# PLANNING COMMISSION MEETING AGENDA REGULAR MEETING

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

AUGUST 9, 2022 7:00 P.M. Council Chambers

- 1. ROLL CALL
- 2. APPROVAL OF AGENDA
- 3. APPROVAL OF MINUTES July 26, 2022
- 4. PUBLIC COMMENT For Items Not on the Agenda

# PLANNED UNIT DEVELOPMENT

5. <u>PUBLIC HEARING – PLANNED UNIT DEVELOPMENT (File Number PUD2020-0018)</u> – Proposed Concept Development Plan for Long Lake and Crooks Masterplan Development, Northwest corner of Long Lake and Crooks, Section 8, Currently Zoned O Office.

# OTHER ITEMS

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

Chair Lambert called the Regular meeting of the Troy City Planning Commission to order at 7:00 p.m. on July 26, 2022, in the Council Chamber of the Troy City Hall. Chair Lambert 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
Michael W. Hutson
Tom Krent
David Lambert
Lakshmi Malalahalli
Sadek Rahman
John J. Tagle

# Absent:

Marianna Perakis

# 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

# Resolution # PC-2022-07-040

Moved by: Krent Support by: Hutson

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

Yes: All present (8)

Absent: Perakis

# **MOTION CARRIED**

# 3. <u>APPROVAL OF MINUTES</u> – June 28, 2022

# Resolution # PC-2022-07-041

Moved by: Faison Support by: Tagle

**RESOLVED**, To approve the minutes of the June 28, 2022 Regular meeting as submitted.

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

Abstain: Rahmar Absent: Perakis

#### **MOTION CARRIED**

4. PUBLIC COMMENT – For Items Not on the Agenda

There was no one present who wished to speak.

# **CONDITIONAL REZONING**

5. <u>PUBLIC HEARING - CONDITIONAL REZONING (CR JPLN2022-001)</u> — Proposed Homestead Condominiums, East side of Livernois, North of Big Beaver (PIN 88-20-22-301-007, -008, -009), Section 22, From R-1E (One Family Residential District) to RT (One Family Attached Residential District)

Mr. Carlisle reviewed background information on the Conditional Rezoning application for Homestead Condominiums. He addressed the proposed development as relates to existing natural features, floodplain, wetlands, tree cover and the Lane Drain. Mr. Carlisle stated the development would be constructed outside of the wetlands and floodplain.

Mr. Carlisle identified amenities offered by the applicant. He asked the applicant to address guest parking and the community park and trail connection to the existing regional trailways, specifically if the trail would be open to the public, maintenance responsibility and if access easements would be required.

Mr. Carlisle said review of traffic by the City's engineering consultant, OHM, indicated traffic generated by the proposed development would be minimal, adding fewer than 20 vehicle trips during the peak hour. Mr. Carlisle addressed renderings, building materials, elevations and housing types proposed by the applicant.

Mr. Carlisle asked Planning Commission members to take into consideration public comments expressed at the Public Hearing this evening and to consider if the plan meets Conditional Rezoning Standards and Site Plan Design Standards.

Discussion among administration and Planning Commission:

- Building height; measurement, height of typical two-story house.
- Community park trail connection to regional trailways; maintenance, access.
- Landscaping; removal of trees, re-forestation.
- Estimation of 8 to 12 homes could be built on site as currently zoned.
- Contractual obligation of developer to build according to site plan.

Project Architect Jim Eppink introduced the project team seated in the audience and announced a new company branch as *Tableau* of Mondrian Properties.

Mr. Eppink narrated a PowerPoint presentation of the proposed development. Mr. Eppink said the team feels the proposed plan is a transitional use to existing surrounding properties. He compared existing R-1E zoning to the proposed RT zoning as relates to lot size and density. Mr. Eppink addressed the building area of the site, preservation of natural resources, stormwater management and amenities offered. Mr. Eppink said the homeowners' association would maintain the community park and trail in perpetuity and the regional trailway system would continue to maintain theirs. He said the trail would be for public use and appropriate signage would be placed to designate the proposed development as private property. He indicated the project team would work with the City to extend the trailway system.

Mr. Eppink identified the housing types, architecture and building materials. He indicated only 9 of the 30 homes proposed are on the second floor. Mr. Eppink said the applicant's intent is to lease the independent homes and to market the development as a 50+community but with no age-restricted covenants. He expressed confidence that there is sufficient parking for both residents and guests.

There was discussion, some comments related to:

- Trailways; commitment to connect and expand trail network, maintenance, potential partnership among collective entities.
- · Material and landscaping of trail.
  - o Crushed gravel/cinder.
  - o Natural feel to landscaping, prairie seed mix, flowers to attract butterflies.
- Stormwater management.
- Building mid-roof height.
  - o Ranch 24 feet.
    - Single living 24.5 feet; second story living 25.5 feet.
- Re-forestation plan, landscaping, replacement of trees, species and height.
- Manicured lawns versus natural lawns.
- Neighborhood meeting invitation, attendance.
- Parking options; garage, driveway, street.
- Buffer to neighboring properties.

Ms. Dufrane advised the Board that amenities must be offered by the applicant in a Conditional Rezoning application.

Mr. Savidant announced at last count 30 email messages were received by the Planning Commission on the proposed development. He said the collective messages were emailed to Board members and hard copies of the messages were provided to members prior to the beginning of the meeting.

# PUBLIC HEARING OPENED

- James Horne, 3151 Helena; addressed wildlife, flooding, swampy environment.
- Tom Avery, 3349 Talbot; encouraged connection of trail, addressed existing erosion of property, wetland, flooding.
- John Phillips, 3302 Frankton; addressed access for second floor residents, reduction in number of buildings, existing environment and wildlife, liability and perceived disorderly conduct on trail, buffer of residential, flooding.
- Odeta Fecani, 3312 Louis; voiced opposition; addressed concerns with decrease in home value, flooding, environmental impact, downside to lease homes, impact on elementary school enrollment.

# PUBLIC HEARING CLOSED

Mr. Savidant addressed the engineering stormwater design process to not negatively impact abutting properties in terms of drainage. He said the design would not exacerbate any situation but could improve the situation. Mr. Savidant addressed the wildlife environment and preservation of trees and new trees to be planted.

Ms. Dufrane said there are ways to address any disorderly conduct should there be such along the trailways. She clarified the proposed development is a private development with a private access road.

Mr. Buechner said his home is located along a major trailway system and he has not experienced any disorderly conduct concerns for the past 25 years.

Mr. Eppink said economics substantiate the request for six buildings in lieu of four. He shared the total count of 90 available parking spaces is a fair and conservative estimation.

# Resolution # PC-2022-07-042

Moved by: Tagle Support by: Krent

**RESOLVED**, That the Planning Commission hereby recommends to the City Council that the R-1E to RT Conditional Rezoning request, as per Section 16.04 of the City of Troy Zoning Ordinance, located on the east side of Livernois, north of Big Beaver, within Section 22, being approximately 9.5 acres in size, be **GRANTED**, for the following reasons:

- 1. The request complies with the Master Plan.
- 2. The rezoning would permit greater flexibility in use and development of the property.
- 3. The conditions offered by the applicant reasonably protect the adjacent properties.
- 4. The rezoning would be compatible with surrounding zoning and land use.
- 5. The site can be adequately served with municipal water and sewer.

**BE IT FURTHER RESOLVED**, That the Planning Commission recommends the following site plan design considerations:

1. Provide Conditional Rezoning Agreement prior to City Council consideration.

# Discussion on the motion on the floor.

Comments related to the connection of the trail to the regional trailways and amenities offered in the Conditional Rezoning Agreement.

Chair Lambert expressed concerns that the plan does not explicitly address adequate protection and screening of adjacent properties, especially for residents on Louis and Troy.

# Vote on the motion on the floor.

Yes: Buechner, Faison, Hutson, Krent, Malalahalli, Rahman, Tagle

No: Lambert Absent: Perakis

# **MOTION CARRIED**

Chair Lambert said his no vote is based on providing adequate screening of adjacent properties.

# **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. Carlisle presented a brief background of the Planned Unit Development application. He addressed the mixed zoning and the 14-unit attached townhome development that was granted approval in 2018. Mr. Carlisle said the applicant is seeking to amend the previously approved plan to incorporate four additional parcels into an overall development of the site. Mr. Carlisle said the concept plan is only for discussion and no action would be taken this evening. He said it is too early in the process to determine data with respect to Zoning Ordinance requirements.

Mr. Carlisle read revised language recently drafted by the Master Plan Neighborhood Node Steering Committee for Neighborhood Node "Q" that relates to primary uses and character of the neighborhood node.

Applicant Gary Abitheira addressed his vision of incorporating the additional parcels with the townhome development and shared his thoughts on various placements of the PUD housing types to blend with the townhomes.

There was discussion, some comments related to:

- Previously approved development; housing types, timing and validity of approval, currently in engineering process.
- Existing homes; historical in nature, not listed in Historic Preservation Chapter.
- Neighborhood Node "Q" toured by Planning Commission and City Council.
- Public benefit; preservation of two existing homes, housing types offered.
- Intent of PUD development; provide flexibility from Zoning Ordinance regulations to allow a more creative and negotiable product.
- Board members expressed opposition to 3-story tall buildings.
- Applicant encouraged to:
  - o Create more green space.
  - o Retain "old Troy" feel of neighborhood.
  - o Create a community feel, a village.
  - Create a different and unique development.
  - Let element of historical homes shine on their own.

Mr. Carlisle and Mr. Savidant briefly exited the meeting from 9:32 p.m. to 9:35 p.m. during above discussion.

7. <u>PUBLIC COMMENT</u> – For Items on the Agenda

There was no one present who wished to speak.

8. PLANNING COMMISSION COMMENT

There were no Planning Commission comments.

9. ADJOURN

The Regular meeting of the Planning Commission adjourned at 9:41 p.m.

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

DATE: August 4, 2022

TO: Planning Commission

FROM: R. Brent Savidant, Community Development Director

SUBJECT: PUBLIC HEARING - PLANNED UNIT DEVELOPMENT (File Number PUD2020-

0018) - Proposed Concept Development Plan for Long Lake and Crooks

Masterplan Development, Northwest corner of Long Lake and Crooks, Section 8,

Currently Zoned O Office.

The applicant Gensler submitted a Concept Development Plan (CDP) application for a Planned Unit Development (PUD) for the subject property. The site is currently vacant and is 24.88 acres in size. The mixed use project is summarized in the attached report.

A PUD is a development option that provides flexibility in the design and use of mixed-use projects. It is a multi-step process. The first step in the process is the CDP. For this step, the applicant seeks the following: (1) Approval of the overall concept; (2) Approval of the PUD Agreement; and, (3) Rezoning of the parcel to PUD. The next step in the process will be the Preliminary Development Plan (PDP). During the PDP step, detailed site plans are submitted for each phase of the project. For this project, we can expect numerous PDP's to be submitted over several years. The Planning Commission is a recommending body for PUD's; City Council is responsible for approving the CDP and PDP.

At this point of time we are at the CDP stage. The Planning Commission discussed a development concept at the January 12, 2021 Regular meeting. The applicant revised the plan including retaining some existing wetland area. The Planning Commission considered the application again at the February 8, 2022.

The attached report prepared by Carlisle/Wortman Associates, Inc. (CWA), the City's Planning Consultant, summarizes the project as revised. 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 the recommendations included therein.

# Attachments:

- 1. Maps
- 2. Minutes from January 12, 2021 Planning Commission Regular meeting (excerpt)
- 3. Minutes from February 8, 2022 Planning Commission Regular meeting (excerpt)
- 4. Report prepared by Carlisle/Wortman Associates, Inc.
- 5. Conceptual Development Plan
- 6. Draft PUD Agreement
- 7. Public comment

# **POTENTIAL RESOLUTION**

<u>PUBLIC HEARING – PLANNED UNIT DEVELOPMENT (File Number PUD2020-0018)</u> – Proposed Concept Development Plan for Long Lake and Crooks Masterplan Development, Northwest corner of Long Lake and Crooks, Section 8, Currently Zoned O Office.

# Resolution # PC-2022-08-

Moved by: Seconded by

**WHEREAS,** The applicant Gensler submitted a Conceptual Development Plan application for a Planned Unit Development, located on the northwest corner of Long Lake and Crooks, in Section 8, approximately 24.88 acres in area; and

**WHEREAS,** The Concept Development Plan proposes multiple phases for a mixed-use development including office, residential, lodging, restaurant, retail and open space with public amenities; and

**WHEREAS,** The Concept Development Plan will be implemented through submittal of Preliminary Development Plans for each phase of development; and

**WHEREAS,** Each Preliminary Development Plan will require a Planning Commission public hearing and City Council public hearing prior to approval; and

**WHEREAS,** The proposed Concept Development Plan meets the Standards for Approval set forth in Section 11.03.

**THEREFORE BE IT RESOLVED,** That the Planning Commission recommends to City Council that Concept Development Plan Approval for the proposed Long Lake and Crooks Masterplan Development be granted, subject to the following:

Yes:
No:
Absent:

#### MOTION CARRIED/FAILED

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2,379

# **GIS Online**



1,189 2,379 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.

# TROY

# **GIS Online**



2,379 0 1,189 2,379 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.

- 7. PLANNED UNIT DEVELOPMENT (File Number PUD2020-0018) Proposed Concept Development Plan (CDP) for Long Lake and Crooks Masterplan Development, Southwest corner of Long Lake and Crooks, Section 8, Currently Zoned O (Office) District
  - Mr. Savidant announced project architect Chris Beck of Gensler, Anthony Antone of Kojaian Properties and traffic consultant Julie Kroll of Fleis & Vandenbrink were present.
  - Mr. Antone gave a brief introduction of Kojaian Properties. He said the proposed development would serve as a gateway to North Troy.
  - Mr. Savidant presented a PowerPoint explanation of a Planned Unit Development (PUD) application.

Mr. Carlisle gave a brief introduction of the Conceptual Development Plan and how the application relates to the Master Plan for North Troy. He addressed additional elements for the applicant to consider and questions for the Planning Commission to consider, as identified in his report dated December 29, 2020. Mr. Carlisle reported the applicant is seeking flexibility in phases, uses and design features.

#### There was discussion on:

- Water feature; location, vocal point, community attraction.
- Residential key component; multi-family, live/work.
- Density and massing of project; building height.
- Preservation of existing green space.
- Applicant request for flexibility as relates to market demand and City vision.
- Viability of office space and hotel in relation to existing office vacancy and number of hotels currently in City.
- Outdoor activities and attractions to engage residents and community; walkability, vehicular-free plaza area.
- Destination point for family and community gatherings.
- Parking; expand parking structure, reduce surface parking, charging stations for electric vehicles.
- Limited available land in City for development of this size.
- Potential to attract large office headquarters.
- Affirmation of worldwide renown architectural firm Gensler.

Mr. Beck addressed greenspace as relates to existing tree quality and species, parking options, water feature, stormwater detention and intent to be flexible based on potential future uses and evolution of project.

Mr. Antone addressed a residential component, density, potential to attract large office headquarters and flexibility in development long-term.

# PLANNED UNIT DEVELOPMENT

5. PLANNED UNIT DEVELOPMENT (File Number PUD 2020-0018) – Proposed Concept Development Plan (CDP) for Long Lake and Crooks Masterplan Development, Northwest Corner of Long Lake and Crooks, Section 8, Currently Zoned O (Office) District

Mr. Savidant explained the approval process of a Planned Unit Development (PUD) application. A brief question and answer session followed.

Present were Anthony Antone and Chris Kojaian of Kojaian Properties and project architect Chris Beck of Gensler.

Mr. Antone gave a brief introduction of Kojaian Properties and noted some of their prominent projects in Troy. Mr. Antone referenced the proposed development as the gateway to North Troy. He stated the revised concept plan before the Board this evening incorporates the preservation of natural features identified by the Department of Environment, Great Lakes and Energy (EGLE). He noted the wetlands are regulated and must be preserved and remain untouched.

Mr. Antone addressed how the development team is using the site's natural features as its focal point. He said they would like the Board's feedback on the revised concept plan prior to their submission of a formal application. Mr. Antone said the development team believes it has incorporated most of the items discussed at the January 12, 2021 Planning Commission meeting.

There was lengthy dialogue among Board members and the applicant. Board members shared their personal visions of the proposed project.

# Board comments related to:

- Create a destination point to attract people from within the complex and throughout the City.
- Integrate a plaza, pedestrian path, promenade, village-like characteristics.
- Reduce surface parking.
- Provide more walkability.
- Centrally relocate parking deck.
- Reconfigure placement of buildings to connect to public amenity space.
- Expand and centrally relocate public amenity space.
- Be bold and creative with expanse of property.
- Provide a visual illustration of project, such as a three-dimensional model.

Some members expressed the revised concept plan offers no significant changes from the concept plan presented in January 2021.

Mr. Antone addressed the "block" conceptual plan and detailed their vision of a live/work/play development. He said the development team has had conversations with high-end, luxury developers for all components of the project; residential, restaurant and retail, anchor hotel and anchor office headquarters. He addressed how the project is market-driven and site configurations must be effectual for various clients.

Mr. Antone said building heights would be:

- Office professional building, up to 10 stories.
- Centrally located building, 6 to 8 stories.
- Residential, 6 to 7 stories.
- Hotel, up to 5 or 6 stories.
- Restaurant/retail, up to 2 stories.
- Parking deck, 10 levels.

Mr. Antone thanked the Board for their comments and visions and said they look forward to coming back in front of the Board.



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

Date: August 1, 2022

# Planned Unit Development Concept Review For City of Troy, Michigan

**Project Name:** Long Lake and Crooks Planned Unit Development

Plan Date: July 12, 2022

**Location:** Northwest Corner of Long Lake and Crooks

**Current Zoning:** O, Office

Proposed Zoning: Planned Unit Development (PUD)

Action Requested: Planned Unit Development (PUD) Concept Plan Approval

# PROJECT AND SITE DESCRIPTION

A recent Planned Unit Development (PUD) application was submitted to the City for the development of a mixed-use development at the northwest corner of Long Lake and Crooks. The 24-acre site is currently vacant with significant tree cover and wetlands.

# **Proposed Development**

Though conceptual and subject to changes, the applicant is proposing the following mix of uses:

- 1. Six and eight-story office complex in two buildings
- Parking Surface and Deck
- 3. Residential apartment building
- 4. Hotel/residential building
- 5. Two restaurant/retail buildings
- 6. Wetland preservation

7. Site amenities: Outdoor activity areas, pedestrian amenities, and programed outdoor space



# **Location of Subject Property:**

Northwest Corner of Long Lake and Crooks

# **Proposed Use of Subject Parcel:**

Mixed Use Development

# **Current Zoning:**

O, Office

# **Proposed Zoning:**

Planned Unit Development (PUD)

# **Surrounding Property Details**

Direction	Zoning	Use
North	O, Office	Office
South	O, Office	Office/Commercial
East	RC, Research Center	Office
West	O, Office	Office

# **PUD PROCESS**

A Planned Unit Development project is viewed as an integrated development concept. To that end, the provisions of this Article are not intended to be used as a device for avoiding the zoning requirements that would otherwise apply, but rather to allow flexibility and mixture of uses, and to improve the design, character and quality of new development. The use of a Planned Unit Development to permit variations from other requirements of this Ordinance shall only be approved when such approval results in improvements to the public health, safety and welfare in the area affected, and in accordance with the intent of this Article.

The approval of a Planned Unit Development (PUD) is a three-step process:

**Step 1-Concept Plan:** The first step shall be application for and approval of a Concept Development Plan, which requires a legislative enactment amending the zoning district map so as to reclassify the property as a Planned Unit Development. A proposed Development Agreement shall be included and incorporated with the Concept Development Plan, to be agreed upon and approved coincident with said Plan. The Concept Development Plan and Development Agreement shall be approved by the City Council following the recommendation of the Planning Commission. Such action, if and when approved, shall confer upon the applicant approval of the Concept Development Plan and shall rezone the property to PUD in accordance with the terms and conditions of the Concept Development Plan approval.

**Step 2- Preliminary Development Plan Approval:** The second step of the review and approval process shall be the application for and approval of a Preliminary Development Plan (preliminary site plan) for the entire project, or for any one or more phases of the project. City Council shall have the final authority to approve and grant Preliminary Development Plan approvals, following a recommendation by the Planning Commission.

**Step 3- Final Development Plan Approval:** The third step of the review and approval process shall be the review and approval of a Final Development Plan (final site plan) for the entire project, or for any one or more phases of the project, and the issuance of building permits. Final Development Plans for Planned Unit Developments shall be submitted to the Zoning Administrator for administrative review, and the Zoning Administrator, with the recommendation of other appropriate City Departments, shall have final authority for approval of such Final Development Plans.

The applicant is seeking a recommendation of approval for their Concept Plan

# **PUD INTENT**

As set forth in Section 11.01, the intent of the Planned Unit Development option is to permit flexibility in the design and use of residential and non-residential land which, through the implementation of an overall development plan, when applicable to the site, will:

- 1. Encourage developments that will result in a long-term contribution to social, environmental and economic sustainability in the City of Troy.
- 2. Permit development patterns that respond to changing public and private needs.
- 3. Encourage flexibility in design and use that will result in a higher quality of development and a better overall project than would be accomplished under conventional zoning, and which can be accommodated without sacrificing established community values.
- 4. Provide for the long-term protection and/or preservation of natural resources, natural features, and/or historic and cultural resources.
- 5. Promote the efficient use and conservation of energy.
- 6. Encourage the use, redevelopment and improvement of existing sites where current ordinances do not provide adequate protection and safeguards for the site or its surrounding areas, or where current ordinances do not provide the flexibility to consider redevelopment, replacement, or adaptive re-use of existing structures and sites.
- 7. Provide for enhanced housing, employment, recreation, and shopping opportunities for the citizens of Troy.
- 8. Ensure the compatibility of design and use between various components within the PUD and with neighboring properties and uses. 9. Ensure development that is consistent with the intent of the Master Plan.

# PREVIOUS CONCEPT PLANS

The applicant of the Crooks and Long Lake PUD has submitted concept development plan that were reviewed by the Planning Commission in January 2021 and February 2022.

# **Previous Concept (January 2021)**



In our review we noted an opportunity for the applicant to apply a more integrated mix of uses, perhaps both vertical and horizontal. This site lends itself to creative and unique site layout.

Other layout suggestions include more activation along Long Lake Road, ensure that there is a minimum of usable two stories for retail/restaurant uses, and a minimum of at least four stories for the office/medical/multiple family buildings.

At the January 2021 meeting, the Planning Commission discussed those noted items and the following additional items:

- Water feature; location, vocal point, community attraction.
- Residential key component; multi-family, live/work.
- Density and massing of project; building height.
- Preservation of existing green space.
- Applicant request for flexibility as relates to market demand and City vision.

- Viability of office space and hotel in relation to existing office vacancy and number of hotels currently in City.
- Outdoor activities and attractions to engage residents and community; walkability, vehicular-free plaza area.
- Destination point for family and community gatherings.
- Parking; expand parking structure, reduce surface parking, charging stations for electric vehicles.
- Limited available land in City for development of this size.
- Potential to attract large office headquarters.
- Affirmation of worldwide renown architectural firm Gensler.

# **Revised Plan (February 2022)**

After the previous Planning Commission review, the applicant submitted a site wetland delineation to the Department of Environment, Great Lakes, and Energy (EGLE). EGLE's review confirmed that the site includes high quality regulated wetlands. Based on ELGE regulation, and Planning Commission's review and comments, the applicant revised their site plan. Major changes in since last Planning Commission review:

- Wetland retention
  - o Removed one (1) parking deck to retain wetland
  - o Replaced formulized stormwater in southwest corner with wetland retention
  - Trying to make wetland retention feature of site
- Replaced retail in northwest corner with mid-rise residential
- Potential residential use in addition to hotel in southwest corner
- Changes to internal circulation



At the February 2022 meeting, the Planning Commission discussed those noted items and the following additional items:

- Create a destination point to attract people from within the complex and throughout the City.
- Integrate a plaza, pedestrian path, promenade, village-like characteristics.
- Reduce surface parking.
- Provide more walkability.
- Centrally relocate parking deck.
- Reconfigure placement of buildings to connect to public amenity space.
- Expand and centrally relocate public amenity space.
- Be bold and creative with expanse of property.
- Provide a visual illustration of project, such as a three-dimensional model.

In conclusion, some members expressed the revised concept plan offers no significant changes from the concept plan presented in January 2021. Mr. Antone addressed the "block" conceptual plan and detailed their vision of a live/work/play development. He said the development team has had conversations with high-end, luxury developers for all components of the project; residential, restaurant and retail, anchor hotel and anchor office

headquarters. He addressed how the project is market-driven and site configurations must be effectual for various clients.

# **JULY 2022 CONCEPT PLAN**

#### CROOKS & LONG LAKE // MASTER PLAN



Major changes in since last Planning Commission review:

- Programed open space activity area with fire pits, seating areas, and shelter gathering area
- Added recreational amenities
  - o Dog Park
  - o Pickle Ball Courts
- Added sculpture garden and programing next to wetland area in southeast corner of site
- Provided PUD agreement for review by City Attorney

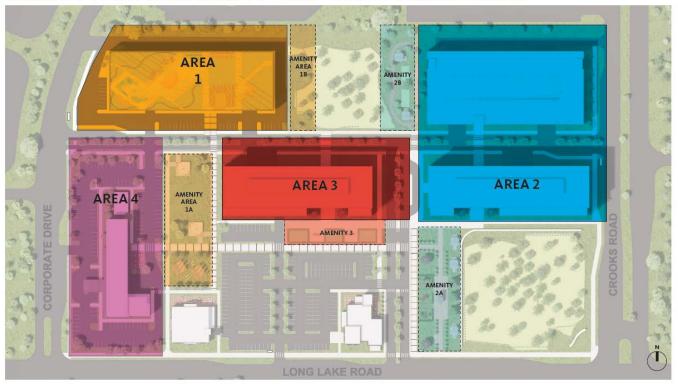
# **DEVELOPMENT AREAS, and AMENITY AREAS**

The applicant is proposing four (4) separate development areas and associated amenities areas. The numbering of the development areas is not reflective of the phasing as the applicant seeks flexibility on phasing based on market conditions.

# **Development Areas**

- Development Area 1: Residential uses permitted as of right or requiring special approval, and their accessory uses, consistent with such uses in the UR – Urban Residential District and all associated surface parking.
- Development Area 2: Office uses permitted as of right or requiring special approval, and their accessory uses, consistent with such uses in the OM - Office Mixed Use District, the O - Office District, or the GB-General Business District, as referenced in the Zoning Ordinance, and a multistory parking structure and surface parking features.
- Development Area 3: Residential uses permitted as of right or requiring special approval, and their accessory uses, consistent such uses in the UR Urban Residential District as referenced in the Zoning Ordinance and all associated surface parking; Office uses permitted as of right or requiring special approval, and their accessory uses, consistent with such uses in the OM Office Mixed Use District, the O Office District, or the GB-General Business District, as referenced in the Zoning Ordinance; "Restaurant" and/or "Retail Business or Retail Sales" uses as defined by the Zoning Ordinance; Conference, meeting, and banquet facility uses permitted as of right or requiring special approval, and their accessory uses consistent with such uses the GB General Business District in the Zoning Ordinance; and, all associated surface parking.
- Development Area 4: Lodging or extended stay facility uses permitted as of right or requiring special approval, and their accessory uses, consistent with such uses in the GB General Business District identified in the Zoning Ordinance; and, Residential uses permitted as of right or requiring special approval, and their accessory uses, consistent such uses in the UR Urban Residential District as referenced in the Zoning Ordinance and all associated surface parking.
- Restaurant/Retail Areas: "Restaurant" and/ or "Retail Business or Retail Sales" uses as defined by the Zoning Ordinance, and their accessory uses, and all associated surface parking.

# **CONCEPT DEVELOPMENT PLAN - DEVELOPMENT AREAS**



# **Amenity Areas**

The applicant has the following amenities areas.

- Amenity Area 1A: "Open Space" as defined by the Zoning Ordinance for use as an open field activity area.
- Amenity Area 1B: "Open Space" as defined by the Zoning Ordinance for use as a dog park.
- Amenity Area 2A: "Open Space" as defined by the Zoning Ordinance for use as a public art or sculpture garden.
- Amenity Area 2B: "Open Space" as defined by the Zoning Ordinance for use as a fitness trail and pickle ball courts.
- Amenity Area 3: "Open Space" as defined by the Zoning Ordinance for use as a bocce ball court and outdoor seating.
- Natural Areas A and B: Restricted from development and shall remain in an "Undeveloped State" as defined in the Zoning Ordinance.

The amenities areas are to be constructed in accordance with their associated development area. For example, amenities areas 1A and 1B are to be built with the development of Development Area 1.

# **DEVELOPMENT GUIDELINES**

The applicant proposes the following development parameters:

District	General Uses	Max Square	Min # Floors	Min Building	Max # Floors	Max Building
		Footage		Height		Height
Development Area 1	Residential	350,000 s.f	3	40'	7	90'
Development Area 2	Office / Parking	500,000 s.f	4	60'	10	150'
	Structure					
Development Area 3	Office /	350,000 s.f	4	60'	10	150'
	residential /					
	retail / parking					
	structures					
Development Area 4	Hotel/residential	105,000 s.f	3	40'	10	150'
Retail / Restaurant	Retail/restaurant	18,000 per	1	17.5'	2	35'
Areas		building				

#### Minimum setbacks:

District	Front	Side	Rear
	Setback	Setbacks	Setbacks
Development Area 1	10'	20'	30'
Development Area 2	10'	20'	30'
Development Area 3	10'	20'	30'
Development Area 4	10'	20'	30'
Retail / Restaurant Areas	10'	20'	30'

# **USES**

The applicant notes the allowance for all uses (permitted and special) in the OM - Office Mixed Use District, the O – Office District, or the GB-General Business District. There are uses in those districts which the Planning Commission should consider if they are appropriate. Permitted or special uses listed in the OM, O, and GB districts that the Planning Commission may want to discuss:

- Primary and secondary schools
- Convalescent center
- Post-secondary school
- Bus/transit passenger dispatching center
- Hospital
- Day Care and preschool
- Golf course
- Swimming pool club
- Fast food restaurant

- Restaurant drive-in
- Drive-through
- Retail, large format
- Shopping center
- Building and lumber supply
- Garden centers/nursery
- Commercial greenhouse
- Outdoor commercial recreation
- Dry cleaners/laundry
- Open air business , as a principal use

- Private clubs, fraternal organization, and lodge halls
- Commercial kennels
- Adult use business
- Mortuary/funeral home
- Prototype or experimental product design
- Basic research, design, pilot or experimental product development
- Laboratory
- Mini warehouse and self-storage
- Vehicle, recreational vehicles sales

- Vehicle repair station
- Vehicle fueling/multiuse station
- Oil change facility
- Vehicle washes
- Vehicle auctions
- Antique and classic vehicle sales
- Ambulance facilities
- Vehicle rental
- Commercial wind energy conversion system
- Wireless communication facility (Tower)

# **PHASING**

The applicant seeks flexibility to build any development area in any sequence, with the only restriction is that Development 4 area (hotel/residential) and retail/restaurant pads can be built as part of any phase except they cannot be the first development built on site.

# TRAFFIC IMPACT STUDY

The applicant has submitted Traffic Impact Study, which will be reviewed by the OHM, the Road Commission, and MDOT. The traffic study identifies significant traffic impacts as a result of the development and identifies roadway improvements based on full build out. The applicant has provided a table of proposed associated roadway improvements.

# **MASTER PLAN**

This site is located in the North Troy Special Area Plan. Located at the intersection of two main arterial roads with a direct access ramp to I-75, North Troy is strategically located to serve as a major employment hub for Oakland County. North Troy currently is home to over 5,000 primarily daytime employees; in addition, there are over 2,000 households within one mile of the area. However, the area is dominated by single-use office buildings with limited interconnections, and few amenities for these workers and nearby residents. Preparing North Troy for the next generation of growth will require a broader and more creative real estate strategy that will tap into regional trends and market opportunities in order to create a more vibrant, attractive, and flexible work environment. A compatible and vibrant mix of uses will create a life and vibrancy,

provide interconnections and a relationship with the adjacent neighborhoods, reduce automobile trips, and enhance walkability by providing destinations.

Priority 1 of the Special Area Plan was to provide a compatible and vibrant mix of uses. Applicable strategies to fulfill this priority includes:

- Promote service infill through property repurposing;
- Promote residential infill through property repurposing;
- Develop and strengthen the core; and
- Create a community gathering space.



Priority 2 is to improve multi-modal circulation and safety. Applicable strategies to fulfill this priority includes:

- Introduce pedestrian mid-block crossing; and
- Establish consistent landscape buffer and setbacks.

Priority 3 is to implement tactical placemaking. Applicable strategies to fulfill this priority includes:

- Create an identity through gateways and wayfinding;
- Facilitate health and wellness initiatives; and
- Encourage creative programming.

This specific site was identified in the Master Plan as an opportunity to define North Troy:

Building off the surrounding employment base and the highly trafficked Northfield Point Marketplace, the vacant parcel on the northwest corner of Long Lake and Crooks Road offers an opportunity to establish a core for North Troy. This core will provide a compatible mix of uses and should be the starting place of other strategies in the Plan, including pedestrian circulation

Long Lake – Crooks PUD Concept Review August 1, 2022

improvements, landscaping, wayfinding, and creative programming. At the heart of the core is the community gathering space. -Page 192

Specifically for this site, the Master Plan identified residential infill, service infill, and a community gathering space. A vibrant mix of uses is supported by the Master Plan. However, there are some elements that the applicant should consider strengthening consistency with the Master Plan:

- 1. Work with City to establish midblock crossing across Crooks and Corporate Drive.
- 2. Clarify if central gathering areas are open for public activities and use.
- 3. Develop pilot gateway features and wayfinding signage to be implemented in rest of North Troy.

# **PUD AGREEMENT**

The applicant has submitted a PUD Agreement, which is being reviewed by the City Attorneys office.

# **STANDARDS**

When reviewing the PUD, the Planning Commission shall consider the following standards as set forth in Section 11.03:

- 1. A mixture of land uses that would otherwise not be permitted without the use of the PUD provided that other objectives of this Article are also met.
- 2. A public improvement or public facility (e.g. recreational, transportation, safety and security) which will enhance, add to or replace those provided by public entities, thereby furthering the public health, safety and welfare.
- 3. A recognizable and material benefit to the ultimate users of the project and to the community, where such benefit would otherwise be infeasible or unlikely to be achieved absent these regulations.
- 4. Long-term protection and preservation of natural resources, natural features, and historic and cultural resources, of a significant quantity and/or quality in need of protection or preservation, and which would otherwise be unfeasible or unlikely to be achieved absent these regulations.
- A compatible mixture of open space, landscaped areas, and/or pedestrian amenities.
- 6. Appropriate land use transitions between the PUD and surrounding properties.
- 7. Design features and techniques, such as green building and low impact design, which will promote and encourage energy conservation and sustainable development.
- 8. Innovative and creative site and building designs, solutions and materials.
- 9. The desirable qualities of a dynamic urban environment that is compact, designed to human scale, and exhibits contextual integration of buildings and city spaces.
- 10. The PUD will reasonably mitigate impacts to the transportation system and enhance non-motorized facilities and amenities.
- 11. For the appropriate assembly, use, redevelopment, replacement and/or improvement of existing sites that are occupied by obsolete uses and/or structures.
- 12. A complementary variety of housing types that is in harmony with adjacent uses.
- 13. A reduction of the impact of a non-conformity or removal of an obsolete building or structure.

- 14. A development consistent with and meeting the intent of this Article, which will promote the intent of the Master Plan or the intent of any applicable corridor or sub-area plans. If conditions have changed since the Plan, or any applicable corridor or sub-area plans were adopted, the uses shall be consistent with recent development trends in the area.
- 15. Includes all necessary information and specifications with respect to structures, heights, setbacks, density, parking, circulation, landscaping, amenities and other design and layout features, exhibiting a due regard for the relationship of the development to the surrounding properties and uses thereon, as well as to the relationship between the various elements within the proposed Planned Unit Development. In determining whether these relationships have been appropriately addressed, consideration shall be given to the following:
  - i. The bulk, placement, and materials of construction of the proposed structures and other site improvements.
  - ii. The location and screening of vehicular circulation and parking areas in relation to surrounding properties and the other elements of the development.
  - iii. The location and screening of outdoor storage, loading areas, outdoor activity or work areas, and mechanical equipment.
  - iv. The hours of operation of the proposed uses.
  - v. The location, amount, type and intensity of landscaping, and other site amenities.
- 16. Parking shall be provided in order to properly serve the total range of uses within the Planned Unit Development. The sharing of parking among the various uses within a Planned Unit Development may be permitted. The applicant shall provide justification to the satisfaction of the City that the shared parking proposed is sufficient for the development and will not impair the functioning of the development, and will not have a negative effect on traffic flow within the development and/or on properties adjacent to the development.
- 17. Innovative methods of stormwater management that enhance water quality shall be considered in the design of the stormwater system.
- 18. The proposed Planned Unit Development shall be in compliance with all applicable Federal, State and local laws and ordinances, and shall coordinate with existing public facilities.

The Planning Commission should review the application considering the standards.

# BENEFITS

The applicant has noted the following benefits:

- Horizontal mixed-use development consisted with Master Plan
- Development of an undeveloped and prominent site
- Outdoor plazas
- Outdoor dining areas
- Pedestrian circulation paths and activities around site
- Public art

The Planning Commission should consider the noted benefits.

# **SUMMARY**

The Planning Commission is asked to hold a public hearing and consider public comments. As part of their deliberations, the Planning Commission should consider:

- 1. The proposed development guidelines (height/setbacks, etc);
- 2. The proposed allowable and special uses;
- 3. If the PUD standards have been met; and
- 4. If the proposed benefits are commensurate with the requested relief/development flexibility.

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

# City of Troy

# Planned Unit Development Concept Development Plan (CDP) Application And Application To Amend The Zoning District Map

# **Long Lake and Crooks Masterplan Development**

Original Submission Date: April 22, 2022 Revised Submission Date: July 12, 2022

# CITY OF TROY PLANNED UNIT DEVELOPMENT CONCEPT DEVELOPMENT PLAN (CDP) APPLICATION AND APPLICATION TO AMEND THE ZONING DISTRICT MAP

CITY OF TROY PLANNING DEPARTMENT

TO THIS REQUEST FOR PLANNED UNIT DEVELOPMENT.

500 W. BIG BEAVER TROY, MICHIGAN 48084 PHONE: 248-524-3364

E-MAIL: planning@troymi.gov



CONCEPT DEVELOPMENT PLAN FEE \$3,000.00

\$5,000.00

PRIOR TO THE SUBMISSION OF AN APPLICATION-FOR APPROVAL OF A PLANNED UNIT DEVELOPMENT, THE APPLICANT SHALL HOLD A PRE-APPLICATION MEETING WITH THE PLANNING DEPARTMENT OF THE CITY AND ANY CITY STAFF AND OUTSIDE CONSULTANTS AS DEEMED APPROPRIATE BY THE CITY.

DA	ATE OF PRE-APPLICATION MEETING: September 25, 2020	
	EGULAR MEETINGS OF THE CITY PLANNING COMMISSION ARE DNTH AT 7:00 P.M. AT CITY HALL.	HELD ON THE SECOND AND FOURTH TUESDAYS OF EACH
1.	NAME OF THE PROPOSED DEVELOPMENT: Long Lake	e & Crooks Masterplan Development
2.	LOCATION OF THE SUBJECT PROPERTY: Northwest	corner - Long Lake & Crooks
3.	ZONING CLASSIFICATION(S) OF THE SUBJECT PROPER	TY: Current Zoning - Office
4.	TAX IDENTIFICATION NUMBER(S) OF SUBJECT PROPER	RTY:
5.	APPLICANT:	PROPERTY OWNER:
	NAME Chris Beck	NAME Tony Antone
	COMPANY Gensler	COMPANY Long Lake Crooks Development Associates
	ADDRESS 150 West Jefferson, Suite 1700	ADDRESS 39400 Woodward Ave, Suite 250
	CITY Detroit STATE MI ZIP 48226	CITY Bloomfield Hills STATE MI ZIP 48304
	TELEPHONE313.496.8966	TELEPHONE 248.644.7600
	E-MAILchris_beck@gensler.com	E-MAILtantone@Kojaian.com
6.	THE APPLICANT BEARS THE FOLLOWING RELATIONSHI Owner's Architect	P TO THE OWNER OF THE SUBJECT PROPERTY:
7.	ATTACHED HERETO IS A SIGNED STATEMENT BY TH AUTHORITY TO EXECUTE A BINDING ACREMENT COV	
8.	SIGNATURE OF APPLICANT	DATE 11.18.20
9.	SIGNATURE OF PROPERTY OWNER	1 Cabo DATE 11 117/2020

BY THIS SIGNATURE, THE PROPERTY OWNER AUTHORIZES PLACEMENT OF A SIGN ON THE PROPERTY TO INFORM THE PUBLIC AS

# PLANNED UNIT DEVELOPMENT CONCEPT DEVELOPMENT PLAN (CDP) PRE-APPLICATION MEETING CHECKLIST

THE APPLICANT SHALL PROVIDE A MINIMUM OF THREE (3) COPIES OF THE FOLLOWING ITEMS, PLUS ONE (1) CD CONTAINING AN ELECTRONIC VERSION OF THE APPLICATION, TO THE PLANNING DEPARTMENT AT OR BEFORE THE PRE-APPLICATION MEETING. SEE SECTION 11.06(A).

- A SKETCH PLAN OF THE PROPOSED PLANNED UNIT DEVELOPMENT
- LEGAL DESCRIPTION OF THE PROPERTY, SCALE DRAWING AND THE TOTAL NUMBER OF ACRES IN THE PROJECT
- TOPOGRAPHICAL MAP OF THE PROJECT SITE
- A STATEMENT OF ALL PROPOSED USES IN THE PROJECT
- THE KNOWN DEVIATIONS SOUGHT FROM THE ORDINANCE REGULATIONS OTHERWISE APPLICABLE
- THE NUMBER OF ACRES TO BE PRESERVED AS OPEN OR RECREATIONAL SPACE AND THE INTENDED USES OF SUCH SPACE
- ALL KNOWN NATURAL RESOURCES, NATURAL FEATURES, HISTORIC RESOURCES AND HISTORIC FEATURES; WHICH ARE TO BE PRESERVED
- A LISTING AND SPECIFICATION OF ALL SITE DEVELOPMENT CONSTRAINTS

# PLANNED UNIT DEVELOPMENT CONCEPT DEVELOPMENT PLAN (CDP) CHECKLIST

THE FOLLOWING INFORMATION AND MATERIALS ARE NECESSARY FOR SUBMISSION. FOR A DETAILED DESCRIPTION OF REQUIRED ITEMS, SEE SECTION 11.06(C) OF THE ZONING ORDINANCE.

