

Regular City Council Meeting

October 26, 2020

Agenda

7:30 p.m. **Call to Order**
Pledge of Allegiance
Roll Call
Approval of Minutes: October 14, 2020
Approval of Bills: None
Approval of Agenda
Consent Agenda- Cultural Arts Commission Appointment

Public Comment

Discussion- Downtown

Fire Chief Report
Police Chief Report

Plante Moran 2019-2020 Audit Presentation

I. Old Business

II. New Business

- 1. Purchase of Kaeser blower for wastewater treatment plant**
- 2. Recommended course of action for 390 S Lafayette St**
- 3. Rules and Procedures for holding electronic meetings**

III. Budget

IV. Manager's Report

V. Public Comment

VI. Council Comments

VII. Adjournment

Please see reverse side for rules of conduct for public comment at City Council meetings

City of South Lyon
Special City Council Meeting
October 14, 2020

Mayor Pelchat called the meeting to order at 5:00 p.m.
Mayor Pelchat led those present in the Pledge of Allegiance

Present: Mayor Pelchat, Councilmembers: Dilg, Kennedy, Kivell, Kurtzweil, Richards and Walton
Also, present: City Manager Zelenak, Attorney Hamameh and Clerk/Treasurer Deaton

MINUTES- September 28, 2020

Councilmember Kennedy stated on page 2 the word prepared should be changed to repaired.
Councilmember Kivell stated on page 7 we need to delete the word those.

CM 10-1-20 MOTION TO APPROVE MINUTES

Motion by Kennedy, supported by Kivell
Motion to approve the minutes as amended

VOTE: MOTION CARRIED UNANIMOUSLY

BILLS

CM 10-2-20 MOTION TO APPROVE BILLS

Motion by Kivell, supported by Walton
Motion to approve the bills as presented

VOTE: MOTION CARRIED UNANIMOUSLY

AGENDA

CM 10-3-20 MOTION TO APPROVE THE AGENDA

Motion by Kivell, supported by Kennedy
Motion to approve the agenda as presented

VOTE: MOTION CARRIED UNANIMOUSLY

CONSENT AGENDA

Councilmember Kivell stated he would like to remove item #2 and add to the regular agenda.
Councilmember Richards stated he would like to remove item #1 and add to the regular agenda.

CM 10-4-20 MOTION TO REMOVE ITEMS #1 AND #2 FROM THE CONSENT AGENDA

Motion by Kivell, supported by Walton
Motion to remove items #1 and #2 from the consent agenda and add to New Business

VOTE: MOTION CARRIED UNANIMOUSLY

PUBLIC COMMENT- None

OLD BUSINESS

NEW BUSINESS

1. DTE street lighting conversion agreement

City Manager Zelenak stated earlier this year Council approved a lighting agreement which afforded us the opportunity to work with DTE on replacement of lights in our community to LED to save on utility charges. We have an agreement to allow DTE to replace and remove existing equipment should it break

10-14-20

down or is damaged throughout the City with new equipment. He further stated the replacement poles will not match at first, but over time as they begin to be replaced, they will eventually match. City Manager Zelenak stated if the City desired us to match all at once, this would have to be a planned job and there would be a cost to the City. Councilmember Kivell asked if the City will be holding any liability for not meeting the IESNA design recommendation. Attorney Hamameh said she doesn't know why the City chose the design. She stated all communities have trouble with DTE and their agreements. They are very difficult to deal with and are not open to making any changes to their agreements. She then stated she and the City Manager spoke with MMRMA who asked for changes to be made as well, but DTE would not agree to any changes. Councilmember Richards stated on page 3 it says they may subcontract in whole or in part to sub-contractors. He further stated we have had some trouble with this before, we will not know who will be working on the poles, they could have criminal backgrounds. Attorney Hamameh stated you really don't know who from DTE would be working on them either.

CM 10-5-20 MOTION TO APPROVE LIGHTING CONVERSION AGREEMENT

Motion by Kennedy, supported by Dilg

Motion to approve DTE Lighting Master Agreement for municipal street lighting

VOTE:

MOTION CARRIED UNANIMOUSLY

2. Award of bid to remove and replace concrete on Liberty Street

City Manager Zelenak stated as part of our efforts to make road improvements, the City applied for and received a grant from Oakland County Local Road Improvement Matching Fund Program to improve Liberty Street between Washington and Pontiac Trail. He stated the two grants total \$32,265.00 with the required matching funds which will afford us the opportunity to make \$65,518.00 in concrete repairs this year. Councilmember Kurtzweil asked if all the money will come out of that account. She said if you take the \$65,518 and minus the \$32,265.00 and that will be the balance of that account. City Manager Zelenak stated that will be the amount from the Major Street Fund. After the project is completed, that is the number we will use and we will come back for a budget adjustment. Councilmember Kurtzweil stated the difference in the amounts is \$33,253.00 which is the amount coming out of this account number, not the total. City Manager Zelenak stated the grants will be accredited to revenues, but the expenditure will be the total amount coming out of the Major Street Fund, because you have the influx coming in as revenues for the grants, then whatever dollars we put in will come out as an expenditure. Councilmember Kurtzweil stated there is no money in that account. City Manager Zelenak stated he applied for the grant at the end of June, but we weren't didn't receive the grant until after July 1 and he applied for the other grant May 19th of 2019. He further stated we hoped to use the grant funds from 3 or 4 years to repair Liberty Street, but they said we had to spend the rest of last years dollars by the end of this year, so we are coupling 2 years of grant funds. Further discussion was held regarding the grants to be used on the repair on Liberty Street. Councilmember Richards stated he wanted to let everyone know there was a limestone base under that street the last time they did repairs. He further stated they are billing us for a base, but there could be a base under the concrete. He then stated there are other important areas that are sketched in lighter shades on the map. He asked if we know when we will have money in the budget for the other sections.

CM 10-6-20 MOTION TO APPROVE BID

Motion by Kurtzweil, supported by Walton

Motion to approve the award of the bid to remove and replace concrete on Liberty Street to GM & Sons of Whitmore Lake, MI in an amount not to exceed \$65,518.00 from account number 202-451-802-100

VOTE:

MOTION CARRIED UNANIMOUSLY

3. City of South Lyon State of Emergency

City Manager Zelenak stated we have a resolution declaring a State of Emergency due to the Covid 19. In light of the recent Supreme Court decision regarding the Governor's authority to declare a state of emergency, the uncertainty of the status of her Executive Orders and the various orders that were recently adopted by the State and County Officials, I am recommending the City declare a State of Emergency in order to authorize the Police Chief, the Mayor and/or the City Manager to take whatever emergency measures are necessary to address the Covi-19 public health crisis. Additionally, proposed legislation regarding amendments to the Open Meetings Act contemplate the requirement of a local emergency declaration. If this resolution is passed, we are hopeful that there will be no delay in the implementation of any authority conferred by the OMA or any other legislation.

CM 10-7-20 MOTION TO APPROVE RESOLUTION

Motion by Kivell, supported by Kennedy

Motion to approve the resolution declaring local State of Emergency to protect the peace, health, safety and general welfare of the residents

VOTE:

MOTION CARRIED UNANIMOUSLY

4. Planning Commission appointment

Councilmember Richards stated he is happy to have a new resident and someone interested in participating in government, and after looking through his resume, and he is sure Tyler Finnegan is very accomplished and competent person, but what qualifies him to be on the Planning Commission because he doesn't have any hands-on experience. Councilmember Richards stated he will vote no on this. Councilmember Kurtzweil stated she doesn't know this person, but she spent some time reviewing his resume and it is outstanding. Her personal opinion is if people want to volunteer their time, we will reap the benefits of the time he will spend on the commission. She stated she was on the planning commission and she had a background in construction and real estate so it came a little bit easy. That doesn't mean that someone with the aptitude and the ability to read and learn can't learn to adapt to planning commission issues. She further stated the City bears some responsibility to ensure some of the commissioners receive training through the MML. She stated she supports his appointment. Councilmember Kivell stated we have some very qualified people on the Planning Commission and the idea of having someone being more of the common man gives some balance that everything isn't going to be viewed in a technical way. He further stated he thinks he has a lot of potential and he supports his appointment.

CM 10-8-20 MOTION TO APPROVE NOMINATION

Motion by Kivell, supported by Kurtzweil

Motion to approve the nomination of Tyler Finnegan for the Planning Commission

ROLL CALL VOTE:

Kurtzweil- Yes

Richards- No

Kivell- Yes

Kennedy- Yes

Walton- Yes

Dilg- Yes

Pelchat- Yes

MOTION CARRIED

5. ZBA board appointment

Councilmember Kivell stated the ZBA board is a critical deliberative body that the decisions are typically long term, determining the look and feel and function of the environment their judgment influence. With
10-14-20

this being the case, it is very important to have a strong level of understanding of the role ZBA plays in the fair and equitable modifications of properties that are hoping to receive relief of non-compliant uses or amendments to those properties, and to understand what hardships warrant variances from the rules of ordinances regulating the use and physical attributes associated with the zoning classes. He further stated he applauds Mr. Hamade for his interest in serving the community and he suggests he fill any open seats Cultural Arts, Planning, Parks and Recreation or the Housing Commission, which may end up being a good starter. With that being said, he didn't see anything in his application that would lead him to believe that his understanding of zoning and the impact of those decisions would end up impacting our community which is why he cannot support the appointment. Councilmember Kennedy stated he agrees with Councilmember Kivell. He has had discussions with Mr. Hamade and discussing a particular ordinance and his position was that ordinances aren't necessary and people should be able to do anything they want on their property. He then stated that goes against the effort that goes into developing, applying and enforcing ordinances in the city for the benefit of the 12,000 residents. He further stated based on that type of discussion, he cannot support the appointment. Councilmember Kurtzweil stated zoning issues are important. She litigates issues such as easements and boundary lines and you always have to go to the ordinances and the issues that come before the ZBA affect neighbors and there are neighbor disputes are usually involved and it's important for law and order to be observed. Law and order are not just civil law and order but also law and order that regulates how we relate to our real estate. She further stated she is disturbed to learn that there is this nonchalant attitude of our enforcement issues related to our ordinances. That leads to other inferences that she could make, but she isn't going to put that on the record. The ordinances have to be enforced equally, and enforced all the time, not just enforced against those you don't like. We all have to play by the same rules.

CM 10-9-20 MOTION TO DENY THE APPOINTMENT TO THE ZBA

Motion by Kivell, supported by Kennedy

Motion to deny the appointment of Jim Hamade to the ZBA

VOTE:

MOTION CARRIED

PUBLIC COMMENT- None

ADJOURNMENT

CM 10-10-20 MOTION TO ADJOURN

Motion by Kurtzweil, supported by Walton

Motion to adjourn the meeting at 5:39 p.m.

VOTE:

MOTION CARRIED UNANIMOUSLY

VOTE:

MOTION CARRIED UNANIMOUSLY

Respectfully submitted,

Mayor Dan Pelchat

City Clerk/Treasurer Lisa Deaton

AGENDA NOTE

Consent Agenda

MEETING DATE: October 26, 2020

PERSON PLACING ITEM ON AGENDA: City Manager

AGENDA TOPIC: Cultural Arts Commission Appointee

EXPLANATION OF TOPIC: We have received a candidate questionnaire from two (2) people Amelia Yunker and Patricia Dombecki who would both like to be appointed to the Cultural Arts Commission.

MATERIALS ATTACHED AS SUPPORTING DOCUMENTS: City Candidate Questionnaires

POSSIBLE COURSES OF ACTION: Appoint or not appoint Amelia Yunker and Patricia Dombecki to the Cultural Arts Commission.

SUGGESTED MOTION: Motion by _____, supported by _____ to approve Mayor Dan Pelchat's nomination of Amelia Yunker and Patricia Dombecki to the Cultural Arts Commission.



CANDIDATE QUESTIONNAIRE

The City of South Lyon wishes to thank you for your interest in serving as a Volunteer Citizen Representative on a Board, Commission or Committee. Your Candidate Questionnaire will be kept on file and entered for consideration for posted openings on any Board, Commission or Committee that you expressed an interest in for a period of two years. Please feel free to submit an updated Candidate Questionnaire to the City Clerk at any time.

Please be advised that the information contained in this Questionnaire is not confidential, and will be reviewed by the Mayor, City Council and other appropriate personnel as vacancies or openings occur on the various Boards, Commissions and Committees. This Candidate Questionnaire may also be included in any City Council Meeting Packet which is published and made available for public inspection in print and on the Internet. Your address, phone numbers and email will not be published, even in the Meeting Packet.

Please be advised that even though you may submit an application to serve on a Board, Commission or Committee, it does not guarantee that you will be appointed to that Board, Commission or Committee.

BOARDS/COMMISSIONS/COMMITTEES ON WHICH YOU WANT TO SERVE (please check up to five applicable boxes; see attachment for descriptions):

Appointed by Mayor-Confirmed by City Council

- ☐ Planning Commission
- ☐ Zoning Board of Appeals
- ☐ Cable Commission
- ☒ Cultural Arts Commission
- ☐ Historical Commission
- ☐ Parks and Recreation Commission
- ☐ Downtown Development Authority
- ☐ Housing Commission
- ☐ Board of Ethics
- ☐ Other



NAME Amelia Yunker CITY OF SOUTH LYON RESIDENT FOR 1986-1996 YEARS

ADDRESS [REDACTED] MI ZIP 48188

PHONE (home) [REDACTED] PHONE (business or cell) [REDACTED]

EMAIL [REDACTED]

OCCUPATION: Librarian at Salem-South Lyon District Library

ARE YOU A CITIZEN OF THE UNITED STATES? ☒ YES ☐ NO

IS ANY MEMBER OF YOUR FAMILY ON ANOTHER BOARD OR COMMISSION? ☐ YES ☒ NO
IF SO, WHO? _____

INTERESTS/REASONS/QUALIFICATIONS: (Resume may be attached)

The library has worked collaboratively with the City and Cultural Arts Commission in the past and would like to encourage further collaborative

BOARDS/COMMISSIONS/COMMITTEES ON WHICH YOU HAVE SERVED (LIST MUNICIPALITIES AND DATES):

Several committees with the Michigan Library Association over the last 10 years; Advisor to the Hudson Preschool Parents (2012-2014 Hudson, OH)

ELECTIVE OFFICES THAT YOU HAVE HELD:

OTHER ORGANIZATIONS: (Ex. Homeowners Association, Volunteer Groups, PTA, etc...)

