

# PLANNING COMMISSION

## MEETING AGENDA

### REGULAR MEETING

500 W. Big Beaver  
Troy, MI 48084  
(248) 524-3364  
www.troymi.gov  
planning@troymi.gov

John J. Tagle, Chair, Donald Edmunds, Vice Chair  
Michael W. Hutson, Edward Kempen, Tom Krent, Philip Sanzica  
Gordon Schepke, Robert Schultz and Thomas Strat

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**March 12, 2013**

**7:00 P.M.**

**Council Chambers**

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1. ROLL CALL
2. APPROVAL OF AGENDA
3. APPROVAL OF MINUTES – February 12, 2013 Regular Meeting
4. PUBLIC COMMENTS – For Items Not on the Current Agenda

#### **POSTPONED ITEMS**

5. SPECIAL USE AND PRELIMINARY SITE PLAN REVIEW (File Number SU 400) – Proposed Starbucks/Qdoba Oakland Mall Outlot, Northwest Corner of John R and 14 Mile, Section 35, Currently Zoned GB (General Business) District
6. PRELIMINARY SITE PLAN REVIEW (File Number SP 979) – Proposed Galleria of Troy, North side of Big Beaver between Wilshire and I-75, Section 21, Currently Zoned BB (Big Beaver) District

#### **SPECIAL USE REQUESTS AND PRELIMINARY SITE PLAN REVIEWS**

7. PUBLIC HEARING - SPECIAL USE AND PRELIMINARY SITE PLAN REVIEW (File Number SU 401) – Proposed Midwest Industrial Metals Inc., 2222 Stephenson Highway, Section 26, Currently Zoned IB (Integrated Industrial and Business) District
8. PUBLIC HEARING - SPECIAL USE AND PRELIMINARY SITE PLAN REVIEW (File Number SU 399) – Proposed Detroit Meeting Room, North of Square Lake and I-75 Expressway, East of Adams, Section 6, Currently Zoned R1-A (One Family Residential) District
9. PUBLIC HEARING - SPECIAL USE AND PRELIMINARY SITE PLAN REVIEW (File Number SU 402) – Proposed Gypsum Supply Company, East side of John R, North of Fourteen Mile Road (651 Robbins), Section 36, Currently Zoned IB (Integrated Industrial and Business) District

**ZONING ORDINANCE TEXT AMENDMENT**

10. **ZONING ORDINANCE TEXT AMENDMENT (File Number ZOTA 245)** – Sober Living Facilities

**OTHER BUSINESS**

11. **PUBLIC COMMENTS** – For Items on Current Agenda
12. **PLANNING COMMISSION COMMENTS**

**ADJOURN**

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

Chair Tagle called the Regular meeting of the Troy City Planning Commission to order at 7:00 p.m. on February 12, 2013 in the Council Chamber of the Troy City Hall.

1. ROLL CALL

Present:

- Donald Edmunds
- Edward Kempen
- Tom Krent
- Philip Sanzica
- Gordon Schepke
- Robert Schultz
- Thomas Strat
- John J. Tagle

Absent:

- Michael W. Hutson

Also Present:

- R. Brent Savidant, Planning Director
- Susan Lancaster, Assistant City Attorney
- Ben Carlisle, Carlisle/Wortman Associates, Inc.
- Eric Huang, Student Representative

2. APPROVAL OF AGENDA

**Resolution # PC-2013-02-009**

- Moved by: Schultz
- Seconded by: Sanzica

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

Yes: All present (8)

**MOTION CARRIED**

3. APPROVAL OF MINUTES

**Resolution # PC-2013-02-010**

- Moved by: Edmunds
- Seconded by: Schepke

**RESOLVED**, To approve the minutes of the January 22, 2013 Special/Study meeting as printed.

Yes: Edmunds, Kempen, Krent, Sanzica, Schepke, Schultz, Tagle  
Abstain: Strat

**MOTION CARRIED**

4. PUBLIC COMMENTS – Items not on the Agenda

There was no one present who wished to speak.

**POSTPONED ITEM**

5. CONDITIONAL REZONING APPLICATION (File Number CR 008) – Proposed Tim Horton’s Café, Northwest Corner Square Lake and Dequindre, Section 1, From NN (Neighborhood Node “N”) to CB (Community Business) District

Mr. Savidant informed the Planning Commission that the applicant requested postponement of this item in writing. The applicant has an agreement to purchase the abutting property to the north of the subject parcel, and requested additional time to revise the site design and prepare a Traffic Study.

No action was taken.

**SPECIAL USE REQUEST AND PRELIMINARY SITE PLAN REVIEW**

6. PUBLIC HEARING – SPECIAL USE AND PRELIMINARY SITE PLAN REVIEW (File Number SU 400) – Proposed Starbucks/Qdoba Oakland Mall Outlot, Northwest Corner of John R and 14 Mile, Section 35, Currently Zoned GB (General Business) District

Mr. Carlisle presented the report on the item.

Jim Butler, Professional Engineering Associates, addressed items of concern listed in the report. He indicated that the site plan would be revised to address all of the required items, including moving the building footprint forward to provide an additional required stacking space.

There was general discussion on the item.

PUBLIC HEARING OPENED

No one was present to speak.

PUBLIC HEARING CLOSED

**Resolution # PC-2013-02-011**

Moved by: Schultz  
 Seconded by: Strat

**RESOLVED**, That the Planning Commission hereby postpones the item to the next meeting or until such time that the applicant can put together an updated and complete site plan package.

Yes: All present (8)

**MOTION CARRIED**

**PRELIMINARY SITE PLAN REVIEW**

- 7. PRELIMINARY SITE PLAN REVIEW (File Number SP 979) – Proposed Galleria of Troy, North side of Big Beaver between Wilshire and I-75, Section 21, Currently Zoned BB (Big Beaver) District

Mr. Carlisle presented the report on the item.

Jim Butler, Civil Engineer from Professional Engineering Associates, addressed items of concern listed in the report.

Scott Bowers, Architect from A<sup>2</sup>, addressed architectural issues.

There was general discussion on the item.

Some members of the Planning Commission questioned the interpretation of the provision requiring the principal building to be set back a maximum of 30 feet from the right-of-way. This was addressed by Mr. Savidant and Mr. Carlisle.

Mr. Butler indicated the site could be redesigned so that it was compliant with the Zoning Ordinance.

**Resolution # PC-2013-02-012**

Moved by: Schultz

Seconded by: Krent

**RESOLVED**, That the Planning Commission hereby postpones the item to the next meeting or until such time that the applicant can put together an updated and complete site plan package.

Yes: All present (8)

**MOTION CARRIED**

**REZONING REQUEST**

- 8. PUBLIC HEARING – CITY INITIATED REZONING APPLICATION (File Number Z 742) – Proposed 1071 Villa Park (part of Parcel Identification No. 88-20-02-301-010), East Side of Rochester Road, South of South Boulevard, Section 2, From R-1D (One Family Residential) District to RT (One Family Attached Residential) District

Mr. Savidant presented the report on the item.

PUBLIC HEARING OPENED

No one was present to speak.

PUBLIC HEARING CLOSED

**Resolution # PC-2013-02-013**

Moved by: Edmunds

Seconded by: Schultz

**RESOLVED**, That the Planning Commission hereby recommends to the City Council that the R-1D to RT rezoning request, located on the east side of Rochester Road, south of South Boulevard (1071 Villa Park), in Section 2, being approximately 34.169 acres in size, be approved for the following reasons:

1. The rezoning is consistent with the City of Troy Master Plan.
2. The rezoning is consistent with abutting zoning districts and land uses.
3. The rezoning will eliminate the nonconforming use status of the subject property.
4. The rezoning will correct an administrative error.

Yes: All present (8)

**MOTION CARRIED**

**ZONING ORDINANCE TEXT AMENDMENT**

9. ZONING ORDINANCE TEXT AMENDMENT (File Number ZOTA 245) – Sober Living Facility

Mr. Carlisle presented a report on this item, including draft provisions regulating sober living facilities.

There was general discussion on the item.

David Lord, representative from Great Lakes Recovery Community, addressed questions related to sober living facilities.

Planning Commission determined that it would be appropriate to limit sober living facilities to adults, 18 years of age and above.

Staff informed Planning Commission next steps would be to present a revised draft based on feedback.

**OTHER BUSINESS**

10. **PUBLIC COMMENTS** – For Items on Current Agenda

There was no one present who wished to speak.

11. **PLANNING COMMISSION COMMENTS**

There were general Planning Commission comments.

The Regular meeting of the Planning Commission adjourned at 9:15 p.m.

Respectfully submitted,

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John J. Tagle, Chair

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R. Brent Savidant, Planning Director

G:\Planning Commission Minutes\2013 PC Minutes\Draft\2013 02 12 Regular Meeting\_Draft.doc

DATE: March 7, 2013

TO: Planning Commission

FROM: R. Brent Savidant, Planning Director

SUBJECT: PUBLIC HEARING – SPECIAL USE AND PRELIMINARY SITE PLAN REVIEW (File Number SU 400) – Proposed Starbucks/Qdoba Oakland Mall Outlot, Northwest Corner of John R and 14 Mile, Section 35, Currently Zoned GB (General Business) District

The petitioner Urban Retail Properties submitted the above referenced Special Use Approval and Preliminary Site Plan Approval application for a proposed Starbucks/Qdoba outlot restaurant. The site is presently an underutilized parking lot.

The Planning Commission considered this item at the February 12, 2013 Regular meeting and postponed the item (see attached meeting minutes).

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

Attachments:

1. Maps
2. Report prepared by Carlisle/Wortman Associates, Inc.
3. Minutes from February 12, 2013 Planning Commission Regular meeting (excerpt)

cc: Applicant  
File/ SU 400

G:\SPECIAL USE\SU 400 Starbucks Qdoba Oakland Mall Outlot Sec 35\PC Memo 03 12 2013.docx

## PROPOSED RESOLUTION

PUBLIC HEARING – SPECIAL USE AND PRELIMINARY SITE PLAN REVIEW (File Number SU 400) – Proposed Starbucks/Qdoba Oakland Mall Outlot, Northwest Corner of John R and 14 Mile, Section 35, Currently Zoned GB (General Business) District

**Resolution # PC-2013-03-**

Moved by:

Seconded by:

**RESOLVED**, That Special Use Approval and Preliminary Site Plan Approval for the proposed Starbucks/Qdoba Restaurant, located on the northwest corner of John R and 14 Mile, Section 35, currently zoned GB (General Business) District, be granted, subject to the following:

1. Expand Maple Road sidewalk to 8-feet.
2. Work with Engineering Department to determine location of sidewalk.

Yes:

No:

Absent:

**MOTION CARRIED / FAILED**



Legend

146 0 73 146Feet

Scale 1: 878

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

Printed: 1/21/2013





605 S. Main Street, Ste. 1  
Ann Arbor, MI 48104

(734) 662-2200  
(734) 662-1935 Fax

Date: March 4, 2013

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

<b>Applicant:</b>	Professional Engineering Associates
<b>Project Name:</b>	Oakland Mall Outlot
<b>Plan Date:</b>	Application dated January 10, 2013
<b>Location:</b>	North Side of W. Fourteen Mile Road (Oakland County Mall)
<b>Zoning:</b>	GB, General Business District
<b>Action Requested:</b>	Preliminary Site Plan and Special Use Approval
<b>Required Information:</b>	Deficiencies noted

### **PROJECT AND SITE DESCRIPTION**

We received a site plan and accompanying documents for a proposed commercial infill development within the Oakland Mall site. The applicant is proposing a 2,500 sq/ft Qdoba and a 1,900 sq/ft Starbucks with a drive-thru. The proposed development fronts on Fourteen Mile Road; however there is no direct curb-cut off Fourteen Mile Road. Access to the development will be via an internal drive that services Oakland Mall. The development is located between the existing Chili's and Bank of America. The drive-through use requires a special use.

### **PREVIOUS PLANNING COMMISSION REVIEW**

The application was first reviewed at the Planning Commission meeting on February 12, 2013. Please review our February 8, 2013 memo for a complete site plan review. At the February 12<sup>th</sup> meeting, the application was continued so that the applicant was able to address the following items:

**1. Confirm that ten (10) stacking spaces can be provided.**

The applicant has resubmitted a site that shows that ten (10) stacking spaces. To do so the applicant has moved the building closer to Fourteen Mile. All setback requirements have been met.

**2. Indicate location of bike rack on site plan.**

The applicant has shown a bike rack on the site plan. The bike rack is located adjacent to the Starbucks outdoor seating area facing the parking lot.

**3. Provide a sidewalk along their section of Fourteen Mile road.**

The applicant has shown a 5-foot sidewalk along their section of Fourteen Mile Road. Due to the location of the existing light poles, the sidewalk is partially located outside of the right-of-way and on their property. This sidewalk should be 8-feet in width and if located on their property an easement must be provided. The final location of the sidewalk can be worked out with the Engineering Department and resubmitted for final site plan review.

**4. Consider extending sidewalk to bus stop.**

The applicant has indicated that they do not want to install this connection at this time. The additional sidewalk work is not approved current year's capital budget for the Mall. They will consider the connection in the future.

**5. Provide sidewalk and crosswalk to connect the Fourteen Mile sidewalk to the pedestrian ramp.**

The applicant has added a sidewalk and crosswalk that connects the Fourteen Mile sidewalk to the pedestrian ramp.

**6. Add one (1) additional parking lot tree.**

The applicant has added the additional one (1) parking lot tree. The provided landscaping is compliant with ordinance requirements.

**7. Confirm number of parking lot lights.**

The applicant has confirmed that the site will include two (2) parking lot poles with two (2) lights each, twelve (12) building mounted lights, and seven (7) lit bollards.

**8. Resubmit parking lot light fixture.**

The applicant has submitted the parking lot light fixture. The resubmitted fixture is full-cut off.

**9. Confirm that bollard light is full cut-off or fully shielded.**

The applicant has confirmed that bollard light is fully shielded. All submitted fixtures are either full cut-off or fully shielded.

**10. Reduce the lighting levels under the parking lot fixtures.**

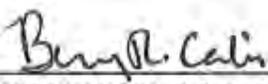
The applicant has reduced the lighting level under the parking lot fixture to comply with ordinance photometric requirements.

**RECOMMENDATION**

We support the proposed project and believe the project does meet or exceed minimum requirements. We recommend the Planning Commission approve the special use request and preliminary site plan application conditioned on the applicant satisfying the following requirements for the final site plan:

1. Expand Maple Road sidewalk to 8-feet.
2. Work with Engineering Department to determine location of sidewalk.

Sincerely,



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

6. PUBLIC HEARING – SPECIAL USE AND PRELIMINARY SITE PLAN REVIEW (File Number SU 400) – Proposed Starbucks/Qdoba Oakland Mall Outlot, Northwest Corner of John R and 14 Mile, Section 35, Currently Zoned GB (General Business) District

Mr. Carlisle presented the report on the item.

Jim Butler, Professional Engineering Associates, addressed items of concern listed in the report. He indicated that the site plan would be revised to address all of the required items, including moving the building footprint forward to provide an additional required stacking space.

There was general discussion on the item.

PUBLIC HEARING OPENED

No one was present to speak.

PUBLIC HEARING CLOSED

**Resolution # PC-2013-02-011**

Moved by: Schultz  
Seconded by: Strat

**RESOLVED**, That the Planning Commission hereby postpones the item to the next meeting or until such time that the applicant can put together an updated and complete site plan package.

Yes: All present (8)

**MOTION CARRIED**



**FLOOD PLAIN:**  
 BY GRAPHICAL PLOTTING THE SUBJECT PARCEL IS IN "AREAS DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOOD PLAIN." (ZONE X) PER FLOOD INSURANCE RATE MAP NUMBER 28125C-0561G, EFFECTIVE DATE JAN. 16, 2009.

**BENCHMARKS:**  
 (BASIS: GPS DERIVED, NAVD 88)  
**BM #300**  
 CHELSE SQUARE AT NORTHEAST CORNER OF TOP OF LIGHT POLE BASE, NORTHEAST OF CHIL'S  
 ELEV. = 638.67  
**BM #301**  
 HYDRANT ARROW, 1ST HYDRANT EAST OF CHIL'S, NORTH SIDE OF 14 MILE ROAD  
 ELEV. = 640.17

**LEGAL DESCRIPTION**  
 (PER OAKLAND COUNTY TAX RECORDS)  
**PARCEL NO. 20-35-400-020**  
 TOWN 2 NORTH, RANGE 11 EAST, SECTION 35, PART OF THE SOUTHEAST 1/4; BEGINNING AT A POINT DISTANT S88°13'06"W 877 FEET AND N02°09'04"W 75 FEET FROM THE SOUTHEAST SECTION CORNER; THENCE N02°09'04"W 161.06 FEET, THENCE N88°13'06"E 142.00 FEET, THENCE N02°09'04"W 134.476 FEET, THENCE S87°50'56"W 523.33 FEET, THENCE ALONG CURVE TO RIGHT, RADIUS 190 FEET, CHORD BEARING N69°39'04"W 145.42 FEET, A DISTANCE OF 149.23 FEET, THENCE N47°09'04"W 31.28 FEET, THENCE S01°46'54"E 325.85 FEET, THENCE S07°17'00"W 383.08 FEET, THENCE S01°46'54"E 850.00 FEET, THENCE N88°13'06"E 192.68 FEET, THENCE S01°46'54"E 25.00 FEET, THENCE N88°13'06"E 28.44 FEET, THENCE N02°10'54"W 208.71 FEET, THENCE N88°13'06"E 208.71 FEET, THENCE S02°10'54"E 208.71 FEET, THENCE N88°13'06"E 180.62 FEET TO THE POINT OF BEGINNING, CONTAINING 23.58 ACRES

**PARCEL NO. 25-35-400-012**  
 CHIL'S  
 #402 W. 14-MILE ROAD  
 1 1/2 ST. BRICK

**BORING LEGEND**  
 1SB-A SOIL BORING, TYP. REFER TO GEOTECHNICAL REPORT BY PEIA DATED DECEMBER 5, 2012 FOR SOIL INFORMATION.

**LEGEND**

● IRON FOUND	⊗ BRASS PLUG SET	⊙ SEC. CORNER FOUND
⊙ IRON SET	⊙ MONUMENT FOUND	R RECORDED
⊙ NAIL FOUND	⊙ MONUMENT SET	M MEASURED
⊙ NAIL & CAP SET		C CALCULATED

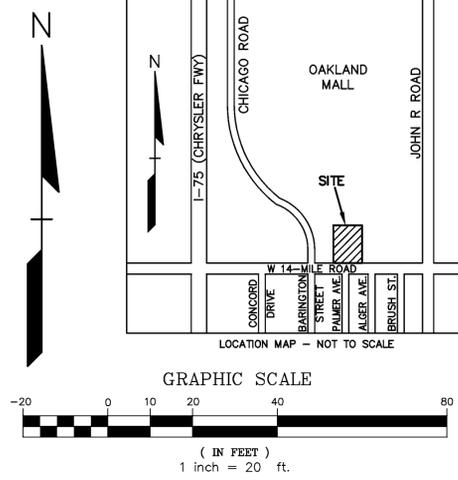
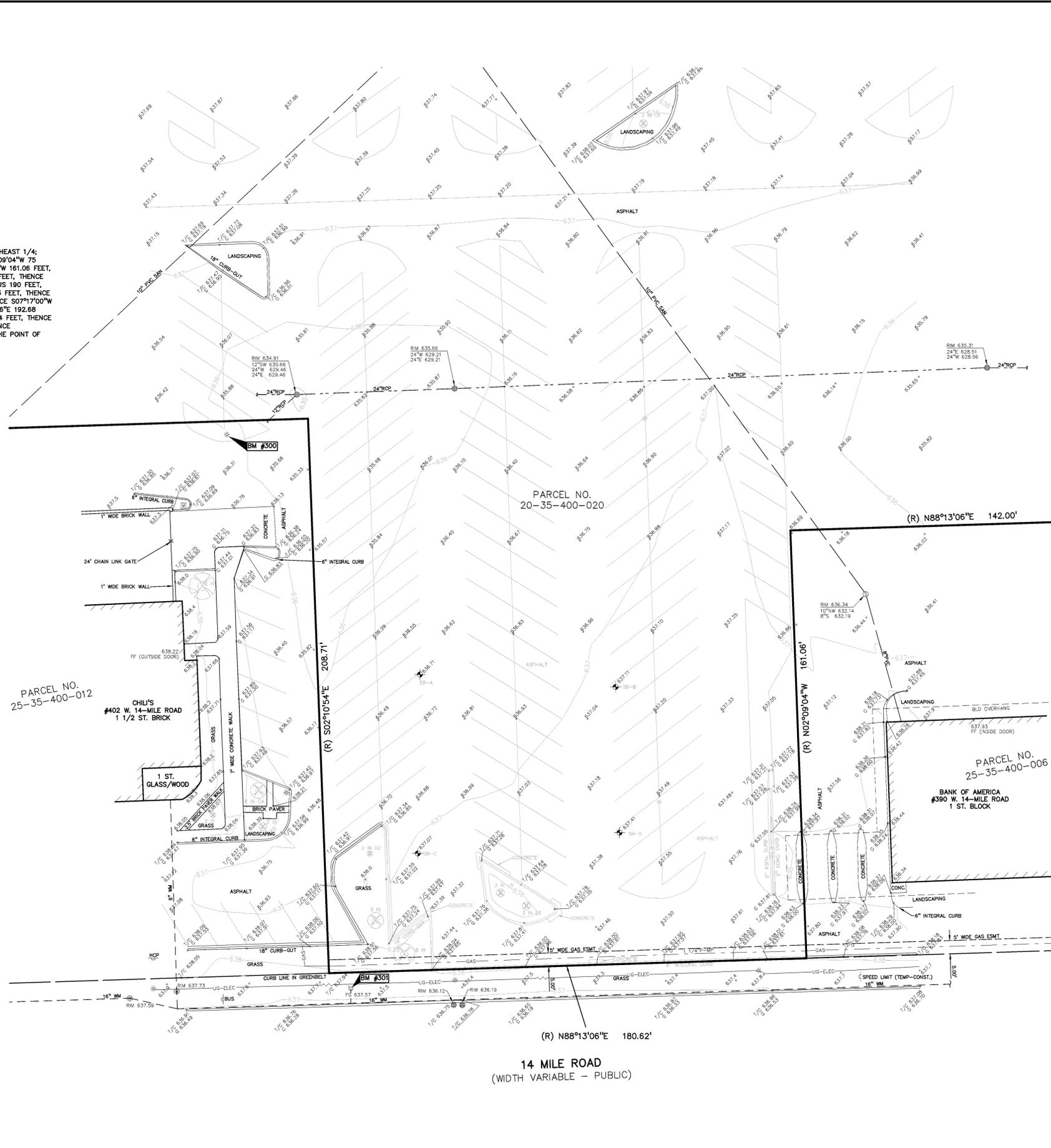
**EXISTING**

— OH-ELEC—	ELEC. PHONE OR CABLE TV O.H. LINE, POLE & QUIP WIRE
— UG-CATV—	UNDERGROUND CABLE TV, CATV PEDESTAL
— UG-PHONE—	TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
— UG-ELEC—	ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE
— GAS—	GAS MAIN, VALVE & GAS LINE MARKER
— W—	WATERMAN, HYD. GATE VALVE, TAPPING SLEEVE & VALVE
— S—	SANITARY SEWER, CLEANOUT & MANHOLE
— ST—	STORM SEWER, CLEANOUT & MANHOLE
— CS—	COMBINED SEWER & MANHOLE
— CB—	CATCH BASIN
— I—	INLET (NO INCOMING LINES)
— YD—	YARD DRAIN (2" DIA. & SMALLER)
— P—	POST INDICATOR VALVE
— W—	WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF
— M—	MALIBOX, TRANSFORMER, IRRIGATION CONTROL VALVE
— U—	UNIDENTIFIED STRUCTURE
— SE—	SPOT ELEVATION
— BE—	AS BUILT ELEVATION
— CL—	CONTOUR LINE
— F—	FENCE
— GR—	GUARD RAIL
— SL—	STREET LIGHT
— S—	SIGN

**CONCRETE**  
 CONC.  
**ASPHALT**  
 ASPH.  
**METLAND**  
 METL.  
**GRAVEL SHOULDER**  
 G.S.

**REFERENCE DRAWINGS**

OAKLAND MALL ALTA/ACSM LAND TITLE SURVEY, HRC JOB #20070562, DATED: 10-11-07  
 CITY OF TROY RECEIVED: 12-30-12  
 CITY OF TROY RECEIVED: 12-30-12  
 CITY OF TROY RECEIVED: 12-30-12  
 CITY OF TROY RECEIVED: 12-20-12  
 CITY OF TROY RECEIVED: 12-17-12  
 CITY OF TROY RECEIVED: 12-18-12  
 CITY OF TROY RECEIVED: 12-20-12



NO.	BY	CHK.	DESCRIPTION	DATE
1	JPB		REVISED PER 2/12/13 PLANNING COMMISSION MEETING	2/15/13

**CAUTION!!**  
 THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS PLAN ARE BASED ON RECORD DRAWINGS AND FIELD SURVEY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXISTENCE, DEPTH, LOCATION AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PROFESSIONAL ENGINEERING ASSOCIATES, INC. THEY ARE LOANED TO THE CONTRACTOR FOR THEIR USE ONLY AND NOT TO BE REPRODUCED OR COPIED IN ANY MANNER WITHOUT THE WRITTEN CONSENT OF PROFESSIONAL ENGINEERING ASSOCIATES, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHER RIGHTS ARE HEREBY SPECIFICALLY RESERVED. © 2013 PROFESSIONAL ENGINEERING ASSOCIATES, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXISTENCE, DEPTH, LOCATION AND ELEVATIONS OF EXISTING UTILITIES PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXISTENCE, DEPTH, LOCATION AND ELEVATIONS OF EXISTING UTILITIES PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXISTENCE, DEPTH, LOCATION AND ELEVATIONS OF EXISTING UTILITIES PRIOR TO THE START OF CONSTRUCTION.

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 2430 Rochester Ct, Suite 100  
 Troy, MI 48063-1872  
 Phone: (248) 689-9090  
 Fax: (248) 689-1044  
 website: www.peainc.com

**URBAN RETAIL PROPERTIES**  
 111 EAST WACKER SUITE 2400  
 CHICAGO, IL 60601

**TOPOGRAPHIC SURVEY OUTLOT 'C'**  
 PART OF THE SE 1/4 OF SECTION 35, T. 2N., R. 11E., CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	RLS	DN.	RLS	SUR.	DJL/CAM	P.M.	JPB
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ORIGINAL ISSUE DATE: JAN. 10, 2013  
 PEA JOB NO. 2012-211  
 SCALE: 1" = 20'  
 DRAWING NUMBER:  
**P-2**

**PRELIMINARY NOT FOR CONSTRUCTION**

XREF: L:\2012211\TOWNSHIP\TOP\BASE-12211.DWG  
 XREF: L:\2012211\TOWNSHIP\PLAN\TOP\BASE-12211.DWG  
 XREF: L:\2012211\TOWNSHIP\PLAN\TELK-12211.DWG

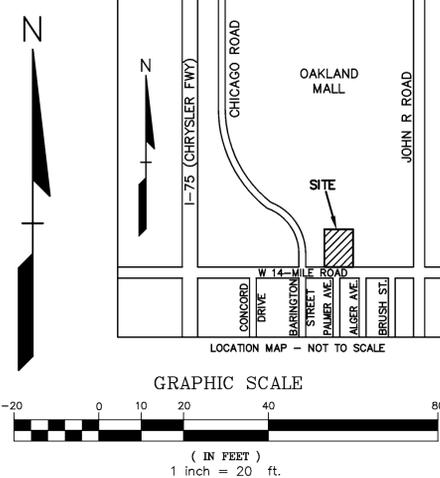




**FLOOD PLAIN:**  
 BY GRAPHICAL PLOTTING THE SUBJECT PARCEL IS IN "AREAS DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOOD PLAIN." (ZONE X) PER FLOOD INSURANCE RATE MAP NUMBER 28125C-0561G, EFFECTIVE DATE JAN. 16, 2009.

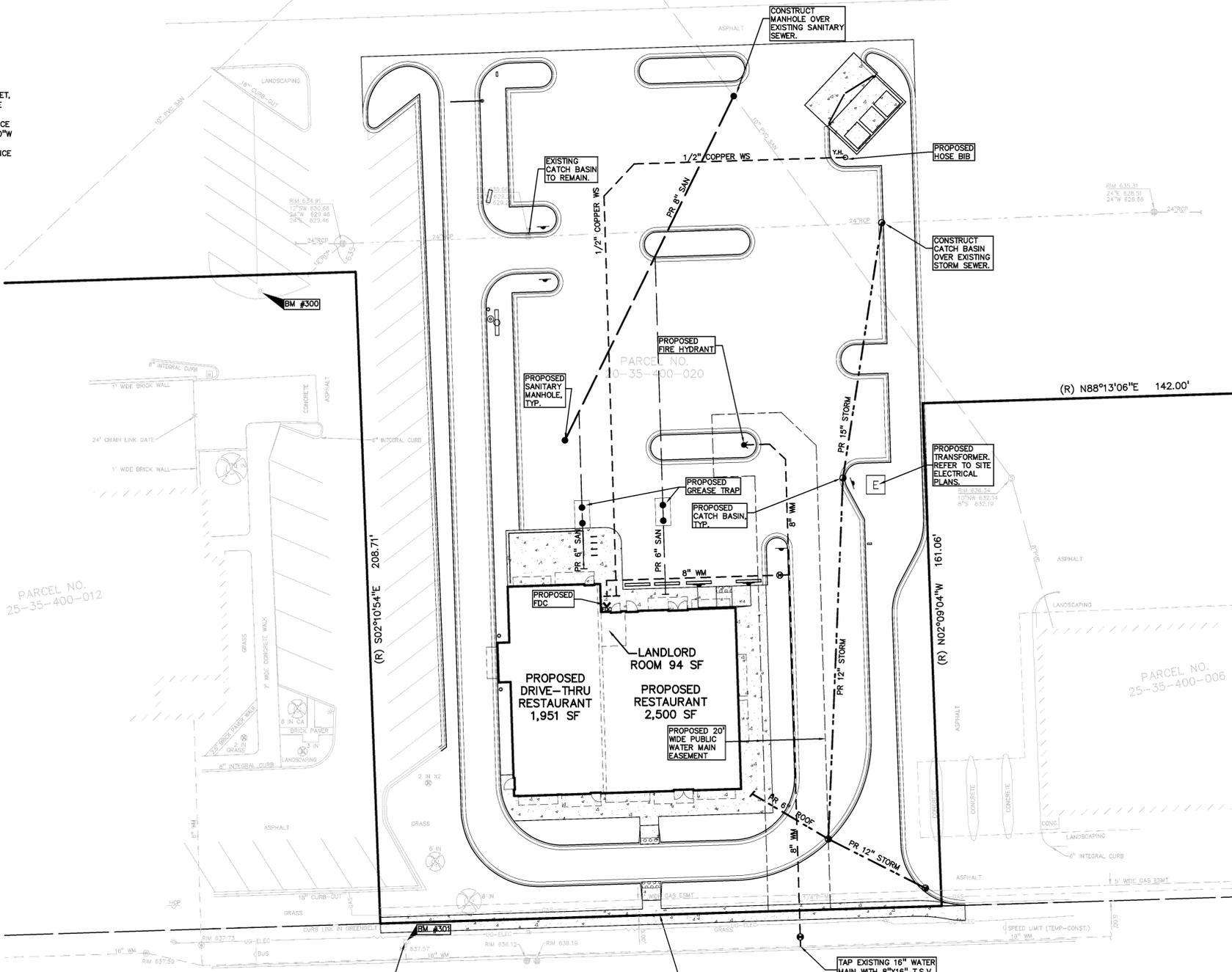
**BENCHMARKS:**  
 (BASIS: GPS DERIVED, NAVD 88)  
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 CHESEBROUGH SQUARE AT NORTHEAST CORNER OF TOP OF LIGHT POLE BASE, NORTHEAST OF CHIL'S  
 ELEV. = 638.67  
**BM #301**  
 HYDRANT ARROW, 1ST HYDRANT EAST OF CHIL'S, NORTH SIDE OF 14 MILE ROAD  
 ELEV. = 640.17

**LEGAL DESCRIPTION**  
 (PER OAKLAND COUNTY TAX RECORDS)  
**PARCEL NO. 20-35-400-020**  
 TOWN 2 NORTH, RANGE 11 EAST, SECTION 35, PART OF THE SOUTHEAST 1/4, BEGINNING AT A POINT DISTANT S88°13'06"W 877 FEET AND N02°09'04"W 75 FEET FROM THE SOUTHEAST SECTION CORNER; THENCE N02°09'04"W 161.06 FEET, THENCE N88°13'06"E 142.00 FEET, THENCE N02°09'04"W 1344.76 FEET, THENCE S87°50'56"W 523.33 FEET, THENCE ALONG CURVE TO RIGHT, RADIUS 190 FEET, CHORD BEARING N69°39'04"W 145.42 FEET, A DISTANCE OF 149.23 FEET, THENCE N47°09'04"W 31.28 FEET, THENCE S01°46'54"E 325.85 FEET, THENCE S07°17'00"W 383.08 FEET, THENCE S01°46'54"E 850.00 FEET, THENCE N88°13'06"E 192.68 FEET, THENCE S01°46'54"E 25.00 FEET, THENCE N88°13'06"E 28.44 FEET, THENCE N02°10'54"W 208.71 FEET, THENCE N88°13'06"E 208.71 FEET, THENCE S02°10'54"E 208.71 FEET, THENCE N88°13'06"E 180.62 FEET TO THE POINT OF BEGINNING, CONTAINING 23.58 ACRES



NO.	DATE	BY	CHK.	DESCRIPTION
1	2/15/13	JFB		REVISED PER 2/12/13 PLANNING COMMISSION MEETING

**REVISIONS**



- GENERAL UTILITY NOTES:**
- ALL UTILITY LINES, STRUCTURES AND TRENCHES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS AND REQUIREMENTS OF THE CITY OF TROY.
  - NO PHYSICAL CONNECTION TO THE EXISTING WATER MAIN CAN BE MADE UNTIL ALL NEW WATER MAIN PASSES PRESSURE AND BACTERIOLOGICAL TESTS TO THE SATISFACTION OF THE CITY.
  - ALL WATER MAIN AND FITTINGS (3" DIAMETER AND LARGER) SHALL BE DUCTILE IRON, CLASS 54.
  - WATER MAIN SERVICE LEADS SHALL BE TYPE "K" ANNEALED SEAMLESS COPPER WITH FLARED FITTINGS, UNLESS OTHERWISE NOTED.
  - ALL WATER MAIN SHALL BE PROVIDED WITH 6' OF COVER UNLESS OTHERWISE NOTED.
  - ALL NECESSARY FITTINGS, THRUST BLOCKS, RESTRAINING GLANDS, BLOW OFFS, ETC. FOR WATER MAIN ARE CONSIDERED INCIDENTAL TO THIS PROJECT. THE CONTRACTOR SHALL INSTALL THESE ITEMS AS NECESSARY AND AS REQUIRED BY THE CITY OF TROY.
  - ALL SANITARY SEWER 8" OR LARGER SHALL BE P.V.C. TRUSS PIPE (ASTM D2689) AND FITTINGS, WITH ELASTOMERIC GASKET JOINTS PER ASTM D3212 UNLESS OTHERWISE NOTED.
  - ALL SANITARY SEWER LEADS SHALL BE POLYVINYL CHLORIDE (PVC) SCH 40 PIPE AND FITTINGS WITH RUBBER GASKET JOINTS UNLESS OTHERWISE NOTED.
  - SANITARY LEADS SHALL BE PROVIDED WITH CLEANOUTS EVERY 100 FEET AND AT EVERY BEND AS SHOWN. ALL CLEANOUTS TO BE PROVIDED WITH E.J.I.W. #1565 BOX OR EQUAL.
  - ALL STORM SEWER 12" DIAMETER OR LARGER SHALL BE REINFORCED CONCRETE PIPE (RCP C-78) CLASS IV WITH PREMIUM JOINTS, UNLESS OTHERWISE NOTED.
  - ALL STORM SEWER LEADS SHALL BE PVC SCHEDULE 40 WITH GLUED JOINTS UNLESS OTHERWISE NOTED.
  - PIPE LENGTHS ARE GIVEN FROM CENTER OF STRUCTURE AND TO END OF FLARED END SECTION UNLESS NOTED OTHERWISE.
  - THE CITY OF TROY STANDARD DETAIL SHEETS ARE INCORPORATED INTO AND MADE A PART OF THESE PLANS. CONTRACTOR TO REFER TO THE CITY OF TROY STANDARD DETAIL SHEETS FOR ALL STRUCTURE, PIPE MATERIALS, BEDDING, TESTING, ETC. NOTES AND DETAILS.

**CAUTION!**  
 THE LOCATIONS AND DEPTHS OF EXISTING UNIDENTIFIED UTILITIES AS SHOWN ON THIS PLAN ARE BASED ON RECORD DRAWINGS AND FIELD SURVEY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXISTENCE AND DEPTHS OF ALL UTILITIES PRIOR TO THE START OF CONSTRUCTION.

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 111 EAST WACKER, SUITE 2400  
 CHICAGO, IL 60601

**PRELIMINARY UTILITY PLAN 'C'**  
 OAKLAND MALL OUTLOT 'C'  
 PART OF THE SE 1/4 OF SECTION 35, T. 2N., R. 11E.,  
 CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	RLS	DN.	RLS	SUR.	DLCAW	P.M.	JFB
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ORIGINAL ISSUE DATE: JAN. 10, 2013

PEA JOB NO. 2012-211

SCALE: 1" = 20'

DRAWING NUMBER:

**P-5**

**NOTE:**  
 ALL WORK WITHIN THE 14 MILE ROAD R.O.W. IS UNDER THE JURISDICTION OF THE ROAD COMMISSION FOR OAKLAND COUNTY AND REQUIRES A PERMIT.

**LEGEND**

● IRON FOUND	⊙ BRASS PLUG SET	⊙ SEC. CORNER FOUND
⊙ IRON SET	⊙ MONUMENT FOUND	R RECORDED
● NAIL FOUND	⊙ MONUMENT SET	M MEASURED
⊙ NAIL & CAP SET		C CALCULATED

— OH—ELEC—	ELEC. PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE
— UG—CATV—	UNDERGROUND CABLE TV, CATV PEDESTAL
— UG—PHONE—	TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
— UG—ELEC—	ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE
— GAS—	GAS MAIN, VALVE & GAS LINE MARKER
— WATER—	WATERMAIN, HYD. GATE VALVE, TAPPING SLAVE & VALVE
— SANITARY—	SANITARY SEWER, CLEANOUT & MANHOLE
— STORM—	STORM SEWER, CLEANOUT & MANHOLE
— COMBINED—	COMBINED SEWER & MANHOLE
— CATCH BASIN	CATCH BASIN
— INLET (NO INCOMING LINES)	INLET (NO INCOMING LINES)
— YARD DRAIN (2" DIA. & SMALLER)	YARD DRAIN (2" DIA. & SMALLER)
— POST INDICATOR VALVE	POST INDICATOR VALVE
— WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF	WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF
— MALIBOX, TRANSFORMER, IRRIGATION CONTROL, VALVE	MALIBOX, TRANSFORMER, IRRIGATION CONTROL, VALVE
— UNIDENTIFIED STRUCTURE	UNIDENTIFIED STRUCTURE
— SPOT ELEVATION	SPOT ELEVATION
— AS BUILT ELEVATION	AS BUILT ELEVATION
— CONTOUR LINE	CONTOUR LINE
— FENCE	FENCE
— GUARD RAIL	GUARD RAIL
— STREET LIGHT	STREET LIGHT
— SIGN	SIGN
— CONC.	CONCRETE
— ASPH.	ASPHALT
— WETLAND	WETLAND
— GRAVEL SHOULDER	GRAVEL SHOULDER
— STANDARD DUTY	STANDARD DUTY
— HEAVY DUTY	HEAVY DUTY
— DEEP STRENGTH	DEEP STRENGTH

**REFERENCE DRAWINGS**

OAKLAND MALL ALTA/ACSM LAND TITLE SURVEY, HRC JOB #20070562, DATED: 10-11-07	CITY OF TROY RECEIVED: 12-30-12
STORM SEWER	CITY OF TROY RECEIVED: 12-30-12
SANITARY SEWER	CITY OF TROY RECEIVED: 12-30-12
WATER MAIN	CITY OF TROY RECEIVED: 12-30-12
GAS	SUN PIPELINE - NO FACILITIES ON SITE, RECEIVED: 12-17-12
ELECTRIC	CONSUMERS - MAP 02-61-35-4, RECEIVED: 12-17-12
CAT TV	OTE - MAP 325-378, RECEIVED: 12-18-12
	COMCAST - NO FACILITIES ON SITE, RECEIVED: 12-20-12

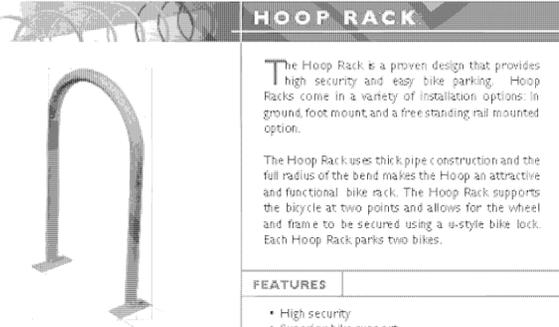
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XREF: L:\2012211\TOWNSHIP\BASE-12211.DWG  
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 XREF: L:\2012211\TOWNSHIP\PLAN\TELK-12211.DWG

SKU 226014 TAG M335

Rack, Bike Black Hoop

MODEL HR-FT-EPX Black MANUFACTURER Dero Bike Racks



**HOOP RACK**

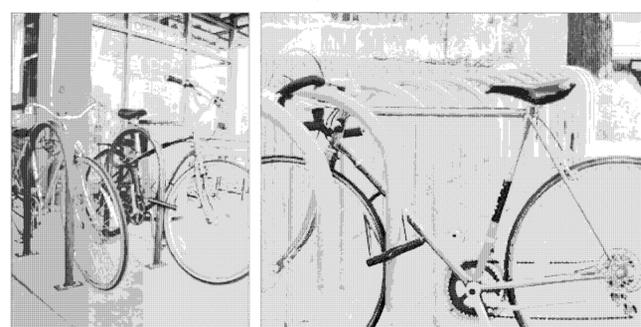
The Hoop Rack is a proven design that provides high security and easy bike parking. Hoop Racks come in a variety of installation options: in ground, foot mount and a free standing rail mounted option.

The Hoop Rack uses thick pipe construction and the full radius of the bend makes the Hoop an attractive and functional bike rack. The Hoop Rack supports the bicycle at two points and allows for the wheel and frame to be secured using a u-style bike lock. Each Hoop Rack parks two bikes.

**FEATURES**

- High security
- Superior bike support
- In ground or surface mounted
- One unit parks 2 bikes
- Free standing rail mount available

The Hoop Rack provide a high level of security and excellent bike support



**DERO** BIKERACK COMPANY  
 3427 JERRY AVENUE S MINNEAPOLIS, MN 55406 TEL: 612 337 0259 FAX: 612 337 0259 WWW.DERORACK.COM BOX 410 811291

SKU 226014 TAG M335

Rack, Bike Black Hoop

Page 2 of 6

**HOOP RACK - Specifications and Space Use**

**Product Name**  
 Dero Hoop Rack  
 As manufactured by Dero Bike Racks

**Bikes Parked per Unit:** 2

**Materials:**  
 1.5" schedule 40 pipe (1.9" OD)

**Finishes**  
 An after fabrication hot dipped galvanized finish is standard. 250 TGIC powder coat colors and a stainless steel option are also available.

Our powder coat finish assures a high level of adhesion and durability by following these steps:  
 1. Sandblast  
 2. Iron phosphate pretreatment  
 3. Epoxy primer electrostatically applied  
 4. Final thick TGIC polyester powder coat

Stainless Steel: 304 grade stainless steel material finished in either a high polished shine or a satin finish.

A rubbery PVC Dip is also available

**Installation Methods**

- In ground mount is embedded into concrete base. Specify in ground mount for this option.
- Foot Mount has two 2.5"x6"x25" feet with two anchors per foot. Specify foot mount for this option.
- Rail Mounted Hoops are bolted to two parallel rails which can be left freestanding or anchored to the ground. Rails are heavy duty 3"x1.4"x3/16" thick galvanized mounting rails. Specify rail mount for this option.