REQUIRED FEE
ONE (1) CD CONTAINING AN ELECTRONIC VERSION OF THE APPLICATION AND ONE (1) COPY OF THE DRAFT DEVELOPMENT AGREEMENT (PDF Format)
application shall include TWO (2) hard copies of the following information and materials, which shall be in an format together with a narrative explanation.
Date(s) and location of all meetings with representatives of adjoining neighborhoods, minutes and attendance record(s) of such meeting(s).
Certified boundary survey including legal description of the property, scale drawing and the total number of acres in the project.
Development concept: A summary explanation of the development concept shall describe the project and explain how the project will meet the intent of the PUD option as set forth in Section 11.01 and the criteria for consideration as a PUD as set forth in Section 11.03 hereof, as those sections reasonably apply to the site.
Density: The maximum density of the overall project and the maximum density for each proposed use and phase.
Road system: A general description of the road system and circulation pattern; the location of roads, entrances, exits and pedestrian walkways; a statement whether roads are intended to be public or private. Efforts shall be made to ensure that multiple transportation modes are safely and effectively accommodated in an effort to provide alternate modes of access and alleviate vehicle traffic congestion particularly as it pertains to the improvements along major roads.
Utilities: A general description and location of both on-site and off-site utilities including proposed water, sanitary sewer, storm sewer systems and utility lines; a general indication of the size and location of stormwater detention and retention ponds, and a map and text showing off-site utilities, existing and proposed, which will provide services to the project.
Open space/common areas: A general description of proposed open space and common areas; the total area of open space; the total area of open space in each proposed phase; the proposed uses of open space and common areas.
Uses: A list of all proposed uses; the location, type and land area to be devoted to each use, both overall and in each phase; a demonstration that all of the proposed uses are permitted under this Article.
Development guidelines: A plan of the site organization, including typical setback and lot dimensions; the minimum lot sizes for each use; typical minimum and maximum building height and size; massing models; conceptual building design; and the general character and arrangement of parking; fencing; lighting; berming; and building materials.
Parking and Traffic: A study of the parking requirements and needs; a traffic impact study and analysis.
Landscaping: A general landscaping plan; a landscape plan for entrances; a landscape plan for overall property perimeters; any theme/streetscape design; any proposed irrigation.
Natural resources and features: Floodway/floodplain locations and elevations; wetlands and watercourses; woodlands; location and description of other natural resources and natural features.

# PLANNED UNIT DEVELOPMENT **CONCEPT DEVELOPMENT PLAN (CDP) CHECKLIST** (page 2)

Phasing information: The approximate location, area and boundaries of each phase; the proposed sequence of

development, including phasing areas and improvements; and the projected timing for commencement and completion of each phase.
Public services and facilities: A description of the anticipated demand to be generated by the development for public sewer, water, off-site roads, schools, solid waste disposal, off-site drainage, police and fire; a description of the sufficiency of each service and facility to accommodate such demands; the anticipated means by which any insufficient services and facilities will be addressed and provided.
Historical resources and structures: Their location, description and proposed preservation plan.
Site topography.
Signage: General character and location of entrance and internal road system signage; project identification signage; and temporary or permanent signage proposed for any other locations.
Amenities.
Zoning classification: Existing zoning classifications on and surrounding the site.
Specification of deviations: A specification of all deviations proposed from the regulations which would otherwise be applicable to the underlying zoning and to the proposed uses, which are proposed and sought for any phase or

physical improvements on and surrounding the development site. Information required for compliance with other ordinance provisions need not be duplicated in the community impact statement. ALL HARD COPY DRAWINGS SHALL BE FOLDED, STAPLED, SEALED AND SIGNED

component of the Planned Unit Development; the safeguards, features and/or planning mechanisms proposed to achieve the objectives intended to be accomplished by any regulation from which a deviation is being sought.

Community impact statement: A community impact statement, which shall provide an assessment of the developmental, ecological, social, economic and physical impacts of the project on the natural environmental and

BY A STATE OF MICHIGAN PROFESSIONAL ENGINEER, REGISTERED ARCHITECT, REGISTERED LANDSCAPE ARCHITECT, OR PROFESSIONAL COMMUNITY PLANNER

PLANNING COMMISSION AGENDAS ARE ELECTRONIC

# PLANNED UNIT DEVELOPMENT CONCEPT DEVELOPMENT PLAN (CDP) CHECKLIST

# Neighborhood meeting:

Communication to immediate neighbors of the property was issued March 11, 2021 to solicit neighborhood comments regarding the proposed masterplan. The communication offered neighbors the opportunity to participate in either a virtual zoom meeting, or comment individually via written response. Neighbors included those to the west, along Corporate Drive, to the south, along Long Lake, and to the east, across Crooks. The developer of this proposed property owns the immediate property to the north. The masterplan graphic, along with contact information for responses to be submitted were included in the mailed communication to each of the neighbors.

No responses were received from any of the neighbors and as such no virtual meeting occurred.

See following page for copy of letter submitted.

Fax 313.965.8060

#### Gensler

03.11.21

Dear Mr. Dugan:

Re: 1175 W. Long Lake Rd

Troy, Michigan

You are being sent this letter as the owner of the above referenced property based on a review of publicly available information. Long Lake Crooks Development Associates, L.L.C. (the "Developer") intends to develop the vacant 24.08 property located at the northwest corner of the intersection of Crooks Road and Long Lake Road. It is planned to be a mixed-use development.

The Developer is required to notify nearby landowners of the proposed development and ask for comments. A proposed concept masterplan is enclosed for your reference. If you wish to verbally comment, please email Chris Beck no later than March 29<sup>th</sup>, 2021. A virtual Zoom meeting will be set up for you to provide verbal comments. Alternatively, you may also provide written comments to the undersigned no later than April 5<sup>th</sup>, 2021 by sending an email to chris\_beck@gensler.com.

Before this development will occur, it must be thoroughly reviewed and approved by the City of Troy. The City will likely be in contact with you to advise you of the time and place of any public hearing that may be required for this development.

Thank you.

Chris Beck, AIA, LEED-AP BD&C Senior Associate

Gensler

Attachment: Crooks & Long Lake Masterplan

C: Brent Savidant (via email)



# LONG LAKE & CROOKS CONCEPT DEVELOPMENT PLAN

KOJAIAN + GENSLER + PEA GROUP + FLEIS & VANDENBRINK | JULY 12, 2022 | CDP

#### Planned Unit Development – Concept Development (CDP) Submittal

Project: Long Lake & Crooks Masterplan Development Original Submission Date: April 22, 2022 Revised Submission Date: July 12, 2022

City of Troy, Planning Department City of Troy, 500 W. Big Beaver Rd., Troy, MI 48084



Kojaian
Long Lake Crooks Development Associates, LLC
tantone@kojaian.com
39400 Woodward Avenue, Suite 250
Bloomfield Hills, MI 48304
(248) 644-7600
Contact: Anthony G. Antone, Vice President

#### Gensler

Gensler 150 West Jefferson, Suite 1700 Detroit, MI 48226 (313) 496-8966 Contact: Chris Beck, Project Manager



Fleis & Vandenbrink 27725 Stansbury Blvd., Suite 195 Farmington Hills, MI 48334 (248) 342-5786 Contact: Julie Kroll, PE, PTOE

### PEA GROUP

PEA Group 2430 Rochester Court, Suite 100 Troy, MI 48083 (248) 528-7369 Contact: James Butler, PE



Dawda, Mann, Mulcahy, & Sadler 39533 Woodward, Suite 200 Bloomfield Hills, MI 48304 (248) 642-4248 Contact: Tyler D. Tennent

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- TR-1 Traffic Impact Study and Shared Parking Study

#### A. Certified Boundary Survey – Refer to Appendix: Sheet C-1

Legal Description of Property

A parcel of land in a part of the southeast quarter of Section 8, T.02N., R.11 E., City of Troy, County of Oakland, State of Michigan described as follows:

Commencing at the Southeast corner of Section 8, T.02N., R.11 E., City of Troy, County of Oakland, State of Michigan, thence South 87 degrees 15 minutes 31 seconds West 130.00 feet; thence North 02 degrees 37 minutes 54 seconds West 100.00 feet to the north line of Long Lake Road (width varies) and the POINT OF BEGINNING: thence along the said north line the following three (3) courses and distances 1) South 87 degrees 15 minutes 31 seconds West 894. 70 feet; 2) North 02 degrees 30 minutes 26 seconds West 10.00 feet; 3) South 87 degrees 15 minutes 31 seconds West 364.00 feet; thence North 47 degrees 37 minutes 28 Seconds West 42.26 feet to the easterly line of Corporate Drive (120' wide); thence North 02 degrees 30 minutes 26 seconds West 424.81 feet to a point of curvature; thence 353.35 feet along a curve to right, said curve having a radius 710.00 feet, a central angle of 28 degrees 30 minutes 52 seconds, and a chord that bears North 11 degrees 45 minutes 00 seconds East 349.71 feet; thence North 87 degrees 15 minutes 31 seconds East 1240. 77 feet to the west line of Crooks Road (width varies); thence along said west line the following three (3) courses and distances: 1) South 02 degrees 37 minutes 54 seconds East 463.36 feet; 2) South 87 degrees 22 minutes 06 seconds West 10.00 feet; 3) South 02 degrees 37 minutes 54 seconds East 310.00 feet; thence South 42 degrees 18 minutes 48 seconds West 42.47 feet to the POINT OF BEGINNING.

Parcel 20-08-477-001 Vacant Land

#### **B.** Development Concept:

Long Lake Crooks Development Associates, L.L.C. (the "Developer") proposes a mixed-use development within the approximate 24.08-acre site bound by Long Lake Road to the south, Crooks Road to the east and Corporate Drive to the west (the "Site"). In concept, this development is envisioned to offer various needed services to the Long Lake corridor and surrounding community and create a development of mixed horizontal and vertical forms. The Site has the potential to be comprised of workplace / medical office space, retail, commercial, residential, and hospitality uses, with the desired overall potential of maximizing the developmental area and providing interconnectivity for vehicles and pedestrians.

The overall phasing of the development will be dependent on the market and the Developer's success and cadence in acquiring prospective users. Final Site configurations will be contingent on such cadence and specific user requirements, both of which will influence final building massing, location, and overall Site character. Final development solutions for each use will be individually issued for approval as part of the preliminary and final development approval process during future timeframes.

The basis of the documentation included within this Concept Development Plan and the PUD application is to demonstrate the desired intent of the overall Site development over a period of time. It is conceptual in nature, however, demonstrates a thoughtful and desired solution to the Site for which a planned unit development zoning status is needed. The descriptions and illustrations within this application form the basis of the development concept.

#### **Development Areas:**

The Concept Development Plan envisions several Site components identified as development areas (refer to appendix sheet A-6). Although sequentially numbered, these development areas are not intended to reflect a specific order of cadence, but to identify separate areas within the overall Site that will be developed through a phased approach.

<u>Development Area 1</u>: A residential component is intended for the northwest corner of the Site that will foster a permanent population and enhance further development of the remaining development areas. This residential component will support the increasing demands of the City's housing needs and satisfy a key component in the intended live / work / play environment the Site is focused to achieve.

<u>Development Area 2</u>: The largest development area of the Site is proposed for workplace / medical office and is generally intended to be the anchor development within the overall Site. This development area will support the functional needs of prospective users of the Site and/or nearby residents, bringing significant growth opportunities for the City and further energizing the area. If developed for either single anchor or multi-tenant configurations, the buildings in this development area will support the flexible workplace environment tenants seek within Class-A office/flex-tech space.

<u>Development Area 3</u>: This development area reflects an additional opportunity for added workplace, office, retail, and residential use. Centered within the Site, this development area can act as either a standalone anchor development or as an expansion of use based on the success of either Development Areas 1 & 2. Supporting parking will be included within the development footprint.

<u>Development Area 4</u>: The development area is for lodging with an intended inclusion of an anchor hotel. The building will be designed so that it is easily convertible to residential, (apartment or condominium), use if desired in the future. Currently located on the southwestern corner of the Site, the final location of the hotel may adjust along Corporate Drive dependent on the final retail / restaurant configuration in other areas of the Site. As with the retail and residential components, the hotel is deemed as an asset to both the immediate Site as well as the broader community.

The remaining areas along Long Lake, as illustrated on the Concept Development Plan, offer retail / restaurant opportunities. These intended areas provide destinations for the surrounding community while also supporting other developments on the Site. They are smaller in scale and are intended to energize the Long Lake and Corporate Drive frontage for both vehicular and pedestrian foot traffic by becoming favorite 'go-to' locations. They are not considered a separate development area, but intended to be built either as part of any phase of the development or separately after 50% completion of the first phase.

A combination of surface and structured parking will support the development of the Site based on the expected development uses. Surface parking will support the needs of the short-term visitors of office, retail, and hotel uses, while structured parking, situated away from the high visibility of Long Lake and Crooks will support the daily occupants of the larger office and mixed-use buildings. Each development area will meet all parking requirements as mandated for its use within the City guidelines.

The Developer requests the flexibility to choose the locations of each permitted use within a development area, the sequence of development, and the specific features and boundaries of

each area depicted in the Concept Development Plan. Market forces and user requirements are constantly changing. As a result, the PUD zoning concept, together with an appropriate Development Agreement, will facilitate this flexibility and encourage development without adversely impacting the preliminary and final development plan approval processes required by the City under the Zoning Ordinance.

All development areas shall be integrated through design elements including but not limited to architecture, materials, landscaping, pedestrian connectivity, street connectivity, and shared parking and in accordance to all City requirements.

Landscaping shall meet or exceed required landscaping for similar projects as per Chapter 39, Section 13.02.

Temporary undeveloped portions of the Site shall be appropriately maintained including grass cutting, snow removal, keeping the Site free of refuse, etc.

#### **Amenity Areas:**

Various amenities will be required as part of the development areas as shown in the Concept Development Plan (refer to appendix sheets A-8 through A-10). An overall view of amenity areas is as illustrated in the Concept Development Plan - Amenity Areas, (refer to appendix sheet A-7). The overall configuration of amenity areas is flexible however they have been purposefully located and sized based on proximity and use of each development area as well as connectivity and access to each other and the local community. Overall, amenity areas account for approximately 135,000 SF, (3 acres), of the total Site area, or 12%.

The amenity areas as illustrated include the following:

<u>Amenity Area 1A</u>: Open green spaces for flexible use, community seating areas / built shelters and fire pits.

Amenity Area 1B: Dog park, walking path.

Amenity Area 2A: Landscape / public art - sculpture garden, walking paths and seating.

Amenity Area 2B: Fitness path, pickle ball courts.

Amenity Area 3: Open green space, bocce ball, food truck staging area.

Overall: Connecting pathways/sidewalks allow both internal and public pedestrian access and engagement across all amenity areas. Continuity of landscape, vegetation and site furnishings will provide a cohesive and connected aesthetic across all parts of the Site.

#### **Natural Areas:**

Approximately 3.6 acres of natural wetland will be preserved on the Site, located within two distinct areas, <u>Natural Area 1</u> and <u>Natural Area 2</u>, as illustrated in the Concept Development Plan (refer to appendix sheet A-7). No development will occur within the natural areas. Viewed as part of the overall Site amenities, the wetlands further enhance the natural landscape and create buffers between development areas that support a more open site environment and will helping to

minimize the appearance of overall densification. Vegetation within these areas will remain untouched, except as may be required by the permitting authorities or to facilitate opportunities to clear low lying scrub vegetation for visual access as well as physical approach along the wetland boundaries.

Amenity areas have strategically been placed adjacent to these natural wetlands to further increase the openness and outdoor offerings to users of the Site and public alike.

C. Location Map - Refer to Appendix: Sheet C-0

D. Land Use Map - Refer to Appendix: Sheet A-1

Properties adjacent to site are: Office, Retail/Restaurant and Cemetery

E. Certified Boundary Survey – Refer to Appendix: Sheet C-1 Topographic Survey

#### F. Density Analysis:

	Zoning	Proposed
District	Max. % of Building Coverage	
OM - Office Mixed Use	40%	37%
UR – Urban Residential	50%	N/A
GB – General Business	N/A	10%
Overall Site	N/A	27%

#### G. Road/Circulation System

- Private Roads within Site
- Entrances
  - Crooks Road Boulevard
    - Main Entry with deceleration lane / Exit
  - Long Lake Road Boulevard
    - Main Entry with deceleration lane / Exit
    - Retail / Restaurant entry with deceleration lane / Exit
  - Corporate Drive Boulevard
    - Main Entry with deceleration lane / Exit
    - Hotel entry with deceleration lane / Exit
- Circulation Pattern
  - Main routes are East to West from Crooks Road to Corporate Drive
  - Intersecting route from Long Lake Road
- Pedestrian walkways throughout the Site to provide walkability and easy access to amenities

#### H. Utilities – Refer to Appendix: Sheet C-3 Conceptual Utility Plan

- Gas Connect to existing from Crooks Road
- Electric Connect to existing from Long Lake Road
- Water / Fire
  - Connect to existing watermain from Corporate Drive
  - o Connect to existing watermain from Crooks Road
- Sanitary Sewer Connect to existing from Long Lake Road
- Communications Connect to existing from Long Lake Road
- Storm
  - o Connect to the existing structure at the corner of Crooks Road and Long Lake
  - o Underground detention area in parking lot near Detention Pond
  - o Detention Area will feature a natural pond with walking path and landscaping

#### I. Open Space/Common Areas:

The Site is currently vacant and not accessible to the public. The Concept Development Plan envisions that a portion of the Site will provide a park like setting and access to the pedestrian boulevards and retail/restaurants, which can be used at the leisure of residents and visitors. This interconnectivity to the Site features and outdoor amenities is a recognizable public benefit.

Open space is incorporated to the greatest extent possible while balancing building, parking and circulation needs within the boundaries of the Site. Open, vegetated areas are located to minimize large scale hardscape zones. Public access is focused primarily to the southern end of the Site, along the Long Lake corridor.

Continuous paved walking paths wrap the development area, connecting open spaces, as well as the incorporation of a potential natural pathways and seating areas.

Native, high quality, vegetation replaces the current low value tree stock and is intended to be incorporated throughout the development areas within open/common spaces, softening the more formal approach of the buildings and balancing human scale to surrounding built environment.

Refer to Appendix: Sheet C-2.0 and Sheet A-7 for Conceptual Site Plan, natural area, and site amenity diagramming.

#### J. Uses: Refer to Appendix: Sheet A-6, A-8, A-9, A-10, A-11

- Lodging / Residential
- Retail / Restaurant
- Office / Medical / Residential
- Parking Surface / Deck

The proposed uses are to be a mixture of commercial, retail, residential, and office, (live / work / play) with both structured and surface parking. All uses are subject to Preliminary Development Plan Approval and described as follows:

<u>Development Area 1</u>: Residential uses permitted as of right or requiring special approval, and their accessory uses, consistent with such uses in the UR – Urban Residential District and all associated surface parking.

<u>Development Area 2</u>: Office uses permitted as of right or requiring special approval, and their accessory uses, consistent with such uses in the OM - Office Mixed Use District, the O - Office District, or the GB-General Business District, as referenced in the Zoning Ordinance, and a multistory parking structure and surface parking features.

<u>Development Area 3</u>: Residential uses permitted as of right or requiring special approval, and their accessory uses, consistent such uses in the UR – Urban Residential District as referenced in the Zoning Ordinance and all associated surface parking; Office uses permitted as of right or requiring special approval, and their accessory uses, consistent with such uses in the OM - Office Mixed Use District, the O - Office District, or the GB-General Business District, as referenced in the Zoning Ordinance; "Restaurant" and/ or "Retail Business or Retail Sales" uses as defined by the Zoning Ordinance; Conference, meeting, and banquet facility uses permitted as of right or requiring special approval, and their accessory uses consistent with such uses the GB - General Business District in the Zoning Ordinance; and, all associated surface parking.

<u>Development Area 4</u>: Lodging or extended stay facility uses permitted as of right or requiring special approval, and their accessory uses, consistent with such uses in the GB – General Business District identified in the Zoning Ordinance; and, Residential uses permitted as of right or requiring special approval, and their accessory uses, consistent such uses in the UR – Urban Residential District as referenced in the Zoning Ordinance and all associated surface parking.

Restaurant/Retail Areas: "Restaurant" and/ or "Retail Business or Retail Sales" uses as defined by the Zoning Ordinance, and their accessory uses, and all associated surface parking.

<u>Amenity Area 1A</u>: "Open Space" as defined by the Zoning Ordinance for use as an open field activity area.

Amenity Area 1B: "Open Space" as defined by the Zoning Ordinance for use as a dog park.

Amenity Area 2A: "Open Space" as defined by the Zoning Ordinance for use as a public art or sculpture garden.

<u>Amenity Area 2B</u>: "Open Space" as defined by the Zoning Ordinance for use as a fitness trail and pickle ball courts.

<u>Amenity Area 3</u>: "Open Space" as defined by the Zoning Ordinance for use as a bocce ball court and outdoor seating.

<u>Natural Areas A and B</u>: Restricted from development and shall remain in an "Undeveloped State" as defined in the Zoning Ordinance.

#### K. Development Guidelines:

DISTRICT	MAX SQUARE FOOTAGE	MIN # FLOORS	MIN BUILDING HEIGHT	MAX # FLOORS	MAX BUILDING HEIGHT
DEVELOPMENT AREA 1	350,000 sf	3	40'	7	90'
DEVELOPMENT AREA 2	500,000 sf	4	60'	10	150'
DEVELOPMENT AREA 3	350,000 sf	4	60'	10	150'
DEVELOPMENT AREA 4	105,000 sf	3	40'	10	150'
RETAIL/RESTAURANT AREAS	18,000 per building	1	17.5'	2	35'

See Sheet A-12 for massing

MINIMUM SETBACKS (measured from perimeter property lines or public rights of way)

DISTRICT	FRONT SETBACK	SIDE SETBACK	REAR SETBACK
DEVELOPMENT AREA 1	10'	20'	30'
<b>DEVELOPMENT AREA 2</b>	10'	20'	30'
<b>DEVELOPMENT AREA 3</b>	10'	20'	30'
<b>DEVELOPMENT AREA 4</b>	10'	20'	30'
RETAIL/RESTAURANT	10'	20'	30'
AREAS			

#### L. Traffic Impact Study:

Refer to Appendix: Sheet TR-1 - Traffic Impact Study and Shared Parking Study.

#### **Executive Summary**

This report presents the results of a Traffic Impact Study (TIS) for the proposed master plan development located generally in the northeast quadrant of the Long Lake Road and Corporate Drive intersection adjacent to the west side of Crooks Road in Troy, Michigan.

This analysis is based on the conceptual development plan included with the application. This study includes an evaluation of the highest trip generation for the potential uses of the Site, thereby providing a conservative analysis. The land uses included herein were assumed for analysis purposes and do not necessarily reflect the actual proposed land uses on this Site.

The proposed conceptual plan evaluated in this study includes the development of the approximately 24-acre parcel with office, hotel, and retail/restaurant land uses. Parking for the Site was assumed to be provided through a combination of parking structures and surface parking. The Site access will be finalized at the site plan phase of the project, however for this analysis access was assumed via seven (7) site driveways; two (2) on SB Crooks Road, two (2)

on Long Lake Road, and three (3) on Corporate Drive. Long Lake Road and Crooks Road are under the jurisdiction of the Road Commission for Oakland County (RCOC), whereas Corporate Drive is under the jurisdiction of the City of Troy.

The scope of this study was developed based on Fleis & VandenBrink's (F&V) knowledge of the study area, understanding of the development program, accepted traffic engineering practice and information published by the Institute of Transportation Engineers (ITE), and pursuant to the requirements of the City of Troy and the RCOC. Additionally, F&V solicited input regarding the scope of work from the City of Troy's engineering consultant (OHM Advisors).

#### **Background Data**

Due to the impacts of COVID-19 and the subsequent closures of businesses and schools, current traffic volume data is not representative of "typical" operations. In addition, the on-going construction on I-75 has significant impacts on the traffic volumes throughout the study network. Therefore, the traffic volume data necessary for this study were obtained from multiple sources:

- SCATS volume data was obtained from RCOC at the signalized study intersections within the network for use in this study. The SCATS data utilized for this study was obtained for September 13, 2018, prior to COVID-19 and the I-75 construction impacts.
- F&V subconsultant Traffic Data Collection, Inc. (TDC) performed weekday AM (7:00 AM to 9:00 AM) and PM (4:00 PM to 6:00 PM) peak hour turning movement counts on Wednesday, October 6, 2020 at the unsignalized intersections.

A 0.5% annual background growth rate was applied to the 2018 signalized traffic volumes to calculate the baseline 'existing' 2020 traffic volumes. COIVD-19 adjustment factors were applied at the unsignalized intersections to calculate the baseline 'existing' 2020 traffic volumes. The traffic volumes were then balanced upwards through the study network. 'Dummy nodes' were added at locations to account for sink and source volumes between intersections.

#### **Trip Generation**

The number of weekday peak hour (AM and PM) and daily vehicle trips that would be generated by the proposed development was forecast based on data published by ITE in the *Trip Generation Manual*, 10<sup>th</sup> Edition. The site trip generation forecast is summarized in **Table 1**. The proposed trip generation included in this analysis was reviewed with the City Traffic Consultant (OHM) prior to use in the study. *Note: Internal trip capture and pass-by trip reductions were not included in this study to provide a conservative analysis*.

Table E1: Trip Generation Summary

Land Use	ITE	Awerage Amount Units Daily Traffic		AM Peak Hour (vph)			PM Peak Hour (vph)			
	Code	Amount	Ullits	(vpd)	ln	Out	Total	ln	Out	Total
High Turnover (Sit-down) Restaurant	932	54,000	SF	6,058	295	242	537	327	201	528
Hotel	310	308	Rooms	3,050	88	61	149	105	100	205
Medical-Dental Office Building	720	1,000,000	GFA SF	38,332	1,353	381	1,734	950	2,442	3,392
Total Trips			47,440	1,736	684	2,420	1,382	2,743	4,125	

#### Site Trip Distribution

The site access for this analysis was assumed via seven (7) driveways: three (3) on Corporate Drive, two (2) on Long Lake Road, and two (2) on SB Crooks Road. The vehicular trips that would be generated by the proposed development were assigned to the study roads based on the proposed site access plan, the existing peak hour traffic patterns on the adjacent roadway

network, and the methodologies published by ITE. The adjacent street traffic volumes were used to develop the trip distribution. In order to determine the projected site traffic distribution, it was assumed that the existing adjacent street traffic volumes in the AM are home-to-work based trips, and in the PM are work-to-home based trips. Therefore, the trip distribution assumes trips are coming into the study network and entering the development for work in the AM peak hour, then leaving work and exiting the network towards home in the PM peak hour. The ITE trip distribution methodology assumes that new trips will return to their direction of origin. The site trip distribution used in the analysis is summarized in **Table E2**.

Table E2: Site Trip Distribution

From/To	Via	AM	PM
North	Crooks Road	28%	30%
South	Crooks Road	14%	19%
East	Long Lake Road	18%	17%
East	I-75 Ramp	28%	18%
West	Long Lake Road	12%	16%
Total		100%	100%

#### **Conclusions**

The conclusions of this TIS are as follows:

Masterplan Development Assumptions

- This analysis is based on the Conceptual Development Plan included with the application. This study includes an evaluation of the highest trip generation associated with the potential uses for this Site. Therefore, the traffic analysis included herein provides a conservative analysis for this development. The land uses included herein were assumed for analysis purposes and do not necessarily reflect the actual proposed land uses on this Site.
  - The proposed conceptual plan evaluated in this study includes the development of the approximately 24-acre parcel with office, hotel, and retail/restaurant land uses.
  - Parking for the Site was assumed to be provided through a combination of parking structures and surface parking.
  - The site access will be finalized at the site plan phase of the project, however for this analysis access was assumed via seven (7) site driveways; two (2) on SB Crooks Road, two (2) on Long Lake Road, and three (3) on Corporate Drive.

#### **Trip Generation Comparison**

 A trip generation comparison analysis was performed to show the potential trip generation associated with development permitted under the existing Office (O) zoning. The results of the analysis indicate that the proposed development plan will generate more trips throughout the day and during both peak hours, as compared to a potential development currently permitted by right under the existing zoning.

#### **Existing Conditions**

 All approaches and movements at the study intersections currently operate acceptably, at LOS D or better during both peak periods, with the exception of the following:

- The overall intersection of Crooks Road & Corporate Drive/I-75 Ramp is currently operating at LOS E during the AM peak period with multiple approaches and movements operating at LOS E and LOS F during both AM and PM peak periods.
- The southbound left-turn movement at the intersection of Corporate Drive & New King Drive is currently operating at LOS E during the AM peak period.
- The southbound approach at the intersection of EB Long Lake Road and Investment Drive is currently operating at LOS E during the AM peak hour and LOS F during the PM peak hour.
- The westbound right turn movement at the intersection of WB Long Lake Road & Corporate Drive is currently operating at LOS E during the AM peak hour.
- Review of SimTraffic network simulations indicates long vehicles queues at the signalized intersection of Crooks Road & Corporate Drive/I-75 Ramp during both peak periods. Microsimulations indicate acceptable operations at all other study intersections.

#### Background Conditions (without the proposed development)

- A conservative annual growth rate of 0.5% per year was applied to the 2020 traffic volumes in order to determine the background 2025 traffic volumes.
- The results of the background conditions analysis show that the study intersections will
  continue to operate in a similar manner to existing conditions, with some increases in the
  delay.

#### Future Conditions (with the proposed development)

- The results of the future conditions analysis show that, with the addition of the sitegenerated traffic, all study intersection approaches and movements will operate in a manner similar to existing and background conditions, with the exception of the following:
  - The intersection of Crooks Road & Corporate Drive/I-75 Ramp is expected to operate at LOS F during both AM and PM peak periods with significant increases in delay for the westbound approach during the AM peak hour and the eastbound approach during the PM peak hour.
  - The southbound left-turn on Crooks Road at Tower Drive exceeds the available storage length and impacts the upstream operation at the intersection of Crooks Road & Corporate Drive/I-75 Ramp.
  - The northbound left turn movement at NB to SB Crooks Road crossover north of Long Lake Road is expected to operate at LOS E during both AM and PM peak hours.
  - The southbound left turn movement at the SB to NB Crooks Road crossover north of Long Lake Road is expected to operate at LOS F during PM peak hour.
  - The southbound left turn movement at SB to NB Crooks Road crossover south of Long Lake Road is expected to operate at LOS F during the PM peak hour.
  - The eastbound right turn movement on the E. Site Drive at Crooks Road is expected to operate at LOS F during the PM peak hour.

- The southbound right turn movement at WB Long Lake Road and S.E. Site Dr. is expected to operate at LOS F during the PM peak hour.
- The westbound left turn movement at the N. Site Drive at the Corporate Drive is expected to operate at LOS E during the PM peak hour.
- The westbound left turn movement at the N.E. Site Drive & SB Crooks Road intersection is expected to operate at LOS F during the PM peak hour.
- The westbound left turn movement at the N.W. Site Drive & Corporate Drive intersection is expected to operate at LOS E and LOS F during the AM and PM peak hour, respectively.
- Review of SimTraffic network simulations indicates long vehicles queues at the signalized intersection of Crooks Road & Corporate Drive/I-75 Ramp during both peak periods. Additionally, long vehicle queues exceeding the available storage length were observed at the Tower Drive Crossover, the SB-to-NB Crossover located north and south of Long Lake Road. Microsimulations indicate acceptable operations at all other study intersections.

#### **Access Management**

- The results of the analysis indicate that right-turn deceleration tapers are recommended at the site driveways on Corporate Drive and full-width right-turn lanes are recommended at the proposed site driveway locations on Crooks Road and Long Lake Road.
- There are no site access driveways proposed at this time with this PUD. Therefore, the site access driveways will be further reviewed for access management and auxiliary lanes during the development of site plan(s) for this PUD.

#### Parking Study

- The proposed PUD includes the addition both surface parking spaces and one or more parking structures.
- A minimum of 4,580 parking spaces is recommended for this Site.

#### **Project Phasing**

There is no identifiable phasing plan at this juncture of the proposed development. The
overall development is assumed to be phased over time, based on tenant opportunities
and economic viability. As various areas are developed, a phasing plan will be formulated
in a manner where all parking and building requirements are met throughout each phase.

#### Recommendations

The recommendations of this TIS are as follows:

#### **Recommended Intersection Improvement (Future 2025)**

#### # 10 Crooks Road & Corporate Drive / I-75 Ramp

Eliminate the EB and WB left-turn movements and the split phasing

- Operate as median U-turn on east and west approaches.
- Construct new SB to NB crossover south of Corporate Drive.
- Construct additional westbound right-turn lane
- Extend the southbound left-turn storage length (~200 feet)

#### #30 NB Crooks Road & Tower Drive

Eliminate direct left turns and operate intersection with indirect left-turns.

- Close existing crossover at intersection
- Construct new NB to SB crossover north of Tower Drive

#### # 40 NB to SB Crooks Road X/O north of Long Lake Road

Provide signalization

#### # 50 SB to NB Crooks Road X/O north of Long Lake Road

Provide dual lane crossover

#### # 130 WB to EB Long Lake Road X/O west of Investment Drive

Provide signalization

#### #140 SB to NB Crooks Road X/O south of Long Lake Road

- Provide dual lane crossover
- Provide signalization

#### # 160 SB Crooks Road & E. Site Drive

- Provide dual right-turn egress
- Provide a right-turn deceleration lane on Crooks Road

#### # 170 Corporate Drive & N. Site Drive

- Provide a two-lane egress approach
- Provide a right-turn deceleration lane on Corporate Drive

#### # 180 Corporate Drive & W. Site Drive

Provide a right-turn deceleration lane on Corporate Drive

#### # 190 WB Long Lake Road & SW. Site Drive

Provide a right-turn deceleration lane on Long Lake Road

#### # 200 WB Long Lake Road & SE. Site Drive

- Provide a two-lane egress approach
- Provide a right-turn deceleration lane on Corporate Drive

#### # 210 NB to SB Crooks Road XO north of Corporate Drive

- Provide dual lane crossover
- Provide signalization

#### # 220 SB to NB Crooks Road XO south of Tower Drive (NEW)

- Provide dual lane crossover
- Provide signalization

#### # 230 NB to SB Crooks Road X/O north of Tower Drive

Relocate crossover further south to accommodate a NB to SB X/O south of Corporate Drive

#### # 240 SB to NB Crooks Road X/O south of Tower Drive

- Provide dual lane crossover
- Provide signalization

#### # 250 SB Crooks Road & NE. Site Drive

- Provide dual right-turn egress
- Provide a right-turn deceleration lane on Crooks Road

#### # 260 Corporate Drive & NW. Site Drive

• Provide a two-lane egress approach

#### M. Landscaping: Refer to Appendix: Sheets: L-1, T-1, T-2 and T-3

- Landscaping will be designed per Article 13 of the City of Troy Zoning Ordinance.
- Tree Survey Originally completed May 15, 2019
  - o 1179 trees 6" DBH or greater were identified and tagged (18 on adjacent property)
  - One (1) tree on the property is in Good condition (Silver Maple)
  - o Remaining trees are noted as Fair, Poor or Very Poor

#### N. Natural Resources/Features:

The Site topography is gently sloping from the west to the east (elevation 800 to 774). Most of the Site drains to the southeast property corner and outlets into an existing culvert. Several areas of the property were shown to be disturbed with mounding, digging and evidence of earthwork/contour changes. No buildings or roads exist on the Site.

#### Wetlands – Refer to Appendix: Sheet A-2, C-1

Based upon the wetland delineation in March 2019, four (4) wetlands were found on the property. Two (2) wetlands were determined to be regulated by the Michigan Department of Environment, Energy & Great Lakes (EGLE). Wetland A and Wetland D is regulated by the City of Troy and EGLE and will need use permits for any impacts. Wetland A is dominantly scrub shrub with a dominance of common buckthorn (*Rhamnus cathartica*), riverbank grape (*Vitis riparia*) and silver maple (*Acer saccharinum*). Wetland D is primarily a scrub shrub wetland with a dominance of glossy buckthorn. The parcel did get processed through the State of Michigan's Wetland Assessment in June 2019. As determined by EGLE, a small stream was identified within the southern edge of Wetland A and drains directly into the existing storm end section. The on-site water travels within the storm pipe along Long Lake and discharges into the Sturgis

Drain. It was this relationship to Sturgis Drain that EGLE determined the on-site water feature a stream and thus regulating Wetland A and D. Refer to Wetland Map below and review the included wetland report. Therefore, the City of Troy\* and EGLE will require a use permit for Wetland A.

Refer to Wetlands Summary Report dated April 2, 2019 and Wetlands Identification Report from EGLE dated July 29, 2019

#### Woodlands – Refer to Appendix: Sheet A-4, T-1, T-2, T-3

Approximately, eighty-three percent (83%) of the 24-acre parcel is wooded. The woodland is split between upland and wetland. The table below provides a break-down of tree species counts and overall tree health condition. Based upon the 2019 tree survey, one thousand one hundred-eighty (1,180) trees were tagged based upon the City's tree ordinance of 6-inch diameter at breast height. Twenty-five (25) different tree species were identified on the parcel with 98.9% being deciduous and 1.1% being evergreen. A majority of the tagged trees showed signs of stress which lead to a poor to very poor overall health (82.8% trees were considered poor to very poor). Factors that contribute to a poor to very poor health condition include trunk rot, trunk alignment, pests/ disease, excessive vine coverings, lack of crown, major limb damage and limited twig growth. The higher quality trees which consists primarily of hardwoods are shown in the chart with bold text. They represent only approximately 20% of the woodland. Most of these trees were located within an old utility corridor in the western portion of the property. In addition, scrub shrub habitat was dominant on the parcel consisting mostly of common buckthorn (Rhamnus cathartica). Based upon the statistical data, the woodland represents a low-quality woodlot with a dominance of prohibited trees species as listed by the City (box elder, cottonwood, white and green ash, black locust, silver maple, white poplar, etc.). Tree replacements should focus on high-quality hardwood native and/or cultivars of native trees for re-establishment.

Table 1.0 – 2019 Tree Survey Health & Diversity Chart

Tree Type	Total Count	Poor/VP	Percentage of Total
American Beech	1	0	0.08%
American Elm	130	105	11.02%
Austrian Pine	5	5	0.42%
Basswood	60	38	5.08%
Black Locust	425	416	36.02%
Black Walnut	126	75	10.68%
Black Willow	1	1	0.08%
Blue Spruce	6	0	0.51%
Box elder	127	121	10.76%
Cottonwood	30	20	2.54%
Domestic Apple	8	8	0.68%
Green Ash	78	72	6.61%
Norway Maple	12	1	1.02%
Paper Birch	1	1	0.08%
Pear	1	1	0.08%
Red Maple	2	0	0.17%
Scotch Pine	2	2	0.17%
Shagbark Hickory	1	1	0.08%
Silver Maple	96	50	8.14%

Sugar Maple	8	2	0.68%
Thornapple/Hawthorne	25	25	2.12%
White Ash	1	1	0.08%
White Poplar	1	1	0.08%
Wild Black Cherry	23	22	1.95%
Yellow Birch	10	9	0.85%
TOTALS	1180	977 (82.80%)	100.00%

High Quality Tree Species	239	139 (58.16%)	20.25%

Deciduous Trees 1.10% Evergreen Trees 98.90%

#### O. Parking Counts:

Refer to Appendix: Sheet TR-1 - Traffic Impact Study and Shared Parking Study, Section 10

#### P. Project Phasing:

There is no identifiable phasing plan at this juncture of the proposed development. The overall development is assumed to be phased over time, based on end-user opportunities and economic viability. As various areas are developed, a phasing plan will be formulated in a manner where all parking and building requirements are met throughout each phase.

#### Q. Public Services/Facilities:

Anticipated demand will be dependent upon the type of development and their uses. City of Troy has sufficient infrastructure to sufficiently support a development of this size and variety.

Much of the stormwater generated from the development will be collected and conveyed via an enclosed storm sewer network to an underground stormwater detention system. The underground detention system provides management of the stormwater rate and quality prior to its discharge into the Sturgis Drain.

#### R. Historical Resources and Structures:

Based upon available online resources and field observations, no known historic architecture, buildings, foundations and/or archeological features exist on the subject property. Historic aerial imagery suggests that the property was used primarily as agricultural property since 1940 to 1980.

From 1980, the site use changed to fallow field and developed into the wetlands and woodlands you see today. In 1963 – 1964, Interstate 75 was constructed, and Crooks Road entrance/ exit ramp was established. The introduction of the highway system energized the immediate surrounding area to develop into commercial and office/ mixed-use zoning.

Around 1999, the northern portion of the property was disturbed due to construction activity for the development of the office and mixed-use buildings and parking areas. In addition, the National Parks Services has only two sites listed on the historic register. The two listings are as follows:

- Brooks Farm: 3521 Big Beaver Road
- Caswell House: 60 West Wattles Road

Both historic sites are over 2.0 miles from the subject property. The proposed development will not adversely affect the listed historic parcels. The following figures show the progression of the subject parcel from 1940 through 1999. In summary, the parcel was heavily farmed for at least forty years with the last forty years being left to naturalized based upon its surroundings. Through that time period, one house and accessory buildings have been shown to exist for approximately ten years.

Figure 4: 1940 B&W Aerial, Source: Oakland County Property Gateway. Property is utilized as agricultural.

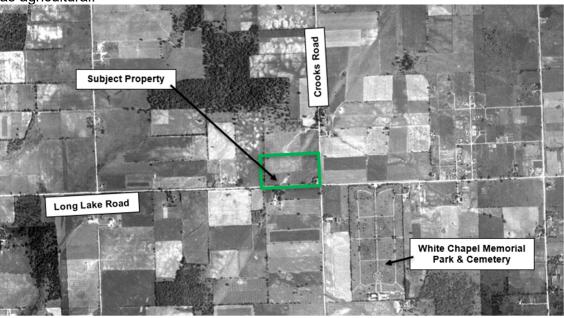


Figure 5: 1963 B&W Aerial, Source: Oakland County Property Gateway. Introduction of Interstate 75, house located in the southeast corner of property; overall property is utilized as agricultural.



Figure 6: 1963 – Detail of house located at the southeast corner. House appears to be removed by 1974.

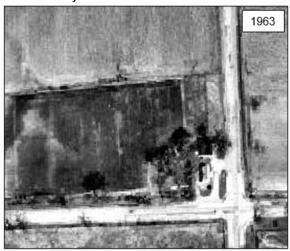




Figure 7: 1974 B&W Aerial, Source: Oakland County Property Gateway. Parcel continues as agricultural use



Figure 8: 1980 B&W Aerial, Source: Oakland County Property Gateway. It appears the parcel is not being farmed.



Figure 9: 1990 B&W Aerial, Source: Oakland County Property Gateway. Significant development surrounding the subject property with office and mix-use. From 1980 to 1990, Corporate Drive is constructed and Long Lake and Crooks Road becomes widen as a boulevard to address future traffic and growth.



Figure 10: 1999 B&W Aerial, Source - Google Earth. Parcel has developed wetlands and woodland area since approximately 1980 due to inactivity on the property (i.e. no farming, maintenance, etc.) Northern portion of the Site receives impacts from the construction activity to the north.



In summary, the Long Lake and Crooks Road 24-acre shares a similar history as most surrounding properties in Troy, Michigan. Once historically farmed, the Site was abandoned from farming and set aside for the future growth and development of the Detroit Metropolitan Area. As shown, this is one of the last large-scale pieces of property within the office and mixed-use zoning in the City of Troy. The resources on the Site are of poor quality due to the lack of land management or planning. As the surrounding properties were developed, this parcel received secondary impacts and disturbance which promotes pioneer plant and tree species to dominant.

#### S. Site Topography: Refer to Appendix: Sheet C-1

The Site topography is gently sloping from the west to the east (elevation 800 to 774). Most of the Site drains to the southeast property corner and outlets into an existing culvert. Several areas of the property were shown to be disturbed with mounding, digging and evidence of earthwork/contour changes. No buildings or roads were observed on the subject property.

#### T. Signage: Refer to Appendix: Sheet C-2

Final signage, based on individual area developments, will adhere to all city requirements / regulations as identified in City ordinances. In general, the following signage opportunities are assumed:

- Monument Signs Four (4) monument signs will be provided
  - Main Entrances on Crooks Road, Long Lake Road and Corporate Drive with tenant signage
  - Corner of Long Lake and Crooks with development signage
- Building Signs Signage will be provided for each of the structures within the property

• Directional Signs – Signage will be provided within the property related to parking, fire lanes, one-way traffic, etc.