Past memberships with Kiwanis and Jaycees, current member of the Society for Creative Anachronism

ADDITIONAL INFORMATION:

Experience with grant writing; Secured NASA display for summer 2019; Proficient in event planning

Signature Amelia Yunker Date 10/6/2020

—◦ AMELIA YUNKER ◦—

✉ [REDACTED]

EDUCATION

Masters in Library Science

Wayne State University
Completed two year degree in one year

Graduate Certificate Nonprofit Management

Eastern Michigan University
Coursework in marketing, strategic planning, and fundraising
Anticipated MPA May 2021

Bachelors of Science

Eastern Michigan University
Major: English
Minors: Management and Literature

EXPERIENCE

Department Head

Salem-South Lyon District Library
July 2018 - present
Hudson Library and Historical Society, OH
July 2012 - Dec. 2014

Librarian

Canton Public Library
Dec. 2014 - Feb. 2018
Ypsilanti District Library
April 2010 - July 2012
Farmington Community Library
August 2007 - July 2012

Graduate Assistant

Eastern Michigan University Halle Library
May 2018 - April 2020

Retail Experience

Multiple Businesses
cash register and customer service
2003 - 2010

RELEVANT SKILLS

- Strong customer service background forming relationships with individuals and organizations
- Recruit, train and supervise new staff members and volunteers
- Experience with public and academic circulation and reference roles
- Maintain confidential records and analyze data
- Meticulous record keeping and file management
- Competent with technology - Microsoft Office, Google Suite, task specific systems such as Polaris and CARL, basic HTML
- Expert communicator, with experience presenting to groups, Board of Trustees, and peers
- Develop and manage schedules, evaluations, timesheets & payroll
- Actively pursues and maintains partnerships
- Involved committee member, contributor, dependable & consistent in handling responsibilities
- Connects with all age groups in a variety of settings including outreach
- Desire and proven ability to inspire enthusiasm in others
- Quickly grasps new concepts, processes and training and eager to learn and discover opportunities
- Create and edit promotional and professional documents using various formats and products
- Manage and market through social networks, blogs, newsletters, and print and video media
- Design, budget, plan, and execute community events and programs
- Coordinate grant applications and execution
- Familiar with cash register, credit cards, and retail transactions

ACTIVITIES AND ACHIEVEMENTS

- 75 Hours of Basic Supervisory and Leadership Skills, Maplewood Career Center, Ravenna, Ohio
- New Supervisors' Academy, Northeast Ohio Regional Library System
- Certified Nonprofit Professional from Nonprofit Leadership Alliance
- Committee member -- All Staff Day, staff culture, advocacy, and strategic planning
- Advisory Board for Hudson Preschool Parents (2012-2014)
- Member of the MLK Committee (2009 - 2012)
- Member of Canton Kiwanis (2015)
- Permanent Professional Librarian Certification (Library of Michigan)
- Alumnae of Dale Carnegie Training Course
- Alumnae of Omega Phi Alpha Service Organization



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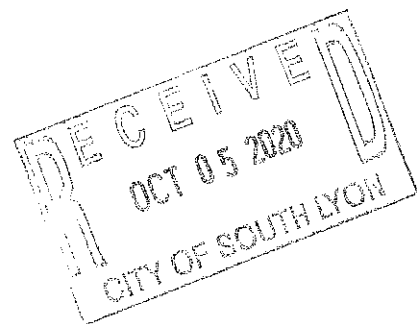
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- ☐ Cable Commission
- ☒ Cultural Arts Commission
- ☐ Historical Commission
- ☐ Parks and Recreation Commission
- ☐ Downtown Development Authority
- ☐ Housing Commission
- ☐ Board of Ethics
- ☐ Other





NAME Patricia Dombecki CITY OF SOUTH LYON RESIDENT FOR YEARS

ADDRESS [REDACTED] South Lyon ZIP 48178

PHONE (home) [REDACTED] PHONE (business or cell)

EMAIL [REDACTED]

OCCUPATION: retired lunch lady SLCS, guest teacher, alternative ed teacher BAS

ARE YOU A CITIZEN OF THE UNITED STATES? ☒ YES ☐ NO

IS ANY MEMBER OF YOUR FAMILY ON ANOTHER BOARD OR COMMISSION? ☐ YES ☒ NO

IF SO, WHO? retired lunch lady, guest teacher + alternative ed teacher

INTERESTS/REASONS/QUALIFICATIONS: (Resume may be attached)

Art in Community

BOARDS/COMMISSIONS/COMMITTEES ON WHICH YOU HAVE SERVED (LIST MUNICIPALITIES AND DATES):

president for SL Fine Arts Society 2008-2014

ELECTIVE OFFICES THAT YOU HAVE HELD:

President SLFAS

OTHER ORGANIZATIONS: (Ex. Homeowners Association, Volunteer Groups, PTA, etc...)

ADDITIONAL INFORMATION:

Signature Patricia M. Dombecki Date 10-5-2020

AGENDA NOTE

New Business: Item # 1

MEETING DATE: October 26, 2020

PERSON PLACING ITEM ON AGENDA: Douglas Varney, Director, Utilities & DPW

AGENDA TOPIC: Purchase of a new Variable Frequency Drive for the #3 Kaeser Blower at the wastewater treatment facility that modulates the speed for air flow to the aeration basin to maintain a proper dissolved oxygen level.

EXPLANATION OF TOPIC: The wastewater treatment facility needs to replace a failed Variable Frequency Drive for Blower #3. This is a scheduled purchase for this year's budget. This expenditure can be purchased out of the Capital Outlay account **592.557.970** with the total amount being \$13,007.00. Kerr Pump and Supply has offered to utilize a like replacement and is including with the startup of the new VFD an 18 month warranty.

MATERIALS ATTACHED AS SUPPORTING DOCUMENTS:

- 1.1 Bid Tab Sheet (5 total competitive bids)
- 1.2 Image of Current VFD in electrical enclosure

POSSIBLE COURSES OF ACTION: Approve/deny the purchase for removal and installation of a new Variable Frequency Drive from Kerr Pump and Supply for the wastewater treatment plant's aeration treatment to allow for speed control of the #3 Kaeser Blower.

SUGGESTED MOTION: : Motion by _____, supported by _____ to approve the purchase and installation of a new Variable Frequency Drive for Blower #3 at the wastewater treatment facility for \$13,007.00 under line item **592.557.970**.

ATTACHMENT 1.1 - BID SHEET FOR COUNCIL REVIEW

ITEM PLACED ON AGENDA: Variable Frequency Drive: Kaeser Blower #3 for Aeration Basin

COMPANY : UTILITIES INSTRUMENTATION SERVICE

BID CONTACT : KEN WESLEY

BID AMMOUNT: \$25,625

DETAILS : DEMO/REMOVE FAILED VFD.REUSE EXISTING ENCLOSURE. INSTALL AND STARTUP OF NEW ALLEN BRADLEY POWER FLEX753 480VAC / PROGRAMMING NEW VFD

COMPANY : HECO, INC INDUSTRIAL SERVICE GROUP

BID CONTACT : PHILIP WHITT / (269)207-3353

BID AMMOUNT: \$15,233.00

DETAILS : DEMO/REMOVE INSTALL ABB 125hp ACS580 VFD CONTROL W/ ACCESSORIES LINE LOAD REACTOR AND LABOR. NOT INCLUDING MISC HARDWARE/WIRE AND SHIPPING AND HANDLING CHARGES

COMPANY : D. F. BEST COMPANY, ELECTRICAL CONSTRUCTION SERVICES

BID CONTACT : DAVID F. BEST

BID AMMOUNT: \$23,080.00

DETAILS : DEMO/REMOVE INSTALL ABB 125HP ACQ580 VFD CONTROL W/ ACCESSORIES.NOT INCLUDED ARE EXTRA WRING IF NEEDED. MOD TO EXISTING FEEDERS OR CIRCUIT BREAKERS OR SCADA PROGRAMMING.

COMPANY : KERR PUMP AND SUPPLY

BID CONTACT : JAKE ORSINI / (248) 961-2761

BID AMMOUNT: \$13,007.00

DETAILS : DEMO/REMOVE INSTALL UNIT REPLACEMENT WITH LIKE UNIT. SQUARE D 630 PROCESS DRIVE RATED FOR 125HP. NEW LINE/LOAD REACTOR AND OUTPUT FILTER. (18mos warranty and start-up)

COMPANY : VERONA INDUSTRIAL EQUIPMENT

BID CONTACT : MATTHEW KERBAWY / (517) 375-9330

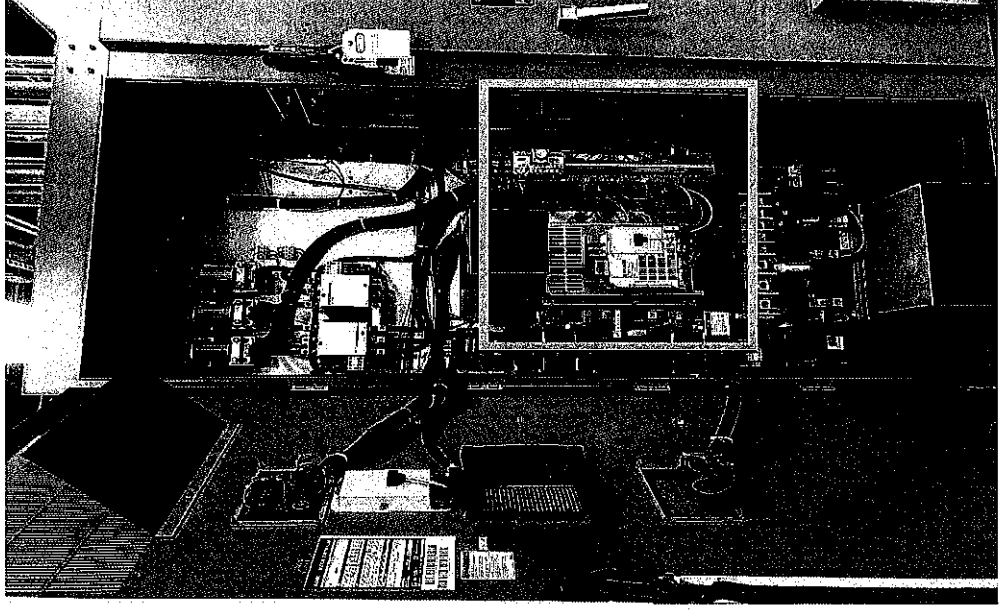
BID AMMOUNT: \$20,382.00

DETAILS : REMOVE ALL CABINET COMPONENTS. RETROFIT CABINET FOR NEW EATON VFD VARIABLE FREQUENCY DRIVE AD COMPONENTS BY PARKWAY ELECTRIC. VFD PROGRAMMING AND DEBUGGING BY VIE.

ATTACHMENT 1.2 (IMAGES OF THE ITEM TO BE REPLACED)

Variable Frequency Drive Enclosure – Blower #3

Area highlighted in the yellow box shows the component that is failed.



AGENDA NOTE

New Business 2

MEETING DATE: October 26, 2020

PERSON PLACING ITEM ON AGENDA: Nate Mack, Director, DDA/Economic Development

AGENDA TOPIC: Recommended Course of Action for 390 S. Lafayette St.

EXPLANATION OF TOPIC: At the regular DDA Board of Directors meeting on October 8th, the board discussed the findings of the soil borings for the property located at 390 S. Lafayette Street. Since the last City Council meeting, staff has been provided additional information from G2 Consulting Group. The new information is a rough estimate of the cost to remove the peat and dewater the soils at the parcel, which is just over \$1 million. This estimate was provided by a builder at the request of G2 Consulting Group. In light of this information as well as the recommendation from the DDA Economic Vitality committee, the DDA Board of Directors made a motion to recommend the city council use 390 S. Lafayette Street for either a gateway/greenspace, parking, or receive requests for proposals. The DDA Board is requesting feedback from the city council with their preferred course of action for this property within 90 days.

MATERIALS ATTACHED AS SUPPORTING DOCUMENTS: G2 Soil Borings Report, Estimate of cost for soil dewatering and peat removal.

POSSIBLE COURSES OF ACTION: Provide a recommendation on City Council's preferred course of action for the parcel. Direct staff to explore potential options for the development of the property.

SUGGESTED MOTION: Motion by _____, supported by _____ to provide a preferred course of action to the Downtown Development Authority Board of Directors for the parcel located at 390 South Lafayette Street.

10/26/20



Report on Preliminary Geotechnical
Investigation

**Proposed Commercial
Development
390 S. Lafayette Street
South Lyon, Michigan**

Latitude: 42.458108° N
Longitude: 83.651785° W

Prepared for:

City of South Lyon
335 S. Warren Street
South Lyon, Michigan 48178

G2 Project No. 200233
September 23, 2020

g2consultinggroup.com

Headquarters	1866 Woodslee St	Troy, MI 48063	P 248.680.0400	F 248.680.9745
Ann Arbor	1350 Eisenhower Pl	Ann Arbor, MI 48108	P 734.390.9330	F 734.390.9331
Chicagoland	1186 Heather Dr	Lake Zurich, IL 60047	P 847.353.8740	F 847.353.8742



**CONSULTING
GROUP**

September 23, 2020

Mr. Paul Zelenak
City Manager
City of South Lyon
335 S. Warren Street
South Lyon, Michigan 48178

Re: Report of Preliminary Geotechnical Investigation
Proposed Commercial Development
390 S. Lafayette Street
South Lyon, Michigan
G2 Project No. 200233

Dear Mr. Zelenak,

In accordance with your request, we have completed the preliminary geotechnical investigation for a proposed commercial development to be constructed at 390 S. Lafayette Street within the City of South Lyon. This report presents the results of our observations and analyses and our recommendations for foundation design and construction considerations as they relate to the geotechnical conditions at the proposed development.

