TROY CITY COUNCIL

REGULAR MEETING AGENDA

SEPTEMBER 23, 2013
CONVENING AT 7:30 P.M.

Submitted By
The City Manager

***NOTICE**: Persons with disabilities needing accommodations for effective participation in this meeting should contact the City Clerk at (248) 524-3316 or via e-mail at clerk@troymi.gov at least two working days in advance of the meeting. An attempt will be made to make reasonable accommodations.*

500 W. Big Beaver
Troy, MI 48084
(248) 524-3300

The City of Tomorrow... ...Today

TO: The Honorable Mayor and City Council
Troy, Michigan

FROM: Brian Kischnick, City Manager

SUBJECT: Background Information and Reports

Ladies and Gentlemen:

This booklet provides a summary of the many reports, communications and recommendations that accompany your agenda. Also included are suggested or requested resolutions and/or ordinances for your consideration and possible adoption.

Supporting materials transmitted with this Agenda have been prepared by department directors and staff members. I am indebted to them for their efforts to provide insight and professional advice for your consideration.

As always, we are happy to provide such added information as your deliberations may require.

Respectfully submitted,

Brian Kischnick, City Manager

TROY CITY COUNCIL

VISION STATEMENT AND GOALS

Adopted: Monday, February 7, 2011

VISION:

To honor the legacy of the past and build a strong, vibrant future and be an attractive place to live, work, and grow a business.

GOALS:

Provide a safe, clean, and livable city

Practice good stewardship of infrastructure
Maintain high quality professional community oriented police and fire protection
Conserve resources in an environmentally responsible manner
Encourage development toward a walkable, livable community

Provide effective and efficient local government

Demonstrate excellence in community services
Maintain fiscally sustainable government
Attract and support a committed and innovative workforce
Develop and maintain efficiencies with internal and external partners
Conduct city business and engage in public policy formation in a clear and transparent manner

Build a sense of community

Communicate internally and externally in a timely and accurate manner
Develop platforms for transparent, deliberative and meaningful community conversations
Involve all stakeholders in communication and engagement activities
Encourage volunteerism and new methods for community involvement
Implement the connectedness of community outlines in the Master Plan 2008

Attract and retain business investment

Clearly articulate an economic development plan
Create an inclusive, entrepreneurial culture internally and externally
Clarify, reduce and streamline investment hurdles
Consistently enhance the synergy between existing businesses and growing economic sectors
Market the advantages of living and working in Troy through partnerships

CITY COUNCIL
AGENDA

September 23, 2013 – 7:30 PM
Council Chambers
City Hall - 500 West Big Beaver
Troy, Michigan 48084
(248) 524-3317

INVOCATION: Pastor Dan Lewis From Troy Christian Chapel 1

PLEDGE OF ALLEGIANCE: 1

A. CALL TO ORDER: 1

B. ROLL CALL: 1

C. CERTIFICATES OF RECOGNITION AND SPECIAL PRESENTATIONS: 1

C-1 On Behalf of the City of Troy Employees' for a Cause Program for the Months of May and June 2013, Community Affairs Director Cindy Stewart will Present a Check in the Amount of $792 to Janice Morgan, Judson Center Autism Connection *(Introduced by: Cindy Stewart, Community Affairs Director)* 1

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SCHEDULED SPECIAL CITY COUNCIL MEETINGS: 15

INVOCATION: Pastor Dan Lewis From Troy Christian Chapel

PLEDGE OF ALLEGIANCE:

A. CALL TO ORDER:

B. ROLL CALL:

a) Mayor Dane Slater
Jim Campbell
Wade Fleming
Dave Henderson
Maureen McGinnis
Ed Pennington
Doug Tietz

b) Excuse Absent Council Members:

Suggested Resolution
Resolution #2013-09-
Moved by
Seconded by

RESOLVED, That Troy City Council hereby **EXCUSES** the absence of _____ at the Regular City Council Meeting of September 23, 2013, due to _____.

Yes:
No:
Absent:

C. CERTIFICATES OF RECOGNITION AND SPECIAL PRESENTATIONS:

C-1 On Behalf of the City of Troy Employees' for a Cause Program for the Months of May and June 2013, Community Affairs Director Cindy Stewart will Present a Check in the Amount of $792 to Janice Morgan, Judson Center Autism Connection ***(Introduced by: Cindy Stewart, Community Affairs Director)***

D. CARRYOVER ITEMS:

D-1 No Carryover Items

E. PUBLIC HEARINGS:

E-1 Adoption of Brownfield Redevelopment Plan #6 for MJR Troy Grand – 100 E. Maple Road

Suggested Resolution

Resolution #2013-09-
Moved by
Seconded by

WHEREAS, On September 23, 2013 at 7:30 p.m., Troy City Council held a Public Hearing at Troy City Hall located at 500 West Big Beaver Road, Troy, Michigan for the Brownfield Redevelopment Plan #6 for MJR Troy Grand, located at 100 East Maple Road, Troy, Michigan; and

WHEREAS, Troy City Council would like to provide the public with full opportunity to comment on Brownfield Redevelopment Plan #6 per statute notice requirements; and

THEREFORE BE IT RESOLVED, That Troy City Council **SHALL CONTINUE** the September 23, 2013 Public Hearing at its next regularly scheduled meeting on October 7, 2013 at 7:30 p.m.

Yes:
No:
Absent:

F. PUBLIC COMMENT FOR ITEMS ON THE AGENDA:

In accordance with the Rules of Procedure for the City Council, Article 17 – Members of the Public and Visitors:

Any person not a member of the City Council may address the Council with recognition of the Chair, after clearly stating the nature of his/her inquiry or comment. *City Council requests that if you do have a question or concern, to bring it to the attention of the appropriate department(s) whenever possible. If you feel that the matter has not been resolved satisfactorily, you are encouraged to bring it to the attention of the City Manager, and if still not resolved satisfactorily, to the Mayor and Council.*

- Petitioners shall be given a fifteen (15) minute presentation time that may be extended with the majority consent of City Council.
- Any member of the public, not a petitioner of an item, shall be allowed to speak for up to three (3) minutes to address any Public Hearing item.
- Any member of the public, not a petitioner of an item, shall be allowed to speak for up to three (3) minutes total to address Postponed, Regular Business, Consent Agenda or Study items or any other item on the Agenda as permitted under the Open Meetings Act during the *Public Comment for Items On the Agenda* portion of the Agenda.
- Any member of the public, not a petitioner of an item, shall be allowed to speak for up to three (3) minutes to address any topic not on the Agenda as permitted under the Open Meetings Act during the *Public Comment for Items Not on the Agenda* portion of the Agenda.
- All members of the public who wish to address the Council at a meeting shall be allowed to speak only if they have signed up to speak within thirty minutes before or within fifteen minutes after the meeting's start time. Signing up to speak requires each speaker provide his or her name and residency status (Troy resident, non-resident, or Troy business owner). If the speaker is addressing an Item (or Items) that appear on the pre-printed agenda, then

the speaker shall also identify each such agenda item number(s) to be addressed.

- City Council may waive the requirements of this section by a majority vote of the City Council members.
- Agenda items that are related to topics where there is significant public input anticipated should initiate the scheduling of a Special meeting for that specific purpose.

The following has been approved by Troy City Council as a statement of the rules of decorum for City Council meetings. The Mayor will also provide a verbal notification of these rules prior to Public Comment:

The audience should be aware that all comments are to be directed to the Council rather than to City Administration or the audience. Anyone who wishes to address the Council is required to sign up to speak within thirty minutes before or within fifteen minutes of the start of the meeting. There are two Public Comment portions of the Agenda. For Items On the Agenda, speakers can sign up to address Postponed, Regular Business, Consent Agenda, or Study items or any other item on the Agenda. Speakers can sign up to address all other topics under Items Not on the Agenda. Also, there is a timer on the City Council table in front of the Mayor that turns yellow when there is one minute of speaker time remaining, and turns red when the speaker's time is up.

In order to make the meeting more orderly and out of respect, please do not clap during the meeting, and please do not use expletives or make derogatory or disparaging comments about any one person or group. If you do so, then there may be immediate consequences, including having the microphone turned off, being asked to leave the meeting, and/or the deletion of speaker comments for any re-broadcast of the meeting. Speakers should also be careful to avoid saying anything that would subject them to civil liability, such as slander and defamation.

Please avoid these consequences and voluntarily assist us in maintaining the decorum befitting this great City.

G. CITY COUNCIL/CITY ADMINISTRATION RESPONSE/REPLY TO PUBLIC COMMENT:

H. POSTPONED ITEMS:

H-1 **No Postponed Items**

I. REGULAR BUSINESS:

I-1 **Board and Committee Appointments: a) Mayoral Appointments – None; b) City Council Appointments – None**

a) **<u>Mayoral Appointments</u>: None**

b) **<u>City Council Appointments</u>:**

Suggested Resolution
Resolution #2013-09-
Moved by
Seconded by

RESOLVED, That Troy City Council hereby **APPOINTS** the following nominated person(s) to serve on the Boards and Committees as indicated:

Animal Control Appeal Board
Appointed by Council
5 Regular Members
3 Year Term

Term Expires: 9/30/2016	**Patrick Carolan**
	Term currently held by: Patrick Carolan

Parks and Recreation Board
Appointed by Council
7 Regular Members and 1 Troy School Board Member:
Regular Member: 3 Year Term / Troy School Board Member: 1 Year Term

Term Expires: 9/30/2016	**Jeffrey Stewart**
	Term currently held by: Jeffrey Stewart

Yes:
No:
Absent:

I-2 Board and Committee Nominations: a) Mayoral Nominations – Downtown Development Authority; b) City Council Nominations –Parks and Recreation Board

a) Mayoral Nominations:

Suggested Resolution
Resolution #2013-09-
Moved by
Seconded by

RESOLVED, That the Mayor of the City of Troy hereby **FORWARDS** the following nominated person(s) to serve on the Boards and Committees as indicated to the next Regular City Council Meeting for action:

Downtown Development Authority
Appointed by Mayor
13 Regular Members
4 Year Term

Current Members:

Last Name	First Name	App Resume Expire	Appointment Expire	Notes 1	Notes 2
Bostick	Dennis	1/31/2015	9/30/2016	In District	
Hay	David	11/16/2013	9/30/2015	In District	
Jonna	Arkan	10/22/2014	9/30/2016	In District	
Keisling	Laurence	5/25/2014	9/30/2016	At Large	
Kiriluk	Alan	10/12/2014	9/30/2016	In District	
Knight	P. Terry	1/4/2014	9/30/2015	At Large	Personnel Bd. exp 4/30/2015
MacLeish	Daniel	5/26/2014	9/30/2016	In District	
Papa	Albert	8/5/2015	9/30/2013	At Large	Requests Reappointment
Randol	Ward	10/12/2013	9/30/2014	In District	
Reschke	Ernest	9/21/2012	9/30/2014	At Large	
Schroeder	Douglas	9/30/2012	9/30/2014	At Large	
Slater	Dane			At Large	Mayor
Vacancy			9/30/2015	In District	Earle Van Dyke resigned

Nominations to the Downtown Development Authority:

Term Expires: 9/30/2017 **(At Large)**

Term currently held by: Albert Papa

Term Expires: 9/30/2015 **(In District)**

Term currently held by: Vacant (Earle Van Dyke resigned)

Interested Applicants:

Last Name	First Name	App Resume Expire	Notes 2
Hoef	Paul V.	11/21/2013	EDC exp 4/30/2015; LDFA exp 6/30/2015
Howrylak	Frank	2/1/2014	Charter Rev. Comm exp 4/30/2014
Kempen	Edward	2/1/2014	Planning Comm exp 12/31/2013
Knight	Barbara	1/4/2014	EDC exp 4/30/2015
Kornacki	Rosemary	11/15/2013	Brownfield exp 4/30/2014
Mallin	Aaron	10/10/2013	
Sawyer Jr.	Thomas	12/11/2014	Municipal Bldg Auth exp 1/31/2013
Schultz	Robert	11/11/2013	Planning Comm exp 12/31/2014
Swartz	Robert	2/12/2015	Brownfield exp 4/30/2014; EDC exp 4/30/2018
Vassallo	Joseph	12/6/2013	Brownfield exp 4/30/2015
Wilberding	Bruce	2/8/2014	Brownfield exp 4/30/2016

Yes:
No:
Absent:

b) City Council Nominations:

Suggested Resolution
Resolution #2013-09-
Moved by
Seconded by

RESOLVED, That Troy City Council hereby **FORWARDS** the following nominated person(s) to serve on the Boards and Committees as indicated to the next Regular City Council Meeting for action:

Parks and Recreation Board
Appointed by Council
7 Regular Members and 1 Troy School Board Member:
Regular Member: 3 Year Term / Troy School Board Member: 1 Year Term

Current Members:

Last Name	First Name	App Resume Expire	Appointment Expire	Notes 2
Anderson	Carol			
Fejes	Kathleen	9/30/2012	9/30/2013	No Reappointment
Gazetti	Tod	9/14/2012	9/30/2013	No Reappointment
Hauff	Gary	2/6/2014	7/31/2014	
Huber	Laurie	2/8/2014	9/30/2015	
Kaltsounis	Orestis (Rusty)	1/20/2014	9/30/2015	ZBA (Alt) exp 1/31/2015
Kovacs	Meaghan	3/25/2010	9/30/2014	
Stewart	Jeffrey L.	6/27/2015	9/30/2013	Requests Reappointment
Yelamanchi	Aditya	6/5/2014	7/31/2013	Student
Zikakis	Janice	11/11/2013	9/30/2014	

Nominations to the Parks and Recreation Board:

Term Expires: 9/30/2016

Term currently held by: Kathleen Fejes

Term Expires: 9/30/2016

Term currently held by: Tod Gazetti

Term Expires: 7/31/2014

Term currently held by: Aditya Yelamanchi

Interested Applicants:

Last Name	First Name	App Resume Expire	Notes 2
Baker	Julia (Judy)	5/7/2015	
Boudon	Frank	5/15/2015	Student - Planning Comm. exp 7/31/2014
Brandstetter	Tim	5/1/2015	Traffic Comm. exp 1/31/2015
Gauri	Kul B.	11/22/2013	
Howrylak	Frank	2/1/2015	Charter Revision Comm. exp 4/30/2014
Knight	P. Terry	1/4/2014	DDA exp 9/30/2015; Personnel Bd. exp 4/30/2015
Rosenberg	Michael	4/19/2015	
Steele	John	9/27/2013	Civil Service Comm. exp 4/30/2014
Toth	Steve	10/3/2013	ACAB exp 9/30/2014
Viola	Vincent	11/16/2013	

Yes:
No:
Absent:

I-3 Request for Closed Session

Suggested Resolution
Resolution #2013-09-
Moved by
Seconded by

BE IT RESOLVED, That Troy City Council **SHALL MEET** in Closed Session, as permitted by MCL15.268 (e) (*May, as Personal Representative of Jesus Gillard v. City of Troy, et. al*).

Yes:
No:
Absent:

I-4 Liquor License Application from Simbad, Inc. Regarding Transfer of All Stock Interest

a) Liquor License Renewal Application for Simbad, Inc.

Suggested Resolution
Resolution #2013-09-
Moved by
Seconded by

WHEREAS, Simbad, Inc. requests to transfer all stock interest in 2012 Class C and SDM licensed business with Sunday Sales Permit (PM), and Dance-Entertainment Permit wherein

Sabah Garmo transfers 1,334 shares of stock to new stockholder, Loretta Garmo, and 666 shares of stock to new stockholder, Muayad Gorgees {MLCC Request #668985}; and

WHEREAS, The Troy City Council passed Resolution #2013-03-064 on March 18, 2013 to object to the renewal of Simbad's liquor license due to the problems that were occurring at the business location; and

WHEREAS, The Michigan Liquor Control Commission (MLCC) conducted a hearing and placed the license held by Simbad, Inc. in escrow effective May 1, 2013; and

WHEREAS, The liquor license held by Simbad, Inc. is still in escrow, and it is not renewed for year 2013-2014; and

WHEREAS, The MLCC ruled that the license shall not be renewed until the City of Troy approves the application for renewal; and

WHEREAS, The new applicants, Loretta Garmo and Muayad Gorgees, have met with the City of Troy Attorney's Office, Police Department, and the Troy Liquor Advisory Committee, and have answered questions and addressed the concerns regarding their application;

NOW, THEREFORE, BE IT RESOLVED, That the Troy City Council **RECOMMENDS RENEWAL** of the liquor license held by Simbad, Inc. for the 2013 license year, with the **STIPULATION** that all serving employees receive TIPS or TAMS or other comparable training acceptable to the Troy Police Department, and that licensee **PRESENT** proof of this training to the Troy Police Department within 90 days of today's date.

BE IT FURTHER RESOLVED, That a certified copy of this resolution shall be **SENT** to the Michigan Liquor Control Commission.

Yes:
No:
Absent:

b) Transfer All Stock Interest

Suggested Resolution
Resolution #2013-09-
Moved by
Seconded by

RESOLVED, That Troy City Council hereby **CONSIDERS** for **APPROVAL** a liquor license request as indicated below, and hereby **AUTHORIZES** the Mayor and City Clerk to **EXECUTE** the document, a copy of which shall be **ATTACHED** to the original Minutes of this meeting.

Liquor License Applicant :	**Simbad, Inc.**
Type of License Requested :	**Transfer All Stock Interest in 2012 Class C and SDM licensed business with Sunday Sales Permit (PM), and Dance-Entertainment Permit, wherein stockholder Sabah Garmo**

	transfers 1,334 shares of stock to new stockholder, Loretta Garmo, and 666 shares of stock to new stockholder, Muayad Gorgees.
Located at :	**336 John R. Road, Troy, MI 48083**
MLCC Request # :	**668985**

and

c) Agreement

Suggested Resolution
Resolution #2013-09-
Moved by
Seconded by

WHEREAS, The Troy City Council deems it necessary to enter into agreements with applicants for liquor licenses for the purpose of providing civil remedies to the City of Troy in the event licensees fail to adhere to Troy Codes and Ordinances;

THEREFORE, BE IT RESOLVED, That Troy City Council hereby **APPROVES** an agreement with the liquor license applicant named in the approved resolution above, and hereby **AUTHORIZES** the Mayor and City Clerk to **EXECUTE** the document, a copy of which shall be **ATTACHED** to the original Minutes of this meeting.

Yes:
No:
Absent:

I-5 Request for Waiver of Bid for Purchase of Fire Apparatus

Suggested Resolution
Resolution #2013-09-
Moved by
Seconded by

RESOLVED, That Troy City Council hereby **WAIVES** formal bidding procedures and **AUTHORIZES** the City of Troy to purchase one (1) Heavy-Duty Fire Apparatus from Halt Fire Apparatus of Wixom, Michigan, for an estimated total cost of $508,347.00; utilizing the Western Wayne County Consortium Pricing; as detailed in the attached recommendation memo which shall be **ATTACHED** to the original Minutes of this meeting.

BE IT FURTHER RESOLVED, That the award is contingent upon the contractor's submission of properly executed Performance Bonds, and all other specified requirements.

Yes:
No:
Absent:

J. CONSENT AGENDA:

J-1a Approval of "J" Items NOT Removed for Discussion

Suggested Resolution
Resolution #2013-09-
Moved by
Seconded by

RESOLVED, That Troy City Council hereby **APPROVES** all items on the Consent Agenda as presented with the exception of Item(s) _____, which shall be **CONSIDERED** after Consent Agenda (J) items, as printed.

Yes:
No:
Absent:

J-1b Address of "J" Items Removed for Discussion by City Council

J-2 Approval of City Council Minutes

Suggested Resolution
Resolution #2013-09-

RESOLVED, That Troy City Council hereby **APPROVES** the following Minutes as submitted:

a) City Council Meeting Minutes-Draft – September 9, 2013

J-3 Proposed City of Troy Proclamations: None Submitted

J-4 Standard Purchasing Resolutions:

a) Standard Purchasing Resolution #1: Award to Low Bidder – Troywood Paving S.A.D.

Suggested Resolution
Resolution #2013-09-

RESOLVED, That Contract No. 13-5, Troywood Paving S.A.D., be **AWARDED** to Florence Cement Company, 12585 23 Mile Road, Shelby Twp., MI 48315 for their low total bid amount of $118,270.00.

BE IT FURTHER RESOLVED, That the award is **CONTINGENT** upon submission of proper contract and bid documents, including bonds, insurance certificates and all specified requirements, and if additional work is required such additional work is **AUTHORIZED** in an amount not to exceed 15% of the total project cost.

b) Standard Purchasing Resolution 2: Award to Low Bidder Meeting Specifications – LED Tri-Pod Lighting

Suggested Resolution
Resolution #2013-09-

RESOLVED, That Troy City Council hereby **AWARDS** a contract to purchase seven (7) LED Tri-Pod Lights for the Fire Department to the low bidder meeting specifications, *Priority One Emergency of Canton, MI* for an estimated net total cost of $12,749.66 at unit prices contained in the bid tabulation opened September 12, 2013, a copy of which shall be **ATTACHED** to the original Minutes of this meeting.

BE IT FURTHER RESOLVED, That the award is **CONTINGENT** upon the company's submission of properly executed bid and contract documents.

J-5 Mark R. Morin v City of Troy

Suggested Resolution
Resolution #2013-09-

RESOLVED, That the City Attorney is hereby **AUTHORIZED** and **DIRECTED** to represent the City of Troy in any and all claims and damages in the matter of *Mark R. Morin v City of Troy* (52-4 District Court Case No.13 CO2167 GC). Furthermore, the City Attorney is **AUTHORIZED** to pay necessary costs and expenses and to retain any necessary expert witnesses to adequately represent the City.

J-6 Municipal Credit and Community Credit Agreement

Suggested Resolution
Resolution #2013-09-

RESOLVED, That the request that the City transfer Municipal Credit funds in the amount of $79,648 and Community Credit funds in the amount of $88,586 to Troy Medi-Go Plus for the operation of transportation service for senior citizens and persons with disabilities is hereby **APPROVED** and the Mayor and City Clerk are **AUTHORIZED TO EXECUTE** the documents and copies shall be **ATTACHED** to the original Minutes of this meeting.

J-7 Correction of Standard Purchasing Resolution #4 of June 17, 2013 – Special Assessment Roll No. 12.201.1

Request to Rescind City Council Resolution #2013-06-113: *Public Hearing to Establish a Special Assessment District for Asphalt Paving of the Westerly 324' of Troywood in Section 22 – Standard Resolution #4*

Suggested Resolution
Resolution #2013-09-

WHEREAS, Troy City Council approved *Resolution #2013-06-113: Public Hearing to Establish a Special Assessment District for Asphalt Paving of the Westerly 324' of Troywood in Section 22 – Standard Resolution #4* on June 17, 2013; and

WHEREAS, The amount of Special Assessment Roll 12.201.1 was incorrectly listed in the resolution as $60,100.00; and

WHEREAS, The correct amount of Special Assessment Roll 12.201.1 is $20,500.00;

THEREFORE, BE IT RESOLVED, That Resolution #2013-06-113, Moved by McGinnis and Seconded by Campbell, as it appears below, be **RESCINDED**, as requested by City Administration:

Resolution #2013-06-113
Moved by McGinnis
Seconded by Campbell

WHEREAS, Troy City Council has caused Special Assessment Roll No. 12.201.1 to be prepared for the purpose of defraying the Special Assessment District's portion of the following described public improvement in the City of Troy; and

Bituminous Paving of a portion of Troywood Street

WHEREAS, Troy City Council and the City Assessor have met after due legal notice and have reviewed said Special Assessment Roll and have heard all persons interested in said Special Assessment Roll appearing at said hearing; and

WHEREAS, Troy City Council is satisfied with said Special Assessment Roll as prepared by the City Assessor;

*THEREFORE, BE IT RESOLVED, That Special Assessment Roll No. 12.201.1 in the amount of $60,100.00 is hereby **CONFIRMED** as prepared by the City Assessor, a copy of which shall be **ATTACHED** to, and become a part of the Minutes of this meeting.*

Yes: Campbell, Henderson, McGinnis, Pennington, Tietz, Slater
No: None
Absent: Fleming

MOTION CARRIED

Yes:
No:
Absent:

Proposed Replacement Resolution for *Public Hearing to Establish a Special Assessment District for Asphalt Paving of the Westerly 324' of Troywood in Section 22 – Standard Resolution #4*

Suggested Resolution
Resolution #2013-09-

WHEREAS, Troy City Council has caused Special Assessment Roll No. 12.201.1 to be prepared for the purpose of defraying the Special Assessment District's portion of the following described public improvement in the City of Troy:

Bituminous Paving of a portion of Troywood Street

and,

WHEREAS, Troy City Council and the City Assessor have met after due legal notice and have reviewed said Special Assessment Roll and have heard all persons interested in said Special Assessment Roll appearing at said hearing; and,

WHEREAS, Troy City Council is satisfied with said Special Assessment Roll as prepared by the City Assessor;

THEREFORE, BE IT RESOLVED, That Special Assessment Roll No. 12.201.1 in the amount of $20,500.00 is hereby **CONFIRMED** as prepared by the City Assessor, a copy of which shall be **ATTACHED** to, and become a part of the Minutes of this meeting.

Yes:
No:
Absent:

K. MEMORANDUMS AND FUTURE COUNCIL AGENDA ITEMS:

K-1 Announcement of Public Hearings: None Submitted

K-2 Memorandums (Items submitted to City Council that may require consideration at some future point in time): None Submitted

L. PUBLIC COMMENT FOR ITEMS NOT ON THE AGENDA:

M. COUNCIL REFERRALS:

Items Advanced to the City Manager by Individual City Council Members for Placement on the Agenda

M-1 No Council Referrals Advanced

N. COUNCIL COMMENTS:

N-1 No Council Comments Advanced

O. REPORTS:

O-1 Minutes – Boards and Committees:

a) Liquor Advisory Committee-Final – September 10, 2012
b) Election Commission-Final – March 28, 2013
c) Building Code Board of Appeals-Final – July 10, 2013
d) Zoning Board of Appeals-Draft – July 16, 2013
e) Planning Commission Special/Study-Final – August 27, 2013
f) Planning Commission Special/Study-Draft – August 27, 2013
g) Building Code Board of Appeals-Draft – September 4, 2013
h) Election Commission-Draft – September 9, 2013
i) Liquor Advisory Committee-Draft – September 9, 2013

O-2 Department Reports: None Submitted

a) City of Troy Employee Retirement System Actuarial Valuation Report Dated December 31, 2012
b) Standard & Poor's AAA Bond Rating Report for the City of Troy
c) Citizen Comment Concerning the Assessor Using Less Than the CPI Increase in Taxable Value, in Order to Reduce City Revenues
d) Building Department Activity Report – August, 2013

O-3 Letters of Appreciation:

a) To Brian Kischnick from Irv Wengrow Regarding City Response to Storm Damage from September 11, 2013

O-4 Proposed Proclamations/Resolutions from Other Organizations: None Submitted

P. STUDY ITEMS:

P-1 No Study Items

Q. CLOSED SESSION:

Q-1 Closed Session

R. ADJOURNMENT:

Respectfully submitted,

Brian Kischnick, City Manager

FUTURE CITY COUNCIL PUBLIC HEARINGS:

SCHEDULED REGULAR CITY COUNCIL MEETINGS:

Monday, October 7, 2013 ..... Regular Meeting
Monday, October 21, 2013 ..... Regular Meeting
Monday, November 11, 2013..... Regular Meeting
Monday, November 25, 2013..... Regular Meeting
Monday, December 2, 2013..... Regular Meeting
Monday, December 16, 2013..... Regular Meeting

SCHEDULED SPECIAL CITY COUNCIL MEETINGS:

CITY COUNCIL AGENDA ITEM

Date: September 19, 2013

To: Brian Kischnick, City Manager

From: Mark F. Miller, Director of Economic and Community Development
Glenn Lapin, Economic Development Specialist

Subject: Public Hearing: Adoption of Brownfield Redevelopment Plan #6 for MJR Troy Grand – 100 E. Maple Road

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The following is a summary of the proposed plan. Details may be found in the provided back-up materials.

Project Overview

MJR Group, LLC intends to demolish and redevelop the vacant former Kmart Department Store and site, located at the southeast corner of E. Maple Road and Livernois, with a new digital movie theater complex. The old Kmart Building totals approximately 118,201 square feet. The new theater complex will be 74,000 square feet with 16 screens including an Epic Studio. Individual theater seating capacity will range from 101 seats to 440 seats (3200 total seats). The new theater complex will include a lobby area, concessions, and bar area. The $16 million project will also include the installation of new asphalt, sidewalks, and landscaping surrounding the theater building. Approximately 70 new jobs are expected to be created serving 800,000 patrons annually.

Due to State statute notification timing requirements, City Council must continue the Public Hearing to the October 7, 2013 City Council Meeting. At the October 7, 2013 meeting, BRA Redevelopment Plan #6 Version A or B may be voted on.

Brownfield Redevelopment Plan #6 Purpose

In order to promote the revitalization of environmentally distressed and functionally obsolete areas within the boundaries of the City of Troy, the City established the City of Troy Brownfield Redevelopment Authority (TBRA) pursuant to the Brownfield Redevelopment Financing Act, Michigan Public Act 381 of 1996, and as amended. The primary purpose of this Brownfield Redevelopment Plan is to promote the redevelopment and private investment of the 100 E. Maple Road property within the City of Troy. Inclusion of this property within this Plan will facilitate financing of eligible environmental remediation activities associated with the project. By facilitating the redevelopment of Brownfield properties, this Plan is intended to promote economic growth for the benefit of Troy residents.

Eligible Activities

Demolition of the current vacant building will require the removal of fluorescent light tubes, PCB ballasts, mercury vapor bulbs and mercury switches, fire extinguishers, CFC refrigerants, hydraulic lifts, facility owned pad mounted transformer (includes packaging, transportation and disposal/recycling), asbestos abatement activities and air monitoring, and removal, disposal, and sampling oversight associated with the five hydraulic hoists.

The entire project also includes the completion of Phase I and Phase II Environmental Site Assessments (ESA), Baseline Environmental Site Assessment (BEA), and Due Care Plan.

Reimbursable Costs

The TBRA provides project assistance through its Local Site Remediation Revolving Fund (LSRRF) and through the reimbursement of eligible activities through tax increment financing.

For the MJR Troy Grand project, the LSRRF would reimburse the cost of Due Care Activities, Demolition and associated activities, and the preparation of the Brownfield Plan in the total amount of **$498,079**. The LSRRF would subsequently be reimbursed from tax increment financing revenues, based on the increased value of the redeveloped property, over the estimated eight-year payback period.

Tax increment financing revenues would also reimburse the cost of the Environmental Site Assessments and Brownfield Plan Application Fee in the total amount of **$11,585**.

Estimate of Captured Taxable Value and Tax Increment Revenues

The taxable value of the real property was $1,025,640 for the current tax year; no personal property is associated with the site. The estimated taxable value of the completed development is $4,500,000. This assumes a one-year phase-in for completion of the redevelopment, which has been incorporated into the tax impact and cash flow assumptions for this plan. An annual increase in taxable value of 1% has been used for the calculation of future tax increments in this plan.

Duration of Brownfield Plan

The duration of **Brownfield Redevelopment Plan #6 Version A** is the period required to reimburse all eligible activities **including an additional five years** of capture to continue building the LSRRF.

The duration of **Brownfield Redevelopment Plan #6 Version B** proposes to reimburse all eligible activities **not including an additional five years** of capture to continue building the LSRRF.

Troy Brownfield Redevelopment Authority Action

At its August 27, 2013 Special Meeting, a resolution was made and approved by the TBRA to recommend approval of Brownfield Redevelopment Plan #6. A copy of the draft meeting minutes is attached.

Recommendation

City Management recommends that City Council continue the Public Hearing at its next regularly scheduled meeting on October 7, 2013 due to State statute notification timing requirements. A sample resolution is provided for your consideration.

City Management recommends to the City Council that at its October 7, 2013 meeting, Brownfield Redevelopment Plan #6 for the proposed MJR Troy Grand, located at 100 East Maple Road, Troy, Michigan, be approved. The TBRA recommendation includes the capture of tax increment revenue for an additional five years to continue building the LSRRF (Version A). The alternative is to **not** capture the tax increment revenue for an additional five years to continue building the LSRRF (Version B).

_____ _____

City Attorney's Review as to Form and Legality Date

Attachments

1. Troy Brownfield Redevelopment Plan #6 Version A – MJR Troy Grand
2. Troy Brownfield Redevelopment Plan #6 Version B – MJR Troy Grand
3. Troy Local Site Remediation Revolving Fund Application
4. Troy Brownfield Redevelopment Authority Draft Minutes from the August 27, 2013 Special Meeting
5. Public Notice language

TROY BROWNFIELD REDEVELOPMENT AUTHORITY

BROWNFIELD PLAN
(Version A: Includes 5 year additional capture to LSRRF, as approved by the BRA)

August 23, 2013

FOR THE PROPOSED MJR TROY GRAND LOCATED AT 100 EAST MAPLE ROAD, TROY, MICHIGAN

Prepared on Behalf of:

MJR Group, LLC
41000 Woodward Avenue, Suite 135 East
Bloomfield Hills, Michigan 48304
Contact Person: Mr. Michael Mihalich
Telephone: (248) 548-8282

Prepared By:

PM Environmental, Inc.
4080 West Eleven Mile Road
Berkley, Michigan 48072
Contact Person: Michael T. Kulka, P.E., C.P.
Telephone: (248) 336-9988

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Appendix F Baseline Environmental Assessment

PROJECT SUMMARY

Project Name:	MJR Troy Grand
Project Location:	The property is located in Township Two (2) North (T. 2N), Range eleven (11) east (R. 11E), Section 34, Troy, Oakland County, Michigan.
Type of Eligible Property:	Property is determined to be functionally obsolete by City Assessor Nino Licari, MMAO (4), PPE. The property is also considered a Facility
Eligible Activities:	Developer TIF Reimbursed Activities: Environmental Assessments, BRA Application Fee Local Site Remediation Revolving Fund TIF Reimbursed Activities: Due Care Activities, Demolition (including Building and Site Demolition, Asbestos Abatement Activities, Air Quality Monitoring, and Lighting Removal/Disposal, Brownfield Plan Preparation
Reimbursable Costs:	Developer TIF Reimbursement: $11,585 for Environmental Site Assessments and Brownfield Plan Application Fee Local Site Remediation Revolving Fund TIF Reimbursement: $498,079 for Eligible Activities
Years to Complete Payback to RLF:	Approximately 8 years
Estimated Capital Investment:	Approximately $16 Million

Project Overview: MJR Group, LLC intends to demolish and redevelop the currently vacant underutilized property with a new Digital Cinema. The new Cinema will include 74,000 square feet with 16 Screens including an Epic Studio. Seating capacity will range from 101 seats to 440 seats. The new theater will include a lobby area, concessions, and bar area. The project will include installation of new asphalt, sidewalks, and landscaping surrounding the theater building.

I. INTRODUCTION AND PURPOSE

In order to promote the revitalization of environmentally distressed and blighted areas within the boundaries of the City of Troy ("the City"), the City has established the City of Troy Brownfield Authority (TBRA) pursuant to the Brownfield Redevelopment Financing Act, Michigan Public Act (PA) 381 of 1996, as amended.

The primary purpose of this Brownfield Plan ("Plan") is to promote the redevelopment of and private investment in certain "Brownfield" properties within the City. Inclusion of property within this Plan will facilitate financing of environmental response and other eligible activities at eligible properties, and will also provide tax incentives to eligible tax payers willing to invest in revitalization of eligible sites, commonly referred to as Brownfields. By facilitating redevelopment of Brownfield properties, this Plan is intended to promote economic growth for the benefit of the residents of the City.

The Property is currently zoned MRF – Maple Road (form based zones), is commercially developed, and located in an area of the City of Troy characterized by commercial and residential Properties.

The identification or designation of a developer or proposed use for the eligible property that is subject to this Plan shall not be integral to the effectiveness or validity of this Plan. This Plan is intended to apply to the eligible property identified in this Plan and, to identify and authorize the eligible activities to be funded. Any change in the proposed developer or proposed use of the eligible property shall not necessitate an amendment to this Plan, affect the application of this Plan to the eligible property, or impair the rights available to the Authority under this Plan.

This plan is intended to be a living document which may be modified or amended as necessary to achieve the purposes of Act 381. The applicable sections of Act 381 are noted throughout the plan for reference purposes.

This Brownfield Plan contains information required by Section 13(1) of Act 381.

This Brownfield Plan is of a single phase associated with the redevelopment of the property.

II. GENERAL DEFINITIONS AS USED IN THIS PLAN

Terms used in this Brownfield Plan are defined as provided in the following statutes, as appropriate:

The Brownfield Redevelopment Financing Act, 1996 Mich. Pub. Acts. 381, M.C.L. § 125.2651 *et seq*., as amended.

III. BROWNFIELD PROJECT

SUBJECT PROPERTY

The subject property consists of one (1) legal parcel with a street address of 100 East Maple Road, Troy, Michigan. The tax ID number of the subject property is 88-20-34-101-023. The parcel number and legal description are also included in Appendix A.

The parcels and all tangible personal property located thereon will comprise the eligible property and is referred to herein as the "Property".

The subject property included in this plan can be considered "eligible property" as defined by Section 2 of Act 381, as amended because (a) it is located within the City of Troy; and (b) the Property is determined to be functionally obsolete as determined by City Assessor Nino Licari, MMAO (4), PPE.

100 East Maple Road (88-20-34-101-023)

Standard and other historical sources indicate the subject property was developed prior to 1940 for agricultural purposes. Agricultural activities ceased between 1957 and 1963, and the central portion of the current building was constructed in 1964. Additions were constructed in 1968, 1992, and 2000. The property was occupied by various retail stores, restaurants, and automotive service operations from 1964 until 2009. The building has been unoccupied since between 2009 and 2011.

The subject building totals approximately 118,201 square feet, and contains a former service area, former retail areas, storage areas, utility rooms, offices, and restrooms. Interior finish materials in the former service area include metal deck ceilings, cinderblock walls, and concrete floors. Interior finish materials in the remainder of the building include metal deck ceilings, two foot by four foot ceiling tiles, two foot by two foot ceiling tiles, cinderblock walls, drywall walls, wood paneling, concrete floors, and 12 inch by 12 inch floor tiles. The property also has five in-ground hoists and an underground vault in the former service area. Asphalt paved driveways and parking areas surround the building.

Identification of the Property as "Functionally Obsolete"

The subject property has been determined functionally obsolete by City Assessor, Nino Licari, MMAO (4), PPE.

A 2013 Valuation Report and Record Card provided by the City are included in Appendix B, showing the property's obsolescence status.

Identification of the Property as a "Facility"

PM Environmental, Inc. (PM) has completed a Baseline Environmental Assessment (BEA) for the vacant retail property (Parcel ID #88-20-34-101-023) located at 100 East Maple Road in Troy, Oakland County, Michigan (hereafter referred to as the "subject property").

Contaminant concentrations identified on the subject property indicate exceedances to the Part 201 Residential and Nonresidential DW cleanup criteria. Therefore, the subject property is a

"facility" in accordance with Part 201 of P.A. 451, as amended, and the rules promulgated thereunder.

The Baseline Environmental Assessment text, figures, and tables stating the property is a facility is located in Appendix F.

PROJECT DESCRIPTION

MJR Group, LLC intends to demolish and redevelop the currently vacant underutilized property with the new Digital Cinema, MJR Troy Grand. MJR Troy Grand will include 74,000 square feet with 16 Screens including an Epic Studio. Seating capacity will range from 101 seats to 440 seats. The new theater will include a lobby area, concessions, and bar area. The project will include installation of new asphalt, sidewalks, and landscaping surrounding the theater building.

Demolition of the current building will require the removal of fluorescent light tubes, PCB ballasts, mercury vapor bulbs and mercury switches, fire extinguishers, CFC refrigerants, hydraulic lifts, and facility owned pad mounted transformer (includes packaging, transportation and disposal/recycling), asbestos abatement activities and air monitoring, and the removal, disposal, and sampling oversight associated with the five (5) hydraulic hoists.

This entire project also includes the completion of Phase I and Phase II Environmental Site Assessments (ESA), Baseline Environmental Site Assessment (BEA), and Due Care Plan.

The project is estimated to begin demolition mid to late summer of 2013, with project completion before the end of the year.

BROWNFIELD PLAN ELEMENTS

A. Description of Costs to Be Paid for With Tax Increment Revenues

Tax increment financing revenues will be utilized to reimburse the City of Troy's Local Site Remediation Revolving Loan Fund (LSRRLF), for loan reimbursements made to MJR Group, LLC for eligible activities completed during development of the Property and as defined in this Plan. The activities funded through the LSRRLF are listed in section "M" of this plan.

Tax Increment Revenues will also pay the Developer for Environmental Site Assessments and the TBRA application fee.

The TBRA administrative fees, 3% simple interest on unreimbursed costs, and capture to continue building the LSRRLF will also be funded utilizing tax increment revenues.

These costs are presented in section "G" of this plan and Table 1 (eligible activities) and 2 (tax increment financing projections) in Appendix D.

B. Summary of Eligible Activities

LSRRLF will be reimbursed for Due Care Activities, Demolition and associated activities, and Preparation of the Brownfield Plan. These activities are further outlined in section "M" of this plan and included in Appendix D.

The Developer will be reimbursed for eligible activities that include environmental site assessments and the TBRA application fee. These costs are presented in Table 1 of Appendix D.

C. Estimate of Captured Taxable Value and Tax Increment Revenues

The taxable value of the real property was $1,025,640 for the current tax year; no personal property is associated with the site. The estimated taxable value of the completed development is $4,500,000 at completion of the development. This assumes a one-year phase-in for completion of the redevelopment, which has been incorporated into the tax impact and cash flow assumptions for this plan. An annual increase in taxable value of 1% has been used for calculation of future tax increments in this plan. The taxable value estimates and tax increment projections are shown in Table 2 of Appendix D.

The TBRA will continue capturing tax increment revenues for 5 years following payback, to build the LSRRLF. The estimated captured taxable value and tax increment revenues for the eligible property for each year of the plan are presented in Table 2 in Appendix D.

D. Method of Financing and Description of Advances by the Municipality

LSRRLF reimbursements will be made by the City to the developer, MJR Group, LLC in an amount not to exceed $498,079 for completed eligible expenses based on the receipt of proper documentation.

The invoicing procedure is summarized as follows:

1. MJR pays an invoice for the eligible expenses
2. The invoices with proof of payment of eligible expenses are then submitted to the City
3. The City then cuts a check from the LSRRF to MJR for those eligible expenses
4. The LSRRF is repaid through TIF Capture

E. Maximum Amount of Note or Bonded Indebtedness

The City of Troy will not incur a financial note or bonded indebtedness for this project. Therefore, a reporting on indebtedness is not required.

F. Duration of Brownfield Plan

The duration of this Plan should be not less than the period required to reimburse all eligible activities plus five years for additional capture to continue building the LSRRLF. The approval date of the Brownfield Plan by the City council will mark the beginning of the reimbursement period, unless modified at the discretion of the City as allowed under Act 381, as amended. In no event, however, shall this Plan extend beyond the maximum term allowed by Section 13(1)(a) of Act 381, as amended for the duration of this Plan, currently limited to 30 years.

G. Estimated Impact of Tax Increment Financing on Revenues of Taxing Jurisdictions

The following tables show the anticipated impact of tax increment financing (TIF) on revenues of taxing jurisdictions. Developer reimbursements for environmental assessment activities will occur within the first year of TIF reimbursement (totaling $11,585), and LSRRLF reimbursement will occur within 8 years from the start of tax TIF reimbursements. An additional year is anticipated for repayment of interest, with an additional 5 years of capture to continue building the LSRRLF.

Description of Eligible Activities (see Table 1)	**Estimated Costs**	
1. Environmental Assessment Activities (Developer Reimbursement)	$	10,085
2. BRA Application Fee (Developer Reimbursement)	$	1,500
3. Due Care Activities (LSRRLF Reimbursement)	$	13,004
4. Demolition (LSRRLF Reimbursement)	$	479,095
5. Preparation of Brownfield Plan (LSRRLF Reimbursement)	$	5,980
Total	**$**	**509,664**

Total Activities to be Captured by TIF	**Estimated Costs**	
Developer Reimbursement	$	11,585
Local Site Remediation Revolving Loan Fund Reimbursement	$	498,079
LSRRLF 3% Interest Capture	$	65,891
5 Years capture to build LSRRLF	$	364,769
TBRA Administrative Fee	$	21,964
Total	**$**	**962,288**

Detailed tax increment financing tables and a list of eligible expenses are located in Appendix D.

H. Legal Description, Property Map, Statement of Qualifying Characteristics and Personal Property

The legal description of the property included in this plan is attached in Appendix A.

A 2013 Valuation Report and Record Card provided by the City are included in Attachment B, showing the property's obsolescence status.

A property location map, site map, and preliminary development plans are attached in Appendix C of this plan.

I. Estimates of Residents and Displacement of Families

No displacement of residents or families is expected as part of this project.

J. Plan for Relocation of Displaced Persons

No displacement of residents or families is expected as part of this project.

K. Provisions for Relocation Costs

No relocation is expected as part of this project.

L. Strategy for Compliance with Michigan's Relocation Assistance Law

No relocation is expected as part of this project.

M. Description of Proposed Use of Local Site Remediation Revolving Loan Fund

The LSRRLF will be used to finance "eligible activities" (as defined by Section 2 of Act 381, as amended) as permitted under the Brownfield Redevelopment Financing Act that includes: Preparation of the Brownfield Plan, Due Care Activities, and Demolition as described in this Plan. A complete listing of these activities is included in Table 1 of Appendix D.

The following eligible activities and budgeted costs are intended as part of the development of the property and are to be financed solely by the developer prior to reimbursement from the LSRRLF.

1. Preparation of the Brownfield Plan $5,980

2. Due Care Activities totaling approximately $13,004; this includes the removal and disposal of five hoists, removal and disposal of associated contaminated soil at approximately 5 yards per hoist, and hoist removal monitoring and assessment activities.

3. Demolition costs totaling approximately $479,095; this includes building and site demolition, demolition oversight, asbestos abatement activities and air monitoring associated with the building demolition, and the proper removal of fluorescent light tubes, PCB ballasts, mercury vapor bulbs and mercury switches, fire extinguishers, CFC refrigerants, hydraulic lifts, and facility owned pad mounted transformer (includes packaging, transportation and disposal/recycling).

All activities are intended to be "eligible activities" under Act 381, as amended. The total cost of eligible activities that are subject to payment or reimbursement from LSRRLF will not exceed $498,079. In addition, the LSRRLF will capture 3% simple interest on the unreimbursed eligible expenses, which will total approximately $65,891. Reimbursements will also not exceed the provided invoices/proof of expenses; the developer will only be reimbursed for the costs that are incurred. A 15% contingency has been built in to each individual line item estimate.

The LSRRLF will continue to capture taxes for five years following eligible expense and interest reimbursement to further build the LSRRLF. In addition, the TBRA will capture 1% of unreimbursed eligible expenses as an administrative fee for the authority.

N. Other Material that the Authority or Governing Body Considers Pertinent

The asbestos inspection conducted by the landlord is included in Appendix E. The asbestos inspection of the property occurred when the building and its electrical systems were still active and therefore limited dismantling of the electrical, heating, and ventilation systems was conducted to complete the initial inspection activities. Consequently, it is possible that asbestos containing linings or insulation (i.e., transite asbestos or paper insulation, etc.) may exist within these systems not accessed during the initial survey but would still need abatement during building demolition activities. The 15% contingency that has been built into the Brownfield Plan should account for any additional asbestos containing materials uncovered during demolition.

Appendix A

PM ENVIRONMENTAL Environmental & Engineering Services

Assessing Report for 88-20-34-101-023

Parcel Number	88-20-34-101-023
Property Address	100 E MAPLE -120
Property Address Apt	-120
Property Address Zip	48083-2761
Owner Name 1	GERSHENSON REALTY & INVESTMENT
Owner Name 2	
Neighborhood Code	VLCOM
State Equalized Value (SEV)	2175240
Taxable Value	1025640
Summary Land Value	4350480
Property Class	201
School District	TROY
Principal Residence Exemption	0
Last Sale Amount	0
Last Sale Date	
Owner Street Address	31500 NORTHWESTERN STE 100
Owner City	FARMINGTON
Owner State	MI
Owner Zip Code	48334
Taxpayer Street Addr	
Frontage	0
Depth of Parcel	0
Summary Res Floor Area	0
Num Res Buildings	0
Summary Res Garage Area	0
Summary Res Year Built	0
Summary Res Style Alph	0
Summary Res Num Bed	0
Summary Res Num Half Bath	0
Summary Res Num Full Bath	0
Summary Res Basement Area	0
Num CI Buildings	1
Summary CI Floor Area	118201
Summary CI Stories	1
Summary CI Year Built	1964
Legal Description	T2N, R11E, SEC 34 PART OF W 1/2 OF NW 1/4 BEG AT PT DIST N 89-59-30 E 235 FT & S 00-02-15 W 60 FT FROM NW SEC COR, TH N 89-59-30 E 324 FT, TH S 00-02-15 W 205 FT, TH N 89-59-30 E 198 FT, TH N 00-02-15 E 205 FT, TH N 89-59-30 E 48 FT, TH S 00-02-15 W 300 FT,

	TH N 89-59-30 E 125 FT, TH S 00-02-15 W 445 FT, TH S 89-59-30 W 870 FT, TH N 00-02-15 E 595 FT, TH N 89-59-30 E 175 FT, TH N 00-02-15 E 150 FT TO BEG 12.48 A 6-13-96 FR 020 & 021

Resources
- Public Records
- Newsletters
- Forms
- Permits
- Press Releases
- Maps
- Newspapers

Government
- Employment
- City Council Meeting
- Code and Charter
- City Manager
- City Council Agenda
- Public Hearings
- Elections
- FAQ
- Web Broadcasts

Contact
- Directions to City Hall
- Phone Directory

Calendar
- Weekly View
- Suggest New Item

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500 W. Big Beaver Rd · Troy, Michigan 48084 · Ph: 248.524.3300 City Hall Hours: 8am-4:30pm

Appendix B

PM ENVIRONMENTAL Environmental & Engineering Services

88-20-34-101-023 2013 Est. T.C.V. GERSHENSON REALTY & INVESTMENT
Property Class: 201 100 E MAPLE -120
Map #: 88-20-34-101-023 CITY OF TROY TROY, MI 48083-2761

T2N, R11E, SEC 34 PART OF W 1/2 OF NW 1/4 BEG AT PT DIST N 89-59-30 E 235 FT & S 00-02-15 W 60 FT FROM NW SEC COR, TH N 89-59-30 E 324 FT, TH S 00-02-15 W 205 FT TH N 89-59-30 E 198 FT, TH N 00-02-15 E 205 FT, TH N 89-59-30 E 48 FT, TH S 00-02-15 W 300 FT, TH N 89-59-30 E 125 FT, TH S 00-02-15 W 445 FT, TH S 89-59-30 W 870 FT, TH N 00-02-15 E 595 FT, TH N 89-59-30 E 175 FT, TH N 00-02-15 E 150 FT TO BEG 12.48 A
6-13-96 FR 020 & 021

Land Value Estimates for Land Table B-123.B-123

Description	Frontage	Depth	* Factors * Front	Depth	Rate	%Adj.	Reason	Value
B-123 SQ F B-123 SQ FT		543810 SqFt		8.00000	100			4,350,480
		12.48 Total Acres			Total Est. Land Value =			4,350,480

Cost Estimates for Commercial/Industrial Building/Section: 1 Built 1964

Costs are taken from the Store, Discount cost schedules.
<<<<< Calculator Cost Computations >>>>>
Class: C Quality: Average Percent Adj: +0

Base Rate for Upper Floors = 49.00

(10) Heating system: Package Heating & Cooling Cost/SqFt: 0.00 100%
Adjusted Square Foot Cost for Upper Floors = 49.00

1 Stories Number of Stories Multiplier: 1.000
Average Height per Story: 19 Height per Story Multiplier: 1.055
Ave. Floor Area: 118,201 Perimeter: 1551 Perim. Multiplier: 0.812
Refined Square Foot Cost for Upper Floors: 41.98

County Multiplier: 1.42, Final Square Foot Cost for Upper Floors = 59.606

Total Floor Area: 118,201 Base Cost New of Upper Floors = 7,045,536

118,201 Sq.Ft. of Sprinklers @ 1.72, County Mult.:1.42 Cost New = 288,694

Reproduction/Replacement Cost = 7,334,231
Eff.Age:42 Phy.%Good/Abnr.Phy./Func./Econ./Overall %Good: 35 /100/0 /100/0.0
Total Depreciated Cost = 0

Total Estimated True Cash Value of Commercial/Industrial Buildings = 0

2013 Est. T.C.V. 88-20-34-101-023 = 4,350,480
Est. TCV/Total Floor Area = 36.81

2012 Assessed	MBOR	S.E.V.	Base for Cap	C.P.I.
2,175,240	2,175,240	2,175,240	1,001,610	2.40

2013 New	Eq. Adjustment	Loss	Additions	Tax Adjustment	Losses
0	0	0	0	24,030	0

2013 Assessed	MBOR	S.E.V.	Capped	->Taxable<-	PRE/MBT
2,175,240	2,175,240	2,175,240	1,025,640	1,025,640	0

Parcel Number: 88-20-34-101-023 Jurisdiction: CITY OF TROY County: OAKLAND Printed on 06/28/2013

Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.

Property Address	Class: 201 COMM IMP	Zoning: B-2 (	Building Permit(s)	Date	Number	Amount
100 E MAPLE -120	School: TROY		COMMERCIAL, ADD/ALTER	02/18/2005	PB2005-0099	20,000
	P.R.E. 0%		COMMERCIAL, ADD/ALTER	01/18/2005	PB2005-0028	20,000
Owner's Name/Address	MAP #: 88-20-34-101-023		MECHANICAL, AIR	10/24/2000	PM2000-2417	0
GERSHENSON REALTY & INVESTMENT 31500 NORTHWESTERN STE 100 FARMINGTON MI 48334	2013 Est TCV 4,350,480 TCV/TFA: 36.81		MECHANICAL, HEAT	10/24/2000	PM2000-2416	0

X Improved | Vacant

Land Value Estimates for Land Table B-123.B-123

Description	Frontage	Depth	* Factors * Front	Depth	Rate	%Adj.	Reason	Value
B-123 SQ F B-123 SQ FT			543810 SqFt	8.00000	100			4,350,480
			12.48 Total Acres		Total Est. Land Value =			4,350,480
D/W/P: Asphalt Paving			1.61	1.42	306115	0		0

Public Improvements

	Dirt Road
	Gravel Road
X	Paved Road
X	Storm Sewer
X	Sidewalk
X	Water
X	Sewer
X	Electric
X	Gas
X	Curb
X	Street Lights
	Standard Utilities
	Underground Utils.

Topography of Site

X	Level
	Rolling
	Low
	High
	Landscaped
	Swamp
	Wooded
	Pond
	Waterfront
	Ravine
	Wetland
	Flood Plain

Tax Description

T2N, R11E, SEC 34 PART OF W 1/2 OF NW 1/4 BEG AT PT DIST N 89-59-30 E 235 FT & S 00-02-15 W 60 FT FROM NW SEC COR, TH N 89-59-30 E 324 FT, TH S 00-02-15 W 205 FT TH N 89-59-30 E 198 FT, TH N 00-02-15 E 205 FT, TH N 89-59-30 E 48 FT, TH S 00-02-15 W 300 FT, TH N 89-59-30 E 125 FT TH S 00-02-15 W 445 FT, TH S 89-59-30 W 870 FT, TH N 00-02-15 E 595 FT, TH N 89-59-30 E 175 FT, TH N 00-02-15 E 150 FT TO BEG 12.48 A
6-13-96 FR 020 & 021

Comments/Influences

01/04/12: REMOVED ALL BLDG IMPROVEMENTS. 1964 VINTAGE S/B DEMO'D. NL

Who	When	What

Year	Land Value	Building Value	Assessed Value	Board of Review	Tribunal/ Other	Taxable Value
2013	2,175,240	0	2,175,240			1,025,640C
2012	2,175,240	0	2,175,240			1,001,610C
2011	2,175,240	659,280	2,834,520		2,834,520A	1,268,837C
2010	2,175,240	1,015,240	3,190,480		1,247,628T	1,247,628C

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*** Information herein deemed reliable but not guaranteed***

Desc. of Bldg/Section:
Calculator Occupancy: Store, Discount

Class: C
Floor Area: 118,201
Stories Above Grd: 1
Average Sty Hght : 19
Bsmnt Wall Hght

Depr. Table : 3%
Effective Age : 42
Physical %Good: 35
Func. %Good
Economic %Good: 100

1964 Year Built
2005 Remodeled

19 Overall Bldg Height

Comments:

Construction Cost

	High		Above Ave.	X	Ave.		Low

** ** Calculator Cost Data ** **
Quality: Average Adj: %+0 $/SqFt:0.00
Heat#1: Package Heating & Cooling 100
Heat#2: Package Heating & Cooling 0%
Ave. SqFt/Story: 118201
Ave. Perimeter: 1551
Has Elevators:

*** Basement Info ***
Area:
Perimeter:
Type:
Heat: Hot Water, Radiant Floor

* Mezzanine Info *
Area #1:
Type #1: Open (No Rates)
Area #2:
Type #2: Office (No Rates)

* Sprinkler Info *
Area: 118201
Type: Average

<<<<< Calculator Cost Computations >>>>>
Class: C Quality: Average Percent Adj: +0

Base Rate for Upper Floors = 49.00

(10) Heating system: Package Heating & Cooling Cost/SqFt: 0.00 100%
Adjusted Square Foot Cost for Upper Floors = 49.00

1 Stories Number of Stories Multiplier: 1.000
Average Height per Story: 19 Height per Story Multiplier: 1.055
Ave. Floor Area: 118,201 Perimeter: 1551 Perim. Multiplier: 0.812
Refined Square Foot Cost for Upper Floors: 41.98

County Multiplier: 1.42, Final Square Foot Cost for Upper Floors = 59.606

Total Floor Area: 118,201 Base Cost New of Upper Floors = 7,045,536

118,201 Sq.Ft. of Sprinklers @ 1.72, County Mult.:1.42 Cost New = 288,694

Reproduction/Replacement Cost = 7,334,231
Eff.Age:42 Phy.%Good/Abnr.Phy./Func./Econ./Overall %Good: 35 /100/0 /100/0.0
Total Depreciated Cost = 0

(1) Excavation/Site Prep:

(2) Foundation: | | Footings

X	Poured Conc		Brick/Stone		Block

(3) Frame:

(4) Floor Structure:

(5) Floor Cover:

(6) Ceiling:

(7) Interior:

(8) Plumbing:

	Many Above Ave.		Average Typical		Few None

	Total Fixtures 3-Piece Baths 2-Piece Baths Shower Stalls Toilets		Urinals Wash Bowls Water Heaters Wash Fountains Water Softeners

(9) Sprinklers:

(10) Heating and Cooling:

X	Gas Oil		Coal Stoker		Hand Fired Boiler

(11) Electric and Lighting:

Outlets:		Fixtures:	
X	Few Average Many Unfinished Typical	X	Few Average Many Unfinished Typical
	Flex Conduit Rigid Conduit Armored Cable Non-Metalic Bus Duct		Incandescent Fluorescent Mercury Sodium Vapor Transformer

(13) Roof Structure: Slope=0

(14) Roof Cover:

(39) Miscellaneous:

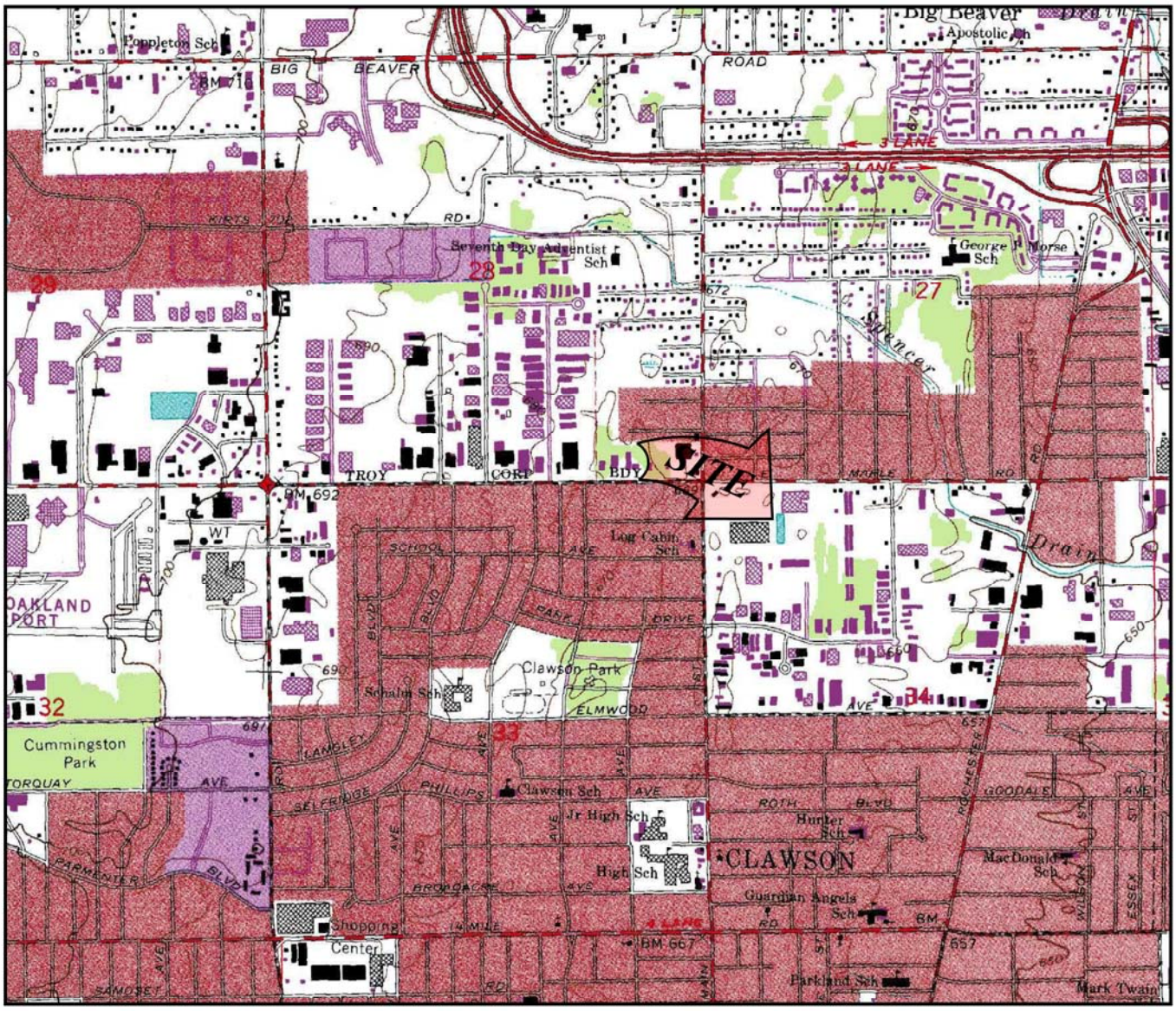
(40) Exterior Wall:

	Thickness		Bsmnt Insul.

*** Information herein deemed reliable but not guaranteed***

Appendix C

PM ENVIRONMENTAL Environmental & Engineering Services



OAKLAND COUNTY

SCALE 1:24,000

1 MILE 1/2 MILE 0 1 MILE

FIGURE 1

PROPERTY VICINITY MAP

USGS, 7.5 MINUTE SERIES

BIRMINGHAM, MI QUADRANGLE, 1968. PHOTO REVISED 1981.

PM ENVIRONMENTAL Environmental & Engineering Services	PROJ: VACANT RETAIL PROPERTY 100 EAST MAPLE ROAD TROY, MI	THIS IS NOT A LEGAL SURVEY VERIFY SCALE 0 — 2,000' IF NOT 1" ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	DRN BY: CS CHKD BY: KT FILE NAME: 02-6518-0F01R00	DATE: 6/20/2013 SCALE: 1" = 2,000'

37 EAST MAPLE ROAD
PSYCHIC READER

49-65 EAST MAPLE ROAD
MULTI-TENANT COMMERCIAL BUILDING

79 EAST MAPLE ROAD
VIOLINS LIMITED

91 EAST MAPLE ROAD
VACANT COMMERCIAL BUILDING

95 EAST MAPLE ROAD
DATTA CORPORATION

101 EAST MAPLE ROAD
BARBARA BENKO ATTORNEYS

125 EAST MAPLE ROAD
AAA

135 EAST MAPLE ROAD
JOHN R. JOSEPH MD

EAST MAPLE ROAD

1553 NORTH MAIN STREET
TROPICAL CAFE SMOTHIES

1537 NORTH MAIN STREET
HAMILTON ANIMAL HOSPITAL

1523 NORTH MAIN STREET
MULTI-TENANT COMMERCIAL BUILDING

1511 NORTH MAIN STREET
THE ART OF CUSTOM FRAMING

1505 NORTH MAIN STREET
PAVED PARKING LOT

1467 NORTH MAIN STREET
PAVED PARKING LOT

1457 NORTH MAIN STREET
STIRNEMANN TOOLS AND MACHINE

1431 NORTH MAIN STREET
CONSTRUCTION SITE

1421 NORTH MAIN STREET
WENDY'S

NORTH MAIN STREET

20 EAST MAPLE ROAD
SUBWAY

150 EAST MAPLE ROAD
BANK OF AMERICA

164 EAST MAPLE ROAD
MULTI-TENANT COMMERCIAL BUILDING

190 EAST MAPLE ROAD
MICHIGAN CHANDELIER

FORMER AUTOMOTIVE SERVICE AREA

DETENTION POND

214 EAST MAPLE ROAD
EMPIRE ELECTRONICS

FORMER RETAIL AREA

APPROXIMATE LOCATION OF FORMER USTs

FORMER AUTOMOTIVE PARTS STORAGE

1350 LIVERNOIS ROAD
PAUL'S AUTO WASH

UNDERGROUND VAULT

205 PARK DRIVE
FEDEX FREIGHT

1300-1310 LIVERNOIS ROAD
VACANT COMMERCIAL BUILDING

LEGEND:

SUBJECT PROPERTY
PAD MOUNTED TRANSFORMER
IN-GROUND HOIST
FLOOR DRAIN
UST — UNDERGROUND STORAGE TANK

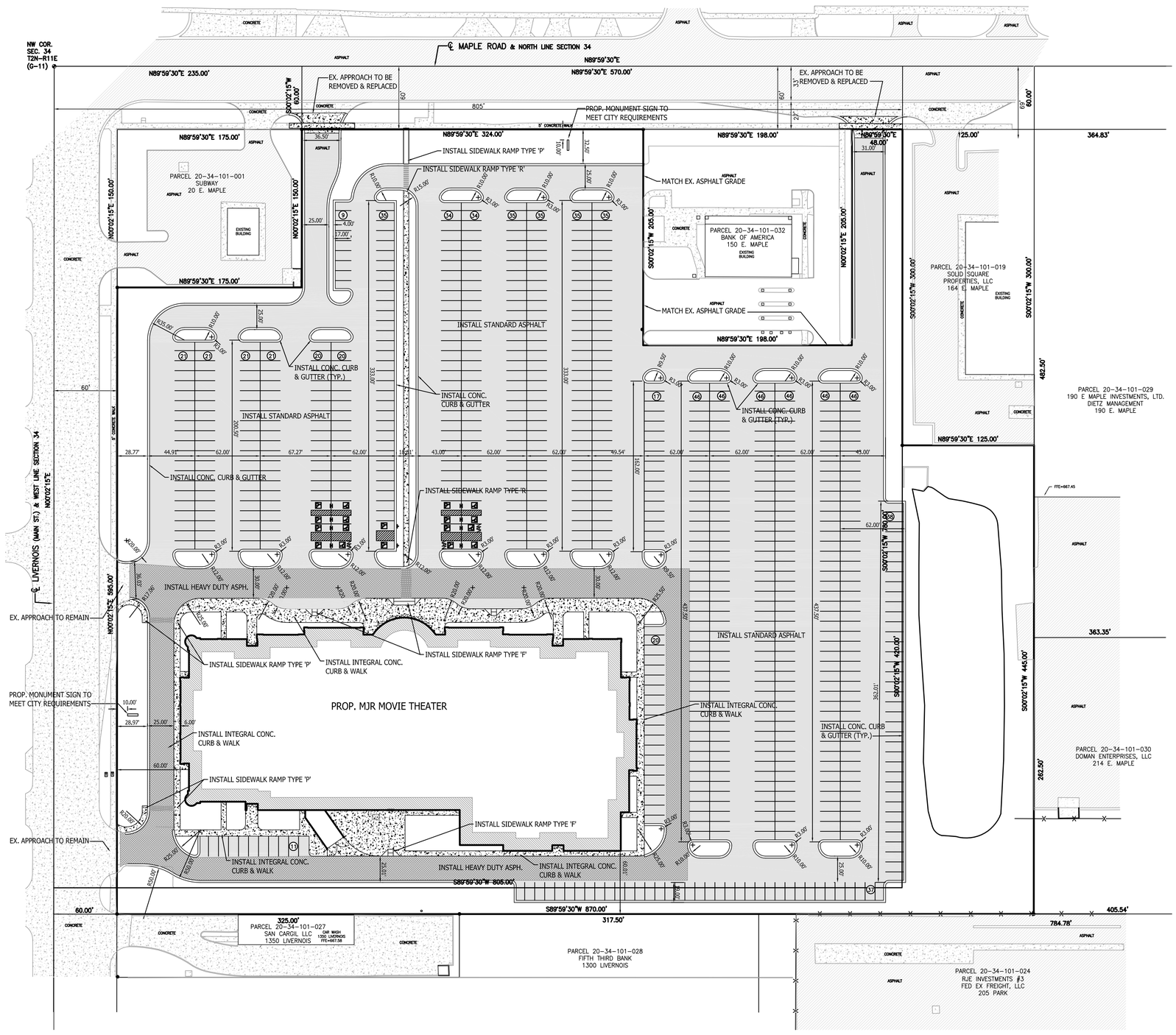
PM ENVIRONMENTAL | Environmental & Engineering Services

FIGURE 2

GENERALIZED DIAGRAM OF THE SUBJECT PROPERTY AND ADJOINING PROPERTIES

PROJ:
VACANT RETAIL PROPERTY
100 EAST MAPLE ROAD
TROY, MI

THIS IS NOT A LEGAL SURVEY	DRN BY: CS	DATE: 6/24/2013
VERIFY SCALE 0 100' IF NOT 1" ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	CHKD BY: KT	SCALE: 1" = 100'
	FILE NAME: 02-6518-0F02R00	

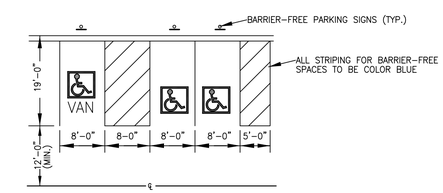


LEGEND

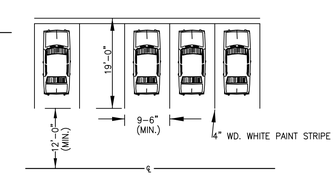
PROPOSED (PR)	EXISTING (EX)	
UP	UP	UTILITY POLE
		UTILITY POLE
		FENCE
		SIGN
		LIMITS OF GRADING/CLEARING
		CONCRETE
		ASPHALT
		MODIFIED CURB

SITE DATA

1. EXISTING ZONING: MR MAPLE ROAD (FORM BASED ZONE)
2. ADJACENT ZONING: MR & IB (INTEGRATED INDUSTRIAL BUSINESS DISTRICT)
3. EXISTING USE: VACANT COMMERCIAL BUILDING (KMART)
4. PROPOSED USE: MJR MOVIE THEATRES
5. PARKING
   REQUIRED: 1 SPACE PER 3 SEATS - 3,200 SEATS / 3 SEATS = 1,067 SPACES
   PROPOSED: 775 SPACES (INCLUDES 18 BARRIER-FREE SPACES)



TYPICAL BARRIER FREE PARKING SPACE
(NO SCALE)



TYPICAL PARKING SPACE
(NO SCALE)

THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE DRAWINGS ARE ONLY APPROXIMATE. NO GUARANTEE IS EXPRESSED OR IMPLIED AS TO THE ACCURACY OR COMPLETENESS OF THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR ESTABLISHING THE EXACT LOCATION OF ALL EXISTING UTILITIES AND PROPOSED UTILITY CROSSINGS IN THE FIELD PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY CONFLICTS ARE APPARENT OR IF THE LOCATION OR DEPTH DIFFERS SIGNIFICANTLY FROM THAT SHOWN ON THE PLANS.

3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 1-800-482-7171 IT'S THE LAW & IT'S GOOD NEIGHBOR PLACE

BOSS ENGINEERING
ENGINEERS • SURVEYORS • PLANNERS
LANDSCAPE ARCHITECTS
(E-MAIL: be@bossengi.com)
312 E. CODDINGTON AVE.
HOWELL, MICHIGAN 48843
(800) 246-6735 FAX (517) 548-1670

PROJECT: MJR THEATRES TROY GRAND CINEMA 16

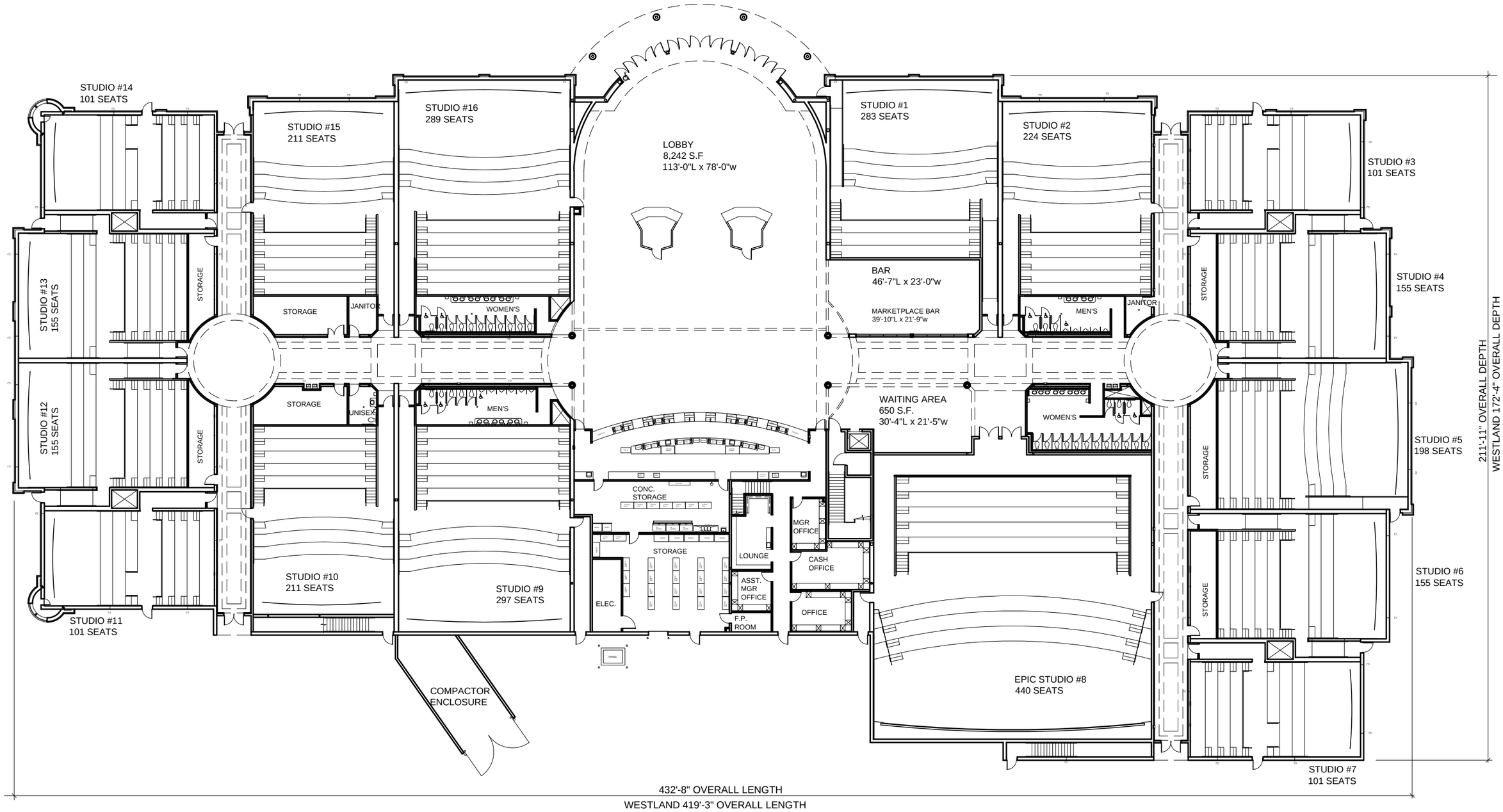
PREPARED FOR: MJR THEATRES
41000 WOODWARD AVE. SUITE 135 EAST
BLOOMFIELD HILLS, MI 48304
248-548-8282

TITLE: SITE PLAN

NO. BY	REVISION PER	DATE

DESIGNED BY: TD
DRAWN BY: TD
CHECKED BY:
SCALE 1" = 50'
JOB NO. 13-104
DATE 5-30-13
SHEET NO. 2

G:\beprojects\13-104\dwg\sp\13-104 Base.dwg, 5/30/2013 3:55:41 PM, CutePDF Writer



MJR TROY GRAND 16 SCREEN THEATER

SCALE: NOT TO SCALE DATE: MAY 29, 2013

paradigm design inc.
550 3 Mile Road N.W.
Suite B
Grand Rapids, MI 49544
Phone: (616) 785 - 5656
Fax: (616) 785 - 5657
www.ParadigmAE.com
ARCHITECTS CIVIL ENGINEERS

MJR DIGITAL CINEMAS
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Appendix D

PM ENVIRONMENTAL Environmental & Engineering Services

Table 1- 100 East Maple, Troy - Estimated Costs of Eligible Activities		
Item/Activity	**Total Estimated Cost**	**Comments**
Developer Reimbursed Activities		
Baseline Environmental Assessment Activities		
Phase I	$ 2,400	
Phase II/BEA/Due Care Plan	$ 7,685	
Brownfield Authority Application Fee		
BRA Application Fee	$ 1,500	
Developer Reimbursed Total	**$ 11,585**	
Local Site Remediation Revolving Loan Fund Reimbursed Activities		
Due Care Activities		
Hoist removal, disposal (5 hoists)	$ 6,785	
Hoist removal monitoring and assessment	$ 5,141	
Contaminated soil removal and disposal associated with hoist removal (approximate 25 yards)	$ 1,078	
Demolition		
Building Demolition	$ 140,000	
Site Demolition	$ 128,000	
Demolition Oversight	$ 17,710	
Asbestos Abatement	$ 131,100	
Air Quality Monitoring and Oversight associated with Asbestos Abatement	$ 17,538	
Temporary Power required to conduct Asbestos Abatement	$ 17,147	
Removal of fluorescent light tubes, PCB ballasts, mercury vapor bulbs and mercury switches, fire extinguishers, CFC refrigerants, hydraulic lifts, and facility owned pad mounted transformer (includes packaging, transportation and disposal/recycling)	$ 27,600	
Preparation of Brownfield Plan and Act 381 Workplan		
Brownfield Plan	$ 5,980	
Local Site Remediation Revolving Loan Fund Reimbursed Total	**$ 498,079**	
Project Subtotal (Developer and LSRRLF Reimbursement)	**$ 509,664**	
Capture to City Brownfield Redevelopment Authority		
TIF Capture for LSRRLF	$ 364,769	
3% Simple Interest of unreimbursed costs	$ 65,891	
TBRA Administrative Fee	$ 21,964	
Total Cost of Eligible Activities to be Funded through TIF	**$ 962,288**	

Tax Increment Financing Estimates
Table 2
100 East Maple, Troy, MI

		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	
Current Taxable Value		$ 1,025,640	$ 1,025,640	$ 1,025,640	$ 1,025,640	$ 1,025,640	$ 1,025,640	$ 1,025,640	$ 1,025,640	$ 1,025,640	$ 1,025,640	$ 1,025,640	$ 1,025,640	$ 1,025,640	$ 1,025,640	
Estimated Tax Increment Value (estimated increase of 1%/year)			$ 4,500,000	$ 4,500,000	$ 4,545,000	$ 4,590,450	$ 4,636,355	$ 4,682,718	$ 4,729,545	$ 4,776,841	$ 4,824,609	$ 4,872,855	$ 4,921,584	$ 4,970,800	$ 5,020,508	
Incremental Difference (New Taxes-Existing)			$ 3,474,360	$ 3,474,360	$ 3,519,360	$ 3,564,810	$ 3,610,715	$ 3,657,078	$ 3,703,905	$ 3,751,201	$ 3,798,969	$ 3,847,215	$ 3,895,944	$ 3,945,160	$ 3,994,868	
Local Taxes - Millage																
County Operating	4.1900		$ 14,558	$ 14,558	$ 14,746	$ 14,937	$ 15,129	$ 15,323	$ 15,519	$ 15,718	$ 15,918	$ 16,120	$ 16,324	$ 16,530	$ 16,738	**$ 202,117**
Library	0.7		$ 2,432	$ 2,432	$ 2,464	$ 2,495	$ 2,528	$ 2,560	$ 2,593	$ 2,626	$ 2,659	$ 2,693	$ 2,727	$ 2,762	$ 2,796	**$ 33,767**
County Parks	0.2415		$ 839	$ 839	$ 850	$ 861	$ 872	$ 883	$ 894	$ 906	$ 917	$ 929	$ 941	$ 953	$ 965	**$ 11,649**
H/CL Metro Auth	0.2146		$ 746	$ 746	$ 755	$ 765	$ 775	$ 785	$ 795	$ 805	$ 815	$ 826	$ 836	$ 847	$ 857	**$ 10,352**
OCPTA Smart	0.5900		$ 2,050	$ 2,050	$ 2,076	$ 2,103	$ 2,130	$ 2,158	$ 2,185	$ 2,213	$ 2,241	$ 2,270	$ 2,299	$ 2,328	$ 2,357	**$ 28,460**
City General	6.5000		$ 22,583	$ 22,583	$ 22,876	$ 23,171	$ 23,470	$ 23,771	$ 24,075	$ 24,383	$ 24,693	$ 25,007	$ 25,324	$ 25,644	$ 25,967	**$ 313,547**
City Capital	1.5300		$ 5,316	$ 5,316	$ 5,385	$ 5,454	$ 5,524	$ 5,595	$ 5,667	$ 5,739	$ 5,812	$ 5,886	$ 5,961	$ 6,036	$ 6,112	**$ 73,804**
City Refuse	1.0500		$ 3,648	$ 3,648	$ 3,695	$ 3,743	$ 3,791	$ 3,840	$ 3,889	$ 3,939	$ 3,989	$ 4,040	$ 4,091	$ 4,142	$ 4,195	**$ 50,650**
ISD Extra Voted	3.1687		$ 11,009	$ 11,009	$ 11,152	$ 11,296	$ 11,441	$ 11,588	$ 11,737	$ 11,886	$ 12,038	$ 12,191	$ 12,345	$ 12,501	$ 12,659	**$ 152,852**
ISD Operating	0.2003		$ 696	$ 696	$ 705	$ 714	$ 723	$ 733	$ 742	$ 751	$ 761	$ 771	$ 780	$ 790	$ 800	**$ 9,662**
OCC	1.5844		$ 5,505	$ 5,505	$ 5,576	$ 5,648	$ 5,721	$ 5,794	$ 5,868	$ 5,943	$ 6,019	$ 6,096	$ 6,173	$ 6,251	$ 6,329	**$ 76,428**
Total Local Taxes (capturable)	**19.9695**															**$ 963,288**
Debt Millages (not capturable)																
School Debt Service	4.9600		$ 17,233	$ 17,233	$ 17,456	$ 17,681	$ 17,909	$ 18,139	$ 18,371	$ 18,606	$ 18,843	$ 19,082	$ 19,324	$ 19,568	$ 19,815	**$ 239,260**
City Debt	0.7000		$ 2,432	$ 2,432	$ 2,464	$ 2,495	$ 2,528	$ 2,560	$ 2,593	$ 2,626	$ 2,659	$ 2,693	$ 2,727	$ 2,762	$ 2,796	**$ 33,767**
Total Debt Millages (not capturable)	**5.6600**															**$ 273,027**
Total Millages	**25.6295**															
Total Capturable Millages	**19.9695**															
Annual Incremental Capture Local Taxes			$ 69,381	$ 69,381	$ 70,280	$ 71,187	$ 72,104	$ 73,030	$ 73,965	$ 74,910	$ 75,864	$ 76,827	$ 77,800	$ 78,783	$ 78,776	
TBRA Administrative Fee*			$ 4,981	$ 4,453	$ 3,803	$ 3,139	$ 2,458	$ 1,762	$ 1,049	$ 320	$ -	$ -	$ -	$ -	$ -	**$ 21,964**
Incremental Capture after Administrative Fees			**$ 64,400**	**$ 64,929**	**$ 66,477**	**$ 68,049**	**$ 69,646**	**$ 71,268**	**$ 72,916**	**$ 74,590**	**$ 75,864**	**$ 76,827**	**$ 77,800**	**$ 78,783**	**$ 78,776**	
Total Cumulative Tax Capture			$ 64,400	$ 129,329	$ 195,806	$ 263,854	$ 333,501	$ 404,769	$ 477,685	$ 552,275	$ 628,138	$ 704,965	$ 782,765	$ 861,548	$ 940,324	
Capture for Reimbursement to Developer																
Unreimbursed Eligible Expenses		**$ 11,585**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	
Capture for LSRRLF																
Unreimbursed Eligible Expenses		**$ 498,079**	**$ 445,263**	**$ 380,334**	**$ 313,858**	**$ 245,809**	**$ 176,163**	**$ 104,895**	**$ 31,978**	**$ (42,611)**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	
Interest, 3% Simple Interest			**$ 14,942**	**$ 13,358**	**$ 11,410**	**$ 9,416**	**$ 7,374**	**$ 5,285**	**$ 3,147**	**$ 959**						**$ 65,891**
Interest Running Total				**$ 28,300**	**$ 39,710**	**$ 49,126**	**$ 56,500**	**$ 61,785**	**$ 64,932**	**$ 65,891**	**$ 23,280**	**$ -**	**$ -**	**$ -**	**$ -**	
Reimbursed Interest to LSRRLF										**$ 42,611**	**$ 23,280**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 65,891**
TBRA LSRRLF Fund Capture																
Local Tax Capture			**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 52,584**	**$ 76,827**	**$ 77,800**	**$ 78,783**	**$ 78,776**	**$ 364,769**

*Administrative fee is 1% of the unreimbursed LSRRLF expenses

1 Year: Developer Reimbursement Complete

9 Years: LSRRLF Interest Capture Complete

8 Years: LSRRLF Reimbursement Complete

Description of Eligible Activities (see Table 1)	**Estimated Costs**
1. Environmental Assessment Activities	$ 10,085
2. BRA Application Fee	$ 1,500
3. Due Care Activities	$ 13,004
4. Demolition	$ 479,095
5. Preparation of Brownfield Plan	$ 5,980
Total	**$ 509,664**

Total Activities to be Captured by TIF	**Estimated Costs**
Developer Reimbursement	$ 11,585
Local Site Remediation Revolving Loan Fund Reimbursement	$ 498,079
LSRRLF 3% Interest Capture	$ 65,891
5 Years capture to build LSRRLF	$ 364,769
TBRA Administrative Fee	$ 21,964
Total	**$ 962,288**

Appendix E

PM ENVIRONMENTAL Environmental & Engineering Services

Testing Engineers & Consultants, Inc.
1343 Rochester Road • PO Box 249 • Troy, Michigan 48099-0249
(248) 588-6200 or (313) T-E-S-T-I-N-G • Fax (248) 588-6232
www.testingengineers.com

TEC Report Number: 53362-01
Date Issued: April 19, 2013

Mr. Mark Perkoski
Maple & Livernois, LLC
31500 Northwestern Highway
Suite 100
Farmington Hills, Michigan 48334

Telephone: (248) 785-2300
Email: mark@gershensonrealty.com

Re: Asbestos Survey Report. Project: Former K-Mart Building located at 100 East Maple Road; Troy, MI 48083.

