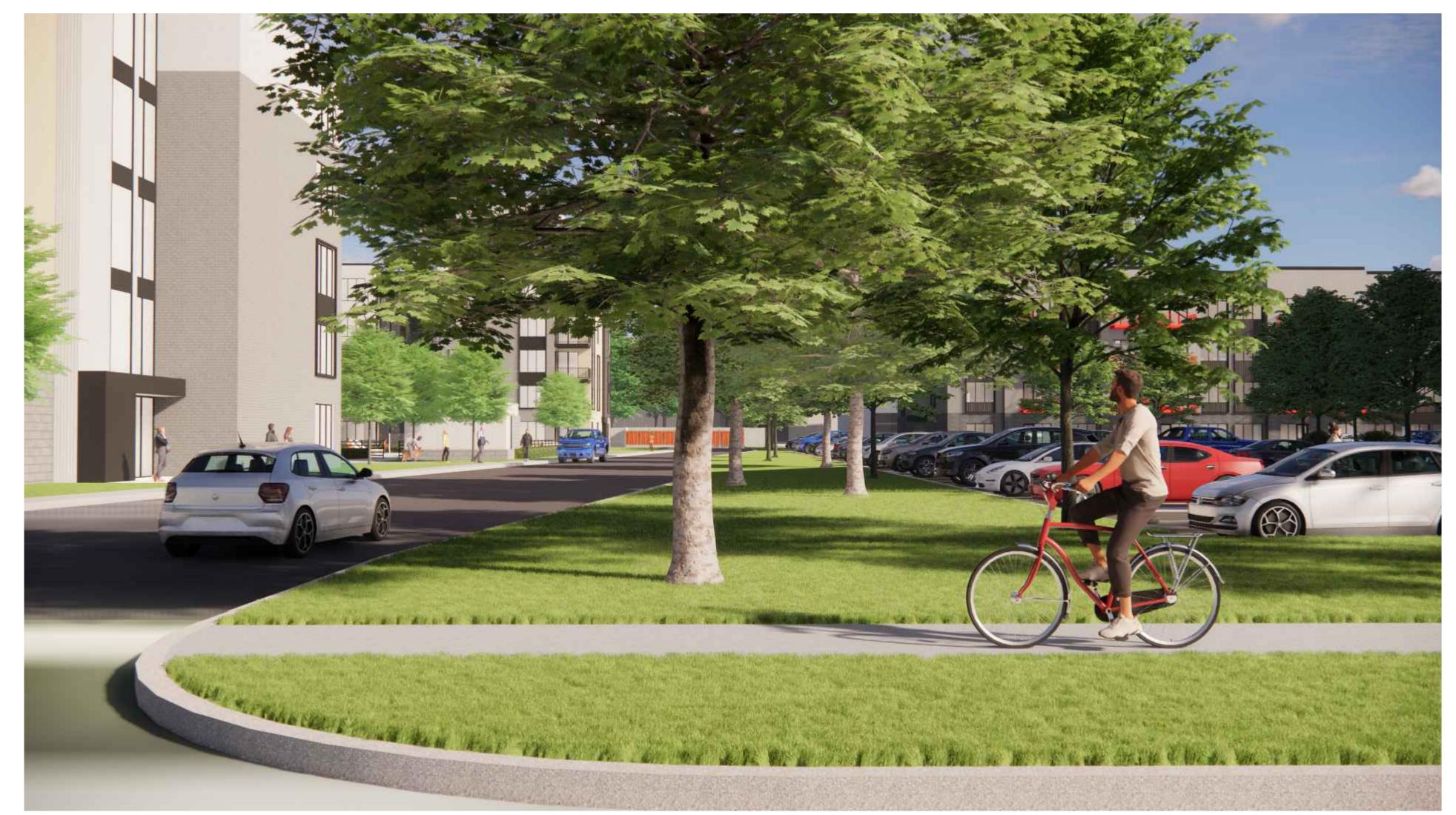


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A.313

PERSPECTIVE IMAGE FOR REFERENCE





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Consultants

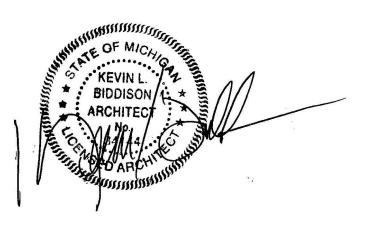
Project title

PROPOSED BUILDING FOR:

Crooks & Big Beaver Mixed Use Redevelopment

2690 CROOKS RD TROY, MICHIGAN

PUD APPROVAL 03.06.20
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SITE PLAN REVIEW 02.11.22
SITE PLAN REVIEW 05.31.22
SITE PLAN APPROVAL 02.07.23



2058.20

A.314

PERSPECTIVE IMAGE FOR REFERENCE





PERSPECTIVE IMAGE FOR REFERENCE

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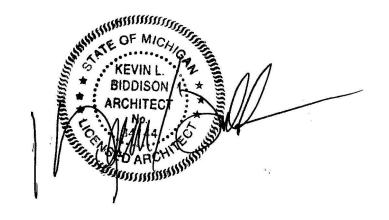
Project title

PROPOSED BUILDING FOR:

Crooks & Big Beaver Mixed Use Redevelopment

2690 CROOKS RD TROY, MICHIGAN

PUD APPROVAL 03.06.20
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SITE PLAN APPROVAL 02.07.23



2058.20

A.315

# **STONEFIELD**

February 10, 2023

Brent Savidant Community Development Director City of Troy 500 W. Big Beaver Road Troy, MI 48084

**RE:** Traffic Review

Proposed Mixed Use Redevelopment
Parcel ID: 88-20-28-101-034, 88-20,101-032 & 88-20-101-047
911 & 999 West Big Beaver Road
City of Troy, Oakland County, Michigan

#### Brent:

Our office is submitting documents on behalf of the Applicant to address the outstanding conditions of the Board's Resolution including comments contained within the latest Board Professional's review letter. Please find the following items enclosed:

ITEM DESCRIPTION	DATED	COPIES	PREPARED BY		
Site Development Plans	02-06-2023	2	Stonefield Engineering & Design		
Shared Parking Study	02-07-2023	2	Fleis & Vandenbrink		

The following is an itemized response to the comments contained within the Traffic Review Letter dated December 22, 2022. For the sake of brevity, any comments that are statements of fact or have been previously addressed are not included in the response below:

#### Traffic Impact Study:

1. Table 3 shows 312 dwelling units for the multi-family housing; however, the site plan shows 156 units. These documents need to match. It appears that the 2690 Crooks development is proposed to include an additional 156 dwelling units. If so, add a footnote to Table 3 to add clarity.

#### The tables have been clarified.

2. OHM notes a level of service F with a delay of 73.1 seconds for NBR vehicles at Big Beaver Road and W. Site Drive during the PM peak hour. Traffic congestion and backups may occur within the site. It is expected that many of these vehicles will instead utilize one of the signalized driveways to exit the site.

#### Noted.

### **STONEFIELD**

Traffic Review Response Letter
911 & 999 West Big Beaver Road & 2690 Crooks Road
Troy, MI
February 10, 2023

3. The plans provide a parking phasing plan that show available parking for each phase of development (during construction, when large portions of the existing surface lots are unavailable and/or before the proposed parking structure is constructed). As each phase of development proceeds, there must be sufficient parking to satisfy parking demand. Interim parking calculations should be reviewed with engineering plans for each phase of development on the 999 Big Beaver and 2690 Crooks sites. It is unclear when 2690 Crooks development will occur relative to the proposed phased construction for 999 Big Beaver.

The project team will work closely with City staff to ensure adequate parking is provided throughout each phase of construction.

#### Site Plan:

1. We note that adjacent site, 2690 Crooks, proposes to utilize shared parking and requires a pedestrian sidewalk connection between the sites. This pedestrian route must be ADA-accessible.

The pathway has been revised to be ADA compliant.