As always, we appreciate the opportunity to be of service to the City of South Lyon on this project and look forward to discussing the recommendations presented. In the meantime, if you have any questions regarding this report or any other matter pertaining to the project, please let us know.

Sincerely,

G2 Consulting Group, LLC

Jeffrey M. Hayball, P.E.
Project Engineer

JMH/NJHT/ljv

Enclosures

Noel J. Hargrave-Thomas, P.E.
Principal

g2consultinggroup.com

Headquarters	1866 Woodlee St	Troy, MI 48063	P 248.680.0400	F 248.680.9745
Ann Arbor	1350 Eisenhower Pl	Ann Arbor, MI 48108	P 734.390.9330	F 734.390.9331
Chicagoland	1186 Heather Dr	Lake Zurich, IL 60047	P 847.353.8740	F 847.353.8742

EXECUTIVE SUMMARY

The project consists of evaluation of the feasibility to develop the existing property located at 390 S. Lafayette Street within the City of South Lyon. The proposed site is a 100 foot by 60 foot parcel located at the northwest corner of S. Lafayette Street and W. McHattie Street. It is our understanding the city desires to develop the property into a two-story, slab-on-grade structure with associated parking and utilities. No grading plan or loading conditions were available upon completion of this proposal. However, we assume final grades will be near or at existing grades and column loads will range from 50 to 100 kips and wall loads range from 2 to 4 kips per foot.

Approximately 4 inches of topsoil is present at the ground surface of boring B-2. Granular fill soils, consisting of medium compact gravelly sand and sand, are present at the ground surface of boring B-1 and underlie the topsoil within boring B-2 and extend to depths ranging from 3 to 4 feet below grade. Very loose peat underlies the granular fill soils within borings B-1 and B-2, extending to depths of 7 and 9-1/2 feet, respectively. Native granular soils, consisting of very loose to medium compact sand, gravelly sand, and sandy gravel, are present below the peat and extend to depths ranging from 24 to 25 feet below existing grades. Native medium to very stiff silty clay underlies the upper native granular soils and extends to an approximate depth of 37 feet. Granular soils, consisting of loose to medium compact sand, sandy silt, and clayey sand, are present below the native silty clay and extend to depths ranging from 52 to 57 feet. Native stiff clayey silt underlies the native granular soils within boring B-1 and extends to the explored depth of 60 feet. Very compact gravelly sand is present below an approximate depth of 58 feet within boring B-2 and extends to the explored depth of 60 feet. Groundwater was observed during drilling operations within the borings B-1 and B-2 at depths of 7 feet and 4 feet, respectively. Upon completion of drilling operations, groundwater was observed within borings B-1 and B-2 at depths of 7 feet and 7-1/2 feet, respectively.

The existing peat is not suitable for support of foundations or floor slabs. Therefore, options for constructing the desired two-story, slab-on-grade, office building consist of removing and replacing the peat with engineered fill or supported the structure on a deep foundation system. Dewatering the site, which will be required to remove the existing peat soils, may induce settlement of any adjacent roadways, parking lots, and commercial buildings supported on the compressible peat soils. All construction options to build the proposed building are expensive relative to conventional construction operations. Therefore, we recommend the small parcel be utilized as public parking, where grades are generally unchanged. Long term pavement distress should be anticipated at an accelerated rate due to the underlying peat, therefore we recommend a pavement maintenance program be budgeted for the design life of the new pavement.

If the project is not limited by budget constraints, then given the present of peat and the generally high groundwater table, we recommend the proposed building and floor slab be constructed on a deep foundation system. We recommend site grades not be raised, which may induce settlement of the existing peat soils.

Based on the results of our analyses, we recommend a minimum new pavement section consisting of 2 inches of MDOT 5E1 bituminous concrete wearing course supported by 2 inches of MDOT 4E1 bituminous concrete leveling course, supported on a minimum of 8 inches of MDOT 21AA dense graded aggregate base.

This summary is not to be considered separate from the entire text of this report, with all the conclusions and qualifications mentioned herein. Details of our analysis and recommendations are discussed in the following sections and in the Appendix of this report.

PROJECT DESCRIPTION

The project consists of evaluation of the feasibility to develop the existing property located at 390 S. Lafayette Street within the City of South Lyon. The proposed site is a 100 foot by 60 foot parcel located at the northwest corner of S. Lafayette Street and W. McHattie Street. It is our understanding the city desires to develop the property into a two-story, slab-on-grade structure with associated parking and utilities. No grading plan or loading conditions were available at the time of this report. However, we assume the final grades will be near or at existing grades and column loads will range from 50 to 100 kips and wall loads range from 2 to 4 kips per foot.

The purpose of our investigation is to determine and evaluate the general subsurface conditions at the site and develop preliminary recommendations for site development.

SCOPE OF SERVICES

The field operations, laboratory testing, and engineering report preparation were performed under direction and supervision of a licensed professional engineer. Our services were performed according to generally accepted standards and procedures in the practice of geotechnical engineering in this area. Our scope of services for this project is as follows:

1. We drilled a total of two (2) soil borings, B-1 and B-2, within the project site extending to a depth of 60 feet each. Soil boring B-1 was performed within the western half of the site and soil boring B-2 was drilled within the eastern half of the site.
2. We performed laboratory testing on samples obtained from the soil borings. Laboratory testing included visual engineering classification, grain size distribution, organic matter content (loss-on-ignition), moisture content, dry density, and unconfined compressive strength determinations.
3. We prepared this engineering report which includes our evaluation of the subsurface conditions at the site and our recommendations for new foundation construction and other construction considerations that may impact the proposed development.

FIELD OPERATIONS

G2 Consulting Group, LLC (G2), selected the number, depth, and location of the soil borings. The soil borings were located in the field by a G2 representative by use of GPS assisted mobile technology in conjunction with conventional taping methods. The approximate soil boring locations are presented on the Soil Boring Location Plan, Plate No. 1. Groundwater surface elevations were not available upon completion of this report. We recommend the boring locations are surveyed by a professional civil engineer in order to assign elevations to the soil boring profiles.

Soil borings were drilled using a truck-mounted rotary drilling rig. Continuous flight, 2-1/4 inch inside diameter hollow-stem augers were used to advance the boreholes to the desired depth of 60 feet. Soil samples were obtained within the soil borings at regular 2-1/2-foot intervals within the upper 10 feet and at intervals of 5 feet thereafter. The samples were obtained by the Standard Penetration Test (SPT) method (ASTM D1586) which involves driving a 2-inch outside diameter split-spoon sampler into the soil with a 140-lb weight falling 30 inches. The sampler is generally driven in three successive 6-inch increments with the number of blows for each increment recorded. The number of blows required to advance the sample the last 12 inches is termed the Standard Penetration Resistance (N-value). The blow counts for each 6-inch increment and the resulting N-value are presented on the individual soil boring logs.

Soil samples were placed in sealed containers in the field and brought to the laboratory for testing and classification. During the drilling operations, the drilling crew maintained logs of the encountered subsurface conditions, including changes in stratigraphy and observed groundwater levels to be used in conjunction with our analysis of the subsurface conditions. The final soil boring logs are based on the

field logs and laboratory soil classification and testing. After completion of boring operations, the boreholes were backfilled with excavated soil.

LABORATORY TESTING

Representative soil samples were subjected to laboratory testing to determine soil parameters pertinent to foundation and pavement design and site preparation. An experienced geotechnical engineer classified the samples in general conformance with the Unified Soil Classification System.

Laboratory testing included natural moisture content, dry density, organic matter content (loss-on-ignition), and unconfined compressive strength determinations. Grain size distribution was determined in general conformance with ASTM C 136 method of testing. The organic matter content of representative samples was determined in accordance with ASTM Test Method D 2974, "Standard Test Methods for Moisture, Ash, and Organic Matter of Peat and Other Organic Soils". The unconfined compressive strengths were determined by ASTM Test Method D2166 and using a spring-loaded hand penetrometer. Per ASTM D2166, the unconfined compressive strength of cohesive soils is determined by axially loading a small cylindrical soil sample under a slow rate of strain. The unconfined compressive strength is defined as the maximum stress applied to the soil sample before shear failure. If shear failure does not occur prior to a total strain of 15 percent, the unconfined compressive strength is defined as the stress at a strain of 15 percent. The hand penetrometer estimates the unconfined compressive strength to a maximum of 4-1/2 tons per square foot (tsf) by measuring the resistance of the soil sample to the penetration of a calibrated spring-loaded cylinder.

The results of the moisture content, organic matter content, dry density, and unconfined compressive strength laboratory tests are indicated on the soil boring logs at the depths the samples were obtained. Unconfined Compressive Strength Test are shown graphically on Figure No. 3 within the Appendix. The grain size analyses are presented in the Appendix as Grain Size Distribution, Figure No. 4. We will hold the soil samples for 60 days from the date of this report. If you would like the samples, please let us know.

SITE CONDITIONS

The subject property is located at 390 S. Lafayette Street within the City of South Lyon, Oakland County, Michigan. The proposed site is a 100 feet by 60 feet parcel located at the northwest corner of S. Lafayette Street and W. McHattie Street. The site is currently covered with grass and bituminous concrete pavements and is relatively flat. Surrounding properties consist of commercial developments, consisting of parking lots and single-story buildings.

SUBSURFACE CONDITIONS

Approximately 4 inches of topsoil are present at the ground surface of boring B-2. Granular fill soils, consisting of gravelly sand and sand, are present at the ground surface of boring B-1 and underlie the topsoil within boring B-2 and extend to depths ranging from 3 to 4 feet below grade. Peat underlies the granular fill soils within borings B-1 and B-2, extending to depths of 7 and 9-1/2 feet, respectively. Native granular soils, consisting of sand, gravelly sand, and sandy gravel, are present below the peat and extend to depths ranging from 24 to 25 feet below existing grades. Native silty clay underlies the upper native granular soils and extends to an approximate depth of 37 feet. Granular soils, consisting of sand, sandy silt, clayey sand, and gravelly sand, are present below the native silty clay and extend to an approximate depth of 52 feet within boring B-1 and the explored depth of 60 feet within boring B-2. Native clayey silt underlies the native granular soils within boring B-1 and extends to the explored depth of 60 feet.

The granular fill soils are medium compact with Standard Penetration Test (SPT) N-values ranging from 16 to 22 blows per foot (bpf). The peat is very loose in compactness with SPT N-values ranging from 1 to 3 bpf, moisture contents ranging from 73 to 154 percent, and organic matter contents ranging from

28.2 to 52.8 percent. The native granular soils are generally very loose to medium compact with SPT N-values ranging from 4 to 17 bpf. However, the gravelly sand within boring B-2 below 58 feet is very compact with a SPT N-value of 58 bpf. The native cohesive soils are medium to very stiff in consistency with natural moisture contents ranging from 11 to 18 percent, dry densities ranging from 131 to 134 pound per cubic foot (pcf), and unconfined compressive strengths ranging from 1,930 to 6,860 pounds per square foot (psf).

The stratification depths shown on the soil boring logs represent the soil conditions at the boring locations. Variations may occur between borings. Additionally, the stratigraphic lines represent the approximate boundaries between soil types. The transition may be more gradual than what is shown. We have prepared the boring logs on the basis of laboratory classification and testing as well as field logs of the soils encountered.

The Soil Boring Location Plan, Plate No. 1, Soil Boring Logs, Figure Nos. 1 through 3, Unconfined Compressive Strength Test, Figure No. 4, and Soil Boring Profile Sheet, Figure No. 5, are presented in the Appendix. The soil profiles described within this report are generalized descriptions of the soil conditions at the boring locations. General notes defining the nomenclature used on the boring logs and elsewhere in this report are presented on Figure No. 6.

GROUNDWATER CONDITIONS

Groundwater observations were made during and upon completion of drilling operations within the soil borings. Groundwater was observed during drilling operations within the borings B-1 and B-2 at depths of 7 feet and 4 feet, respectively. Upon completion of drilling operations, groundwater was observed within borings B-1 and B-2 at depths of 7 feet and 7-1/2 feet, respectively. It should be noted the boreholes collapsed at depths ranging from 7-1/2 and 8 feet upon removal of augers. Fluctuations in perched and long-term groundwater levels should be anticipated due to seasonal variations and following periods of prolonged precipitation.

OBSERVATIONS AND RECOMMENDATIONS

The purpose of this preliminary geotechnical investigation is to determine the feasibility of developing the existing property. It is desired to construct a two-story, slab-on-grade office building. However, peat was encountered within the soil borings at depths ranging from 3 to 4 feet and extending to depths ranging from 7 to 9-1/2 feet. In addition, groundwater was encountered at depths ranging from 4 to 7 feet during drilling operations.

The existing peat is not suitable for support of foundations or floor slabs. Therefore, options for constructing the desired two-story, slab-on-grade, office building consist of removing and replacing the peat with engineered fill or supporting the structure on a deep foundation system. Dewatering the site, which will be required to remove the existing peat soils, may induce settlement of any adjacent roadways, parking lots, and commercial buildings supported on the compressible peat soils. All construction options to build the proposed building are expensive relative to conventional construction operations. Therefore, we recommend the small parcel be utilized as public parking, where grades are generally unchanged. Long term pavement distress should be anticipated at an accelerated rate due to the underlying peat, therefore we recommend a pavement maintenance program be budgeted for the design life of the new pavement.

If the project is not limited by budget constraints, then given the present of peat and the generally high groundwater table, we recommend the proposed building and floor slab be constructed on a deep foundation system. We recommend site grades not be raised, which may induce settlement of the existing peat soils.