#### **U.** Amenities:

Refer to Appendix: A-7 for locations and opportunities.

- Outdoor plazas to encourage interaction and engagement outside of the workplace.
- Outdoor dining areas opportunities within Retail / Entertainment locations as well as along 'pedestrian boulevard' where daily retail pop-ups can be incorporated.
- Pedestrian circulation paths and activity areas throughout the property for walkability, relaxation and encouragement of a healthy environment.
- Walking paths and activity areas for public and internal use.
- Public artwork

#### V. Existing Zoning Classification:

O - Office Building District Zoning

Development to support office uses and limited related retail and service uses which support an office environment.

Not supportive of prominent retail or other commercial components

Maximum height – 3 stories/ 36'
Density restrictions
Restaurants – not permitted
Hotel/Lodging – not permitted
Parking Decks – special approval only

#### W. Specification of Deviations:

The proposed re-zoning will shift from the current Site zoning of 'O' to the desired 'PUD', including variances of development use, maximum height and GSF.

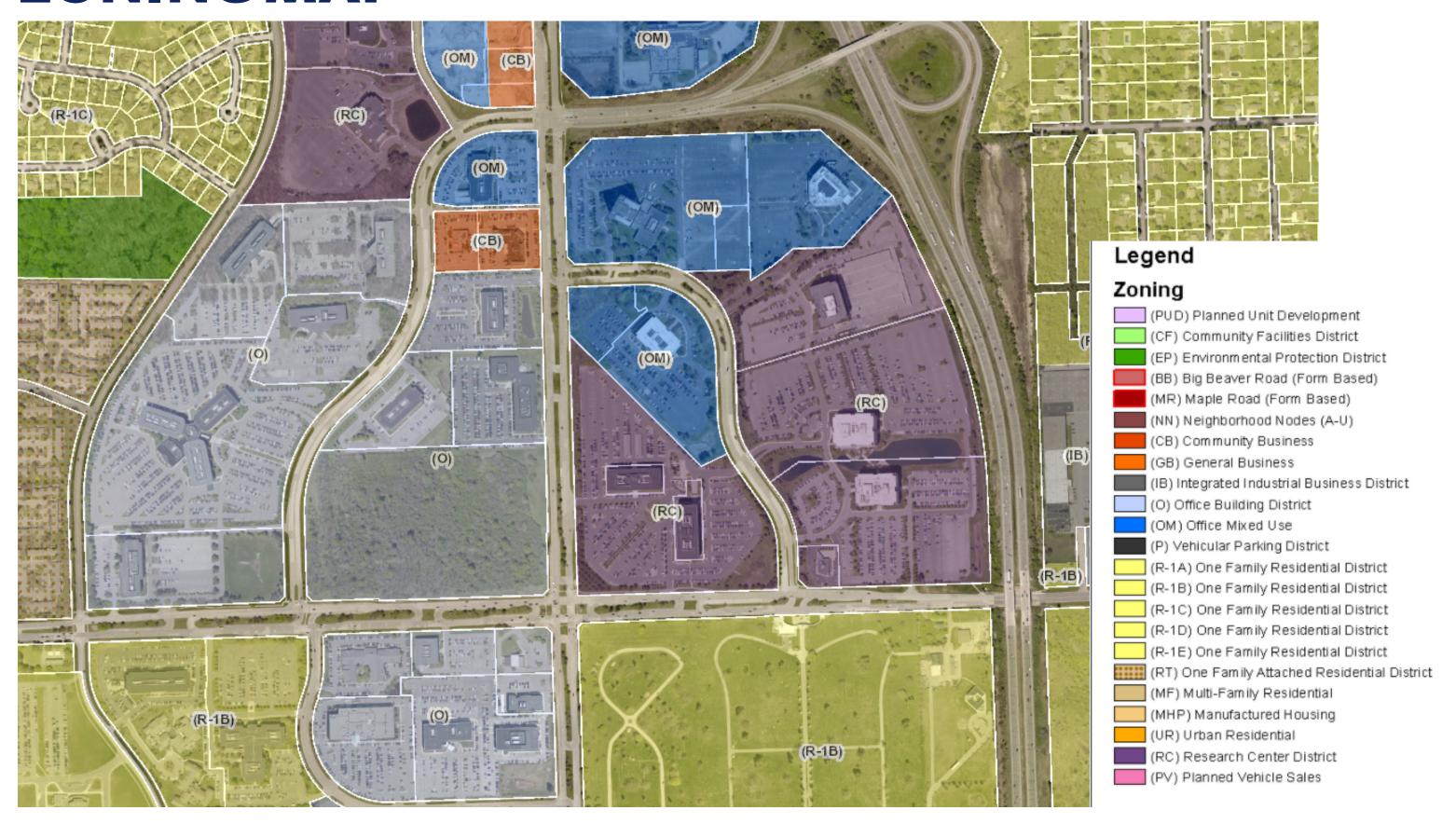
#### X. Community Impact Statement:

As part of the North Troy Master Plan, the integration of mixed-use developments will help encourage the public to remain in the area outside of the typical 9 to 5 office hours, which in turn will grow and strengthen the local economy and develop a larger presence for the Northfield district. Given the location of the Site, this development is intended to act as a gateway into the district, spearheading North Troy's positioning within the larger city context. It is hoped that the development of this vacant site will encourage further strategic redevelopment of properties within the surrounding area as the next generation of growth.

The development will be pedestrian-friendly and readily accessible, encouraging users to move from building to building in a campus / park-like setting. By enhancing site walkability and creating desirable public and private destinations, this gateway corner will be rejuvenated with new life and vibrancy that the district has currently been void of.

## **APPENDIX**

### **ZONING MAP**





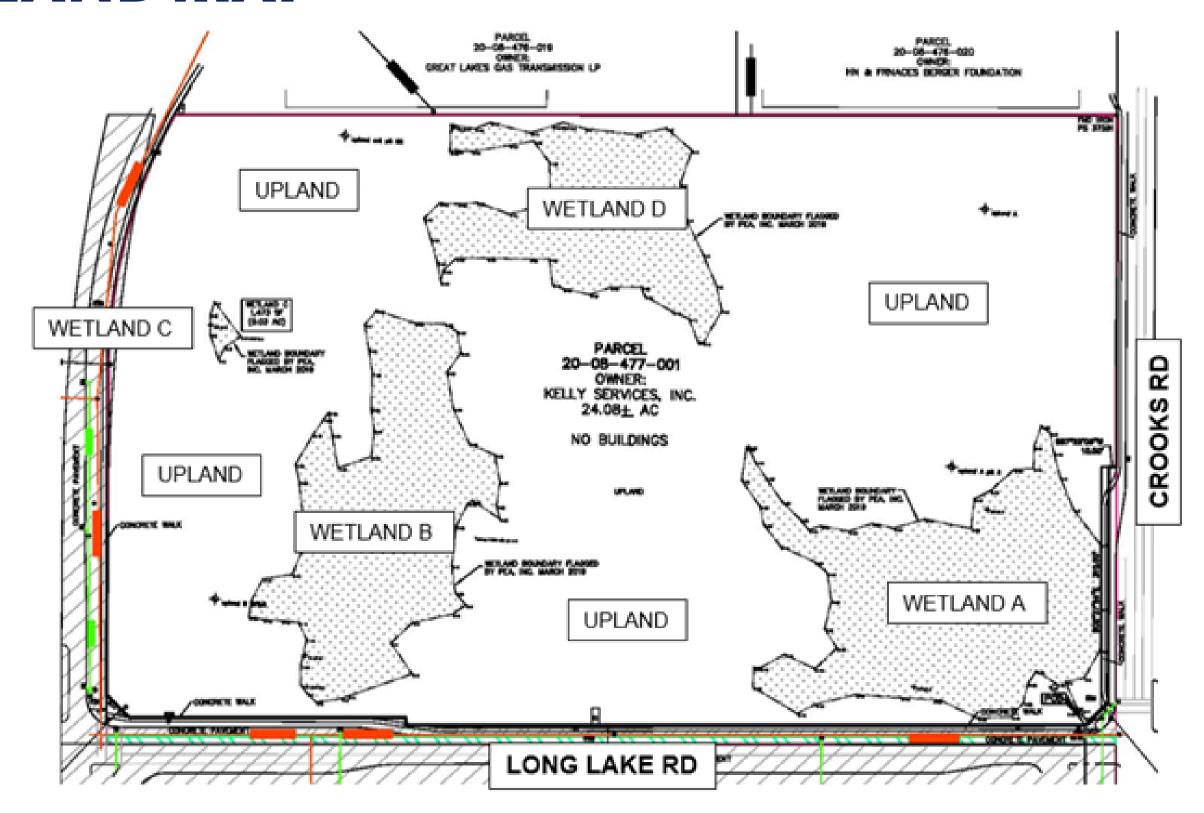
### **WETLANDS**



FIGURE 1: SOURCE - OAKLAND COUNTY PROPERTY GATEWAY



### **WETLAND MAP**



\*City of Troy wetlands ordinance only regulates those wetlands regulated by the State of Michigan.



### **WOODLANDS**





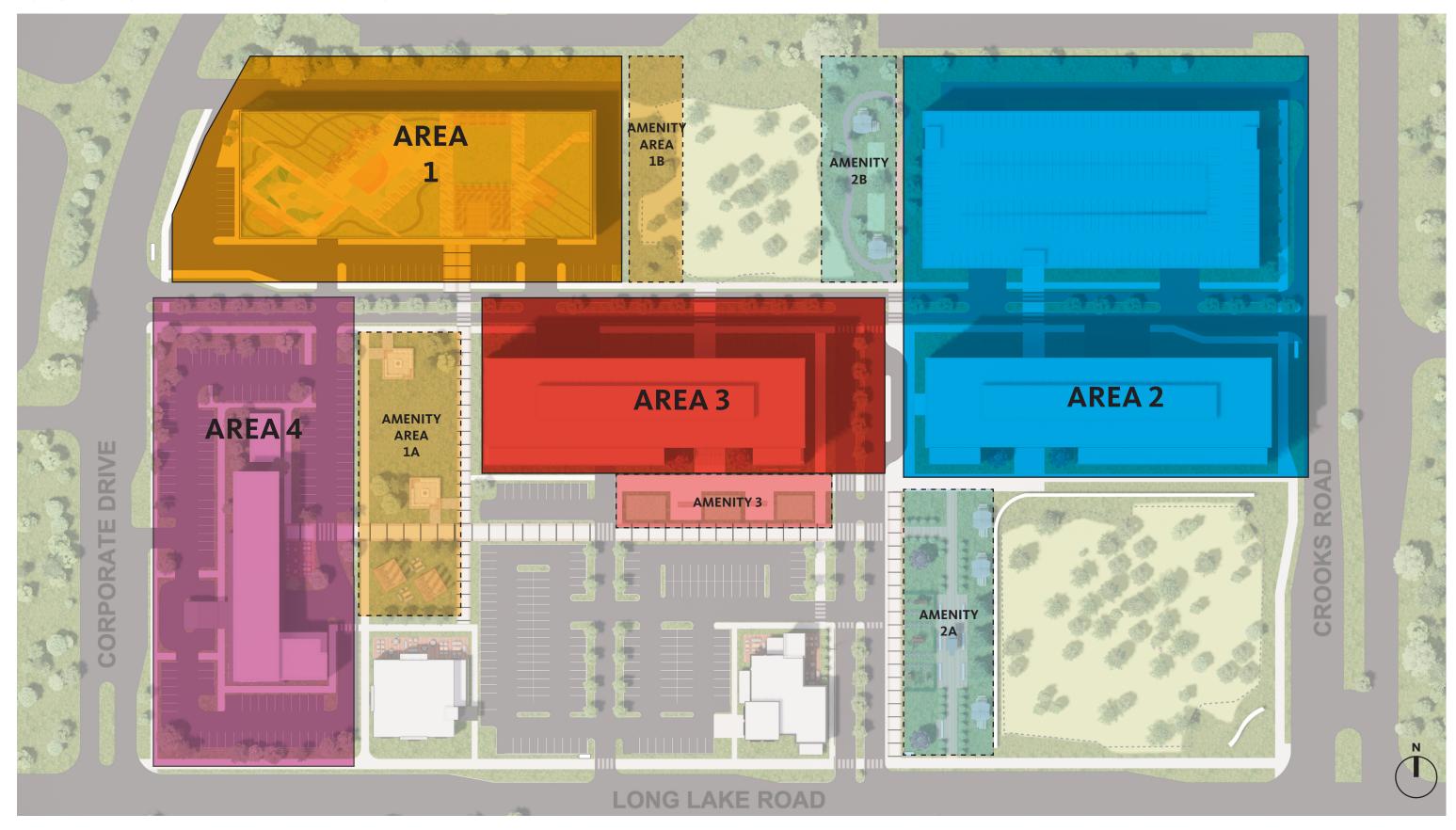
### **CONCEPT DEVELOPMENT PLAN - OVERALL**



Illustration is a representation of a potential future maximum buildout based on buildout of each Development Area.

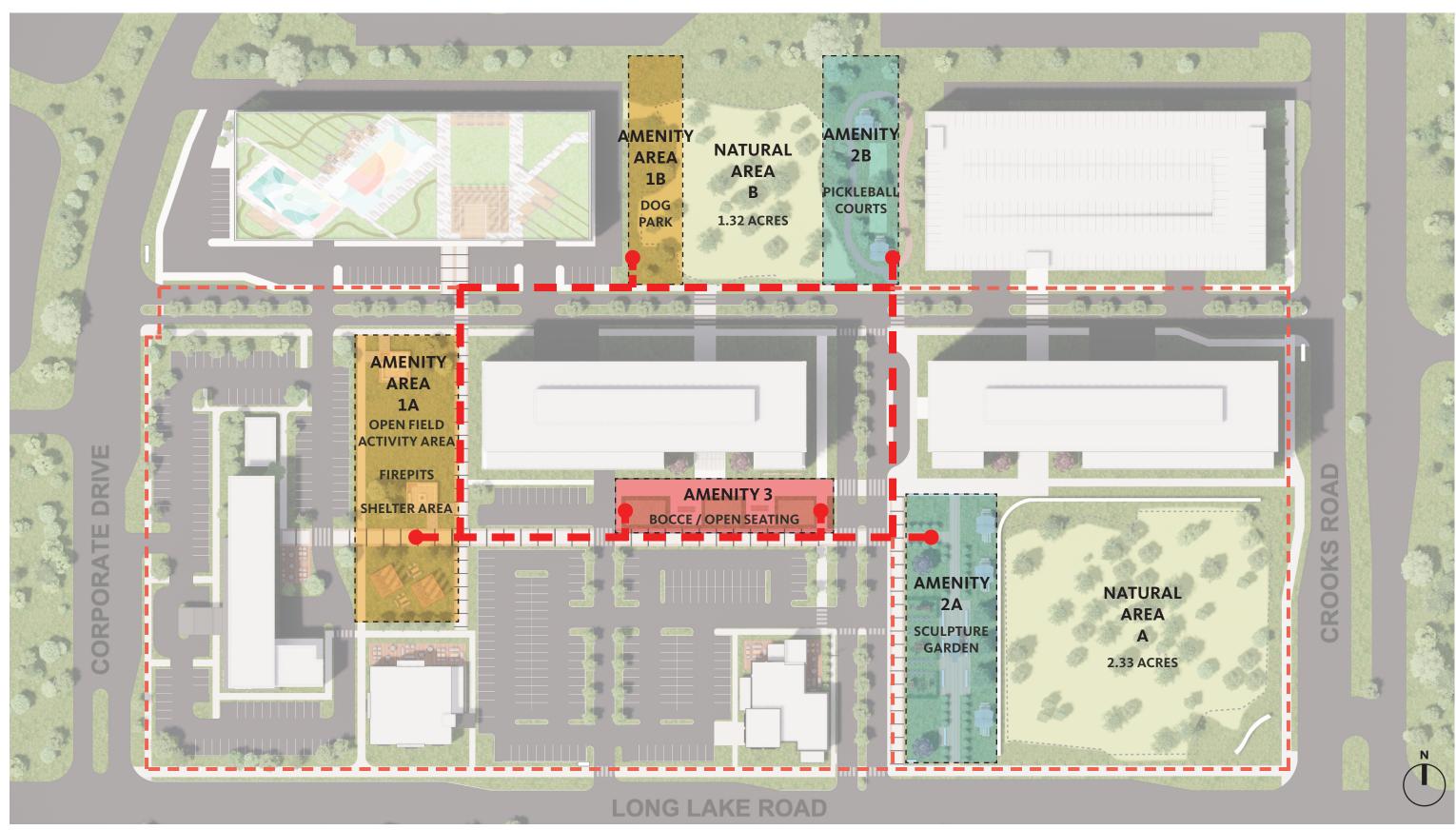


### CONCEPT DEVELOPMENT PLAN - DEVELOPMENT AREAS





### DEVELOPMENT PLAN - AMENITY AREAS





### DEVELOPMENT AREA 1 - RESIDENTIAL



Illustration is a representation of a potential area buildout.



### DEVELOPMENT AREA 2 - OFFICE / PROFESSIONAL

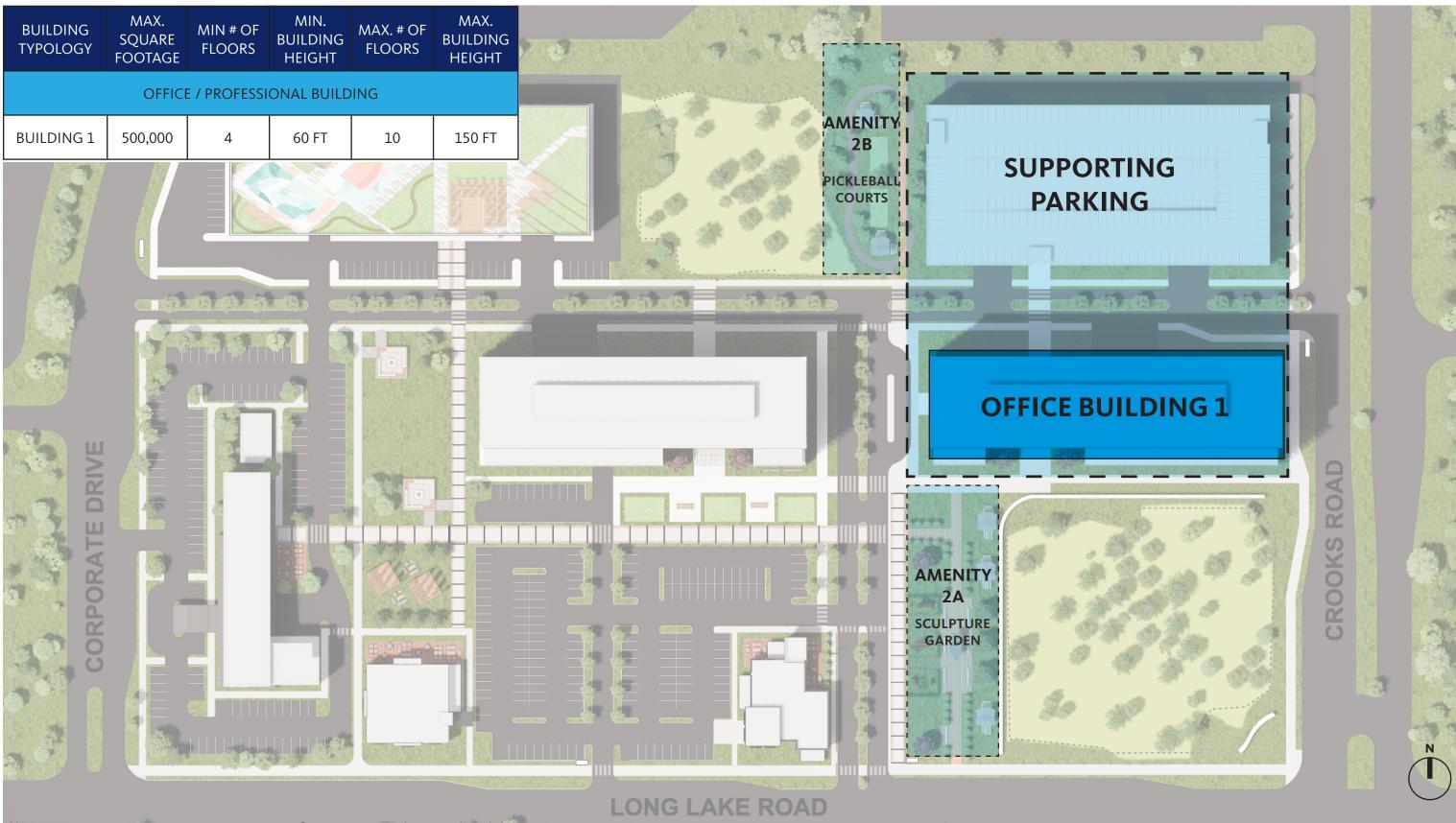


Illustration is a representation of a potential area buildout.



# DEVELOPMENT AREA 3 - OFFICE / PROFESSIONAL / RESIDENTIAL

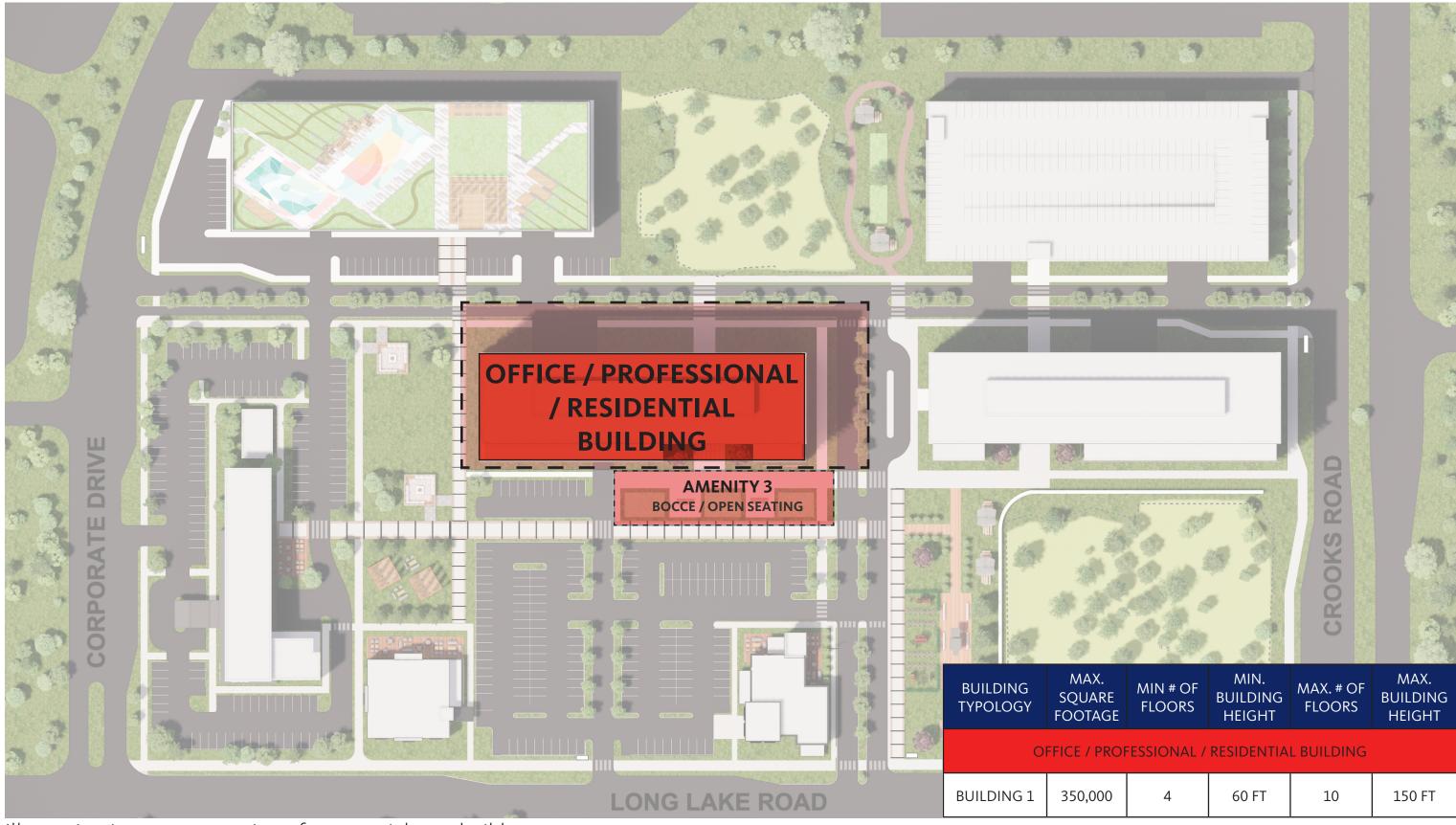


Illustration is a representation of a potential area buildout.



# DEVELOPMENT AREA 4 - HOTEL / RESIDENTIAL

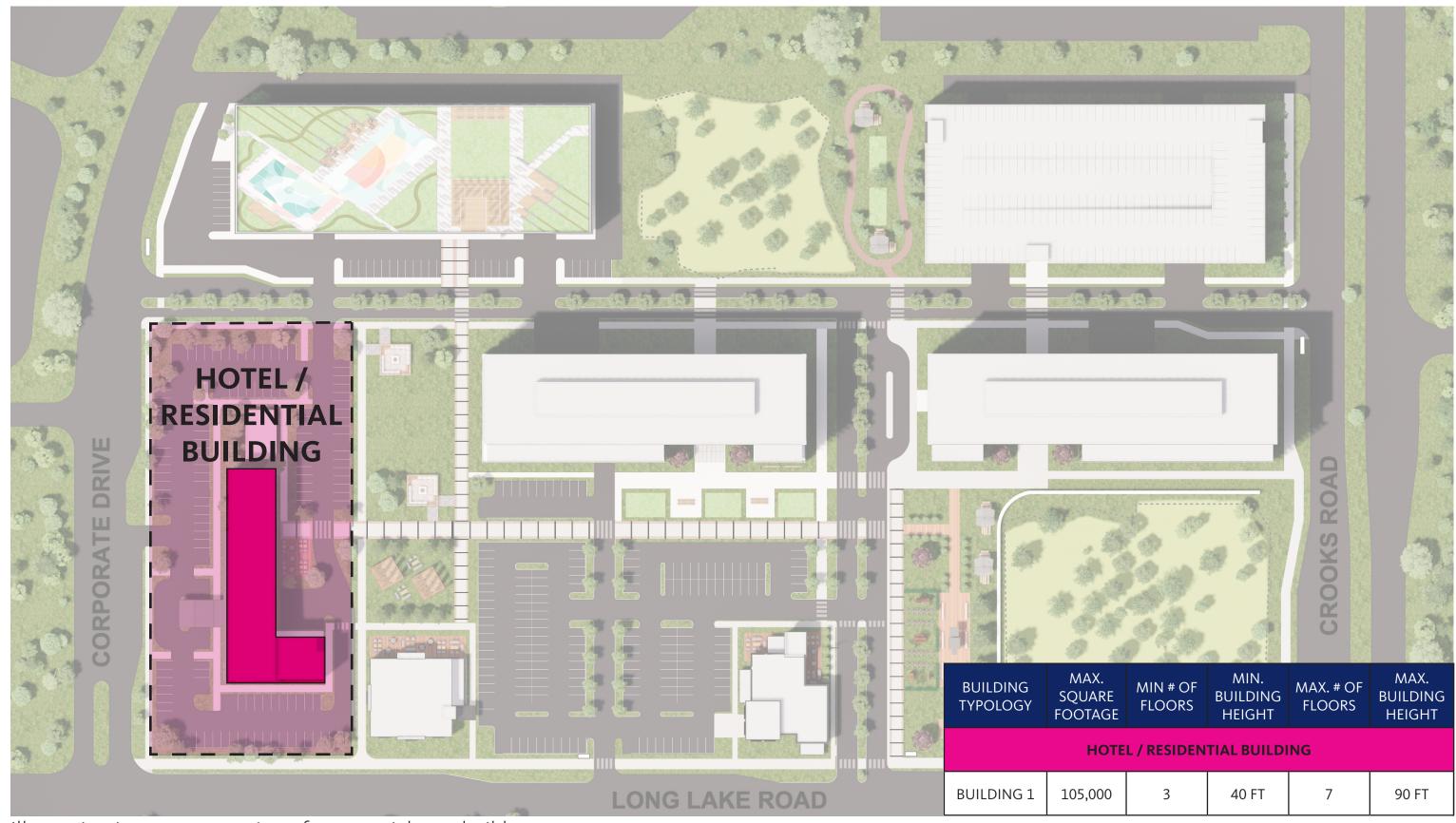
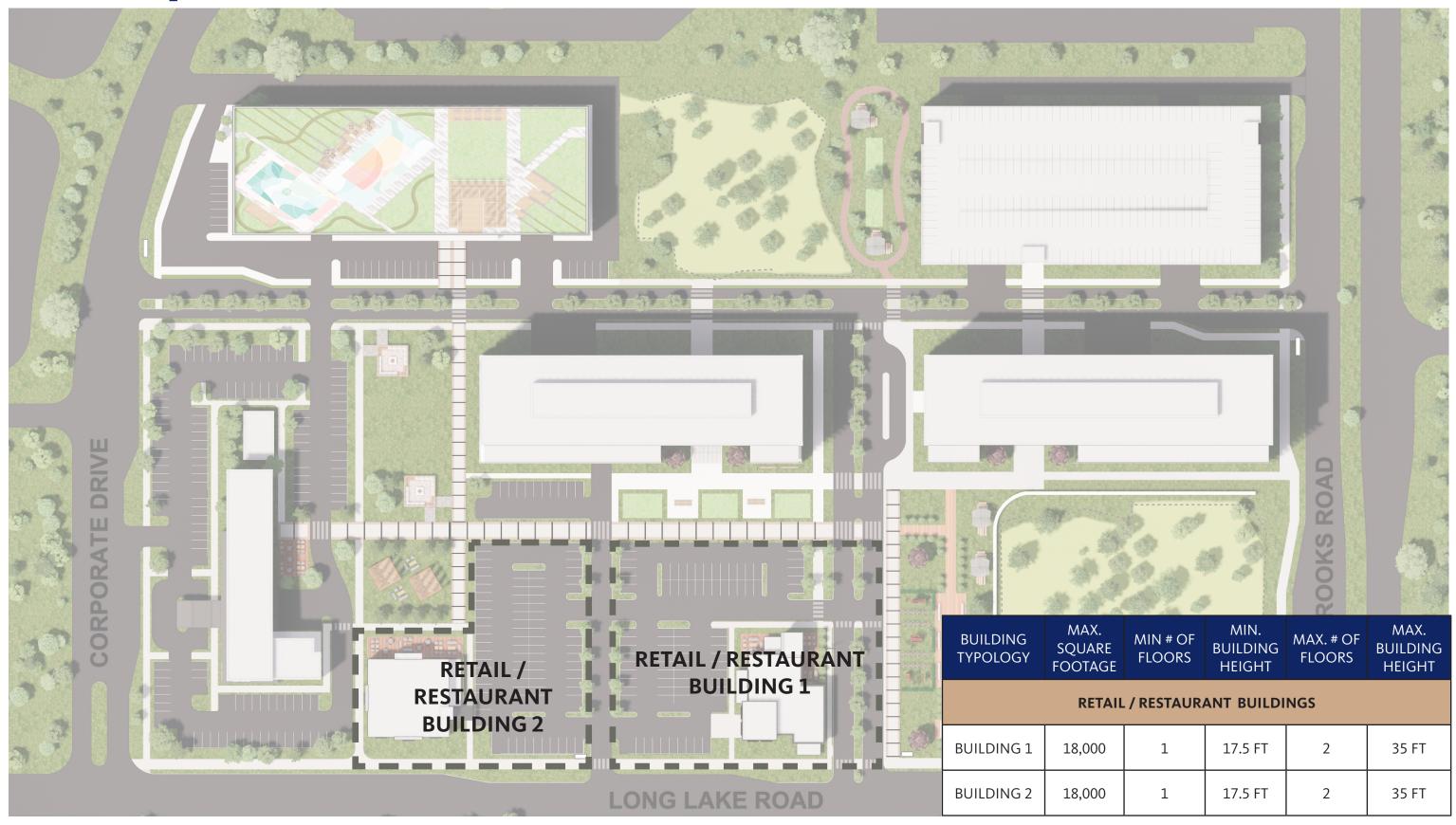


Illustration is a representation of a potential area buildout.



# **RETAIL / RESTAURANT**





## CONCEPT DEVELOPMENT PLAN - MASSING

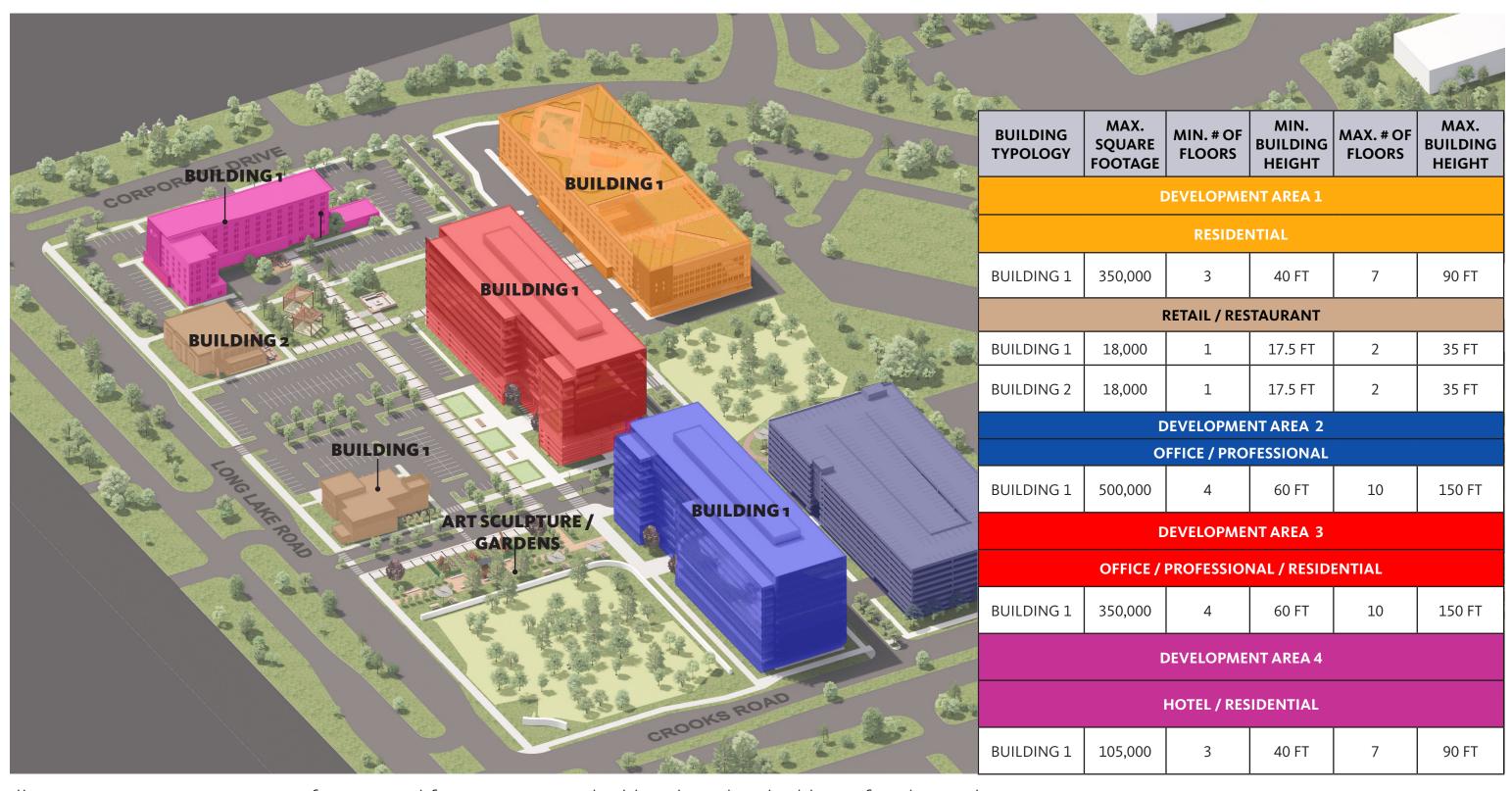
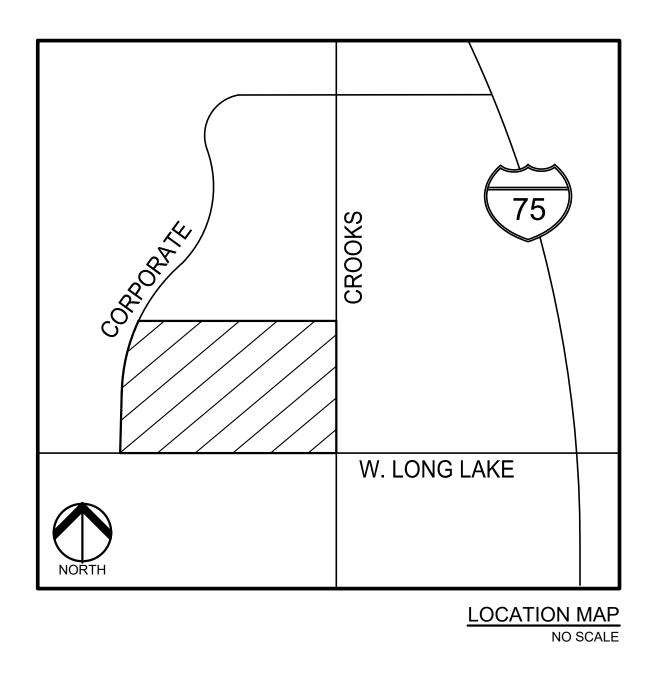


Illustration is a representation of a potential future maximum buildout based on buildout of each Development Area.



# LONG LAKE & CROOKS MASTERPLAN DEVELOPMENT

LONG LAKE AND CROOKS ROAD CITY OF TROY, OAKLAND COUNTY, MICHIGAN



INDEX OF DRAWINGS					
NUMBER	TITLE				
	COVER SHEET				
C-1	TOPOGRAPHIC SURVEY				
C-2	CONCEPTUAL SITE PLAN				
C-3	CONCEPTUAL UTILITY PLAN				
L-1	CONCEPTUAL LANDSCAPE PLAN				

#### DESIGN TEAM

CLIENT

KOJAIAN MANAGEMENT LONG LAKE CROOKS DEVELOPMENT ASSOCIATES, LLC 39400 WOODWARD AVE, STE. 250 BLOOMFIELD HILLS, MI 48304 CONTACT: TONY ANTONE PHONE: 248.644.7600

ARCHITECT

GENSLER

150 W JEFFERSON, STE. 1700

DETROIT, MI 48226

CONTACT: CHRIS BECK

PHONE: 313.496.8966

EMAIL: CHRIS\_BECK@GENSLER.COM

EMAIL: TANTONE@KOJAIAN.COM

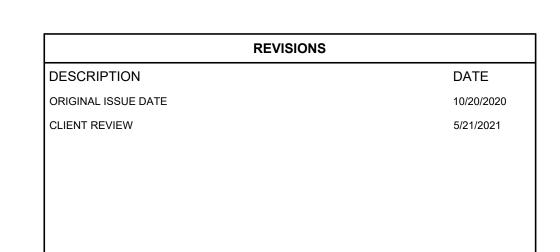
#### CIVIL ENGINEER

PEA GROUP 2430 ROCHESTER COURT, STE. 100 TROY, MI 48083-1872 CONTACT: GREG BONO, PE PHONE: 844.813.2949 EMAIL: GBONO@PEAGROUP.COM

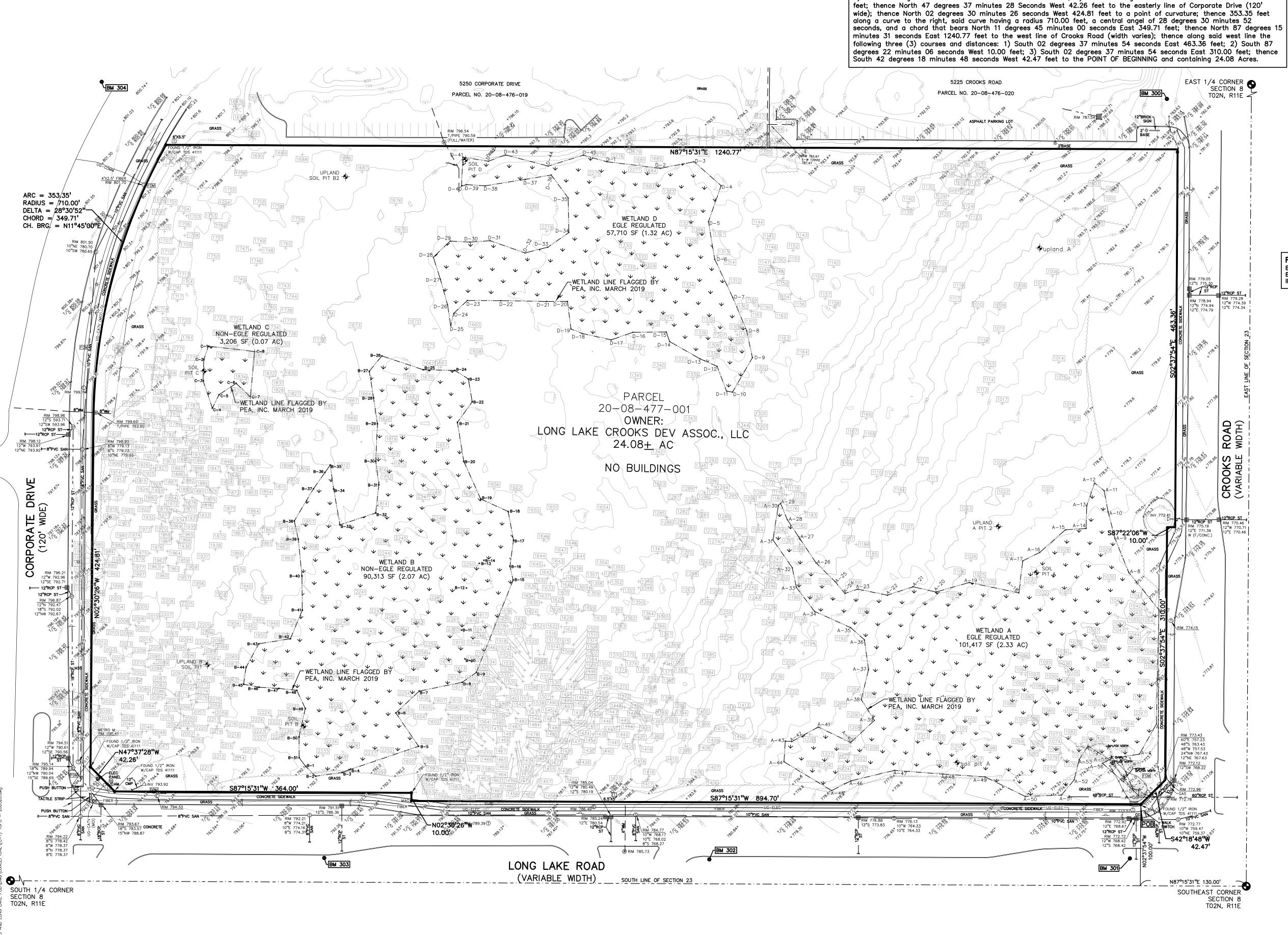
#### LANDSCAPE ARCHITECT

PEA GROUP
45 W. GRAND RIVER AVE., STE. 501
DETROIT, MI 48226
CONTACT: NOAH BIRMELIN, PLA, ASLA
PHONE: 844.813.2949
EMAIL: NBIRMELIN@PEAGROUP.COM









LEGAL DESCRIPTION

of Michigan described as follows:

(Per Seaver Title Agency Commitment File No. 63-15403143-SCM, Revision 6, Commitment Date May 06, 2019.)