Dear Mr. Perkoski:

Enclosed please find our report of a pre-demolition asbestos survey at the above referenced location. We hope that you find this report complete and self-explanatory.

We are pleased to provide this service. Should you have any questions regarding this report or require additional information, please contact this office at your convenience.

Respectfully Yours,
TESTING ENGINEERS & CONSULTANTS, INC.

Scott M. Chandler, CIH, LEED AP
Manager
Industrial Hygiene Services

Jennifer M. Pendley
Assistant Manager
Industrial Hygiene Services

SC/rfm
Enclosure

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Testing Engineers & Consultants, Inc.

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1	Introduction
2	Summary of Findings
2.1	Homogenous Material Listing
2.2	Recommendations for ACM
2.3	List by Functional Space
2.4	List by Homogenous Material
3	Bulk Sample Report, Laboratory Data and Chain of Custody Document(s)
4	Functional Space Listing

Appendices:

A	Definitions of Terms and Assessment Criteria
B	Bulk Sampling Protocol and Analytical Methods
C	Summary of Regulatory Requirements
D	Photographs

Testing Engineers & Consultants, Inc.
Maple and Livernois, LLC
Mr. Mark Perkoski
April 19, 2013

TEC Report Number: 53362-01

Executive Summary

Testing Engineers & Consultants, Inc. (TEC) was retained by Maple & Livernois, LLC to perform a National Emission Standard for Hazardous Air Pollutants (NESHAP) style asbestos survey of the former K-Mart building located at 100 East Maple Road; Troy, MI 48083. A vacant, one story commercial building (former K-Mart) is located on the site.

The following known or assumed asbestos-containing materials were identified in the survey area:

HM #	Homogeneous Material Description	F/NF	SM/TSI/MM
15	Mastic on HM# 14	NF	MM
16	9" x 9" Gray Floor Tile	NF	MM
17	Mastic on HM# 16	NF	MM
18	Mudded Pipe Fittings on Fiberglass Straight Pipe	F	TSI
20	12" x 12" Gray w/ Gray Streak Floor Tile	NF	MM
21	Mastic on HM# 20	NF	MM
23	Mastic on HM# 22	NF	MM
26	Mastic on HM# 25	NF	MM
27	Original Drywall and Joint Compound	NF	MM
29	Roof Drain Conductor Insulation	F	TSI
36	Mastic on HM# 35	NF	MM
41	Tagged Fire Door	NF	MM
44	Woven HVAC Expansion Fabric	NF	MM
45	Black and Yellow Carpet Adhesive	NF	MM
47	Interior Boiler Insulation	F	TSI
48	Boiler Flue Exhaust Insulation	F	TSI

HM # Homogeneous Material Number
F/NF Friable or Non-Friable
SM Surfacing Material
TSI Thermal Systems Insulation
MM Miscellaneous Material

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Maple and Livernois, LLC
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Section 1 Introduction

This report is based on requirements of the National Emission Standard for Hazardous Air Pollutants (NESHAP) for renovation and/or demolition projects. NESHAP requires that building owners conduct surveys for asbestos-containing materials (ACM) in buildings that are to be renovated or demolished. The Environmental Protection Agency defines an asbestos-containing material as one which contains greater than one percent asbestos, using standardized analytical methods (polarized light microscopy). Building materials containing greater than one percent asbestos are referred to as asbestos-containing building materials (ACBM).

This survey addresses friable and non-friable suspect asbestos-containing building materials to meet NESHAP requirements for renovation and/or demolition activities. Friable materials are those that can be crumbled, pulverized or reduced to powder by hand pressure when dry. This includes products such as spray-applied fireproofing on structural steel members, spray-applied acoustical ceiling materials, and thermal systems insulation. Because friable materials are more likely to release asbestos fibers into the air when disturbed than non-friable materials, they are considered a greater health concern.

All other materials such as floor tile, adhesives, plaster, stucco, and sheet rock mudding compounds are considered non-friable materials. Non-friable materials can become friable through various mechanical means such as crushing, sanding, sawing, and shot-blasting or by natural means such as weathering.

On April 11 and 12, 2013, Richard Michalski (A25681) s State of Michigan accredited Building Inspector from TEC, performed an asbestos survey of the building in accordance with NESHAP and project requirements.

All identified suspect asbestos-containing materials are summarized in Section 2.1. Information regarding all suspect materials including locations, recommended response actions and quantities are described in Section 2.2 through 2.4.

DISCLAIMER

This report was prepared for the express use and benefit of Maple and Livernois, LLC, its agents and employees. The information in this report or portions thereof may be required to be included in notifications to residents, employees, contractors, regulators or other visitors to the building. This report is not intended to be used by the owner or its agents as a specification or work plan for any of the work suggested or recommended herein.

This report is based upon conditions observed at the property and information made available to the surveyor. This report does not intend to identify all hazards nor indicate that other hazards or unsafe practices do not exist at the premises.

TEC made their best effort to determine the location of inaccessible ACBM. TEC shall not be responsible for identifying all ACBM located behind walls and/or columns, beneath flooring, above solid ceilings, underground or any other inaccessible areas.

Polarized light microscopy (PLM) is not consistently reliable in detecting asbestos in a small percentage of samples that contain asbestos. Certain flooring materials (floor tile, linoleum) may contain very small asbestos fibers that are not visible by PLM. The fibers may also be bound or obscured by the organic matrix of the material. Thus, negative PLM results are not guaranteed by the laboratory. TEC recommends that any samples reported as <1% or below limit of detection should be further tested by transmission electron microscopy (TEM) to positively determine if the material is an ACM.

Standard PLM also is not consistently reliable in detecting asbestos in vermiculite insulation due to its heterogeneous nature. TEC recommends that any vermiculite insulation samples reported as below limit of detection should be further tested for asbestos using the California Air Resources Board Method 435, which includes a fine milling of the sample to create a homogeneous mixture.

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Section 2 Summary of Findings for Suspect Materials

Section 2 consists of several tables summarizing the findings of the building survey performed by TEC. Descriptions of each table are found below.

Section 2.1 consists of a table of all suspect building materials identified by the building inspector in the survey area. The materials are listed by Homogeneous Material Number (HM#). Each suspect material is assigned a unique HM#. The table also describes the material type (surfacing material, thermal systems insulation or miscellaneous material), its friability and whether it is an ACM.

Section 2.2 is a table summarizing our recommendations for each ACM or assumed ACM identified in the survey area. **Please note that the recommendations provided are based upon the condition of the ACM identified at the time of the inspection as well as our understanding of the scope of work.**

The table in Section 2.3 describes suspect ACM found in each Functional Space Number (FS#) identified in the survey area. For survey purposes, a building is divided into smaller units called Functional Spaces. A Functional Space is defined as a room, group of rooms, or other spatially distinct building unit as designated by an accredited asbestos building inspector. Each Functional Space is assigned a number and a description is provided. During the survey, the building inspector identifies the suspect ACM that are present in the functional space or that may be impacted during renovation work, in the case of limited surveys. **All materials listed in this section were determined to be in good condition except where noted in the table.**

Section 2.4 is organized by Homogeneous Material Number (HM#) and depicts which Functional Spaces contain them. Other information, such as quantities, ACM designation, friability and material category are also included in this table.

See Appendix A for definitions of terms used in the tables throughout Section 2.

Section 2.1

Homogenous Material Listing

Former K-Mart Building

HM Listing

HM#	Homogeneous Material Description	ACM?	F/NF	SM/TSI/MM
1	Drywall and Joint Compound	No	NF	MM
2	4" Covebase Adhesive	No	NF	MM
3	Round Fiberglass HVAC Duct	Non-suspect		
4	Gray Window Caulk	No	NF	MM
5	12" x 12" White w/Tan Speck Floor Tile	No	NF	MM
6	Adhesive on HM# 5	No	NF	MM
7	2' x 4' Gypsum Suspended Ceiling Tile	No	F	MM
8	2' x 4' Gray Suspended Ceiling Tile	No	F	MM
9	12" x 12" Off-white w/ Blue Streak Floor Tile	No	NF	MM
10	Adhesive on HM# 9	No	NF	MM
11	Fiberglass Straight Pipe and Fitting Insulation	Non-suspect		
11	Fiberglass Straight Pipe and Fiberglass Fitting Insulation	Non-suspect		
12	Metal-Jacketed Door Insulation	No	F	MM
13	2' x 4' White Bumby Suspended Ceiling Tile	No	F	MM
14	12" x 12" Cream Busy Floor Tile	No	NF	MM
15	**Mastic on HM# 14**	**Yes**	**NF**	**MM**
16	**9" x 9" Gray Floor Tile**	**Yes**	**NF**	**MM**
17	**Mastic on HM# 16**	**Yes**	**NF**	**MM**
18	**Mudded Pipe Fittings on Fiberglass Straight Pipe**	**Yes**	**F**	**TSI**
19	Joint Compound on Plywood	No	NF	MM
20	**12" x 12" Gray w/ Gray Streak Floor Tile**	**Yes**	**NF**	**MM**
21	**Mastic on HM# 20**	**Yes**	**NF**	**MM**
22	12" x 12" Pink Busy Floor Tile	No	NF	MM
23	**Mastic on HM# 22**	**Yes**	**NF**	**MM**
24	Green Linoleum with Burlap Backing	No	NF	MM
25	12" x 12" Dark Gray Floor Tile	No	NF	MM
26	**Mastic on HM# 25**	**Yes**	**NF**	**MM**
27	**Original Drywall and Joint Compound**	**Yes**	**NF**	**MM**
28	2' x 4' Pinhole Suspended Ceiling Tile	No	F	MM
29	**Roof Drain Conductor Insualtion**	**Yes**	**F**	**TSI**
30	Coating on Fiberglass Ceiling Panel	No	F	SM
31	12" x 12" Red Brick "Sticky-back" Floor Tile	No	NF	MM
32	1' x 1' Randon Hole Glued-on Ceiling Tile	No	F	MM
33	Glue Pod on HM# 32	No	NF	MM
34	Wallboard	No	NF	MM
35	12" x 12" Cream Floor Tile	No	NF	MM
36	**Mastic on HM# 35**	**Yes**	**NF**	**MM**
37	1' x 1' Randon Pin Hole Glued-on Ceiling Tile	No	F	MM
38	Glue Pod on HM# 37	No	NF	MM
39	Fiberglass Straight Pipe w/ Tar Layer	No	F	TSI
40	Popcorn Texturing Material	No	F	SM
41	**Tagged Fire Door**	**Yes (Assumed)**	**NF**	**MM**
42	12" x 12" Multi-colored "Sticky-Back" Floor Tile	No	NF	MM
43	Square Fiberglass HVAC Duct Insulation	Non-suspect		
44	**Woven HVAC Expansion Fabric**	**Yes**	**NF**	**MM**
45	**Black and Yellow Carpet Adhesive**	**Yes**	**NF**	**MM**
46	Yellow Carpet Adhesive	No	NF	MM
47	**Interior Boiler Insulation**	**Yes (Assumed)**	**F**	**TSI**
48	**Boiler Flue Exhaust Insulation**	**Yes**	**F**	**TSI**
49	White Sink Undercoating	No	NF	MM

HM#	*Homogeneous Material Description*	*ACM?*	*F/NF*	*SM/TSI/MM*
50	Asphalt and Gravel Roofing Material	No	NF	MM
51	Rubber Membrane Roofing Material	No	NF	MM
52	Exterior Door Frame Caulk	No	NF	MM

Section 2.2

Recommendations for ACM

HM#	Homogeneous Material Description	Amount Units	EPA Category	Recommendation
15	Mastic on HM# 14	75,500 SF	Category I Non-Friable ACM	Remove Prior to Demolition
16	9" x 9" Gray Floor Tile	575 SF	Category I Non-Friable ACM	Remove Prior to Demolition
17	Mastic on HM# 16	575 SF	Category I Non-Friable ACM	Remove Prior to Demolition
18	Mudded Pipe Fittings on Fiberglass Straight Pipe	285 SF	Friable ACM	Remove Prior to Demolition
20	12" x 12" Gray w/ Gray Streak Floor Tile	800 SF	Category I Non-Friable ACM	Remove Prior to Demolition
21	Mastic on HM# 20	800 SF	Category I Non-Friable ACM	Remove Prior to Demolition
23	Mastic on HM# 22	1,800 SF	Category I Non-Friable ACM	Remove Prior to Demolition
26	Mastic on HM# 25	850 SF	Category I Non-Friable ACM	Remove Prior to Demolition
27	Original Drywall and Joint Compound	4,500 SF	Category II Non-Friable ACM	Remove Prior to Demolition
29	Roof Drain Conductor Insualtion	32 EA	Friable ACM	Remove Prior to Demolition
36	Mastic on HM# 35	175 SF	Category I Non-Friable ACM	Remove Prior to Demolition
41	Tagged Fire Door	1 EA	Category II Non-Friable ACM	Remove Prior to Demolition
44	Woven HVAC Expansion Fabric	45 SF	Friable ACM	Remove Prior to Demolition
45	Black and Yellow Carpet Adhesive	150 SF	Category I Non-Friable ACM	Remove Prior to Demolition
47	Interior Boiler Insulation	200 SF	Friable ACM	Remove Prior to Demolition
48	Boiler Flue Exhaust Insulation	150 SF	Friable ACM	Remove Prior to Demolition

Footnotes:

1. For asbestos-containing materials which are currently in good condition and are to remain in place during demolition, they must remain non-friable during all phases of demolition when using allowable demolition techniques (bulldozers, implosion, wrecking balls, cranes or hydraulic excavators). No visible emissions allowed during any stage of demolition. Demolition debris containing Category I and II non-friable ACM does not require disposal at a facility licensed to accept asbestos waste.

2. If all ACM are removed prior to demolition, the remainder of the demolition debris may be either recycled (if appropriate) or disposed as general construction debris at a facility licensed to accept this waste.

3. Asbestos-containing materials removed in a non-friable manner and which remain non-friable during handling, transporting and disposal, can be disposed as general construction debris at a facility licensed to accept this waste. Contact disposal facility and inquire about the policies regarding acceptance of Category I and II non-friable ACM.

Section 2.3

List by Functional Space

S#	FS Description	Floor	FS Notes	HM#	Homogeneous Material Description	HM Notes	Amount	Units	ACM?
1	Entrance	1		1	Drywall and Joint Compound		725	SF	No
1	Entrance	1		2	4" Covebase Adhesive		10	LF	No
1	Entrance	1		3	Round Fiberglass HVAC Duct		NA		Non-suspect
1	Entrance	1		4	Gray Window Caulk		2	SF	No
1	Entrance	1		5	12" x 12" White w/Tan Speck Floor Tile		350	SF	No
1	Entrance	1		6	Adhesive on HM# 5		350	SF	No
2	Food Service Area	1		1	Drywall and Joint Compound		825	SF	No
2	Food Service Area	1		2	4" Covebase Adhesive		60	LF	No
2	Food Service Area	1		3	Round Fiberglass HVAC Duct		NA		Non-suspect
2	Food Service Area	1		7	2' x 4' Gypsum Suspended Ceiling Tile		375	SF	No
2	Food Service Area	1		8	2' x 4' Gray Suspended Ceiling Tile		475	SF	No
2	Food Service Area	1		9	12" x 12" Off-white w/ Blue Streak Floor Tile		675	SF	No
2	Food Service Area	1		10	Adhesive on HM# 9		675	SF	No
2	Food Service Area	1		11	Fiberglass Straight Pipe and Fitting Insulation		NA		Non-suspect
3	Retail Area	1		1	Drywall and Joint Compound	Dressing Rooms and Sales Displays	3,750	SF	No
3	Retail Area	1		2	4" Covebase Adhesive		135	LF	No
3	Retail Area	1		3	Round Fiberglass HVAC Duct		NA		No
3	Retail Area	1	Includes Pharmacy	12	Metal-Jacketed Door Insulation		1	EA	No
3	Retail Area	1		13	2' x 4' White Bumby Suspended Ceiling Tile	Replacement tiles	675	SF	No
3	Retail Area	1		14	12" x 12" Cream Busy Floor Tile		75,500	SF	No
3	**Retail Area**	**1**		**15**	**Mastic on HM# 14**		**75,500**	**SF**	**Yes**
3	**Retail Area**	**1**		**16**	**9" x 9" Gray Floor Tile**	**Material found under wall material at the perimeter of north and south side and small office**	**400**	**SF**	**Yes**
3	**Retail Area**	**1**		**17**	**Mastic on HM# 16**		**400**	**SF**	**Yes**
3	**Retail Area**	**1**		**18**	**Mudded Pipe Fittings on Fiberglass Straight Pipe**		**52**	**EA**	**Yes**
3	Retail Area	1		19	Joint Compound on Plywood		325	SF	No
3	**Retail Area**	**1**		**20**	**12" x 12" Gray w/ Gray Streak Floor Tile**		**800**	**SF**	**Yes**
3	**Retail Area**	**1**		**21**	**Mastic on HM# 20**		**800**	**SF**	**Yes**
3	Retail Area	1		22	12" x 12" Pink Busy Floor Tile		1,800	SF	No
3	**Retail Area**	**1**		**23**	**Mastic on HM# 22**		**1,800**	**SF**	**Yes**
3	Retail Area	1		24	Green Linoleum with Burlap Backing		400	SF	No
3	Retail Area	1		25	12" x 12" Dark Gray Floor Tile		775	SF	No
3	**Retail Area**	**1**		**26**	**Mastic on HM# 25**		**775**	**SF**	**Yes**
3	**Retail Area**	**1**		**27**	**Original Drywall and Joint Compound**	**Exterior walls and various areas above SCT**	**4,500**	**SF**	**Yes**
3	Retail Area	1		28	2' x 4' Pinhole Suspended Ceiling Tile		125	SF	No
3	**Retail Area**	**1**		**29**	**Roof Drain Conductor Insualtion**		**15**	**EA**	**Yes**
3	Retail Area	1		31	12" x 12" Red Brick "Sticky-back" Floor Tile	Small Office area	45	SF	No
4	Garden Department	1		1	Drywall and Joint Compound		1,875	SF	No
4	Garden Department	1		2	4" Covebase Adhesive		42	LF	No
4	Garden Department	1		11	Fiberglass Straight Pipe and Fiberglass Fitting Insulation		NA		Non-suspect
5	Automotive Service Area	1	Includes Restroom	1	Drywall and Joint Compound		55	SF	No
5	Automotive Service Area	1		2	4" Covebase Adhesive	Restroom	18	LF	No
5	Automotive Service Area	1		4	Gray Window Caulk		2	SF	No
5	Automotive Service Area	1		12	Metal-Jacketed Door Insulation	Restroom	1	EA	No
5	**Automotive Service Area**	**1**		**18**	**Mudded Pipe Fittings on Fiberglass Straight Pipe**		**10**	**EA**	**Yes**
5	Automotive Service Area	1		30	Coating on Fiberglass Ceiling Panel		2,400	SF	No

S#	FS Description	Floor	FS Notes	HM#	Homogeneous Material Description	HM Notes	Amount	Units	ACM?
5	Automotive Service Area	1		40	Popcorn Texturing Material	On Straight Pipe Insul	135	SF	No
5	Automotive Service Storage Room	1		12	Metal-Jacketed Door Insulation		1	EA	No
5	**Automotive Service Storage Room**	**1**		**18**	**Mudded Pipe Fittings on Fiberglass Straight Pipe**		**24**	**EA**	**Yes**
7	Intermediate Hallway/Security Area	1		1	Drywall and Joint Compound		450	SF	No
7	Intermediate Hallway/Security Area	1		2	4" Covebase Adhesive		45	LF	No
7	Intermediate Hallway/Security Area	1		12	Metal-Jacketed Door Insulation	Food Storage Room	1	EA	No
7	Intermediate Hallway/Security Area	1		14	12" x 12" Cream Busy Floor Tile	Material located in Storage room and each entrance	225	SF	No
7	**Intermediate Hallway/Security Area**	**1**		**15**	**Mastic on HM# 14**		**225**	**SF**	**Yes**
7	**Intermediate Hallway/Security Area**	**1**		**16**	**9" x 9" Gray Floor Tile**	**Material located on far west side**	**160**	**SF**	**Yes**
7	**Intermediate Hallway/Security Area**	**1**		**17**	**Mastic on HM# 16**	**Material located on far west side**	**160**	**SF**	**Yes**
7	**Intermediate Hallway/Security Area**	**1**		**20**	**12" x 12" Gray w/ Gray Streak Floor Tile**	**Food Storage Room**	**160**	**SF**	**Yes**
7	**Intermediate Hallway/Security Area**	**1**		**21**	**Mastic on HM# 20**	**Food Storage Room**	**160**	**SF**	**Yes**
7	Intermediate Hallway/Security Area	1		32	1' x 1' Randon Hole Glued-on Ceiling Tile	Hallway at each Entrance	175	SF	No
7	Intermediate Hallway/Security Area	1		33	Glue Pod on HM# 32	Hallway	175	SF	No
7	Intermediate Hallway/Security Area	1		34	Wallboard	Hallway	175	SF	No
7	Intermediate Hallway/Security Area	1		35	12" x 12" Cream Floor Tile	Food Storage Room	140	SF	No
7	**Intermediate Hallway/Security Area**	**1**		**36**	**Mastic on HM# 35**	**Food Storage Room**	**140**	**SF**	**Yes**
7	Intermediate Hallway/Security Area	1		37	1' x 1' Randon Pin Hole Glued-on Ceiling Tile	Food Storage Room	140	SF	No
7	Intermediate Hallway/Security Area	1		38	Glue Pod on HM# 37	Food Storage Room	140	SF	No
8	Intermediate Hallway/Security Room	2		11	Fiberglass Straight Pipe and Fiberglass Fitting Insulation		NA		Non-suspect
8	Intermediate Hallway/Security Room	2		43	Square Fiberglass HVAC Duct Insulation		NA		Non-suspect
9	Rear Storage Area	1		1	Drywall and Joint Compound	Receiving Office	80	SF	No
9	**Rear Storage Area**	**1**		**18**	**Mudded Pipe Fittings on Fiberglass Straight Pipe**	**Receiving area**	**6**	**EA**	**Yes**
9	**Rear Storage Area**	**1**		**29**	**Roof Drain Conductor Insualtion**	**Receiving area**	**1**	**EA**	**Yes**
9	Rear Storage Area	1	Area divided by concrete block wall	34	Wallboard		375	SF	No
9	Rear Storage Area	1	Includes Receiving Offices	39	Fiberglass Straight Pipe w/ Tar Layer	South side	225	LF	No
9	**Rear Storage Area**	**1**		**41**	**Tagged Fire Door**	**Receiving Office**	**1**	**EA**	**Yes (Assumed)**
9	Rear Storage Area	1		42	12" x 12" Multi-colored "Sticky-Back" Floor Tile		35	SF	No
10	**Rear Storage Area**	**2**	**Area divided by concrete block wall**	**18**	**Mudded Pipe Fittings on Fiberglass Straight Pipe**		**69**	**EA**	**Yes**
10	**Rear Storage Area**	**2**		**29**	**Roof Drain Conductor Insualtion**		**3**	**EA**	**Yes**
10	Rear Storage Area	2		34	Wallboard		175	SF	No
11	Storage Room	1		2	4" Covebase Adhesive		25	LF	No
11	Storage Room	1		12	Metal-Jacketed Door Insulation		1	EA	No
11	Storage Room	1		14	12" x 12" Cream Busy Floor Tile		145	SF	No
11	**Storage Room**	**1**		**15**	**Mastic on HM# 14**		**145**	**SF**	**Yes**
11	**Storage Room**	**1**		**18**	**Mudded Pipe Fittings on Fiberglass Straight Pipe**		**3**	**EA**	**Yes**
12	Fan and Compressor Room	1		1	Drywall and Joint Compound		45	SF	No
12	Fan and Compressor Room	1		12	Metal-Jacketed Door Insulation		3	EA	No
12	**Fan and Compressor Room**	**1**		**18**	**Mudded Pipe Fittings on Fiberglass Straight Pipe**		**35**	**EA**	**Yes**
12	**Fan and Compressor Room**	**1**		**29**	**Roof Drain Conductor Insualtion**		**1**	**EA**	**Yes**
12	**Fan and Compressor Room**	**1**		**44**	**Woven HVAC Expansion Fabric**	**on 1 unit**	**15**	**SF**	**Yes**
13	Office Area	1		1	Drywall and Joint Compound		575	SF	No
13	Office Area	1		2	4" Covebase Adhesive		135	LF	No
13	Office Area	1		12	Metal-Jacketed Door Insulation		2	EA	No
13	Office Area	1		13	2' x 4' White Bumby Suspended Ceiling Tile		450	SF	No
13	Office Area	1		14	12" x 12" Cream Busy Floor Tile		325	SF	No
13	**Office Area**	**1**		**15**	**Mastic on HM# 14**		**325**	**SF**	**Yes**

#	FS Description	Floor	FS Notes	HM#	Homogeneous Material Description	HM Notes	Amount	Units	ACM?
3	Office Area	1		32	1' x 1' Randon Hole Glued-on Ceiling Tile	Above SCT	825	SF	No
3	Office Area	1		33	Glue Pod on HM# 32		825	SF	No
3	**Office Area**	**1**		**45**	**Black and Yellow Carpet Adhesive**	**Front and Back Office**	**150**	**SF**	**Yes**
3	Office Area	1		46	Yellow Carpet Adhesive		175	SF	No
4	Boiler Room	1		11	Fiberglass Straight Pipe and Fiberglass Fitting Insulation		NA		Non-suspect
4	Boiler Room	1		12	Metal-Jacketed Door Insulation		1	EA	No
4	**Boiler Room**	**1**		**18**	**Mudded Pipe Fittings on Fiberglass Straight Pipe**		**60**	**EA**	**Yes**
4	**Boiler Room**	**1**		**47**	**Interior Boiler Insulation**		**200**	**SF**	**Yes (Assumed)**
4	**Boiler Room**	**1**		**48**	**Boiler Flue Exhaust Insulation**	**Mag Material**	**125**	**SF**	**Yes**
5	Restroom Area	1		1	Drywall and Joint Compound		1,250	SF	No
5	Restroom Area	1		2	4" Covebase Adhesive		65	LF	No
5	Restroom Area	1		3	Round Fiberglass HVAC Duct		NA		Non-suspect
5	Restroom Area	1		11	Fiberglass Straight Pipe and Fiberglass Fitting Insulation		NA		Non-suspect
5	Restroom Area	1		12	Metal-Jacketed Door Insulation		5	EA	No
5	Restroom Area	1		13	2' x 4' White Bumby Suspended Ceiling Tile		175	SF	No
5	Restroom Area	1		14	12" x 12" Cream Busy Floor Tile		375	SF	No
5	**Restroom Area**	**1**		**15**	**Mastic on HM# 14**		**375**	**SF**	**Yes**
5	**Restroom Area**	**1**		**18**	**Mudded Pipe Fittings on Fiberglass Straight Pipe**		**4**	**EA**	**Yes**
5	**Restroom Area**	**1**		**29**	**Roof Drain Conductor Insualtion**		**2**	**EA**	**Yes**
5	Restroom Area	1		49	White Sink Undercoating	1 sink	4	SF	No
6	Electrical Panel Room	1		11	Fiberglass Straight Pipe and Fiberglass Fitting Insulation		NA		Non-suspect
7	Exterior	E		50	Asphalt and Gravel Roofing Material		60,000	SF	No
7	Exterior	E		51	Rubber Membrane Roofing Material		20,000	SF	No
7	Exterior	E		52	Exterior Door Frame Caulk		6	SF	No

Section 2.4

List by Homogenous Material

M#	Homogeneous Material Description	HM Notes	FS#	FS Description	Floor	FS Notes	Amount	Units	ACM?	F/NF	SM/TSI/MM
1	Drywall and Joint Compound		1	Entrance	1		725	SF	No	NF	MM
2	4" Covebase Adhesive		1	Entrance	1		10	LF	No	NF	MM
3	Round Fiberglass HVAC Duct		1	Entrance	1		NA		Non-suspect		
4	Gray Window Caulk		1	Entrance	1		2	SF	No	NF	MM
5	12" x 12" White w/Tan Speck Floor Tile		1	Entrance	1		350	SF	No	NF	MM
6	Adhesive on HM# 5		1	Entrance	1		350	SF	No	NF	MM
1	Drywall and Joint Compound		2	Food Service Area	1		825	SF	No	NF	MM
2	4" Covebase Adhesive		2	Food Service Area	1		60	LF	No	NF	MM
3	Round Fiberglass HVAC Duct		2	Food Service Area	1		NA		Non-suspect		
7	2' x 4' Gypsum Suspended Ceiling Tile		2	Food Service Area	1		375	SF	No	F	MM
8	2' x 4' Gray Suspended Ceiling Tile		2	Food Service Area	1		475	SF	No	F	MM
9	12" x 12" Off-white w/ Blue Streak Floor Tile		2	Food Service Area	1		675	SF	No	NF	MM
10	Adhesive on HM# 9		2	Food Service Area	1		675	SF	No	NF	MM
11	Fiberglass Straight Pipe and Fitting Insulation		2	Food Service Area	1		NA		Non-suspect	F	TSI
1	Drywall and Joint Compound	Dressing Rooms and Sales Displays	3	Retail Area	1		3,750	SF	No	NF	MM
2	4" Covebase Adhesive		3	Retail Area	1		135	LF	No	NF	MM
3	Round Fiberglass HVAC Duct		3	Retail Area	1		NA		Non-suspect		
12	Metal-Jacketed Door Insulation		3	Retail Area	1	Includes Pharmacy	1	EA	No	F	MM
13	2' x 4' White Bumby Suspended Ceiling Tile	Replacement tiles	3	Retail Area	1		675	SF	No	F	MM
14	12" x 12" Cream Busy Floor Tile		3	Retail Area	1		75,500	SF	No	NF	MM
15	**Mastic on HM# 14**		**3**	**Retail Area**	**1**		**75,500**	**SF**	**Yes**	**NF**	**MM**
16	**9" x 9" Gray Floor Tile**	**Material found under wall material at the perimeter of north and south side and small office**	**3**	**Retail Area**	**1**		**400**	**SF**	**Yes**	**NF**	**MM**
17	**Mastic on HM# 16**		**3**	**Retail Area**	**1**		**400**	**SF**	**Yes**	**NF**	**MM**
18	**Mudded Pipe Fittings on Fiberglass Straight Pipe**		**3**	**Retail Area**	**1**		**52**	**EA**	**Yes**	**F**	**TSI**
19	Joint Compound on Plywood		3	Retail Area	1		325	SF	No	NF	MM
20	**12" x 12" Gray w/ Gray Streak Floor Tile**		**3**	**Retail Area**	**1**		**800**	**SF**	**Yes**	**NF**	**MM**
21	**Mastic on HM# 20**		**3**	**Retail Area**	**1**		**800**	**SF**	**Yes**	**NF**	**MM**
22	12" x 12" Pink Busy Floor Tile		3	Retail Area	1		1,800	SF	No	NF	MM
23	**Mastic on HM# 22**		**3**	**Retail Area**	**1**		**1,800**	**SF**	**Yes**	**NF**	**MM**
24	Green Linoleum with Burlap Backing		3	Retail Area	1		400	SF	No	NF	MM
25	12" x 12" Dark Gray Floor Tile		3	Retail Area	1		775	SF	No	NF	MM
26	**Mastic on HM# 25**		**3**	**Retail Area**	**1**		**775**	**SF**	**Yes**	**NF**	**MM**
27	**Original Drywall and Joint Compound**	**Exterior walls**	**3**	**Retail Area**	**1**		**4,500**	**SF**	**Yes**	**NF**	**MM**
28	2' x 4' Pinhole Suspended Ceiling Tile		3	Retail Area	1		125	SF	No	F	MM
29	**Roof Drain Conductor Insualtion**		**3**	**Retail Area**	**1**		**15**	**EA**	**Yes**	**F**	**TSI**
31	12" x 12" Red Brick "Sticky-back" Floor Tile	Small Office area	3	Retail Area	1		45	SF	No	NF	MM
1	Drywall and Joint Compound		4	Garden Department	1		1,875	SF	No	NF	MM
2	4" Covebase Adhesive		4	Garden Department	1		42	LF	No	NF	MM
11	Fiberglass Straight Pipe and Fiberglass Fitting Insulation		4	Garden Department	1		NA		Non-suspect		
1	Drywall and Joint Compound		5	Automotive Service Area	1	Includes Restroom	55	SF	No	NF	MM
2	4" Covebase Adhesive	Restroom	5	Automotive Service Area	1		18	LF	No	NF	MM
12	Metal-Jacketed Door Insulation	Restroom	5	Automotive Service Area	1		1	EA	No	F	MM
4	Gray Window Caulk		5	Automotive Service Area	1		2	SF	No	NF	MM
18	**Mudded Pipe Fittings on Fiberglass Straight Pipe**		**5**	**Automotive Service Area**	**1**		**10**	**EA**	**Yes**	**F**	**TSI**
30	Coating on Fiberglass Ceiling Panel		5	Automotive Service Area	1		2,400	SF	No	F	SM
40	Popcorn Texturing Material	On Straight Pipe Insulation	5	Automotive Service Area	1		135	SF	No	F	SM
12	Metal-Jacketed Door Insulation		6	Automotive Service Storage Room	1		1	EA	No	F	MM
18	**Mudded Pipe Fittings on Fiberglass Straight Pipe**		**6**	**Automotive Service Storage Room**	**1**		**24**	**EA**	**Yes**	**F**	**TSI**
1	Drywall and Joint Compound		7	Intermediate Hallway/Security Area	1		450	SF	No	NF	MM
2	4" Covebase Adhesive		7	Intermediate Hallway/Security Area	1		45	LF	No	NF	MM
12	Metal-Jacketed Door Insulation	Food Storage Room	7	Intermediate Hallway/Security Area	1		1	EA	No	F	MM

Homogeneous Material Description	*HM Notes*	*FS#*	*FS Description*	*Floor*	*FS Notes*	*Amount*	*Units*	*ACM?*	*F/NF*	*SM/TSI/MM*
12" x 12" Cream Busy Floor Tile	Material located in Storage room and each entrance	7	Intermediate Hallway/Security Area	1		225	SF	No	NF	MM
Mastic on HM# 14		**7**	**Intermediate Hallway/Security Area**	**1**		**225**	**SF**	**Yes**	**NF**	**MM**
9" x 9" Gray Floor Tile	**Material located on far west side**	**7**	**Intermediate Hallway/Security Area**	**1**		**160**	**SF**	**Yes**	**NF**	**MM**
Mastic on HM# 16	**Material located on far west side**	**7**	**Intermediate Hallway/Security Area**	**1**		**160**	**SF**	**Yes**	**NF**	**MM**
1' x 1' Randon Hole Glued-on Ceiling Tile	Hallway at each Entrance	7	Intermediate Hallway/Security Area	1		175	SF	No	F	MM
Glue Pod on HM# 32	Hallway	7	Intermediate Hallway/Security Area	1		175	SF	No	NF	MM
Wallboard	Hallway	7	Intermediate Hallway/Security Area	1		175	SF	No	NF	MM
12" x 12" Gray w/ Gray Streak Floor Tile	**Food Storage Room**	**7**	**Intermediate Hallway/Security Area**	**1**		**160**	**SF**	**Yes**	**NF**	**MM**
Mastic on HM# 20	**Food Storage Room**	**7**	**Intermediate Hallway/Security Area**	**1**		**160**	**SF**	**Yes**	**NF**	**MM**
12" x 12" Cream Floor Tile	Food Storage Room	7	Intermediate Hallway/Security Area	1		140	SF	No	NF	MM
Mastic on HM# 35	**Food Storage Room**	**7**	**Intermediate Hallway/Security Area**	**1**		**140**	**SF**	**Yes**	**NF**	**MM**
1' x 1' Randon Pin Hole Glued-on Ceiling Tile	Food Storage Room	7	Intermediate Hallway/Security Area	1		140	SF	No	F	MM
Glue Pod on HM# 37	Food Storage Room	7	Intermediate Hallway/Security Area	1		140	SF	No	NF	MM
Fiberglass Straight Pipe and Fiberglass Fitting Insulation		8	Intermediate Hallway/Security Room	2		NA		Non-suspect		
Square Fiberglass HVAC Duct Insulation		8	Intermediate Hallway/Security Room	2		NA		Non-suspect		
Drywall and Joint Compound	Receiving Office	9	Rear Storage Area	1		80	SF	No	NF	MM
Mudded Pipe Fittings on Fiberglass Straight Pipe	**Receiving area**	**9**	**Rear Storage Area**	**1**		**6**	**EA**	**Yes**	**F**	**TSI**
Roof Drain Conductor Insualtion	**Receiving area**	**9**	**Rear Storage Area**	**1**		**1**	**EA**	**Yes**	**F**	**TSI**
Wallboard		9	Rear Storage Area	1	Area divided by concrete block wall	375	SF	No	NF	MM
Fiberglass Straight Pipe w/ Tar Layer	South side	9	Rear Storage Area	1	Includes Receiving Offices	225	LF	No	F	TSI
Tagged Fire Door	**Receiving Office**	**9**	**Rear Storage Area**	**1**		**1**	**EA**	**Yes (Assumed)**	**NF**	**MM**
12" x 12" Multi-colored "Sticky-Back" Floor Tile		9	Rear Storage Area	1		35	SF	No	NF	MM
Mudded Pipe Fittings on Fiberglass Straight Pipe		**10**	**Rear Storage Area**	**2**	**Area divided by concrete block wall**	**69**	**EA**	**Yes**	**F**	**TSI**
Roof Drain Conductor Insualtion		**10**	**Rear Storage Area**	**2**		**3**	**EA**	**Yes**	**F**	**TSI**
Wallboard		10	Rear Storage Area	2		175	SF	No	NF	MM
4" Covebase Adhesive		11	Storage Room	1		25	LF	No	NF	MM
12" x 12" Cream Busy Floor Tile		11	Storage Room	1		145	SF	No	NF	MM
Mastic on HM# 14		**11**	**Storage Room**	**1**		**145**	**SF**	**Yes**	**NF**	**MM**
Metal-Jacketed Door Insulation		11	Storage Room	1		1	EA	No	F	MM
Mudded Pipe Fittings on Fiberglass Straight Pipe		**11**	**Storage Room**	**1**		**3**	**EA**	**Yes**	**F**	**TSI**
Drywall and Joint Compound		12	Fan and Compressor Room	1		45	SF	No	NF	MM
Metal-Jacketed Door Insulation		12	Fan and Compressor Room	1		3	EA	No	F	MM
Mudded Pipe Fittings on Fiberglass Straight Pipe		**12**	**Fan and Compressor Room**	**1**		**35**	**EA**	**Yes**	**F**	**TSI**
Roof Drain Conductor Insualtion		**12**	**Fan and Compressor Room**	**1**		**1**	**EA**	**Yes**	**F**	**TSI**
Woven HVAC Expansion Fabric	**on 1 unit**	**12**	**Fan and Compressor Room**	**1**		**15**	**SF**	**Yes**	**NF**	**MM**
Drywall and Joint Compound		13	Office Area	1		575	SF	No	NF	MM
4" Covebase Adhesive		13	Office Area	1		135	LF	No	NF	MM
Metal-Jacketed Door Insulation		13	Office Area	1		2	EA	No	F	MM
2' x 4' White Bumby Suspended Ceiling Tile		13	Office Area	1		450	SF	No	F	MM
12" x 12" Cream Busy Floor Tile		13	Office Area	1		325	SF	No	NF	MM
Mastic on HM# 14		**13**	**Office Area**	**1**		**325**	**SF**	**Yes**	**NF**	**MM**
1' x 1' Randon Hole Glued-on Ceiling Tile	Above SCT	13	Office Area	1		825	SF	No	F	MM
Glue Pod on HM# 32		13	Office Area	1		825	SF	No	NF	MM
Black and Yellow Carpet Adhesive	**Front and Back Office**	**13**	**Office Area**	**1**		**150**	**SF**	**Yes**	**NF**	**MM**
Yellow Carpet Adhesive		13	Office Area	1		175	SF	No	NF	MM
Fiberglass Straight Pipe and Fiberglass Fitting Insulation		14	Boiler Room	1		NA		Non-suspect		
Metal-Jacketed Door Insulation		14	Boiler Room	1		1	EA	No	F	MM
Mudded Pipe Fittings on Fiberglass Straight Pipe		**14**	**Boiler Room**	**1**		**60**	**EA**	**Yes**	**F**	**TSI**
Interior Boiler Insulation		**14**	**Boiler Room**	**1**		**200**	**SF**	**Yes (Assumed)**	**F**	**TSI**

M#	Homogeneous Material Description	HM Notes	FS#	FS Description	Floor	FS Notes	Amount	Units	ACM?	F/NF	SM/TSI/MM
8	**Boiler Flue Exhaust Insulation**	**Mag Material**	**14**	**Boiler Room**	**1**		**125**	**SF**	**Yes**	**F**	**TSI**
1	Drywall and Joint Compound		15	Restroom Area	1		1,250	SF	No	NF	MM
2	4" Covebase Adhesive		15	Restroom Area	1		65	LF	No	NF	MM
3	Round Fiberglass HVAC Duct		15	Restroom Area	1		NA		Non-suspect		
1	Fiberglass Straight Pipe and Fiberglass Fitting Insulation		15	Restroom Area	1		NA		Non-suspect		
2	Metal-Jacketed Door Insulation		15	Restroom Area	1		5	EA	No	F	MM
3	2' x 4' White Bumby Suspended Ceiling Tile		15	Restroom Area	1		175	SF	No	F	MM
4	12" x 12" Cream Busy Floor Tile		15	Restroom Area	1		375	SF	No	NF	MM
5	**Mastic on HM# 14**		**15**	**Restroom Area**	**1**		**375**	**SF**	**Yes**	**NF**	**MM**
8	**Mudded Pipe Fittings on Fiberglass Straight Pipe**		**15**	**Restroom Area**	**1**		**4**	**EA**	**Yes**	**F**	**TSI**
9	**Roof Drain Conductor Insualtion**		**15**	**Restroom Area**	**1**		**2**	**EA**	**Yes**	**F**	**TSI**
9	White Sink Undercoating	1 sink	15	Restroom Area	1		4	SF	No	NF	MM
1	Fiberglass Straight Pipe and Fiberglass Fitting Insulation		16	Electrical Panel Room	1		NA		Non-suspect		
0	Asphalt and Gravel Roofing Material		17	Exterior	E		60,000	SF	No	NF	MM
1	Rubber Membrane Roofing Material		17	Exterior	E		20,000	SF	No	NF	MM
2	Exterior Door Frame Caulk		17	Exterior	E		6	SF	No	NF	MM

Section 4

Functional Space Listing

Maple and Livernois, LLC
Former K-Mart Building
Functional Space Listing

FS#	*FS Description*	*Floor*
1	Entrance	1
2	Food Service Area	1
3	Retail Area	1
4	Garden Department	1
5	Automotive Service Area	1
6	Automotive Service Storage Room	1
7	Intermediate Hallway/Security Area	1
8	Intermediate Hallway/Security Room	2
9	Rear Storage Area	1
10	Rear Storage Area	2
11	Storage Room	1
12	Fan and Compressor Room	1
13	Office Area	1
14	Boiler Room	1
15	Restroom Area	1
16	Electrical Panel Room	1
17	Exterior	E

Appendix A

Definitions of Terms and Assessment Criteria

Definitions of Terms and Assessment Criteria

This survey report organizes information on each suspect ACBM that was identified. This appendix describes how to interpret the data found in this report.

Material description contains the description of the suspect homogeneous asbestos-containing building material.

Material Serial Number is used to reference the material for reinspections, etc.

ACM Asbestos-Containing Materials. Materials containing greater than 1 percent (>1%) asbestos.

ACBM Asbestos-Containing Building Materials means surfacing ACM, thermal system insulation ACM, or miscellaneous ACM that is found in or on interior structural members or other parts of a building.

Asbestos type and content describes the type of asbestos and its percentage in the material.

Asbestos Results for positive materials are shown as a percentage. Samples having less than 1% asbestos are reported as containing "Trace" amounts of asbestos and samples with no detected asbestos are reported as "BLD" or below limit of detection.

Sample number(s) identifies a particular material sample obtained from a specific sample location. Sample numbers are used primarily for laboratory identification.

Sample Location identifies where the samples of this material were obtained.

Material Category categorizes each material as surfacing, TSI or miscellaneous.
Surfacing Materials (SM) - Asbestos-containing materials that are sprayed-on, troweled-on or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing on structural members, or other materials on surfaces for acoustical, fireproofing, or other purposes.

Thermal Systems Insulation (TSI) - Asbestos-containing materials applied to pipes, fittings, boilers, breaching, tanks, ducts or other interior structural components to prevent heat loss or gain or water condensation.

Miscellaneous Materials (MM) - Asbestos-containing materials applied to or a part of building components that are not classified as surfacing materials or thermal systems insulation.

Quantity & Units reports approximate total quantity per unit of measure for each material.

Building(s) & Floor(s) specifies where a material is located.

Material Location describes where the material is found throughout the building.

Friability identifies the material as Friable, Non-friable or Jacketed (for thermal systems insulation only) if asbestos is present.

Friable (F) - An asbestos-containing material that can be crumbled, pulverized or reduced to powder, when dry, by hand pressure, such as spray applied fireproofing on structural steel members, spray applied acoustical ceiling materials or damaged thermal systems insulation. Friable materials are of greatest concern due to their potential fiber release.

Non-Friable (NF) - An asbestos-containing material where the asbestos is bound tightly in a matrix or sealed by a protective layer. Non-friable materials can become friable by being rendered to a crumbled, pulverized or powdered state, when dry, by crushing, sanding, sawing, shot-blasting, severe weathering or by other mechanically induced means. Common examples of non-friable materials are adhesives, floor tiles, transite and roofing materials.

Jacketed (J) - An asbestos-containing material applied to thermal systems insulation and "jacketed" with a protective outer layer such as canvas or metal to keep the material in good condition. Undamaged jacketed ACBM is considered non-friable. If the jacketing is damaged, the material is considered friable.

Damage Category describes the type of damage, if any, to the material. The following damage categories are used: None, Physical, Air, and Water.

Material Assessment identifies the condition of the material in relation to physical and water damage, delamination of the material from its substrate, the extent of the damage and the potential for damage from building conditions, such as, accessibility by building occupants, influence of vibration, etc. The six standard assessment categories ranked by hazard potential, with the first being the lowest hazard are as follows: 1) Friable ACBM or TSI in Good Condition with Low Potential for Damage, 2) Friable ACBM or TSI in Good Condition with Moderate Potential for Damage 3) Friable ACBM or TSI in Good Condition with Potential for Significant Damage, 4) Damaged Friable ACBM or TSI with Low Potential for Damage, 5) Damaged Friable ACBM or TSI with Moderate Potential for Damage, 6) Damaged Friable ACBM or TSI with Potential for Significant Damage, and 7) Significantly Damaged ACBM or TSI. Only friable materials are assessed under AHERA regulations. Non-friable materials are not assessed.

Material Condition

Good - Material with no visible damage or deterioration, or showing only very limited damage or deterioration.

Damaged - The damage or deterioration of the material results in inadequate cohesion or adhesion with crumbling, blistering, water stains, marring or otherwise abraded over less than on-tenth (1/10) of the surface if the damage is evenly distributed or one-fourth (1/4) if the damage is localized.

Significant Damage - The damage or deterioration of the material results in inadequate adhesion or cohesion and the damage is extensive and severe with one or more of the following characteristics: 1) Crumbling or blistering over at least one-tenth (1/10) of the surface if evenly distributed, one-fourth (1/4) if the damage is localized; 2) Areas of the material hanging from the surface, delaminated, or showing adhesive failure; 3) Water stains, gouges or marred.

Recommended Response suggests the appropriate options for controlling or maintaining ACBM in a safe manner. For non-school buildings, TEC selects between five options:

Operations & Maintenance (O&M) - A program of work practices to maintain friable ACBM in good condition, ensure cleanup of asbestos fibers previously released, and prevent further release by minimizing and controlling friable ACBM disturbance or damage.

Repair - The restoration of damaged or deteriorated asbestos-containing building materials to an intact condition. Once the intact condition is established, the material should be included in an O&M program. The material is usually only required to be removed if it is significantly damaged, prior to demolition of the building or if it will be disturbed by renovation activities.

Abate Due to Condition - This material is significantly damaged and is unsafe in its current condition. The access to the area should be restricted to personnel equipped with appropriate personal protection. This material should be properly removed by a licensed contractor using workers trained in the safe removal of asbestos.

Abate Prior to Renovation - This material should be properly removed prior to planned renovation activities by a licensed contractor using workers trained in the safe removal of asbestos. This recommendation is usually made only on survey reports prepared prior to planned renovation activities.

Abate Prior to Demolition - This material should be properly removed prior to planned demolition activities by a licensed contractor using workers trained in the safe removal of asbestos. This recommendation is usually made only on survey reports prepared prior to planned demolition activities.

For school buildings, AHERA provides five response actions to choose from:

Removal - The taking out or stripping of substantially all ACBM from damaged Area, a functional space or a homogenous area in a school building.

Repair - Returning damaged ACBM to an undamaged condition or to intact state so as to prevent fiber release.

Encapsulation - Means the treatment of ACBM with material that surrounds or embeds asbestos fibers in an adhesive matrix to prevent the release of fibers, as the encapsulant creates a membrane over the surface (bridging encapsulant) or penetrates the material and binds its components together (penetrating encapsulant).

Enclosure - An airtight, impermeable, permanent barrier around ACBM to prevent the release of asbestos fibers into the air.

Operations and Maintenance - see definition above.

Comments & Damage Description contains any additional information and or specific details of material damage are noted here.

EPA Category provides the appropriate material category as outlined in the NESHAPS regulation. The options are friable, Category I and Category II non-friable ACM.

Friable - Materials containing greater than 1% asbestos are always considered Regulated Asbestos-containing Materials (RACM) that require removal prior to building renovation or demolition activities that impact the material.

Category I non-friable ACM means asbestos-containing packings, gaskets, resilient floor covering, and asphalt roofing products containing more than 1 percent asbestos.

Category II non-friable ACM means any material, excluding Category I non-friable ACM, containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

Needs Determination - Materials that the individual designing the abatement and demolition project needs to inspect and evaluate to determine the potential for the material to become RACM and/or evaluate the asbestos content for the composite and individual layers of the material. For sheet rock with mudding compounds only, the EPA allows using the composite sample result. If the composite result by Point Counting the sample is below 1% asbestos, the material is not RACM.

Appendix B

Bulk Sampling Protocol and Analytical Methods

Bulk Sampling Protocol and Analytical Methods

Bulk samples of suspect asbestos-containing building materials were obtained using standard industrial hygiene techniques including wetting the material to minimize fiber release.

Our sampling strategy for suspect friable surfacing materials was based on the guidelines outlined in the EPA publication Asbestos in Buildings: Simplified Sampling Scheme for Friable Surfacing Materials, and the procedures outlined in 40 CFR 763, Subpart E (AHERA). For non-friable suspect materials, AHERA requires the building inspector to determine the appropriate number of samples to obtain and analyze. Usually one to three samples of non-friable materials are collected.

For each homogeneous material identified by visual inspection as suspect material, random samples are obtained. A single bulk sample is randomly selected from each homogeneous material for first-round testing. If the sample is positive, the remaining samples are not analyzed; if the sample is negative, the other samples are submitted for study. Every sample must be reported negative if the material is to be considered non-asbestos-containing.

The bulk samples were delivered to an independent laboratory that participates in the bulk sample proficiency analysis program conducted by the United States Environmental Protection Agency and is accredited by the National Voluntary Laboratory Program (NVLAP). The samples were analyzed using Polarized Light Microscopy (PLM) with dispersion staining to estimate the percent of asbestos composition by volume. Samples with no observable asbestiform minerals are designated as None-Detected. Samples in which asbestiform minerals are observed, but exist in concentrations of less than one percent, are designated as present in Trace amounts; all other samples are designated as asbestos-containing with the appropriate percent of asbestos noted.

Appendix C

Summary of Regulatory Requirements

Summary of Regulatory Requirements

This appendix provides a summary of building owner and manager requirements under various asbestos regulations promulgated by the Michigan Occupational Safety and Health Administration (MIOSHA) and the Environmental Protection Agency (EPA) to protect building occupants and employees from exposure to asbestos.

Survey Requirements

Prior to any renovation activity, MIOSHA and EPA regulations require that a complete asbestos survey be performed to determine if asbestos is present in any suspect asbestos-containing material that will be present in the construction or work area. This survey report addresses accessible materials. It is recommended that prior to renovation activities, inaccessible areas that could contain asbestos materials be inspected.

Notification and Posting Requirements

Regulatory agencies feel that the building owner or manager should be responsible for knowing and communicating the locations of asbestos in their buildings to building employees, outside contractors and tenants to prevent exposure to asbestos.

Under the Michigan Occupational Safety and Health Act (Act 154), building owners and managers are required to provide annual notifications regarding known asbestos-containing materials in their buildings to building employees, tenants, vendors and outside contractors. Therefore, specific information contained in this survey report is required to be included in the notification.

MIOSHA requires building employees, outside contractors, vendors and construction contractors bidding on or performing work in buildings be provided with notification regarding asbestos-containing materials in their work areas. MIOSHA also requires that asbestos warning signs be posted in mechanical rooms.

Demolition/Renovation Requirements

The National Emission Standard for Hazardous Air Pollutants (40 CFR Part 61; Subpart M) provides specific notification requirements for both renovations and demolitions of buildings. Either the owner, operator (contractor) or their representatives must file the notices. According to NESHAP, an operation is considered a demolition if the overall project involves the wrecking or taking out of any load supporting structural members at the subject facility. Notification is required even if there are no asbestos-containing materials in the facility. Notification must be provided to the Michigan Department of Environmental Quality (MDEQ), Air Quality Division no later than 10 working days prior to the scheduled demolition.

For the scheduled demolition of structures having RACM, the RACM must be removed prior to demolition. RACM are either friable asbestos-containing materials, Category I non-friable ACM that has become friable or will become friable (such as floor coverings), or Category II non-friable ACM that has a high probability of becoming friable during the demolition process notification would be required 10 working days prior to beginning asbestos removal and demolition.

If a facility to be demolished contains less than the cutoff amount of RACM, this would be termed a demolition below the cutoff and notification would be required 10 working days prior to beginning demolition.

In a demolition above the cutoff, both the removal and demolition operations should be reported on the same notification form and all required information submitted at least 10 days prior to the beginning of the asbestos removal. For all work outside Wayne County, a completed copy of the notification form must be sent to the Air Quality Division of the MDEQ as well as to the United States Environmental Protection Agency (Region V). For work in Wayne County (including the city of Detroit), completed forms must be sent to the NESHAP Asbestos Program Detroit Field Office, MDEQ, AQD.

NESHAP defines "planned renovations" as a renovation operation or a number of renovation operations in which RACM will be removed or stripped within a given period of time and can be predicted. For planned renovations above the cutoff (where amounts of RACM to be removed equals or exceeds 260 linear feet on pipes, or at least 160 square feet on other facility components), NESHAP requires notification no later than 10 working days before removing or disturbing the RACM.

Michigan Act 135 (Section 220(1-4) or (8) also requires notification when removing asbestos-containing materials greater than 10 linear feet or 15 square feet. For projects involving the removal of RACM prior to demolition, a copy of the same form must also be submitted to the Michigan Department Licensing and Regulatory Affairs (LARA) Asbestos Program Office at least 10 days prior to the scheduled removal.

Removal Requirements

Under EPA regulations, asbestos-containing materials must be properly removed by licensed asbestos abatement contractors prior to renovation or demolition activities that would disturb friable materials or cause non-friable materials to become friable and a regulated material. All ACM should be collected, processed, packaged, transported and disposed of according to applicable federal, state and local regulations, which includes but is not limited to NESHAP 40 CFR, Section 61.150 and the Asbestos Standards for Construction 29 CFR 1926.1101.

Repair of Damaged Materials and Cleanup of Debris

MIOSHA requires that asbestos-containing debris be immediately cleaned up. It is recommended that damaged materials that may release fibers be repaired as soon as possible to prevent fiber release and potential exposures.

Training Requirements

MIOSHA requires employers whose employees are likely to or required to disturb asbestos to receive an asbestos training course. Refresher training is required to be provided annually.

Appendix F

PM ENVIRONMENTAL Environmental & Engineering Services

Environmental
& Engineering
Services

BASELINE ENVIRONMENTAL ASSESSMENT

100 East Maple Road | Troy, Michigan
PM Project Number 02-6518-2

Prepared for:

MJR Group, LLC
41000 Woodward Avenue, Suite 135 East
Bloomfield Hills, Michigan 48304

Prepared by:

PM Environmental, Inc.
4080 West 11 Mile Road
Berkley, Michigan 48072

Michigan
Alabama
Florida
Illinois
Mississippi
New Jersey
North Carolina
Ohio
Tennessee

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY – REMEDIATION AND REDEVELOPMENT DIVISION PO BOX 30426, LANSING, MICHIGAN 48909-7926, Phone 517-373-9837, Fax 517-373-2637

FOR DEQ USE ONLY
BEA SUBMITTAL #
_____

Baseline Environmental Assessment Submittal Form

This form is for submittal of a Baseline Environmental Assessment (BEA), as defined by Part 201, Environmental Remediation and Part 213, Leaking Underground Storage Tanks, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, for the purpose of establishing an exemption to liability pursuant to Section 20126(1)(c) and Section 21323a(1)(b) for a new owner or operator of property that is a facility as defined by Section 20101(1)(s) or Property as defined by Section 21303(d). The BEA report must be conducted either prior to or within 45 days after becoming the owner or operator, whichever is earliest. This form and the BEA report must be submitted within 6 months of becoming the owner or operator whichever is earliest. A separate BEA is required for each legal entity that is or will be a new owner or operator of the property. To maintain the exemption to liability, the owner and operator must also disclose the BEA to any subsequent purchaser or transferee before conveying interest in the property pursuant to Section 20126(1)(c) and Section 21323a(1)(b). An owner or operator of a facility or Property also has due care obligations under Section 20107a and Section 21304c with respect to any existing contamination to prevent unacceptable exposure; prevent exacerbation; take reasonable precautions; provide reasonable cooperation, assistance, and access to authorized persons taking response activities at the property; comply with land use restrictions associated with response activities; and not impede the effectiveness of response activities implemented at the property. Documentation of due care evaluations and response activities need to be available, but not submitted, to the DEQ within 8 months of becoming the owner or operator of a facility.

Section A: Legal Entity Information

Name of legal entity that will own or operate the property:
MJR Group, LLC
Address: 41000 Woodward Avenue, Suite 135 East
City: Bloomfield Hills State: MI Zip: 48304
Contact person (Name & Title): Michael Mihalich – Member of MJR Group, LLC
Telephone: (248) 548-8282 E-Mail: mmihalich@mjrtheatres.com

Contact for BEA questions if different from submitter
Name & Title: Christie Santiago – Senior Project Mgr.
Company: PM Environmental, Inc.

Address: 4080 West Eleven Mile Road
City: Berkley State: MI Zip: 48072
Telephone: 248.336.9988 E-Mail: santiago@pmenv.com

Section B: Property Information

Street Address of Property: 100 East Maple Road

City: Troy State: MI Zip: 48083
Property Tax ID (include all applicable IDs): 88-20-34-101-023

Address according to tax records, if different than above (include all applicable addresses):

City: State: Zip:

Status of submitter relative to the property (check all that apply):

	Former	Current	Prospective
Owner	☐	☐	☐
Operator	☐	☒	☐

County: Oakland

City/Village/Township: Troy

Town: 2N Range: 11E Section: 34
Quarter: NW Quarter-Quarter: NW

Decimal Degrees Latitude: 42.547 north
Decimal Degrees Longitude: -83.1453 west

Reference point for latitude and longitude:
Center of site ☐ Main/front door ☒
Front gate/main entrance ☐ Other ☐

Collection method:
Survey ☐ GPS ☐ Interpolation ☒

Section C: Source of contamination at the property (check all that are known to apply):

Facility regulated under Part 201, other source, or source unknown Part 201 Site ID, if known:	☒
Leaking Underground Storage Tank regulated pursuant to Part 213 Part 211/213. Facility ID, if known:	☐
Oil or gas production and development regulated pursuant to Part 615 or 625	☐
Licensed landfill regulated pursuant to Part 115	☐
Licensed hazardous waste treatment, storage, or disposal facility regulated pursuant to Part 111	☐

Section D: Applicable Dates (provide date for all that are relevant): MM/DD/YYYY

Date All Appropriate Inquiry (AAI) Report or Phase I Environmental Assessment Report completed: 06/25/2013
Date Baseline Environmental Assessment Report conducted: 07/26/2013
Date submitter first became the owner:
Date submitter first became the operator (if prior to ownership): 07/24/2013
Anticipated date of becoming the owner for prospective owners:
Anticipated date of becoming the operator for prospective operators:
If former owner or operator of this property, prior dates of being the owner or operator:

Section E: Check the appropriate response to each of the following questions:	YES	NO
1. Is the property at which the BEA was conducted a "facility" as defined by Section 20101(1)(s) or a Property as defined by Section 21303(d)?	☒	☐
2. Is the All Appropriate Inquiry (AAI) compliant with 40 CFR 312, or is the Phase I Environmental Assessment compliant with ASTM E1527-05?	☒	☐
3. Was the BEA, including the AAI and sampling, conducted either prior to or within 45 days of the date of becoming the owner, operator, or of foreclosure, whichever is earliest.?	☒	☐
4. Is this BEA being submitted to the department within 6 months of the submitter first becoming the owner or operator, or foreclosing?	☒	☐
5. Does the BEA provide sufficient rationale to demonstrate that the data are reliable and relevant to define conditions at the property at the time of purchase, occupancy, or foreclosure, even if the BEA relies on studies of data prepared by others or conducted for other purposes?	☒	☐
6. Does this BEA contain the legal description of the property addressed by the BEA?	☒	☐
7. Does this BEA contain the environmental analytical results, a scaled map showing the sample locations, and the basis for the determination that the property is a facility as defined by Section 20101(1)(s) or the basis for the determination that the property is a Property as defined by Section 21303(d)?	☒	☐

Section F: Environmental Consultant Signature:

I certify to the best of my knowledge and belief, that this BEA and all related materials are true, accurate, and complete. I certify that an All Appropriate Inquiry (AAI) was conducted in conformance with the scope and limitations of the All Appropriate Inquiry Rule, 40 CFR 312 or a Phase I Environmental Site Assessment (Phase I) in conformance with the scope and limitations of the ASTM E1527-05. I certify that the property is a facility as defined by Section 20101(1)(s) or a Property as defined by Section 21303(d) and have provided the sampling and analyses that support that determination. I certify that any exceptions to, or deletions from, the All Appropriate Inquiry Rule or ASTM E1527-05 are described in Section 1 of the BEA report.

Signature: _____ Date: _____

Printed Name: Christie L. Santiago

Company: PM Environmental, Inc.

Mailing Address: 4080 West Eleven Mile Road City: Berkley State: MI Zip: 48072

Telephone: 248.336.9988 E-Mail: santiago@pmenv.com

Section G: Legal Entity Signature:

With my signature below, I certify that to the best of my knowledge and belief, this BEA and all related materials are true, accurate, and complete.

Signature: _____ Date: _____

(Person legally authorized to bind the legal entity)

Printed Name: Michael Mihalich

Title and Relationship of signatory to submitter: Member of MJR Group, LLC

Address: 41000 Woodward Avenue, Suite 135 East City: Bloomfield Hills State: MI Zip: 48304

Telephone: (248) 548-8282 E-Mail: mmihalich@mjrtheatres.com

Submit the BEA report and this form to the DEQ District Office for the county in which the property is located.
A district map is located at www.michigan.gov/bea or www.michigan.gov/deqrrd.

PM ENVIRONMENTAL
ISO 9001 REGISTERED

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4080 W. 11 Mile Rd
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f: 877-884-6775
t: 248-336-9988

Grand Rapids
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f: 877-884-6775
t: 616-285-8857

Lansing
3340 Ranger Road
Lansing, MI 48906
f: 877-884-6775
t: 517-321-3331

July 26, 2013

District Clerk
Michigan Department of Environmental Quality
Southeast Michigan District Office
27700 Donald Court
Warren, MI 48092-2793

RE: Baseline Environmental Assessment for the Vacant Retail Property Located at 100 East Maple Road, Troy, Michigan Parcel Identification No. 88-20-34-101-023 PM Environmental, Inc. Project No. 02-6518-2

Dear District Clerk:

Enclosed is a copy of the Baseline Environmental Assessment prepared for the above referenced subject property in accordance with Section 20126(1)(c) of Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act (NREPA), P.A. 451 of 1994 (Part 201), as amended.

If you have any questions regarding the information in this report, please contact us at 248-336-9988.

Sincerely,
PM ENVIRONMENTAL, INC.

Christie Santiago
Senior Project Engineer

Michael T. Kulka, P.E.
Principal

cc: Michael Mihalich – MJR Group, LLC

Enclosure

PM ENVIRONMENTAL
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f: 877-884-6775
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July 26, 2013

Mr. Michael Mihalich
MJR Group, LLC
41000 Woodward Avenue, Suite 135 East
Bloomfield Hills, Michigan 48304

RE: Baseline Environmental Assessment for the Vacant Retail Property Located at 100 East Maple Road, Troy, Michigan Parcel Identification No. 88-20-34-101-023 PM Environmental, Inc. Project No. 02-6518-2

Dear Mr. Mihalich:

Enclosed is a copy of the above-referenced document prepared in accordance with Section 20126(1)(c) of Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act (NREPA), P.A. 451 of 1994 (Part 201), as amended.

THIS BASELINE ENVIRONMENTAL ASSESSMENT WAS PERFORMED FOR THE EXCLUSIVE USE OF MJR GROUP, LLC, WHO MAY RELY ON THE REPORT'S CONTENTS.

If you have any questions regarding the information in this report, please contact our office at 248-336-9988.

Sincerely,
PM ENVIRONMENTAL, INC.

Christie Santiago
Senior Project Engineer

Michael T. Kulka, P.E.
Principal

Enclosure

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1.0 INTRODUCTION AND DISCUSSION

PM Environmental, Inc. (PM) has completed a Baseline Environmental Assessment (BEA) for the vacant retail property (Parcel ID #88-20-34-101-023) located at 100 East Maple Road in Troy, Oakland County, Michigan (hereafter referred to as the "subject property"). The subject property consists of a 12.48-acre parcel of land, located at the southeast corner of Main Street and East Maple Road (Figure 1). The subject building totals approximately 118,201 square feet, and contains a former service area, former retail areas, storage areas, utility rooms, offices, and restrooms. Asphalt paved driveways and parking areas surround the building, with landscaped areas adjacent to the right-of-ways. Currently the subject property is vacant.

Standard and other historical sources indicate the subject property was developed prior to 1940 for agricultural purposes. Agricultural activities ceased between 1957 and 1963, and the central portion of the current building was constructed in 1964. Additions were constructed in 1968, 1992, and 2000. The property was occupied by various retail stores, restaurants, and automotive service operations from 1964 until 2009. The building has been unoccupied since approximately 2010. Historical interior waste streams associated with the former automotive service operations would have consisted of general hazardous substances and/or petroleum products.

1.1 Owner/Operator Information

MJR Group, LLC, 41000 Woodward Avenue, Suite 135 East, Bloomfield Hills, Michigan, began leasing the property from the current owner on July 24, 2013.

1.2 Intended Use of the Subject Property

MJR Group, LLC, intends to redevelop the subject property and construct a movie theater complex. Refer to Appendix F for the proposed site plan.

1.3 Summary of All Appropriate Inquiry Phase I Environmental Assessment

PM performed a Phase I ESA for the subject property, dated June 25, 2013, in conformance with the scope and limitations of American Society for Testing and Materials (ASTM) Practice E 1527-05 (i.e., the 'ASTM Standard'). A copy of the June 25, 2013, Phase I ESA, including photographs of the subject property, is included in Appendix A.

The following recognized environmental conditions (RECs) were identified in PM's June 25, 2013, Phase I ESA:

- The subject property was formerly occupied by various automotive service operations from 1964 until approximately 2010. Historical interior waste streams associated with the former automotive service operations would have consisted of general hazardous substances and/or petroleum products. Based upon review of the previous subsurface investigations, groundwater contamination is present which exceeds the current Part 201 Residential and Nonresidential Generic Cleanup Criteria. Based on these analytical results, the subject property would be classified as a "facility," as defined by Part 201 of P.A. 451 of the Michigan Natural Resources Environmental Protection Act (NREPA), as amended. Additionally, concentrations of vinyl chloride in groundwater have been identified above Michigan Department of Environmental Quality (MDEQ) Residential

Groundwater Vapor Intrusion Screening Levels, but below the Nonresidential Vapor Intrusion Screening Levels.

- During the site reconnaissance, PM observed five in-ground hydraulic hoists in the former service area. In-ground hoists have an underground reservoir for hydraulic fluids, which can contain petroleum products and polychlorinated biphenyls (PCBs). Although previous site investigations indicate contamination associated with the hoists was not detected above MDEQ Part 201 Generic Cleanup Criteria in 2010, the potential exists that a release occurred from the hydraulic hoist systems and/or underground reservoirs since 2010.

- PM observed staining in areas associated with the former automotive service operations. Although previous site investigations indicate contamination was not detected above MDEQ Part 201 Generic Cleanup Criteria in areas of staining in 2010, the potential exists for general hazardous substances and/or petroleum products to have seeped through the concrete into subsurface soils since 2010.

- PM observed an underground vault in the former service area. At the time of the site reconnaissance, the vault contained an unknown liquid. The underground vault may have contained hazardous substances and/or petroleum products. The structural integrity of the vault is unknown. Although previous site investigations indicate contamination was not detected above MDEQ Part 201 Generic Cleanup Criteria associated with the vault in 2010, the potential exists that a release occurred from the underground vault since 2010.

The following adjoining and/or nearby REC has been identified:

- The northwest adjoining property, identified as 20 East Maple Road, was occupied by a gasoline service station from between 1957 and 1963 until between 1980 and 1981. PM was unable to determine if the underground storage tanks (USTs) have been removed from the property. Based on the close proximity to the subject property, the potential exists that a release has occurred on this property and migrated onto the subject property.

A historical REC (HREC), as defined in the ASTM Standard, is an environmental condition that in the past would have been identified as a REC, but has been adequately addressed and therefore no longer represents a REC. The following HREC was identified:

- In PM's professional opinion, the previous site investigations adequately assessed the release associated with the former 1,000-gallon used oil UST on the subject property. Limited soil and groundwater contamination was identified above current MDEQ Part 213 Drinking Water (DW) and Groundwater Surface Water Interface (GSI) Risk Based Screening Levels (RBSLs); however, based on the limited, discontinuous groundwater at the subject property, these pathways are not applicable, and the release was granted closure in 2011. Based on the limited residual contamination, removal of the UST, and closed LUST status, PM has identified the former UST and LUST status as a HREC.

1.3.1 Phase I ESA Exceptions or Deletions

During the completion of the June 25, 2013, Phase I ESA, there were no exceptions or deletions from the Federal All Appropriate Inquiry Rule under 40 CFR 312, or the ASTM Standard. To the best of PM's knowledge, no special terms or conditions applied to the preparation of the Phase I ESA.

1.3.2 Phase I ESA Data Gaps

PM did not identify any significant data gaps during the completion of the June 25, 2013, Phase I ESA.

1.4 Summary of Site Investigation

1.4.1 Summary of Previous Site Investigations

PM reviewed the following reports pertaining to previous environmental investigations completed at the subject property. Copies of the previous site investigations reports, including sample location maps and analytical summary tables, are included in Appendix C of the June 25, 2013, Phase I ESA Report (Appendix A).

Name of Report	Date of Report	Company that Prepared Report
Modified Phase I ESA	10-6-2009	Soil and Materials Engineers, Inc. (SME)
Phase II ESA	7-14-2010	Testing Engineers & Consultants, Inc. (TEC)
Tier 1 LUST Closure Report	1-7-2011	Materials Testing Consultants, Inc.

The following table provides a brief summary of the previous investigation completed on the subject property. Additional details regarding the locations where soil and groundwater contamination exceed the applicable Part 201/Part 213 Nonresidential Risk-Based Screening Levels (RBSLs)/cleanup criteria are also included below.

Open or Closed LUST Site:	Closed
Release Identification(s):	C2428-90 / C-2385-90
Release Date(s)	January 1, 1990 / October 15, 1990
Is soil contamination present above an applicable regulatory level?	No
Is soil contamination delineated in all directions?	Not applicable
Is groundwater contamination present above an applicable regulatory level?	Yes
Is groundwater contamination delineated in all directions?	Yes
Significant deficiencies identified?	No
Additional information:	See below

The scope of work for the 2009 Modified Phase I ESA included interviews with knowledgeable contacts, review of municipal records, and a site reconnaissance. The report identified similar regulatory database listings and municipal information as identified by this Phase I ESA. The 2009 Modified Phase I ESA identified RECs including the former open LUST status, the potential for former and/or current USTs to be present, the unknown waste management practices associated with a vault in the automotive service garage, presence of in-ground hoists

and the potential for associated releases, stained concrete within the automotive service garage, and the unknown waste management practices associated with the potential former onsite septic system. PM did not identify any deficiencies with the 2009 report; however, the scope of work did not include a review of historical sources sufficient to document the former use of the subject property and adjoining properties, or the potential for a former septic system to be present.

The 2011 LUST Closure Report indicated that a release was discovered from the former 1,000-gallon used oil UST located west of the automotive service garage. The release was reported in January 1990 based on visual indications and was reported again in October 1990 based on the results of laboratory analysis indicating detectable concentrations of total petroleum hydrocarbons (TPH) from samples collected during the removal. Approximately 221 cubic yards of potentially impacted soil was excavated and disposed in 1992. Subsurface investigation activities conducted in 2009 included the advancement of five soil borings, and the collection and laboratory analysis of soil and groundwater samples for volatile organic compounds (VOCs), polynuclear aromatic compounds (PNAs), PCBs, cadmium, chromium, and lead, or some combinations thereof. Analytical results did not identify concentrations of target parameters above applicable MDEQ Part 213 RBSLs. Limited soil and groundwater contamination was identified above current MDEQ Part 213 Drinking Water (DW) and Groundwater Surface Water Interface (GSI) RBSLs; however, based on the limited, discontinuous groundwater at the subject property, these pathways were not applicable, and the release was granted closure in 2011.

Based upon review of the previous subsurface investigations to investigate former service operations, groundwater contamination is present which exceeds the current Part 201 Residential and Nonresidential Generic Cleanup Criteria. Based on these analytical results, the subject property would be classified as a “facility,” as defined by Part 201 of P.A. 451 of the Michigan Natural Resources Environmental Protection Act (NREPA), as amended. Additionally, concentrations of vinyl chloride in groundwater have been identified above MDEQ Residential Groundwater Vapor Intrusion Screening Level, but below the Nonresidential Vapor Intrusion Screening Level.

Refer to Section 2.1 for additional details regarding the results of the previous subsurface investigations conducted by TEC.

1.4.2 Summary of Current Site Investigations

On June 28, 2013, PM completed a scope of work consisting of the advancement of five soil borings (SB-1 through SB-5), installation of four temporary monitoring wells (TMW-1 through TMW-3 and TMW-5), installation of one sub-slab soil gas sampling point (SSG-1), and the collection of soil, groundwater, and soil gas samples. The soil and groundwater samples were submitted for laboratory analysis of VOCs, PNAs, PCBs, cadmium, chromium and lead, or some combination thereof; while the soil gas sample was submitted for VOCs.

1.4.2.1 Subsurface Investigation

Soil borings were advanced to assess the RECs identified in the Phase I ESA completed by PM in June 2013. Specifically, the Phase II ESA activities were conducted in the following areas of the subject property:

Description of Soil Boring/Temporary Monitoring Well Locations

Location and Total Depth (feet bgs)	Soil Sample Depth (feet bgs)	TMW Screen and DTW (feet bgs)	Analysis	Objectives	Sample Selection (justification)
PSB/TMW-1 (15.0)	Not Applicable	2.05-7.05 (2.2)	VOCs and PNAs	Assess potential contaminant migration from the former northwest adjoining gas station	**Soil:** Due to the absence of visual/olfactory evidence of contamination, a soil sample was not collected **GW:** Sampled
PSB/TMW-2 (16.0)	Not Applicable	1.0-6.0 (3.0)	VOCs and PNAs	Assess potential contaminant migration from the former northwest adjoining gas station	**Soil:** Due to the PID readings ranging from 0.3 ppm to 1.9 ppm within the saturated zone, a soil sample was not collected **GW:** Sampled
PSB/TMW-3 (10.0)	9.0-10.0	0.90-5.90 (1.12)	VOCs, PNAs, PCBs, cadmium, chromium, and lead	Assess the historical service operations and hydraulic hoists	**Soil:** Due to the absence of visual/olfactory evidence of contamination, a sample was collected at the sand/clay interface **GW:** Sampled
PSB-4 (15.0)	10.0-11.0	Not Applicable	VOCs, PNAs, PCBs, cadmium, chromium, and lead	Assess the historical service operations, hydraulic hoists, and underground vault	**Soil:** Due to the absence of visual/olfactory evidence of contamination, a sample was collected at the sand/clay interface **GW:** Not sampled
PSB/TMW-5 (15.0)	12.0-13.0	0.0-5.0 (0.90)	VOCs, PNAs, PCBs, cadmium, chromium, and lead	Assess the historical service operations, hydraulic hoists, and underground vault	**Soil:** Due to the absence of visual/olfactory evidence of contamination, a sample was collected at the sand/clay interface **GW:** Sampled

GW – Groundwater
DTW – Depth to Water
PID – Photoionization Detector
TMW – temporary monitoring well
bgs – below ground surface

1.4.2.2 Soil Gas Investigation

On June 28, 2013, PM installed one temporary sub-slab sampling points (SSG-1) and collected one soil gas sample to assess the indoor air inhalation pathway at the subject property. The sample was collected in general accordance with MDEQ Guidance Document for the Vapor Intrusion Pathway, dated May 2013.