NEW PAVEMENT RECOMMENDATIONS

General

For new pavement construction, we recommend stripping the site of topsoil and bituminous concrete then cutting down the exposed subgrade to the proposed subgrade elevation. The exposed subgrade is anticipated to consist of granular fill soils. The subgrade should also be graded to promote effective drainage. Once a rough grade has been achieved, the subgrade should be evaluated for stability. We recommend proof compacting the granular subgrade with a smooth drum roller, making a minimum of 10 passes across the subgrade in perpendicular directions. However, we recommend the vibratory setting of the smooth drum roller be turned off within 25 feet of the adjacent building.

Subgrade undercuts, if required, should be evaluated by a qualified engineering technician to determine if subgrade stabilization is necessary. We recommend that undercut excavations, where required, be backfilled with MDOT 21AA dense graded aggregate base placed in an engineered manner. Lift thicknesses should not exceed 9 inches. All engineered fill should be compacted to a density of at least 95 percent of the maximum density determined by the Modified Proctor (ASTM D 1557) method of testing. All engineered fill material should be placed and compacted at approximately the optimum moisture content. Frozen material should not be used as fill, nor should fill be placed on a frozen subgrade.

Pavement Design

We performed pavement design analyses in accordance with the "AASHTO Guide for Design of Pavement Structures". The subgrade soils will generally consist of granular fill overlaying peat. Based on the existing subgrade soils, we have provided design pavement sections based on an effective subgrade resilient modulus of 5,000 pounds per square inch (psi).

It is our understanding the traffic is primarily cars with the occasional delivery trucks. For evaluation purposes, we have designed the pavement section on an estimated of 50,000 18-kip equivalent single-axle loads (ESALs) over a 20-year design life. For evaluation purposes of the reconstruction, we have utilized a serviceability loss of 2.0, a standard deviation of 0.49 for flexible pavements, and a reliability factor of 0.95. If any actual traffic volume information becomes available, G2 Consulting Group should be notified so we can reevaluate our recommendations.

Based on the results of our analyses, we recommend a minimum new pavement section consisting of 2 inches of MDOT 5E1 bituminous concrete wearing course supported by 2 inches of MDOT 4E1 bituminous concrete leveling course, supported on a minimum of 8 inches of MDOT 21AA dense graded aggregate base.

All pavement materials are specified within the 2012 Standard Specifications for Construction from the Michigan Department of Transportation. The aggregate materials for the subbase are described in Section 902. The bituminous pavement materials are described in Section 501 and can be assigned a structural coefficient number of 0.42. Any imported MDOT 21AA material can be assigned a structural coefficient number of 0.14.

Pavement Drainage and Maintenance

The pavement and subgrade should be properly sloped to promote effective surface and subsurface drainage and prevent water from ponding. We also recommend pavement subbase materials consist of non-frost-susceptible aggregates where possible. Regular timely maintenance should be performed on the bituminous pavement to reduce the potential deterioration associated with moisture infiltration through surface cracks. The owner should be prepared to seal the cracks with a hot-applied elastic crack

filler as soon as possible after cracking develops and as often as necessary to block the passage of water to the subgrade soils.

DEEP FOUNDATION RECOMMENDATIONS

We recommend a deep foundation system consist of either auger cast piles or triple flight helical piles to support the proposed building and floor slab. We anticipate an auger cast pile extending into the stiff to very stiff silty clay encountered within the soil borings at depths between 25 and 37 feet below existing grades will provide an allowable bearing capacity of 50 kips per 12-inch diameter pile. Alternatively, a triple flight helical anchor deep foundation system utilizing a 12-inch, 10-inch, and 8-inch helix will provide an allowable bearing capacity of 10 kips per pile bearing at the same depth as the auger cast piles. Once the proposed building layout and loading conditions are determined, we recommend a supplemental geotechnical investigation be performed to confirm our preliminary findings and recommendations. We can provide different pile lengths for different pile capacities if required.

If final grades are raised, G2 should be notified, as an additional downdrag load should be applied to the allowable bearing capacities of the deep foundations system.

We recommend a compression load test be performed prior to installation of production piles. The load test shall follow ASTM D1143 - Standard Test Methods for Deep Foundations Under Static Axial Compressive Load. The test pile shall be installed in a manner that matches the final production piles, utilizing the same contractor and equipment.

Piles should have a minimum center-to-center spacing of 3 times their maximum diameter to avoid any reduction in pile capacity due to group action. Once the pile installation operations are complete, grade beams and/or pier caps will be required to transfer the building loads to the foundation system. Exterior grade beams and pier caps must extend to a minimum depth of 3-1/2 feet below finished grade for protection from frost penetration.

We recommend a qualified G2 field representative or engineer be present on site during foundation excavation operations in order to verify the soils are consistent with that which was observed during our geotechnical exploration or to verify driven pile capacity during pile driving operations.

Additionally, the G2 representative can verify the foundation elements have been constructed in accordance with project plans and specifications. If the recommendations outlined in this report are adhered to, total and differential settlements for the completed structure should be within 1 inch and 1/2 inch, respectively. We expect settlements of these magnitudes are within tolerable limits for the type of structure proposed. We recommend all foundations be suitably reinforced to minimize the effects of differential settlements associated with local variations in subsoil conditions.

FLOOR SLAB RECOMMENDATIONS

The existing peat is not suitable for support of the proposed floor slab. Therefore, we recommend the floor slab be structurally supported and incorporated into the deep foundation system. We recommend that at least 4 inches of pea gravel or coarse sand be placed between the subgrade and the bottom of the floor slab for use as a capillary break to reduce moisture transmission through the concrete floors and to reduce the potential for concrete curling. If moisture sensitive floor coverings are planned, or if greater protection against vapor transmission is desired, a vapor barrier, consisting of at least 10-mil plastic sheeting, may be placed over the capillary break layer beneath floor slabs.

CONSTRUCTION CONSIDERATIONS

Care should always be exercised when excavating near existing roadways, structures, or utilities to avoid undermining. In no case should excavations extend below the level of adjacent foundations and utilities unless underpinning is planned.

We anticipate excavations for grade beams and pile caps will extend to a minimum of 3-1/2 feet below the proposed finish grade elevations. In general, we anticipate caving and or sloughing of the granular fill soils will occur. The contractor should be prepared to over-excavate and form grade beams and pile caps. The sides of the grade beams should be constructed straight and vertical.

Where sloped excavations can be made, we recommend a maximum slope of 2 horizontal units to 1 vertical unit (2H:1V) within the very loose to loose granular soils, and 1-1/2H:1V within the medium compact granular fill soils and medium to stiff cohesive fill soils. Under no circumstance shall excavations extend below the groundwater level without prior construction dewatering. All excavations must be safely shored or sloped in accordance with MI-OSHA requirements. If material is stored or equipment is operated near an excavation, lower angle slopes or stronger shoring must be used to resist the extra pressure due to the superimposed loads.

GENERAL COMMENTS

We have formulated the evaluations and recommendations presented in this report relative to site preparation, new pavement construction, and new foundation construction on the basis of data provided to us relating to the location, type, and grade for the proposed site. Any significant change in this data should be brought to our attention for review and evaluation with respect to the prevailing subsurface conditions.

The scope of the present investigation was limited to evaluation of subsurface conditions for the construction of the proposed building and other related aspects of the proposed project. No chemical, environmental, or hydrogeological testing or analysis were included in the scope of this investigation. If changes occur in the design, location, or concept of the project, the conclusions and recommendations contained in this report are not valid unless G2 Consulting Group, LLC reviews the changes. G2 Consulting Group, LLC will then confirm the recommendations presented herein or make changes in writing.

We have based the analyses and recommendations submitted in this report upon the data from soil borings performed at the approximate locations shown on the Soil Boring Location Plan, Plate No. 1. This report does not reflect variations that may occur between the actual boring locations. The nature and extent of any such variations may not become clear until the time of construction. If significant variations then become evident, it may be necessary for us to re-evaluate our report recommendations.

Soil conditions at the site could vary from those generalized on the basis of soil borings made at specific locations. It is, therefore, recommended that G2 Consulting Group, LLC be retained to provide soil engineering services during the water main and roadway construction phases of the proposed project. This is to observe compliance with the design concepts, specifications, and recommendations. Also, this allows design changes to be made in the event that subsurface conditions differ from those anticipated prior to the start of construction.

APPENDIX

Soil Boring Location Plan	Plate No. 1
Soil Boring Logs	Figure Nos. 1 and 2
Unconfined Compressive Strength Test	Figure No. 3
Grain Size Distribution	Figure No. 4
General Notes Terminology	Figure No. 5



Legend

⊕ Soil Borings performed by Triple R Drilling on August 25, 2020

Soil Boring Location Plan		
Proposed Commerical Development 390 S. Lafayette Street South Lyon, Michigan		
<div>2</div> CONSULTING GROUP	Project No. 200233	
	Drawn by: JMH	
	Date: 9/17/20	Plate No. 1
	Scale: NTS	

Project Name: Proposed Commercial Development

Project Location: 390 S. Lafayette Street
South Lyon, Michigan

G2 Project No. 200233

Latitude: N/A

Longitude: N/A



Soil Boring No. B-1

CONSULTING GROUP

SUBSURFACE PROFILE

SOIL SAMPLE DATA

DEPTH (ft)	PRO-FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Fill: Medium Compact Brown Gravelly Sand with trace silt and slab-like-material			8 10 12	22			
		Fill: Loose Brown Sand with trace silt and gravel	3.0	S-1	4 1 2	3	72.9		
5		Loose Black Peat (Organic Matter Content = 29.6%)	5	S-2	0 1 4	5			
			7.0	S-3	4 6 7	13			
10			10	S-4	3 4 5	9			
		Loose to Medium Compact Gray Sand with trace silt and gravel	15	S-5	3 3 3	6			
20			20	S-6	1 2 2	4	12.0	133	1930
		Loose Gray Gravelly Sand with trace silt	24.0	S-7	6 7 8	15	10.9	133	2830
25		Medium Gray Silty Clay with trace sand and gravel	27.0	S-8	5 7 7	14	10.7	132	6860
30			30	S-9					
35		Stiff to Very Stiff Gray Silty Clay with trace sand and gravel	35						

Total Depth: 60 ft
Drilling Date: August 25, 2020
Inspector:
Contractor: Triple R Drilling
Driller: Ryan Rau

Water Level Observation:
7 feet during and upon completion

Notes:
Borehole collapsed at 7-1/2 ft after auger removal
* Calibrated Hand Penetrometer

Drilling Method:
2-1/4 inch inside diameter hollow-stem augers

Excavation Backfilling Procedure:
Auger cuttings

Figure No. 1a

Project Name: Proposed Commercial Development

Project Location: 390 S. Lafayette Street
South Lyon, Michigan

G2 Project No. 200233

Latitude: N/A Longitude: N/A



Soil Boring No. B-1

CONSULTING GROUP

SUBSURFACE PROFILE

SOIL SAMPLE DATA

DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Stiff to Very Stiff Gray Silty Clay with trace sand and gravel <i>(continued)</i>							
		37.0							
40			40	S-10	2 3 4	7			
		Loose Gray Sand with trace silt and gravel							
45			45	S-11	3 4 4	8			
		48.0							
50		Medium Compact Gray Sandy Silt with trace clay	50	S-12	5 6 8	14			
		52.0							
55		Stiff Gray Clayey Silt with occasional sand partings	55	S-13	5 7 8	15	16.5		3500*
60		60.0	60	S-14	7 8 9	17	18.0		3000*
		End of Boring @ 60 ft							
65			65						
70			70						

Total Depth: 60 ft
Drilling Date: August 25, 2020
Inspector:
Contractor: Triple R Drilling
Driller: Ryan Rau

Water Level Observation:
7 feet during and upon completion

Notes:
Borehole collapsed at 7-1/2 ft after auger removal
* Calibrated Hand Penetrometer

Drilling Method:
2-1/4 inch inside diameter hollow-stem augers

Excavation Backfilling Procedure:
Auger cuttings

Figure No. 1b

Project Name: Proposed Commercial Development

Project Location: 390 S. Lafayette Street
South Lyon, Michigan

G2 Project No. 200233

Latitude: N/A

Longitude: N/A

Soil Boring No. B-2



CONSULTING GROUP

SUBSURFACE PROFILE

SOIL SAMPLE DATA

DEPTH (ft)	PRO-FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Topsoil: Dark Brown Silty Sand (4 inches)	0.3						
		Fill: Dark Brown Sand with trace silt, gravel, and organic matter	1.3		4				
		Fill: Medium Compact Brown Sand with trace silt and gravel	3.0	S-1	8	16			
5					2				
		Very Loose Black Peat with occasional sand seams (Organic Matter Content = 28.2% - 52.8%)		S-2	1	2	154.3		
					0				
				S-3	1	1	142.6		
10					0				
				S-4	3	4			
		Very Loose Gray Gravelly Sand with trace silt							
			9.5						
15					6				
				S-5	9	17			
20		Medium Compact Gray Sand with trace silt and gravel			6				
				S-6	7	13			
			23.0						
25		Medium Compact Gray Sandy Gravel with trace silt			5				
				S-7	7	13			
			25.0						
30		Very Stiff Gray Silty Clay with trace sand and gravel			7				
				S-8	10	18	11.5	131	4020
35					8				
				S-9	8	14	11.3	134	5750

Total Depth: 60 ft
Drilling Date: August 26, 2020
Inspector:
Contractor: Triple R Drilling
Driller: Ryan Rau

Water Level Observation:
4 feet during; 7-1/2 feet upon completion

Notes:
Borehole collapsed at 8 ft after auger removal
* Calibrated Hand Penetrometer