A parcel of land in a part of the southeast quarter of Section 8, T.O2N., R.11E., City of Troy, County of Oakland, State

Commencing at the Southeast corner of Section 8, T.02N., R.11E., City of Troy, County of Oakland, State of Michigan, thence South 87 degrees 15 minutes 31 seconds West 130.00 feet; thence North 02 degrees 37 minutes 54 seconds

West 100.00 feet to the north line of Long Lake Road (width varies) and the POINT OF BEGINNING; thence along said

north line the following three (3) courses and distances 1) South 87 degrees 15 minutes 31 seconds West 894.70 feet;

2) North 02 degrees 30 minutes 26 seconds West 10.00 feet; 3) South 87 degrees 15 minutes 31 seconds West 364.00

#### LEGEND

IRON FOUND 

MAIL FOUND

Ø NAIL & CAP SET

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SEC. CORNER FOUND R RECORDED M MEASURED C CALCULATED

-OH-ELEC-VV-O--- ELEC., PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE -UG-CATV-TV- UNDERGROUND CABLE TV, CATV PEDESTAL

-⊠-UG-PHONE-T TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE -UG-ELEC-E-E-E-E-ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE GAS MAIN, VALVE & GAS LINE MARKER \_\_\_\_\_ WATERMAIN, HYD., GATE VALVE, TAPPING SLEEVE & VALVE SANITARY SEWER, CLEANOUT & MANHOLE COMBINED SEWER & MANHOLE

SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN POST INDICATOR VALVE WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF M T I MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE UNIDENTIFIED STRUCTURE SPOT ELEVATION

CONTOUR LINE -X-X-X- FENCE ☆ STREET LIGHT

∕— ASPH. →

GRAVEL SHOULDER \_\_GRAVEL \_\_\_\_ عقد عقد WETLAND

REFERENCE DRAWINGS

ALTA/NSPS LAND TITLE SURVEY, PEA JOB NO. 2019-096, DATED APRIL 9, 2019, REVISED 5/17/2019

WATER MAIN CITY OF TROY GIS MAP SANITARY SEWER CITY OF TROY GIS MAP CITY OF TROY GIS MAP

FLOODPLAIN NOTE: BY GRAPHICAL PLOTTING, SITE IS WITHIN ZONE 'X', AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN PER FLOOD INSURANCE RATE MAP NUMBER 26125C0531F, DATED SEPTEMBER 29, 2006.

BENCHMARKS

(GPS DERIVED - NAVD88)

BM #300
PUNCH AN ARROW ON A HYDRANT LOCATED ON THE WEST SIDE OF CROOKS ROAD, AT THE SOUTH ENTRANCE TO 5225 CROOKS RD.

BM #301
PUNCH AN ARROW ON A HYDRANT LOCATED IN AN ISLAND IN W. LONG
LAKE ROAD JUST WEST OF CROOKS ROAD.
ELEV. — 776.93

BM #302
PUNCH AN ARROW ON A HYDRANT LOCATED IN AN ISLAND IN W. LONG
LAKE ROAD, APPROX. 650'± WEST OF CROOKS ROAD.

BM #303 PUNCH AN ARROW ON A HYDRANT LOCATED IN AN ISLAND IN W. LONG LAKE ROAD, APPROX. 350'± EAST OF CORPORATE DRIVE. ELEV. — 795.26

PUNCH AN ARROW ON A HYDRANT LOCATED ON THE WEST SIDE OF CORPORATE DRIVE, APPROX. 290'± SOUTHWEST FROM THE SOUTH ENTRANCE TO 5250 CORPORATE DRIVE.

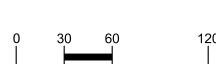
GROUP

t: 844.813.2949

www.peagroup.com



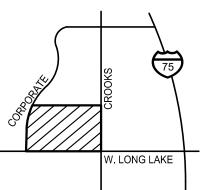




SCALE: 1" = 60'



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



GENSLER
150 W JEFFERSON, SUITE 1700
DETROIT, MI 48226

PROJECT TITLE

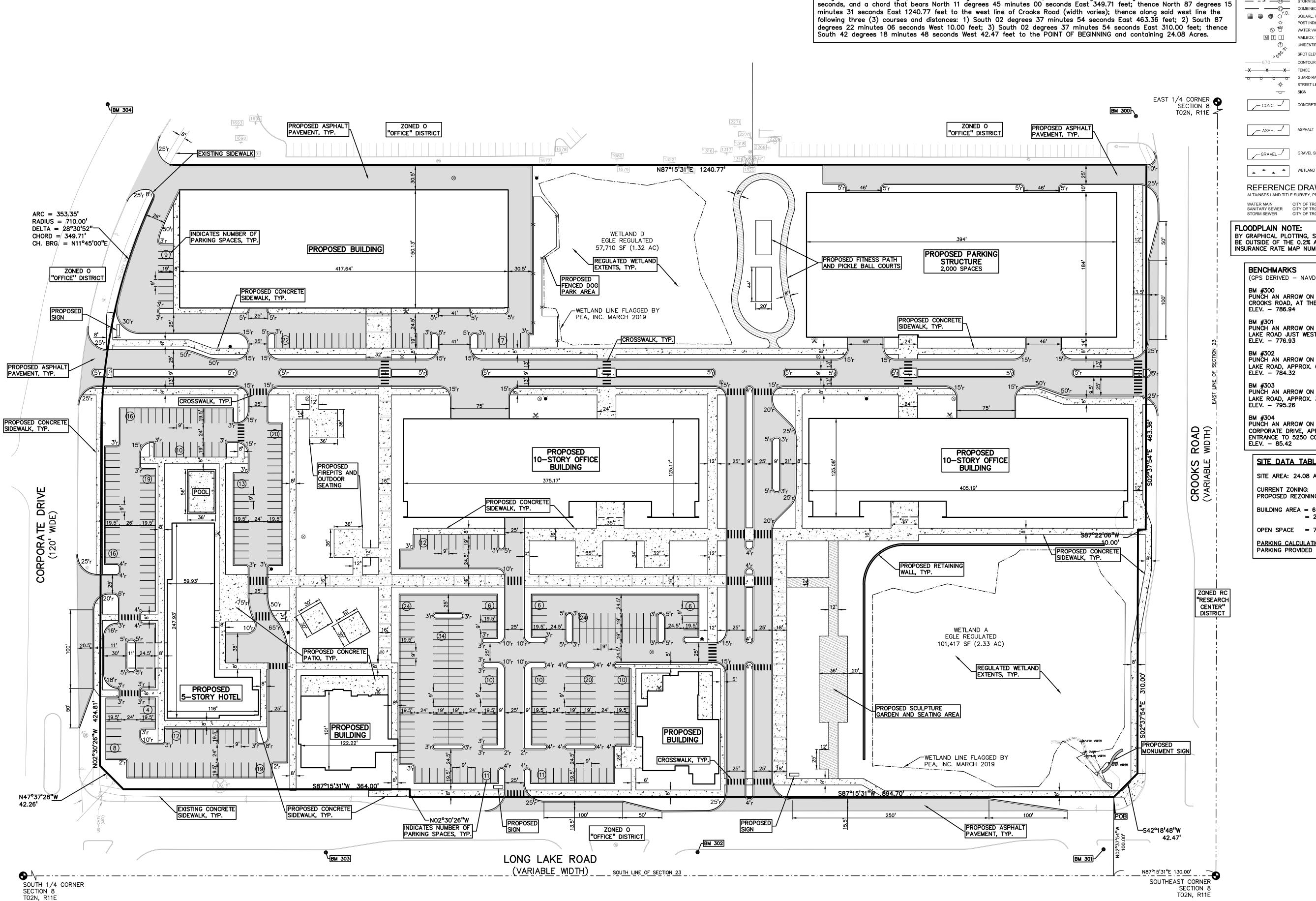
**LONG LAKE** & CROOKS **MASTERPLAN DEVELOPMEN** LONG LAKE AND CROOKS ROAD CITY OF TROY, OAKLAND COUNTY, MICHIGAN

REVISIONS CLIENT REVIEW

ORIGINAL ISSUE DATE: OCTOBER 20, 2020 **TOPOGRAPHIC** 

**SURVEY** 

2020-0320 PEA JOB NO. KRD DRAWING NUMBER:



LEGAL DESCRIPTION

of Michigan described as follows:

(Per Seaver Title Agency Commitment File No. 63-15403143-SCM, Revision 6, Commitment Date May 06, 2019.)

A parcel of land in a part of the southeast quarter of Section 8, T.O2N., R.11E., City of Troy, County of Oakland, State

Commencing at the Southeast corner of Section 8, T.02N., R.11E., City of Troy, County of Oakland, State of Michigan, thence South 87 degrees 15 minutes 31 seconds West 130.00 feet; thence North 02 degrees 37 minutes 54 seconds

West 100.00 feet to the north line of Long Lake Road (width varies) and the POINT OF BEGINNING; thence along said

feet; thence North 47 degrees 37 minutes 28 Seconds West 42.26 feet to the easterly line of Corporate Drive (120'

wide); thence North 02 degrees 30 minutes 26 seconds West 424.81 feet to a point of curvature; thence 353.35 feet along a curve to the right, said curve having a radius 710.00 feet, a central angel of 28 degrees 30 minutes 52

north line the following three (3) courses and distances 1) South 87 degrees 15 minutes 31 seconds West 894.70 feet;

2) North 02 degrees 30 minutes 26 seconds West 10.00 feet; 3) South 87 degrees 15 minutes 31 seconds West 364.00

#### LEGEND

BRASS PLUG SET MONUMENT FOUND MONUMENT SET

IRON FOUND

Ø NAIL & CAP SET

SEC. CORNER FOUND R RECORDED M MEASURED

C CALCULATED

671.21

671

-x----x---x-0 0 0 0

-OH-ELEC-W-O- ELEC., PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE -UG-CATV-TV- UNDERGROUND CABLE TV, CATV PEDESTAL -⊠-UG-PHONE-①--- TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE -UG-ELEC-E-E-E-E-ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE GAS MAIN, VALVE & GAS LINE MARKER — Q\_\_\_\_\_\_\_\_ WATERMAIN, HYD., GATE VALVE, TAPPING SLEEVE & VALVE — T\_\_\_\_\_ &

SANITARY SEWER, CLEANOUT & MANHOLE — — STORM SEWER, CLEANOUT & MANHOLE COMBINED SEWER & MANHOLE SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF

POST INDICATOR VALVE MTI MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE UNIDENTIFIED STRUCTURE

SPOT ELEVATION CONTOUR LINE **\_X** FENCE ☆ STREET LIGHT SIGN

\_— ASPH. — Й GRAVEL SHOULDER

REFERENCE DRAWINGS

ALTA/NSPS LAND TITLE SURVEY, PEA JOB NO. 2019-096, DATED APRIL 9, 2019, REVISED 5/17/2019

WATER MAIN CITY OF TROY GIS MAP SANITARY SEWER CITY OF TROY GIS MAP CITY OF TROY GIS MAP

FLOODPLAIN NOTE: BY GRAPHICAL PLOTTING, SITE IS WITHIN ZONE 'X', AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN PER FLOOD INSURANCE RATE MAP NUMBER 26125C0531F, DATED SEPTEMBER 29, 2006.

BENCHMARKS (GPS DERIVED - NAVD88)

PUNCH AN ARROW ON A HYDRANT LOCATED ON THE WEST SIDE OF CROOKS ROAD, AT THE SOUTH ENTRANCE TO 5225 CROOKS RD.

PUNCH AN ARROW ON A HYDRANT LOCATED IN AN ISLAND IN W. LONG LAKE ROAD JUST WEST OF CROOKS ROAD. ELEV. - 776.93

BM #302 PUNCH AN ARROW ON A HYDRANT LOCATED IN AN ISLAND IN W. LONG LAKE ROAD, APPROX. 650'± WEST OF CROOKS ROAD. ELEV. - 784.32

PUNCH AN ARROW ON A HYDRANT LOCATED IN AN ISLAND IN W. LONG LAKE ROAD, APPROX. 350'± EAST OF CORPORATE DRIVE. ELEV. - 795.26

PUNCH AN ARROW ON A HYDRANT LOCATED ON THE WEST SIDE OF CORPORATE DRIVE, APPROX. 290'± SOUTHWEST FROM THE SOUTH ENTRANCE TO 5250 CORPORATE DRIVE.

SITE DATA TABLE:

SITE AREA: 24.08 AC (1,048,948 SF)

CURRENT ZONING: O, OFFICE BUILDING DISTRICT PUD, PLANNED UNIT DEVELOPMENT BUILDING AREA = 6.11 AC (266,130 SF)

= 25.4% OPEN SPACE = 74.6%

PARKING PROVIDED = 2,359 SPACES (359 SURFACE, 2,000 GARAGE)

<u>WETLAND</u>

WETLAND A EXISTING = 101,417 SF (2.33 ACRES)REVISED = 79,211 SF (1.82 ACRES)DISTURBED = 22,206 SF (0.51 ACRES)

WETLAND D EXISTING = 57,710 SF (1.32 ACRES)

REVISED = 40850 SF (0.93 ACRES) DISTURBED = 16,860 SF (0.39 ACRES)TOTAL DISTURBED AREA: 0.90 ACRES

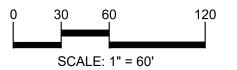
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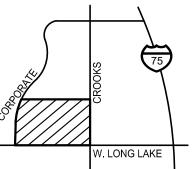








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GENSLER
150 W JEFFERSON, SUITE 1700
DETROIT, MI 48226

PROJECT TITLE

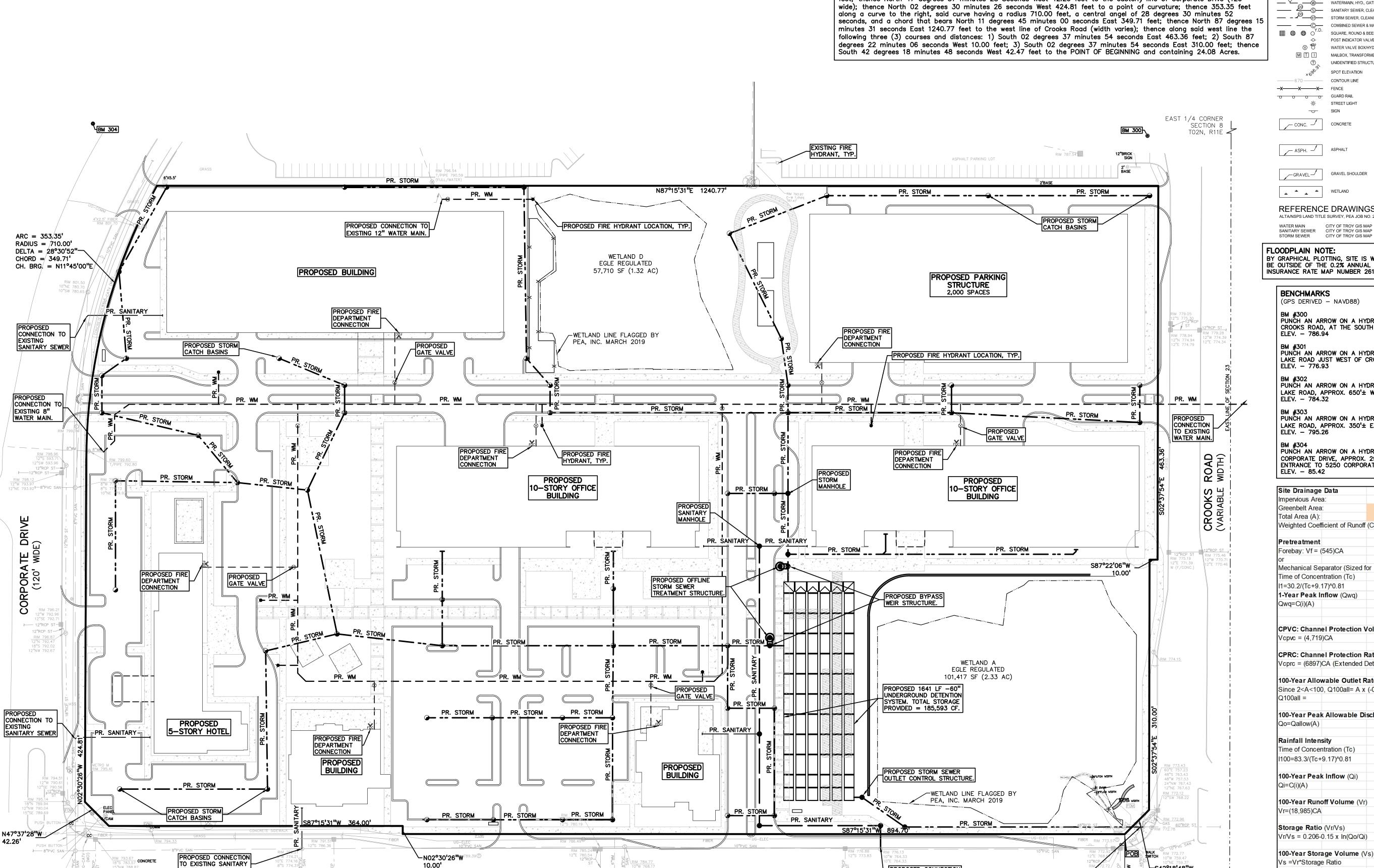
LONG LAKE & CROOKS **MASTERPLAN DEVELOPMENT** LONG LAKE AND CROOKS ROAD CITY OF TROY, OAKLAND COUNTY, MICHIGAN

REVISIONS

ORIGINAL ISSUE DATE: APRIL 11, 2022

DRAWING TITLE **PRELIMINARY SITE PLAN** 

2020-0320 PEA JOB NO. AJM DES. DRAWING NUMBER:



LONG LAKE ROAD

(VARIABLE WIDTH)

DRIVE E)

SOUTH 1/4 CORNER SECTION 8

T02N, R11E

LEGAL DESCRIPTION

of Michigan described as follows:

PROPOSED CONNECTION

TO EXISTING SANITARY

SEWER MANHOLE.

PROPOSED CONNECTION TO

EXISTING STORM SEWER MANHOLE.

S42°18'48"W

SOUTHEAST CORNER

SECTION 8 TO2N, R11E

(Per Seaver Title Agency Commitment File No. 63-15403143-SCM, Revision 6, Commitment Date May 06, 2019.)

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north line the following three (3) courses and distances 1) South 87 degrees 15 minutes 31 seconds West 894.70 feet;

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#### LEGEND

IRON FOUND

BRASS PLUG SET MONUMENT FOUND MONUMENT SET Ø NAIL & CAP SET

R RECORDED

SEC. CORNER FOUND M MEASURED C CALCULATED

-OH-ELEC-W-O- ELEC., PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE -UG-CATV-TV- UNDERGROUND CABLE TV, CATV PEDESTAL -⊠-UG-PHONE-(T)— TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE

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MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE UNIDENTIFIED STRUCTURE

MTI SPOT ELEVATION CONTOUR LINE **\_X** FENCE ☆ STREET LIGHT SIGN  $\overline{\phantom{a}}$ CONC. -

∕— ASPH. — ́ GRAVEL SHOULDER \_\_GRAVEL\_

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REFERENCE DRAWINGS ALTA/NSPS LAND TITLE SURVEY, PEA JOB NO. 2019-096, DATED APRIL 9, 2019, REVISED 5/17/2019

WATER MAIN CITY OF TROY GIS MAP SANITARY SEWER CITY OF TROY GIS MAP CITY OF TROY GIS MAP FLOODPLAIN NOTE:

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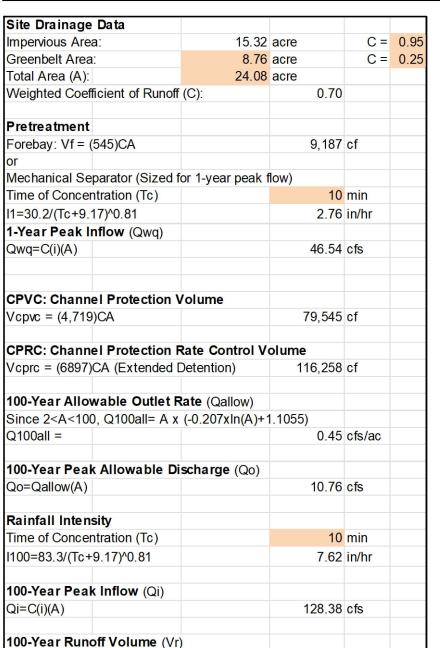
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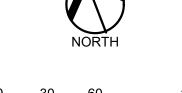
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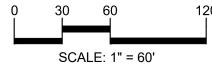


Design Requirements

t: 844.813.2949 www.peagroup.com ENGINEE 671.21 671 -x----x---x-0 0 0 0



BONO





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

. LONG LAKE

GENSLER
150 W JEFFERSON, SUITE 1700
DETROIT, MI 48226

PROJECT TITLE **LONG LAKE** & CROOKS **MASTERPLAN DEVELOPMENT** LONG LAKE AND CROOKS ROAD CITY OF TROY, OAKLAND COUNTY, MICHIGAN

REVISIONS

ORIGINAL ISSUE DATE: APRIL 11, 2022 DRAWING TITLE

**PRELIMINARY UTILITY PLAN** 

PEA JOB NO. 2020-0320 AJM DES. DRAWING NUMBER:

320,018 cf

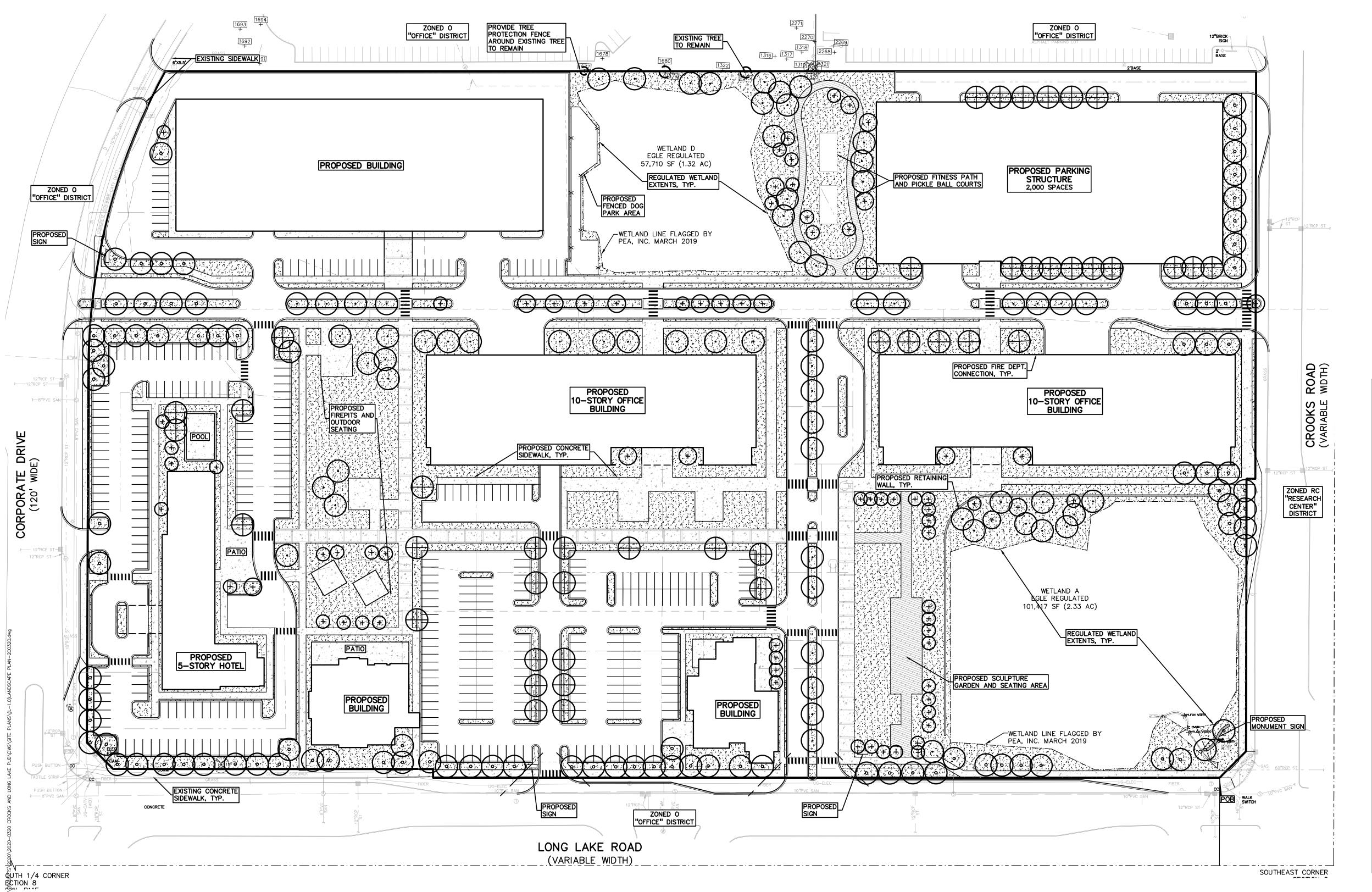
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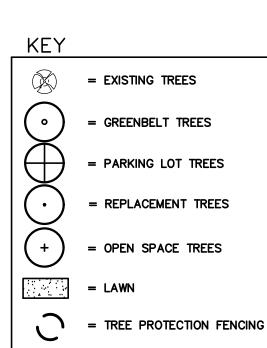
184,916 cf

79,545 cf

116,258 cf 184.916 cf

Volume





#### LANDSCAPE CALCULATIONS:

PER CITY OF TROY ZONING ORDINANCE: PROPOSED PUD

GREENBELT (13.02.D)

REQUIRED: MIN. 10 FEET IN WIDTH, ONE DECIDUOUS TREE PER 30 LINEAL FEET, MIN. CALIPER OF 2.5"

CROOKS RD: 773.36 LF/30 = 26 TREES LONG LAKE RD: 1258.7 LF/30 = 42 TREES CORPORATE DR: 778.16 LF/30 = 26 TREES

PROVIDED:

CROOKS RD: 26 TREES LONG LAKE RD: 42 TREES CORPORATE DR: 26 TREES

PARKING LOT SCREENING (13.02.C.3)

REQUIRED: PARKING LOTS THAT FRONT ON A PUBLIC ROADWAY SHALL BE SCREENED BY A LANDSCAPED BERM AT LEAST THREE (3) FEET IN HEIGHT ALONG THE PERIMETER OF THE ROAD RIGHT—OF—WAY. ALTERNATIVE LANDSCAPE PLANTINGS OR A SOLID WALL THAT DOES NOT EXCEED THREE (3) FEET IN HEIGHT MAY BE APPROVED.

PARKING LOT LANDSCAPE (13.02C.2)

REQUIRED: ONE TREE PER 8 SPACES, MIN. OF 3' FROM BACK OF CURB OR 5' WHERE THERE IS A CAR OVERHANG.

359 SPACES/8 = 45 TREES

PROVIDED: 45 TREES

#### BUFFER ZONE (13.02.B)

REQUIRED: A LANDSCAPE BUFFER SHALL BE CONSTRUCTED TO CREATE A VISUAL SCREEN AT LEAST SIX (6) FEET IN HEIGHT ALONG ALL ADJOINING BOUNDARIES WHEN A PROPOSED USE IS EITHER MORE INTENSE OR INCOMPATIBLE WITH AN ADJOINING PROPERTY, AS SET FORTH IN TABLE

#### TREE REPLACEMENT: TO BE DETERMINED

WOODLAND: 30 CALIPER INCHES LANDMARK: 131.5 CALIPER INCHES

TOTAL: 161.5 CALIPER INCHES OR (65) 2.5" TREES

PROVIDED: 65 REPLACEMENT TREES ESTIMATED

ADDITIONAL 77 OPEN SPACE TREES PROVIDED

#### GENERAL PLANTING NOTES:

- 1. LANDSCAPE CONTRACTOR SHALL VISIT SITE, INSPECT EXISTING SITE CONDITIONS AND REVIEW PROPOSED PLANTING AND RELATED WORK. IN CASE OF DISCREPANCY BETWEEN PLAN AND PLANT LIST, PLAN SHALL GOVERN QUANTITIES. CONTACT LANDSCAPE ARCHITECT WITH ANY
- 2. CONTRACTOR SHALL VERIFY LOCATIONS OF ALL ON SITE UTILITIES PRIOR TO BEGINNING CONSTRUCTION ON HIS/HER PHASE OF WORK. ELECTRIC, GAS, TELEPHONE, CABLE TELEVISION MAY BE LOCATED BY CALLING MISS DIG 1-800-482-7171. ANY DAMAGE OR INTERRUPTION OF SERVICES SHALL BE THE RESPONSIBILITY OF CONTRACTOR. CONTRACTOR SHALL COORDINATE ALL RELATED ACTIVITIES WITH OTHER TRADES ON THE JOB AND SHALL REPORT ANY UNACCEPTABLE JOB CONDITIONS TO OWNER'S REPRESENTATIVE PRIOR TO COMMENCING.
- . ALL PLANT MATERIAL TO BE PREMIUM GRADE NURSERY STOCK AND SHALL SATISFY AMERICAN ASSOCIATION OF NURSERYMEN STANDARD FOR NURSERY STOCK. ALL LANDSCAPE MATERIAL SHALL BE NORTHERN GROWN, NO. 1.
- 4. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON LANDSCAPE PLAN PRIOR TO PRICING THE WORK.
- 5. THE OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO REJECT ANY PLANT MATERIAL NOT MEETING SPECIFICATIONS.
- 3. ALL SINGLE STEM SHADE TREES TO HAVE STRAIGHT TRUNKS AND SYMMETRICAL CROWNS.
- 7. ALL SINGLE TRUNK SHADE TREES TO HAVE A CENTRAL LEADER; TREES WITH FORKED OR IRREGULAR TRUNKS WILL NOT BE ACCEPTED.
- 8. ALL MULTI STEM TREES SHALL BE HEAVILY BRANCHED AND HAVE SYMMETRICAL CROWNS. ONE SIDED TREES OR THOSE WITH THIN OR OPEN

CROWNS SHALL NOT BE ACCEPTED.

- 9. ALL EVERGREEN TREES SHALL BE HEAVILY BRANCHED AND FULL TO THE GROUND, SYMMETRICAL IN SHAPE AND NOT SHEARED FOR THE LAST FIVE GROWING SEASONS.
- 10. ALL TREES TO HAVE CLAY OR CLAY LOAM BALLS, TREES WITH SAND BALLS WILL BE REJECTED.
- 11. NO MACHINERY IS TO BE USED WITHIN THE DRIP LINE OF EXISTING TREES; HAND GRADE ALL LAWN AREAS WITHIN THE DRIP LINE OF EXISTING TREES.
- 12. ALL TREE LOCATIONS SHALL BE STAKED BY LANDSCAPE CONTRACTOR AND ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION OF THE PLANT MATERIAL.
- 13. IT IS MANDATORY THAT POSITIVE DRAINAGE IS PROVIDED AWAY FROM ALL BUILDINGS.
- 14. ALL PLANTING BEDS SHALL RECEIVE 3" SHREDDED HARDWOOD BARK MULCH WITH PRE EMERGENT, SEE SPECIFICATIONS. SHREDDED PALETTE AND DYED MULCH WILL NOT BE ACCEPTED.
- 15. ALL LANDSCAPED AREAS SHALL RECEIVE 3" COMPACTED TOPSOIL.
- 16. SEE SPECIFICATIONS FOR ADDITIONAL COMMENTS, REQUIREMENTS, PLANTING PROCEDURES AND WARRANTY STANDARDS.
- 17. CONTRACTOR SHALL NOT INSTALL PLANTS UNDER BUILDING OVERHANG AND SHALL NOTIFY LANDSCAPE ARCHITECT IF DRAWINGS CONFLICT WITH BUILDING OVERHANGS.

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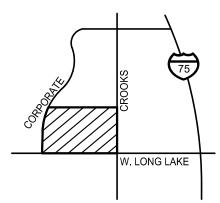




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LOCATION MAP



DETROIT, MI 48226

GENSLER
150 W JEFFERSON, SUITE 1700

PROJECT TITLE

LONG LAKE & CROOKS MASTERPLAN DEVELOPMENT LONG LAKE AND CROOKS ROAD

CITY OF TROY, OAKLAND COUNTY, MICHIGAN

ISIONS	

ORIGINAL ISSUE DATE:

APRIL 11, 2022

DRAWING TITLE

PRELIMINARY LANDSCAPE PLAN

PEA JOB NO. 2020-0320

P.M. LAA

DN. AEH

DES. JLE

DRAWING NUMBER:



t: 844.813.2949		Very Poor	Acer negundo	Box elder	10	BX	1322		Poor	Ulmus americana
www.peagroup.com	x2	Fair	Acer saccharinum	Silver Maple	21	SM	1323		Very Poor	Fraxinus pennsylvanica
		Fair	Acer saccharum	Sugar Maple	6	SU	1324		Very Poor	Fraxinus pennsylvanica
		Poor	Acer negundo	Box elder	6	BX	1325	x1	Fair	Ulmus americana
	x1	Fair	Ulmus americana	American Elm	25	Е	1326	x2	Fair	Acer saccharinum
								The state of the s		

		BX	10	Box elder	Acer negundo	Very Poor	
	1323	SM	21	Silver Maple	Acer saccharinum	Fair	x2
	1324	SU	6	Sugar Maple	Acer saccharum	Fair	
	1325	BX	6	Box elder	Acer negundo	Poor	
	1326	E	25	American Elm	Ulmus americana	Fair	x1
	1327	ВС	12	Wild Black Cherry	Prunus serotina	Very Poor	
_	1328	BX	8	Box elder	Acer negundo	Poor	
_	1329	BX	19	Box elder	Acer negundo	Poor	
_	1330	BX E	9	Box elder	Acer negundo	Poor	
	1331 1332	BX	24	American Elm  Box elder	Ulmus americana Acer negundo	Poor Poor	
	1333	BX	19	Box elder	Acer negundo  Acer negundo	Poor	
	1334	BX	6	Box elder	Acer negundo	Poor	
	1335	BX	6	Box elder	Acer negundo	Poor	
	1336	BX	9	Box elder	Acer negundo	Poor	
	1337	ВХ	12	Box elder	Acer negundo	Poor	х3
	1338	GA	6	Green Ash	Fraxinus pennsylvanica	Poor	
	1339	ВХ	8	Box elder	Acer negundo	Poor	x2
_	1340	SM	22	Silver Maple	Acer saccharinum	Fair	
_	1341	SM	22	Silver Maple	Acer saccharinum	Fair	
_	1342 1343	BX BX	6 8	Box elder Box elder	Acer negundo Acer negundo	Poor Poor	
	1344	BC	9	Wild Black Cherry	Prunus serotina	Very Poor	x2
_	1345	E	12	American Elm	Ulmus americana	Fair	AZ
	1346	BL	8	Black Locust	Robinia pseudoacacia	Poor	
	1347	BW	18	Black Walnut	Juglans nigra	Fair	
	1348	BL	9	Black Locust	Robinia pseudoacacia	Poor	
	1349	BL	12	Black Locust	Robinia pseudoacacia	Poor	
	1350	ВХ	9	Box elder	Acer negundo	Poor	
	1351	BX	15	Box elder	Acer negundo	Poor	
-	1352	BL	15	Black Locust	Robinia pseudoacacia	Poor	
-	1353 1354	BL BL	17 9	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor Very Poor	
-	1354	BL	12	Black Locust  Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor	
}	1356	BL	12	Black Locust	Robinia pseudoacacia	Poor	
	1357	BX	13	Box elder	Acer negundo	Poor	
	1358	BL	13	Black Locust	Robinia pseudoacacia	Poor	
	1359	BL	8	Black Locust	Robinia pseudoacacia	Poor	
	1360	BL	7	Black Locust	Robinia pseudoacacia	Very Poor	
	1361	ВХ	35	Box elder	Acer negundo	Poor	
	1362	BX	16	Box elder	Acer negundo	Poor	
_	1363	BX	28	Box elder	Acer negundo	Poor	
_	1364	E B\M	15 9	American Elm	Ulmus americana	Poor	
-	1365 1366	BW E	19	Black Walnut  American Elm	Juglans nigra Ulmus americana	Poor Poor	
	1367	BX	16	Box elder	Acer negundo	Fair	
	1368	BW	16	Black Walnut	Juglans nigra	Poor	
	1369	ВС	21	Wild Black Cherry	Prunus serotina	Poor	
	1370	ВХ	10	Box elder	Acer negundo	Poor	
	1371	BL	10	Black Locust	Robinia pseudoacacia	Poor	
	1372	BL	14	Black Locust	Robinia pseudoacacia	Poor	
_	1373	BX	35	Box elder	Acer negundo	Poor	
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	1376	BX	12	Box elder	Acer negundo	Poor	
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					-		
-	1378	ВХ	6	Box elder	Acer negundo	Poor	
	1378 1379	BX BX BW E	6 8	Box elder  Box elder  Black Walnut  American Elm	Acer negundo Acer negundo	Poor Poor	
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1323				Acer negunao	Very Poor	
	SM	21	Silver Maple	Acer saccharinum	Fair	x2
1324	SU	6	Sugar Maple	Acer saccharum	Fair	
1325	BX	6	Box elder	Acer negundo	Poor	
1326	E	25	American Elm	Ulmus americana	Fair	x1
1327	вс	12	Wild Black Cherry	Prunus serotina	Very Poor	
1328	BX	8	Box elder	Acer negundo	Poor	
1329	вх	19	Box elder	Acer negundo	Poor	
1330	BX	9	Box elder	Acer negundo	Poor	
1331	E	18	American Elm	Ulmus americana	Poor	
1332	BX	24	Box elder	Acer negundo	Poor	
1333	BX	19	Box elder	Acer negundo	Poor	
1334	BX	6	Box elder	Acer negundo	Poor	
1335	BX	6	Box elder	Acer negundo	Poor	
1336	BX	9	Box elder	Acer negundo	Poor	
1337	BX	12	Box elder	Acer negundo	Poor	x3
1338	GA	6	Green Ash	Fraxinus pennsylvanica	Poor	Λ0
1339	BX	8	Box elder	Acer negundo	Poor	x2
1340	SM	22		Acer negundo  Acer saccharinum	Fair	X2
		22	Silver Maple			
1341	SM		Silver Maple	Acer saccharinum	Fair	
1342	BX	6	Box elder	Acer negundo	Poor	
1343	BX	8	Box elder	Acer negundo	Poor	_
1344	BC	9	Wild Black Cherry	Prunus serotina	Very Poor	x2
1345	E	12	American Elm	Ulmus americana	Fair	
1346	BL	8	Black Locust	Robinia pseudoacacia	Poor	
1347	BW	18	Black Walnut	Juglans nigra	Fair	
1348	BL	9	Black Locust	Robinia pseudoacacia	Poor	
1349	BL	12	Black Locust	Robinia pseudoacacia	Poor	
1350	BX	9	Box elder	Acer negundo	Poor	
1351	BX	15	Box elder	Acer negundo	Poor	
1352	BL	15	Black Locust	Robinia pseudoacacia	Poor	
1353	BL	17	Black Locust	Robinia pseudoacacia	Poor	
1354	BL	9	Black Locust	Robinia pseudoacacia	Very Poor	
1355	BL	12	Black Locust	· · · · · · · · · · · · · · · · · · ·	Poor	
1355	BL BL	12 12		Robinia pseudoacacia	Poor	
-			Black Locust	Robinia pseudoacacia		
1357	BX	13	Box elder	Acer negundo	Poor	
1358	BL	13	Black Locust	Robinia pseudoacacia	Poor	
1359	BL	8	Black Locust	Robinia pseudoacacia	Poor	
1360	BL	7	Black Locust	Robinia pseudoacacia	Very Poor	
1361	BX	35	Box elder	Acer negundo	Poor	
1362	вх	16	Box elder	Acer negundo	Poor	
1363	BX	28	Box elder	Acer negundo	Poor	
1364	E	15	American Elm	Ulmus americana	Poor	
1365	BW	9	Black Walnut	Juglans nigra	Poor	
1366	E	19	American Elm	Ulmus americana	Poor	
1367	BX	16	Box elder	Acer negundo	Fair	
1368	BW	16	Black Walnut	Juglans nigra	Poor	
1369	BC	21	Wild Black Cherry	Prunus serotina	Poor	
1370	BX	10	Box elder		Poor	
				Acer negundo		
1371	BL	10	Black Locust	Robinia pseudoacacia	Poor	
1372	BL	14	Black Locust	Robinia pseudoacacia	Poor	
1373	BX	35	Box elder	Acer negundo	Poor	
1374	BX	13	Box elder	Acer negundo	Poor	
1375	ВС	17	Wild Black Cherry	Prunus serotina	Poor	
1376	BX	12	Box elder	Acer negundo	Poor	
1377	BX	15	Box elder	Acer negundo	Fair	
1378	BX	6	Box elder	Acer negundo	Poor	
1379	BX	8	Box elder	Acer negundo	Poor	
1380	BW	16	Black Walnut	Juglans nigra	Poor	
1381	Е	8	American Elm	Ulmus americana	Poor	
1382	ВХ	6	Box elder	Acer negundo	Poor	
1383	BW	21	Black Walnut	Juglans nigra	Fair	
1384	GA	8	Green Ash	Fraxinus pennsylvanica	Poor	
1385	BX	15	Box elder	Acer negundo	Poor	
1386	BX	23	Box elder	Acer negundo	Poor	
1387	E		American Elm	Ulmus americana	Poor	
	_ ,	31			1 (7.7.	
-	RY	31 26		Acer negundo		
1388	BX BI	26	Box elder	Acer negundo  Robinia pseudoacacia	Poor	
1388 1389	BL	26 6	Box elder Black Locust	Robinia pseudoacacia	Poor Poor	
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1388 1389 1390 1391 1392 1393 1394 1395 1396 1397 1398 1399 1400 1401 1402 1403 1404 1405 1406 1407 1408 1409 1410 1411 1412 1413 1414 1415 1416 1417 1418 1419 1420 1421 1422 1423 1424 1425	BL BL BL BL BL BL BL BL BA BW BX BW BL BX GA E BW E BW E BW BL BW BH BW BA E BW BW BA E BW BW BA E BW BW BW BA E BW	26 6 6 7 14 8 8 8 14 8 8 13 7 10 14 8 6 8 17 12 8 10 7 7 7 7 6 9 9 9 15 15 15 15 24 6 7 6 7 6	Box elder Black Locust Green Ash Black Walnut Box elder Black Walnut Black Locust Black Walnut Black Locust Box elder Green Ash American Elm Black Walnut American Elm Black Walnut Black Locust	Robinia pseudoacacia Fraxinus pennsylvanica Juglans nigra Acer negundo Juglans nigra Robinia pseudoacacia Acer negundo Fraxinus pennsylvanica Ulmus americana Juglans nigra Ulmus americana Juglans nigra Juglans nigra Fraxinus pennsylvanica Ulmus americana Juglans nigra Fraxinus pennsylvanica Ulmus americana Fraxinus pennsylvanica Ulmus americana Fraxinus pennsylvanica Ulmus americana Robinia pseudoacacia Robinia pseudoacacia Robinia pseudoacacia Robinia pseudoacacia Robinia pseudoacacia Pyrus communis Ulmus americana	Poor Poor Very Poor Very Poor Poor Poor Poor Poor Poor Poor Poor	
1388 1389 1390 1391 1392 1393 1394 1395 1396 1397 1398 1399 1400 1401 1402 1403 1404 1405 1406 1407 1408 1409 1410 1411 1412 1413 1414 1415 1416 1417 1418 1419 1420 1421 1422 1423 1424	BL BL BL BL BL BL BL BL BR BN BX BW BX BW BL BX GA E BW E BW BW BH BW BW BH BW	26 6 6 7 14 8 8 8 13 7 10 14 8 6 8 17 12 8 10 7 7 7 7 6 9 9 15 15 15 24 6 7 6 23 22 6	Box elder Black Locust Black Walnut American Elm Black Walnut American Elm Black Walnut Black Locust	Robinia pseudoacacia Fraxinus pennsylvanica Juglans nigra Acer negundo Juglans nigra Robinia pseudoacacia Acer negundo Fraxinus pennsylvanica Ulmus americana Juglans nigra Ulmus americana Juglans nigra Juglans nigra Fraxinus pennsylvanica Ulmus americana Juglans nigra Fraxinus pennsylvanica Ulmus americana Fraxinus pennsylvanica Ulmus americana Fraxinus pennsylvanica Robinia pseudoacacia Robinia pseudoacacia Robinia pseudoacacia Pyrus communis Ulmus americana Robinia pseudoacacia Pyrus communis Ulmus americana Ulmus americana Ulmus americana Ulmus americana Ulmus americana	Poor Poor Very Poor Poor Poor Poor Poor Poor Poor Poor	

Black Walnut

 1427
 BW
 7

 1428
 BW
 14

 1429
 E
 9

Ulmus americana

Juglans nigra

Poor Fair Fair

GROUP	
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CAUTION!!