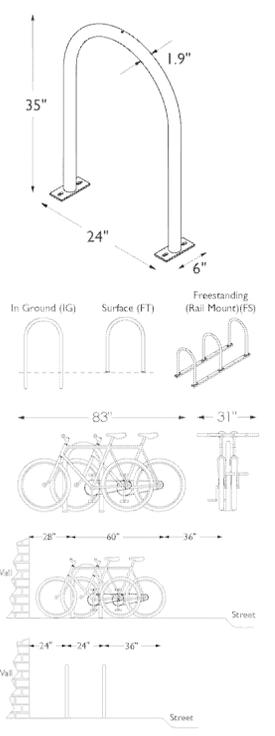
**SETBACKS**

**Wall Setbacks:**  
 For racks set parallel to a wall:  
 Minimum: 24"  
 Recommended: 36"

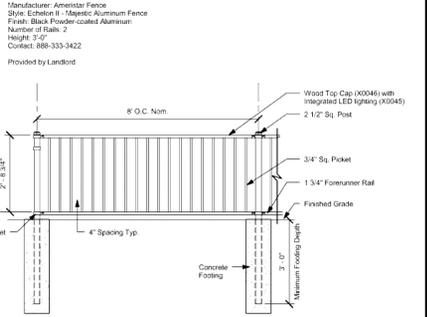
For racks set perpendicular to a wall:  
 Minimum: 28"  
 Recommended: 36"

**Distance Between Racks:**  
 Minimum: 24"  
 Recommended: 36"

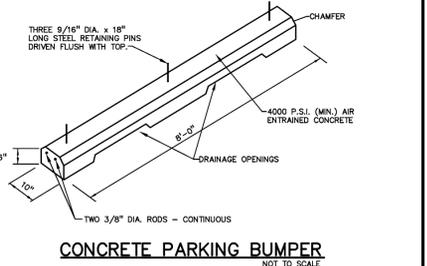
**Street Setbacks:**  
 Minimum: 24"  
 Recommended: 36"



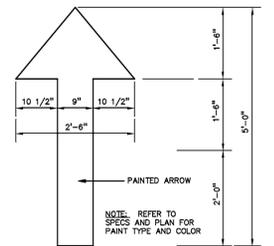
**Retaining**



**1 Site Railing**



**CONCRETE PARKING BUMPER**



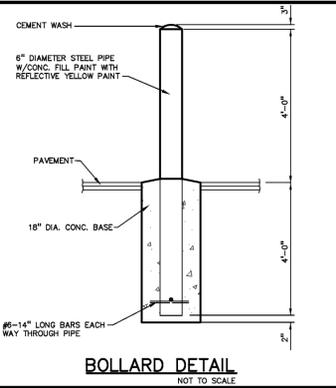
**PAINTED DIRECTIONAL ARROW**



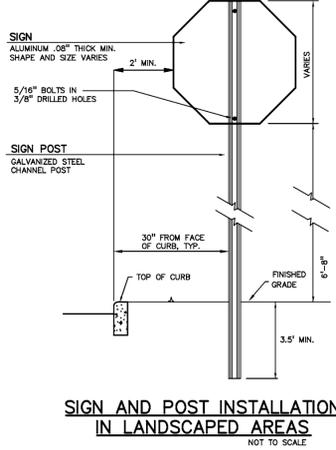
**DO NOT ENTER SIGN DETAIL**



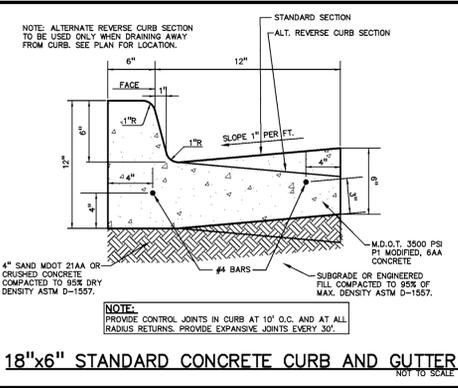
**ONE WAY SIGN DETAIL**



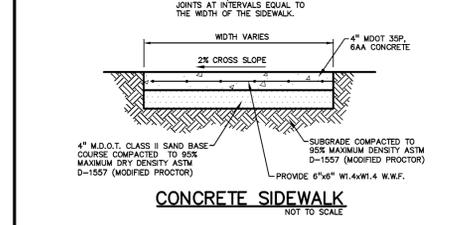
**BOLLARD DETAIL**



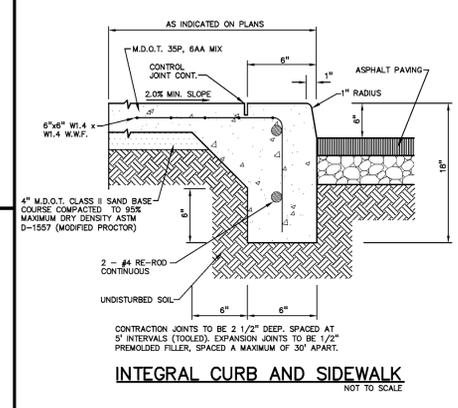
**SIGN AND POST INSTALLATION IN LANDSCAPED AREAS**



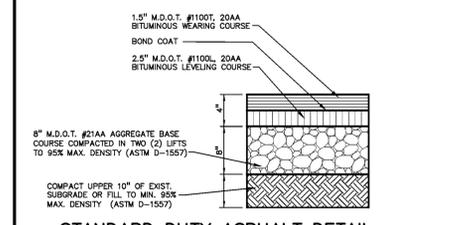
**18"x6" STANDARD CONCRETE CURB AND GUTTER**



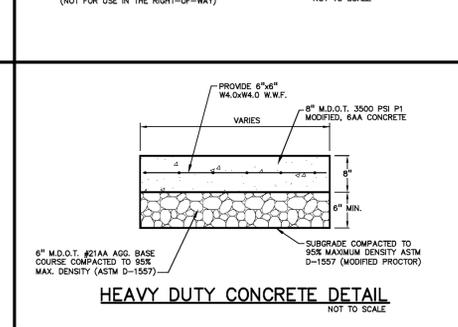
**CONCRETE SIDEWALK**



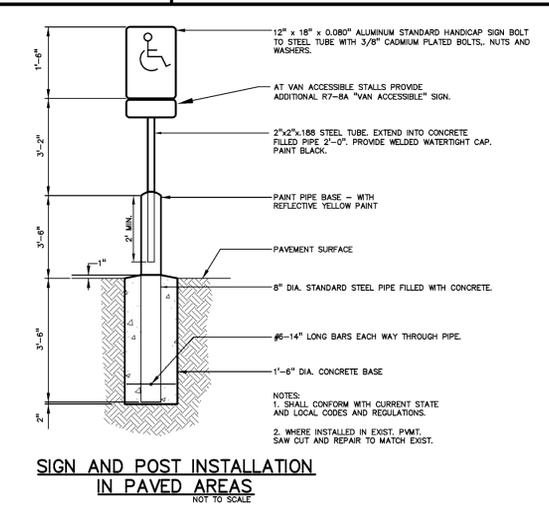
**INTEGRAL CURB AND SIDEWALK**



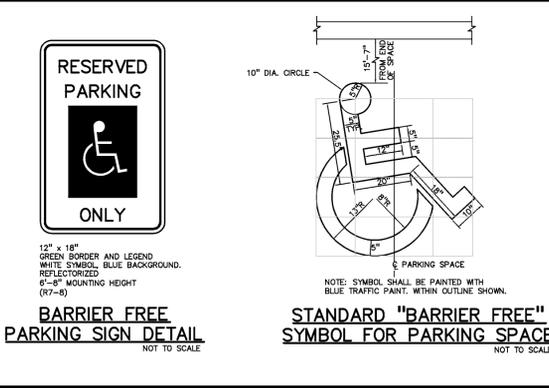
**STANDARD DUTY ASPHALT DETAIL**



**HEAVY DUTY CONCRETE DETAIL**



**SIGN AND POST INSTALLATION IN PAVED AREAS**



**RESERVED PARKING ONLY**

**BARRIER FREE PARKING SIGN DETAIL**

**STANDARD "BARRIER FREE" SYMBOL FOR PARKING SPACE**

NO.	DATE	REVISIONS
1	12/15/13	DATE
1	12/15/13	DESCRIPTION

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**NOTES AND DETAILS**  
 OAKLAND MALL OUTLOT 'C'  
 PART OF THE SE 1/4 OF SECTION 35, T. 2N., R. 11E., CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	RLS.	DN.	RLS.	SUR.	MIC/AM	P.M.	JPB

ORIGINAL ISSUE DATE: JAN. 10, 2013  
 PEA JOB NO. 2012-211

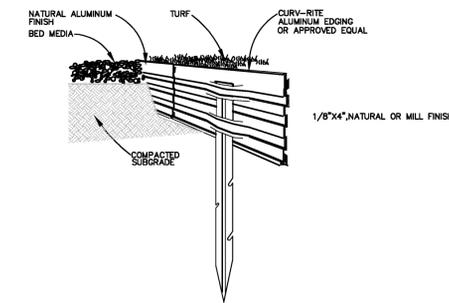
SCALE: NONE  
 DRAWING NUMBER:

**PRELIMINARY NOT FOR CONSTRUCTION**

**P-6**

XREF: L:\2012211\DWG\TOP\BASE-12211.DWG  
 XREF: L:\2012211\DWG\SITE\PLAN\BASE-12211.DWG  
 XREF: L:\2012211\DWG\SITE\PLAN\TELK-12211.DWG

LANDSCAPE CALCULATIONS: PER CITY OF TROY ZONING ORDINANCE	
<b>PARKING LOT LANDSCAPE</b>	
REQUIRED: 1 TREE FOR EVERY (8) EIGHT PARKING SPACES 56 PARKING SPACES / 8 = 7 TREES REQUIRED	
PROVIDED: 7 TREES	
<b>GREENBELT</b>	
REQUIRED: 1 DEC. TREE FOR EVERY 30 LF OF TOTAL FRONTAGE 180 LF / 30 = 6 TREES	
PROVIDED: 5 PROPOSED TREES AND 1 EXISTING TREE TO REMAIN	
<b>GENERAL SITE STANDARDS</b>	
REQUIRED: MIN OF 20% OF TOTAL LOT AREA MUST BE LANDSCAPED TOTAL LOT AREA = ±1.14 ACRES (49658 SF) 49658 SF * 20% = 9,932 SF REQUIRED	
PROVIDED: 11,539 SF LANDSCAPED	



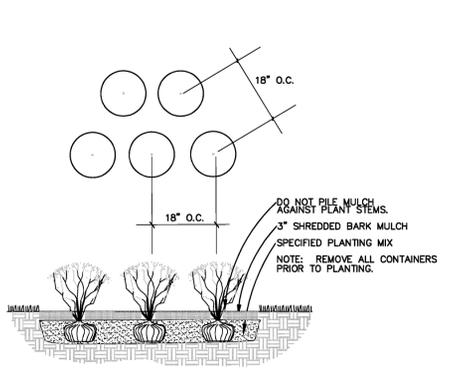
**SPECIFICATION FOR LANDSCAPE BED EDGING**

LANDSCAPE BED EDGING SHALL BE CURV-RITE DESIGN 2 (CRO2) AS MANUFACTURED BY CURV-RITE INC. WAYLAND, MICHIGAN 1 - 800 366 - 2878.

EIGHT (8) OR SIXTEEN (16) FOOT SECTIONS SHALL BE USED WITH ONE STAKE PER (36) INCHES OF EDGING SHALL BE ALUMINUM ALLOY 6063 - T5 WITH STAKES BEING 6061 - T5 STAKE SHALL SECURELY ENGAGE EDGING AND SHALL BE ENTIRELY BELOW TOP SURFACE OF EDGING. EDGING SHALL HAVE A MINIMUM OF (2) INCHES OF INTERLOCKING OVERLAP BETWEEN SECTIONS.

INSTALL AS PER MANUFACTURER'S SPECIFICATIONS WITH TOP OF EDGING 1/4" TO 1/2" ABOVE COMPACTED FINISH GRADE. FINISH GRADE TO BE COMPACTED ON EITHER SIDE OF EDGING TO MAINTAIN STABILITY.

**ALUMINUM EDGE DETAIL**  
NOT TO SCALE



**PERENNIAL PLANTING DETAIL**  
NOT TO SCALE

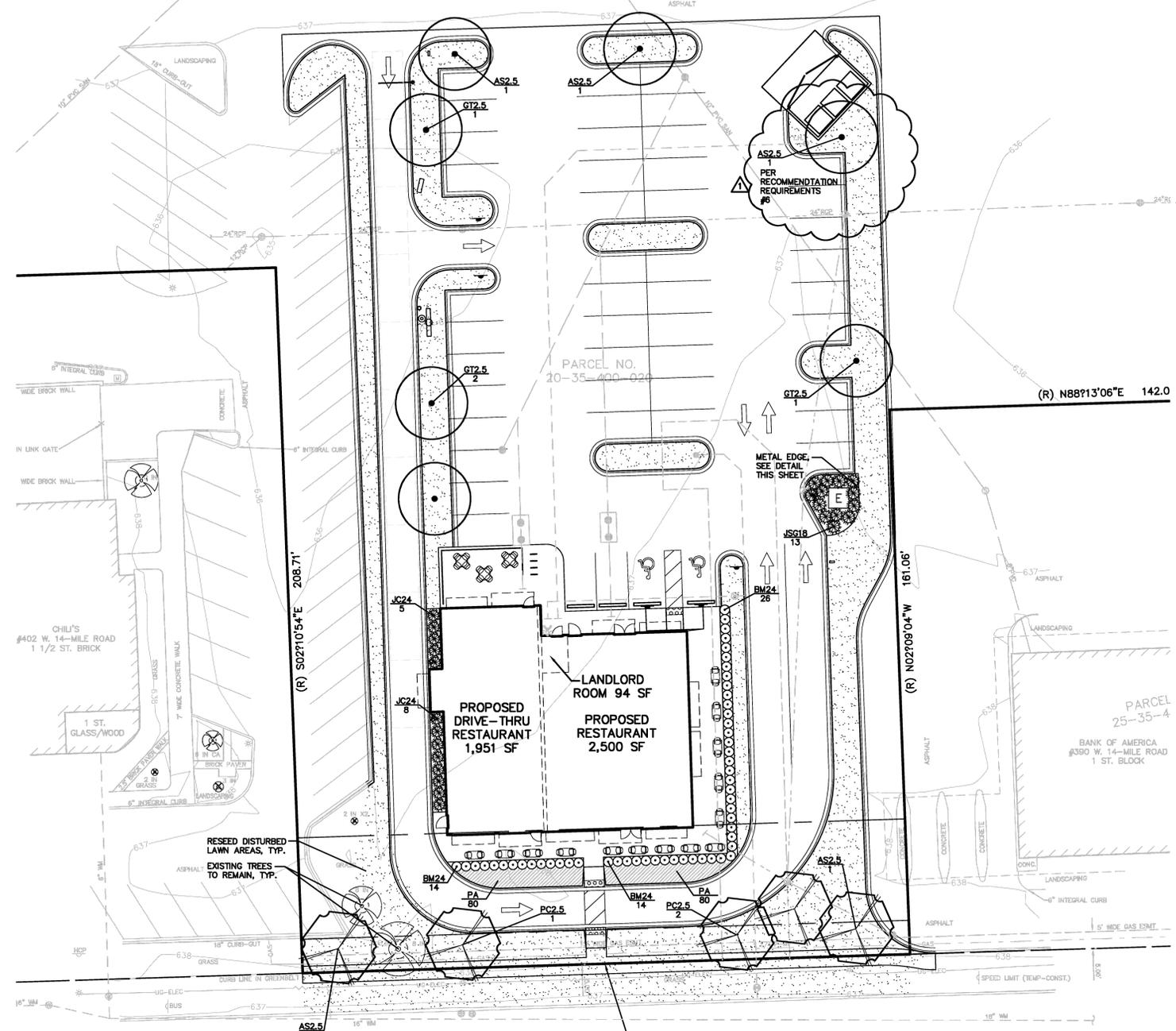
TREE PLANT LIST:					
QUANTITY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	SPEC.
5	AS2.5	Sugar Maple	<i>Acer saccharum</i> 'Green Mountain'	2.5" Cal.	B&B
4	GT2.5	Skyline Honeylocust	<i>Gleditsia triacanthos</i> 'Skyline'	2.5" Cal.	B&B
3	PC2.5	Cleveland Select Pear	<i>Pyrus calleryana</i> 'Cleveland Select'	2.5" Cal.	B&B

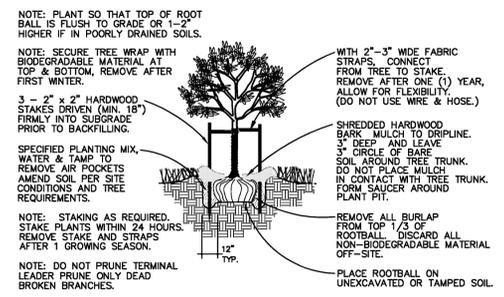
SHRUB PLANT LIST:					
QUANTITY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	SPEC.
54	BM24	Green Gem Boxwood	<i>Buxus x 'Green Gem'</i>	24" Ht.	Cont.
13	JC24	Green Sargent Juniper	<i>Juniperus chinensis sargentii</i> 'Viridis'	24" Sprd	Cont.
13	JSG18	Sea Green Juniper	<i>Juniperus ch. 'Sea Green'</i>	18" Ht.	Cont.

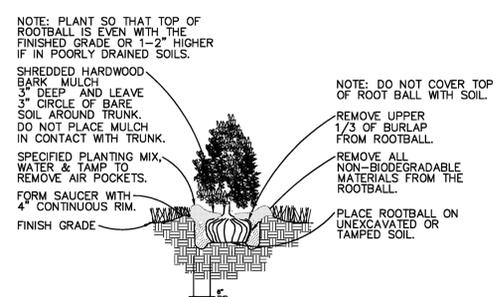
PERENNIAL PLANT LIST:					
QUANTITY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	SPEC.
160	PA	Dwarf Fountain Grass	<i>Pennisetum alopecuroides</i> 'Hameln'	1 Gal	Cont.



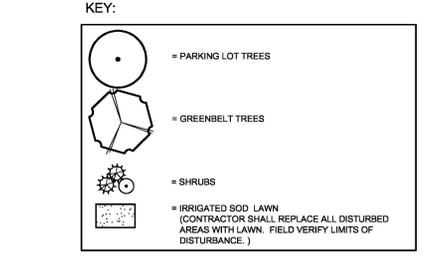
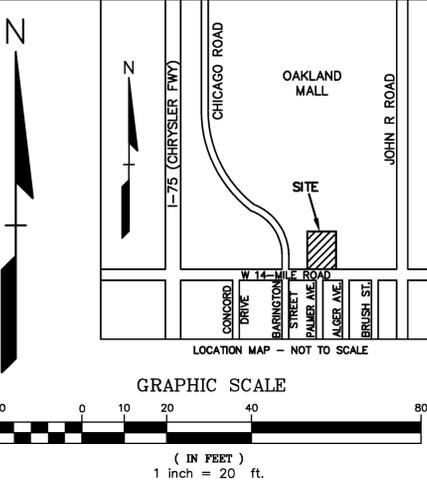
**NOTE:**  
ALL WORK WITHIN THE 14 MILE ROAD R.O.W. IS UNDER THE JURISDICTION OF THE ROAD COMMISSION FOR OAKLAND COUNTY AND REQUIRES A PERMIT.



**DECIDUOUS TREE PLANTING DETAIL**  
NOT TO SCALE



**SHRUB PLANTING DETAIL**  
NOT TO SCALE



**GENERAL LANDSCAPE NOTES:**

- Landscape contractor shall visit site, inspect existing site conditions and review proposed planting and related work. In case of discrepancy between plan and plant list, plan shall govern quantities. Contact Landscape Architect with any concerns.
- Contractor shall verify locations of all site utilities prior to beginning construction on his/her phase of work. Electric, gas, telephone, cable television may be located by calling MISS DIG 1-800-482-7171. Any damage or interruption of services shall be the responsibility of Contractor. Contractor shall coordinate all related activities with other trades on the job and shall report any unacceptable job conditions to Owner's Representative prior to commencing.
- All plant material to be premium grade nursery stock and shall satisfy American Association of Nurserymen standard for Nursery Stock. All landscape material shall be Northern Grown, No. 1. Grade.
- Contractor is responsible for verifying all quantities shown on landscape plan prior to pricing the work.
- The owner's representative reserves the right to reject any plant material not meeting specifications.
- All single stem shade trees to have straight trunks and symmetrical crowns.
- All multi stem trees shall be heavily branched and have symmetrical crowns. One sided trees or those with thin or open crowns shall not be accepted.
- All evergreen trees shall be heavily branched and full to the ground, symmetrical in shape and not sheared for the last five growing seasons.
- All trees to have clay or clay loam balls, trees with sand balls will be rejected.
- No machinery is to be used within the drip line of existing trees. Hand grade all lawn areas within the drip line of existing trees.
- All tree locations shall be staked by Landscape Contractor and are subject to the approval of the landscape Architect prior to installation of the plant material.
- It is mandatory that positive drainage is provided away from all buildings.
- All planting beds shall receive 3" shredded hardwood bark mulch. Shredded points and dead mulch will not be accepted.
- All landscaped areas shall receive 3" compacted topsoil.
- All landscaping shall be maintained in a healthy, neat, and orderly appearance free from refuse and debris. All unhealthy and dead plant material shall be replaced immediately upon notice from the Building Official. The planting season, if replaced at the beginning of the next planting season, if season is not appropriate for planting.
- All required landscape plantings shall be guaranteed for a period of one (1) year and those which are diseased or dead must be replaced in conformance with the approved landscape plan. Replacement trees and shrubs shall be of the same species and size as those removed.
- See specifications for additional comments, requirements, planting procedures and warranty standards.
- All landscape areas to be grass common to region except where other plant material is called for.
- All trees and shrubs to be planted in mulch beds with edge strips to separate turf grass areas.
- Any landscape area disturbed by construction shall be scarified to a depth of 2", graded smooth to allow for positive drainage. For any landscape area so designated to remain whether on or off site, remove weeds, rocks, construction items, etc., scarify area, re-seed and fertilize. All R.O.W. curb and gutters are to be cleaned of debris.
- Finished grade in landscape islands shall be installed so that they are 1" lower than the top of the surrounding curbs.
- The Contractor shall provide a WATER PERMEABLE WEED MAT for all planting beds!!!
- All plant materials to receive permanent underground automatic irrigation system designed by an irrigation contractor licensed by the State. The Contractor shall provide drawings for approval by the City prior to installation.
- Grass and irrigation to extend from property lines to back of City sidewalks and/or curbs.
- Install pipe sleeves where irrigation lines cross or are under pavement. All sleeves shall be twice the diameter of the pipe(s) it houses.

**PRELIMINARY NOT FOR CONSTRUCTION**

NO.	BY	DATE	DESCRIPTION
1	JPB	12/13/12	PLANNING COMMISSION MEETING
2	JPB	12/13/12	PLANNING COMMISSION MEETING

REVISIONS	

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

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CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME FULL RESPONSIBILITY FOR ALL SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY THAT THIS REQUIREMENT SHALL BE MADE A PART OF THE CONTRACT AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

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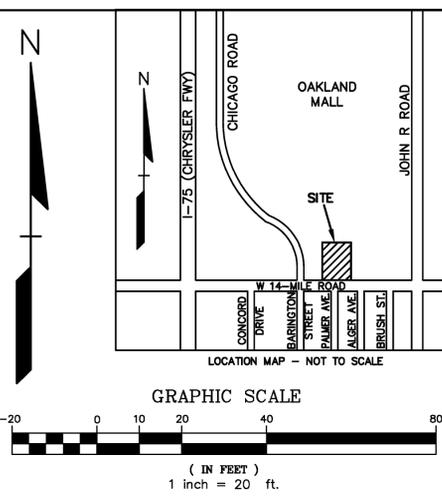
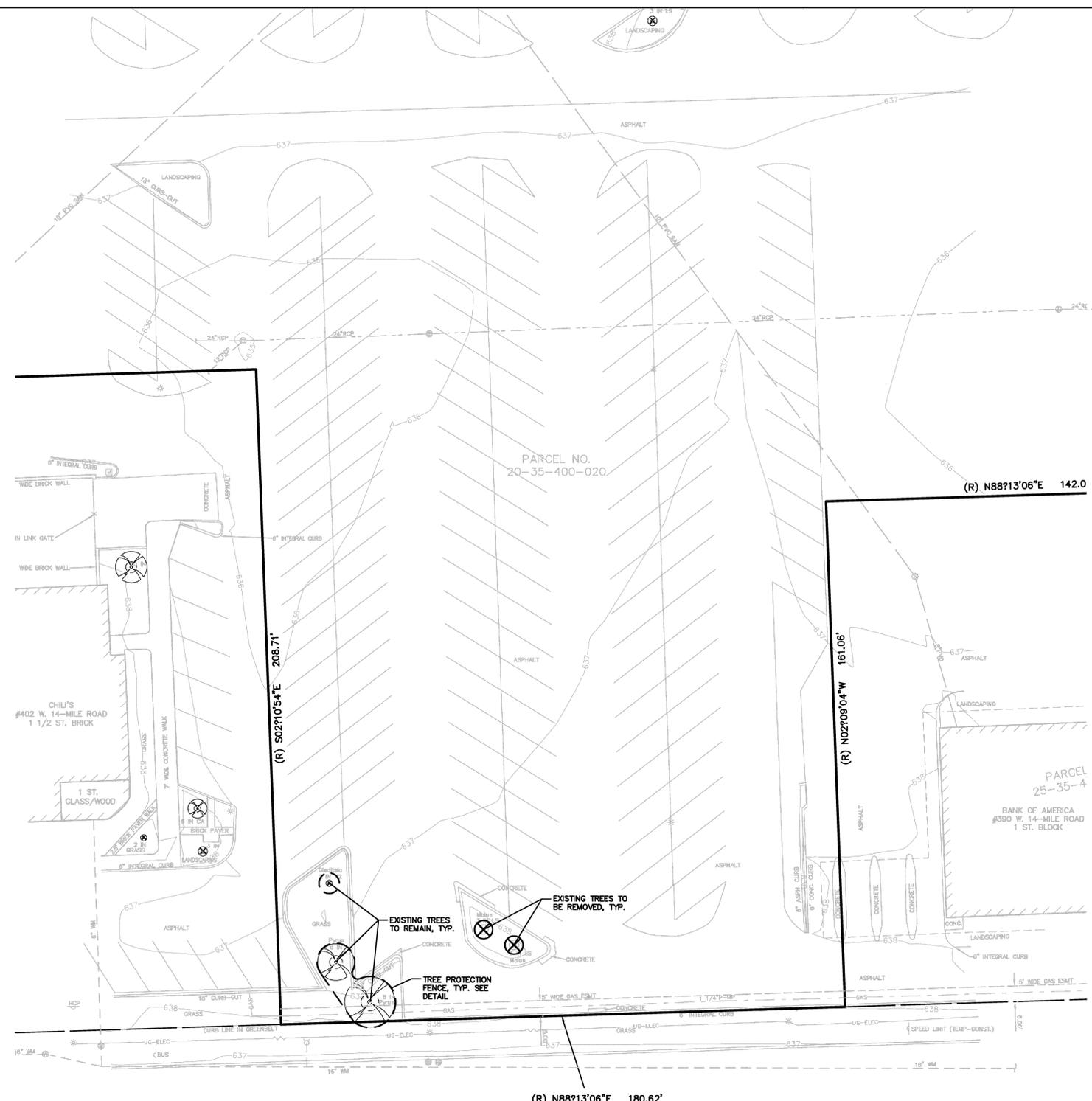
**PROFESSIONAL ENGINEERING ASSOCIATES**  
2430 Rochester Ct. Suite 100  
Troy, MI 48063-1872  
Phone: (248) 689-9090  
Fax: (248) 689-1044  
Website: www.peainc.com

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111 EAST WACKER, SUITE 2400  
CHICAGO, IL 60601

**PRELIMINARY LANDSCAPE PLAN**  
**OAKLAND MALL OUTLOT 'C'**  
PARCEL NO. 20-35-400-024  
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES: RLS DN RLS SUR DLCLJW P.M. JPB  
DATE: 12/13/12

ORIGINAL ISSUE DATE: JAN. 10, 2013  
PEA JOB NO. 2012-211  
SCALE: 1" = 20'  
DRAWING NUMBER:  
**L-1**



**KEY:**

- = EXISTING TREE TO BE REMOVED
- = EXISTING TREE TO REMAIN
- = TREE PROTECTION FENCE

NO.	BY	CHK	DESCRIPTION	DATE
1	JRB	REVISED PER 2/12/13 PLANNING COMMISSION MEETING		2/14/13

**CAUTION!**  
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**TREE PRESERVATION & INVENTORY PLAN**  
**OAKLAND MALL OUTLOT 'C'**  
PARCEL 25-35-4  
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

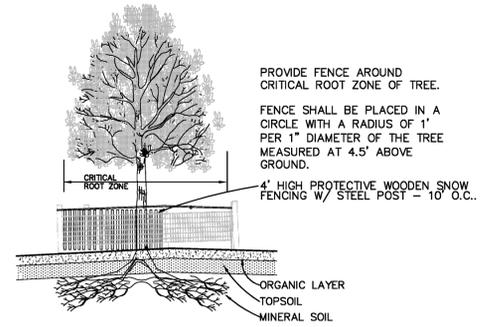
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DATE: 02/12/2013

ORIGINAL ISSUE DATE: JAN. 10, 2013  
PEA JOB NO. 2012-211  
SCALE: 1" = 20'  
DRAWING NUMBER:  
**L-2**

14 MILE ROAD  
(WIDTH VARIABLE - PUBLIC)

**EXISTING TREE LIST:**

SIZE	COMMON NAME	SCIENTIFIC NAME	CONDITION
2"	TWIN Honeylocust	<i>Gleditsia triacanthos</i>	Fair
6"	Bradford Pear	<i>Pyrus calleryana 'Bradford'</i>	Fair
8"	Bradford Pear	<i>Pyrus calleryana 'Bradford'</i>	Fair
3"	Crab	<i>Malus species</i>	Fair
3"	Crab	<i>Malus species</i>	Fair



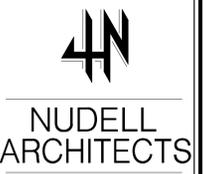
**TREE PROTECTION DETAIL**  
NOT TO SCALE

**PRELIMINARY**  
**NOT FOR CONSTRUCTION**

PROVIDE FENCE AROUND CRITICAL ROOT ZONE OF TREE.  
FENCE SHALL BE PLACED IN A CIRCLE WITH A RADIUS OF 1' PER 1" DIAMETER OF THE TREE MEASURED AT 4.5' ABOVE GROUND.  
4' HIGH PROTECTIVE WOODEN SNOW FENCING W/ STEEL POST - 10' O.C.

XREF: L:\2012211\DWG\TOPBASE-12211.DWG  
XREF: L:\2012211\DWG\SITE PLAN\F-BASE-12211.DWG  
XREF: L:\2012211\DWG\SITE PLAN\TBK-12211.DWG

4/14/2011 11:58:00 AM



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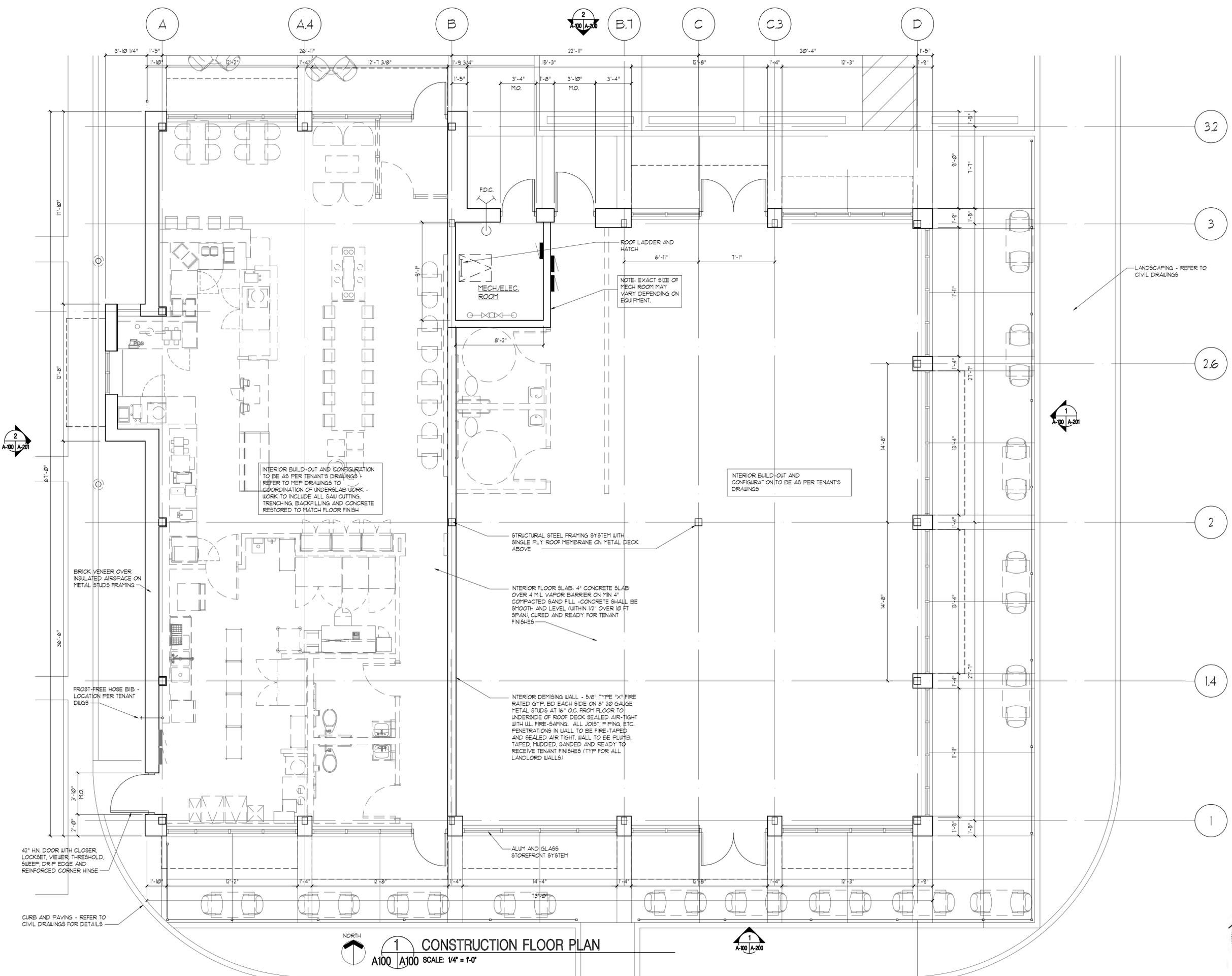


project title  
**Oakland Mall  
Outlot 'C'**  
Oakland Mall  
Troy, MI

sheet title  
**CONSTRUCTION  
FLOOR PLAN**  
DO NOT SCALE DRAWINGS  
USE FIGURED DIMENSIONS ONLY

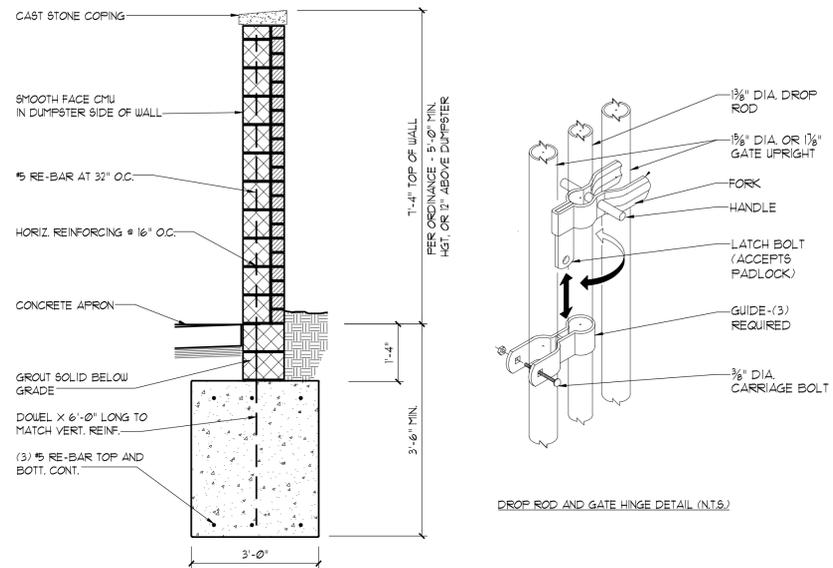
project number  
**2011-164**  
drawn AB  
checked JRJ  
approved JHN  
issued for date  
REVIEW 12-7-12  
REVIEW 12-11-12  
30% REVIEW 12-21-12  
SITE PLAN SUBM. 1-10-13  
Rev. per PC comments 2-15-13

sheet  
**A100**

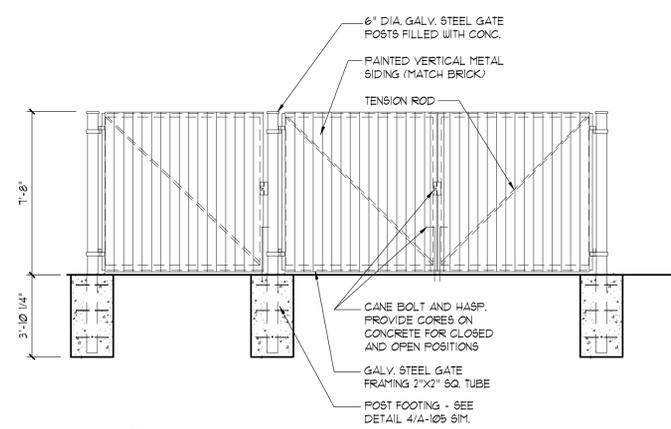
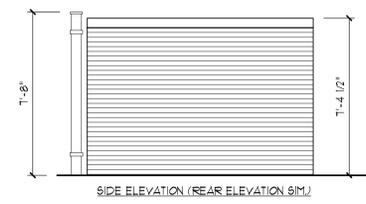


**1 CONSTRUCTION FLOOR PLAN**  
A100 | A100 SCALE: 1/4" = 1'-0"

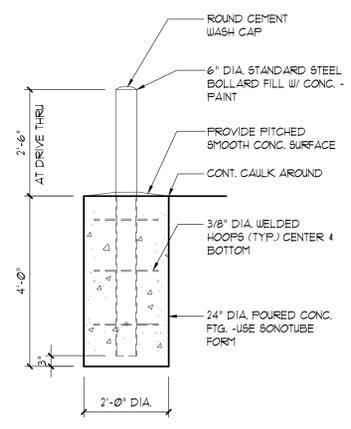




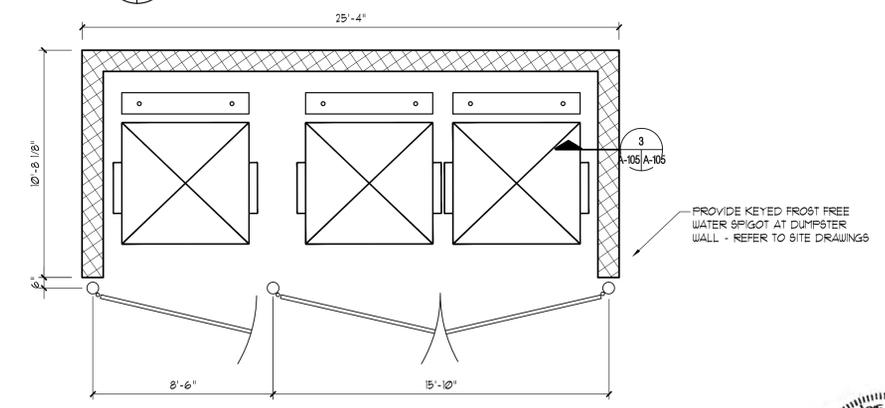
**3 DUMPSTER ENCLOSURE SECTION**  
A100 | A105 SCALE: 1/2" = 1'-0"



**2 DUMPSTER ENCLOSURE ELEVATIONS**  
A100 | A105 SCALE: 1/4" = 1'-0"



**4 PIPE BOLLARD DETAIL**  
A100 | A105 SCALE: 1/4" = 1'-0"



**1 DUMPSTER ENCLOSURE PLAN**  
A100 | A105 SCALE: 1/4" = 1'-0"



**4N**  
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Chicago, Illinois 60601  
312-955-2000

project title  
**Oakland Mall Outlot 'C'**  
Oakland Mall  
Troy, MI

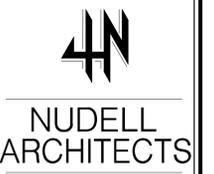
sheet title  
**SECTIONS AND DETAILS**  
DO NOT SCALE DRAWINGS  
USE FIGURED DIMENSIONS ONLY

project number  
**2011-164**  
drawn AB  
checked JRJ  
approved JHN

issued for date  
REVIEW 12-7-12  
REVIEW 12-11-12  
30% REVIEW 12-21-12  
SITE PLAN SUBM. 1-10-13  
Rev. per PC comments 2-15-13

sheet  
**A105**

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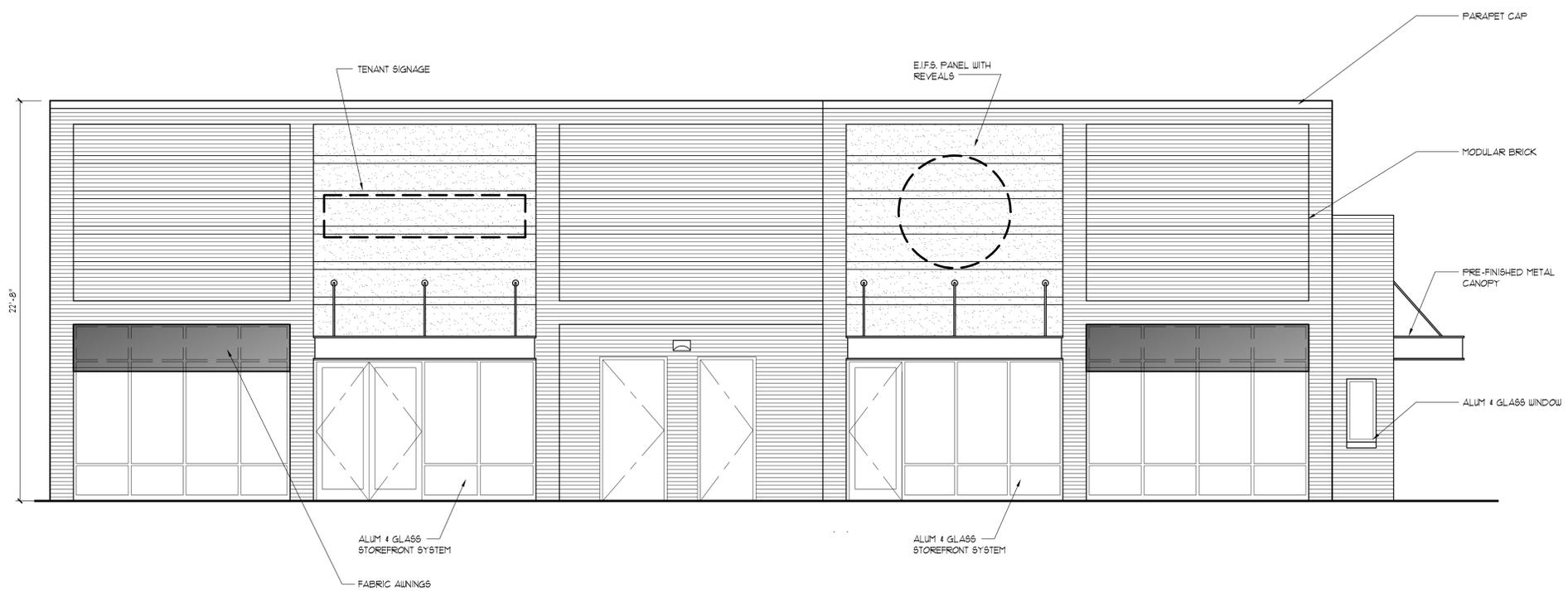


project title  
**Oakland Mall  
Outlot 'C'**  
Oakland Mall  
Troy, MI

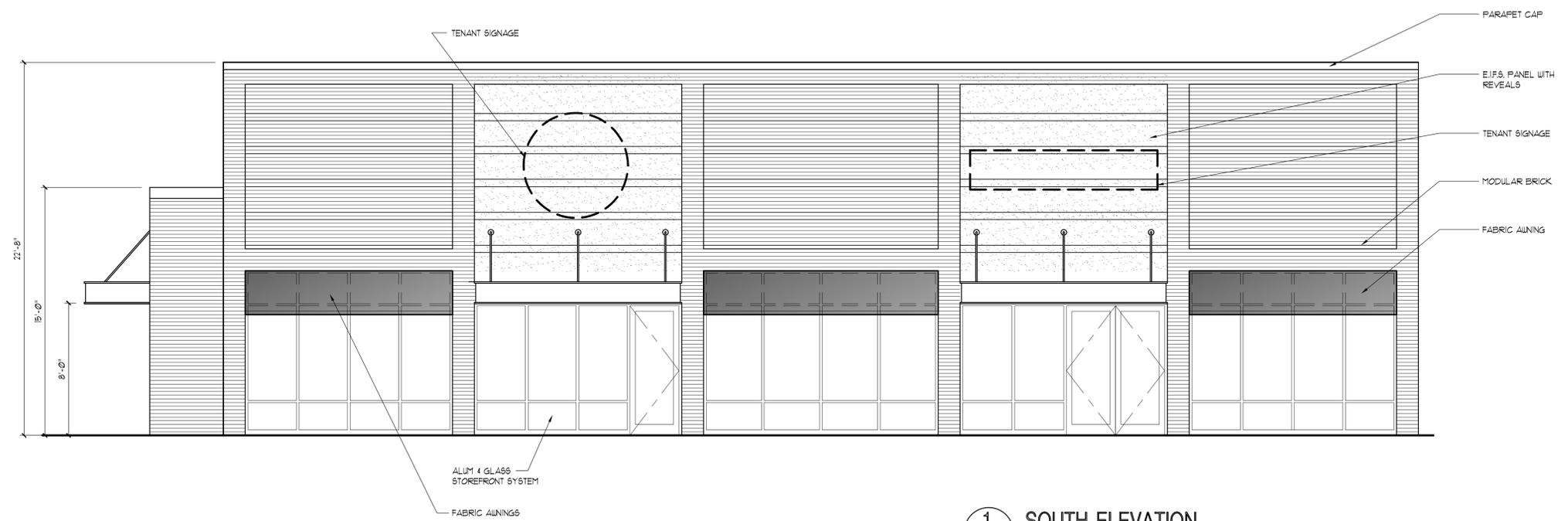
sheet title  
**PROPOSED  
ELEVATIONS**  
DO NOT SCALE DRAWINGS  
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project number  
**2011-164**  
drawn AB  
checked JRJ  
approved JHN  
issued for date  
REVIEW 12-7-12  
REVIEW 12-11-12  
30% REVIEW 12-21-12  
SITE PLAN SUBM. 1-10-13  
Rev. per PC comments 2-15-13

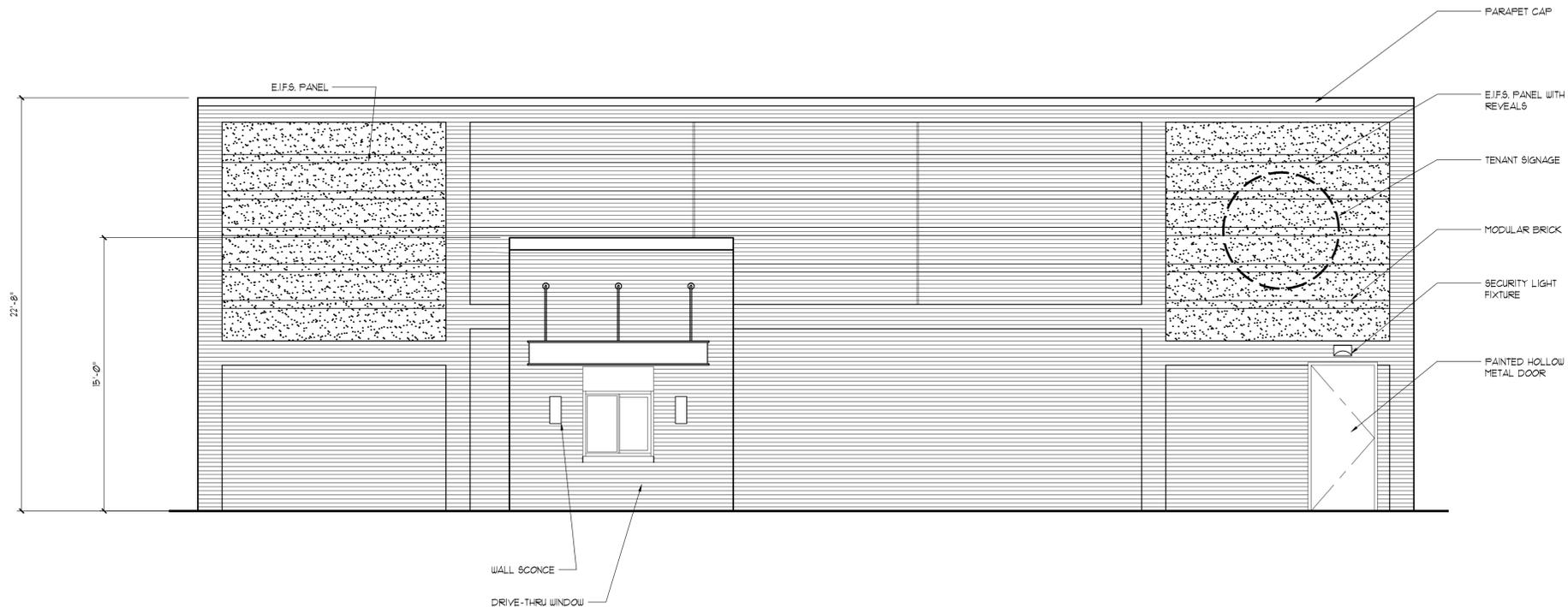
sheet  
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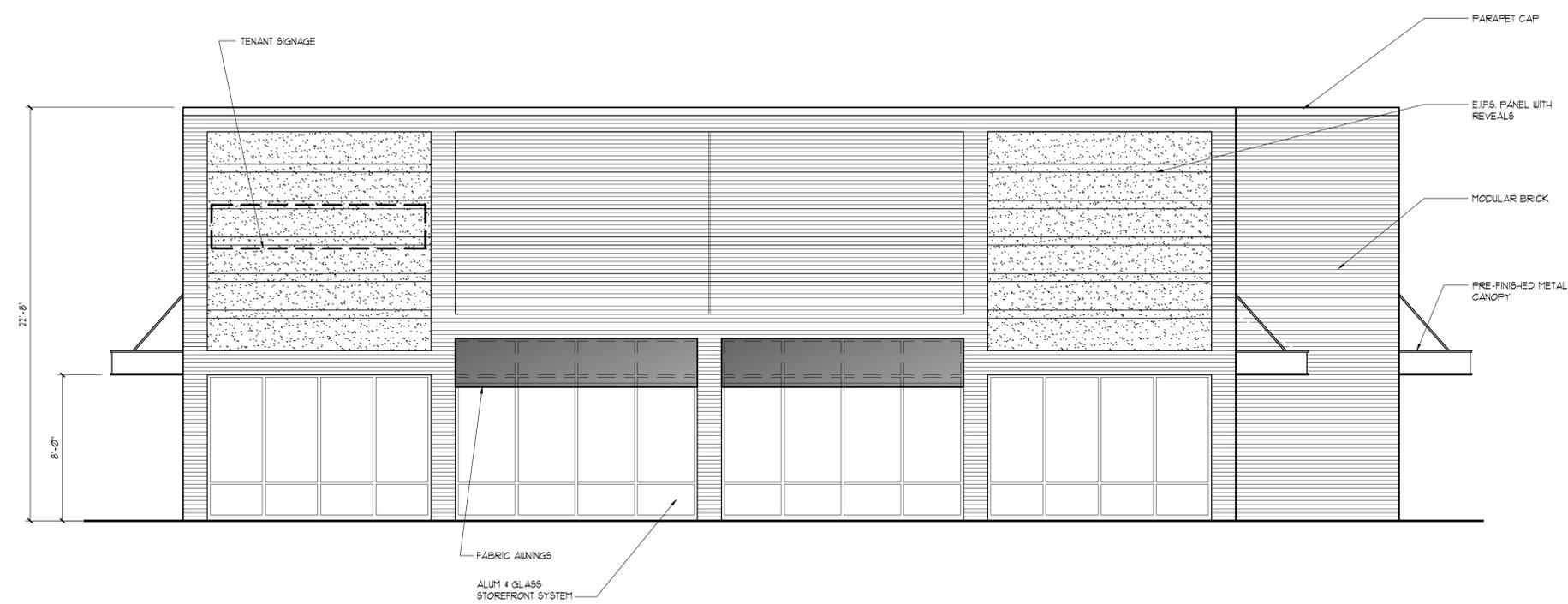
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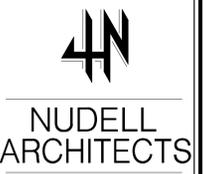
**1 SOUTH ELEVATION**  
A100 | A200 SCALE 1/4" = 1'-0"



**2 WEST ELEVATION**  
A100 | A201 SCALE: 1/4" = 1'-0"



**1 EAST ELEVATION**  
A100 | A201 SCALE: 1/4" = 1'-0"



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project title  
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Oakland Mall  
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sheet title  
**PROPOSED ELEVATIONS**  
DO NOT SCALE DRAWINGS  
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project number  
**2011-164**  
drawn AB  
checked JRJ  
approved JHN

issued for date  
REVIEW 12-7-12  
REVIEW 12-11-12  
30% REVIEW 12-21-12  
SITE PLAN SUBM. 1-10-13  
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sheet  
**A201**