Drilling Method:
2-1/4 inch inside diameter hollow-stem augers

Excavation Backfilling Procedure:
Auger cuttings

Figure No. 2a

SOIL / PAVEMENT BORING 200233.GPJ 20150116 G2 CONSULTING DATA TEMPLATE.CDT 9/23/20

Project Name: Proposed Commercial Development

Project Location: 390 S. Lafayette Street
South Lyon, Michigan

G2 Project No. 200233

Latitude: N/A Longitude: N/A



Soil Boring No. B-2

CONSULTING GROUP

SUBSURFACE PROFILE

SOIL SAMPLE DATA

DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Very Stiff Gray Silty Clay with trace sand and gravel (continued)	37.0						
40			40	S-10	6 8 8	16			
		Medium Compact Gray Sand with trace silt and gravel, occasional gravel layers							
45			45	S-11	4 6 7	13			
			48.0						
50			50	S-12	4 6 6	12			
		Medium Compact Gray Clayey Sand with trace silt and gravel, occasional gravel layers							
55			55	S-13	4 5 6	11			
			57.0						
60		Very Compact Gray Gravelly Sand with trace clay and silt	60.0	S-14	21 28 30	58			
		End of Boring @ 60 ft							
65			65						
70			70						

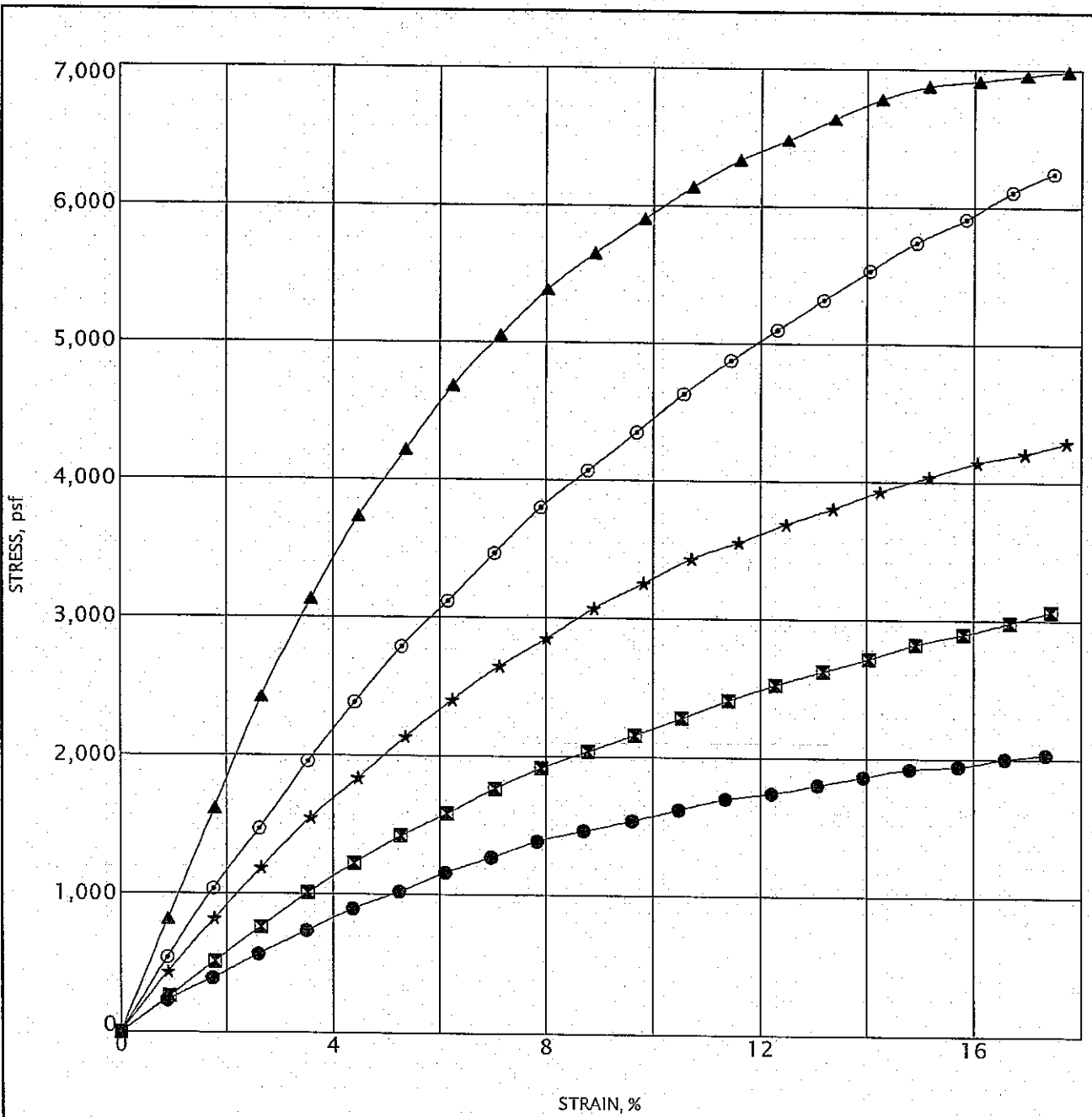
Total Depth: 60 ft
Drilling Date: August 26, 2020
Inspector:
Contractor: Triple R Drilling
Driller: Ryan Rau

Water Level Observation:
4 feet during; 7-1/2 feet upon completion

Notes:
Borehole collapsed at 8 ft after auger removal
* Calibrated Hand Penetrometer

Drilling Method:
2-1/4 inch inside diameter hollow-stem augers

Excavation Backfilling Procedure:
Auger cuttings



Specimen	Classification		MC%	γ_d	UC
● B-1 S-7	Gray Silty Clay		12	133	1930
⊠ B-1 S-8	Gray Silty Clay		11	133	2830
▲ B-1 S-9	Gray Silty Clay		11	132	6860
★ B-2 S-8	Gray Silty Clay		11	131	4020
⊙ B-2 S-9	Gray Silty Clay		11	134	5750



CONSULTING GROUP

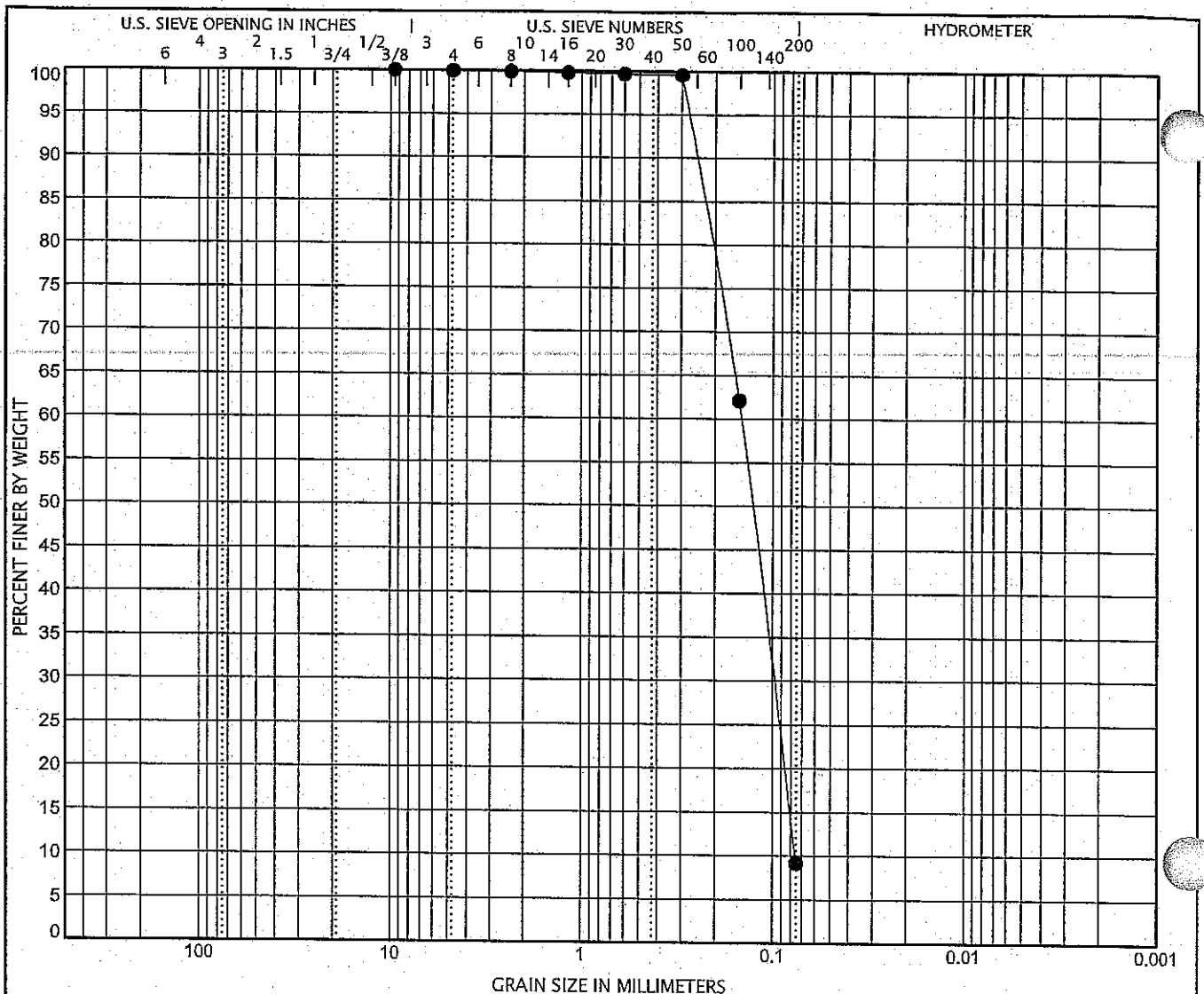
UNCONFINED COMPRESSIVE STRENGTH TEST

Project Name: Proposed Commercial Development

Project Location: 390 S. Lafayette Street
South Lyon, Michigan

G2 Project No.: 200233

Figure No. 3



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen ID	Description					LL	PL	PI	Cc	Cu
● B-1 S-4	Gray Sand with trace silt								0.9	1.9
Specimen ID	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay		
● B-1 S-4	9.5	0.146	0.099	0.076	0.1	90.8	9.2			



CONSULTING GROUP

GRAIN SIZE DISTRIBUTION

Project Name: Proposed Commercial Development

Project Location: 390 S. Lafayette Street
South Lyon, Michigan

G2 Project No.: 200233

Figure No. 4

GENERAL NOTES TERMINOLOGY

Unless otherwise noted, all terms herein refer to the Standard Definitions presented in ASTM 653.

PARTICLE SIZE

Boulders	- greater than 12 inches
Cobbles	- 3 inches to 12 inches
Gravel	- Coarse - 3/4 inches to 3 inches
	- Fine - No. 4 to 3/4 inches
Sand	- Coarse - No. 10 to No. 4
	- Medium - No. 40 to No. 10
	- Fine - No. 200 to No. 40
Silt	- 0.005mm to 0.074mm
Clay	- Less than 0.005mm

CLASSIFICATION

The major soil constituent is the principal noun, i.e. clay, silt, sand, gravel. The second major soil constituent and other minor constituents are reported as follows:

Second Major Constituent (percent by weight)	Minor Constituent (percent by weight)
Trace - 1 to 12%	Trace - 1 to 12%
Adjective - 12 to 35%	Little - 12 to 23%
And - over 35%	Some - 23 to 33%

COHESIVE SOILS

If clay content is sufficient so that clay dominates soil properties, clay becomes the principal noun with the other major soil constituent as modifier, i.e. sandy clay. Other minor soil constituents may be included in accordance with the classification breakdown for cohesionless soils, i.e. silty clay, trace sand, little gravel.

Consistency	Unconfined Compressive Strength (psf)	Approximate Range of (N)
Very Soft	Below 500	0 - 2
Soft	500 - 1,000	3 - 4
Medium	1,000 - 2,000	5 - 8
Stiff	2,000 - 4,000	9 - 15
Very Stiff	4,000 - 8,000	16 - 30
Hard	8,000 - 16,000	31 - 50
Very Hard	Over 16,000	Over 50

Consistency of cohesive soils is based upon an evaluation of the observed resistance to deformation under load and not upon the Standard Penetration Resistance (N).

Density Classification	COHESIONLESS SOILS Relative Density %	Approximate Range of (N)
Very Loose	0 - 15	0 - 4
Loose	16 - 35	5 - 10
Medium Compact	36 - 65	11 - 30
Compact	66 - 85	31 - 50
Very Compact	86 - 100	Over 50

Relative Density of cohesionless soils is based upon the evaluation of the Standard Penetration Resistance (N), modified as required for depth effects, sampling effects, etc.

SAMPLE DESIGNATIONS

AS -	Auger Sample - Cuttings directly from auger flight
BS -	Bottle or Bag Samples
S -	Split Spoon Sample - ASTM D 1586
LS -	Liner Sample with liner insert 3 inches in length
ST -	Shelby Tube sample - 3 inch diameter unless otherwise noted
PS -	Piston Sample - 3 inch diameter unless otherwise noted
RC -	Rock Core - NX core unless otherwise noted

STANDARD PENETRATION TEST (ASTM D 1586) - A 2.0 inch outside-diameter, 1-3/8 inch inside-diameter split barrel sampler is driven into undisturbed soil by means of a 140-pound weight falling freely through a vertical distance of 30 inches. The sampler is normally driven three successive 6-inch increments. The total number of blows required for the final 12 inches of penetration is the Standard Penetration Resistance (N).

From: Spano, Tiffany <Tiffany.Spano@bartonmalow.com>

Date: Thu Oct 1 2020 at 2:41 PM

Subject Undertut/Engineered Fill

TO: Mark Stepien via ste2cons@imperial.ac.uk

Mark,

please see below. If you need unit pricing or material pricing let me know.

Thanks!!

47	27	Remove and replace fill for building pad (1/10 - 2/10)	NTP issued	Brenco	\$	\$	\$	522,320.80
66	25	RH 97 - exterior fabric and 1 x 3		Brenco	\$	-	\$	20,728.63
77	92	1x3, 21aa, Fabric - Material Only		Brenco	\$	-	\$	4,345.13
78	99	Undercut replace fill for stair and future walks		Brenco	\$	-	\$	329,378.40
79		Remaining Soil Remediation & 1x3, 21aa and Fabric		Brenco	\$	75,654.87	\$	-
86	37	Undercuts for Site from 2/19 - 3/6		Brenco	\$	-	\$	119,275.20
98	48	Sand for Dewatering (required due to clogging)		Brenco	\$	-	\$	989.28

Total Cost: \$1,067,345.18

please see below: if you need unit pricing or material pricing let me know.