Description of Soil Gas Sampling Locations

Location	Sample Depth	Analysis	Objectives
SSG-1	Sub-slab	VOCs	Assess potential vapor intrusion in the area of MW-4

1.4.2.4 Subsurface Investigations Techniques and QA/QC Procedures

The soil borings were advanced to the desired depth using a model 6610DT Geoprobe® drill rig. Soil sampling was performed for soil classification, verification of subsurface geologic conditions, and for investigating the potential and/or extent of soil and groundwater contamination at the subject property. Soil samples were generally collected on a continuous basis using a 5-foot long macro-core sampler.

During drilling operations, the drilling equipment was cleaned to minimize the possibility of cross contamination. These procedures included cleaning equipment with a phosphate free solution (i.e., Alconox®) and rinsing with distilled water after each sample collection. Drilling and sampling equipment was also cleaned in this manner prior to initiating field activities.

Soils collected from discrete sample intervals were screened using a photoionization detector (PID) to determine if VOCs were present. Soil from specific depths was placed in plastic bags, sealed, and allowed to volatilize. The headspace within each bag was then monitored with the PID. The PID is able to detect trace levels of organic compounds in the air space within the plastic bag. The PID utilizes a 10.2 electron volts (eV) lamp. Soil samples were collected from the soil borings based upon the highest PID reading, visual/olfactory evidence, a change in geology, surficial soil, and/or directly above saturated soil.

Soil samples for VOC analysis were preserved with methanol, in accordance with Environmental Protection Agency (EPA) method 5035, and then placed in appropriately labeled containers with Teflon lined lids and/or sanitized glass jars, placed in an ice packed cooler, and transported under chain of custody procedures for laboratory analysis within applicable holding times.

Temporary monitoring wells were installed in select soil borings to collect groundwater samples for chemical analysis. A new well assembly was used for each temporary well, consisting of a 5-foot long, one-inch diameter, 0.010-inch slot, schedule 40, PVC screen and a 1-inch diameter PVC casing. After the screen for the well was set to the desired depth, natural sands were allowed to collapse around the well screen. The well was developed using either a new disposable 0.9-inch diameter bailer or peristaltic pump equipped with new, chemically inert, 3/8-inch diameter polyethylene and silicon tubing. Well development was performed by purging until clear, turbid free groundwater was observed coming from the well.

Groundwater samples were placed in appropriately labeled containers, placed in an ice packed cooler, and transported under chain of custody procedures for laboratory analysis within applicable holding times.

Soil gas sampling activities were conducted in general accordance with the guidelines established by the ASTM in the Standard Practice for Vapor Encroachment Screening on Property Involved in Real Estate Transactions Designation E 2600-10 (ASTM Standard Practice

E 2600-10) and MDEQ May 2013 Guidance For The Vapor Intrusion Pathway. This included purging three gas point/sand pack volumes at low-flow (200 ml/minute) from each soil gas monitoring point, followed by the collection of one soil gas sample, using summa canister methods, for laboratory analysis of VOCs. The summa canisters were regulated with a flow rate of 200 ml/minute, which was pre-set at the laboratory.

The sub-slab sampling point was installed into the void created by a hammer drill in the concrete slab foundation and were confirmed to be secure and sealed. Additionally, an isolation chamber was utilized during soil gas sample collection was placed over each soil gas sample location to confirm the system was tight and representative samples were collected. Helium gas (i.e., as a tracer gas) was pumped into each bucket chamber and monitored in the field during the collection of each soil gas sample to assess the integrity of the surface seal and piping associated with each sample point.

Three soil samples and four groundwater sample were submitted to Merit Laboratories, Inc. in East Lansing, Michigan. One soil gas sample was submitted to Accutest Laboratories in Dayton, New Jersey for chemical analysis. Tables 1 through Table 3 and Figures 3 through 5 summarize the soil, groundwater, and soil gas analytical results. Complete laboratory reports are presented in Appendix B.

Upon completion of the investigation, the temporary well materials were removed from the soil boring and the soil borings were abandoned by placing the soil cuttings back into the borehole, filling the void with bentonite chips, hydrating the chips, resurfacing and returning the area to its pre-drilling condition.

1.4.3 Geology and Hydrogeology

A review of the 7.5 Minute, Birmingham, Michigan Quadrangle (Figure 1) prepared by the United States Geological Survey (USGS), dated 1968 (photo revised 1971), indicates that the subject property is approximately 669 feet relative to the National Geodetic Vertical Datum (NGVD). The immediate subject site area appears to be relatively flat with no discernible slope.

The general native soil stratigraphy consisted of up to 12.0 feet of sand followed by clay to 16.0 feet bgs. Previous assessment activities indicated up to 7.0 feet of sand followed by clay to at least 12.0 feet bgs. Groundwater was encountered in all soil borings within the sand unit at depths ranging from 0.90 to 2.2. Based on the 2013 assessment activities completed at the subject property documenting a saturated thickness ranging from 3.0 to 11.0 feet thick, the groundwater would meet the definition of an “aquifer” as defined in MDEQ Peer Review Draft Operation Memorandum No. 4 Attachment 10 “Groundwater Not in an Aquifer” dated February 2007.

The soil boring logs are included in Appendix C, which consist of site specific geology, sample depths, and temporary monitoring well details.

2.0 LOCATION OF CONTAMINATED MEDIA ON THE SUBJECT PROPERTY

2.1 Soil and Groundwater Analytical Results

The analytical results for soil and groundwater samples collected by PM were compared with the MDEQ cleanup criteria as presented in Attachment 1 to MDEQ Operational Memorandum

Number 1 "Part 201 Cleanup Criteria and Part 213 Risk-Based Screening Levels," September 28, 2012 using the applicable RBSL. The analytical results are summarized in Tables 1 and 2 (including CAS #) and in Figures 3 and 4. Appendix B contains the laboratory analytical report.

Summary of Soil and Groundwater Exceedances

Location and Total Depth (feet bgs)	Soil Sample Depth (feet bgs)	TMW Screen and DTW (feet bgs)	Analysis	Objectives	Exceedance of applicable MDEQ Part 201 Cleanup Criteria	
					Soil	GW
PSB/TMW-1 (15.0)	Not Applicable	2.05-7.05 (2.2)	VOCs and PNAs	Assess potential contaminant migration from the former northwest adjoining gas station	Not Applicable	None
PSB/TMW-2 (16.0)	Not Applicable	1.0-6.0 (3.0)	VOCs and PNAs	Assess potential contaminant migration from the former northwest adjoining gas station	Not Applicable	None
PSB/TMW-3 (10.0)	9.0-10.0	0.90-5.90 (1.12)	VOCs, PNAs, PCBs, cadmium, chromium, and lead	Assess the historical service operations and hydraulic hoists	None	**Vinyl Chloride: DW**
PSB-4 (15.0)	10.0-11.0	Not Applicable	VOCs, PNAs, PCBs, cadmium, chromium, and lead	Assess the historical service operations and hydraulic hoists	None	Not Applicable
PSB/TMW-5 (15.0)	12.0-13.0	0.0-5.0 (0.90)	VOCs, PNAs, PCBs, cadmium, chromium, and lead	Assess the historical service operations and hydraulic hoists	None	None

Soil analytical results from the 2013 site assessment activities indicate that no VOCs, PNAs, or PCBs were identified above the laboratory method detection levels (MDLs). Concentrations of cadmium, chromium, and lead were identified above the laboratory MDLs; however, concentrations were below the Michigan Statewide Default Background Levels.

Groundwater analytical results from the 2013 site assessment activities indicate that no PNAs, PCBs, cadmium, chromium, and lead were identified above the laboratory MDLs. A concentration of the VOC species vinyl chloride was identified at TMW-3 above the Residential and Nonresidential Drinking Water Generic Cleanup Criteria. All other VOCs samples collected were non-detect.

Historical Data Summary

Previous site investigation reports, including analytical results for soil and groundwater samples collected at the subject property are included in Appendix C of the June 2013 Phase I ESA (Appendix A).

A summary of the most recent soil data obtained for the subject property by TEC during March and May 2010 indicates a concentration of cadmium at SB-5 above the Michigan Statewide Default Background levels and the Groundwater Surface Water Interface Protection (GSIP) Criteria, based on the more conservative MDEQ chromium VI valence comparison. However, because the property is not known to historically been involved in metal plating operations, the MDEQ criterion for chromium III valence may be a more reasonable comparison. The observed concentration at SB-5 is below the MDEQ GSIP (6.9 E+9 µg/Kg) criterion for chromium III. Figure 3 depicts the soil sample locations along with a summary of the associated TEC soil analytical results. TEC Table 1 "Soil Analytical Data Summary," includes a summary of soil analytical data along with a comparison to the applicable Part 201 cleanup criteria, and is included as Table 4 of this BEA.

Groundwater analytical results indicate groundwater concentrations of vinyl chloride, chromium, and lead are present above the MDEQ DW and/or GSI cleanup criteria. However, since no significantly elevated chromium and lead concentrations were identified in soils on the site, it is likely the elevated chromium and lead results in groundwater is a result of residual silty sampling conditions in temporary monitoring wells. Analytical data collected in May 2010 from permanent monitoring wells, which were installed with a filter pack and properly developed, showed no significant metal impact. Therefore, the chromium and lead impact is not representative of a metal release at the subject property. Groundwater impact is defined in all directions horizontally, and is vertically defined by the confining clay unit present across the subject property. Figure 4 depicts temporary and permanent monitoring well locations from which groundwater samples were collected at the subject property along with a summary of TEC's March and May 2010 groundwater analytical results. TEC Table 2 "Groundwater Analytical Data Summary", includes a summary of the groundwater analytical data along with a comparison to the applicable Part 201 cleanup criteria, and is included as Table 5 of this BEA.

2.2 Soil Gas Analytical Results

The analytical results for the soil gas samples collected by PM on June 28, 2013 were compared with the MDEQ May 2013 Guidance for the Vapor Intrusion Pathway Guidance Document.

The analytical results are summarized in the table below:

Summary of Soil Gas Exceedances

Location	Sample Depth	Analysis	Objectives	Soil Gas Exceedance
SSG-1	Sub-slab	VOCs	Assess potential vapor intrusion in the area of MW-4	None

The soil gas analytical results from the sample location (SSG-1) that was collected by PM on June 28, 2013 are summarized in Table 3 and on Figure 5. Appendix B contains the laboratory report.

Concentrations of various VOCs were identified in the soil gas sample above laboratory MDLs, but below the Residential and Nonresidential Screening Levels.

2.3 Subject Property Site Status

Contaminant concentrations identified on the subject property indicate exceedances to the Part 201 Residential and Nonresidential DW cleanup criteria. Therefore, the subject property is a "facility" in accordance with Part 201 of P.A. 451, as amended, and the rules promulgated thereunder.

3.0 PROPERTY INFORMATION

3.1 Legal Description of Subject Property

Assessing records bearing a legal description of the subject property are included in Appendix D.

3.2 Map of Subject Property

A map of the subject property which depicts the property/parcel boundaries is included as Figure 2.

3.3 Subject Location and Analytical Summary Maps

Figure 2 provides a scaled map of the subject property with site structures.

Figure 3 provides a summary of the March 2010 and June 2013 soil analytical data collected by TEC and PM.

Figure 4 provides a summary of the March and May 2010 and June 2013 groundwater analytical data collected by TEC and PM.

Figure 5 provides a summary of the June 2013 soil gas analytical data collected by PM.

The previous site investigation reports identified in Section 1.4.1 is included in Appendix C of PM's June 2013 Phase I ESA (Appendix A).

3.4 Subject Property Location Map

Figure 1 provides a scaled area map depicting the subject property location in relation to the surrounding area.

3.5 Subject Property Address

As indicated in Section 1.0, the subject property (Parcel ID #88-20-34-101-023) is located at 100 East Maple, Troy, Oakland County, Michigan (Figure 1).

3.6 Subject Spatial Data

As depicted in Figure 1, the subject property is located in the northwest quarter of the northwest quarter of Section 34 in Township two North (T2N), Range 11 East (R11E), Troy, Oakland County, Michigan.

According to the MDEQ Groundwater Mapping Project Website, the subject property is located at latitude 42.547 north and a longitude of -83.1453 west.

4.0 FACILITY STATUS OF SUBJECT PROPERTY

As indicated in Section 2.0, based upon documented exceedances of the Part 201 Residential and Nonresidential DW cleanup criteria; the subject property is a facility under Part 201 of P.A. 451, and the rules promulgated thereunder.

4.1 Summary Data Tables

The analytical results for the soil and groundwater samples collected by PM were compared with the MDEQ GCC as presented in Attachment 1 to MDEQ Operational Memorandum Number 1 "Part 201 Cleanup Criteria and Part 213 Risk-Based Screening Levels," September 28, 2012, using the applicable cleanup criteria. The analytical results are summarized in Tables 1 and 2. CAS numbers associated with each target analyte identified above the laboratory MDLs and maximum contaminant concentrations are also presented in Tables 1 and 2.

The soil gas analycial results, including CAS numbers associated with each target analyte, are summarized in Table 3 along with a comparison to the MDEQ May 2013 Guidance for the Vapor Intrusion Pathway Guidance Document.

The analytical results for the most recent soil and groundwater samples collected from the subject property by TEC are presented in Tables 4 and 5. Those tables include the following:

Table 4: TEC Table 1 Soil Analytical Data Summary
Table 5: TEC Table 2 Groundwater Analytical Data Summary

Previous site investigation reports, including summary data tables, are included in Appendix A.

4.2 Laboratory Reports and Chain of Custody Documentation

Soil, groundwater, and soil gas samples collected by PM were submitted under chain of custody procedures and within applicable holding times. Refer to Appendix B for the laboratory analytical report and associated chain of custody documentation.

Laboratory chain of custody documentation for TEC is included in the previous site investigation reports included in Appendix C of PM's June 2013 Phase I ESA (Appendix A).

5.0 IDENTIFICATION OF BEA AUTHOR

This BEA was conducted on July 26, 2013, by Ms. Christie L. Santiago, Senior Project Engineer and Mr. Michael T. Kulka, P.E., Principal, PM Environmental, Inc., which is prior to or within 45

days of becoming the property owner or operator. Qualification statements are provided as Appendix E.

I declare that, to the best of my professional knowledge and belief, I meet the definition of *Environmental Professional* as defined in §312.10 of 40 CFR 312 and I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquires in conformance with the standards and practices set forth in 40 CFR Part 312.

Christie Santiago
Senior Project Engineer

Michael T. Kulka, P.E.
Principal

6.0 AAI REPORT OR ASTM PHASE I ESA

As indicated in Section 1.3, PM performed a Phase I ESA of the subject property, June 25, 2013, in conformance with the scope and limitations of ASTM Practice E 1527-05 for the subject property (Parcel ID: 88-20-34-101-023) located at 100 East Maple, Troy, Michigan 48083. The scope of the Phase I ESA included consideration of hazardous substances as defined in Section 20202(1)(x) of P.A 451 of 1994, as amended, and constituted the performance of an All Appropriate Inquiry in conformance with the standards and practices set forth in 40 CFR Part 312.

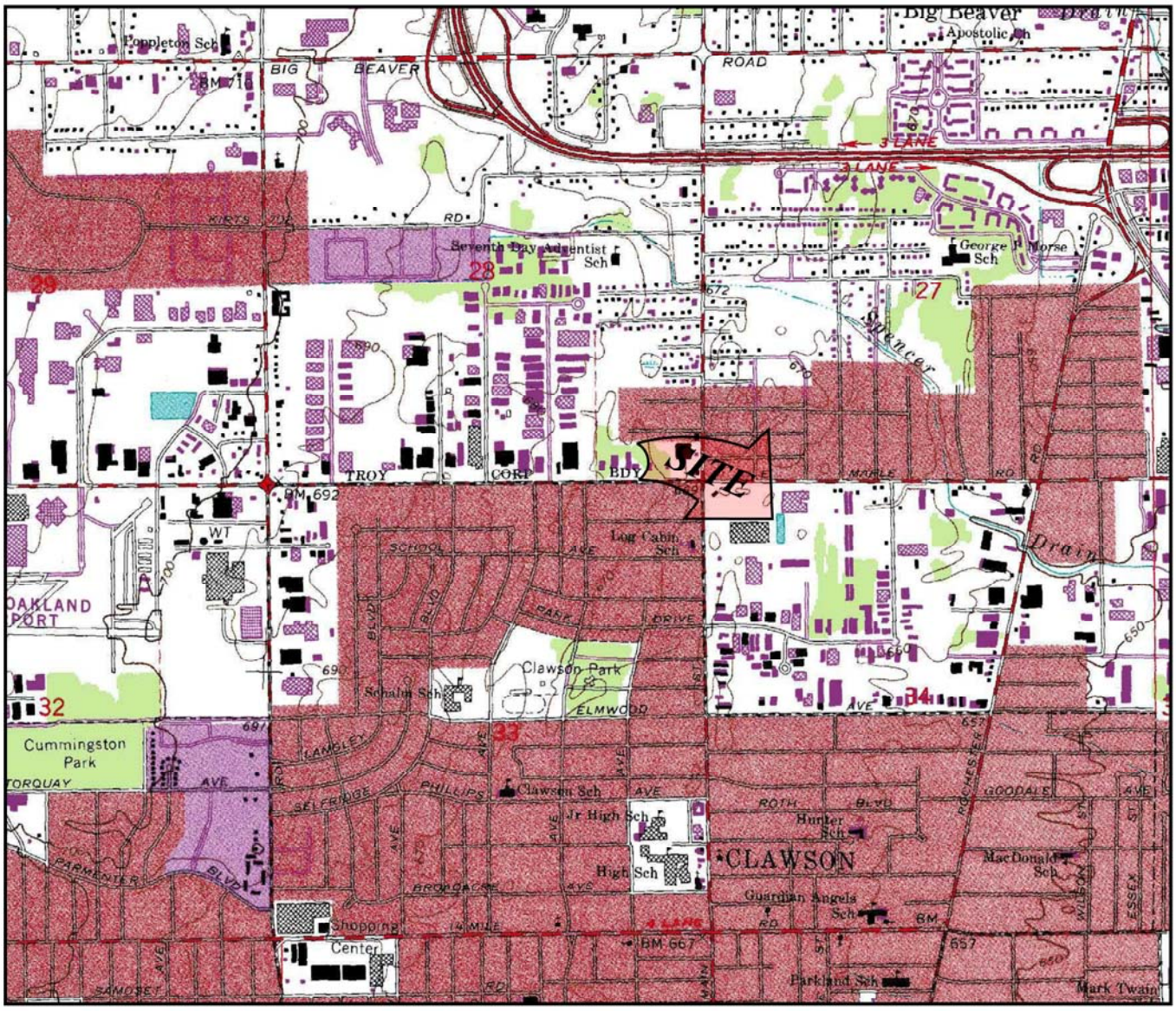
A copy of the June 2013 Phase I ESA is included in Appendix A.

7.0 REFERENCES

- MDEQ Operational Memorandum No. 1 “Part 201 Cleanup Criteria and Part 213 Risk-based Screening Levels,” Revised March 25, 2011 and in accordance with Section 20120a(1);
- MDEQ Operational Memorandum No. 4 “Site Characterization and Remediation Verification – Attachment 10, Peer Review Draft Groundwater Not in an Aquifer,” February 2007;
- MDEQ Operational Memorandum No. 2 “Sampling and Analysis,” October 22, 2004, Revised July 5, 2007;
- MDEQ Baseline Environmental Assessment Submittal Form (EQP 4025), dated March 2011;
- Modified Phase I Environmental Site Assessment (ESA), October 6, 2009, SME;
- Phase II ESA, July 14, 2010, TEC;
- Tier 1 LUST Closure Report, January 7, 2011, Materials Testing Consultants, Inc.; and
- Phase I ESA, June 25, 2013, PM.

Figures

PM ENVIRONMENTAL Environmental & Engineering Services



OAKLAND COUNTY

SCALE 1:24,000

1 MILE 1/2 MILE 0 1 MILE

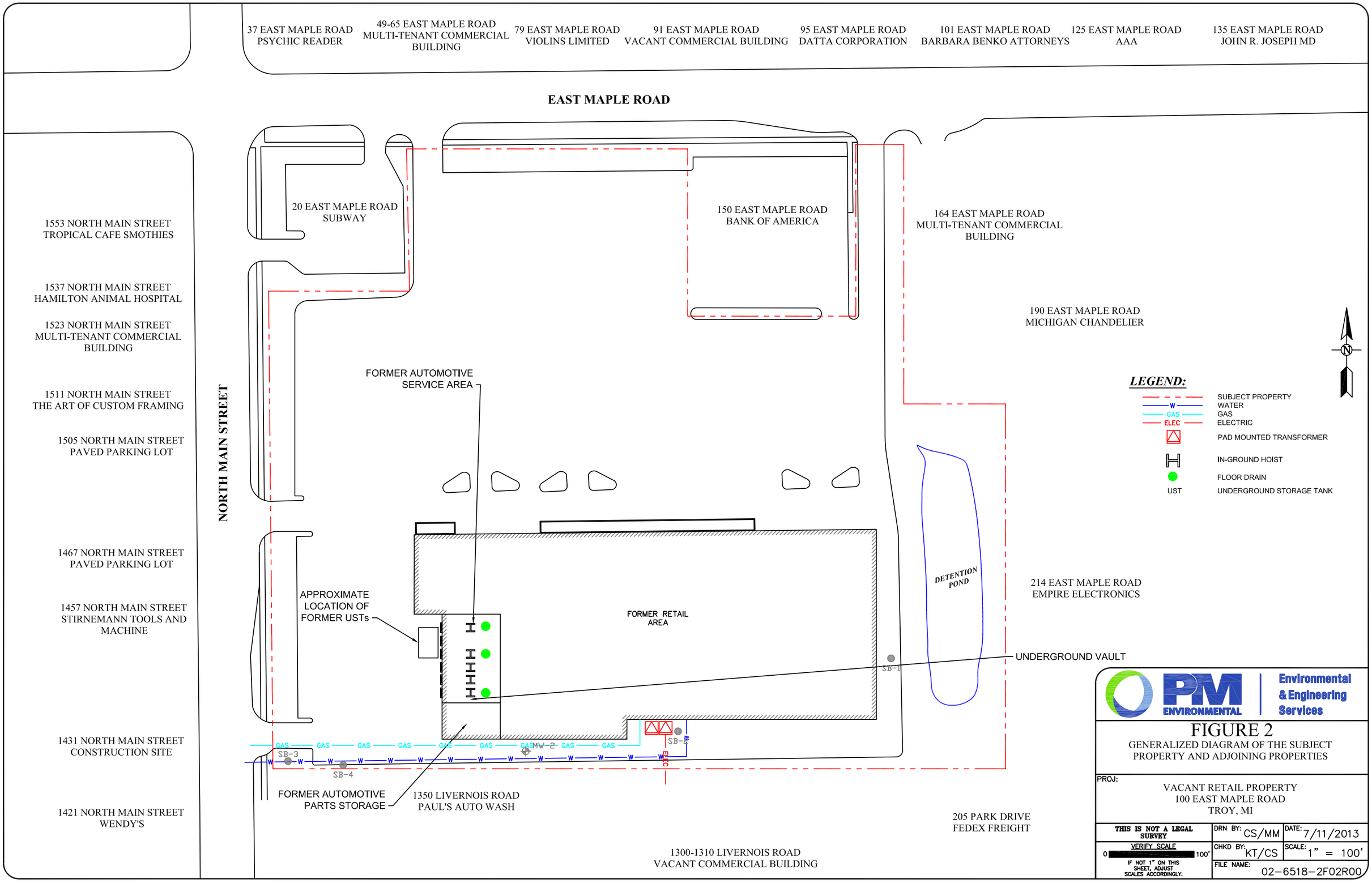
FIGURE 1

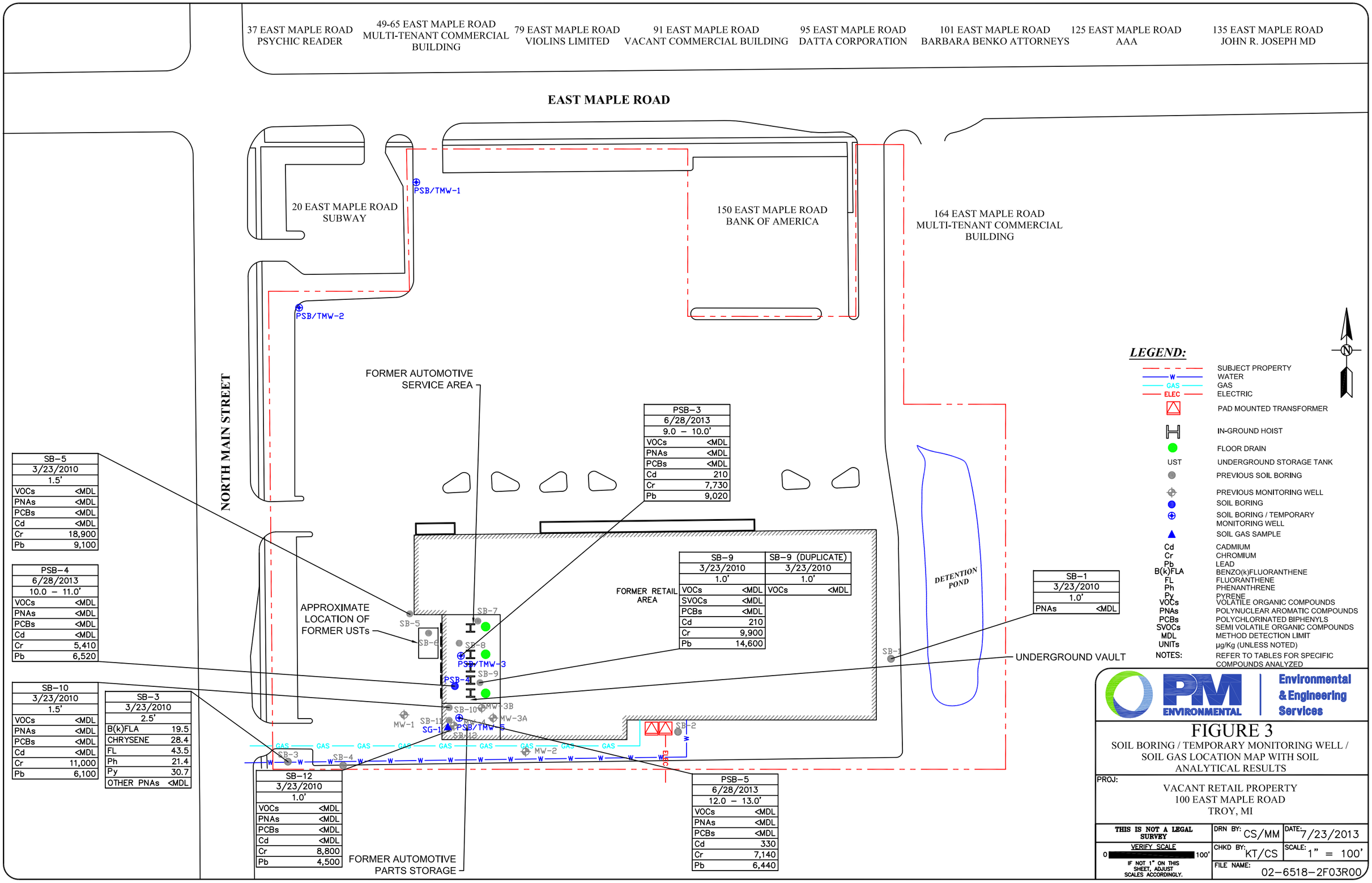
PROPERTY VICINITY MAP

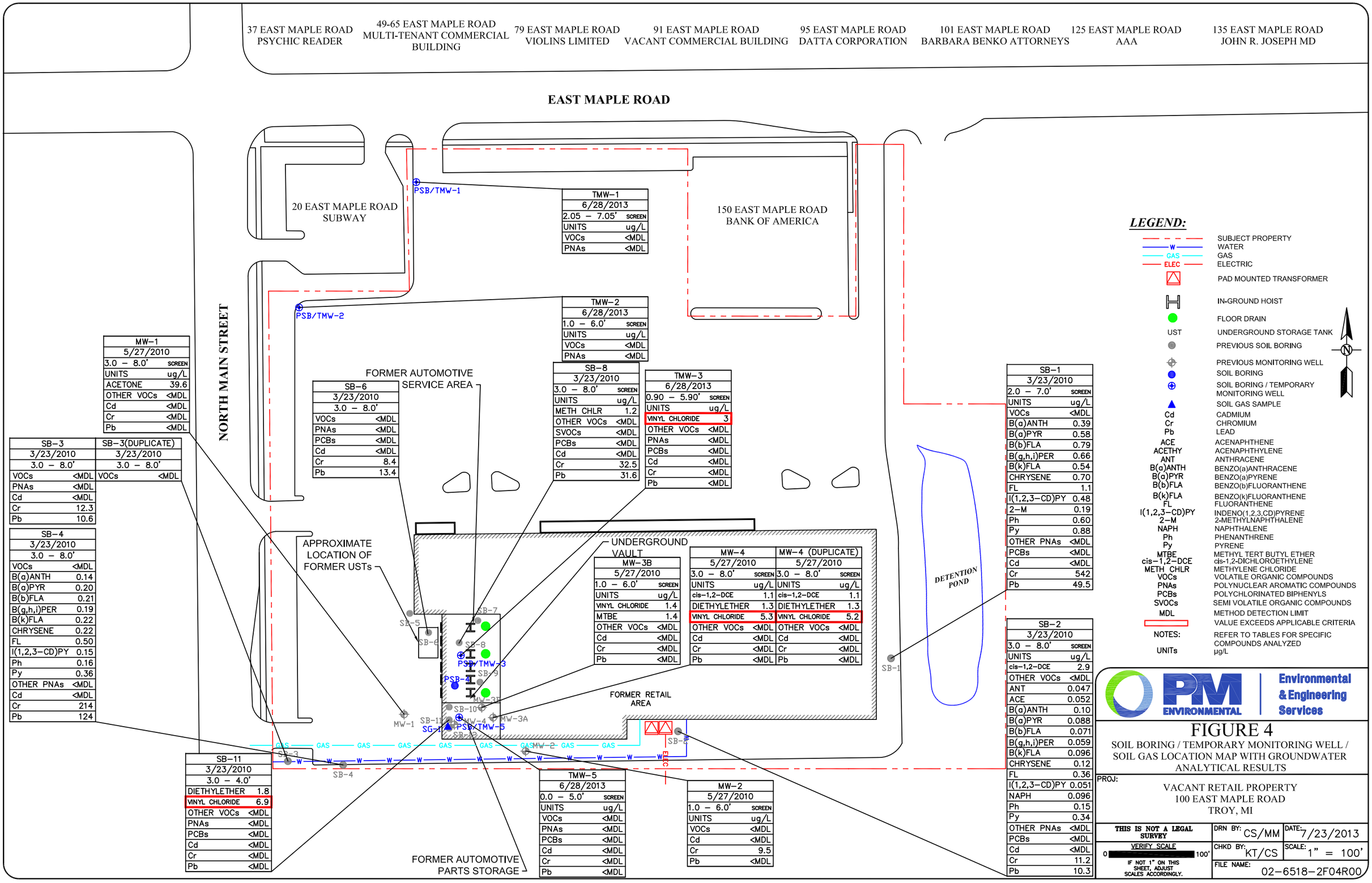
USGS, 7.5 MINUTE SERIES

BIRMINGHAM, MI QUADRANGLE, 1968. PHOTO REVISED 1981.

PM ENVIRONMENTAL Environmental & Engineering Services	PROJ: VACANT RETAIL PROPERTY 100 EAST MAPLE ROAD TROY, MI	THIS IS NOT A LEGAL SURVEY VERIFY SCALE 0 — 2,000' IF NOT 1" ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	DRN BY: CS/TS/MM CHKD BY: KT/AP/CS FILE NAME: 02-6518-2F01R00	DATE: 7/11/2013 SCALE: 1" = 2,000'


37 EAST MAPLE ROAD
PSYCHIC READER
49-65 EAST MAPLE ROAD
MULTI-TENANT COMMERCIAL BUILDING
79 EAST MAPLE ROAD
VIOLINS LIMITED
91 EAST MAPLE ROAD
VACANT COMMERCIAL BUILDING
95 EAST MAPLE ROAD
DATTA CORPORATION
101 EAST MAPLE ROAD
BARBARA BENKO ATTORNEYS
125 EAST MAPLE ROAD
AAA
135 EAST MAPLE ROAD
JOHN R. JOSEPH MD
EAST MAPLE ROAD
20 EAST MAPLE ROAD
SUBWAY
150 EAST MAPLE ROAD
BANK OF AMERICA
164 EAST MAPLE ROAD
MULTI-TENANT COMMERCIAL BUILDING
190 EAST MAPLE ROAD
MICHIGAN CHANDELIER
1553 NORTH MAIN STREET
TROPICAL CAFE SMOTHIES
1537 NORTH MAIN STREET
HAMILTON ANIMAL HOSPITAL
1523 NORTH MAIN STREET
MULTI-TENANT COMMERCIAL BUILDING
1511 NORTH MAIN STREET
THE ART OF CUSTOM FRAMING
1505 NORTH MAIN STREET
PAVED PARKING LOT
NORTH MAIN STREET
FORMER AUTOMOTIVE SERVICE AREA
LEGEND:
SUBJECT PROPERTY
WATER
GAS
ELECTRIC
PAD MOUNTED TRANSFORMER
IN-GROUND HOIST
FLOOR DRAIN
UST
UNDERGROUND STORAGE TANK
N
1467 NORTH MAIN STREET
PAVED PARKING LOT
1457 NORTH MAIN STREET
STIRNEMANN TOOLS AND MACHINE
APPROXIMATE LOCATION OF FORMER USTs
FORMER RETAIL AREA
DETENTION POND
214 EAST MAPLE ROAD
EMPIRE ELECTRONICS
UNDERGROUND VAULT
SB-1
SB-2
SB-3
SB-4
MW-2
GAS
W
ELEC
1431 NORTH MAIN STREET
CONSTRUCTION SITE
FORMER AUTOMOTIVE PARTS STORAGE
1350 LIVERNOIS ROAD
PAUL'S AUTO WASH
1421 NORTH MAIN STREET
WENDY'S
205 PARK DRIVE
FEDEX FREIGHT
1300-1310 LIVERNOIS ROAD
VACANT COMMERCIAL BUILDING
PM ENVIRONMENTAL
Environmental & Engineering Services
FIGURE 2
GENERALIZED DIAGRAM OF THE SUBJECT PROPERTY AND ADJOINING PROPERTIES
PROJ:
VACANT RETAIL PROPERTY
100 EAST MAPLE ROAD
TROY, MI
THIS IS NOT A LEGAL SURVEY
VERIFY SCALE
0 100'
IF NOT 1" ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
DRN BY: CS/MM
DATE: 7/11/2013
CHKD BY: KT/CS
SCALE: 1" = 100'
FILE NAME: 02-6518-2F02R00


37 EAST MAPLE ROAD
PSYCHIC READER
49-65 EAST MAPLE ROAD
MULTI-TENANT COMMERCIAL BUILDING
79 EAST MAPLE ROAD
VIOLINS LIMITED
91 EAST MAPLE ROAD
VACANT COMMERCIAL BUILDING
95 EAST MAPLE ROAD
DATTA CORPORATION
101 EAST MAPLE ROAD
BARBARA BENKO ATTORNEYS
125 EAST MAPLE ROAD
AAA
135 EAST MAPLE ROAD
JOHN R. JOSEPH MD
EAST MAPLE ROAD
NORTH MAIN STREET
20 EAST MAPLE ROAD
SUBWAY
150 EAST MAPLE ROAD
BANK OF AMERICA
164 EAST MAPLE ROAD
MULTI-TENANT COMMERCIAL BUILDING
PSB/TMW-1
PSB/TMW-2
PSB/TMW-3
PSB/TMW-4
PSB/TMW-5
FORMER AUTOMOTIVE SERVICE AREA
FORMER RETAIL AREA
APPROXIMATE LOCATION OF FORMER USTs
FORMER AUTOMOTIVE PARTS STORAGE
DETENTION POND
UNDERGROUND VAULT
SB-1
SB-2
SB-3
SB-4
SB-5
SB-6
SB-7
SB-8
SB-9
SB-10
SB-11
SB-12
MW-1
MW-2
MW-3A
MW-3B
SG-1
GAS
W
ELEC
PSB-3
6/28/2013
9.0 – 10.0'
VOCs <MDL
PNAs <MDL
PCBs <MDL
Cd 210
Cr 7,730
Pb 9,020
SB-5
3/23/2010
1.5'
VOCs <MDL
PNAs <MDL
PCBs <MDL
Cd <MDL
Cr 18,900
Pb 9,100
PSB-4
6/28/2013
10.0 – 11.0'
VOCs <MDL
PNAs <MDL
PCBs <MDL
Cd <MDL
Cr 5,410
Pb 6,520
SB-10
3/23/2010
1.5'
VOCs <MDL
PNAs <MDL
PCBs <MDL
Cd <MDL
Cr 11,000
Pb 6,100
SB-3
3/23/2010
2.5'
B(k)FLA 19.5
CHRYSENE 28.4
FL 43.5
Ph 21.4
Py 30.7
OTHER PNAs <MDL
SB-12
3/23/2010
1.0'
VOCs <MDL
PNAs <MDL
PCBs <MDL
Cd <MDL
Cr 8,800
Pb 4,500
SB-9
3/23/2010
1.0'
VOCs <MDL
SVOCs <MDL
PCBs <MDL
Cd 210
Cr 9,900
Pb 14,600
SB-9 (DUPLICATE)
3/23/2010
1.0'
VOCs <MDL
PSB-5
6/28/2013
12.0 – 13.0'
VOCs <MDL
PNAs <MDL
PCBs <MDL
Cd 330
Cr 7,140
Pb 6,440
SB-1
3/23/2010
1.0'
PNAs <MDL
LEGEND:
SUBJECT PROPERTY
WATER
GAS
ELECTRIC
PAD MOUNTED TRANSFORMER
IN-GROUND HOIST
FLOOR DRAIN
UST UNDERGROUND STORAGE TANK
PREVIOUS SOIL BORING
PREVIOUS MONITORING WELL
SOIL BORING
SOIL BORING / TEMPORARY MONITORING WELL
SOIL GAS SAMPLE
Cd CADMIUM
Cr CHROMIUM
Pb LEAD
B(k)FLA BENZO(k)FLUORANTHENE
FL FLUORANTHENE
Ph PHENANTHRENE
Py PYRENE
VOCs VOLATILE ORGANIC COMPOUNDS
PNAs POLYNUCLEAR AROMATIC COMPOUNDS
PCBs POLYCHLORINATED BIPHENYLS
SVOCs SEMI VOLATILE ORGANIC COMPOUNDS
MDL METHOD DETECTION LIMIT
UNITs µg/Kg (UNLESS NOTED)
NOTES: REFER TO TABLES FOR SPECIFIC COMPOUNDS ANALYZED
N
PM ENVIRONMENTAL
Environmental & Engineering Services
FIGURE 3
SOIL BORING / TEMPORARY MONITORING WELL / SOIL GAS LOCATION MAP WITH SOIL ANALYTICAL RESULTS
PROJ:
VACANT RETAIL PROPERTY
100 EAST MAPLE ROAD
TROY, MI
THIS IS NOT A LEGAL SURVEY
VERIFY SCALE
0 100'
IF NOT 1" ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
DRN BY: CS/MM
DATE: 7/23/2013
CHKD BY: KT/CS
SCALE: 1" = 100'
FILE NAME: 02-6518-2F03R00


37 EAST MAPLE ROAD
PSYCHIC READER
49-65 EAST MAPLE ROAD
MULTI-TENANT COMMERCIAL BUILDING
79 EAST MAPLE ROAD
VIOLINS LIMITED
91 EAST MAPLE ROAD
VACANT COMMERCIAL BUILDING
95 EAST MAPLE ROAD
DATTA CORPORATION
101 EAST MAPLE ROAD
BARBARA BENKO ATTORNEYS
125 EAST MAPLE ROAD
AAA
135 EAST MAPLE ROAD
JOHN R. JOSEPH MD
EAST MAPLE ROAD
NORTH MAIN STREET
20 EAST MAPLE ROAD
SUBWAY
150 EAST MAPLE ROAD
BANK OF AMERICA
DETENTION POND
FORMER AUTOMOTIVE SERVICE AREA
APPROXIMATE LOCATION OF FORMER USTs
UNDERGROUND VAULT
FORMER RETAIL AREA
FORMER AUTOMOTIVE PARTS STORAGE
PSB/TMW-1
PSB/TMW-2
PSB/TMW-3
PSB/TMW-4
PSB/TMW-5
SG-1
SB-1
SB-2
SB-3
SB-4
SB-5
SB-6
SB-7
SB-8
SB-9
SB-10
SB-11
SB-12
SB-13
MW-1
MW-2
MW-3A
MW-3B
MW-4
GAS
W
ELEC
TMW-1
6/28/2013
2.05 – 7.05' SCREEN
UNITS ug/L
VOCs <MDL
PNAs <MDL
TMW-2
6/28/2013
1.0 – 6.0' SCREEN
UNITS ug/L
VOCs <MDL
PNAs <MDL
TMW-3
6/28/2013
0.90 – 5.90' SCREEN
UNITS ug/L
VINYL CHLORIDE 3
OTHER VOCs <MDL
PNAs <MDL
PCBs <MDL
Cd <MDL
Cr <MDL
Pb <MDL
TMW-5
6/28/2013
0.0 – 5.0' SCREEN
UNITS ug/L
VOCs <MDL
PNAs <MDL
PCBs <MDL
Cd <MDL
Cr <MDL
Pb <MDL
MW-1
5/27/2010
3.0 – 8.0' SCREEN
UNITS ug/L
ACETONE 39.6
OTHER VOCs <MDL
Cd <MDL
Cr <MDL
Pb <MDL
SB-3
3/23/2010
3.0 – 8.0'
VOCs <MDL
PNAs <MDL
Cd <MDL
Cr 12.3
Pb 10.6
SB-3(DUPLICATE)
3/23/2010
3.0 – 8.0'
VOCs <MDL
SB-4
3/23/2010
3.0 – 8.0'
VOCs <MDL
B(a)ANTH 0.14
B(a)PYR 0.20
B(b)FLA 0.21
B(g,h,i)PER 0.19
B(k)FLA 0.22
CHRYSENE 0.22
FL 0.50
I(1,2,3-CD)PY 0.15
Ph 0.16
Py 0.36
OTHER PNAs <MDL
Cd <MDL
Cr 214
Pb 124
SB-6
3/23/2010
3.0 – 8.0'
VOCs <MDL
PNAs <MDL
PCBs <MDL
Cd <MDL
Cr 8.4
Pb 13.4
SB-8
3/23/2010
3.0 – 8.0' SCREEN
UNITS ug/L
METH CHLR 1.2
OTHER VOCs <MDL
SVOCs <MDL
PCBs <MDL
Cd <MDL
Cr 32.5
Pb 31.6
SB-11
3/23/2010
3.0 – 4.0'
DIETHYLETHER 1.8
VINYL CHLORIDE 6.9
OTHER VOCs <MDL
PNAs <MDL
PCBs <MDL
Cd <MDL
Cr <MDL
Pb <MDL
MW-3B
5/27/2010
1.0 – 6.0' SCREEN
UNITS ug/L
VINYL CHLORIDE 1.4
MTBE 1.4
OTHER VOCs <MDL
Cd <MDL
Cr <MDL
Pb <MDL
MW-4
5/27/2010
3.0 – 8.0' SCREEN
UNITS ug/L
cis-1,2-DCE 1.1
DIETHYLETHER 1.3
VINYL CHLORIDE 5.3
OTHER VOCs <MDL
Cd <MDL
Cr <MDL
Pb <MDL
MW-4 (DUPLICATE)
5/27/2010
3.0 – 8.0' SCREEN
UNITS ug/L
cis-1,2-DCE 1.1
DIETHYLETHER 1.3
VINYL CHLORIDE 5.2
OTHER VOCs <MDL
Cd <MDL
Cr <MDL
Pb <MDL
MW-2
5/27/2010
1.0 – 6.0' SCREEN
UNITS ug/L
VOCs <MDL
Cd <MDL
Cr 9.5
Pb <MDL
SB-1
3/23/2010
2.0 – 7.0' SCREEN
UNITS ug/L
VOCs <MDL
B(a)ANTH 0.39
B(a)PYR 0.58
B(b)FLA 0.79
B(g,h,i)PER 0.66
B(k)FLA 0.54
CHRYSENE 0.70
FL 1.1
I(1,2,3-CD)PY 0.48
2-M 0.19
Ph 0.60
Py 0.88
OTHER PNAs <MDL
PCBs <MDL
Cd <MDL
Cr 542
Pb 49.5
SB-2
3/23/2010
3.0 – 8.0' SCREEN
UNITS ug/L
cis-1,2-DCE 2.9
OTHER VOCs <MDL
ANT 0.047
ACE 0.052
B(a)ANTH 0.10
B(a)PYR 0.088
B(b)FLA 0.071
B(g,h,i)PER 0.059
B(k)FLA 0.096
CHRYSENE 0.12
FL 0.36
I(1,2,3-CD)PY 0.051
NAPH 0.096
Ph 0.15
Py 0.34
OTHER PNAs <MDL
PCBs <MDL
Cd <MDL
Cr 11.2
Pb 10.3
LEGEND:
SUBJECT PROPERTY
WATER
GAS
ELECTRIC
PAD MOUNTED TRANSFORMER
IN-GROUND HOIST
FLOOR DRAIN
UST UNDERGROUND STORAGE TANK
PREVIOUS SOIL BORING
PREVIOUS MONITORING WELL
SOIL BORING
SOIL BORING / TEMPORARY MONITORING WELL
SOIL GAS SAMPLE
Cd CADMIUM
Cr CHROMIUM
Pb LEAD
ACE ACENAPHTHENE
ACETHY ACENAPHTHYLENE
ANT ANTHRACENE
B(a)ANTH BENZO(a)ANTHRACENE
B(a)PYR BENZO(a)PYRENE
B(b)FLA BENZO(b)FLUORANTHENE
B(k)FLA BENZO(k)FLUORANTHENE
FL FLUORANTHENE
I(1,2,3-CD)PY INDENO(1,2,3,CD)PYRENE
2-M 2-METHYLNAPHTHALENE
NAPH NAPHTHALENE
Ph PHENANTHRENE
Py PYRENE
MTBE METHYL TERT BUTYL ETHER
cis-1,2-DCE cis-1,2-DICHLOROETHYLENE
METH CHLR METHYLENE CHLORIDE
VOCs VOLATILE ORGANIC COMPOUNDS
PNAs POLYNUCLEAR AROMATIC COMPOUNDS
PCBs POLYCHLORINATED BIPHENYLS
SVOCs SEMI VOLATILE ORGANIC COMPOUNDS
MDL METHOD DETECTION LIMIT
VALUE EXCEEDS APPLICABLE CRITERIA
NOTES: REFER TO TABLES FOR SPECIFIC COMPOUNDS ANALYZED
UNITs µg/L
N
PM ENVIRONMENTAL
Environmental & Engineering Services
FIGURE 4
SOIL BORING / TEMPORARY MONITORING WELL / SOIL GAS LOCATION MAP WITH GROUNDWATER ANALYTICAL RESULTS
PROJ:
VACANT RETAIL PROPERTY
100 EAST MAPLE ROAD
TROY, MI
THIS IS NOT A LEGAL SURVEY
VERIFY SCALE
0 100'
IF NOT 1" ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
DRN BY: CS/MM
DATE: 7/23/2013
CHKD BY: KT/CS
SCALE: 1" = 100'
FILE NAME: 02-6518-2F04R00

37 EAST MAPLE ROAD
PSYCHIC READER

49-65 EAST MAPLE ROAD
MULTI-TENANT COMMERCIAL BUILDING

79 EAST MAPLE ROAD
VIOLINS LIMITED

91 EAST MAPLE ROAD
VACANT COMMERCIAL BUILDING

95 EAST MAPLE ROAD
DATTA CORPORATION

101 EAST MAPLE ROAD
BARBARA BENKO ATTORNEYS

125 EAST MAPLE ROAD
AAA

135 EAST MAPLE ROAD
JOHN R. JOSEPH MD

EAST MAPLE ROAD

1553 NORTH MAIN STREET
TROPICAL CAFE SMOTHIES

1537 NORTH MAIN STREET
HAMILTON ANIMAL HOSPITAL

1523 NORTH MAIN STREET
MULTI-TENANT COMMERCIAL BUILDING

1511 NORTH MAIN STREET
THE ART OF CUSTOM FRAMING

1505 NORTH MAIN STREET
PAVED PARKING LOT

NORTH MAIN STREET

1467 NORTH MAIN STREET
PAVED PARKING LOT

1457 NORTH MAIN STREET
STIRNEMANN TOOLS AND MACHINE

1431 NORTH MAIN STREET
CONSTRUCTION SITE

1421 NORTH MAIN STREET
WENDY'S

20 EAST MAPLE ROAD
SUBWAY

150 EAST MAPLE ROAD
BANK OF AMERICA

164 EAST MAPLE ROAD
MULTI-TENANT COMMERCIAL BUILDING

190 EAST MAPLE ROAD
MICHIGAN CHANDELIER

FORMER AUTOMOTIVE SERVICE AREA

APPROXIMATE LOCATION OF FORMER USTs

FORMER RETAIL AREA

UNDERGROUND VAULT

DETENTION POND

214 EAST MAPLE ROAD
EMPIRE ELECTRONICS

FORMER AUTOMOTIVE PARTS STORAGE

1350 LIVERNOIS ROAD
PAUL'S AUTO WASH

205 PARK DRIVE
FEDEX FREIGHT

1300-1310 LIVERNOIS ROAD
VACANT COMMERCIAL BUILDING

PSB/TMW-1
PSB/TMW-2
PSB/TMW-3
PSB-4
PSB/TMW-5
SB-1
SB-2
SB-3
SB-4
SB-5
SB-6
SB-7
SB-8
SB-9
SB-10
SB-11
SB-12
MW-1
MW-2
MW-3A
MW-3B
MW-4
SG-1

SSG-1	
6/28/2013	
SUB-SLAB	
ACETONE	520
B	7.1
CARBON DISF	9.2
Chl	0.62
CYCLOHEXANE	4.3
DICLFMETH	0.52
ETHANOL	24.3
E	3.9
4-ETHYLTOLUENE	1.1
HEPTANE	9.6
HEXANE	23.8
2-HEXANONE	2.1
ISOP ALCOHOL	2.7
METH CHLR	1.5
MEK	19.4
MIK	22.9
MTBE	0.17
1,2,4-TMB	4.7
1,3,5-TMB	1.4
2,2,4-TMP	0.75
TBA	3.5
PCE	4
TETRAHYDROFURAN	1.6
T	26.4
TCE	0.81
TRICLFL METH	0.77
X	15.3
OTHER VOCs	<MDL

LEGEND:

- SUBJECT PROPERTY
- W — WATER
- GAS — GAS
- ELEC — ELECTRIC
- PAD MOUNTED TRANSFORMER
- IN-GROUND HOIST
- FLOOR DRAIN
- UST — UNDERGROUND STORAGE TANK
- PREVIOUS SOIL BORING
- PREVIOUS MONITORING WELL
- SOIL BORING
- SOIL BORING / TEMPORARY MONITORING WELL
- SOIL GAS SAMPLE

B	BENZENE
T	TOLUENE
E	ETHYLBENZENE
X	XYLENES
1,2,4-TMB	1,2,4-TRIMETHYLBENZENE
1,3,5-TMB	1,3,5-TRIMETHYLBENZENE
Chl	CHLOROFORM
MTBE	METHYL TERT BUTYL ETHER
TCE	TRICHLOROETHENE
PCE	TETRACHLOROETHENE
MEK	2-BUTANONE (MEK)
VOCs	VOLATILE ORGANIC COMPOUNDS
MDL	METHOD DETECTION LIMIT
PPBV	PART PER BILLION BY VOLUME
NOTES:	REFER TO TABLES FOR SPECIFIC COMPOUNDS ANALYZED
MIK	METHYL ISOBUTYL KETONE
TBA	TERTIARYBUTYLALCOHOL
METH CHLR	METHYLENE CHLORIDE
2,2,4-TMP	2,2,4-TRIMETHYLPENTANE
DICLFMETH	DICHLORODIFLUOROMETHANE
CARBON DISF	CARBON DISULFIDE
TRICLFL METH	TRICHLOROFLUOROMETHANE

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FIGURE 5

SOIL BORING / TEMPORARY MONITORING WELL / SOIL GAS LOCATION MAP WITH SOIL GAS ANALYTICAL RESULTS

PROJ: VACANT RETAIL PROPERTY
100 EAST MAPLE ROAD
TROY, MI

THIS IS NOT A LEGAL SURVEY	DRN BY: CS/MM	DATE: 7/23/2013
VERIFY SCALE 0 [redacted] 100' IF NOT 1" ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	CHKD BY: KT/CS	SCALE: 1" = 100'
	FILE NAME: 02-6518-2F05R00	

Tables

PM ENVIRONMENTAL Environmental & Engineering Services

TABLE 1 (1 OF 1)
SUMMARY OF SOIL ANALYTICAL RESULTS
VOLATILE ORGANIC COMPOUNDS, POLYNUCEAR AROMATIC COMPOUNDS, POLYCHLORINATED BIPHENYLS and METALS
100 EAST MAPLE, TROY, MICHIGAN
PM PROJECT # 02-6518-2

Volatile Organic Compounds, Polynuclear Aromatic Compmounds, Polychlorinated Biphenyls (PCBs) & Metals (Cadmium, Chromium, & Lead) (µg/Kg)			Volatile Organic Compounds	Polynuclear Aromatic Compounds	Polychlorinated Biphenyls	Cadmium	Chromium	Lead Total[1]
Chemical Abstract Service Number (CAS#)			Various	Various	1336363	7440439	16065831	7439921
Sample ID	**Sample Date**	**Sample Depth (bgs)**	**VOCs**	**PNAs**	**PCBs**	**Metals**		
PSB-3	06/28/2013	9.0-10.0	ND	ND	<330	210	7,730	9,020
PSB-4	06/28/2013	10.0-11.0	ND	ND	<330	<200	5,410	6,520
PSB-5	06/28/2013	12.0-13.0	ND	ND	<330	330	7,140	6,440
Operational Memorandum No. 1: Part 201 Cleanup Criteria and Part 213 Risk-based Screening Levels (RBSLs), Attachment 1: Soil Tables 2 and 3 Residential and Nonresidential Part 201 Generic Cleanup Criteria and Screening Levels; Part 213 Tier 1 RBSLs, September 28, 2012								
Residential (µg/Kg)								
Statewide Default Background Levels			NA	NA	NA	1,200	18,000	21,000
Drinking Water Protection (Res DWP)			Various	Various	NLL	6,000	30,000	700,000
Groundwater Surface Water Interface Protection (GSIP)			Various	Various	NLL	7,730 {G,X}	3300 (VI) 6.9E+9 (III)	8.3E+6 {G,X}
GSIP Human Drinking Water			Various	Various	NA	3,000 {G,X}	3.5E+9 {G,X}	2.5E+6 {G,X}
Groundwater Contact Protection (GCP)			Various	Various	NLL	2.3E+08	1.4E+08	ID
Soil Volatilization to Indoor Air Inhalation (Res SVII)			Various	Various	3.0E+06	NLV	NLV	NLV
Ambient Air Infinite Source Volatile Soil Inhalation (Res VSI)			Various	Various	240,000	NLV	NLV	NLV
Ambient Air Finite VSI for 5 Meter Source Thickness			Various	Various	7.9E+06	NLV	NLV	NLV
Ambient Air Finite VSI for 2 Meter Source Thickness			Various	Various	7.9E+06	NLV	NLV	NLV
Ambient Air Particulate Soil Inhalation (Res PSI)			Various	Various	5.2E+06	1.70E+06	260,000	NA
Direct Contact (Res DC)			Various	Various	{T}	550,000	2.50E+06	400,000
Nonresidential (µg/Kg)								
Drinking Water Protection (Nonres DWP)			Various	Various	NLL	6,000	30,000	700,000
Soil Volatilization to Indoor Air Inhalation (Nonres SVII)			Various	Various	1.6E+07	NLV	NLV	NLV
Ambient Air Infinite Source Volatile Soil Inhalation (Nonres VSI)			Various	Various	810,000	NLV	NLV	NLV
Ambient Air Finite VSI for 5 Meter Source Thickness			Various	Various	2.8E+07	NLV	NLV	NLV
Ambient Air Finite VSI for 2 Meter Source Thickness			Various	Various	2.8E+07	NLV	NLV	NLV
Ambient Air Particulate Soil Inhalation (Nonres PSI)			Various	Various	6.5E+06	2.2E+06	240,000	NA
Direct Contact (Nonres DC)			Various	Various	{T}	2.1E+06	9.2E+06	900,000 (DD)
Screening Levels (µg/Kg)								
Soil Saturation Concentration Screening Levels (Csat)			Various	Various	NA	NA	NA	NA

{G} Metal GSIP Criteria for Surface Water Not Protected for Drinking Water Use based on 417.5 mg/L CaCO3 Hardness: Station ID 630003, River Rouge AT Wattles Road Bridge; City of Troy, MI.

{T} Refer to the Toxic Substance Control Act (TSCA), 40 CFR 761, Subparts D and G, as amended, to determine the applicability of TSCA cleanup standards. Alternatives to compliance with the standards listed below are possible under Subpart D. New Releases may be subject to the standards identified in Subpart G. Use Part 201 soil direct contact criteria in the table below where TSCA standards are not applicable.

LAND USE CATEGORY	TSCA, Subpart D	Part 201
Residential	1,000 µg/Kg, or	4,000 µg/Kg
Nonresidential	10,000 µg/Kg if	16,000 µg/Kg

Applicable Criteria Exceeded
BOLD Value Exceeds Applicable Criteria
bgs Below Grade Surface (feet)
1 Maximum of analyzed or calculated total lead value.

TABLE 2 (1 OF 1)
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
VOLATILE ORGANIC COMPOUNDS, POLYNUCLEAR AROMATIC COMPOUNDS, POLYCHLORINATED BIPHENYLS and METALS
100 EAST MAPLE, TROY, MICHIGAN
PM PROJECT # 02-6518-2

Volatile Organic Compounds, Polynuclear Aromatic Compounds, Polychlorinated Biphenyls (PCBs), & Metals (Cadmium, Chromium, & Lead) (µg/L)				Vinyl chloride	Other VOCs	Polynuclear Aromatic Compounds	Polychlorinated Biphenyls	Cadmium	Chromium	Lead
Chemical Abstract Service Number (CAS#)				75014	Various	Various	1336363	7440439	16065831	7439921
Sample ID	**Sample Date**	**Screen Depth (bgs)**	**Depth to Groundwater (bgs)**	**VOCs**		**PNAs**	**PCBs**	**Metals**		
TMW-1	06/28/2013	2.05-7.05	2.2	<1	ND	ND	NA	NA	NA	NA
TMW-2	06/28/2013	1.0-6.0	3.0	<1	ND	ND	NA	NA	NA	NA
TMW-3	06/28/2013	0.90-5.90	1.12	**3**	ND	ND	<0.1	<0.5	<5	<3
TMW-5	06/28/2013	0.0-5.0	0.90	<1	ND	ND	<0.1	<0.5	<5	<3
Operational Memorandum No. 1: Part 201 Cleanup Criteria and Part 213 Risk-based Screening Levels (RBSLs), Attachment 1: Table 1. Groundwater: Residential and Nonresidential Part 201 Generic Cleanup Criteria and Screening Levels; Part 213 Tier 1 RBSLs, September 28, 2012										
Residential/Nonresidential (µg/L)										
Residential Drinking Water (Res DW)				2.0 {A}	Various	Various	0.5 {A}	5.0 {A}	100 {A}	4.0 {L}
Residential Health Based Drinking Water Values				NL	Various	Various	NL	NL	NL	NL
Nonresidential Drinking Water (Nonres DW)				2.0 {A}	Various	Various	0.5 {A}	5.0 {A}	100 {A}	4.0 {L}
Nonresidential Health Based Drinking Water Values				NL	Various	Various	NL	NL	NL	NL
Groundwater Surface Water Interface (GSI)				13 {X}	Various	Various	0.2 {M}; 2.6E-5	6.4 {G,X}	11 (VI) 240 (III)	47 {G,X}
GSI Final Acute Values (FAV) [1]				17,000	Various	Various	ID	{G}	{G}	{G}
GSI Human Drinking Water				NA	Various	Various	NA	2.5 {G,X}	120 {G,X}	14 {G,X}
Residential Groundwater Volatilization to Indoor Air Inhalation (Res GVII) [2]				1,100	Various	Various	45 {S}	NLV	NLV	NLV
Nonresidential Groundwater Volatilization to Indoor Air Inhalation (Nonres GVII) [2]				13,000	Various	Various	45 {S}	NLV	NLV	NLV
Groundwater Contact (GC)				1,000	Various	Various	3.3 {AA}	1.90E+05	4.60E+05	ID
Screening Levels (µg/L)										
Residential Groundwater Vapor Intrusion Screening Levels [3]				4.8	Various	Various	4.5	NLV	NLV	NLV
Nonresidential Groundwater Vapor Intrusion Screening Levels [3]				19	Various	Various	18	NLV	NLV	NLV
Water Solubility				2.76E+06	Various	Various	44.7	NA	NA	NA
Flammability and Explosivity Screening Level				33,000	Various	Various	ID	ID	ID	ID
Acute Inhalation Screening Level				ID	Various	Various	ID	ID	ID	ID

{G} Metal GSIP Criteria for Surface Water Not Protected for Drinking Water Use based on 417.5 mg/L CaCO3 Hardness:
Station ID 630003, River Rouge AT Wattles Road Bridge; City of Troy, MI.

Applicable Criteria/RBSL Exceeded
BOLD Value Exceeds Applicable Criteria
bgs Below Grade Surface (feet)
ND Not detected at levels above the laboratory Method Detection Limit (MDL) or Minimum Quantitative Level (MQL)
[1] Rule 323.1057 of Part 4 Water Quality Standards
[2] Tier 1 GVII Criteria based on 3 meter (or greater) groundwater depth
[3] (Program Redesign 2009 Draft) Screening Levels based on depth to groundwater less than 3 meters and not in contact with building foundation

TABLE 3 (1 OF 1)
SUMMARY OF SOIL VAPOR ANALYTICAL RESULTS
VOLATILE ORGANIC COMPOUNDS
100 EAST MAPLE, TROY, MICHIGAN
PM PROJECT # 02-6518-2

VOLATILE ORGANIC COMPOUNDS (ppbv)				Acetone	Benzene	Carbon disulfide	Chloroform	Cyclohexane	Dichlorodifluoromethane	Ethanol	Ethylbenzene	4-Ethyltoluene	Heptane	Hexane	2-Hexanone	Isopropyl Alcohol	Methylene chloride	Methyl ethyl ketone	Methyl Isobutyl Ketone	Methyl Tert Butyl Ether	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	2,2,4-Trimethylpentane	Tertiary Butyl Alcohol	Tetrachloroethylene	Tetrahydrofuran	Toluene	Trichloroethylene	Trichlorofluoromethane	m,p-Xylene	o-Xylene	Xylenes (total)	Other VOCs
Chemical Abstract Service Number (CAS#)				67641	71432	75150	67663	110827	75718	64175	100414	622968	142825	110543	591786	67630	75092	78933	108101	1634044	95636	108678	540841	75650	127184	109999	108883	79016	75694	1330207	95476	1330207	Various
Sample ID	**Sample Date**	**Sample Duration (min)**	**Flow Rate (ml/min)**	**VOCs**																													
SSG-1	6/28/2013	5.0		520	7.1	9.2	0.62 J	4.3	0.52 J	24.3	3.9	1.1	9.6	23.8	2.1	2.7	1.5	19.4	22.9	0.17 J	4.7	1.4	0.75 J	3.5	4	1.6	26.4	0.81	0.77 J	11	4.3	15.3	ND
MDEQ Guidance Document For The Vapor Intrusion Pathway, Policy and Procedure Number: 09-017, Appendix D Vapor Intrusion Screening Values, May 2013																																	
Residential Screening Levels (ppbv)																																	
Vapor Intrusion Shallow Sub-Slab Soil Gas Screening Levels (≤ 1.5m bgs) (SG_{VI-SS})				82,000	32	7,400	73	58,000	3.30E+05	NDC	640	NDC	28,000	6,600	250	NDC	880	56,000	24,000	27,000	1,500	1,500	25,000	NDC	170	200	44,000	12	3.30E+05	760	760	760	Various
Vapor Intrusion Deep Soil Gas Screening Levels (SG_{VI})				8.20E+05	320	74,000	730	5.80E+05	3.30E+06	NDC	6,400	NDC	2.80E+05	66,000	2,500	NDC	8,800	5.60E+05	2.40E+05	2.70E+05	15,000	15,000	2.50E+05	NDC	1,700	2,000	4.40E+05	120	3.30E+06	7,600	7,600	7,600	Various
Nonresidential Screening Levels (ppbv)																																	
Vapor Intrusion Shallow Sub-Slab Soil Gas Screening Levels (≤ 1.5m bgs) (SG_{VI-SS})				1.40E+06	650	1.20E+05	1,500	9.70E+05	5.60E+06	NDC	13,000	NDC	4.70E+05	1.10E+05	4,100	NDC	18,000	9.40E+05	4.10E+05	4.60E+05	25,000	25,000	4.20E+05	NDC	3,300	3,400	7.40E+05	210	5.60E+06	13,000	13,000	13,000	Various
Vapor Intrusion Deep Soil Gas Screening Levels (SG_{VI})				1.40E+07	6,500	1.20E+06	15,000	9.70E+06	5.60E+07	NDC	1.30E+05	NDC	4.70E+06	1.10E+06	41,000	NDC	1.80E+05	9.40E+06	4.10E+06	4.60E+06	2.50E+05	2.50E+05	4.20E+06	NDC	33,000	34,000	7.40E+06	2100	5.60E+07	1.30E+05	1.30E+05	1.30E+05	Various
DRAFT Acute Vapor Intrusion Screening Levels for Indoor Air and Soil Gas; Residential and Nonresidential Land Use, February 2013 (ppbv)																																	
IRASL Indoor Air (AIA_{VI})				25,000	390	1,900	29	NDC	NDC	NDC	NDC	NDC	NDC	NDC	NDC	NDC	6,400	4,200	NDC	1,900	NDC	NDC	NDC	NDC	2,800	NDC	9,300	74,000	NDC	4,800	4,800	4,800	Various
IRASL Soil Gas (ASG_{VI})				8.28E+05	13,000	63,000	970	NDC	NDC	NDC	NDC	NDC	NDC	NDC	NDC	NDC	2.15E+05	1.40E+05	NDC	63,000	NDC	NDC	NDC	NDC	93,000	NDC	3.10E+05	2.48E+06	NDC	1.60E+05	1.60E+05	1.60E+05	Various

Applicable Criteria/RBSL Exceeded

BOLD Value Exceeds Applicable Criteria

bgs Below Ground Surface (feet)

ND Not detected at levels above the laboratory Method Detection Limit (MDL) or Minimum Quantitative Level (MQL)

NLV A hazardous substance is "Not Likely to Volatilize". This designation is given to any hazardous substance with a Henry's Law Constant of less than 1.0×10^{-5} atm-m^3/mol.

ID "Insufficient Data" was available to the MDEQ in order to develop a criterion at the date of publication.

NDC "No Defined Criteria" by the Michigan Department of Environmental Quality (MDEQ)

[1] The IAC and SGC presented in this table are health-based values. The applicable IAC and SGC are based on the higher of the health-based value and the appropriate analytical reporting limit.

IRASL Immediate Response Acute Vapor Intrusion Screening Levels

RL Reporting Limit

E Indicates value exceeds calibration range

J Indicates estimated value

B Indicates analyte found in associated method blank

N Indicates presumptive evidence of a compound

Table 1: Soil Analytical Data Summary

Parameter	Chemical Abstract Service Number	Michigan DNRE Generic Residential Cleanup Criteria (GRCC) units = µg/kg									Sample ID, Depth, PID Reading, Collection Date, and Results units = µg/kg							
			Groundwater Protection			Indoor Air	Ambient Air (Y)		Direct Contact									
		Statewide Default Background Levels	Drinking Water Protection Criteria & RBSLs	Groundwater Surface Water Interface Protection Criteria & RBSLs	Groundwater Contact Protection Criteria & RBSLs	Soil Volatilization to Indoor Air Inhalation Criteria & RBSLs	Infinite Source Volatile Soil Inhalation Criteria (VSIC) & RBSLs	Particulate Soil Inhalation Criteria & RBSLs	Direct Contact Criteria & RBSLs	Soil Saturation Concentration Screening Levels	SB-1-1 1' bgs 0 ppm March 23, 2010	SB-3-2.5 2.5' bgs 0 ppm March 23, 2010	SB-5-1.5 1.5' bgs 0 ppm March 23, 2010	SB-7-0.5 0.5' bgs 0 ppm March 23, 2010	SB-9-1 1' bgs 3.5 ppm March 23, 2010	SB-9-1D 1' bgs 3.5 ppm March 23, 2010	SB-10-1.5 1.5' bgs 0.5 ppm March 23, 2010	SB-12-1 1' bgs 0 ppm March 23, 2010
Total Metals																		
Cadmium (B)	7440439	1,200	6,000	(G, X)	2.3E+8	NLV	NLV	1.7E+6	5.5E+5	NA	---	---	ND	ND	ND	---	ND	ND
Chromium VI (B,H)	18540299	18,000 (total)	30,000	3,300	1.4E+8	NLV	NLV	2.6E+5	2.5E+6	NA	---	---	**18,900**	**11,200**	**9,900**	---	**11,000**	**8,800**
Lead (B)	7439921	21,000	7.0E+5	(G, X)	ID	NLV	NLV	1.0E+8	4.0E+5	NA	---	---	**9,100**	**4,800**	**14,600**	---	**6,100**	**4,500**
Polychlorinated Biphenyls (PCBs)																		
Aroclor-1016	No criteria available										---	---	ND	ND	ND	---	ND	ND
Aroclor-1221	No criteria available										---	---	ND	ND	ND	---	ND	ND
Aroclor-1232	No criteria available										---	---	ND	ND	ND	---	ND	ND
Aroclor-1242	No criteria available										---	---	ND	ND	ND	---	ND	ND
Aroclor-1248	No criteria available										---	---	ND	ND	ND	---	ND	ND
Aroclor-1254	No criteria available										---	---	ND	ND	ND	---	ND	ND
Aroclor-1260	No criteria available										---	---	ND	ND	ND	---	ND	ND
Total Polychlorinated Biphenyls (J, T)	1336363	NA	NLL	NLL	NLL	3.0E+6	2.4E+5	5.2E+6	(T)	NA	---	---	ND	ND	ND	---	ND	ND
Polynuclear Aromatics (PNAs)																		
Anthracene	120127	NA	41,000	ID	41,000	1.0E+9 (D)	1.4E+9	6.7E+10	2.3E+8	NA	ND	ND	ND	ND	---	---	ND	ND
Acenaphthene	83329	NA	3.0E+5	4,400	9.7E+5	1.9E+8	8.1E+7	1.4E+10	4.1E+7	NA	ND	ND	ND	ND	---	---	ND	ND
Acenaphthylene	208968	NA	5,900	ID	4.4E+5	1.6E+6	2.2E+6	2.3E+9	1.6E+6	NA	ND	ND	ND	ND	---	---	ND	ND
Benzo(a)anthracene (Q)	56553	NA	NLL	NLL	NLL	NLV	NLV	ID	20,000	NA	ND	ND	ND	ND	---	---	ND	ND
Benzo(a)pyrene	50328	NA	NLL	NLL	NLL	NLV	NLV	1.5E+6	2,000	NA	ND	ND	ND	ND	---	---	ND	ND
Benzo(b)fluoranthene	205992	NA	NLL	NLL	NLL	ID	ID	ID	20,000	NA	ND	ND	ND	ND	---	---	ND	ND
Benzo(g,h,i)perylene	191242	NA	NLL	NLL	NLL	NLV	NLV	8.0E+8	2.5E+6	NA	ND	ND	ND	ND	---	---	ND	ND
Benzo(k)fluoranthene	207089	NA	NLL	NLL	NLL	NLV	NLV	ID	2.0E+5	NA	ND	**19.5**	ND	ND	---	---	ND	ND
Chrysene (Q)	218019	NA	NLL	NLL	NLL	ID	ID	ID	2.0E+6	NA	ND	**28.4**	ND	ND	---	---	ND	ND
Dibenzo(a,h)anthracene (Q)	53703	NA	NLL	NLL	NLL	NLV	NLV	ID	2,000	NA	ND	ND	ND	ND	---	---	ND	ND
Fluoranthene	206440	NA	7.3E+5	5,500	7.3E+5	1.0E+9 (D)	7.4E+8	9.3E+9	4.6E+7	NA	ND	**43.5**	ND	ND	---	---	ND	ND
Fluorene	86737	NA	3.9E+5	5,300	8.9E+5	5.8E+8	1.3E+8	9.3E+9	2.7E+7	NA	ND	ND	ND	ND	---	---	ND	ND
Indeno(1,2,3-cd)pyrene	193395	NA	NLL	NLL	NLL	NLV	NLV	ID	20,000	NA	ND	ND	ND	ND	---	---	ND	ND
Naphthalene	91203	NA	35,000	870	2.1E+6	2.5E+5	3.0E+5	2.0E+8	1.6E+7	NA	ND	ND	ND	ND	---	---	ND	ND
2-Methylnaphthalene	91576	NA	57,000	ID	5.5E+6	ID	ID	ID	8.1E+6	NA	ND	ND	ND	ND	---	---	ND	ND
Phenanthrene	85018	NA	56,000	5,300	1.1E+6	2.8E+6	1.6E+5	6.7E+6	1.6E+6	NA	ND	**21.4**	ND	ND	---	---	ND	ND
Pyrene	129000	NA	4.8E+5	ID	4.8E+5	1.0E+9 (D)	6.5E+8	6.7E+9	2.9E+7	NA	ND	**30.7**	ND	ND	---	---	ND	ND
Volatile Organic Compounds (VOCs)																		
All VOCs	Varies by Compound										---	---	ND	ND	ND	ND	ND	ND
Semi-Volatile Organic Compounds (SVOCs)																		
All SVOCs	Varies by Compound										---	---	---	---	ND	---	---	---

Table 1: Soil Analytical Data Summary

Footnotes:

B - Background, as defined in R 299.5701(b), may be substituted if higher than the calculated cleanup criterion. Background levels may be less than criteria for some inorganic compounds.
D - Calculated criterion exceeds 100 percent, hence it is reduced to 100 percent or 1.0E+9 parts per billion (ppb).
G - Groundwater surface water interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water.
H - Valence-specific chromium data (Cr III and CR IV) shall be compared to valence specific cleanup criteria
J - Hazardous substance may be present is everal isomer forms. Isomer-specific concentrations shall be added together for comparison to cr
Q - Criteria for carcinogenic polycyclic aromatic hydrocarbons were developed using relative potential potencies to benzo(a)pyrene.
T - Refer to the Toxic Substances Control Act (TSCA) for cleanup standards
X - The GSI criterion shown in the generic cleanup criteria tables is not protective for surface water that is used as a drinking water source.
Y - Source size modifiers shown in the following table shall be used to determine soil inhalation criteria for ambient air when the source size is not one-half acre.
bgs - Below ground surface
bold - Values presented in bold represent exceedence of laboratory reported detection limit.
ID - Insufficient data to develop criterion.
NA - A criterion or value is not available or, in the case of background and CAS numbers, not applicable.
ND - Analyte was not detected at or above method detection limits.
NLL - Hazardous substance is not likely to leach under most soil conditions.
NLV - Hazardous substance is not likely to volatilize under most conditions.
ppm - Parts per million
µg/kg - Micrograms per kilogram (ppb).
--- Sample not analyzed for compound.
- Numbers in yellow-shaded boxes represent exceedence of relevant criteria.
- Numbers in green-shaded boxes represent relevant criteria exceeded.