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

LOCATION MAP

CLIENT

GENSLER
150 W JEFFERSON, SUITE 1700
DETROIT, MI 48226

PROJECT TITLE

LONG LAKE & CROOKS MASTERPLAN DEVELOPMENT LONG LAKE AND CROOKS ROAD CITY OF TROY, OAKLAND COUNTY, MICHIGAN

REVISIONS

ORIGINAL ISSUE DATE: OCTOBER 20, 2020

TREE LIST SHEET 1

PEA JOB NO.	2020-0320
P.M.	LAA
DN.	KRD
DES.	GMB
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NO.	CODE	DBH	COMMON NAME	LATIN NAME	COND	COMMENTS
001 002	BL BL	6	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor Poor	
003	BL	7	Black Locust	Robinia pseudoacacia	Very Poor	
004	CT BL	28 16	Cottonwood Black Locust	Populus deltoides  Robinia pseudoacacia	Fair Very Poor	dead
006	BL	16	Black Locust	Robinia pseudoacacia	Poor	x2
007	BL SM	15 20	Black Locust Silver Maple	Robinia pseudoacacia Acer saccharinum	Poor Very Poor	x1
009	SM	17	Silver Maple	Acer saccharinum	Poor	
)10	CT BX	37 8	Cottonwood  Box elder	Populus deltoides  Acer negundo	Fair Poor	
)12	BX	21	Box elder	Acer negundo	Poor	
)13	BX CT	6 17	Box elder Cottonwood	Acer negundo Populus deltoides	Poor Fair	
015	CT	18	Cottonwood	Populus deltoides  Populus deltoides	Poor	x1
)16	BX	6	Box elder	Acer negundo	Poor	
)17	BX SM	36 15	Box elder Silver Maple	Acer negundo Acer saccharinum	Poor Poor	
)19	вх	17	Box elder	Acer negundo	Poor	
020	BX SM	10 38	Box elder Silver Maple	Acer negundo Acer saccharinum	Poor Poor	
)22	SM	23	Silver Maple	Acer saccharinum	Fair	
)23	GA BX	9	Green Ash Box elder	Fraxinus pennsylvanica Acer negundo	Poor Poor	
)25	SM	27	Silver Maple	Acer saccharinum	Fair	
)26	SM	29	Silver Maple	Acer saccharinum	Fair	
)27	SM BX	9 8	Silver Maple Box elder	Acer saccharinum  Acer negundo	Poor Poor	
)29	вх	17	Box elder	Acer negundo	Very Poor	
)30	E SM	8 24	American Elm Silver Maple	Ulmus americana Acer saccharinum	Poor Poor	x1
32	GA	12	Green Ash	Fraxinus pennsylvanica	Poor	<u></u>
)33	SM GA	21 7	Silver Maple Green Ash	Acer saccharinum  Fraxinus pennsylvanica	Fair Poor	
)35	GA E	6	American Elm	Fraxinus pennsylvanica Ulmus americana	Poor	x1
)36	SM	34	Silver Maple	Acer saccharinum	Fair	
)37	SM E	14 12	Silver Maple American Elm	Acer saccharinum Ulmus americana	Poor Poor	
)39	E	8	American Elm	Ulmus americana	Poor	
)40 )41	BX CT	9 33	Box elder Cottonwood	Acer negundo Populus deltoides	Very Poor Poor	
)42	CT	18	Cottonwood	Populus deltoides	Poor	
)43	CT CT	28 23	Cottonwood  Cottonwood	Populus deltoides Populus deltoides	Poor Poor	
)45	E	13	American Elm	Ulmus americana	Poor	
)46	СТ	17	Cottonwood	Populus deltoides	Poor	
)47 )48	E E	7 8	American Elm American Elm	Ulmus americana Ulmus americana	Poor Fair	
)49	E	8	American Elm	Ulmus americana	Poor	
)50 )51	SM SM	13 17	Silver Maple Silver Maple	Acer saccharinum  Acer saccharinum	Fair Poor	
)52	E	8	American Elm	Ulmus americana	Fair	
)53 )54	E CT	14 15	American Elm Cottonwood	Ulmus americana Populus deltoides	Poor Poor	
)55	CT	13	Cottonwood	Populus deltoides	Poor	
)56	SM	9	Silver Maple	Acer saccharinum	Poor	
)57 )58	CT E	31 12	Cottonwood  American Elm	Populus deltoides Ulmus americana	Poor Poor	
)59	СТ	29	Cottonwood	Populus deltoides	Poor	
)60 )61	E CT	9 27	American Elm Cottonwood	Ulmus americana Populus deltoides	Very Poor Fair	
062	SM	9	Silver Maple	Acer saccharinum	Very Poor	
)63 )64	SM E	8 6	Silver Maple American Elm	Acer saccharinum  Ulmus americana	Poor Poor	
)65	SM	13	Silver Maple	Acer saccharinum	Poor	
)66 )67	E SM	6	American Elm Silver Maple	Ulmus americana Acer saccharinum	Poor Poor	x1
068	SM	17	Silver Maple	Acer saccharinum  Acer saccharinum	Poor	X I
069	BWW	25	Black Willow	Salix nigra	Very Poor	
)70 )71	CT CT	7 8	Cottonwood Cottonwood	Populus deltoides Populus deltoides	Poor Fair	
72	СТ	12	Cottonwood	Populus deltoides	Poor	x1
073	CT CT	6 10	Cottonwood  Cottonwood	Populus deltoides Populus deltoides	Fair Poor	
75	СТ	14	Cottonwood	Populus deltoides	Poor	
)76 )77	CT CT	16 10	Cottonwood  Cottonwood	Populus deltoides Populus deltoides	Fair Fair	
778	E	10	American Elm	Ulmus americana	Fair	
79	GA	6	Green Ash	Fraxinus pennsylvanica	Poor	
)80 )81	E SM	7 16	American Elm Silver Maple	Ulmus americana Acer saccharinum	Fair Fair	
)82	SM	27	Silver Maple	Acer saccharinum	Poor	
)83 )84	SM SM	14 8	Silver Maple Silver Maple	Acer saccharinum  Acer saccharinum	Poor Poor	
085	SM	13	Silver Maple	Acer saccharinum	Fair	
)86 )87	GA E	6 10	Green Ash American Elm	Fraxinus pennsylvanica Ulmus americana	Poor Poor	
)88	SM	15	Silver Maple	Acer saccharinum	Fair	
)89	SM	19 18	Silver Maple	Acer saccharinum	Poor	
)90 )91	SM E	18 6	Silver Maple American Elm	Acer saccharinum Ulmus americana	Fair Poor	
92	SM	20	Silver Maple	Acer saccharinum	Fair	
)93 )94	SM E	17 12	Silver Maple American Elm	Acer saccharinum Ulmus americana	Poor Poor	
)95	SM	13	Silver Maple	Acer saccharinum	Poor	
)96	SM	7	Silver Maple	Acer saccharinum	Poor	
)97 )98	TH E	7 6	Thornapple/Hawthorne  American Elm	Cragaegus spp. Ulmus americana	Poor Poor	
99	SM	17	Silver Maple	Acer saccharinum	Fair	x1
100	E GA	12 10	American Elm Green Ash	Ulmus americana Fraxinus pennsylvanica	Fair Poor	
102	E	9	American Elm	Ulmus americana	Poor	
103	AP	9	Domestic Apple	Malus sylvestris	Poor	x4
104	SM	24	Silver Maple	Acer saccharinum	Poor	

1107	SM	13	Silver Maple	Acer saccharinum	Fair	
1108	GA	7	Green Ash	Fraxinus pennsylvanica	Poor	
1109	SM	14	Silver Maple	Acer saccharinum	Fair	
1110 1111	GA SM	13 23	Green Ash Silver Maple	Fraxinus pennsylvanica  Acer saccharinum	Fair Poor	
1112	SM	13	Silver Maple	Acer saccharinum	Poor	
1113 1114	RM BX	10 12	Red Maple Box elder	Acer rubrum Acer negundo	Fair Poor	
1115	SM	24	Silver Maple	Acer negando  Acer saccharinum	Fair	x2
1116	SM	28	Silver Maple	Acer saccharinum	Fair	
1117 1118	RM GA	8	Red Maple Green Ash	Acer rubrum Fraxinus pennsylvanica	Fair Poor	
1119	BX	21	Box elder	Acer negundo	Poor	x1
1120	BX	28	Box elder	Acer negundo	Poor	
1121 1122	BX BC	9 18	Box elder Wild Black Cherry	Acer negundo Prunus serotina	Poor Poor	
1123	BX	10	Box elder	Acer negundo	Poor	
1124	BX	21	Box elder	Acer negundo	Poor	
1125 1126	BX BX	7 8	Box elder Box elder	Acer negundo Acer negundo	Poor Poor	
1127	BX	8	Box elder	Acer negundo	Poor	х3
1128	BX	7	Box elder	Acer negundo	Poor	2
1129 1130	BX BX	9	Box elder Box elder	Acer negundo Acer negundo	Poor Poor	x2
1131	BX	10	Box elder	Acer negundo	Poor	
1132	BX	7	Box elder	Acer negundo	Poor	x1
1133 1134	BX AP	9 10	Box elder  Domestic Apple	Acer negundo  Malus sylvestris	Poor Poor	x1
1135	AP	7	Domestic Apple	Malus sylvestris	Poor	
1136 1137	AP AP	7	Domestic Apple	Malus sylvestris	Poor	
1137 1138	AP AP	9	Domestic Apple  Domestic Apple	Malus sylvestris  Malus sylvestris	Poor Poor	
1139	AP	6	Domestic Apple	Malus sylvestris	Poor	x1
1140 1141	AP BC	7	Domestic Apple	Malus sylvestris	Poor Poor	x1
1141	E BC	21 8	Wild Black Cherry  American Elm	Prunus serotina Ulmus americana	Poor	
1143	Е	7	American Elm	Ulmus americana	Fair	
1144	BX	23	Box elder	Acer negundo	Poor	
1145 1146	SU BX	12 6	Sugar Maple Box elder	Acer saccharum  Acer negundo	Fair Fair	
1147	BX	8	Box elder	Acer negundo	Poor	
1148	BX	6	Box elder	Acer negundo	Poor	
1149 1150	BX BX	10 6	Box elder Box elder	Acer negundo Acer negundo	Poor Poor	
1151	BX	6	Box elder	Acer negundo	Poor	
1152	BX	6	Box elder	Acer negundo	Poor	
1153 1154	BX BX	8	Box elder Box elder	Acer negundo Acer negundo	Poor Poor	
1155	BX	8	Box elder	Acer negundo	Poor	
1156	BX	7	Box elder	Acer negundo	Poor	
1157 1158	E BC	22 24	American Elm Wild Black Cherry	Ulmus americana Prunus serotina	Poor Very Poor	x1
1159	BX	8	Box elder	Acer negundo	Poor	XI
1160	BX	10	Box elder	Acer negundo	Poor	
1161 1162	BX BX	7 8	Box elder Box elder	Acer negundo Acer negundo	Poor Poor	
1163	BX	8	Box elder	Acer negundo	Poor	
1164	BX	6	Box elder	Acer negundo	Poor	
					l Door	
1165 1166	BX	9	Box elder	Acer negundo	Poor	x2
1165 1166 1167				Acer negundo Acer negundo Acer negundo	Poor	x2
1166 1167 1168	BX BX BX BX	9 12 6 18	Box elder Box elder Box elder Box elder	Acer negundo Acer negundo Acer negundo	Poor Poor Poor	x2
1166 1167 1168 1169	BX BX BX BX GA	9 12 6 18	Box elder Box elder Box elder Box elder Green Ash	Acer negundo Acer negundo Acer negundo Fraxinus pennsylvanica	Poor Poor Poor	x2
1166 1167 1168	BX BX BX BX	9 12 6 18	Box elder Box elder Box elder Box elder	Acer negundo Acer negundo Acer negundo	Poor Poor Poor	x2
1166 1167 1168 1169 1170 1171 1172	BX BX BX BX GA GA BX BL	9 12 6 18 12 6 6 6	Box elder Box elder Box elder Box elder Green Ash Green Ash Box elder Black Locust	Acer negundo Acer negundo Acer negundo Fraxinus pennsylvanica Fraxinus pennsylvanica Acer negundo Robinia pseudoacacia	Poor Poor Poor Very Poor Poor Poor	
1166 1167 1168 1169 1170	BX BX BX BX GA GA GA BX	9 12 6 18 12 6	Box elder Box elder Box elder Box elder Green Ash Green Ash Box elder	Acer negundo Acer negundo Acer negundo Fraxinus pennsylvanica Fraxinus pennsylvanica Acer negundo	Poor Poor Poor Very Poor Poor	x2 x3 x1
1166 1167 1168 1169 1170 1171 1172 1173	BX BX BX BX GA GA BX BL TH	9 12 6 18 12 6 6 9	Box elder Box elder Box elder Box elder Green Ash Green Ash Box elder Black Locust Thornapple/Hawthorne	Acer negundo Acer negundo Acer negundo Acer negundo Fraxinus pennsylvanica Fraxinus pennsylvanica Acer negundo Robinia pseudoacacia Cragaegus spp.	Poor Poor Poor Very Poor Poor Poor Poor	х3
1166 1167 1168 1169 1170 1171 1172 1173 1174 1175 1176	BX BX BX BX GA GA TH BL BL BX	9 12 6 18 12 6 6 9 14 8 8	Box elder Box elder Box elder Box elder Box elder Green Ash Green Ash Box elder Black Locust Thornapple/Hawthorne Black Locust Black Locust Black Locust Black Locust Black Locust	Acer negundo Acer negundo Acer negundo Acer negundo Fraxinus pennsylvanica Fraxinus pennsylvanica Acer negundo Robinia pseudoacacia Cragaegus spp. Robinia pseudoacacia Robinia pseudoacacia Acer negundo	Poor Poor Poor Poor Poor Poor Poor Poor	х3
1166 1167 1168 1169 1170 1171 1172 1173 1174 1175	BX BX BX BX GA GA TH BL BL	9 12 6 18 12 6 6 9 14 8	Box elder Box elder Box elder Box elder Box elder Green Ash Green Ash Box elder Black Locust Thornapple/Hawthorne Black Locust Black Locust	Acer negundo Acer negundo Acer negundo Acer negundo Fraxinus pennsylvanica Fraxinus pennsylvanica Acer negundo Robinia pseudoacacia Cragaegus spp. Robinia pseudoacacia Robinia pseudoacacia	Poor Poor Poor Very Poor Poor Poor Poor Poor Poor Poor Poor	х3
1166 1167 1168 1169 1170 1171 1172 1173 1174 1175 1176 1177 1178	BX BX BX BX GA GA BX BL TH BL BL BX	9 12 6 18 12 6 6 6 9 14 8 8 10 10	Box elder Box elder Box elder Box elder Box elder Green Ash Green Ash Box elder Black Locust Thornapple/Hawthorne Black Locust Black Locust Box elder Black Locust Box elder Black Locust Box elder Black Locust	Acer negundo Acer negundo Acer negundo Acer negundo Fraxinus pennsylvanica Fraxinus pennsylvanica Acer negundo Robinia pseudoacacia Cragaegus spp. Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Acer negundo Acer negundo Acer negundo	Poor Poor Poor Poor Poor Poor Poor Poor	х3
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1166 1167 1168 1169 1170 1171 1172 1173 1174 1175 1176 1177 1178	BX BX BX BX GA GA BX BL TH BL BL BX	9 12 6 18 12 6 6 6 9 14 8 8 10 10	Box elder Box elder Box elder Box elder Box elder Green Ash Green Ash Box elder Black Locust Thornapple/Hawthorne Black Locust Black Locust Box elder Black Locust Box elder Black Locust Box elder Black Locust	Acer negundo Acer negundo Acer negundo Acer negundo Fraxinus pennsylvanica Fraxinus pennsylvanica Acer negundo Robinia pseudoacacia Cragaegus spp. Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Acer negundo Acer negundo Acer negundo	Poor Poor Poor Poor Poor Poor Poor Poor	х3
1166 1167 1168 1169 1170 1171 1172 1173 1174 1175 1176 1177 1178 1179 1180 1181 1182	BX BX BX BX BX GA GA BX BL TH BL BX BL BX BL BX BL BX	9 12 6 18 12 6 6 9 14 8 8 10 10 12 10 13 17 9 14	Box elder Box elder Box elder Box elder Box elder Green Ash Green Ash Box elder Black Locust Thornapple/Hawthorne Black Locust Black Locust Box elder Black Locust Box elder Black Locust Box elder Black Locust Black Locust	Acer negundo Acer negundo Acer negundo Acer negundo Fraxinus pennsylvanica Fraxinus pennsylvanica Acer negundo Robinia pseudoacacia Cragaegus spp. Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Acer negundo Acer negundo Acer negundo Acer negundo Robinia pseudoacacia Robinia pseudoacacia Robinia pseudoacacia Robinia pseudoacacia	Poor Poor Poor Poor Poor Poor Poor Poor	х3
1166 1167 1168 1169 1170 1171 1172 1173 1174 1175 1176 1177 1178 1179 1180 1181 1182 1183 1184	BX BX BX BX BX GA GA GA BX BL TH BL BL BX BL BX BL BX	9 12 6 18 12 6 6 9 14 8 8 10 10 12 10 13 17 9 14 6	Box elder Box elder Box elder Box elder Box elder Green Ash Green Ash Box elder Black Locust Thornapple/Hawthorne Black Locust Black Locust Box elder Black Locust Box elder Box elder Box elder Box elder Box elder Box elder Black Locust Box elder Box elder Box elder Box elder Box elder Black Locust Black Locust	Acer negundo Acer negundo Acer negundo Fraxinus pennsylvanica Fraxinus pennsylvanica Acer negundo Robinia pseudoacacia Cragaegus spp. Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Acer negundo Acer negundo Acer negundo Robinia pseudoacacia Acer negundo Acer negundo Acer negundo Robinia pseudoacacia Robinia pseudoacacia Robinia pseudoacacia Robinia pseudoacacia Robinia pseudoacacia	Poor Poor Poor Poor Poor Poor Poor Poor	x3 x1
1166 1167 1168 1169 1170 1171 1172 1173 1174 1175 1176 1177 1178 1179 1180 1181 1182	BX BX BX BX BX GA GA BX BL TH BL BX BL BX BL BX BL BX	9 12 6 18 12 6 6 9 14 8 8 10 10 12 10 13 17 9 14	Box elder Box elder Box elder Box elder Box elder Green Ash Green Ash Box elder Black Locust Thornapple/Hawthorne Black Locust Black Locust Box elder Black Locust Box elder Black Locust Box elder Black Locust Black Locust	Acer negundo Acer negundo Acer negundo Acer negundo Fraxinus pennsylvanica Fraxinus pennsylvanica Acer negundo Robinia pseudoacacia Cragaegus spp. Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Acer negundo Acer negundo Acer negundo Acer negundo Robinia pseudoacacia Robinia pseudoacacia Robinia pseudoacacia Robinia pseudoacacia	Poor Poor Poor Poor Poor Poor Poor Poor	х3
1166 1167 1168 1169 1170 1171 1172 1173 1174 1175 1176 1177 1178 1179 1180 1181 1182 1183 1184 1185 1186	BX BX BX BX BX BX BX GA GA BX BL TH BL BL BX BL BX BL BX	9 12 6 18 12 6 6 9 14 8 8 10 10 12 10 13 17 9 14 6 13 12 12	Box elder Box elder Box elder Box elder Box elder Green Ash Green Ash Box elder Black Locust Thornapple/Hawthorne Black Locust Black Locust Box elder Black Locust Box elder Box elder Box elder Box elder Box elder Box elder Black Locust Box elder	Acer negundo Acer negundo Acer negundo Fraxinus pennsylvanica Fraxinus pennsylvanica Acer negundo Robinia pseudoacacia Cragaegus spp. Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Acer negundo Acer negundo Acer negundo Acer negundo Fraxinus pennsylvanica Acer saccharinum Acer negundo Acer negundo	Poor Poor Poor Poor Poor Poor Poor Poor	x3 x1
1166 1167 1168 1169 1170 1171 1172 1173 1174 1175 1176 1177 1178 1179 1180 1181 1182 1183 1184 1185 1186 1187 1188	BX BX BX BX BX BX GA GA BX BL TH BL BL BX BL BX	9 12 6 18 12 6 6 9 14 8 8 10 10 10 12 10 13 17 9 14 6 13 12 7	Box elder Box elder Box elder Box elder Box elder Green Ash Green Ash Box elder Black Locust Thornapple/Hawthorne Black Locust Black Locust Box elder Black Locust Box elder Black Locust Box elder Box elder Box elder Black Locust Black Locust Box elder Box elder Box elder Black Locust Box elder Box elder Green Ash Silver Maple Box elder Box elder Thornapple/Hawthorne	Acer negundo Acer negundo Acer negundo Fraxinus pennsylvanica Fraxinus pennsylvanica Acer negundo Robinia pseudoacacia Cragaegus spp. Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Acer negundo Acer negundo Acer negundo Acer negundo Fraxinus pennsylvanica Acer saccharinum Acer negundo Acer negundo Cragaegus spp.	Poor Poor Poor Poor Poor Poor Poor Poor	x3 x1
1166 1167 1168 1169 1170 1171 1172 1173 1174 1175 1176 1177 1178 1179 1180 1181 1182 1183 1184 1185 1186	BX BX BX BX BX BX BX GA GA BX BL TH BL BL BX BL BX BL BX	9 12 6 18 12 6 6 9 14 8 8 10 10 12 10 13 17 9 14 6 13 12 12	Box elder Box elder Box elder Box elder Box elder Green Ash Green Ash Box elder Black Locust Thornapple/Hawthorne Black Locust Black Locust Box elder Black Locust Box elder Box elder Box elder Box elder Box elder Box elder Black Locust Box elder	Acer negundo Acer negundo Acer negundo Fraxinus pennsylvanica Fraxinus pennsylvanica Acer negundo Robinia pseudoacacia Cragaegus spp. Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Acer negundo Acer negundo Acer negundo Acer negundo Fraxinus pennsylvanica Acer saccharinum Acer negundo Acer negundo	Poor Poor Poor Poor Poor Poor Poor Poor	x3 x1
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1214	Е	6	American Elm	Ulmus americana	Poor	
1215	GA	7	Green Ash	Fraxinus pennsylvanica	Very Poor	
1216	GA	10	Green Ash	Fraxinus pennsylvanica	Very Poor	
1217	E	14	American Elm	Ulmus americana	Fair	x1
1218	SM	14	Silver Maple	Acer saccharinum	Fair	x2
1219	GA	15	Green Ash	Fraxinus pennsylvanica	Poor	
1220	GA	9	Green Ash	Fraxinus pennsylvanica	Poor	
1221	GA	8	Green Ash	Fraxinus pennsylvanica	Very Poor	
1222	Е	8	American Elm	Ulmus americana	Poor	
1223	E	9	American Elm	Ulmus americana	Poor	
1224	E	8	American Elm	Ulmus americana	Poor	
1225	E	9	American Elm	Ulmus americana	Poor	
1226	SM	8	Silver Maple	Acer saccharinum	Fair	
1227	SM	13	Silver Maple	Acer saccharinum	Fair	
1228	GA	8	Green Ash	Fraxinus pennsylvanica	Very Poor	x1
1229	SM	10	Silver Maple	Acer saccharinum	Fair	X1
1230	GA	8	Green Ash		Fair	
			Green Ash	Fraxinus pennsylvanica		
1231	GA	6		Fraxinus pennsylvanica	Poor	
1232	BL	10	Black Locust	Robinia pseudoacacia	Poor	
1233	GA	6	Green Ash	Fraxinus pennsylvanica	Poor	
1234	E	15	American Elm	Ulmus americana	Very Poor	
1235	GA	6	Green Ash	Fraxinus pennsylvanica	Poor	
1236	GA	9	Green Ash	Fraxinus pennsylvanica	Poor	
1237	GA	6	Green Ash	Fraxinus pennsylvanica	Poor	
1238	SM	12	Silver Maple	Acer saccharinum	Poor	
1239	Е	15	American Elm	Ulmus americana	Fair	
1240	SC	13	Scotch Pine	Pinus sylvestris	Poor	
1241	BL	17	Black Locust	Robinia pseudoacacia	Poor	
1242	BL	16	Black Locust	Robinia pseudoacacia	Poor	
1243	BL	14	Black Locust	Robinia pseudoacacia	Poor	
1243	BL	6	Black Locust	Robinia pseudoacacia	Poor	
1244	BL	8	Black Locust  Black Locust	Robinia pseudoacacia  Robinia pseudoacacia	Poor	
1245	BL	8		· '	Poor	
			Black Locust	Robinia pseudoacacia		
1247	BL	6	Black Locust	Robinia pseudoacacia	Very Poor	
1248	BL	14	Black Locust	Robinia pseudoacacia	Poor	
1249	BL	12	Black Locust	Robinia pseudoacacia	Poor	
1250	BL	15	Black Locust	Robinia pseudoacacia	Poor	
1251	BL	14	Black Locust	Robinia pseudoacacia	Poor	
1252	BL	8	Black Locust	Robinia pseudoacacia	Poor	
1253	BL	7	Black Locust	Robinia pseudoacacia	Poor	
1254	BW	15	Black Walnut	Juglans nigra	Poor	
1255	Е	15	American Elm	Ulmus americana	Poor	
1256	BL	8	Black Locust	Robinia pseudoacacia	Poor	
1257	BL	12	Black Locust	Robinia pseudoacacia	Poor	
1258	BL	12	Black Locust	Robinia pseudoacacia	Poor	
1259	BL	12	Black Locust	Robinia pseudoacacia	Poor	
1260	BL	13	Black Locust	Robinia pseudoacacia	Poor	
1261	E	15	American Elm	Ulmus americana	Fair	
1262	BX	15	Box elder	Acer negundo	Poor	
				Robinia pseudoacacia	Poor	
1263		13	Black Locust		1 001	
1263 1264	BL	13 17	Black Locust  Box elder	· ·		
1264	BL BX	17	Box elder	Acer negundo	Poor	
1264 1265	BL BX BL	17 13	Box elder Black Locust	Acer negundo Robinia pseudoacacia	Poor Poor	v1
1264 1265 1266	BL BX BL BL	17 13 15	Box elder Black Locust Black Locust	Acer negundo Robinia pseudoacacia Robinia pseudoacacia	Poor Poor Poor	x1
1264 1265 1266 1267	BL BX BL BL BX	17 13 15 18	Box elder Black Locust Black Locust Box elder	Acer negundo Robinia pseudoacacia Robinia pseudoacacia Acer negundo	Poor Poor Poor	x1
1264 1265 1266 1267 1268	BL BX BL BL BX BL	17 13 15 18 8	Box elder Black Locust Black Locust Box elder Black Locust	Acer negundo Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia	Poor Poor Poor Poor	
1264 1265 1266 1267 1268 1269	BL BX BL BL BX BL BC	17 13 15 18 8 20	Box elder Black Locust Black Locust Box elder Black Locust Wild Black Cherry	Acer negundo Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Prunus serotina	Poor Poor Poor Poor Poor Poor	x2
1264 1265 1266 1267 1268 1269 1270	BL BX BL BL BX BL BC BC	17 13 15 18 8 20 9	Box elder Black Locust Black Locust Box elder Black Locust Wild Black Cherry Wild Black Cherry	Acer negundo Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Prunus serotina Prunus serotina	Poor Poor Poor Poor Poor Poor	
1264 1265 1266 1267 1268 1269 1270 1271	BL BX BL BL BX BL BC BC BC	17 13 15 18 8 20 9	Box elder Black Locust Black Locust Box elder Black Locust Wild Black Cherry Wild Black Cherry Wild Black Cherry	Acer negundo Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Prunus serotina Prunus serotina Prunus serotina	Poor Poor Poor Poor Poor Poor Poor Poor	x2
1264 1265 1266 1267 1268 1269 1270 1271 1272	BL BX BL BX BL BX BC BC BC BC	17 13 15 18 8 20 9 19	Box elder  Black Locust  Black Locust  Box elder  Black Locust  Wild Black Cherry	Acer negundo Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Prunus serotina Prunus serotina Prunus serotina Prunus serotina Prunus serotina	Poor Poor Poor Poor Poor Poor Poor Poor	x2
1264 1265 1266 1267 1268 1269 1270 1271 1272 1273	BL BX BL BL BX BL BC BC BC BC	17 13 15 18 8 20 9 19 13	Box elder Black Locust Black Locust Box elder Black Locust Wild Black Cherry Wild Black Cherry Wild Black Cherry	Acer negundo Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Prunus serotina Prunus serotina Prunus serotina	Poor Poor Poor Poor Poor Poor Poor Poor	x2
1264 1265 1266 1267 1268 1269 1270 1271 1272	BL BX BL BX BL BX BC BC BC BC	17 13 15 18 8 20 9 19 13 13	Box elder  Black Locust  Black Locust  Box elder  Black Locust  Wild Black Cherry	Acer negundo Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Prunus serotina Prunus serotina Prunus serotina Prunus serotina Prunus serotina	Poor Poor Poor Poor Poor Poor Poor Poor	x2
1264 1265 1266 1267 1268 1269 1270 1271 1272 1273	BL BX BL BL BX BL BC BC BC BC	17 13 15 18 8 20 9 19 13	Box elder Black Locust Black Locust Box elder Black Locust Wild Black Cherry	Acer negundo Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Prunus serotina Prunus serotina Prunus serotina Prunus serotina Prunus serotina Prunus serotina	Poor Poor Poor Poor Poor Poor Poor Very Poor	x2
1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274	BL BX BL BL BX BL BC BC BC BC BC BC	17 13 15 18 8 20 9 19 13 13	Box elder Black Locust Black Locust Box elder Black Locust Wild Black Cherry	Acer negundo Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Prunus serotina	Poor Poor Poor Poor Poor Poor Poor Very Poor Very Poor	x2
1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275	BL BX BL BX BL BC BC BC BC BC BC BC BC BC	17 13 15 18 8 20 9 19 13 13 12	Box elder Black Locust Black Locust Box elder Black Locust Wild Black Cherry Black Locust	Acer negundo Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Prunus serotina Robinia pseudoacacia	Poor Poor Poor Poor Poor Poor Poor Very Poor Poor	x2
1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276	BL BX BL BL BC	17 13 15 18 8 20 9 19 13 13 12 17	Box elder  Black Locust  Black Locust  Box elder  Black Locust  Wild Black Cherry  Black Locust  Black Locust	Acer negundo Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Prunus serotina Robinia pseudoacacia Robinia pseudoacacia	Poor Poor Poor Poor Poor Poor Poor Poor	x2
1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277	BL BX BL BL BC	17 13 15 18 8 20 9 19 13 13 12 17 19	Box elder Black Locust Black Locust Box elder Black Locust Wild Black Cherry Black Cherry Black Locust Black Locust	Acer negundo Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Prunus serotina Robinia pseudoacacia Robinia pseudoacacia	Poor Poor Poor Poor Poor Poor Poor Poor	x2
1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277 1278	BL BX BL BX BL BC	17 13 15 18 8 20 9 19 13 13 12 17 19 19	Box elder Black Locust Black Locust Box elder Black Locust Wild Black Cherry Black Locust Black Locust Black Locust Black Locust	Acer negundo Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Prunus serotina Prunus serotina Prunus serotina Prunus serotina Prunus serotina Prunus serotina Robinia pseudoacacia Robinia pseudoacacia Robinia pseudoacacia Robinia pseudoacacia	Poor Poor Poor Poor Poor Poor Poor Poor	x2 x1
1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280	BL BX BL BL BC	17 13 15 18 8 20 9 19 13 13 12 17 19 6 15 18	Box elder Black Locust Black Locust Box elder Black Locust Wild Black Cherry Black Cherry Black Locust	Acer negundo Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Prunus serotina Prunus serotina Prunus serotina Prunus serotina Prunus serotina Prunus serotina Robinia pseudoacacia Robinia pseudoacacia Robinia pseudoacacia Robinia pseudoacacia Robinia pseudoacacia	Poor Poor Poor Poor Poor Poor Poor Poor	x2 x1
1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281	BL BX BL BX BL BX BL BC	17 13 15 18 8 20 9 19 13 13 12 17 19 6 15 18 12	Box elder Black Locust Black Locust Box elder Black Locust Wild Black Cherry Black Cherry Black Locust	Acer negundo Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Prunus serotina Robinia pseudoacacia	Poor Poor Poor Poor Poor Poor Poor Poor	x2 x1 x1 x1 x1
1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282	BL BX BL BL BC	17 13 15 18 8 20 9 19 13 13 12 17 19 6 15 18	Box elder Black Locust Black Locust Box elder Black Locust Wild Black Cherry Black Locust	Acer negundo Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Prunus serotina Prunus serotina Prunus serotina Prunus serotina Prunus serotina Prunus serotina Robinia pseudoacacia	Poor Poor Poor Poor Poor Poor Poor Poor	x2 x1
1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282 1283	BL BX BL BX BL BX BL BC	17 13 15 18 8 20 9 19 13 13 12 17 19 19 6 15 18 12 12 8	Box elder Black Locust Black Locust Box elder Black Locust Wild Black Cherry Black Cherry Black Locust	Acer negundo Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Prunus serotina Prunus serotina Prunus serotina Prunus serotina Prunus serotina Prunus serotina Robinia pseudoacacia	Poor Poor Poor Poor Poor Poor Poor Poor	x2 x1 x1 x1 x1
1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282 1283 1284	BL BX BL BX BL BC	17 13 15 18 8 20 9 19 13 13 12 17 19 6 15 18 12 12 12 8 9	Box elder Black Locust Black Locust Box elder Black Locust Wild Black Cherry Black Cherry Black Locust	Acer negundo Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Prunus serotina Robinia pseudoacacia Acer negundo Robinia pseudoacacia Juglans nigra	Poor Poor Poor Poor Poor Poor Poor Poor	x2 x1 x1 x1 x1
1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282 1283 1284 1285	BL BX BL BX BL BC	17 13 15 18 8 20 9 19 13 13 12 17 19 6 15 18 12 12 12 8 9 9	Box elder Black Locust Black Locust Box elder Black Locust Wild Black Cherry Black Locust	Acer negundo Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Prunus serotina Robinia pseudoacacia Acer negundo Acer negundo Robinia pseudoacacia Juglans nigra Juglans nigra	Poor Poor Poor Poor Poor Poor Poor Poor	x2 x1 x1 x1 x1
1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282 1283 1284 1285 1286	BL BX BL BX BL BX BL BC	17 13 15 18 8 20 9 19 13 13 12 17 19 19 6 15 18 12 12 8 9 9 12	Box elder Black Locust Black Locust Box elder Black Locust Wild Black Cherry Black Locust Black Walnut Black Walnut	Acer negundo Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Prunus serotina Prunus serotina Prunus serotina Prunus serotina Prunus serotina Prunus serotina Robinia pseudoacacia Acer negundo Acer negundo Robinia pseudoacacia Juglans nigra Juglans nigra Juglans nigra	Poor Poor Poor Poor Poor Poor Poor Poor	x2 x1 x1 x1 x1
1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282 1283 1284 1285 1286 1287	BL BX BL BL BX BL BC	17 13 15 18 8 20 9 19 13 13 13 12 17 19 6 15 18 12 12 12 8 9 9 12 9	Box elder Black Locust Black Locust Box elder Black Locust Wild Black Cherry Black Locust Black Walnut Black Walnut Black Walnut Black Locust	Acer negundo Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Prunus serotina Robinia pseudoacacia Acer negundo Acer negundo Robinia pseudoacacia Juglans nigra Juglans nigra Robinia pseudoacacia	Poor Poor Poor Poor Poor Poor Poor Poor	x2 x1 x1 x1 x1
1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282 1283 1284 1285 1286 1287 1288	BL BX BL BX BL BC BC BC BC BC BC BC BC BL	17 13 15 18 8 20 9 19 13 13 13 12 17 19 6 15 18 12 12 12 8 9 9 12 9	Box elder Black Locust Black Locust Box elder Black Locust Wild Black Cherry Black Locust Black Valnut Black Walnut Black Walnut Black Locust	Acer negundo Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Prunus serotina Robinia pseudoacacia Acer negundo Acer negundo Robinia pseudoacacia Juglans nigra Juglans nigra Robinia pseudoacacia Robinia pseudoacacia	Poor Poor Poor Poor Poor Poor Poor Poor	x2 x1 x1 x1 x1
1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282 1283 1284 1285 1286 1287 1288 1289	BL BX BL BX BL BC	17 13 15 18 8 20 9 19 13 13 13 12 17 19 19 6 15 18 12 12 8 9 9 12 9 9 13	Box elder Black Locust Black Locust Box elder Black Locust Wild Black Cherry Black Locust Black Walnut Black Walnut Black Locust Black Locust Black Locust	Acer negundo Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Prunus serotina Prunus serotina Prunus serotina Prunus serotina Prunus serotina Prunus serotina Robinia pseudoacacia Acer negundo Acer negundo Robinia pseudoacacia Juglans nigra Juglans nigra Robinia pseudoacacia Robinia pseudoacacia Robinia pseudoacacia	Poor Poor Poor Poor Poor Poor Poor Poor	x2 x1 x1 x1 x1
1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282 1283 1284 1285 1286 1287 1288 1289 1290	BL BX BL BX BL BC	17 13 15 18 8 20 9 19 13 13 13 12 17 19 19 6 15 18 12 12 8 9 9 12 9 9 13 8	Box elder Black Locust Black Locust Box elder Black Locust Wild Black Cherry Black Locust Black Walnut Black Walnut Black Locust Black Locust Black Locust Black Locust	Acer negundo Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Prunus serotina Robinia pseudoacacia Acer negundo Acer negundo Robinia pseudoacacia Juglans nigra Juglans nigra Robinia pseudoacacia	Poor Poor Poor Poor Poor Poor Poor Poor	x2 x1 x1 x1 x1
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1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282 1283 1284 1285 1286 1287 1288 1289 1290 1291 1292 1293 1294 1296	BL BX BL BX BL BC BC BC BC BC BC BC BC BL BW BW BW BW BW BW BW BU	17 13 15 18 8 20 9 19 13 13 13 12 17 19 19 6 15 18 12 12 8 9 9 12 9 9 13 8 9 9 11 10 10	Box elder Black Locust Black Locust Box elder Black Locust Wild Black Cherry Black Locust Black Cherry Black Locust Black Locust Black Locust Black Locust Black Locust Black Walnut Black Walnut Black Locust	Acer negundo Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Prunus serotina Robinia pseudoacacia Juglans nigra Juglans nigra Juglans nigra Robinia pseudoacacia	Poor Poor Poor Poor Poor Poor Poor Poor	x2 x1 x1 x1 x1
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1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282 1283 1284 1285 1286 1287 1288 1289 1290 1291 1292 1293 1294 1295 1298	BL BX BL BX BL BC BC BC BC BC BC BC BL	17 13 15 18 8 20 9 19 13 13 13 12 17 19 6 15 18 12 12 8 9 9 12 9 9 13 8 9 9 11 10 10 10 16 12	Box elder Black Locust Black Locust Box elder Black Locust Wild Black Cherry Black Locust Black Cherry Black Locust Black Locust Black Locust Black Locust Black Locust Black Walnut Black Walnut Black Locust	Acer negundo Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Prunus serotina Robinia pseudoacacia Juglans nigra Juglans nigra Juglans nigra Robinia pseudoacacia	Poor Poor Poor Poor Poor Poor Poor Poor	x2 x1 x1 x1 x1
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1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282 1283 1284 1285 1286 1287 1288 1289 1290 1291 1292 1293 1294 1295 1298	BL BX BL BX BL BC BC BC BC BC BC BC BL	17 13 15 18 8 20 9 19 13 13 13 12 17 19 6 15 18 12 12 8 9 9 12 9 9 13 8 9 9 11 10 10 16 12	Box elder Black Locust Black Locust Box elder Black Locust Wild Black Cherry Black Locust Black Cherry Wild Black Cherry Wild Black Cherry Wild Black Locust Black Locust Black Locust Black Locust Black Locust Black Cocust Black Locust	Acer negundo Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Prunus serotina Robinia pseudoacacia	Poor Poor Poor Poor Poor Poor Poor Poor	x2 x1 x1 x1 x1
1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282 1283 1284 1285 1286 1287 1288 1289 1290 1291 1292 1293 1294 1295 1298 1299	BL BX BL BX BL BC BC BC BC BC BC BC BL BL BL BL BL BL BL BL BL BW BW BW BW BW BW BW BU	17 13 15 18 8 20 9 19 13 13 13 12 17 19 19 6 15 18 12 12 8 9 9 12 9 9 13 8 9 9 11 10 10 16 12 10	Box elder Black Locust Black Locust Box elder Black Locust Wild Black Cherry Black Locust Black Cherry Black Locust Black Locust Black Locust Black Locust Black Locust Black Walnut Black Walnut Black Locust	Acer negundo Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Prunus serotina Robinia pseudoacacia Juglans nigra Juglans nigra Juglans nigra Robinia pseudoacacia	Poor Poor Poor Poor Poor Poor Poor Poor	x2 x1 x1 x1 x1
1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282 1283 1284 1285 1286 1287 1288 1290 1291 1292 1293 1294 1295 1296 1297 1298 1299 1300	BL BX BL BX BL BC BC BC BC BC BC BC BL	17 13 15 18 8 20 9 19 13 13 13 12 17 19 6 15 18 12 12 12 8 9 9 12 9 9 13 8 9 9 11 10 10 10 16 12 10 9	Box elder Black Locust Black Locust Box elder Black Locust Wild Black Cherry Black Locust Black Walnut Black Walnut Black Locust	Acer negundo Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Prunus serotina Robinia pseudoacacia Juglans nigra Juglans nigra Juglans nigra Robinia pseudoacacia	Poor Poor Poor Poor Poor Poor Poor Poor	x2 x1 x1 x1 x1
1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282 1283 1284 1285 1285 1286 1287 1288 1289 1290 1291 1292 1293 1294 1295 1297 1298 1299 1300 1301	BL BX BL BX BL BC BC BC BC BC BC BC BL	17 13 15 18 8 20 9 19 13 13 13 12 17 19 6 15 18 12 12 8 9 9 12 9 9 13 8 9 9 11 10 10 16 12 10 9 12	Box elder Black Locust Black Locust Box elder Black Locust Wild Black Cherry Black Locust Black Cherry Black Locust	Acer negundo Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Prunus serotina Robinia pseudoacacia	Poor Poor Poor Poor Poor Poor Poor Poor	x2 x1 x1 x1 x1
1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282 1283 1284 1285 1286 1287 1288 1289 1290 1291 1292 1293 1294 1295 1296 1297 1298 1299 1300 1301 1302	BL BX BL BC BC BC BC BC BC BC BL	17 13 15 18 8 20 9 19 13 13 13 12 17 19 19 6 15 18 12 12 8 9 9 12 9 9 13 8 9 10 11 10 10 16 12 10 9 12 7	Box elder Black Locust Black Locust Box elder Black Locust Wild Black Cherry Black Locust Black Walnut Black Walnut Black Cocust Black Locust	Acer negundo Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Prunus serotina Robinia pseudoacacia Juglans nigra Juglans nigra Juglans nigra Robinia pseudoacacia	Poor Poor Poor Poor Poor Poor Poor Poor	x2 x1 x1 x1 x1
1264 1265 1266 1267 1268 1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282 1283 1284 1285 1286 1287 1288 1289 1290 1291 1292 1293 1294 1295 1296 1297 1298 1299 1300 1301 1302 1303	BL BX BL BC BC BC BC BC BC BC BC BL	17 13 15 18 8 20 9 19 13 13 13 12 17 19 19 6 15 18 12 12 8 9 9 12 9 9 13 8 9 9 11 10 10 16 12 10 9 12 7 6	Box elder Black Locust Black Locust Box elder Black Locust Wild Black Cherry Black Locust Black Coust Black Locust Black Walnut Black Walnut Black Cocust Black Locust	Acer negundo Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Prunus serotina Robinia pseudoacacia Acer negundo Robinia pseudoacacia Juglans nigra Juglans nigra Juglans nigra Robinia pseudoacacia	Poor Poor Poor Poor Poor Poor Poor Poor	x2 x1 x1 x1 x1
1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282 1283 1284 1285 1285 1286 1287 1288 1289 1290 1291 1292 1293 1294 1295 1296 1297 1298 1297 1298 1299 1300 1301 1302 1303 1304	BL BX BL BC BC BC BC BC BC BC BC BC BL	17 13 15 18 8 20 9 19 13 13 13 12 17 19 6 15 18 12 12 12 8 9 9 12 9 9 13 8 9 9 11 10 10 10 16 12 10 9 12 7 6 12 7	Box elder Black Locust Black Locust Box elder Black Locust Wild Black Cherry Black Locust Black Cocust Black Locust Black Walnut Black Walnut Black Cocust Black Locust	Acer negundo Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Prunus serotina Robinia pseudoacacia	Poor Poor Poor Poor Poor Poor Poor Poor	x2 x1 x1 x1 x1
1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282 1283 1284 1285 1286 1287 1288 1289 1290 1291 1292 1293 1294 1295 1296 1297 1298 1299 1300 1301 1302 1303 1304 1305	BL BX BL BC BC BC BC BC BC BC BC BC BL	17 13 15 18 8 20 9 19 13 13 13 12 17 19 19 6 15 18 12 12 8 9 9 12 9 9 13 8 9 9 11 10 10 16 12 10 9 12 7 6 12 9 10	Box elder Black Locust Black Locust Box elder Black Locust Wild Black Cherry Black Locust Black Cherry Black Coust Black Locust Black Walnut Black Walnut Black Cocust Black Locust	Acer negundo Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Prunus serotina Robinia pseudoacacia Robinia pseudoacac	Poor Poor Poor Poor Poor Poor Poor Poor	x2 x1 x1 x1 x1
1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282 1283 1284 1285 1286 1287 1288 1289 1290 1291 1292 1293 1294 1295 1296 1297 1298 1299 1300 1301 1302 1303 1304 1305 1306 1307	BL BX BL BC BC BC BC BC BC BC BC BL	17 13 15 18 8 20 9 19 13 13 13 12 17 19 19 6 15 18 12 12 8 9 9 12 9 9 13 8 9 9 11 10 10 16 12 10 9 12 7 6 12 9 10 12	Box elder Black Locust Black Locust Box elder Black Locust Wild Black Cherry Black Locust Black Cherry Black Locust Black Locust Black Walnut Black Walnut Black Cocust Black Locust	Acer negundo Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Prunus serotina Robinia pseudoacacia Ro	Poor Poor Poor Poor Poor Poor Poor Poor	x2 x1 x1 x1 x1
1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282 1283 1284 1285 1286 1287 1288 1289 1290 1291 1292 1293 1294 1295 1296 1297 1298 1299 1300 1301 1302 1303 1304 1305 1306 1307 1308	BL BX BL BC BC BC BC BC BC BC BC BC BL	17 13 15 18 8 20 9 19 13 13 13 12 17 19 19 6 15 18 12 12 8 9 9 12 9 9 13 8 9 9 12 9 9 13 13 8 9 10 11 10 10 16 12 10 9 12 7 6 12 9 10 12 9 10 12 15	Box elder Black Locust Black Locust Box elder Black Locust Wild Black Cherry Black Locust Black Cherry Black Locust Black Walnut Black Walnut Black Walnut Black Locust	Acer negundo Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Prunus serotina Robinia pseudoacacia Ro	Poor Poor Poor Poor Poor Poor Poor Poor	x2 x1 x1 x1 x1
1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282 1283 1284 1285 1286 1287 1288 1289 1290 1291 1292 1293 1294 1292 1293 1294 1295 1296 1297 1298 1299 1300 1301 1302 1303 1304 1305 1306 1307 1308 1309	BL  BX  BL  BX  BL  BC  BC  BC  BC  BC  BC  BL  BL  BL	17 13 15 18 8 20 9 19 13 13 13 12 17 19 19 6 15 18 12 12 8 9 9 12 9 9 13 8 9 12 9 11 10 10 10 16 12 10 9 12 7 6 12 9 10 12 9 10 12 15 14	Box elder Black Locust Black Locust Box elder Black Locust Wild Black Cherry Black Locust Black Cherry Black Walnut Black Walnut Black Walnut Black Locust	Acer negundo Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Prunus serotina Robinia pseudoacacia Ro	Poor Poor Poor Poor Poor Poor Poor Poor	x2 x1 x1 x1 x1
1264 1265 1266 1267 1268 1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282 1283 1284 1285 1285 1286 1287 1288 1289 1290 1291 1292 1293 1294 1292 1293 1294 1295 1297 1298 1299 1300 1301 1302 1303 1304 1305 1308 1308 1309 1310	BL  BX  BL  BX  BL  BC  BC  BC  BC  BC  BC  BL  BL  BL	17 13 15 18 8 20 9 19 13 13 13 12 17 19 19 6 15 18 12 12 8 9 9 12 9 9 13 8 9 9 12 9 13 8 9 10 11 10 10 16 12 10 9 12 7 6 12 9 10 12 7 6 12 9 10 12 15 14 14	Box elder Black Locust Black Locust Box elder Black Locust Wild Black Cherry Black Locust Black Walnut Black Walnut Black Walnut Black Locust	Acer negundo Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Prunus serotina Robinia pseudoacacia Ro	Poor Poor Poor Poor Poor Poor Poor Poor	x2 x1 x1 x1 x1
1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282 1283 1284 1285 1286 1287 1288 1289 1290 1291 1292 1293 1294 1290 1291 1292 1293 1294 1295 1296 1297 1298 1299 1300 1310 1305 1306 1307 1308 1309 1310 1311	BL  BX  BL  BX  BL  BC  BC  BC  BC  BC  BC  BL  BL  BL	17 13 15 18 8 20 9 19 13 13 13 12 17 19 19 6 15 18 12 12 8 9 9 12 9 9 13 8 9 9 12 9 9 13 13 8 9 10 11 10 10 16 12 10 9 12 7 6 12 9 10 12 9 10 12 15 14 14 14 12	Box elder Black Locust Black Locust Box elder Black Locust Wild Black Cherry Black Locust Black Cherry Black Locust Black Locust Black Walnut Black Walnut Black Walnut Black Locust	Acer negundo Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Prunus serotina Robinia pseudoacacia Ro	Poor Poor Poor Poor Poor Poor Poor Poor	x2 x1 x1 x1 x1
1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282 1283 1284 1285 1286 1287 1288 1289 1290 1291 1292 1293 1294 1292 1293 1294 1295 1296 1297 1298 1299 1300 1301 1302 1303 1304 1305 1306 1307 1308 1309 1310 1311 1312	BL  BX  BL  BX  BL  BC  BC  BC  BC  BC  BC  BL  BL  BL	17 13 15 18 8 20 9 19 19 13 13 13 12 17 19 19 6 15 18 12 12 8 9 9 12 9 9 13 8 9 9 12 9 11 10 10 10 16 12 10 9 12 7 6 12 9 10 12 7 6 12 12 9 10 12 17	Box elder Black Locust Black Locust Box elder Black Locust Wild Black Cherry Black Locust Black Cherry Black Walnut Black Walnut Black Walnut Black Locust Black Cherry Wild Black Cherry	Acer negundo Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Prunus serotina Robinia pseudoacacia Ro	Poor Poor Poor Poor Poor Poor Poor Poor	x2 x1 x1 x1 x2
1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282 1283 1284 1285 1286 1287 1288 1289 1290 1291 1292 1293 1294 1292 1293 1294 1295 1296 1297 1298 1299 1300 1301 1302 1303 1304 1305 1306 1307 1308 1309 1310 1311 1312 1312 1313	BL  BX  BL  BX  BL  BC  BC  BC  BC  BC  BC  BL  BL  BL	17 13 15 18 8 20 9 19 13 13 13 12 17 19 19 6 15 18 12 12 12 8 9 9 12 9 9 13 8 9 9 12 9 9 13 8 9 10 11 10 10 16 12 10 9 12 7 6 12 9 10 12 17 15	Box elder Black Locust Black Locust Box elder Black Locust Wild Black Cherry Black Locust Black Walnut Black Walnut Black Walnut Black Locust Black Locu	Acer negundo Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Prunus serotina Robinia pseudoacacia Robinia pseudoacac	Poor Poor Poor Poor Poor Poor Poor Poor	x2 x1 x1 x1 x1
1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282 1283 1284 1285 1286 1287 1288 1289 1290 1291 1292 1293 1294 1292 1293 1294 1295 1296 1297 1298 1299 1300 1301 1302 1303 1304 1305 1306 1307 1308 1309 1310 1311 1312	BL BX BL BX BL BC BC BC BC BC BC BC BC BL	17 13 15 18 8 20 9 19 13 13 13 12 17 19 19 6 15 18 12 12 12 8 9 9 12 9 9 13 8 9 9 12 9 9 13 8 10 11 10 10 16 12 10 9 12 7 6 12 9 10 12 7 6 12 7 6 12 7 7 6 12 7	Box elder Black Locust Black Locust Box elder Black Locust Wild Black Cherry Black Locust Black Cherry Black Locust Black Locust Black Locust Black Walnut Black Walnut Black Walnut Black Locust Bl	Acer negundo Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Prunus serotina Robinia pseudoacacia Robinia pseudoacac	Poor Poor Poor Poor Poor Poor Poor Poor	x2 x1 x1 x1 x2
1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282 1283 1284 1285 1286 1287 1288 1289 1290 1291 1292 1293 1294 1292 1293 1294 1295 1296 1297 1298 1299 1300 1301 1302 1303 1304 1305 1306 1307 1308 1309 1310 1311 1312 1312 1313	BL  BX  BL  BX  BL  BC  BC  BC  BC  BC  BC  BL  BL  BL	17 13 15 18 8 20 9 19 13 13 13 12 17 19 19 6 15 18 12 12 12 8 9 9 12 9 9 13 8 9 9 12 9 9 13 8 9 10 11 10 10 16 12 10 9 12 7 6 12 9 10 12 17 15	Box elder Black Locust Black Locust Box elder Black Locust Wild Black Cherry Black Locust Black Walnut Black Walnut Black Walnut Black Locust Black Locu	Acer negundo Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Prunus serotina Robinia pseudoacacia Robinia pseudoacac	Poor Poor Poor Poor Poor Poor Poor Poor	x2 x1 x1 x1 x2
1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282 1283 1284 1285 1286 1287 1288 1289 1290 1291 1292 1293 1294 1293 1294 1295 1296 1297 1298 1299 1300 1301 1302 1303 1304 1305 1306 1307 1308 1309 1310 1311 1312 1313 1314	BL BX BL BX BL BC BC BC BC BC BC BC BC BL	17 13 15 18 8 20 9 19 13 13 13 12 17 19 19 6 15 18 12 12 12 8 9 9 12 9 9 13 8 9 9 12 9 9 13 8 10 11 10 10 16 12 10 9 12 7 6 12 9 10 12 7 6 12 7 6 12 7 7 6 12 7	Box elder Black Locust Black Locust Box elder Black Locust Wild Black Cherry Black Locust Black Cherry Black Locust Black Locust Black Locust Black Walnut Black Walnut Black Walnut Black Locust Bl	Acer negundo Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Prunus serotina Robinia pseudoacacia Robinia pseudoacac	Poor Poor Poor Poor Poor Poor Poor Poor	x2 x1 x1 x1 x2
1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282 1283 1284 1285 1286 1287 1288 1289 1290 1291 1290 1291 1292 1293 1294 1295 1296 1297 1298 1299 1300 1301 1302 1303 1304 1305 1306 1307 1308 1309 1310 1311 1312 1313 1314 1315	BL BX BL BX BL BC BC BC BC BC BC BC BC BL	17 13 15 18 8 20 9 19 13 13 13 12 17 19 19 6 15 18 12 12 8 9 9 12 9 9 13 8 9 9 12 9 9 13 13 8 9 10 11 10 10 16 12 10 9 12 7 6 12 9 10 12 7 6 12 9 10 12 7 6 12 17 15 7 19	Box elder Black Locust Black Locust Box elder Black Locust Wild Black Cherry Black Locust Black Cherry Black Cherry Black Locust Black Locust Black Locust Black Walnut Black Walnut Black Cocust Black Locust Black Cherry Wild Black Cherry	Acer negundo Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Prunus serotina Robinia pseudoacacia Acer negundo Acer negundo Robinia pseudoacacia Juglans nigra Juglans nigra Juglans nigra Robinia pseudoacacia Robinia pseudoacac	Poor Poor Poor Poor Poor Poor Poor Poor	x2 x1 x1 x1 x2
1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282 1283 1284 1285 1286 1287 1288 1289 1290 1291 1292 1293 1291 1292 1293 1294 1295 1296 1297 1298 1299 1300 1301 1302 1303 1304 1305 1306 1307 1308 1307 1308 1307 1308 1311 1312 1313 1314 1315 1316	BL  BX  BL  BX  BL  BC  BC  BC  BC  BC  BC  BL  BL  BL	17 13 15 18 8 20 9 19 13 13 13 12 17 19 19 6 15 18 12 12 12 8 9 9 12 9 9 13 8 9 9 12 9 9 13 8 9 10 11 10 10 16 12 10 9 12 7 6 12 9 10 12 7 6 12 9 10 12 7 6 12 9 10 12 15 14 14 12 17 15 7	Box elder Black Locust Black Locust Box elder Black Locust Wild Black Cherry Black Locust Black Coust Black Locust Black Walnut Black Walnut Black Walnut Black Locust Black Locus	Acer negundo Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Prunus serotina Robinia pseudoacacia Acer negundo Acer negundo Acer negundo Robinia pseudoacacia	Poor Poor Poor Poor Poor Poor Poor Poor	x2 x1 x1 x1 x2
1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282 1283 1284 1285 1286 1287 1288 1289 1290 1291 1292 1293 1294 1292 1293 1294 1295 1296 1297 1298 1299 1300 1301 1302 1303 1304 1305 1306 1307 1308 1309 1310 1311 1312 1313 1314 1315 1316 1317	BL  BX  BL  BX  BL  BC  BC  BC  BC  BC  BC  BL  BL  BL	17 13 15 18 8 20 9 19 13 13 13 12 17 19 19 6 15 18 12 12 12 8 9 9 12 9 9 13 8 9 9 12 9 9 13 8 9 10 11 10 10 16 12 10 9 12 7 6 12 17 19 19 10 12 17 17 19 19 10 11 10 10 11 10 10 11 10 10 11 10 10	Box elder Black Locust Black Locust Box elder Black Locust Wild Black Cherry Black Locust Black Walnut Black Walnut Black Walnut Black Locust Black Locu	Acer negundo Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Prunus serotina Prunus serotina Prunus serotina Prunus serotina Prunus serotina Prunus serotina Robinia pseudoacacia Robinia pseud	Poor Poor Poor Poor Poor Poor Poor Poor	x2 x1 x1 x1 x2
1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282 1283 1284 1285 1286 1287 1288 1289 1290 1291 1290 1291 1292 1293 1294 1295 1296 1297 1298 1299 1300 1301 1302 1303 1304 1305 1306 1307 1308 1309 1310 1311 1312 1313 1314 1315 1316 1317 1318	BL  BX  BL  BX  BL  BC  BC  BC  BC  BC  BC  BL  BL  BL	17 13 15 18 8 20 9 19 13 13 13 12 17 19 19 6 15 18 12 12 8 9 9 12 9 9 12 9 9 13 8 9 9 12 9 9 13 13 8 9 10 11 10 10 16 12 10 9 12 7 6 12 9 10 12 7 6 12 9 10 12 17 15 7 19 22 17 16	Box elder Black Locust Box elder Black Locust Box elder Black Locust Wild Black Cherry Black Locust Black Walnut Black Walnut Black Walnut Black Locust	Acer negundo Robinia pseudoacacia Robinia pseudoacacia Acer negundo Robinia pseudoacacia Prunus serotina Robinia pseudoacacia Acer negundo Acer negundo Robinia pseudoacacia Juglans nigra Juglans nigra Juglans nigra Juglans nigra Robinia pseudoacacia Robi	Poor Poor Poor Poor Poor Poor Poor Poor	x2 x1 x1 x1 x2