Thanks!!

[illegible]

From: Spanio, Tiffany <Tiffany.Spanio@bartonmalow.com>
 Date: Thu, Oct 1, 2020 at 2:33 PM
 Subject: Dewatering Cost
 To: Mark Stapleton <mstapleton@e2consultinggroup.com>

DEWATERING SERVICES PRICING

Item	Unit Cost	Unit of Measure
Mobilization / Demobilization / Installation / Removal + 1 month of operation	\$ 18,500.00	Lump Sum
Rental Rate of Single Wellpoint System following the initial month of operation	\$ 1,800.00	Weekly
Sediment Filtration Bag (purchase)	\$ 250.00	Each

Monthly rental was \$5,400.

Total Cost: \$25, 950

III. SUBAREA PLANS

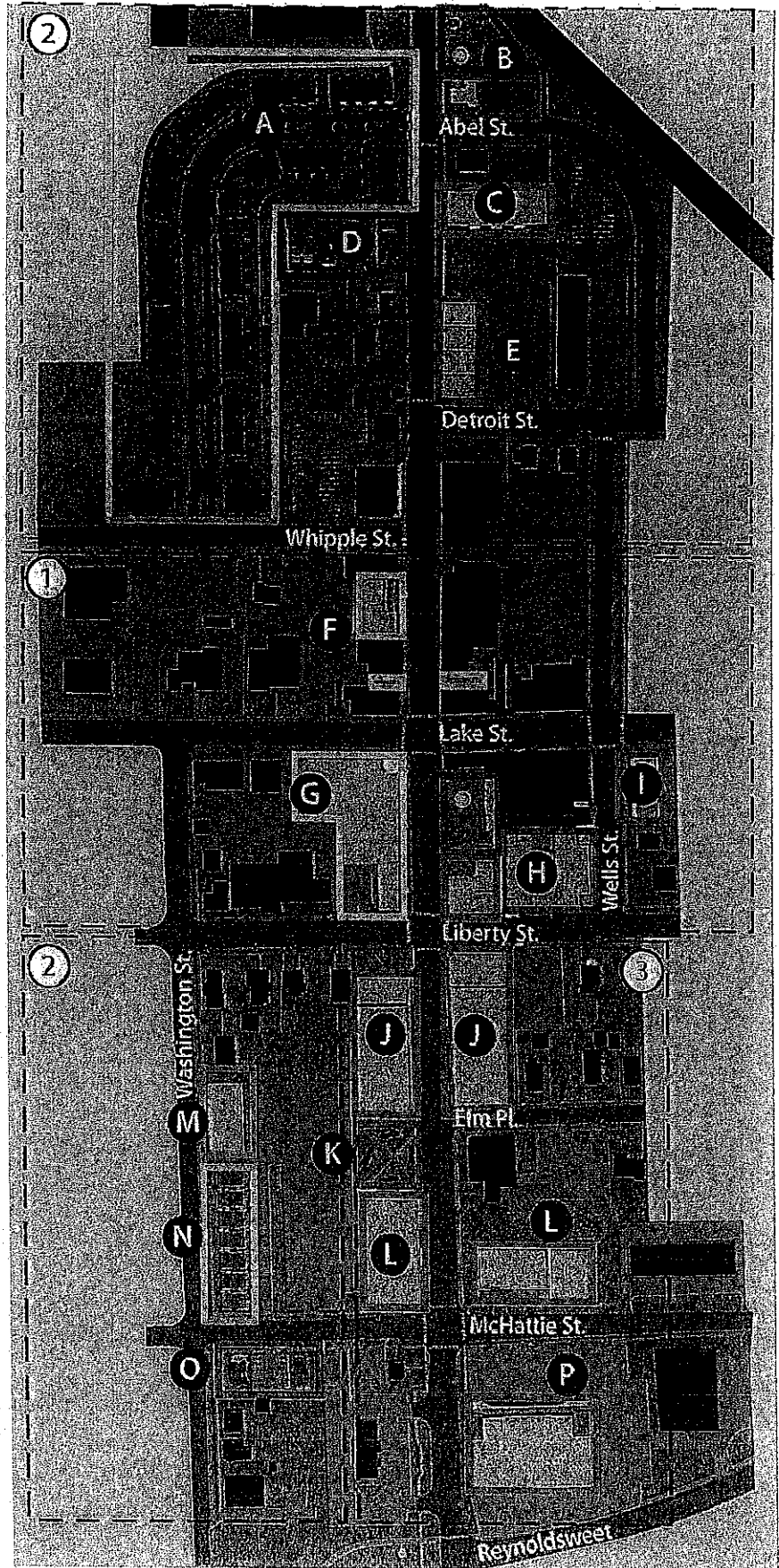
The following pages show snapshots from a 3D model designed to show key redevelopment opportunities in Downtown South Lyon broken down by three area types:

1. Downtown Transition
2. Downtown Core
3. Mixed-Use Redevelopment

Key Tools

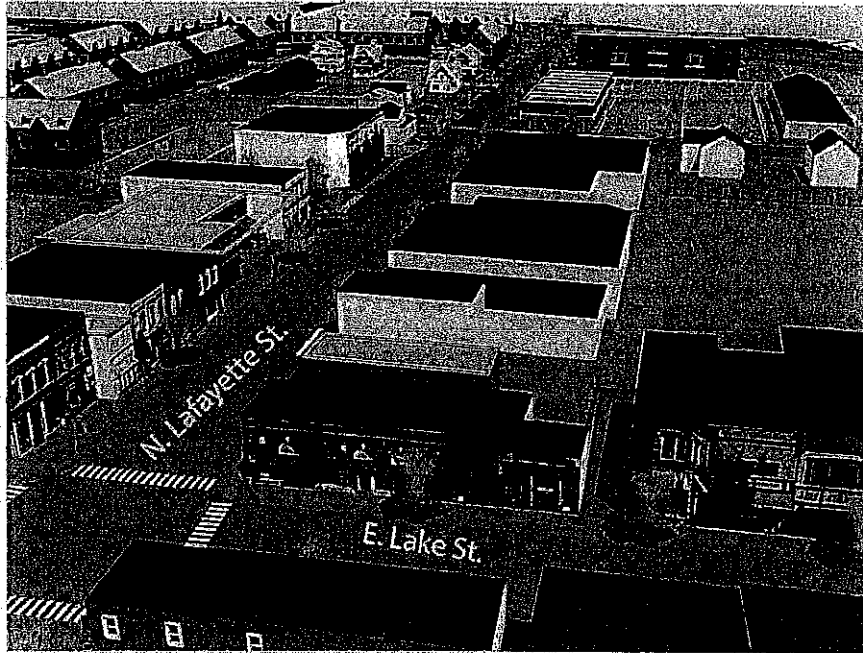
- 3D Model
- Aerial Imagery
- Downtown Transition
- Downtown Core
- Mixed-Use Redevelopment

A. Downtown

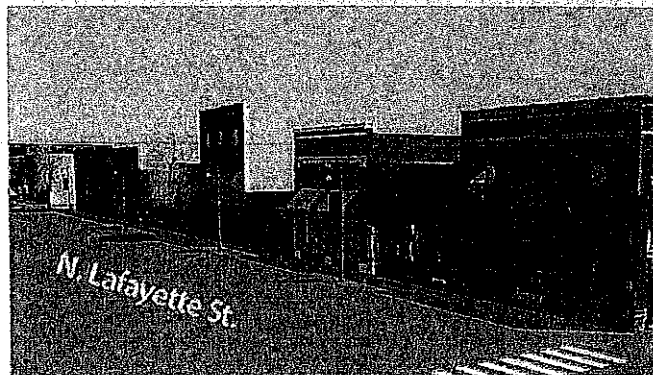


1. Downtown Core

F Key Infill Opportunities

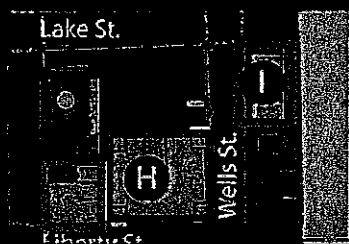


Redevelopment of three key parcels north of Lake Street could complete the rhythm of the existing historic buildings.

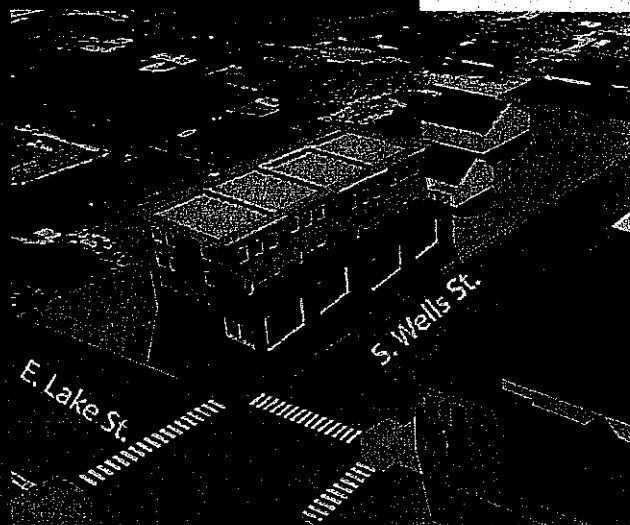


Maintain a safe pedestrian walkway on Lake Street to the public parking lot behind





1. Downtown Core



I Live/Work



example of artists' live/work units

A vacant lot that currently faces businesses across Wells Street is an opportunity for live/work units that would serve as a transition between commercial and residential uses.

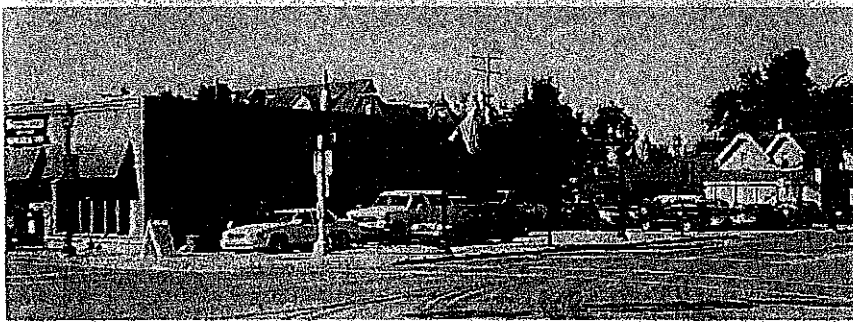
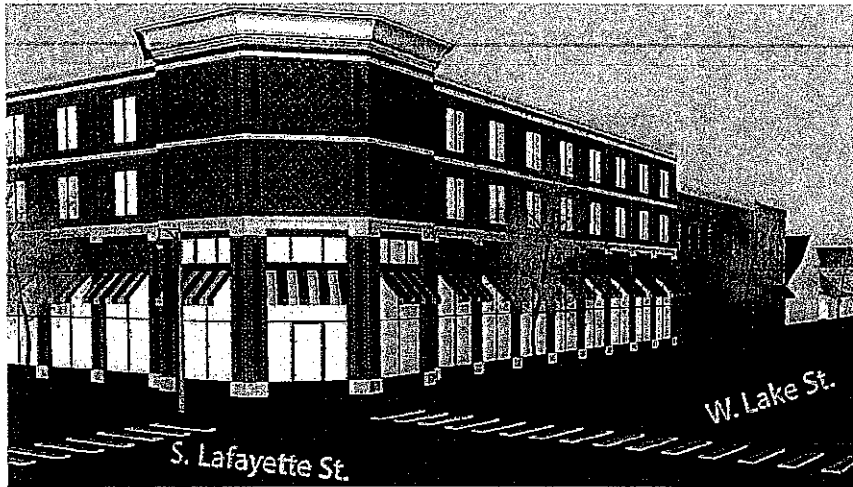
H Post Office Redevelopment/ Town Square



Should the Post Office vacate its current site in the future, the location could be redeveloped with a town square, outdoor restaurant seating, and storefronts that match the rest of the downtown core.

1. Downtown Core

G LONG TERM: Key Redevelopment Block

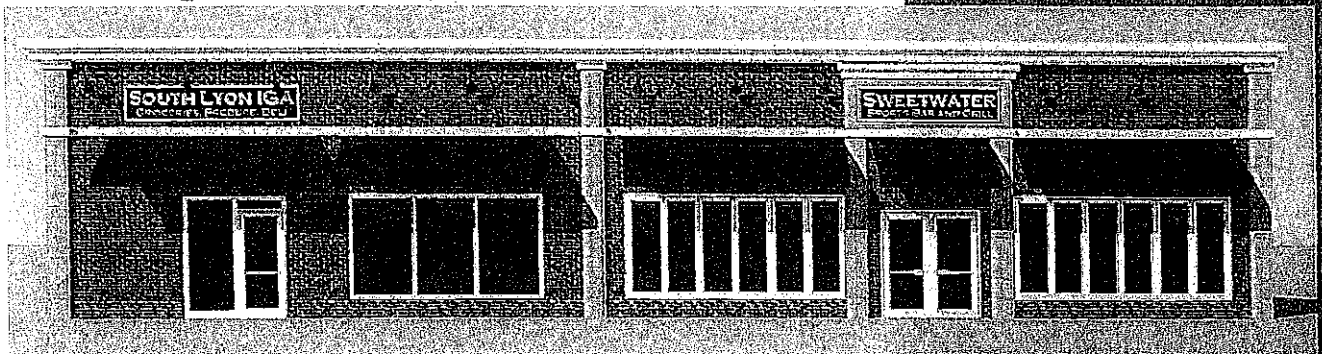


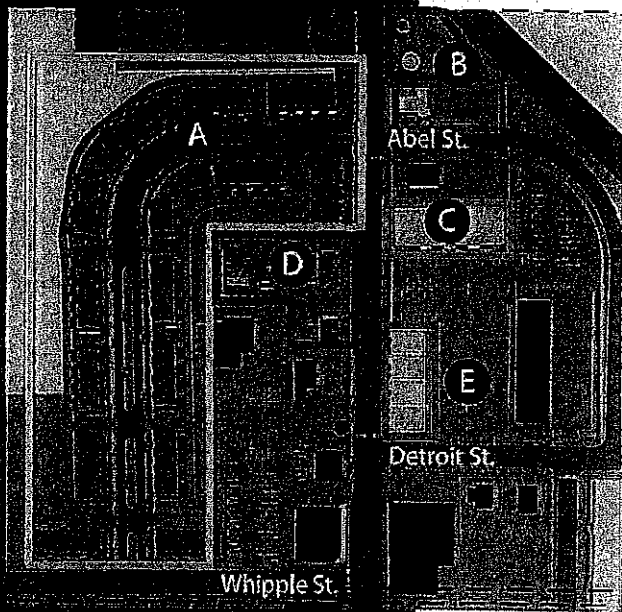
Reestablishing a corner building anchor will ensure each corner of this key intersection has a corner building to contribute to the core of the downtown.