Table 2: Groundwater Analytical Data Summary

Parameter	Chemical Abstract Service Number	Michigan DNRE Generic Residential Cleanup Criteria (GRCC) units = µg/l									Sample ID, Well Screen Interval Depth, Collection Date, and Results units = µg/l									
		Residential & Commercial I Drinking Water Criteria & RBSLs	Industrial & Commercial II, III & IV Drinking Water Criteria & RBSLs	Groundwater Surface Water Interface Criteria & RBSLs	Residential & Commercial I Groundwater Volatilization to Indoor Air Inhalation Criteria & RBSLs	Industrial & Commercial II, III & IV Groundwater Volatilization to Indoor Air Inhalation Criteria & RBSLs	Groundwater Contact Criteria & RBSLs	Water Solubility	Flammability and Explosivity Screening Level	Acute Inhalation Screening Level	SB-1 2'-7' bgs March 23, 2010	SB-2 3'-8' bgs March 23, 2010	SB-3 3'-8' bgs March 23, 2010	SB-3D 3'-8' bgs March 23, 2010	SB-4 3'-8' bgs March 23, 2010	SB-6 3'-8' bgs March 23, 2010	SB-8 3'-8' bgs March 23, 2010	SB-11 3'-8' bgs March 23, 2010	FB-1 Not Applicable March 23, 2010	TB-1 Not Applicable March 23, 2010
Total Metals																				
Cadmium (B)	7440439	5.0 (A)	5.0 (A)	(G,X)	NLV	NLV	1.9E+5	NA	ID	ID	ND	ND	ND	---	ND	ND	ND	ND	---	---
Chromium VI (B,H)	18540299	100 (A)	100 (A)	11	NLV	NLV	4.6E+5	NA	ID	ID	**542**	**11.2**	**12.3**	---	**214**	**8.4**	**32.5**	ND	---	---
Lead (B)	7439921	4.0 (L)	4.0 (L)	(G,X)	NLV	NLV	ID	NA	ID	ID	**49.5**	**10.3**	**10.6**	---	**124**	**13.4**	**31.6**	ND	---	---
Polychlorinated Biphenyls (PCBs)																				
Aroclor-1016	No criteria available										ND	ND	---	---	---	ND	ND	ND	---	---
Aroclor-1221	No criteria available										ND	ND	---	---	---	ND	ND	ND	---	---
Aroclor-1232	No criteria available										ND	ND	---	---	---	ND	ND	ND	---	---
Aroclor-1242	No criteria available										ND	ND	---	---	---	ND	ND	ND	---	---
Aroclor-1248	No criteria available										ND	ND	---	---	---	ND	ND	ND	---	---
Aroclor-1254	No criteria available										ND	ND	---	---	---	ND	ND	ND	---	---
Aroclor-1260	No criteria available										ND	ND	---	---	---	ND	ND	ND	---	---
Total Polychlorinated Biphenyls (J, T)	1336363	0.5 (A)	0.5 (A)	0.2 (M); 2.6E5	45 (S)	45 (S)	3.3 (AA)	44.7	ID	ID	ND	ND	---	---	---	ND	ND	ND	---	---
Polynuclear Aromatics (PNAs)																				
Anthracene	120127	43 (S)	43 (S)	ID	43 (S)	43 (S)	43 (S)	43.4	ID	ID	ND	**0.047**	ND	---	ND	ND	---	ND	---	---
Acenaphthene	83329	1,300	3,800	19	4,200 (S)	4,200 (S)	4,200 (S)	4240	ID	ID	ND	**0.052**	ND	---	ND	ND	---	ND	---	---
Acenaphthylene	208968	52	150	ID	3,900 (S)	3,900 (S)	3,900 (S)	3930	ID	ID	ND	ND	ND	---	ND	ND	---	ND	---	---
Benzo(a)anthracene (Q)	56553	2.1	8.5	ID	NLV	NLV	9.4 (S,AA)	9.4	ID	ID	**0.39**	**0.10**	ND	---	**0.14**	ND	---	ND	---	---
Benzo(a)pyrene	50328	5.0 (A)	5.0 (A)	ID	NLV	NLV	1.0 (M,AA); 0.64	1.62	ID	ID	**0.58**	**0.088**	ND	---	**0.20**	ND	---	ND	---	---
Benzo(b)fluoranthene	205992	1.5 (S, AA)	1.5 (S, AA)	ID	ID	ID	1.5 (S,AA)	1.5	ID	ID	**0.79**	**0.071**	ND	---	**0.21**	ND	---	ND	---	---
Benzo(g,h,i)perylene	191242	1.0 (M); 0.26 (S)	1.0 (M); 0.26 (S)	NA	NLV	NLV	1.0 (M,AA); 0.26 (S)	.26	ID	ID	**0.66**	**0.059**	ND	---	**0.19**	ND	---	ND	---	---
Benzo(k)fluoranthene	207089	1.0 (M); 0.8 (S)	1.0 (M); 0.8 (S)	NA	NLV	NLV	1.0 (M,AA); 0.8 (S)	.8	ID	ID	**0.54**	**0.096**	ND	---	**0.22**	ND	---	ND	---	---
Chrysene (Q)	218019	1.6 (S)	1.6 (S)	ID	ID	ID	1.6 (S,AA)	1.6	ID	ID	**0.70**	**0.12**	ND	---	**0.22**	ND	---	ND	---	---
Dibenzo(a,h)anthracene (Q)	53703	2.0 (M); 0.21	2.0 (M); 0.85	ID	NLV	NLV	2.0 (M,AA); 0.31	2.49	ID	ID	ND	ND	ND	---	ND	ND	---	ND	---	---
Fluoranthene	206440	210 (S)	210 (S)	1.6	210 (S)	210 (S)	210 (S)	206	ID	ID	**1.1**	**0.36**	ND	---	**0.50**	ND	---	ND	---	---
Fluorene	86737	880	2,000 (S)	12	2,000 (S)	2,000 (S)	2,000 (S)	1980	ID	ID	ND	ND	ND	---	ND	ND	---	ND	---	---
Indeno(1,2,3-cd)pyrene	193395	2.0 (M); 0.022 (S)	2.0 (M); 0.022 (S)	ID	NLV	NLV	2.0 (M, AA); 0.022 (S)	0.022	ID	ID	**0.48**	**0.051**	ND	---	**0.15**	ND	---	ND	---	---
Naphthalene	91203	520	1,500	13	31,000 (S)	31,000 (S)	31,000 (S)	31000	NA	31,000 (S)	ND	**0.096**	ND	---	ND	ND	---	ND	---	---
2-Methylnaphthalene	91576	260	750	ID	ID	ID	25,000 (S)	24600	ID	ID	**0.19**	ND	ND	---	ND	ND	---	ND	---	---
Phenanthrene	85018	52	150	2.4	1,000 (S)	1,000 (S)	1,000 (S)	1000	ID	ID	**0.60**	**0.15**	ND	---	**0.16**	ND	---	ND	---	---
Pyrene	129000	140 (S)	140 (S)	ID	140 (S)	140 (S)	140 (S)	135	ID	ID	0.88	**0.34**	ND	---	**0.36**	ND	---	ND	---	---
Volatile Organic Compounds (VOCs)																				
Acetone	67641	730	2,100	1,700	1.0E+9 (D,S)	1.0E+9 (D,S)	3.1E+7	1.0E+9	1.5E+7	1.0E+9 (D)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide (I, R)	75150	800	2300	ID	2.5E+5	5.5E+5	1.2E+6 (S)	1.19E+6	13,000	ID	ND	**2.9**	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	156592	70 (A)	70 (A)	620	93,000	2.1E+5	2.0+E5	3.50E+6	5.3E+5	ID	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethyl Ether	60297	10 (E)	10 (E)	ID	6.1E+7 (S)	6.1E+7 (S)	3.5E+7	6.10E+7	6.5E+5	6.10E+7 (S)	ND	ND	ND	ND	ND	ND	ND	**1.8**	ND	ND
Methylene Chloride	75092	5.0 (A)	5.0 (A)	940 (X)	2.2E+5	1.4E+6	2.2E+5	1.70E+7	ID	ID	ND	ND	ND	ND	ND	ND	**1.2**	ND	ND	ND
Methyl-tert-butyl-ether (MTBE)	1634044	40 (E)	40 (E)	730 (X)	4.7E+7 (S)	4.7E+7 (S)	6.1E+5	4.68E+7	ID	ID	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	100425	100 (A)	100 (A)	80	1.7E+5	3.1E+5 (S)	9,700	3.10E+5	1.4E+5	3.1E+5 (S)	ND	ND	ND	ND	ND	ND	ND	ND	**72.0**	ND
Vinyl Chloride	75014	2.0 (A)	2.0 (A)	15	1,100	13,000	1,000	2.76E+6	33,000	ID	ND	ND	ND	ND	ND	ND	ND	**6.9**	ND	ND
All Remaining VOCs	Varies by Compound										ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Semi-Volatile Organic Compounds (SVOCs)																				
All SVOCs	Varies by Compound										---	---	---	---	---	---	ND	---	---	---

Table 2: Groundwater Analytical Data Summary

Parameter	Chemical Abstract Service Number	Michigan DNRE Generic Residential Cleanup Criteria (GRCC) units = µg/l									Sample ID, Well Screen Interval Depth, Collection Date, and Results units = µg/l						
		Residential & Commercial I Drinking Water Criteria & RBSLs	Industrial & Commercial II, III & IV Drinking Water Criteria & RBSLs	Groundwater Surface Water Interface Criteria & RBSLs	Residential & Commercial I Groundwater Volatilization to Indoor Air Inhalation Criteria & RBSLs	Industrial & Commercial II, III & IV Groundwater Volatilization to Indoor Air Inhalation Criteria & RBSLs	Groundwater Contact Criteria & RBSLs	Water Solubility	Flammability and Explosivity Screening Level	Acute Inhalation Screening Level	MW1-052710 3'-8' bgs May 27, 2010	MW2-052710 1'-6' bgs May 27, 2010	MW3-052710 3'-8' bgs May 27, 2010	MW4A-052710 3'-8' bgs May 27, 2010	MW4B-052710 3'-8' bgs May 27, 2010	TB-052710 Not Applicable May 27, 2010	EB-052710 Not Applicable May 27, 2010
Total Metals																	
Cadmium (B)	7440439	5.0 (A)	5.0 (A)	(G,X)	NLV	NLV	1.9E+5	NA	ID	ID	ND	ND	ND	ND	ND	---	ND
Chromium VI (B,H)	18540299	100 (A)	100 (A)	11	NLV	NLV	4.6E+5	NA	ID	ID	ND	**9.5**	ND	ND	ND	---	ND
Lead (B)	7439921	4.0 (L)	4.0 (L)	(G,X)	NLV	NLV	ID	NA	ID	ID	ND	ND	ND	ND	ND	---	ND
Volatile Organic Compounds (VOCs)																	
Acetone	67641	730	2,100	1,700	1.0E+9 (D,S)	1.0E+9 (D,S)	3.1E+7	1.0E+9	1.5E+7	1.0E+9 (D)	**39.6**	ND	ND	ND	ND	ND	ND
Carbon Disulfide (I, R)	75150	800	2300	ID	2.5E+5	5.5E+5	1.2E+6 (S)	1.19E+6	13,000	ID	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	156592	70 (A)	70 (A)	620	93,000	2.1E+5	2.0+E5	3.50E+6	5.3E+5	ID	ND	ND	ND	**1.1**	**1.1**	ND	ND
Diethyl Ether	60297	10 (E)	10 (E)	ID	6.1E+7 (S)	6.1E+7 (S)	3.5E+7	6.10E+7	6.5E+5	6.10E+7 (S)	ND	ND	ND	**1.3**	**1.2**	ND	ND
Methylene Chloride	75092	5.0 (A)	5.0 (A)	940 (X)	2.2E+5	1.4E+6	2.2E+5	1.70E+7	ID	ID	ND	ND	ND	ND	ND	ND	ND
Methyl-tert-butyl-ether (MTBE)	1634044	40 (E)	40 (E)	730 (X)	4.7E+7 (S)	4.7E+7 (S)	6.1E+5	4.68E+7	ID	ID	ND	ND	**1.4**	ND	ND	ND	ND
Styrene	100425	100 (A)	100 (A)	80	1.7E+5	3.1E+5 (S)	9,700	3.10E+5	1.4E+5	3.1E+5 (S)	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride	75014	2.0 (A)	2.0 (A)	15	1,100	13,000	1,000	2.76E+6	33,000	ID	ND	ND	**1.4**	**5.3**	**5.2**	ND	ND
All Remaining VOCs	Varies by Compound										ND	ND	ND	ND	ND	ND	ND

TROY BROWNFIELD REDEVELOPMENT AUTHORITY

BROWNFIELD PLAN
(Version B: No 5 Year Additional Capture to LSRRF)

August 23, 2013

FOR THE PROPOSED MJR TROY GRAND LOCATED AT 100 EAST MAPLE ROAD, TROY, MICHIGAN

Prepared on Behalf of:

MJR Group, LLC
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Prepared By:

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PROJECT SUMMARY

Project Name:	MJR Troy Grand
Project Location:	The property is located in Township Two (2) North (T. 2N), Range eleven (11) east (R. 11E), Section 34, Troy, Oakland County, Michigan.
Type of Eligible Property:	Property is determined to be functionally obsolete by City Assessor Nino Licari, MMAO (4), PPE. The property is also considered a Facility
Eligible Activities:	Developer TIF Reimbursed Activities: Environmental Assessments, BRA Application Fee Local Site Remediation Revolving Fund TIF Reimbursed Activities: Due Care Activities, Demolition (including Building and Site Demolition, Asbestos Abatement Activities, Air Quality Monitoring, and Lighting Removal/Disposal, Brownfield Plan Preparation
Reimbursable Costs:	Developer TIF Reimbursement: $11,585 for Environmental Site Assessments and Brownfield Plan Application Fee Local Site Remediation Revolving Fund TIF Reimbursement: $498,079 for Eligible Activities
Years to Complete Payback to RLF:	Approximately 8 years
Estimated Capital Investment:	Approximately $16 Million

Project Overview: MJR Group, LLC intends to demolish and redevelop the currently vacant underutilized property with a new Digital Cinema. The new Cinema will include 74,000 square feet with 16 Screens including an Epic Studio. Seating capacity will range from 101 seats to 440 seats. The new theater will include a lobby area, concessions, and bar area. The project will include installation of new asphalt, sidewalks, and landscaping surrounding the theater building.

I. INTRODUCTION AND PURPOSE

In order to promote the revitalization of environmentally distressed and blighted areas within the boundaries of the City of Troy ("the City"), the City has established the City of Troy Brownfield Authority (TBRA) pursuant to the Brownfield Redevelopment Financing Act, Michigan Public Act (PA) 381 of 1996, as amended.

The primary purpose of this Brownfield Plan ("Plan") is to promote the redevelopment of and private investment in certain "Brownfield" properties within the City. Inclusion of property within this Plan will facilitate financing of environmental response and other eligible activities at eligible properties, and will also provide tax incentives to eligible tax payers willing to invest in revitalization of eligible sites, commonly referred to as Brownfields. By facilitating redevelopment of Brownfield properties, this Plan is intended to promote economic growth for the benefit of the residents of the City.

The Property is currently zoned MRF – Maple Road (form based zones), is commercially developed, and located in an area of the City of Troy characterized by commercial and residential Properties.

The identification or designation of a developer or proposed use for the eligible property that is subject to this Plan shall not be integral to the effectiveness or validity of this Plan. This Plan is intended to apply to the eligible property identified in this Plan and, to identify and authorize the eligible activities to be funded. Any change in the proposed developer or proposed use of the eligible property shall not necessitate an amendment to this Plan, affect the application of this Plan to the eligible property, or impair the rights available to the Authority under this Plan.

This plan is intended to be a living document which may be modified or amended as necessary to achieve the purposes of Act 381. The applicable sections of Act 381 are noted throughout the plan for reference purposes.

This Brownfield Plan contains information required by Section 13(1) of Act 381.

This Brownfield Plan is of a single phase associated with the redevelopment of the property.

II. GENERAL DEFINITIONS AS USED IN THIS PLAN

Terms used in this Brownfield Plan are defined as provided in the following statutes, as appropriate:

The Brownfield Redevelopment Financing Act, 1996 Mich. Pub. Acts. 381, M.C.L. § 125.2651 *et seq*., as amended.

III. BROWNFIELD PROJECT

SUBJECT PROPERTY

The subject property consists of one (1) legal parcel with a street address of 100 East Maple Road, Troy, Michigan. The tax ID number of the subject property is 88-20-34-101-023. The parcel number and legal description are also included in Appendix A.

The parcels and all tangible personal property located thereon will comprise the eligible property and is referred to herein as the "Property".

The subject property included in this plan can be considered "eligible property" as defined by Section 2 of Act 381, as amended because (a) it is located within the City of Troy; and (b) the Property is determined to be functionally obsolete as determined by City Assessor Nino Licari, MMAO (4), PPE.

100 East Maple Road (88-20-34-101-023)

Standard and other historical sources indicate the subject property was developed prior to 1940 for agricultural purposes. Agricultural activities ceased between 1957 and 1963, and the central portion of the current building was constructed in 1964. Additions were constructed in 1968, 1992, and 2000. The property was occupied by various retail stores, restaurants, and automotive service operations from 1964 until 2009. The building has been unoccupied since between 2009 and 2011.

The subject building totals approximately 118,201 square feet, and contains a former service area, former retail areas, storage areas, utility rooms, offices, and restrooms. Interior finish materials in the former service area include metal deck ceilings, cinderblock walls, and concrete floors. Interior finish materials in the remainder of the building include metal deck ceilings, two foot by four foot ceiling tiles, two foot by two foot ceiling tiles, cinderblock walls, drywall walls, wood paneling, concrete floors, and 12 inch by 12 inch floor tiles. The property also has five in-ground hoists and an underground vault in the former service area. Asphalt paved driveways and parking areas surround the building.

Identification of the Property as "Functionally Obsolete"

The subject property has been determined functionally obsolete by City Assessor, Nino Licari, MMAO (4), PPE.

A 2013 Valuation Report and Record Card provided by the City are included in Appendix B, showing the property's obsolescence status.

Identification of the Property as a "Facility"

PM Environmental, Inc. (PM) has completed a Baseline Environmental Assessment (BEA) for the vacant retail property (Parcel ID #88-20-34-101-023) located at 100 East Maple Road in Troy, Oakland County, Michigan (hereafter referred to as the "subject property").

Contaminant concentrations identified on the subject property indicate exceedances to the Part 201 Residential and Nonresidential DW cleanup criteria. Therefore, the subject property is a

"facility" in accordance with Part 201 of P.A. 451, as amended, and the rules promulgated thereunder.

The Baseline Environmental Assessment text, figures, and tables stating the property is a facility is located in Appendix F.

PROJECT DESCRIPTION

MJR Group, LLC intends to demolish and redevelop the currently vacant underutilized property with the new Digital Cinema, MJR Troy Grand. MJR Troy Grand will include 74,000 square feet with 16 Screens including an Epic Studio. Seating capacity will range from 101 seats to 440 seats. The new theater will include a lobby area, concessions, and bar area. The project will include installation of new asphalt, sidewalks, and landscaping surrounding the theater building.

Demolition of the current building will require the removal of fluorescent light tubes, PCB ballasts, mercury vapor bulbs and mercury switches, fire extinguishers, CFC refrigerants, hydraulic lifts, and facility owned pad mounted transformer (includes packaging, transportation and disposal/recycling), asbestos abatement activities and air monitoring, and the removal, disposal, and sampling oversight associated with the five (5) hydraulic hoists.

This entire project also includes the completion of Phase I and Phase II Environmental Site Assessments (ESA), Baseline Environmental Site Assessment (BEA), and Due Care Plan.

The project is estimated to begin demolition mid to late summer of 2013, with project completion before the end of the year.

BROWNFIELD PLAN ELEMENTS

A. Description of Costs to Be Paid for With Tax Increment Revenues

Tax increment financing revenues will be utilized to reimburse the City of Troy's Local Site Remediation Revolving Loan Fund (LSRRLF), for loan reimbursements made to MJR Group, LLC for eligible activities completed during development of the Property and as defined in this Plan. The activities funded through the LSRRLF are listed in section "M" of this plan.

Tax Increment Revenues will also pay the Developer for Environmental Site Assessments and the TBRA application fee.

The TBRA administrative fees, 3% simple interest on unreimbursed costs.

These costs are presented in section "G" of this plan and Table 1 (eligible activities) and 2 (tax increment financing projections) in Appendix D.

B. Summary of Eligible Activities

LSRRLF will be reimbursed for Due Care Activities, Demolition and associated activities, and Preparation of the Brownfield Plan. These activities are further outlined in section "M" of this plan and included in Appendix D.

The Developer will be reimbursed for eligible activities that include environmental site assessments and the TBRA application fee. These costs are presented in Table 1 of Appendix D.

C. Estimate of Captured Taxable Value and Tax Increment Revenues

The taxable value of the real property was $1,025,640 for the current tax year; no personal property is associated with the site. The estimated taxable value of the completed development is $4,500,000 at completion of the development. This assumes a one-year phase-in for completion of the redevelopment, which has been incorporated into the tax impact and cash flow assumptions for this plan. An annual increase in taxable value of 1% has been used for calculation of future tax increments in this plan. T

The estimated captured taxable value and tax increment revenues for the eligible property for each year of the plan are presented in Table 2 in Appendix D.

D. Method of Financing and Description of Advances by the Municipality

LSRRLF reimbursements will be made by the City to the developer, MJR Group, LLC in an amount not to exceed $498,079 for completed eligible expenses based on the receipt of proper documentation.

The invoicing procedure is summarized as follows:

1. MJR pays an invoice for the eligible expenses
2. The invoices with proof of payment of eligible expenses are then submitted to the City
3. The City then cuts a check from the LSRRF to MJR for those eligible expenses
4. The LSRRF is repaid through TIF Capture

E. Maximum Amount of Note or Bonded Indebtedness

The City of Troy will not incur a financial note or bonded indebtedness for this project. Therefore, a reporting on indebtedness is not required.

F. Duration of Brownfield Plan

The duration of this Plan should be not less than the period required to reimburse all eligible activities. The approval date of the Brownfield Plan by the City council will mark the beginning of the reimbursement period, unless modified at the discretion of the City as allowed under Act 381, as amended. In no event, however, shall this Plan extend beyond the maximum term allowed by Section 13(1) (a) of Act 381, as amended for the duration of this Plan, currently limited to 30 years.

G. Estimated Impact of Tax Increment Financing on Revenues of Taxing Jurisdictions

The following tables show the anticipated impact of tax increment financing (TIF) on revenues of taxing jurisdictions. Developer reimbursements for environmental assessment activities will occur within the first year of TIF reimbursement (totaling $11,585), and LSRRLF

reimbursement will occur within 8 years from the start of tax TIF reimbursements. An additional year is anticipated for repayment of interest, with an additional 5 years of capture to continue building the LSRRLF.

Description of Eligible Activities (see Table 1)	**Estimated Costs**	
1. Environmental Assessment Activities	$	10,085
2. BRA Application Fee	$	1,500
3. Due Care Activities	$	13,004
4. Demolition	$	479,095
5. Preparation of Brownfield Plan	$	5,980
Total	**$**	**509,664**

Total Activities to be Captured by TIF	**Estimated Costs**	
Developer Reimbursement	$	11,585
Local Site Remediation Revolving Loan Fund Reimbursement	$	498,079
LSRRLF 3% Interest Capture	$	65,891
TBRA Administrative Fee	$	21,964
Total	**$**	**597,519**

Detailed tax increment financing tables and a list of eligible expenses are located in Appendix D.

H. Legal Description, Property Map, Statement of Qualifying Characteristics and Personal Property

The legal description of the property included in this plan is attached in Appendix A.

A 2013 Valuation Report and Record Card provided by the City are included in Attachment B, showing the property's obsolescence status.

A property location map, site map, and preliminary development plans are attached in Appendix C of this plan.

I. Estimates of Residents and Displacement of Families

No displacement of residents or families is expected as part of this project.

J. Plan for Relocation of Displaced Persons

No displacement of residents or families is expected as part of this project.

K. Provisions for Relocation Costs

No relocation is expected as part of this project.

L. Strategy for Compliance with Michigan's Relocation Assistance Law

No relocation is expected as part of this project.

M. Description of Proposed Use of Local Site Remediation Revolving Loan Fund

The LSRRLF will be used to finance "eligible activities" (as defined by Section 2 of Act 381, as amended) as permitted under the Brownfield Redevelopment Financing Act that includes: Preparation of the Brownfield Plan, Due Care Activities, and Demolition as described in this Plan. A complete listing of these activities is included in Table 1 of Appendix D.

The following eligible activities and budgeted costs are intended as part of the development of the property and are to be financed solely by the developer prior to reimbursement from the LSRRLF.

1. Preparation of the Brownfield Plan $5,980

2. Due Care Activities totaling approximately $13,004; this includes the removal and disposal of five hoists, removal and disposal of associated contaminated soil at approximately 5 yards per hoist, and hoist removal monitoring and assessment activities.

3. Demolition costs totaling approximately $479,095; this includes building and site demolition, demolition oversight, asbestos abatement activities and air monitoring associated with the building demolition, and the proper removal of fluorescent light tubes, PCB ballasts, mercury vapor bulbs and mercury switches, fire extinguishers, CFC refrigerants, hydraulic lifts, and facility owned pad mounted transformer (includes packaging, transportation and disposal/recycling).

All activities are intended to be "eligible activities" under Act 381, as amended. The total cost of eligible activities that are subject to payment or reimbursement from LSRRLF will not exceed $498,079. In addition, the LSRRLF will capture 3% simple interest on the unreimbursed eligible expenses, which will total approximately $65,891. Reimbursements will also not exceed the provided invoices/proof of expenses; the developer will only be reimbursed for the costs that are incurred. A 15% contingency has been built in to each individual line item estimate.

In addition, the TBRA will capture 1% of unreimbursed eligible expenses as an administrative fee for the authority.

N. Other Material that the Authority or Governing Body Considers Pertinent

The asbestos inspection conducted by the landlord is included in Appendix E. The asbestos inspection of the property occurred when the building and its electrical systems were still active and therefore limited dismantling of the electrical, heating, and ventilation systems was conducted to complete the initial inspection activities. Consequently, it is possible that asbestos containing linings or insulation (i.e., transite asbestos or paper insulation, etc.) may exist within these systems not accessed during the initial survey but would still need abatement during building demolition activities. The 15% contingency that has been built into the Brownfield Plan should account for any additional asbestos containing materials uncovered during demolition.

Appendix A

PM ENVIRONMENTAL Environmental & Engineering Services

Assessing Report for 88-20-34-101-023

Parcel Number	88-20-34-101-023
Property Address	100 E MAPLE -120
Property Address Apt	-120
Property Address Zip	48083-2761
Owner Name 1	GERSHENSON REALTY & INVESTMENT
Owner Name 2	
Neighborhood Code	VLCOM
State Equalized Value (SEV)	2175240
Taxable Value	1025640
Summary Land Value	4350480
Property Class	201
School District	TROY
Principal Residence Exemption	0
Last Sale Amount	0
Last Sale Date	
Owner Street Address	31500 NORTHWESTERN STE 100
Owner City	FARMINGTON
Owner State	MI
Owner Zip Code	48334
Taxpayer Street Addr	
Frontage	0
Depth of Parcel	0
Summary Res Floor Area	0
Num Res Buildings	0
Summary Res Garage Area	0
Summary Res Year Built	0
Summary Res Style Alph	0
Summary Res Num Bed	0
Summary Res Num Half Bath	0
Summary Res Num Full Bath	0
Summary Res Basement Area	0
Num CI Buildings	1
Summary CI Floor Area	118201
Summary CI Stories	1
Summary CI Year Built	1964
Legal Description	T2N, R11E, SEC 34 PART OF W 1/2 OF NW 1/4 BEG AT PT DIST N 89-59-30 E 235 FT & S 00-02-15 W 60 FT FROM NW SEC COR, TH N 89-59-30 E 324 FT, TH S 00-02-15 W 205 FT, TH N 89-59-30 E 198 FT, TH N 00-02-15 E 205 FT, TH N 89-59-30 E 48 FT, TH S 00-02-15 W 300 FT,

	TH N 89-59-30 E 125 FT, TH S 00-02-15 W 445 FT, TH S 89-59-30 W 870 FT, TH N 00-02-15 E 595 FT, TH N 89-59-30 E 175 FT, TH N 00-02-15 E 150 FT TO BEG 12.48 A 6-13-96 FR 020 & 021

Resources
- Public Records
- Newsletters
- Forms
- Permits
- Press Releases
- Maps
- Newspapers

Government
- Employment
- City Council Meeting
- Code and Charter
- City Manager
- City Council Agenda
- Public Hearings
- Elections
- FAQ
- Web Broadcasts

Contact
- Directions to City Hall
- Phone Directory

Calendar
- Weekly View
- Suggest New Item

City of Troy
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500 W. Big Beaver Rd · Troy, Michigan 48084 · Ph: 248.524.3300 City Hall Hours: 8am-4:30pm

Appendix B

PM ENVIRONMENTAL Environmental & Engineering Services

88-20-34-101-023 2013 Est. T.C.V. GERSHENSON REALTY & INVESTMENT
Property Class: 201 100 E MAPLE -120
Map #: 88-20-34-101-023 CITY OF TROY TROY, MI 48083-2761

T2N, R11E, SEC 34 PART OF W 1/2 OF NW 1/4 BEG AT PT DIST N 89-59-30 E 235 FT & S 00-02-15 W 60 FT FROM NW SEC COR, TH N 89-59-30 E 324 FT, TH S 00-02-15 W 205 FT TH N 89-59-30 E 198 FT, TH N 00-02-15 E 205 FT, TH N 89-59-30 E 48 FT, TH S 00-02-15 W 300 FT, TH N 89-59-30 E 125 FT, TH S 00-02-15 W 445 FT, TH S 89-59-30 W 870 FT, TH N 00-02-15 E 595 FT, TH N 89-59-30 E 175 FT, TH N 00-02-15 E 150 FT TO BEG 12.48 A
6-13-96 FR 020 & 021

Land Value Estimates for Land Table B-123.B-123

Description	Frontage	Depth	* Factors * Front	Depth	Rate	%Adj.	Reason	Value
B-123 SQ F B-123 SQ FT		543810 SqFt		8.00000	100			4,350,480
		12.48 Total Acres			Total Est. Land Value =			4,350,480

Cost Estimates for Commercial/Industrial Building/Section: 1 Built 1964

Costs are taken from the Store, Discount cost schedules.
<<<<< Calculator Cost Computations >>>>>
Class: C Quality: Average Percent Adj: +0

Base Rate for Upper Floors = 49.00

(10) Heating system: Package Heating & Cooling Cost/SqFt: 0.00 100%
Adjusted Square Foot Cost for Upper Floors = 49.00

1 Stories Number of Stories Multiplier: 1.000
Average Height per Story: 19 Height per Story Multiplier: 1.055
Ave. Floor Area: 118,201 Perimeter: 1551 Perim. Multiplier: 0.812
Refined Square Foot Cost for Upper Floors: 41.98

County Multiplier: 1.42, Final Square Foot Cost for Upper Floors = 59.606

Total Floor Area: 118,201 Base Cost New of Upper Floors = 7,045,536

118,201 Sq.Ft. of Sprinklers @ 1.72, County Mult.:1.42 Cost New = 288,694

Reproduction/Replacement Cost = 7,334,231
Eff.Age:42 Phy.%Good/Abnr.Phy./Func./Econ./Overall %Good: 35 /100/0 /100/0.0
Total Depreciated Cost = 0

Total Estimated True Cash Value of Commercial/Industrial Buildings = 0

2013 Est. T.C.V. 88-20-34-101-023 = 4,350,480
Est. TCV/Total Floor Area = 36.81

2012 Assessed	MBOR	S.E.V.	Base for Cap	C.P.I.
2,175,240	2,175,240	2,175,240	1,001,610	2.40

2013 New	Eq. Adjustment	Loss	Additions	Tax Adjustment	Losses
0	0	0	0	24,030	0

2013 Assessed	MBOR	S.E.V.	Capped	->Taxable<-	PRE/MBT
2,175,240	2,175,240	2,175,240	1,025,640	1,025,640	0

Parcel Number: 88-20-34-101-023 Jurisdiction: CITY OF TROY County: OAKLAND Printed on 06/28/2013

Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.

Property Address	Class: 201 COMM IMP	Zoning: B-2 (	Building Permit(s)	Date	Number	Amount
100 E MAPLE -120	School: TROY		COMMERCIAL, ADD/ALTER	02/18/2005	PB2005-0099	20,000
	P.R.E. 0%		COMMERCIAL, ADD/ALTER	01/18/2005	PB2005-0028	20,000
Owner's Name/Address	MAP #: 88-20-34-101-023		MECHANICAL, AIR	10/24/2000	PM2000-2417	0
GERSHENSON REALTY & INVESTMENT 31500 NORTHWESTERN STE 100 FARMINGTON MI 48334	2013 Est TCV 4,350,480 TCV/TFA: 36.81		MECHANICAL, HEAT	10/24/2000	PM2000-2416	0

X Improved | Vacant

Land Value Estimates for Land Table B-123.B-123

Description	Frontage	Depth	* Factors * Front	Depth	Rate	%Adj.	Reason	Value
B-123 SQ F B-123 SQ FT			543810 SqFt	8.00000	100			4,350,480
			12.48 Total Acres		Total Est. Land Value =			4,350,480
D/W/P: Asphalt Paving			1.61	1.42	306115	0		0

Public Improvements

	Dirt Road
	Gravel Road
X	Paved Road
X	Storm Sewer
X	Sidewalk
X	Water
X	Sewer
X	Electric
X	Gas
X	Curb
X	Street Lights
	Standard Utilities
	Underground Utils.

Topography of Site

X	Level
	Rolling
	Low
	High
	Landscaped
	Swamp
	Wooded
	Pond
	Waterfront
	Ravine
	Wetland
	Flood Plain

Tax Description

T2N, R11E, SEC 34 PART OF W 1/2 OF NW 1/4 BEG AT PT DIST N 89-59-30 E 235 FT & S 00-02-15 W 60 FT FROM NW SEC COR, TH N 89-59-30 E 324 FT, TH S 00-02-15 W 205 FT TH N 89-59-30 E 198 FT, TH N 00-02-15 E 205 FT, TH N 89-59-30 E 48 FT, TH S 00-02-15 W 300 FT, TH N 89-59-30 E 125 FT TH S 00-02-15 W 445 FT, TH S 89-59-30 W 870 FT, TH N 00-02-15 E 595 FT, TH N 89-59-30 E 175 FT, TH N 00-02-15 E 150 FT TO BEG 12.48 A
6-13-96 FR 020 & 021

Comments/Influences

01/04/12: REMOVED ALL BLDG IMPROVEMENTS. 1964 VINTAGE S/B DEMO'D. NL

Who	When	What

Year	Land Value	Building Value	Assessed Value	Board of Review	Tribunal/ Other	Taxable Value
2013	2,175,240	0	2,175,240			1,025,640C
2012	2,175,240	0	2,175,240			1,001,610C
2011	2,175,240	659,280	2,834,520		2,834,520A	1,268,837C
2010	2,175,240	1,015,240	3,190,480		1,247,628T	1,247,628C

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*** Information herein deemed reliable but not guaranteed***

Desc. of Bldg/Section:
Calculator Occupancy: Store, Discount

Class: C
Floor Area: 118,201
Stories Above Grd: 1
Average Sty Hght : 19
Bsmnt Wall Hght

Depr. Table : 3%
Effective Age : 42
Physical %Good: 35
Func. %Good
Economic %Good: 100

1964 Year Built
2005 Remodeled

19 Overall Bldg Height

Comments:

Construction Cost

	High		Above Ave.	X	Ave.		Low

** ** Calculator Cost Data ** **
Quality: Average Adj: %+0 $/SqFt:0.00
Heat#1: Package Heating & Cooling 100
Heat#2: Package Heating & Cooling 0%
Ave. SqFt/Story: 118201
Ave. Perimeter: 1551
Has Elevators:

*** Basement Info ***
Area:
Perimeter:
Type:
Heat: Hot Water, Radiant Floor

* Mezzanine Info *
Area #1:
Type #1: Open (No Rates)
Area #2:
Type #2: Office (No Rates)

* Sprinkler Info *
Area: 118201
Type: Average

<<<<< Calculator Cost Computations >>>>>
Class: C Quality: Average Percent Adj: +0

Base Rate for Upper Floors = 49.00

(10) Heating system: Package Heating & Cooling Cost/SqFt: 0.00 100%
Adjusted Square Foot Cost for Upper Floors = 49.00

1 Stories Number of Stories Multiplier: 1.000
Average Height per Story: 19 Height per Story Multiplier: 1.055
Ave. Floor Area: 118,201 Perimeter: 1551 Perim. Multiplier: 0.812
Refined Square Foot Cost for Upper Floors: 41.98

County Multiplier: 1.42, Final Square Foot Cost for Upper Floors = 59.606

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118,201 Sq.Ft. of Sprinklers @ 1.72, County Mult.:1.42 Cost New = 288,694

Reproduction/Replacement Cost = 7,334,231
Eff.Age:42 Phy.%Good/Abnr.Phy./Func./Econ./Overall %Good: 35 /100/0 /100/0.0
Total Depreciated Cost = 0

(1) Excavation/Site Prep:

(2) Foundation: | | Footings

X	Poured Conc		Brick/Stone		Block

(3) Frame:

(4) Floor Structure:

(5) Floor Cover:

(6) Ceiling:

(7) Interior:

(8) Plumbing:

	Many Above Ave.		Average Typical		Few None

	Total Fixtures 3-Piece Baths 2-Piece Baths Shower Stalls Toilets		Urinals Wash Bowls Water Heaters Wash Fountains Water Softeners

(9) Sprinklers:

(10) Heating and Cooling:

X	Gas Oil		Coal Stoker		Hand Fired Boiler

(11) Electric and Lighting:

Outlets:		Fixtures:	
X	Few Average Many Unfinished Typical	X	Few Average Many Unfinished Typical
	Flex Conduit Rigid Conduit Armored Cable Non-Metalic Bus Duct		Incandescent Fluorescent Mercury Sodium Vapor Transformer

(13) Roof Structure: Slope=0

(14) Roof Cover:

(39) Miscellaneous:

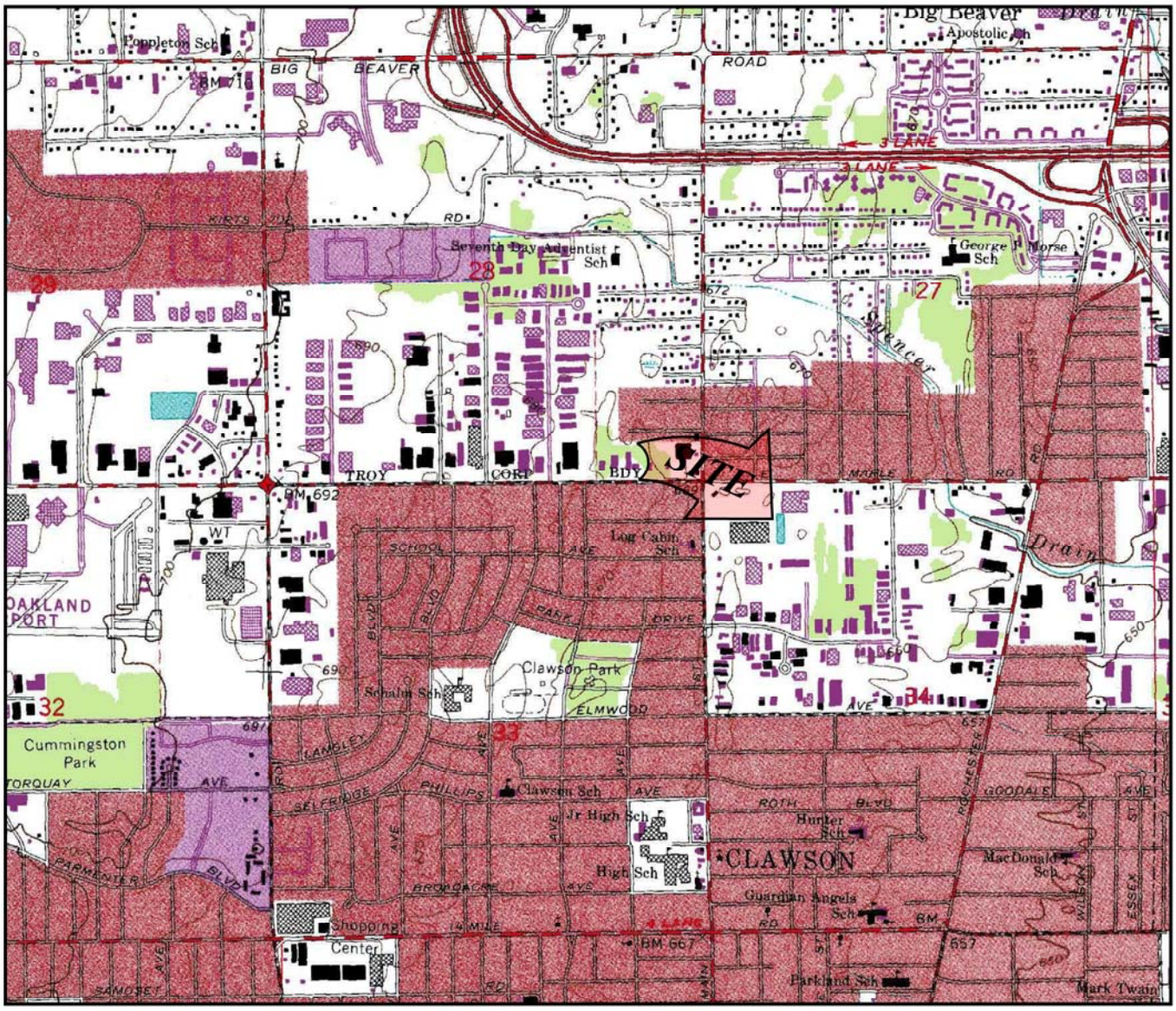
(40) Exterior Wall:

	Thickness		Bsmnt Insul.

*** Information herein deemed reliable but not guaranteed***

Appendix C

PM ENVIRONMENTAL Environmental & Engineering Services



OAKLAND COUNTY

SCALE 1:24,000

1 MILE 1/2 MILE 0 1 MILE

FIGURE 1

PROPERTY VICINITY MAP

USGS, 7.5 MINUTE SERIES

BIRMINGHAM, MI QUADRANGLE, 1968. PHOTO REVISED 1981.

PM ENVIRONMENTAL Environmental & Engineering Services	PROJ: VACANT RETAIL PROPERTY 100 EAST MAPLE ROAD TROY, MI	THIS IS NOT A LEGAL SURVEY VERIFY SCALE 0 — 2,000' IF NOT 1" ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	DRN BY: CS CHKD BY: KT FILE NAME: 02-6518-0F01R00	DATE: 6/20/2013 SCALE: 1" = 2,000'

37 EAST MAPLE ROAD
PSYCHIC READER

49-65 EAST MAPLE ROAD
MULTI-TENANT COMMERCIAL BUILDING

79 EAST MAPLE ROAD
VIOLINS LIMITED

91 EAST MAPLE ROAD
VACANT COMMERCIAL BUILDING

95 EAST MAPLE ROAD
DATTA CORPORATION

101 EAST MAPLE ROAD
BARBARA BENKO ATTORNEYS

125 EAST MAPLE ROAD
AAA

135 EAST MAPLE ROAD
JOHN R. JOSEPH MD

EAST MAPLE ROAD

1553 NORTH MAIN STREET
TROPICAL CAFE SMOTHIES

1537 NORTH MAIN STREET
HAMILTON ANIMAL HOSPITAL

1523 NORTH MAIN STREET
MULTI-TENANT COMMERCIAL BUILDING

1511 NORTH MAIN STREET
THE ART OF CUSTOM FRAMING

1505 NORTH MAIN STREET
PAVED PARKING LOT

1467 NORTH MAIN STREET
PAVED PARKING LOT

1457 NORTH MAIN STREET
STIRNEMANN TOOLS AND MACHINE

1431 NORTH MAIN STREET
CONSTRUCTION SITE

1421 NORTH MAIN STREET
WENDY'S

NORTH MAIN STREET

20 EAST MAPLE ROAD
SUBWAY

150 EAST MAPLE ROAD
BANK OF AMERICA

164 EAST MAPLE ROAD
MULTI-TENANT COMMERCIAL BUILDING

190 EAST MAPLE ROAD
MICHIGAN CHANDELIER

FORMER AUTOMOTIVE SERVICE AREA

DETENTION POND

214 EAST MAPLE ROAD
EMPIRE ELECTRONICS

FORMER RETAIL AREA

APPROXIMATE LOCATION OF FORMER USTs

FORMER AUTOMOTIVE PARTS STORAGE

1350 LIVERNOIS ROAD
PAUL'S AUTO WASH

UNDERGROUND VAULT

205 PARK DRIVE
FEDEX FREIGHT

1300-1310 LIVERNOIS ROAD
VACANT COMMERCIAL BUILDING

LEGEND:

SUBJECT PROPERTY
PAD MOUNTED TRANSFORMER
IN-GROUND HOIST
FLOOR DRAIN
UST — UNDERGROUND STORAGE TANK

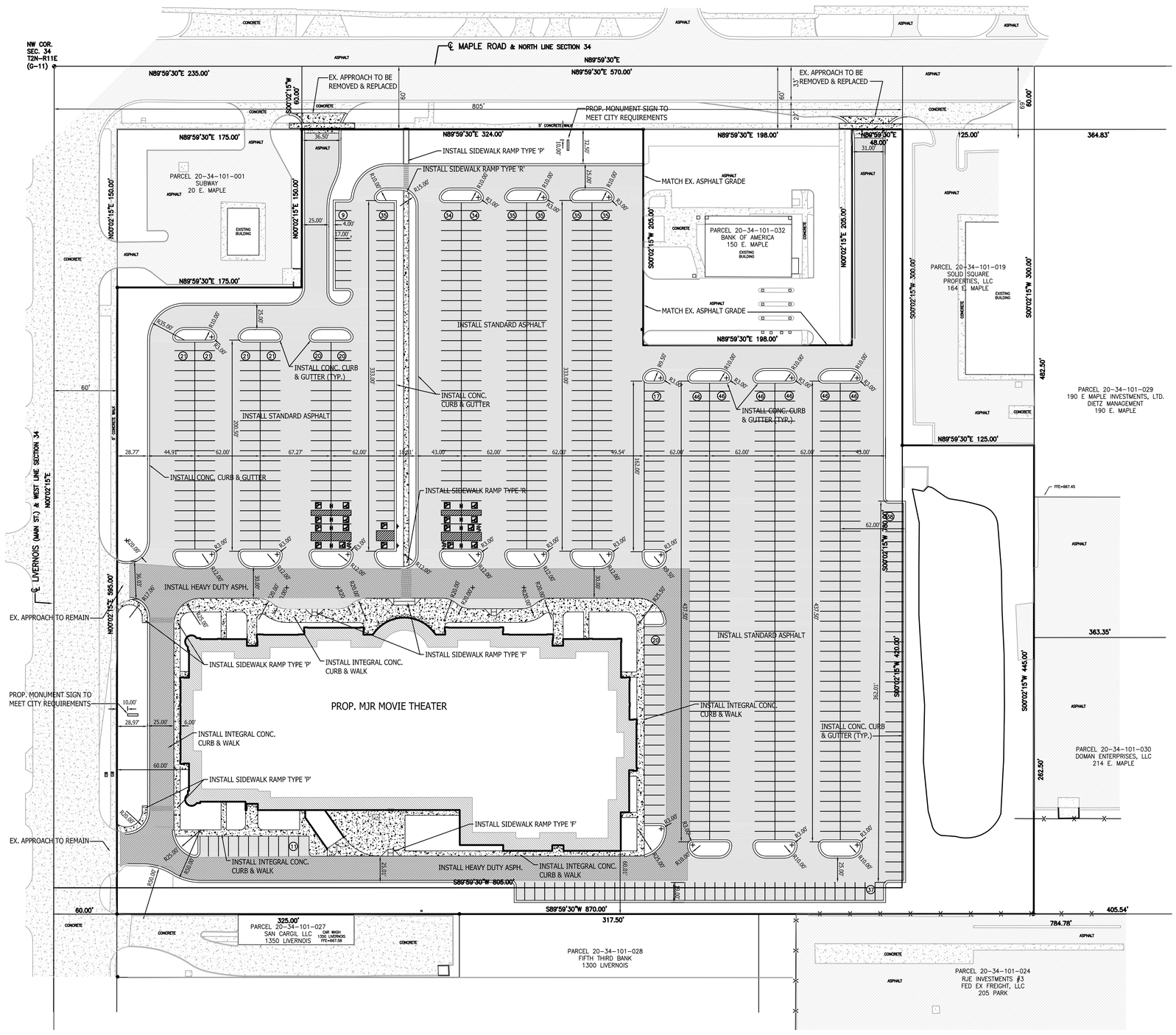
PM ENVIRONMENTAL | Environmental & Engineering Services

FIGURE 2

GENERALIZED DIAGRAM OF THE SUBJECT PROPERTY AND ADJOINING PROPERTIES

PROJ:
VACANT RETAIL PROPERTY
100 EAST MAPLE ROAD
TROY, MI

THIS IS NOT A LEGAL SURVEY	DRN BY: CS	DATE: 6/24/2013
VERIFY SCALE 0 100' IF NOT 1" ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	CHKD BY: KT	SCALE: 1" = 100'
	FILE NAME: 02-6518-0F02R00	

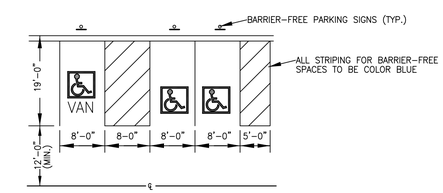


LEGEND

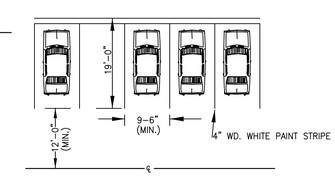
PROPOSED (PR)	EXISTING (EX)	
UP	UP	UTILITY POLE
		UTILITY POLE
		FENCE
		SIGN
		LIMITS OF GRADING/CLEARING
		CONCRETE
		ASPHALT
		MODIFIED CURB

SITE DATA

1. EXISTING ZONING: MR MAPLE ROAD (FORM BASED ZONE)
2. ADJACENT ZONING: MR & IB (INTEGRATED INDUSTRIAL BUSINESS DISTRICT)
3. EXISTING USE: VACANT COMMERCIAL BUILDING (KMART)
4. PROPOSED USE: MJR MOVIE THEATRES
5. PARKING
   REQUIRED: 1 SPACE PER 3 SEATS - 3,200 SEATS / 3 SEATS = 1,067 SPACES
   PROPOSED: 775 SPACES (INCLUDES 18 BARRIER-FREE SPACES)



TYPICAL BARRIER FREE PARKING SPACE
(NO SCALE)



TYPICAL PARKING SPACE
(NO SCALE)

THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE DRAWINGS ARE ONLY APPROXIMATE. NO GUARANTEE IS EXPRESSED OR IMPLIED AS TO THE ACCURACY OR COMPLETENESS OF THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR ESTABLISHING THE EXACT LOCATION OF ALL EXISTING UTILITIES AND PROPOSED UTILITY CROSSINGS IN THE FIELD PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY CONFLICTS ARE APPARENT OR IF THE LOCATION OR DEPTH DIFFERS SIGNIFICANTLY FROM THAT SHOWN ON THE PLANS.

3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 1-800-482-7171 IT'S THE LAW & IT'S GOOD NEIGHBOR PLACE

BOSS ENGINEERING
ENGINEERS • SURVEYORS • PLANNERS
LANDSCAPE ARCHITECTS
(E-MAIL: be@bossengi.com)
312 E. CODDINGTON AVE.
HOWELL, MICHIGAN 48843
(800) 246-6735 FAX (517) 548-1670

PROJECT: MJR THEATRES TROY GRAND CINEMA 16

PREPARED FOR: MJR THEATRES
41000 WOODWARD AVE. SUITE 135 EAST
BLOOMFIELD HILLS, MI 48304
248-548-8282

TITLE: SITE PLAN

NO. BY	REVISION PER	DATE

DESIGNED BY: TD
DRAWN BY: TD
CHECKED BY:
SCALE 1" = 50'
JOB NO. 13-104
DATE 5-30-13
SHEET NO. 2

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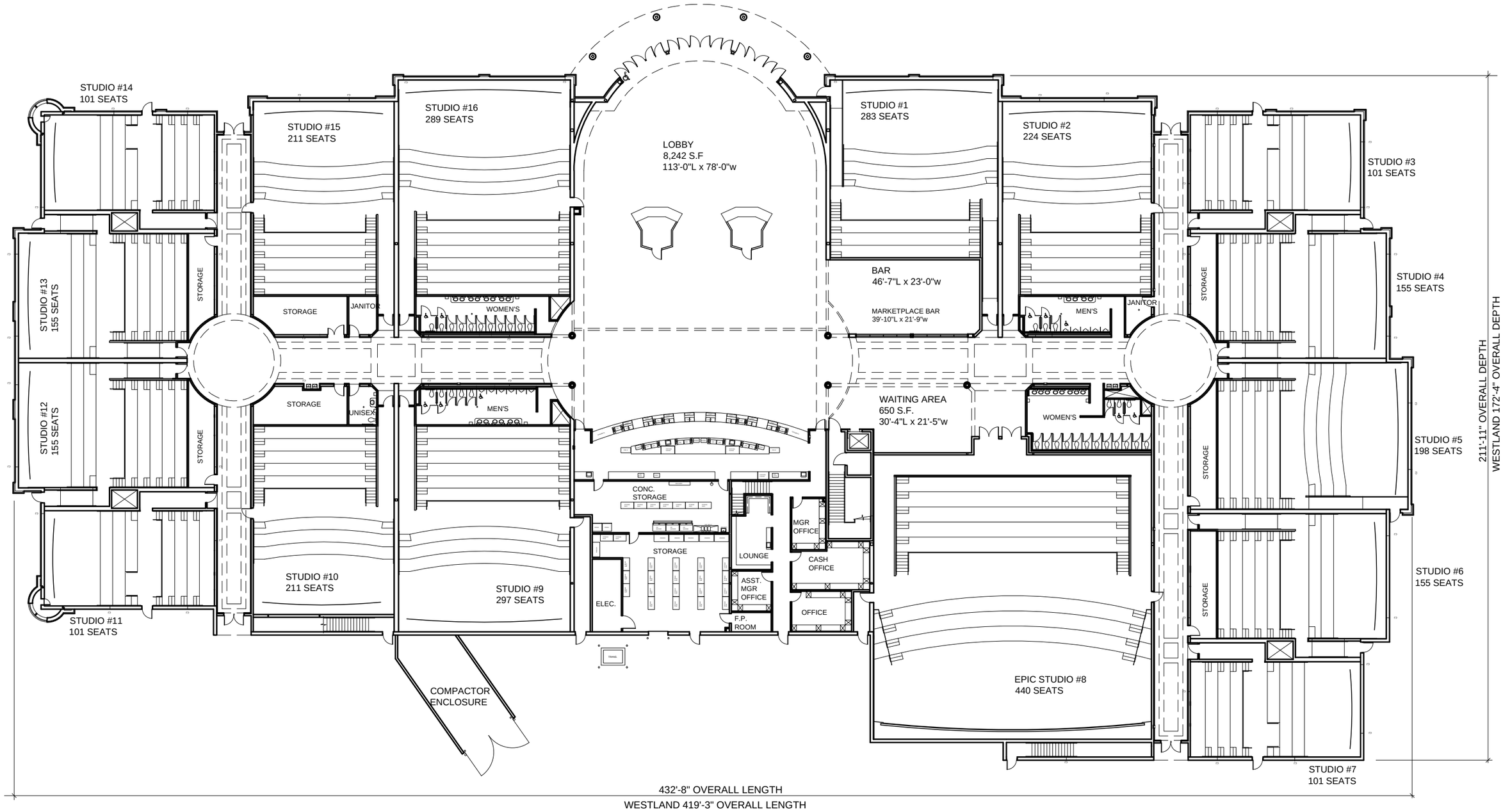

MJR TROY GRAND 16 SCREEN THEATER

SCALE: NOT TO SCALE DATE: MAY 29, 2013

paradigm design inc.
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Appendix D

PM ENVIRONMENTAL Environmental & Engineering Services

Table 1- 100 East Maple, Troy - Estimated Costs of Eligible Activities		
Item/Activity	**Total Estimated Cost**	**Comments**
Developer Reimbursed Activities		
Baseline Environmental Assessment Activities		
Phase I	$ 2,400	
Phase II/BEA/Due Care Plan	$ 7,685	
Brownfield Authority Application Fee		
BRA Application Fee	$ 1,500	
Developer Reimbursed Total	**$ 11,585**	
Local Site Remediation Revolving Loan Fund Reimbursed Activities		
Due Care Activities		
Hoist removal, disposal (5 hoists)	$ 6,785	
Hoist removal monitoring and assessment	$ 5,141	
Contaminated soil removal and disposal associated with hoist removal (approximate 25 yards)	$ 1,078	
Demolition		
Building Demolition	$ 140,000	
Site Demolition	$ 128,000	
Demolition Oversight	$ 17,710	
Asbestos Abatement	$ 131,100	
Air Quality Monitoring and Oversight associated with Asbestos Abatement	$ 17,538	
Temporary Power required to conduct Asbestos Abatement	$ 17,147	
Removal of fluorescent light tubes, PCB ballasts, mercury vapor bulbs and mercury switches, fire extinguishers, CFC refrigerants, hydraulic lifts, and facility owned pad mounted transformer (includes packaging, transportation and disposal/recycling)	$ 27,600	
Preparation of Brownfield Plan and Act 381 Workplan		
Brownfield Plan	$ 5,980	
Local Site Remediation Revolving Loan Fund Reimbursed Total	**$ 498,079**	
Project Subtotal (Developer and LSRRLF Reimbursement)	**$ 509,664**	
Capture to City Brownfield Redevelopment Authority		
3% Simple Interest of unreimbursed costs	$ 65,891	
TBRA Administrative Fee	$ 21,964	
Total Cost of Eligible Activities to be Funded through TIF	**$ 597,519**	

Tax Increment Financing Estimates
Table 2
100 East Maple, Troy, MI

		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
Current Taxable Value		$ 1,025,640	$ 1,025,640	$ 1,025,640	$ 1,025,640	$ 1,025,640	$ 1,025,640	$ 1,025,640	$ 1,025,640	$ 1,025,640	$ 1,025,640	
Estimated Tax Increment Value (estimated increase of 1%/year)			$ 4,500,000	$ 4,500,000	$ 4,545,000	$ 4,590,450	$ 4,636,355	$ 4,682,718	$ 4,729,545	$ 4,776,841	$ 4,824,609	
Incremental Difference (New Taxes-Existing)			$ 3,474,360	$ 3,474,360	$ 3,519,360	$ 3,564,810	$ 3,610,715	$ 3,657,078	$ 3,703,905	$ 3,751,201	$ 3,798,969	
Local Taxes - Millage												
County Operating	4.1900		$ 14,558	$ 14,558	$ 14,746	$ 14,937	$ 15,129	$ 15,323	$ 15,519	$ 15,718	$ 15,918	**$ 136,404**
Library	0.7000		$ 2,432	$ 2,432	$ 2,464	$ 2,495	$ 2,528	$ 2,560	$ 2,593	$ 2,626	$ 2,659	**$ 22,788**
County Parks	0.2415		$ 839	$ 839	$ 850	$ 861	$ 872	$ 883	$ 894	$ 906	$ 917	**$ 7,862**
H/CL Metro Auth	0.2146		$ 746	$ 746	$ 755	$ 765	$ 775	$ 785	$ 795	$ 805	$ 815	**$ 6,986**
OCPTA Smart	0.5900		$ 2,050	$ 2,050	$ 2,076	$ 2,103	$ 2,130	$ 2,158	$ 2,185	$ 2,213	$ 2,241	**$ 19,207**
City General	6.5000		$ 22,583	$ 22,583	$ 22,876	$ 23,171	$ 23,470	$ 23,771	$ 24,075	$ 24,383	$ 24,693	**$ 211,606**
City Capital	1.5300		$ 5,316	$ 5,316	$ 5,385	$ 5,454	$ 5,524	$ 5,595	$ 5,667	$ 5,739	$ 5,812	**$ 49,809**
City Refuse	1.0500		$ 3,648	$ 3,648	$ 3,695	$ 3,743	$ 3,791	$ 3,840	$ 3,889	$ 3,939	$ 3,989	**$ 34,182**
ISD Extra Voted	3.1687		$ 11,009	$ 11,009	$ 11,152	$ 11,296	$ 11,441	$ 11,588	$ 11,737	$ 11,886	$ 12,038	**$ 103,156**
ISD Operating	0.2003		$ 696	$ 696	$ 705	$ 714	$ 723	$ 733	$ 742	$ 751	$ 761	**$ 6,521**
OCC	1.5844		$ 5,505	$ 5,505	$ 5,576	$ 5,648	$ 5,721	$ 5,794	$ 5,868	$ 5,943	$ 6,019	**$ 51,580**
Total Local Taxes (capturable)	**19.9695**											**$ 650,102**
Debt Millages (not capturable)												
School Debt Service	4.9600		$ 17,233	$ 17,233	$ 17,456	$ 17,681	$ 17,909	$ 18,139	$ 18,371	$ 18,606	$ 18,843	**$ 161,472**
City Debt	0.7000		$ 2,432	$ 2,432	$ 2,464	$ 2,495	$ 2,528	$ 2,560	$ 2,593	$ 2,626	$ 2,659	**$ 22,788**
Total Debt Millages (not capturable)	**5.6600**											**$ 184,260**
Total Millages	**25.6295**											
Total Capturable Millages	**19.9695**											
Annual Incremental Capture Local Taxes			$ 69,381	$ 69,381	$ 70,280	$ 71,187	$ 72,104	$ 73,030	$ 73,965	$ 74,910	$ 75,864	
TBRA Administrative Fee*			$ 4,981	$ 4,453	$ 3,803	$ 3,139	$ 2,458	$ 1,762	$ 1,049	$ 320	$ -	**$ 21,964**
Incremental Capture after Administrative Fees			**$ 64,400**	**$ 64,929**	**$ 66,477**	**$ 68,049**	**$ 69,646**	**$ 71,268**	**$ 72,916**	**$ 74,590**	**$ 75,864**	
Total Cumulative Tax Capture			$ 64,400	$ 129,329	$ 195,806	$ 263,854	$ 333,501	$ 404,769	$ 477,685	$ 552,275	$ 628,138	
Capture for Reimbursement to Developer												
Unreimbursed Eligible Expenses		**$ 11,585**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	
Capture for LSRRLF												
Unreimbursed Eligible Expenses		**$ 498,079**	**$ 445,263**	**$ 380,334**	**$ 313,858**	**$ 245,809**	**$ 176,163**	**$ 104,895**	**$ 31,978**	**$ (42,611)**	**$ -**	
Interest, 3% Simple Interest			**$ 14,942**	**$ 13,358**	**$ 11,410**	**$ 9,416**	**$ 7,374**	**$ 5,285**	**$ 3,147**	**$ 959**		**$ 65,891**
Interest Running Total				**$ 28,300**	**$ 39,710**	**$ 49,126**	**$ 56,500**	**$ 61,785**	**$ 64,932**	**$ 65,891**	**$ 23,280**	
Reimbursed Interest to LSRRLF										**$ 42,611**	**$ 23,280**	**$ 65,891**

*Administrative fee is 1% of the unreimbursed LSRRLF expenses

1 Year: Developer Reimbursement Complete

9 Years: LSRRLF Interest Capture Complete

8 Years: LSRRLF Reimbursement Complete

Description of Eligible Activities (see Table 1)	**Estimated Costs**
1. Environmental Assessment Activities	$ 10,085
2. BRA Application Fee	$ 1,500
3. Due Care Activities	$ 13,004
4. Demolition	$ 479,095
5. Preparation of Brownfield Plan	$ 5,980
Total	**$ 509,664**

Total Activities to be Captured by TIF	**Estimated Costs**
Developer Reimbursement	$ 11,585
Local Site Remediation Revolving Loan Fund Reimbursement	$ 498,079
LSRRLF 3% Interest Capture	$ 65,891
TBRA Administrative Fee	$ 21,964
Total	**$ 597,519**

Appendix E

PM ENVIRONMENTAL Environmental & Engineering Services

Testing Engineers & Consultants, Inc.
1343 Rochester Road • PO Box 249 • Troy, Michigan 48099-0249
(248) 588-6200 or (313) T-E-S-T-I-N-G • Fax (248) 588-6232
www.testingengineers.com

TEC Report Number: 53362-01
Date Issued: April 19, 2013

Mr. Mark Perkoski
Maple & Livernois, LLC
31500 Northwestern Highway
Suite 100
Farmington Hills, Michigan 48334

Telephone: (248) 785-2300
Email: mark@gershensonrealty.com

Re: Asbestos Survey Report. Project: Former K-Mart Building located at 100 East Maple Road; Troy, MI 48083.

Dear Mr. Perkoski:

Enclosed please find our report of a pre-demolition asbestos survey at the above referenced location. We hope that you find this report complete and self-explanatory.

We are pleased to provide this service. Should you have any questions regarding this report or require additional information, please contact this office at your convenience.

Respectfully Yours,
TESTING ENGINEERS & CONSULTANTS, INC.

Scott M. Chandler, CIH, LEED AP
Manager
Industrial Hygiene Services

Jennifer M. Pendley
Assistant Manager
Industrial Hygiene Services

SC/rfm
Enclosure

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All services undertaken are subject to the following policy. Reports are submitted for exclusive use of the clients to whom they are addressed. Their significance is subject to the adequacy and representative character of the samples and the comprehensiveness of the tests, examinations and surveys made. No quotation from reports or use of TEC's name is permitted except as expressly authorized by TEC in writing.

Testing Engineers & Consultants, Inc.

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	Executive Summary
1	Introduction
2	Summary of Findings
2.1	Homogenous Material Listing
2.2	Recommendations for ACM
2.3	List by Functional Space
2.4	List by Homogenous Material
3	Bulk Sample Report, Laboratory Data and Chain of Custody Document(s)
4	Functional Space Listing

Appendices:

A	Definitions of Terms and Assessment Criteria
B	Bulk Sampling Protocol and Analytical Methods
C	Summary of Regulatory Requirements
D	Photographs

Testing Engineers & Consultants, Inc.
Maple and Livernois, LLC
Mr. Mark Perkoski
April 19, 2013

TEC Report Number: 53362-01

Executive Summary

Testing Engineers & Consultants, Inc. (TEC) was retained by Maple & Livernois, LLC to perform a National Emission Standard for Hazardous Air Pollutants (NESHAP) style asbestos survey of the former K-Mart building located at 100 East Maple Road; Troy, MI 48083. A vacant, one story commercial building (former K-Mart) is located on the site.

The following known or assumed asbestos-containing materials were identified in the survey area:

HM #	Homogeneous Material Description	F/NF	SM/TSI/MM
15	Mastic on HM# 14	NF	MM
16	9" x 9" Gray Floor Tile	NF	MM
17	Mastic on HM# 16	NF	MM
18	Mudded Pipe Fittings on Fiberglass Straight Pipe	F	TSI
20	12" x 12" Gray w/ Gray Streak Floor Tile	NF	MM
21	Mastic on HM# 20	NF	MM
23	Mastic on HM# 22	NF	MM
26	Mastic on HM# 25	NF	MM
27	Original Drywall and Joint Compound	NF	MM
29	Roof Drain Conductor Insulation	F	TSI
36	Mastic on HM# 35	NF	MM
41	Tagged Fire Door	NF	MM
44	Woven HVAC Expansion Fabric	NF	MM
45	Black and Yellow Carpet Adhesive	NF	MM
47	Interior Boiler Insulation	F	TSI
48	Boiler Flue Exhaust Insulation	F	TSI

HM # Homogeneous Material Number
F/NF Friable or Non-Friable
SM Surfacing Material
TSI Thermal Systems Insulation
MM Miscellaneous Material

Testing Engineers & Consultants, Inc.
Maple and Livernois, LLC
Mr. Mark Perkoski
April 19, 2013

TEC Report Number: 53362-01

Section 1 Introduction

This report is based on requirements of the National Emission Standard for Hazardous Air Pollutants (NESHAP) for renovation and/or demolition projects. NESHAP requires that building owners conduct surveys for asbestos-containing materials (ACM) in buildings that are to be renovated or demolished. The Environmental Protection Agency defines an asbestos-containing material as one which contains greater than one percent asbestos, using standardized analytical methods (polarized light microscopy). Building materials containing greater than one percent asbestos are referred to as asbestos-containing building materials (ACBM).

This survey addresses friable and non-friable suspect asbestos-containing building materials to meet NESHAP requirements for renovation and/or demolition activities. Friable materials are those that can be crumbled, pulverized or reduced to powder by hand pressure when dry. This includes products such as spray-applied fireproofing on structural steel members, spray-applied acoustical ceiling materials, and thermal systems insulation. Because friable materials are more likely to release asbestos fibers into the air when disturbed than non-friable materials, they are considered a greater health concern.

All other materials such as floor tile, adhesives, plaster, stucco, and sheet rock mudding compounds are considered non-friable materials. Non-friable materials can become friable through various mechanical means such as crushing, sanding, sawing, and shot-blasting or by natural means such as weathering.

On April 11 and 12, 2013, Richard Michalski (A25681) s State of Michigan accredited Building Inspector from TEC, performed an asbestos survey of the building in accordance with NESHAP and project requirements.

All identified suspect asbestos-containing materials are summarized in Section 2.1. Information regarding all suspect materials including locations, recommended response actions and quantities are described in Section 2.2 through 2.4.

DISCLAIMER

This report was prepared for the express use and benefit of Maple and Livernois, LLC, its agents and employees. The information in this report or portions thereof may be required to be included in notifications to residents, employees, contractors, regulators or other visitors to the building. This report is not intended to be used by the owner or its agents as a specification or work plan for any of the work suggested or recommended herein.

This report is based upon conditions observed at the property and information made available to the surveyor. This report does not intend to identify all hazards nor indicate that other hazards or unsafe practices do not exist at the premises.

TEC made their best effort to determine the location of inaccessible ACBM. TEC shall not be responsible for identifying all ACBM located behind walls and/or columns, beneath flooring, above solid ceilings, underground or any other inaccessible areas.

Polarized light microscopy (PLM) is not consistently reliable in detecting asbestos in a small percentage of samples that contain asbestos. Certain flooring materials (floor tile, linoleum) may contain very small asbestos fibers that are not visible by PLM. The fibers may also be bound or obscured by the organic matrix of the material. Thus, negative PLM results are not guaranteed by the laboratory. TEC recommends that any samples reported as <1% or below limit of detection should be further tested by transmission electron microscopy (TEM) to positively determine if the material is an ACM.

Standard PLM also is not consistently reliable in detecting asbestos in vermiculite insulation due to its heterogeneous nature. TEC recommends that any vermiculite insulation samples reported as below limit of detection should be further tested for asbestos using the California Air Resources Board Method 435, which includes a fine milling of the sample to create a homogeneous mixture.

Testing Engineers & Consultants, Inc.
Maple and Livernois, LLC
Mr. Mark Perkoski
April 19, 2013

TEC Report Number: 53362-01

Section 2 Summary of Findings for Suspect Materials

Section 2 consists of several tables summarizing the findings of the building survey performed by TEC. Descriptions of each table are found below.

Section 2.1 consists of a table of all suspect building materials identified by the building inspector in the survey area. The materials are listed by Homogeneous Material Number (HM#). Each suspect material is assigned a unique HM#. The table also describes the material type (surfacing material, thermal systems insulation or miscellaneous material), its friability and whether it is an ACM.

Section 2.2 is a table summarizing our recommendations for each ACM or assumed ACM identified in the survey area. **Please note that the recommendations provided are based upon the condition of the ACM identified at the time of the inspection as well as our understanding of the scope of work.**

The table in Section 2.3 describes suspect ACM found in each Functional Space Number (FS#) identified in the survey area. For survey purposes, a building is divided into smaller units called Functional Spaces. A Functional Space is defined as a room, group of rooms, or other spatially distinct building unit as designated by an accredited asbestos building inspector. Each Functional Space is assigned a number and a description is provided. During the survey, the building inspector identifies the suspect ACM that are present in the functional space or that may be impacted during renovation work, in the case of limited surveys. **All materials listed in this section were determined to be in good condition except where noted in the table.**

Section 2.4 is organized by Homogeneous Material Number (HM#) and depicts which Functional Spaces contain them. Other information, such as quantities, ACM designation, friability and material category are also included in this table.

See Appendix A for definitions of terms used in the tables throughout Section 2.

Section 2.1

Homogenous Material Listing

Former K-Mart Building

HM Listing

HM#	Homogeneous Material Description	ACM?	F/NF	SM/TSI/MM
1	Drywall and Joint Compound	No	NF	MM
2	4" Covebase Adhesive	No	NF	MM
3	Round Fiberglass HVAC Duct	Non-suspect		
4	Gray Window Caulk	No	NF	MM
5	12" x 12" White w/Tan Speck Floor Tile	No	NF	MM
6	Adhesive on HM# 5	No	NF	MM
7	2' x 4' Gypsum Suspended Ceiling Tile	No	F	MM
8	2' x 4' Gray Suspended Ceiling Tile	No	F	MM
9	12" x 12" Off-white w/ Blue Streak Floor Tile	No	NF	MM
10	Adhesive on HM# 9	No	NF	MM
11	Fiberglass Straight Pipe and Fitting Insulation	Non-suspect		
11	Fiberglass Straight Pipe and Fiberglass Fitting Insulation	Non-suspect		
12	Metal-Jacketed Door Insulation	No	F	MM
13	2' x 4' White Bumby Suspended Ceiling Tile	No	F	MM
14	12" x 12" Cream Busy Floor Tile	No	NF	MM
15	**Mastic on HM# 14**	**Yes**	**NF**	**MM**
16	**9" x 9" Gray Floor Tile**	**Yes**	**NF**	**MM**
17	**Mastic on HM# 16**	**Yes**	**NF**	**MM**
18	**Mudded Pipe Fittings on Fiberglass Straight Pipe**	**Yes**	**F**	**TSI**
19	Joint Compound on Plywood	No	NF	MM
20	**12" x 12" Gray w/ Gray Streak Floor Tile**	**Yes**	**NF**	**MM**
21	**Mastic on HM# 20**	**Yes**	**NF**	**MM**
22	12" x 12" Pink Busy Floor Tile	No	NF	MM
23	**Mastic on HM# 22**	**Yes**	**NF**	**MM**
24	Green Linoleum with Burlap Backing	No	NF	MM
25	12" x 12" Dark Gray Floor Tile	No	NF	MM
26	**Mastic on HM# 25**	**Yes**	**NF**	**MM**
27	**Original Drywall and Joint Compound**	**Yes**	**NF**	**MM**
28	2' x 4' Pinhole Suspended Ceiling Tile	No	F	MM
29	**Roof Drain Conductor Insualtion**	**Yes**	**F**	**TSI**
30	Coating on Fiberglass Ceiling Panel	No	F	SM
31	12" x 12" Red Brick "Sticky-back" Floor Tile	No	NF	MM
32	1' x 1' Randon Hole Glued-on Ceiling Tile	No	F	MM
33	Glue Pod on HM# 32	No	NF	MM
34	Wallboard	No	NF	MM
35	12" x 12" Cream Floor Tile	No	NF	MM
36	**Mastic on HM# 35**	**Yes**	**NF**	**MM**
37	1' x 1' Randon Pin Hole Glued-on Ceiling Tile	No	F	MM
38	Glue Pod on HM# 37	No	NF	MM
39	Fiberglass Straight Pipe w/ Tar Layer	No	F	TSI
40	Popcorn Texturing Material	No	F	SM
41	**Tagged Fire Door**	**Yes (Assumed)**	**NF**	**MM**
42	12" x 12" Multi-colored "Sticky-Back" Floor Tile	No	NF	MM
43	Square Fiberglass HVAC Duct Insulation	Non-suspect		
44	**Woven HVAC Expansion Fabric**	**Yes**	**NF**	**MM**
45	**Black and Yellow Carpet Adhesive**	**Yes**	**NF**	**MM**
46	Yellow Carpet Adhesive	No	NF	MM
47	**Interior Boiler Insulation**	**Yes (Assumed)**	**F**	**TSI**
48	**Boiler Flue Exhaust Insulation**	**Yes**	**F**	**TSI**
49	White Sink Undercoating	No	NF	MM

HM#	*Homogeneous Material Description*	*ACM?*	*F/NF*	*SM/TSI/MM*
50	Asphalt and Gravel Roofing Material	No	NF	MM
51	Rubber Membrane Roofing Material	No	NF	MM
52	Exterior Door Frame Caulk	No	NF	MM

Section 2.2

Recommendations for ACM

HM#	Homogeneous Material Description	Amount Units	EPA Category	Recommendation
15	Mastic on HM# 14	75,500 SF	Category I Non-Friable ACM	Remove Prior to Demolition
16	9" x 9" Gray Floor Tile	575 SF	Category I Non-Friable ACM	Remove Prior to Demolition
17	Mastic on HM# 16	575 SF	Category I Non-Friable ACM	Remove Prior to Demolition
18	Mudded Pipe Fittings on Fiberglass Straight Pipe	285 SF	Friable ACM	Remove Prior to Demolition
20	12" x 12" Gray w/ Gray Streak Floor Tile	800 SF	Category I Non-Friable ACM	Remove Prior to Demolition
21	Mastic on HM# 20	800 SF	Category I Non-Friable ACM	Remove Prior to Demolition
23	Mastic on HM# 22	1,800 SF	Category I Non-Friable ACM	Remove Prior to Demolition
26	Mastic on HM# 25	850 SF	Category I Non-Friable ACM	Remove Prior to Demolition
27	Original Drywall and Joint Compound	4,500 SF	Category II Non-Friable ACM	Remove Prior to Demolition
29	Roof Drain Conductor Insualtion	32 EA	Friable ACM	Remove Prior to Demolition
36	Mastic on HM# 35	175 SF	Category I Non-Friable ACM	Remove Prior to Demolition
41	Tagged Fire Door	1 EA	Category II Non-Friable ACM	Remove Prior to Demolition
44	Woven HVAC Expansion Fabric	45 SF	Friable ACM	Remove Prior to Demolition
45	Black and Yellow Carpet Adhesive	150 SF	Category I Non-Friable ACM	Remove Prior to Demolition
47	Interior Boiler Insulation	200 SF	Friable ACM	Remove Prior to Demolition
48	Boiler Flue Exhaust Insulation	150 SF	Friable ACM	Remove Prior to Demolition

Footnotes:

1. For asbestos-containing materials which are currently in good condition and are to remain in place during demolition, they must remain non-friable during all phases of demolition when using allowable demolition techniques (bulldozers, implosion, wrecking balls, cranes or hydraulic excavators). No visible emissions allowed during any stage of demolition. Demolition debris containing Category I and II non-friable ACM does not require disposal at a facility licensed to accept asbestos waste.

2. If all ACM are removed prior to demolition, the remainder of the demolition debris may be either recycled (if appropriate) or disposed as general construction debris at a facility licensed to accept this waste.

3. Asbestos-containing materials removed in a non-friable manner and which remain non-friable during handling, transporting and disposal, can be disposed as general construction debris at a facility licensed to accept this waste. Contact disposal facility and inquire about the policies regarding acceptance of Category I and II non-friable ACM.