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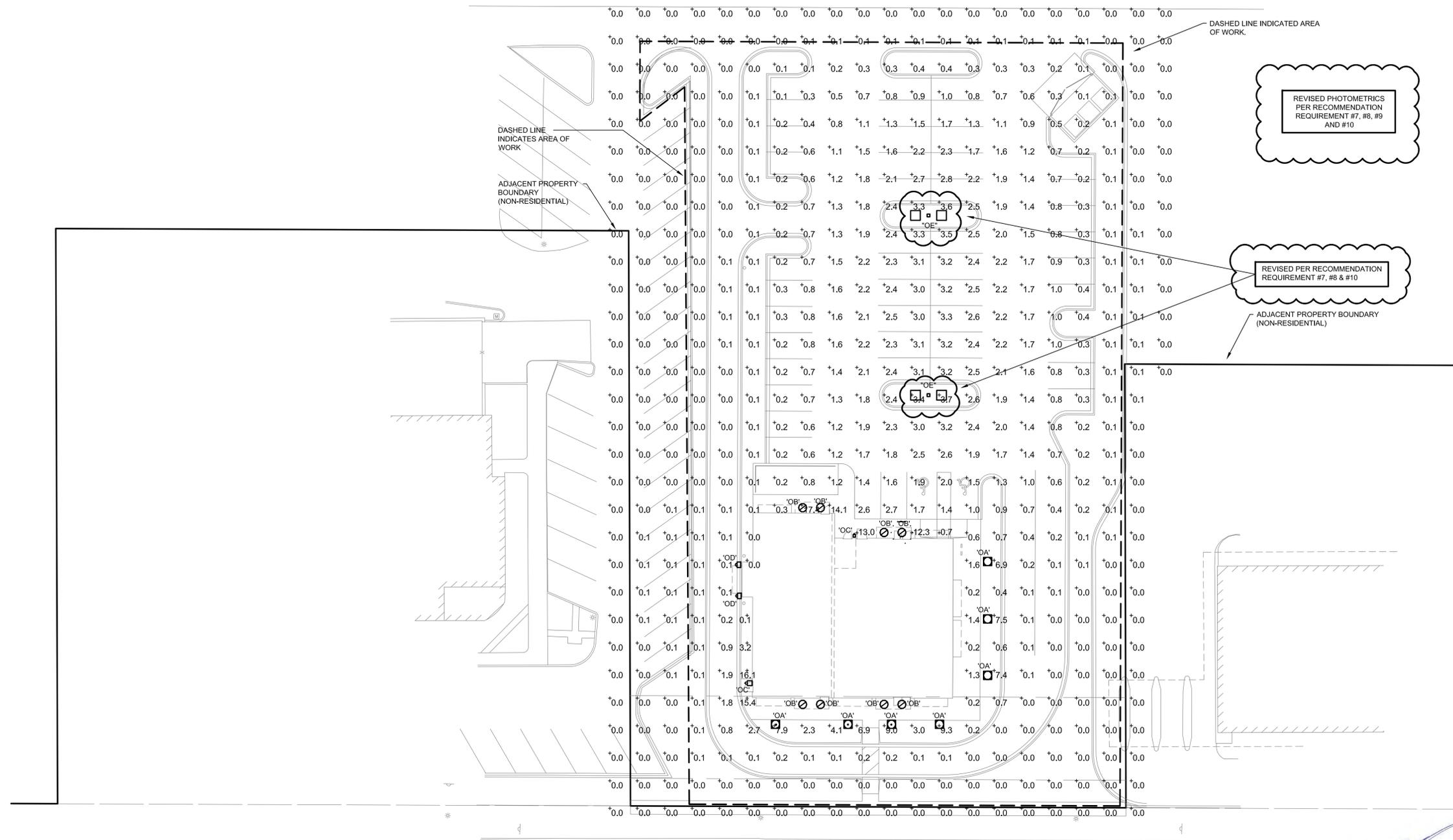
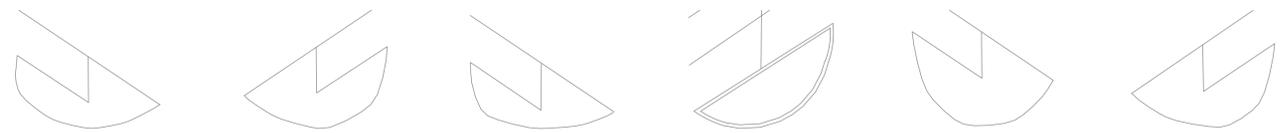
project title  
**Oakland Mall  
Outlot 'C'**  
Oakland Mall  
Troy, MI

sheet title  
**SITE LIGHTING -  
PHOTOMETRICS**  
DO NOT SCALE DRAWINGS  
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project number  
**2011-164**  
drawn T.M.B.  
checked JB  
approved JB

issued for date  
SITE PLAN SUBM. 1-10-13  
Rev. per PC comments 2-15-13

mechanical electrical engineering consultants  
**MEEC**  
1415 Goldsmith  
Plymouth, MI 48170  
P 734-464-6518  
F 734-464-6517  
MEEC JOB # 1324-101  
sheet  
**SE101**



Symbol	Label	Qty	Catalog Number	Description	Lamp	File	Lumens	LLF	Watts	Finish
☐	OA	7	BR840-CVL-NW-360-26-BLP	FULL CUTOFF BOLLARD	14 WHITE LEDS DRIVEN AT 500mA	BR840-CVL-NW-360-26-BLP	Absolute	0.90	23.4	Bronze
○	OB	8	CFSCB26EB	8" SURFACE MOUNT CROSS BAFFLE	2-26W 4-PIN QUAD TUBE	pl5125x.ies	1800	0.90	45	Bronze
☐	OC	2	ASW1 LED 1 49B350/40K SR2	ASW1 LED WITH HLM MODULE, 49 LED'S, 350mA DRIVER, 4000K COLOR TEMPERATURE, TYPE 2 LENS	ONE 57.5-WATT LED, AIMED DOWN POS.	ASW1_LED_1_49B350_40K_SR2.ies	Absolute	0.90	57.5	Dark Bronze
☐	OD	2	1649BZ	RECTANGULAR WALL LANTERN	2-4W LED MR16	OW1602-1FO17.IES	1350	0.90	8	Bronze
☐	OE	2 POLES EACH WITH 2 HEADS	AS1 LED 1 63B530/40K SR3	AS1 LED WITH HLM MODULE, 63 LED'S, 530mA DRIVER, 4000K COLOR TEMPERATURE, TYPE 3 LENS	ONE 108.3-WATT LED, AIMED DOWN POS.	AS1_LED_1_63B530_40K_SR3.ies	Absolute	0.90	216.6	Dark Bronze

REVISED PER RECOMMENDATION REQUIREMENT #9

REVISED PER RECOMMENDATION REQUIREMENT #7 AND #8

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
PARKING LOT	+	0.7 fc	17.4 fc	0.0 fc	N/A	N/A

REVISED PER RECOMMENDATION REQUIREMENT #10



### SITE LIGHTING - PHOTOMETRICS

SCALE: 1" = 20'-0"



mechanical electrical engineering consultants  
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Plymouth, MI 48170  
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A:\Nude\Architects\22-12-168\_Startback\_OutlotSE101.dwg - 2/15/2013 1:03:27 PM, DELL



STARBUCKS COFFEE & QDOBA - OAKLAND MALL OUTLOT - TROY, MI

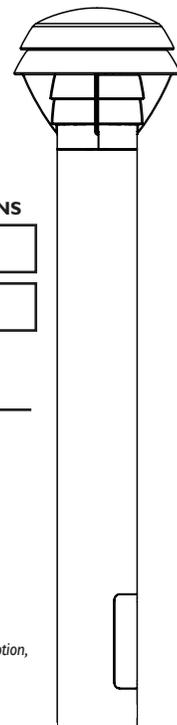
Job:  
Type:  
Notes:



# Bollard LED

## Round Full Cutoff Bollard BR840 Series, Including Motion Response

The Philips Gardco LED Bollard family features the round full cutoff bollard, the BR840 series. This sleek series features LEDs concealed below cast louvers to provide down lighting for landscape and pathway applications. The BR840 series features 4" diameter extruded aluminum shafts. Available mountings include the standard shaft, with a welded cast base mounted firmly to anchor bolts. The BR840 series also is available with a galvanized steel base tenon reinforced shaft (BR842) for applications requiring additional support, such as schools. BR840 series bollards provide full cutoff performance.



PREFIX	HEIGHT	LED CONTROL	LED SELECTION	LIGHTED COVERAGE / LED WATTAGE	VOLTAGE	FINISH	OPTIONS
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>				

Enter the order code into the appropriate box above. Note: Gardco reserves the right to refuse a configuration. Not all combinations and configurations are valid. Refer to notes below for exclusions and limitations. For questions or concerns, please consult the factory.

### PREFIX

PREFIX	HEIGHT	LED CONTROL
<b>BR840</b>	Standard Shaft	42" 36" 30"
<b>BR841</b>	Head Only	7.1"
<b>BR842</b>	School Bollard Reinforced Shaft with Galvanized Steel Tenon	42" 36" 30"

### LED CONTROL

- CWL** Constant Wattage Full Light Output  
Full wattage and light output only.
- DIM** 0 - 10V Dimming  
Dimming controls by others. The dimming driver utilized permits dimming control via a potentiometer (by others) or via 0 - 10V control (by others.) Consult installation instructions for more information.
- MR** Motion Response  
Featuring two (2) integral Passive Infrared (PIR) sensors. In the absence of motion, luminaires operate at 20% of normal power and light output (80% dimmed.) See page 3 for more information on Motion Response luminaires.

### LED SELECTION

<b>CW</b>	5,700°K , 75CRI
<b>NW</b>	4,000°K , 75CRI
<b>WW</b>	3,000°K , 75CRI

### LIGHTED COVERAGE / LED WATTAGE

<i>360° lighted louvers - 14 LEDs</i>	
<b>360 -10</b>	10 watts at 225mA
<b>360 -18</b>	18 watts at 350mA
<b>360 -26</b>	26 watts at 500mA
<i>180° lighted louvers - 7 LEDs<sup>1,2</sup> (Provides reduced backside light.)</i>	
<b>180 -10</b>	10 watts at 450mA
<b>180 -18</b>	18 watts at 700mA

1. 180° achieved by populating half of LEDs.
2. 180° distributions include an internal house side shield to limit the amount of backlight.

Note: A variation of LED wattage (+/- 8%) may occur due to LED manufacturer's forward volt specification and ambient temperature.

### VOLTAGE

<b>UNIV</b>	120V through 277V, 50hz to 60hz input.
-------------	--

### FINISH

<b>BRP</b>	Bronze Paint	<b>OC</b>	Optional Color Paint Specify RAL designation as ex: OC-RAL7024.
<b>BLP</b>	Black Paint		
<b>WP</b>	White Paint	<b>SC</b>	Special Color Paint Specify. Must supply color chip.
<b>NP</b>	Natural Aluminum Paint		

### OPTIONS

<b>PCB<sup>3</sup></b>	Button Photocontrol
<b>SPR</b>	Surge Protection for 120V through 277V Input meeting ANSI C62.41.2

3. Not available in BR841.

1611 Clovis Barker Road, San Marcos, TX 78666  
(800) 227-0758 (512) 753-1000 FAX: (512) 753-7855 [sitelighting.com](http://sitelighting.com)

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G200-020/0113

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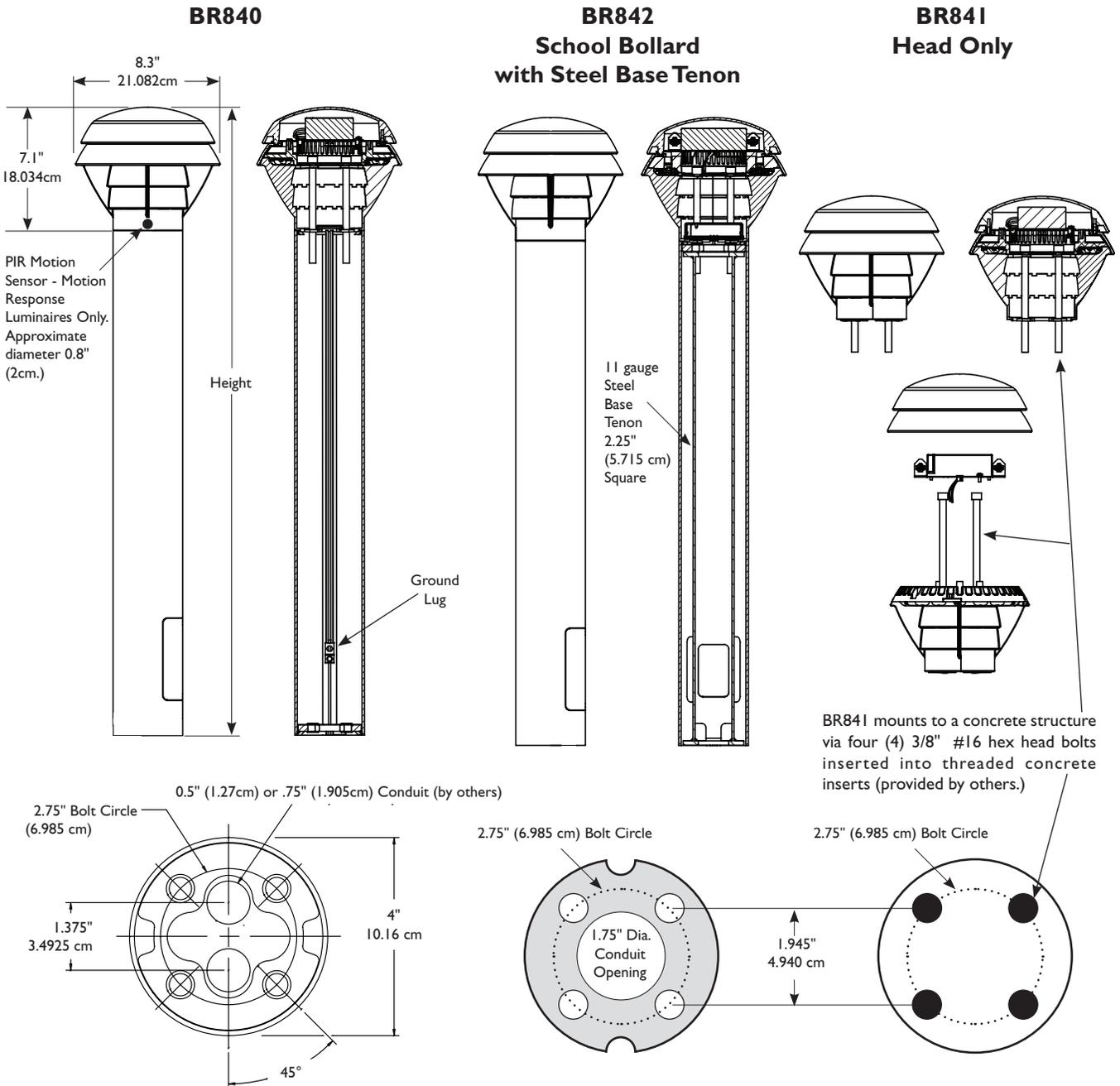




# Bollard LED

## Round Full Cutoff Bollard BR840 Series, Including Motion Response

### DIMENSIONS



**NOTE:** Factory supplied template must be used when setting anchor bolts. Philips Gardco will not honor any claim for incorrect anchorage placement from failure to use factory supplied templates.

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**PHILIPS**





# Bollard LED

## Round Full Cutoff Bollard BR840 Series, Including Motion Response

### SPECIFICATIONS

**UPPER HOUSING:** Die cast aluminum upper housing featuring shielding louvers to provide down light.

**LOWER HOUSING:**

**BR840 :**The lower housing assembly consists of a .140" wall by 4" diameter high strength 6063-T6 extruded aluminum section incorporating a flush, weather-tight gasketed hand hole cover.

**BR41 :** Louver head assembly is suitable for attachment to architectural elements (by others).

**BR842 :**The lower housing assembly consists of a .140" wall by 4" diameter high strength 6063-T6 extruded aluminum section, incorporating a flush, weather-tight gasketed hand hole cover, for placement over the galvanized steel tenon support structure. Tenon support structure is made from a .12" thick wall, 11 gauge steel, 2.25" square tube, welded to top and bottom round steel support plates. The steel tenon support structure includes an opening aligned with the aluminum shaft hand hole to permit wiring. The entire steel tenon support structure is hot dipped galvanized after fabrication.

**BR842:**A high strength steel mounting tenon, hot-dip galvanized after fabrication, is secured to the concrete footing with (4) 3/8" x 8" x 1 1/2" anchor bolts on a 2 3/4" bolt circle.

**IP RATING:** IP66 is the rating for the optical compartment.

**ELECTRICAL:** The LED power supply is located within the bollard head. Bollards accept from 120 Volts through 277 Volts, 50hz to 60 hz, input. supply. The LED driver is located in the upper dome. LED drivers are replaceable. LEDs provided as specified. Power factor is not less than 90%. Luminaires consume 0.0 watts in the off state.

**MOTION RESPONSE LUMINAIRES:**Each Motion Response (MR) luminaire includes two (2) Panasonic EKMB1203112 Passive Infrared (PIR) sensors to detect motion. When motion is not detected for a 5 minute period, luminaires automatically dim to 20% power and light, gradually over a 2 minute period. Once Motion is detected, luminaires immediately ramp to full power and light output until motion is not detected for a 5 minute period.

**LED PERFORMANCE:**

PREDICTED LUMEN DEPRECIATION DATA <sup>4</sup>		
Ambient Temperature °C	Driver mA	L <sub>70</sub> Hours <sup>5</sup>
25 °C	225	230,000
	350	220,000
	450 / 500	165,000
	700	150,000
40 °C	225	212,000
	350	188,000
	450 / 500	150,000
	700	137,000

4. Predicted performance derived from LED manufacturer's data and engineering design estimates, based on IESNA LM-80 methodology. Actual experience may vary due to field application conditions.  
5. L<sub>70</sub> is the predicted time when LED performance depreciates to 70% of initial lumen output.

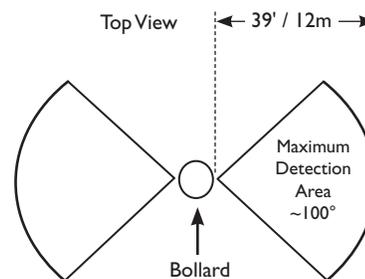
**OPTICAL SYSTEM:** Philips Gardco LED Bollards feature advanced Philips Gardco LED technology, assuring maximized light output. LED arrays are replaceable.

**ANCHORAGE:**

**BR840:** Base assembly consists of an internal welded cast ring section that provides for mounting to the foundation with four (4) 3/8" X 8" X 1 1/2" anchor bolts on a 2 3/4" bolt circle.

**BR841:**The luminaire head mounts to a concrete structure utilizing four (4) 3/8" #16 hex head bolts inserted into threaded concrete inserts (provided by others) on a 2 3/4" bolt circle.

PIR sensors are able to detect motion in the approximate patterns shown below:



Note: Motion sensors rely on specific zonal crossings to detect motion. It is possible for a person to directly approach the bollard motion sensor without crossing between zones until 15 feet from the motion sensor. The actual motion detection distance may vary based on specific application characteristics.

**LUMINAIRE FINISH:** Each luminaire receives a fade and abrasion resistant, electrostatically applied, thermally cured textured powdercoat finish

**LABELS:** All luminaires bear UL or CUL (where applicable) Wet Location labels.

**WARRANTY:** Philips Gardco luminaires feature a 5 year limited warranty. Philips Gardco LED luminaires with LED arrays or modules feature a 5 year limited warranty covering the LED arrays or modules. LED drivers carry a 5 year limited warranty. See Warranty Information on [www.sitelighting.com](http://www.sitelighting.com) for complete details and exclusions.

**FULL CUTOFF PERFORMANCE:** Full cutoff performance means a luminaire distribution where zero candela intensity occurs at an angle at or above 90° above nadir. Additionally, the candela per 1000 lamp lumens does not numerically exceed 100 (10 percent) at a vertical angle of 80° above nadir. This applies to all lateral angles around the luminaire.





## 8" Surface Mount Cross Baffle

# CFSCB813EB CFSCB818EB CFSCB826EB

Two 13W Twin Tube, 18W Quad Tube, or 26W CFL Quad Tube  
120V-277V

# LiteForms

For conversion to millimeters,  
multiply inches by 25.4

Not to Scale

### APPLICATIONS:

The CFSCB series is a surface mounted cross baffle luminaire for low ceiling applications with limited plenum space. The shallow depth combined with a concealed lamp source makes the surface cross baffle the ideal luminaire for a wide variety of architectural spaces including commercial, retail and hospitality applications.

### HOUSING:

Seamless aluminum housing with powder coat finish. Spun aluminum top with provision for direct mounting to 3 1/2" or 4" outlet box. Spun aluminum bottom. Specify: brushed aluminum, matte black, bronze, matte white or Prescolite's exclusive Zet, metallic silver.

### REFLECTOR:

Specular clear or champagne gold Alzak reflector with parabolic cross baffle. Over-lap self-flange standard.

### BALLAST:

One (1) compact fluorescent Class 'P' electronic multi-volt, multi-watt ballast suitable for operating 13W twin tube, 18W quad tube, or 26W quad tube lamps.

### LAMP:

Two (2) 13W twin tube with 2GX7 base, two (2) 18W quad tube with G24q-2 base, or two (2) 26W quad tube with G24q-3 base lamps. Lamps furnished by others.

### SOCKET:

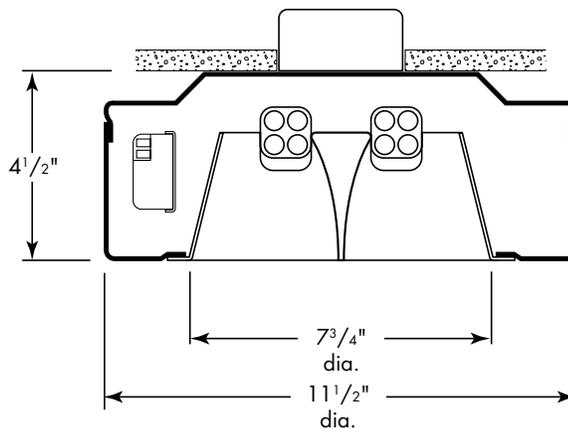
Two (2) injection molded sockets suitable for 13W twin tube, 18W quad tube, or 26W quad tube lamps.

### INSTALLATION:

Easy installation onto standard J-box.

### LABELS:

UL listed or UL/CSA listed with CDN option for damp locations and through wiring



CATALOG NUMBER:

EXAMPLE: CFSCB826EBBZ-STCB8CLSS

CYLINDERS	CYLINDER OPTIONS	CYLINDER OPTIONS	CYLINDER FINISHES	REFLECTORS	REFLECTOR OPTIONS	ACCESSORIES
<input type="checkbox"/> <b>CFSCB813EB</b> Ceiling mount cross baffle (2) 13W 4-pin twin tube <input type="checkbox"/> <b>CFSCB818EB</b> Ceiling mount cross baffle (2) 18W 4-pin quad tube <input type="checkbox"/> <b>CFSCB826EB</b> Ceiling mount cross baffle (2) 26W 4-pin quad tube	<input type="checkbox"/> <b>CDN</b> Canadian Electrical code compliant ballast disconnect <input type="checkbox"/> <b>MW26</b> Max Wattage label, 26W <input type="checkbox"/> <b>FSDFA</b> Fuse kit installed at factory <input type="checkbox"/> <b>RIF1</b> Radio interference filter (single circuit) line voltage <input type="checkbox"/> <b>SYL2</b> Osram Sylvania Ballast (available only for standard EB option) <input type="checkbox"/> <b>DM</b> Electronic dimming ballast (contact factory for wall control system compatibility)	<input type="checkbox"/> <b>7DM</b> Advance Mark 7 Dimming Ballast to 5%, 4-wire, 0-10V, analog (120V-277V) <input type="checkbox"/> <b>XDM</b> Advance Mark 10 Dimming Ballast to 5%, 2-wire line voltage <input type="checkbox"/> <b>ECDM1</b> Lutron EcoSystem or 3-wire line voltage dimming ballast (120-277V). Dims to 5%. <input type="checkbox"/> <b>SMT</b> Philips Advance SmartMate® ballast	<input type="checkbox"/> <b>BA</b> Brushed Aluminum <input type="checkbox"/> <b>BL</b> Matte Black <input type="checkbox"/> <b>BZ</b> Bronze <input type="checkbox"/> <b>WH</b> Matte White <input type="checkbox"/> <b>Z</b> "Zet" Metallic Silver	<input type="checkbox"/> <b>STCB8CL</b> Specular clear Alzak <input type="checkbox"/> <b>STCB8CG</b> Champagne Gold Alzak <input type="checkbox"/> <b>STCB8WH</b> Painted white reflector <input type="checkbox"/> <b>STCB8CLWW</b> Specular clear wall wash	<input type="checkbox"/> <b>SS</b> Semi-specular reflector <input type="checkbox"/> <b>WT</b> Painted white trim	<input type="checkbox"/> <b>FSDFI</b> Fuse kit for field installation

1. Not available in 13W  
2. Available for Osram Sylvania Quick 60+® Limited Warranty when used with Osram lamp(s). See [www.prescolite.com](http://www.prescolite.com) for details.

# PHOTOMETRIC DATA

## LiteForms® - 8" Surface Mount Cross Baffle CFSCB813EB/CFSCB818EB/CFSCB826EB

### BALLAST DATA

	13W			18W			26W		
	120V	277V	347V	120V	277V	347V	120V	277V	347V
Total System Watts	27W	28W	N/A	38W	38W	36W	57W	57W	58W
Input Current (Amps)	0.22	0.1		0.32	0.14	0.11	0.48	0.21	0.17
Input Frequency	50/60Hz								
Power Factor	>97%	>97%		>97%	>97%	>97%	>97%	>97%	>97%
Ballast Factor	1	1		>98%	>98%	1	>98%	>98%	1
Total Harmonic Distortion	<10%	<10%		<10%	<10%	<10%	<10%	<10%	<10%
Total Harmonic Distortion	-18°C (0°F)								

### LAMP DATA

	13W Twin	18W Quad	26W Quad
Rated Watts	13W Twin	18W Quad	26W Quad
Rated Lumens	900	1250	1800
Efficacy (LPW)	69	69	69
Rated Life	10,000 hours	10,000 hours	10,000 hours
CRI	82	82	82
Minimum Starting Temp.	0° F	0° F	0° F

### LUMINANCE DATA IN CANDELA/SQ. METER

Angle in Vertical	Average 0°	Average 45°	Average 90°
45°	6685	8391	13893
55°	864	2161	400
65°	0	0	0
75°	0	0	0
85°	0	0	0

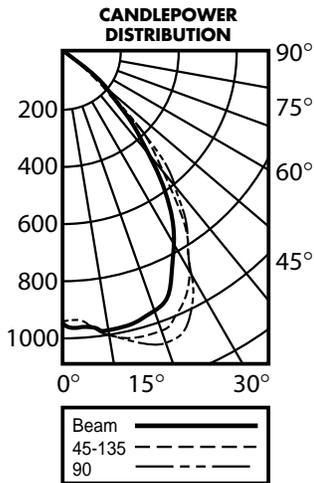
### CFSCB826EB-STCB8CL with Clear Alzak Reflector and Cross Baffle

Two 26W Quad  
Spacing Criteria:  
0° = 1.2  
90° = 1.3  
Efficiency: 43.1%

### AVERAGE INITIAL FOOTCANDLES

Multiple Units (Square Array)  
Ceiling 80% Wall 50% Floor 20%

26W Quads			
SPACING	RCR1	RCR3	RCR7
6.0	42	35	26
7.0	31	26	19
8.0	23	20	14
9.0	18	16	11
10.0	15	13	9



CANDLEPOWER SUMMARY			
Angle	0°	45°	90°
0	647	647	647
5	683	681	676
15	684	716	743
25	602	661	739
35	397	468	522
45	143	180	299
55	15	38	7
65	0	0	0
75	0	0	0
85	0	0	0

Test No. PL5125

### COEFFICIENTS OF UTILIZATION Zonal Cavity Method

Room Cavity Ratio	% Effective Ceiling Cavity Reflectance										
	80%		70%		50%		30%		10%		
	20% Effective Floor Cavity Reflectance										
% Wall Reflectance											
	70	50	30	10	70	50	30	10	50	30	10
1	.49	.48	.47	.46	.48	.47	.46	.45	.44	.44	.43
2	.47	.45	.43	.41	.46	.44	.42	.41	.40	.41	.40
3	.44	.42	.39	.38	.43	.41	.39	.38	.37	.39	.38
4	.42	.39	.37	.35	.41	.38	.36	.34	.37	.36	.34
5	.40	.36	.34	.32	.39	.36	.33	.32	.35	.33	.31
6	.38	.34	.31	.29	.37	.33	.31	.29	.33	.31	.29
7	.35	.31	.29	.27	.35	.31	.28	.27	.30	.28	.27
8	.33	.29	.26	.24	.33	.29	.26	.24	.28	.26	.24
9	.31	.27	.24	.22	.31	.27	.24	.22	.26	.24	.22
10	.29	.25	.22	.20	.29	.25	.22	.20	.24	.22	.20

CFSCB826EB-STCB8CL

Test No. PL5125

### NOTES

☉ Denotes a Virtual Source reflector.

Refer to [www.prescolite.com](http://www.prescolite.com) for additional photometric tests (IES Files).



Web: [www.prescolite.com](http://www.prescolite.com) • Tech Support: (888) 777-4832  
701 Millennium Boulevard • Greenville, SC 29607 U.S.A. • Phone (864) 678-1000  
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Specifications subject to change without notice. • Printed in U.S.A. • LFO-CFL-019 • 10/10/11



Hubbell Lighting, Inc.

# ASW1 LED LED Wall Luminaire



DESIGNLIGHTS  
CONSORTIUM



AERIS™

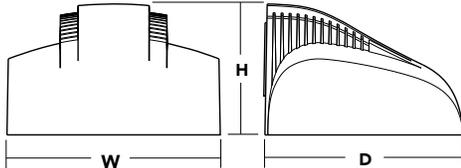
## Specifications

**Width:** 15"  
(38.1 cm)

**Depth:** 13-3/4"  
(34.9 cm)

**Height:** 9-1/4"  
(25.5 cm)

**Weight (max):** 34 lbs  
(15.4 kg)



Catalog  
Number

Notes

Type  
OC

Hit the Tab key or mouse over the page to see all interactive elements.

## Introduction

The AERIS™ family combines sleek, fluid forms and crisp edges into a striking architectural aesthetic that can be echoed throughout entire sites.

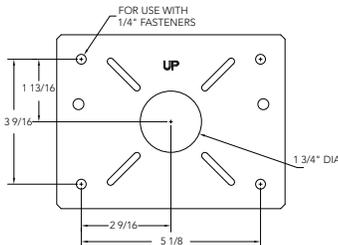
The ASW1 LED integrates the latest LED technology with the designer aesthetic of the AERIS™ family for stylish, high-performance illumination that lasts. The ASW1 LED is ideal for replacing 100-400W metal halide in area lighting applications with typical energy savings of 65% and expected service life of over 100,000 hours.

## Ordering Information

EXAMPLE: ASW1 LED 1 63B350/40K SR4 MVOLT DDBTXD

ASW1 LED	1	49B350/40K	SR2	MVOLT			DDBXD
Series	Light Engines	Performance Package <sup>1</sup>	Distribution	Voltage	Mounting	Options	Finish (required)
ASW1 LED	1 One engine (49 or 63 LEDs)	<b>350 mA options:</b> 49B350/30K 3000K 49B350/40K 4000K 49B350/50K 5000K 63B350/30K 3000K 63B350/40K 4000K 63B350/50K 5000K  <b>530 mA options:</b> 63B530/30K 3000K 63B530/40K 4000K 63B530/50K 5000K	SR2 Type II SR3 Type III SR4 Type IV	MVOLT <sup>2</sup> 120 <sup>2</sup> 208 <sup>2</sup> 240 <sup>2</sup> 277 <sup>2</sup> 347 480	<b>Shipped included</b> (blank) Surface mount  <b>Shipped separately</b> BBW Surface-mounted back box (for conduit entry) <sup>3</sup>	<b>Shipped installed</b> SF Single fuse (120, 277, 347V) <sup>4</sup> DF Double fuse (208, 240, 480V) <sup>4</sup> PE Photoelectric cell, button type <sup>5,6</sup> DMG 0-10V dimming driver (no controls) <sup>7</sup> DFL Diffusing lens  <b>Shipped separately<sup>3</sup></b> VG Vandal guard WG Wire guard	DDBXD Dark bronze DBLXD Black DNAXD Natural aluminum DWHXD White DDBTXD Textured dark bronze DBLBXD Textured black DNATXD Textured natural aluminum DWHGXD Textured white

## Drilling



## Accessories

Ordered and shipped separately.

ASW1BBW DDBXD U	Back box accessory (specify finish)
ASW1WG U	Wire guard accessory
ASW1VG U	Vandal guard accessory

## NOTES

- Configured with 4000K (/40K) provides the shortest lead times. Consult factory for 3000K (/30K) and 5000K (/50K) lead times.
- MVOLT driver operates on any line voltage from 120-277V (50/60 Hz). Specify 120, 208, 240 or 277 options only when ordering with fusing (SF, DF options) or photocontrol (PE option).
- Also available as a separate accessory; see Accessories information at left.
- Single fuse (SF) requires 120 or 277 voltage option. Double fuse (DF) requires 208 or 240 voltage option.
- Photocontrol (PE) requires 120, 208, 240, 277 or 347 voltage option.
- Must be ordered with fixture; cannot be field installed.
- Not available with 347 or 480V.



## Performance Data

### Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Actual performance may differ as a result of end-user environment and application. Contact factory for performance data on any configurations not shown here.

Light Engines	Drive Current (mA)	Performance Package	System Watts	Dist. Type	40K (4000K, 67 CRI)				
					Lumens	B	U	G	LPW
1 (49 LEDs)	350	49B350/--K	58W	SR2	4882	1	0	1	84
				SR3	4557	1	0	1	79
				SR4	4497	1	0	1	78
1 (63 LEDs)	350	63B350/--K	73W	SR2	5846	1	0	1	80
				SR3	6254	1	0	1	86
				SR4	6071	1	0	1	83
1 (63 LEDs)	530	63B530/--K	109W	SR2	7957	2	0	2	73
				SR3	8188	2	0	2	75
				SR4	8124	2	0	2	75

### Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.02
10°C	50°F	1.01
20°C	68°F	1.00
<b>25°C</b>	<b>77°F</b>	<b>1.00</b>
30°C	86°F	1.00
40°C	104°F	0.99

### Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the **ASW1 LED 1 63B530** platform in a **30°C ambient**, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	1.0	0.95	0.92	0.87

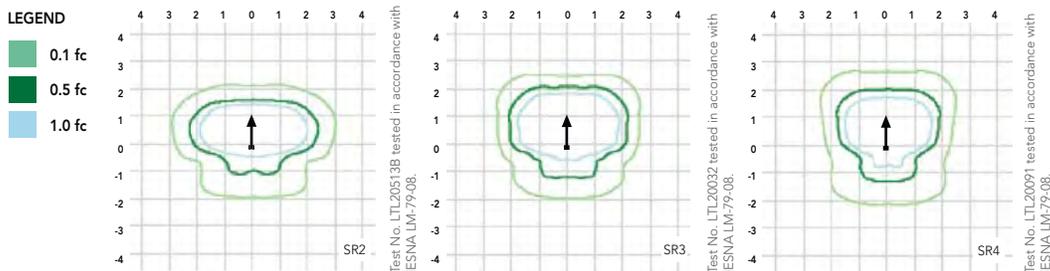
### Electrical Load

Light Engines	Drive Current (mA)	System Watts	Current (A)					
			120	208	240	277	347	480
1 (49)	350	58W	0.54	0.31	0.27	0.23	0.19	0.13
1 (63)	350	73W	0.68	0.39	0.34	0.29	0.23	0.17
	530	109W	1.01	0.58	0.50	0.44	0.35	0.25

## Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's ASW1 LED homepage.

Isofootcandle plots for the ASW1 LED 1 63B530/40K. Distances are in units of mounting height (20').



## FEATURES & SPECIFICATIONS

### INTENDED USE

The ASW1 LED is a high performance, high efficacy, long life luminaire that is ideally suited for lighting building entries, walk ways and surrounding areas adjacent to commercial exteriors.

### CONSTRUCTION

Single-piece, die-cast aluminum housing. Die-cast doorframe has impact-resistant, tempered glass lens. Doorframe is fully sealed with a closed-cell silicone gasket.

### FINISH

Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling.

### OPTICS

Precision-molded refractive acrylic lenses housed behind the door frame lens are available in three distributions. Light engines are available in standard 4000K (67 CRI) or optional 3000K (80 CRI) or 5000K (67 CRI) configurations.

### ELECTRICAL

Light engine consists of 49 or 63 high-efficacy LEDs mounted to a metal-core circuit board and aluminum heat sink, ensuring optimal thermal management and long life. Class 1 electronic driver has a power factor >90%, THD <20%, and has an expected life of 100,000 hours with <1% failure rate. Easily-serviceable surge protection device meets a minimum Category C Low for 120-277V

operation (per ANSI/IEEE C62.41.2).

### INSTALLATION

Universal mounting plate with integral mounting bolts supports the fixture for easy, one-person installation. Suitable for downward orientation only.

### LISTINGS

CSA certified to U.S. and Canadian standards. Luminaire is IP65 rated. **US. Patent No. D500,569. Canada Patent No. 107561.**

### WARRANTY

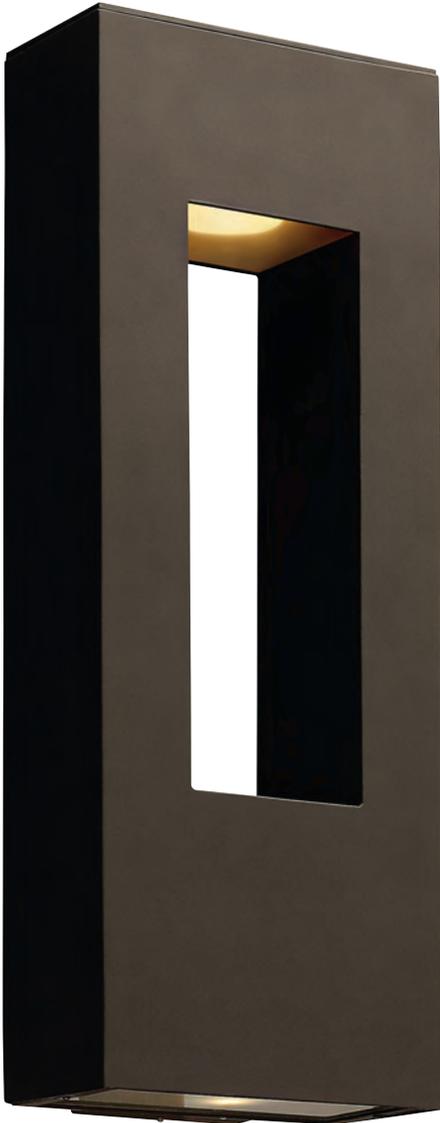
Five year limited warranty. Full warranty terms located at [www.acuitybrands.com/CustomerResources/Terms\\_and\\_conditions.aspx](http://www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx).

**Note:** Specifications subject to change without notice.



## Product Specifications Atlantis 1649 BZ

The Hinkley Atlantis outdoor lantern features a Bronze (BZ) finish and an etched glass lens.

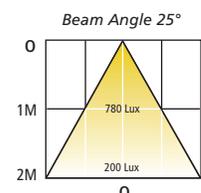
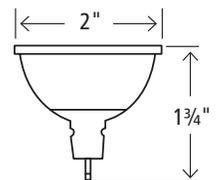


Item	1649 BZ
Finish	Powder Coated Bronze
Width	9"
Height	24"
Extension	4"
Top to Outlet	20 <sup>3</sup> / <sub>4</sub> "
Back Plate Dimensions	4 <sup>1</sup> / <sub>2</sub> "W, 6 <sup>1</sup> / <sub>2</sub> "H
Bulbs	(2) 4w LED MR-16
Other	

## Lamp Specifications

Model	LMR16-3-30K25
Base	GU5.3
Color Temperature	3000K
Color Rendering Index	80
Beam Angle	25°
Luminous Flux	180Lm

LMR16-3-30K25



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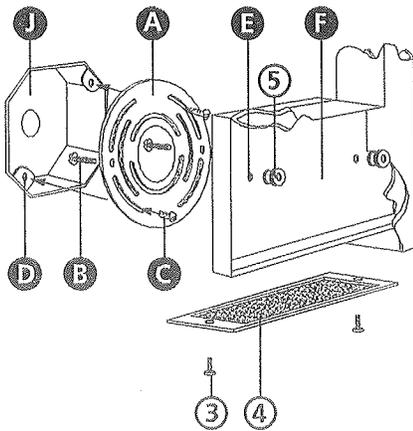


# assembly instructions

Family: Atlantis | Item No. 1648TT/BZ  
1649TT/BZ

1648/1649

Drawing 1 - Fixture Mounting



▼ start here



1

1. Find a clear area in which you can work.
2. Unpack fixture and glass from carton.
3. Carefully review instructions prior to assembly.

\*\*\* The construction of this fixture will be accomplished by first attaching the mounting strap to the junction box, making all necessary electrical connections, mounting the fixture to the wall, and then lamping the fixture.

2

1. Prepare mounting strap (A) by threading the two 8-32 x 1 mounting screws (B) into the back of the mounting strap (A) - see Drawing 1.
  - Be sure the holes into which the screws are threaded match the spacing of holes (E) in the backplate (F).
2. Attach mounting strap (A) to junction box (J) by threading 2 screws (C) provided into holes (D) of junction box (J).
3. Un-thread the 2 screws (3) from the bottom lens cover (4) and remove lens cover (4).

**SAFETY WARNING: READ WIRING AND GROUNDING INSTRUCTIONS (I.S. 18) AND ANY ADDITIONAL DIRECTIONS. TURN POWER SUPPLY OFF DURING INSTALLATION. IF NEW WIRING IS REQUIRED, CONSULT A QUALIFIED ELECTRICIAN OR LOCAL AUTHORITIES FOR CODE REQUIREMENTS.**

3

3. Make electrical connections from supply wire to fixture lead wires. Refer to instruction sheet (I.S. 18) and follow all instructions to make all necessary wiring connections. Then refer back to this sheet to continue installation of this fixture.

4

1. To mount fixture, line up holes (E) in backplate (F) and slide fixture over both 8-32 x 1 screws (B) - see Drawing 1.
2. While holding fixture in place, thread the two 8-32 battery nuts (5) provided onto screws (B) and tighten with pliers.

5

1. Bottom of fixture can now be lamped accordingly.
2. Re-place bottom lens cover (4) and secure with the 2 screws (3).
3. To lamp top of fixture. remove lens cover (4) by un-threading 2 screws (3).
4. Top of fixture can now be lamped accordingly.
5. Replace lens cover and secure with the 2 screws (3).

Note: Maximum wattage for 1648 fixture is 2-12 Volt, 20w/MR-16.

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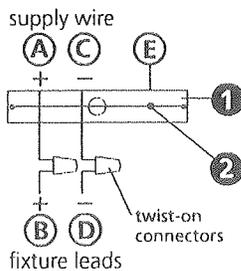


design • illuminate • enjoy

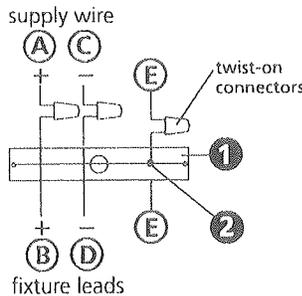
## I.S. 18 wiring | grounding instructions

I.S. 18

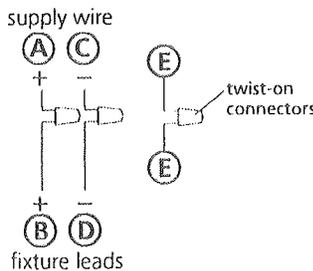
**Drawing 1 - Flush Mount**



**Drawing 2 - Chain Hung**



**Drawing 3 - Post-Mount**



**SAFETY WARNING: READ WIRING AND GROUNDING INSTRUCTIONS (I.S. 18) AND ANY ADDITIONAL DIRECTIONS. TURN POWER SUPPLY OFF DURING INSTALLATION. IF NEW WIRING IS REQUIRED, CONSULT A QUALIFIED ELECTRICIAN OR LOCAL AUTHORITIES FOR CODE REQUIREMENTS.**

### wiring instructions

#### Indoor Fixtures

1. Connect positive supply wire (A) (typically black or the smooth, unmarked side of the two-conductor cord) to positive fixture lead (B) with appropriately sized twist on connector - see **Drawings 1 or 2**.
2. Connect negative supply wire (C) (typically white or the ribbed, marked side of the two-conductor cord) to negative fixture lead (D).
3. Please refer to the **grounding instructions** below to complete all electrical connections.

#### Outdoor Fixtures

1. Connect positive supply wire (A) (typically black or the smooth unmarked side of the two-conductor cord) to positive fixture lead (B) with appropriately sized twist on connector - see **Drawings 2 or 3**.
2. Connect negative supply wire (C) (typically white or the ribbed, marked side of the two-conductor cord) to negative fixture lead (D).
3. Cover open end of connectors with silicone sealant to form a watertight seal.
  - If installing a wall mount fixture, use caulk to seal gaps between the fixture mounting plate (backplate) and the wall. This will help prevent water from entering the outlet box. If the wall surface is lap siding, use caulk and a fixture mounting platform specially.
4. Please refer to the **grounding instructions** below to complete all electrical connections.

### grounding instructions

#### Flush Mount Fixtures

For positive grounding in a 3-wire electrical system, fasten the fixture ground wire (E) (typically copper or green plastic coated) to the fixture mounting strap (1) with the ground screw (2) - see **Drawing 1**.

Note: On straps for screw supported fixtures, first install the two mounting screws in strap. Any remaining tapped hole may be used for the ground screw.

#### Chain Hung Fixtures

Loop fixture ground wire (E) (typically copper or green plastic coated) under the head of the ground screw (2) on fixture mounting strap (1) and connect to the loose end of the fixture ground wire directly to the ground wire of the building system with appropriately sized twist-on connectors - see **Drawing 2**.

#### Post-Mount Fixtures

Connect fixture ground wire (E) (typically copper or green plastic coated) to power supply ground with appropriately sized twist-on connector inside post. Cover open end of connector with silicone sealant to form a watertight seal - see **Drawing 3**.



# AS1 LED

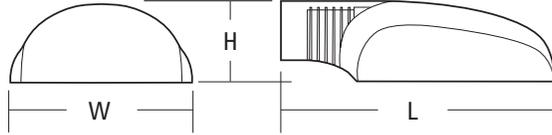
## LED Area Luminaire



AERIS™

### Specifications

<b>EPA:</b>	0.7 ft <sup>2</sup> (0.07 m <sup>2</sup> )
<b>Length:</b>	22-1/4" (56.4 cm)
<b>Width:</b>	13" (33.0 cm)
<b>Height:</b>	6-3/8" (15.9 cm)
<b>Weight (max):</b>	33 lbs (14.8 kg)



Catalog Number

Notes

Type **OE**

Hit the Tab key or mouse over the page to see all interactive elements.

### Introduction

The AERIS™ family combines sleek, fluid forms and crisp edges into a striking architectural aesthetic that can be echoed throughout entire sites.

The AS1 LED integrates the latest LED technology with the designer aesthetic of the AERIS™ family for stylish, high-performance illumination that lasts. The AS1 LED is ideal for replacing 100-250W metal halide in area lighting applications with typical energy savings of 65% and expected service life of over 100,000 hours.

### Ordering Information

**EXAMPLE: AS1 LED 1 63B350/40K SR5 MVOLT SPA DDBXD**

AS1 LED	1	63B530/40K	SR3	MVOLT	SPA		DDBXD
Series	Light Engines	Performance Package <sup>1</sup>	Distribution	Voltage	Mounting	Options	Finish (required)
AS1 LED	1 One engine (49 or 63 LEDs)	<b>350 mA options:</b> 49B350/30K 3000K 49B350/40K 4000K 49B350/50K 5000K 63B350/30K 3000K 63B350/40K 4000K 63B350/50K 5000K  <b>530 mA options:</b> 63B530/30K 3000K 63B530/40K 4000K 63B530/50K 5000K	SR2 Type II SR3 Type III SR4 Type IV SR5 Type V	MVOLT <sup>2</sup> 120 <sup>2</sup> 208 <sup>2</sup> 240 <sup>2</sup> 277 <sup>2</sup> 347 480	<b>Shipped included</b> SPA Square pole mounting RPA Round pole mounting WBA Wall bracket	<b>Shipped installed</b> PER NEMA twist-lock receptacle only (no controls) SF Single fuse (120, 277, 347V) <sup>3</sup> DF Double fuse (208, 240, 480V) <sup>3</sup> DMG 0-10V dimming driver (no controls) <sup>4</sup> DFL Diffusing lens  <b>Shipped separately</b> VG Vandal guard <sup>5</sup>	DDBXD Dark bronze DBLXD Black DNAXD Natural aluminum DWHXD White DDBTXD Textured dark bronze DBLBXD Textured black DNATXD Textured natural aluminum DWHGXD Textured white

**Drilling**

Template #8 Top of Pole

The AERIS™ has a unique drilling pattern. Specify this drilling pattern when specifying poles, per the table below.