2. As a part of Building E, the four parking stalls adjacent to the common area should be hatched out since it is impossible for a vehicle to exit this area if all of the parking spaces are occupied.

Two parking stalls have been striped out to aid in vehicles leaving parking spaces.

3. For the parking provided within Building E, an active parking management sign displaying the number of available spaces should be provided for both parking areas. This will alert drivers if these lots are full. There is not an easy way for vehicles to exit these areas if they are full.

This system is not necessary, residents will quickly become accustomed to what parking spaces are available at any point in time. Adequate turnaround areas are provided to ensure vehicles can exit the are as necessary.

Should you have any questions regarding the submission items or responses above please do not hesitate to contact our office.

Regards,

Eric Williams, PE

Fre William

Stonefield Engineering and Design, LLC

Kevin Heffernan, PE

The Allen

Stonefield Engineering and Design, LLC

V:\M\2019\M-19301-AF Jonna-Big Beaver Road & Crooks Road, Troy, MI\Correspondence\Outgoing\City or Township\2023-02-08\_Traffic Review Response Letter.docx

# **STONEFIELD**

February 10, 2023

Brent Savidant
Community Development Director
City of Troy
500 W. Big Beaver Road
Troy, MI 48084

RE: Preliminary Site Plan & Special Land Use Review Proposed Mixed Use Redevelopment Parcel ID: 88-20-28-101-034, 88-20,101-032 & 88-20-101-047 911 & 999 West Big Beaver Road City of Troy, Oakland County, Michigan

#### Brent:

Our office is submitting documents on behalf of the Applicant to address the outstanding conditions of the Board's Resolution including comments contained within the latest Board Professional's review letter. Please find the following items enclosed:

ITEM DESCRIPTION	DATED	COPIES	PREPARED BY		
Site Development Plans	02-06-2023	2	Stonefield Engineering & Design		
Shared Parking Study	02-07-2023	2	Stonefield Engineering & Design		

The following is an itemized response to the comments contained within the Preliminary Site Plan and Special Land Use Review Letter dated January 5, 2023. For the sake of brevity, any comments that are statements of fact or have been previously addressed are not included in the response below:

1. Review and revise site plan based on OHMs comments.

#### Noted.

Flip the parking for Building E to be adjacent to the building.

This revision has been made on Sheet C-2 of the Site Development Plans.

3. Address OHM and Road Commission comments.

#### Noted.

4. Show drive-through stacking spaces and provide dimensions.

The stacking spaces on Sheet C-2 of the Site Development Plans.

February 10, 2023

### **STONEFIELD**

5. For Building E, replace use of first floor residential along eastern elevation (Crooks).

The residential units have been left in place since there is a substantial setback from the roadway and this area could not function as a retail / office space.

6. Provide one (1) additional green belt tree.

One additional tree has been provided on Sheet C-9 of the Site Development Plans.

7. Applicant shall either increase overall landscaping or seek a variance from the Zoning Board of Appeals.

The landscape area has been revised to exceed the 15% requirement on Sheet C-9 of the <u>Site Development Plans.</u>

8. Provide transparency calculations.

#### Please see below for transparency calculations.

TRANSPARENCY %	NORTH	SOUTH	EAST	WEST
RETAIL BUILDING A	86%	77%	44%	42%
RETAIL BUILDING B	85%	65%	43%	42%
COMMUNITY SPACE BUILDING C	73%	66%	-	75%
CLUBHOUSE BUILDING D	35%	28%	55%	43%
RESIDENTIAL BUILDING E	33%	41%	41%	42%
LINDSEY BUILDING A	87%	53%	70%	80%
LINDSEY BUILDING B	16%	12%	39%	46%

9. Provide a shared parking agreement to the satisfaction of the City Attorney.

The properties are owned / controlled by the same entity and should not require a shared parking agreement.

Should you have any questions regarding the submission items or responses above please do not hesitate to contact our office.

Regards,

Eric Williams, PE

Fre William

Stonefield Engineering and Design, LLC

Kevin Heffernan, PE

The Iller

Stonefield Engineering and Design, LLC