Section 2.3

List by Functional Space

S#	FS Description	Floor	FS Notes	HM#	Homogeneous Material Description	HM Notes	Amount	Units	ACM?
1	Entrance	1		1	Drywall and Joint Compound		725	SF	No
1	Entrance	1		2	4" Covebase Adhesive		10	LF	No
1	Entrance	1		3	Round Fiberglass HVAC Duct		NA		Non-suspect
1	Entrance	1		4	Gray Window Caulk		2	SF	No
1	Entrance	1		5	12" x 12" White w/Tan Speck Floor Tile		350	SF	No
1	Entrance	1		6	Adhesive on HM# 5		350	SF	No
2	Food Service Area	1		1	Drywall and Joint Compound		825	SF	No
2	Food Service Area	1		2	4" Covebase Adhesive		60	LF	No
2	Food Service Area	1		3	Round Fiberglass HVAC Duct		NA		Non-suspect
2	Food Service Area	1		7	2' x 4' Gypsum Suspended Ceiling Tile		375	SF	No
2	Food Service Area	1		8	2' x 4' Gray Suspended Ceiling Tile		475	SF	No
2	Food Service Area	1		9	12" x 12" Off-white w/ Blue Streak Floor Tile		675	SF	No
2	Food Service Area	1		10	Adhesive on HM# 9		675	SF	No
2	Food Service Area	1		11	Fiberglass Straight Pipe and Fitting Insulation		NA		Non-suspect
3	Retail Area	1		1	Drywall and Joint Compound	Dressing Rooms and Sales Displays	3,750	SF	No
3	Retail Area	1		2	4" Covebase Adhesive		135	LF	No
3	Retail Area	1		3	Round Fiberglass HVAC Duct		NA		No
3	Retail Area	1	Includes Pharmacy	12	Metal-Jacketed Door Insulation		1	EA	No
3	Retail Area	1		13	2' x 4' White Bumby Suspended Ceiling Tile	Replacement tiles	675	SF	No
3	Retail Area	1		14	12" x 12" Cream Busy Floor Tile		75,500	SF	No
3	**Retail Area**	**1**		**15**	**Mastic on HM# 14**		**75,500**	**SF**	**Yes**
3	**Retail Area**	**1**		**16**	**9" x 9" Gray Floor Tile**	**Material found under wall material at the perimeter of north and south side and small office**	**400**	**SF**	**Yes**
3	**Retail Area**	**1**		**17**	**Mastic on HM# 16**		**400**	**SF**	**Yes**
3	**Retail Area**	**1**		**18**	**Mudded Pipe Fittings on Fiberglass Straight Pipe**		**52**	**EA**	**Yes**
3	Retail Area	1		19	Joint Compound on Plywood		325	SF	No
3	**Retail Area**	**1**		**20**	**12" x 12" Gray w/ Gray Streak Floor Tile**		**800**	**SF**	**Yes**
3	**Retail Area**	**1**		**21**	**Mastic on HM# 20**		**800**	**SF**	**Yes**
3	Retail Area	1		22	12" x 12" Pink Busy Floor Tile		1,800	SF	No
3	**Retail Area**	**1**		**23**	**Mastic on HM# 22**		**1,800**	**SF**	**Yes**
3	Retail Area	1		24	Green Linoleum with Burlap Backing		400	SF	No
3	Retail Area	1		25	12" x 12" Dark Gray Floor Tile		775	SF	No
3	**Retail Area**	**1**		**26**	**Mastic on HM# 25**		**775**	**SF**	**Yes**
3	**Retail Area**	**1**		**27**	**Original Drywall and Joint Compound**	**Exterior walls and various areas above SCT**	**4,500**	**SF**	**Yes**
3	Retail Area	1		28	2' x 4' Pinhole Suspended Ceiling Tile		125	SF	No
3	**Retail Area**	**1**		**29**	**Roof Drain Conductor Insualtion**		**15**	**EA**	**Yes**
3	Retail Area	1		31	12" x 12" Red Brick "Sticky-back" Floor Tile	Small Office area	45	SF	No
4	Garden Department	1		1	Drywall and Joint Compound		1,875	SF	No
4	Garden Department	1		2	4" Covebase Adhesive		42	LF	No
4	Garden Department	1		11	Fiberglass Straight Pipe and Fiberglass Fitting Insulation		NA		Non-suspect
5	Automotive Service Area	1	Includes Restroom	1	Drywall and Joint Compound		55	SF	No
5	Automotive Service Area	1		2	4" Covebase Adhesive	Restroom	18	LF	No
5	Automotive Service Area	1		4	Gray Window Caulk		2	SF	No
5	Automotive Service Area	1		12	Metal-Jacketed Door Insulation	Restroom	1	EA	No
5	**Automotive Service Area**	**1**		**18**	**Mudded Pipe Fittings on Fiberglass Straight Pipe**		**10**	**EA**	**Yes**
5	Automotive Service Area	1		30	Coating on Fiberglass Ceiling Panel		2,400	SF	No

S#	FS Description	Floor	FS Notes	HM#	Homogeneous Material Description	HM Notes	Amount	Units	ACM?
5	Automotive Service Area	1		40	Popcorn Texturing Material	On Straight Pipe Insul	135	SF	No
5	Automotive Service Storage Room	1		12	Metal-Jacketed Door Insulation		1	EA	No
5	**Automotive Service Storage Room**	**1**		**18**	**Mudded Pipe Fittings on Fiberglass Straight Pipe**		**24**	**EA**	**Yes**
7	Intermediate Hallway/Security Area	1		1	Drywall and Joint Compound		450	SF	No
7	Intermediate Hallway/Security Area	1		2	4" Covebase Adhesive		45	LF	No
7	Intermediate Hallway/Security Area	1		12	Metal-Jacketed Door Insulation	Food Storage Room	1	EA	No
7	Intermediate Hallway/Security Area	1		14	12" x 12" Cream Busy Floor Tile	Material located in Storage room and each entrance	225	SF	No
7	**Intermediate Hallway/Security Area**	**1**		**15**	**Mastic on HM# 14**		**225**	**SF**	**Yes**
7	**Intermediate Hallway/Security Area**	**1**		**16**	**9" x 9" Gray Floor Tile**	**Material located on far west side**	**160**	**SF**	**Yes**
7	**Intermediate Hallway/Security Area**	**1**		**17**	**Mastic on HM# 16**	**Material located on far west side**	**160**	**SF**	**Yes**
7	**Intermediate Hallway/Security Area**	**1**		**20**	**12" x 12" Gray w/ Gray Streak Floor Tile**	**Food Storage Room**	**160**	**SF**	**Yes**
7	**Intermediate Hallway/Security Area**	**1**		**21**	**Mastic on HM# 20**	**Food Storage Room**	**160**	**SF**	**Yes**
7	Intermediate Hallway/Security Area	1		32	1' x 1' Randon Hole Glued-on Ceiling Tile	Hallway at each Entrance	175	SF	No
7	Intermediate Hallway/Security Area	1		33	Glue Pod on HM# 32	Hallway	175	SF	No
7	Intermediate Hallway/Security Area	1		34	Wallboard	Hallway	175	SF	No
7	Intermediate Hallway/Security Area	1		35	12" x 12" Cream Floor Tile	Food Storage Room	140	SF	No
7	**Intermediate Hallway/Security Area**	**1**		**36**	**Mastic on HM# 35**	**Food Storage Room**	**140**	**SF**	**Yes**
7	Intermediate Hallway/Security Area	1		37	1' x 1' Randon Pin Hole Glued-on Ceiling Tile	Food Storage Room	140	SF	No
7	Intermediate Hallway/Security Area	1		38	Glue Pod on HM# 37	Food Storage Room	140	SF	No
8	Intermediate Hallway/Security Room	2		11	Fiberglass Straight Pipe and Fiberglass Fitting Insulation		NA		Non-suspect
8	Intermediate Hallway/Security Room	2		43	Square Fiberglass HVAC Duct Insulation		NA		Non-suspect
9	Rear Storage Area	1		1	Drywall and Joint Compound	Receiving Office	80	SF	No
9	**Rear Storage Area**	**1**		**18**	**Mudded Pipe Fittings on Fiberglass Straight Pipe**	**Receiving area**	**6**	**EA**	**Yes**
9	**Rear Storage Area**	**1**		**29**	**Roof Drain Conductor Insualtion**	**Receiving area**	**1**	**EA**	**Yes**
9	Rear Storage Area	1	Area divided by concrete block wall	34	Wallboard		375	SF	No
9	Rear Storage Area	1	Includes Receiving Offices	39	Fiberglass Straight Pipe w/ Tar Layer	South side	225	LF	No
9	**Rear Storage Area**	**1**		**41**	**Tagged Fire Door**	**Receiving Office**	**1**	**EA**	**Yes (Assumed)**
9	Rear Storage Area	1		42	12" x 12" Multi-colored "Sticky-Back" Floor Tile		35	SF	No
10	**Rear Storage Area**	**2**	**Area divided by concrete block wall**	**18**	**Mudded Pipe Fittings on Fiberglass Straight Pipe**		**69**	**EA**	**Yes**
10	**Rear Storage Area**	**2**		**29**	**Roof Drain Conductor Insualtion**		**3**	**EA**	**Yes**
10	Rear Storage Area	2		34	Wallboard		175	SF	No
11	Storage Room	1		2	4" Covebase Adhesive		25	LF	No
11	Storage Room	1		12	Metal-Jacketed Door Insulation		1	EA	No
11	Storage Room	1		14	12" x 12" Cream Busy Floor Tile		145	SF	No
11	**Storage Room**	**1**		**15**	**Mastic on HM# 14**		**145**	**SF**	**Yes**
11	**Storage Room**	**1**		**18**	**Mudded Pipe Fittings on Fiberglass Straight Pipe**		**3**	**EA**	**Yes**
12	Fan and Compressor Room	1		1	Drywall and Joint Compound		45	SF	No
12	Fan and Compressor Room	1		12	Metal-Jacketed Door Insulation		3	EA	No
12	**Fan and Compressor Room**	**1**		**18**	**Mudded Pipe Fittings on Fiberglass Straight Pipe**		**35**	**EA**	**Yes**
12	**Fan and Compressor Room**	**1**		**29**	**Roof Drain Conductor Insualtion**		**1**	**EA**	**Yes**
12	**Fan and Compressor Room**	**1**		**44**	**Woven HVAC Expansion Fabric**	**on 1 unit**	**15**	**SF**	**Yes**
13	Office Area	1		1	Drywall and Joint Compound		575	SF	No
13	Office Area	1		2	4" Covebase Adhesive		135	LF	No
13	Office Area	1		12	Metal-Jacketed Door Insulation		2	EA	No
13	Office Area	1		13	2' x 4' White Bumby Suspended Ceiling Tile		450	SF	No
13	Office Area	1		14	12" x 12" Cream Busy Floor Tile		325	SF	No
13	**Office Area**	**1**		**15**	**Mastic on HM# 14**		**325**	**SF**	**Yes**

#	FS Description	Floor	FS Notes	HM#	Homogeneous Material Description	HM Notes	Amount	Units	ACM?
3	Office Area	1		32	1' x 1' Randon Hole Glued-on Ceiling Tile	Above SCT	825	SF	No
3	Office Area	1		33	Glue Pod on HM# 32		825	SF	No
3	**Office Area**	**1**		**45**	**Black and Yellow Carpet Adhesive**	**Front and Back Office**	**150**	**SF**	**Yes**
3	Office Area	1		46	Yellow Carpet Adhesive		175	SF	No
4	Boiler Room	1		11	Fiberglass Straight Pipe and Fiberglass Fitting Insulation		NA		Non-suspect
4	Boiler Room	1		12	Metal-Jacketed Door Insulation		1	EA	No
4	**Boiler Room**	**1**		**18**	**Mudded Pipe Fittings on Fiberglass Straight Pipe**		**60**	**EA**	**Yes**
4	**Boiler Room**	**1**		**47**	**Interior Boiler Insulation**		**200**	**SF**	**Yes (Assumed)**
4	**Boiler Room**	**1**		**48**	**Boiler Flue Exhaust Insulation**	**Mag Material**	**125**	**SF**	**Yes**
5	Restroom Area	1		1	Drywall and Joint Compound		1,250	SF	No
5	Restroom Area	1		2	4" Covebase Adhesive		65	LF	No
5	Restroom Area	1		3	Round Fiberglass HVAC Duct		NA		Non-suspect
5	Restroom Area	1		11	Fiberglass Straight Pipe and Fiberglass Fitting Insulation		NA		Non-suspect
5	Restroom Area	1		12	Metal-Jacketed Door Insulation		5	EA	No
5	Restroom Area	1		13	2' x 4' White Bumby Suspended Ceiling Tile		175	SF	No
5	Restroom Area	1		14	12" x 12" Cream Busy Floor Tile		375	SF	No
5	**Restroom Area**	**1**		**15**	**Mastic on HM# 14**		**375**	**SF**	**Yes**
5	**Restroom Area**	**1**		**18**	**Mudded Pipe Fittings on Fiberglass Straight Pipe**		**4**	**EA**	**Yes**
5	**Restroom Area**	**1**		**29**	**Roof Drain Conductor Insualtion**		**2**	**EA**	**Yes**
5	Restroom Area	1		49	White Sink Undercoating	1 sink	4	SF	No
6	Electrical Panel Room	1		11	Fiberglass Straight Pipe and Fiberglass Fitting Insulation		NA		Non-suspect
7	Exterior	E		50	Asphalt and Gravel Roofing Material		60,000	SF	No
7	Exterior	E		51	Rubber Membrane Roofing Material		20,000	SF	No
7	Exterior	E		52	Exterior Door Frame Caulk		6	SF	No

Section 2.4

List by Homogenous Material

M#	Homogeneous Material Description	HM Notes	FS#	FS Description	Floor	FS Notes	Amount	Units	ACM?	F/NF	SM/TSI/MM
1	Drywall and Joint Compound		1	Entrance	1		725	SF	No	NF	MM
2	4" Covebase Adhesive		1	Entrance	1		10	LF	No	NF	MM
3	Round Fiberglass HVAC Duct		1	Entrance	1		NA		Non-suspect		
4	Gray Window Caulk		1	Entrance	1		2	SF	No	NF	MM
5	12" x 12" White w/Tan Speck Floor Tile		1	Entrance	1		350	SF	No	NF	MM
6	Adhesive on HM# 5		1	Entrance	1		350	SF	No	NF	MM
1	Drywall and Joint Compound		2	Food Service Area	1		825	SF	No	NF	MM
2	4" Covebase Adhesive		2	Food Service Area	1		60	LF	No	NF	MM
3	Round Fiberglass HVAC Duct		2	Food Service Area	1		NA		Non-suspect		
7	2' x 4' Gypsum Suspended Ceiling Tile		2	Food Service Area	1		375	SF	No	F	MM
8	2' x 4' Gray Suspended Ceiling Tile		2	Food Service Area	1		475	SF	No	F	MM
9	12" x 12" Off-white w/ Blue Streak Floor Tile		2	Food Service Area	1		675	SF	No	NF	MM
10	Adhesive on HM# 9		2	Food Service Area	1		675	SF	No	NF	MM
11	Fiberglass Straight Pipe and Fitting Insulation		2	Food Service Area	1		NA		Non-suspect	F	TSI
1	Drywall and Joint Compound	Dressing Rooms and Sales Displays	3	Retail Area	1		3,750	SF	No	NF	MM
2	4" Covebase Adhesive		3	Retail Area	1		135	LF	No	NF	MM
3	Round Fiberglass HVAC Duct		3	Retail Area	1		NA		Non-suspect		
12	Metal-Jacketed Door Insulation		3	Retail Area	1	Includes Pharmacy	1	EA	No	F	MM
13	2' x 4' White Bumby Suspended Ceiling Tile	Replacement tiles	3	Retail Area	1		675	SF	No	F	MM
14	12" x 12" Cream Busy Floor Tile		3	Retail Area	1		75,500	SF	No	NF	MM
15	**Mastic on HM# 14**		**3**	**Retail Area**	**1**		**75,500**	**SF**	**Yes**	**NF**	**MM**
16	**9" x 9" Gray Floor Tile**	**Material found under wall material at the perimeter of north and south side and small office**	**3**	**Retail Area**	**1**		**400**	**SF**	**Yes**	**NF**	**MM**
17	**Mastic on HM# 16**		**3**	**Retail Area**	**1**		**400**	**SF**	**Yes**	**NF**	**MM**
18	**Mudded Pipe Fittings on Fiberglass Straight Pipe**		**3**	**Retail Area**	**1**		**52**	**EA**	**Yes**	**F**	**TSI**
19	Joint Compound on Plywood		3	Retail Area	1		325	SF	No	NF	MM
20	**12" x 12" Gray w/ Gray Streak Floor Tile**		**3**	**Retail Area**	**1**		**800**	**SF**	**Yes**	**NF**	**MM**
21	**Mastic on HM# 20**		**3**	**Retail Area**	**1**		**800**	**SF**	**Yes**	**NF**	**MM**
22	12" x 12" Pink Busy Floor Tile		3	Retail Area	1		1,800	SF	No	NF	MM
23	**Mastic on HM# 22**		**3**	**Retail Area**	**1**		**1,800**	**SF**	**Yes**	**NF**	**MM**
24	Green Linoleum with Burlap Backing		3	Retail Area	1		400	SF	No	NF	MM
25	12" x 12" Dark Gray Floor Tile		3	Retail Area	1		775	SF	No	NF	MM
26	**Mastic on HM# 25**		**3**	**Retail Area**	**1**		**775**	**SF**	**Yes**	**NF**	**MM**
27	**Original Drywall and Joint Compound**	**Exterior walls**	**3**	**Retail Area**	**1**		**4,500**	**SF**	**Yes**	**NF**	**MM**
28	2' x 4' Pinhole Suspended Ceiling Tile		3	Retail Area	1		125	SF	No	F	MM
29	**Roof Drain Conductor Insualtion**		**3**	**Retail Area**	**1**		**15**	**EA**	**Yes**	**F**	**TSI**
31	12" x 12" Red Brick "Sticky-back" Floor Tile	Small Office area	3	Retail Area	1		45	SF	No	NF	MM
1	Drywall and Joint Compound		4	Garden Department	1		1,875	SF	No	NF	MM
2	4" Covebase Adhesive		4	Garden Department	1		42	LF	No	NF	MM
11	Fiberglass Straight Pipe and Fiberglass Fitting Insulation		4	Garden Department	1		NA		Non-suspect		
1	Drywall and Joint Compound		5	Automotive Service Area	1	Includes Restroom	55	SF	No	NF	MM
2	4" Covebase Adhesive	Restroom	5	Automotive Service Area	1		18	LF	No	NF	MM
12	Metal-Jacketed Door Insulation	Restroom	5	Automotive Service Area	1		1	EA	No	F	MM
4	Gray Window Caulk		5	Automotive Service Area	1		2	SF	No	NF	MM
18	**Mudded Pipe Fittings on Fiberglass Straight Pipe**		**5**	**Automotive Service Area**	**1**		**10**	**EA**	**Yes**	**F**	**TSI**
30	Coating on Fiberglass Ceiling Panel		5	Automotive Service Area	1		2,400	SF	No	F	SM
40	Popcorn Texturing Material	On Straight Pipe Insulation	5	Automotive Service Area	1		135	SF	No	F	SM
12	Metal-Jacketed Door Insulation		6	Automotive Service Storage Room	1		1	EA	No	F	MM
18	**Mudded Pipe Fittings on Fiberglass Straight Pipe**		**6**	**Automotive Service Storage Room**	**1**		**24**	**EA**	**Yes**	**F**	**TSI**
1	Drywall and Joint Compound		7	Intermediate Hallway/Security Area	1		450	SF	No	NF	MM
2	4" Covebase Adhesive		7	Intermediate Hallway/Security Area	1		45	LF	No	NF	MM
12	Metal-Jacketed Door Insulation	Food Storage Room	7	Intermediate Hallway/Security Area	1		1	EA	No	F	MM

Homogeneous Material Description	*HM Notes*	*FS#*	*FS Description*	*Floor*	*FS Notes*	*Amount*	*Units*	*ACM?*	*F/NF*	*SM/TSI/MM*
12" x 12" Cream Busy Floor Tile	Material located in Storage room and each entrance	7	Intermediate Hallway/Security Area	1		225	SF	No	NF	MM
Mastic on HM# 14		**7**	**Intermediate Hallway/Security Area**	**1**		**225**	**SF**	**Yes**	**NF**	**MM**
9" x 9" Gray Floor Tile	**Material located on far west side**	**7**	**Intermediate Hallway/Security Area**	**1**		**160**	**SF**	**Yes**	**NF**	**MM**
Mastic on HM# 16	**Material located on far west side**	**7**	**Intermediate Hallway/Security Area**	**1**		**160**	**SF**	**Yes**	**NF**	**MM**
1' x 1' Randon Hole Glued-on Ceiling Tile	Hallway at each Entrance	7	Intermediate Hallway/Security Area	1		175	SF	No	F	MM
Glue Pod on HM# 32	Hallway	7	Intermediate Hallway/Security Area	1		175	SF	No	NF	MM
Wallboard	Hallway	7	Intermediate Hallway/Security Area	1		175	SF	No	NF	MM
12" x 12" Gray w/ Gray Streak Floor Tile	**Food Storage Room**	**7**	**Intermediate Hallway/Security Area**	**1**		**160**	**SF**	**Yes**	**NF**	**MM**
Mastic on HM# 20	**Food Storage Room**	**7**	**Intermediate Hallway/Security Area**	**1**		**160**	**SF**	**Yes**	**NF**	**MM**
12" x 12" Cream Floor Tile	Food Storage Room	7	Intermediate Hallway/Security Area	1		140	SF	No	NF	MM
Mastic on HM# 35	**Food Storage Room**	**7**	**Intermediate Hallway/Security Area**	**1**		**140**	**SF**	**Yes**	**NF**	**MM**
1' x 1' Randon Pin Hole Glued-on Ceiling Tile	Food Storage Room	7	Intermediate Hallway/Security Area	1		140	SF	No	F	MM
Glue Pod on HM# 37	Food Storage Room	7	Intermediate Hallway/Security Area	1		140	SF	No	NF	MM
Fiberglass Straight Pipe and Fiberglass Fitting Insulation		8	Intermediate Hallway/Security Room	2		NA		Non-suspect		
Square Fiberglass HVAC Duct Insulation		8	Intermediate Hallway/Security Room	2		NA		Non-suspect		
Drywall and Joint Compound	Receiving Office	9	Rear Storage Area	1		80	SF	No	NF	MM
Mudded Pipe Fittings on Fiberglass Straight Pipe	**Receiving area**	**9**	**Rear Storage Area**	**1**		**6**	**EA**	**Yes**	**F**	**TSI**
Roof Drain Conductor Insualtion	**Receiving area**	**9**	**Rear Storage Area**	**1**		**1**	**EA**	**Yes**	**F**	**TSI**
Wallboard		9	Rear Storage Area	1	Area divided by concrete block wall	375	SF	No	NF	MM
Fiberglass Straight Pipe w/ Tar Layer	South side	9	Rear Storage Area	1	Includes Receiving Offices	225	LF	No	F	TSI
Tagged Fire Door	**Receiving Office**	**9**	**Rear Storage Area**	**1**		**1**	**EA**	**Yes (Assumed)**	**NF**	**MM**
12" x 12" Multi-colored "Sticky-Back" Floor Tile		9	Rear Storage Area	1		35	SF	No	NF	MM
Mudded Pipe Fittings on Fiberglass Straight Pipe		**10**	**Rear Storage Area**	**2**	**Area divided by concrete block wall**	**69**	**EA**	**Yes**	**F**	**TSI**
Roof Drain Conductor Insualtion		**10**	**Rear Storage Area**	**2**		**3**	**EA**	**Yes**	**F**	**TSI**
Wallboard		10	Rear Storage Area	2		175	SF	No	NF	MM
4" Covebase Adhesive		11	Storage Room	1		25	LF	No	NF	MM
12" x 12" Cream Busy Floor Tile		11	Storage Room	1		145	SF	No	NF	MM
Mastic on HM# 14		**11**	**Storage Room**	**1**		**145**	**SF**	**Yes**	**NF**	**MM**
Metal-Jacketed Door Insulation		11	Storage Room	1		1	EA	No	F	MM
Mudded Pipe Fittings on Fiberglass Straight Pipe		**11**	**Storage Room**	**1**		**3**	**EA**	**Yes**	**F**	**TSI**
Drywall and Joint Compound		12	Fan and Compressor Room	1		45	SF	No	NF	MM
Metal-Jacketed Door Insulation		12	Fan and Compressor Room	1		3	EA	No	F	MM
Mudded Pipe Fittings on Fiberglass Straight Pipe		**12**	**Fan and Compressor Room**	**1**		**35**	**EA**	**Yes**	**F**	**TSI**
Roof Drain Conductor Insualtion		**12**	**Fan and Compressor Room**	**1**		**1**	**EA**	**Yes**	**F**	**TSI**
Woven HVAC Expansion Fabric	**on 1 unit**	**12**	**Fan and Compressor Room**	**1**		**15**	**SF**	**Yes**	**NF**	**MM**
Drywall and Joint Compound		13	Office Area	1		575	SF	No	NF	MM
4" Covebase Adhesive		13	Office Area	1		135	LF	No	NF	MM
Metal-Jacketed Door Insulation		13	Office Area	1		2	EA	No	F	MM
2' x 4' White Bumby Suspended Ceiling Tile		13	Office Area	1		450	SF	No	F	MM
12" x 12" Cream Busy Floor Tile		13	Office Area	1		325	SF	No	NF	MM
Mastic on HM# 14		**13**	**Office Area**	**1**		**325**	**SF**	**Yes**	**NF**	**MM**
1' x 1' Randon Hole Glued-on Ceiling Tile	Above SCT	13	Office Area	1		825	SF	No	F	MM
Glue Pod on HM# 32		13	Office Area	1		825	SF	No	NF	MM
Black and Yellow Carpet Adhesive	**Front and Back Office**	**13**	**Office Area**	**1**		**150**	**SF**	**Yes**	**NF**	**MM**
Yellow Carpet Adhesive		13	Office Area	1		175	SF	No	NF	MM
Fiberglass Straight Pipe and Fiberglass Fitting Insulation		14	Boiler Room	1		NA		Non-suspect		
Metal-Jacketed Door Insulation		14	Boiler Room	1		1	EA	No	F	MM
Mudded Pipe Fittings on Fiberglass Straight Pipe		**14**	**Boiler Room**	**1**		**60**	**EA**	**Yes**	**F**	**TSI**
Interior Boiler Insulation		**14**	**Boiler Room**	**1**		**200**	**SF**	**Yes (Assumed)**	**F**	**TSI**

M#	Homogeneous Material Description	HM Notes	FS#	FS Description	Floor	FS Notes	Amount	Units	ACM?	F/NF	SM/TSI/MM
8	**Boiler Flue Exhaust Insulation**	**Mag Material**	**14**	**Boiler Room**	**1**		**125**	**SF**	**Yes**	**F**	**TSI**
1	Drywall and Joint Compound		15	Restroom Area	1		1,250	SF	No	NF	MM
2	4" Covebase Adhesive		15	Restroom Area	1		65	LF	No	NF	MM
3	Round Fiberglass HVAC Duct		15	Restroom Area	1		NA		Non-suspect		
1	Fiberglass Straight Pipe and Fiberglass Fitting Insulation		15	Restroom Area	1		NA		Non-suspect		
2	Metal-Jacketed Door Insulation		15	Restroom Area	1		5	EA	No	F	MM
3	2' x 4' White Bumby Suspended Ceiling Tile		15	Restroom Area	1		175	SF	No	F	MM
4	12" x 12" Cream Busy Floor Tile		15	Restroom Area	1		375	SF	No	NF	MM
5	**Mastic on HM# 14**		**15**	**Restroom Area**	**1**		**375**	**SF**	**Yes**	**NF**	**MM**
8	**Mudded Pipe Fittings on Fiberglass Straight Pipe**		**15**	**Restroom Area**	**1**		**4**	**EA**	**Yes**	**F**	**TSI**
9	**Roof Drain Conductor Insualtion**		**15**	**Restroom Area**	**1**		**2**	**EA**	**Yes**	**F**	**TSI**
9	White Sink Undercoating	1 sink	15	Restroom Area	1		4	SF	No	NF	MM
1	Fiberglass Straight Pipe and Fiberglass Fitting Insulation		16	Electrical Panel Room	1		NA		Non-suspect		
0	Asphalt and Gravel Roofing Material		17	Exterior	E		60,000	SF	No	NF	MM
1	Rubber Membrane Roofing Material		17	Exterior	E		20,000	SF	No	NF	MM
2	Exterior Door Frame Caulk		17	Exterior	E		6	SF	No	NF	MM

Section 4

Functional Space Listing

Maple and Livernois, LLC
Former K-Mart Building
Functional Space Listing

FS#	*FS Description*	*Floor*
1	Entrance	1
2	Food Service Area	1
3	Retail Area	1
4	Garden Department	1
5	Automotive Service Area	1
6	Automotive Service Storage Room	1
7	Intermediate Hallway/Security Area	1
8	Intermediate Hallway/Security Room	2
9	Rear Storage Area	1
10	Rear Storage Area	2
11	Storage Room	1
12	Fan and Compressor Room	1
13	Office Area	1
14	Boiler Room	1
15	Restroom Area	1
16	Electrical Panel Room	1
17	Exterior	E

Appendix A

Definitions of Terms and Assessment Criteria

Definitions of Terms and Assessment Criteria

This survey report organizes information on each suspect ACBM that was identified. This appendix describes how to interpret the data found in this report.

Material description contains the description of the suspect homogeneous asbestos-containing building material.

Material Serial Number is used to reference the material for reinspections, etc.

ACM Asbestos-Containing Materials. Materials containing greater than 1 percent (>1%) asbestos.

ACBM Asbestos-Containing Building Materials means surfacing ACM, thermal system insulation ACM, or miscellaneous ACM that is found in or on interior structural members or other parts of a building.

Asbestos type and content describes the type of asbestos and its percentage in the material.

Asbestos Results for positive materials are shown as a percentage. Samples having less than 1% asbestos are reported as containing "Trace" amounts of asbestos and samples with no detected asbestos are reported as "BLD" or below limit of detection.

Sample number(s) identifies a particular material sample obtained from a specific sample location. Sample numbers are used primarily for laboratory identification.

Sample Location identifies where the samples of this material were obtained.

Material Category categorizes each material as surfacing, TSI or miscellaneous.
Surfacing Materials (SM) - Asbestos-containing materials that are sprayed-on, troweled-on or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing on structural members, or other materials on surfaces for acoustical, fireproofing, or other purposes.

Thermal Systems Insulation (TSI) - Asbestos-containing materials applied to pipes, fittings, boilers, breaching, tanks, ducts or other interior structural components to prevent heat loss or gain or water condensation.

Miscellaneous Materials (MM) - Asbestos-containing materials applied to or a part of building components that are not classified as surfacing materials or thermal systems insulation.

Quantity & Units reports approximate total quantity per unit of measure for each material.

Building(s) & Floor(s) specifies where a material is located.

Material Location describes where the material is found throughout the building.

Friability identifies the material as Friable, Non-friable or Jacketed (for thermal systems insulation only) if asbestos is present.

Friable (F) - An asbestos-containing material that can be crumbled, pulverized or reduced to powder, when dry, by hand pressure, such as spray applied fireproofing on structural steel members, spray applied acoustical ceiling materials or damaged thermal systems insulation. Friable materials are of greatest concern due to their potential fiber release.

Non-Friable (NF) - An asbestos-containing material where the asbestos is bound tightly in a matrix or sealed by a protective layer. Non-friable materials can become friable by being rendered to a crumbled, pulverized or powdered state, when dry, by crushing, sanding, sawing, shot-blasting, severe weathering or by other mechanically induced means. Common examples of non-friable materials are adhesives, floor tiles, transite and roofing materials.

Jacketed (J) - An asbestos-containing material applied to thermal systems insulation and "jacketed" with a protective outer layer such as canvas or metal to keep the material in good condition. Undamaged jacketed ACBM is considered non-friable. If the jacketing is damaged, the material is considered friable.

Damage Category describes the type of damage, if any, to the material. The following damage categories are used: None, Physical, Air, and Water.

Material Assessment identifies the condition of the material in relation to physical and water damage, delamination of the material from its substrate, the extent of the damage and the potential for damage from building conditions, such as, accessibility by building occupants, influence of vibration, etc. The six standard assessment categories ranked by hazard potential, with the first being the lowest hazard are as follows: 1) Friable ACBM or TSI in Good Condition with Low Potential for Damage, 2) Friable ACBM or TSI in Good Condition with Moderate Potential for Damage 3) Friable ACBM or TSI in Good Condition with Potential for Significant Damage, 4) Damaged Friable ACBM or TSI with Low Potential for Damage, 5) Damaged Friable ACBM or TSI with Moderate Potential for Damage, 6) Damaged Friable ACBM or TSI with Potential for Significant Damage, and 7) Significantly Damaged ACBM or TSI. Only friable materials are assessed under AHERA regulations. Non-friable materials are not assessed.

Material Condition

Good - Material with no visible damage or deterioration, or showing only very limited damage or deterioration.

Damaged - The damage or deterioration of the material results in inadequate cohesion or adhesion with crumbling, blistering, water stains, marring or otherwise abraded over less than on-tenth (1/10) of the surface if the damage is evenly distributed or one-fourth (1/4) if the damage is localized.

Significant Damage - The damage or deterioration of the material results in inadequate adhesion or cohesion and the damage is extensive and severe with one or more of the following characteristics: 1) Crumbling or blistering over at least one-tenth (1/10) of the surface if evenly distributed, one-fourth (1/4) if the damage is localized; 2) Areas of the material hanging from the surface, delaminated, or showing adhesive failure; 3) Water stains, gouges or marred.

Recommended Response suggests the appropriate options for controlling or maintaining ACBM in a safe manner. For non-school buildings, TEC selects between five options:

Operations & Maintenance (O&M) - A program of work practices to maintain friable ACBM in good condition, ensure cleanup of asbestos fibers previously released, and prevent further release by minimizing and controlling friable ACBM disturbance or damage.

Repair - The restoration of damaged or deteriorated asbestos-containing building materials to an intact condition. Once the intact condition is established, the material should be included in an O&M program. The material is usually only required to be removed if it is significantly damaged, prior to demolition of the building or if it will be disturbed by renovation activities.

Abate Due to Condition - This material is significantly damaged and is unsafe in its current condition. The access to the area should be restricted to personnel equipped with appropriate personal protection. This material should be properly removed by a licensed contractor using workers trained in the safe removal of asbestos.

Abate Prior to Renovation - This material should be properly removed prior to planned renovation activities by a licensed contractor using workers trained in the safe removal of asbestos. This recommendation is usually made only on survey reports prepared prior to planned renovation activities.

Abate Prior to Demolition - This material should be properly removed prior to planned demolition activities by a licensed contractor using workers trained in the safe removal of asbestos. This recommendation is usually made only on survey reports prepared prior to planned demolition activities.

For school buildings, AHERA provides five response actions to choose from:

Removal - The taking out or stripping of substantially all ACBM from damaged Area, a functional space or a homogenous area in a school building.

Repair - Returning damaged ACBM to an undamaged condition or to intact state so as to prevent fiber release.

Encapsulation - Means the treatment of ACBM with material that surrounds or embeds asbestos fibers in an adhesive matrix to prevent the release of fibers, as the encapsulant creates a membrane over the surface (bridging encapsulant) or penetrates the material and binds its components together (penetrating encapsulant).

Enclosure - An airtight, impermeable, permanent barrier around ACBM to prevent the release of asbestos fibers into the air.

Operations and Maintenance - see definition above.

Comments & Damage Description contains any additional information and or specific details of material damage are noted here.

EPA Category provides the appropriate material category as outlined in the NESHAPS regulation. The options are friable, Category I and Category II non-friable ACM.

Friable - Materials containing greater than 1% asbestos are always considered Regulated Asbestos-containing Materials (RACM) that require removal prior to building renovation or demolition activities that impact the material.

Category I non-friable ACM means asbestos-containing packings, gaskets, resilient floor covering, and asphalt roofing products containing more than 1 percent asbestos.

Category II non-friable ACM means any material, excluding Category I non-friable ACM, containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

Needs Determination - Materials that the individual designing the abatement and demolition project needs to inspect and evaluate to determine the potential for the material to become RACM and/or evaluate the asbestos content for the composite and individual layers of the material. For sheet rock with mudding compounds only, the EPA allows using the composite sample result. If the composite result by Point Counting the sample is below 1% asbestos, the material is not RACM.

Appendix B

Bulk Sampling Protocol and Analytical Methods

Bulk Sampling Protocol and Analytical Methods

Bulk samples of suspect asbestos-containing building materials were obtained using standard industrial hygiene techniques including wetting the material to minimize fiber release.

Our sampling strategy for suspect friable surfacing materials was based on the guidelines outlined in the EPA publication Asbestos in Buildings: Simplified Sampling Scheme for Friable Surfacing Materials, and the procedures outlined in 40 CFR 763, Subpart E (AHERA). For non-friable suspect materials, AHERA requires the building inspector to determine the appropriate number of samples to obtain and analyze. Usually one to three samples of non-friable materials are collected.

For each homogeneous material identified by visual inspection as suspect material, random samples are obtained. A single bulk sample is randomly selected from each homogeneous material for first-round testing. If the sample is positive, the remaining samples are not analyzed; if the sample is negative, the other samples are submitted for study. Every sample must be reported negative if the material is to be considered non-asbestos-containing.

The bulk samples were delivered to an independent laboratory that participates in the bulk sample proficiency analysis program conducted by the United States Environmental Protection Agency and is accredited by the National Voluntary Laboratory Program (NVLAP). The samples were analyzed using Polarized Light Microscopy (PLM) with dispersion staining to estimate the percent of asbestos composition by volume. Samples with no observable asbestiform minerals are designated as None-Detected. Samples in which asbestiform minerals are observed, but exist in concentrations of less than one percent, are designated as present in Trace amounts; all other samples are designated as asbestos-containing with the appropriate percent of asbestos noted.

Appendix C

Summary of Regulatory Requirements

Summary of Regulatory Requirements

This appendix provides a summary of building owner and manager requirements under various asbestos regulations promulgated by the Michigan Occupational Safety and Health Administration (MIOSHA) and the Environmental Protection Agency (EPA) to protect building occupants and employees from exposure to asbestos.

Survey Requirements

Prior to any renovation activity, MIOSHA and EPA regulations require that a complete asbestos survey be performed to determine if asbestos is present in any suspect asbestos-containing material that will be present in the construction or work area. This survey report addresses accessible materials. It is recommended that prior to renovation activities, inaccessible areas that could contain asbestos materials be inspected.

Notification and Posting Requirements

Regulatory agencies feel that the building owner or manager should be responsible for knowing and communicating the locations of asbestos in their buildings to building employees, outside contractors and tenants to prevent exposure to asbestos.

Under the Michigan Occupational Safety and Health Act (Act 154), building owners and managers are required to provide annual notifications regarding known asbestos-containing materials in their buildings to building employees, tenants, vendors and outside contractors. Therefore, specific information contained in this survey report is required to be included in the notification.

MIOSHA requires building employees, outside contractors, vendors and construction contractors bidding on or performing work in buildings be provided with notification regarding asbestos-containing materials in their work areas. MIOSHA also requires that asbestos warning signs be posted in mechanical rooms.

Demolition/Renovation Requirements

The National Emission Standard for Hazardous Air Pollutants (40 CFR Part 61; Subpart M) provides specific notification requirements for both renovations and demolitions of buildings. Either the owner, operator (contractor) or their representatives must file the notices. According to NESHAP, an operation is considered a demolition if the overall project involves the wrecking or taking out of any load supporting structural members at the subject facility. Notification is required even if there are no asbestos-containing materials in the facility. Notification must be provided to the Michigan Department of Environmental Quality (MDEQ), Air Quality Division no later than 10 working days prior to the scheduled demolition.

For the scheduled demolition of structures having RACM, the RACM must be removed prior to demolition. RACM are either friable asbestos-containing materials, Category I non-friable ACM that has become friable or will become friable (such as floor coverings), or Category II non-friable ACM that has a high probability of becoming friable during the demolition process notification would be required 10 working days prior to beginning asbestos removal and demolition.

If a facility to be demolished contains less than the cutoff amount of RACM, this would be termed a demolition below the cutoff and notification would be required 10 working days prior to beginning demolition.

In a demolition above the cutoff, both the removal and demolition operations should be reported on the same notification form and all required information submitted at least 10 days prior to the beginning of the asbestos removal. For all work outside Wayne County, a completed copy of the notification form must be sent to the Air Quality Division of the MDEQ as well as to the United States Environmental Protection Agency (Region V). For work in Wayne County (including the city of Detroit), completed forms must be sent to the NESHAP Asbestos Program Detroit Field Office, MDEQ, AQD.

NESHAP defines "planned renovations" as a renovation operation or a number of renovation operations in which RACM will be removed or stripped within a given period of time and can be predicted. For planned renovations above the cutoff (where amounts of RACM to be removed equals or exceeds 260 linear feet on pipes, or at least 160 square feet on other facility components), NESHAP requires notification no later than 10 working days before removing or disturbing the RACM.

Michigan Act 135 (Section 220(1-4) or (8) also requires notification when removing asbestos-containing materials greater than 10 linear feet or 15 square feet. For projects involving the removal of RACM prior to demolition, a copy of the same form must also be submitted to the Michigan Department Licensing and Regulatory Affairs (LARA) Asbestos Program Office at least 10 days prior to the scheduled removal.

Removal Requirements

Under EPA regulations, asbestos-containing materials must be properly removed by licensed asbestos abatement contractors prior to renovation or demolition activities that would disturb friable materials or cause non-friable materials to become friable and a regulated material. All ACM should be collected, processed, packaged, transported and disposed of according to applicable federal, state and local regulations, which includes but is not limited to NESHAP 40 CFR, Section 61.150 and the Asbestos Standards for Construction 29 CFR 1926.1101.

Repair of Damaged Materials and Cleanup of Debris

MIOSHA requires that asbestos-containing debris be immediately cleaned up. It is recommended that damaged materials that may release fibers be repaired as soon as possible to prevent fiber release and potential exposures.

Training Requirements

MIOSHA requires employers whose employees are likely to or required to disturb asbestos to receive an asbestos training course. Refresher training is required to be provided annually.

Appendix F

PM ENVIRONMENTAL Environmental & Engineering Services

Environmental
& Engineering
Services

BASELINE ENVIRONMENTAL ASSESSMENT

100 East Maple Road | Troy, Michigan
PM Project Number 02-6518-2

Prepared for:

MJR Group, LLC
41000 Woodward Avenue, Suite 135 East
Bloomfield Hills, Michigan 48304

Prepared by:

PM Environmental, Inc.
4080 West 11 Mile Road
Berkley, Michigan 48072

Michigan
Alabama
Florida
Illinois
Mississippi
New Jersey
North Carolina
Ohio
Tennessee

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY – REMEDIATION AND REDEVELOPMENT DIVISION PO BOX 30426, LANSING, MICHIGAN 48909-7926, Phone 517-373-9837, Fax 517-373-2637

FOR DEQ USE ONLY
BEA SUBMITTAL #
_____

Baseline Environmental Assessment Submittal Form

This form is for submittal of a Baseline Environmental Assessment (BEA), as defined by Part 201, Environmental Remediation and Part 213, Leaking Underground Storage Tanks, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, for the purpose of establishing an exemption to liability pursuant to Section 20126(1)(c) and Section 21323a(1)(b) for a new owner or operator of property that is a facility as defined by Section 20101(1)(s) or Property as defined by Section 21303(d). The BEA report must be conducted either prior to or within 45 days after becoming the owner or operator, whichever is earliest. This form and the BEA report must be submitted within 6 months of becoming the owner or operator whichever is earliest. A separate BEA is required for each legal entity that is or will be a new owner or operator of the property. To maintain the exemption to liability, the owner and operator must also disclose the BEA to any subsequent purchaser or transferee before conveying interest in the property pursuant to Section 20126(1)(c) and Section 21323a(1)(b). An owner or operator of a facility or Property also has due care obligations under Section 20107a and Section 21304c with respect to any existing contamination to prevent unacceptable exposure; prevent exacerbation; take reasonable precautions; provide reasonable cooperation, assistance, and access to authorized persons taking response activities at the property; comply with land use restrictions associated with response activities; and not impede the effectiveness of response activities implemented at the property. Documentation of due care evaluations and response activities need to be available, but not submitted, to the DEQ within 8 months of becoming the owner or operator of a facility.

Section A: Legal Entity Information

Name of legal entity that will own or operate the property:
MJR Group, LLC
Address: 41000 Woodward Avenue, Suite 135 East
City: Bloomfield Hills State: MI Zip: 48304
Contact person (Name & Title): Michael Mihalich – Member of MJR Group, LLC
Telephone: (248) 548-8282 E-Mail: mmihalich@mjrtheatres.com

Contact for BEA questions if different from submitter
Name & Title: Christie Santiago – Senior Project Mgr.
Company: PM Environmental, Inc.

Address: 4080 West Eleven Mile Road
City: Berkley State: MI Zip: 48072
Telephone: 248.336.9988 E-Mail: santiago@pmenv.com

Section B: Property Information

Street Address of Property: 100 East Maple Road

City: Troy State: MI Zip: 48083
Property Tax ID (include all applicable IDs): 88-20-34-101-023

Address according to tax records, if different than above (include all applicable addresses):

City: State: Zip:

Status of submitter relative to the property (check all that apply):

	Former	Current	Prospective
Owner	☐	☐	☐
Operator	☐	☒	☐

County: Oakland

City/Village/Township: Troy

Town: 2N Range: 11E Section: 34
Quarter: NW Quarter-Quarter: NW

Decimal Degrees Latitude: 42.547 north
Decimal Degrees Longitude: -83.1453 west

Reference point for latitude and longitude:
Center of site ☐ Main/front door ☒
Front gate/main entrance ☐ Other ☐

Collection method:
Survey ☐ GPS ☐ Interpolation ☒

Section C: Source of contamination at the property (check all that are known to apply):

Facility regulated under Part 201, other source, or source unknown Part 201 Site ID, if known:	☒
Leaking Underground Storage Tank regulated pursuant to Part 213 Part 211/213. Facility ID, if known:	☐
Oil or gas production and development regulated pursuant to Part 615 or 625	☐
Licensed landfill regulated pursuant to Part 115	☐
Licensed hazardous waste treatment, storage, or disposal facility regulated pursuant to Part 111	☐

Section D: Applicable Dates (provide date for all that are relevant): MM/DD/YYYY

Date All Appropriate Inquiry (AAI) Report or Phase I Environmental Assessment Report completed: 06/25/2013
Date Baseline Environmental Assessment Report conducted: 07/26/2013
Date submitter first became the owner:
Date submitter first became the operator (if prior to ownership): 07/24/2013
Anticipated date of becoming the owner for prospective owners:
Anticipated date of becoming the operator for prospective operators:
If former owner or operator of this property, prior dates of being the owner or operator:

Section E: Check the appropriate response to each of the following questions:	YES	NO
1. Is the property at which the BEA was conducted a "facility" as defined by Section 20101(1)(s) or a Property as defined by Section 21303(d)?	☒	☐
2. Is the All Appropriate Inquiry (AAI) compliant with 40 CFR 312, or is the Phase I Environmental Assessment compliant with ASTM E1527-05?	☒	☐
3. Was the BEA, including the AAI and sampling, conducted either prior to or within 45 days of the date of becoming the owner, operator, or of foreclosure, whichever is earliest.?	☒	☐
4. Is this BEA being submitted to the department within 6 months of the submitter first becoming the owner or operator, or foreclosing?	☒	☐
5. Does the BEA provide sufficient rationale to demonstrate that the data are reliable and relevant to define conditions at the property at the time of purchase, occupancy, or foreclosure, even if the BEA relies on studies of data prepared by others or conducted for other purposes?	☒	☐
6. Does this BEA contain the legal description of the property addressed by the BEA?	☒	☐
7. Does this BEA contain the environmental analytical results, a scaled map showing the sample locations, and the basis for the determination that the property is a facility as defined by Section 20101(1)(s) or the basis for the determination that the property is a Property as defined by Section 21303(d)?	☒	☐

Section F: Environmental Consultant Signature:

I certify to the best of my knowledge and belief, that this BEA and all related materials are true, accurate, and complete. I certify that an All Appropriate Inquiry (AAI) was conducted in conformance with the scope and limitations of the All Appropriate Inquiry Rule, 40 CFR 312 or a Phase I Environmental Site Assessment (Phase I) in conformance with the scope and limitations of the ASTM E1527-05. I certify that the property is a facility as defined by Section 20101(1)(s) or a Property as defined by Section 21303(d) and have provided the sampling and analyses that support that determination. I certify that any exceptions to, or deletions from, the All Appropriate Inquiry Rule or ASTM E1527-05 are described in Section 1 of the BEA report.

Signature: _____ Date: _____

Printed Name: Christie L. Santiago

Company: PM Environmental, Inc.

Mailing Address: 4080 West Eleven Mile Road City: Berkley State: MI Zip: 48072

Telephone: 248.336.9988 E-Mail: santiago@pmenv.com

Section G: Legal Entity Signature:

With my signature below, I certify that to the best of my knowledge and belief, this BEA and all related materials are true, accurate, and complete.

Signature: _____ Date: _____

(Person legally authorized to bind the legal entity)

Printed Name: Michael Mihalich

Title and Relationship of signatory to submitter: Member of MJR Group, LLC

Address: 41000 Woodward Avenue, Suite 135 East City: Bloomfield Hills State: MI Zip: 48304

Telephone: (248) 548-8282 E-Mail: mmihalich@mjrtheatres.com

Submit the BEA report and this form to the DEQ District Office for the county in which the property is located.
A district map is located at www.michigan.gov/bea or www.michigan.gov/deqrrd.

PM ENVIRONMENTAL
ISO 9001 REGISTERED

Detroit
4080 W. 11 Mile Rd
Berkley, MI 48072
f: 877-884-6775
t: 248-336-9988

Grand Rapids
77 Monroe Center, NW
Suite 602
Grand Rapids, MI 49503
f: 877-884-6775
t: 616-285-8857

Lansing
3340 Ranger Road
Lansing, MI 48906
f: 877-884-6775
t: 517-321-3331

July 26, 2013

District Clerk
Michigan Department of Environmental Quality
Southeast Michigan District Office
27700 Donald Court
Warren, MI 48092-2793

RE: Baseline Environmental Assessment for the Vacant Retail Property Located at 100 East Maple Road, Troy, Michigan Parcel Identification No. 88-20-34-101-023 PM Environmental, Inc. Project No. 02-6518-2

Dear District Clerk:

Enclosed is a copy of the Baseline Environmental Assessment prepared for the above referenced subject property in accordance with Section 20126(1)(c) of Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act (NREPA), P.A. 451 of 1994 (Part 201), as amended.

If you have any questions regarding the information in this report, please contact us at 248-336-9988.

Sincerely,
PM ENVIRONMENTAL, INC.

Christie Santiago
Senior Project Engineer

Michael T. Kulka, P.E.
Principal

cc: Michael Mihalich – MJR Group, LLC

Enclosure

PM ENVIRONMENTAL
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Lansing, MI 48906
f: 877-884-6775
t: 517-321-3331

July 26, 2013

Mr. Michael Mihalich
MJR Group, LLC
41000 Woodward Avenue, Suite 135 East
Bloomfield Hills, Michigan 48304

RE: Baseline Environmental Assessment for the Vacant Retail Property Located at 100 East Maple Road, Troy, Michigan Parcel Identification No. 88-20-34-101-023 PM Environmental, Inc. Project No. 02-6518-2

Dear Mr. Mihalich:

Enclosed is a copy of the above-referenced document prepared in accordance with Section 20126(1)(c) of Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act (NREPA), P.A. 451 of 1994 (Part 201), as amended.

THIS BASELINE ENVIRONMENTAL ASSESSMENT WAS PERFORMED FOR THE EXCLUSIVE USE OF MJR GROUP, LLC, WHO MAY RELY ON THE REPORT'S CONTENTS.

If you have any questions regarding the information in this report, please contact our office at 248-336-9988.

Sincerely,
PM ENVIRONMENTAL, INC.

Christie Santiago
Senior Project Engineer

Michael T. Kulka, P.E.
Principal

Enclosure

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1.0 INTRODUCTION AND DISCUSSION

PM Environmental, Inc. (PM) has completed a Baseline Environmental Assessment (BEA) for the vacant retail property (Parcel ID #88-20-34-101-023) located at 100 East Maple Road in Troy, Oakland County, Michigan (hereafter referred to as the "subject property"). The subject property consists of a 12.48-acre parcel of land, located at the southeast corner of Main Street and East Maple Road (Figure 1). The subject building totals approximately 118,201 square feet, and contains a former service area, former retail areas, storage areas, utility rooms, offices, and restrooms. Asphalt paved driveways and parking areas surround the building, with landscaped areas adjacent to the right-of-ways. Currently the subject property is vacant.

Standard and other historical sources indicate the subject property was developed prior to 1940 for agricultural purposes. Agricultural activities ceased between 1957 and 1963, and the central portion of the current building was constructed in 1964. Additions were constructed in 1968, 1992, and 2000. The property was occupied by various retail stores, restaurants, and automotive service operations from 1964 until 2009. The building has been unoccupied since approximately 2010. Historical interior waste streams associated with the former automotive service operations would have consisted of general hazardous substances and/or petroleum products.

1.1 Owner/Operator Information

MJR Group, LLC, 41000 Woodward Avenue, Suite 135 East, Bloomfield Hills, Michigan, began leasing the property from the current owner on July 24, 2013.

1.2 Intended Use of the Subject Property

MJR Group, LLC, intends to redevelop the subject property and construct a movie theater complex. Refer to Appendix F for the proposed site plan.

1.3 Summary of All Appropriate Inquiry Phase I Environmental Assessment

PM performed a Phase I ESA for the subject property, dated June 25, 2013, in conformance with the scope and limitations of American Society for Testing and Materials (ASTM) Practice E 1527-05 (i.e., the 'ASTM Standard'). A copy of the June 25, 2013, Phase I ESA, including photographs of the subject property, is included in Appendix A.

The following recognized environmental conditions (RECs) were identified in PM's June 25, 2013, Phase I ESA:

- The subject property was formerly occupied by various automotive service operations from 1964 until approximately 2010. Historical interior waste streams associated with the former automotive service operations would have consisted of general hazardous substances and/or petroleum products. Based upon review of the previous subsurface investigations, groundwater contamination is present which exceeds the current Part 201 Residential and Nonresidential Generic Cleanup Criteria. Based on these analytical results, the subject property would be classified as a "facility," as defined by Part 201 of P.A. 451 of the Michigan Natural Resources Environmental Protection Act (NREPA), as amended. Additionally, concentrations of vinyl chloride in groundwater have been identified above Michigan Department of Environmental Quality (MDEQ) Residential

Groundwater Vapor Intrusion Screening Levels, but below the Nonresidential Vapor Intrusion Screening Levels.

- During the site reconnaissance, PM observed five in-ground hydraulic hoists in the former service area. In-ground hoists have an underground reservoir for hydraulic fluids, which can contain petroleum products and polychlorinated biphenyls (PCBs). Although previous site investigations indicate contamination associated with the hoists was not detected above MDEQ Part 201 Generic Cleanup Criteria in 2010, the potential exists that a release occurred from the hydraulic hoist systems and/or underground reservoirs since 2010.

- PM observed staining in areas associated with the former automotive service operations. Although previous site investigations indicate contamination was not detected above MDEQ Part 201 Generic Cleanup Criteria in areas of staining in 2010, the potential exists for general hazardous substances and/or petroleum products to have seeped through the concrete into subsurface soils since 2010.

- PM observed an underground vault in the former service area. At the time of the site reconnaissance, the vault contained an unknown liquid. The underground vault may have contained hazardous substances and/or petroleum products. The structural integrity of the vault is unknown. Although previous site investigations indicate contamination was not detected above MDEQ Part 201 Generic Cleanup Criteria associated with the vault in 2010, the potential exists that a release occurred from the underground vault since 2010.

The following adjoining and/or nearby REC has been identified:

- The northwest adjoining property, identified as 20 East Maple Road, was occupied by a gasoline service station from between 1957 and 1963 until between 1980 and 1981. PM was unable to determine if the underground storage tanks (USTs) have been removed from the property. Based on the close proximity to the subject property, the potential exists that a release has occurred on this property and migrated onto the subject property.

A historical REC (HREC), as defined in the ASTM Standard, is an environmental condition that in the past would have been identified as a REC, but has been adequately addressed and therefore no longer represents a REC. The following HREC was identified:

- In PM's professional opinion, the previous site investigations adequately assessed the release associated with the former 1,000-gallon used oil UST on the subject property. Limited soil and groundwater contamination was identified above current MDEQ Part 213 Drinking Water (DW) and Groundwater Surface Water Interface (GSI) Risk Based Screening Levels (RBSLs); however, based on the limited, discontinuous groundwater at the subject property, these pathways are not applicable, and the release was granted closure in 2011. Based on the limited residual contamination, removal of the UST, and closed LUST status, PM has identified the former UST and LUST status as a HREC.

1.3.1 Phase I ESA Exceptions or Deletions

During the completion of the June 25, 2013, Phase I ESA, there were no exceptions or deletions from the Federal All Appropriate Inquiry Rule under 40 CFR 312, or the ASTM Standard. To the best of PM's knowledge, no special terms or conditions applied to the preparation of the Phase I ESA.

1.3.2 Phase I ESA Data Gaps

PM did not identify any significant data gaps during the completion of the June 25, 2013, Phase I ESA.

1.4 Summary of Site Investigation

1.4.1 Summary of Previous Site Investigations

PM reviewed the following reports pertaining to previous environmental investigations completed at the subject property. Copies of the previous site investigations reports, including sample location maps and analytical summary tables, are included in Appendix C of the June 25, 2013, Phase I ESA Report (Appendix A).

Name of Report	Date of Report	Company that Prepared Report
Modified Phase I ESA	10-6-2009	Soil and Materials Engineers, Inc. (SME)
Phase II ESA	7-14-2010	Testing Engineers & Consultants, Inc. (TEC)
Tier 1 LUST Closure Report	1-7-2011	Materials Testing Consultants, Inc.

The following table provides a brief summary of the previous investigation completed on the subject property. Additional details regarding the locations where soil and groundwater contamination exceed the applicable Part 201/Part 213 Nonresidential Risk-Based Screening Levels (RBSLs)/cleanup criteria are also included below.

Open or Closed LUST Site:	Closed
Release Identification(s):	C2428-90 / C-2385-90
Release Date(s)	January 1, 1990 / October 15, 1990
Is soil contamination present above an applicable regulatory level?	No
Is soil contamination delineated in all directions?	Not applicable
Is groundwater contamination present above an applicable regulatory level?	Yes
Is groundwater contamination delineated in all directions?	Yes
Significant deficiencies identified?	No
Additional information:	See below

The scope of work for the 2009 Modified Phase I ESA included interviews with knowledgeable contacts, review of municipal records, and a site reconnaissance. The report identified similar regulatory database listings and municipal information as identified by this Phase I ESA. The 2009 Modified Phase I ESA identified RECs including the former open LUST status, the potential for former and/or current USTs to be present, the unknown waste management practices associated with a vault in the automotive service garage, presence of in-ground hoists

and the potential for associated releases, stained concrete within the automotive service garage, and the unknown waste management practices associated with the potential former onsite septic system. PM did not identify any deficiencies with the 2009 report; however, the scope of work did not include a review of historical sources sufficient to document the former use of the subject property and adjoining properties, or the potential for a former septic system to be present.

The 2011 LUST Closure Report indicated that a release was discovered from the former 1,000-gallon used oil UST located west of the automotive service garage. The release was reported in January 1990 based on visual indications and was reported again in October 1990 based on the results of laboratory analysis indicating detectable concentrations of total petroleum hydrocarbons (TPH) from samples collected during the removal. Approximately 221 cubic yards of potentially impacted soil was excavated and disposed in 1992. Subsurface investigation activities conducted in 2009 included the advancement of five soil borings, and the collection and laboratory analysis of soil and groundwater samples for volatile organic compounds (VOCs), polynuclear aromatic compounds (PNAs), PCBs, cadmium, chromium, and lead, or some combinations thereof. Analytical results did not identify concentrations of target parameters above applicable MDEQ Part 213 RBSLs. Limited soil and groundwater contamination was identified above current MDEQ Part 213 Drinking Water (DW) and Groundwater Surface Water Interface (GSI) RBSLs; however, based on the limited, discontinuous groundwater at the subject property, these pathways were not applicable, and the release was granted closure in 2011.

Based upon review of the previous subsurface investigations to investigate former service operations, groundwater contamination is present which exceeds the current Part 201 Residential and Nonresidential Generic Cleanup Criteria. Based on these analytical results, the subject property would be classified as a “facility,” as defined by Part 201 of P.A. 451 of the Michigan Natural Resources Environmental Protection Act (NREPA), as amended. Additionally, concentrations of vinyl chloride in groundwater have been identified above MDEQ Residential Groundwater Vapor Intrusion Screening Level, but below the Nonresidential Vapor Intrusion Screening Level.

Refer to Section 2.1 for additional details regarding the results of the previous subsurface investigations conducted by TEC.

1.4.2 Summary of Current Site Investigations

On June 28, 2013, PM completed a scope of work consisting of the advancement of five soil borings (SB-1 through SB-5), installation of four temporary monitoring wells (TMW-1 through TMW-3 and TMW-5), installation of one sub-slab soil gas sampling point (SSG-1), and the collection of soil, groundwater, and soil gas samples. The soil and groundwater samples were submitted for laboratory analysis of VOCs, PNAs, PCBs, cadmium, chromium and lead, or some combination thereof; while the soil gas sample was submitted for VOCs.

1.4.2.1 Subsurface Investigation

Soil borings were advanced to assess the RECs identified in the Phase I ESA completed by PM in June 2013. Specifically, the Phase II ESA activities were conducted in the following areas of the subject property:

Description of Soil Boring/Temporary Monitoring Well Locations

Location and Total Depth (feet bgs)	Soil Sample Depth (feet bgs)	TMW Screen and DTW (feet bgs)	Analysis	Objectives	Sample Selection (justification)
PSB/TMW-1 (15.0)	Not Applicable	2.05-7.05 (2.2)	VOCs and PNAs	Assess potential contaminant migration from the former northwest adjoining gas station	**Soil:** Due to the absence of visual/olfactory evidence of contamination, a soil sample was not collected **GW:** Sampled
PSB/TMW-2 (16.0)	Not Applicable	1.0-6.0 (3.0)	VOCs and PNAs	Assess potential contaminant migration from the former northwest adjoining gas station	**Soil:** Due to the PID readings ranging from 0.3 ppm to 1.9 ppm within the saturated zone, a soil sample was not collected **GW:** Sampled
PSB/TMW-3 (10.0)	9.0-10.0	0.90-5.90 (1.12)	VOCs, PNAs, PCBs, cadmium, chromium, and lead	Assess the historical service operations and hydraulic hoists	**Soil:** Due to the absence of visual/olfactory evidence of contamination, a sample was collected at the sand/clay interface **GW:** Sampled
PSB-4 (15.0)	10.0-11.0	Not Applicable	VOCs, PNAs, PCBs, cadmium, chromium, and lead	Assess the historical service operations, hydraulic hoists, and underground vault	**Soil:** Due to the absence of visual/olfactory evidence of contamination, a sample was collected at the sand/clay interface **GW:** Not sampled
PSB/TMW-5 (15.0)	12.0-13.0	0.0-5.0 (0.90)	VOCs, PNAs, PCBs, cadmium, chromium, and lead	Assess the historical service operations, hydraulic hoists, and underground vault	**Soil:** Due to the absence of visual/olfactory evidence of contamination, a sample was collected at the sand/clay interface **GW:** Sampled

GW – Groundwater
DTW – Depth to Water
PID – Photoionization Detector
TMW – temporary monitoring well
bgs – below ground surface

1.4.2.2 Soil Gas Investigation

On June 28, 2013, PM installed one temporary sub-slab sampling points (SSG-1) and collected one soil gas sample to assess the indoor air inhalation pathway at the subject property. The sample was collected in general accordance with MDEQ Guidance Document for the Vapor Intrusion Pathway, dated May 2013.

Description of Soil Gas Sampling Locations

Location	Sample Depth	Analysis	Objectives
SSG-1	Sub-slab	VOCs	Assess potential vapor intrusion in the area of MW-4

1.4.2.4 Subsurface Investigations Techniques and QA/QC Procedures

The soil borings were advanced to the desired depth using a model 6610DT Geoprobe® drill rig. Soil sampling was performed for soil classification, verification of subsurface geologic conditions, and for investigating the potential and/or extent of soil and groundwater contamination at the subject property. Soil samples were generally collected on a continuous basis using a 5-foot long macro-core sampler.

During drilling operations, the drilling equipment was cleaned to minimize the possibility of cross contamination. These procedures included cleaning equipment with a phosphate free solution (i.e., Alconox®) and rinsing with distilled water after each sample collection. Drilling and sampling equipment was also cleaned in this manner prior to initiating field activities.

Soils collected from discrete sample intervals were screened using a photoionization detector (PID) to determine if VOCs were present. Soil from specific depths was placed in plastic bags, sealed, and allowed to volatilize. The headspace within each bag was then monitored with the PID. The PID is able to detect trace levels of organic compounds in the air space within the plastic bag. The PID utilizes a 10.2 electron volts (eV) lamp. Soil samples were collected from the soil borings based upon the highest PID reading, visual/olfactory evidence, a change in geology, surficial soil, and/or directly above saturated soil.

Soil samples for VOC analysis were preserved with methanol, in accordance with Environmental Protection Agency (EPA) method 5035, and then placed in appropriately labeled containers with Teflon lined lids and/or sanitized glass jars, placed in an ice packed cooler, and transported under chain of custody procedures for laboratory analysis within applicable holding times.

Temporary monitoring wells were installed in select soil borings to collect groundwater samples for chemical analysis. A new well assembly was used for each temporary well, consisting of a 5-foot long, one-inch diameter, 0.010-inch slot, schedule 40, PVC screen and a 1-inch diameter PVC casing. After the screen for the well was set to the desired depth, natural sands were allowed to collapse around the well screen. The well was developed using either a new disposable 0.9-inch diameter bailer or peristaltic pump equipped with new, chemically inert, 3/8-inch diameter polyethylene and silicon tubing. Well development was performed by purging until clear, turbid free groundwater was observed coming from the well.

Groundwater samples were placed in appropriately labeled containers, placed in an ice packed cooler, and transported under chain of custody procedures for laboratory analysis within applicable holding times.

Soil gas sampling activities were conducted in general accordance with the guidelines established by the ASTM in the Standard Practice for Vapor Encroachment Screening on Property Involved in Real Estate Transactions Designation E 2600-10 (ASTM Standard Practice

E 2600-10) and MDEQ May 2013 Guidance For The Vapor Intrusion Pathway. This included purging three gas point/sand pack volumes at low-flow (200 ml/minute) from each soil gas monitoring point, followed by the collection of one soil gas sample, using summa canister methods, for laboratory analysis of VOCs. The summa canisters were regulated with a flow rate of 200 ml/minute, which was pre-set at the laboratory.

The sub-slab sampling point was installed into the void created by a hammer drill in the concrete slab foundation and were confirmed to be secure and sealed. Additionally, an isolation chamber was utilized during soil gas sample collection was placed over each soil gas sample location to confirm the system was tight and representative samples were collected. Helium gas (i.e., as a tracer gas) was pumped into each bucket chamber and monitored in the field during the collection of each soil gas sample to assess the integrity of the surface seal and piping associated with each sample point.

Three soil samples and four groundwater sample were submitted to Merit Laboratories, Inc. in East Lansing, Michigan. One soil gas sample was submitted to Accutest Laboratories in Dayton, New Jersey for chemical analysis. Tables 1 through Table 3 and Figures 3 through 5 summarize the soil, groundwater, and soil gas analytical results. Complete laboratory reports are presented in Appendix B.

Upon completion of the investigation, the temporary well materials were removed from the soil boring and the soil borings were abandoned by placing the soil cuttings back into the borehole, filling the void with bentonite chips, hydrating the chips, resurfacing and returning the area to its pre-drilling condition.

1.4.3 Geology and Hydrogeology

A review of the 7.5 Minute, Birmingham, Michigan Quadrangle (Figure 1) prepared by the United States Geological Survey (USGS), dated 1968 (photo revised 1971), indicates that the subject property is approximately 669 feet relative to the National Geodetic Vertical Datum (NGVD). The immediate subject site area appears to be relatively flat with no discernible slope.

The general native soil stratigraphy consisted of up to 12.0 feet of sand followed by clay to 16.0 feet bgs. Previous assessment activities indicated up to 7.0 feet of sand followed by clay to at least 12.0 feet bgs. Groundwater was encountered in all soil borings within the sand unit at depths ranging from 0.90 to 2.2. Based on the 2013 assessment activities completed at the subject property documenting a saturated thickness ranging from 3.0 to 11.0 feet thick, the groundwater would meet the definition of an “aquifer” as defined in MDEQ Peer Review Draft Operation Memorandum No. 4 Attachment 10 “Groundwater Not in an Aquifer” dated February 2007.

The soil boring logs are included in Appendix C, which consist of site specific geology, sample depths, and temporary monitoring well details.

2.0 LOCATION OF CONTAMINATED MEDIA ON THE SUBJECT PROPERTY

2.1 Soil and Groundwater Analytical Results

The analytical results for soil and groundwater samples collected by PM were compared with the MDEQ cleanup criteria as presented in Attachment 1 to MDEQ Operational Memorandum

Number 1 "Part 201 Cleanup Criteria and Part 213 Risk-Based Screening Levels," September 28, 2012 using the applicable RBSL. The analytical results are summarized in Tables 1 and 2 (including CAS #) and in Figures 3 and 4. Appendix B contains the laboratory analytical report.

Summary of Soil and Groundwater Exceedances

Location and Total Depth (feet bgs)	Soil Sample Depth (feet bgs)	TMW Screen and DTW (feet bgs)	Analysis	Objectives	Exceedance of applicable MDEQ Part 201 Cleanup Criteria	
					Soil	GW
PSB/TMW-1 (15.0)	Not Applicable	2.05-7.05 (2.2)	VOCs and PNAs	Assess potential contaminant migration from the former northwest adjoining gas station	Not Applicable	None
PSB/TMW-2 (16.0)	Not Applicable	1.0-6.0 (3.0)	VOCs and PNAs	Assess potential contaminant migration from the former northwest adjoining gas station	Not Applicable	None
PSB/TMW-3 (10.0)	9.0-10.0	0.90-5.90 (1.12)	VOCs, PNAs, PCBs, cadmium, chromium, and lead	Assess the historical service operations and hydraulic hoists	None	**Vinyl Chloride: DW**
PSB-4 (15.0)	10.0-11.0	Not Applicable	VOCs, PNAs, PCBs, cadmium, chromium, and lead	Assess the historical service operations and hydraulic hoists	None	Not Applicable
PSB/TMW-5 (15.0)	12.0-13.0	0.0-5.0 (0.90)	VOCs, PNAs, PCBs, cadmium, chromium, and lead	Assess the historical service operations and hydraulic hoists	None	None

Soil analytical results from the 2013 site assessment activities indicate that no VOCs, PNAs, or PCBs were identified above the laboratory method detection levels (MDLs). Concentrations of cadmium, chromium, and lead were identified above the laboratory MDLs; however, concentrations were below the Michigan Statewide Default Background Levels.

Groundwater analytical results from the 2013 site assessment activities indicate that no PNAs, PCBs, cadmium, chromium, and lead were identified above the laboratory MDLs. A concentration of the VOC species vinyl chloride was identified at TMW-3 above the Residential and Nonresidential Drinking Water Generic Cleanup Criteria. All other VOCs samples collected were non-detect.

Historical Data Summary

Previous site investigation reports, including analytical results for soil and groundwater samples collected at the subject property are included in Appendix C of the June 2013 Phase I ESA (Appendix A).

A summary of the most recent soil data obtained for the subject property by TEC during March and May 2010 indicates a concentration of cadmium at SB-5 above the Michigan Statewide Default Background levels and the Groundwater Surface Water Interface Protection (GSIP) Criteria, based on the more conservative MDEQ chromium VI valence comparison. However, because the property is not known to historically been involved in metal plating operations, the MDEQ criterion for chromium III valence may be a more reasonable comparison. The observed concentration at SB-5 is below the MDEQ GSIP (6.9 E+9 µg/Kg) criterion for chromium III. Figure 3 depicts the soil sample locations along with a summary of the associated TEC soil analytical results. TEC Table 1 "Soil Analytical Data Summary," includes a summary of soil analytical data along with a comparison to the applicable Part 201 cleanup criteria, and is included as Table 4 of this BEA.

Groundwater analytical results indicate groundwater concentrations of vinyl chloride, chromium, and lead are present above the MDEQ DW and/or GSI cleanup criteria. However, since no significantly elevated chromium and lead concentrations were identified in soils on the site, it is likely the elevated chromium and lead results in groundwater is a result of residual silty sampling conditions in temporary monitoring wells. Analytical data collected in May 2010 from permanent monitoring wells, which were installed with a filter pack and properly developed, showed no significant metal impact. Therefore, the chromium and lead impact is not representative of a metal release at the subject property. Groundwater impact is defined in all directions horizontally, and is vertically defined by the confining clay unit present across the subject property. Figure 4 depicts temporary and permanent monitoring well locations from which groundwater samples were collected at the subject property along with a summary of TEC's March and May 2010 groundwater analytical results. TEC Table 2 "Groundwater Analytical Data Summary", includes a summary of the groundwater analytical data along with a comparison to the applicable Part 201 cleanup criteria, and is included as Table 5 of this BEA.

2.2 Soil Gas Analytical Results

The analytical results for the soil gas samples collected by PM on June 28, 2013 were compared with the MDEQ May 2013 Guidance for the Vapor Intrusion Pathway Guidance Document.

The analytical results are summarized in the table below:

Summary of Soil Gas Exceedances

Location	Sample Depth	Analysis	Objectives	Soil Gas Exceedance
SSG-1	Sub-slab	VOCs	Assess potential vapor intrusion in the area of MW-4	None

The soil gas analytical results from the sample location (SSG-1) that was collected by PM on June 28, 2013 are summarized in Table 3 and on Figure 5. Appendix B contains the laboratory report.

Concentrations of various VOCs were identified in the soil gas sample above laboratory MDLs, but below the Residential and Nonresidential Screening Levels.

2.3 Subject Property Site Status

Contaminant concentrations identified on the subject property indicate exceedances to the Part 201 Residential and Nonresidential DW cleanup criteria. Therefore, the subject property is a "facility" in accordance with Part 201 of P.A. 451, as amended, and the rules promulgated thereunder.

3.0 PROPERTY INFORMATION

3.1 Legal Description of Subject Property

Assessing records bearing a legal description of the subject property are included in Appendix D.

3.2 Map of Subject Property

A map of the subject property which depicts the property/parcel boundaries is included as Figure 2.

3.3 Subject Location and Analytical Summary Maps

Figure 2 provides a scaled map of the subject property with site structures.

Figure 3 provides a summary of the March 2010 and June 2013 soil analytical data collected by TEC and PM.

Figure 4 provides a summary of the March and May 2010 and June 2013 groundwater analytical data collected by TEC and PM.

Figure 5 provides a summary of the June 2013 soil gas analytical data collected by PM.

The previous site investigation reports identified in Section 1.4.1 is included in Appendix C of PM's June 2013 Phase I ESA (Appendix A).

3.4 Subject Property Location Map

Figure 1 provides a scaled area map depicting the subject property location in relation to the surrounding area.

3.5 Subject Property Address

As indicated in Section 1.0, the subject property (Parcel ID #88-20-34-101-023) is located at 100 East Maple, Troy, Oakland County, Michigan (Figure 1).

3.6 Subject Spatial Data

As depicted in Figure 1, the subject property is located in the northwest quarter of the northwest quarter of Section 34 in Township two North (T2N), Range 11 East (R11E), Troy, Oakland County, Michigan.

According to the MDEQ Groundwater Mapping Project Website, the subject property is located at latitude 42.547 north and a longitude of -83.1453 west.

4.0 FACILITY STATUS OF SUBJECT PROPERTY

As indicated in Section 2.0, based upon documented exceedances of the Part 201 Residential and Nonresidential DW cleanup criteria; the subject property is a facility under Part 201 of P.A. 451, and the rules promulgated thereunder.

4.1 Summary Data Tables

The analytical results for the soil and groundwater samples collected by PM were compared with the MDEQ GCC as presented in Attachment 1 to MDEQ Operational Memorandum Number 1 "Part 201 Cleanup Criteria and Part 213 Risk-Based Screening Levels," September 28, 2012, using the applicable cleanup criteria. The analytical results are summarized in Tables 1 and 2. CAS numbers associated with each target analyte identified above the laboratory MDLs and maximum contaminant concentrations are also presented in Tables 1 and 2.

The soil gas analycial results, including CAS numbers associated with each target analyte, are summarized in Table 3 along with a comparison to the MDEQ May 2013 Guidance for the Vapor Intrusion Pathway Guidance Document.

The analytical results for the most recent soil and groundwater samples collected from the subject property by TEC are presented in Tables 4 and 5. Those tables include the following:

Table 4: TEC Table 1 Soil Analytical Data Summary
Table 5: TEC Table 2 Groundwater Analytical Data Summary

Previous site investigation reports, including summary data tables, are included in Appendix A.

4.2 Laboratory Reports and Chain of Custody Documentation

Soil, groundwater, and soil gas samples collected by PM were submitted under chain of custody procedures and within applicable holding times. Refer to Appendix B for the laboratory analytical report and associated chain of custody documentation.

Laboratory chain of custody documentation for TEC is included in the previous site investigation reports included in Appendix C of PM's June 2013 Phase I ESA (Appendix A).

5.0 IDENTIFICATION OF BEA AUTHOR

This BEA was conducted on July 26, 2013, by Ms. Christie L. Santiago, Senior Project Engineer and Mr. Michael T. Kulka, P.E., Principal, PM Environmental, Inc., which is prior to or within 45

days of becoming the property owner or operator. Qualification statements are provided as Appendix E.

I declare that, to the best of my professional knowledge and belief, I meet the definition of *Environmental Professional* as defined in §312.10 of 40 CFR 312 and I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquires in conformance with the standards and practices set forth in 40 CFR Part 312.

Christie Santiago
Senior Project Engineer

Michael T. Kulka, P.E.
Principal

6.0 AAI REPORT OR ASTM PHASE I ESA

As indicated in Section 1.3, PM performed a Phase I ESA of the subject property, June 25, 2013, in conformance with the scope and limitations of ASTM Practice E 1527-05 for the subject property (Parcel ID: 88-20-34-101-023) located at 100 East Maple, Troy, Michigan 48083. The scope of the Phase I ESA included consideration of hazardous substances as defined in Section 20202(1)(x) of P.A 451 of 1994, as amended, and constituted the performance of an All Appropriate Inquiry in conformance with the standards and practices set forth in 40 CFR Part 312.

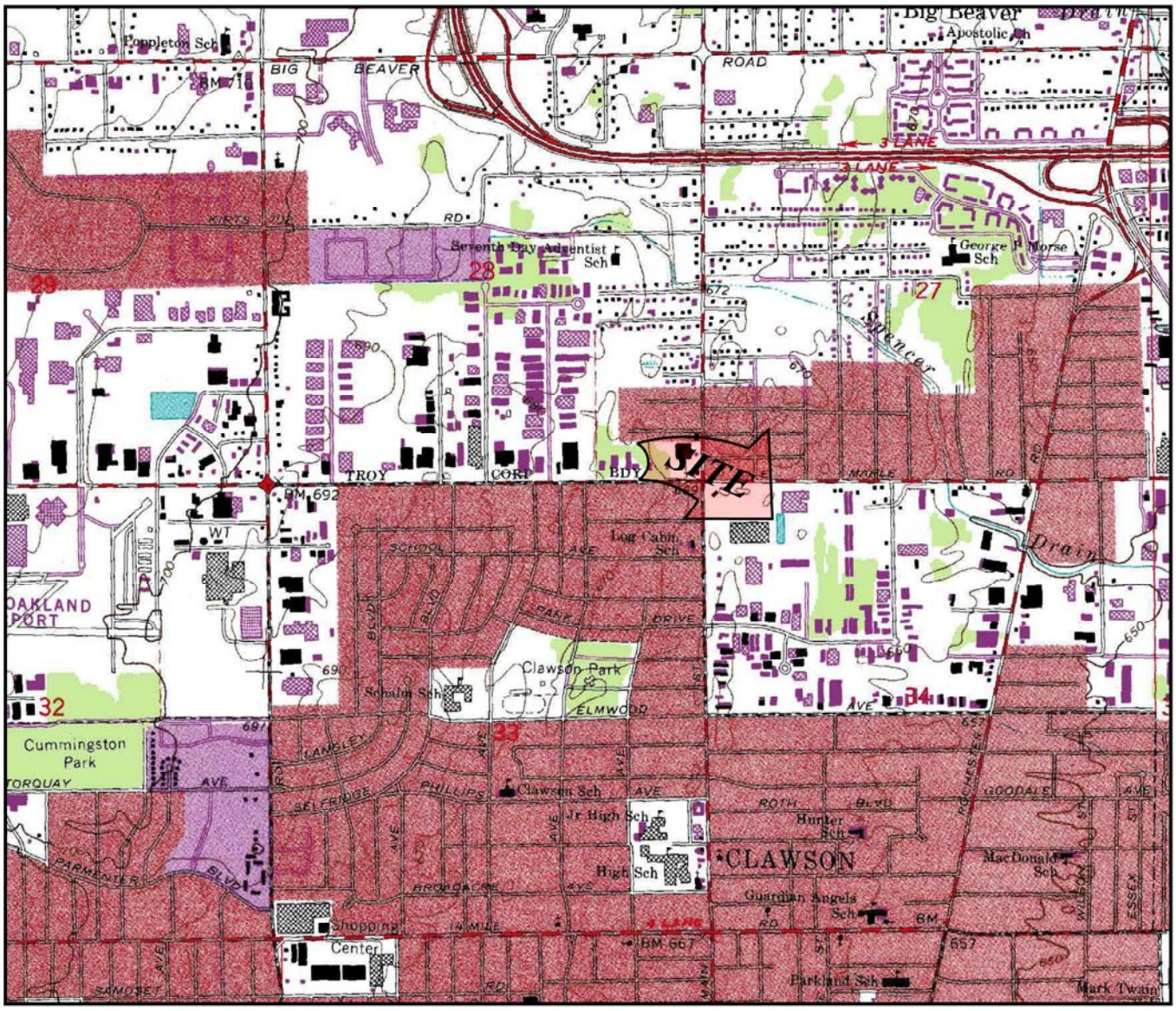
A copy of the June 2013 Phase I ESA is included in Appendix A.

7.0 REFERENCES

- MDEQ Operational Memorandum No. 1 “Part 201 Cleanup Criteria and Part 213 Risk-based Screening Levels,” Revised March 25, 2011 and in accordance with Section 20120a(1);
- MDEQ Operational Memorandum No. 4 “Site Characterization and Remediation Verification – Attachment 10, Peer Review Draft Groundwater Not in an Aquifer,” February 2007;
- MDEQ Operational Memorandum No. 2 “Sampling and Analysis,” October 22, 2004, Revised July 5, 2007;
- MDEQ Baseline Environmental Assessment Submittal Form (EQP 4025), dated March 2011;
- Modified Phase I Environmental Site Assessment (ESA), October 6, 2009, SME;
- Phase II ESA, July 14, 2010, TEC;
- Tier 1 LUST Closure Report, January 7, 2011, Materials Testing Consultants, Inc.; and
- Phase I ESA, June 25, 2013, PM.

Figures

PM ENVIRONMENTAL Environmental & Engineering Services



OAKLAND COUNTY

SCALE 1:24,000

1 MILE 1/2 MILE 0 1 MILE

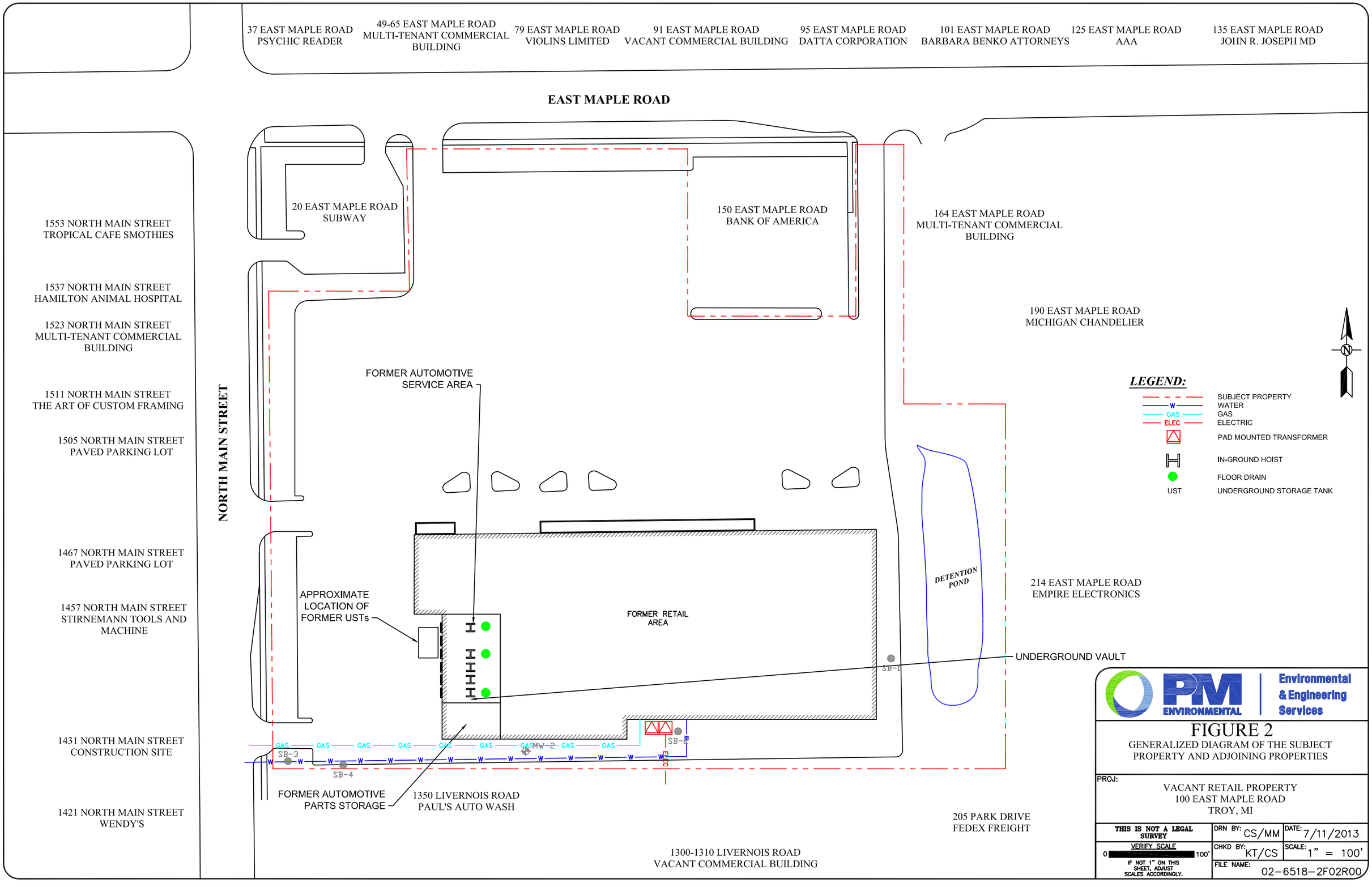
FIGURE 1

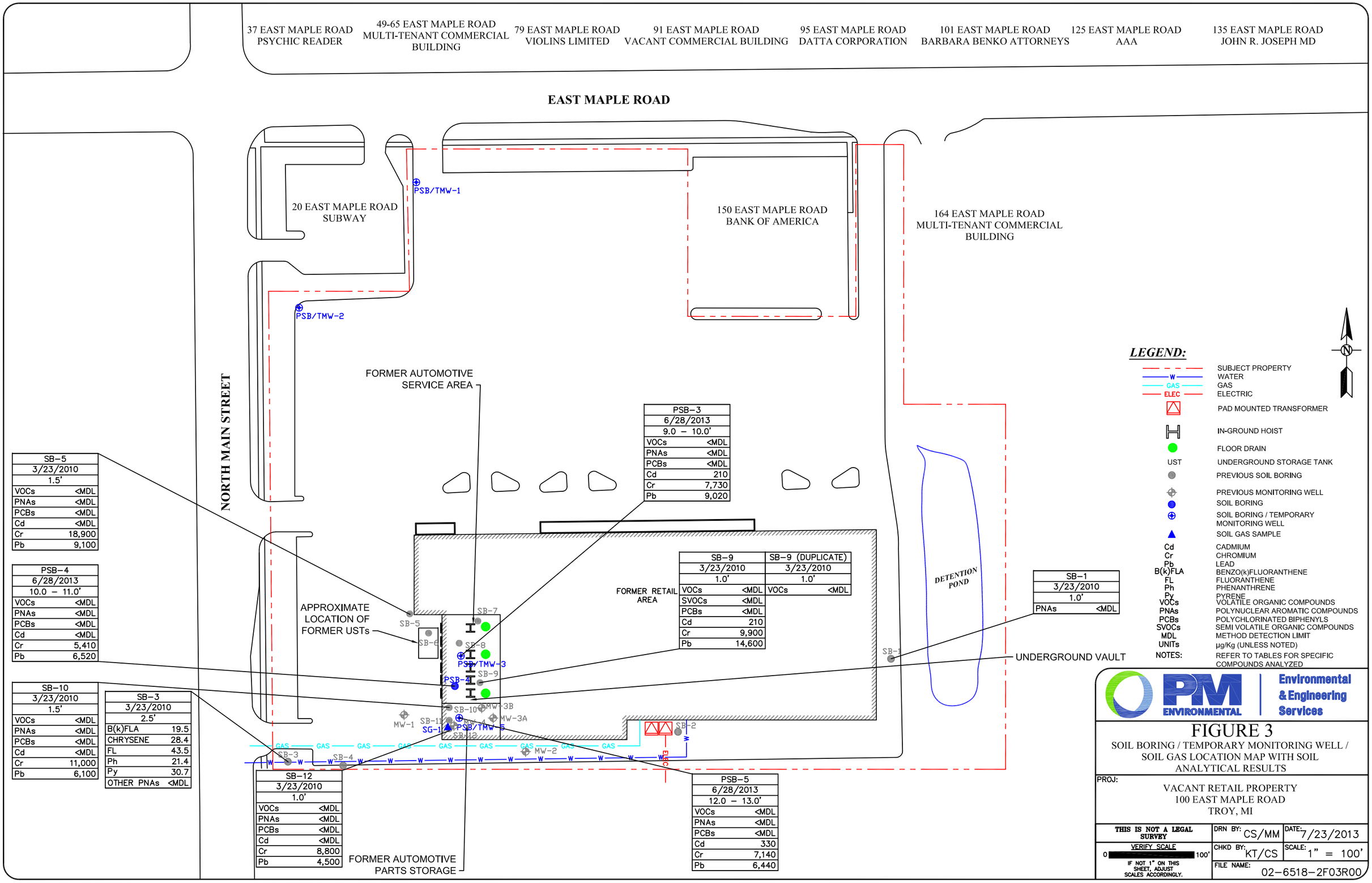
PROPERTY VICINITY MAP

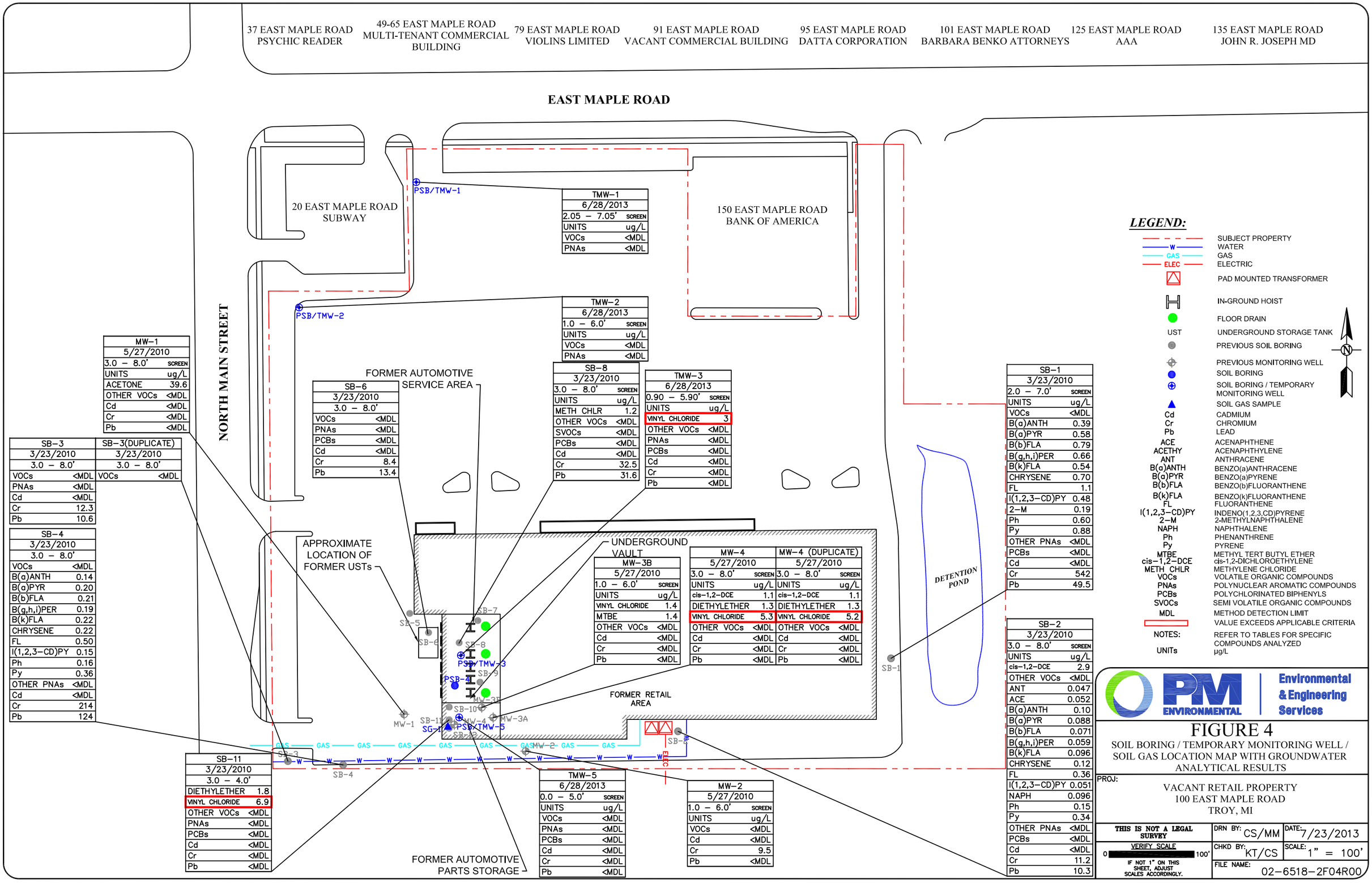
USGS, 7.5 MINUTE SERIES

BIRMINGHAM, MI QUADRANGLE, 1968. PHOTO REVISED 1981.