DM19AS	1 at 90°	DM28AS	2 at 180°
DM29AS	2 at 90°	DM39AS	3 at 90°
DM49AS	4 at 90°	DM32AS	3 at 120° *

**Example:** SSA 20 4C DM19AS DDBXD

Visit Lithonia Lighting's [POLES CENTRAL](#) to see our wide selection of poles, accessories and educational tools.

**Accessories**  
Ordered and shipped separately.

DSS124N 1.5 TJJE U	Photocell - SSL twist-lock (120-277V) <sup>6</sup>
REN480 NM1 J1	ROAM® node (480V) <sup>6</sup>
SC U	Shorting cap <sup>6</sup>
AS1VG U	Vandal guard accessory
KMA8 DDBXD U	Mast arm adapter (specify finish)
SPA19/MR2 DDBXD U	Square pole DM19 to DM19AS adapter (specify finish)
RPA19/MR2 DDBXD U	Round pole DM19 to DM19AS adapter (specify finish)

For more control options, visit [DTL](#) and [ROAM](#) online.

**Tenon Mounting Slipfitter \***

Tenon O.D.	Single Unit	2 at 180°	2 at 90°	3 at 120°	3 at 90°	4 at 90°
2-3/8"	AST20-190	AST20-280	AST20-290	AST20-320	AST20-390	AST20-490
2-7/8"	AST25-190	AST25-280	AST25-290	AST25-320	AST25-390	AST25-490
4"	AST35-190	AST35-280	AST35-290	AST35-320	AST35-390	AST35-490

\* For round pole mounting (RPA) only.

- NOTES**
- 1 Configured with 4000K (40K) provides the shortest lead times. Consult factory for 3000K (30K) and 5000K (50K) lead times.
  - 2 MVOLT driver operates on any line voltage from 120-277V (50/60 Hz). Specify 120, 208, 240 or 277 options only when ordering with fusing (SF, DF options).
  - 3 Single fuse (SF) requires 120, 277 or 347 voltage option. Double fuse (DF) requires 208, 240 or 480 voltage option.
  - 4 Not available with 347 or 480V.
  - 5 Also available as a separate accessory; see Accessories information at left.
  - 6 Requires luminaire to be specified with PER option. Ordered and shipped as a separate line item.



## Performance Data

### Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Actual performance may differ as a result of end-user environment and application. Contact factory for performance data on any configurations not shown here.

Light Engines	Drive Current (mA)	Performance Package	System Watts	Dist. Type	40K (4000K, 67 CRI)				
					Lumens	B	U	G	LPW
1 (49 LEDs)	350	49B350/--K	59W	SR2	5060	1	0	1	86
				SR3	4642	1	0	1	79
				SR4	4551	1	0	1	77
				SR5	4750	2	0	1	81
1 (63 LEDs)	350	63B350/--K	75W	SR2	6106	1	0	1	81
				SR3	6276	1	0	1	84
				SR4	6207	1	0	1	83
				SR5	6395	3	0	1	85
1 (63 LEDs)	530	63B530/--K	109W	SR2	8022	2	0	2	74
				SR3	8194	2	0	2	75
				SR4	8192	2	0	2	75
				SR5	8366	3	0	1	77

### Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.02
10°C	50°F	1.01
20°C	68°F	1.00
<b>25°C</b>	<b>77°F</b>	<b>1.00</b>
30°C	86°F	1.00
40°C	104°F	0.99

### Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the **AS1 LED 1 63B530** platform in a **40°C ambient**, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	1.0	0.95	0.92	0.87

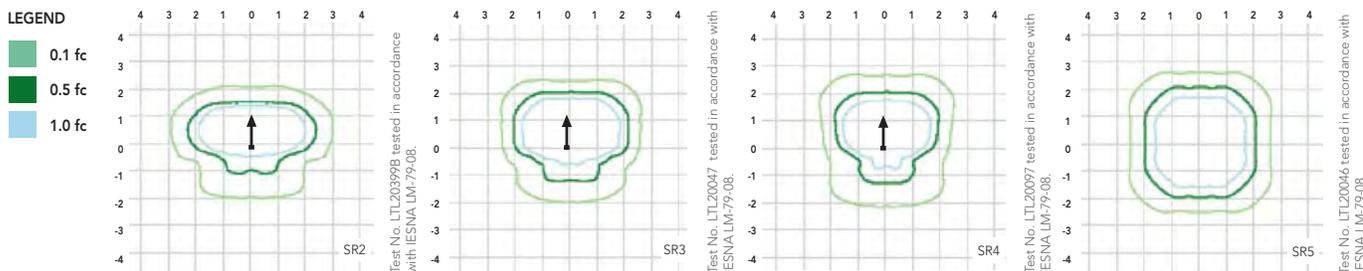
### Electrical Load

Light Engines	Drive Current (mA)	System Watts	Current (A)					
			120	208	240	277	347	480
1 (49)	350	59W	0.55	0.32	0.27	0.24	0.19	0.14
1 (63)	350	75W	0.69	0.40	0.35	0.30	0.24	0.17
	530	109W	1.01	0.58	0.50	0.44	0.35	0.25

## Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's [AS1 LED homepage](#).

Isofootcandle plots for the AS1 LED 1 63B530/40K. Distances are in units of mounting height (20').



## FEATURES & SPECIFICATIONS

### INTENDED USE

The energy savings and long life of the AS1 LED area luminaire make it a reliable choice for illuminating streets, walkways, parking lots, and surrounding areas.

### CONSTRUCTION

Single-piece die-cast aluminum housing with nominal wall thickness of .012". Die-cast doorframe has impact-resistant, tempered glass lens (3/16" thick). Doorframe is fully gasketed with one-piece tubular silicone.

### FINISH

Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling.

### OPTICS

Precision-molded refractive acrylic optics housed behind the door frame lens are available in four distributions. Light engines are available in standard 4000K (67 CRI) or optional 3000K (80 CRI) or 5000K (67 CRI) configurations. The AS1 has zero uplight and qualifies as a Nighttime Friendly™ product, meaning it is consistent with the LEED® and Green Globes™ criteria for eliminating wasteful uplight.

### ELECTRICAL

Light engine consists of 49 or 63 high-efficacy LEDs mounted to a metal-core circuit board and

aluminum heat sink, ensuring optimal thermal management and long life. Class 1 electronic driver has a power factor >90%, THD <20%, and has an expected life of 100,000 hours with <1% failure rate. Easily-serviceable surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).

### INSTALLATION

Integral arm provides easy installation to a pole and assists in alignment and leveling.

### LISTINGS

CSA certified to U.S. and Canadian standards. Luminaire is IP65 rated. **U.S. Patent No. D447,590. Canada Patent No. 94324.**

### WARRANTY

Five year limited warranty. Full warranty terms located at [www.acuitybrands.com/CustomerResources/Terms\\_and\\_conditions.aspx](http://www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx).

**Note:** Specifications subject to change without notice.



DATE: March 7, 2013

TO: Planning Commission

FROM: R. Brent Savidant, Planning Director

SUBJECT: PRELIMINARY SITE PLAN REVIEW (File Number SP 979) – Proposed Galleria of Troy, North side of Big Beaver between Wilshire and I-75, Section 21, Currently Zoned BB (Big Beaver) District

The petitioner Galleria of Troy LLC submitted the above referenced Preliminary Site Plan Approval application for two restaurants, a retail building and future hotel(s) within the Big Beaver corridor.

The property is currently zoned BB (Big Beaver) District. The Planning Commission is responsible for granting Preliminary Site Plan Approval for this item. The Planning Commission considered this item at the February 12, 2013 Regular meeting and postponed the item (see attached minutes).

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

Attachments:

1. Maps
2. Report prepared by Carlisle/Wortman Associates, Inc.
3. Minutes from February 12, 2013 Planning Commission Regular meeting (excerpt).

G:\SITE PLANS\SP 979 Galleria of Troy LLC Sec 21\SP-979 PC Memo 03 12 13.docx

**PRELIMINARY SITE PLAN REVIEW**

PRELIMINARY SITE PLAN REVIEW (File Number SP 979) – Proposed Galleria of Troy, North side of Big Beaver between Wilshire and I-75, Section 21, Currently Zoned BB (Big Beaver) District

**Resolution # PC-2013-03-**

Moved by:

Seconded by:

**RESOLVED**, That Preliminary Site Plan Approval, pursuant to Article 8 of the Zoning Ordinance, as requested for the proposed Galleria of Troy, located on the north side of Big Beaver between Wilshire and I-75, Section 21, within the BB (Big Beaver) district, be granted, for the following reasons:

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

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

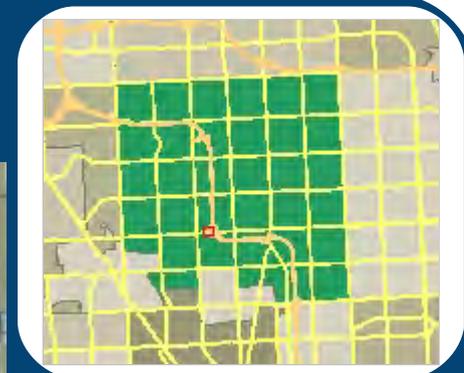
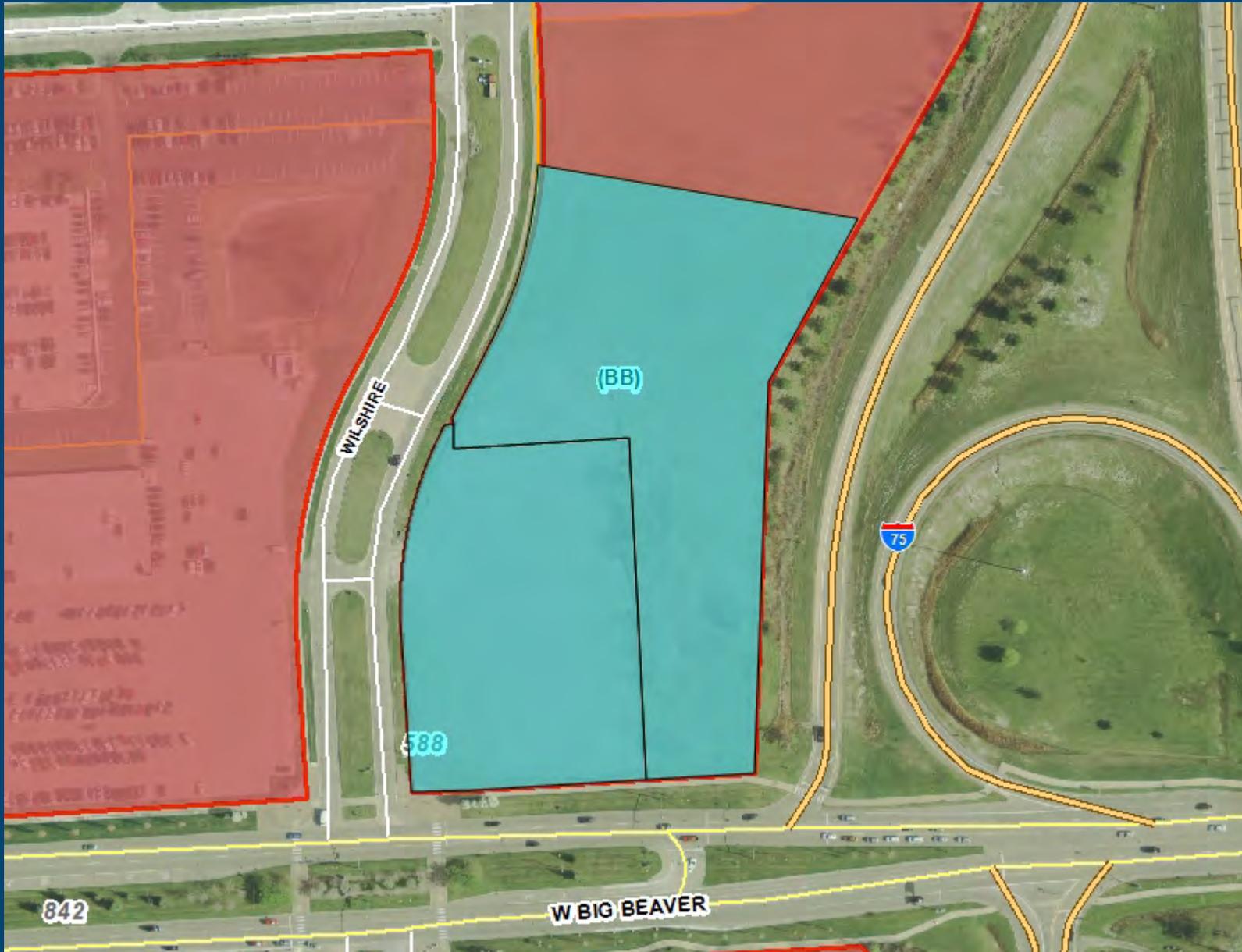
(postponed, for the following reasons: \_\_\_\_\_)

Yes:

No:

**MOTION CARRIED/FAILED**





### Legend

-  I-75
- Road Centerline**
  -  Major Road
  -  Industrial Road
  -  Local Road
- Current Zoning Ordinance**
  -  (PUD) Planned Unit Development
  -  (CF) Community Facilities District
  -  (EP) Environmental Protection District
  -  (BB) Big Beaver Road (Form Based)
  -  (MRF) Maple Road (Form Based)
  -  (NN) Neighborhood Nodes (A-U)
  -  (CB) Community Business
  -  (GB) General Business
  -  (IB) Integrated Industrial Business District
  -  (O) Office Building District
  -  (OM) Office Mixed Use
  -  (P) Vehicular Parking District
  -  (R-1A) One Family Residential District
  -  (R-1B) One Family Residential District
  -  (R-1C) One Family Residential District
  -  (R-1D) One Family Residential District
  -  (R-1E) One Family Residential District
  -  (RT) One Family Attached Residential District
  -  (MR) Multi-Family Residential
  -  (MHP) Manufactured Housing
  -  (UR) Urban Residential
  -  (RC) Research Center District
  -  (PV) Planned Vehicle Sales
-  Ponds and Basins
-  Streams and Creeks
-  Parcels
- Aerial Photos - 2010**
  -  Red: Band\_1
  -  Green: Band\_2
  -  Blue: Band\_3

343 0 172 343Feet

Scale 1: 2,059





**CARLISLE/WORTMAN ASSOCIATES, INC.**  
*Community Planners /Landscape Architects*

605 S. Main, Suite 1  
Ann Arbor, MI 48104  
734-662-2200  
fax 734-662-1935

6401 Citation Drive, Suite E  
Clarkston, MI 48346  
248-625-8480  
fax 248-625-8455

Revised: February 4, 2013  
March 4, 2013

## **Preliminary Site Plan Review For City of Troy, Michigan**

<b>Applicant:</b>	Group 10 Management
<b>Project Name:</b>	Galleria of Troy
<b>Plan Date:</b>	Revised: February 15, 2013
<b>Location:</b>	Northeast corner of Big Beaver Road and Troy Center Drive
<b>Zoning:</b>	BB, Big Beaver Form-based district
<b>Action Requested:</b>	Preliminary Site Plan Approval
<b>Required Information:</b>	Deficiencies noted

### **PROJECT AND SITE DESCRIPTION**

We received a site plan and accompanying documents for a proposed commercial development at the lot located at the northeast corner of Big Beaver and Wilshire/Troy Plaza Drive. The applicant is proposing a restaurant, retail, and hotel development on the existing vacant 5.9 acre site. The applicant proposes to develop the site in two phases. The proposed first phase is the development of three pad sites that front on Big Beaver Road. The front eastern pad will be a Carrabbas Italian Grill, the front western pad will be a Bonefish Grill, and the user(s) of the front middle pad has not been determined. The applicant has labeled the middle pad as retail; however in discussions with the applicant they have indicated that this pad might include some restaurant uses. Access to this phase will be via two (2) curb cuts off Troy Center Drive.

Galleria of Troy  
March 4, 2013

The second phase will be the development of the back end of the site for hotel use. The applicant has not submitted a site plan but has indicated the potential for up to two (2) hotels. The applicant has not indicated the timing of the second phase. This second phase is not included in this review and will require a future site plan review at the time of proposed buildout.

The property is zoned Big Beaver Form-Based District. The proposed development and mix of uses are by-right and only require Site Plan Review approval from the Planning Commission.

Location of Subject Property:

Northeast corner of Big Beaver Road and Troy Center Drive

Proposed Uses of Subject Parcel:

First Phase: Commercial (Restaurant and Retail)

Second Phase: Hotel

Current Use of Subject Property:

Vacant

Current Zoning:

The property is currently zoned Big Beaver Form Based Code, site type A.



Direction	Zoning	Use
North	BB, Big Beaver Form Based	Vacant / Parking
South	BB, Big Beaver Form Based	Commercial
East	I-75	I-75
West	BB, Big Beaver Form Based	Commercial

## MASTER PLAN

The site was identified in the Big Beaver Corridor Study as one of five Corridor “Gateway” locations. The plan calls for:

- Building from lot line to lot line along the right-of-way rather than continuing to be a collection of isolated towers.
- Multiple level buildings which includes vertically integrated mixed-use commercial, office and residential towers.
- The use of prominent ground floor retail, restaurants and cafes allows visual interest and activity for visitors and residents.
- Contain parking in structures that are shared by surrounding developments.
- Parking in rear and not visible from major throughfares.
- Buildings set close to the street.

Though desired by the Master Plan a single large building or multiple storied buildings along Big Beaver at this site might not be achievable. However, there is an opportunity to develop a well-integrated site that includes creative yet consistent designed buildings. While we recognize that there are a multitude of different architectural styles and patterns along Big Beaver, creating site integration, cohesiveness, and a consistent design pattern both between and among this site is important. Because of its high visibility and prominence along Big Beaver, a key to site integration and cohesiveness, is a consistent building design pattern as well as the treatment and interaction between the buildings and the public/semi-public space along Big Beaver. The applicant has made significant improvements to address building cohesiveness and providing quality public/semi-public space.

Though there are still outstanding site planning issues to be addressed, the applicant through building integration as well as providing a high-quality streetscape along in the “Pedestrian Realm (area between building and Big Beaver)”, has provided the appropriate site integration and cohesiveness.

**Items to be Addressed:** Address site plan issues to ensure development is consistent with Master Plan.

## PREVIOUS PLANNING COMMISSION REVIEW

The site plan was last reviewed by the Planning Commission at the February 12, 2013 meeting. Please review our February 4, 2013 review for a detailed site plan review. At the February 12<sup>th</sup> meeting, the application was continued so that the applicant was able to address the following items:

- 1) Address concept of moving hotel building closer to Big Beaver.

The Planning Commission requested consideration of moving the hotel portion of the development closer to Big Beaver and putting portions of the restaurant/retail and hotel parking behind the hotel building. The applicant notes that due to parking requirements of the three (3) buildings that front on Big Beaver, they will not move the hotel closer to Big Beaver.

**Items to be Addressed:** None

**2) Move retail building closer to Big Beaver Road.**

The previous submittal showed the retail building setback 35-feet from Big Beaver. This setback was not allowed to be approved by the Planning Commission. The Planning Commission may adjust the required building line from 10-feet to a maximum of 30-feet beyond the property line for projects incorporating a permanent space for an outdoor café, or public space. The applicant has moved the retail building closer to Big Beaver and all three buildings have been setback 30-feet to incorporate a plaza/streetscape and outdoor seating.

**Items to be Addressed:** None

**3) Ensure that all parking along Troy Center Drive is behind the front building line.**

In the form-based districts, all parking shall be located in a side or rear yard. All the parking is located behind the buildings that front along Big Beaver Road. However, because this is a corner site, the parking must be located behind the front building line along Troy Center Drive. The parking along Troy Center Drive meets the ordinance requirements.

**Items to be Addressed:** None

**4) Incorporate bicycle parking as part of the pedestrian realm on Big Beaver.**

The applicant has added a bicycle parking rack on either end of the pedestrian realm on Big Beaver. One rack is located in front of the Bone Fish Grill, the other is located in front of the Carrabbas.

**Items to be Addressed:** None

**5) Address architectural comments for each building.**

We find that the applicant has made significant improvements to the elevations, particularly the retail building and Bonefish. However we do provide the following architectural comments:

**Bonefish Grill:**

- The trash enclosure area is located at the northeast corner of the building which is directly adjacent to the pedestrian walkway. If the applicant is not able to provide a common trash enclosure area for all three (3) buildings, the applicant should either relocate the Bonefish trash enclosure area inside the building or relocate the outdoor trash enclosure to the northwest corner of the building.
- E.I.F. should not be used as primary material and rather used as accent material. There is a significant amount of E.I.F. on all elevations.
- Consider adding more height or variety in roof.

- Include greater massing and bulk where possible for the Bonefish and Carrabbas' building. The second story for these buildings could include a small lounge, bar, or outdoor roof patio.

**Retail Building:**

- Is the balcony accessible directly from building? Who is the future tenant of the corresponding space?
- Should the balcony seating be provided on west balcony?
- Ensure that the brick (color, type, etc) of all three buildings match.

**Carrabba's:**

- The chosen building design and material use is not consistent with the Big Beaver Design Guidelines. Specifically, the Big Beaver Design Guidelines state that all buildings on Big Beaver should be "unique and attractive structures built of high-quality materials and should avoid being "branded" so as to allow for their adaptation to future tenants."
- The Carrabbas color scheme is bright and does not correspond with nor is consistent with the retail building or Bonefish. Match color scheme of retail building and Bonefish.
- Match brick of retail building and Bonefish.
- Add transparency along west and north elevation.
- E.I.F. wall on south elevation (fronting Big Beaver) should be revised.
- Elevations do not match site plan. Specifically the elevations show landscaping and a solid masonry wall where the site plan shows the trash enclosure access and gate. The elevations should be reviewed to ensure that they match the site plan.
- Consider adding more height or variety in roof.
- Include greater massing and bulk where possible for the Bonefish and Carrabbas' building. The second story for these buildings could include a small lounge, bar, or outdoor roof patio.

***Items to be Addressed:*** Address architectural comments for each building.

**6) Provide description (visual or written) indicating the use of materials and design features that provide design consistency between the retail building, Bonefish and Carrabbas.**

Though free-standing buildings, there is an opportunity to provide a consistent design pattern for all three. While there are elements of the Bonefish and the retail building appear to have some consistency, the Carrabbas appears "branded" to the national prototype and does not appear to carry any of the common design elements. The applicant should indicate the use of materials and design features that provide design consistency between the retail building, Bonefish and Carrabbas.

***Items to be Addressed:*** Provide description (visual or written) indicating the use of materials and design features that provide design consistency between the retail building, Bonefish and Carrabbas.

**7) Provide color rendering along entire length of Big Beaver.**

The applicant provided a color rendering of all three buildings and public realm at the last planning commission meeting.

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

**8) Incorporate additional elements into the pedestrian realm as outline in the Big Beaver Design Guidelines.**

The applicant is greatly improving external and internal site pedestrian circulation. The applicant is providing a 7-foot wide pedestrian spine through the site, which connects the commercial portion of the development to the future hotel use. In addition, the applicant is proposing a full sidewalk along the entire length of Troy Center Drive.

Along Big Beaver, the applicant is proposing a significant benefit via pedestrian enhancements by improving the “Pedestrian Realm (area between building and roadway)” with the following features:

- 30-feet in depth of pedestrian area
- Landscape planter boxes
- Public art in front of retail buildings
- Outdoor seating
- Trash cans
- Benches along Big Beaver
- Pedestrian style pole lighting in pedestrian realm
- Bike rack



Primary Corridor B (204' ROW)



**Items to be Addressed:** None.

**9) Provide hardscape and softscape calculations.**

The applicant is providing approximately 28,000 sq/ft of softscape (16%) and 24,000 sq/ft of hardscape (13%). The revised ordinance requires a minimum of fifteen percent (15%) site landscaping area. The provided landscaping exceeds ordinance requirements.

**Items to be Addressed:** None.

**10) Reconfigure trash enclosure locations.**

The Planning Commission asked the applicant to consider alternative trash enclosure solutions, particularly for Bonefish. The quality of the site layout and elevations from the parking lot are marred by the trash enclosures. The applicant is encouraged to incorporate the trash enclosure as part of the

building or provide one common site trash enclosure location along the east property line (adjacent to I-75).

The Bonfish trash enclosure details have been provided. However, the Carrabbas and the retail building trash enclosure details have not been provided.

**Items to be Addressed:** 1). Reconfigure trash enclosure locations; and 2). Provide trash enclosure details for the Carrabbas and the retail building.

**11) Provide building lighting fixtures.**

The applicant provided building light fixture detail sheets as requested.

**Items to be Addressed:** None.

**12) Provide pedestrian realm fixtures.**

The applicant is proposing five (5) pedestrian style pole lighting in pedestrian realm.

**Items to be Addressed:** None

**13) Resubmit photometric calculations with all site and building lighting included.**

The applicant provided a revised photometric plan that complies with the lighting standards of Article 13.

**Items to be Addressed:** None.

**14) Confirm transparency requirement for all buildings.**

Section 5.04.E.3.A of the Big Beaver design standards requires:

*The first floor of any front façade facing a right-of-way shall be no less than fifty (50) percent windows and doors, and the minimum transparency for facades facing a side street, side yard, or parking area shall be no less than 30 percent of the façade. Transparency alternatives are permitted up to 80% of the 50% total along the front of buildings, and up to 100% of the sides of buildings. The minimum transparency requirement shall apply to all sides of a building that abut an open space, including a side yard, or public right-of-way. Transparency requirements shall not apply to sides which abut an alley.*

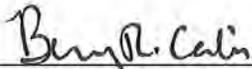
The applicant shall confirm that they meet the transparency requirement for all buildings. It appears that the north, east, and west elevations of the Carrabbas does not meet this requirement.

**Items to be Addressed:** Confirm transparency requirement for all buildings

**SUMMARY OF FINDINGS**

We support the conceptual development of this site, and find that the plan and development details are more consistent with the vision along Big Beaver and the requirements of Big Beaver form-based district. However, we recommend that the following items be address and/or resubmitted prior to Preliminary Site Plan Approval:

- 1) *Address architectural comments for each building.*
- 2) *Provide narrative indicating the use of materials and design features that provide design consistency between the retail building, Bonefish and Carrabbas.*
- 3) *Reconfigure trash enclosure locations.*
- 4) *Provide trash enclosure details for the Carrabbas and the retail building.*
- 5) *Confirm transparency requirement for all buildings.*



---

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

7. PRELIMINARY SITE PLAN REVIEW (File Number SP 979) – Proposed Galleria of Troy, North side of Big Beaver between Wilshire and I-75, Section 21, Currently Zoned BB (Big Beaver) District

Mr. Carlisle presented the report on the item.

Jim Butler, Civil Engineer from Professional Engineering Associates, addressed items of concern listed in the report.

Scott Bowers, Architect from A<sup>2</sup>, addressed architectural issues.

There was general discussion on the item.

Some members of the Planning Commission questioned the interpretation of the provision requiring the principal building to be set back a maximum of 30 feet from the right-of-way. This was addressed by Mr. Savidant and Mr. Carlisle.

Mr. Butler indicated the site could be redesigned so that it was compliant with the Zoning Ordinance.

**Resolution # PC-2013-02-012**

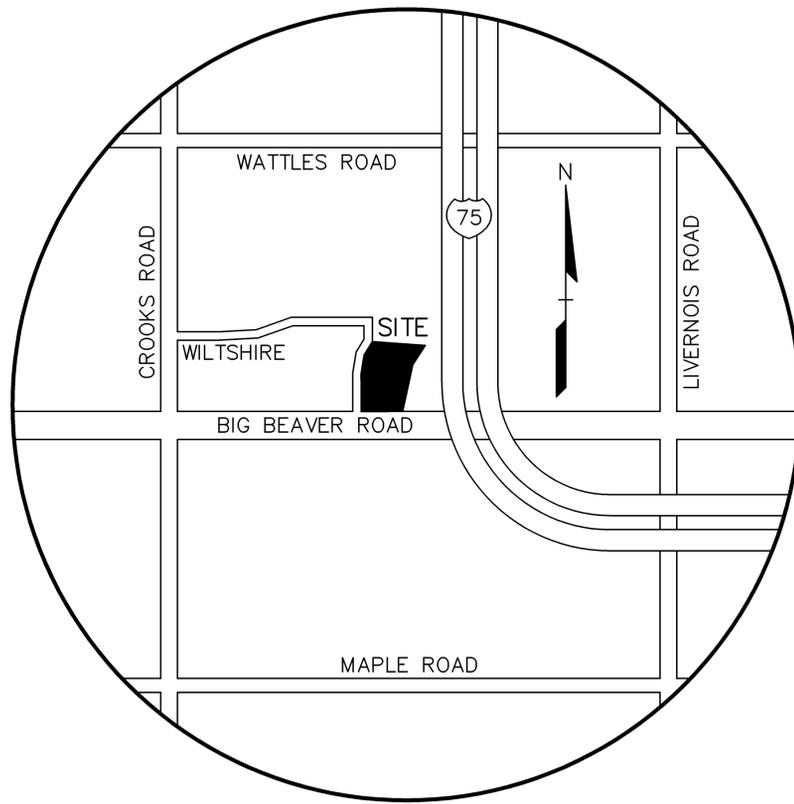
Moved by: Schultz  
Seconded by: Krent

**RESOLVED**, That the Planning Commission hereby postpones the item to the next meeting or until such time that the applicant can put together an updated and complete site plan package.

Yes: All present (8)

**MOTION CARRIED**

PRELIMINARY SITE PLANS FOR  
**THE GALLERIA OF TROY**  
 NORTHEAST CORNER OF BIG BEAVER ROAD AND TROY CENTER DRIVE  
 CITY OF TROY, OAKLAND COUNTY, MICHIGAN



LOCATION MAP  
 NO SCALE

INDEX OF DRAWINGS:

- COVER SHEET
- P-1.0 TOPOGRAPHIC SURVEY
- P-2.0 OVERALL SITE PLAN
- P-2.1 PRELIMINARY SITE PLAN - SOUTH
- P-2.2 PRELIMINARY SITE PLAN - NORTH
- P-3.1 PRELIMINARY GRADING PLAN - SOUTH
- P-3.2 PRELIMINARY GRADING PLAN - NORTH
- P-4.0 PRELIMINARY UTILITY PLAN
- P-5.1 NOTES AND DETAILS
- L-1.1 OVERALL LANDSCAPE PLAN
- L-1.2 LANDSCAPE DETAILS
- A-1.00 RETAIL 'A' SCHEMATIC FLOOR PLAN
- A-5.00 RETAIL 'A' SCHEMATIC EXTERIOR ELEVATIONS
- A-1.1 BONEFISH GRILL FLOOR PLAN
- A-2.1 BONEFISH GRILL EXTERIOR ELEVATIONS AND DETAILS
- A-2.2 BONEFISH GRILL EXTERIOR ELEVATIONS
- A-1 CARRABBA'S FLOOR PLAN
- A-2 CARRABBA'S EXTERIOR ELEVATIONS
- E-101 SITE PHOTOMERTIC PLAN
- E-102 FIXTURE SPEC SHEETS

PETITIONER/PROPERTY OWNER:

GROUP 10 MANAGEMENT  
 30500 NORTHWESTERN HIGHWAY, SUITE #525  
 FARMINGTON HILLS, MI, 48334  
 PHONE: (248) 855-2100  
 FAX: (248) 855-1080  
 CONTACT: KENNY KOZA

CIVIL ENGINEER/LANDSCAPE ARCHITECT:

PROFESSIONAL ENGINEERING ASSOCIATES, INC.  
 2430 ROCHESTER CT., SUITE 100  
 TROY, MI, 48063  
 PHONE: (248) 689-9090  
 FAX: (248) 689-1044  
 CONTACT: JAMES P. BUTLER, P.E./JEFFREY T. SMITH R.L.A.

**LEGAL DESCRIPTION**  
 PARCEL ID 88-20-21-326-008, 88-20-21-326-009  
 (Per First American Title Insurance Company Commitment #CM-486587)

Land in the City of Troy, Oakland County, Michigan, described as follows:

Part of the Southeast 1/4 of the Southwest 1/4 of Section 21, Town 2 North, Range 11 East, City of Troy, Oakland County, Michigan, being more particularly described as: Commencing at the Southwest corner of said Section 21; thence North 87 degrees 28 minutes 55 seconds East along the South line of said Section 21, 1644.21 feet and North 02 degrees 31 minutes 05 seconds West, 102.00 feet to the North Right-of-Way line of Big Beaver (204 feet wide) and the POINT OF BEGINNING; thence along said line South 87 degrees 28 minutes 55 seconds West 386.22 feet to a point on the East Right-of-Way line of Troy Center Drive (120 feet wide); thence along said line, North 02 degrees 31 minutes 05 seconds West 198.00 feet; thence 234.99 feet along a curve to the right, radius 440.00 feet, central angle 30 degrees 36 minutes 01 seconds, chord bearing North 12 degrees 46 minutes 55 seconds East, 232.21 feet; thence North 28 degrees 04 minutes 58 seconds East 110.76 feet; thence 209.72 feet along a curve to the left, radius 510.00 feet, central angle 23 degrees 33 minutes 41 seconds, chord bearing North 16 degrees 18 minutes 05 seconds East 208.25 feet; thence South 79 degrees 31 minutes 26 seconds East 370.39 feet to a point on the West Right-of-Way line of I-75; thence along said line South 30 degrees 30 minutes 43 seconds West 217.24 feet; thence South 02 degrees 42 minutes 49 seconds West 450.89 feet to the POINT OF BEGINNING. Containing 5.909 Acres

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 website: www.peainc.com

GROUP 10 MANAGEMENT 30500 NORTHWESTERN HIGHWAY, SUITE #525 FARMINGTON HILLS, MICHIGAN, 48334	COVER SHEET PART OF THE SOUTHWEST 1/4 OF SECTION 21, T. 2N, R. 11E. CITY OF TROY, OAKLAND COUNTY, MICHIGAN	DES.	DN.	PB.	SUR.	N&F	P.M.	JPB
ORIGINAL ISSUE DATE: NOV. 12, 2012		PEA JOB NO. 2012-070						
SCALE: NONE		DRAWING NUMBER: <b>COVER</b>						

**BENCHMARKS**  
(USSS DATUM)

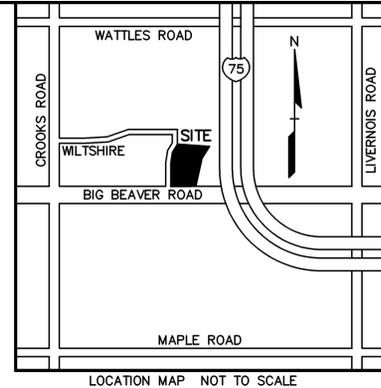
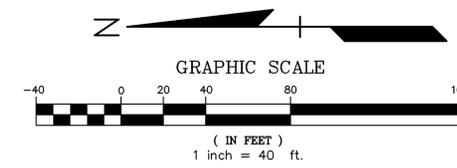
BM #NF-100  
ARROW ON HYDRANT ON THE WEST SIDE OF TROY CENTER DRIVE, ±525 FEET NORTH OF BIG BEAVER ROAD. ELEV. 699.50

BM #NF-200  
ARROW ON HYDRANT ON THE WEST SIDE OF TROY CENTER DRIVE, ±1025 FEET NORTH OF BIG BEAVER ROAD. ELEV. 700.76

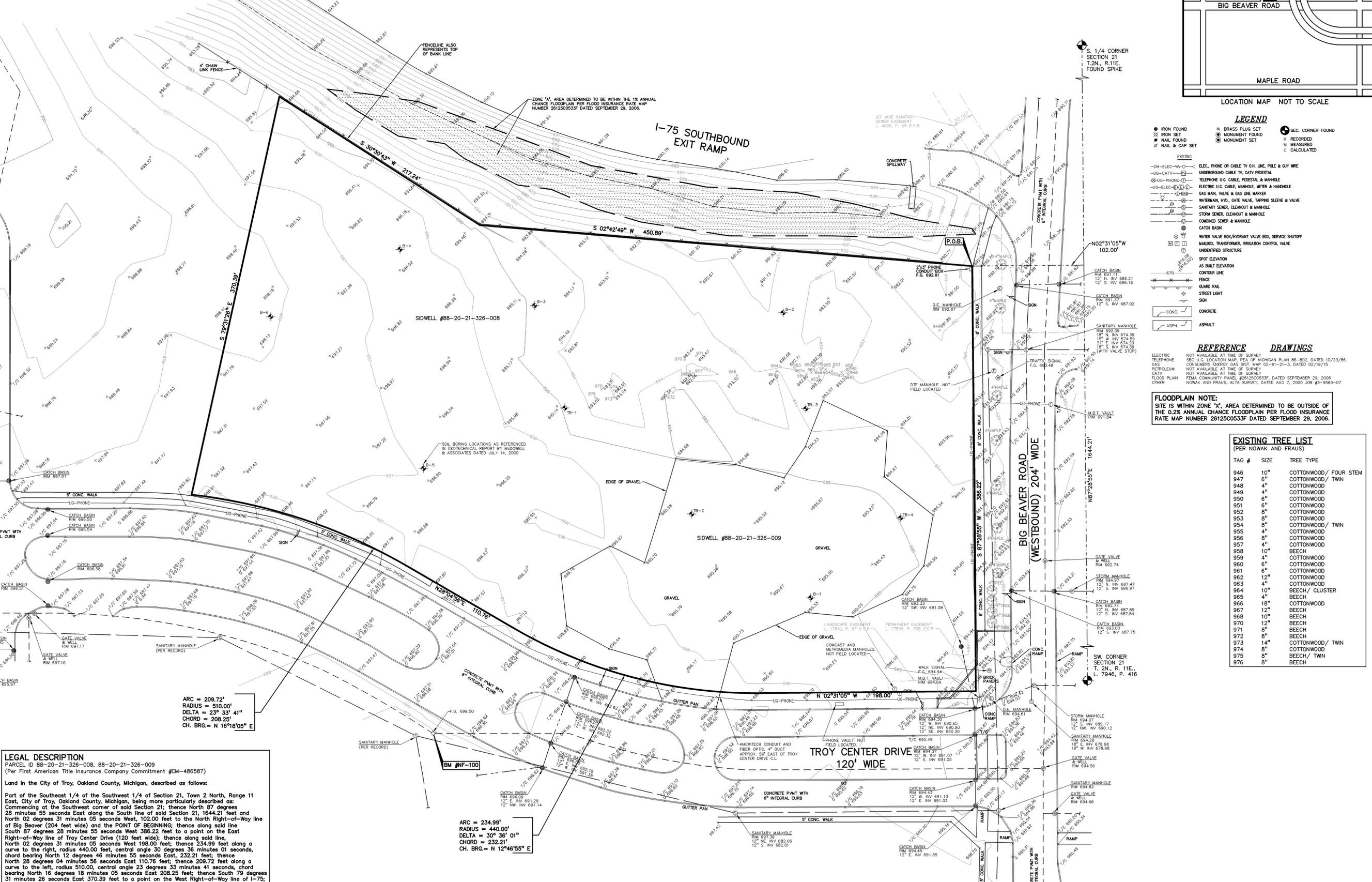
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**CAUTION!**  
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**GROUP 10 MANAGEMENT**  
30500 NORTHWESTERS HIGHWAY, SUITE #225  
PARKINGTON HILLS, MICHIGAN, 48364

**TOPOGRAPHIC SURVEY OF THE GALLERIA OF TROY**  
PART OF THE SOUTHWEST 1/4 OF SECTION 21, T. 2N., R. 11E., CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES. JPB  
DN. JPB  
SUR. JPB  
P.M. JPB

ORIGINAL  
ISSUE DATE: NOV. 12, 2012  
PEA JOB NO. 2012-070  
SCALE: 1" = 40'  
DRAWING NUMBER:  
**P-1.0**

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REF: L:\2012070\DWG\SITE PLAN\326-12070.DWG  
REF: L:\2012070\DWG\SITE PLAN\BLK-12070.DWG

NOT FOR CONSTRUCTION

**BENCHMARKS**  
(USSS DATUM)

BM #NF-100  
ARROW ON HYDRANT ON THE WEST SIDE OF TROY CENTER DRIVE, ±525 FEET NORTH OF BIG BEAVER ROAD. ELEV. 699.50

BM #NF-200  
ARROW ON HYDRANT ON THE WEST SIDE OF TROY CENTER DRIVE, ±1025 FEET NORTH OF BIG BEAVER ROAD. ELEV. 700.76

**GENERAL NOTES:**

THESE NOTES APPLY TO ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT.

- ALL DIMENSIONS SHOWN ARE TO BACK OF CURB, FACE OF SIDEWALK, OUTSIDE FACE OF BUILDING, PROPERTY LINE, CENTER OF MANHOLE/CATCH BASIN OR CENTERLINE OF PIPE UNLESS OTHERWISE NOTED.
- REFER TO SHEET P-5.1 FOR ON-SITE PAVING DETAILS.
- REFER TO CONSTRUCTION PLANS FOR ON-SITE SIDEWALK RAMP DETAILS.
- NO PARKING-FIRE LANE SIGNS SHALL BE POSTED ALONG ALL FIRE LANES AT 100 FOOT INTERVALS OR AS DIRECTED BY THE FIRE OFFICIAL.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF TROY CURRENT STANDARDS AND REGULATIONS.
- THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEER AND/OR THE AUTHORITY HAVING JURISDICTION 3 BUSINESS DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
- ANY WORK WITHIN THE STREET OR HIGHWAY RIGHT-OF-WAYS SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AGENCIES HAVING JURISDICTION AND SHALL NOT BEGIN UNTIL ALL NECESSARY PERMITS HAVE BEEN ISSUED FOR THE WORK.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ADJUST THE TOP OF ALL EXISTING AND PROPOSED STRUCTURES (MANHOLES, CATCH BASINS, INLETS, GATE WELLS ETC.) WITHIN GRADED AND/OR PAVED AREAS TO FINAL GRADE SHOWN ON THE PLANS. ALL SUCH ADJUSTMENTS SHALL BE INCIDENTAL TO THE JOB AND WILL NOT BE PAID FOR SEPARATELY.
- THIS SITE DRAINS TO A PROPOSED UNDERGROUND DETENTION SYSTEM.

**TOPOGRAPHIC AND BOUNDARY SURVEY DISCLAIMER:**

TOPOGRAPHIC AND BOUNDARY SURVEY, INCLUDING PROPERTY LINES, LEGAL DESCRIPTION, EXISTING UTILITIES, EXISTING ELEVATIONS, EXISTING PHYSICAL FEATURES AND STRUCTURES WAS PROVIDED BY NOWAK AND FRAUS ALTA/ASGM LAND TITLE SURVEY, JOB #S-9560-07, DATED AUG. 7, 2000

PROFESSIONAL ENGINEERING ASSOCIATES, INC. WILL NOT BE HELD RESPONSIBLE FOR THE ACCURACY OF THE SURVEY OR FOR DESIGN ERRORS/OMISSIONS RESULTING FROM SURVEY INACCURACIES.

**CURB DROP AND RAMP LEGEND:**

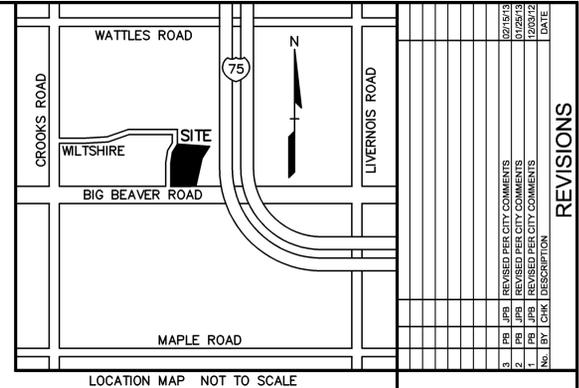
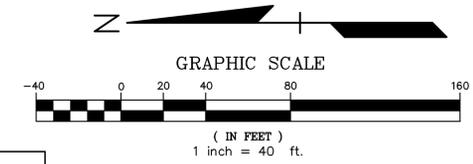
CURB DROP AND RAMP "TYPE P" (P)  
 CURB DROP AND RAMP "TYPE R" (R)  
 CURB DROP AND RAMP "TYPE D" (D)  
 CURB DROP AND RAMP "TYPE F" (F)

REFER TO CONSTRUCTION PLANS FOR M.D.O.T. STANDARD RAMP DETAILS

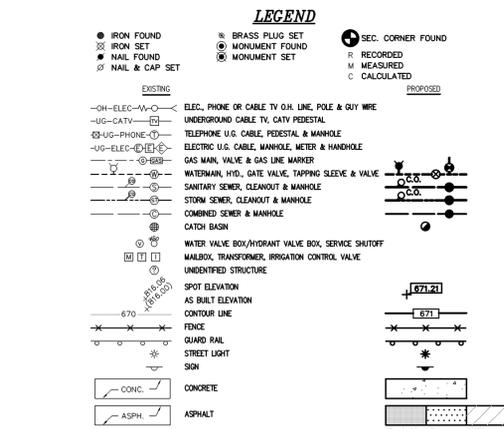
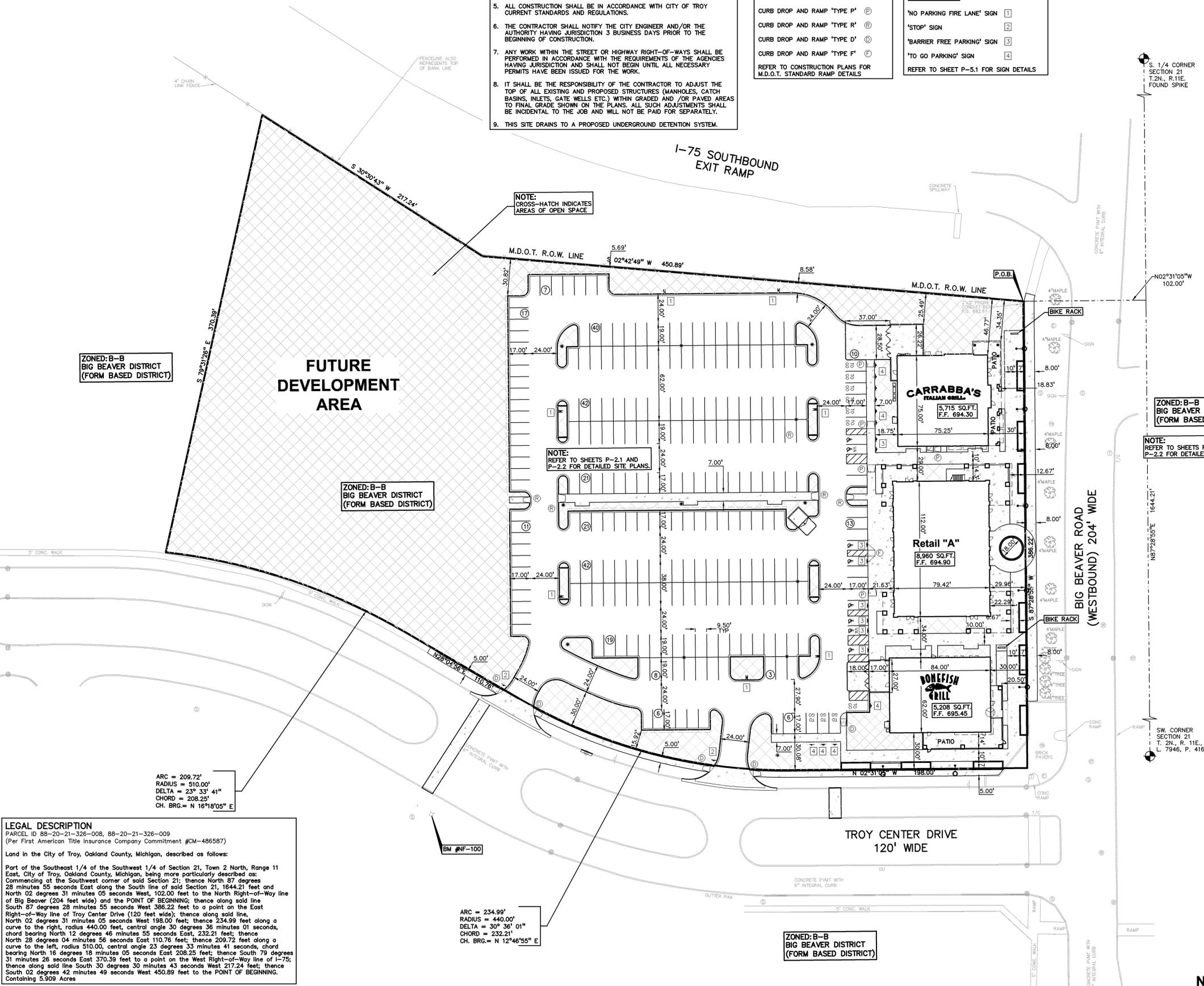
**SIGN LEGEND:**

'NO PARKING FIRE LANE' SIGN (1)  
 'STOP' SIGN (2)  
 'BARRIER FREE PARKING' SIGN (3)  
 'TO GO PARKING' SIGN (4)

REFER TO SHEET P-5.1 FOR SIGN DETAILS



NO.	DATE	DESCRIPTION
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18	08/01/13	REVISED PER CITY COMMENTS
19	08/01/13	REVISED PER CITY COMMENTS
20	08/01/13	REVISED PER CITY COMMENTS



**REFERENCE DRAWINGS**

ELECTRIC TELEPHONE: NOT AVAILABLE AT TIME OF SURVEY  
 GAS: CONSUMERS ENERGY GAS DIST. MAP 02-01-21-3, DATED 02/19/15  
 PETROLEUM: NOT AVAILABLE AT TIME OF SURVEY  
 FLOOD PLAN: FEMA COMMUNITY PANEL #26125C0533F, DATED SEPTEMBER 29, 2006  
 OTHER: NOWAK AND FRAUS, ALTA SURVEY, DATED AUG. 7, 2000 JOB #S-9560-07

**FLOODPLAIN NOTE:**  
 SITE IS WITHIN ZONE 'X', AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN PER FLOOD INSURANCE RATE MAP NUMBER 26125C0533F DATED SEPTEMBER 29, 2006.