Similarly, two-story buildings could be constructed along the entire block to match the character of the other three core blocks.

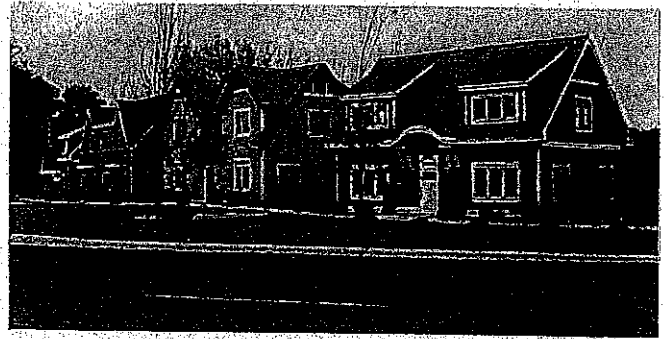
The existing site is underutilized with the storage of parked cars.

SHORT TERM: Facade improvements to existing buildings, while they may not achieve the long-term vision illustrated above, are a good first step toward reaching the vision for this key block.





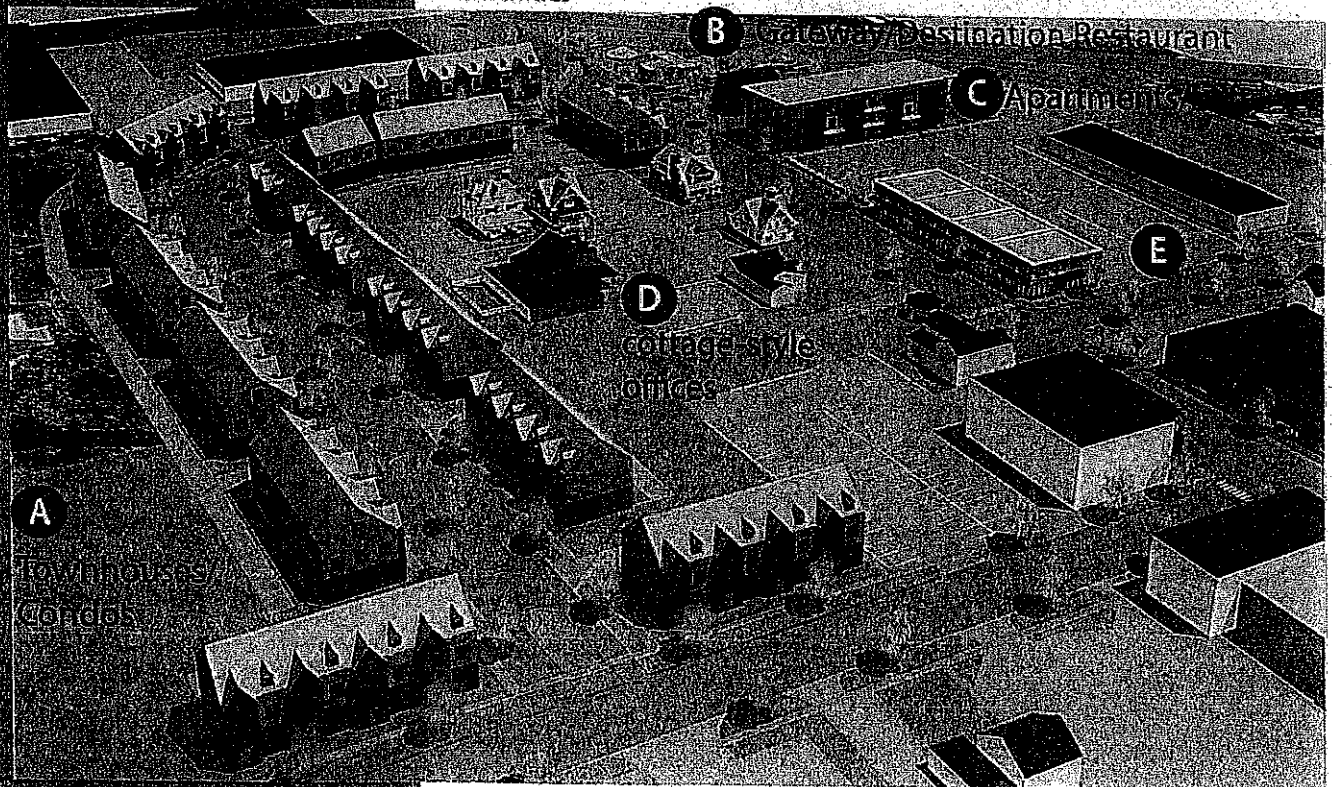
2. Downtown Transition



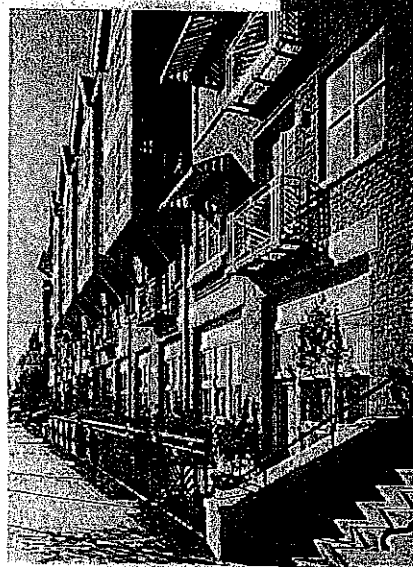
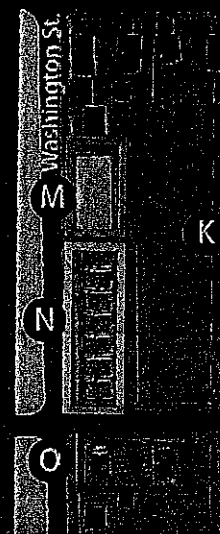
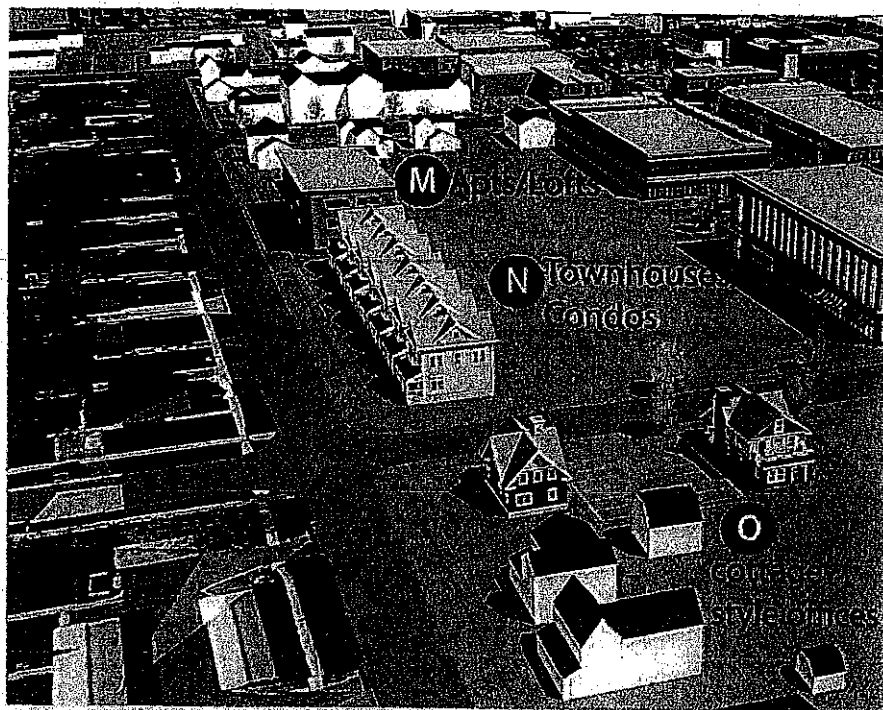
An example of cottage-style offices in East Lansing where new offices can blend into an established residential area or with existing cottage-style offices as seen below on N. Lafayette St.



Compatible residential and office uses at the fringe of downtown will provide a transition to the downtown district and provide urban living amenities



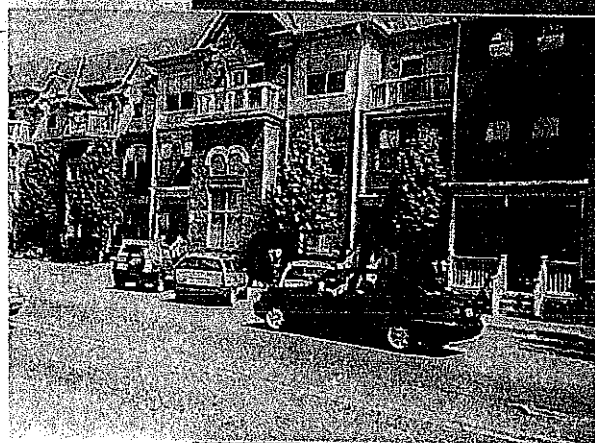
2. Downtown Transition

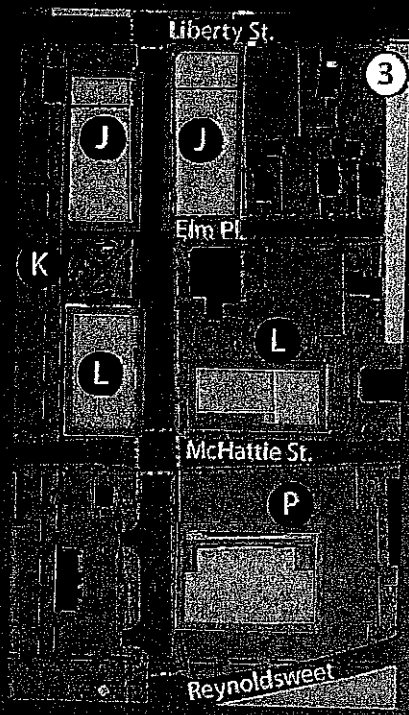


Modern multiple-family apartments or lofts would be a positive addition to urban living options downtown

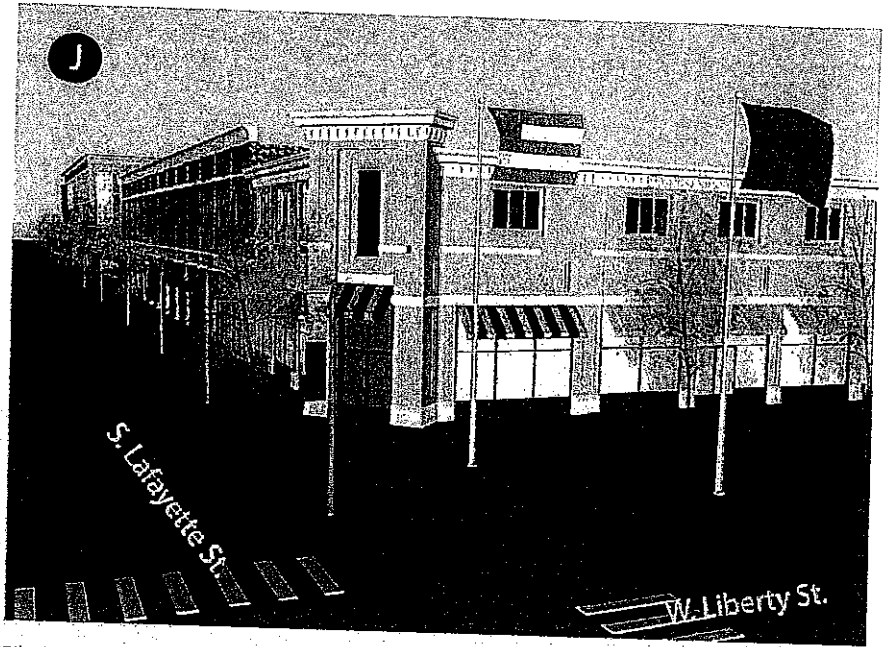


Attached or detached condos or townhouses can provide the urban living many people seek out in new homes