PM ENVIRONMENTAL Environmental & Engineering Services	PROJ: VACANT RETAIL PROPERTY 100 EAST MAPLE ROAD TROY, MI	THIS IS NOT A LEGAL SURVEY VERIFY SCALE 0 — 2,000' IF NOT 1" ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	DRN BY: CS/TS/MM CHKD BY: KT/AP/CS FILE NAME: 02-6518-2F01R00	DATE: 7/11/2013 SCALE: 1" = 2,000'


37 EAST MAPLE ROAD
PSYCHIC READER
49-65 EAST MAPLE ROAD
MULTI-TENANT COMMERCIAL BUILDING
79 EAST MAPLE ROAD
VIOLINS LIMITED
91 EAST MAPLE ROAD
VACANT COMMERCIAL BUILDING
95 EAST MAPLE ROAD
DATTA CORPORATION
101 EAST MAPLE ROAD
BARBARA BENKO ATTORNEYS
125 EAST MAPLE ROAD
AAA
135 EAST MAPLE ROAD
JOHN R. JOSEPH MD
EAST MAPLE ROAD
20 EAST MAPLE ROAD
SUBWAY
150 EAST MAPLE ROAD
BANK OF AMERICA
164 EAST MAPLE ROAD
MULTI-TENANT COMMERCIAL BUILDING
190 EAST MAPLE ROAD
MICHIGAN CHANDELIER
1553 NORTH MAIN STREET
TROPICAL CAFE SMOTHIES
1537 NORTH MAIN STREET
HAMILTON ANIMAL HOSPITAL
1523 NORTH MAIN STREET
MULTI-TENANT COMMERCIAL BUILDING
1511 NORTH MAIN STREET
THE ART OF CUSTOM FRAMING
1505 NORTH MAIN STREET
PAVED PARKING LOT
NORTH MAIN STREET
FORMER AUTOMOTIVE SERVICE AREA
LEGEND:
SUBJECT PROPERTY
WATER
GAS
ELECTRIC
PAD MOUNTED TRANSFORMER
IN-GROUND HOIST
FLOOR DRAIN
UST
UNDERGROUND STORAGE TANK
N
1467 NORTH MAIN STREET
PAVED PARKING LOT
1457 NORTH MAIN STREET
STIRNEMANN TOOLS AND MACHINE
APPROXIMATE LOCATION OF FORMER USTs
FORMER RETAIL AREA
DETENTION POND
214 EAST MAPLE ROAD
EMPIRE ELECTRONICS
UNDERGROUND VAULT
SB-1
SB-2
SB-3
SB-4
MW-2
GAS
W
ELEC
1431 NORTH MAIN STREET
CONSTRUCTION SITE
FORMER AUTOMOTIVE PARTS STORAGE
1350 LIVERNOIS ROAD
PAUL'S AUTO WASH
1421 NORTH MAIN STREET
WENDY'S
205 PARK DRIVE
FEDEX FREIGHT
1300-1310 LIVERNOIS ROAD
VACANT COMMERCIAL BUILDING
PM ENVIRONMENTAL
Environmental & Engineering Services
FIGURE 2
GENERALIZED DIAGRAM OF THE SUBJECT PROPERTY AND ADJOINING PROPERTIES
PROJ:
VACANT RETAIL PROPERTY
100 EAST MAPLE ROAD
TROY, MI
THIS IS NOT A LEGAL SURVEY
VERIFY SCALE
0 100'
IF NOT 1" ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
DRN BY: CS/MM
DATE: 7/11/2013
CHKD BY: KT/CS
SCALE: 1" = 100'
FILE NAME: 02-6518-2F02R00


37 EAST MAPLE ROAD
PSYCHIC READER
49-65 EAST MAPLE ROAD
MULTI-TENANT COMMERCIAL BUILDING
79 EAST MAPLE ROAD
VIOLINS LIMITED
91 EAST MAPLE ROAD
VACANT COMMERCIAL BUILDING
95 EAST MAPLE ROAD
DATTA CORPORATION
101 EAST MAPLE ROAD
BARBARA BENKO ATTORNEYS
125 EAST MAPLE ROAD
AAA
135 EAST MAPLE ROAD
JOHN R. JOSEPH MD
EAST MAPLE ROAD
NORTH MAIN STREET
20 EAST MAPLE ROAD
SUBWAY
150 EAST MAPLE ROAD
BANK OF AMERICA
164 EAST MAPLE ROAD
MULTI-TENANT COMMERCIAL BUILDING
PSB/TMW-1
PSB/TMW-2
PSB/TMW-3
PSB/TMW-4
PSB/TMW-5
FORMER AUTOMOTIVE SERVICE AREA
FORMER RETAIL AREA
APPROXIMATE LOCATION OF FORMER USTs
FORMER AUTOMOTIVE PARTS STORAGE
DETENTION POND
UNDERGROUND VAULT
SB-1
SB-2
SB-3
SB-4
SB-5
SB-6
SB-7
SB-8
SB-9
SB-10
SB-11
SB-12
MW-1
MW-2
MW-3A
MW-3B
SG-1
GAS
W
ELEC
PSB-3
6/28/2013
9.0 – 10.0'
VOCs <MDL
PNAs <MDL
PCBs <MDL
Cd 210
Cr 7,730
Pb 9,020
SB-5
3/23/2010
1.5'
VOCs <MDL
PNAs <MDL
PCBs <MDL
Cd <MDL
Cr 18,900
Pb 9,100
PSB-4
6/28/2013
10.0 – 11.0'
VOCs <MDL
PNAs <MDL
PCBs <MDL
Cd <MDL
Cr 5,410
Pb 6,520
SB-10
3/23/2010
1.5'
VOCs <MDL
PNAs <MDL
PCBs <MDL
Cd <MDL
Cr 11,000
Pb 6,100
SB-3
3/23/2010
2.5'
B(k)FLA 19.5
CHRYSENE 28.4
FL 43.5
Ph 21.4
Py 30.7
OTHER PNAs <MDL
SB-12
3/23/2010
1.0'
VOCs <MDL
PNAs <MDL
PCBs <MDL
Cd <MDL
Cr 8,800
Pb 4,500
SB-9
3/23/2010
1.0'
VOCs <MDL
SVOCs <MDL
PCBs <MDL
Cd 210
Cr 9,900
Pb 14,600
SB-9 (DUPLICATE)
3/23/2010
1.0'
VOCs <MDL
PSB-5
6/28/2013
12.0 – 13.0'
VOCs <MDL
PNAs <MDL
PCBs <MDL
Cd 330
Cr 7,140
Pb 6,440
SB-1
3/23/2010
1.0'
PNAs <MDL
LEGEND:
SUBJECT PROPERTY
WATER
GAS
ELECTRIC
PAD MOUNTED TRANSFORMER
IN-GROUND HOIST
FLOOR DRAIN
UST UNDERGROUND STORAGE TANK
PREVIOUS SOIL BORING
PREVIOUS MONITORING WELL
SOIL BORING
SOIL BORING / TEMPORARY MONITORING WELL
SOIL GAS SAMPLE
Cd CADMIUM
Cr CHROMIUM
Pb LEAD
B(k)FLA BENZO(k)FLUORANTHENE
FL FLUORANTHENE
Ph PHENANTHRENE
Py PYRENE
VOCs VOLATILE ORGANIC COMPOUNDS
PNAs POLYNUCLEAR AROMATIC COMPOUNDS
PCBs POLYCHLORINATED BIPHENYLS
SVOCs SEMI VOLATILE ORGANIC COMPOUNDS
MDL METHOD DETECTION LIMIT
UNITs µg/Kg (UNLESS NOTED)
NOTES: REFER TO TABLES FOR SPECIFIC COMPOUNDS ANALYZED
N
PM ENVIRONMENTAL
Environmental & Engineering Services
FIGURE 3
SOIL BORING / TEMPORARY MONITORING WELL / SOIL GAS LOCATION MAP WITH SOIL ANALYTICAL RESULTS
PROJ:
VACANT RETAIL PROPERTY
100 EAST MAPLE ROAD
TROY, MI
THIS IS NOT A LEGAL SURVEY
VERIFY SCALE
0 100'
IF NOT 1" ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
DRN BY: CS/MM
DATE: 7/23/2013
CHKD BY: KT/CS
SCALE: 1" = 100'
FILE NAME: 02-6518-2F03R00


37 EAST MAPLE ROAD
PSYCHIC READER
49-65 EAST MAPLE ROAD
MULTI-TENANT COMMERCIAL BUILDING
79 EAST MAPLE ROAD
VIOLINS LIMITED
91 EAST MAPLE ROAD
VACANT COMMERCIAL BUILDING
95 EAST MAPLE ROAD
DATTA CORPORATION
101 EAST MAPLE ROAD
BARBARA BENKO ATTORNEYS
125 EAST MAPLE ROAD
AAA
135 EAST MAPLE ROAD
JOHN R. JOSEPH MD
EAST MAPLE ROAD
NORTH MAIN STREET
20 EAST MAPLE ROAD
SUBWAY
150 EAST MAPLE ROAD
BANK OF AMERICA
DETENTION POND
FORMER AUTOMOTIVE SERVICE AREA
APPROXIMATE LOCATION OF FORMER USTs
UNDERGROUND VAULT
FORMER RETAIL AREA
FORMER AUTOMOTIVE PARTS STORAGE
PSB/TMW-1
PSB/TMW-2
PSB/TMW-3
PSB/TMW-4
PSB/TMW-5
SG-1
SB-1
SB-2
SB-3
SB-4
SB-5
SB-6
SB-7
SB-8
SB-9
SB-10
SB-11
SB-12
SB-13
MW-1
MW-2
MW-3A
MW-3B
MW-4
GAS
W
ELEC
TMW-1
6/28/2013
2.05 – 7.05' SCREEN
UNITS ug/L
VOCs <MDL
PNAs <MDL
TMW-2
6/28/2013
1.0 – 6.0' SCREEN
UNITS ug/L
VOCs <MDL
PNAs <MDL
TMW-3
6/28/2013
0.90 – 5.90' SCREEN
UNITS ug/L
VINYL CHLORIDE 3
OTHER VOCs <MDL
PNAs <MDL
PCBs <MDL
Cd <MDL
Cr <MDL
Pb <MDL
TMW-5
6/28/2013
0.0 – 5.0' SCREEN
UNITS ug/L
VOCs <MDL
PNAs <MDL
PCBs <MDL
Cd <MDL
Cr <MDL
Pb <MDL
MW-1
5/27/2010
3.0 – 8.0' SCREEN
UNITS ug/L
ACETONE 39.6
OTHER VOCs <MDL
Cd <MDL
Cr <MDL
Pb <MDL
SB-3
3/23/2010
3.0 – 8.0'
VOCs <MDL
PNAs <MDL
Cd <MDL
Cr 12.3
Pb 10.6
SB-3(DUPLICATE)
3/23/2010
3.0 – 8.0'
VOCs <MDL
SB-4
3/23/2010
3.0 – 8.0'
VOCs <MDL
B(a)ANTH 0.14
B(a)PYR 0.20
B(b)FLA 0.21
B(g,h,i)PER 0.19
B(k)FLA 0.22
CHRYSENE 0.22
FL 0.50
I(1,2,3-CD)PY 0.15
Ph 0.16
Py 0.36
OTHER PNAs <MDL
Cd <MDL
Cr 214
Pb 124
SB-6
3/23/2010
3.0 – 8.0'
VOCs <MDL
PNAs <MDL
PCBs <MDL
Cd <MDL
Cr 8.4
Pb 13.4
SB-8
3/23/2010
3.0 – 8.0' SCREEN
UNITS ug/L
METH CHLR 1.2
OTHER VOCs <MDL
SVOCs <MDL
PCBs <MDL
Cd <MDL
Cr 32.5
Pb 31.6
SB-11
3/23/2010
3.0 – 4.0'
DIETHYLETHER 1.8
VINYL CHLORIDE 6.9
OTHER VOCs <MDL
PNAs <MDL
PCBs <MDL
Cd <MDL
Cr <MDL
Pb <MDL
MW-3B
5/27/2010
1.0 – 6.0' SCREEN
UNITS ug/L
VINYL CHLORIDE 1.4
MTBE 1.4
OTHER VOCs <MDL
Cd <MDL
Cr <MDL
Pb <MDL
MW-4
5/27/2010
3.0 – 8.0' SCREEN
UNITS ug/L
cis-1,2-DCE 1.1
DIETHYLETHER 1.3
VINYL CHLORIDE 5.3
OTHER VOCs <MDL
Cd <MDL
Cr <MDL
Pb <MDL
MW-4 (DUPLICATE)
5/27/2010
3.0 – 8.0' SCREEN
UNITS ug/L
cis-1,2-DCE 1.1
DIETHYLETHER 1.3
VINYL CHLORIDE 5.2
OTHER VOCs <MDL
Cd <MDL
Cr <MDL
Pb <MDL
MW-2
5/27/2010
1.0 – 6.0' SCREEN
UNITS ug/L
VOCs <MDL
Cd <MDL
Cr 9.5
Pb <MDL
SB-1
3/23/2010
2.0 – 7.0' SCREEN
UNITS ug/L
VOCs <MDL
B(a)ANTH 0.39
B(a)PYR 0.58
B(b)FLA 0.79
B(g,h,i)PER 0.66
B(k)FLA 0.54
CHRYSENE 0.70
FL 1.1
I(1,2,3-CD)PY 0.48
2-M 0.19
Ph 0.60
Py 0.88
OTHER PNAs <MDL
PCBs <MDL
Cd <MDL
Cr 542
Pb 49.5
SB-2
3/23/2010
3.0 – 8.0' SCREEN
UNITS ug/L
cis-1,2-DCE 2.9
OTHER VOCs <MDL
ANT 0.047
ACE 0.052
B(a)ANTH 0.10
B(a)PYR 0.088
B(b)FLA 0.071
B(g,h,i)PER 0.059
B(k)FLA 0.096
CHRYSENE 0.12
FL 0.36
I(1,2,3-CD)PY 0.051
NAPH 0.096
Ph 0.15
Py 0.34
OTHER PNAs <MDL
PCBs <MDL
Cd <MDL
Cr 11.2
Pb 10.3
LEGEND:
SUBJECT PROPERTY
WATER
GAS
ELECTRIC
PAD MOUNTED TRANSFORMER
IN-GROUND HOIST
FLOOR DRAIN
UST UNDERGROUND STORAGE TANK
PREVIOUS SOIL BORING
PREVIOUS MONITORING WELL
SOIL BORING
SOIL BORING / TEMPORARY MONITORING WELL
SOIL GAS SAMPLE
Cd CADMIUM
Cr CHROMIUM
Pb LEAD
ACE ACENAPHTHENE
ACETHY ACENAPHTHYLENE
ANT ANTHRACENE
B(a)ANTH BENZO(a)ANTHRACENE
B(a)PYR BENZO(a)PYRENE
B(b)FLA BENZO(b)FLUORANTHENE
B(k)FLA BENZO(k)FLUORANTHENE
FL FLUORANTHENE
I(1,2,3-CD)PY INDENO(1,2,3,CD)PYRENE
2-M 2-METHYLNAPHTHALENE
NAPH NAPHTHALENE
Ph PHENANTHRENE
Py PYRENE
MTBE METHYL TERT BUTYL ETHER
cis-1,2-DCE cis-1,2-DICHLOROETHYLENE
METH CHLR METHYLENE CHLORIDE
VOCs VOLATILE ORGANIC COMPOUNDS
PNAs POLYNUCLEAR AROMATIC COMPOUNDS
PCBs POLYCHLORINATED BIPHENYLS
SVOCs SEMI VOLATILE ORGANIC COMPOUNDS
MDL METHOD DETECTION LIMIT
VALUE EXCEEDS APPLICABLE CRITERIA
NOTES: REFER TO TABLES FOR SPECIFIC COMPOUNDS ANALYZED
UNITs µg/L
N
PM ENVIRONMENTAL
Environmental & Engineering Services
FIGURE 4
SOIL BORING / TEMPORARY MONITORING WELL / SOIL GAS LOCATION MAP WITH GROUNDWATER ANALYTICAL RESULTS
PROJ:
VACANT RETAIL PROPERTY
100 EAST MAPLE ROAD
TROY, MI
THIS IS NOT A LEGAL SURVEY
VERIFY SCALE
0 100'
IF NOT 1" ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
DRN BY: CS/MM
DATE: 7/23/2013
CHKD BY: KT/CS
SCALE: 1" = 100'
FILE NAME: 02-6518-2F04R00

37 EAST MAPLE ROAD
PSYCHIC READER

49-65 EAST MAPLE ROAD
MULTI-TENANT COMMERCIAL BUILDING

79 EAST MAPLE ROAD
VIOLINS LIMITED

91 EAST MAPLE ROAD
VACANT COMMERCIAL BUILDING

95 EAST MAPLE ROAD
DATTA CORPORATION

101 EAST MAPLE ROAD
BARBARA BENKO ATTORNEYS

125 EAST MAPLE ROAD
AAA

135 EAST MAPLE ROAD
JOHN R. JOSEPH MD

EAST MAPLE ROAD

1553 NORTH MAIN STREET
TROPICAL CAFE SMOTHIES

1537 NORTH MAIN STREET
HAMILTON ANIMAL HOSPITAL

1523 NORTH MAIN STREET
MULTI-TENANT COMMERCIAL BUILDING

1511 NORTH MAIN STREET
THE ART OF CUSTOM FRAMING

1505 NORTH MAIN STREET
PAVED PARKING LOT

NORTH MAIN STREET

1467 NORTH MAIN STREET
PAVED PARKING LOT

1457 NORTH MAIN STREET
STIRNEMANN TOOLS AND MACHINE

1431 NORTH MAIN STREET
CONSTRUCTION SITE

1421 NORTH MAIN STREET
WENDY'S

20 EAST MAPLE ROAD
SUBWAY

150 EAST MAPLE ROAD
BANK OF AMERICA

164 EAST MAPLE ROAD
MULTI-TENANT COMMERCIAL BUILDING

190 EAST MAPLE ROAD
MICHIGAN CHANDELIER

FORMER AUTOMOTIVE SERVICE AREA

APPROXIMATE LOCATION OF FORMER USTs

FORMER RETAIL AREA

UNDERGROUND VAULT

DETENTION POND

214 EAST MAPLE ROAD
EMPIRE ELECTRONICS

FORMER AUTOMOTIVE PARTS STORAGE

1350 LIVERNOIS ROAD
PAUL'S AUTO WASH

205 PARK DRIVE
FEDEX FREIGHT

1300-1310 LIVERNOIS ROAD
VACANT COMMERCIAL BUILDING

PSB/TMW-1
PSB/TMW-2
PSB/TMW-3
PSB-4
PSB/TMW-5
SB-1
SB-2
SB-3
SB-4
SB-5
SB-6
SB-7
SB-8
SB-9
SB-10
SB-11
SB-12
MW-1
MW-2
MW-3A
MW-3B
MW-4
SG-1

SSG-1	
6/28/2013	
SUB-SLAB	
ACETONE	520
B	7.1
CARBON DISF	9.2
Chl	0.62
CYCLOHEXANE	4.3
DICLFMETH	0.52
ETHANOL	24.3
E	3.9
4-ETHYLTOLUENE	1.1
HEPTANE	9.6
HEXANE	23.8
2-HEXANONE	2.1
ISOP ALCOHOL	2.7
METH CHLR	1.5
MEK	19.4
MIK	22.9
MTBE	0.17
1,2,4-TMB	4.7
1,3,5-TMB	1.4
2,2,4-TMP	0.75
TBA	3.5
PCE	4
TETRAHYDROFURAN	1.6
T	26.4
TCE	0.81
TRICLFL METH	0.77
X	15.3
OTHER VOCs	<MDL

LEGEND:

- SUBJECT PROPERTY
- W — WATER
- GAS — GAS
- ELEC — ELECTRIC
- PAD MOUNTED TRANSFORMER
- IN-GROUND HOIST
- FLOOR DRAIN
- UST — UNDERGROUND STORAGE TANK
- PREVIOUS SOIL BORING
- PREVIOUS MONITORING WELL
- SOIL BORING
- SOIL BORING / TEMPORARY MONITORING WELL
- SOIL GAS SAMPLE

B	BENZENE
T	TOLUENE
E	ETHYLBENZENE
X	XYLENES
1,2,4-TMB	1,2,4-TRIMETHYLBENZENE
1,3,5-TMB	1,3,5-TRIMETHYLBENZENE
Chl	CHLOROFORM
MTBE	METHYL TERT BUTYL ETHER
TCE	TRICHLOROETHENE
PCE	TETRACHLOROETHENE
MEK	2-BUTANONE (MEK)
VOCs	VOLATILE ORGANIC COMPOUNDS
MDL	METHOD DETECTION LIMIT
PPBV	PART PER BILLION BY VOLUME
NOTES:	REFER TO TABLES FOR SPECIFIC COMPOUNDS ANALYZED
MIK	METHYL ISOBUTYL KETONE
TBA	TERTIARYBUTYLALCOHOL
METH CHLR	METHYLENE CHLORIDE
2,2,4-TMP	2,2,4-TRIMETHYLPENTANE
DICLFMETH	DICHLORODIFLUOROMETHANE
CARBON DISF	CARBON DISULFIDE
TRICLFL METH	TRICHLOROFLUOROMETHANE

PM ENVIRONMENTAL | Environmental & Engineering Services

FIGURE 5

SOIL BORING / TEMPORARY MONITORING WELL / SOIL GAS LOCATION MAP WITH SOIL GAS ANALYTICAL RESULTS

PROJ: VACANT RETAIL PROPERTY
100 EAST MAPLE ROAD
TROY, MI

THIS IS NOT A LEGAL SURVEY	DRN BY: CS/MM	DATE: 7/23/2013
VERIFY SCALE 0 [redacted] 100' IF NOT 1" ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	CHKD BY: KT/CS	SCALE: 1" = 100'
	FILE NAME: 02-6518-2F05R00	

Tables

PM ENVIRONMENTAL Environmental & Engineering Services

TABLE 1 (1 OF 1)
SUMMARY OF SOIL ANALYTICAL RESULTS
VOLATILE ORGANIC COMPOUNDS, POLYNUCEAR AROMATIC COMPOUNDS, POLYCHLORINATED BIPHENYLS and METALS
100 EAST MAPLE, TROY, MICHIGAN
PM PROJECT # 02-6518-2

Volatile Organic Compounds, Polynuclear Aromatic Compmounds, Polychlorinated Biphenyls (PCBs) & Metals (Cadmium, Chromium, & Lead) (µg/Kg)			Volatile Organic Compounds	Polynuclear Aromatic Compounds	Polychlorinated Biphenyls	Cadmium	Chromium	Lead Total[1]
Chemical Abstract Service Number (CAS#)			Various	Various	1336363	7440439	16065831	7439921
Sample ID	**Sample Date**	**Sample Depth (bgs)**	**VOCs**	**PNAs**	**PCBs**	**Metals**		
PSB-3	06/28/2013	9.0-10.0	ND	ND	<330	210	7,730	9,020
PSB-4	06/28/2013	10.0-11.0	ND	ND	<330	<200	5,410	6,520
PSB-5	06/28/2013	12.0-13.0	ND	ND	<330	330	7,140	6,440
Operational Memorandum No. 1: Part 201 Cleanup Criteria and Part 213 Risk-based Screening Levels (RBSLs), Attachment 1: Soil Tables 2 and 3 Residential and Nonresidential Part 201 Generic Cleanup Criteria and Screening Levels; Part 213 Tier 1 RBSLs, September 28, 2012								
Residential (µg/Kg)								
Statewide Default Background Levels			NA	NA	NA	1,200	18,000	21,000
Drinking Water Protection (Res DWP)			Various	Various	NLL	6,000	30,000	700,000
Groundwater Surface Water Interface Protection (GSIP)			Various	Various	NLL	7,730 {G,X}	3300 (VI) 6.9E+9 (III)	8.3E+6 {G,X}
GSIP Human Drinking Water			Various	Various	NA	3,000 {G,X}	3.5E+9 {G,X}	2.5E+6 {G,X}
Groundwater Contact Protection (GCP)			Various	Various	NLL	2.3E+08	1.4E+08	ID
Soil Volatilization to Indoor Air Inhalation (Res SVII)			Various	Various	3.0E+06	NLV	NLV	NLV
Ambient Air Infinite Source Volatile Soil Inhalation (Res VSI)			Various	Various	240,000	NLV	NLV	NLV
Ambient Air Finite VSI for 5 Meter Source Thickness			Various	Various	7.9E+06	NLV	NLV	NLV
Ambient Air Finite VSI for 2 Meter Source Thickness			Various	Various	7.9E+06	NLV	NLV	NLV
Ambient Air Particulate Soil Inhalation (Res PSI)			Various	Various	5.2E+06	1.70E+06	260,000	NA
Direct Contact (Res DC)			Various	Various	{T}	550,000	2.50E+06	400,000
Nonresidential (µg/Kg)								
Drinking Water Protection (Nonres DWP)			Various	Various	NLL	6,000	30,000	700,000
Soil Volatilization to Indoor Air Inhalation (Nonres SVII)			Various	Various	1.6E+07	NLV	NLV	NLV
Ambient Air Infinite Source Volatile Soil Inhalation (Nonres VSI)			Various	Various	810,000	NLV	NLV	NLV
Ambient Air Finite VSI for 5 Meter Source Thickness			Various	Various	2.8E+07	NLV	NLV	NLV
Ambient Air Finite VSI for 2 Meter Source Thickness			Various	Various	2.8E+07	NLV	NLV	NLV
Ambient Air Particulate Soil Inhalation (Nonres PSI)			Various	Various	6.5E+06	2.2E+06	240,000	NA
Direct Contact (Nonres DC)			Various	Various	{T}	2.1E+06	9.2E+06	900,000 (DD)
Screening Levels (µg/Kg)								
Soil Saturation Concentration Screening Levels (Csat)			Various	Various	NA	NA	NA	NA

{G} Metal GSIP Criteria for Surface Water Not Protected for Drinking Water Use based on 417.5 mg/L CaCO3 Hardness: Station ID 630003, River Rouge AT Wattles Road Bridge; City of Troy, MI.

{T} Refer to the Toxic Substance Control Act (TSCA), 40 CFR 761, Subparts D and G, as amended, to determine the applicability of TSCA cleanup standards. Alternatives to compliance with the standards listed below are possible under Subpart D. New Releases may be subject to the standards identified in Subpart G. Use Part 201 soil direct contact criteria in the table below where TSCA standards are not applicable.

LAND USE CATEGORY	TSCA, Subpart D	Part 201
Residential	1,000 µg/Kg, or	4,000 µg/Kg
Nonresidential	10,000 µg/Kg if	16,000 µg/Kg

Applicable Criteria Exceeded
BOLD Value Exceeds Applicable Criteria
bgs Below Grade Surface (feet)
1 Maximum of analyzed or calculated total lead value.

TABLE 2 (1 OF 1)
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
VOLATILE ORGANIC COMPOUNDS, POLYNUCLEAR AROMATIC COMPOUNDS, POLYCHLORINATED BIPHENYLS and METALS
100 EAST MAPLE, TROY, MICHIGAN
PM PROJECT # 02-6518-2

Volatile Organic Compounds, Polynuclear Aromatic Compounds, Polychlorinated Biphenyls (PCBs), & Metals (Cadmium, Chromium, & Lead) (µg/L)				Vinyl chloride	Other VOCs	Polynuclear Aromatic Compounds	Polychlorinated Biphenyls	Cadmium	Chromium	Lead
Chemical Abstract Service Number (CAS#)				75014	Various	Various	1336363	7440439	16065831	7439921
Sample ID	**Sample Date**	**Screen Depth (bgs)**	**Depth to Groundwater (bgs)**	**VOCs**		**PNAs**	**PCBs**	**Metals**		
TMW-1	06/28/2013	2.05-7.05	2.2	<1	ND	ND	NA	NA	NA	NA
TMW-2	06/28/2013	1.0-6.0	3.0	<1	ND	ND	NA	NA	NA	NA
TMW-3	06/28/2013	0.90-5.90	1.12	**3**	ND	ND	<0.1	<0.5	<5	<3
TMW-5	06/28/2013	0.0-5.0	0.90	<1	ND	ND	<0.1	<0.5	<5	<3
Operational Memorandum No. 1: Part 201 Cleanup Criteria and Part 213 Risk-based Screening Levels (RBSLs), Attachment 1: Table 1. Groundwater: Residential and Nonresidential Part 201 Generic Cleanup Criteria and Screening Levels; Part 213 Tier 1 RBSLs, September 28, 2012										
Residential/Nonresidential (µg/L)										
Residential Drinking Water (Res DW)				2.0 {A}	Various	Various	0.5 {A}	5.0 {A}	100 {A}	4.0 {L}
Residential Health Based Drinking Water Values				NL	Various	Various	NL	NL	NL	NL
Nonresidential Drinking Water (Nonres DW)				2.0 {A}	Various	Various	0.5 {A}	5.0 {A}	100 {A}	4.0 {L}
Nonresidential Health Based Drinking Water Values				NL	Various	Various	NL	NL	NL	NL
Groundwater Surface Water Interface (GSI)				13 {X}	Various	Various	0.2 {M}; 2.6E-5	6.4 {G,X}	11 (VI) 240 (III)	47 {G,X}
GSI Final Acute Values (FAV) [1]				17,000	Various	Various	ID	{G}	{G}	{G}
GSI Human Drinking Water				NA	Various	Various	NA	2.5 {G,X}	120 {G,X}	14 {G,X}
Residential Groundwater Volatilization to Indoor Air Inhalation (Res GVII) [2]				1,100	Various	Various	45 {S}	NLV	NLV	NLV
Nonresidential Groundwater Volatilization to Indoor Air Inhalation (Nonres GVII) [2]				13,000	Various	Various	45 {S}	NLV	NLV	NLV
Groundwater Contact (GC)				1,000	Various	Various	3.3 {AA}	1.90E+05	4.60E+05	ID
Screening Levels (µg/L)										
Residential Groundwater Vapor Intrusion Screening Levels [3]				4.8	Various	Various	4.5	NLV	NLV	NLV
Nonresidential Groundwater Vapor Intrusion Screening Levels [3]				19	Various	Various	18	NLV	NLV	NLV
Water Solubility				2.76E+06	Various	Various	44.7	NA	NA	NA
Flammability and Explosivity Screening Level				33,000	Various	Various	ID	ID	ID	ID
Acute Inhalation Screening Level				ID	Various	Various	ID	ID	ID	ID

{G} Metal GSIP Criteria for Surface Water Not Protected for Drinking Water Use based on 417.5 mg/L CaCO3 Hardness:
Station ID 630003, River Rouge AT Wattles Road Bridge; City of Troy, MI.

Applicable Criteria/RBSL Exceeded
BOLD Value Exceeds Applicable Criteria
bgs Below Grade Surface (feet)
ND Not detected at levels above the laboratory Method Detection Limit (MDL) or Minimum Quantitative Level (MQL)
[1] Rule 323.1057 of Part 4 Water Quality Standards
[2] Tier 1 GVII Criteria based on 3 meter (or greater) groundwater depth
[3] (Program Redesign 2009 Draft) Screening Levels based on depth to groundwater less than 3 meters and not in contact with building foundation

TABLE 3 (1 OF 1)
SUMMARY OF SOIL VAPOR ANALYTICAL RESULTS
VOLATILE ORGANIC COMPOUNDS
100 EAST MAPLE, TROY, MICHIGAN
PM PROJECT # 02-6518-2

VOLATILE ORGANIC COMPOUNDS (ppbv)				Acetone	Benzene	Carbon disulfide	Chloroform	Cyclohexane	Dichlorodifluoromethane	Ethanol	Ethylbenzene	4-Ethyltoluene	Heptane	Hexane	2-Hexanone	Isopropyl Alcohol	Methylene chloride	Methyl ethyl ketone	Methyl Isobutyl Ketone	Methyl Tert Butyl Ether	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	2,2,4-Trimethylpentane	Tertiary Butyl Alcohol	Tetrachloroethylene	Tetrahydrofuran	Toluene	Trichloroethylene	Trichlorofluoromethane	m,p-Xylene	o-Xylene	Xylenes (total)	Other VOCs
Chemical Abstract Service Number (CAS#)				67641	71432	75150	67663	110827	75718	64175	100414	622968	142825	110543	591786	67630	75092	78933	108101	1634044	95636	108678	540841	75650	127184	109999	108883	79016	75694	1330207	95476	1330207	Various
Sample ID	**Sample Date**	**Sample Duration (min)**	**Flow Rate (ml/min)**	**VOCs**																													
SSG-1	6/28/2013	5.0		520	7.1	9.2	0.62 J	4.3	0.52 J	24.3	3.9	1.1	9.6	23.8	2.1	2.7	1.5	19.4	22.9	0.17 J	4.7	1.4	0.75 J	3.5	4	1.6	26.4	0.81	0.77 J	11	4.3	15.3	ND
MDEQ Guidance Document For The Vapor Intrusion Pathway, Policy and Procedure Number: 09-017, Appendix D Vapor Intrusion Screening Values, May 2013																																	
Residential Screening Levels (ppbv)																																	
Vapor Intrusion Shallow Sub-Slab Soil Gas Screening Levels (≤ 1.5m bgs) (SG_{VI-SS})				82,000	32	7,400	73	58,000	3.30E+05	NDC	640	NDC	28,000	6,600	250	NDC	880	56,000	24,000	27,000	1,500	1,500	25,000	NDC	170	200	44,000	12	3.30E+05	760	760	760	Various
Vapor Intrusion Deep Soil Gas Screening Levels (SG_{VI})				8.20E+05	320	74,000	730	5.80E+05	3.30E+06	NDC	6,400	NDC	2.80E+05	66,000	2,500	NDC	8,800	5.60E+05	2.40E+05	2.70E+05	15,000	15,000	2.50E+05	NDC	1,700	2,000	4.40E+05	120	3.30E+06	7,600	7,600	7,600	Various
Nonresidential Screening Levels (ppbv)																																	
Vapor Intrusion Shallow Sub-Slab Soil Gas Screening Levels (≤ 1.5m bgs) (SG_{VI-SS})				1.40E+06	650	1.20E+05	1,500	9.70E+05	5.60E+06	NDC	13,000	NDC	4.70E+05	1.10E+05	4,100	NDC	18,000	9.40E+05	4.10E+05	4.60E+05	25,000	25,000	4.20E+05	NDC	3,300	3,400	7.40E+05	210	5.60E+06	13,000	13,000	13,000	Various
Vapor Intrusion Deep Soil Gas Screening Levels (SG_{VI})				1.40E+07	6,500	1.20E+06	15,000	9.70E+06	5.60E+07	NDC	1.30E+05	NDC	4.70E+06	1.10E+06	41,000	NDC	1.80E+05	9.40E+06	4.10E+06	4.60E+06	2.50E+05	2.50E+05	4.20E+06	NDC	33,000	34,000	7.40E+06	2100	5.60E+07	1.30E+05	1.30E+05	1.30E+05	Various
DRAFT Acute Vapor Intrusion Screening Levels for Indoor Air and Soil Gas; Residential and Nonresidential Land Use, February 2013 (ppbv)																																	
IRASL Indoor Air (AIA_{VI})				25,000	390	1,900	29	NDC	NDC	NDC	NDC	NDC	NDC	NDC	NDC	NDC	6,400	4,200	NDC	1,900	NDC	NDC	NDC	NDC	2,800	NDC	9,300	74,000	NDC	4,800	4,800	4,800	Various
IRASL Soil Gas (ASG_{VI})				8.28E+05	13,000	63,000	970	NDC	NDC	NDC	NDC	NDC	NDC	NDC	NDC	NDC	2.15E+05	1.40E+05	NDC	63,000	NDC	NDC	NDC	NDC	93,000	NDC	3.10E+05	2.48E+06	NDC	1.60E+05	1.60E+05	1.60E+05	Various

Applicable Criteria/RBSL Exceeded

BOLD Value Exceeds Applicable Criteria

bgs Below Ground Surface (feet)

ND Not detected at levels above the laboratory Method Detection Limit (MDL) or Minimum Quantitative Level (MQL)

NLV A hazardous substance is "Not Likely to Volatilize". This designation is given to any hazardous substance with a Henry's Law Constant of less than 1.0×10^{-5} atm-m^3/mol.

ID "Insufficient Data" was available to the MDEQ in order to develop a criterion at the date of publication.

NDC "No Defined Criteria" by the Michigan Department of Environmental Quality (MDEQ)

[1] The IAC and SGC presented in this table are health-based values. The applicable IAC and SGC are based on the higher of the health-based value and the appropriate analytical reporting limit.

IRASL Immediate Response Acute Vapor Intrusion Screening Levels

RL Reporting Limit

E Indicates value exceeds calibration range

J Indicates estimated value

B Indicates analyte found in associated method blank

N Indicates presumptive evidence of a compound

Table 1: Soil Analytical Data Summary

Parameter	Chemical Abstract Service Number	Michigan DNRE Generic Residential Cleanup Criteria (GRCC) units = µg/kg									Sample ID, Depth, PID Reading, Collection Date, and Results units = µg/kg							
			Groundwater Protection			Indoor Air	Ambient Air (Y)		Direct Contact									
		Statewide Default Background Levels	Drinking Water Protection Criteria & RBSLs	Groundwater Surface Water Interface Protection Criteria & RBSLs	Groundwater Contact Protection Criteria & RBSLs	Soil Volatilization to Indoor Air Inhalation Criteria & RBSLs	Infinite Source Volatile Soil Inhalation Criteria (VSIC) & RBSLs	Particulate Soil Inhalation Criteria & RBSLs	Direct Contact Criteria & RBSLs	Soil Saturation Concentration Screening Levels	SB-1-1 1' bgs 0 ppm March 23, 2010	SB-3-2.5 2.5' bgs 0 ppm March 23, 2010	SB-5-1.5 1.5' bgs 0 ppm March 23, 2010	SB-7-0.5 0.5' bgs 0 ppm March 23, 2010	SB-9-1 1' bgs 3.5 ppm March 23, 2010	SB-9-1D 1' bgs 3.5 ppm March 23, 2010	SB-10-1.5 1.5' bgs 0.5 ppm March 23, 2010	SB-12-1 1' bgs 0 ppm March 23, 2010
Total Metals																		
Cadmium (B)	7440439	1,200	6,000	(G, X)	2.3E+8	NLV	NLV	1.7E+6	5.5E+5	NA	---	---	ND	ND	ND	---	ND	ND
Chromium VI (B,H)	18540299	18,000 (total)	30,000	3,300	1.4E+8	NLV	NLV	2.6E+5	2.5E+6	NA	---	---	**18,900**	**11,200**	**9,900**	---	**11,000**	**8,800**
Lead (B)	7439921	21,000	7.0E+5	(G, X)	ID	NLV	NLV	1.0E+8	4.0E+5	NA	---	---	**9,100**	**4,800**	**14,600**	---	**6,100**	**4,500**
Polychlorinated Biphenyls (PCBs)																		
Aroclor-1016	No criteria available										---	---	ND	ND	ND	---	ND	ND
Aroclor-1221	No criteria available										---	---	ND	ND	ND	---	ND	ND
Aroclor-1232	No criteria available										---	---	ND	ND	ND	---	ND	ND
Aroclor-1242	No criteria available										---	---	ND	ND	ND	---	ND	ND
Aroclor-1248	No criteria available										---	---	ND	ND	ND	---	ND	ND
Aroclor-1254	No criteria available										---	---	ND	ND	ND	---	ND	ND
Aroclor-1260	No criteria available										---	---	ND	ND	ND	---	ND	ND
Total Polychlorinated Biphenyls (J, T)	1336363	NA	NLL	NLL	NLL	3.0E+6	2.4E+5	5.2E+6	(T)	NA	---	---	ND	ND	ND	---	ND	ND
Polynuclear Aromatics (PNAs)																		
Anthracene	120127	NA	41,000	ID	41,000	1.0E+9 (D)	1.4E+9	6.7E+10	2.3E+8	NA	ND	ND	ND	ND	---	---	ND	ND
Acenaphthene	83329	NA	3.0E+5	4,400	9.7E+5	1.9E+8	8.1E+7	1.4E+10	4.1E+7	NA	ND	ND	ND	ND	---	---	ND	ND
Acenaphthylene	208968	NA	5,900	ID	4.4E+5	1.6E+6	2.2E+6	2.3E+9	1.6E+6	NA	ND	ND	ND	ND	---	---	ND	ND
Benzo(a)anthracene (Q)	56553	NA	NLL	NLL	NLL	NLV	NLV	ID	20,000	NA	ND	ND	ND	ND	---	---	ND	ND
Benzo(a)pyrene	50328	NA	NLL	NLL	NLL	NLV	NLV	1.5E+6	2,000	NA	ND	ND	ND	ND	---	---	ND	ND
Benzo(b)fluoranthene	205992	NA	NLL	NLL	NLL	ID	ID	ID	20,000	NA	ND	ND	ND	ND	---	---	ND	ND
Benzo(g,h,i)perylene	191242	NA	NLL	NLL	NLL	NLV	NLV	8.0E+8	2.5E+6	NA	ND	ND	ND	ND	---	---	ND	ND
Benzo(k)fluoranthene	207089	NA	NLL	NLL	NLL	NLV	NLV	ID	2.0E+5	NA	ND	**19.5**	ND	ND	---	---	ND	ND
Chrysene (Q)	218019	NA	NLL	NLL	NLL	ID	ID	ID	2.0E+6	NA	ND	**28.4**	ND	ND	---	---	ND	ND
Dibenzo(a,h)anthracene (Q)	53703	NA	NLL	NLL	NLL	NLV	NLV	ID	2,000	NA	ND	ND	ND	ND	---	---	ND	ND
Fluoranthene	206440	NA	7.3E+5	5,500	7.3E+5	1.0E+9 (D)	7.4E+8	9.3E+9	4.6E+7	NA	ND	**43.5**	ND	ND	---	---	ND	ND
Fluorene	86737	NA	3.9E+5	5,300	8.9E+5	5.8E+8	1.3E+8	9.3E+9	2.7E+7	NA	ND	ND	ND	ND	---	---	ND	ND
Indeno(1,2,3-cd)pyrene	193395	NA	NLL	NLL	NLL	NLV	NLV	ID	20,000	NA	ND	ND	ND	ND	---	---	ND	ND
Naphthalene	91203	NA	35,000	870	2.1E+6	2.5E+5	3.0E+5	2.0E+8	1.6E+7	NA	ND	ND	ND	ND	---	---	ND	ND
2-Methylnaphthalene	91576	NA	57,000	ID	5.5E+6	ID	ID	ID	8.1E+6	NA	ND	ND	ND	ND	---	---	ND	ND
Phenanthrene	85018	NA	56,000	5,300	1.1E+6	2.8E+6	1.6E+5	6.7E+6	1.6E+6	NA	ND	**21.4**	ND	ND	---	---	ND	ND
Pyrene	129000	NA	4.8E+5	ID	4.8E+5	1.0E+9 (D)	6.5E+8	6.7E+9	2.9E+7	NA	ND	**30.7**	ND	ND	---	---	ND	ND
Volatile Organic Compounds (VOCs)																		
All VOCs	Varies by Compound										---	---	ND	ND	ND	ND	ND	ND
Semi-Volatile Organic Compounds (SVOCs)																		
All SVOCs	Varies by Compound										---	---	---	---	ND	---	---	---

Table 1: Soil Analytical Data Summary

Footnotes:

B - Background, as defined in R 299.5701(b), may be substituted if higher than the calculated cleanup criterion. Background levels may be less than criteria for some inorganic compounds.
D - Calculated criterion exceeds 100 percent, hence it is reduced to 100 percent or 1.0E+9 parts per billion (ppb).
G - Groundwater surface water interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water.
H - Valence-specific chromium data (Cr III and CR IV) shall be compared to valence specific cleanup criteria
J - Hazardous substance may be present is everal isomer forms. Isomer-specific concentrations shall be added together for comparison to cr
Q - Criteria for carcinogenic polycyclic aromatic hydrocarbons were developed using relative potential potencies to benzo(a)pyrene.
T - Refer to the Toxic Substances Control Act (TSCA) for cleanup standards
X - The GSI criterion shown in the generic cleanup criteria tables is not protective for surface water that is used as a drinking water source.
Y - Source size modifiers shown in the following table shall be used to determine soil inhalation criteria for ambient air when the source size is not one-half acre.
bgs - Below ground surface
bold - Values presented in bold represent exceedence of laboratory reported detection limit.
ID - Insufficient data to develop criterion.
NA - A criterion or value is not available or, in the case of background and CAS numbers, not applicable.
ND - Analyte was not detected at or above method detection limits.
NLL - Hazardous substance is not likely to leach under most soil conditions.
NLV - Hazardous substance is not likely to volatilize under most conditions.
ppm - Parts per million
µg/kg - Micrograms per kilogram (ppb).
--- Sample not analyzed for compound.
- Numbers in yellow-shaded boxes represent exceedence of relevant criteria.
- Numbers in green-shaded boxes represent relevant criteria exceeded.

Table 2: Groundwater Analytical Data Summary

Parameter	Chemical Abstract Service Number	Michigan DNRE Generic Residential Cleanup Criteria (GRCC) units = µg/l									Sample ID, Well Screen Interval Depth, Collection Date, and Results units = µg/l									
		Residential & Commercial I Drinking Water Criteria & RBSLs	Industrial & Commercial II, III & IV Drinking Water Criteria & RBSLs	Groundwater Surface Water Interface Criteria & RBSLs	Residential & Commercial I Groundwater Volatilization to Indoor Air Inhalation Criteria & RBSLs	Industrial & Commercial II, III & IV Groundwater Volatilization to Indoor Air Inhalation Criteria & RBSLs	Groundwater Contact Criteria & RBSLs	Water Solubility	Flammability and Explosivity Screening Level	Acute Inhalation Screening Level	SB-1 2'-7' bgs March 23, 2010	SB-2 3'-8' bgs March 23, 2010	SB-3 3'-8' bgs March 23, 2010	SB-3D 3'-8' bgs March 23, 2010	SB-4 3'-8' bgs March 23, 2010	SB-6 3'-8' bgs March 23, 2010	SB-8 3'-8' bgs March 23, 2010	SB-11 3'-8' bgs March 23, 2010	FB-1 Not Applicable March 23, 2010	TB-1 Not Applicable March 23, 2010
Total Metals																				
Cadmium (B)	7440439	5.0 (A)	5.0 (A)	(G,X)	NLV	NLV	1.9E+5	NA	ID	ID	ND	ND	ND	---	ND	ND	ND	ND	---	---
Chromium VI (B,H)	18540299	100 (A)	100 (A)	11	NLV	NLV	4.6E+5	NA	ID	ID	**542**	**11.2**	**12.3**	---	**214**	**8.4**	**32.5**	ND	---	---
Lead (B)	7439921	4.0 (L)	4.0 (L)	(G,X)	NLV	NLV	ID	NA	ID	ID	**49.5**	**10.3**	**10.6**	---	**124**	**13.4**	**31.6**	ND	---	---
Polychlorinated Biphenyls (PCBs)																				
Aroclor-1016	No criteria available										ND	ND	---	---	---	ND	ND	ND	---	---
Aroclor-1221	No criteria available										ND	ND	---	---	---	ND	ND	ND	---	---
Aroclor-1232	No criteria available										ND	ND	---	---	---	ND	ND	ND	---	---
Aroclor-1242	No criteria available										ND	ND	---	---	---	ND	ND	ND	---	---
Aroclor-1248	No criteria available										ND	ND	---	---	---	ND	ND	ND	---	---
Aroclor-1254	No criteria available										ND	ND	---	---	---	ND	ND	ND	---	---
Aroclor-1260	No criteria available										ND	ND	---	---	---	ND	ND	ND	---	---
Total Polychlorinated Biphenyls (J, T)	1336363	0.5 (A)	0.5 (A)	0.2 (M); 2.6E5	45 (S)	45 (S)	3.3 (AA)	44.7	ID	ID	ND	ND	---	---	---	ND	ND	ND	---	---
Polynuclear Aromatics (PNAs)																				
Anthracene	120127	43 (S)	43 (S)	ID	43 (S)	43 (S)	43 (S)	43.4	ID	ID	ND	**0.047**	ND	---	ND	ND	---	ND	---	---
Acenaphthene	83329	1,300	3,800	19	4,200 (S)	4,200 (S)	4,200 (S)	4240	ID	ID	ND	**0.052**	ND	---	ND	ND	---	ND	---	---
Acenaphthylene	208968	52	150	ID	3,900 (S)	3,900 (S)	3,900 (S)	3930	ID	ID	ND	ND	ND	---	ND	ND	---	ND	---	---
Benzo(a)anthracene (Q)	56553	2.1	8.5	ID	NLV	NLV	9.4 (S,AA)	9.4	ID	ID	**0.39**	**0.10**	ND	---	**0.14**	ND	---	ND	---	---
Benzo(a)pyrene	50328	5.0 (A)	5.0 (A)	ID	NLV	NLV	1.0 (M,AA); 0.64	1.62	ID	ID	**0.58**	**0.088**	ND	---	**0.20**	ND	---	ND	---	---
Benzo(b)fluoranthene	205992	1.5 (S, AA)	1.5 (S, AA)	ID	ID	ID	1.5 (S,AA)	1.5	ID	ID	**0.79**	**0.071**	ND	---	**0.21**	ND	---	ND	---	---
Benzo(g,h,i)perylene	191242	1.0 (M); 0.26 (S)	1.0 (M); 0.26 (S)	NA	NLV	NLV	1.0 (M,AA); 0.26 (S)	.26	ID	ID	**0.66**	**0.059**	ND	---	**0.19**	ND	---	ND	---	---
Benzo(k)fluoranthene	207089	1.0 (M); 0.8 (S)	1.0 (M); 0.8 (S)	NA	NLV	NLV	1.0 (M,AA); 0.8 (S)	.8	ID	ID	**0.54**	**0.096**	ND	---	**0.22**	ND	---	ND	---	---
Chrysene (Q)	218019	1.6 (S)	1.6 (S)	ID	ID	ID	1.6 (S,AA)	1.6	ID	ID	**0.70**	**0.12**	ND	---	**0.22**	ND	---	ND	---	---
Dibenzo(a,h)anthracene (Q)	53703	2.0 (M); 0.21	2.0 (M); 0.85	ID	NLV	NLV	2.0 (M,AA); 0.31	2.49	ID	ID	ND	ND	ND	---	ND	ND	---	ND	---	---
Fluoranthene	206440	210 (S)	210 (S)	1.6	210 (S)	210 (S)	210 (S)	206	ID	ID	**1.1**	**0.36**	ND	---	**0.50**	ND	---	ND	---	---
Fluorene	86737	880	2,000 (S)	12	2,000 (S)	2,000 (S)	2,000 (S)	1980	ID	ID	ND	ND	ND	---	ND	ND	---	ND	---	---
Indeno(1,2,3-cd)pyrene	193395	2.0 (M); 0.022 (S)	2.0 (M); 0.022 (S)	ID	NLV	NLV	2.0 (M, AA); 0.022 (S)	0.022	ID	ID	**0.48**	**0.051**	ND	---	**0.15**	ND	---	ND	---	---
Naphthalene	91203	520	1,500	13	31,000 (S)	31,000 (S)	31,000 (S)	31000	NA	31,000 (S)	ND	**0.096**	ND	---	ND	ND	---	ND	---	---
2-Methylnaphthalene	91576	260	750	ID	ID	ID	25,000 (S)	24600	ID	ID	**0.19**	ND	ND	---	ND	ND	---	ND	---	---
Phenanthrene	85018	52	150	2.4	1,000 (S)	1,000 (S)	1,000 (S)	1000	ID	ID	**0.60**	**0.15**	ND	---	**0.16**	ND	---	ND	---	---
Pyrene	129000	140 (S)	140 (S)	ID	140 (S)	140 (S)	140 (S)	135	ID	ID	0.88	**0.34**	ND	---	**0.36**	ND	---	ND	---	---
Volatile Organic Compounds (VOCs)																				
Acetone	67641	730	2,100	1,700	1.0E+9 (D,S)	1.0E+9 (D,S)	3.1E+7	1.0E+9	1.5E+7	1.0E+9 (D)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide (I, R)	75150	800	2300	ID	2.5E+5	5.5E+5	1.2E+6 (S)	1.19E+6	13,000	ID	ND	**2.9**	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	156592	70 (A)	70 (A)	620	93,000	2.1E+5	2.0+E5	3.50E+6	5.3E+5	ID	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethyl Ether	60297	10 (E)	10 (E)	ID	6.1E+7 (S)	6.1E+7 (S)	3.5E+7	6.10E+7	6.5E+5	6.10E+7 (S)	ND	ND	ND	ND	ND	ND	ND	**1.8**	ND	ND
Methylene Chloride	75092	5.0 (A)	5.0 (A)	940 (X)	2.2E+5	1.4E+6	2.2E+5	1.70E+7	ID	ID	ND	ND	ND	ND	ND	ND	**1.2**	ND	ND	ND
Methyl-tert-butyl-ether (MTBE)	1634044	40 (E)	40 (E)	730 (X)	4.7E+7 (S)	4.7E+7 (S)	6.1E+5	4.68E+7	ID	ID	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	100425	100 (A)	100 (A)	80	1.7E+5	3.1E+5 (S)	9,700	3.10E+5	1.4E+5	3.1E+5 (S)	ND	ND	ND	ND	ND	ND	ND	ND	**72.0**	ND
Vinyl Chloride	75014	2.0 (A)	2.0 (A)	15	1,100	13,000	1,000	2.76E+6	33,000	ID	ND	ND	ND	ND	ND	ND	ND	**6.9**	ND	ND
All Remaining VOCs	Varies by Compound										ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Semi-Volatile Organic Compounds (SVOCs)																				
All SVOCs	Varies by Compound										---	---	---	---	---	---	ND	---	---	---

Table 2: Groundwater Analytical Data Summary

Parameter	Chemical Abstract Service Number	Michigan DNRE Generic Residential Cleanup Criteria (GRCC) units = µg/l									Sample ID, Well Screen Interval Depth, Collection Date, and Results units = µg/l						
		Residential & Commercial I Drinking Water Criteria & RBSLs	Industrial & Commercial II, III & IV Drinking Water Criteria & RBSLs	Groundwater Surface Water Interface Criteria & RBSLs	Residential & Commercial I Groundwater Volatilization to Indoor Air Inhalation Criteria & RBSLs	Industrial & Commercial II, III & IV Groundwater Volatilization to Indoor Air Inhalation Criteria & RBSLs	Groundwater Contact Criteria & RBSLs	Water Solubility	Flammability and Explosivity Screening Level	Acute Inhalation Screening Level	MW1-052710 3'-8' bgs May 27, 2010	MW2-052710 1'-6' bgs May 27, 2010	MW3-052710 3'-8' bgs May 27, 2010	MW4A-052710 3'-8' bgs May 27, 2010	MW4B-052710 3'-8' bgs May 27, 2010	TB-052710 Not Applicable May 27, 2010	EB-052710 Not Applicable May 27, 2010
Total Metals																	
Cadmium (B)	7440439	5.0 (A)	5.0 (A)	(G,X)	NLV	NLV	1.9E+5	NA	ID	ID	ND	ND	ND	ND	ND	---	ND
Chromium VI (B,H)	18540299	100 (A)	100 (A)	11	NLV	NLV	4.6E+5	NA	ID	ID	ND	**9.5**	ND	ND	ND	---	ND
Lead (B)	7439921	4.0 (L)	4.0 (L)	(G,X)	NLV	NLV	ID	NA	ID	ID	ND	ND	ND	ND	ND	---	ND
Volatile Organic Compounds (VOCs)																	
Acetone	67641	730	2,100	1,700	1.0E+9 (D,S)	1.0E+9 (D,S)	3.1E+7	1.0E+9	1.5E+7	1.0E+9 (D)	**39.6**	ND	ND	ND	ND	ND	ND
Carbon Disulfide (I, R)	75150	800	2300	ID	2.5E+5	5.5E+5	1.2E+6 (S)	1.19E+6	13,000	ID	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	156592	70 (A)	70 (A)	620	93,000	2.1E+5	2.0+E5	3.50E+6	5.3E+5	ID	ND	ND	ND	**1.1**	**1.1**	ND	ND
Diethyl Ether	60297	10 (E)	10 (E)	ID	6.1E+7 (S)	6.1E+7 (S)	3.5E+7	6.10E+7	6.5E+5	6.10E+7 (S)	ND	ND	ND	**1.3**	**1.2**	ND	ND
Methylene Chloride	75092	5.0 (A)	5.0 (A)	940 (X)	2.2E+5	1.4E+6	2.2E+5	1.70E+7	ID	ID	ND	ND	ND	ND	ND	ND	ND
Methyl-tert-butyl-ether (MTBE)	1634044	40 (E)	40 (E)	730 (X)	4.7E+7 (S)	4.7E+7 (S)	6.1E+5	4.68E+7	ID	ID	ND	ND	**1.4**	ND	ND	ND	ND
Styrene	100425	100 (A)	100 (A)	80	1.7E+5	3.1E+5 (S)	9,700	3.10E+5	1.4E+5	3.1E+5 (S)	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride	75014	2.0 (A)	2.0 (A)	15	1,100	13,000	1,000	2.76E+6	33,000	ID	ND	ND	**1.4**	**5.3**	**5.2**	ND	ND
All Remaining VOCs	Varies by Compound										ND	ND	ND	ND	ND	ND	ND

Table 2: Groundwater Analytical Data Summary

Footnotes:

A - Criterion is the state of Michigan drinking water standard established pursuant to Section 5 of 1976 PA 399, MCL 325.1005.
B - Background, as defined in R 299.5701(b), may be substituted if higher than the calculated cleanup criterion. Background levels may be less than criteria for some inorganic compounds.
D - Calculated criterion exceeds 100 percent, hence it is reduced to 100 percent or 1.0E+9 parts per billion (ppb).
E - Criterion is the aesthetic drinking water value.
G - Groundwater surface water interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water.
H - Valence-specific chromium data (Cr III and CR IV) shall be compared to valence specific cleanup criteria.
I - Hazardous substance may exhibit the characteristic of ignitability.
J - Hazardous substance may be present in several isomer forms. Isomer-specific concentrations shall be added together for comparison to criteria.
L - Criteria for lead are derived using a biologically based model.
M - Calculated criterion is below the analytical target detection limit, therefore, the criterion defaults to the target detection limit.
Q - Criteria for carcinogenic polycyclic aromatic hydrocarbons were developed using relative potential potencies to benzo(a)pyrene.
R - Hazardous substance may exhibit the characteristic of reactivity.
S - Criterion defaults to the hazardous substance-specific water solubility limit.
T - Refer to the Toxic Substances Control Act (TSCA) for cleanup standards.
X - The GSI criterion shown in the generic cleanup criteria tables is not protective for surface water that is used as a drinking water source.
AA - Comparison to these criteria may take into account an evaluation of whether hazardous substances are adsorbed to particulates rather than dissolved in water and whether filtered groundwater samples were used to evaluate groundwater.
bgs - Below ground surface.
bold - Values presented in bold represent exceedence of laboratory reported detection limit.
ID - Insufficient data to develop criterion.
NA - A criterion or value is not available or, in the case of background and CAS numbers, not applicable.
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NLV - Hazardous substance is not likely to volatilize under most conditions.
µg/l - Micrograms per liter (approximately equivalent to parts per billion or ppb).
--- Sample not analyzed for compound.
- Numbers in yellow-shaded boxes represent exceedence of relevant criteria.
- Numbers in green-shaded boxes represent relevant criteria exceeded.

APPLICANT INFORMATION
All information must be completed before submission

Company Name (applicant must be occupant/operator)	**Standard Industrial Classification Code (SIC)**
MJR Group, LLC	7830
Facility Address/Parcel ID	**School District where facility is located**
100 East Maple Road; 88-20-34-101-023	Troy

The application shall contain or be accompanied with a description of the site assessment activities completed to date. Also, describe the overall project, and how loan funding advances project goals. Attach additional pages if more room is needed.

Please see attached

Cost of land and building improvements	$ 10,000,000.00	**
* attach list of improvements and associated costs		
Cost of machinery, equipment, furniture and fixtures	$ 6,000,000.00	**
* attach itemized listing with month and year of expected installation		
Total Real and Personal Property Costs	$ 16,000,000.00	
Total approved eligible project costs	$ 498,079.00	
* attach itemized list of eligible project costs		

**Costs provided are estimates, exact costs and timeframe will be determined following a bid process and are not all available at this time

The undersigned, authorized officer of the company making this application certifies that, to the best of his/her knowledge, no information contained herein or in the attachments hereto is false in any way and that all are truly descriptive of the property and project for which this application is being submitted.

Preparer Name	**Telephone Number**	**Fax Number**	**e-mail address**
Jessica Besaw PM Environmental, Inc.	517-325-9875	877-884-6774	besaw@pmenv.com
Contact Person	**Telephone Number**	**Fax Number**	**e-mail address**
Same as above	Same as above	Same as above	Same as above

Name of Company Officer
Mr. Michael Mihalich

Signature of Company Officer

APPLICANT INFORMATION

All information must be completed before submission

Company Name (applicant must be occupant/operator)	**Standard Industrial Classification Code (SIC)**
MJR Group, LLC	7830
Facility Address/Parcel ID	**School District where facility is located**
100 East Maple Road; 88-20-34-101-023	Troy

The application shall contain or be accompanied with a description of the site assessment activities completed to date. Also, describe the overall project, and how loan funding advances project goals. Attach additional pages if more room is needed.

Please see attached

Cost of land and building improvements * attach list of improvements and associated costs	$ 10,000,000.00	**
Cost of machinery, equipment, furniture and fixtures * attach itemized listing with month and year of expected installation	$ 6,000,000.00	**
Total Real and Personal Property Costs	$ 16,000,000.00	
Total approved eligible project costs * attach itemized list of eligible project costs	$ 498,079.00	

**Costs provided are estimates, exact costs and timeframe will be determined following a bid process and are not all available at this time

The undersigned, authorized officer of the company making this application certifies that, to the best of his/her knowledge, no information contained herein or in the attachments hereto is false in any way and that all are truly descriptive of the property and project for which this application is being submitted.

Preparer Name	**Telephone Number**	**Fax Number**	**e-mail address**
Jessica Besaw PM Environmental, Inc.	517-325-9875	877-884-6774	besaw@pmenv.com
Contact Person	**Telephone Number**	**Fax Number**	**e-mail address**
Same as above	Same as above	Same as above	Same as above

Name of Company Officer

Mr. Michael Mihalich

Signature of Company Officer

Site Assessment Activities & Project Description

MJR Group, LLC intends to demolish and redevelop the currently vacant underutilized property with a new Digital Cinema. The new Cinema will include 74,000 square feet with 16 Screens including an Epic Studio. Seating capacity will range from 101 seats to 440 seats. The new theater will include a lobby area, concessions, and bar area. The project will include installation of new asphalt, sidewalks, and landscaping surrounding the theater building.

This entire project also includes the completion of Phase I and Phase II Environmental Site Assessments (ESA), Baseline Environmental Site Assessment (BEA), and Due Care Plan.

A Phase I ESA was completed June 25, 2013 for MJR Group, LLC and identified recognized environmental conditions (RECs) associated with the subject property and a single REC associated with the northwest adjoining property.

RECs connected with the subject property included various automotive service operations located on the subject property, underground reservoirs for hydraulic fluids associated with five in-ground hydraulic hoists on the subject property, staining in areas associated with the former automotive service operations, and an underground vault in the former service area. The northwest adjoining property identified as a REC, was occupied by a gasoline service station, based on the close proximity to the subject property, the potential exists that a release has occurred on this property and migrated onto the subject property.

A Phase II ESA/Baseline Environmental Assessment was competed July, 26th 2013 to assess these RECs. PM completed a scope of work consisting of the advancement of five soil borings (SB-1 through SB-5), installation of four temporary monitoring wells (TMW-1 through TMW-3 and TMW-5), installation of one sub-slab soil gas sampling point (SSG-1), and the collection of soil, groundwater, and soil gas samples. The soil and groundwater samples were submitted for laboratory analysis of VOCs, PNAs, PCBs, cadmium, chromium and lead, or some combination thereof; while the soil gas sample was submitted for VOCs. A concentration of the VOC species vinyl chloride was identified at TMW-3 above the Residential and Nonresidential Drinking Water Generic Cleanup Criteria. Based upon documented exceedances of the Part 201 Residential and Nonresidential DW cleanup criteria; the subject property is a facility under Part 201 of P.A. 451, and the rules promulgated thereunder.

Demolition of the current building will require the removal of mercury vapor lighting, asbestos abatement and air monitoring, and the removal, disposal, and sampling oversight associated with the removal of five (5) hydraulic hoists.

The City of Troy's Local Site Remediation Revolving Loan Fund will provide funding to assist in the remediation costs associated with redeveloping this brownfield site, which would not exist on a greenfield site location.

The project is estimated to begin demolition late summer to early fall of 2013, with project completion before the end of the year.

MJR Troy Grand Digital 16

COMMITMENT STATUS SUMMARY (Contract Update)

Owner: MJR THEATRE GROUP
Contact: Dennis Redmer

Job No. 13-031
Latest Revision: 7/3/2013

Cost Code	Trade Item	BUDGET Amount	CONTRACTOR	Original Contract Amount	Total F.O. Changes	99's Misc. Extra Work	Exposure Allocation	Current Project Commitment	Variance Savings Over-Run	Remarks
01-001	PRECONSTRUCTION SERVICES									
01-002	PROJECT STAFF/TEMP. OFFICE FACILITIES									
	GENERAL REQUIREMENTS									
01-500	TEMP. WATER, ELECTRIC BLDG. SERVICE HOOK-UP									
01-530	MISC. SAFETY & TEMP/WEATHER BARRICADES									
01-630	TEMP. CONSTRUCTION SIGNS/PROJECT SIGNS									
01-540	SECURITY / NIGHT WATCHMEN									
01-700	ON-GOING BUILDING CLEANING									
01-700	FINAL BUILDING CLEANING									
01-710	DUMPSTERS (MJR Equipment & Seats)									
01-520	BLDG. ELECTRIC CONSUMPTION COSTS									
01-520	BLDG. SPACE HEATING COSTS - FUEL									
01-604	PLAN REPRODUCTION COSTS									
	TESTING & INSPECTIONS									
01-410	TESTING - Building									
01-410	TESTING - Site									
	LAYOUT & ENGINEERING									
01-050	BUILDING LAYOUT & ENGINEERING									
	PERMITS									
01-060	MUNICIPAL PERMITS & FEES ($62,966 Paid by MJR)									
	CONCRETE									
03 1230	STADIUM RISERS									
	HAND RAILINGS									
	INSTALLATION OF FOAM / RISERS									
03 3000	CONCRETE FOUNDATIONS									
03 3000	CONCRETE FLATWORK									
	SLAB ON FOAM									
	MEZZANINE SLAB ON DECK									
	MASONRY									
04 200	MASONRY									
04 720	CAST STONE									
	METALS									
05 1200	STRUCTURAL STEEL - MATERIAL & ERECTION									
05 2100	STEEL JOISTS									
05 3100	STEEL DECKING									
05 5000	METAL FABRICATIONS									
05 5100	METAL STAIRS									
05 5213	PIPE AND TUBE RAILINGS									
05 5300	METAL GRATINGS									
05 4000	COLD FORMED METAL FRAMING									
	CARPENTRY									
06 1000	ROUGH CARPENTRY									
06 1600	SHEATHING									
06 4023	INTERIOR ARCHITECTURAL WOODWORK									
06 6400	PLASTIC PANELING									
	MOISTURE PROTECTION									
07 1110	COMPOSITE SHEET WATERPROOFING									
07 1113	BITUMINOUS DAMPROOFING									
07 1326	SELF-ADHERING SHEET WATERPROOFING									
07 2100	THERMAL INSULATION									
07 2419	EIFS									
07 4243	ALUMINUM WALL PANELS									
07 4600	VINYL SIDING									
07 5323	EPDM ROOFING									
07 6200	SHEET METAL FLASHING AND TRIM									
07 7200	ROOF ACCESSORIES									
07 9200	JOINT SEALANTS									
	DOORS & GLASS									
08 1113	HOLLOW METAL DOORS AND FRAMES									
08 1416	FLUSH WOOD DOORS									
08 3113	ACCESS DOORS									
08 3613	SECTIONAL DOORS									
08 4113	ALUMINUM FRAMED ENTRANCES									
08 4413	GLAZED ALUMINUM CURTAIN WALLS									
08 8000	GLAZING									
08 7110	FINISH HARDWARE									
	FINISHES									
09 2216	NON-STRUCTURAL METAL FRAMING									
09 2900	GYPSUM BOARD									
09 5113	ACOUSTICAL CEILINGS									
09 3000	HARD TILE									
	EXTERIOR TILE DETAIL									
09 6513	RESILIENT BASE AND ACCESSORIES									
09 6519	RESILIENT TILE FLOORING									
09 6816	SHEET CARPETING									
09 9113	EXTERIOR PAINTING									
09 9123	INTERIOR PAINTING									
	INSTALLATION OF OWNER WALL CARPET									
	SPECIALTIES AND EQUIPMENT									
10 2113	TOILET COMPARTMENTS									
10 2800	TOILET & BATH ACCESSORIES									
10 4413	FIRE EXTINGUISHERS CABINETS									
10 4416	FIRE EXTINGUISHERS									
	ADA SIGNAGE									
	FIRE PROTECTION									
21 0500	FIRE PROTECTION									
	MECHANICAL									
22 0500	PLUMBING									
23 0500	H.V.A.C. SYSTEMS									
	ELECTRICAL									
26 0500	ELECTRICAL									

MJR Troy Grand Digital 16

COMMITMENT STATUS SUMMARY (Contract Update)

Owner: MJR THEATRE GROUP
Contact: Dennis Redmer

Job No. 13-031
Latest Revision: 7/3/2013

Cost Code	Trade Item	BUDGET Amount	CONTRACTOR	Original Contract Amount	Total F.O. Changes	99's Misc. Extra Work	Exposure Allocation	Current Project Commitment	Variance Savings Over-Run	Remarks
19-000	INSURANCE - GENERAL LIABILITY									
19-000	RONCELLI FEE									
	SUBTOTAL	**10,000,000**								
	SITE CONSTRUCTION									
02-200	FENCING - TRASH ENCLOSURE GATES									
02-200	LANDSCAPING									
02-200	IRRIGATION									
02-200	ASPHALT / CURBS									
02-200	SITE WORK									
02-200	SITE UTILITIES									
02-200	SITE CONCRETE (BUILDING SIDEWALKS)									
02-200	SITE ELECTRIC									
	SUBTOTAL	**2,000,000**								
	OWNER FF&E									
	SEATS									
	PROJECTION AND SOUND									
	DRAPERY									
	CARPET AND TILE									
	CONCESSION AND BOX OFFICE MILLWORK									
	NCR POINT OF SALE									
	OFFICE MATERIALS									
	FURNITURE									
	POSTERCASES									
	SUBTOTAL	**4,000,000**								
	SUBTOTAL									
	CONSTRUCTION CONTINGENCY									
	EST. CONSTRUCTION COST	**16,000,000**		**0**	**0**	**0**	**0**	**0**	**0**	**Current Savings**

Local Site Remediation Revolving Loan Fund Reimbursed Activities	
Due Care Activities	
Hoist removal, disposal (5 hoists)	$ 6,785
Hoist removal monitoring and assessment	$ 5,141
Contaminated soil removal and disposal associated with hoist removal (approximately 25 yards)	$ 1,078
Demolition	
Building Demolition	$ 140,000
Site Demolition	$ 128,000
Demolition Oversight	$ 17,710
Asbestos Abatement	$ 131,100
Air Quality Monitoring and Oversight associated with Asbestos Abatement	$ 17,538
Temporary Power required to conduct Asbestos Abatement	$ 17,147
Removal of fluorescent light tubes, PCB ballasts, mercury vapor bulbs and mercury switches, fire extinguishers, CFC refrigerants, hydraulic lifts, and facility owned pad mounted transformer (includes packaging, transportation and disposal/recycling)	$ 27,600
Preparation of Brownfield Plan and Act 381 Workplan	
Brownfield Plan	$ 5,980
Local Site Remediation Revolving Loan Fund Reimbursed Total	**$ 498,079**

Table 2: Groundwater Analytical Data Summary

Footnotes:

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--- Sample not analyzed for compound.
- Numbers in yellow-shaded boxes represent exceedence of relevant criteria.
- Numbers in green-shaded boxes represent relevant criteria exceeded.

The meeting was called to order at 3:00 p.m. in the Council Boardroom, Troy City Hall by Chairman Bruce Wilberding.

Members Present: Bruce Wilberding, Chairman
Dan Brake
Theodore Dziurman
Rosemary Kornacki
Robert Swartz
Joseph Vassallo

Members Absent: None

Also Present: Mark F. Miller, Secretary/Treasurer
Glenn Lapin, Economic Development Specialist
Brian Kischnick, City Manager
Lori Bluhm, City Attorney
Nino Licari, City Assessor
R. Brent Savidant, Planning Director

OLD BUSINESS

None

NEW BUSINESS

BRA Plan #6 – Brownfield Plan for the proposed MJR Troy Grand located at 100 East Maple Road, Troy, Michigan

Mark Miller summarized the application and BRA process. An explanation of the Local Site Remediation Revolving Fund was provided. The LSRRF has a balance of approximately $551,558.

Michael Mihalich, CEO and Founder of MJR Group, LLC, described the project and summarized the need for BRA assistance.

Jessica Besaw, Brownfields Consultant & GIS Coordinator for PM Environmental (consultant to MJR Group, LLC), summarized BRA Plan #6 and the LSRRF application.

General discussion took place.

Brian Considine, Attorney from Dawda, Mann, Mulcahy & Sadler, PLC (attorney for MJR Group, LLC), discussed the issue of LSRRF loan collateral.

Resolution # BRA-2013-08-01
Moved by: Joseph Vassallo
Seconded by: Robert Swartz

RESOLVED, that the Troy Brownfield Redevelopment Authority hereby recommends to the City Council that the Brownfield Redevelopment Plan #6 for the proposed MJR Troy Grand located at 100 East Maple Road, Troy, Michigan, be approved.

FURTHER RESOLVED, that the Local Site Remediation Revolving Fund loan shall require collateral and may include a financial guarantee from MJR Group, LLC or lien rights from the subject property.

Yes: All (6)
Absent: None

MOTION CARRIED

BOARD MEMBER COMMENT

None

PUBLIC COMMENT

None

Meeting was adjourned at 3:55 p.m.

The next scheduled meeting is October 15, 2013 – 3:00 p.m.

Bruce Wilberding, Chairman

Mark F. Miller, Secretary

g/my documents/BRA/2013 Agendas and Minutes/08.27.13 – Draft BRA Minutes

CITY OF TROY
OAKLAND COUNTY, MICHIGAN

NOTICE OF PUBLIC HEARING

On September 23, 2013 at 7:30 p.m., Troy City Council will hold a Public Hearing at Troy City Hall located at 500 West Big Beaver Road, Troy, Michigan for the Brownfield Redevelopment Plan #6 for MJR Troy Grand, the former Kmart Department Store property located at 100 East Maple Road, Troy, Michigan. If you would like information concerning the proposed Brownfield Redevelopment Plan for this property, please contact the City of Troy Economic & Community Development Department at 248.524.3351. The Property Description is described as follows:

> LOCATED IN THE CITY OF TROY, COUNTY OF OAKLAND, STATE OF MICHIGAN:
>
> T2N, R11E, SEC 34 PART OF W ½ OF NW ¼ OF BEG AT PT DIST N 89-59-30 E 235 FT & S 00-02-15 W 60 FT FROM NW SEC COR, TH N 89-59-30 E 324 FT, TH S 00-02-15 W 205 FT, TH N 89-59-30 E 198 FT, TH N 00-02-15 E 205 FT, TH N 89-59-30 E 48 FT, TH S 00-02-15 W 300 FT, TH N 89-59-30 E 125 FT, TH S 00-02-15 W 445 FT, TH S 89-59-30 W 870 FT, TH N 00-02-15 E 595 FT, TH N 89-59-30 E 175 FT, TH N 00-02-15 E 150 FT TO BEG 12.48 A 6-13-96 FR 020 & 021
>
> PARCEL ID: 88-20-34-101-023

You may express your comments regarding this matter by contacting the Economic & Community Development Department in writing or at 248.524.3351, or by attending the Public Hearing.

_____
Aileen Bittner, CMC
City Clerk

NOTICE: People with disabilities needing accommodations for effective participation in this meeting should contact the City Clerk by e-mail at clerk@troymi.gov or by calling 248.524.3316 at least two working days in advance of the meeting. An attempt will be made to make reasonable accommodations.

City of Troy

CITY COUNCIL AGENDA ITEM

Date: September 11, 2013

To: Brian Kischnick, City Manager

From: Gary Mayer, Chief of Police
Lieutenant Thomas Gordon
Sergeant George Zielinski

Subject: Liquor License Application from Simbad, Inc. regarding Transfer of All Stock Interest

Background

Simbad, Inc. requests to transfer all stock interest in 2012 Class C and SDM licensed business with Sunday Sales Permit (PM), and Dance-Entertainment Permit wherein Sabah Garmo transfers 1,334 shares of stock to new stockholder, Loretta Garmo, and 666 shares of stock to new stockholder, Muayad Gorgees {MLCC Request #668985}.

Simbad's liquor license is CURRENTLY IN ESCROW, and it cannot be used at this time. The license was escrowed by the Michigan Liquor Control Commission (MLCC) effective May 1, 2013. Prior to that date, the City of Troy passed Resolution #2013-03-064 on March 18, 2013 to object to the renewal of the license. The City passed the resolution due to the problems that were occurring at the business location. After the resolution was sent to the MLCC, they conducted a hearing and placed the license in escrow. In addition, the MLCC ruled that the license shall not be renewed until the City of Troy approves the application for renewal. Therefore, the license cannot be renewed unless the City reverses its objection to the renewal.