**SITE DATA TABLE:**

ZONING: EXISTING ZONING: B-B (BIG BEAVER DISTRICT)

SITE AREA: GROSS AND NET SITE AREA = 5.909 ACRES

FORM 'D' BUILDING SETBACKS:

FRONT YARD:	10 FEET	REQUIRED	PROVIDED
SIDE YARD:	8.960 FEET	REQUIRED	25.49 FEET MINIMUM (CARRABBA'S)
REAR YARD:	0 FEET	REQUIRED	NOT APPLICABLE (OVER 500 FEET)

BUILDING COVERAGE: MAXIMUM ALLOWABLE BUILDING COVERAGE = 30%  
 PROPOSED BUILDING COVERAGE = (19,883 SQ.FT./5,909 AC) = 7.7%

OPEN SPACE: MINIMUM OPEN SPACE REQUIRED = 15%  
 PROPOSED OPEN SPACE = (116,052 SQ.FT./5,909 AC) = 45.1%

BUILDING INFORMATION:

CARRABBA'S RESTAURANT	5,715 SQ.FT.	BONEFISH GRILL RESTAURANT	5,208 SQ.FT.
235 SEATS (24 ON PATIO)		224 SEATS (44 ON PATIO)	
BUILDING HEIGHT = 25'-2"		BUILDING HEIGHT = 25'-8"	

RETAIL BUILDING: TOTAL 8,960 SQ.FT., BUILDING HEIGHT = 32'

PARKING CALCULATIONS:

RESTAURANT: TOTAL SEATING CAPACITY (INDOORS AND OUTDOORS) = 459 SEATS  
 REQUIRED PARKING = 1 SPACE PER 2 SEATS = 230 SPACES

RETAIL: BUILDING AREA = 8,960 SQ.FT., REQUIRED PARKING = 1 SPACES 250 SQ.FT. G.F.A. = 36 SPACES

TOTAL REQUIRED PARKING = 266 SPACES  
 TOTAL PARKING PROVIDED = 266 SPACES INCLUDING 8 H/C SPACES  
 BICYCLE RACK PARKING PROVIDED = 2 RACKS (±10 BICYCLES)

**LEGAL DESCRIPTION**

PARCEL ID 88-20-21-326-008, 88-20-21-326-009  
 (Per First American Title Insurance Company Commitment #CM-486587)

Land in the City of Troy, Oakland County, Michigan, described as follows:

Part of the Southeast 1/4 of the Southwest 1/4 of Section 21, Town 2 North, Range 11 East, City of Troy, Oakland County, Michigan, being more particularly described as: Commencing at the Southwest corner of said Section 21; thence North 87 degrees 28 minutes 55 seconds East along the South line of said Section 21, 1644.21 feet and North 02 degrees 31 minutes 05 seconds West, 102.00 feet to the North Right-of-Way line of Big Beaver (204 feet wide) and the POINT OF BEGINNING; thence along said line South 87 degrees 28 minutes 55 seconds West 386.22 feet to a point on the East Right-of-Way line of Troy Center Drive (120 feet wide); thence along said line, North 02 degrees 31 minutes 05 seconds West 198.00 feet; thence 234.59 feet along a curve to the right, radius 440.00 feet, central angle 30 degrees 36 minutes 01 seconds, chord bearing North 12 degrees 46 minutes 55 seconds East, 232.21 feet; thence North 28 degrees 04 minutes 55 seconds East 110.76 feet; thence 209.72 feet along a curve to the left, radius 510.00 feet, central angle 23 degrees 33 minutes 41 seconds, chord bearing North 16 degrees 18 minutes 05 seconds East 208.25 feet; thence South 79 degrees 31 minutes 26 seconds East 370.39 feet to a point on the West Right-of-Way line of I-75; thence along said line South 30 degrees 30 minutes 43 seconds West 217.24 feet; thence South 02 degrees 42 minutes 49 seconds West 450.89 feet to the POINT OF BEGINNING. Containing 5.909 Acres

**CAUTION!**  
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CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES AND CONSTRUCTION TO NORMAL WORKING HOURS AND CONSTRUCTION CONTRACTOR SHALL HOLD DESIGN PROFESSIONAL ENGINEER FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THE PROJECT EXCEPT LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL ENGINEER.

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**GROUP 10 MANAGEMENT**  
 30500 NORTHWESTERN HIGHWAY, SUITE #225  
 FARMINGTON HILLS, MICHIGAN, 48334

**OVERALL SITE PLAN**  
**THE GALLERIA OF TROY**  
 PART OF THE SOUTHWEST 1/4 OF SECTION 21, T. 2N, R. 11E,  
 CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES. JPB  
 P.M. JPB  
 SUR. N&F  
 N&F

ORIGINAL ISSUE DATE: NOV. 12, 2012  
 PEA JOB NO. 2012-070  
 SCALE: 1" = 40'  
 DRAWING NUMBER: **P-2.0**

**NOT FOR CONSTRUCTION**

REF: L:\2012070\DWG\TOPD-12070.DWG  
 REF: L:\2012070\DWG\SITE PLAN\326-008-12070.DWG  
 REF: L:\2012070\DWG\SITE PLAN\TLK-12070.DWG

**BENCHMARKS**  
(USSS DATUM)

BM #NF-100  
ARROW ON HYDRANT ON THE WEST SIDE OF TROY CENTER DRIVE, ±525 FEET NORTH OF BIG BEAVER ROAD. ELEV. 699.50

BM #NF-200  
ARROW ON HYDRANT ON THE WEST SIDE OF TROY CENTER DRIVE, ±1025 FEET NORTH OF BIG BEAVER ROAD. ELEV. 700.75

**GENERAL NOTES:**

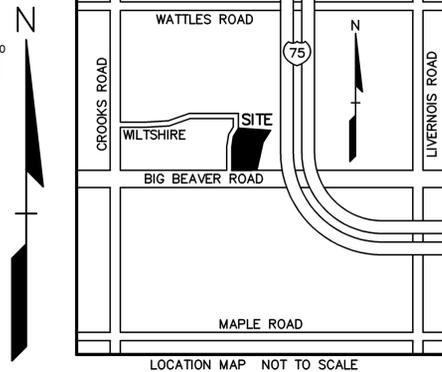
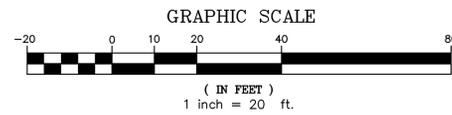
THESE NOTES APPLY TO ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT.

- ALL DIMENSIONS SHOWN ARE TO BACK OF CURB, FACE OF SIDEWALK, OUTSIDE FACE OF BUILDING, PROPERTY LINE, CENTER OF MANHOLE/CATCH BASIN OR CENTERLINE OF PIPE UNLESS OTHERWISE NOTED.
- REFER TO SHEET P-5.1 FOR ON-SITE PAVING DETAILS.
- REFER TO CONSTRUCTION PLANS FOR ON-SITE SIDEWALK RAMP DETAILS.
- 'NO PARKING-FIRE LANE' SIGNS SHALL BE POSTED ALONG ALL FIRE LANES AT 100 FOOT INTERVALS OR AS DIRECTED BY THE FIRE OFFICIAL.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF TROY CURRENT STANDARDS AND REGULATIONS.
- THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEER AND/OR THE AUTHORITY HAVING JURISDICTION 3 BUSINESS DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
- ANY WORK WITHIN THE STREET OR HIGHWAY RIGHT-OF-WAYS SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AGENCIES HAVING JURISDICTION AND SHALL NOT BEGIN UNTIL ALL NECESSARY PERMITS HAVE BEEN ISSUED FOR THE WORK.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ADJUST THE TOP OF ALL EXISTING AND PROPOSED STRUCTURES (MANHOLES, CATCH BASINS, INLETS, GATE WELLS ETC.) WITHIN GRADED AND /OR PAVED AREAS TO FINAL GRADE SHOWN ON THE PLANS. ALL SUCH ADJUSTMENTS SHALL BE INCIDENTAL TO THE JOB AND WILL NOT BE PAID FOR SEPARATELY.
- THIS SITE DRAINS TO A PROPOSED UNDERGROUND DETENTION SYSTEM.

**TOPOGRAPHIC AND BOUNDARY SURVEY DISCLAIMER:**

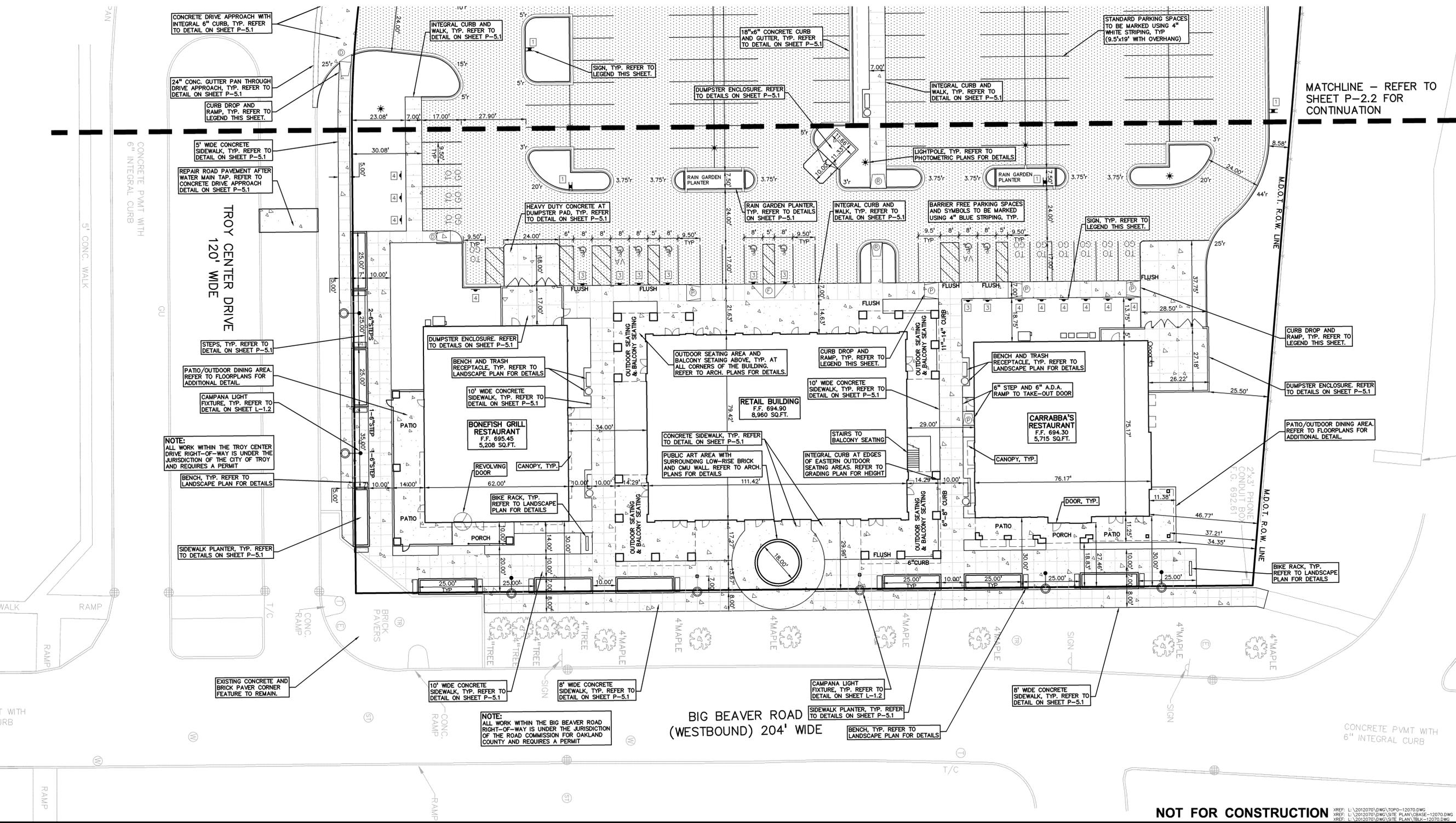
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PROFESSIONAL ENGINEERING ASSOCIATES, INC. WILL NOT BE HELD RESPONSIBLE FOR THE ACCURACY OF THE SURVEY OR FOR DESIGN ERRORS/OMISSIONS RESULTING FROM SURVEY INACCURACIES.



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REVISIONS



MATCHLINE - REFER TO SHEET P-2.2 FOR CONTINUATION

**CAUTION!!**  
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**GROUP 10 MANAGEMENT**  
30500 NORTHWESTERN HIGHWAY, SUITE #225  
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**PRELIMINARY SITE PLAN - SOUTH**  
**THE GALLERIA OF TROY**  
PART OF THE SOUTHWEST 1/4 OF SECTION 21, T. 2N., R. 11E.  
CITY OF TROY, OKLAND COUNTY, MICHIGAN

DES. JPB DN. JPB SUR. JPB P.M. JPB

ORIGINAL  
ISSUE DATE: NOV. 12, 2012

PEA JOB NO. 2012-070

SCALE: 1" = 20'

DRAWING NUMBER:  
**P-2.1**

NOT FOR CONSTRUCTION



**BENCHMARKS (USSS DATUM)**

BM #NF-100  
ARROW ON HYDRANT ON THE WEST SIDE OF TROY CENTER DRIVE, ±525 FEET NORTH OF BIG BEAVER ROAD. ELEV. 699.50

BM #NF-200  
ARROW ON HYDRANT ON THE WEST SIDE OF TROY CENTER DRIVE, ±1025 FEET NORTH OF BIG BEAVER ROAD. ELEV. 700.76

**CURB DROP AND RAMP LEGEND:**

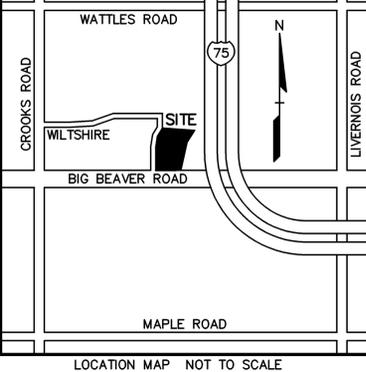
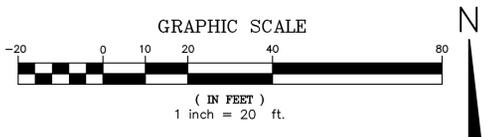
CURB DROP AND RAMP "TYPE P" (P)  
 CURB DROP AND RAMP "TYPE R" (R)  
 CURB DROP AND RAMP "TYPE D" (D)  
 CURB DROP AND RAMP "TYPE F" (F)

REFER TO CONSTRUCTION PLANS FOR M.D.O.T. STANDARD RAMP DETAILS

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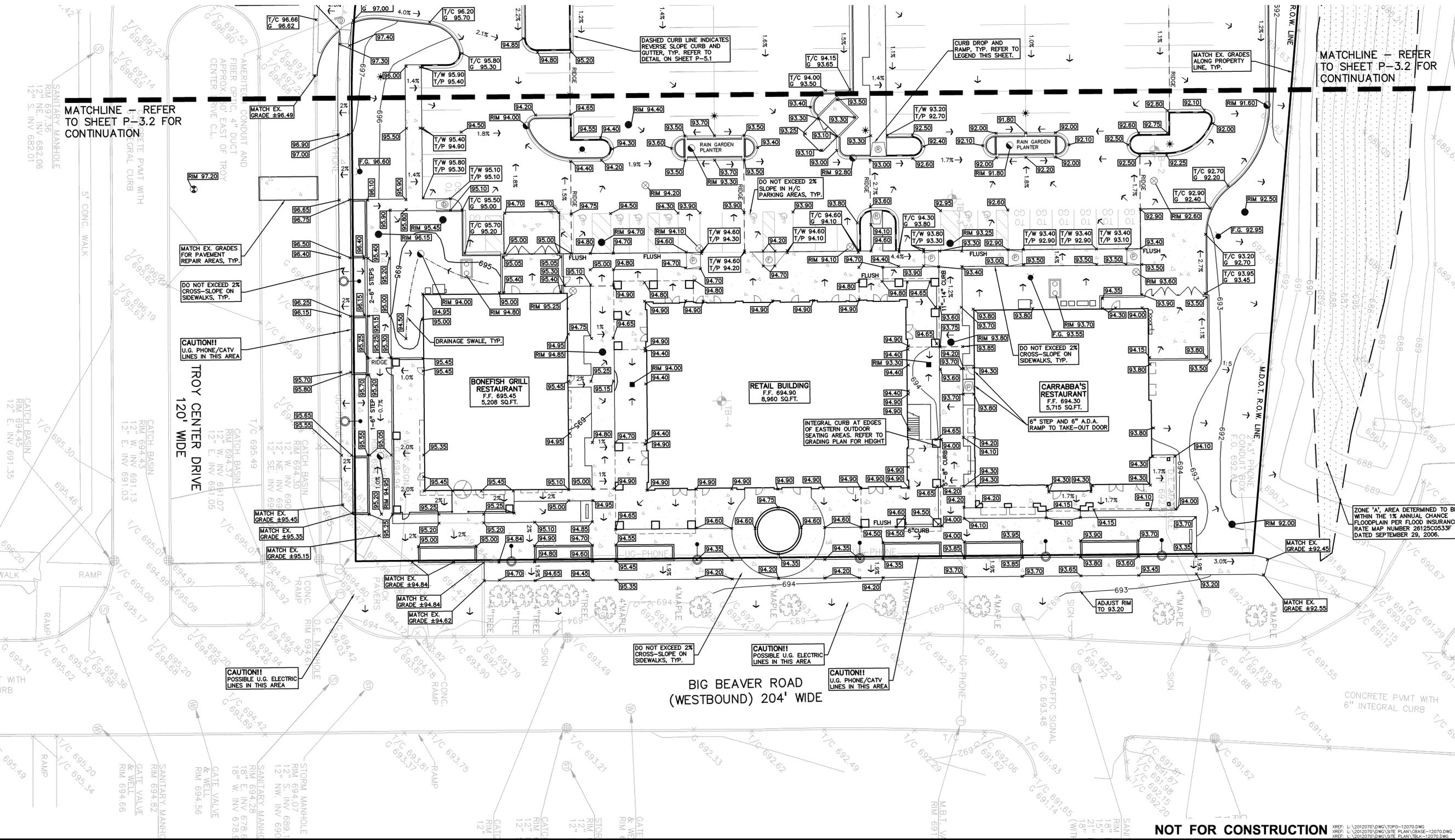
**SYMBOLS: GRADING**

95.20  
 PROPOSED SPOT GRADE ELEVATION  
 ALL GRADES INDICATED ARE TOP OF PAVEMENT UNLESS OTHERWISE NOTED.  
 ADD 600 TO ALL 4-DIGIT ELEVATIONS TO OBTAIN ACTUAL ELEVATION.

—695— PROPOSED CONTOUR LINE

**GENERAL GRADING AND EARTHWORK NOTES:**

REFER TO SHEET P-3.2 FOR GENERAL GRADING AND EARTHWORK NOTES



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ORIGINAL  
 ISSUE DATE: NOV. 12, 2012  
 PEA JOB NO. 2012-070  
 SCALE: 1" = 20'  
 DRAWING NUMBER:  
**P-3.1**

NOT FOR CONSTRUCTION

**BENCHMARKS**  
(USSS DATUM)

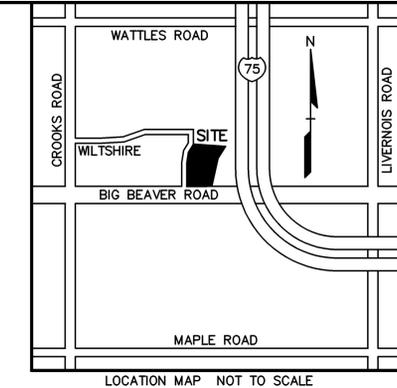
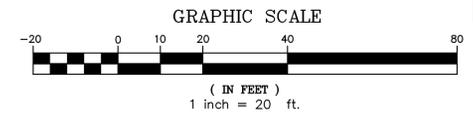
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18	08/01/13	REVISED PER CITY COMMENTS
19	08/01/13	REVISED PER CITY COMMENTS
20	08/01/13	REVISED PER CITY COMMENTS

**REVISIONS**

- GENERAL GRADING AND EARTHWORK NOTES:**
- THESE NOTES APPLY TO ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT
- CONTRACTOR TO FIELD VERIFY ALL EXISTING TREES AND BRUSH AND REMOVE ALL THAT ARE NECESSARY TO GRADE SITE.
  - ALL GRADES ARE TO TOP OF PAVEMENT UNLESS OTHERWISE NOTED.
  - THE STAGING OF CONSTRUCTION ACTIVITIES SHALL OCCUR ONLY WITHIN THE SITE BOUNDARIES. ANY CONSTRUCTION ACTIVITIES OUTSIDE OF THE SITE BOUNDARIES SHALL BE AT THE SOLE RESPONSIBILITY AND RISK OF THE CONTRACTOR.
  - ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL MEET THE REQUIREMENTS OF THE CITY OF TROY AND OAKLAND COUNTY. AN EROSION CONTROL PERMIT MUST BE SECURED FROM THE CITY PRIOR TO CONSTRUCTION.
  - ALL EARTHWORK AND GRADING OPERATIONS SHALL BE PERFORMED IN ACCORDANCE WITH THE SOILS INVESTIGATION AND REPORT PREPARED BY GILES ENGINEERING ASSOCIATES, INC. DATED SEPT. 28, 2012
  - REFER TO CONSTRUCTION PLANS FOR ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES AND NOTES.
  - ALL SIDE SLOPES 1:6 OR STEEPER SHALL BE STABILIZED BY SODDING OR BY PLACING A MULCH BLANKET PEGGED IN PLACE OVER SEED.
  - ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED OR SODDED IN ACCORDANCE WITH THE LANDSCAPE PLANS. PROVIDE A MINIMUM OF 3" OF TOPSOIL IN THESE AREAS UNLESS OTHERWISE NOTED.
  - THE CONTRACTOR SHALL NOTE EXISTING UNDERGROUND UTILITIES WITHIN AND ADJACENT TO THE SITE. BACKFILL FOR EXISTING UTILITY TRENCHES SHALL BE EXAMINED CRITICALLY. ANY TRENCHES FOUND TO HAVE SOFT, UNSTABLE OR UNSUITABLE BACKFILL MATERIAL, IN THE OPINION OF THE GEOTECHNICAL ENGINEER, THAT ARE TO BE WITHIN THE ZONE OF INFLUENCE OF PROPOSED BUILDINGS OR PAVEMENT SHALL BE COMPLETELY EXCAVATED AND BACKFILLED WITH SUITABLE MATERIAL.

**SYMBOLS: GRADING**

95.20 PROPOSED SPOT GRADE ELEVATION  
ALL GRADES INDICATED ARE TOP OF PAVEMENT UNLESS OTHERWISE NOTED. ADD 600 TO ALL 4-DIGIT ELEVATIONS TO OBTAIN ACTUAL ELEVATION.

—695— PROPOSED CONTOUR LINE

**EARTHWORK BALANCING NOTE:**

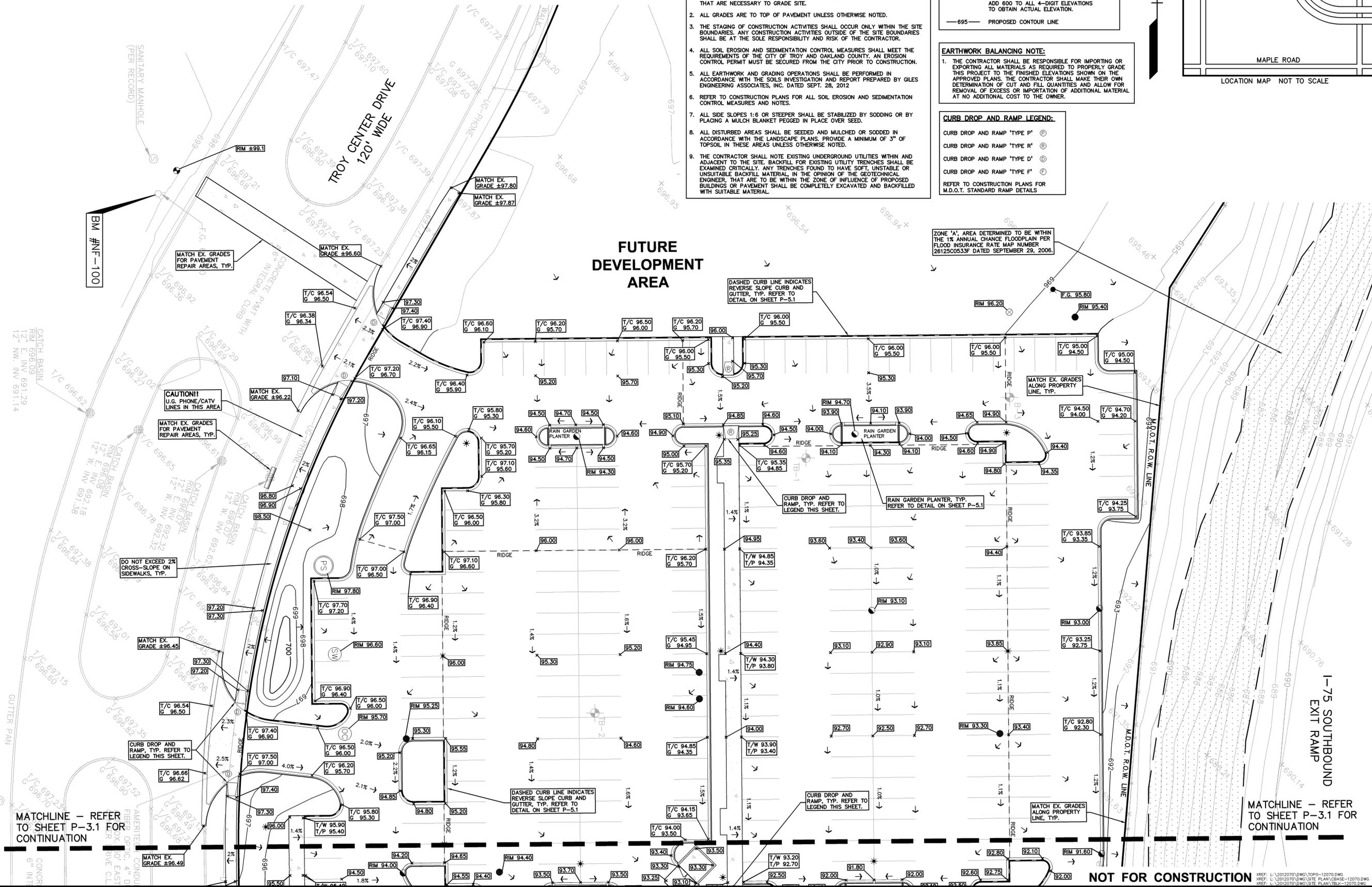
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPORTING OR EXPORTING ALL MATERIALS AS REQUIRED TO PROPERLY GRADE THIS PROJECT TO THE FINISHED ELEVATIONS SHOWN ON THE APPROVED PLANS. THE CONTRACTOR SHALL MAKE THEIR OWN DETERMINATION OF CUT AND FILL QUANTITIES AND ALLOW FOR REMOVAL OF EXCESS OR IMPORTATION OF ADDITIONAL MATERIAL AT NO ADDITIONAL COST TO THE OWNER.

**CURB DROP AND RAMP LEGEND:**

CURB DROP AND RAMP 'TYPE P' (P)  
CURB DROP AND RAMP 'TYPE R' (R)  
CURB DROP AND RAMP 'TYPE D' (D)  
CURB DROP AND RAMP 'TYPE F' (F)

REFER TO CONSTRUCTION PLANS FOR M.D.O.T. STANDARD RAMP DETAILS

**ZONE 'A' AREA DETERMINED TO BE WITHIN THE 1% ANNUAL CHANCE FLOODPLAIN PER FLOOD INSURANCE RATE MAP NUMBER 26125C0533F DATED SEPTEMBER 29, 2006.**



**CAUTION!!**  
THE LOCATION AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE BASED ON RECORD DRAWINGS AND FIELD SURVEY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATION AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

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CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERAL CONDITIONS OF CONTRACT, CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY THAT THIS REQUIREMENT SHALL BE MADE TO APPLY TO ALL CONTRACTORS AND SUBCONTRACTORS TO NORMAL WORKING HOURS AND CONSTRUCTION CONTROLS. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND HOLD DESIGN PROFESSIONAL LIABILITY INSURANCE FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPT LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

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Troy, MI 48063-1872  
Phone: (248) 689-9090  
Fax: (248) 689-1044  
website: www.peainc.com

**GROUP 10 MANAGEMENT**  
30500 NORTHWESTERN HIGHWAY, SUITE #225  
FARMINGTON HILLS, MICHIGAN, 48334

**PRELIMINARY GRADING PLAN - NORTH**  
**THE GALLERIA OF TROY**  
PART OF THE SOUTHWEST 1/4 OF SECTION 21, T. 2N, R. 11E,  
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES. JPB P.M.  
DN. JPB P.M.  
SUR. NMF P.M.  
P.B. JPB P.M.

ORIGINAL ISSUE DATE: NOV. 12, 2012  
PEA JOB NO. 2012-070  
SCALE: 1" = 20'  
DRAWING NUMBER:  
**P-3.2**

**NOT FOR CONSTRUCTION**

**BENCHMARKS**  
(USSS DATUM)

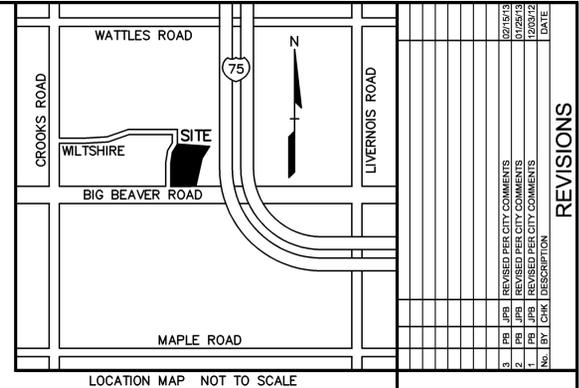
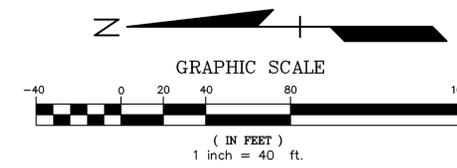
BM #NF-100  
ARROW ON HYDRANT ON THE WEST SIDE OF TROY CENTER DRIVE, ±525 FEET NORTH OF BIG BEAVER ROAD. ELEV. 699.50

BM #NF-200  
ARROW ON HYDRANT ON THE WEST SIDE OF TROY CENTER DRIVE, ±1025 FEET NORTH OF BIG BEAVER ROAD. ELEV. 700.75

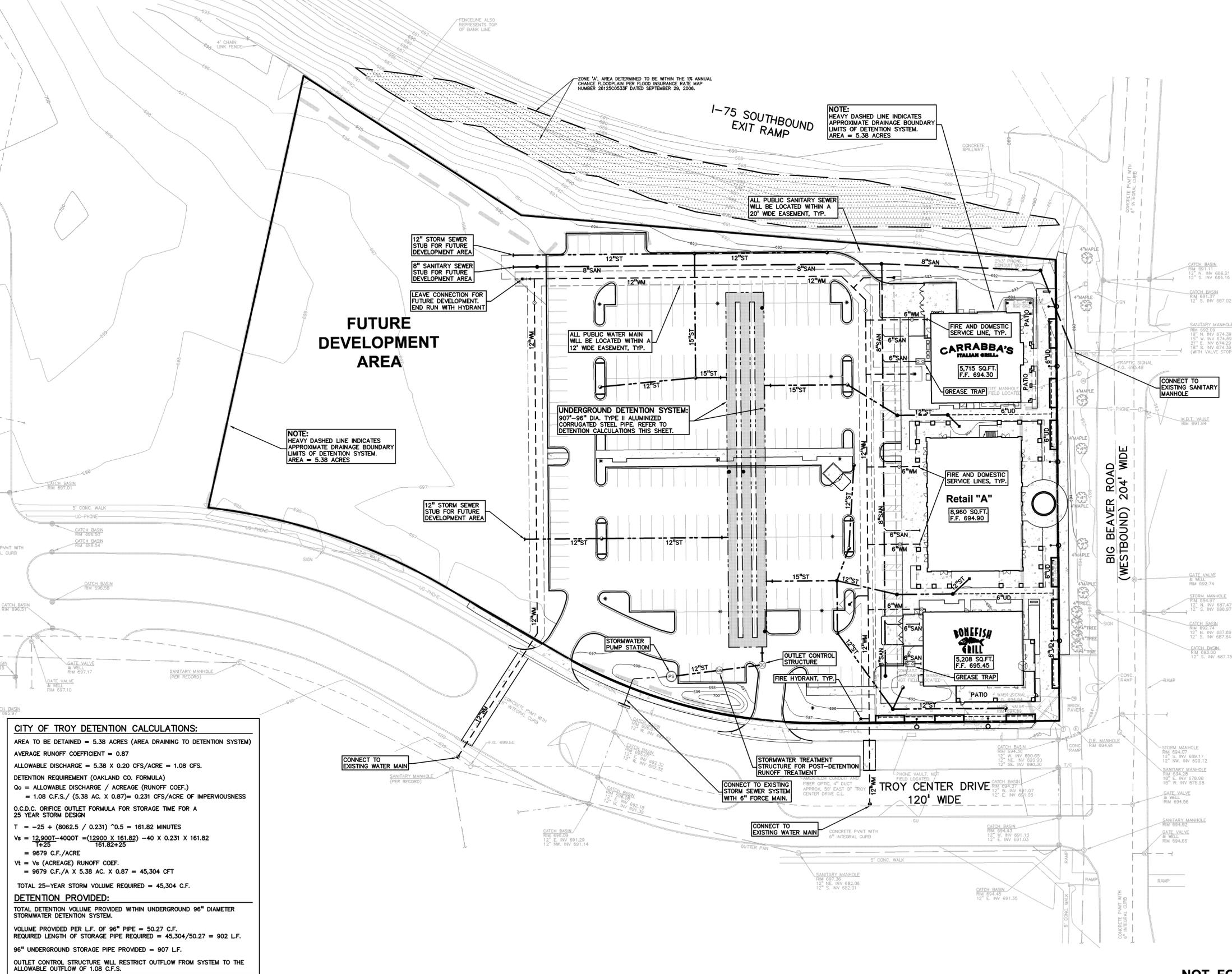
**TOPOGRAPHIC AND BOUNDARY SURVEY DISCLAIMER:**

TOPOGRAPHIC AND BOUNDARY SURVEY, INCLUDING PROPERTY LINES, LEGAL DESCRIPTION, EXISTING UTILITIES, EXISTING ELEVATIONS, EXISTING PHYSICAL FEATURES AND STRUCTURES WAS PROVIDED BY NOWAK AND FRAUS ALTA/ACSM LAND TITLE SURVEY, JOB #3-9560-07, DATED AUG. 7, 2000

PROFESSIONAL ENGINEERING ASSOCIATES, INC. WILL NOT BE HELD RESPONSIBLE FOR THE ACCURACY OF THE SURVEY OR FOR DESIGN ERRORS/OMISSIONS RESULTING FROM SURVEY INACCURACIES.



NO.	DATE	DESCRIPTION
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2	07/29/13	REVISED PER CITY COMMENTS
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100	07/29/13	REVISED PER CITY COMMENTS



**NOTE:**  
HEAVY DASHED LINE INDICATES APPROXIMATE DRAINAGE BOUNDARY LIMITS OF DETENTION SYSTEM. AREA = 5.38 ACRES

**NOTE:**  
HEAVY DASHED LINE INDICATES APPROXIMATE DRAINAGE BOUNDARY LIMITS OF DETENTION SYSTEM. AREA = 5.38 ACRES

**CITY OF TROY DETENTION CALCULATIONS:**

AREA TO BE DETAINED = 5.38 ACRES (AREA DRAINING TO DETENTION SYSTEM)

AVERAGE RUNOFF COEFFICIENT = 0.87

ALLOWABLE DISCHARGE = 5.38 X 0.20 CFS/ACRE = 1.08 CFS.

DETENTION REQUIREMENT (OAKLAND CO. FORMULA)

$Q_0 = \text{ALLOWABLE DISCHARGE} / \text{ACREAGE (RUNOFF COEF.)}$   
 $= 1.08 \text{ C.F.S./} (5.38 \text{ AC.} \times 0.87) = 0.231 \text{ CFS/ACRE OF IMPERVIOUSNESS}$

O.C.D.C. ORIFICE OUTLET FORMULA FOR STORAGE TIME FOR A 25 YEAR STORM DESIGN

$T = -25 + (8062.5 / 0.231)^{0.5} = 161.82 \text{ MINUTES}$

$V_s = \frac{12,900T - 4000T}{74.25} = \frac{12900(161.82) - 4000(161.82)}{74.25} = 45,304 \text{ C.F.}$

$V_t = V_s \text{ (ACREAGE) RUNOFF COEF.}$   
 $= 9679 \text{ C.F./ACRE} \times 5.38 \text{ AC.} \times 0.87 = 45,304 \text{ C.F.}$

TOTAL 25-YEAR STORM VOLUME REQUIRED = 45,304 C.F.

**DETENTION PROVIDED:**

TOTAL DETENTION VOLUME PROVIDED WITHIN UNDERGROUND 96" DIAMETER STORMWATER DETENTION SYSTEM

VOLUME PROVIDED PER L.F. OF 96" PIPE = 50.27 C.F.  
 REQUIRED LENGTH OF STORAGE PIPE REQUIRED = 45,304/50.27 = 902 L.F.

96" UNDERGROUND STORAGE PIPE PROVIDED = 907 L.F.

OUTLET CONTROL STRUCTURE WILL RESTRICT OUTFLOW FROM SYSTEM TO THE ALLOWABLE OUTFLOW OF 1.08 C.F.S.

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CONTRACTOR CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERAL ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY THAT THE CONTRACTOR SHALL BE MADE TO APPROPRIATELY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND CONSTRUCTION CONTRACTOR FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THE PROJECT EXCEPT LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

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website: www.peainc.com

**GROUP 10 MANAGEMENT**  
30500 NORTHWESTERN HIGHWAY, SUITE #225  
FARMINGTON HILLS, MICHIGAN, 48334

**PRELIMINARY UTILITY PLAN**  
**THE GALLERIA AT TROY**  
PART OF THE SOUTHWEST 1/4 OF SECTION 21, T. 2N, R. 11E.  
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES. JPB  
P.M. JPB  
SUR. NMF  
DN. JPB  
CONTRACTOR: 15 & BE BEAVER-PERMANENT SITE PLAN (P-4017)-12070.DWG

ORIGINAL ISSUE DATE: NOV. 12, 2012  
PEA JOB NO. 2012-070  
SCALE: 1" = 40'  
DRAWING NUMBER:  
**P-4.0**

**NOT FOR CONSTRUCTION**

REF: L:\2012070\DWG\TOPD-12070.DWG  
REF: L:\2012070\DWG\SITE PLAN\2012-070.DWG  
REF: L:\2012070\DWG\SITE PLAN\BLK-12070.DWG

**GENERAL NOTES:**

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF TROY.
2. ALL NECESSARY PERMITS, TESTING, BONDS AND INSURANCES ETC., SHALL BE PAID FOR BY THE CONTRACTOR. THE OWNER SHALL PAY FOR ALL CITY INSPECTION FEES.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL DURING THE PERIODS OF CONSTRUCTION. THIS SHALL BE CONSIDERED INCIDENTAL TO THE JOB.
4. PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL CONTACT MISS DIG (811) TO VERIFY THE LOCATION OF ANY EXISTING UNDERGROUND UTILITIES AND SHALL NOTIFY OTHER REPRESENTATIVES OF OTHER UTILITIES IN THE VICINITY OF THE WORK.
5. ALL PROPERTIES OR FACILITIES IN THE SURROUNDING AREAS, PUBLIC OR PRIVATE, DESTROYED OR OTHERWISE DISTURBED DUE TO CONSTRUCTION, SHALL BE REPLACED AND/OR RESTORED TO THE ORIGINAL CONDITION BY THE CONTRACTOR.
6. MANHOLE, CATCH BASIN, GATE VALVES AND HYDRANT FINISH GRADES MUST BE CLOSELY CHECKED AND APPROVED BY THE ENGINEER BEFORE THE CONTRACTOR'S WORK IS CONSIDERED COMPLETE.
7. CONTRACTOR SHALL REMOVE AND DISPOSE OF OFF-SITE ANY TREES, BRUSH, STUMPS, TRASH OR OTHER UNWANTED DEBRIS AT THE OWNER'S DIRECTION, INCLUDING OLD BUILDING FOUNDATIONS AND FLOORS. BURNING OF TRASH, STUMPS OR OTHER DEBRIS SHALL NOT BE PERMITTED.
8. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY BARRICADING, LIGHTS AND TRAFFIC CONTROL DEVICES TO PROTECT THE WORK AND SAFELY CONTAIN TRAFFIC IN ACCORDANCE WITH "MMUTCD".
9. ALL EXCAVATIONS SHALL BE SLOPED, SHORED OR BRACED IN ACCORDANCE WITH MI-OSHA REQUIREMENTS. THE CONTRACTOR SHALL PROVIDE AN ADEQUATELY CONSTRUCTED AND BRACED SHORING SYSTEM FOR EMPLOYEES WORKING IN AN EXCAVATION THAT MAY EXPOSE EMPLOYEES TO THE DANGER OF MOVING GROUND.
10. ALL REFERENCES TO M.D.O.T. SPECIFICATIONS ARE TO BE IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS FOR CONSTRUCTION.

**PAVING NOTES:**

1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF TROY.
2. IN AREAS WHERE NEW PAVEMENTS ARE BEING CONSTRUCTED, THE TOPSOIL AND SOIL CONTAINING ORGANIC MATTER SHALL BE REMOVED PRIOR TO PAVEMENT CONSTRUCTION.
3. SUBGRADE UNDERCUTTING, INCLUDING BACKFILLING SHALL BE PERFORMED TO REPLACE MATERIALS SUSCEPTIBLE TO FROST HEAVING AND UNSTABLE SOIL CONDITIONS. ANY EXCAVATIONS THAT MAY BE REQUIRED BELOW THE TOPSOIL IN FILL SECTIONS OR BELOW SUBGRADE IN CUT SECTIONS, WILL BE CLASSIFIED AS SUBGRADE UNDERCUTTING.
4. SUBGRADE UNDERCUTTING SHALL BE PERFORMED WHERE NECESSARY AND THE EXCAVATED MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR. ANY SUBGRADE UNDERCUTTING SHALL BE BACKFILLED WITH SAND OR OTHER SIMILAR APPROVED MATERIAL. BACKFILL SHALL BE COMPACTED TO 95% OF THE MAXIMUM UNIT WEIGHT (PER ASTM D-1557) UNLESS OTHERWISE SPECIFIED.
5. BACKFILL UNDER PAVED AREAS SHALL BE AS SPECIFIED ON DETAILS.
6. ANY SUB-GRADE WATERING REQUIRED TO ACHIEVE REQUIRED DENSITY SHALL BE CONSIDERED INCIDENTAL TO THE JOB.

**GENERAL UTILITY NOTES:**

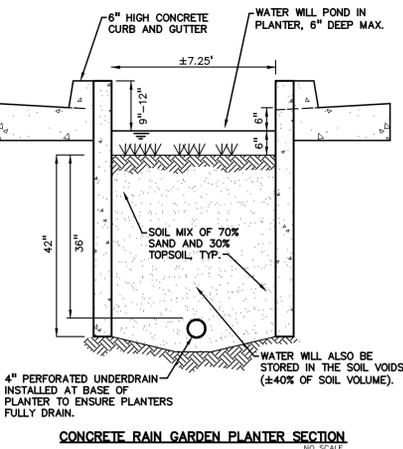
1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE CITY OF TROY.
2. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO VERIFY AND/OR OBTAIN ANY INFORMATION NECESSARY REGARDING THE PRESENCE OF UNDERGROUND UTILITIES, WHICH MIGHT AFFECT THIS JOB.
3. ALL TRENCHES UNDER OR WITHIN THREE (3) FEET OR THE FORTY-FIVE (45) DEGREE ZONE OF INFLUENCE LINE OF EXISTING AND/OR PROPOSED PAVEMENT, BUILDING PAD OR DRIVE APPROACH SHALL BE BACKFILLED WITH SAND COMPACTED TO AT LEAST NINETY-FIVE (95) PERCENT OF MAXIMUM UNIT WEIGHT (ASTM D-1557). ALL OTHER TRENCHES TO BE COMPACTED TO 90% OR BETTER.
4. WHENEVER EXISTING MANHOLES OR SEWER PIPE ARE TO BE TAPPED, DRILL HOLES 4" CENTER TO CENTER, AROUND PERIPHERY OF OPENING TO CREATE A PLANE OF WEAKNESS JOINT BEFORE BREAKING SECTION OUT.
5. EXACT GRADES AND DEPTHS OF UTILITIES ARE TO BE CHECKED CLOSELY WITH THE FIELD ENGINEER PRIOR TO INSTALLATION.
6. REFER TO CITY OF TROY STANDARD DETAIL SHEETS FOR ADDITIONAL INFORMATION.

**RAIN GARDEN PLANTER NARRATIVE:**

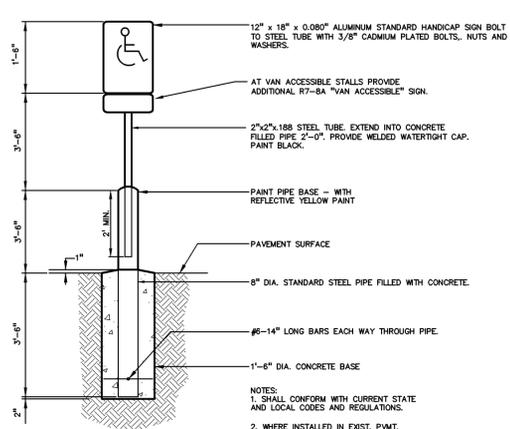
STORM RUNOFF FLOWS FROM THE PAVEMENT AREAS TO THE CONCRETE CURB AND GUTTER. THE CURB AND GUTTER CHANNELS FLOW TOWARDS ONE OF THE SPILLWAYS LOCATED AROUND THE PLANTER. THE PLANTERS WILL BE SIZED TO STORE AND PRE-TREAT THE "FIRST FLUSH" VOLUME FROM AREAS TRIBUTARY TO THE PLANTER. CALCULATIONS WILL BE PROVIDED ON THE CONSTRUCTION PLANS FOR EACH PLANTER.

THE STORMWATER PLANTERS WILL STORE RUNOFF TO A MAXIMUM DEPTH OF 6" AND ALLOW IT PERCOLATE INTO THE SOIL. THIS PROVIDING FILTERING OF THE RUNOFF THROUGH PERCOLATION AND THROUGH ABSORPTION BY THE PLANT MATERIALS. IF THE VOLUME OF RUNOFF EXCEEDS THE PLANTER STORAGE VOLUME IT WILL OVERFLOW VIA THE CATCH BASIN RIM LOCATED WITHIN THE PLANTER. THE PLANTERS ARE DESIGNED TO TREAT THE FIRST FLUSH VOLUME FROM SURFACE DRAINAGE ONLY.