1430	BL	7	Black Locust	Robinia pseudoacacia	Poor	1
1431	СТ	30	Cottonwood	Populus deltoides	Poor	
1432 1433	CT CT	39 23	Cottonwood  Cottonwood	Populus deltoides Populus deltoides	Fair Poor	
1434	CT	23	Cottonwood	Populus deltoides	Poor	
1435 1436	BC BL	8	Wild Black Cherry Black Locust	Prunus serotina Robinia pseudoacacia	Poor Poor	
1437	BL	8	Black Locust	Robinia pseudoacacia	Poor	
1438 1439	BL BX	9	Black Locust Box elder	Robinia pseudoacacia Acer negundo	Poor Poor	
1440	BW	9	Black Walnut	Juglans nigra	Poor	
1441 1442	E BW	8 18	American Elm Black Walnut	Ulmus americana Juglans nigra	Poor Fair	
1443	BL	7	Black Locust	Robinia pseudoacacia	Poor	
1444 1445	TH BL	7 8	Thornapple/Hawthorne Black Locust	Cragaegus spp.  Robinia pseudoacacia	Poor Poor	
1446	BX	6	Box elder	Acer negundo	Poor	
1447 1448	BL E	16 9	Black Locust American Elm	Robinia pseudoacacia Ulmus americana	Very Poor Poor	
1449	Шι	16	American Elm	Ulmus americana	Poor	no tag in h20, move E
1450 1451	E BL	9	American Elm Black Locust	Ulmus americana Robinia pseudoacacia	Poor Poor	x1
1452	BC	6	Wild Black Cherry	Prunus serotina	Poor	
1453 1454	BL BL	8	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor Poor	
1455	В	8	Basswood	Tilia americana	Poor	
1456 1457	BW BL	22 7	Black Walnut Black Locust	Juglans nigra Robinia pseudoacacia	Fair Poor	
1458	BL	8	Black Locust	Robinia pseudoacacia	Poor	4
1459 1460	BL B	10 7	Black Locust Basswood	Robinia pseudoacacia Tilia americana	Poor Poor	x1
1461	BL	6	Black Locust	Robinia pseudoacacia	Poor	
1462 1463	BL B	8	Black Locust Basswood	Robinia pseudoacacia Tilia americana	Poor Fair	
1464	BL	9	Black Locust	Robinia pseudoacacia	Poor	
1465 1466	BL BL	6 9	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor Poor	
1467	BL	8	Black Locust	Robinia pseudoacacia	Poor	
1468 1469	BL BL	6 8	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor Poor	
1470	BL	7	Black Locust	Robinia pseudoacacia	Poor	
1471 1472	BL BL	10 12	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor Poor	
1473	BL	6	Black Locust	Robinia pseudoacacia	Poor	
1474 1475	BL BL	8 10	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor Poor	
1476	BL	13	Black Locust	Robinia pseudoacacia	Poor	
1477 1478	BL BL	8 15	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor Fair	
1479	BL	8	Black Locust	Robinia pseudoacacia	Poor	
1480 1481	BL BL	9	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor Poor	
1482	BL	13	Black Locust	Robinia pseudoacacia	Poor	
1483 1484	BL BL	6 6	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor Poor	
1485	BL	13	Black Locust	Robinia pseudoacacia	Poor	x1
1486 1487	BL BL	6 15	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor Poor	
1488	BC	8	Wild Black Cherry	Prunus serotina	Poor	
1489 1490	BL BL	8 6	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor Poor	
1491	BL	12	Black Locust	Robinia pseudoacacia	Poor	
1492 1493	BL BL	6 6	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor Poor	
1494	BL	9	Black Locust	Robinia pseudoacacia	Poor	
1495 1496	BL YB	9 10	Black Locust Yellow Birch	Robinia pseudoacacia  Betula alleghaniensis	Poor Fair	
1497	BL	7	Black Locust	Robinia pseudoacacia	Poor	
1498 1499	BL BL	15 12	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor Poor	
1500	В	12	Basswood	Tilia americana	Poor	
1501 1502	BC BL	15 9	Wild Black Cherry Black Locust	Prunus serotina	Poor Poor	
1502	BL	9	Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor	
1504 1505	BL BL	12 12	Black Locust	Robinia pseudoacacia	Poor Poor	
1505 1506	BL	12 16	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor Poor	
1507 1508	BL BL	14 14	Black Locust	Robinia pseudoacacia	Poor Poor	
1508 1509	BL BL	14 12	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor	
1510 1511	BL	9	Black Locust	Robinia pseudoacacia	Poor	
1511 1512	BL BL	6 10	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor Poor	
1513	BL	14	Black Locust	Robinia pseudoacacia	Poor	
1514 1515	BL BL	10 9	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor Very Poor	
1516	BL	13	Black Locust	Robinia pseudoacacia	Poor	
1517 1518	BL BL	12 7	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor Poor	
1519	BL	9	Black Locust	Robinia pseudoacacia	Poor	
1520 1521	BL BL	6 7	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor Poor	
1522	E	8	American Elm	Ulmus americana	Poor	
1523 1524	BL BL	8 10	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor Poor	
1525	E	13	American Elm	Ulmus americana	Poor	
1526 1527	BL BL	13 12	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor Poor	
1528	BL	15	Black Locust	Robinia pseudoacacia	Poor	
1529 1530	BX BL	7 17	Box elder Black Locust	Acer negundo  Robinia pseudoacacia	Poor Poor	
1531	BL	13	Black Locust	Robinia pseudoacacia	Poor	
1532 1533	E BL	9	American Elm Black Locust	Ulmus americana Robinia pseudoacacia	Fair Poor	
1534	BL	12	Black Locust	Robinia pseudoacacia	Poor	
1535 1536	BL BL	8 13	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor Poor	
1537	BL	9	Black Locust	Robinia pseudoacacia	Poor	
1538 1539	BL E	6 13	Black Locust American Elm	Robinia pseudoacacia Ulmus americana	Poor Poor	
1539 1540	BL	13 13	American Eim Black Locust	Robinia pseudoacacia	Poor	
1541	BL	16 18	Black Locust	Robinia pseudoacacia	Poor	x1
1542	BL	18	Black Locust	Robinia pseudoacacia	Poor	
1543	BL	14	Black Locust	Robinia pseudoacacia	Very Poor	

Robinia pseudoacacia

1544 BL 17

1545						
	BL	12	Black Locust	Robinia pseudoacacia	Poor	
1546 1547	BL BL	10 9	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor Poor	
1548	BL	8	Black Locust	Robinia pseudoacacia	Poor	
1549	BL	12	Black Locust	Robinia pseudoacacia	Poor	
1550 1551	BL BL	6 7	Black Locust Black Locust	Robinia pseudoacacia	Poor Poor	
1552	BL	6	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor	
1553	BL	12	Black Locust	Robinia pseudoacacia	Poor	x2
1554	BL	8	Black Locust	Robinia pseudoacacia	Poor	
1555 1556	BL E	13 13	Black Locust  American Elm	Robinia pseudoacacia Ulmus americana	Poor Poor	
1557	BL	14	Black Locust	Robinia pseudoacacia	Poor	
1558	BL	13	Black Locust	Robinia pseudoacacia	Poor	
559	BL	15	Black Locust	Robinia pseudoacacia	Poor	
1560 1561	BL BL	17 9	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor Poor	
562	BL	7	Black Locust	Robinia pseudoacacia	Poor	
563	BL	19	Black Locust	Robinia pseudoacacia	Poor	
564 565	BL BL	9 17	Black Locust Black Locust	Robinia pseudoacacia	Poor Poor	
566	E	8	American Elm	Robinia pseudoacacia Ulmus americana	Poor	
567	BL	16	Black Locust	Robinia pseudoacacia	Poor	
568	BL	8	Black Locust	Robinia pseudoacacia	Poor	
569 570	BL BL	6 8	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor Poor	
571	BL	8	Black Locust	Robinia pseudoacacia	Poor	
572	BX	6	Box elder	Acer negundo	Poor	
573	BL	9	Black Locust	Robinia pseudoacacia	Poor	
574 575	BL BL	12 13	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor Poor	
576	BL	14	Black Locust	Robinia pseudoacacia	Poor	
577	BX	12	Box elder	Acer negundo	Poor	
578 579	BL SM	7	Black Locust	Robinia pseudoacacia Acer saccharinum	Poor Fair	
579 580	SM BL	14	Silver Maple Black Locust	Robinia pseudoacacia	Poor	
581	BL	15	Black Locust	Robinia pseudoacacia	Poor	
582	BL	12	Black Locust	Robinia pseudoacacia	Poor	
583 584	BL BW	7 16	Black Locust Black Walnut	Robinia pseudoacacia  Juglans nigra	Poor Fair	
585	BL	8	Black Locust	Robinia pseudoacacia	Poor	
586	BL	8	Black Locust	Robinia pseudoacacia	Poor	
587	BL	13	Black Locust	Robinia pseudoacacia	Poor	
588 589	BL BL	13 8	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor Poor	
590	BL	10	Black Locust	Robinia pseudoacacia	Poor	
591	BL	6	Black Locust	Robinia pseudoacacia	Poor	
592	BL	9	Black Locust	Robinia pseudoacacia	Poor	
593 594	BL E	10 8	Black Locust  American Elm	Robinia pseudoacacia Ulmus americana	Poor Poor	
595	SM	14	Silver Maple	Acer saccharinum	Fair	
596	E	16	American Elm	Ulmus americana	Very Poor	
597 598	BL E	16 21	Black Locust  American Elm	Robinia pseudoacacia Ulmus americana	Poor Poor	
599	BX	10	Box elder	Acer negundo	Poor	x1
600	BW	7	Black Walnut	Juglans nigra	Poor	
601	BW	10	Black Walnut	Juglans nigra	Fair	
602	SM E	12 15	Silver Maple American Elm	Acer saccharinum Ulmus americana	Poor Fair	
604	BL	17	Black Locust	Robinia pseudoacacia	Poor	
605	BL	16	Black Locust	Robinia pseudoacacia	Poor	
1606	BL	8	Black Locust	Robinia pseudoacacia	Very Poor	
1607 1608	BL BL	9 8	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor Poor	
609	E	16	American Elm	Ulmus americana	Poor	
610	SM	16	Silver Maple	Acer saccharinum	Fair	
611	BL SM	6	Black Locust	Robinia pseudoacacia	Poor	
613		16	Silver Manle		Fair	
	BX	16 6	Silver Maple Box elder	Acer saccharinum	Fair Poor	
614	BX SM				Fair Poor Fair	
615	SM SM	6 16 6	Box elder Silver Maple Silver Maple	Acer saccharinum Acer negundo Acer saccharinum Acer saccharinum	Poor Fair Fair	
615 616	SM SM TH	6 16 6 10	Box elder Silver Maple Silver Maple Thornapple/Hawthorne	Acer saccharinum Acer negundo Acer saccharinum Acer saccharinum Crataegus spp.	Poor Fair Fair Poor	v <sup>7</sup>
615 616 617	SM SM	6 16 6	Box elder Silver Maple Silver Maple	Acer saccharinum Acer negundo Acer saccharinum Acer saccharinum	Poor Fair Fair	x7
615 616 617 618 619	SM SM TH TH	6 16 6 10 8	Box elder Silver Maple Silver Maple Thornapple/Hawthorne Thornapple/Hawthorne	Acer saccharinum Acer negundo Acer saccharinum Acer saccharinum Crataegus spp. Crataegus spp. Juglans nigra Juglans nigra	Poor Fair Fair Poor Poor	x7
615 616 617 618 619 620	SM SM TH TH BW BW	6 16 6 10 8 21 18 22	Box elder Silver Maple Silver Maple Thornapple/Hawthorne Thornapple/Hawthorne Black Walnut Black Walnut Black Walnut	Acer saccharinum Acer negundo Acer saccharinum Acer saccharinum Crataegus spp. Crataegus spp. Juglans nigra Juglans nigra Juglans nigra	Poor Fair Poor Poor Fair Fair Fair	x7
615 616 617 618 619 620 621	SM SM TH TH BW BW BW	6 16 6 10 8 21 18 22 16	Box elder Silver Maple Silver Maple Thornapple/Hawthorne Thornapple/Hawthorne Black Walnut Black Walnut Black Walnut American Elm	Acer saccharinum Acer negundo Acer saccharinum Acer saccharinum Crataegus spp. Crataegus spp. Juglans nigra Juglans nigra Juglans nigra Ulmus americana	Poor Fair Poor Poor Fair Fair Fair Fair Fair	x7
615 616 617 618 619 620 621	SM SM TH TH BW BW	6 16 6 10 8 21 18 22	Box elder Silver Maple Silver Maple Thornapple/Hawthorne Thornapple/Hawthorne Black Walnut Black Walnut Black Walnut	Acer saccharinum Acer negundo Acer saccharinum Acer saccharinum Crataegus spp. Crataegus spp. Juglans nigra Juglans nigra Juglans nigra	Poor Fair Poor Poor Fair Fair Fair	x7
615 616 617 618 619 620 621 622 623 624	SM SM TH TH BW	6 16 6 10 8 21 18 22 16 22 19	Box elder Silver Maple Silver Maple Thornapple/Hawthorne Thornapple/Hawthorne Black Walnut Black Walnut Black Walnut American Elm Black Walnut Black Walnut Black Walnut	Acer saccharinum Acer negundo Acer saccharinum Acer saccharinum Crataegus spp. Crataegus spp. Juglans nigra Juglans nigra Juglans nigra Ulmus americana Juglans nigra Juglans nigra Juglans nigra Juglans nigra Juglans nigra Juglans nigra	Poor Fair Poor Poor Fair Fair Fair Fair Fair Fair Fair Fai	x7
615 616 617 618 619 620 621 622 623 624 625	SM SM TH TH BW BW BW E BW BW BW BW BW BW	6 16 6 10 8 21 18 22 16 22 19	Box elder Silver Maple Silver Maple Thornapple/Hawthorne Thornapple/Hawthorne Black Walnut Black Walnut Black Walnut American Elm Black Walnut Black Walnut Black Walnut Black Walnut Black Walnut	Acer saccharinum Acer negundo Acer saccharinum Acer saccharinum Crataegus spp. Crataegus spp. Juglans nigra Juglans nigra Juglans nigra Ulmus americana Juglans nigra	Poor Fair Poor Poor Fair Fair Fair Fair Fair Fair Fair Fai	x7
615 616 617 618 619 620 621 622 623 624 625 626	SM SM TH TH BW	6 16 6 10 8 21 18 22 16 22 19	Box elder Silver Maple Silver Maple Thornapple/Hawthorne Thornapple/Hawthorne Black Walnut Black Walnut Black Walnut American Elm Black Walnut Black Walnut Black Walnut	Acer saccharinum Acer negundo Acer saccharinum Acer saccharinum Crataegus spp. Crataegus spp. Juglans nigra Juglans nigra Juglans nigra Ulmus americana Juglans nigra Juglans nigra Juglans nigra Juglans nigra Juglans nigra Juglans nigra	Poor Fair Poor Poor Fair Fair Fair Fair Fair Fair Fair Fai	x7
615 616 617 618 619 620 621 622 623 624 625 626 627 628	SM SM TH TH BW	6 16 6 10 8 21 18 22 16 22 19 19	Box elder Silver Maple Silver Maple Thornapple/Hawthorne Thornapple/Hawthorne Black Walnut Black Walnut American Elm Black Walnut Black Walnut American Elm Black Walnut Black Walnut Black Walnut Black Walnut Black Walnut	Acer saccharinum Acer negundo Acer saccharinum Acer saccharinum Crataegus spp. Crataegus spp. Juglans nigra Juglans nigra Juglans nigra Ulmus americana Juglans nigra	Poor Fair Poor Poor Fair Fair Fair Fair Fair Fair Fair Fai	x7
615 616 617 618 619 620 621 622 623 624 625 626 626 627 628	SM SM TH TH BW	6 16 6 10 8 21 18 22 16 22 19 19 9 18 15 9	Box elder Silver Maple Silver Maple Thornapple/Hawthorne Thornapple/Hawthorne Black Walnut Black Walnut American Elm Black Walnut	Acer saccharinum Acer negundo Acer saccharinum Acer saccharinum Crataegus spp. Crataegus spp. Juglans nigra Juglans nigra Juglans nigra Ulmus americana Juglans nigra	Poor Fair Poor Poor Fair Fair Fair Fair Fair Fair Fair Fai	x7
615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630	SM SM TH TH BW BW BW E BW	6 16 6 10 8 21 18 22 16 22 19 19 9 18 15 9	Box elder Silver Maple Silver Maple Thornapple/Hawthorne Thornapple/Hawthorne Black Walnut Black Walnut American Elm Black Walnut	Acer saccharinum Acer negundo Acer saccharinum Acer saccharinum Acer saccharinum Crataegus spp. Ulglans nigra Juglans nigra Juglans nigra Ulmus americana Juglans nigra	Poor Fair Poor Poor Fair Fair Fair Fair Fair Fair Fair Fai	x7
615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630	SM SM TH TH BW BW BW E BW	6 16 6 10 8 21 18 22 16 22 19 19 9 18 15 9 26	Box elder Silver Maple Silver Maple Thornapple/Hawthorne Thornapple/Hawthorne Black Walnut Black Walnut American Elm Black Walnut	Acer saccharinum Acer negundo Acer saccharinum Acer saccharinum Crataegus spp. Crataegus spp. Juglans nigra Juglans nigra Juglans nigra Ulmus americana Juglans nigra	Poor Fair Poor Poor Fair Fair Fair Fair Fair Fair Fair Fai	x7
615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633	SM SM TH TH BW BW BW E BW	6 16 6 10 8 21 18 22 16 22 19 19 9 18 15 9 26 16 8 6 8	Box elder Silver Maple Silver Maple Thornapple/Hawthorne Thornapple/Hawthorne Black Walnut Black Walnut American Elm Black Walnut Black Locust Black Locust Black Locust	Acer saccharinum Acer negundo Acer saccharinum Acer saccharinum Acer saccharinum Crataegus spp. Crataegus spp. Juglans nigra Juglans nigra Juglans nigra Ulmus americana Juglans nigra Auglans nigra Juglans nigra Robinia pseudoacacia Robinia pseudoacacia	Poor Fair Fair Poor Fair Fair Fair Fair Fair Fair Fair Fai	x7
615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634	SM SM TH TH BW BW BW E BW	6 16 6 10 8 21 18 22 16 22 19 19 9 18 15 9 26 16 8 6 8	Box elder Silver Maple Silver Maple Thornapple/Hawthorne Thornapple/Hawthorne Black Walnut Black Walnut American Elm Black Walnut	Acer saccharinum Acer negundo Acer saccharinum Acer saccharinum Acer saccharinum Crataegus spp. Crataegus spp. Juglans nigra Juglans nigra Juglans nigra Ulmus americana Juglans nigra Auglans nigra Juglans nigra Auglans nigra Juglans nigra Robinia pseudoacacia Robinia pseudoacacia Robinia pseudoacacia	Poor Fair Poor Poor Fair Fair Fair Fair Fair Fair Fair Fai	x7
615 616 617 618 619 620 621 622 623 624 625 626 626 627 628 630 631 632 633 634 635	SM SM TH TH BW BW BW E BW	6 16 6 10 8 21 18 22 16 22 19 19 9 18 15 9 26 16 8 6 8	Box elder Silver Maple Silver Maple Thornapple/Hawthorne Thornapple/Hawthorne Black Walnut Black Walnut American Elm Black Walnut Black Locust Black Locust Black Locust	Acer saccharinum Acer negundo Acer saccharinum Acer saccharinum Acer saccharinum Crataegus spp. Crataegus spp. Juglans nigra Juglans nigra Juglans nigra Ulmus americana Juglans nigra Auglans nigra Juglans nigra Robinia pseudoacacia Robinia pseudoacacia	Poor Fair Fair Poor Fair Fair Fair Fair Fair Fair Fair Fai	x7
615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636	SM SM TH TH BW	6 16 6 10 8 21 18 22 16 22 19 19 9 18 15 9 26 16 8 6 8 14 17 9	Box elder Silver Maple Silver Maple Thornapple/Hawthorne Thornapple/Hawthorne Black Walnut Black Walnut American Elm Black Walnut Black Locust Black Locust Black Walnut	Acer saccharinum Acer negundo Acer saccharinum Acer saccharinum Crataegus spp. Crataegus spp. Juglans nigra Juglans nigra Juglans nigra Ulmus americana Juglans nigra Auglans nigra Juglans nigra Juglans nigra Juglans nigra Auglans nigra Juglans nigra Juglans nigra Robinia pseudoacacia Robinia pseudoacacia Robinia pseudoacacia Juglans nigra Juglans nigra Juglans nigra	Poor Fair Poor Poor Fair Fair Fair Fair Fair Fair Fair Fai	x7
615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638	SM SM TH TH BW	6 16 6 10 8 21 18 22 16 22 19 19 9 18 15 9 26 16 8 6 8 14 17 9 9	Box elder Silver Maple Silver Maple Thornapple/Hawthorne Thornapple/Hawthorne Black Walnut Black Walnut American Elm Black Walnut Black Locust	Acer saccharinum Acer negundo Acer saccharinum Acer saccharinum Acer saccharinum Crataegus spp. Crataegus spp. Juglans nigra Robinia pseudoacacia	Poor Fair Poor Fair Poor Fair Fair Fair Fair Fair Fair Fair Fai	x7
615 616 617 618 619 620 621 622 623 624 625 626 627 628 630 631 632 633 634 635 636 637 638 639	SM SM TH TH BW	6 16 6 10 8 21 18 22 16 22 19 19 9 18 15 9 26 16 8 6 8 14 17 9 9	Box elder Silver Maple Silver Maple Thornapple/Hawthorne Thornapple/Hawthorne Black Walnut Black Walnut Black Walnut American Elm Black Walnut Black Locust	Acer saccharinum Acer negundo Acer saccharinum Acer saccharinum Acer saccharinum Crataegus spp. Crataegus spp. Juglans nigra Abulans nigra Robinia pseudoacacia	Poor Fair Foor Fair Fair Fair Fair Fair Fair Fair Fai	x7
615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640	SM SM TH TH BW	6 16 6 10 8 21 18 22 16 22 19 19 9 18 15 9 26 16 8 6 8 14 17 9 9	Box elder Silver Maple Silver Maple Thornapple/Hawthorne Thornapple/Hawthorne Black Walnut Black Walnut American Elm Black Walnut Black Locust	Acer saccharinum Acer negundo Acer saccharinum Acer saccharinum Acer saccharinum Crataegus spp. Crataegus spp. Juglans nigra Robinia pseudoacacia	Poor Fair Poor Fair Poor Fair Fair Fair Fair Fair Fair Fair Fai	x7
615 616 617 618 619 620 621 622 623 624 625 626 627 628 630 631 632 633 634 635 636 637 638 639 640 641	SM SM TH TH BW	6 16 6 10 8 21 18 22 16 22 19 19 9 18 15 9 26 16 8 6 8 14 17 9 9 15 16 13 9	Box elder Silver Maple Silver Maple Thornapple/Hawthorne Thornapple/Hawthorne Black Walnut Black Walnut Black Walnut American Elm Black Walnut Black Locust	Acer saccharinum Acer negundo Acer saccharinum Acer saccharinum Crataegus spp. Crataegus spp. Juglans nigra Juglans nigra Juglans nigra Ulmus americana Juglans nigra Robinia pseudoacacia	Poor Fair Poor Fair Poor Fair Fair Fair Fair Fair Fair Fair Fai	x7
615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643	SM SM TH TH BW	6 16 6 10 8 21 18 22 16 22 19 19 9 18 15 9 26 16 8 6 8 14 17 9 9 15 16 16 17 23	Box elder Silver Maple Silver Maple Thornapple/Hawthorne Thornapple/Hawthorne Black Walnut Black Walnut Black Walnut American Elm Black Walnut Black Locust	Acer saccharinum Acer negundo Acer saccharinum Acer saccharinum Acer saccharinum Crataegus spp. Urataegus spp. Juglans nigra Auglans nigra Juglans nigra Juglans nigra Robinia pseudoacacia	Poor Fair Poor Fair Fair Fair Fair Fair Fair Fair Fai	x7
615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644	SM SM TH TH BW	6 16 6 10 8 21 18 22 16 22 19 19 9 18 15 9 26 16 8 6 8 14 17 9 9 15 16 16 8 8 14 17 9 9	Box elder Silver Maple Silver Maple Thornapple/Hawthorne Thornapple/Hawthorne Black Walnut Black Walnut Black Walnut American Elm Black Walnut Black Locust	Acer saccharinum Acer negundo Acer saccharinum Acer saccharinum Crataegus spp. Crataegus spp. Juglans nigra Auglans nigra Juglans nigra Robinia pseudoacacia	Poor Fair Poor Fair Fair Fair Fair Fair Fair Fair Fai	x7
615 616 617 618 619 620 621 622 623 624 625 626 627 628 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 644 645	SM SM TH TH BW	6 16 6 10 8 21 18 22 16 22 19 19 9 18 15 9 26 16 8 6 8 14 17 9 9 15 16 16 17 23	Box elder Silver Maple Silver Maple Thornapple/Hawthorne Thornapple/Hawthorne Black Walnut Black Walnut Black Walnut American Elm Black Walnut Black Locust	Acer saccharinum Acer negundo Acer saccharinum Acer saccharinum Acer saccharinum Crataegus spp. Urataegus spp. Juglans nigra Auglans nigra Juglans nigra Juglans nigra Robinia pseudoacacia	Poor Fair Poor Fair Fair Fair Fair Fair Fair Fair Fai	x7
615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647	SM SM TH TH BW	6 16 6 10 8 21 18 22 16 22 19 19 9 18 15 9 26 16 8 6 8 14 17 9 9 15 16 16 8 17 9 9 17 23 8 17 18 18 18 18 18 18 18 18 18 18 18 18 18	Box elder Silver Maple Silver Maple Thornapple/Hawthorne Thornapple/Hawthorne Black Walnut Black Locust	Acer saccharinum Acer negundo Acer saccharinum Acer saccharinum Crataegus spp. Crataegus spp. Juglans nigra Robinia pseudoacacia	Poor Fair Fair Fair Fair Fair Fair Fair Fai	x7
615 616 617 618 619 620 621 622 623 624 625 626 627 628 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648	SM SM TH TH BW	6 16 6 10 8 21 18 22 16 22 19 19 9 18 15 9 26 16 8 6 8 14 17 9 9 15 16 16 8 17 28 17 29 18 18 18 18 18 18 18 18 18 18 18 18 18	Box elder Silver Maple Silver Maple Thornapple/Hawthorne Thornapple/Hawthorne Black Walnut Black Locust	Acer saccharinum Acer negundo Acer saccharinum Acer saccharinum Crataegus spp. Crataegus spp. Juglans nigra Robinia pseudoacacia	Poor Fair Poor Fair Fair Fair Fair Fair Fair Fair Fai	
615 616 617 618 619 620 621 622 623 624 625 626 627 628 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649	SM SM TH TH BW	6 16 6 10 8 21 18 22 16 22 19 19 9 18 15 9 26 16 8 6 8 14 17 9 9 15 16 13 9 17 23 8 12 14 14 14 18 17	Box elder Silver Maple Silver Maple Thornapple/Hawthorne Thornapple/Hawthorne Black Walnut Black Locust	Acer saccharinum Acer negundo Acer saccharinum Acer saccharinum Crataegus spp. Crataegus spp. Juglans nigra Robinia pseudoacacia	Poor Fair Poor Fair Fair Fair Fair Fair Fair Fair Fai	x7
615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650	SM SM TH TH BW	6 16 6 10 8 21 18 22 16 22 19 19 9 18 15 9 26 16 8 6 8 14 17 9 9 15 16 16 8 17 28 17 29 18 18 18 18 18 18 18 18 18 18 18 18 18	Box elder Silver Maple Silver Maple Thornapple/Hawthorne Thornapple/Hawthorne Black Walnut Black Locust	Acer saccharinum Acer negundo Acer saccharinum Acer saccharinum Crataegus spp. Crataegus spp. Juglans nigra Robinia pseudoacacia	Poor Fair Poor Fair Fair Fair Fair Fair Fair Fair Fai	
615 616 617 618 619 620 621 622 623 624 625 626 627 628 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652	SM SM TH TH BW	6 16 6 10 8 21 18 22 16 22 19 19 9 18 15 9 26 16 8 6 8 14 17 9 9 15 16 13 9 17 23 8 12 14 14 18 17 22 9 13	Box elder Silver Maple Silver Maple Thornapple/Hawthorne Thornapple/Hawthorne Black Walnut Black Cocust Black Locust	Acer saccharinum Acer negundo Acer saccharinum Acer saccharinum Crataegus spp. Crataegus spp. Juglans nigra Robinia pseudoacacia	Poor Fair Poor Fair Fair Fair Fair Fair Fair Fair Fai	
615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653	SM SM TH TH BW	6 16 6 10 8 21 18 22 16 22 19 19 9 18 15 9 26 16 8 6 8 14 17 9 9 15 16 13 9 17 23 8 12 14 14 14 18 17 22 9	Box elder Silver Maple Silver Maple Thornapple/Hawthorne Thornapple/Hawthorne Black Walnut Black Locust	Acer saccharinum Acer negundo Acer saccharinum Acer saccharinum Crataegus spp. Crataegus spp. Juglans nigra Auglans nigra Juglans nigra Robinia pseudoacacia	Poor Fair Poor Fair Fair Fair Fair Fair Fair Fair Fai	
615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654	SM SM TH TH BW	6 16 6 10 8 21 18 22 16 22 19 19 9 18 15 9 26 16 8 6 8 14 17 9 9 15 16 13 9 17 23 8 12 14 14 18 17 22 9 13	Box elder Silver Maple Silver Maple Thornapple/Hawthorne Thornapple/Hawthorne Black Walnut Black Cocust Black Locust	Acer saccharinum Acer negundo Acer saccharinum Acer saccharinum Crataegus spp. Crataegus spp. Juglans nigra Robinia pseudoacacia	Poor Fair Poor Fair Fair Fair Fair Fair Fair Fair Fai	
615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656	SM SM TH TH BW	6 16 6 10 8 21 18 22 16 22 19 19 9 18 15 9 26 16 8 6 8 14 17 9 9 15 16 13 9 17 23 8 12 14 14 14 18 17 22 9 17 23 18 18 18 18 18 18 18 18 18 18 18 18 18	Box elder Silver Maple Silver Maple Thornapple/Hawthorne Thornapple/Hawthorne Black Walnut Black Cocust Black Locust	Acer saccharinum Acer negundo Acer saccharinum Acer saccharinum Crataegus spp. Crataegus spp. Juglans nigra Auglans nigra Juglans nigra Robinia pseudoacacia	Poor Fair Poor Fair Poor Fair Fair Fair Fair Fair Fair Fair Fai	
1614   1615   1616   1617   1618   1619   1620   1621   1622   1623   1624   1625   1626   1627   1638   1634   1635   1636   1637   1638   1639   1640   1641   1642   1645   1644   1645   1646   1647   1648   1649   1650   1651   1655   1656   1657   1658   1656   1657   1658   1657   1658   1657   1658   1657   1658   1657   1658   1657   1658   1657   1658   1657   1658   1657   1658   1657   1658   1657   1658   1657   1658   1657   1658   1657   1658   1657   1658   1655   1656   1657   1658   1655   1656   1657   1658   1655   1656   1657   1658   1655   1656   1657   1658   16	SM SM TH TH BW	6 16 6 10 8 21 18 22 16 22 19 19 9 18 15 9 26 16 8 6 8 14 17 9 9 15 16 13 9 17 23 8 12 14 14 14 18 17 22 9 17 23 18 18 18 18 18 18 18 18 18 18 18 18 18	Box elder Silver Maple Silver Maple Thornapple/Hawthorne Thornapple/Hawthorne Black Walnut Black Locust	Acer saccharinum Acer negundo Acer saccharinum Acer saccharinum Crataegus spp. Crataegus spp. Juglans nigra Robinia pseudoacacia	Poor Fair Poor Fair Poor Fair Fair Fair Fair Fair Fair Fair Fai	