On September 9, 2013, attorney Joseph Shallal, applicant Loretta Garmo, Imad Koki, Kristen Davis, and Haitham Izzat Zora were present to answer questions from the Liquor Advisory Committee. Mr. Shallal informed the Committee that his client, Loretta Garmo, is purchasing this restaurant and banquet hall business from Sabah Garmo. He also stated that Ms. Garmo and Mr. Garmo are of no relation. Ms. Garmo has no restaurant experience, but has prior business experience in that she owned a salon for several years. Ms. Garmo plans to hire all new employees, i.e., one to two chefs, three to four servers, and one dishwasher. Mr. Muayad Gorgees (the other stockholder) will act in a public relations capacity.

The Police Department conducted an investigation into this application. Loretta Garmo and Muayad Gorgees were made aware of our concerns regarding the current stockholder Sabah Garmo. Both Ms. Garmo and Mr. Gorgees stated Sabah Garmo would have no interest at all in the business. Attorney Joseph Shallal modified the stock purchase agreement to indicate that if Muayad Gorgees or Loretta Garmo default, then the stock would not return to Sabah Garmo. The Police Department also expressed a concern regarding Ms. Garmo's original plan to hire "Danny" Haitham Izzat Zora as business manager. After a background check was completed on Mr. Zora, the Police Department informed Ms. Garmo through her attorney that we would object to Mr. Zora managing the business. Loretta Garmo then advised us that Mr. Zora would have no management or decision making

privileges of this business and will be employed only as a promoter/marketer. Mr. Imad Koki will be hired as the manager.

The Liquor Advisory Committee members asked questions of Mr. Shallal and Ms. Garmo in order to clarify the relationship of all involved parties, and the Committee unanimously approved the request.

The request complies with all applicable Troy City Ordinances and Michigan Liquor Control Commission Rules.

Recommendation

Recommend approval of the license renewal application from Simbad, Inc., and recommend approval of the request to transfer all stock interest.

Prepared by: Jeff Oberski

A regular meeting of the Liquor Advisory Committee was held on Monday, September 9, 2013 in the Lower Level Conference Room of Troy City Hall, 500 West Big Beaver Road. Chairman Max K. Ehlert called the meeting to order at 7:00 p.m.

ROLL CALL:

PRESENT: Max K. Ehlert, Chairman
Matthew Binkowski
W. Stan Godlewski
Patrick C. Hall
Andrew Kaltsounis
Timothy P. Payne
Bohdan L. Ukrainec

ALSO PRESENT: Susan Lancaster, Assistant City Attorney
Jeffrey Oberski, Police Department Analyst/Planner
Mitch Huber, Student Representative
Pat Gladysz

Resolution to Approve Minutes of September 10, 2012 Meeting

Resolution #LC2013-09-001
Moved by Ukrainec
Seconded by Godlewski

RESOLVED, That the Minutes of the September 10, 2012 meeting of the Liquor Advisory Committee be **APPROVED**.

Yes: 7
No: 0
Absent: 0

Agenda Items

1. **Simbad, Inc.** requests to Transfer All Stock Interest in 2012 Class C and SDM licensed business with Sunday Sales Permit (PM), and Dance-Entertainment Permit, located at 336 John R., Troy, MI, 48083, Oakland County, wherein stockholder Sabah Garmo transfers 1,334 shares of stock to new stockholder, Loretta Garmo, and 666 shares of stock to new stockholder, Muayad Gorgees {MLCC Request #668985}.

Present to answer questions from the Committee were attorney Joseph Shallal, Loretta Garmo, Imad Koki, Kristen Davis, and Haitham Izzat Zora.

Mr. Shallal informed the Committee that his client, Loretta Garmo, is purchasing this restaurant and banquet hall business from Sabah Garmo. He also stated that Ms. Garmo and Mr. Garmo are of no relation. Ms. Garmo has no restaurant experience, but has prior business experience in that she owned a salon for several years.

Ms. Garmo plans to hire all new employees, i.e., one to two chefs, three to four servers, and one dishwasher. Mr. Muayad Gorgees (the other stockholder) will act in a public relations capacity. Ms. Garmo's original plan was to hire Mr. Izzat Zora as business manager.

Mr. Oberski informed the Committee that his investigation revealed background information which would cause the Police Department to object to Mr. Zora acting as manager of this new business. This potential objection was communicated to Ms. Garmo. In light of this, Ms. Garmo advised the Police Department that Mr. Zora would have no management or decision making privileges of this business and will be employed only as a promoter/marketer. Mr. Imad Koki will be hired as the manager.

The Committee members asked questions of Mr. Shallal and Ms. Garmo in order to clarify the relationship of all involved parties.

Resolution #LC2013-09-002
Moved by Hall
Seconded by Payne

RESOLVED, That the Liquor Advisory Committee recommends that the request of Simbad, Inc. to transfer all stock interest in 2012 Class C and SDM licensed business with Sunday Sales Permit (PM), and Dance-Entertainment Permit, located at 336 John R., Troy, MI, 48083, Oakland County, wherein stockholder Sabah Garmo transfers 1,334 shares of stock to new stockholder, Loretta Garmo, and 666 shares of stock to new stockholder, Muayad Gorgees, be **APPROVED**.

Yes:	7
No:	0
Absent:	0

The meeting adjourned at 7:55 p.m.

Max K. Ehlert, Chairman

Patricia A. Gladysz, Secretary II

AGREEMENT REGARDING LIQUOR LICENSE REQUEST

Re: Applicant: LORETTA GARMO / MUAYAD GORGES
Address: 2956 LORENZO DR.
City/State/Zip: ST. HTS MI 48314

Date: JUNE 6, 2013
Type of License/s: CLASS C
MLCC Request ID: 668985

This Agreement, made by and between the CITY OF TROY, MICHIGAN, a municipal corporation, with offices located at 500 W. Big Beaver Road, Troy, Michigan, 48084, hereinafter known as THE CITY, and the Applicant as indicated above, hereinafter known as APPLICANT.

1. The City Council of the City of Troy, for and in consideration of the following covenants and conditions, agrees to recommend to the Michigan Liquor Control Commission Approval of the requested Liquor License to be located as indicated above in Troy Michigan.
2. In consideration of the City of Troy's recommendation for approval of the request, the applicant hereby agrees that:
   (a) It has read and is aware of the provisions of City of Troy Ordinances, Chapter No. 67, Chapter No. 68, Chapter No. 98 and Chapter No. 101, and agrees that it shall be deemed to have knowledge of any subsequent amendments to said Chapters which may become effective during the term of this agreement.
   (b) It agrees to observe and comply with all laws, statutes, ordinances, rules, regulations or resolutions of the United States government, State of Michigan, and the City of Troy, or any department or agency of the governmental entities, as well as the rules and regulations of the Michigan Liquor Control Commission as they pertain to the operation of a liquor licensed business in the City of Troy.
   (c) It agrees to immediately require all employees who serve/sell alcohol to attend a recognized alcohol awareness program, and forward the names of each certified employee to the Troy Police Department. The alcohol awareness program must either be recognized by the Troy Police Department (i.e. TIPS,TAMS), or the program must be reviewed by the Troy Police Department to insure that the program is comparable to the recognized programs.
3. Applicant agrees that the recommendation for Approval agreed upon by the City Council is not a property right and is approved upon the express and continuing condition that no violation as set forth in paragraph 2 of this agreement shall occur.
4. Applicant agrees that the recommendation for Approval agreed upon by the City Council is approved upon the express and continuing condition that the physical characteristics (including but not limited to the inside layout, building design and engineering, seating capacity, parking space allocations, fire exits, and other physical attributes); and also the nature and type of business intended to be conducted remain virtually the same.
5. Applicant agrees that upon such violation, after full investigation and an opportunity for said applicant to be heard, upon a finding by the City Council that a violation as set forth in paragraph 2 of this agreement has occurred, the City Council shall have just cause for revocation of said recommendation for approval.

LICENSEE AUTHORIZED REPRESENTATIVE

Witnesses: ROBERT E. BERG JR.

By: Loretta Garmo

Subscribed and sworn to before me this 6th day of June 2013
Notary Public, Macomb County, MI
Acting in the County of Macomb
My commission expires: 4/15/2017

JACQUELINE A. KOOK
NOTARY PUBLIC, STATE OF MI
COUNTY OF MACOMB
MY COMMISSION EXPIRES Apr 15, 2017
ACTING IN COUNTY OF Macomb

CITY OF TROY

Witnesses: _____

By: _____
Dane Slater, Mayor

By: _____
M. Aileen Bittner, City Clerk

Subscribed and sworn to before me this _____ day of _____ 20___
Notary Public, _____ County, MI
Acting in the County of Oakland
My commission expires: _____

STATE OF MICHIGAN

DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS
LIQUOR CONTROL COMMISSION

* * * * *

In the matter of the request of	)	
SIMBAD, INC.	)	
336 John R	)	Business ID No. 221640
Troy, Michigan 48083	)	Request ID No. 679286
	)	
Oakland County	)	
	)	

At the April 19, 2013 hearing of the Michigan Liquor Control Commission (Commission) in Lansing, Michigan.

PRESENT: Andrew J. Deloney, Chairman
Teri L. Quimby, Commissioner
Dennis Olshove, Commissioner

OBJECTION TO RENEWAL OF LICENSE
SHOW CAUSE HEARING ORDER

Simbad, Inc. (licensee) holds 2012 Class C and SDM licenses with Sunday Sales Permit (P.M.) and Dance-Entertainment Permit at the above-noted location.

The City of Troy has filed an objection to the 2013-2014 renewal of this license with the Commission under MCL 436.1501(2), and has submitted the following documents:

- A copy of the Resolution adopted by the Troy City Council at a regular meeting held March 18, 2013 objecting to the 2013 renewal of the subject license.

Licenses issued by the Commission expire April 30th of each year as established by MCL 436.1501(2). Further, licenses for consumption of alcoholic liquor on the premises require approval by the local legislative body in which the applicant's place of business is located (except in a city with a population of 600,000 or more) before issuance of a license, and also before renewal of an existing license if an objection to renewal has been filed with the Commission by the local legislative body at least 30 days before April 30th.

The Commission noticed a Show Cause Hearing under administrative rule R 436.1925(1) as to whether the license should be renewed based on the objection received by the local legislative body under MCL 436.1501(2). Assistant City Attorney Julie DeBrink represented the City of Troy at the April 19, 2013 hearing held at the Commission's Lansing office. Although notice of the hearing was sent to the licensed business address on April 8, 2013 via certified and regular mail, there was no representation on behalf of the licensee at the hearing.

Based on the evidence submitted, testimony, and the local governmental unit proceedings, the Commission finds that the City of Troy has filed with the Commission an objection to the application for the 2013-2014 renewal year. The Commission finds that the population of Troy is less than 600,000. The Commission finds that MCL 436.1501(2) requires the approval of the local legislative body for renewal of the license since an objection to renewal was filed at least 30 days before April 30, 2013. The Commission finds that without approval of the local legislative body, the license for 2013 shall not be renewed until the local legislative body approves the application for renewal.

Under Article IV, Section 40, of the Constitution of Michigan (1963), the Commission shall exercise complete control of the alcoholic beverage traffic within this state, including the retail sales thereof, subject to statutory limitations. Further, the Commission shall have the sole right, power, and duty to control the alcoholic beverage traffic and traffic in other alcoholic liquor within this state, including the manufacture, importation, possession, transportation and sale thereof under MCL 436.1201(2).

THEREFORE, IT IS ORDERED that:

A. The Class C and SDM licenses and permits shall be placed in escrow for the 2013-2014 licensing year effective April 30, 2013 at 11:59 p.m. EST, subject to the escrow requirements of administrative rule R 436.1107, including the payment of all fees by April 30th of each year.

B. The Class C and SDM licenses and permits shall remain in escrow for the 2013-2014 licensing year, subject to the escrow requirements of administrative rule R

436.1107, until approval is received from the City of Troy and filed with the Commission, or until a transfer is approved by the MLCC within the escrow time period authorized.

MICHIGAN LIQUOR CONTROL COMMISSION

Andrew J. Deloney, Chairman

Teri L. Quimby, Commissioner

Dennis Olshove, Commissioner

Prepared by:
Terri Chase, Commission Aide

Date Mailed: APR 30 2013

CITY COUNCIL AGENDA ITEM

Date: September 17, 2013

To: Brian Kischnick, City Manager

From: MaryBeth Murz, Purchasing Manager
William S. Nelson, Fire Chief

Subject: Regular Business - Request for Waiver of Bid for Purchase of Fire Apparatus

History

The City of Troy Fire Department operates a heavy-duty rescue truck, housed at Station 4, which carries specialized rescue equipment that is not carried by Fire Department engines and ladders. The heavy-duty rescue truck responds all to extrication and rescue incidents as well as every structure fire. The current heavy-duty rescue is a 1996 Spartan-Darley truck that was originally purchased to serve as a hazmat response vehicle. With the consolidation of three local hazmat teams into one regional team, this truck was not required for hazmat service and was reassigned as a heavy rescue operated by Fire Station 4.

The current 1996 Spartan-Darley heavy-duty rescue is a unique vehicle which was designed with a rear mounted engine and is basically a motor home chassis that had been reinforced for fire apparatus use. This vehicle performed satisfactorily in the hazmat team role as it responded to a limited number of incidents, did not carry an extensive inventory of heavy equipment, and typically did not respond frequently under emergency conditions. As this vehicle has advanced in age and usage, significant issues have developed with regard to maintenance, equipment carrying capacity, and functionality.

In planning for a replacement vehicle, the Station 4 Fire Officers and Staff created a work group and reviewed several recent heavy-duty rescue vehicles delivered to Fire Departments in Michigan. The majority of these vehicles were manufactured by Pierce Manufacturing, Inc. and the work group found these units to be more functional and better constructed than the other units. Since Pierce has delivered the last five engines purchased by the City of Troy that are basically identical, the work group recommends that the replacement heavy-duty rescue be purchased from Pierce Manufacturing.

In conjunction with the Western Wayne County Consortium; The City of Troy Fire Department worked with other Fire Departments that are purchasing apparatus to develop a group purchase for multiple units. Currently, the total group purchase includes:

White Lake Township - 3 Pierce PUC pumpers
Livonia - 2 Pierce PUC pumpers
Canton Township – One 75 foot pumper ladder

The above listed entities are purchasing pumpers with the PUC (pump under cab) design. Pierce is the only manufacturer that can provide the patented PUC design. Because Troy has five PUC pumpers manufactured by Pierce Fire Apparatus, staff and the work group recommend that the heavy-duty rescue be purchased from Pierce for the following reasons:

History (continued):

- The Pierce heavy-duty rescue trucks recently delivered in Michigan are more functional and better constructed.
- The cab design and operating controls for the heavy-duty rescue will be identical to the five (5) existing PUC pumpers which will facilitate operator training and skill maintenance.
- Many of the operational parts on the heavy-duty rescue will be the same as those on the five (5) existing PUC pumpers which will reduce the required parts inventory and simplify the required preventative maintenance to be performed.
- Pierce has a factory service center located in Wixom which is very convenient and provides timely warranty and technical support.

Due to the quantity of apparatus being purchased with the Western Wayne County Consortium; the following discounts, including a prepayment discount are included. The cost is detailed as follows:

Heavy-Duty Rescue cost:	$567,620.00
Discount:	$ 24,000.00
Consortium Discount:	$ 15,000.00
Prepayment discount:	$ 20,273.00
Total Cost:	**$508,347.00**

Purchasing

The only authorized Pierce Manufacturing local distributor is Halt Fire Apparatus. Based on the research and analysis of the work group and in an effort to maintain standardization of the fire vehicles it is recommended to waive the bid process and purchase the above described equipment from Halt Fire Apparatus in cooperation with the Western Wayne County Consortium pricing.

Financial

Funds are budgeted in the Fire Department Capital Budget for the Heavy-Duty Rescue.

Recommendation

City management recommends that the bid process be waived and a contract be awarded to the sole Pierce Manufacturing local area Distributor; Halt Fire Apparatus of Wixom, MI, for one Heavy-Duty Rescue apparatus for an estimated total cost of $508,347.00 utilizing the Western Wayne County Consortium pricing and the up-front payment discount option; which also includes a 100% Performance Bond which shall guarantee satisfactory delivery.

HALT FIRE
INCORPORATED

Heroes.
They Deserve The Best

September 12, 2013

City of Troy Fire Department
500 West Big Beaver Road
Troy, MI 48084

Subject: Pierce Saber Heavy-Duty Rescue

Dear Chief Nelson:

Per your request, the following is pricing and terms for a Pierce Saber Heavy-Duty Rescue. This is based on a tag-on order to the Western Wayne County bid consortium that was recently advertised on MITN. The other members of the Western Wayne County consortium are the City of Livonia, Canton Township and White Lake Township.

The price for this tag on rescue opportunity will be $528,620.00. This is based on a concession of $24,000.00 with an additional discount of $15,000.00 if the City of Troy tags on to the group bid consortium.

This price includes the following:

- Two (2) inspection trips (post paint and final)
- Delivery of the unit to Halt Fire
- Complete a post delivery inspection by Halt Fire
- Operational training by Halt Fire (Jim Lee)
- A complete set of progress pictures during production

Price	$567,620.00
Concession	-$24,000.00
Subtotal	$543,620.00
Group tag-on	-$15,000.00
Total	$528,620.00

50168 W. Pontiac Trail • Unit 5
Wixom, MI 48393

Office: 248.669.0800
Facsimile: 248.669.8120

Pierce
PERFORM. LIKE NO OTHER.

BE READY. BE SURE.
MEDTEC

HALT FIRE
INCORPORATED

Heroes.
They Deserve The Best

If the city decided to do a 100% upfront prepayment with a signed purchase order made out to Pierce Manufacturing, then an additional $13,393.00 in interest savings and $6,880.00 in chassis handling costs could also be deducted.

Group bid price	$528,620.00
Interest Disc.	-$13,393.00
Chassis disc	-$6,880.00
Total	$508,347.00

We also have provided a performance bond if you decide to take advantage of the pre-payment option.

The current build time for a new truck is 9.5 to 10.5 months after receipt of order.

The price as quoted above is good for 30 days from the date on the quote.

If you have any questions, please do not hesitate to call.

Sincerely,

Todd L. Lincoln, President

Halt Fire, Inc.

50168 W. Pontiac Trail • Unit 5
Wixom, MI 48393

Office: 248.669.0800
Facsimile: 248.669.8120

Pierce
PERFORM. LIKE NO OTHER.

BE READY. BE SURE.
MEDTEC

Mayor Pro Tem Fleming performed the Invocation. The Pledge of Allegiance to the Flag was given.

A. CALL TO ORDER:

A Regular Meeting of the Troy City Council was held on Monday, September 9, 2013, at City Hall, 500 W. Big Beaver Rd. Mayor Slater called the meeting to order at 7:32 PM.

B. ROLL CALL:

Mayor Dane Slater
Jim Campbell
Wade Fleming
Dave Henderson
Maureen McGinnis
Ed Pennington
Doug Tietz

C. CERTIFICATES OF RECOGNITION AND SPECIAL PRESENTATIONS:

C-1 SEMCOG Sustainable Community Recognition Program *(Introduced by: Sehrish Salah-Ud-Din)*

C-2 Legislative Update From Representative Howrylak *(Introduced by: State Representative Martin Howrylak)*

C-3 Proclamation for AT&T's "Drive 4 Pledges Day" Don't Text and Drive Campaign *(Introduced by: Cindy Stewart, Community Affairs Director)*

C-4 Proclamation for Patriot Week – September 11-17, 2013

D. CARRYOVER ITEMS:

D-1 No Carryover Items

E. PUBLIC HEARINGS:

E-1 No Public Hearings

F. PUBLIC COMMENT FOR ITEMS ON THE AGENDA:

Kaszubski, Tom	Spoke on Item J-6.
Raniszeski, Larry	Spoke on Item P-1.
Cushing, Jack	Spoke on Item P-1.

G. CITY COUNCIL/CITY ADMINISTRATION RESPONSE/REPLY TO PUBLIC COMMENT:

H. POSTPONED ITEMS:

H-1 No Postponed Items

I. REGULAR BUSINESS:

I-1 Board and Committee Appointments: a) Mayoral Appointments – None; b) City Council Appointments – None

a) Mayoral Appointments: None

b) City Council Appointments: None

I-2 Board and Committee Nominations: a) Mayoral Nominations – Downtown Development Authority; b) City Council Nominations – Animal Control Appeal Board, Parks and Recreation Board

a) Mayoral Nominations:

The Mayor took NO ACTION on this Item.

b) City Council Nominations:

Resolution #2013-09-144
Moved by Fleming
Seconded by McGinnis

RESOLVED, That Troy City Council hereby **FORWARDS** the following nominated person(s) to serve on the Boards and Committees as indicated to the next Regular City Council Meeting for action:

Animal Control Appeal Board
Appointed by Council
5 Regular Members
3 Year Term

Nominations to the Animal Control Appeal Board:

Term Expires: 9/30/2016	**Patrick Carolan**
	Term currently held by: Patrick Carolan

Parks and Recreation Board
Appointed by Council
7 Regular Members and 1 Troy School Board Member:

Regular Member: 3 Year Term / Troy School Board Member: 1 Year Term

Nominations to the Parks and Recreation Board:

Term Expires: 9/30/2016	**Jeffrey Stewart**
	Term currently held by: Jeffrey Stewart

Yes: All-7
No: None

MOTION CARRIED

I-3 No Closed Session

J. CONSENT AGENDA:

J-1a Approval of "J" Items NOT Removed for Discussion

Resolution #2013-09-145
Moved by McGinnis
Seconded by Fleming

RESOLVED, That Troy City Council hereby **APPROVES** all items on the Consent Agenda as presented with the exception of Item(s) J-6, which shall be **CONSIDERED** after Consent Agenda (J) items, as printed.

Yes: All-7
No: None

MOTION CARRIED

J-1b Address of "J" Items Removed for Discussion by City Council

J-2 Approval of City Council Minutes

Resolution #2013-09-145-J-2

RESOLVED, That Troy City Council hereby **APPROVES** the following Minutes as submitted:

a) City Council Meeting Minutes-Draft – August 26, 2013

J-3 Proposed City of Troy Proclamations: None Submitted
a) Patriot Week – September 11-17, 2013

J-4 Standard Purchasing Resolutions: None Submitted

J-5 Asset Management Consultants of Virginia, Inc. v City of Troy

Resolution #2013-09-145-J-5

RESOLVED, That the City Attorney is hereby **AUTHORIZED** and **DIRECTED** to represent the City of Troy in any and all claims and damages in the matter of *Asset Management Consultants of Virginia, Inc. v. City of Troy,* and to retain any necessary expert witnesses or pay any necessary costs to adequately represent the City.

J-6 Fireworks Permit – Troy Family Daze Festival

Resolution #2013-09-146
Moved by Fleming
Seconded by Campbell

RESOLVED, That Troy City Council hereby **ISSUES** a fireworks permit to Mad Bomber Fireworks Productions of Kingsbury, Indiana, for the public display of fireworks at the Troy Family Daze Festival at the Zion Christian Church, 3668 Livernois, Troy, Michigan, on September 14, 2013, or the rain date of September 15, 2013.

BE IT FURTHER RESOLVED, That the Troy Fire Department will **INSPECT** the fireworks to be displayed along with the site to assure compliance with applicable codes and standards for such a fireworks display.

Yes: Fleming, Henderson, McGinnis, Pennington, Slater, Campbell
No: None
Abstain: Tietz

MOTION CARRIED

K. MEMORANDUMS AND FUTURE COUNCIL AGENDA ITEMS:

K-1 Announcement of Public Hearings:

a) Adoption of Brownfield Redevelopment Plan #6 for MJR Troy Grand – 100 E. Maple Road

K-2 Memorandums (Items submitted to City Council that may require consideration at some future point in time): None Submitted

L. PUBLIC COMMENT FOR ITEMS NOT ON THE AGENDA:

Brake, Dan	Spoke about the City's reserve fund.
Savage, James	Spoke about various studies, consultants and outsourcing.
Cherasaro, Nicholas	Spoke about the City's reserve fund.
Peters, Richard	Spoke about conflict overseas and Troy Family Daze.

M. COUNCIL REFERRALS:

Items Advanced to the City Manager by Individual City Council Members for Placement on the Agenda

M-1 No Council Referrals Advanced

N. COUNCIL COMMENTS:

N-1 No Council Comments Advanced

Council Member McGinnis announced a community project on Thursday, September 12, 2013 from 11:00 AM – 4:00 PM, at Grace Centers of Hope. The USA Melting Pot Club will be doing painting and yard work on Seneca Street in Pontiac. Please view www.usameltingpot.org or contact (248) 978-7904 for more information.

Mayor Pro Tem Fleming addressed a situation resulting from the recent change in remittance address for water bills. This problem specifically affects online payments and resulted in penalties being charged. City Manager Brian Kischnick and Financial Services Director Tom Darling provided an update and efforts to work with those residents affected.

Mayor Slater requests to schedule a Closed Session on October 21, 2013 for the purpose of the City Manager annual evaluation.

O. REPORTS:

O-1 Minutes – Boards and Committees:

a) Planning Commission Special/Study-Final – July 23, 2013

b) Planning Commission-Final – August 13, 2013

Noted and Filed

O-2 Department Reports: None Submitted

Noted and Filed

O-3 Letters of Appreciation:

a) To Chief Mayer and Captain Frye From Matthew Leitman, Miller Canfield, Regarding Praise for Detective Todd Gustke

b) Certificate of Appreciation to Sergeant Andy Breidenich, Officer Gail Jasak and PSA Shawn Flint From Veterans of Foreign Wars

c) To Chief Mayer From Nancy Knutson Regarding PSA Jerilyn Sievers

d) Certificate of Appreciation to the Troy Police Department From the Clawson Police Department Regarding July 4th Traffic Assistance

e) To Mayor and City Council From Lori Funk, VP Lending at Flagstar Bank, Regarding Wonderful Service From the Parks Department

f) To Chief Mayer From Jill Weaver Regarding Officer Jeff Strong and Officer Scott Allan

Noted and Filed

O-4 Proposed Proclamations/Resolutions from Other Organizations: None Submitted
Noted and Filed

O-5 Notice of Hearing for Gas Customers of Consumers Energy Case No. U-1692-R
Noted and Filed

O-6 Old Stone School Update – Necessity of Selective Demolition
Noted and Filed

The Meeting **RECESSED** at 8:23 PM.

The Meeting **RECONVENED** at 8:34 PM.

P. STUDY ITEMS:

P-1 Pure Troy – Snow/Mowing Maintenance

Mayor Slater reconvened and asked City Manager Kischnick to open the presentation.

City Manager Kischnick introduced the topic as a complex issue. City Administration will address as many areas as possible, but will be consistently looking at other areas in order to address problems. He then turned the presentation over to Paul Evans, Zoning and Compliance Specialist.

Mr. Evans discussed and presented a PowerPoint presentation to City Council. He asked City Attorney Bluhm to comment regarding a citizen complaint asserting that the City was transferring City responsibility for removing snow to private residents. City Attorney Bluhm referenced Charter Section 2.2 (r) and the Home Rule Cities Act that allows the City of Troy to require residents to perform snow removal on public sidewalks. Mr. Evans continued with the presentation.

Kurt Bovensiep, Superintendent of the Parks Division, commented that there is not a “clear pavement” policy in the Streets Division of the Department of Public Works.

City Attorney Bluhm explained that the City has governmental immunity from civil liability for snow and ice accumulation and, therefore, so do the residents as long as the ordinances are obeyed.

Mr. Evans completed the PowerPoint presentation and opened the floor to questions and comments from City Council.

Mayor Pro Tem Fleming commented that he would like to see modifications to the ordinance to specify the minimum amount of snow requiring removal and to increase the time permitted to remove the snow. He went on to suggest that some areas of Troy have residences where it is not practical for homeowners to be responsible for rear yard snow removal, so perhaps the City could evaluate those areas. He emphasized that the City cannot take responsibility for snow removal on all public sidewalks.

Mayor Slater suggested that 3" is a better depth for the plowing policy and should also be the depth for the sidewalk snow removal policy. He also suggested that a 48 hour time limit would be more reasonable to have the snow removed. Mayor Slater went on to say that City Administration and City Council need to revisit the cuts that were made to snow removal services and mowing services in 2010, especially when there are safety issues involved. He asked that City Administration provide the dollar amounts for the reimplementation of 2010 service reductions. Mayor Slater requested consensus from City Council that the City doesn't expect residents to run out and clear sidewalks every time the wind blows. He further emphasized to residents that the City responds to complaints from other residents regarding the property owners not clearing sidewalks or mowing grass. Mayor Slater thanked the residents of Caliper for bringing these issues to the attention of City Administration and City Council.

Council Member Henderson commented that a change in a resident's routine can result in that resident complaining to the City about lack of snow removal on sidewalks. He expressed sympathy for those residents whose properties have difficult access to rear yard sidewalks. Council Member Henderson added that a 12 hour time limit doesn't seem practical.

Council Member Tietz asked about the amount of money that was cut from the budget when cuts to service were made in 2010. Mayor Slater responded that the City no longer has the personnel to afford the services for $23,000.

The consensus of City Council was to eliminate the requirement for certified mailings to residents. City Attorney Bluhm will bring back the requested changes for Council approval.

Council Member Tietz stated that there needs to be a depth threshold in the ordinance. He asked if there were complaints against the residents of Caliper who did not clear their rear yard sidewalks. Tim Richnak, Director of Public Works, answered that there were very few complaints. Over the last few years, however, more residents ride bikes and jog in the winter. The additional activity causes complaints.

Council Member Henderson clarified that any changes to the ordinance would be only for rear yard sidewalks, not all sidewalks. City Attorney Bluhm responded that language would need to be drafted and be clear for residents, which can be done.

Council Member McGinnis commented that there is language in the ordinance that is vague and needs to be corrected. She stated that it is not financially possible for the City to take over clearing sidewalks. Also, a 12 hour time limit is not reasonable for residents to obey. She believes cleaning up the ordinance language will alleviate a lot of the concerns discussed tonight. She would like to see information regarding the return of services that were cut in 2010, but after the ordinance is amended.

Mayor Slater commented that a minimum of 10" height for grass is too high for a violation. He would like to see that requirement amended to be 6" high in order for the City to take action on a complaint. Mayor and Council Member Tietz asked Mr. Kischnick to bring back a comparison from other cities as well as far as grass height limits. Mayor Slater would also like to see an amendment making the snow depth plowing threshold to be 3".

Council Member Campbell asked who is responsible for cattails and other grasses growing in the right of way. Mr. Richnak answered that most of those properties are on County roads, so the County is responsible for enforcement and maintenance.

Council Member Tietz would like to see the breakdown of commercial and residential complaints regarding mowing and snow removal. Mayor Slater asked how many vacant commercial lots are maintained by the City. Mr. Bovensiep answered that there were over 100 at one time, but now there are more like 20. Mayor Slater agreed with Council Member Tietz and would like to see the breakdown of complaints.

Mayor Pro Tem Fleming would also like to look at properties where the owners have hardships in complying with the ordinances. Mr. Evans explained a grading standard of safety for mowing and snow removal. He stated that if the Code Enforcement Officer determines that it is not safe to clear or mow a property, the City will not hold the property owner liable.

City Manager Kischnick asked for clarification regarding the request for breakdown of complaints. Mayor Slater also clarified that City Council would like to see the types of complaints that were registered, as well. Mr. Kischnick restated City Council's consensus of requests for amendments and more information as previously stated.

Mayor Slater asked for clarification regarding the dept policy on sidewalks and streets. The consensus of City Council was that the depth policy should be 3" for all sidewalks; and, a 48 hour time limit for snow removal.

Mr. Richnak commented that snow plowing depth was at 6" a few decades ago. With the popularity of smaller, lighter cars, the plowing depth needed to be reduced to 4". He stated that there is a huge difference in difficulty of driving between 3" and 4". Over 4", driving becomes very hazardous.

Q. CLOSED SESSION:

Q-1 No Closed Session

R. ADJOURNMENT:

Mayor Slater **ADJOURNED** the meeting at 9:46 PM.

Mayor Dane Slater

M. Aileen Bittner, CMC
City Clerk

CITY COUNCIL AGENDA ITEM

Date: September 16, 2013

To: Brian Kischnick, City Manager

From: Mark F. Miller, Director of Economic and Community Development
Steven J. Vandette, City Engineer

Subject: Standard Purchasing Resolution #1: Award to Low Bidder
Contract 13-5 – Troywood Paving S.A.D.

History

Troywood Paving is a special assessment district (S.A.D.) project approved by Standard Resolution #4 (#2013-06-113) on June 17, 2013.

The project includes paving the existing gravel road and installing storm drains at the west end of Troywood Street in Section 22. All contract work is scheduled to start in October 2013 and be completed by November 2013, with the exception of seed and sod restoration which will be completed by June 2013.

Purchasing

Bids were received and publicly read on September 11, 2013. The low bid of $118,270.00 submitted by Florence Cement Company is shown in the attached tabulation of bids. The Engineer's estimate at the time of bidding was $125,000. The low bid is $6,730 or 5.4% below the Engineer's estimate of the overall cost.

Work was competitively bid and publicly opened with two (2) bidders responding. The award is contingent upon submission of proper proposal and bid documents, including insurance certificates, bonds and all specified requirements.

Financial

Funds for this work are included in the Local Roads Fund. The budgeted amount includes funds for construction, inspection and contingencies.

Recommendation

It is recommended that City Council award a contract for the Troywood Paving S.A.D. Project to Florence Cement Company, 12585 23 Mile Road, Shelby Twp., MI 48315 for their low total bid amount of $118,270.00. In addition, we are requesting authorization to approve additional work, if needed, not to exceed 15% of the original project cost due to unknown conflicts with existing underground utilities that may arise during construction.

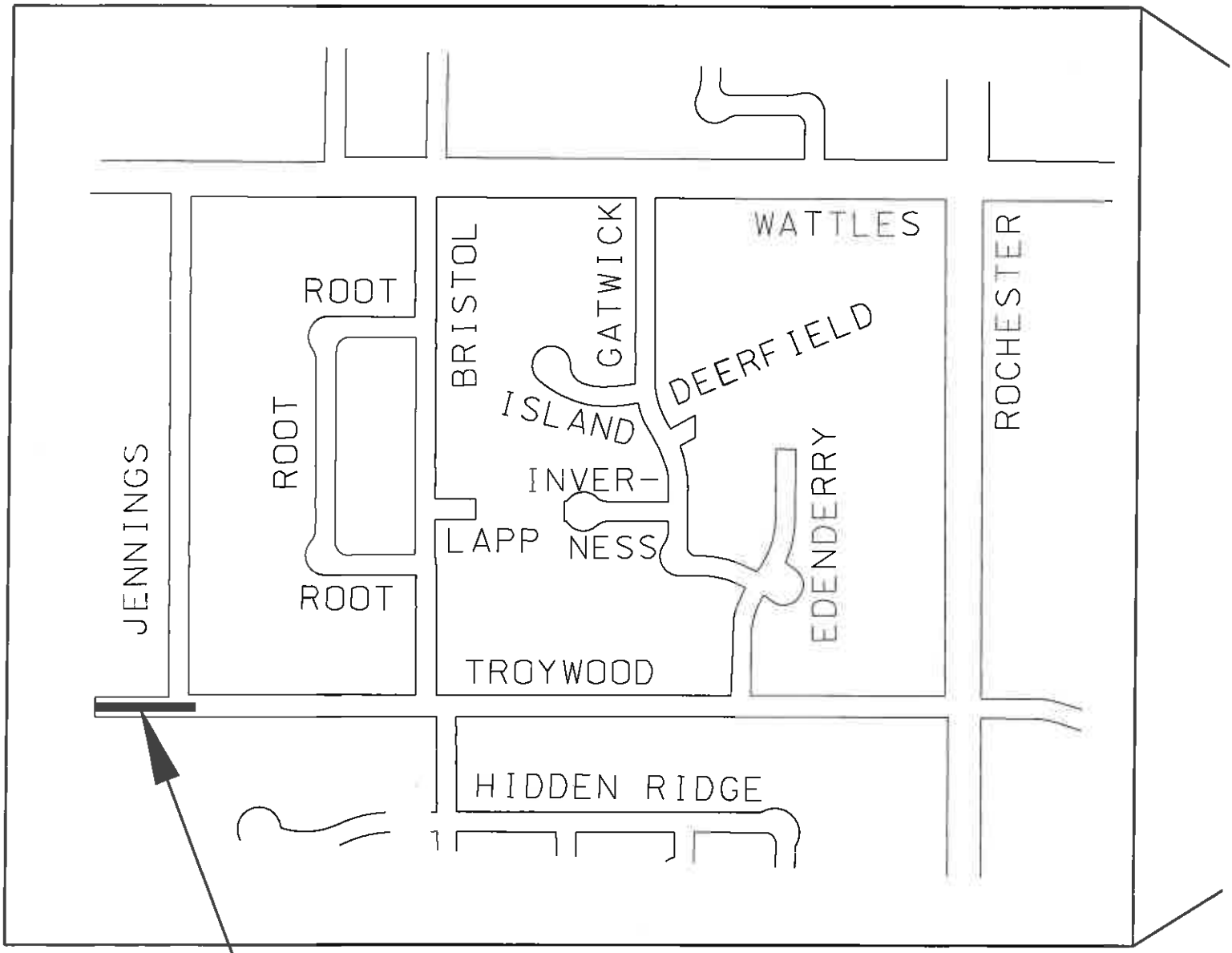
BID TABULATION
CONTRACT 13-5
Troywood Paving S.A.D.
City of Troy
Oakland County, Michigan

Bids Due: September 11, 2013
Project # 12.201.1

Total Bid Amount

Florence Cement Company	$	**118,270.00**	
Cadillac Asphalt, LLC	$	**132,213.17**	*

* = Corrected By Engineer



PROJECT AREA

CITY COUNCIL AGENDA ITEM

Date: September 17, 2013

To: Brian Kischnick, City Manager

From: MaryBeth Murz, Purchasing Manager
William S. Nelson, Fire Chief

Subject: Standard Purchasing Resolution 2: Award To Low Bidder Meeting Specifications – LED Tri-Pod Lighting

History

Fire scenes are usually dark and dangerous because of damage caused by the fire and the lack of lighting caused by the necessity to disconnect electrical service as a safety precaution. The Fire Department has been using older portable scene lighting equipment with the following issues:

- The portable lighting units have a large power draw limiting the number of units that can be deployed due to generator power and circuit availability.
- A bulb technology that generates considerable heat while operating, causing a potential hazard while in operation as the amount of time it takes to cool so the lights can be placed back onto the apparatus at the conclusion of the incident.
- The older bulb technology is susceptible to damage from vibration in the fire apparatus while being deployed which has resulted in inoperable units when needed.

The new LED Tri-Pod Lights provide a light level of illumination, consume less electrical power during use, do not generate heat while in use, and are more rugged and reliable than the older light technology.

Purchasing

On September 12, 2013, a bid opening was conducted as required by City Charter and Code for the purchase of six (6) LED Tri-Pod Lights. The bid was posted on the Michigan Inter-governmental Trade Network (MITN) website; www.mitn.info and the bid was also sent to the Troy Chamber of Commerce. Eight (8) bid responses were received. Below is a detailed summary of potential vendors:

Companies notified via MITN	303
Troy Companies notified via MITN	8
Troy Companies notified Active email Notification	8
Troy Companies notified Active Free	0
Companies that viewed the bid	102
Troy Companies that viewed the bid	4

MITN *provides a resourceful online platform to streamline the procurement process, reduce costs, and make it easier and more transparent for vendors to do business with the City of Troy.*
Active MITN members with a current membership and paying annual dues receive automatic electronic notification which allows instant access to Bids, RFPS and Quote opportunities with the City.
Active MITN *non-paying* members are responsible to monitor and check the MITN website for opportunities to do business with the City.
Inactive MITN member status can occur when a company does not renew their account upon expiration. Inactive members cannot be notified of solicitations or access any bid information.

The bid process resulted in a very good vendor response. As per the unit bid pricing which is detailed in the attached bid tabulation, the budget allows for the purchase of one (1) additional LED Tri-Pod Light instead of the original bid quantity which was six (6) for a total of seven (7) LED Tri-Pod Lights.

Financial
Funds are available in the 2013-2014 for the purchase of seven (7) LED Tri-Pod Lights for the Fire Department.

Recommendation
City management recommends awarding a contract to purchase seven (7) LED Tri-Pod Lights for the Fire Department to the low bidder meeting specifications, *Priority One Emergency of Canton, MI,* for an estimated total cost of $12,749.66, at unit prices contained in the bid tabulation opened September 12, 2013. The award is contingent upon the contractor's submission of properly executed bid documents and all other specified requirements.

TO: Members of Troy City Council
FROM: Lori Grigg Bluhm, City Attorney LGB
Allan T. Motzny, Assistant City Attorney ATM
DATE: September 18, 2013
SUBJECT: Mark R. Morin v City of Troy

Mark R. Morin has filed a case against the City in the 52-4 District Court. In this complaint, Dr. Morin argues that he should not have to pay for repairs that the City's contractor completed on the sidewalk in front of his home at 6804 Meadow Court. These repairs were completed after a routine inspection under the City's sidewalk inspection program, which covers the entire City in a twelve year cycle. The inspectors observed defects in the sidewalk at Plaintiff's residence, which needed to be repaired for safety purposes. Plaintiff was notified of the need for the repairs and given an opportunity to either do the necessary work or hire his own contractor to do it. Plaintiff took no action within the allocated 30 day time frame, and as a result, the City's contractor did the work and the City sent Plaintiff an invoice in the amount of $1,257.69. Plaintiff's lawsuit alleges the repairs were "unnecessary."

This case is currently assigned to 52-4 District Court Judge William E. Bolle, and the City's initial response was due on or before September 18, 2013. We have already filed a Motion for a More Definite Statement, because Plaintiff's claim did not specify the remedy he was seeking or the legal basis for his claim the City should be liable. If the Court grants this motion, the Plaintiff will be given 14 days to file a more detailed complaint, and if he fails to do so, the case will be dismissed.

A resolution authorizing our office to represent the City's interests is proposed for your consideration.

PROPOSED RESOLUTION:

RESOLVED, that the City Attorney is hereby authorized and directed to represent the City of Troy in any and all claims and damages in the matter of *Mark R. Morin v City of Troy* (52-4 District Court Case No.13 CO2167 GC). Furthermore, the City Attorney is authorized to pay necessary costs and expenses and to retain any necessary expert witnesses to adequately represent the City.

CITY COUNCIL AGENDA ITEM

Date: September 11, 2013

To: Brian Kischnick, City Manager

From: Mark F. Miller, Director of Economic and Community Development
Carol Anderson, Recreation Director

Subject: Municipal Credit and Community Credit Agreement

Background:

Municipal credits are state-authorized funds that are given directly to the Suburban Mobility Authority for Regional Transportation (SMART) to be divided among every city, township and village in Oakland, Wayne and Macomb Counties on a per capita basis. Community credits are a direct result of the SMART millage that provides opt-in communities with additional funds.

Troy's municipal and community credit dollars have been used to support the community based Troy Medi-Go Plus service. Medi-Go Plus provided over 14,000 rides to senior and disabled riders in 2012.

Recommendation:

It is recommended that the City enter into a contract for Municipal and Community Credits with SMART for $79,648 and $88,586 respectively. This fund is utilized for transportation service for senior citizens and persons with disabilities.

City Attorney's Review as to Form and Legality

Approved as to Form and Legality: _____
Lori Grigg Bluhm, City Attorney

CV\g\Seniors\SMART – CITY COUNCIL MEMO 13-14

MUNICIPAL CREDIT and COMMUNITY CREDIT CONTRACT
for FY - 2014

I, Dane Slater, as the Mayor of **City of Troy** (hereinafter, the "Community") hereby apply to SMART and agree to the terms and conditions herein, for the receipt and expenditure of **Municipal Credits** (Section 1 below), and **Community Credits** (Section 2 below); and further agree that the **Municipal and Community Credits Master Agreement** between the parties is incorporated herein by reference. A description of the service the Community shall provide hereunder is set forth in Exhibit A, and the operating budget for that service is set forth in Exhibit B, both of which are attached hereto and incorporated herein.

1. The Community agrees to use $ **79,648** in **Municipal Credit** funds as follows:

(a) Transfer to _____ (TRANSFEREE COMMUNITY) Funding of: $ _____

(b) Van/Bus Operations (Including Charter and Taxi services) At the cost of: $ 79,648

(c) Services Purchased from SMART (Including Tickets, Shuttle Services/Dial-a-Ride) At the cost of: $ _____

Total $ 79,648

SMART intends to provide Municipal Credit funds under this contract to the extent funds for the program are made available to it by the Michigan Legislature pursuant to Michigan Public Act 51 of 1951. Municipal Credit funds made available to SMART through legislative appropriation are based on projected revenue estimates. In the event that revenue actually received is insufficient to support the Legislature's appropriation, it will result in an equivalent reduction in funding provided to the Community pursuant to this Contract. In such event, SMART reserves the right, without notice, to reduce the payment of Municipal Credit funds by the amount of any reduction by the legislature to SMART. All funding must be spent by September 30, 2015; all funds not spent by that date will revert back to SMART pursuant to Michigan Public Act 51 of 1951, for expenditure consistent with Michigan law and SMART policy.

2. The Community agrees to use $ **88,586** in **Community Credit** funds available as follows:

(a) Transfer to _____ (TRANSFEREE COMMUNITY) Funding of: $ _____

(b) Van/Bus Operations (Including Charter and Taxi services) At the cost of: $ 88,586

(c) Services Purchased from SMART (Including Tickets, Shuttle Services/Dial-a-Ride) At the cost of: $ _____

(d) Capital Purchases At the cost of: $ _____

Total $ 88,586

MUNICIPAL CREDIT and COMMUNITY CREDIT CONTRACT
for FY - 2014

Capital purchases permitted with Community Credits are subject to applicable state and federal regulations, and SMART policy, including procurement guidelines. When advantageous, SMART may make procurements directly. Reimbursement for purchases made by Community requires submission of proper documentation to support the purchase (i.e. purchase orders, receiving reports, invoices, etc.). Community Credit dollars available in FY 2014, may be required to serve local employer transportation needs per the coordination requirements set forth in the aforementioned Master Agreement. All Community Credit funds must be spent by June 30, 2016 unless approval from SMART General Manager is obtained to extend Community Credits for an additional 2 years to allow accrual for major capital projects; any funds not spent by that date may revert back to SMART for expenditure consistent with SMART policy.

This agreement shall be binding once signed by both parties.

City of Troy

By: _____

Date _____ Its: Dane Slater
Mayor

Suburban Mobility Authority for
Regional Transportation

Date _____ By: _____

John C. Hertel
General Manager

EXHIBIT A

PROJECT DESCRIPTION

Community: Troy
Project: MUNICIPAL/COMMUNITY CREDIT PROGRAM
FISCAL YEAR 2014: JULY 1, 2013 through JUNE 30, 2014

Overall Project Description:
Troy Medi-Go Plus is a nonprofit community organization dedicated to helping Troy senior citizens and adults with disabilities in need of transportation get to medical appointments and other important destinations.

Service Area:
11 Mile, Mound, Hamlin, and Southfield Roads for medical appointments and work and educational trips. City of Troy for shopping and Troy Community Center.

Service Times:
Monday through Friday from 8:30 a.m. to 4 p.m.

Eligible User Groups:
Troy residents age 60 and older and Troy residents with disabilities age 18 and older.

Fare Structure
$2 per one way trip and additional donations are encouraged.

Service Mode:
Four 14-passenger vehicles. All vehicles are wheelchair accessible.

EXHIBIT B

PROJECT OPERATION BUDGET

COMMUNITY: City of Troy Medi-Go Plus
PROJECT: MUNICIPAL/COMMUNITY CREDIT PROGRAM
FISCAL YEAR 2014

OPERATING EXPENSES:		
Administrative Fee (max. is 10% of MC/CC Funds)	-	
Driver Wages	108,800.00	
Fringe Benefits	11,000.00	
Gasoline & Lubricants	34,000.00	
Vehicle Insurance	23,000.00	
Parts, Maintenance Supplies	13,660.00	
Mechanic Wages	-	
Fringe Benefits	-	
Dispatch Wages	27,000.00	
Cell phones or other overhead costs (Specify)	10,900.00	
Sub Total (Operating Expenses)		**$ 228,360.00**
PURCHASED SERVICE		
Taxi Service	-	
Charter Service	-	
SMART Bus Tickets	-	
SMART Shuttle Service	-	
SMART Dial-A-Ride	-	
Sub Total (Purchased Service)		**$ -**
CAPITAL EQUIPMENT		
(Only list purchases to be made with Community Credits)		
Computer Equipment	-	
Software	-	
Vehicle	-	
Maintenance Equipment	-	
Other (Specify)	-	
Sub Total (Capital Equipment)		**$ -**
TOTAL EXPENSES		**$ 228,360.00**
(Operating Expenses, Purchased Service and Capital Equipment)		
REVENUES:		
Municipal Credit Funds	79,648.00	
Community Credit Funds	88,586.00	
Specialized Services Funds	23,126.00	
General Funds	-	
Farebox Revenue	22,000.00	
In-Kind Service	-	
Special Fares (Contracted Service)	-	
Other (Specify) - Beaumont donation	15,000.00	
TOTAL REVENUE:		**$ 228,360.00**

Submitted By:	Title	Date
Dan Mayville	Treasurer	9/10/2013

(Note: Total Expenses MUST equal Total REVENUE)

Suburban Mobility Authority
for Regional Transportation

Office
Contract Compliance

Equal Employment Opportunity Compliance Report A

Bid / Project Name Municipal/Community Credit Program for FY 2014 - July 1, 2013 through June 30, 2014

Name of Firm: Troy Medi - Go *Plus*

Employer I.D. Number:

Address: ~~3179 Livernois~~ 3179 Livernois

City: Troy, MI 48083 State: Zip:

☐ Independent firm, or
☐ Owned / controlled by:

Corporate address of parent or affiliated company:

Indicate the appropriate box for your reporting unit (Mark only one box):
☐ Consolidated Report
☐ Headquarters Unit Report
☐ Special Report
☐ Single Establishment Employer Report
☐ Individual Establishment Report (Submit one for each establishment)

Business Data

What is the major activity of this establishment (Be specific, i.e., manufacturing steel casings, retail grocer, wholesale plumbing supplies, title insurance)?

Include the specific type of product or type of service provided, as well as the principal business or industrial activity:

Have all subcontractors been informed of their responsibility to file EEO Compliance Report A? ☐ Yes ☐ No

Is an Affirmative Action Plan on file with SMARTs Office of Contract Compliance? ☐ Yes ☐ No If no, plan will be submitted by (indicate date):

An Affirmative Action Plan is on file with the following governmental agencies. Please list:

Employment Data Employment at this establishment - Report all permanent, temporary, or part time employees including apprentices and on-the-job trainees. Enter the appropriate figures on ALL lines and in ALL columns. Blank spaces will be considered as zero.

Job Categories	Establishment			Minority Male				Minority Female			
	Total Employees Including Minorities	Total Males Including Minorities	Total Females Including Minorities	Black	Asian Pacific	Amer. Indian	Spanish Amer.	Black	Asian Pacific	Amer. Indian	Spanish Amer.
Officials /Managers	3	1	2					1			
Professionals											
Technicians											
Sales Workers											
Office and Clerical Staff											
Craftsmen (Skilled)											
Operators (Semi-Skilled)	9	8	1					1			
Laborers (Unskilled)											
Service Workers											
Journey Workers											
Apprentices											
Total	12	9	3					2			

Employment Data (continued)

Employment at this establishment-Report all permanent, temporary, or part-time employees including apprentices and on-the-job trainees. Enter the appropriate figures.

Job Categories	Current Workforce					Under-utilization		Estimated Number of Vacancies	20____ Goals				Ultimate Goals			
	No. of	Minority		Female					Minority		Female		Minority		Female	
	Employees	#	%	#	%	Min.	Fem.		#	%	#	%	Year	%	Year	%
Officials/Managers	3	1		2												
Professionals																
Technicians																
Sales Workers																
Office and Clerical Staff																
Craftsmen (Skilled)																
Operators (Semi. Skilled)	9	1		2												
Laborers (Unskilled)																
Service Workers																
Journey Workers																
Apprentices																
Total	12	2		4												

Certification

Name of authorized official: William McFadden

Title: Transportation Coordinator

Signature: W.P. McFadden

Date: 9-11-13

Name of person to contact regarding this report: W.P. McFadden

Title:

Address (number and street): 3179 Livernois

City: Troy MI 48083

State:

Zip Code:

Area Code: 248

Telephone Number: 452 1100

Ext.

How was information as to race or ethnic group obtained? ☐ Visual Survey ☐ Employment Records

Do not write below this line. For SMART Only.

Date	Awardable		Signature	Comments
	Yes	No		

CITY COUNCIL AGENDA ITEM

Date: September 23, 2013

To: Brian Kischnick, City Manager

From: Nino Licari, City Assessor

Subject: Correction of Standard Resolution No. 4 of June 17, 2013 – Special Assessment Roll No. 12.201.1

Background:

On June 17, 2013 Troy City Council approved Standard Resolutions No. 4, for Special Assessment Roll No. 12.201.1 at a cost of $60,100.00.

The Issue:

In Standard Resolutions No. 1, 2 and 3, and in the actual roll, and the amortization schedule, the Roll amount is actually $20,500.00.

The Solution:

If Council would be so kind as to rescind Standard Resolution No. 4 of June 17, 2013 and approve the correct Standard Resolution No. 4 attached to this memorandum, the Standard Resolution No. 4 for bituminous paving of a portion of Troywood Street and Special Assessment Roll No. 12.201.1 will match the correct amount of the Special Assessment at $20,500.00.

The Apology:

This error is mine, and mine alone (which is the rationale for leaving Mr. Darling off of the memo). I apologize for having to present this item to you a second time.

LIQUOR ADVISORY COMMITTEE MINUTES – FINAL SEPTEMBER 10, 2012

A regular meeting of the Liquor Advisory Committee was held on Monday, September 10, 2012 in the Lower Level Conference Room of Troy City Hall, 500 West Big Beaver Road. Chairman Max K. Ehlert called the meeting to order at 7:05 p.m.

ROLL CALL:

PRESENT: Max K. Ehlert, Chairman
Patrick C. Hall
Andrew Kaltsounis
Bohdan L. Ukrainec

ABSENT: W. Stan Godlewski
David S. Ogg
Timothy P. Payne

ALSO PRESENT: Julie Dufrane, Assistant City Attorney
Jeffrey Oberski, Analyst/Planner
Jesse Pappas, Student Representative
Pat Gladysz

Resolution to Excuse Committee Members Godlewski, Ogg, Payne

Resolution #LC2012-09-021
Moved by Hall
Seconded by Kaltsounis

RESOLVED, That the absence of Committee members Godlewski, Ogg, and Payne at the Liquor Advisory Committee meeting of September 10, 2012 be **EXCUSED**.

Yes: 4
No: 0
Absent: Godlewski, Ogg, Payne

Resolution to Approve Minutes of August 13, 2012 Meeting

Resolution #LC2012-09-022
Moved by Hall
Seconded by Ukrainec

RESOLVED, That the Minutes of the August 13, 2012 meeting of the Liquor Advisory Committee be **APPROVED**.

Yes: 4
No: 0
Absent: Godlewski, Ogg, Payne

Agenda Items

1. **7-Eleven, Inc.** requests a new SDM liquor license with Sunday Sales (AM) Permit, to be located at 4060 Rochester Road, Troy, MI 48084. *This is at the northeast corner of Rochester Road and Wattles.*

Present to answer questions from the Committee were Jason Canvasser, attorney for applicant, and Jim Carline, field consultant for applicant.

Applicant's representatives advised the Committee that this will be the fifth 7-Eleven store in Troy. There has been one violation in the past four years. Applicant's parent company has a comprehensive, computer-based alcohol training program that all employees must complete with a 100% score. All employees must repeat this training on an annual basis. This location is currently a corporate store, but will eventually be franchised. The liquor license will be in the corporation's name with the franchisee as the co-licensee.

The Police Department had no adverse findings to report.

Resolution #LC2012-09-023
Moved by Hall
Seconded by Kaltsounis

RESOLVED, That the Liquor Advisory Committee recommends that the request of 7-Eleven, Inc. for a new SDM liquor license with Sunday Sales (AM) Permit, to be located at 4060 Rochester Road, Troy, MI 48084 be **APPROVED**, pending approval of all final inspections.

Yes: 4
No: 0
Absent: Godlewski, Ogg, Payne

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2. **Sakura of Troy, Inc.** requests a new Class C Quota License "above all others" and new SDM license with new Sunday Sales Permit (PM), and new Sunday Sales Permit (AM) to be located at 3635 Rochester Road, Troy, MI 48098. *This is just north of Colebrook Street.*

Present to answer questions from the Committee were Joseph Shallal, attorney for applicant, and applicants Ho Yin Yip and Li Zhang.

Mr. Shallal advised the Committee that the applicants currently own the Golden Harvest Restaurant in Warren. They have 20 years of experience in the Asian food business. They plan to open a Japanese hibachi-style steak house utilizing the "teppanyaki" cooking method. As is the practice in the Warren restaurant, there will be monthly staff meetings to reinforce all liquor license laws. The restaurant will be open seven days a week, from 11:00 a.m. to 10:00 p.m.

Building permits have been issued for interior renovations. The façade on the south side will be removed which will add parking spaces. However, the entire building will not be utilized for the restaurant since there would not be enough parking spaces for the square footage.

Mr. Shallal stated that the applicants would be willing to agree in advance to return the Class C license to the city's quota system if they fail at their endeavor and a restaurant is not operated at this location. Assistant City Attorney Dufrane stated that she is unfamiliar with such an agreement and would research the concept.

Mr. Ukrainec expressed concerns about the inability to view plans for exterior improvements prior to making a decision. The Committee briefly discussed this issue in view of the fact that the applicants state that they will be investing a considerable amount of money in the façade on the south side of the building.

The Police Department reports that there are unpaid personal property taxes. There have been no final inspections.

Also, the Police Department located two incidents that occurred at the Golden Harvest Restaurant in Warren in March of 2000 and July of 2000 involving Li Zhang. Both incidents involved contact with the Warren Police Department, no citations were issued, and they do not appear on the records of the Michigan Liquor Control Commission.

Resolution #LC2012-09-024
Moved by Hall
Seconded by Kaltsounis

RESOLVED, That the Liquor Advisory Committee recommends that the request of Sakura of Troy, Inc. for a new Class C Quota License "above all others" and new SDM license with new Sunday Sales Permit (PM), and new Sunday Sales Permit (AM) to be located at 3635 Rochester Road, Troy, MI 48098 be **APPROVED** pending approval of all final inspections and with a request to City Council to consider applicant's offer to return liquor license to the city's quota system if they fail at their endeavor and a restaurant is not operated at this location.

Yes:	Ehlert, Hall, Kaltsounis
No:	Ukrainec
Absent:	Godlewski, Ogg, Payne

Assistant City Attorney Dufrane advised the Committee that on September 20, 2012 a meeting will be held of the Michigan Association of Municipal Attorneys. One of the topics of discussion will be the changes of the MLCC regulations. She will report findings after that meeting.

The meeting adjourned at 8:20 p.m.

Max K. Ehlert, Chairman

Patricia A. Gladysz, Secretary II

ELECTION COMMISSION MINUTES – Final **March 28, 2013**

A meeting of the Troy Election Commission was held March 28, 2013, at City Hall, 500 W. Big Beaver Road. City Clerk Bittner called the Meeting to order at 8:00 AM.

Roll Call:

PRESENT: David C. Anderson, M. Aileen Bittner – City Clerk
ABSENT: Timothy Dewan

Approval of Minutes

Resolution #EC-2013-03-004
Moved by Anderson
Seconded by Bittner

RESOLVED, That the following Minutes are **APPROVED** as submitted:

Election Commission Meeting – February 25, 2013

Yes: Anderson, Bittner
No: None
Absent: Dewan

MOTION CARRIED

Approval of Election Inspector Assignments – May 7, 2013 Special Election

Resolution # EC-2013-03-005
Motion by Anderson
Seconded by Bittner

RESOLVED, That Election Inspectors be **APPOINTED** for the May 7, 2013 Special Election, as presented by the City Clerk.

Yes: Bittner, Anderson
No: None
Absent: Dewan

MOTION CARRIED

Adjournment:

The meeting was adjourned at 8:01 AM.

M Aileen Bittner

M. Aileen Bittner, CMC
City Clerk

Chair Dziurman called the Regular meeting of the Building Code Board of Appeals to order at 3:00 p.m. on July 10, 2013 in the Lower Level Conference Room of the Troy City Hall.

1. ROLL CALL

Members Present:
Theodore Dziurman, Chair
Gary Abitheira
Teresa Brooks
Michael Carolan
Brian Kischnick

Support Staff Present:
Mitch Grusnick, Building Official/Code Inspector
Kathy L. Czarnecki, Recording Secretary

Also Present:
Attached and made a part hereof is the signature sheet of those present and signed in at this meeting.

2. APPROVAL OF MINUTES

Moved by: Brooks
Support by: Carolan

RESOLVED, To approve the minutes of the June 5, 2013 Regular meeting as submitted.

Yeas: All present (5)

MOTION CARRIED

3. HEARING OF CASES

A. **VARIANCE REQUEST, THOMAS DESMOND FOR D&G CAPITAL LLC, 1436 WACON** – A variance to replace a dilapidated 6' high wood privacy fence in the required front setback along Lyons. Fences are limited to 30" inches in the front setback at this location. The proposed fence has been installed without a permit and is set back 4'6" from the sidewalk along Lyons.

Mr. Grusnick gave a summary of the variance request. He indicated a total of ten property owners voiced approval of the variance request. Mr. Grusnick said City records show no permits were issued for the fence previously constructed on the property but a permit was issued for the hot tub.

Chair Dziurman opened the floor for public comment.

Connie Kleinstiver of 2805 Lahser, Bloomfield Hills, was present to represent the property owner at 1402 Wacon. She asked about the visibility of traffic in relation to the fence construction.

Mr. Grusnick stated there is no vision obstruction.

Seeing no one else was present to speak, Chair Dziurman closed the floor for public comment.

The applicant, Thomas Desmond, was present. He said he was informed by the fence contractor that a permit was not required for repair work only. Mr. Desmond said the previous fence had been there since the 1970's and was structured around the existing patio and hot tub. Mr. Desmond said the same footprint was used for the new fence, and is of the same dimensions and height as the previous fence.

Mr. Grusnick confirmed that the same footprint was used.

There was discussion on:

- Double front setback.
- Regulations on hot tubs.
- Approval of neighbors re property improvements.
- Potential for future variance requests.

Moved by: Kischnick
Support by: Abitheira

RESOLVED, To approve the variance request based on the unique circumstances, and that the property owner did not enlarge the footprint or height of the pre-existing, non/conforming fence, and that the safety would be enhanced with this approval.

Yeas: All present (5)

MOTION CARRIED

B. **VARIANCE REQUEST, BOB REED FOR CUSTOM SIGN CENTER, INC., 1852 E BIG BEAVER** – A variance to allow two ground signs (menu boards) each measuring 41.22 square feet. The signs will not be visible from the public right of way. Sign permits are not required for signs that do not exceed 36 square feet provided they are not visible from the public right of way.

Mr. Grusnick gave a summary of the variance request.

Patrick Bell, representative of Tim Horton's Restaurant, was present. Mr. Bell briefly addressed the size of the menu boards. He noted the same variance request was granted by this Board last year for the Tim Horton's restaurant on Maple Road. Mr. Bell said the drive-through at the two-tenant building would be used solely for Tim Horton's.

Mr. Grusnick said the menu boards are located behind the building and not visible from any public right-of-way. He confirmed a similar variance was granted last year for the Maple Road restaurant. Mr. Grusnick said no public comment was received.

Chair Dziurman opened the floor for public comment; seeing no one was present to speak, the floor was closed.

Moved by: Carolan
Support by: Abitheira

RESOLVED, To approve the variance as requested.

Yeas: All present (5)

MOTION CARRIED

C. **VARIANCE REQUEST, TOBY BUECHNER FOR TROY GYMNASTICS, 1921 NORTHWOOD** – A variance to allow gymnastic use occupancy in an existing 41,744 square foot building that is type 2B construction. The 2009 Michigan Building Code, Chapter 503, limits the A-3 use group occupancy in this existing type 2B building to 38,726 square feet.

Mr. Grusnick gave a summary of the variance request. Mr. Grusnick said there was no public comment received.

Toby Buechner, owner of Troy Gymnastics, and Paul Taylor, project architect, were present. Mr. Taylor addressed the use with respect to fire code and safety.

Mr. Buechner gave an overview of the remodeling of the existing office space and gymnasium area. He indicated the building will be open and completely visible. Mr. Buechner said seven exits are proposed, noting that safety is of utmost importance for the children.

Mr. Grusnick reported that plans for the building remodel have been submitted for permits. The plans show the removal of the wall to open up the gymnasium area and confirmed the entire building would continue to be sprinkled.

Mr. Grusnick summarized the following code equivalencies relating to safety factors for consideration by the Board in their determination.

- 7 exits provided; 3 required.
- Maximum of 100 feet travel distance provided to exit(s); 250 feet is allowed.
- Ceiling height is 24 feet; Code permits 8 feet.
- Space layout is open, designed without corridors and partitions.
- Open space to the south not used in area increase because of setback to the property line; however, space will provide emergency vehicle access.

Mr. Carolan asked to recuse himself from voting on the item because his daughter is an active member of gymnastics facility.

Moved by: Kischnick
Support by: Brooks

RESOLVED, To approve the variance as requested based on the additional safety factors.

Yeas: Abitheira, Brooks, Kischnick, Dziurman
Abstain: Carolan

MOTION CARRIED

4. COMMUNICATIONS

None.

5. PUBLIC COMMENT

None.

6. MISCELLANEOUS BUSINESS

None.

7. ADJOURNMENT

The Regular meeting of the Building Code Board of Appeals adjourned at 3:32 p.m.

Respectfully submitted,

Theodore Dziurman, Chair

Kathy L. Czarnecki, Recording Secretary

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On July 16, 2013, at 7:30 p.m., in the Council Chambers of Troy City Hall, Vice Chair Clark called the Zoning Board of Appeals meeting to order.

1. ROLL CALL

Present:
Bruce Bloomingdale
Glenn Clark
Kenneth Courtney
David Eisenbacher
Thomas Krent

Absent
Allen Kneale
David Lambert

Also Present:
Paul Evans, Zoning and Compliance Specialist
Allan Motzny, Assistant City Attorney

2. APPROVAL OF MINUTES – May 21, 2013

Moved by Courtney
Seconded by Eisenbacher

RESOLVED, to approve the May 21, 2013 meeting minutes.

Yes: All

MOTION PASSED

3. APPROVAL OF AGENDA – No changes

4. HEARING OF CASE

A. VARIANCE REQUEST, MICHAEL J. BLANEK, AIA, FOR STUCKY VITALE ARCHITECTS, 1125 NAUGHTON – In order to construct an addition to an existing building, a 4 foot variance to the required 10 foot side yard setback. Zoning Ordinance Section 4.15 (C).

Moved by Courtney
Seconded by Krent

RESOLVED, to grant the request.

Yes: All

MOTION PASSED

5. COMMUNICATIONS – None

6. MISCELLANEOUS BUSINESS – None

7. PUBLIC COMMENT – None

8. ADJOURNMENT – The Zoning Board of Appeals meeting ADJOURNED at 7:50 p.m.

Respectfully submitted,

_____
Glenn Clark, Vice Chair

_____
Paul Evans, Zoning and Compliance Specialist

G:\ZONING BOARD OF APPEALS\Minutes\2013\Draft\2013 07 16 ZBA Minutes draft.doc

Chair Tagle called the Special/Study meeting of the Troy City Planning Commission to order at 7:00 p.m. on August 27, 2013 in the Council Chambers of the Troy City Hall.

1. ROLL CALL

Present:
Donald Edmunds
Michael W. Hutson
Edward Kempen
Tom Krent
Gordon Schepke
Robert Schultz
Thomas Strat
John J. Tagle

Absent:
Philip Sanzica

Also Present:
R. Brent Savidant, Planning Director
Susan Lancaster, Assistant City Attorney
Ben Carlisle, Carlisle/Wortman Associates, Inc.
Frank Boudon, Student Representative
Kathy L. Czarnecki, Recording Secretary

2. APPROVAL OF AGENDA

Resolution # PC-2013-08-066
Moved by: Edmunds
Seconded by: Strat

RESOLVED, To approve the Agenda as prepared.

Yes: All present (8)
Absent: Sanzica

MOTION CARRIED

3. APPROVAL OF MINUTES

Resolution # PC-2013-08-067
Moved by: Kempen
Seconded by: Krent

RESOLVED, To approve the minutes of the August 13, 2013 Regular meeting as published.

Yes: All present (8)
Absent: Sanzica

MOTION CARRIED

4. PUBLIC COMMENTS – Items not on the Agenda

There was no one present who wished to speak.

5. ZONING BOARD OF APPEALS (ZBA) REPORT

No report; there was no Zoning Board of Appeals meeting this month.

6. DOWNTOWN DEVELOPMENT AUTHORITY (DDA) REPORT

No report; there was no Downtown Development Authority meeting this month.

7. PLANNING AND ZONING REPORT

Mr. Savidant reported the Brownfield Redevelopment Authority considered and approved the proposed Brownfield Redevelopment Plan #6 for 100 E. Maple Road, MJR Theatres Troy Grand Cinema 16.

POSTPONED ITEM

8. CONDITIONAL REZONING APPLICATION (File Number CR 009) – Proposed Troy Marriott Hotels, West side of Stephenson Highway, North of 14 Mile (333 Stephenson Highway), Section 35, From O (Office) District to OM (Office Mixed Use) District

Mr. Carlisle gave a brief summary of the conditional rezoning request. At the July 23, 2013 Regular meeting, the applicant offered to come back to the Planning Commission with a site plan as a condition. Mr. Carlisle identified the proposed conditions offered by the applicant and addressed the preliminary site plan with respect to site arrangement, parking, site access, landscaping, lighting and elevations. Mr. Carlisle recommended that the site planning issues identified in his report, dated August 15, 2013, are addressed prior to a recommendation of approval by the Planning Commission.

Present to represent the applicant were Victor Saroki and Jeffrey Ryntz of Victor Saroki and Associates, and Andy Wakeland of Giffels Webster. Akram Namou of A&M Hospitality was also present.

Mr. Saroki addressed the proposed mitigation of concerns voiced by the residential neighbors, site plan concerns identified by the Planning Consultant, potential to use designated loading zones for additional landscaping, hotel occupancy and staff. Mr. Saroki said they did look into orienting placement of the building so that the majority of windows would not face the residential side, and it resulted in an awkward layout with the buildings being closer to the residential property line. Mr. Saroki also addressed the building materials, building heights and lighting. Color renderings of the hotels were displayed.

Mr. Wakeland said Marriott Hotels would not agree to frosted windows as suggested at the previous meeting. He indicated Marriott Hotels gave their approval of the site plan as presented this evening. Mr. Wakeland said the applicant is happy to address the site planning issues identified in the Planning Consultant report. He continued to address setbacks, dumpster location, tree heights, bicycle parking, lighting, hotel staff, loading areas and the wall as a sound barrier.

Mr. Namou said he instructed the architectural and engineering team to take to heart the concerns of the residents. He indicated Marriott Hotels is satisfied with the strategic location of the proposed hotels and has given its approval to go forward.

There was discussion on:

- Site line profile.
- Landscaping; types, heights, growth timeline.
- Lighting; islands.
- Wall; sound barrier, height.
- Loading zones; additional landscaping, landbanked parking.
- Elevation and building facades.
- Access drive.
- Stormwater management.
- Role of Planning Commission as a recommending body.

PUBLIC HEARING OPENED

The following residents voiced opposition to the proposed rezoning:

Nick Penchoff, 302 Redwood
James Stone, 314 Redwood
Jim Kaltz, 286 Burtman
Sally Wilsher, 350 Redwood
Mary Jo Austin, 242 Redwood
Mike Landreth, 218 Redwood
Matt Morrison, 182 Redwood
Cynthia Wilsher, 369 E Maple
Randall Kriebel, 277 Redwood
Speaker did not sign in, stated address as 254 Redwood
Tom Norton, 1331 Key West (signed in at that address, City records show address as 1332 Key West, submitted photographs)
Bill Ring, 362 Redwood
Joan Devera, 157 Redwood

PUBLIC HEARING CLOSED

The Board thanked residents for attending the meeting to voice their concerns.

Resolution # PC-2013-08-068
Moved by: Hutson
Seconded by: Edmunds

RESOLVED, To postpone the item to the October 8, 2013 Regular meeting to provide the applicant an opportunity to address issues identified in the Planning Consultant reported dated August 15, 2013.

Yes: All present (8)
Absent: Sanzica

MOTION CARRIED

Chair Tagle called for a break at 8:59 p.m. The meeting reconvened at 9:06 p.m.

STUDY ITEM

9. POTENTIAL PLANNED UNIT DEVELOPMENT (PUD) – Proposed Mixed Use PUD Project, Northeast corner of Crooks Road and I-75 (5498-5500 Crooks), Section 9, Currently Zoned OM (Office Mixed Use) District

Mr. Savidant introduced the team members of the proposed development project.

Present were Remo Polselli, CEO of New California Hotel Corporation, and project architect, Jason Krieger of Krieger Klatt Architects. Collectively they introduced the proposed redevelopment plans for the Met Hotel. The plans include a 35,000 square foot retail center facing the property, a 500 seat amphitheater in the hotel courtyard and a fine dining restaurant at the former Charley's Crab restaurant location.

Members of the Planning Commission expressed their enthusiasm for the proposed development.

OTHER BUSINESS

10. PUBLIC COMMENT – Items on Current Agenda

There was no one present who wished to speak.

11. PLANNING COMMISSION COMMENT

There were general Planning Commission comments.

The Special/Study meeting of the Planning Commission adjourned at 9:47 p.m.

Respectfully submitted,

John J. Tagle, Chair

Kathy L. Czarnecki, Recording Secretary

G:\Planning Commission Minutes\2013 PC Minutes\Final\2013 08 27 Special Study Meeting_Final.doc

Chair Tagle called the Special/Study meeting of the Troy City Planning Commission to order at 7:00 p.m. on August 27, 2013 in the Council Chambers of the Troy City Hall.

1. ROLL CALL

Present:
Donald Edmunds
Michael W. Hutson
Edward Kempen
Tom Krent
Gordon Schepke
Robert Schultz
Thomas Strat
John J. Tagle

Absent:
Philip Sanzica

Also Present:
R. Brent Savidant, Planning Director
Susan Lancaster, Assistant City Attorney
Ben Carlisle, Carlisle/Wortman Associates, Inc.
Frank Boudon, Student Representative
Kathy L. Czarnecki, Recording Secretary

2. APPROVAL OF AGENDA

Resolution # PC-2013-08-066
Moved by: Edmunds
Seconded by: Strat

RESOLVED, To approve the Agenda as prepared.

Yes: All present (8)
Absent: Sanzica

MOTION CARRIED

3. APPROVAL OF MINUTES

Resolution # PC-2013-08-067
Moved by: Kempen
Seconded by: Krent

RESOLVED, To approve the minutes of the August 13, 2013 Regular meeting as published.

Yes: All present (8)
Absent: Sanzica

MOTION CARRIED

4. PUBLIC COMMENTS – Items not on the Agenda

There was no one present who wished to speak.

5. ZONING BOARD OF APPEALS (ZBA) REPORT

No report; there was no Zoning Board of Appeals meeting this month.

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Bill Ring, 362 Redwood
Joan Devera, 157 Redwood

PUBLIC HEARING CLOSED

The Board thanked residents for attending the meeting to voice their concerns.

Resolution # PC-2013-08-068
Moved by: Hutson
Seconded by: Edmunds

RESOLVED, To postpone the item to the October 8, 2013 Regular meeting to provide the applicant an opportunity to address issues identified in the Planning Consultant reported dated August 15, 2013.

Yes: All present (8)
Absent: Sanzica

MOTION CARRIED

Chair Tagle called for a break at 8:59 p.m. The meeting reconvened at 9:06 p.m.

STUDY ITEM

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OTHER BUSINESS

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11. PLANNING COMMISSION COMMENT

There were general Planning Commission comments.

The Special/Study meeting of the Planning Commission adjourned at 9:47 p.m.

Respectfully submitted,

_____
John J. Tagle, Chair

_____
Kathy L. Czarnecki, Recording Secretary

G:\Planning Commission Minutes\2013 PC Minutes\Draft\2013 08 27 Special Study Meeting_Draft.doc

Chair Dziurman called the Regular meeting of the Building Code Board of Appeals to order at 3:00 p.m. on September 4, 2013 in the Lower Level Conference Room of the Troy City Hall.

1. ROLL CALL

Members Present:
Theodore Dziurman, Chair
Gary Abitheira
Teresa Brooks
Michael Carolan

Member(s) Absent:
Brian Kischnick

Support Staff Present:
Mitch Grusnick, Building Official/Code Inspector
Kathy L. Czarnecki, Recording Secretary

Also Present:
Attached and made a part hereof is the signature sheet of those present and signed in at this meeting.

2. APPROVAL OF MINUTES

Moved by: Carolan
Support by: Abitheira

RESOLVED, To approve the minutes of the July 10, 2013 Regular meeting as submitted.

Yeas: All present (4)
Absent: Kischnick

MOTION CARRIED

3. HEARING OF CASE(S)

A. **VARIANCE REQUEST, JON AND LISA BRUNT, 5637 MARTELL DRIVE** – A variance for relief of Chapter 83 to install a 6 foot high privacy fence in the front setback along the south frontage of Martell Drive where the Fence Code limits the height to 48 inches.

Mr. Grusnick reviewed the variance request. He stated the department received no responses to the public hearing notices. Mr. Grusnick displayed photographs of the property and addressed concern for the potential vision obstruction of school children and pedestrians using the public sidewalk along Martell.

Jon and Lisa Brunt were present. They cited reasons for the request: the desire for privacy from the school activity, children and pedestrian traffic and potential liability with future installation of an in-ground pool. They indicated the fence contractor is aware of the obstruction view and propose to cut back the fence on a diagonal angle at the property corner.

Mr. Grusnick showed to the applicant the scale of the 25' corner clearance triangular cutback necessary to eliminate the obstruction view.

Mr. and Mrs. Brunt said they would have no problem with the triangular cutback as required by the City.

Mr. Abitheira shared he is very familiar with the school baseball activity and traffic. He said the subject lot is very unique and he identifies with the applicant's request for the privacy fence.

Discussion followed on:
- House setback from lot line.
- Preservation of existing trees.
- Existing chain link fence; ownership, maintenance of weed growth.

Moved by: Abitheira
Support by: Brooks

RESOLVED, That the variance request for relief of Chapter 83 to install a 6 foot high privacy fence in the front setback along the south frontage of Martell Drive, be granted for the following reasons:

1. The variance would not be contrary to the public interest or general purpose and intent of Chapter 83; and
2. The variance does not adversely affect properties in the immediate vicinity; and
3. The petitioner has a hardship or practical difficulty resulting from the unusual characteristics of the property that precludes reasonable use of the property.

FURTHER RESOLVED, That the variance is subject to providing a corner clearance triangular area without fencing starting at the intersection of the Martell right-of-way and the driveway approach, extending for a distance of 25 feet north of the driveway and 25 feet west along Martell for the purpose of eliminating the public sidewalk vision obstruction.

Yeas: Abitheira, Brooks, Carolan
Nay: Dziurman
Absent: Kischnick

MOTION CARRIED

4. COMMUNICATIONS

None.

5. PUBLIC COMMENT

None.

6. MISCELLANEOUS BUSINESS

None.

7. ADJOURNMENT

The Regular meeting of the Building Code Board of Appeals adjourned at 3:20 p.m.

Respectfully submitted,

_____

Theodore Dziurman, Chair

_____

Kathy L. Czarnecki, Recording Secretary

G:\Building Code Board of Appeals Minutes\2013\Draft\2013 09 04 Regular Meeting_Draft.doc

BUILDING CODE BOARD OF APPEALS SIGN-IN SHEET

September 4, 2013

NAME (PLEASE PRINT)	*ADDRESS*
JON & LISA BRUNT	5637 MARTELL DR. TROY, MI 48085

ELECTION COMMISSION MINUTES – Draft September 9, 2013

A meeting of the Troy Election Commission was held September 9, 2013, at City Hall, 500 W. Big Beaver Road. City Clerk Bittner called the Meeting to order at 8:01 AM.

Roll Call:

PRESENT: David C. Anderson, Timothy Dewan, M. Aileen Bittner – City Clerk

---

Approval of Minutes

Resolution #EC-2013-09-006
Moved by Dewan
Seconded by Anderson

RESOLVED, That the following Minutes are **APPROVED** as submitted:

Election Commission Meeting – March 28, 2013

Yes: Anderson, Bittner, Dewan
No: None

MOTION CARRIED

Approval of Consolidation of Precincts

Resolution # EC-2013-09-007
Motion by Anderson
Seconded by Dewan

RESOLVED, That the Election Commission of the City of Troy hereby **AUTHORIZES** that applicable precincts servicing qualified electors in the City of Troy be **CONSOLIDATED** for the November 5, 2013 General Election in accordance with MCL 168.659.

Yes: Bittner, Dewan, Anderson
No: None

MOTION CARRIED

Adjournment:

The meeting was adjourned at 8:04 AM.

M. Aileen Bittner, CMC
City Clerk

LIQUOR ADVISORY COMMITTEE MINUTES – DRAFT SEPTEMBER 9, 2013

A regular meeting of the Liquor Advisory Committee was held on Monday, September 9, 2013 in the Lower Level Conference Room of Troy City Hall, 500 West Big Beaver Road. Chairman Max K. Ehlert called the meeting to order at 7:00 p.m.

ROLL CALL:

PRESENT: Max K. Ehlert, Chairman
Matthew Binkowski
W. Stan Godlewski
Patrick C. Hall
Andrew Kaltsounis
Timothy P. Payne
Bohdan L. Ukrainec

ALSO PRESENT: Susan Lancaster, Assistant City Attorney
Jeffrey Oberski, Police Department Analyst/Planner
Mitch Huber, Student Representative
Pat Gladysz

Resolution to Approve Minutes of September 10, 2012 Meeting

Resolution #LC2013-09-001
Moved by Ukrainec
Seconded by Godlewski

RESOLVED, That the Minutes of the September 10, 2012 meeting of the Liquor Advisory Committee be **APPROVED**.