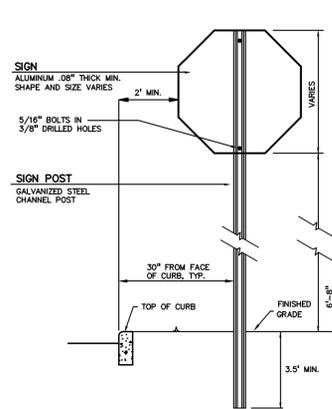
THIS METHOD OF PRE-TREATING SURFACE DRAINAGE HAS BEEN PROVEN SUCCESSFUL IN URBAN SETTINGS AND SHOULD REDUCE THE VOLUME OF STORMWATER RUNOFF ENTERING THE CITY'S SEWER SYSTEM FOR SOME OF THE RAINFALL EVENTS ON AN ANNUAL BASIS BY ALLOWING MORE STORMWATER TO PERCOLATE INTO THE GROUND RATHER THAN BE COLLECTED IN A STORM SEWER SYSTEM. HIGHER INTENSITY STORMS WILL CAUSE THE PLANTERS TO OVERFLOW INTO THE STORM SYSTEM WHERE THE RUNOFF WILL BE STORED IN UNDERGROUND OVER-SIZED PIPES AND RELEASED TO THE CITY SEWER SYSTEM AT A REDUCED RATE.



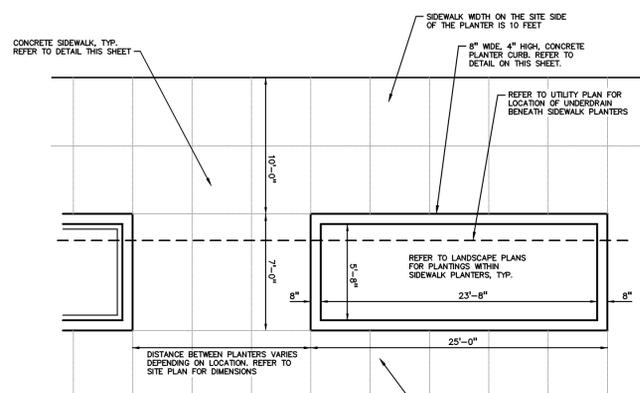
**CONCRETE RAIN GARDEN PLANTER SECTION**  
NOT TO SCALE



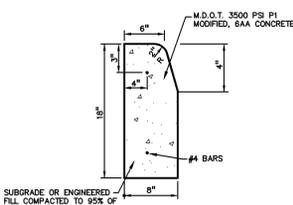
**SIGN AND POST INSTALLATION IN PAVED AREAS**  
NOT TO SCALE



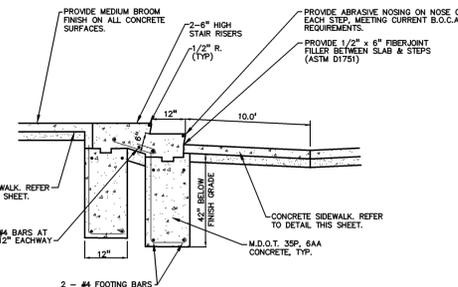
**SIGN AND POST INSTALLATION IN LANDSCAPED AREAS**  
NOT TO SCALE



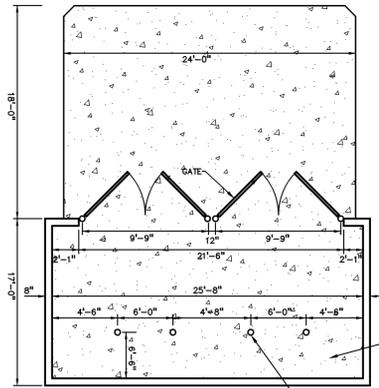
**SIDEWALK PLANTER DETAIL**  
NOT TO SCALE



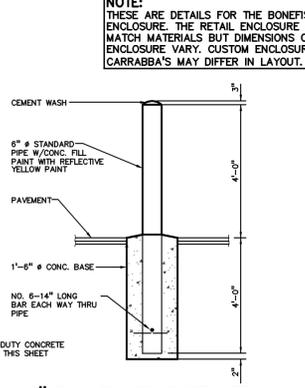
**CONCRETE PLANTER CURB**  
NOT TO SCALE



**CONCRETE STAIRS DETAIL**  
TO BE USED ALONG TROY CENTER DRIVE, WEST OF THE BONIFER RESTAURANT

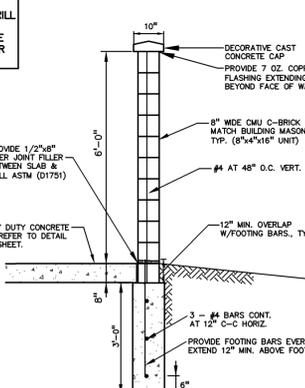


**DOUBLE DUMPSTER ENCLOSURE DETAIL**

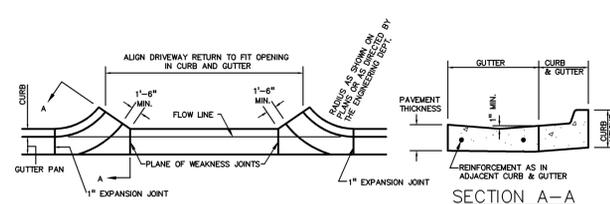


**6" DIA. GUARD POST DETAIL**

**TRASH ENCLOSURE DETAILS**  
NOT TO SCALE



**DUMPSTER ENCLOSURE WALL CROSS SECTION**

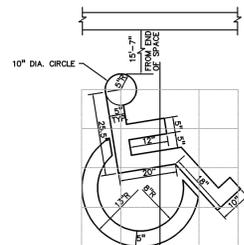


**M.D.O.T. DRIVEWAY OPENING-DETAIL 'M'**  
NOT TO SCALE



**RESERVED PARKING ONLY**

**BARRIER FREE PARKING SIGN DETAIL**  
NOT TO SCALE



**STANDARD "BARRIER FREE" SYMBOL FOR PARKING SPACE**  
NOT TO SCALE



**"TO-GO" PARKING ONLY**

**TO GO PARKING SIGN DETAIL**  
NOT TO SCALE

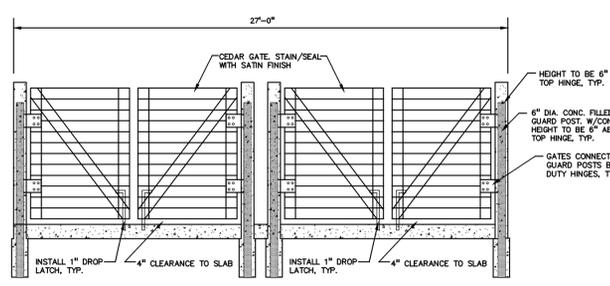


**NO PARKING FIRE LANE**

**NO PARKING SIGN DETAIL**  
NOT TO SCALE

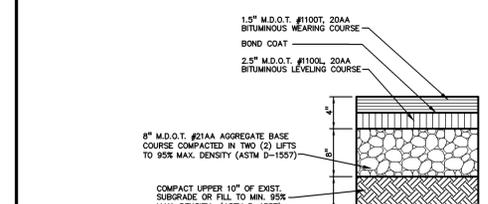


**STOP SIGN DETAIL**  
NOT TO SCALE

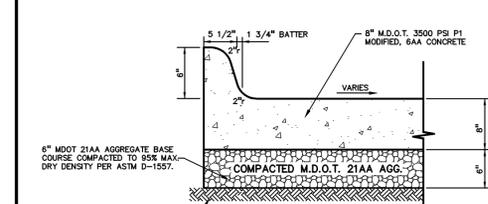


**FRONT ELEVATION**

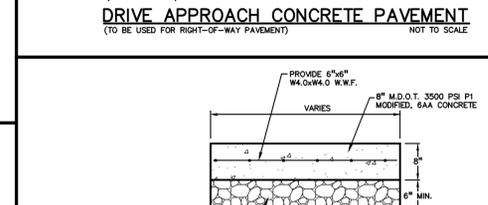
**NOTE:** THESE ARE DETAILS FOR THE BONIFER GRILL ENCLOSURE. THE RETAIL ENCLOSURE WILL MATCH MATERIALS BUT DIMENSIONS OF THE ENCLOSURE VARY. CUSTOM ENCLOSURE FOR CARRABBA'S MAY DIFFER IN LAYOUT.



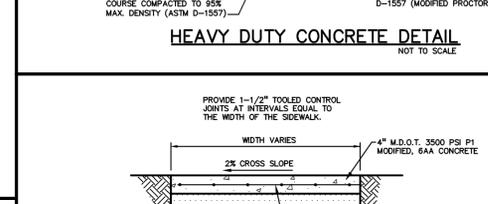
**STANDARD DUTY ASPHALT DETAIL**  
(NOT FOR USE IN THE RIGHT-OF-WAY)



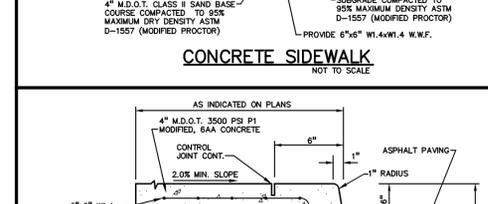
**DRIVE APPROACH CONCRETE PAVEMENT**  
(TO BE USED FOR RIGHT-OF-WAY PAVEMENT)



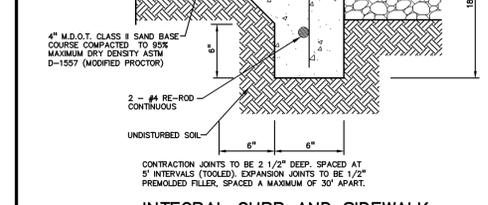
**HEAVY DUTY CONCRETE DETAIL**  
NOT TO SCALE



**CONCRETE SIDEWALK**  
NOT TO SCALE



**INTEGRAL CURB AND SIDEWALK**  
NOT TO SCALE



**18"x6" STANDARD CONCRETE CURB AND GUTTER**  
NOT TO SCALE

NO.	DATE	DESCRIPTION
1	02/15/13	REVISED PER CITY COMMENTS
2	02/26/13	REVISED PER CITY COMMENTS
3	03/11/13	REVISED PER CITY COMMENTS
4	03/11/13	REVISED PER CITY COMMENTS
5	03/11/13	REVISED PER CITY COMMENTS
6	03/11/13	REVISED PER CITY COMMENTS
7	03/11/13	REVISED PER CITY COMMENTS
8	03/11/13	REVISED PER CITY COMMENTS
9	03/11/13	REVISED PER CITY COMMENTS
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13	03/11/13	REVISED PER CITY COMMENTS
14	03/11/13	REVISED PER CITY COMMENTS
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16	03/11/13	REVISED PER CITY COMMENTS
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44	03/11/13	REVISED PER CITY COMMENTS
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46	03/11/13	REVISED PER CITY COMMENTS
47	03/11/13	REVISED PER CITY COMMENTS
48	03/11/13	REVISED PER CITY COMMENTS
49	03/11/13	REVISED PER CITY COMMENTS
50	03/11/13	REVISED PER CITY COMMENTS

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2430 Rochester Ct. Suite 100  
Troy, MI 48063-1872  
Phone: (248) 689-9090  
Fax: (248) 689-1044  
website: www.peainc.com

**GROUP 10 MANAGEMENT**  
30500 NORTHWESTERN HIGHWAY, SUITE #225  
PARKINGTON HILLS, MICHIGAN, 48364

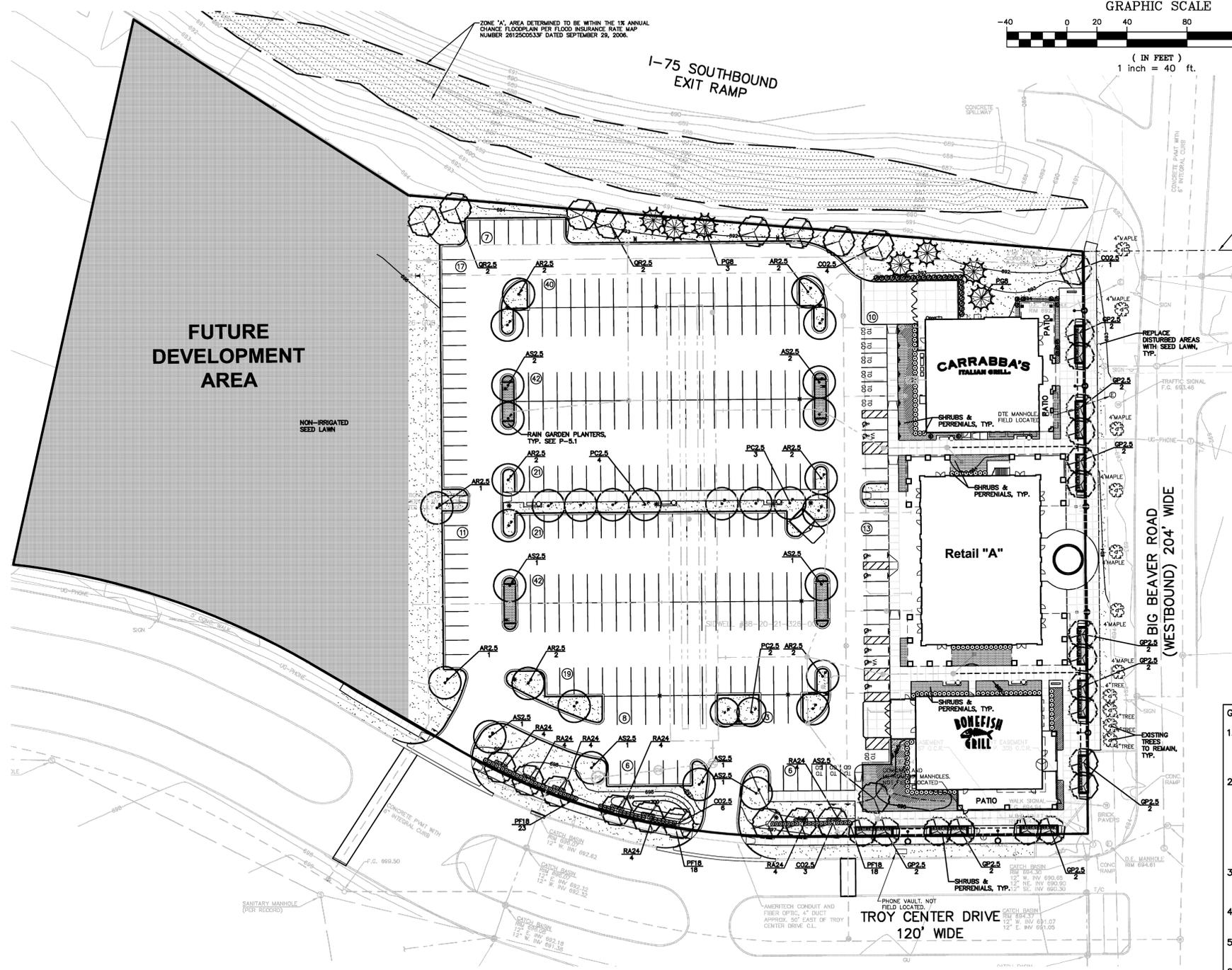
**NOTES AND DETAILS OF THE GALLERIA OF TROY**  
PART OF THE SOUTHWEST 1/4 OF SECTION 21, T. 2N., R. 11E.  
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES. P.M. P.M.  
DN. SUR. N&F P.M.  
PB. DN. PB. SUR. N&F P.M.  
PB. DN. PB. SUR. N&F P.M.

ORIGINAL ISSUE DATE: NOV. 12, 2012  
PEA JOB NO. 2012-070  
SCALE: NONE  
DRAWING NUMBER:  
**P-5.1**

**NOT FOR CONSTRUCTION**

REF: L:\2012070\DWG\TOPD-12070.DWG  
REF: L:\2012070\DWG\SITE PLAN\2012-12070.DWG  
REF: L:\2012070\DWG\SITE PLAN\TBLK-12070.DWG



**TREE LIST:**

QUANTITY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	SPEC COMMENTS
14	AR2.5	Red Maple	<i>Acer rubrum</i>	2.5" Cal.	B&B Native
11	AS2.5	Sugar Maple	<i>Acer saccharum 'Green Mountain'</i>	2.5" Cal.	B&B Native
14	CO2.5	Common Hackberry	<i>Celtis occidentalis</i>	2.5" Cal.	B&B Native
18	GP2.5	Princeton Sentry Ginkgo (Male)	<i>Ginkgo biloba 'Princeton Sentry'</i>	2.5" Cal.	B&B Non-Native
9	PC2.5	Cleveland Select Pear	<i>Pyrus calleryana 'Cleveland Select'</i>	2.5" Cal.	B&B Non-Native
7	PG8	Black Hills Spruce	<i>Picea glauca 'Densata'</i>	8' Ht.	B&B Non-Native
4	QR2.5	Red Oak	<i>Quercus rubra</i>	2.5" Cal.	B&B Native
54% Native Trees					

**SHRUB PLANT LIST:**

QUANTITY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	SPEC COMMENTS
59	PF18	McKay's White Potentilla	<i>Potentilla fruticosa 'McKay's White'</i>	18" Ht.	Cont. Native
28	RA24	Gro Low Sumac	<i>Rhus aromatica 'Gro-Low'</i>	24" Sprd	Cont. Native
100% Native Shrubs					

NOT FOR CONSTRUCTION

NO.	BY	CHKD	DESCRIPTION	DATE
1	JPB		REVISED PER CITY COMMENTS	07/15/13
2	JPB		REVISED PER CITY COMMENTS	07/25/13
3	JPB		REVISED PER CITY COMMENTS	07/25/13

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Fax: (248) 689-1044  
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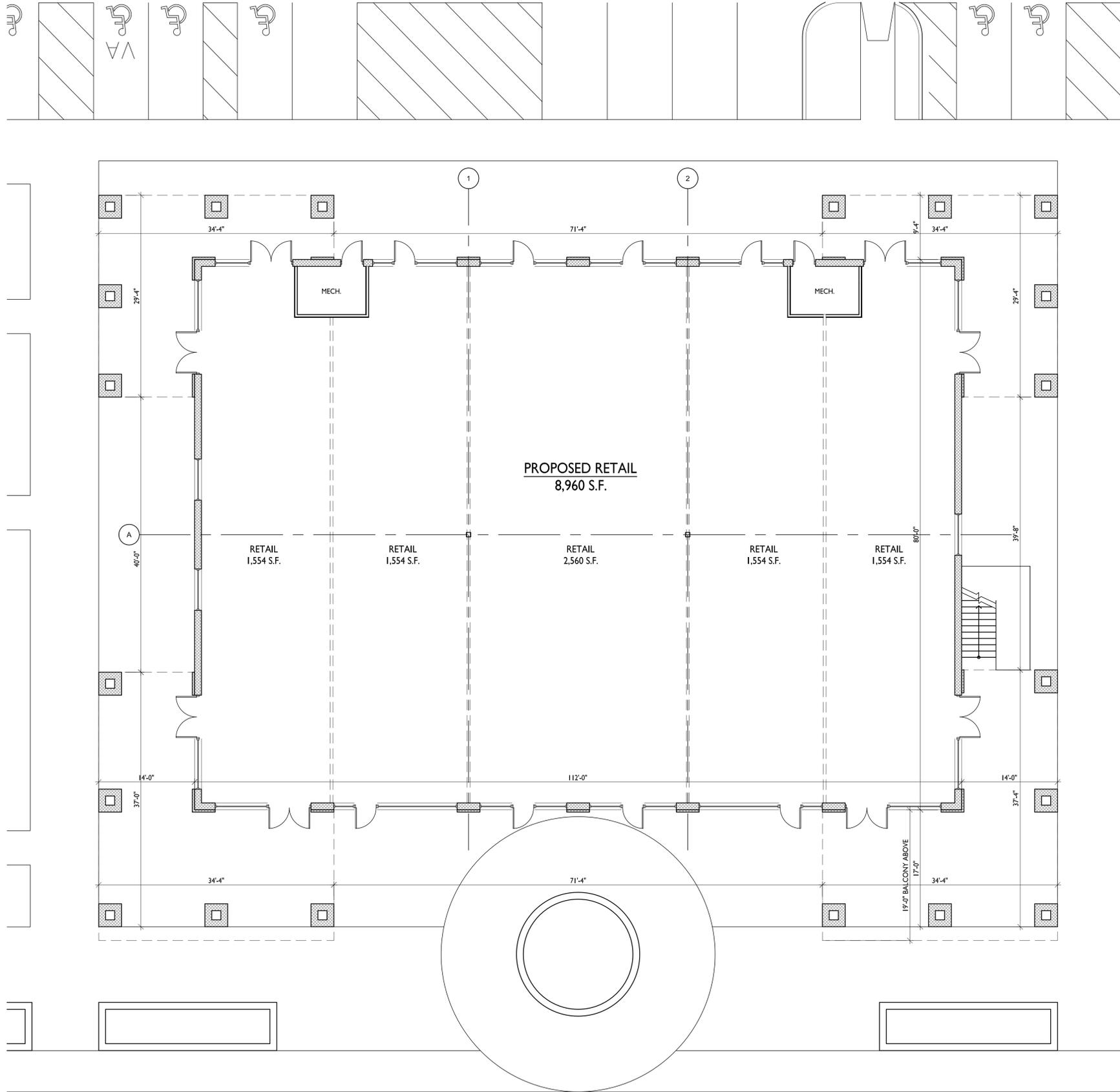
**GROUP 10 MANAGEMENT**  
30500 NORTHWESTERN HIGHWAY, SUITE #625  
FARMINGTON HILLS, MICHIGAN 48334

**OVERALL LANDSCAPE PLAN**  
**THE GALLERIA OF TROY**  
PART OF THE GALLERIA OF TROY, R. 11E,  
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES. JPB DN. JPB SUR. N&F P.M. JPB

ORIGINAL ISSUE DATE: NOV. 12, 2012  
PEA JOB NO. 2012-070  
SCALE: 1" = 40'  
DRAWING NUMBER:  
**L-1.1**






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

**BOWERS ASSOCIATES**  
 ARCHITECTURE DESIGN  
 2400 SOUTH HURON PARADISEWAY • ANN ARBOR, MI 48104  
 P: 734.769.4210  
 WWW.BOWERSARCH.COM

CONSULTANT + NAME

PROJECT + INFORMATION  
**PROPOSED HOTEL DEVELOPMENT**  
 BIG BEAVER ROAD  
 TROY, MICHIGAN

PROJECT + NUMBER  
**12-213**

ISSUE + DATE  
 21 JAN 2013 OWN. REV.  
 14 FEB 2013 CITY APPR.

SHEET + TITLE  
 SCHEMATIC FLOOR PLAN  
 12213MAST.dwg

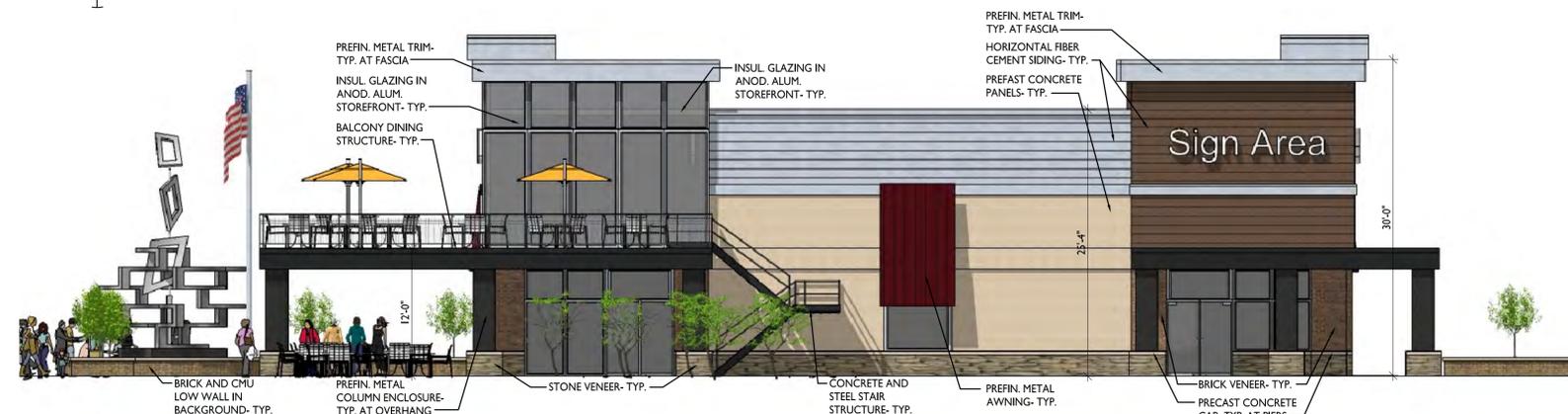
SHEET + NUMBER  
**A1.00**



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



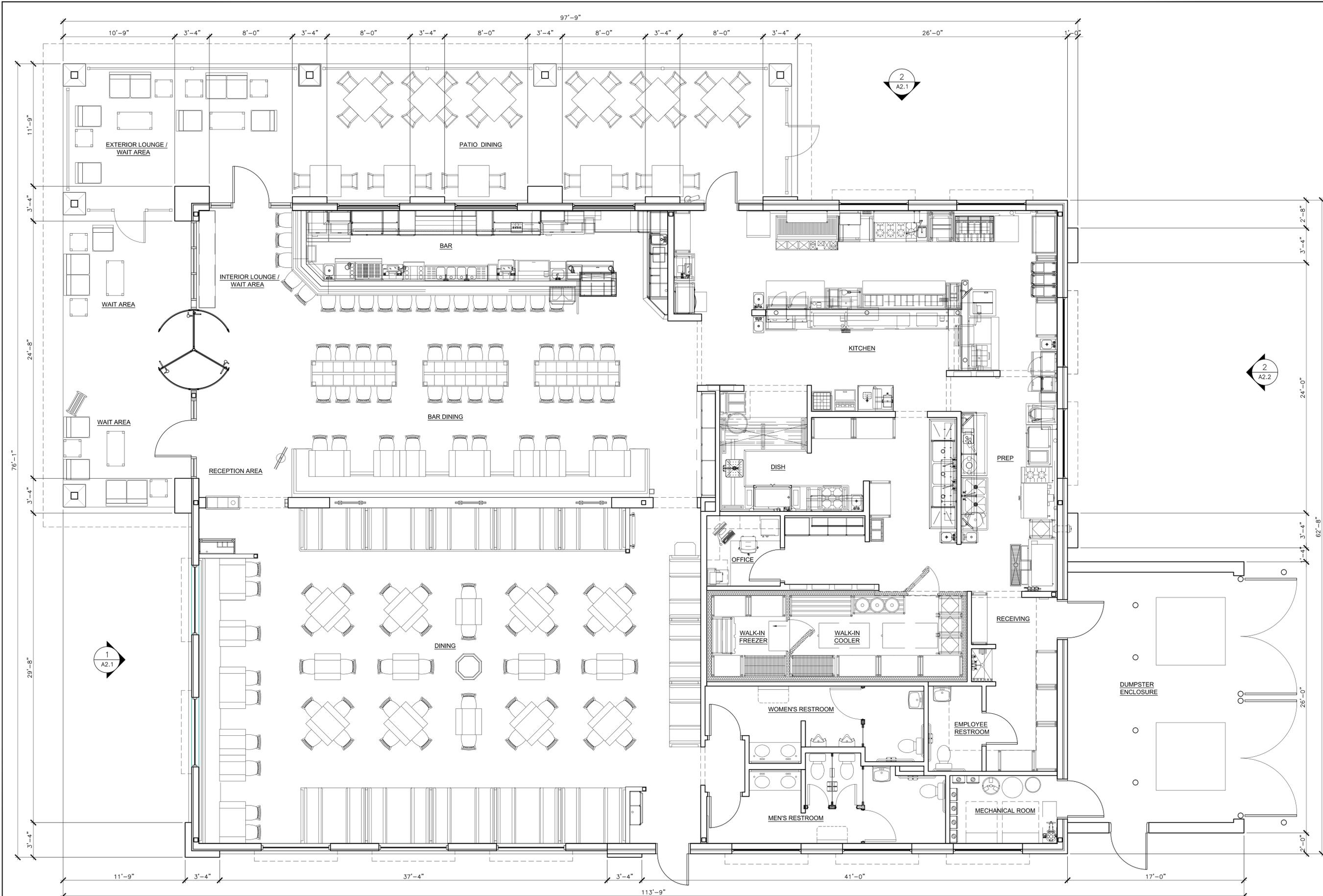
2 NORTH ELEVATION  
SCALE: 1/8" = 1'-0"



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



4 EAST ELEVATION  
SCALE: 1/8" = 1'-0"



**1 FLOOR PLAN**  
A1.1 1/4" = 1'-0"



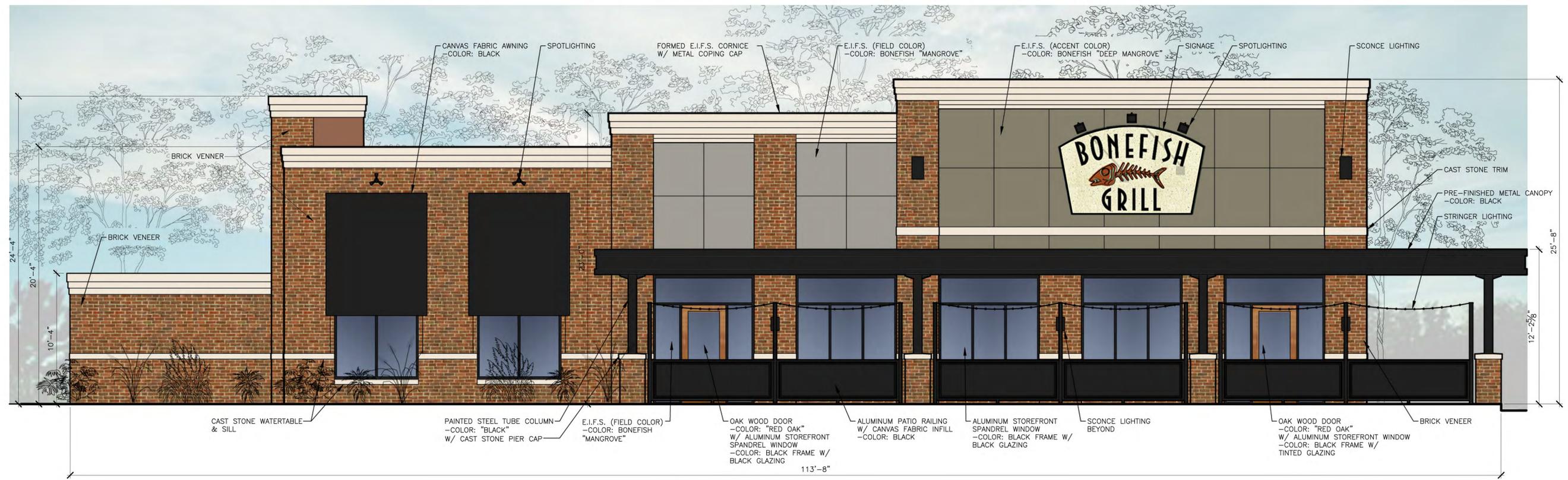


DRAWN BY	DWM
CHECKED BY	HCG
DATE	1/21/13
REVISIONS	

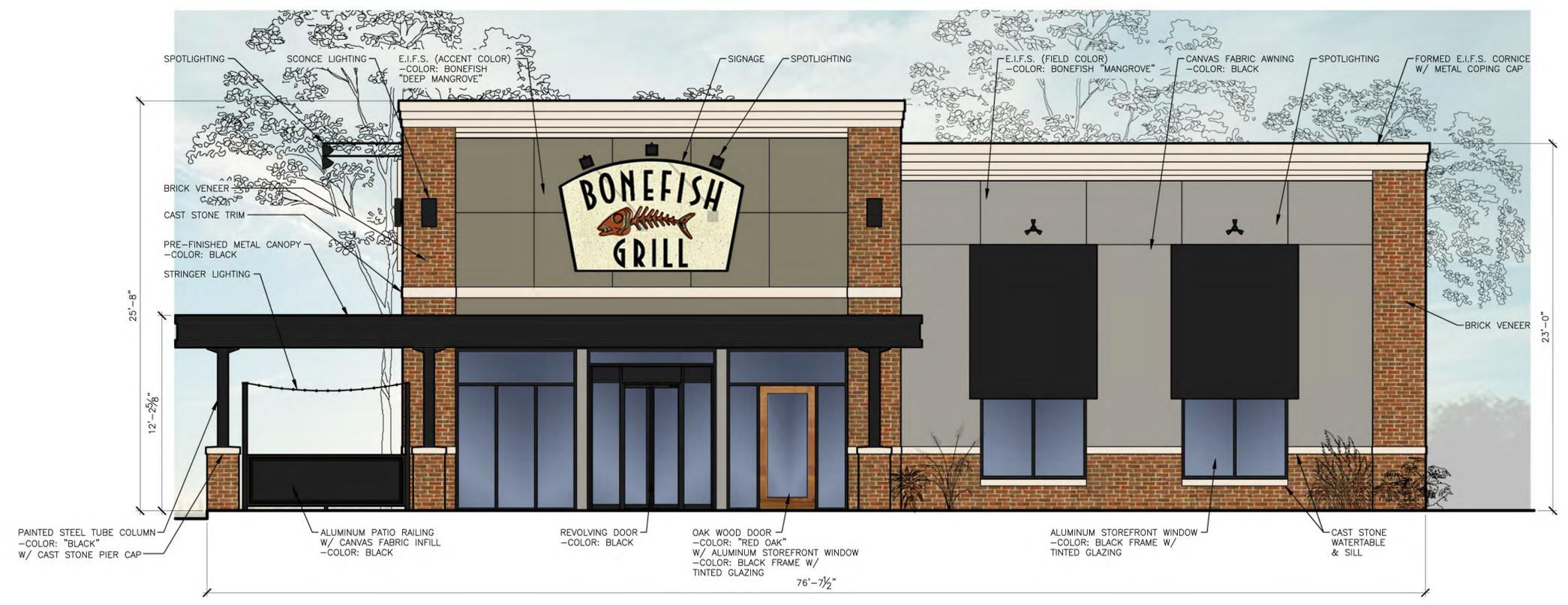
SHEET TITLE  
EXTERIOR ELEVATIONS & DETAILS

SHEET NUMBER

**A2.1**



2 SIDE - WEST ELEVATION  
A2.1 1/4" = 1'-0"



1 FRONT - SOUTH ELEVATION  
A2.1 1/4" = 1'-0"



H. Carleton Godsey Associates Architects  
207 West Market Street  
Louisville, Kentucky 40202  
Phone: 502.583.6611  
Fax: 502.584.4557

DRAWN BY: DWM  
CHECKED BY: HCG  
DATE: 1/21/13  
REVISIONS:

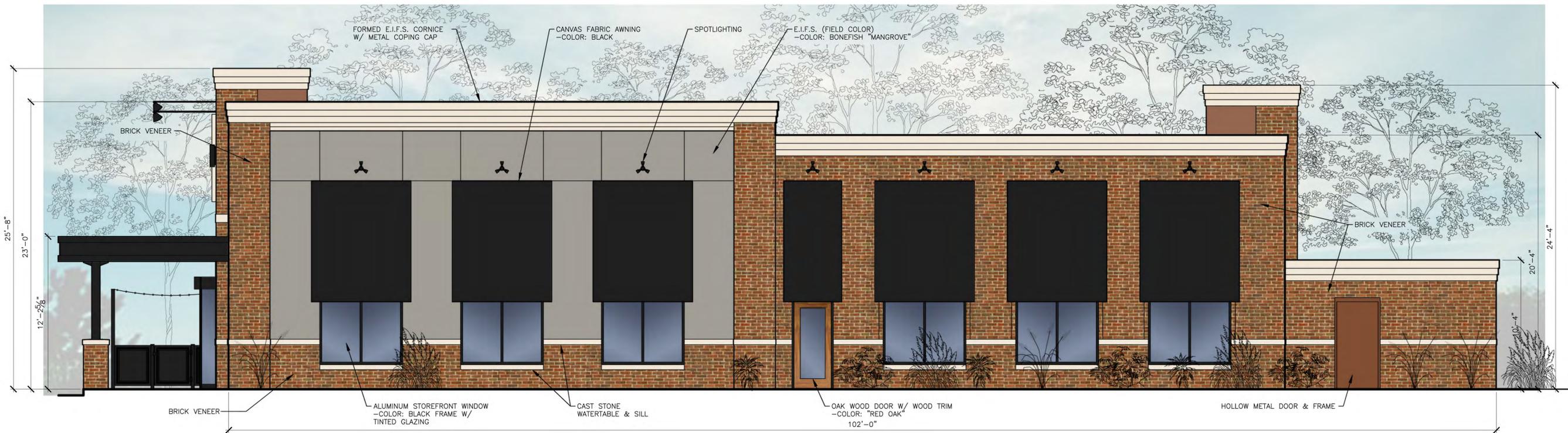
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EXTERIOR ELEVATIONS

SHEET NUMBER

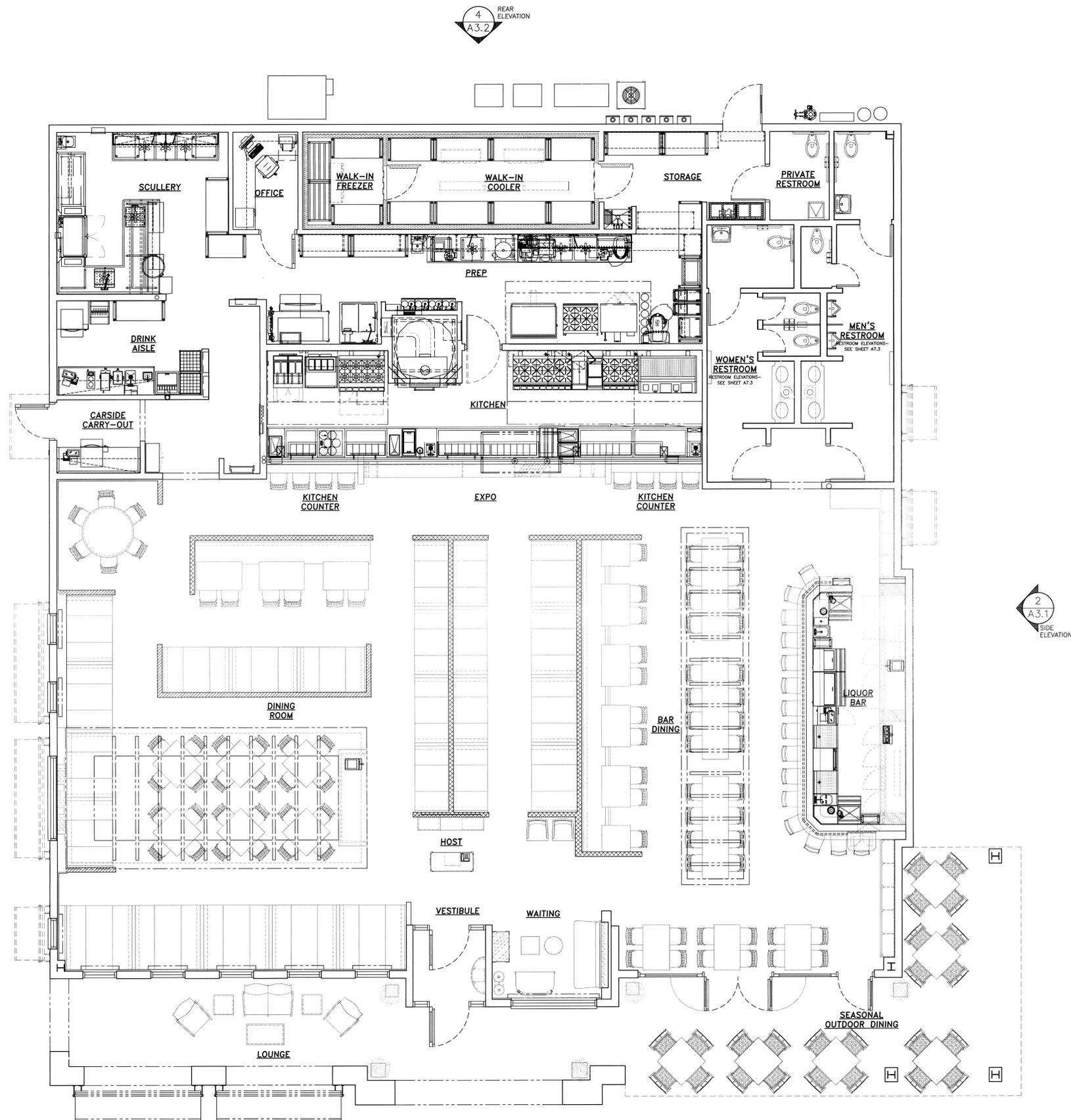
A2.2



2 REAR - NORTH ELEVATION  
A2.2 1/4" = 1'-0"



1 SIDE - EAST ELEVATION  
A2.2 1/4" = 1'-0"



**JON W. SAMMER**  
 ARCHITECT, AIA  
 3921 OLD LEE HWY  
 SUITE 72-B  
 FAIRFAX, VIRGINIA 22030  
 (703) 591-0747

SUBMISSION AND REVISION DATES	
NUM.	DESCRIPTION
11/09/2012	PLANNING SUBMISSION

REVISION SYMBOLS  
 DOES NOT APPLY TO THIS SHEET  
 APPLIES TO THIS SHEET

# CARRABBA'S

ITALIAN GRILL

TROY, MICHIGAN

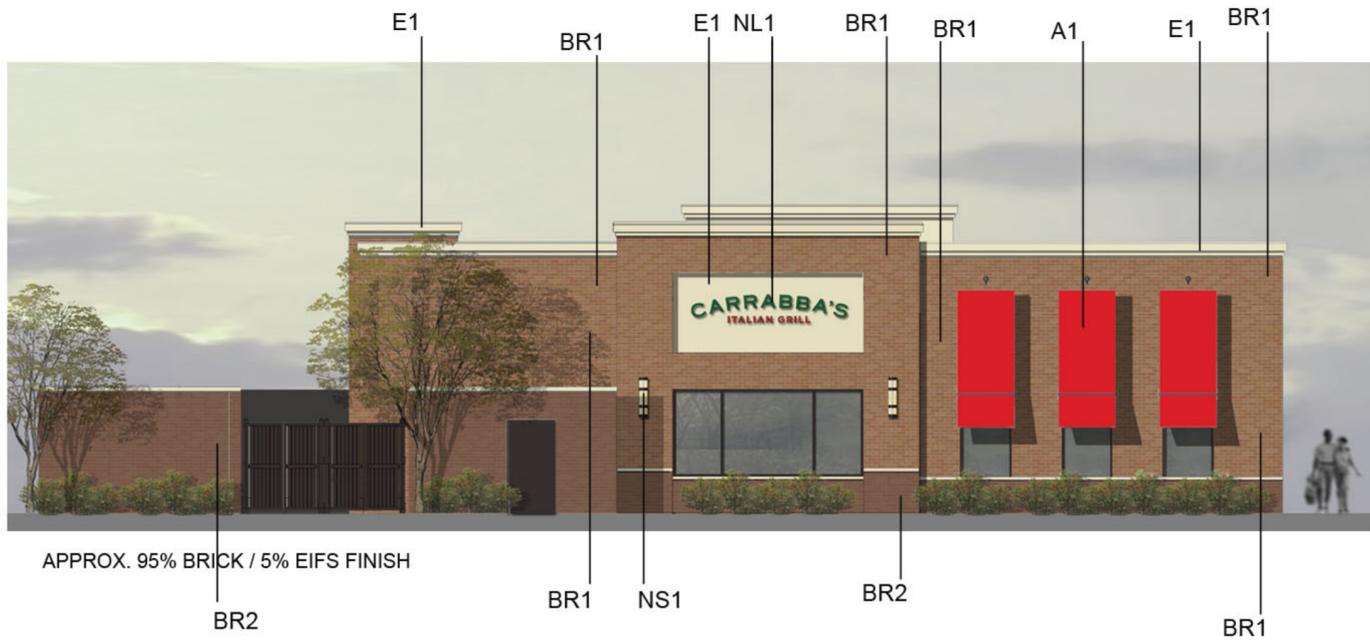
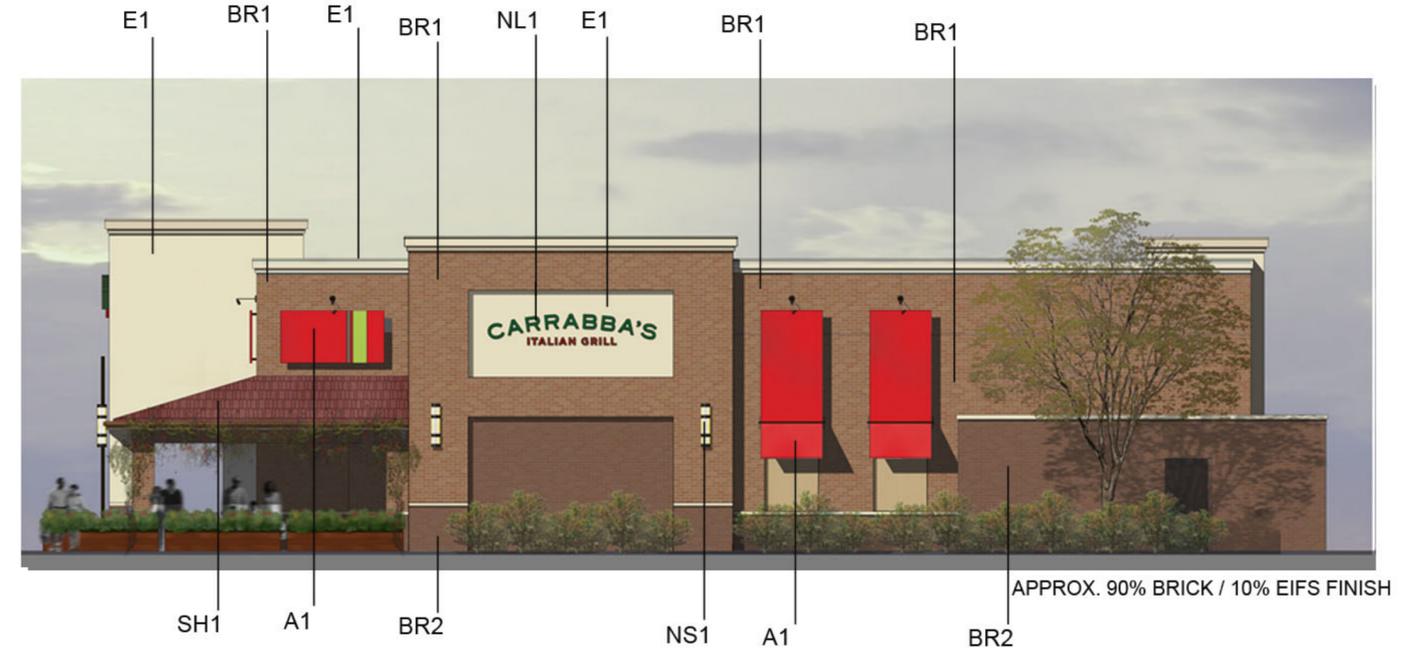
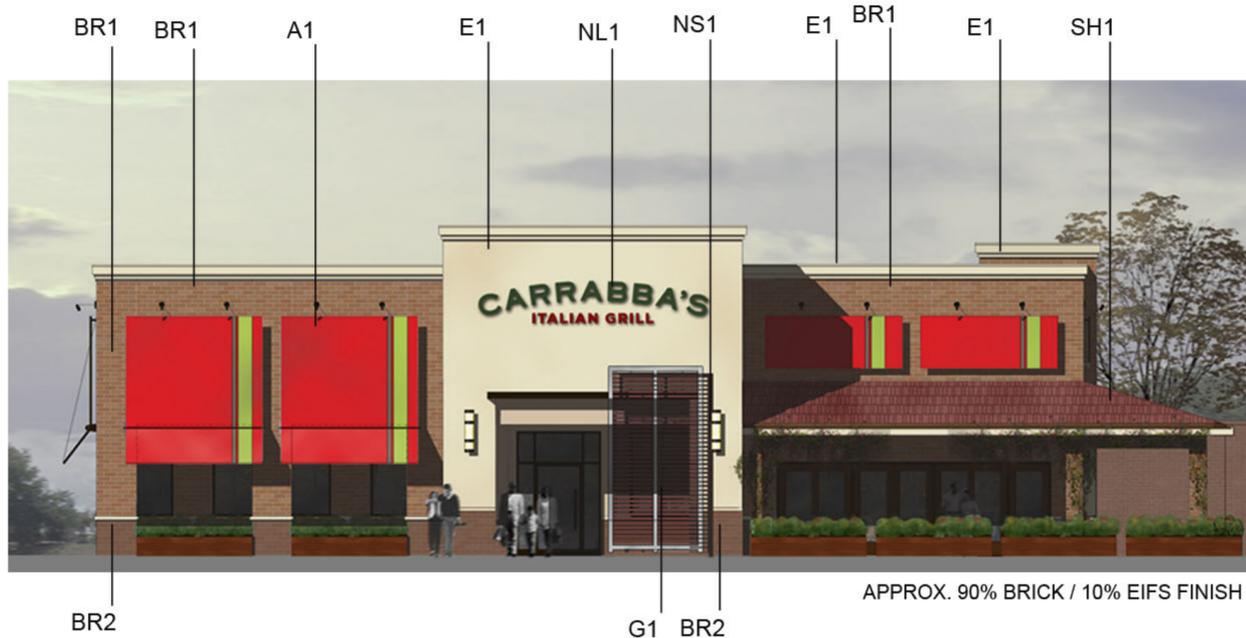
SEAL:

I CERTIFY THAT THESE DRAWINGS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED ARCHITECT UNDER THE LAWS OF THE STATE OF MICHIGAN. LICENSE NUMBER 1301047298. EXPIRATION DATE 10/31/2013.