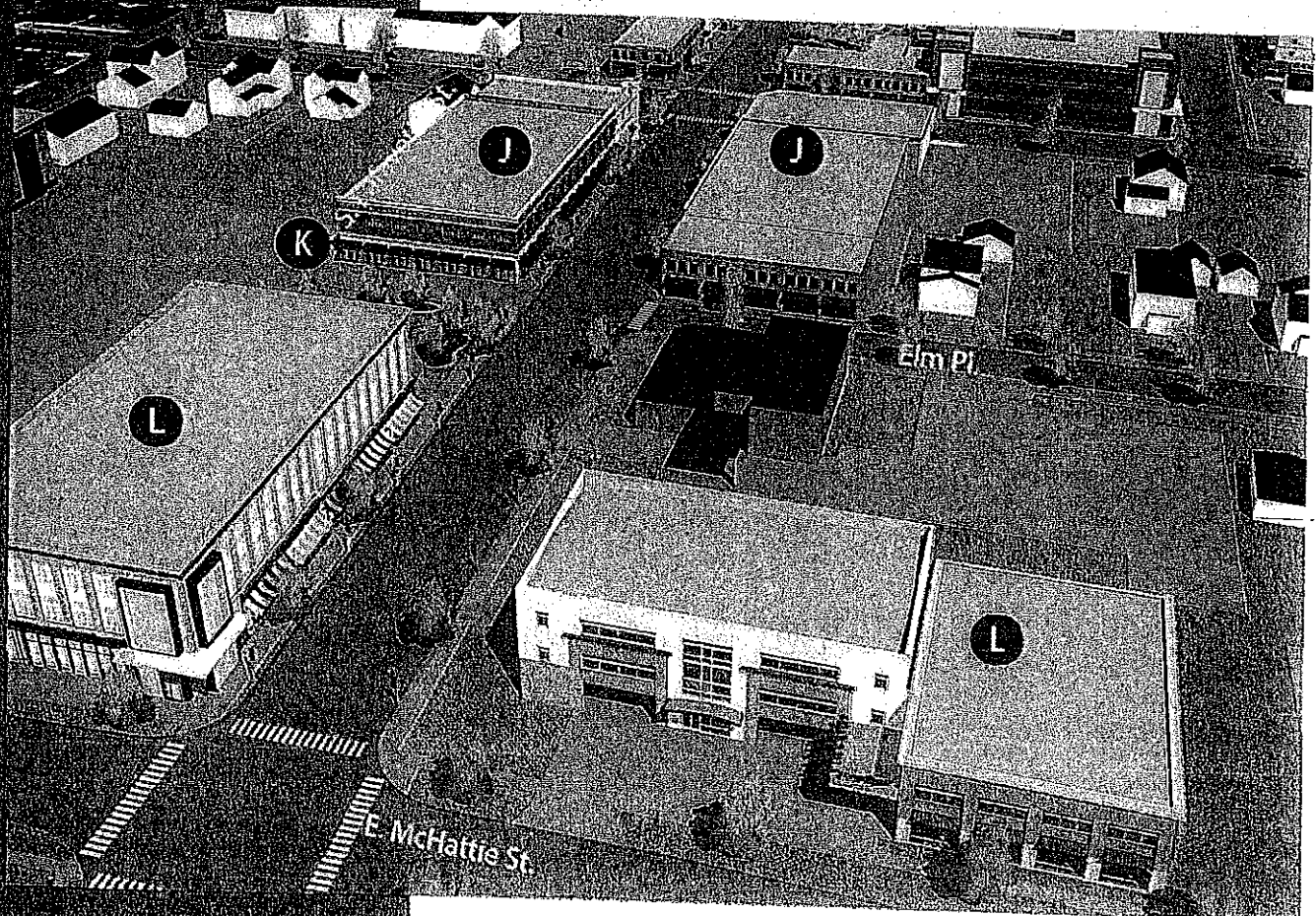




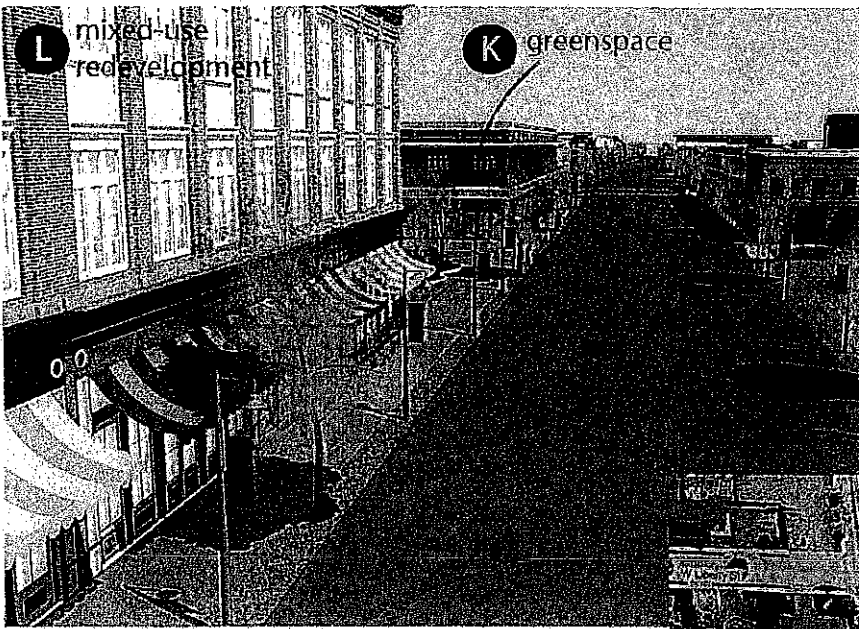
3. Mixed-Use Redevelopment



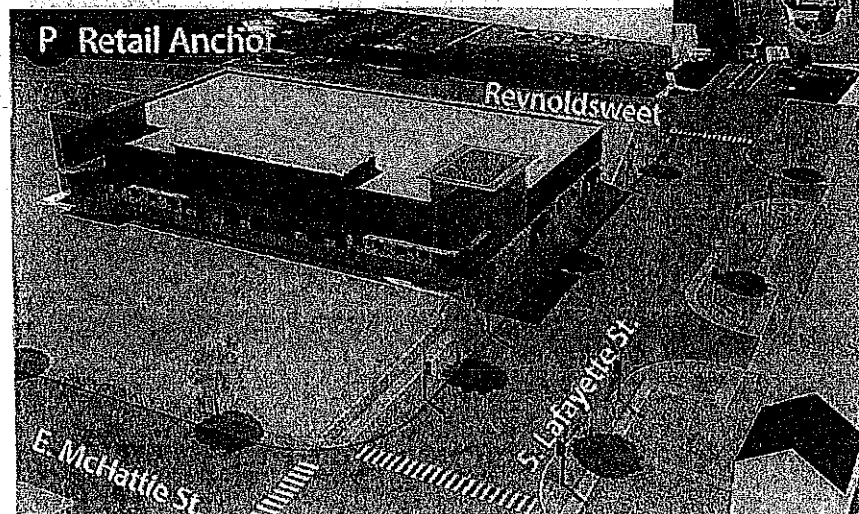
The areas just to the north and south of the core can be redeveloped with two to three-story buildings that front the street, making an attractive, walkable environment for shoppers that extends beyond the core intersection of Lake/Lafayette.



3. Mixed-Use Redevelopment



The current character of the downtown south of Lake St. lacks the consistent "Main Street" feel that the Lafayette/Lake St. intersection has. Planning for higher density buildings that front the street will help achieve a more desirable downtown streetscape.



A key transitional property to the commercial corridor to the south of downtown, the property just north of the Reynoldsweet ring road can serve as the south gateway anchor to downtown at this highly visible intersection. It is a prime location for a medium-sized grocer or retailer that could be developed in an urban style.

AGENDA NOTE

New Business# 3

MEETING DATE: October 26, 2020

PERSON PLACING ITEM ON AGENDA: City Manager

AGENDA TOPIC: Rules and Procedures for Electronic Meetings

EXPLANATION OF TOPIC: The Governor recently signed Senate Bill 1108 amending the Open Meetings Act. The changes allow public bodies to conduct virtual meetings. It applies to all boards and commissions. As part of this municipalities are required to establish Rules and Procedure for Electronic Meetings. The items discussed and approved pertaining to electronic meetings, will be added to the already approved City Council Rules and Procedures.

MATERIALS ATTACHED AS SUPPORTING DOCUMENTS: Rules and Procedure for holding Electronic Meetings.

POSSIBLE COURSES OF ACTION: Discuss and approve Rules and Procedures for holding Electronic Meetings.

SUGGESTED MOTION: Motion by _____, supported by _____ to approve the Rules and Procedures for holding Electronic Meetings.

City of South Lyon

Rules of Procedure for Electronic Meetings

City Council adopts these rules and procedures for all electronic meetings, including telephonic conferencing or video conferencing, in accordance with the Open Meetings Act, Public Act 267 of 1976, as amended. These rules and procedures are intended to supplement existing meeting rules and procedures of the City. Therefore, except as otherwise provided herein, all other previously adopted meeting rules and procedures for all Councils, Boards, Committees and Commissions of the City shall remain applicable to all meetings, including electronic meetings.

Conduct of electronic meetings.

An electronic meeting held by the City must be conducted in a manner that permits 2-way communication so that members of the public body can hear and be heard by other members of the public body, and so that public participants can hear and be heard by members of the public body and can be heard by other public participants. The public body may choose to facilitate typed public comments during the meeting submitted by members of the public participating in the meeting that may be read to or shared with members of the public body and other participants to satisfy the requirement that public participants be heard by others during the electronic meeting.

Notice of electronic meeting.

In addition to all other notices that may be required by law, notice of a meeting held electronically must be provided at least 18 hours before the meeting begins. The notice must clearly explain all of the following:

1. Reason for allowing participation by electronic means.
2. How members of the public may participate in the meeting electronically. If a telephone number, internet address, or both are needed to participate, that information must be provided.
3. How members of the public may contact members of the public body to provide input or ask questions on any business that will come before the public body at that meeting.
4. How person with disabilities may participate in the meeting.

The notice must be posted on the City's website - either on the homepage or on a separate webpage dedicated to public notices for non-regularly scheduled or electronic public meetings. If on a separate webpage dedicated to public notices for non-regularly scheduled or electronic public meetings, then the notice must be made accessible through a prominent and conspicuous link on the homepage describing its purpose for public notification of non-regularly scheduled or electronic public meetings.

The agenda of a meeting held electronically must also be posted on a portion of the City's website that is fully accessible to the public at least 2 hours before the electronic meeting begins.

Announcement of members of the public body.

Beginning on January 1, 2021, if a member of the public body is attending the meeting remotely for a purpose other than for military duty, the member must announce his/her physical location by stating the county, city, township or village and state from which he/she is attending the meeting remotely.

The Notice of Electronic Meeting posted for a meeting at which a member of the public body will be physically absent shall announce the physical absence of the public body member and provide his/her contact information in order to allow members of the public to provide input on any business that will come before the public body.

All votes shall be by roll-call vote.

A roll call vote shall be required on all motions, ordinances and resolutions of the public body. A "Yes" or "No" vote shall be entered upon the records opposite the name of the voting member of the public body.

Technical difficulties.

In the event of technical difficulties, which prohibits electronic participation in accordance with the Open Meetings Act, the electronic meeting of the public body shall be canceled and rescheduled. Notice of the rescheduled meeting shall be in accordance with the City's ordinances, rules, regulations and state law.

The inability of one or more members of the public body or the public to participate electronically due to technical difficulties not attributed to the City of South Lyon will not require cancellation of the meeting.

Sample Notice of Electronic Meeting of the City

THIS MEETING WILL BE HELD ELECTRONICALLY AS AUTHORIZED UNDER THE OPEN MEETINGS ACT, PUBLIC ACT 267 OF 1976, AS AMENDED. MEMBERS OF THE PUBLIC BODY AND MEMBERS OF THE PUBLIC MAY PARTICIPATE ELECTRONICALLY, AS DESCRIBED BELOW.

Reason for allowing participation by electronic means:

To mitigate the spread of COVID-19, protect the public health, and provide essential protections to vulnerable citizens, in-person contact should be limited. Critical mitigation measures include social distancing and limiting the number of people interacting at public gatherings. This includes public meetings.

How members of the public may participate:

Members of the public may access the agenda materials via the City's website – www.southlyonmi.org by end of day on _____.

Members of the public wishing to participate in the electronic meeting may do so by clicking the below webinar link or by dialing one of the telephone numbers listed, and entering the meeting or webinar ID, listed below:

Telephone Access: _____

US Toll-free: _____

Meeting ID: _____

Webinar Link: _____

Videos of recorded City Council meetings will be available to view on YouTube within 24 hours of the meeting. The link to the video recording, which will be posted on the City's website, is: http://www.southlyonmi.org/government/city_council/city_council_minutes_and_agendas.php). Closed captioning is an option available through YouTube.

Procedure for public participation by electronic means:

The City will be utilizing a video/audio conferencing platform, which will be accessible to members of the public body and members of the public. Members of the public body will be able to hear and speak to each other for the entire meeting. Except for any closed session portions of the meeting, members of the public will be able to hear (and possibly see) members of the public body during the entire meeting but will only be able to speak during public comment or at a public hearing.

Members of the public participating in the electronic meeting who wish to speak at the public meeting during public comment or at a public hearing must alert the meeting coordinator of their desire to speak by using the "raise hand" feature in the webinar or, if participating telephonically, by pressing *9 on their telephone keypad. Pressing *9 will activate the "raise hand" feature signaling to the meeting coordinator that a participant wishes to comment. Participants will then be placed a queue until called upon during public comment or at a public hearing of the meeting. Participants will be called upon one at a time, as would happen during an in-person meeting. A meeting coordinator will determine the order of participants. Once the participant is unmuted by the meeting coordinator he/she will have three (3) minutes to share comments with the public body. At the conclusion of the comments, or the allotted three (3) minutes, the participant will be muted and then removed from the queue.

Participants may also choose to submit comments that can be read into the record. Comments can be submitted via an electronic form to Ideaton@southlyonmi.org or dpelchat@southlyonmi.org. Comments shall be submitted prior to 7 p.m. on the day of the meeting

Procedures by which persons may contact members of City Council prior to the meeting:

Members of the public may contact members of the public body prior to the electronic meeting by e-mail. E-mail addresses for City government may be found on the City's website at www.southlyonmi.org.

Procedures for accommodations for persons with disabilities:

The City will be following its normal procedures for accommodation of persons with disabilities. Those individuals needing accommodations for effective participation in this meeting should contact the City Clerk (248) 437-1735 at least two working days in advance of the meeting. An attempt will be made to make reasonable accommodations.