Yes: 7
No: 0
Absent: 0

Agenda Items

1. **Simbad, Inc.** requests to Transfer All Stock Interest in 2012 Class C and SDM licensed business with Sunday Sales Permit (PM), and Dance-Entertainment Permit, located at 336 John R., Troy, MI, 48083, Oakland County, wherein stockholder Sabah Garmo transfers 1,334 shares of stock to new stockholder, Loretta Garmo, and 666 shares of stock to new stockholder, Muayad Gorgees {MLCC Request #668985}.

Present to answer questions from the Committee were attorney Joseph Shallal, Loretta Garmo, Imad Koki, Kristen Davis, and Haitham Izzat Zora.

Mr. Shallal informed the Committee that his client, Loretta Garmo, is purchasing this restaurant and banquet hall business from Sabah Garmo. He also stated that Ms. Garmo and Mr. Garmo are of no relation. Ms. Garmo has no restaurant experience, but has prior business experience in that she owned a salon for several years.

Ms. Garmo plans to hire all new employees, i.e., one to two chefs, three to four servers, and one dishwasher. Mr. Muayad Gorgees (the other stockholder) will act in a public relations capacity. Ms. Garmo's original plan was to hire Mr. Izzat Zora as business manager.

Mr. Oberski informed the Committee that his investigation revealed background information which would cause the Police Department to object to Mr. Zora acting as manager of this new business. This potential objection was communicated to Ms. Garmo. In light of this, Ms. Garmo advised the Police Department that Mr. Zora would have no management or decision making privileges of this business and will be employed only as a promoter/marketer. Mr. Imad Koki will be hired as the manager.

The Committee members asked questions of Mr. Shallal and Ms. Garmo in order to clarify the relationship of all involved parties.

Resolution #LC2013-09-002
Moved by Hall
Seconded by Payne

RESOLVED, That the Liquor Advisory Committee recommends that the request of Simbad, Inc. to transfer all stock interest in 2012 Class C and SDM licensed business with Sunday Sales Permit (PM), and Dance-Entertainment Permit, located at 336 John R., Troy, MI, 48083, Oakland County, wherein stockholder Sabah Garmo transfers 1,334 shares of stock to new stockholder, Loretta Garmo, and 666 shares of stock to new stockholder, Muayad Gorgees, be **APPROVED**.

Yes:	7
No:	0
Absent:	0

The meeting adjourned at 7:55 p.m.

_____
Max K. Ehlert, Chairman

_____
Patricia A. Gladysz, Secretary II

CITY COUNCIL AGENDA ITEM

Date: September 18, 2013

To: Brian Kischnick, City Manager

From: Thomas Darling, Director of Financial Services

Subject: City of Troy Employee Retirement System Actuarial Valuation Dated December 31, 2012

History

The City of Troy Employee Retirement System has an actuarial valuation performed on an annual basis. The valuation is used to assess system assets, the value of future liabilities, the current funding ratio and any amount that will be required to be contributed by the employer.

The City of Troy Employee Retirement Board (the "Board") engaged the firm of Gabriel, Roeder Smith and Company to compile and provide the report. The report was accepted by the Board during the September 11, 2013 meeting.

Highlights of the Report

A copy of the report is attached. Highlights of the report are as follows:

1. The City's annual required contribution to the system will be reduced for the fiscal year ending June 30, 2015 from $1,845,880 to $1,451,198. A reduction of nearly $400,000 per year. This is indicated on page A-1 of the report.

2. The present value of the City's unfunded liability for future benefits is $11,540,277 and can also be seen on page A-1.

3. The system is 96.4% funded and appears to be in good financial health. The System funding percentage can be found on page D-2

4. Comments and Conclusions from the Actuary can be found on page A-3 and include:

    a. In aggregate, there was approximately a 1.4% actuarial gain (changes in actuarial assumptions and/or performance different from expectations) that resulted in the decrease in annual contribution requirements.

b. **If** the City continues to allow Defined Contribution members to annuitize account balances, a study should be undertaken to:
   i. Ensure conversion factors continue to be appropriate.
   ii. Review risks associated with this activity in a closed plan.
   iii. Discuss long-term funding implications with this kind of activity.

   It should be noted related to the last comment that the City currently has no plans to allow Defined Contribution members annuitize their accounts and become members of the system.

Further discussion on the topic of Employee Retirement System, Retiree Healthcare Trust and related legacy costs are currently being planned for a study session to be held in October 2013.

GRS Gabriel Roeder Smith & Company
Consultants & Actuaries

CITY OF TROY EMPLOYEES RETIREMENT SYSTEM

FORTY-NINTH ANNUAL ACTUARIAL VALUATION

DECEMBER 31, 2012

OUTLINE OF CONTENTS

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A-2	Computed City contributions – comparative statement
A-3	Comments and conclusion
A-4	Derivation of actuarial gain (loss)
	Summary of Benefit Provisions and Valuation Data Submitted by the Retirement System
B-1	Summary of benefit provisions
B-3	Reported asset information
B-8	Retired life data
B-12	Vested terminated member data
B-13	Active member data
	Financial Principles, Actuarial Valuation Process, Actuarial Cost Methods, Actuarial Assumptions and Definitions of Technical Terms
C-1	Financial principles
C-4	Actuarial valuation process
C-5	Actuarial cost methods
C-6	Actuarial assumptions in the valuation process
C-9	Actuarial assumptions used for the valuation
C-15	Definitions of technical terms
	Certain Disclosures Required by Statements No. 25 and No. 27 of the Governmental Accounting Standards Board
D-1	Actuarial accrued liability
D-2	Schedule of funding progress
D-3	Supplementary information

GRS
Gabriel Roeder Smith & Company
Consultants & Actuaries
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August 20, 2013

The Board of Trustees
City of Troy Employees Retirement System
Troy, Michigan

Submitted in this report are the results of the 49th Annual Actuarial Valuation of the assets, benefit values, reserves and contribution requirements associated with payments provided by the City of Troy Employees Retirement System.

This report was prepared at the request of the Board and is intended for use by the City of Troy Employees Retirement System and those designated or approved by the City of Troy Employees Retirement System. This report may be provided to parties other than the Retirement System only in its entirety and only with the permission of the Retirement System.

The purpose of the valuation is to measure the System's funding progress, to determine the employer contribution rate for the fiscal year ending and June 30, 2015, and to determine the actuarial information for Governmental Accounting Standards Board (GASB) Statement No. 25 and No. 27. The date of the valuation was December 31, 2012.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law.

This report should not be relied on for any purpose other than the purpose described above. Determinations of the financial results associated with the benefits described in this report in a manner other than the intended purpose may produce significantly different results.

To the best of our knowledge, the information contained in this report is accurate and fairly represents the actuarial position of the City of Troy Employees Retirement System as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices, with the Actuarial Standards of Practice issued by the Actuarial Standards Board.

The valuation was based upon data, furnished by your staff, concerning financial operations and individual participants and vested former participants. We checked for internal and year-to-year consistency, but did not otherwise audit the data. We are not responsible for the accuracy or completeness of the information.

The actuaries submitting this report are independent of the plan sponsor.

Randall Dziubek is a Member of the American Academy of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Respectfully submitted,

Randall J. Dziubek,
A.S.A., E.A., M.A.A.A.

Kenneth G. Alberts

RJD:KGA:sc

SECTION A

VALUATION RESULTS, COMMENTS AND CONCLUSION

COMPUTED CITY CONTRIBUTIONS
OF THE RETIREMENT SYSTEM
FOR THE FISCAL YEAR BEGINNING JULY 1, 2014

1. Actuarial Present Value of All Future Benefits*:		
- Active	$	33,923,266
- Terminated Vested		1,501,045
- Retired		124,959,897
- Total	$	160,384,208
2. Funding Value of Assets	$	147,567,945
3. Actuarial Present Value of Future Employee Contributions	$	1,275,986
4. City's Remaining Unfunded Present Value of Benefits After Recognition of Funding Value of Assets and Future Employee Contributions		
a. At 12/31/2012 (1) - (2) - (3)	$	11,540,277
b. Projected Forward to 6/30/2014	$	9,805,162
5. Actuarial Present Value of Future Salary	$	32,341,397
6. Projected Payroll 7/1/2014 - 6/30/2015#	$	4,786,638
7. City's Annual Normal Cost for Year Ending June 30, 2015		
(4b) / (5) * (6)	$	1,451,198

* *An actuarial present value is the present day value of a payment or series of payments that may become payable in the future. To determine an actuarial present value you need to use assumptions for the probability a payment will be paid, in what amount, and when. The probability the payment will be paid is determined by the eligibility provisions and the demographic assumptions for rates of withdrawal, disability, death, and retirement. The amount is determined by the benefit formula and assumptions for salary increases. The "when" determines how long an investment today would earn investment return before it needs to be paid. For example, if the probability of $1,000 being paid in 10 years is 75% and assumed investment return is 6.5%/year, the actuarial present value is $1,000 x 75% / (1.065)^{10} = $400.*

\# *Projected payroll reflects only those active employees covered by the closed Retirement System. This amount is expected to decline in the future until all active employees have terminated/retired, at which point it will be $0. Note, the relationship between computed City contributions and payroll will become less and less meaningful each year.*

COMPUTED CITY PENSION CONTRIBUTIONS
COMPARATIVE STATEMENT

Fiscal Year Beginning July 1	Valuation Date December 31	% of Payroll Contributions General	% of Payroll Contributions Public Safety	Valuation Payroll
1985	1984 *	13.49 %	19.23 %	$ 10,518,429
1986	1985	13.29	18.75	11,373,793
1987	1986 *	13.67	17.59	12,048,592
1988	1987 *	14.91	16.34	13,083,451
1989	1988	14.69	15.98	14,162,413
1990	1989 *	13.11	19.39	14,774,001
1991	1990 *	13.09	22.99	16,105,129
1992	1991	11.65	21.21	17,323,677
1993	1992	10.02	17.82	17,619,701
1994	1993 *	9.24	20.09	18,518,880
1995	1994	8.00	18.62	17,598,618
1996	1995 *	7.23	16.23	19,039,969
1997	1996	3.66	13.40	20,535,959
1998	1997 *	0.00	10.99	16,133,023
1999	1998 *	4.30	0.04	16,201,219
2000	1999 *	0.05	0.00	15,056,554
2001	2000 *@	0.00	0.00	15,441,200
2002	2001 *	0.00	0.00	14,566,460
2003	2002	1.69	0.00	13,552,549
2004	2003	1.87	0.00	13,052,713
2005	2004	3.64	0.00	12,572,374
2006	2005	4.97	0.00	12,099,631
2007	2006 *	1.79	1.79	11,471,511
2008	2007 *	4.10	4.10	11,045,745
2009	2008	13.57	13.57	10,953,297
2010	2009	26.62	26.62	10,483,020
2011	2010	27.16	27.16	8,959,340
2012	2011	36.57	36.57	5,427,637
2013	2011	36.57	36.57	5,427,637
2014	**2012**	**30.32**	**30.32**	**5,069,499**

* *After changes in benefit provisions/cost method/actuarial assumptions.*

@ *After change in asset valuation method.*

Given that the Retirement System is closed to new entrants, payroll is expected to decline in the future until all active employees have terminated/retired, at which point it will be $0. Note, the relationship between computed City contributions and payroll will become less and less meaningful each year.

COMMENTS AND CONCLUSION

COMMENT A: For the plan year ended December 31, 2012, the System experienced an actual gain of approximately $2.3 million. Roughly half of the gain was attributable to investment performance. The remaining portion was a result of a gain in connection with system liabilities. The primary source of the liability gain was pay increases that were less than assumed. The gain was partially offset by mortality losses (less actual deaths than assumed). In aggregate, the total actuarial gain was approximately 1.4% of total System liabilities. This resulted in a decrease in the annual contribution requirement.

COMMENT B: In the past, members of the DC plan annuitized their account balances and became retirees of this System. If the City/System is going to continue to allow this kind of activity going forward, we recommend a study be undertaken to:

- Ensure the conversion factors continue to be appropriate (or are updated as necessary);
- Review the risks associated with allowing this kind of activity in a closed plan;
- Discuss the long-term funding implication of this kind of activity.

CONCLUSION: It is the actuary's opinion that the required contribution rate determined by the most recent actuarial valuation is sufficient to meet the Retirement System's funding objective. In addition, to ensure that the Retirement System maintains the ability to pay retiree benefits when due, and to reduce the likelihood of future required contribution amounts increasing from the current level, continued timely receipt of annual computed contributions is essential.

DERIVATION OF ACTUARIAL GAIN/LOSS
YEAR ENDED DECEMBER 31, 2012

The actuarial gains or losses realized in the operation of the Retirement System provide an experience test. Gains and losses are expected to cancel each other over a period of years (in the absence of double-digit inflation) and sizable year to year fluctuations are common. Detail on the derivation of the actuarial gain/loss is shown below, along with a year by year comparative schedule.

	Total Liability - (PV Future Benefits)	-	Funding Value of Assets	-	PV Future Employee Contributions	=	Unfunded PV of Employer Financed Future Benefits
(1) Start of year	$ 162,050,264		$ 145,522,890		$ 1,464,906		$ 15,062,468
(2) Employer and employee contributions	0		2,314,691		(189,697)		(2,124,994)
(3) Benefits paid	(10,615,760)		(10,615,760)		0		0
(4) Interest accrual	10,188,255		9,189,203		89,054		909,998
(5) Expected before changes: (1) + (2) + (3) + (4)	161,622,759		146,411,024		1,364,263		13,847,472
(6) DC transfers#	0		0		0		0
(7) Change from revised benefit provisions	0		0		0		0
(8) Change from actuarial assumptions	0		0		0		0
(9) Expected amount after changes: (5) + (6) + (7) + (8)	161,622,759		146,411,024		1,364,263		13,847,472
(10) Actual at end of year	160,384,208		147,567,945		1,275,986		11,540,277
(11) Gain/Loss: (9) - (10)	$ 1,238,551		$ (1,156,921)		$ 88,277		$ 2,307,195
Gain/Loss as percent of present value of future benefit at start of year	0.8% Gain	-	(0.7)% Gain	-	0.1% N/A	=	1.4% Gain

 # Liability due to the annuitizing of Defined Contribution accounts was assumed to be equal to the asset transfer. Transfers were assumed to occur mid-year for purposes of calculating interest.

Valuation Date December 31	Actuarial Gain (Loss) As % of Beginning PVFB*
2002	(3.2) %
2003	1.6
2004	(3.7)
2005	(0.7)
2006	(0.6)
2007	0.3
2008	(5.2)
2009	(6.0)
2010	1.2
2011	1.1
2012	**1.4**

** Prior to 2007 this exhibit shows Actuarial Gain (Loss) as a % of Beginning Actuarial Accrued Liabilities.*

SECTION B

SUMMARY OF BENEFIT PROVISIONS AND VALUATION DATA SUBMITTED BY THE RETIREMENT SYSTEM

BENEFIT PROVISIONS EVALUATED AND/OR CONSIDERED (DECEMBER 31, 2012)

REGULAR RETIREMENT (no reduction factor for age):

Eligibility - T.P.O.A., T.F.S.O.A. and T.C.O.A. members: 25 years of service; or age 60 with 10 years of service. General AFSCME, General Clerical Members, Classified or Exempt: Age 50 with 27 years of service; or age 55 with 25 years of service; or age 60 with 10 years of service.

Mandatory Retirement Age - None.

Annual Amount

Division	Benefit	Supplemental Benefit
T.P.O.A.	2.80% * FAC to 25 years 1.00% * FAC 26-30 years	
T.C.O.A.	2.80% * FAC to 25 years 1.00% * FAC 26-30 years	
T.F.S.O.A.	2.25% * FAC * Service	0.25% * FAC * Service
General AFSCME	2.25% * FAC * Service	0.25% * FAC * Service
General Classified/Exempt	2.25% * FAC * Service	0.25% * FAC * Service
General Clerical	2.25% * FAC * Service	0.25% * FAC * Service

Type of Final Average Compensation - Highest 3 years out of last 10. Some lump sums are included but payment of sick or vacation leave is not included.

EARLY RETIREMENT (AGE REDUCTION FACTOR USED):

Eligibility - Age 55 with 10 years of service.

Annual Amount - Computed as regular retirement benefit but reduced by 1/2% for each month by which retirement precedes age 60.

DEFERRED RETIREMENT (vested benefits):

Eligibility - 10 years of service. Benefit payable at age 60.

Annual Amount - Same as regular retirement but based on credited service and final average compensation at termination.

DUTY DISABILITY RETIREMENT:

Eligibility - No age or service requirement. Worker's compensation must be payable.

Annual Amount - Same as regular retirement. Upon termination of worker's compensation the benefit is recomputed to grant service credit for the period in receipt of worker's compensation. Minimum benefit is based on 10 years of credited service (66-2/3% of final average compensation for non-command/exempt public safety members, while in receipt of worker's compensation).

NON-DUTY DISABILITY RETIREMENT:

Eligibility - 5 years of service (10 years for Exempt and Classified, AFSCME employees hired after 2/96).

Annual Amount - Same as regular retirement, but with a minimum benefit based on 10 years of credited service.

DUTY DEATH BEFORE RETIREMENT:

Eligibility - No age or service requirement.

Annual Amount - Widow's benefit equal to regular retirement benefit actuarially reduced in accordance with a 100% joint and survivor election. Minimum benefit is 25% (50% for T.F.S.O.A., Command Officers and T.P.O.A.) of final average compensation. If no widow, children under 18 share equally in 25% (50% for Command Officers and T.P.O.A.) of final average compensation.

NON-DUTY DEATH BEFORE RETIREMENT:

Eligibility - 10 years service.

Annual Amount - Same as regular retirement but reduced in accordance with a 100% joint and survivor election.

AUTOMATIC DEATH BENEFIT AFTER RETIREMENT: NONE.

POST-RETIREMENT ADJUSTMENTS: One-time increases were granted in 1973, 1977, 1978, 1981, 1983, 1989 and 1999.

HEALTH INSURANCE PREMIUM SUBSIDY: Post-retirement health insurance premiums are subsidized by the City as follows:

T.C.O.A. - Fully paid after 7/1/94.
T.P.O.A. - 4% per complete year, retired after 2/20/1996.
T.F.S.O.A.- 4% per complete year, retired after 1/1/99.
AFSCME - 4% per complete year, retired after 1/1/01.
Classified Exempt, Clerical - $400/month or 4% per complete year, whichever is greater.
Retirees from prior provisions - $400/month or 3% per complete year, whichever is greater.

Liabilities for the health insurance premium subsidy are included in the City's OPEB valuation report and not included in the Retirement System valuation (this report).

MEMBER CONTRIBUTIONS: Expressed as percentages of compensation as follows:

1.5% for clerical members
3.0% for T.F.S.O.A.
1.5% for classified and Exempt members
1.5% for AFSCME
4.0% for T.P.O.A.
4.0% for T.C.O.A.

REPORTED FUND BALANCE (MARKET VALUE)

Reserves	Reported Fund Balance December 31, 2012	2011
Reserve for Employees' Contributions	$ 2,632,887	$ 2,443,190
Reserve for Employer Contributions	99,914,485	90,584,179
Reserve for Retired Benefit Payments	49,882,949	50,317,983
Reserve for Undistributed Investment Income	0	0
Reserve for Health Insurance Premiums	28,233,330	32,392,068
Total Fund Balance	$180,663,651	$175,737,420

Valuation assets are equal to reported market value of assets (excluding health reserves), except that all realized and unrealized gains and losses are spread over a period of years, with 20% recognition the first year. Such spreading reduces the fluctuation in the City's computed contribution rate which might otherwise be caused by market value fluctuations. The details of the spreading technique are shown on page B-4. The valuation assets as of December 31, 2012 total $147,567,945.

In financing actuarial accrued liabilities, valuation assets of $147,567,945 were distributed as follows:

Reserves for	Valuation Assets Applied to Actuarial Accrued Liabilities for: Active Members	Retirants & Beneficiaries	Contingency Reserve	Totals
Employees' Contributions	$ 2,632,887			$ 2,632,887
Employer Contributions	24,837,537	$ 75,076,948		99,914,485
Retired Benefit Payments		49,882,949		49,882,949
Valuation Asset Adjustment	(4,862,376)			(4,862,376)
Totals	**$22,608,048**	**$124,959,897**		**$147,567,945**

DERIVATION OF VALUATION ASSETS
MARKET VALUE WITH 20% RECOGNITION OF THE DIFFERENCE BETWEEN THE MARKET RATE OF RETURN AND THE PROJECTED RATE OF RETURN

	2011	2012	2013	2014	2015	2016
A. Funding Value Beginning of Year	$ 133,400,223	$ 145,522,890				
B. Market Value End of Year	143,345,352	152,430,321				
C. Market Value Beginning of Year	134,391,230	143,345,352				
D. Non-Investment Net Cash Flow (EE + ER cont.) - (Ret Ben. + Refunds)	3,810,265	(8,301,069)				
E. Investment Income:						
E1. Market Total: B-C-D	5,143,857	17,386,038				
E2. Assumed Rate	6.50%	6.50%				
E3. Amount for Immediate Recognition: E2 * (A+D/2)	8,794,848	9,189,203				
E4. Amount for Phased-In Recognition: E1-E3	(3,650,991)	8,196,835				
F. Phased-In Recognition of Investment Income:						
F1. Current Year: 0.20*E4	(730,198)	1,639,367				
F2. First Prior Year	247,752	$(730,198)	$1,639,367			
F3. Second Prior Year	0	247,752	(730,198)	$1,639,367		
F4. Third Prior Year	0	0	247,752	(730,198)	$1,639,367	
F5. Fourth Prior Year	0	0	0	247,751	(730,199)	$1,639,367
F6. Total Recognized Investment Gain	(482,446)	1,156,921	1,156,921	1,156,920	909,168	1,639,367
G. Funding Value End of Year: A+D+E3+F6	**145,522,890**	**147,567,945**				
H. Difference between Market & Funding Value	(2,177,538)	4,862,376				
I. Recognized Rate of Return	6.14%	7.32%				
J. Ratio of Funding Value to Market Value	102%	97%				

ASSET INFORMATION REPORTED FOR VALUATION COMPARATIVE STATEMENT

Year Ended December 31	Revenues				Expenses				Assets Year-End *
	Employee Contrib.	Employer Contrib.	Investment Income	Misc. Income	Retirement Benefits	Contrib. Refunds	Health Insurance	Misc. Expenses	
1985	$ 1,011	$1,483,547	$ 3,952,592	$ 0	$ 349,086	$ 11,087	$ 18,268	$ 3,026	$ 25,952,007
1990	1,558	2,401,060	3,861,487	0	782,167	19,292	68,886	4,984	56,013,922
1991	1,760	3,081,239	11,116,274	0	878,775	1,431	87,281	0	69,245,708
1992	6,177	2,626,564	7,134,901	0	1,040,882	14,188	100,340	5,600	77,852,340
1993	24,939	2,647,753	7,900,961	0	1,115,225	392	119,120	6,000	87,185,256
1994	144,934	2,950,360	(187,532)	0	1,351,290	590	152,637	6,300	88,582,201
1995	198,746	3,156,148	20,889,448	0	1,819,840	14,066	220,291	6,600	110,765,746
1996	335,144	3,311,550	16,325,274	0	2,013,257	3,047	251,138	11,300	128,458,972
1997	371,811	3,167,814	25,544,354	0	2,459,287	11,273	329,312	16,404	154,726,675
1998	340,807	2,819,785	21,825,629	0	2,666,133	19,105,397	449,779	19,846	160,216,807
1999	335,828	1,795,070	12,085,389	0	2,860,935	1,095,796	481,660	28,782	167,220,855
2000	421,161	1,113,993	3,075,759	0	3,156,251	7,349,663	688,138	27,515	160,610,201
2001	398,572	1,303,079	2,162,267	0	3,351,223	6,753,854	693,345	28,998	153,646,699
2002	364,130	1,532,439	(7,992,398)	0	3,496,301	7,249,513	942,054	31,653	135,831,349
2003	343,629	1,543,286	25,064,474	0	3,843,356	10,230	1,102,076	29,334	157,797,742
2004	333,305	1,571,547	12,763,027	0	4,482,783	335,998	1,254,559	29,322	166,362,959
2005	309,731	972,454	2,995,153	0	4,923,401	2,613	1,368,331	53,247	164,292,705
2006	308,887	247,688	14,764,828	0	5,529,394	57,875	1,592,311	32,382	172,402,146
2007	315,677	218,653	15,286,055	0	5,924,256	5,516	1,855,527	47,947	180,389,285
2008	316,708	376,155	(44,700,324)	0	6,204,282	0	2,101,958	62,349	128,013,235
2009	7,651,667 #	838,969	33,216,875	0	7,944,132	0	2,558,948	67,073	159,150,593
2010	285,047	1,953,321	22,366,478	0	7,596,953	0	3,042,783	54,894	173,060,809
2011	10,145,048 #	2,789,888	2,455,082	0	9,124,671	0	3,535,596	53,140	175,737,420
2012	**189,697**	**2,124,994**	**17,431,467**	**0**	**10,615,760**	**0**	**4,158,738**	**45,429**	**180,663,651**

** Includes assets for retiree health benefits.*

 # Includes amounts moved from the City's defined contribution plan for employees choosing to transfer to the Employees Retirement System.

SUMMARY OF
CURRENT ASSET INFORMATION *
REPORTED FOR VALUATION

Market Value of Assets

	12/31/2012 Market Value	12/31/2011 Market Value
Cash & equivalents	$ 12,309,417	$ 9,582,177
Government bonds	9,688,100	12,899,336
Corporate bonds	7,874,441	13,843,282
Stock	131,445,632	126,636,694
Bond mutual funds	15,234,059	12,349,586
Other (mutual funds)	4,112,002	426,345
Total assets	180,663,651	175,737,420
Less accounts payable	0	0
Net assets available for benefits	$180,663,651	$175,737,420

Revenues and Expenses

	2012	2011
Balance - January 1	$ 175,737,420	$ 173,060,809
Revenues		
Employees' contributions#	189,697	10,145,048
Employer contributions	2,124,994	2,789,888
Investment income	17,483,386	2,455,082
Miscellaneous	0	0
Expenses		
Benefit payments	10,615,760	9,124,671
Refunds of member contributions	0	0
Administrative expenses	29,059	53,140
Investment expenses	51,919	44,307
Health insurance premiums	4,158,738	3,535,596
Miscellaneous	16,370	0
Balance - December 31	$ 180,663,651	$ 175,737,420

* *Includes assets for retiree health benefits.*

\# *Includes amounts moved from the City's defined contribution plan for employees choosing to transfer to the Employees Retirement System.*

RECENT HISTORICAL MARKET VALUE RATES OF RETURN

Year Ending	Rate of Return	Five Year Average	Ten Year Average
2003	18.7%		
2004	8.2%		
2005	1.8%		
2006	9.2%	6.2%	
2007	9.1%	9.3%	
2008	(25.3)%	(0.4)%	
2009	26.2%	2.7%	
2010	14.4%	5.1%	
2011	1.4%	3.6%	4.9%
2012	10.3%	3.8%	6.5%

RETIREES AND BENEFICIARIES ADDED TO AND REMOVED FROM ROLLS
DEFINED BENEFIT PLAN
COMPARATIVE STATEMENT

Year Ended December 31	Added to Rolls			Removed from Rolls		Rolls End of Year		% Incr. Annual Benefit	Average Annual Benefit	Present Value of Benefits	Expected Removal
	No.	Annual Benefit	Post-Ret. Increases	No.	Annual Benefit	No.	Annual Benefit				
1986	8	$ 64,758		1	$ 3,820	71	$ 531,906	12.9%	$ 7,492	$ 6,006,326	1.3
1987	6	45,628		3	12,295	74	565,239	6.3	7,638	6,307,514	1.6
1988	6	82,290		2	8,825	78	538,704	13.0	8,188	6,997,601	1.7
1989	6	71,518	$ 26,993	1	4,836	83	732,379	14.7	8,824	7,902,521	1.9
1990	5	102,108		2	13,370	86	821,117	12.1	9,548	8,852,756	2.1
1991	10	185,752		6	53,568	90	953,301	16.1	10,592	10,403,174	2.2
1992	10	154,697		4	41,160	96	1,066,838	11.9	11,113	11,711,334	2.4
1993	6	110,685		3	26,135	99	1,151,388	7.9	11,630	12,514,776	2.6
1994	21	648,681			(1,572)	120	1,798,497	56.2	14,987	20,491,084	2.7
1995	6	84,312		4	55,506	122	1,827,303	1.6	14,978	21,287,811	2.9
1996	20	446,833		6	60,831	136	2,213,305	21.1	16,274	25,459,651	2.0
1997	14	420,457		1	10,217	149	2,623,545	18.5	17,608	30,537,712	2.8
1998	8	163,633		4	56,055	153	2,731,123	4.1	17,850	31,402,870	3.6
1999	10	286,293		3	69,193	160	2,948,223	7.9	18,426	33,748,959	4.0
2000	11	340,403		8	59,325	163	3,229,301	9.5	19,812	37,083,835	4.0
2001	9	240,483		3	24,905	169	3,444,879	6.7	20,384	39,424,271	4.4
2002	8	189,284		6	59,479	171	3,574,684	3.8	20,905	40,667,169	4.4
2003	15	521,015		4	17,957	182	4,077,742	14.1	22,405	47,046,673	4.4
2004	21	615,572		7	87,193	196	4,606,121	13.0	23,501	53,030,527	4.8
2005	14	520,152		5	101,352	205	5,024,921	9.1	24,512	57,995,428	4.8
2006	15	609,624		3	29,746	217	5,604,799	11.5	25,829	64,573,648	4.8
2007	18	459,496		3	53,602	232	6,010,693	7.2	25,908	68,494,664	5.5
2008	11	176,381		3	30,933	240	6,156,141	2.4	25,651	69,351,765	5.8
2009	23	1,270,351		8	114,219	255	7,312,273	18.8	28,676	84,166,668	6.4
2010	17	547,081		7	93,784	265	7,765,570	6.2	29,304	88,664,507	6.4
2011	62	3,024,612		5	49,056	322	10,741,127	38.3	33,358	125,716,820	6.8
2012	**6**	**179,886**		**6**	**118,671**	**322**	**10,802,342**	**0.6**	**33,548**	**124,959,897**	**7.2**

RETIREES AND BENEFICIARIES - DECEMBER 31, 2012
TABULATED BY VALUATION DIVISIONS

DEFINED BENEFIT MEMBERS

Valuation Division	No.	Annual Benefits	Age
General	214	$ 5,377,182	68.2 years
Public Safety	108	5,425,160	61.8 years
Totals	322	$ 10,802,342	

RETIREES AND BENEFICIARIES INCLUDED IN DEFINED BENEFIT VALUATION
TABULATED BY TYPE OF BENEFITS BEING PAID
DECEMBER 31, 2012

Type of Benefits Being Paid	Number	Annual Benefits
Age and Service benefits		
Regular benefit - benefit terminating at death of retirant	94	$ 2,687,108
100% Joint and Survivor benefit		
Option A	79	3,947,250
Option C	61	2,242,896
50% Joint and Survivor benefits		
Option B	23	624,496
Option D	23	741,250
Survivor Beneficiary	30	407,746
Total age and service benefits	310	$10,650,746
Casualty benefits		
Non-Duty Disability - Regular		
- Retiree - Regular benefit	1	$ 29,547
- Retiree - Option C	1	12,097
- Beneficiary	4	21,843
Duty- Disability - Option A	1	7,866
Non-Duty Death benefit	3	44,206
Duty Death benefit	2	36,037
Total Casualty benefits	12	151,596
Total Benefits Being Paid	**322**	**$10,802,342**

RETIREES AND BENEFICIARIES INCLUDED IN DEFINED BENEFIT VALUATION
BY ATTAINED AGES
DECEMBER 31, 2012

Attained Ages	No.	Annual Pensions
45-49	6	$ 252,195
50-54	32	1,573,534
55-59	51	2,281,679
60-64	82	3,479,637
65-69	59	1,577,624
70-74	32	830,496
75-79	18	325,087
80-84	26	311,847
85-89	12	150,110
90-94	4	20,133
Totals	**322**	**$ 10,802,342**

VESTED TERMINATED MEMBERS INCLUDED IN DEFINED BENEFIT VALUATION
BY ATTAINED AGES
DECEMBER 31, 2012

Attained Ages	Estimated No.	Estimated Annual Benefits
43	1	$ 24,588
49	1	5,110
51	1	13,230
53	2	15,012
54	1	8,033
55	1	16,662
57	1	13,419
58	1	3,414
59	1	11,442
60	1	15,782
Totals	**11**	**$ 126,693**

ACTIVE MEMBERS - DECEMBER 31, 2012
TABULATED BY VALUATION DIVISIONS

DEFINED BENEFIT MEMBERS

Valuation Division	No.	Annual Payroll	Average Age	Average Service	Average Pay
General	21	$ 1,196,567	53.9 years	18.9 years	$56,979
Public Safety	43	3,872,932	45.4 years	18.5 years	90,068
Totals	64	$ 5,069,499			

ACTIVE MEMBERS INCLUDED IN DEFINED BENEFIT VALUATION

Valn. Date Dec. 31	Active Members: General: Class/ Exempt	Active Members: General: Other	Active Members: Public Safety: Comm/ Other	Active Members: Public Safety: TPOA	Active Members: Total	Valuation Payroll	Average: Age	Average: Service	Average: Pay	Average: % Incr.
1972		183		66	249	$ 2,907,267	36.1 yrs.	4.7 yrs.	$ 11,676	7.6 %
1973		205		64	269	3,434,997	36.2	4.9	12,770	9.4
1974		222		68	290	4,123,892	36.3	5.3	14,220	11.4
1975		247		81	328	4,996,368	36.2	5.5	15,233	7.1
1976		254	20	62	336	5,615,394	36.8	6.2	16,712	9.7
1977		269	18	63	350	5,970,264	37.7	6.5	17,058	2.1
1978		261	18	69	348	6,628,692	38.0	7.2	19,048	11.7
1979		282	22	72	376	7,700,464	37.9	7.2	20,480	7.5
1980		279	21	86	386	8,947,885	38.0	7.6	23,181	13.2
1981	100	167	25	87	379	9,697,649	38.4	8.3	25,587	10.4
1982	92	163	32	78	365	9,954,722	39.0	9.2	27,273	6.6
1983	94	140	30	78	342	10,214,049	39.2	10.0	29,866	9.5
1984	97	135	32	74	338	10,518,429	39.2	11.3	31,120	4.2
1985	103	139	32	79	353	11,373,793	39.2	11.1	32,220	3.5
1986	108	141	37	79	365	12,048,592	39.5	11.0	33,010	2.5
1987	116	143	41	84	384	13,083,451	40.0	11.3	34,071	3.2
1988	118	142	43	86	389	14,162,413	40.4	11.7	36,407	6.8
1989	122	144	47	86	399	14,774,001	40.5	11.7	37,028	1.7
1990	128	148	46	90	412	16,105,129	41.1	12.0	39,090	5.6
1991	129	150	44	98	421	17,323,677	41.5	12.0	41,149	5.3
1992	132	150	45	96	423	17,619,701	42.0	12.7	41,654	1.2
1993	134	150	47	93	424	18,518,880	42.6	13.1	43,677	4.9
1994	128	147	39	87	401	17,598,618	43.0	13.4	43,887	0.5
1995	127	153	43	95	418	19,039,969	43.4	13.6	45,550	3.8
1996@	**135 ***	**160**	**44**	**95**	**434**	**20,535,959**	**43.2**	**13.1**	**47,318**	**3.9**
1997	55 *	146	37	102	340	16,133,023	42.4	12.1	47,590	0.6
1998	59	116 *	40	99	314	16,201,219	43.0	13.3	51,761	8.8
1999	55	85 #	40	99	279	15,056,554	43.4	14.4	54,553	5.4
2000	55	76	29	97 *	257	15,441,200	44.1	14.8	60,317	10.6
2001	56	73	20	92	241	14,566,460	44.7	14.7	60,442	0.2
2002	59	66	21	71	217	13,552,549	45.7	15.8	62,454	3.3
2003	56	61	19	69	205	13,052,713	46.5	16.3	63,672	1.9
2004	52	54	19	61	186	12,572,374	46.9	16.9	67,593	6.2
2005	48	51	21	54	174	12,099,631	47.7	17.4	69,538	2.9
2006	44	46	20	51	161	11,471,511	48.0	17.6	71,252	2.5
2007	37	40	21	49	147	11,045,745	48.1	18.1	75,141	5.5
2008	37	36	22	47	142	10,953,297	48.8	19.0	77,136	2.7
2009	30	32	20	46	128	10,483,020	48.9	19.1	81,899	6.2
2010	23	28	18	46	115	8,959,340	49.1	19.7	77,907	(4.9)
2011	9	16	11	34	70	5,427,637	47.1	17.7	77,538	(0.5)
2012	**7**	**14**	**12**	**31**	**64**	**5,069,499**	**48.2**	**18.6**	**79,211**	**2.2**

* *Includes 1 member on leave of absence.*
\# *Includes 3 members on leave of absence.*
@ *Represents the peak of active membership.*

ADDITIONS TO AND REMOVALS FROM ACTIVE MEMBERSHIP
ACTUAL AND EXPECTED NUMBERS

Year Ended Dec. 31	Normal Retirement		Disability Retirement		Died-In-Service		Terminations			Active Members End of Year
							Trans. to DC	Other		
	A	E	A	E	A	E	A	A	E	
1993	6	9.1	0	1.2	0	1.2		11	21.4	424
1994	19	14.6	0	1.2	1	1.1		12	20.5	401
1995	3	8.6	0	1.2	1	1.2		10	17.8	418
1996	15	8.7	0	1.3	0	0.8		9	23.5	434
1997	13	8.7	0	1.3	0	0.8	98	10	23.5	340
1998	4	6.9	0	0.8	0	0.8	28	3	18.6	314
1999	7	8.6	0	0.7	0	0.5	26	7	14.7	279
2000	9	9.3	0	0.6	0	0.4	11	3	10.3	257
2001	4	6.9	0	0.6	1	0.5	10	1	8.2	241
2002	6	5.3	0	0.8	0	0.5	19	0	6.5	217
2003	10	4.4	0	0.7	1	0.4	0	1	5.3	205
2004	15	13.5	0	0.6	0	0.4	0	4	3.5	186
2005	10	13.5	1	0.6	0	0.4	0	1	3.5	174
2006	13	10.6	0	0.6	0	0.4	0	1	3.1	161
2007	13	9.5	0	0.6	0	0.4	0	1	2.6	147
2008	5	11.5	0	0.5	0	0.3	0	0	2.3	142
2009	14	11.7	0	0.5	0	0.3	0	0	2.0	128
2010	12	12.8	1	0.5	0	0.3	0	0	1.7	115
2011	44	13.1	1	0.4	0	0.2	0	0	1.4	70
2012	**1**	**4.7**	**2**	**0.2**	**0**	**0.1**	**0**	**3**	**1.0**	**64**
5-Yr. Totals	**76**	**53.8**	**4**	**2.1**	**0**	**1.2**	**0**	**3**	**8.4**	

A represents actual number.
E represents expected number based on assumptions outlined in Section C.

GENERAL (CLERICAL) - DECEMBER 31, 2012
BY ATTAINED AGE AND YEARS OF SERVICE

Age	Years of Accrued Service						Totals	
Group	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Salary
35-39		1					1	$ 49,900
45-49			1				1	63,473
50-54		1	1				2	95,386
61				1			1	55,901
67			1				1	47,233
69			1				1	42,722
Totals		**2**	**4**	**1**			**7**	**$ 354,615**

While not used in the financial computations, the following group averages are computed and shown because of their general interest:

Age: 55.1 years.

Service: 17.1 years.

GENERAL (CLASSIFIED AND EXEMPT) - DECEMBER 31, 2012
BY ATTAINED AGE AND YEARS OF SERVICE

Age	Years of Accrued Service						Totals	
Group	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Salary
45-49			1				1	$ 59,583
50-54			1	3			4	270,677
55-59			1		1		2	138,864
Totals			**3**	**3**	**1**		**7**	**$ 469,124**

While not used in the financial computations, the following group averages are computed and shown because of their general interest:

Age: 52.1 years.

Service: 20.4 years.

Annual Pay: $67,018

GENERAL (AFSCME) - DECEMBER 31, 2012
BY ATTAINED AGE AND YEARS OF SERVICE

Age	Years of Accrued Service						Totals	
Group	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Salary
45-49				1			1	$ 52,374
50-54			2				2	99,120
55-59			1	2			3	169,680
62			1				1	51,654
Totals			**4**	**3**			**7**	**$ 372,828**

While not used in the financial computations, the following group averages are computed and shown because of their general interest:

Age: 54.6 years.

Service: 19.4 years.

Annual Pay: $53,261

PUBLIC SAFETY – (T.F.S.O.A.) - DECEMBER 31, 2012
BY ATTAINED AGE AND YEARS OF SERVICE

Age	Years of Accrued Service						Totals	
Group	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Salary
60							0	$ -
Totals							**0**	**$ -**

While not used in the financial computations, the following group averages are computed and shown because of their general interest:

Age: 0.0 years.

Service: 0.0 years.

Annual Pay: $0

PUBLIC SAFETY (T.P.O.A.) - DECEMBER 31, 2012
BY ATTAINED AGE AND YEARS OF SERVICE

Age	Years of Accrued Service						Totals	
Group	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Salary
35-39		2	2				4	$ 315,787
40-44		3	9				12	953,790
45-49			4	5			9	773,218
50-54				2			2	166,168
55-59				2	1		3	289,172
61				1			1	81,564
Totals		**5**	**15**	**10**	**1**		**31**	**$ 2,579,699**

While not used in the financial computations, the following group averages are computed and shown because of their general interest:

Age: 45.6 years.

Service: 18.5 years.

Annual Pay: $83,216

PUBLIC SAFETY (T.C.O.A.) - DECEMBER 31, 2012
BY ATTAINED AGE AND YEARS OF SERVICE

Age	Years of Accrued Service						Totals	
Group	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Salary
35-39		1	1				2	$ 194,363
40-44			4				4	444,112
45-49			2	1			3	335,918
50-54				2	1		3	318,840
Totals		**1**	**7**	**3**	**1**		**12**	**$ 1,293,233**

While not used in the financial computations, the following group averages are computed and shown because of their general interest:

Age: 45.0 years.

Service: 18.5 years.

Annual Pay: $107,769

SECTION C

FINANCIAL PRINCIPLES, ACTUARIAL VALUATION PROCESS, ACTUARIAL COST METHODS, ACTUARIAL ASSUMPTIONS AND DEFINITIONS OF TECHNICAL TERMS

BASIC FINANCIAL PRINCIPLES AND OPERATION OF THE RETIREMENT SYSTEM

Benefit Promises Made Which Must Be Paid For. A retirement program is an orderly means of handing out, keeping track of, and financing pension promises to a group of employees. As each member of the retirement program acquires a unit of service credit the member is, in effect, handed an "IOU" which reads: "The City of Troy Employees Retirement System promises to pay you one unit of retirement benefits, payments in cash commencing when you retire."

The principal related financial question is: When shall the money required to cover the "IOU" be contributed? This year, when the benefit of the member's service is received? Or, some future year when the "IOU" becomes a cash demand?

The Constitution of the State of Michigan is directed to the question:

> "Financial benefits arising on account of service rendered in each fiscal year shall be funded during that year and such funding shall not be used for financing unfunded accrued liabilities."

This Retirement System meets this requirement by having as its ***financial objective the establishment and receipt of contributions which will fund the expected benefits over the average future working lifetimes of the remaining active members***.

The accumulation of invested assets ***is a by-product of pre-funding a retirement system, not the objective.*** Investment income is a major contributor to the retirement program, and the amount is directly related to the amount of contributions and investment performance.

If contributions to the retirement program are less than the preceding amount, the difference, ***plus investment earnings not realized thereon,*** will have to be contributed at some later time (or benefits will have to be reduced) to satisfy the fundamental fiscal equation under which all retirement programs must operate:

$$\mathbf{B = C + I - E}$$

The aggregate amount of **B**enefit payments to any group of members and their beneficiaries cannot exceed the sum of:

The aggregate amount of **C**ontributions received on behalf of the group

... plus ...

Investment earnings on contributions received and not required for immediate cash payments of benefits

... minus ...

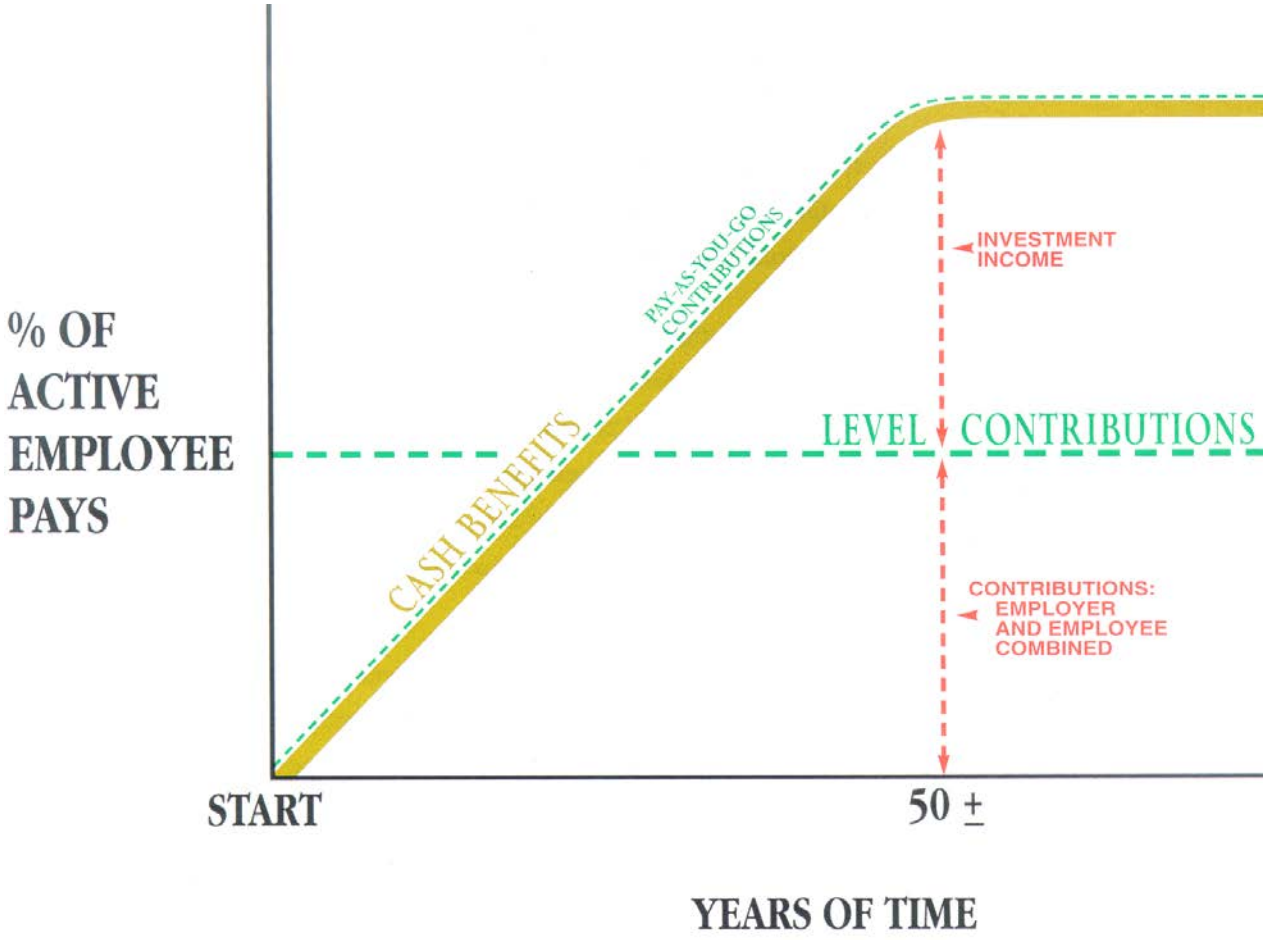
The **E**xpenses of operating the program.

There are retirement programs designed to defer the bulk of contributions far into the future. The present contribution rate for such systems is ***artificially low***. The fact that the contribution rate is destined to increase relentlessly to a much higher level is often ignored.

This method of financing is prohibited in Michigan by the state constitution.

Computed Contribution Rate Needed to Finance Benefits. From a given schedule of benefits and from the data furnished, the actuary calculates the contribution rate ***by means of an actuarial valuation*** - the technique of assigning monetary values to the risks assumed in operating a retirement program.

Pre-funding retirement benefits results in each generation of taxpayers paying for the benefits earned during that generation. Deferring the bulk of contributions into the future can result in the next generation paying for the benefits earned in the current generation.



CASH BENEFITS LINE. This relentlessly increasing line is the fundamental reality of retirement plan financing. It happens each time a new benefit is added for future retirements (and happens regardless of the design for contributing for benefits).

LEVEL CONTRIBUTION LINE. Determining the level contribution line requires detailed assumptions concerning a variety of experiences in future decades, including:

- Economic Risk Areas
  - Rates of investment return
  - Rates of pay increase
  - Changes in active member group size
- Non-Economic Risk Areas
  - Ages at actual retirement
  - Rates of mortality
  - Rates of withdrawal of active members (turnover)
  - Rates of disability

THE ACTUARIAL VALUATION PROCESS

The ***financing diagram*** on the previous page shows the relationship between the two fundamentally different philosophies of paying for retirement benefits: the method where contributions match cash benefit payments (or barely exceed cash benefit payments, as in the Federal Social Security program) which is an ***increasing contribution method;*** and the ***level contribution method*** which equalizes contributions between the generations.

The ***actuarial valuation*** is the mathematical process by which the level contribution rate is determined, and the flow of activity constituting the valuation may be summarized as follows:

A. ***Covered Person Data***, furnished by plan administrator.

Retired lives now receiving benefits

Former employees with vested benefits not yet payable

Active employees

B. + ***Asset data*** (cash & investments), furnished by plan administrator

C. + ***Assumptions concerning future financial experience in various risk areas***, which assumptions are established by the Board of Trustees after consulting with the actuary

D. + The ***funding method*** for employer contributions (the long-term, planned pattern for employer contributions)

E. + ***Mathematically combining the assumptions, the funding method, and the data***

F. = Determination of:

Plan financial position

and/or New Employer Contribution Rate

ACTUARIAL COST METHODS USED FOR THE VALUATION

The funding method used in this actuarial valuation is the ***Aggregate Cost Method.*** Under this method the Actuarial Present Value of Projected Benefits of the group included in the valuation, less the sum of the Funding Value of Assets and the Actuarial Present Value of Future Member Contributions is allocated over a future scheduled period. This allocation is performed for the group as a whole, not as a sum of individual allocations. The portion of this Actuarial Present Value allocated to a specific year is called the **City's Annual Normal Cost**. Under this method, actuarial gains (losses) reduce (increase) future Normal Costs.

ACTUARIAL ASSUMPTIONS IN THE VALUATION PROCESS

The actuary calculates contribution requirements and actuarial present values of a retirement system by applying actuarial assumptions to the benefit provisions and people information of the system, using the actuarial cost methods described on page C-5.

The principal areas of risk which require assumptions about future experience are:

(i) Long-term rates of investment return to be generated by the assets of the System.
(ii) Patterns of pay increases to members.
(iii) Rates of mortality among members, retirees and beneficiaries.
(iv) Rates of withdrawal of active members.
(v) Rates of disability among active members.
(vi) The age patterns of actual retirements.

In making a valuation, the actuary calculates the monetary effect of each assumption for as long as a present covered person survives - - - a period of time which can be as long as a century.

The employer contribution rate has been computed to remain level from year to year so long as benefits and the basic experience and make-up of members do not change. Examples of favorable experience which would tend to reduce the employer contribution rate are:

(1) Investment returns in excess of 6.5% per year.
(2) Member non-vested terminations at a higher rate than outlined on page C-11.
(3) Mortality among retirees and beneficiaries at a higher rate than indicated by the RP-2000 Combined Healthy Mortality Table.

Examples of unfavorable experience which would tend to increase the employer contribution rate are:

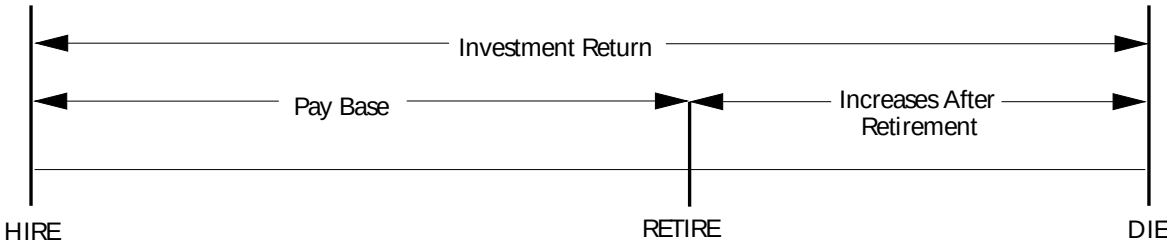
(1) Pay increases in excess of the rates outlined on page C-9.

(2) An acceleration in the rate of retirement from the rates outlined on page C-12.

Actual experience of the system will not coincide exactly with assumed experience, regardless of the choice of the assumptions, the skill of the actuary or the precision of the calculations. Each valuation provides a complete recalculation of assumed future experience and takes into account all past differences between assumed and actual experience. The result is a continual series of adjustments (usually small) to the computed contribution rate.

From time to time one or more of the assumptions is modified to reflect experience trends (but not random or temporary year to year fluctuations).

RELATIONSHIP OF ECONOMIC ASSUMPTIONS IN COMPUTING CONTRIBUTIONS TO A RETIREMENT SYSTEM



Investment Return

An increase in this assumption reduces computed contributions. The assumption operates over all parts of an employee's lifetime.

Pay Base

An increase in this assumption increases computed contributions. However, a 1% increase in this assumption, coupled with a 1% increase in Investment Return reduces computed contributions. This is because the Pay Base assumption operates only over an employee's working lifetime, while the Investment Return assumption operates over the employee's entire lifetime, and therefore has a greater effect.

Increases After Retirement

An increase in this element increases computed contributions.

If Investment Return, Pay Base, and Increases After Retirement are each increased by equal amounts, computed contributions remain the same (except in plans using Final Average Pay as a factor in computing benefits; the multi-year average used for Final Average Pay causes computed contributions to decrease slightly).

If Investment Return and Pay Base are increased by equal amounts, with no change in Increases After Retirement, computed contributions decrease – sometimes significantly. The decreases represent the projected devaluation of an employee's benefits following retirement.

ACTUARIAL ASSUMPTIONS USED FOR THE VALUATION

Investment Return (net of expenses).

6.5% per year, compounded annually. This rate consists of a real rate of return of 3.0% per year plus a long-term rate of wage inflation of 3.5% per year.

This assumption is used to equate the value of payments due at different points in time and was first used for the December 31, 1995 valuation. The 3.5% wage inflation assumption was first used for the December 31, 2007 valuation. Approximate rates of investment return, for the purpose of comparisons with assumed rates, are shown below:

	Year Ended December 31				
	2012	**2011**	**2010**	**2009**	**2008**
Recognized Rate of Investment Return of Funding Value of Assets	7.3%	6.1%	4.9%	2.9%	0.7%

The nominal rate of return was computed using the approximate formula i = I divided by 1/2 (A + B - I), where I is actual investment income (after smoothing gains and losses) net of expenses, A is the beginning of year valuation asset value, and B is the end of year valuation asset value.

These rates of return should not be used for measurement of an investment advisor's performance or for comparisons with other systems -- to do so will mislead.

Pay Projections. These assumptions are used to project current pays to those upon which benefits will be based. The assumptions were first used for the December 31, 2007 valuation.

Annual Rate of Pay Increase for Sample Ages

Sample Ages	Base (Economic)	Merit and Longevity	Total
35	3.5	2.5	6.0
40	3.5	2.2	5.7
45	3.5	1.7	5.2
50	3.5	1.2	4.7
55	3.5	0.7	4.2
60	3.5	0.2	3.7

Changes actually experienced in average pay have been as follows:

Increase in	Year Ended December 31 2012	2011	2010	2009	2008	3-Year Average	5-Year Average
Average pay	2.2%	(0.5)%	(4.9)%	6.2%	2.7%	(1.1)%	1.1%

Note: The changes in average pay shown above are affected by changes in active membership during the year as well as individual annual pay increases of the members.

Mortality Table. The RP-2000 Combined Healthy Mortality Table, for healthy males and females, and the RP-2000 Disabled Mortality Table, for impaired males and females. This table was first used for the December 31, 2007 valuation. Sample values follow:

Sample Attained Ages	Single Life Retirement Values Healthy Lives: Present Value of $1.00 Monthly for Life		Future Life Expectancy (Years)	
	Men	Women	Men	Women
50	$156.42	$161.11	30.80	33.59
55	146.11	152.04	26.18	28.91
60	133.49	140.76	21.74	24.38
65	118.85	127.55	17.61	20.12
70	102.73	112.76	13.88	16.23
75	85.47	96.73	10.57	12.74
80	68.04	79.91	7.75	9.68

This assumption is used to measure the probabilities of members dying before retirement and the probabilities of each benefit payment being made after retirement.

There is no margin for future mortality improvement in the above table.

Disabled and Pre-Retirement Mortality rates are static tables and do not reflect any future mortality improvements.

For Pre-Retirement mortality, 80% of future incidents were assumed to be non-duty related and 20% were assumed to be duty related.

Rates of separation from active membership. The rates do not apply to members eligible to retire and do not include separation on account of death or disability. This assumption measures the probabilities of members remaining in employment.

Sample Ages	Years of Service	Percent Separating Within Next Year	
		General	Public Safety
ALL	0	30.00 %	15.00 %
	1	20.00	10.00
	2	15.00	8.00
	3	10.00	7.00
	4	7.00	6.00
25	5 & Over	6.00	5.00
30		6.00	4.50
35		6.00	3.55
40		6.00	1.45
45		3.50	0.75
50		1.50	0.75
55		1.50	0.75
60		1.50	0.75

The rates were first used for the December 31, 1975 valuation.

Rates of Disability. These assumptions represent the probabilities of active members becoming disabled.

Sample Ages	Percent Becoming Disabled Within Next Year	
	Men	Women
20	0.08 %	0.10 %
25	0.08	0.10
30	0.08	0.10
35	0.08	0.10
40	0.20	0.36
45	0.27	0.41
50	0.49	0.57
55	0.89	0.77
60	1.41	1.02
65	1.66	1.23

These rates were first used for the December 31, 1976 valuation.

Rates of Retirement. These rates are used to measure the probabilities of an eligible member retiring during the next year.

Retirement Ages	Percent of Active Members Retiring Within Next Year			
		Public Safety		
	General	T.F.S.O.A. & Exempt	T.C.O.A.	T.P.O.A.
43			35	40
44			25	40
45			20	40
46			15	40
47			15	40
48			15	40
49			15	35
50	15	35	15	20
51	10	25	25	15
52	5	20	30	15
53	5	15	100	15
54	5	15		15
55	5	15		15
56	5	15		15
57	5	15		25
58	5	25		100
59	5	30		100
60	5	100		
61	5			
62	30			
63	10			
64	10			
65	100			

T.P.O.A, T.F.S.O.A. and T.C.O.A. members were assumed to be eligible for retirement after 25 years of service, or after attaining age 60 with 10 or more years of service. General AFSCME, General Clerical, and Classified or Exempt members were assumed to be eligible for retirement after attaining age 50 with 27 years of service, or age 55 with 25 years of service; or age 60 with 10 years of service.

These rates were first used for the December 31, 1973 valuation. The rates for Classified, Exempt and Command Officers were first used for the December 31, 1981 valuation. The rates for Non-Classified/Exempt General members were first used for the December 31, 1986 valuation.

No active members were assumed to elect early retirement.

SUMMARY OF ASSUMPTIONS USED
DECEMBER 31, 2012

Pensions in an Inflationary Environment

VALUE OF $1,000/MONTH RETIREMENT BENEFIT
To an Individual Who Retires at Age 60
In an Environment of 3.50% Inflation

Age	Value
60	$1,000
61	966
62	933
63	901
64	871
65	842
70	708
75	596
80	502
85	423

The life expectancy of a 60 year old male retiree is age 82. The life expectancy for a 60 year old female retiree is age 84. Half of the people will outlive their life expectancy. The effects of even moderate amounts of inflation can be significant for those who live to an advanced age.

SUMMARY OF ASSUMPTIONS USED
MISCELLANEOUS AND TECHNICAL ASSUMPTIONS
DECEMBER 31, 2012

Marriage Assumption. 90% of males and 90% of females are assumed to be married for purposes of death-in-service benefits.

Pay Increase Timing. Beginning of (Fiscal) year. This is equivalent to assuming that reported pays represent amounts paid to members during the year ended on the valuation date.

Decrement Timing. Decrements of all types are assumed to occur mid-year.

Eligibility Testing. Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.

Benefit Service. Exact fractional service is used to determine the amount of benefit payable.

Decrement Relativity. Decrement rates are used without adjustment for multiple decrement table effects.

Decrement Operation. Disability and mortality decrements do not operate during the first 5 years of service. Disability and withdrawal do not operate during retirement eligibility.

Normal Form of Benefit. The assumed normal form of benefit is the straight life form.

Incidence of Contributions. Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made.

Expense Loading. None

DEFINITIONS OF TECHNICAL TERMS

Accrued Service. Service credited under the system which was rendered before the date of the actuarial valuation.

Actuarial Accrued Liability. The difference between the actuarial present value of system benefits and the actuarial present value of future normal costs. Also referred to as "past service liability".

Actuarial Assumptions. Estimates of future experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

Actuarial Cost Method. A mathematical budgeting procedure for allocating the dollar amount of the "actuarial present value of future benefits" between future normal costs and actuarial accrued liability. Sometimes referred to as the "actuarial funding method".

Actuarial Equivalent. One series of payments is said to be actuarially equivalent to another series of payments if the two series have the same actuarial present value.

Actuarial Gain (Loss). The difference between actual unfunded actuarial accrued liabilities and anticipated unfunded actuarial accrued liabilities -- during the period between two valuation dates. It is a measurement of the difference between actual and expected experience.

Actuarial Present Value. The amount of funds currently required to provide a payment or series of payments in the future. It is determined by discounting future payments at predetermined rates of interest, and by probabilities of payments.

Amortization. Paying off an interest-discounted amount with periodic payments of interest and (generally) principal -- as opposed to paying off with a lump sum payment.

Aggregate Cost Method is a method where the Actuarial Present Value of Projected Benefits of the group included in the valuation, less the sum of the Funding Value of Assets and the Actuarial Present Value of Future Member Contributions is allocated over a future scheduled period. This allocation is performed for the group as a whole, not as a sum of individual allocations. The portion of this Actuarial Present Value allocated to a specific year is called the **City's Annual Normal Cost**. Under this method, actuarial gains (losses) reduce (increase) future Normal Costs.

Credited Projected Benefit. The portion of a member's projected benefit attributable to service before the valuation date - allocated based on the ratio of accrued service to projected total service and based on anticipated future compensation.

Experience Gain (loss). The difference between actual actuarial costs and assumed actuarial costs – during the period between two valuation dates.

Funding Value of Assets. Also referred to as actuarial value of assets, smoothed market value of assets, or valuation assets.

Valuation assets recognize assumed investment return fully each year. Differences between actual and assumed investment return are phased in over a closed 5 year period. During periods when investment performance exceeds the assumed rate, valuation assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, valuation assets will tend to be greater than market value. If assumed rates are exactly realized for 4 consecutive years, valuation assets will become equal to market value.

Normal Cost. The portion of the actuarial present value of future benefits that is assigned to the current year by the actuarial cost method. Sometimes referred to as "current service cost".

Unfunded Actuarial Accrued Liabilities. The difference between actuarial accrued liabilities and valuation assets. Sometimes referred to as "unfunded past service liability" or "unfunded supplemental present value".

Most retirement systems have unfunded actuarial accrued liabilities. They arise each time new benefits are added and each time an actuarial loss occurs.

The existence of unfunded actuarial accrued liabilities is not in itself bad, any more than a mortgage on a house is bad. Unfunded actuarial accrued liabilities do not represent a debt that is payable today. What is important is the ability to amortize the unfunded actuarial accrued liabilities and the trend in their amount (after due allowance for devaluation of the dollar).

SECTION D

CERTAIN DISCLOSURES REQUIRED BY STATEMENTS NO. 25 AND NO. 27 OF THE GOVERNMENTAL ACCOUNTING STANDARDS BOARD

This information is presented in draft form for review by the City's auditor. Please let us know if there are any items that the auditor changes so that we may maintain consistency with the City's financial statements.

ACTUARIAL ACCRUED LIABILITY

The actuarial accrued liability is a measure intended to help users assess (i) a pension fund's funded status on a going concern basis, and (ii) progress being made toward accumulating the assets needed to pay benefits as due. The excess of the Actuarial Present Value of Projected Benefits of the group included in an Actuarial Valuation over the Actuarial Value of Assets is allocated **on a level basis over the payroll of the group between the valuation date and assumed exit.** This allocation is performed for the group as a whole, not as a sum of individual allocations. That portion of the Actuarial Present Value allocated to a valuation year is called the Normal Cost. The Actuarial Accrued Liability is equal to the Actuarial Value of Assets. Under this method, the Actuarial Gains (Losses), as they occur, reduce (increase) future Normal Costs.

The preceding methods comply with the financial reporting standards established by the Governmental Accounting Standards Board.

The Present Value of Projected Benefits was determined as part of an actuarial valuation of the plan as of December 31, 2012. Significant actuarial assumptions used in determining the Present Value of Projected Benefits include (a) a rate of return on the investment of present and future assets of 6.5% per year compounded annually, (b) projected salary increases of 3.5% per year compounded annually, (c) additional projected salary increases of 0.0% to 2.5% per year attributable to seniority/merit, and (d) that there will be no cost of living adjustments after retirement.

Actuarial Present Value of All Past and Future Benefits	
Active members	$ 33,923,266
Retired members and beneficiaries currently receiving benefits	124,959,897
Vested terminated members not yet receiving benefits	1,501,045
Total	160,384,208
Actuarial Value of Assets (market value was $152,430,321)	147,567,945
Present Value of Future Employee Contributions	1,275,986
Unfunded Present Value of Future Benefits	$ 11,540,277

During the year ended December 31, 2012, the Plan experienced a net change of ($1,666,056) in the actuarial present value of projected benefits. There were no changes in actuarial assumptions or benefits during the year.

REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF FUNDING PROGRESS
($ AMOUNTS IN THOUSANDS)

Actuarial Valuation Date December 31	Actuarial Value of Assets# (a)	Actuarial Accrued Liability* (AAL) (b)	Unfunded AAL (b)-(a)	Funded Ratio (a)/(b)	Active Member Covered Payroll (c)	Unfunded AAL as a Percentage of Active Member Covered Payroll ((b-a)/c)
1995	$ 94,730	$ 85,625	$ (9,105)	110.6	$19,040	(47.8) %
1996	106,334	92,845	(13,489)	114.5	20,536	(65.7)
1997	120,718	105,689	(15,029)	114.2	16,133	(93.2)
1998	109,474	90,869	(18,605)	120.5	16,201	(114.8)
1999	118,595	94,661	(23,934)	125.3	15,057	(159.0)
2000	123,956	99,740	(24,216)	124.3	15,441	(156.8)
2001	123,669	97,140	(26,529)	127.3	14,566	(182.1)
2002	117,372	95,527	(21,845)	122.9	13,553	(161.2)
2003	126,738	103,558	(23,180)	122.4	13,053	(177.6)
2004	126,802	109,364	(17,438)	115.9	12,572	(138.7)
2005	128,790	113,260	(15,530)	113.7	12,100	(128.4)
2006	132,168	119,299	(12,869)	110.8	11,472	(112.2)
2007	132,917	123,162	(9,755)	107.9	11,046	(88.3)
2008	128,249	126,138	(2,111)	101.7	10,953	(19.3)
2009	132,465	139,519	7,054	94.9	10,483	67.3
2010	133,400	139,232	5,832	95.8	8,959	65.1
2011	145,523	153,564	8,041	94.8	5,428	148.1
2012	**147,568**	**153,045**	**5,477**	**96.4**	**5,069**	**108.0**

 # Smoothed-market value.
** Reflects entry age normal actuarial cost method to comply with GASB Statement No. 50.*

REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF EMPLOYER CONTRIBUTIONS

Fiscal Year Ending June 30	Actuarial Valuation Date December 31	Annual Required Contribution (In thousands)
2004	2002	$ 1,482
2005	2003	117
2006	2004	213
2007	2005	273
2008	2006	273
2009	2007	428
2010	2008	1,361
2011	2009	2,505
2012	2010	2,157
2013	2011	1,884
2014	2011	1,846
2015	**2012**	**1,451**

* *Since it was stated to the actuary that the City's practice is to contribute the percent of payroll employer contribution rate shown in the actuarial valuation results, the values shown are the actual contributions reported by the City in the fiscal year. Also, for fiscal years ending in 2004 and earlier, annual required contributions include contributions for retiree health benefits.*

NOTES TO REQUIRED SUPPLEMENTARY INFORMATION
SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

Valuation Date	12/31/2012
Actuarial Cost Method	Aggregate
Asset Valuation Method	5-year smoothed market
Actuarial Assumptions:	
Investment Rate of Return*	6.5%
Projected Salary Increases*	3.5% - 7.5%
*Includes Inflation	3.5%

O-02b

STANDARD
& POOR'S
RATINGS SERVICES

RatingsDirect®

Summary:

Troy, Michigan; General Obligation; General Obligation Equivalent Security

Primary Credit Analyst:
Errol R Arne, New York (1) 212-438-2379; errol.arne@standardandpoors.com

Secondary Contact:
Helen Samuelson, Chicago (1) 312-233-7011; helen.samuelson@standardandpoors.com

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Rationale

Outlook

Related Criteria And Research

Summary:

Troy, Michigan; General Obligation; General Obligation Equivalent Security

Credit Profile		
US$14.625 mil GO ltd tax bnds ser 2013 due 11/01/2032		
Long Term Rating	AAA/Stable	New
Troy GO		
Long Term Rating	AAA/Stable	Affirmed

Rationale

Standard & Poor's Ratings Services has assigned its 'AAA' long-term rating to Troy, Mich.'s series 2013 limited-tax general obligation (GO) bonds and affirmed its 'AAA' long-term rating on the city's and the Troy Municipal Building Authority's previously issued GO debt. The outlook is stable.

The rating reflects our assessment of the city's:

- Participation in the deep and diverse Oakland County economy;
- Very strong income levels and very strong market value per capita;
- Very strong financial operations; and
- Low debt as a percentage of market value.

The city's full-faith-and credit, limited-tax GO pledge, secures the series 2013 bonds. The intended source for repayment of the bonds is certain tax increment revenues to be collected by the city from the Downtown Development Authority (DDA). It is our understanding that officials plan to use bond proceeds for refunding the series 2001 DDA bonds, the series 2002 community center facility bonds and the series 2003 community facility center junior bonds for interest-cost savings.

Troy is an affluent suburb of Detroit, Mich., in Oakland County, which serves a 2013 estimated population of 81,646 which is slightly higher than the 2010 U.S. census population of 80,980 residents. Excellent highway access has resulted in the development of a substantial employment base with a variety of employment sectors available within the city's limits such as education, health and social services, professional, manufacturing, retail, and finance. Residents also benefit from employment throughout southeastern Michigan. The average unemployment rate through the first six months of 2013 for Oakland County averaged 8.4%, which is slightly lower than the calendar year 2012 average of 9.1%. These rates are on par with the state's rates which were 8.95% and 9.1% for the same time periods, respectively.

We consider the city's income level indicators to be very strong, with the median household and per capita effective buying income levels at 159% and 151% when compared with the national average. Taxable valuation has declined by almost 25% since fiscal 2010 to $4.3 billion in fiscal 2013, and management expects an increase of nearly 5% for fiscal 2014. Despite the recent declines, the fiscal 2013 market value was an estimated $8.9 billion, which we consider

extremely strong at $110,022 per capita.

The city's overall financial profile remains very strong, in our view, despite the recent declines in taxable valuation, as characterized by very strong reserves (51% of operating expenditures, on an unassigned basis, as of the last audit, June 30, 2012). The adopted budget for fiscal 2014 called for a usage of $1.7 million of reserves as management cited the main reason for the use was due to transfer to capital fund for maintenance and repair of major and local streets in the city.

Management expects unaudited results for 2013 to yield its fourth straight surplus in its general fund of nearly $4 million after initially budgeting to use nearly $500,000 of reserves. Officials cited its self-described "conservative" budgeting practices as well as receiving more in state shared revenues than anticipated. Fiscal 2012 audited results yielded a surplus of $6.4 million, which increased the total general fund balance to $33.9 million, or, in our opinion, a very strong 74% of operating expenditures. The unassigned balance totaled $23.3 million, or a very strong 51% of operating expenditures. Results included transfers in to the general fund from the major and local street funds to reimburse operating expenses paid out by the general fund. According to the 2012 audit, property taxes represented nearly 63% of the total general fund revenues while charges for services and intergovernmental revenues contributed 15% and 14%, respectively. The city still has room to raise seven-tenths of a mill because it is operating under the Headlee limit and this could generate approximately $300,000 per year.

The city is in the middle of its adopted three year budget, 2013-2015, whereby expectations are to utilize general fund reserves in each year but actual results are anticipated to add to its reserve balance. Officials again cite its conservative budgeting practices as the main reason for positive actual results. Even if projected reserves are utilized, the city would still maintain very strong reserves, in our opinion, and remain well above of their policy of maintaining at least 15% of unassigned reserves.

We consider the city's financial management practices "strong" based on Standard & Poor's Financial Management Assessment (FMA). An FMA of strong indicates that practices are strong, well embedded and likely sustainable.

We consider the city's overall net debt burden, which includes overlapping debt (approximately 77%), moderate at $2,447 per capita or low at 2.2% of market value. We consider debt service carrying charges low at 7% of governmental fund expenditures, less capital outlay, in fiscal 2012. We consider debt amortization rapid, with officials planning to retire 74% of existing principal over 10 years and 100% over 20 years. We understand the city does not have any debt plans in the two-year outlook period.

Troy's employment retirement system is a single-employer defined-benefit pension plan, which it administers. The city made the required contribution to the plan, totaling $2.2 million for the fiscal year ended June 30, 2012. As of Dec. 31, 2011, this plan was 95% funded.

The city also maintains a defined-contribution plan (DCP) administered by the International City Manager's Assn. Retirement Corp. (ICMARC) for classified, exempt and fire staff officers. The city made the required contribution to the plan, totaling $1.73 million for the fiscal year ended June 30, 2012. In addition, the city has a noncontributory incentive plan covering its volunteer firefighters and it contributed $873,354 to this plan in 2012.

The city also provides other postemployment benefits (OPEB) to employees through a single-employer defined-benefit plan administered by city. In fiscal 2012, it contributed $3.3 million or more than 100% of its $2.8 million annual OPEB cost. As of Dec. 31, 2010, the city's most recent actuarial valuation showed that its $90 million actuarial accrued liability was 67% funded.

On a combined basis, payments for pension and OPEB made by the city in 2012 represented 12% of total government expenditures.

Outlook

The stable outlook reflects Standard & Poor's expectation that the city will maintain strong financial reserves and that management will implement strong fiscal controls to protect its financial position despite the forecasted use of reserves and as such we do not think the rating will change during the two-year outlook period.

Related Criteria And Research

- USPF Criteria: GO Debt, Oct. 12, 2006
- State And Local Government Ratings Are Not Directly Constrained By That Of The U.S. Sovereign, Aug. 8, 2011

Ratings Detail (As Of September 9, 2013)		
Troy Mun Bldg Auth, Michigan		
Troy, Michigan		
Troy Mun Bldg Auth (Troy) GO		
Long Term Rating	AAA/Stable	Affirmed

Complete ratings information is available to subscribers of RatingsDirect at www.globalcreditportal.com. All ratings affected by this rating action can be found on Standard & Poor's public Web site at www.standardandpoors.com. Use the Ratings search box located in the left column.

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McGRAW-HILL

CITY COUNCIL REPORT

Date: September 11, 2013

To: Brian Kischnick, City Manager

From: Tom Darling, Director of Financial Services
Nino Licari, City Assessor

Subject: Citizen comment concerning the Assessor using less than the CPI increase in Taxable Value, in order to reduce City revenues

History

At the September 9, 2013 City Council meeting, a citizen spoke towards a means of reducing revenues by having the Assessor use less than the Consumer Price Index (CPI) increase in Taxable Value.

The Law on the Subject:

In 1993 the voters of the State of Michigan passed Proposal A, a constitutional amendment that capped the amount of any increase in value that property taxes were levied against to the rate of inflation, or 5%, whichever was less.

This is the law in short. There are many exceptions to this law that allow the change to go higher than the CPI, but none that give any Assessor the ability to use less than the CPI (as long as there is a gap between Assessed and Taxable Value at least equal to the CPI).

Calculating Taxable Value (T/V):

In late fall, Counties release their Equalization studies to all of the Cities, Village, and Townships in their jurisdiction. This sets their estimates of the ratio of Market Value to Assessed Value (A/V) in those units, by class. By law, that ratio may not exceed 50%.

The local Assessor then spreads the change in value over the class across neighborhoods of similar homes as determined by the local Sales Study. Different subdivisions generate different value changes.

Capped Value (C/V) is defined by the enabling language of Proposal A as the prior year's Taxable Value (T/V) times the CPI (or 5%, whichever is less).

Taxable Value (T/V, the value millages are levied against) is defined by that same language as the lesser of the current year's Assessed or Capped Value.

Proposal A mandates that any value difference between the current Assessed Value and last year's Taxable Value must cause the prior year's Taxable Value to increase by any portion of the CPI (or 5%) available between the two values, and may not exceed the Assessed Value, by definition.

Levying Millage Against Taxable Value:

After the local Board of Review closes at the end of March of each year, the local units Assessments are equalized by both the County and the State. In other words, they are certified to be at 50% of Market Value.

The working budget is based on estimates of these final values. When the final values are certified they are used for the final budget that Council approves.

In order to meet revenue needs, millage rates are established by Council based upon the available Taxable Value, divided by the revenue needed to meet budget goals.

This is a checks and balances process. Only the governing body has the power to tax (City Council, in Troy). No local Assessor has the ability to tax anything.

In other words, no City Manager, City Council, Township or Village Board has any authority to demand an Assessor increase or decrease Assessed and Taxable Values to meet revenue needs.

Likewise, no Assessor has the ability to change millage rates to satisfy revenue needs. To repeat: No local Assessor has the ability to tax anything.

The Answer to the Citizen Comment:

If the problem is excess revenue because of increased Taxable Value, the governing body can lower the Millage Rate (*bearing in mind, that under the most recent Charter Amendment, if the millage rate is lowered, it cannot be raised without a vote of the electorate*), save the excess for lean times (Fund Balance), or spend the excess funds for other goals. They cannot change Taxable Value. It is what it is. This is no different than increasing a Millage Rate for declining revenues when Taxable Value is falling.

NL/nl H:\Council\09.23.13 Less than CPI.docx

O-02d

CITY COUNCIL AGENDA ITEM

Date: September 12, 2013

To: Brian Kischnick, City Manager

From: Mark F. Miller, Director of Economic and Community Development
Steve Burns, Building Official, SAFEbuilt
Mitch Grusnick, City Building Official

Subject: Building Department Activity Report – August, 2013

The following attachment contains a summary of permit activity, project valuation for the Building Inspection Department comparing August 2012 to August 2013. Permit activity and inspections have continued to increase.

We have issued 6,469 building, plumbing, electrical and mechanical related permits for the year so far.

Year to date project valuations thru August, 2013 are at $91,824,238. Compared to August, 2012 we issued 5,723 building related permits that had a valuation of $83,577,704.

Our inspectors have performed 10,812 trade inspections in 2013 compared to 9,365 in 2012.

Attachments:
1. Building Department Activity Report

Preparer of memo\File name\File location

BUILDING PERMITS ISSUED

	BUILDING PERMITS 2012	PERMIT VALUATION 2012	BUILDING PERMIT REVENUE 2012	BUILDING PERMITS 2013	PERMIT VALUATION 2013	BUILDING PERMIT REVENUE 2013
JANUARY	77	$7,124,788.00	$165,958.59	134	$ 17,779,504.00	$325,899.80
FEBRUARY	95	$ 9,389,991.00	$ 160,308.24	85	$ 4,917,385.00	$ 147,780.63
MARCH	151	$ 6,931,863.00	$ 201,917.53	119	$ 8,792,342.00	$ 214,333.92
APRIL	165	$ 11,266,382.00	$ 245,615.15	139	$ 7,893,210.00	$ 183,511.89
MAY	243	$ 11,559,555.00	$ 281,126.31	231	$ 11,331,067.00	$ 282,130.55
JUNE	180	$ 7,633,262.00	$ 216,532.32	205	$ 13,523,975.00	$ 302,089.28
JULY	189	$ 15,233,416.00	$ 328,465.63	228	$ 13,915,855.00	$ 398,711.85
AUGUST	213	$ 14,438,447.00	$ 328,960.94	232	$ 13,670,900.00	$ 347,740.85
SEPTEMBER	169	$ 15,280,341.00	$ 284,069.97	0	$ -	
OCTOBER	214	$ 19,018,536.00	$ 310,992.21	0	$ -	
NOVEMBER	144	$ 13,959,463.00	$ 188,185.35	0	$ -	
DECEMBER	115	$ 4,389,275.00	$ 150,134.05	0	$ -	
TOTAL	**1955**	**$136,225,319.00**	**$2,862,266.29**	**1373**	**$91,824,238.00**	**$2,202,198.77**

O-03a

September 12, 2013

Mr. Brian Kischnick
City Manager
City of Troy, Mi

Letter of Appreciation

Dear Mr. Kischnick,

On behalf of my neighbors, the City and its contractor, J.H. Hart, are to be commended for their timely and effective response to the storms of September 11. Our sub-division, Troy Estates, north of Big Beaver and west of Coolidge was hit very hard with almost 1 in 3 homes having significant damage mostly to large trees on the easement that blocked many streets. We have been in our home since 1988 and have never been hit by such a storm with this much damage.

But within two hours of the storms passing, J.H. Hart crews were on site making the streets passable. And by the next afternoon the crews returned to begin debris removal.

If the expense to the City for unforeseen events such as this is paid for out of fund balance, it is a wise decision to keep a significant fund balance in the budget that allows for a quick recovery that adds to the value of living in Troy.

Sincerely,

Irv Wengrow
Boulder Dr.