SCALE: 1/4" = 1'-0"  
 UNO  
 PROJECT NO. CBTR\_1211

SHEET TITLE  
 FLOOR PLAN

SHEET  
 A1  
 OF



### FINISHES:

E1 EIFS WALLS:  
SHERWIN WILLIAMS COLOR  
"ACCESSIBLE BEIGE"

E2 EIFS WALLS:  
SHERWIN WILLIAMS COLOR  
"BASKET BEIGE"

A1 FABRIC AWNING  
BY OTHERS

E3 EIFS WALLS:  
SHERWIN WILLIAMS COLOR  
"SUPERIOR BRONZE"

CS1 NEW CAR SIDE

SH1 SHINGLE ROOF

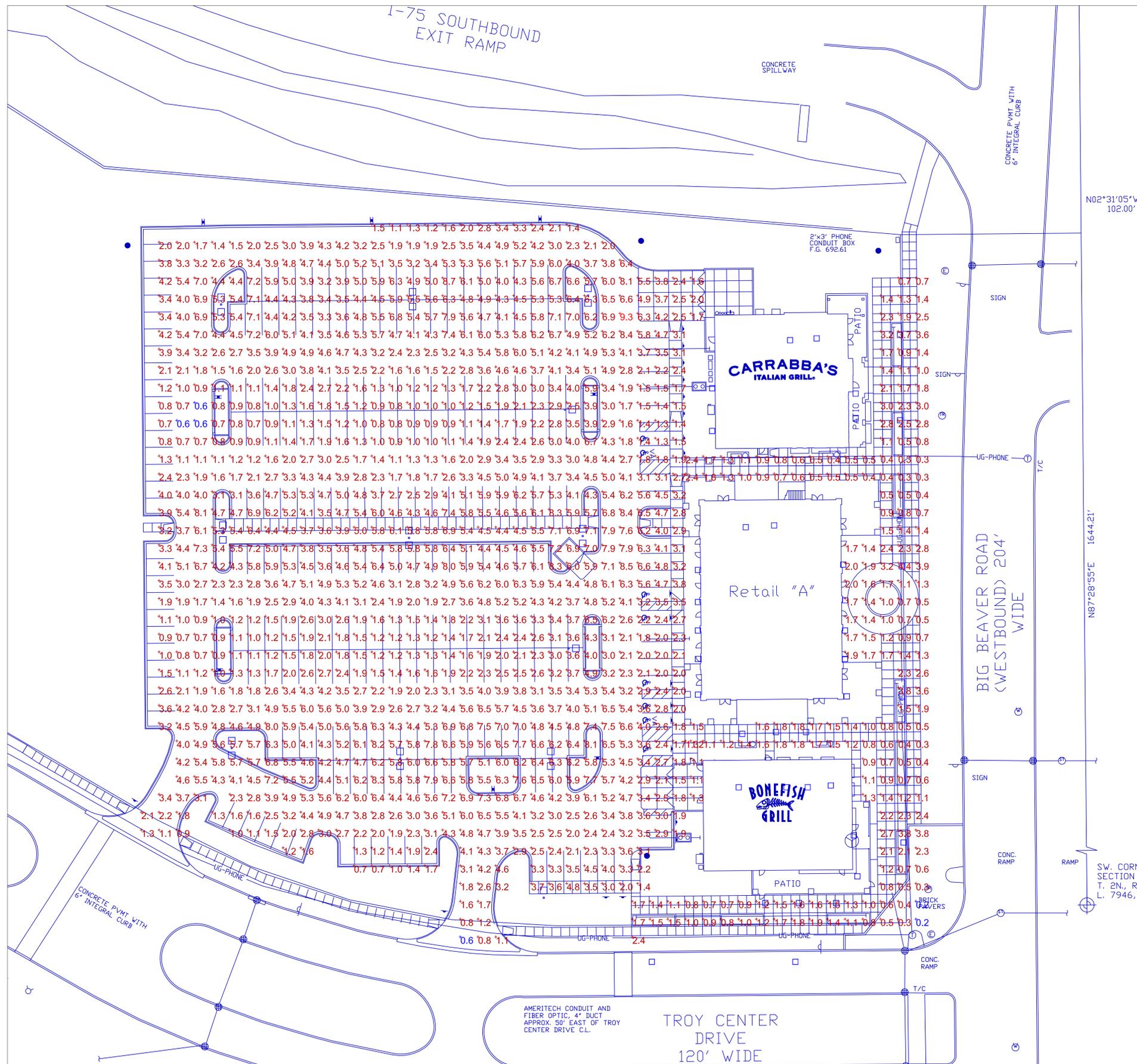
BR2 DARK BRICK  
VENEER

BR1 MEDIUM BRICK  
VENEER

G1 IPEI GRILL

NL1 NEW CARRABBA'S  
LOGO

NS1 NEW SCONCES



Symbol	Label	Qty	Catalog Number	Description	Lamp	File	Lumens	LLF	Watts
□	A	3	KSF2 400M R3	Specification Area Luminaire, 400W Metal Halide, R3 Reflector, Full Cutoff Meets the 'NIGHTTIME FRIENDLY' CRITERIA	ONE 400 WATT CLEAR ED28 PULSE START METAL HALIDE IN HORIZONTAL POSITION	KSF2_400M_R 3ies	38000	0.72	456
□	B	9	KSF2 400M R3	Specification Area Luminaire, 400W Metal Halide, R3 Reflector, Full Cutoff Meets the 'NIGHTTIME FRIENDLY' CRITERIA	ONE 400 WATT CLEAR ED28 PULSE START METAL HALIDE IN HORIZONTAL POSITION	KSF2_400M_R 3ies	38000	0.72	912
□	C	7	CAMPANA-CNS5P1-FT10C-3L3HS-72W-24K-IES	Series pendant	16x4 LED chips	CAMPANA-CNS5P1-FT10C-3L3HS-72W-24K-IES	5070	1.00	72
□	D	30	OW1344	EXTRUDED ALUMINUM HOUSING WITH CAST ALUMINUM ENDS FORMED WHITE ENAMEL STEEL REFLECTOR TRANSLUCENT WHITE ACRYLIC LINEAR PRISMATIC LENS.	ONE 54 WATT HIGH OUTPUT T5 LINEAR FLUORESCENT LAMP RATED AT 5000 LUMENS.	OW1344-1FS54.IES	5000	0.72	63

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone #1	+	3.7 fc	9.3 fc	0.6 fc	15.5:1	6.2:1
Calc Zone #2	+	1.4 fc	4.4 fc	0.2 fc	22.0:1	7.0:1

No.	Label	X	Y	Z	MH	Orientation	Tilt	X	Y	Z
1	A	4796.0	4952.0	30.0	30.0	0.0	0.0	4796.0	4953.4	0.0
2	A	4810.0	5052.0	30.0	30.0	90.0	0.0	4811.4	5092.0	0.0
3	A	4808.0	5228.0	30.0	30.0	90.0	0.0	4809.4	5228.0	0.0
4	B	4821.0	5200.0	30.0	30.0	180.0	0.0			
5	B	4818.0	5155.0	30.0	30.0	0.0	0.0			
6	B	4800.0	5030.0	30.0	30.0	0.0	0.0			
7	B	4620.0	5036.0	30.0	30.0	0.0	0.0			
8	B	4615.0	5157.0	30.0	30.0	180.0	0.0			
9	B	4614.0	5285.0	30.0	30.0	180.0	0.0			
10	B	4722.0	5288.0	30.0	30.0	180.0	0.0			
11	B	4720.0	5154.0	30.0	30.0	0.0	0.0			
12	B	4715.0	5030.0	30.0	30.0	0.0	0.0			
13	C	4857.0	4916.0	18.0	18.0	0.0	0.0	4857.0	4916.0	0.0
14	C	4938.0	4916.0	18.0	18.0	0.0	0.0	4938.0	4916.0	0.0
15	C	4999.0	4983.0	18.0	18.0	0.0	0.0	4999.0	4983.0	0.0
16	C	4988.0	5085.0	18.0	18.0	0.0	0.0	4988.0	5085.0	0.0
17	C	4988.0	5138.0	18.0	18.0	0.0	0.0	4988.0	5138.0	0.0
18	C	4997.0	5220.0	18.0	18.0	0.0	0.0	4997.0	5220.0	0.0
19	C	4997.0	5288.0	18.0	18.0	0.0	0.0	4997.0	5288.0	0.0
20	D	4891.0	5214.0	30.0	30.0	0.0	0.0	4891.0	5214.0	0.0
21	D	4891.0	5238.0	30.0	30.0	0.0	0.0	4891.0	5238.0	0.0
22	D	4935.0	5285.0	30.0	30.0	0.0	0.0	4935.0	5285.0	0.0
23	D	4950.0	5286.0	30.0	30.0	0.0	0.0	4950.0	5286.0	0.0
24	D	4972.0	5235.0	30.0	30.0	0.0	0.0	4972.0	5235.0	0.0
25	D	4972.0	5221.0	30.0	30.0	0.0	0.0	4972.0	5221.0	0.0
26	D	4910.0	5160.0	30.0	30.0	0.0	0.0	4910.0	5160.0	0.0
27	D	4926.0	5161.0	30.0	30.0	0.0	0.0	4926.0	5161.0	0.0
28	D	4883.0	5136.0	30.0	30.0	0.0	0.0	4883.0	5136.0	0.0
29	D	4883.0	5118.0	30.0	30.0	0.0	0.0	4883.0	5118.0	0.0
30	D	4883.0	5102.0	30.0	30.0	0.0	0.0	4883.0	5102.0	0.0
31	D	4883.0	5086.0	30.0	30.0	0.0	0.0	4883.0	5086.0	0.0
32	D	4883.0	5066.0	30.0	30.0	0.0	0.0	4883.0	5066.0	0.0
33	D	4908.0	5044.0	30.0	30.0	0.0	0.0	4908.0	5044.0	0.0
34	D	4927.0	5045.0	30.0	30.0	0.0	0.0	4927.0	5045.0	0.0
35	D	4944.0	5045.0	30.0	30.0	0.0	0.0	4944.0	5045.0	0.0
36	D	4965.0	5139.0	30.0	30.0	0.0	0.0	4965.0	5139.0	0.0
37	D	4966.0	5119.0	30.0	30.0	0.0	0.0	4966.0	5119.0	0.0
38	D	4966.0	5102.0	30.0	30.0	0.0	0.0	4966.0	5102.0	0.0
39	D	4966.0	5086.0	30.0	30.0	0.0	0.0	4966.0	5086.0	0.0
40	D	4967.0	5085.0	30.0	30.0	0.0	0.0	4967.0	5085.0	0.0
41	D	4906.0	5014.0	30.0	30.0	0.0	0.0	4906.0	5014.0	0.0
42	D	4933.0	5014.0	30.0	30.0	0.0	0.0	4933.0	5014.0	0.0
43	D	4945.0	5014.0	30.0	30.0	0.0	0.0	4945.0	5014.0	0.0
44	D	4958.0	5015.0	30.0	30.0	0.0	0.0	4958.0	5015.0	0.0
45	D	4971.0	4987.0	30.0	30.0	0.0	0.0	4971.0	4987.0	0.0
46	D	4973.0	4984.0	30.0	30.0	0.0	0.0	4973.0	4984.0	0.0
47	D	4961.0	4949.0	30.0	30.0	0.0	0.0	4961.0	4949.0	0.0
48	D	4940.0	4949.0	30.0	30.0	0.0	0.0	4940.0	4949.0	0.0
49	D	4921.0	4949.0	30.0	30.0	0.0	0.0	4921.0	4949.0	0.0

**PEA**  
 PROFESSIONAL ENGINEERING ASSOCIATES, INC.  
 2430 ROCHESTER CT., SUITE 100  
 TROY, MICHIGAN 48063  
 PH 248-689-9090  
 PH 248-689-1044  
 FX 248-689-1044

**EPD**  
 CONSULTANT + NAME  
 ELECTRICAL POWER & DESIGN, INC.  
 8800 WOODLAND AVENUE  
 RED FORD, MICHIGAN 48240  
 PH 313-537-5980  
 PH 313-537-6826  
 FX 313-537-6826

PROJECT + INFORMATION  
**GALLERIA OF TROY PARKING LOT**

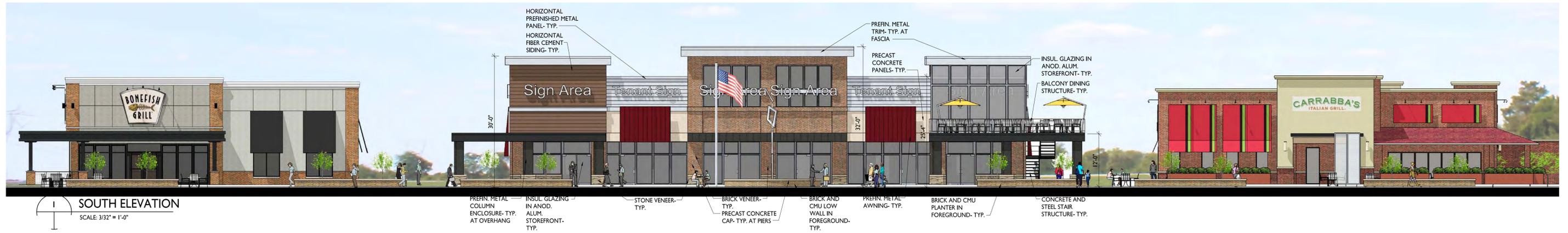
PROJECT + NUMBER  
**EPD# 2519**

ISSUE + DATE  
 11-10-12 REVIEW  
 12-03-12 CITY REVIEW  
 1-28-13 CITY REVIEW  
 03-07-13 CITY REVIEW

SHEET + TITLE  
 SITE PHOTO-METRIC

SHEET + NUMBER  
**E101**





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



2 NORTH ELEVATION  
SCALE: 3/32" = 1'-0"



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



2 EAST ELEVATION  
SCALE: 3/32" = 1'-0"



DATE: March 8, 2013

TO: Planning Commission

FROM: R. Brent Savidant, Planning Director

SUBJECT: PUBLIC HEARING - SPECIAL USE AND PRELIMINARY SITE PLAN REVIEW (File Number SU 401) – Proposed Midwest Industrial Metals Inc., 2222 Stephenson Highway, Section 26, Currently Zoned IB (Integrated Industrial and Business) District

The petitioner Midwest Industrial Metals, Inc. submitted the above referenced Special Use Approval and Preliminary Site Plan Approval application for a proposed materials recovery facility.

It should be noted, the operation moved into the building some time ago and began operations, including materials sorting outside. Code Enforcement received a number of complaints regarding the operation, and it was identified that the applicant needed Special Use Approval.

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

Attachments:

1. Maps
2. Report prepared by Carlisle/Wortman Associates, Inc.

cc: Applicant  
File/ SU 401

G:\SPECIAL USE\SU 401 Midwest Industrial Metals Inc Sec 26\SU 401 PC Memo 03 12 2013.docx

## PROPOSED RESOLUTION

PUBLIC HEARING - SPECIAL USE AND PRELIMINARY SITE PLAN REVIEW (File Number SU 401) – Proposed Midwest Industrial Metals Inc., 2222 Stephenson Highway, Section 26, Currently Zoned IB (Integrated Industrial and Business) District

**Resolution # PC-2013-03-**

Moved by:

Seconded by:

**RESOLVED**, That Special Use Approval and Preliminary Site Plan Approval for the proposed Midwest Industrial Metals Inc., 2222 Stephenson Highway, Section 26, Currently Zoned IB (Integrated Industrial and Business) District, be granted, subject to the following:

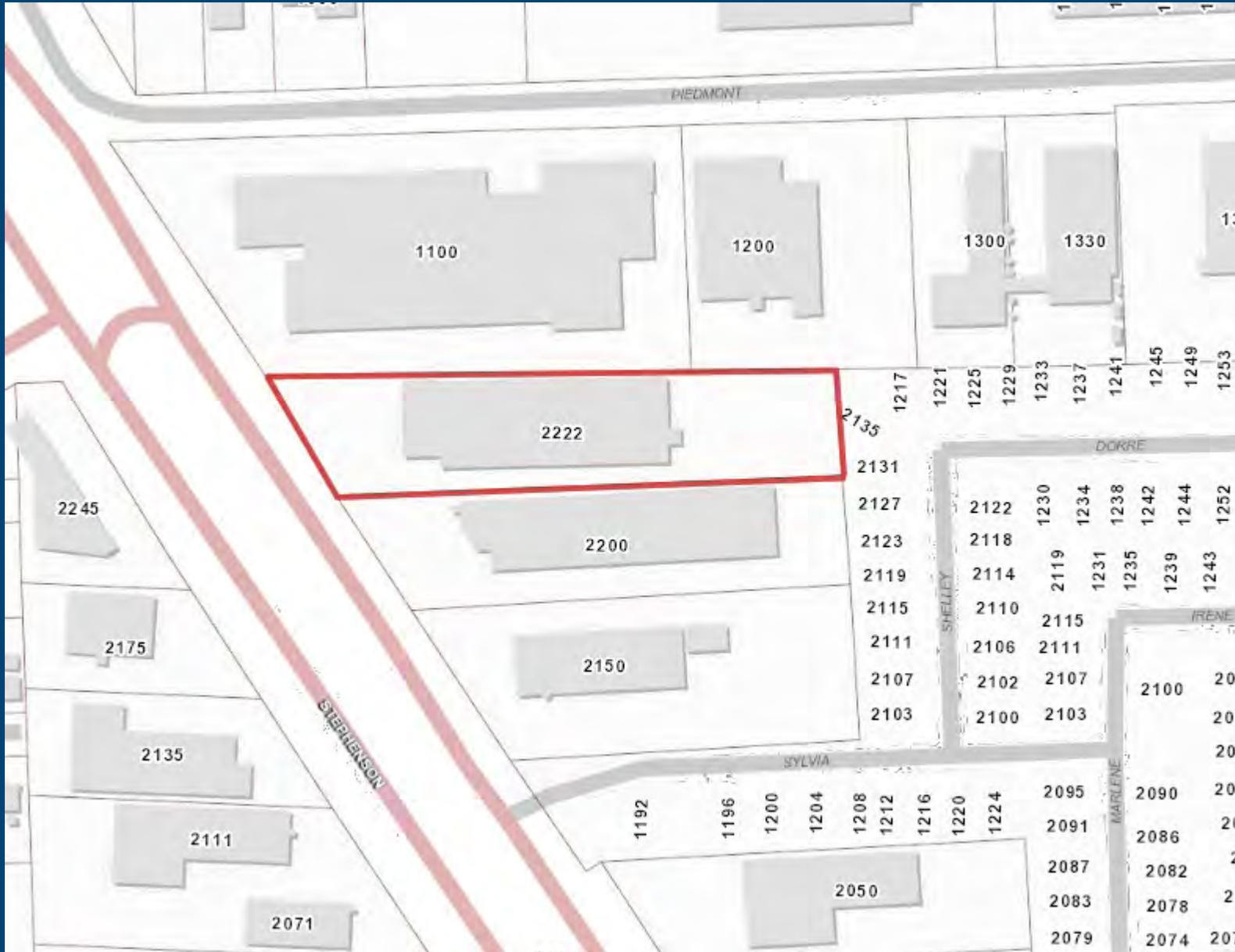
1. The applicant confirms that there is no outdoor storage or bins to be located in the rear of the site

Yes:

No:

Absent:

**MOTION CARRIED / FAILED**



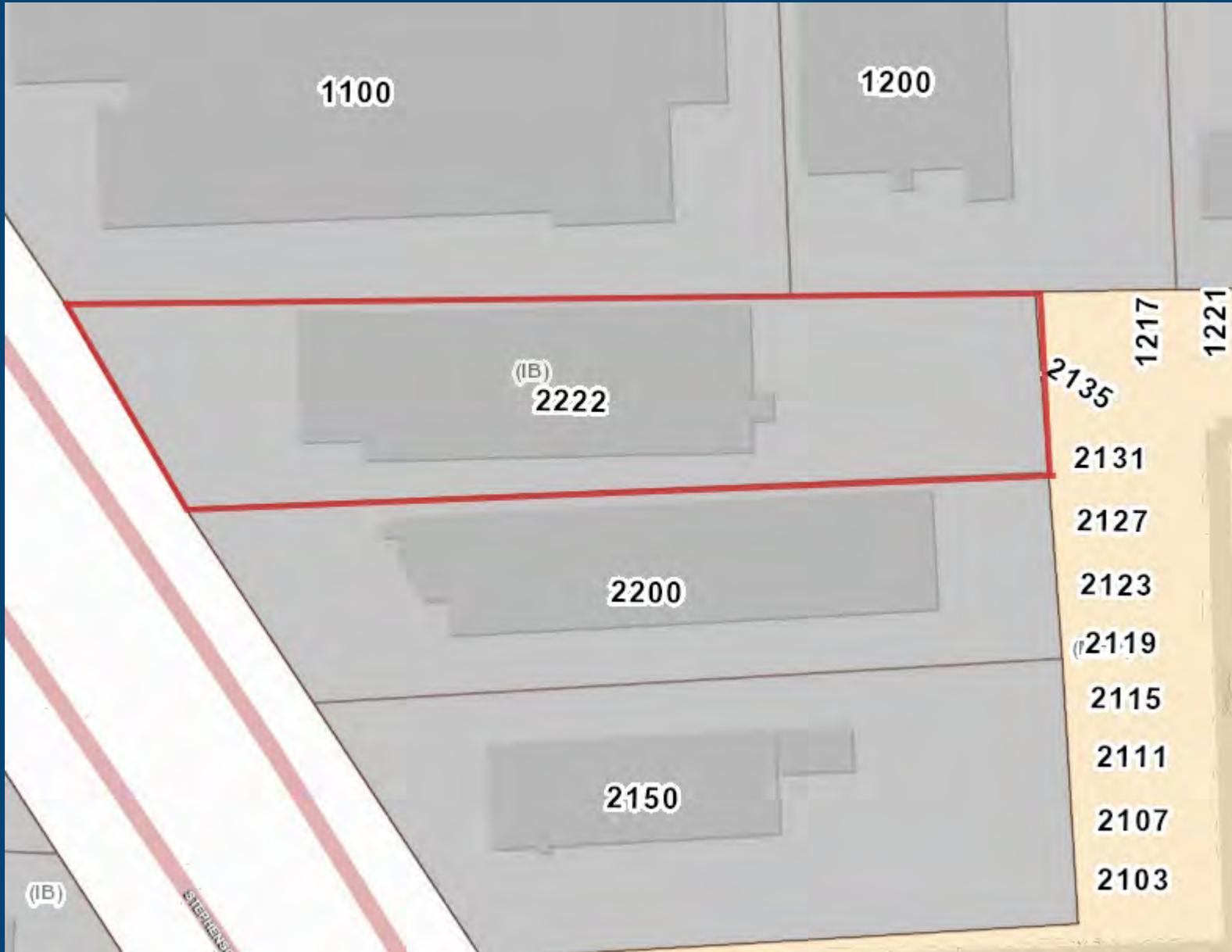
Legend

469 0 235 469Feet

Scale 1:2,817

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

Printed: 1/29/2013



## Legend

- Form Based Zoning (Current)**
- (PUD) Planned Unit Development
  - (CF) Community Facilities District
  - (EP) Environmental Protection District
  - (BB) Big Beaver Road (Form Based)
  - (MRF) Maple Road (Form Based)
  - (NN) Neighborhood Nodes (A-U)
  - (CB) Community Business
  - (GB) General Business
  - (IB) Integrated Industrial Business District
  - (O) Office Building District
  - (OM) Office Mixed Use
  - (P) Vehicular Parking District
  - (R-1A) One Family Residential District
  - (R-1B) One Family Residential District
  - (R-1C) One Family Residential District
  - (R-1D) One Family Residential District
  - (R-1E) One Family Residential District
  - (RT) One Family Attached Residential District
  - (MR) Multi-Family Residential
  - (MHP) Manufactured Housing
  - (UR) Urban Residential
  - (RC) Research Center District
  - (PV) Planned Vehicle Sales

275 0 138 275 Feet

Scale 1: 1,652

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

Printed: 1/29/2013



**CARLISLE/WORTMAN ASSOCIATES, INC.**  
*Community Planners /Landscape Architects*

605 S. Main, Suite 1  
Ann Arbor, MI 48104  
734-662-2200  
fax 734-662-1935

6401 Citation Drive, Suite E  
Clarkston, MI 48346  
248-625-8480  
fax 248-625-8455

Date: March 6, 2013

## **Special Use Review For City of Troy, Michigan**

<b>Applicant:</b>	Ark-Tec LLC
<b>Project Name:</b>	Materials Recovery Facility
<b>Plan Date:</b>	November 16, 2012
<b>Location:</b>	2222 Stephenson Highway – Between Sylvia Drive and Piedmont Drive
<b>Zoning:</b>	IB, Integrated Business District
<b>Action Requested:</b>	Special Use Approval
<b>Required Information:</b>	Deficiencies noted

### **PROJECT AND SITE DESCRIPTION**

We are in receipt of a special land use application which includes a site plan demonstrating existing site conditions related to the addition of an indoor materials recovery facility within an existing industrial building.

The applicant is proposing to utilize a portion of the existing industrial building to house a material recovery facility as part of their business operations. The site is located at 2222 Stephenson Highway. The site is zoned IB, Integrated Business District. Material recovery facilities are listed as a special use in the IB district.

**Figure 1. – Aerial Photograph**



Location of Subject Property:

The property is located on the east side of Stephenson Highway between Sylvia Drive and Piedmont Drive.

Size of Subject Property:

The parcel is approximately 1.928 acres in area.

Proposed Uses of Subject Parcel:

The applicant proposes to modify the southeastern portion of the existing industrial building for material resource operations.

Current Use of Subject Property:

The subject property currently maintains an approximate 25,900 s.f. industrial building.

Current Zoning:

The property is currently zoned IB, Integrated Business District.

Zoning Classification of Adjacent Parcels and Current Land Use:

Direction	Zoning	Use
North	IB, Integrated Business District	Industrial / Warehousing
South	IB, Integrated Business District	Industrial / Warehousing
East	MH, Manufactured Housing	Troy Mobile Home Villa
West	GB, General Business	Commercial

**NATURAL RESOURCES**

The site is improved with an existing 25,925 s.f. industrial building and other site improvements. No natural features exist; therefore the proposed site improvements will not impact any protected natural features.

*Items to be Addressed: None.*

**BUILDING LOCATION AND SITE ARRANGEMENT**

The existing building is located at the center of the site, with the parking in the front (west). No site improvements are proposed. All resource recovery operations will take place indoors.

*Items to be Addressed: None.*

**AREA, WIDTH, HEIGHT, SETBACKS**

Required and Provided Dimensions:

Section 4.15.C establishes the dimensional requirements for the IB District. The applicant does not propose any building improvements other than internal configurations. The site’s area and building setbacks will not be impacted by the proposed materials recovery operations. The requirements and the proposed dimensions are as follows:

	<u>Required:</u>	<u>Provided:</u>
Front (west/Stephenson)	30 feet	97 feet
Rear (east)	20 foot	187 feet
Side (north)	10 feet	10 feet
Side (south)	10 feet	19 feet
Building Height	Maximum 4 stories, 50 feet	Less than 4 stories and 50 feet (existing to remain)
Maximum Percent Lot Area Covered by Buildings	40%	Information not provided (existing to remain)

*Items to be Addressed: None.*

**PARKING**

Parking:

Seventeen (17) parking spaces (including 1 barrier-free space) are provided on the site. No modifications to the site or the exterior of the building are proposed or required with the addition of the indoor materials recovery operation.

**Items to be Addressed:** None.

## SITE ACCESS AND CIRCULATION

### Vehicular access:

The site will be accessed via the existing driveway from Stephenson Highway. No modifications regarding site access are proposed.

### Pedestrian access:

There is an existing public sidewalk along Stephenson Highway. Internal pedestrian connections to the site are not proposed.

### Truck access:

From the submitted site plan, the applicant indicates that they are removing existing storage bins and moving all outside storage interior to the building. This will improve truck access and circulation. As shown on the site plan, the applicant shall confirm that there is no outdoor storage or bins to be located in the rear of the site.

**Items to be Addressed:** Confirm that there is no outdoor storage or bins to be located in the rear of the site.

## LIGHTING

No additional lighting is proposed.

**Items to be Addressed:** None.

## LANDSCAPING / SCREENING

### Landscaping:

A landscaping plan has not been provided nor is any additional landscaping proposed.

### Screening:

The applicant is proposing to install privacy slats in an existing fence along the existing northern and southern property line. There is an existing 10+ screen wall along the along the eastern property line.

**Items to be Addressed:** None.

## STANDARDS

### Use Standards

Section 6.17 provides specific use requirements for material recovery facilities.

**1. All recyclable materials shall at all times be stored within a completely enclosed building.**

The site plan provided demonstrates that the area devoted to materials recovery will be located in a completely enclosed building.

**2. The proposed use must be of such location, size, and character that it will be in harmony with the appropriate and orderly development of the surrounding area.**

The proposed use is located in an industrial area. The completely enclosed use should not impact the adjacent properties. As noted, the applicant shall confirm that the site provides adequate screening to adjacent properties.

**3. Access and circulation shall be sufficient.**

Provided that the applicant confirms that there is no outdoor storage or bins to be located in the rear of the site, access and circulation is sufficient.

**4. Designed to eliminate any possible nuisance including dust, noise, fumes, vibration, smoke, or lights, or the presence of toxic materials.**

The proposed use should not provide additional nuisance than normally anticipated for a similar use in the area.

**5. The following activities shall be prohibited, except as noted:**

- a. Incineration or open burning in any building or on the site.**
- b. Overnight storage of any refuse material, other than recyclable materials, in any building.**
- c. Dumping or storage of material on the site outside the buildings at any time**

The applicant is not proposing any of the aforementioned prohibited activities.

**6. All recyclable materials temporarily stored outside the buildings must be in transport vehicles or transportable containers.**

The applicant indicates no outdoor storage.

### Standards of Approval

In the IB District, materials recovery facilities are permitted as a special use. For any special use, according to Section 9.02.D, the Planning Commission shall "...review the request, supplementary

*materials either in support or opposition thereto, as well as the Planning Department's report, at a Public Hearing established for that purpose, and shall either grant or deny the request, table action on the request, or grant the request subject to specific conditions."*

Section 9.03 states that before approving any requests for Special Use Approval, the Planning Commission shall consider:

**1. *Compatibility with Adjacent Uses. The Special Use shall be designed and constructed in a manner harmonious with the character of adjacent property and the surrounding area. In determining whether a Special Use will be harmonious and not create a significant detrimental impact, as compared to the impacts of permitted uses.***

The proposed material recovery area will be confined within an existing industrial building within an established industrial park. The applicant should confirm adequate screening to ensure the adjacent residential use will not be impacted.

**2. *Compatibility with the Master Plan. The proposed Special Use shall be compatible and in accordance with the goals and objectives of the City of Troy Master Plan and any associated sub-area and corridor plans.***

The Master Plan designates the subject site and the surrounding area as 21<sup>st</sup> Century Industrial. The 21<sup>st</sup> Century Industrial future land use classification encourages a variety of industrial uses; specifically, light industrial uses with no outdoor storage or external nuisances are especially encouraged. The proposed enclosed material recovery facility is compatible with the goals and objectives of the City of Troy Master Plan.

**3. *Traffic Impact. The proposed Special Use shall be located and designed in a manner which will minimize the impact of traffic, taking into consideration: pedestrian access and safety; vehicle trip generation (i.e. volumes); types of traffic, access location, and design, circulation and parking design; street and bridge capacity and, traffic operations at nearby intersections and access points. Efforts shall be made to ensure that multiple transportation modes are safely and effectively accommodated in an effort to provide alternate modes of access and alleviate vehicular traffic congestion.***

The conversion of a limited portion of the building to material recycling shall not impact site traffic.

**4. *Impact on Public Services. The proposed Special Use shall be adequately served by essential public facilities and services, such as: streets, pedestrian or bicycle facilities, police and fire protection, drainage systems, refuse disposal, water and sewage facilities, and schools. Such services shall be provided and accommodated without an unreasonable public burden.***

There should not be any additional impact on other public services, such as police or utilities, beyond what would normally be experienced for other uses in the district.

**5. *Compliance with Zoning Ordinance Standards. The proposed Special Use shall be designed, constructed, operated and maintained to meet the stated intent of the zoning districts and shall comply with all applicable ordinance standards.***

The site complies with all zoning ordinance standards.

The Planning Commission is also required to generally consider the following for any special use application:

**1. The nature and character of the activities, processes, materials, equipment, or conditions of operation; either specifically or typically associated with the use.**

With the removal of outdoor storage, the proposed use is permissible.

**2. Vehicular circulation and parking areas.**

No change to parking areas is proposed. Additional consideration is needed with regard to truck circulation at the southeast corner of the property.

**3. Outdoor activity, storage and work areas.**

The special requirements (Section 6.17) related to material recovery facilities have been met.

**4. Hours of operation.**

The addition of the indoor material recovery area will not impact the existing businesses current hours of operation.

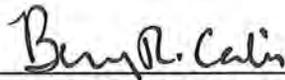
**5. Production of traffic, noise vibration, smoke, fumes odors, dust, glare and light.**

We do not anticipate any additional impact in this regard.

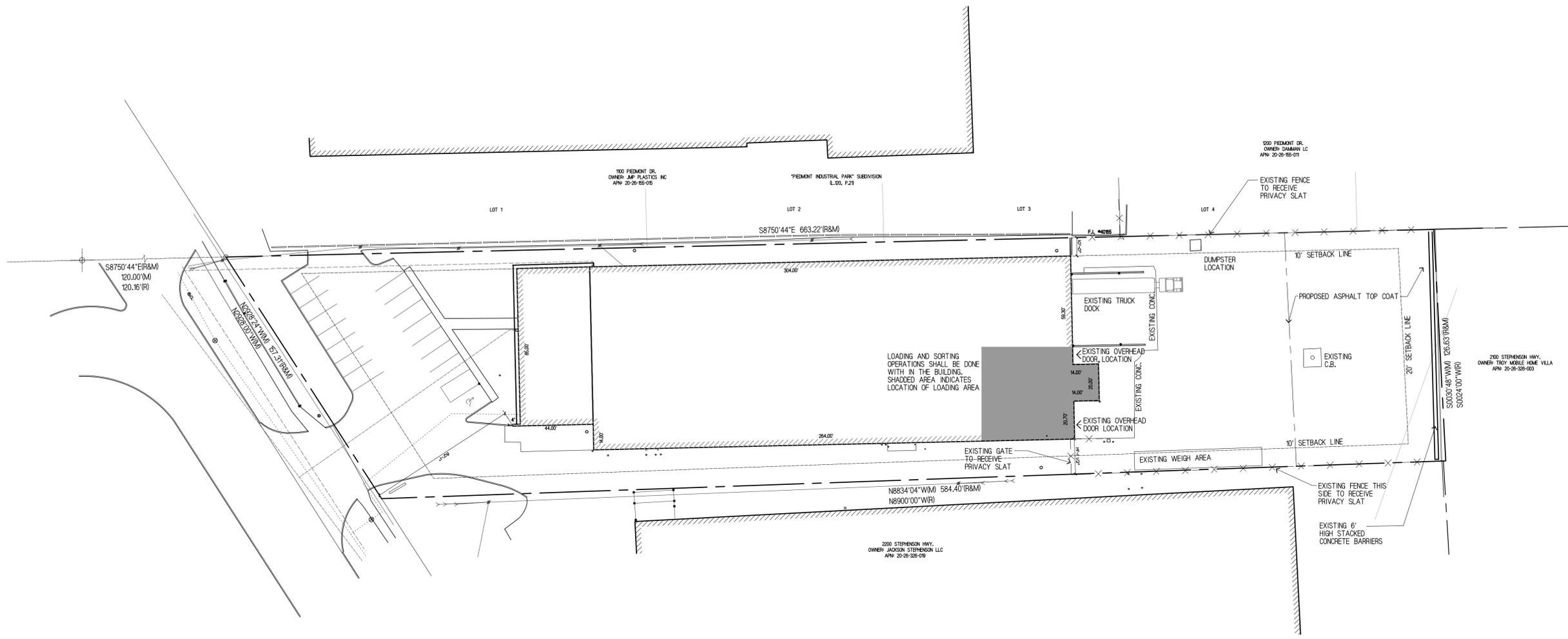
**Items to be addressed:** None.

**RECOMMENDATIONS**

Provided that the applicant can confirm that there is no outdoor storage or bins to be located in the rear of the site, we find that the proposed improvements to the site for a material recovery facility will clean up the site and reduce impacts upon surrounding properties.



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



**PROPOSED SITE PLAN**  
SCALE: 1"=30'-0"

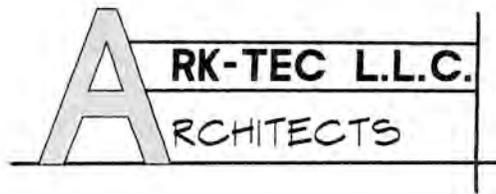
ZONING IB INTEGRATED INDUSTRIAL AND BUSINESS DISTRICT

PROJECT:  
**2222 SEPHENSON HWY**  
TROY, MI

RENOVATION TO:  
**2222 SEPHENSON HWY**  
TROY, MI

DATE:  
REVISIONS:  
3/7/13  
11/16/12

SHEET NO.  
**1**



January 4, 2013

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

Re: Midwest Industrial Metals  
2222 Stephenson Hwy  
Troy, MI  
Statement of Compatibility

Re: Midwest Industrial Metals  
Special use approval site plan application

To whom it may concern,

As proposed the operations of the materials recovery facility shall be brought inside the building to comply with Section 6.17 and corresponding ordinance requirements as they pertain to the special use requirements. Materials shall be unloaded and sorted within the building.

Sincerely,

A handwritten signature in black ink, appearing to read 'Troy Chontos', is written over a horizontal line that extends to the right.

Troy Chontos  
Ark-Tec  
248-703-4494

DATE: March 8, 2013

TO: Planning Commission

FROM: R. Brent Savidant, Planning Director

SUBJECT: PUBLIC HEARING - SPECIAL USE AND PRELIMINARY SITE PLAN REVIEW (File Number SU 399) – Proposed Detroit Meeting Room, North of Square Lake and I-75 Expressway, East of Adams, Section 6, Currently Zoned R1-A (One Family Residential) District

The petitioner Detroit Meeting Room submitted the above referenced Special Use Approval and Preliminary Site Plan Approval application for a 3,000 square foot worship facility.

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

Attachments:

1. Maps
2. Report prepared by Carlisle/Wortman Associates, Inc.

cc: Applicant  
File/ SU 399

G:\SPECIAL USE\SU 399 Detroit Meeting Room Sec 06\SU 399 PC Memo 03 12 2013.docx

## PROPOSED RESOLUTION

PUBLIC HEARING - SPECIAL USE AND PRELIMINARY SITE PLAN REVIEW (File Number SU 399) – Proposed Detroit Meeting Room, North of Square Lake and I-75 Expressway, East of Adams, Section 6, Currently Zoned R1-A (One Family Residential) District

**Resolution # PC-2013-03-**

Moved by:

Seconded by:

**RESOLVED**, That Special Use Approval and Preliminary Site Plan Approval for the Proposed Detroit Meeting Room, North of Square Lake and I-75 Expressway, East of Adams, Section 6, Currently Zoned R1-A (One Family Residential) District, be granted, subject to the following:

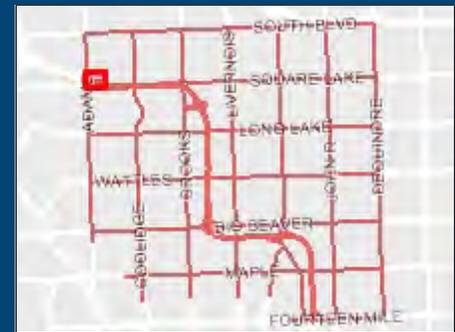
1. Indicate grading limit north of parking lot.
2. Adjust parking lot dimensions.
3. Consider landbank parking.
4. Install bicycle parking.
5. Clarify the eight (8) trees within and along the exterior of parking lot.
6. Remove the landscape feature from the Square Lake right-of-way.
7. Relocate the light that is in the Square Lake public right-of-way.
8. Provide the proposed days and hours of operation of the facility.

Yes:

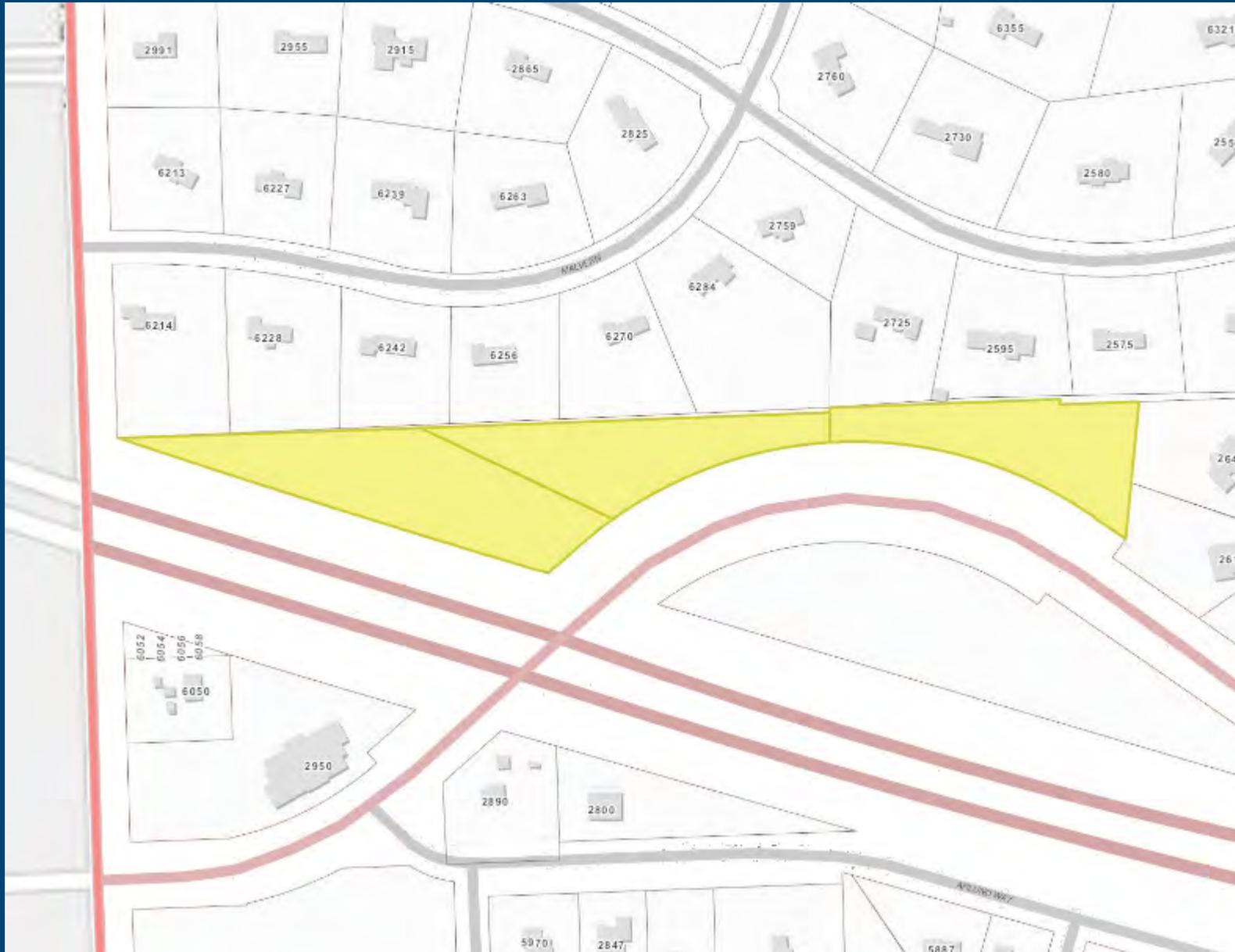
No:

Absent:

**MOTION CARRIED / FAILED**



Legend

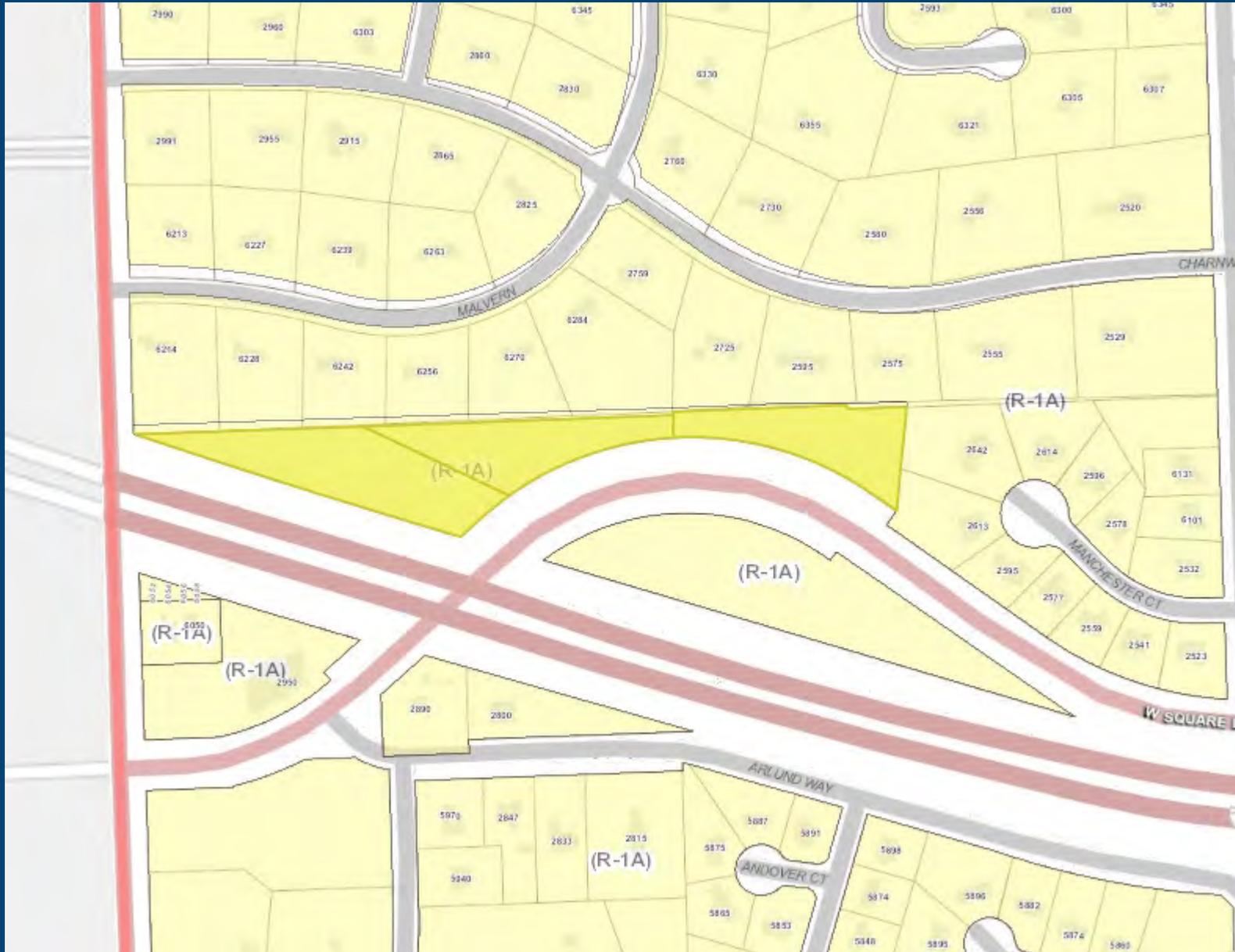
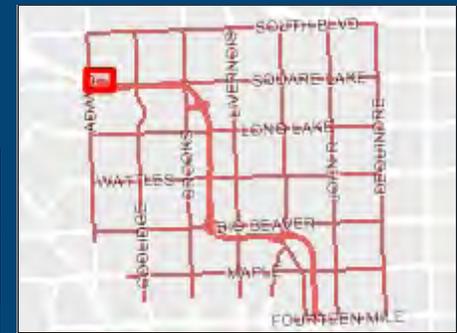


726 0 363 726Feet

Scale 1: 4,353

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

Printed: 2/21/2013



### Legend

- Form Based Zoning (Current)**
- (PUD) Planned Unit Development
  - (CF) Community Facilities District
  - (EP) Environmental Protection District
  - (BB) Big Beaver Road (Form Based)
  - (MRF) Maple Road (Form Based)
  - (NN) Neighborhood Nodes (A-U)
  - (CB) Community Business
  - (GB) General Business
  - (IB) Integrated Industrial Business District
  - (O) Office Building District
  - (OM) Office Mixed Use
  - (P) Vehicular Parking District
  - (R-1A) One Family Residential District
  - (R-1B) One Family Residential District
  - (R-1C) One Family Residential District
  - (R-1D) One Family Residential District
  - (R-1E) One Family Residential District
  - (RT) One Family Attached Residential District
  - (MR) Multi-Family Residential
  - (MHP) Manufactured Housing
  - (UR) Urban Residential
  - (RC) Research Center District
  - (PV) Planned Vehicle Sales

960 0 480 960Feet

Scale 1: 5,761

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

Printed: 2/21/2013



605 S. Main Street, Ste. 1  
Ann Arbor, MI 48104

(734) 662-2200  
(734) 662-1935 Fax

Date: March 7, 2013

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

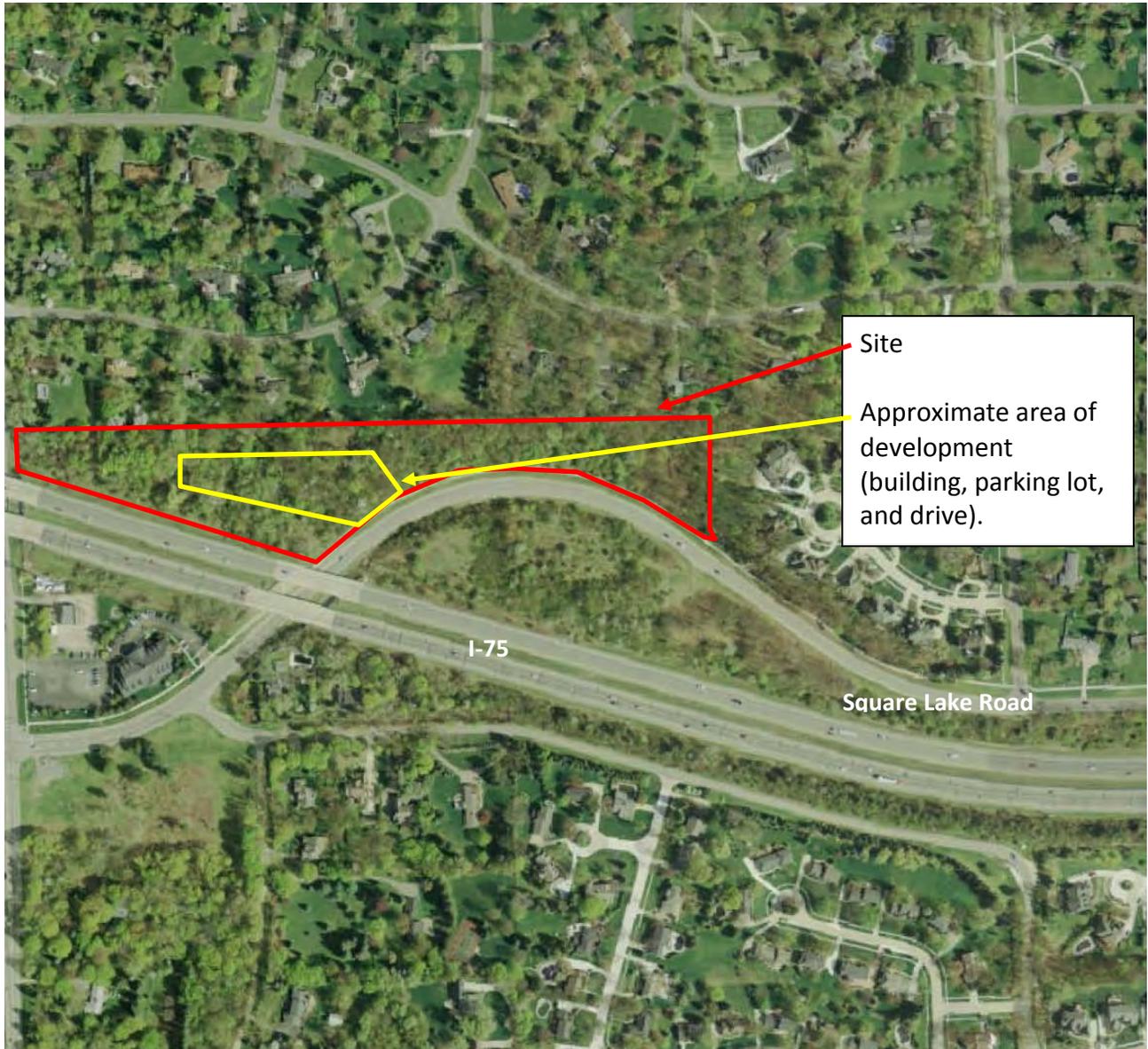
<b>Applicant:</b>	Moiseev/Gordan Associates
<b>Project Name:</b>	Alderbrook Meeting Room
<b>Plan Date:</b>	February 6, 2013
<b>Location:</b>	North Side of W. Square Lake Road between Adams + Beach Roads.
<b>Zoning:</b>	R-1A, One-Family Residential
<b>Action Requested:</b>	Preliminary Site Plan and Special Use Approval
<b>Required Information:</b>	Deficiencies noted

### **PROJECT AND SITE DESCRIPTION**

We received a site plan and accompanying documents for a proposed 3,000 sq/ft meeting hall to be located on the north side of W. Square Lake Road between Adams and Beach Roads. In the Zoning Ordinance, a meeting hall is considered a place of worship. The project description on the cover sheet notes a meeting hall and private school; however the applicant is not proposing a school. The 5.4 acre site (3 parcels) is currently vacant and is zoned R-1A, One-Family Residential. The parcel is uniquely shaped and heavily wooded. Furthermore, there is a significant grade change between Square Lake Road and the site. Places of worship are listed as special land uses in the R-1A zoning district.