4000			I			
1660 1661	SM SM	6 17	Silver Maple Silver Maple	Acer saccharinum  Acer saccharinum	Fair Fair	
1662	E	12	American Elm	Ulmus americana	Poor	
1663 1664	SM GA	15 13	Silver Maple Green Ash	Acer saccharinum	Fair	
1665	E	8	American Elm	Fraxinus pennsylvanica Ulmus americana	Poor Poor	
1666	E	17	American Elm	Ulmus americana	Poor	
1667 1668	TH GA	6 7	Thornapple/Hawthorne Green Ash	Crataegus spp. Fraxinus pennsylvanica	Poor Poor	
1669	SM	17	Silver Maple	Acer saccharinum	Poor	
1670	SM	18	Silver Maple	Acer saccharinum	Poor	
1671 1672	SM SM	18 17	Silver Maple Silver Maple	Acer saccharinum  Acer saccharinum	Poor Poor	
1673	SM	25	Silver Maple	Acer saccharinum	Poor	
1674 1675	BX GA	8	Box elder Green Ash	Acer negundo	Poor Very Poor	
1676	GA GA	6	Green Ash	Fraxinus pennsylvanica Fraxinus pennsylvanica	Fair	
1677	NM	8	Norway Maple	Acer platanoides	Fair	
1678 1679	BS BX	10 12	Blue Spruce Box elder	Picea pungens Acer negundo	Fair Poor	
1680	BX	9	Box elder	Acer negundo	Poor	
1681	BX	12	Box elder	Acer negundo	Poor	
1682 1683	BX BX	15 8	Box elder Box elder	Acer negundo Acer negundo	Poor Very Poor	
1684	BX	14	Box elder	Acer negundo	Very Poor	
1685 1686	BX CT	6 24	Box elder Cottonwood	Acer negundo Populus deltoides	Poor Poor	
1687	SM	16	Silver Maple	Acer saccharinum	Fair	x3
1688	GA	6	Green Ash	Fraxinus pennsylvanica	Very Poor	
1689 1690	BW BW	8	Black Walnut Black Walnut	Juglans nigra  Juglans nigra	Fair Fair	
1691	BS	14	Blue Spruce	Picea pungens	Good	
1692	BS	13	Blue Spruce	Picea pungens	Good	
1693 1694	BS BS	14	Blue Spruce Blue Spruce	Picea pungens Picea pungens	Good Good	
1695	BW	9	Black Walnut	Juglans nigra	Poor	
1696 1697	BL BI	23	Black Locust	Robinia pseudoacacia	Fair	
1697 1698	BL BL	15 22	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Fair Poor	
1699	BL	9	Black Locust	Robinia pseudoacacia	Fair	
1700 1701	BW BL	24 8	Black Walnut Black Locust	Juglans nigra  Robinia pseudoacacia	Fair Poor	
1701	BW	15	Black Walnut	Juglans nigra	Fair	
1703	BW	26	Black Walnut	Juglans nigra	Fair	
1704 1705	BW TH	10 6	Black Walnut Thornapple/Hawthorne	Juglans nigra Crataegus spp.	Very Poor Poor	x1
1706	BW	12	Black Walnut	Juglans nigra	Poor	
1707	BW	25	Black Walnut	Juglans nigra	Fair	
1708 1709	BW BW	9	Black Walnut Black Walnut	Juglans nigra  Juglans nigra	Poor Poor	
1710	BW	15	Black Walnut	Juglans nigra	Poor	
1711 1712	BW BW	30 25	Black Walnut Black Walnut	Juglans nigra Juglans nigra	Fair Fair	
1713	BL	19	Black Locust	Robinia pseudoacacia	Poor	
1714	BL	16	Black Locust	Robinia pseudoacacia	Poor	
1715 1716	BL BL	26 15	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor Fair	
1717	BL	24	Black Locust	Robinia pseudoacacia	Poor	
1718	В	13	Basswood	Tilia americana	Poor	
1719 1720	BL BL	36 14	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor Poor	
1721	BW	7	Black Walnut	Juglans nigra	Poor	
1722 1723	BW BW	9	Black Walnut Black Walnut	Juglans nigra  Juglans nigra	Poor Poor	
1724	BW	12	Black Walnut	Juglans nigra	Poor	x1
1725	BX	6	Box elder	Acer negundo	Poor	
1726 1727	BW BW	19 10	Black Walnut Black Walnut	Juglans nigra Juglans nigra	Poor Poor	
1728	BW	12	Black Walnut	Juglans nigra	Poor	
1729	BW	14	Black Walnut	Juglans nigra	Poor	
1730 1731	BX BW	8 18	Box elder Black Walnut	Acer negundo  Juglans nigra	Fair Poor	
1732	BL	16	Black Locust	Robinia pseudoacacia	Poor	
1733 1734	BW BW	13 6	Black Walnut Black Walnut	Juglans nigra	Poor Poor	
1734	BW	12	Black Walnut	Juglans nigra Juglans nigra	Poor	
1736	BW	8	Black Walnut	Juglans nigra	Poor	
1737 1738	BW BW	13 14	Black Walnut Black Walnut	Juglans nigra Juglans nigra	Poor Poor	
1739	BL	8	Black Locust	Robinia pseudoacacia	Poor	
1740	BL	14	Black Locust	Robinia pseudoacacia	Poor	
1741 1742	BW BW	9	Black Walnut Black Walnut	Juglans nigra  Juglans nigra	Poor Poor	
1743	BW	7	Black Walnut	Juglans nigra	Poor	
1744 1745	BW BW	15 6	Black Walnut Black Walnut	Juglans nigra Juglans nigra	Poor Poor	
1745	BC	12	Wild Black Cherry	Prunus serotina	Poor	x1
1747	BW	8	Black Walnut	Juglans nigra	Poor	
1748 1749	BX TH	7	Box elder Thornapple/Hawthorne	Acer negundo Crataegus spp.	Very Poor Poor	x1
1750	BW	16	Black Walnut	Juglans nigra	Poor	
1751	BW	10	Black Walnut	Juglans nigra	Poor	
1752 1753	BW BW	9 12	Black Walnut Black Walnut	Juglans nigra Juglans nigra	Poor Very Poor	
1754	BW	9	Black Walnut	Juglans nigra	Poor	
1755 1756	BW BW	10	Black Walnut Black Walnut	Juglans nigra	Poor	
1/56 1757	BW	6 9	Black Walnut Black Walnut	Juglans nigra  Juglans nigra	Poor Poor	
1758	BW	8	Black Walnut	Juglans nigra	Fair	
1759 1760	GA BX	12 14	Green Ash Box elder	Fraxinus pennsylvanica Acer negundo	Poor Fair	
1761	BL	18	Black Locust	Robinia pseudoacacia	Poor	
1762	BL	19	Black Locust	Robinia pseudoacacia	Poor	
1763 1764	E BW	13 6	American Elm Black Walnut	Ulmus americana Juglans nigra	Poor Fair	
1765	BL	7	Black Locust	Robinia pseudoacacia	Poor	
1766 1767	GA BY	7	Green Ash	Fraxinus pennsylvanica	Very Poor	x2
1767 1768	BX SM	10	Box elder Silver Maple	Acer negundo Acer saccharinum	Poor Poor	x4
1769	SH	12	Shagbark Hickory	Carya ovata	Poor	
1770 1771	BW BL	16 24	Black Walnut Black Locust	Juglans nigra Robinia pseudoacacia	Fair Poor	
1771	TH	9	Thornapple/Hawthorne	Crataegus spp.	Poor	
1773	BW	14	Black Walnut	Juglans nigra	Poor	
1774	BL	9	Black Locust	Robinia pseudoacacia	Poor	

1775 1776	BL BW	10 12	Black Locust Black Walnut	Robinia pseudoacacia  Juglans nigra	Poor Fair	
1777	BL	10	Black Locust	Robinia pseudoacacia	Poor	
1778	В	13	Basswood	Tilia americana	Fair	
1779 1780	B BL	12 8	Basswood Black Locust	Tilia americana Robinia pseudoacacia	Fair Poor	
1781	BL	6	Black Locust	Robinia pseudoacacia	Poor	
1782	TH	6	Thornapple/Hawthorne	Crataegus spp.	Poor	
1783 1784	BL B	16 16	Black Locust Basswood	Robinia pseudoacacia Tilia americana	Fair Fair	x1
1785	BL	18	Black Locust	Robinia pseudoacacia	Poor	X I
1786	Е	15	American Elm	Ulmus americana	Poor	
1787	BL	28	Black Locust	Robinia pseudoacacia	Poor	0
1788 1789	B BL	14 10	Basswood Black Locust	Tilia americana  Robinia pseudoacacia	Fair Poor	x2
1790	В	15	Basswood	Tilia americana	Poor	x1
1791	TH	7	Thornapple/Hawthorne	Crataegus spp.	Poor	
1792 1793	SU BL	13 19	Sugar Maple Black Locust	Acer saccharum  Robinia pseudoacacia	Fair Fair	
1794	BL	17	Black Locust	Robinia pseudoacacia	Very Poor	dead
1795	E	17	American Elm	Ulmus americana	Poor	
1796 1797	BW BL	18 18	Black Walnut Black Locust	Juglans nigra  Robinia pseudoacacia	Fair Fair	
1798	В	7	Basswood	Tilia americana	Poor	
1799	BL	10	Black Locust	Robinia pseudoacacia	Poor	
1800 1801	BL SU	6 7	Black Locust	Robinia pseudoacacia Acer saccharum	Poor Poor	
1802	BL	13	Sugar Maple Black Locust	Robinia pseudoacacia	Poor	
1803	BL	17	Black Locust	Robinia pseudoacacia	Poor	
1804	BL	1	Black Locust	Robinia pseudoacacia	Poor	
1805 1806	BW BL	9 16	Black Walnut Black Locust	Juglans nigra Robinia pseudoacacia	Fair Poor	
1807	WA	6	White Ash	Fraxinus americana	Poor	
1808	BL	8	Black Locust	Robinia pseudoacacia	Poor	
1809 1810	BL BL	10 8	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor Poor	
1811	BL	27	Black Locust	Robinia pseudoacacia  Robinia pseudoacacia	Poor	x1
1812	SM	18	Silver Maple	Acer saccharinum	Poor	
1813 1814	SM GA	16 9	Silver Maple Green Ash	Acer saccharinum	Poor	
1814 1815	GA GA	13	Green Ash Green Ash	Fraxinus pennsylvanica Fraxinus pennsylvanica	Poor Very Poor	
1816	GA	8	Green Ash	Fraxinus pennsylvanica	Poor	
1817	GA	9	Green Ash	Fraxinus pennsylvanica	Poor	
1818 1819	GA GA	13 14	Green Ash Green Ash	Fraxinus pennsylvanica Fraxinus pennsylvanica	Poor Poor	
1820	GA	8	Green Ash	Fraxinus pennsylvanica	Very Poor	
1821	GA	10	Green Ash	Fraxinus pennsylvanica	Poor	x1
1822 1823	BL BL	6 16	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor Poor	
1824	BL	13	Black Locust	Robinia pseudoacacia	Poor	
1825	TH	7	Thornapple/Hawthorne	Crataegus spp.	Poor	x3
1826 1827	BL BL	7 8	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor Poor	
1828	BL	12	Black Locust	Robinia pseudoacacia	Poor	
1829	BL	13	Black Locust	Robinia pseudoacacia	Poor	
1830 1831	GA BW	15 16	Green Ash Black Walnut	Fraxinus pennsylvanica	Poor Poor	
1832	BL	13	Black Locust	Juglans nigra  Robinia pseudoacacia	Poor	
1833	BW	14	Black Walnut	Juglans nigra	Poor	
1834	BL	12	Black Locust	Robinia pseudoacacia	Poor	
1835 1836	BL BW	13 13	Black Locust Black Walnut	Robinia pseudoacacia  Juglans nigra	Poor Fair	
1837	BW	8	Black Walnut	Juglans nigra	Poor	
1838	В	16	Basswood	Tilia americana	Poor	x1
1839 1840	B BL	6 9	Basswood Black Locust	Tilia americana Robinia pseudoacacia	Poor Poor	x1
1841	BL	13	Black Locust	Robinia pseudoacacia	Poor	Λ.
1842	BL	13	Black Locust	Robinia pseudoacacia	Poor	
1843 1844	BL BL	14 6	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor Poor	
1845	BL	7	Black Locust	Robinia pseudoacacia	Very Poor	
1846	BL	13	Black Locust	Robinia pseudoacacia	Poor	
1847 1848	BL BL	10 8	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor Poor	
1849	BL	16	Black Locust Black Locust	Robinia pseudoacacia  Robinia pseudoacacia	Poor	
1850	BL	10	Black Locust	Robinia pseudoacacia	Poor	
1851 1852	TH BL	8 16	Thornapple/Hawthorne  Black Locust	Crataegus spp.	Poor Poor	x2
1852 1853	BL BL	16 13	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor	
1854	BL	13	Black Locust	Robinia pseudoacacia	Poor	
1855	BL	9	Black Locust	Robinia pseudoacacia	Poor	
1856 1857	BL B	12 10	Black Locust Basswood	Robinia pseudoacacia Tilia americana	Poor Poor	
1858	BW	14	Black Walnut	Juglans nigra	Fair	
1859	GA B\A/	7	Green Ash	Fraxinus pennsylvanica	Poor	
1860 1861	BW BL	14 7	Black Walnut Black Locust	Juglans nigra  Robinia pseudoacacia	Poor Poor	
1862	BW	14	Black Walnut	Juglans nigra	Poor	
1863	BL	6	Black Locust	Robinia pseudoacacia	Poor	<u> </u>
1864 1865	BL BL	17 15	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Very Poor Poor	
1866	BL	26	Black Locust	Robinia pseudoacacia	Poor	
1867	BL	6	Black Locust	Robinia pseudoacacia	Poor	
1868 1869	BL SM	13 19	Black Locust Silver Maple	Robinia pseudoacacia Acer saccharinum	Poor Fair	x2
1870	BL	12	Black Locust	Robinia pseudoacacia	Poor	Λ <u>΄</u>
1871	BL	29	Black Locust	Robinia pseudoacacia	Poor	_
1872 1873	BL BL	10 13	Black Locust	Robinia pseudoacacia	Poor Poor	
1873 1874	BL	13 8	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor	
1875	BL	12	Black Locust	Robinia pseudoacacia	Poor	
1876	В	12	Basswood	Tilia americana	Poor	x1
1877 1878	B BL	10 17	Basswood Black Locust	Tilia americana Robinia pseudoacacia	Poor Poor	x1
1879	BL	16	Black Locust	Robinia pseudoacacia	Poor	
1880	BL	16	Black Locust	Robinia pseudoacacia	Poor	
1881 1882	BW B	19 7	Black Walnut Basswood	Juglans nigra Tilia americana	Fair Poor	
	GA GA	14	Green Ash	Fraxinus pennsylvanica	Poor	
1883	BL	14	Black Locust	Robinia pseudoacacia	Poor	
1884				Juglans nigra	Fair	
1884 1885	BW	21	Black Walnut	+		
1884		21 9 8	Black Walnut  Basswood  Black Locust	Tilia americana  Robinia pseudoacacia	Poor Very Poor	





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CLIENT GENSLER
150 W JEFFERSON, SUITE 1700
DETROIT, MI 48226

PROJECT TITLE

LONG LAKE & CROOKS MASTERPLAN DEVELOPMENT LONG LAKE AND CROOKS ROAD CITY OF TROY, OAKLAND COUNTY, MICHIGAN

ORIGINAL ISSUE DATE: OCTOBER 20, 2020

TREE LIST SHEET 2

2020-0320 PEA JOB NO. LAA KRD GMB DES. DRAWING NUMBER:

1890	BL	13	Black Locust	Robinia pseudoacacia	Poor	
1891	GA	9	Green Ash	Fraxinus pennsylvanica	Poor	
1892	В	6 15	Basswood	Tilia americana	Poor	
1893 1894	GA B	16	Green Ash Basswood	Fraxinus pennsylvanica Tilia americana	Poor Poor	
1895	В	6	Basswood	Tilia americana	Poor	
1896 1897	B BL	28 6	Basswood Black Locust	Tilia americana  Robinia pseudoacacia	Fair Poor	
1898	В	6	Basswood	Tilia americana	Poor	
1899	В	16	Basswood	Tilia americana	Fair	x1
1900 1901	BL B	13 8	Black Locust Basswood	Robinia pseudoacacia Tilia americana	Poor Poor	
1902	В	15	Basswood	Tilia americana	Poor	
1903	SU	17	Sugar Maple	Acer saccharum	Fair	
1904 1905	BL BL	12 13	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor Poor	
1906	SM	17	Silver Maple	Acer saccharinum	Poor	
1907 1908	BL BW	13 7	Black Locust Black Walnut	Robinia pseudoacacia  Juglans nigra	Poor Poor	
1909	BW	8	Black Walnut	Juglans nigra	Poor	
1910	BL	14	Black Locust	Robinia pseudoacacia	Poor	
1911 1912	SM BL	12 15	Silver Maple  Black Locust	Acer saccharinum  Robinia pseudoacacia	Poor Poor	
1913	SM	25	Silver Maple	Acer saccharinum	Fair	x2
1914	ш	8	American Elm	Ulmus americana	Very Poor	
1915 1916	BL BL	13 14	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor Poor	
1917	SM	9	Silver Maple	Acer saccharinum	Poor	x4
1918	SM	28	Silver Maple	Acer saccharinum	Fair	
1919 1920	BL BL	7 13	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor Poor	
1921	BL	7	Black Locust	Robinia pseudoacacia	Poor	
1922 1923	BL TH	7	Black Locust Thomapple/Hawthome	Robinia pseudoacacia Crataegus spp.	Very Poor Poor	
1923	В	14	Basswood	Tilia americana	Poor	
1925	BL	9	Black Locust	Robinia pseudoacacia	Poor	
1926 1927	В В	13 6	Basswood Basswood	Tilia americana Tilia americana	Fair Fair	
1928	BL	8	Black Locust	Robinia pseudoacacia	Poor	
1929	SU	22	Sugar Maple	Acer saccharum	Fair	
1930 1931	B BL	6 15	Basswood Black Locust	Tilia americana Robinia pseudoacacia	Poor Poor	
1932	В	6	Basswood	Tilia americana	Poor	
1933 1934	BL B	9	Black Locust Basswood	Robinia pseudoacacia Tilia americana	Poor Fair	x1
1935	В	15	Basswood	Tilia americana	Fair	X1
1936	BW	24	Black Walnut	Juglans nigra	Fair	
1937 1938	BW BL	7 10	Black Walnut Black Locust	Juglans nigra  Robinia pseudoacacia	Poor Poor	
1939	BL	21	Black Locust	Robinia pseudoacacia	Poor	
1940	BL	13	Black Locust	Robinia pseudoacacia	Poor	
1941 1942	SM BW	16 14	Silver Maple Black Walnut	Acer saccharinum  Juglans nigra	Fair Fair	
1943	BL	15	Black Locust	Robinia pseudoacacia	Poor	
1944 1945	<u>В</u> Е	14 17	Basswood  American Elm	Tilia americana Ulmus americana	Poor Very Poor	
1946	E	6	American Elm	Ulmus americana	Poor	
1947	BL	13	Black Locust	Robinia pseudoacacia	Poor	
1948 1949	BL TH	14 8	Black Locust Thornapple/Hawthorne	Robinia pseudoacacia  Crataegus spp.	Poor Poor	×4
1950	BW	12	Black Walnut	Juglans nigra	Fair	X1
1951	BW	16	Black Walnut	Juglans nigra	Poor	
1952 1953	BL BW	14 17	Black Locust Black Walnut	Robinia pseudoacacia  Juglans nigra	Poor Poor	
1954	NM	8	Norway Maple	Acer platanoides	Poor	
1955 1956	BW BW	17 19	Black Walnut Black Walnut	Juglans nigra Juglans nigra	Poor Poor	x1
1957	BL	14	Black Locust	Robinia pseudoacacia	Poor	X1
1958	TH	6	Thornapple/Hawthorne	Crataegus spp.	Poor	
1959 1960	B BL	21 12	Basswood Black Locust	Tilia americana  Robinia pseudoacacia	Poor Poor	x1
1961	TH	10	Thornapple/Hawthorne	Crataegus spp.	Poor	x1
1962	В	10	Basswood	Tilia americana	Fair	
1963 1964	BW BL	15 15	Black Walnut Black Locust	Juglans nigra  Robinia pseudoacacia	Fair Poor	
1965	В	8	Basswood	Tilia americana	Poor	
1966	BL	18	Black Locust	Robinia pseudoacacia	Poor	
1967 1968	BL BL	10 15	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor Poor	
1969	BL	20	Black Locust	Robinia pseudoacacia	Poor	
1970 1971	BL B	15 8	Black Locust Basswood	Robinia pseudoacacia Tilia americana	Poor Poor	
1971 1972	BW B	16	Black Walnut	Juglans nigra	Poor	
1973	BL	9	Black Locust	Robinia pseudoacacia	Poor	
1974 1975	BL E	16 17	Black Locust  American Elm	Robinia pseudoacacia Ulmus americana	Poor Very Poor	
1975	GA	17	Green Ash	Fraxinus pennsylvanica	Very Poor Very Poor	
1977	BL	12	Black Locust	Robinia pseudoacacia	Poor	_
1978 1979	BL BL	13 6	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor Poor	
1980	BL	8	Black Locust	Robinia pseudoacacia	Poor	
1981	BL	18	Black Locust	Robinia pseudoacacia	Poor	<del>_</del> _
1982	BW BL	12 8	Black Walnut Black Locust	Juglans nigra  Robinia pseudoacacia	Poor Poor	
1983		8	American Elm	Ulmus americana	Poor	
1983 1984	E		Black Locust	Robinia pseudoacacia	Poor	
1984 1985	BL	10 16		•	Door	
1984 1985 1986		10 16 12	Black Locust  Black Locust  Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor Poor	
1984	BL BL	16	Black Locust	Robinia pseudoacacia		
1984 1985 1986 1987 1988 1989	BL BL BL BL	16 12 15 6	Black Locust Black Locust Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia Robinia pseudoacacia Robinia pseudoacacia	Poor Poor Poor	
1984 1985 1986 1987 1988	BL BL BL BL	16 12 15	Black Locust Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia Robinia pseudoacacia	Poor Poor	
1984 1985 1986 1987 1988 1989 1990 1991	BL BL BL BL BL BL BL BL	16 12 15 6 8 9	Black Locust	Robinia pseudoacacia	Poor Poor Poor Poor Poor	
1984 1985 1986 1987 1988 1989 1990 1991 1992 1993	BL BL BL BL BL BL BL BL BL	16 12 15 6 8 9 11	Black Locust	Robinia pseudoacacia	Poor Poor Poor Poor Poor Poor	
1984 1985 1986 1987 1988 1989 1990 1991	BL BL BL BL BL BL BL BL	16 12 15 6 8 9	Black Locust	Robinia pseudoacacia	Poor Poor Poor Poor Poor	
1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996	BL BL BL BL BL BL BL BL E	16 12 15 6 8 9 11 9 13 8	Black Locust American Elm American Elm	Robinia pseudoacacia Ulmus americana Ulmus americana	Poor Poor Poor Poor Poor Poor Poor Poor	
1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997	BL B	16 12 15 6 8 9 11 9 13 8 13	Black Locust American Elm American Elm Black Locust	Robinia pseudoacacia Ulmus americana Ulmus americana Robinia pseudoacacia	Poor Poor Poor Poor Poor Poor Poor Poor	
1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997	BL BL BL BL BL BL BL BL E	16 12 15 6 8 9 11 9 13 8	Black Locust American Elm American Elm	Robinia pseudoacacia Ulmus americana Ulmus americana	Poor Poor Poor Poor Poor Poor Poor Poor	
1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000	BL B	16 12 15 6 8 9 11 9 13 8 13 14 13 8	Black Locust American Elm American Elm Black Locust Black Locust Black Locust Black Locust	Robinia pseudoacacia Ulmus americana Ulmus americana Robinia pseudoacacia Robinia pseudoacacia Robinia pseudoacacia Robinia pseudoacacia	Poor Poor Poor Poor Poor Poor Poor Poor	
1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001	BL B	16 12 15 6 8 9 11 9 13 8 13 14 13 8 14	Black Locust American Elm American Elm Black Locust Black Locust Black Locust Black Locust Black Locust Black Locust	Robinia pseudoacacia Ulmus americana Ulmus americana Robinia pseudoacacia Robinia pseudoacacia Robinia pseudoacacia Robinia pseudoacacia Robinia pseudoacacia	Poor Poor Poor Poor Poor Poor Poor Poor	
1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997	BL B	16 12 15 6 8 9 11 9 13 8 13 14 13 8	Black Locust American Elm American Elm Black Locust Black Locust Black Locust Black Locust	Robinia pseudoacacia Ulmus americana Ulmus americana Robinia pseudoacacia Robinia pseudoacacia Robinia pseudoacacia Robinia pseudoacacia	Poor Poor Poor Poor Poor Poor Poor Poor	
1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001	BL B	16 12 15 6 8 9 11 9 13 8 13 14 13 8 14 12 14	Black Locust American Elm American Elm Black Locust	Robinia pseudoacacia Ulmus americana Ulmus americana Robinia pseudoacacia Robinia pseudoacacia Robinia pseudoacacia Robinia pseudoacacia Robinia pseudoacacia Robinia pseudoacacia	Poor Poor Poor Poor Poor Poor Poor Poor	

2005 2006	BL BW	15 10	Black Locust Black Walnut	Robinia pseudoacacia Juglans nigra	Poor Fair	
2007	BL	13	Black Locust	Robinia pseudoacacia	Poor	
2008	BL SM	17 16	Black Locust Silver Maple	Robinia pseudoacacia Acer saccharinum	Poor Fair	
2010 2011	BL BL	13 13	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor Poor	
2012	BL	14	Black Locust	Robinia pseudoacacia	Poor	
2013 2014	BL E	16 15	Black Locust  American Elm	Robinia pseudoacacia Ulmus americana	Poor Poor	
2015	E	6	American Elm	Ulmus americana	Poor	
2016 2017	E BL	24 8	American Elm Black Locust	Ulmus americana Robinia pseudoacacia	Fair Poor	
2018 2019	BL BW	10 8	Black Locust Black Walnut	Robinia pseudoacacia  Juglans nigra	Poor Poor	
2020	BL	8	Black Locust	Robinia pseudoacacia	Poor	
2021	BL BL	10 11	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor Poor	
2023 2024	BL E	22 13	Black Locust American Elm	Robinia pseudoacacia Ulmus americana	Poor Poor	
2024	BL	7	Black Locust	Robinia pseudoacacia	Poor	
2026 2027	BL SM	6 15	Black Locust Silver Maple	Robinia pseudoacacia Acer saccharinum	Poor Fair	x1
2028	SM	20	Silver Maple	Acer saccharinum	Fair	x2
2029 2030	BL BL	16 6	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor Poor	
2031 2032	BW BL	14 15	Black Walnut Black Locust	Juglans nigra Robinia pseudoacacia	Fair Poor	
2032	BL	7	Black Locust	Robinia pseudoacacia	Poor	
2034 2035	BL BL	16 19	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor Poor	
2036	Е	7	American Elm	Ulmus americana	Poor	
2037 2038	BL GA	13 16	Black Locust Green Ash	Robinia pseudoacacia Fraxinus pennsylvanica	Poor Fair	
2039	E	27	American Elm	Ulmus americana	Poor	
2040 2041	E NM	25 12	American Elm Norway Maple	Ulmus americana Acer platanoides	Fair Fair	
2042 2043	E BL	7 12	American Elm Black Locust	Ulmus americana Robinia pseudoacacia	Poor Poor	
2044	BL	10	Black Locust	Robinia pseudoacacia	Poor	
2045 2046	E E	28 9	American Elm American Elm	Ulmus americana Ulmus americana	Poor Fair	
2047	В	12	Basswood	Tilia americana	Poor	x1
2048 2049	E BL	19 18	American Elm Black Locust	Ulmus americana Robinia pseudoacacia	Very Poor Poor	
2050 2051	BL NM	10 10	Black Locust Norway Maple	Robinia pseudoacacia Acer platanoides	Poor Fair	
2052	NM	8	Norway Maple	Acer platanoides	Fair	
2053 2054	NM E	6 23	Norway Maple  American Elm	Acer platanoides Ulmus americana	Fair Poor	
2055	NM	6	Norway Maple	Acer platanoides	Fair	
2056 2057	BW E	18 13	Black Walnut American Elm	Juglans nigra Ulmus americana	Poor Poor	
2058	E	10	American Elm	Ulmus americana	Poor	
2059 2060	BL BL	8 17	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor Poor	
2061 2062	BW BL	16 6	Black Walnut Black Locust	Juglans nigra Robinia pseudoacacia	Poor Poor	
2063	BL	6	Black Locust	Robinia pseudoacacia	Poor	
2064 2065	В В	16 16	Basswood Basswood	Tilia americana Tilia americana	Fair Fair	
2066 2067	В	6 16	Basswood Basswood	Tilia americana Tilia americana	Poor Fair	
2068	B B	13	Basswood	Tilia americana	Fair	
2069 2070	B B	12 17	Basswood Basswood	Tilia americana Tilia americana	Poor Poor	
2071	В	17	Basswood	Tilia americana	Fair	
2072 2073	B NM	12 14	Basswood Norway Maple	Tilia americana Acer platanoides	Poor Fair	
2074 2075	NM GA	14 14	Norway Maple Green Ash	Acer platanoides Fraxinus pennsylvanica	Fair Poor	
2076	NM	6	Norway Maple	Acer platanoides	Fair	
2077 2078	BL BL	19 18	Black Locust Black Locust	Robinia pseudoacacia Robinia pseudoacacia	Poor Poor	
2079	BL	14	Black Locust	Robinia pseudoacacia	Poor	
2080 2081	E BL	18 19	American Elm  Black Locust	Ulmus americana Robinia pseudoacacia	Poor Poor	
2082 2083	B BL	14	Basswood	Tilia americana Robinia pseudoacacia	Poor	
2083	В	13 12	Black Locust Basswood	Tilia americana	Poor Poor	
2085 2086	GA BL	15 15	Green Ash Black Locust	Fraxinus pennsylvanica Robinia pseudoacacia	Fair Poor	
2087	В	16	Basswood	Tilia americana	Poor	
2088 2089	PB B	6 15	Paper Birch Basswood	Betula papyrifera Tilia americana	Poor Poor	
2090 2091	B B	17 16	Basswood Basswood	Tilia americana Tilia americana	Poor Poor	
2091	BL	16	Black Locust	Robinia pseudoacacia	Very Poor	
2093 2094	NM B	12 10	Norway Maple Basswood	Acer platanoides Tilia americana	Fair Fair	
2095	GA	12	Green Ash	Fraxinus pennsylvanica	Poor	
2096 2097	E BW	6 23	American Elm Black Walnut	Ulmus americana Juglans nigra	Poor Fair	
2098	E	12	American Elm	Ulmus americana	Poor	
2099 2100	BW E	21 6	Black Walnut American Elm	Juglans nigra Ulmus americana	Poor Poor	
2201	D	13	Jump in sequence	Tilia amoricana	Poor	v1
2201 2202	B B	13 14	Basswood Basswood	Tilia americana Tilia americana	Poor Fair	x1
2203 2204	E BW	9 38	American Elm Black Walnut	Ulmus americana Juglans nigra	Poor Fair	
2205	BW	19	Black Walnut	Juglans nigra	Poor	
2206 2207	TH TH	9	Thornapple/Hawthorne Thornapple/Hawthorne	Crataegus spp. Crataegus spp.	Poor Poor	
2208 2209	NM BW	13 6	Norway Maple Black Walnut	Acer platanoides  Juglans nigra	Fair Poor	
2210	PW	6	White Poplar	Juglans nigra Populus alba	Poor	
2211 2212	E E	7 6	American Elm American Elm	Ulmus americana Ulmus americana	Poor Poor	
2213	E	15	American Elm	Ulmus americana	Very Poor	
2214 2215	E TH	6 19	American Elm Thornapple/Hawthorne	Ulmus americana Crataegus spp.	Poor Poor	x1
2216	BL	16	Black Locust	Robinia pseudoacacia	Poor	
2217	BL	8	Black Locust	Robinia pseudoacacia	Poor	

American Elm

Ulmus americana

Poor







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**LOCATION MAP** 

CLIENT

GENSLER
150 W JEFFERSON, SUITE 1700
DETROIT, MI 48226

PROJECT TITLE

**LONG LAKE** & CROOKS MASTERPLAN DEVELOPMENT
LONG LAKE AND CROOKS ROAD
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

REVISIONS		
-		

ORIGINAL ISSUE DATE: OCTOBER 20, 2020

DRAWING TITLE TREE LIST -

SHEET 3

PEA JOB NO.	2020-0320
P.M.	LAA
DN.	KRD
DES.	GMB
DRAWING NUMBER	₹:

# LONG LAKE & CROOKS MASTERPLAN DEVELOPMENT STATE OF MICHIGAN COUNTY OF OAKLAND CITY OF TROY

# DEVELOPMENT AGREEMENT FOR "LONG LAKE & CROOKS MASTERPLAN DEVELOPMENT" PLANNED UNIT DEVELOPMENT

#### **RECITALS**

- A. Developer is the owner of certain real property located at the northwest corner of Long Lake and Crooks Roads in the City of Troy, Oakland County, Michigan, consisting of one (1) parcel and containing approximately 24.08 acres, as more particularly described on attached **Exhibit A** (the "Property").
- B. Developer has petitioned for an Amendment to Chapter 39 of the Troy City Code (the "Zoning Ordinance") for the rezoning of the Property to Planned Unit Development ("PUD"), pursuant to Article 11 of the Zoning Ordinance, for the development to be known as "Long Lake & Crooks Masterplan Development", sometimes also referred to herein as the "Development" or the "Planned Unit Development".
- C. Developer has demonstrated the need for the zoning of the Property as PUD consistent with the intent of Section 11.03 of the Zoning Ordinance because, among other features, the Developer proposes: (i) a mixture of land uses that would otherwise not be permitted without the use of the PUD; (ii) to provide a recognizable and material benefit to the ultimate users of the

project and to the community, where such benefit would otherwise be infeasible or unlikely to be achieved absent the PUD designation; (iii) to encourage compatible mixture of open space, landscaped areas, and pedestrian amenities; (iv) to use appropriate land use transitions between the PUD and surrounding properties; (v) to use innovative and creative site and building designs, solutions and materials; (vi) to provide the desirable qualities of a dynamic urban environment that is compact, designed to human scale, and exhibits contextual integration of buildings and city spaces; (vii) to encourage uses for the appropriate assembly, use, redevelopment, replacement, and improvement of an existing vacant site; (viii) to promote the intent of the City's Master Plan and the intent of any applicable corridor or sub-area plans and consistent with recent development trends in the area; and, (ix) to include all necessary information and specifications with respect to structures, heights, setbacks, density, parking, circulation, landscaping, amenities, and other design and layout features, exhibiting a due regard for the relationship of the Development to the surrounding properties and uses thereon, as well as to the relationship between the various elements within the proposed Development.

D. Developer has received, and the City has approved, the Concept Development Plan, a copy of which is attached as **Exhibit B** ("Concept Development Plan"), pursuant to Section 11.06 of the Zoning Ordinance subject to the terms of this Agreement.

**NOW, THEREFORE**, as an integral part of the grant of rezoning of the Property to PUD known as the "Long Lake & Crooks Masterplan Development" and its development, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties agree as follows:

#### **ARTICLE I**

#### **GENERAL TERMS**

- 1.1 <u>Binding Effect</u>. This Agreement incorporates all PUD Documents, as defined below, and shall run with the land. References in this Agreement or in any PUD Documents to "Developer" shall include Developer's successors and assigns. It is the intent of the City and Developer to put all future owners of the Property, and parties in interest, on notice of the rights, obligations, and restrictions contained herein, by recording this Agreement and its attached Exhibits with the Oakland County Register of Deeds. The terms and conditions of this Agreement shall be considered "Deed Restrictions" binding upon all developers and any successors or assigns of the Property.
- 1.2 <u>PUD Documents</u>. The Property shall be developed and improved in accordance with the following, which shall be referred to collectively as the "PUD Documents":
  - A. Article 11 of the Zoning Ordinance, and amendments, if any, as of the Effective Date;
  - B. This Agreement;
  - C. The PUD Application received by the City of Troy Planning Department on \_\_\_\_\_\_, 2022;

D. The following documents:

General Description of Document	Date of Document	Drafter or Preparer

- E. The Resolution and the official minutes of the meeting at which the City Council approved the PUD, including any and all conditions of the approval contained therein, an Affidavit of Property Ownership to be recorded with the Oakland County Register of Deeds prior to commencement of construction and prior to the sale, lease, rental, or occupancy by tenants of any portion of the Property, contain the legal description of the entire Property, specifying the date of the Concept Development Plan approval, and rezoning of the Property to PUD by the City Council, and declaring that all future development of the Property has been authorized, restricted, and required to be carried out in accordance with this Agreement, and the amendment to the Zoning Ordinance granting rezoning to PUD;
- F. All Preliminary Development Plans, as defined in Section 11.07 of the Zoning Ordinance, approved by City Council; and,
- G. All Final Development Plans, as defined in Section 11.08 of the Zoning Ordinance, approved by the Zoning Administrator or by the Community Development Director of the City.
- 1.3 Amendment to Zoning Ordinance. Troy City Council Resolution #\_\_\_\_\_\_ (the "Resolution") and this Agreement shall be considered an amendment to the Zoning Ordinance and the Zoning Map, reclassifying the zoning of the Property, which was not previously rezoned to PUD, and the Resolution constitutes the land authorization for the Property in accordance with the Zoning Ordinance. All uses and improvements completed on the Property shall be in substantial conformity with Article 11 of the Zoning Ordinance and the PUD Documents.

#### **ARTICLE II**

#### DEVELOPER'S RIGHTS, OBLIGATIONS, AND PROPERTY RESTRICTIONS

- 2.1 <u>Development Rights</u>. Developer shall have the right to develop and use the Property, and make improvements and modifications to the Property, in accordance with the PUD Documents. Any changes to the Development shall be approved in accordance with the PUD Documents in effect at the time of the proposed changes.
- 2.2 <u>Permitted Uses</u>. The City acknowledges and approves that the Development shall consist of separate areas within which there will be separate permitted uses, but which together will relate to each other in an acceptable and cohesive development. The separate areas are depicted on the Concept Development Plan as development areas, amenity areas, retail/restaurant

areas, and natural areas and are more fully defined in this Agreement. The permitted uses of the Development described below are consistent with the intent of the City's Master Plan or the intent of any applicable corridor or sub-area plans, and otherwise consistent with Section 11.02 of the Zoning Ordinance, and are to be a mixture of commercial, retail, residential, and office uses, and identified as follows:

- A. <u>Development Area 1</u> Residential uses permitted as of right or requiring special approval, and their accessory uses, consistent with such uses in the UR Urban Residential District, and all associated surface parking.
- B. <u>Development Area 2</u> Office uses permitted as of right or requiring special approval, and their accessory uses, consistent with such uses in the OM Office Mixed Use District, the O Office District, or the GB-General Business District, as referenced in the Zoning Ordinance, and a multi-story parking structure and surface parking features.
- C. <u>Development Area 3</u> Residential uses permitted as of right or requiring special approval, and their accessory uses, consistent with such uses in the UR Urban Residential District as referenced in the Zoning Ordinance and all associated surface parking; Office uses permitted as of right or requiring special approval, and their accessory uses, consistent with such uses in the OM Office Mixed Use District, the O Office District, or the GB-General Business District, as referenced in the Zoning Ordinance; "Restaurant" and/or "Retail Business or Retail Sales" uses as defined by the Zoning Ordinance; Conference, meeting, and banquet facility uses permitted as of right or requiring special approval, and their accessory uses consistent with such uses the GB General Business District in the Zoning Ordinance; and all associated surface parking.
- D. <u>Development Area 4</u> Lodging or extended stay facility uses permitted as of right or requiring special approval, and their accessory uses, consistent with such uses in the GB General Business District identified in the Zoning Ordinance; and, Residential uses permitted as of right or requiring special approval, and their accessory uses, consistent such uses in the UR Urban Residential District as referenced in the Zoning Ordinance and all associated surface parking.
- E. <u>Restaurant/Retail Areas</u> "Restaurant" and/ or "Retail Business or Retail Sales" uses as defined by the Zoning Ordinance, and their accessory uses, and all associated surface parking.
- F. <u>Amenity Area 1A</u> "Open Space" as defined by the Zoning Ordinance for use as an open field activity area.
- G. <u>Amenity Area 1B</u> "Open Space" as defined by the Zoning Ordinance for use as a dog park.

- H. <u>Amenity Area 2A</u> -"Open Space" as defined by the Zoning Ordinance for use as a public art or sculpture garden.
- I. <u>Amenity Area 2B</u> -"Open Space" as defined by the Zoning Ordinance for use as a fitness trail and pickle ball courts.
- J. <u>Amenity Area 3</u> "Open Space" as defined by the Zoning Ordinance for use as a bocce ball court and outdoor seating.
- K. <u>Natural Areas A and B</u> Restricted from development and shall remain in an "Undeveloped State" as defined in the Zoning Ordinance.

The City recognizes that the permitted uses identified above within each of the above areas merely provide the range of actual uses available for selection by the Developer. Such permitted uses within each of the above areas shall be selected by the Developer, in its sole discretion, recognizing the uses are subject to market demand, end-user requirements, development patterns, and other factors outside of the control of the Developer. Developer shall be provided with flexibility in selecting such permitted uses, and any combination of the permitted uses, to provide Developer the opportunity to construct and use a higher quality development and a better overall project than would be accomplished under conventional zoning, and which will be accommodated without sacrificing established community values. It is also recognized that Developer shall be provided with flexibility in altering the uses within the Amenity Areas referenced above so long as such uses are consistent with the "Open Space" definition in the Zoning Ordinance.

2.3 Sequencing and Phasing of Development. Due to the unique nature and scale of the Development, the City recognizes that the Developer shall be afforded maximum flexibility in the sequencing and phasing of the Development to attract investment and end users consistent with the Phasing Plan, as described below. Any phase described below shall be generally referenced alone as a "Phase" and together as "Phases" for purposes of this Agreement. Developer shall be permitted to apply for all approvals, including Preliminary Development Plan approval and Final Development Plan approval, for any portion of the Development, including the Phases or Restaurant/Retail Areas, at any time consistent with the Phasing Plan, within the sole discretion of the Developer, and the City shall be obligated to review and promptly process such requests for approval as provided for under the Zoning Ordinance. Developer shall be permitted, but not required, to commence construction and development of any Phase or Restaurant/Retail Area at any time consistent with the Phasing Plan, within the sole discretion of the Developer, and the City shall be obligated to review and process such requests for construction and development approvals as provided for under the Zoning Ordinance; provided, however, that once construction is commenced in any Phase or Restaurant/Retail Area, the Developer shall complete the development and construction of such Phase or Restaurant/Retail Area. Undeveloped Phases or Restaurant/Retail Areas shall be appropriately maintained by Developer, including grass cutting and refuse removal. Developer shall not clear-cut trees within any unapproved and undeveloped Phase or Restaurant/Retail Area without the approval of the Community Development Director.

The Development is planned as a multiple phase development, each of which shall include the associated infrastructure improvements within and necessary to serve such Phase or Restaurant/Retail Area. The Phases of the Development (the "Phasing Plan") are set forth below.

**RESIDENTIAL MID-RISE PHASE:** The Residential Mid-Rise Phase is depicted on the Concept Development Plan as **Development Area 1**, **Amenity Area 1A**, and **Amenity Area 1B**. This Phase includes a residential mid-rise building not to exceed seven (7) stories, the open field activity area, and the fenced dog park zone, all with associated parking, driveways, and sidewalks.

**OFFICE/PROFESSIONAL PHASE:** The Office/Professional Phase is depicted on the Concept Development Plan as **Development Area 2**, **Amenity Area 2A**, and **Amenity Area 2B** and includes an office/professional building not to exceed ten (10) stories, a parking deck, pickle ball courts, a fitness trail, and a public art or sculpture garden.

OFFICE/PROFESSIONAL/RESIDENTIAL/RETAIL/PARKING PHASE: The Office/Professional/Residential/Retail/Parking Phase is depicted on the Concept Development Plan Development and Amenity Area 3 Area 3 and office/professional/residential/retail/parking building not to exceed ten (10) stories, associated parking, the open activity area, and pedestrian boulevard. This phase shall include the parking deck associated with the Office/Professional Phase shown on the Concept Development Plan if construction of this phase commences prior to construction of the Office/Professional Phase.

LODGING/EXTENDED STAY/RESIDENTIAL PHASE: The Lodging/Extended Stay/ Residential Phase is depicted on the Concept Development Plan as Development Area 4 and includes a not to exceed seven (7) story lodging, extended stay facility, or residential (apartment or condominium) building with associated surface parking. The Lodging/Extended Stay/Residential Phase shall not be developed until after completion of 50% of the development of the first Phase of the Development. The percentage of completion of such first Phase shall be determined by the Community Development Director in the exercise of his/her reasonable discretion. If the Lodging/Extended Stay/Residential Phase is commenced prior to the commencement of construction of Amenity Area 1A and Amenity Area 1B, then the Lodging/Extended Stay/Residential Phase shall include Amenity Area 1A and Amenity Area 1B.

At the discretion of the Developer, any or all of the Restaurant/Retail Areas (depicted as Restaurant/Retail Building #1 and Restaurant/Retail Building #2 on the Concept Development Plan) may be: (i) constructed at any time without being part of any Phase after the Developer has commenced construction of the first Phase; or, (ii) constructed at any time as part of any Phase.

Upon commencement of the first Phase, Natural Area A and Natural Area B shall be restricted from any development and shall remain in an "Undeveloped State" as defined in the Zoning Ordinance.

2.4 <u>Duration</u>. The Concept Development Plan shall remain in full force and effect so long as Developer requests Preliminary Development Plan approval for the first Phase within five (5) years from the Effective Date. Developer may commence construction of the first Phase within two (2) years of Final Development Plan approval of the first Phase and shall thereafter, in its sole discretion, commence construction of any other Phase or Restaurant/Retail Area no later than twenty (20) years from the commencement of construction of the first Phase. Developer has a

right to request an extension for good cause from the City not less than 90 days prior to the expiration date of any deadlines.

- 2.5 Relationship of Phases and Areas. Each Phase or Restaurant/Retail Area developed shall be capable of standing on its own in terms of the presence of Improvements, as defined below, to serve such Phase or Restaurant/Retail Area. Developer shall not be required to construct Improvements outside of a particular Phase or Restaurant/Retail Area and shall not be required to connect any such Improvements between any non-contiguous Phase or Restaurant/Retail Area, until the last of the Phases and Restaurant/Retail Areas described above is completed.
- 2.6 <u>Vesting</u>. To the extent construction has commenced on a particular Phase or Restaurant/Retail Area, Developer shall be deemed to have obtained vested rights with respect to that Phase or Restaurant/Retail Area and shall be permitted to complete that Phase or Restaurant/Retail Area in accordance with applicable approvals.
- 2.7 <u>Preliminary Development Plan Submittal</u>. Preliminary Development Plans for each Phase or Restaurant/Retail Area shall be consistent with the Concept Development Plans and this Agreement, and each Preliminary Development Plan shall be submitted for approval to the City with corresponding traffic and parking studies to be reviewed and approved administratively by the City Engineer, the Road Commission for Oakland County, and the Michigan Department of Transportation as may be required by applicable law. The scope of the traffic and parking studies shall be approved by the City Engineer consistent with the Zoning Ordinance and this Agreement.
- 2.8 <u>Statement of Conditions</u>. As part of the PUD and as a condition of said approval and to satisfy the PUD zoning standards, Developer's obligations shall include the following, plus any other requirements set forth in the PUD Documents, this Agreement and Exhibits, attached hereto and made a part hereof, which are designated as the obligations of the Developer:
  - A. The Development will facilitate the interconnectivity of vehicular and pedestrian access through a network of sidewalks and internal roads.
  - B. The Developer will preserve in perpetuity certain natural wetland areas on the Property.
  - C. The Development will include amenity areas with a dog park, pickle ball courts, fitness trail, bocce ball court, public art and sculpture gardens, outdoor plazas, outdoor activity areas, outdoor dining areas, and a pedestrian loop and boulevard throughout the Property, each accessible to the public and as shown on the Concept Development Plan.
  - D. The Development will provide large open spaces and landscaped areas which exceed the requirements of the City in a workable integrated design.

The City acknowledges that the Development will have numerous community benefits and, among them, the Development will: (a) eliminate existing under-development of the Property as well as encourage the assemblage and division of parcels within the Property to create a consistent development that provides a logical transition with the surrounding properties; (b) promote and be consistent with the redevelopment goals of the City's Master Plan; (c) incorporate and implement numerous goals and strategies of the City's Master Plan; and, (d) provide a higher quality of development than could be achieved under conventional zoning.

- 2.9 <u>Development Standards</u>. The Property shall be developed, if at all, consistent with the City of Troy development standards, the Zoning Ordinance, and other City ordinances, or any amendments thereto, and consistent with the PUD Documents (the "Approved Standards"), without the need for any additional approvals from the City for such standards, because the City has determined that the Approved Standards are a reasonable approach for the PUD as listed in Article 11 of the Zoning Ordinance for the Development including but not limited to the following purposes:
  - A. To encourage developments that will result in a long-term contribution to social, environmental, and economic sustainability in the City;
  - B. To permit development patterns that respond to changing public and private needs;
  - C. To encourage flexibility in design and use that will result in a higher quality of development and a better overall project than would be accomplished under conventional zoning, and which can be accommodated without sacrificing established community values;
  - D. To encourage the use, redevelopment, and improvement of existing sites where current ordinances do not provide the flexibility to consider redevelopment of sites;
  - E. To ensure the compatibility of design and use among various components within the PUD and with neighboring properties and uses;
  - F. To ensure development that is consistent with the intent of the City's Master Plan; and,
  - G. To encourage an integrated development.

The Approved Standards, as well as other approved features of the Development contained in this Agreement, are not intended to avoid the zoning requirements that would otherwise apply, but rather to allow flexibility and mixture of uses, and to improve the design, character, and quality of Development and any variations from the requirements of the Zoning Ordinance, because they are improvements to the public health, safety, and welfare in the area affected and in accordance with the intent of Article 11 of the Zoning Ordinance.

The City recognizes that the boundaries of each of the Phases and Restaurant/Retail Areas shown on the Concept Development Plan may need to change in light of market demand, end-user

requirements, development patterns, and other factors outside of the control of the Developer. Therefore, to provide Developer with flexibility in design and use that will result in a higher quality of development and a better overall project than would be accomplished under conventional zoning, and which will be accommodated without sacrificing established community values, the boundaries of such Phases or Restaurant/Retail Areas shown on the Concept Development Plan may be enlarged or reduced, at the sole discretion of the Developer, so long as the Developer complies with the Approved Standards as specified herein.

Modifications regarding the density, mix of types of buildings, number of units per building, and location of buildings shall be permitted under this Agreement to allow the Developer flexibility and as may be reasonably necessary to comply with applicable laws or regulations, subject to this Section. Developer shall have the right, in its sole discretion, to modify interior floor plans subject to compliance with all other City ordinances. Minor modifications to the PUD Documents resulting from engineering considerations, site conditions, or other governmental requirements may be administratively approved by the Zoning Administrator or Community Development Director.

Landscaping shall meet or exceed required landscaping for similar projects pursuant to Chapter 39, Section 13.02 of the Zoning Ordinance.

- 2.10 <u>General Maintenance</u>. Developer shall maintain all common areas, storm water drainage and retention facilities, landscaped areas, parking areas, and sidewalks in good working order and appearance. Developer may establish an Association or Associations to assume the maintenance obligations set forth in this Agreement in which event the Association or Associations shall succeed to the Developer's obligations for those portions of the Property defined in the instrument establishing each Association, and Developer shall be relieved of all obligations and liability with respect thereto.
- 2.11 <u>Conveyance by Developer</u>. In the event Developer conveys all or any portion of the Property, it shall establish easements over and across the Property providing that all portions of the Property shall have full egress and ingress for both vehicular and pedestrian use and for egress and ingress to a public road, and access over, under, and across portions of the common areas necessary for installation, construction, repair, and maintenance of utilities affecting and placed upon the Property, which may provide for shared participation in the cost of maintenance and repair. Developer may, however, designate specific parking areas for use by specific areas of the Development.
- 2.12 <u>Construction Trailers</u>. Developer shall comply with the City Code and Ordinances, make any necessary application for permits, and obtain any necessary permits for the use of construction trailers, and for rental, occupancy, and advertising signs.

#### **ARTICLE III**

#### **PUBLIC IMPROVEMENTS**

3.1 <u>Water and Sanitary Sewer Systems</u>. Developer shall, at its sole expense, construct and install improvements and/or connections tying into the municipal water and sanitary sewer

systems, including any required fire hydrant, consistent with the Phasing Plan. Such improvements shall be designed and constructed in accordance with any Final Development Plan approved under Section 11.08 of the Zoning Ordinance, approved engineering construction plans, and all applicable City, County, and State standards, codes, regulations, ordinances, and laws. Such water and sanitary sewer service facilities, including any on-site and off-site facilities, extensions, and easements to reach the area to be served, shall be completed, approved, and dedicated to the City to the extent necessary to fully service all proposed and existing facilities, structures, and uses for such Phase or Restaurant/Retail Area. Consistent with the Phasing Plan, all water and sanitary system improvements required shall be completed before construction of the buildings to be erected in the applicable Phase or Restaurant/Retail Areas and shall be completed, approved and dedicated to and accepted by the City, if required, to the extent necessary to fully service all proposed and existing facilities, structures and uses, within such Phase or Restaurant/Retail Area to be served thereby, prior to issuance of any building permits within such Phase or Restaurant/Retail Area. The water and sanitary sewer improvements within each Phase or Restaurant/Retail Area must be completed such that, upon completion and any dedication of such improvements, they are fully sufficient to provide the required capacity for water and sewer services to such buildings to be erected within such Phase or Restaurant/Retail Area according to the applicable laws, ordinances, codes, regulations, and standards at the time of construction of buildings to be erected within such Phase or Restaurant/Retail Area. The Developer shall post security in the form of cash or check or certificate of deposit, irrevocable letter of credit, or a performance bond (the "Security"), as specified in a separate agreement approved by the City for any water and sanitary sewer systems undergoing construction. The Security shall be in an amount equal to the estimated cost of installation, or a performance bond in an amount equal to the cost of construction plus ten percent (10%), as specified in a bona fide contract for installation of such improvements approved by the City Engineer. The agreement shall also authorize the City, at its option, to complete these improvements as required by the City Engineer, if Developer fails to complete the water and sanitary sewer improvements in a timely fashion, once construction has commenced. All performance bonds shall be issued by institutions licensed and admitted to do business in the State of Michigan. Building permits for the buildings to be erected on the Property within the Development to be served by the water and sanitary sewer improvements in question shall be issued upon the posting of such Security and execution of such agreement, which shall be approved by the City Attorney in the exercise of reasonable discretion.

3.2 Storm Water Drainage. Developer shall, at its sole expense, construct and install storm water and retention and/or detention systems consistent with the Phasing Plan. Such improvements shall be designed and constructed in accordance with any Final Development Plan approved under Section 11.08 of the Zoning Ordinance, approved engineering construction plans, and all applicable City, County and State standards, codes, regulations, ordinances, and laws. All storm water and retention and/or detention system improvements required shall be completed before construction of the buildings to be erected within a Phase or Restaurant/Retail Area and shall be completed and approved to the extent necessary to fully service all proposed and existing facilities, structures and uses, within such Phase or Restaurant/Retail Area, prior to issuance of any building permits. The Developer shall post Security, as specified in a separate agreement approved by the City, for any storm water and retention and/or detention system systems undergoing construction. The Security shall be in an amount equal to the estimated cost of installation, or a performance bond in an amount equal to the cost of construction plus ten percent (10%), as specified in a bona fide contract for installation of such improvements approved by the City

Engineer. The agreement shall also authorize the City, at its option, to complete these improvements as required by the City Engineer, if Developer fails to complete the storm water and retention and/or detention system improvements in a timely fashion, once construction has commenced. All performance bonds shall be issued by institutions licensed and admitted to do business in the State of Michigan. Building permits for the buildings to be erected within the Development to be served by the storm water and retention and/or detention system improvements in question shall be issued upon the posting of such Security and execution of such agreement, which shall be approved by the City Attorney in the exercise of reasonable discretion. During the development of the Property, the Developer or its successors or assigns shall be obligated to maintain the storm water and retention and/or detention system and facilities for such applicable Phase or Restaurant/Retail Area in a fully operational condition.

Streets, Boulevards, Sidewalks, Non-Motorized Paths, Drives, Entryways and 3.3 Parking Areas. Developer shall, at its sole expense, construct and install streets, boulevards, sidewalks, non-motorized paths, drives, entryways, and parking areas consistent with the Phasing Plan. All internal streets, boulevards, sidewalks, non-motorized paths, drives, entryways, and parking areas will be private. Such improvements shall be designed and constructed in accordance with any Final Development Plan approved under Section 11.08 of the Zoning Ordinance, approved engineering construction plans, and all applicable City, County, and State standards, codes, regulations, ordinances, and laws. The Developer shall post Security, as specified in a separate agreement approved by the City, for any streets, boulevards, sidewalks, non-motorized paths, drives, entryways, and parking areas undergoing construction. The Security shall be in an amount equal to the estimated cost of installation, or a performance bond in an amount equal to the cost of construction plus ten percent (10%), as specified in a bona fide contract for installation of such improvements approved by the City Engineer. The agreement shall also authorize the City, at its option, to complete these improvements as required by the City Engineer, if Developer fails to complete the streets, boulevards, sidewalks, non-motorized paths, drives, entryways, and parking areas in a timely fashion, once construction has commenced. All performance bonds shall be issued by institutions licensed and admitted to do business in the State of Michigan. Building permits for the buildings to be erected within the Development to be served by the streets, boulevards, sidewalks, non-motorized paths, drives, entryways, and parking areas in question shall be issued upon the posting of such Security and execution of such agreement, which shall be approved by the City Attorney in the exercise of reasonable discretion. At all times, during and after completion of construction, Developer, its successor and assigns, shall cause all internal streets, boulevards, sidewalks, non-motorized paths, drives, entryways, and parking areas to be maintained, repaired and kept in an unimpeded, unobstructed, safe and passable condition at all times to allow for the free flow and circulation of traffic throughout the Development when completed, and within each Phase Restaurant/Retail Area prior to completion of the Development, except for temporary closures or obstruction due to repairs or snow. Developer shall install and maintain an adequate gravel surface base as determined by the City Engineer for all entrance ways and internal drive areas to provide for access for construction traffic, City personnel, emergency and firefighting equipment for such specific site and prior to construction of a final base course. The aforementioned agreement for completion shall provide that the paving of all areas referenced in this Section within an applicable Phase or Restaurant/Retail Area shall be completed and approved (including topcoat and parking lot striping) prior to the issuance of more than ninetyfive percent (95%) of any certificates of occupancy for buildings within a Phase or

Restaurant/Retail Area, but in any event such paving shall be completed within two (2) years of issuance of the first building permit for a building within such Phase or Restaurant/Retail Area.

- Improvements. The City acknowledges that any Phase or Restaurant/Retail Area as may be shown on the Concept Development Plan may be constructed, and operated, at different times consistent with the Phasing Plan, at the discretion of the Developer, depending on market forces and the feasibility of doing so, and that the Developer should be afforded flexibility in its approach to develop the Property in a reasonable and efficient manner. Therefore, notwithstanding anything to the contrary contained in Sections 3.1, 3.2, and 3.3 above: (a) the City shall permit the Developer to construct and operate upon any Phase or Restaurant/Retail Area so long as the improvements referenced in Sections 3.1, 3.2, and 3.3 above (the "Improvements") adequately service all proposed and existing facilities, structures, and uses within such Phase or Restaurant/Retail Area and shall issue all permits, approvals, and consents accordingly; (b) it shall not be a condition of this Agreement that Developer must complete all of the Improvements on the entire Property before any Phase or Restaurant/Retail Area on the Concept Development Plan is commenced or completed, including the streets, boulevards, sidewalks, non-motorized paths, drives, entryways, and parking areas; and, (c) the City shall not withhold certificates of occupancy, or any other approval, for any buildings in a specific Phase or Restaurant/Retail Area shown on the Concept Development Plan solely because Improvements are not completed within other Phases or Restaurant/Retail Areas.
- 3.5 <u>Assignment of Maintenance Obligations</u>. Developer shall have the right to assign its maintenance obligations under this Agreement to an Association or Associations and to any successors and assigns including any successor developer or owner of a portion of the Development. Upon the assignment to and assumption by an Association or any successor developer or owner of any of Developer's maintenance obligations, as set out in this Agreement and otherwise, Developer shall have no further obligations or liability with respect thereto. All successors and assigns of Developer shall agree to be bound by the obligations for common area maintenance contained in this Agreement.
- 3.6 <u>Regular Inspections</u>. For purposes of maintenance obligations set forth in this Article, the term "maintenance," "maintain" and "maintained" shall mean and include regular inspections.
- 3.7 Reduction of Security. At the Developer's request, but not more frequently than once a month, the Security may be reduced by the same percentage as the percentage of completion of each component of the Improvements as determined by the City's engineer in the exercise of reasonable discretion. The balance of any Security shall be returned to Developer within thirty (30) days following the determination of the City that any particular portion of the Improvements have been completed consistent with the approved engineering plans. A minimum of ten percent (10%) of the Security shall be maintained by the City until such time as final approval has been issued for all Improvements commenced.

#### **ARTICLE IV**

#### **THE CITY'S RIGHTS AND OBLIGATIONS**

- 4.1 <u>Notice of Deficiencies and Cure Period.</u> The City, in each instance, shall provide by written thirty (30) days' notice to Developer documentation of any and all deficiencies and shall provide Developer with an adequate time period in which to cure any deficiencies under this Agreement, which shall be enough time for Developer, its successors, or assigns, to cure the deficiency, taking into consideration applicable weather and related conditions. Subject to Force Majeure, as defined below, if following the expiration of the period set forth to cure any deficiencies, such deficiencies have not been cured, the City shall thereupon have the power and authority, but not the obligation, to take any of the following actions, in addition to any actions authorized under City ordinance and/or State law:
- (a) Demand that the non-performance, deficiency, or obligation be fulfilled, performed, or completed before Developer assigns its obligations to another owner of the Property and set a specific date to complete the performance, fulfill the obligation, or correct the deficiency. If Developer has not completed the performance, fulfilled the obligation, or corrected the deficiency by the date specified, the Developer shall not assign its obligations to a subsequent owner of the applicable portion of the Property to which the non-performance, deficiency, or obligation pertains and the City may proceed under Section 4.1(b).
- (b) Enter upon the Property or cause its agents or contractors to enter upon the Property and perform such obligation or take such corrective measures as reasonably found by the City Administration to be appropriate. In addition to any financial assurance given to ensure completion of the improvements, the additional costs and expense of making and financing such action by the City, including without limitation notices by the City, upon written documentation of such additional costs and expenses, and reasonable legal fees incurred by the City, plus an administrative fee in the amount of ten percent (10%) of the total of all such costs and expenses incurred, shall be paid by Developer within thirty (30) days of City's invoicing to Developer.
- (c) The City may initiate legal action for the enforcement of any of the provisions, requirements, and obligations set forth in the PUD Documents.
- (d) The City may issue a stop work order as to any or all aspects of then uncompleted portions of the Development to which the non-performance, deficiency, or obligation pertains detailing in writing the uncompleted portions of the Development, may deny the issuance of any requested building permit or certificate of occupancy within any part or all of the Development, regardless of whether the Developer is the named applicant for such permit or certificate of occupancy, and may suspend further inspections of any or all aspects of the Development until such issues have been satisfactorily resolved.
- (e) The City may, until as such non-performance, deficiency, or obligation has been cured: (i) initiate proceedings to rezone any part of the undeveloped portions of the Property in control of the Developer for which such non-performance, deficiency, or obligation pertains to its former zoning designation, or (ii) in the event that such non-performance, deficiency, or obligation is a material default of this Agreement by such Developer, terminate this Agreement

with respect to the portion of the Property to which the deficiency pertains, which termination shall only be effective if the deficiency remains uncured for a period of sixty (60) days from receipt by Developer of the notice of termination.

- 4.2 <u>Right of Entry</u>. At any time throughout the period of development and construction of any part of the Development, the City, its contractors, representatives, consultants, and agents, shall be permitted and are hereby granted authority to enter upon such portion of the Property being developed or constructed for the purpose of inspecting and/or completing the respective improvements, and for the purposes of inspecting for compliance with and enforcement of the PUD Documents.
- 4.3 <u>Deviations Permitted.</u> To the extent the PUD Documents deviate from or conflict with the City of Troy development standards, the Zoning Ordinance, or other City ordinances, or any amendments thereto, the PUD Documents shall control, and the City shall not require any additional approvals, waivers, or variances with respect to such deviations. All improvements constructed in accordance with the PUD Documents shall be deemed to be conforming under the Zoning Ordinance and in compliance with all ordinances of the City.
- 4.4 <u>Permits and Approvals</u>. Other than provided for in this Agreement or as required by Article 11 of the Zoning Ordinance, the City shall not require any additional land use related permits or approvals for the Development such as site plan approval under Article 8 of the Zoning Ordinance, special land use approval under Article 9 of the Zoning Ordinance, and variances under Article 15 of the Zoning Ordinance.

#### ARTICLE V

#### **MISCELLANEOUS PROVISIONS**

- 5.1 <u>Amendments</u>. This Agreement may not be modified, replaced, amended, or terminated without the prior written consent of the parties to this Agreement. Developer shall have the right to delegate its rights and obligations under this Agreement to a successor owner of all of the Property or to one or more successor owners of portions of the Property in accordance with this Agreement. Until the rights and responsibilities under this Agreement are transferred to a third party under this Agreement, Developer and the City shall be entitled to modify, replace, amend, or terminate this Agreement, without requiring the consent of any other person or entity whatsoever, regardless of whether such person has any interest in the Property, including mortgagees and others.
- 5.2 <u>Governing Law</u>. This Agreement shall be governed by and construed in accordance with the laws of the State of Michigan.
- 5.3 <u>Interpretation in the Event of Conflict</u>. If there is a conflict among the terms of any of the PUD Documents, such documents shall control in the following order: (a) this Agreement and the attached Exhibits which are made a part hereof; (b) Article 11 of the Zoning Ordinance and amendments, if any; (c) Final Development Plans, and (d) the Concept Development or Preliminary Development Plans. Where there is a question with regard to applicable regulations for a particular aspect of the Development, or with regard to clarification, interpretation, or

definition of terms or regulations, and there are no apparent express provisions of the PUD Documents which apply, the City in the reasonable exercise of its discretion shall determine the regulations of the City's Ordinances that are applicable, provided such determination is not inconsistent with the nature and intent of the PUD Documents or in violation of applicable Federal or Michigan law; and, provided that Developer, its successors or assigns, shall have the right to challenge or contest the determination of the City in any court having jurisdiction.

- General Interpretation and Findings. The terms of the PUD Documents, including 5.4 this Agreement, have been negotiated by the undersigned parties and such documentation represents the product of the joint efforts and agreement of the Developer and the City. Developer and the City fully accept and agree to the final terms, conditions, requirements, and obligations of the PUD Documents, and shall not be permitted in the future to claim that the effect of these PUD Documents results in an unreasonable limitation upon uses of all or a portion of the Property or claim that enforcement of any of the PUD Documents causes an inverse condemnation or taking of all or a portion of the Property. Furthermore, it is agreed that the improvements and undertakings set forth in the PUD Documents are necessary and roughly proportional to the burden imposed in order to ensure that services and facilities affected by the Development will be capable of accommodating increased services and facility loads, traffic, and storm water drainage caused by the development thereof, to protect the natural environment and conserve natural resources, to ensure compatibility with adjacent uses of land, to promote use of the Property in a socially and economically desirable manner, and to achieve other legitimate objectives authorized under the Michigan Zoning Enabling Act, MCL 125.3101, et seq. It is further agreed and acknowledged hereby that all of such improvements are substantially related to the burdens to be created by the Development contemplated hereby, and all such improvements and the requirements and regulations of the Development under the PUD Documents and the Zoning Ordinance, without exception, are clearly and substantially related to the legitimate interests in protecting the public health, safety and general welfare. All Exhibits attached to this Agreement are made a part hereof and are incorporated herein by reference.
- 5.5 <u>Counterparts</u>. This Agreement may be executed in multiple counterparts, each of which shall be deemed an original and all of which together shall constitute one and the same agreement. The signature of any party to any counterpart shall be deemed to be a signature to, and may be appended to, any other counterpart.
- 5.6 <u>Successors and Assigns</u>. This Agreement shall be binding on and shall inure to the benefit of the parties and their respective successors and assigns, as more particularly provided herein.
- 5.7 Force Majeure. Provided that the Developer is proceeding in good faith and with reasonable diligence to develop the Development in light of existing economic conditions, and is otherwise in compliance with this Agreement, the City will not unreasonably refuse to extend any time periods under this Agreement for a reasonable time to enable the Developer to complete the Development or any portion of it. Any delay or failure of Developer to perform its obligations in this Agreement shall be excused to the extent that it is caused by an unforeseen, unpreventable event or occurrence beyond its reasonable control such as, by way of example and not by way of limitation, an order of the State of Michigan, United States of America or local governmental body, an outbreak and/or the spread of an epidemic, pandemic (including, without limitation, COVID-19),

or other disease causing local, regional, or national emergency, acts of God, actions by governmental authority (whether valid or invalid), fires, floods, riot, natural disasters, wars, economic downturn, loss of funding, diminished funding, terroristic threat or action, or sabotage (collectively, a "Force Majeure"); provided the Developer promptly notifies the City of the event of a Force Majeure, the anticipated duration of the event of Force Majeure, and the steps taken to remedy the failure; and provided further that commercially reasonable efforts shall be used to minimize the extent and effect of the Force Majeure event.

5.8 <u>Effective Date</u>. For the purpose of confirming the rights, obligations, and restrictions in connection with the Development to be undertaken on the Property, once the City Council has enacted an Amendment to the Zoning Ordinance rezoning the Property to PUD as approved this Agreement, the effective date of the rezoning and this Agreement shall be the date on which City Council approves this Agreement (the "Effective Date"). After this Agreement granting rezoning is effective, the Planning Director of the City shall take what actions are necessary to correct the Zoning Map to show the rezoning of the Property, and this Agreement shall be binding upon the City and the Developer.

[Signatures appear on the following page]

#### **DEVELOPER:**

### LONG LAKE CROOKS DEVELOPMENT ASSOCIATES, L.L.C.,

a Michigan limited liability company

		5 1 5
	Ву:	Long Lake Crooks Development-MM, Inc., a Michigan corporation Its: Manager
		By:Anthony G. Antone Its: Vice-President
STATE OF MICHIGAN )		
COUNTY OF OAKLAND ) SS.		
by Anthony G. Antone, the Vice-Presider	nt of Lo ng Lake	me this day of, 2022, ong Lake Crooks Development-MM, Inc., a e Crooks Development Associates, L.L.C., a e Company.
		, Notary Public County, Michigan
		My Commission Expires:  Acting in the County of

		CITY:
		CITY OF TROY, a Michigan municipal corporation
		By: Ethan Baker
		Its: Mayor
		By:Aileen Dickson Its: City Clerk
STATE OF MICHIGAN	) ) SS.	
COUNTY OF OAKLAND)		
	Aileen Dickson	ed before me this day of, 2022, a, City Clerk of the City of Troy, a Michigan municipal
		, Notary Public County, Michigan
		My Commission Expires:
		Acting in the County of

#### COOPERATIVELY DRAFTED BY:

Tyler D. Tennent
Dawda Mann, PLC
Dawda Mann Building
39533 Woodward Avenue, Suite 200
Bloomfield Hills, Michigan 48304
AND
Allan T. Motzny
Assistant City Attorney
City of Troy
500 W. Big Beaver Road
Troy, Michigan 48084

WHEN RECORDED RETURN TO:

Aileen Dickson City Clerk City of Troy 500 W. Big Beaver Road Troy, MI 48084

INDEX OF EXHIBITS

**EXHIBIT A** - LEGAL DESCRIPTION OF PROPERTY

EXHIBIT B - CONCEPT DEVELOPMENT PLAN

#### EXHIBIT A

#### **LEGAL DESCRIPTION OF PROPERTY**

Land situated in the City of Troy, County of Oakland, and State of Michigan, being more particularly described as follows:

Part of the Southeast 1/4, Section 8, Town 2 North, Range 11 East, City of Troy, Oakland County, Michigan, beginning at point distant South 87 degrees 15 minutes 31 seconds West 90.00 feet and North 02 degrees 37 minutes 54 seconds West 75.00 feet from Southeast Section corner; thence South 87 degrees 15 minutes 31 seconds West 1328.70 feet along Northerly right of way line of Long Lake Road; thence North 02 degrees 30 minutes 26 seconds West 489.76 feet; thence along curve to right, radius 710.00 feet, chord bears North 11 degrees 45 minutes 00 seconds East 349.71 feet, distance of 353.35 feet; thence North 87 degrees 15 minutes 31 seconds East 1240.77 feet; thence South 02 degrees 37 minutes 54 seconds East 828.33 feet along Westerly right of way line of Crooks Road to beginning, EXCEPT that part lying Southerly and Southwesterly of line described as beginning at point distant South 87 degrees 15 minutes 31 seconds West 90 feet and North 02 degrees 37 minutes 54 seconds West 100 feet from Southeast Section corner; thence South 87 degrees 15 minutes 31 seconds West 934.70 feet; thence North 02 degrees 30 minutes 26 seconds West 10 feet; thence South 87 degrees 15 minutes 31 seconds West 364 feet; thence North 47 degrees 37 minutes 28 seconds West 43 feet to point of ending, also EXCEPT that part lying Easterly and Southeasterly of line described as beginning at point distant South 87 degrees 15 minutes 31 seconds West 130 feet and North 02 degrees 37 minutes 54 seconds West 100 feet from Southeast Section corner; thence North 42 degrees 18 minutes 48 seconds East 42.47 feet; thence North 02 degrees 37 minutes 54 seconds West 310 feet to the point of ending.

Tax Parcel No.: 20-08-477-001

# EXHIBIT B CONCEPT DEVELOPMENT PLAN

From: RICHARD KILLEWALD

To: Planning

Subject: Long Lake/Crooks Development

Date: Sunday, March 7, 2021 10:29:27 PM

#### Planning Commissioners,

My name is Rick Killewald. I am a 30+ year resident of north Troy. I am writing you with a concern after reading the Troy Times article regarding the proposed development at Long lake and Crooks roads.

North Troy has an enormous amount of building vacancies along the north Crooks road areas. It also has an unsightly demolition site, the old Northfield Hilton vacant land, to add to the glut of "for lease" signs; along with other newly constructed buildings seeking tenants. Have you drove by this area, (Crooks Road from Long Lake to Square Lake), lately? The vacant/for lease signs are staggering. Additionally, behind the newly constructed Panera building, Crooks and I75 exit, sit two large vacant office buildings. And now you want to put another hotel/office/retail development on the corner of Long Lake and Crooks. Are you serious? How many more vacant buildings do you want in this area? And a hotel? In this area of Troy? Last I checked, Double Tree Hotel is never over booked. Don't you have enough hotels at Big Beaver that you feel compelled to stick another one at the proposed sight? Why? Is the demand really there? Don't think so.

Planning Commissioners Jerry Rauch and Michael Hutson said it right in the Troy Times article. They are concerned about the <u>glut</u> of vacancies in the area. YES!! Will you other commissioners pay attention! Look for yourselves! We north Troy residents have to look at these "eye-sores" everyday.

Furthermore, is there a need to destroy this wooded parcel of land on the cited corner. Is it necessary to destroy every wooded parcel of land in Troy for more concrete vacant buildings? You are responsible to the City of Troy residents to do the right thing even if it means saying NO at this time to a developer.

Please recognize your responsibility to the city, and reconsider this proposed development!

Thank you,

Rick

From: Cindy D

To: Planning

Subject: PUD Project

**Date:** Tuesday, January 12, 2021 8:27:15 PM

#### Good Evening,

I love what Ms. Perakis proposed. I remember telling you back in 2016 that I like being able to walk to Starbucks from Northfield Pkwy. Our kids use to ride their bikes to get frozen yogurt. Make it a place to go for the already occupied offices and for the local neighborhoods.

When I saw their proposal I hated it. My neighbor disliked it. This is an opportunity to create something special and lasting.

Thank you,

Cindy Desmon Troy Resident From: Brent Savidant
To: Jackie Ferencz

Subject: FW: Please Preserve Our Green Spaces!

Date: Monday, March 1, 2021 4:13:06 PM

Please save in Public Input folder in Long Lake PUD folder.

----Original Message-----

From: Jackie Ferencz On Behalf Of Planning Sent: Monday, March 1, 2021 8:54 AM To: Brent Savidant <SavidantB@troymi.gov> Subject: FW: Please Preserve Our Green Spaces!

Jackie Ferencz

Administrative Assistant | City of Troy Planning Dept

O: 248.524.3364

----Original Message-----

From: C Angell <charangell1@gmail.com> Sent: Saturday, February 27, 2021 5:36 PM To: Planning <planning@troymi.gov> Subject: Please Preserve Our Green Spaces!

Hello,

Now, I see in the Troy Times that the proposed development on Crooks and Long Lake, which is in the area where I live, is being proposed as a "maximum flexibility" site.

I no longer see the Troy "City of Tree" signs - I suppose because we no longer are. Which is very sad.

We are losing all our green spaces, which made Troy a beautiful city, reduced noise and pollution.

I agree that we DO NOT NEED MORE BUILDINGS / PLAZA'S in our city.

We need to ensure that IF a site is developed, that developers set aside a green space and leave an area of trees in tact - otherwise, what will happen is Troy will have more ugly office buildings and plaza's with huge For Lease signs, that seem a permanent fixture, on the property. A fountain is not on par with green spaces / trees.

Please take a stand on protecting our green spaces and help protect our environment and beautiful city.

Charlene Angell 6660 Tree Knoll Dr Troy, MI 48098 Date: August 4, 2022

To: Planning Department

From: Laury Shah

1448 Brentwood Drive

Troy, MI 48098

Re: Long Lake & Crooks PUD- PUD-030

Dear Planning Department and City Council Members,

As a resident in Northfield Hills, my home sits on Northfield Parkway. I am very concerned about the maximum height variance the applicant seeks in this design proposal. The Flagstar Bank building that is on Corporate Drive, directly across from the 24- acre parcel in question, is a low-rise 4 story building. This building is hidden from my residential view due to trees that have grown tall over the years. So, I do not feel that the Flagstar bank is oppressive to me from my residence. If you travel west bound on Long Lake Road from Adams, you cannot visually see the top of the Flagstar bank buildings (starting at 1450 W Long Lake Rd) upon approach. Approaching west on Long Lake to Corporate Drive, I know that seeing tops of green trees and blue sky and clouds is so much more inviting to me in comparison to the oppressive feeling I would feel possibly with a 10-story building. Most of the surroundings from the parcel are residential neighborhoods. Therefore, I think the variance should not be approved and that the number of stories should not exceed 6 stories.

I respectfully want to ask, was the PEA tree reported impartially completed? I know PEA was hired by Kojaian and are working with the city of Troy with respect to allowable tree species, but I really would like to see more trees saved to cover the circumference of the parcel. I would request a thicker density of trees in the circumference of the area. I would like the tops of the trees to be higher than the buildings. This would provide a more peaceful and green space visually.

I understand the newer concept of mixed-use development with the possibility of having a positive effect on our social lives and better usage of space, but with this parcel's very close proximity to 1-75, it is going to be loud in that parcel. Especially, with the added proximity directly on a busy intersection (Crooks and Long Lake). From my home, just about 3000 (south) to 4000 feet (west) from the I-75 freeway, it can be very loud and it has gotten louder surprisingly from the newer "sound barriers" built along I-75.

Also, if we allow the variance of maximum building height, will the other many buildings on Corporate Drive and New King Street (currently very many listed for lease with open parking lots) be removed and rezoned for maximum height as well? I would not be in favor of that.

Lastly, I would like to request that a thorough written report of all valuable native plants be listed for public viewing and that the developer allows access to a responsible party to carefully retrieve these

native plants from this parcel before building commences. I know for a fact that a valuable native plant, Joe Pye weed (a valuable pollinator plant) and wild bergamot are on this parcel.

Thank you, Laury Shah