Location of Subject Property:

The property is located on the north side W. Square Lake Road between Adams and Beach Roads, adjacent to I-75.



Size of Subject Property:

Three (3) parcels: 233,218 sq/ft (5.124 acres)

Proposed Uses of Subject Parcel:

The applicant is proposing a 3,000 sq/ft meeting hall.

Current Use of Subject Property:

Vacant

Current Zoning:

The property is currently zoned R-1A, One-Family Residential.

Direction	Zoning	Use
North	R-1A, One-Family Residential	Residential
South	R-1A, One-Family Residential	Vacant / I-75
East	R-1A, One-Family Residential	Residential
West	R-1A, One-Family Residential	I-75

**AREA, WIDTH, HEIGHT, SETBACKS**

Sections 4.14.C and 6.21 establish the dimensional requirements for both the R-1A District, and the specific use standards for Places of Worship. The requirements and the proposed dimensions are as follows:

	<u>Required<sup>1</sup>:</u>	<u>Provided:</u>	<u>Compliance</u>
Minimum Lot Area	15,000 sq/ft (with sewers) 30,000 (without sewers)	+200,000 sq/ft	Complies
Front (Square Lake Road)	50 feet minimum setback	50 feet	Complies
Side (east)	50 feet minimum setback	50 feet	Complies
Side (south)	75 feet minimum setback <sup>2</sup>	75 feet	Complies
Rear (north)	50 feet minimum setback	50 feet	Complies
Building Height	Maximum 2 ½ stories, 30 feet	Approx. 14 feet (not provided, scaled measurement)	Complies
Maximum Building Coverage	30%	1.3% (building only) 13.9% (with parking)	Complies

1. Section 6.21.E requires a 50-foot setback from front, side, and rear property lines for a Place of Worship.

2. Section 4.06 D.2, states, *whenever a lot or parcel abuts I-75, the yard setback abutting the right-of-way of I-75 shall not be less than seventy-five (75) feet.* In this case, the southwestern property line of the subject parcel abuts the I-75 right-of-way.

The proposed site plan meets all area and setback provisions of the R-1A and Place of Worship specific use standards.

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

## BUILDING ARRANGEMENT

The proposed building is oriented towards the western portion of the site and accessed via a single drive from W. Square Lake Road. Parking and landscape areas are also denoted on the site plan. Due to setbacks, the edge of development will maintain a 50-foot separation from the northern property line, which is adjacent to single-family residential. The applicant has not submitted a grading plan that demarks the edge of earth movement and tree removal. However, the Landscape Plan shows a fence line to delineate the construction area. If the applicant were to limit grading to a few feet beyond the northern edge of the parking lot, the existing tree buffer should be sufficient to provide adequate screening.

**Items to be Addressed:** *Confirm that the line on Landscape Plan indicates the edge of grading.*

## PARKING

Section 13.06.G of the Zoning Ordinance requires:

	Required	Provided
Places of Assembly: 1 space for each 3 seats or 6 feet of pews in the main unit of worship.	180 seats/3 = 60 spaces	180 seats/3 = 60 spaces
Barrier Free	3	3
Bicycle Parking	2	0
Loading	0	0
<b>Total</b>	<b>60 spaces</b>	<b>60 spaces</b>

The parking lot stall length of some of the parking spaces is deficient. Unless spaces overhang a 7-foot wide sidewalk, a 19-foot parking stall length is required. Parking lot dimensions must be adjusted.

In discussions with the applicant, they indicated that based on the congregation, the required 60 parking spaces will not be needed. In order to both eliminate unnecessary costs for the applicant, reduce impervious surface, and provide a greater buffer to adjacent properties, the applicant may, with Planning Commission approval, landbank some of the required parking. Landbanked parking is parking that is shown on the site plan but not constructed. Such parking may be installed in the future if necessary. If landbanking is considered, the northern most parking aisle should be removed to provide additional setbacks to the adjacent residential.

The applicant shall install bicycle parking.

**Items to be Addressed:** *1). Parking lot dimensions must be adjusted; 2). Consider landbank parking; and 3). Install bicycle parking.*

**SITE ACCESS AND CIRCULATION**

Vehicular access and Circulation

The site will be accessed via a single drive from W. Square Lake Road. The Engineering Department notes that the final engineering plans should include a check of sight distance along Square Lake Road for the driveway. Vision is somewhat obstructed due to the curve in proximity to the I-75 over Square Lake structure.

Pedestrian access:

There is currently a sidewalk along this stretch Square Lake Road, and the site plan demonstrates an internal pathway connection from the proposed building along the southern edge of the parking lot to the existing sidewalk. Due to changes in grade, final engineering will need to confirm that sidewalk is ADA compatible.

**Items to be Addressed:** None.

**LANDSCAPING**

The applicant has provided a landscape plan in accordance with Article 13 of the Ordinance:

	<u>Required:</u>	<u>Provided:</u>	<u>Compliance:</u>
<u>Screening Between Land Uses:</u> The Ordinance requires that Places of Worship provide Alternative 1 or 2 screening options when contiguous to Residential Uses.	1 narrow evergreen tree per 3 lineal feet OR 1 large evergreen tree per 10 lineal feet.	Potential 50-foot tree buffer	If the applicant were to limit grading to a few feet beyond the northern edge of the parking lot edge the existing tree buffer should be sufficient to provide adequate screening.
<u>Street Trees:</u> The Ordinance requires that the greenbelt shall be landscaped with a minimum of one (1) deciduous tree for every thirty (30) lineal feet, or fraction thereof, of frontage abutting a public road right-of-way.	200 feet = 7 trees	Two (2) additional trees plus existing protected trees.	Complies
<u>Site landscaping:</u> A minimum of twenty percent (20%) of the site area shall be comprised of landscape material.	20%	Site exceeds 20% landscaping/natural area.	Complies

<p><u>Parking Lot Landscaping:</u> 1 tree for every 8 parking spaces. Trees may be located adjacent to parking lot with planning commission approval.</p>	<p>Required 60 spaces = 8 trees</p>	<p>The applicant indicates eight (8) trees within and along exterior of parking lot; however it is unclear if these are preserved trees or new trees.</p>	<p>Clarify trees shown on plan</p>
<p><u>Parking Lot Screening from ROW:</u> Parking lots that front on a public roadway shall be screened by a landscaped berm at least 3 feet in height along the perimeter of the road right-of-way.</p>	<p>3-foot berm or tree screen</p>	<p>Providing thirty (30) arborvitae.</p>	<p>Compliant</p>

The site plan demonstrates a landscaping feature at the driveway entrance. The landscape feature called out along the drive is to be on private property and not in the Square Lake right-of-way.

**Trash Enclosure:**

The applicant indicates that trash will be stored inside building until collection day.

***Items to be Addressed:*** 1). Indicate grading limit north of parking lot; 2). Clarify the eight (8) trees within and along the exterior of parking lot; and 3). Remove the landscape feature from the Square Lake right-of-way

**PHOTOMETRICS**

The applicant is proposing two (2) poles with single lights along the entrance drive, two (2) poles with double lights interior to the parking lot; and two (2) building fixture lights. One (1) of the lights along the entrance drive is located within the Square Lake public right-of-way. This pole needs to be relocated.

***Items to be Addressed:*** Relocate the light that is in the Square Lake public right-of-way.

**FLOOR PLANS and ELEVATIONS**

The applicant has submitted floor plans and elevations. The building exterior consists of vinyl siding with wood trim. The north elevation is characterized by a 14-foot overhang with supporting columns. The building has a residential appearance that is consistent with the residential uses in the surrounding area.

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

**SPECIAL USE**

In the R-1A District, both Places of Worship are permitted as a special use. For any special use, according to Section 9.02.D, the Planning Commission shall "...review the request, supplementary materials either

*in support or opposition thereto, as well as the Planning Department's report, at a Public Hearing established for that purpose, and shall either grant or deny the request, table action on the request, or grant the request subject to specific conditions."*

#### **Use Standards**

1. *All religious activities shall take place in a fully enclosed building except as may be approved by the City.*

#### **All proposed religious activities will take place within the building.**

2. *Facilities incidental to the main religious sanctuary must be used for church, worship, or religious education purposes, in a manner which is consistent with residential zoning and compatible with adjacent residential property.*

#### **No other incidental facilities are proposed.**

3. *The site shall have frontage on and primary access to a major or minor arterial.*

#### **Square Lake Road is a major arterial.**

4. *Buildings of greater than the maximum height allowed in the District in which a place of worship is located, may be allowed provided that the front, side and rear yards are increased one (1) foot for each foot of building height which exceeds the maximum height allowed.*

#### **The 14-foot building height complies with the R1-A zoning district.**

5. *Front, side and rear yard setbacks shall be a minimum of fifty (50) feet.*

#### **The applicant meets the 50-foot setback.**

6. *Parking shall not be permitted in the required yards adjacent to any public street or adjacent to any land zoned for residential purposes, other than that which is developed or committed for uses other than the construction of residential dwellings. Such yards shall be maintained as landscaped open space.*

#### **Parking is located outside all required yards.**

7. *Traffic from events, including church worship services and other large assemblies, shall be controlled so as not to create congestion or unreasonable delays on the public street.*

**The Engineering Department notes that the final engineering plans should include a check of sight distance along Square Lake Road for the driveway. Vision is somewhat obstructed due to the curve in proximity to the I-75 over Square Lake structure.**

## Standards of Approval

Section 9.03 states that before approving any requests for Special Use Approval, the Planning Commission shall consider:

1. *Compatibility with Adjacent Uses.* The Special Use shall be designed and constructed in a manner harmonious with the character of adjacent property and the surrounding area. In determining whether a Special Use will be harmonious and not create a significant detrimental impact, as compared to the impacts of permitted uses.

**The proposed use has provided the required setback from residential uses (along the north property line). Provided that the applicant can limit grading to a few feet beyond the northern edge of the parking lot the existing tree buffer should be sufficient to provide adequate screening and buffering. If adequate buffering and screening can be provided, the proposed use will not have any detrimental impact to the surrounding residential uses.**

2. *Compatibility with the Master Plan.* The proposed Special Use shall be compatible and in accordance with the goals and objectives of the City of Troy Master Plan and any associated sub-area and corridor plans.

**The use is common to residential areas along major thoroughfares, and complies with the Master Plan.**

3. *Traffic Impact.* The proposed Special Use shall be located and designed in a manner which will minimize the impact of traffic, taking into consideration: pedestrian access and safety; vehicle trip generation (i.e. volumes); types of traffic, access location, and design, circulation and parking design; street and bridge capacity and, traffic operations at nearby intersections and access points. Efforts shall be made to ensure that multiple transportation modes are safely and effectively accommodated in an effort to provide alternate modes of access and alleviate vehicular traffic congestion.

**Provided that a safe sight distance along Square Lake Road for the driveway can be confirmed, traffic along Square Lake and in the surrounding area should not be impacted.**

4. *Impact on Public Services.* The proposed Special Use shall be adequately served by essential public facilities and services, such as: streets, pedestrian or bicycle facilities, police and fire protection, drainage systems, refuse disposal, water and sewage facilities, and schools. Such services shall be provided and accommodated without an unreasonable public burden.

**The proposed use should not cause additional impact on other public services, such as police or utilities, beyond what would normally be experienced for other uses in the district.**

5. *Compliance with Zoning Ordinance Standards.* The proposed Special Use shall be designed, constructed, operated and maintained to meet the stated intent of the zoning districts and shall comply with all applicable ordinance standards.

**Outside the aforementioned issues, the site complies with all zoning ordinance standards.**

The Planning Commission is also required to generally consider the following for any special use application:

1. *The nature and character of the activities, processes, materials, equipment, or conditions of operation; either specifically or typically associated with the use.*

**See above. Provided site planning issues are addressed the proposed use may be permissible in the proposed location.**

2. *Vehicular circulation and parking areas.*

**Parking lot dimensions must be adjusted.**

3. *Outdoor activity, storage and work areas.*

**N/A.**

4. *Hours of operation.*

**The applicant should provide the proposed days and hours of operation of the facility.**

5. *Production of traffic, noise vibration, smoke, fumes odors, dust, glare and light.*

**We do not anticipate any additional impact after initial construction in this regard.**

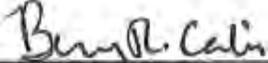
*Items to be addressed: Address Ordinance compliance issues noted herein.*

## **RECOMMENDATION**

Overall we find that due to the limited size of the facility, the location of the use is appropriate. The applicant has met the special use and Place of Workshop specific use standards. However due to the number outstanding items we recommend that the applicant address the following issues prior to Planning Commission approval:

1. Indicate grading limit north of parking lot.
2. Adjust parking lot dimensions.
3. Consider landbank parking.
4. Install bicycle parking.
5. Clarify the eight (8) trees within and along the exterior of parking lot.
6. Remove the landscape feature from the Square Lake right-of-way.
7. Relocate the light that is in the Square Lake public right-of-way.
8. Provide the proposed days and hours of operation of the facility.

Sincerely,



---

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

#225-02-1303



January 11, 2013

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

Re: Alderbrook School and Meeting Room  
Project Number: 12464

We are requesting a Special Land Use Approval of the above-referenced project.

The proposed project, a private school and religious meeting room, are both uses in accordance with the R1-A zoning district and the city Master Plan, requiring only a Special Land Use Approval.

The proposed site is located on a major street and will not burden neighboring residential streets with additional traffic. The site has access to existing water and sewer lines. The proposed development at completion will only cover 22.5% of the site, minimizing its impact within the property lines and beyond.

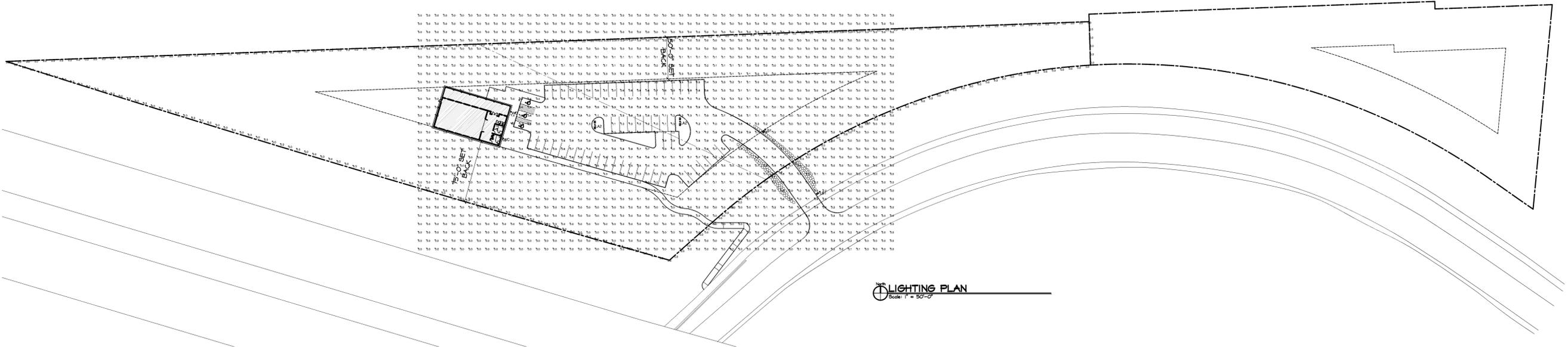
We thank you for consideration of our proposal.

Sincerely,

A handwritten signature in black ink, appearing to read 'Michael J. Gordon', is written over a light gray grid background.

Michael J. Gordon, RA





**LIGHTING PLAN**  
Scale: 1" = 50'-0"

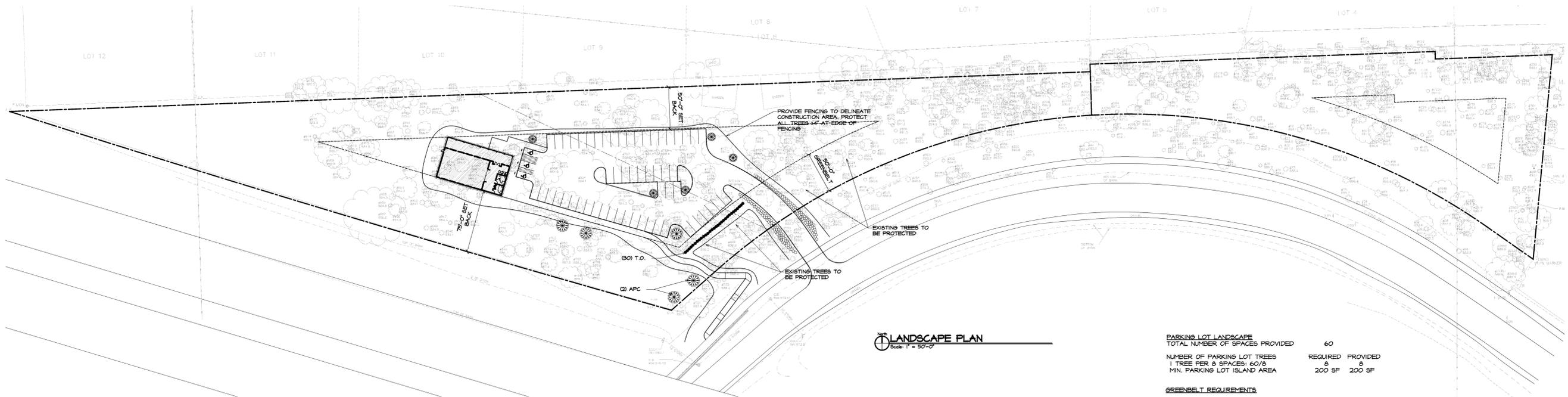
**NOTES**

1. SEE MH COLUMN OF LUMINAIRE LOCATIONS FOR MOUNTING HEIGHTS.
2. SEE LUMINAIRE SCHEDULE FOR LIGHT LOSS FACTORS.
3. CALCULATIONS ARE SHOWN IN FOOTCANDLES AT GRADE.

LUMINAIRE LOCATIONS										
No.	Label	Location			MH	Orientation	T/R	Aim		
		X	Y	Z				X	Y	Z
1	LB1	3064.2	-677.0	25.0	25.0	215.3	0.0	3063.5	-678.0	0.0
2	LA2	2862.1	-671.8	25.0	25.0	0.0	0.0			
3	LA2	2983.1	-688.0	25.0	25.0	0.0	0.0			
4	LB1	3128.9	-751.9	25.0	25.0	233.0	0.0	3128.0	-752.6	0.0
5	WC	2762.6	-656.1	18.0	18.0	101.8	0.0	2762.6	-656.1	0.0
6	WC	2753.1	-687.8	18.0	18.0	109.8	0.0	2753.1	-687.8	0.0

LUMINAIRE SCHEDULE									
Symbol	Label	Qty	Catalog Number	Description	Lamp	File	Lumens	LLF	Watts
□	LA2	2	LITHONIA #DSX1 LED 1 30870040K SR4 MVOLT	DSX1 LED WITH 1 LIGHT ENGINE, 700mA DRIVER, 4000K LEDES, TYPE 4 OPTICS	ONE 73.4-WATT LED, AIMED DOWN POS.	DSX1_LED_1_308700_40K_SR4_MVOLT.es	Absolute	0.90	146.8
□	LB1	2	LITHONIA #DSX1 LED 1 30870050K SR3 MVOLT HS	DSX1 LED WITH 1 LIGHT ENGINE, 700mA DRIVER, 5000K LEDES, TYPE 3 OPTICS, HOUSE SIDE SHIELD	ONE 73.3-WATT LED, AIMED DOWN POS.	DSX1_LED_1_308700_50K_SR3_MVOLT_HS.es	Absolute	0.90	73.3
○	WC	2	LITHONIA #WST LED 1 10A70040K SR4 MVOLT	WST LED WITH 1 MODULE, 10 LED'S, 700mA DRIVER, 4000K COLOR TEMPERATURE, TYPE 4 LENS	Outdoor Wall Pack Luminaire to LES LM-79-08. LUMINAIRE OUTPUT: 1833 Lms.	WST_LED_1_10A700_40K_SR4_MVOLT.es	Absolute	0.90	24.2

STATISTICS						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
OVERALL LTG VALUES AT GRADE	+	0.2 fc	1.4 fc	0.0 fc	N/A	N/A
PARKING LOT	⊗	0.8 fc	1.3 fc	0.1 fc	13.0:1	8.0:1
PROPERTY LINE	+	0.0 fc	0.8 fc	0.0 fc	N/A	N/A



**LANDSCAPE PLAN**  
Scale: 1" = 50'-0"

**PARKING LOT LANDSCAPE**

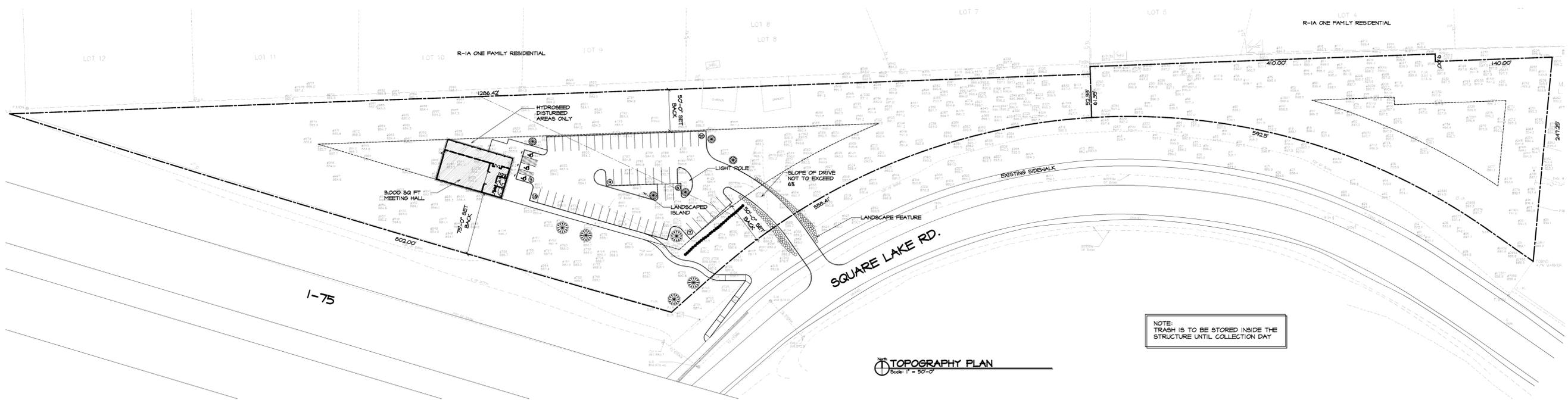
TOTAL NUMBER OF SPACES PROVIDED	60
NUMBER OF PARKING LOT TREES 1 TREE PER 6 SPACES: 60/6	REQUIRED 10 PROVIDED 8
MIN. PARKING LOT ISLAND AREA	200 SF 200 SF

**GREENBELT REQUIREMENTS**

TOTAL LIN. FEET OF ROAD FRONTAGE	200 FT
TOTAL NUMBER OF GREENBELT TREES REQUIRED: 200/30 = 7	
2 NEW TREES PROVIDED, EXISTING TREES TO REMAIN TO MEET GREENBELT REQUIREMENTS	
GREENBELT WIDTH	50 FT

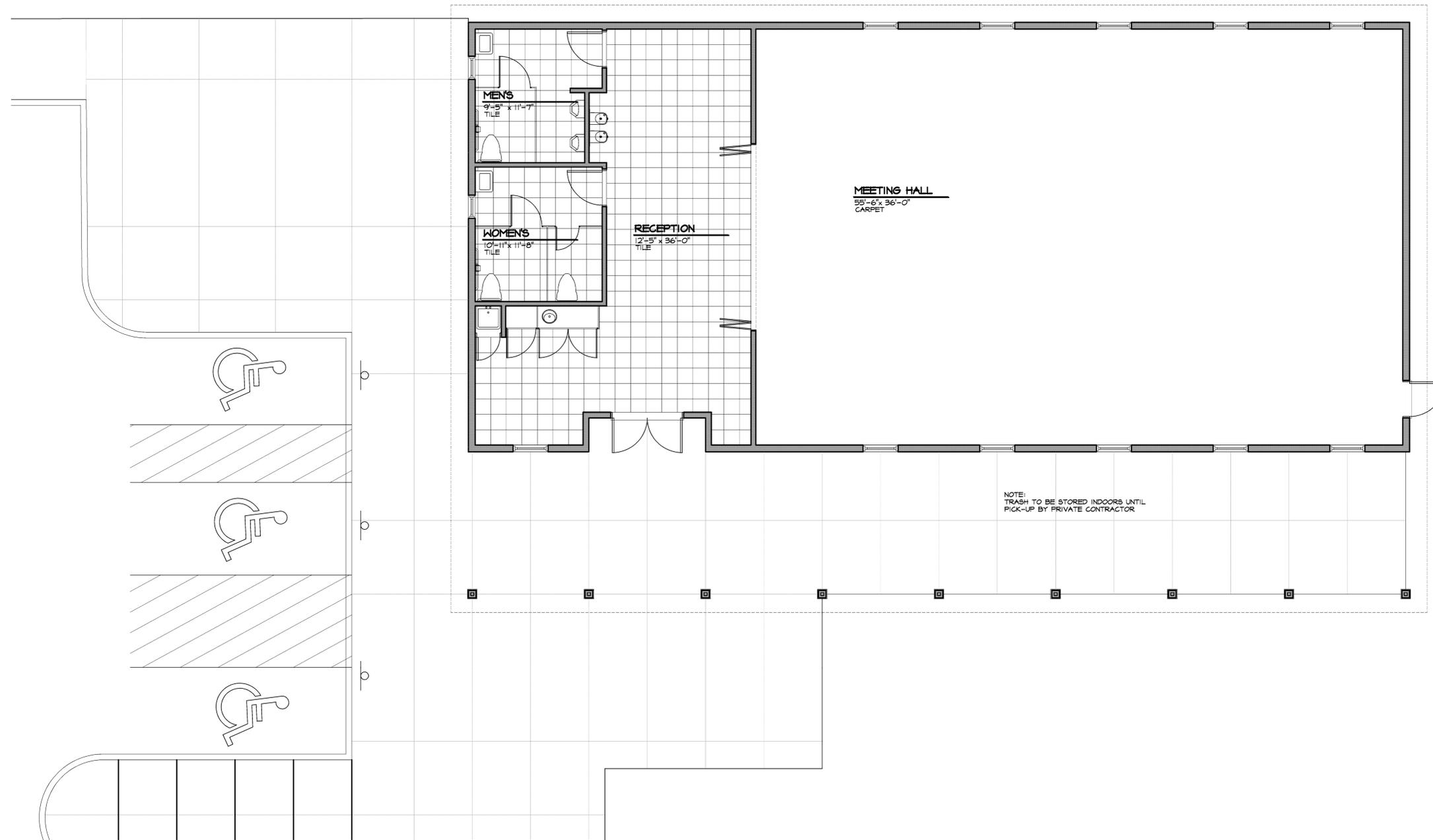
**PLANT MATERIAL LIST**

KEY	SHT. SP-2	BOTANICAL NAME	COMMON NAME	SIZE
APC	2	ACE P. CRIMSON KING	CRIMSON KING NORWAY MAPLE	3" BB
TO	30	THUJA OCCIDENTALIS 'SMARAGD'	EMERALD GREEN ARBORVITAE	18" BB



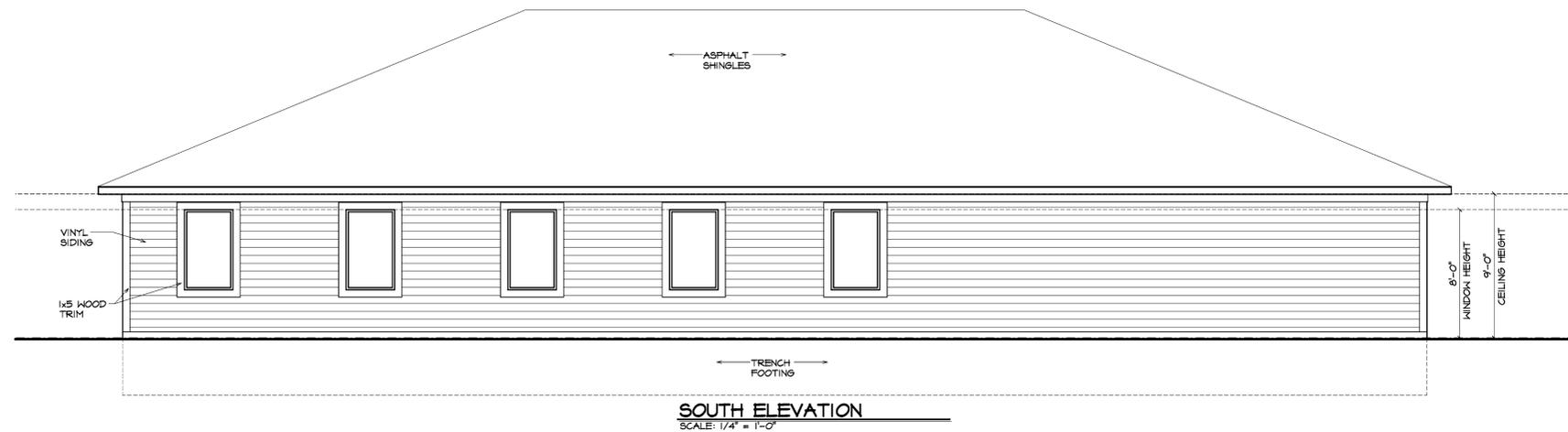
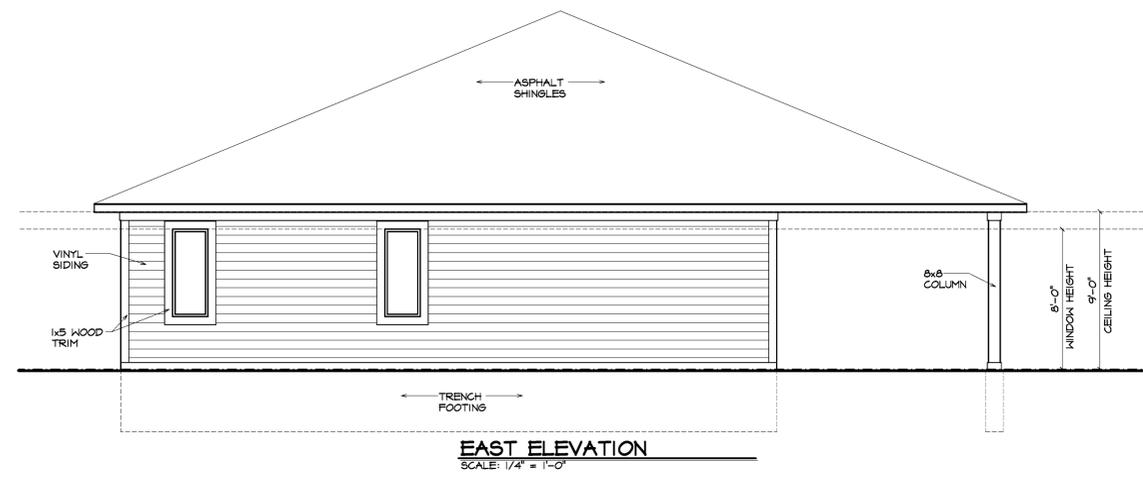
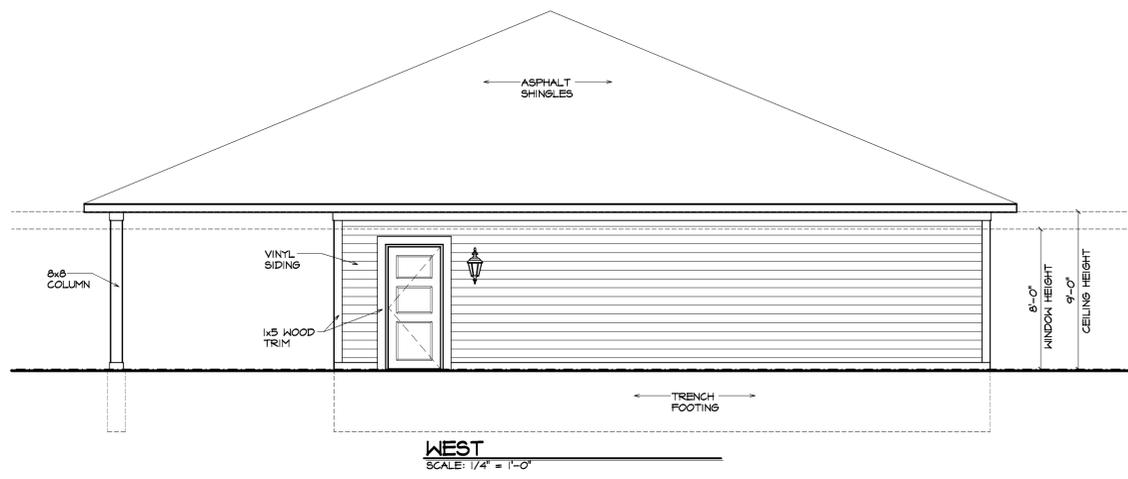
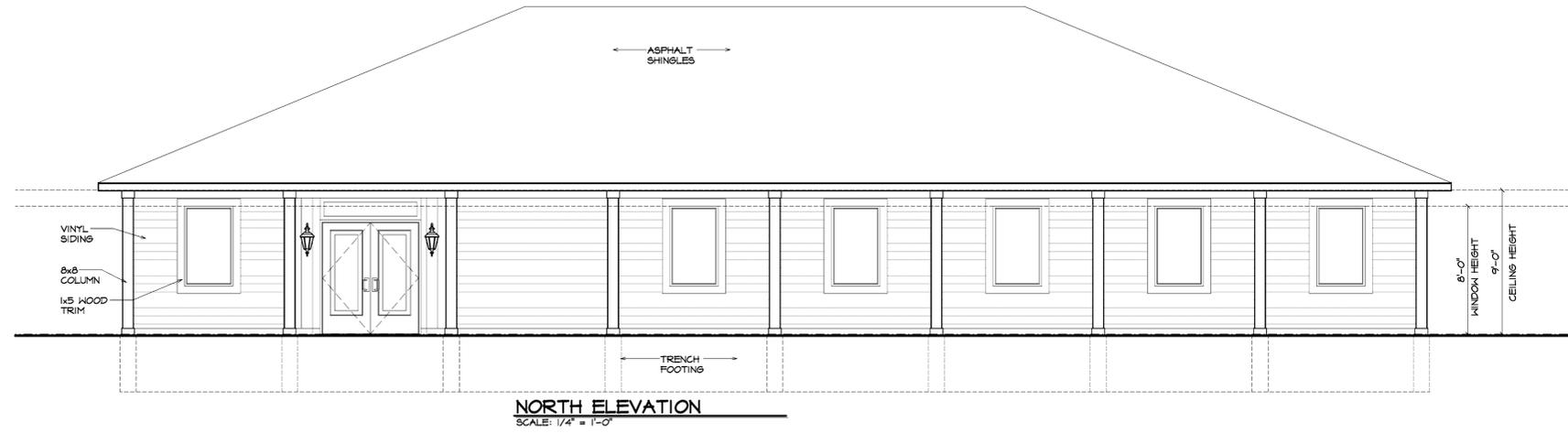
**TOPOGRAPHY PLAN**  
Scale: 1" = 50'-0"

NOTE:  
TRASH IS TO BE STORED INSIDE THE  
STRUCTURE UNTIL COLLECTION DAY

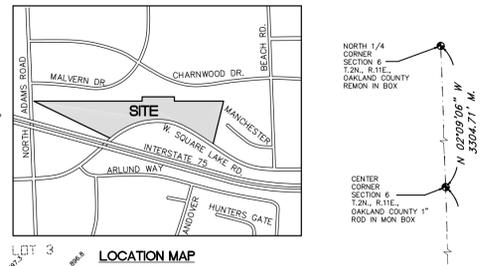
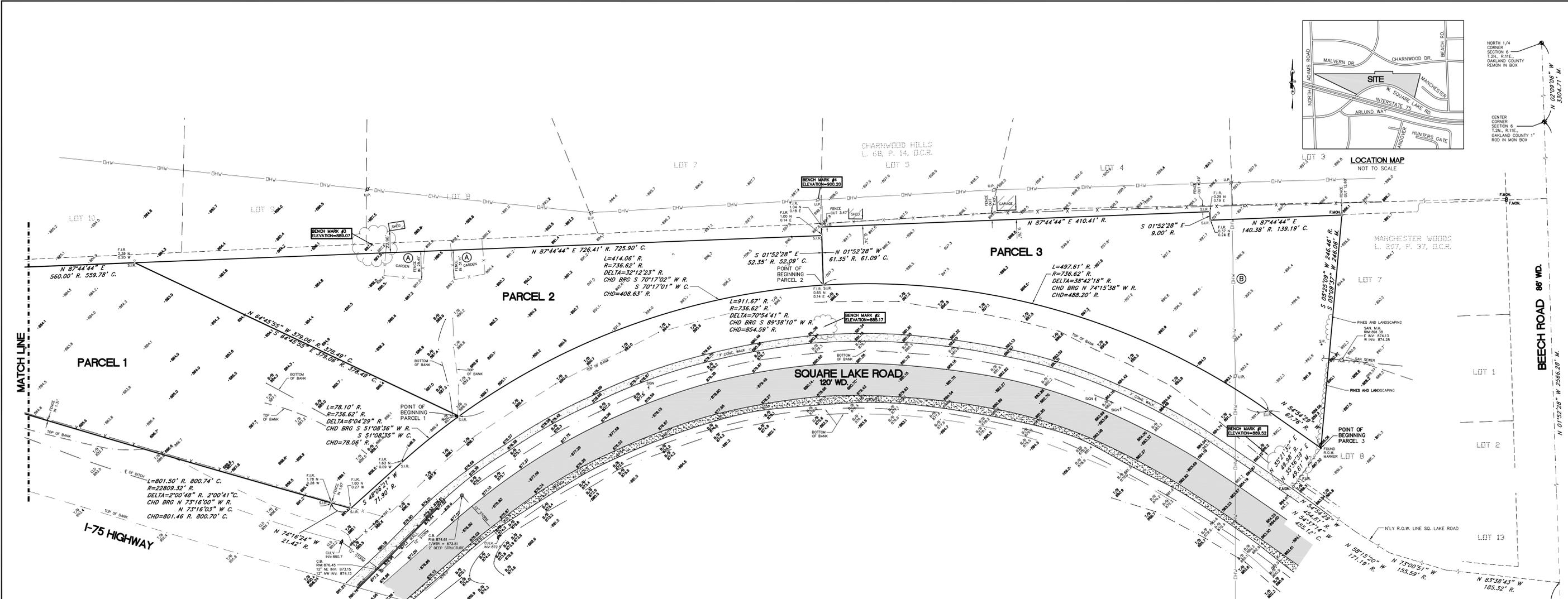


**MEETING HALL PLAN**  
Scale: 1/4" = 1'-0"  
North

H:\COMMERCIAL\Troy Church\Condo\Meeting Hall - 3000 SF\12464a1.dwg, 3/5/2013 3:20:13 PM, RP, 3000 - FILE.P3



H:\COMMERCIAL\Troy Church\Condo\Meeting Hall - 3000 SF\12464a1.dwg, 3/5/2013 3:20:26 PM, HP, 3000 - FILE.P3



**TABLE OF ENCROACHMENTS**

- (A) FENCED IN GARDENS ENCROACH ONTO PROPERTY AS SHOWN
- (B) OVERHEAD LINES CROSS PROPERTY WITHOUT AN EASEMENT.

**SCHEDULE B EXCEPTIONS**

1. Easement Grant in favor of the Edison Illuminating Company of Detroit for construction, operation and maintenance of lines and equipment for the transmission and distribution of electrical energy recorded in Liber 4357, Page 136, Oakland County Records. As plotted herein.
2. Sewer Connection Transfer Agreement executed by and among Keith W. McIntyre and Joyce McIntyre, husband and wife, Stephen Grand, and the City of Troy, a Michigan municipal corporation recorded in Liber 1127, Page 032, Oakland County Records. Item refers to sanitary sewer lead information and is not plotable.

**LEGAL DESCRIPTION** (Seaver Title Agency, File No: 63-13289951-SCM, Dated: Nov. 12, 2012)

Land situated in the City of Troy, Oakland County, Michigan, described as follows:

**PARCEL I:** Part of the Southwest 1/4 of Section 6, Town 2 North, Range 11 East, described as: beginning at a point that is North 01 degrees 52 minutes 28 seconds West, 45.11 feet along the North-South 1/4 line of Section 6 and North 83 degrees 38 minutes 43 seconds West, 185.32 feet along the Northerly right-of-way line of Square Lake Road, so-called and continuing North 73 degrees 00 minutes 51 seconds West, 155.59 feet along said right-of-way line and continuing North 58 degrees 15 minutes 20 seconds West, 171.19 feet and continuing North 54 degrees 54 minutes 29 seconds West, 454.81 feet and continuing North 35 degrees 21 minutes 32 seconds East, 49.98 feet and North 54 degrees 54 minutes 29 seconds West, 67.76 feet and on a curve to the left, whose radius is 736.62 feet, central angle 70 degrees 54 minutes 41 seconds, chord bearing and distance: South 89 degrees 38 minutes 10 seconds West, 854.59 feet from the South 1/4 corner of Section 6; thence continuing along a curve to the left, whose radius is 736.62 feet, central angle of 06 degrees 04 minutes 29 seconds, chord bearing and distance of South 51 degrees 08 minutes 36 seconds West, 78.06 feet; thence South 48 degrees 06 minutes 21 seconds West, 71.90 feet to a point on the northerly right-of-way line of Interstate Highway I-75; thence North 74 degrees 16 minutes 24 seconds West, 21.42 feet along said North right-of-way line of Interstate Highway I-75; thence continuing along said right-of-way on a curve to the right with a radius of 22,809.32 feet, central angle 02 degrees 00 minutes 48 seconds, chord bearing and distance of North 73 degrees 16 minutes 00 seconds West, 801.46 feet to a point, said point being North 01 degrees 57 minutes 10 seconds West, 779.60 feet and North 87 degrees 44 minutes 44 seconds East, 37.97 feet from the Southwest corner of said Section 6; thence North 87 degrees 44 minutes 44 seconds East, 560.00 feet; thence South 64 degrees 45 minutes 55 seconds East, 379.06 feet to the point of beginning.

**PARCEL II:** Part of the Southwest 1/4 of Section 6, Town 2 North, Range 11 East, described as: beginning at a point that is North 01 degrees 52 minutes 28 seconds West, 45.11 feet along the North-South 1/4 line of Section 6 and North 83 degrees 38 minutes 43 seconds West, 185.32 feet along the Northerly right-of-way line of Square Lake Road, so-called and continuing North 73 degrees 00 minutes 51 seconds West, 155.59 feet along said right-of-way line and continuing North 58 degrees 15 minutes 20 seconds West, 171.19 feet and continuing North 54 degrees 54 minutes 29 seconds West, 454.81 feet and continuing North 35 degrees 21 minutes 32 seconds East, 49.98 feet and North 54 degrees 54 minutes 29 seconds West, 67.76 feet and on a curve to the left, whose radius is 736.62 feet, central angle 38 degrees 42 minutes 18 seconds, chord bearing and distance of North 74 degrees 15 minutes 38 seconds West, 488.20 feet from the South 1/4 corner of Section 6; thence continuing along a curve to the left, whose radius is 736.62 feet, central angle of 32 degrees 12 minutes 23 seconds, chord bearing and distance of South 70 degrees 17 minutes 02 seconds West, 408.63 feet; thence North 64 degrees 45 minutes 55 seconds West, 379.06 feet; thence North 87 degrees 44 minutes 44 seconds East, 726.41 feet; thence South 01 degrees 52 minutes 28 seconds East, 52.35 feet to the point of beginning.

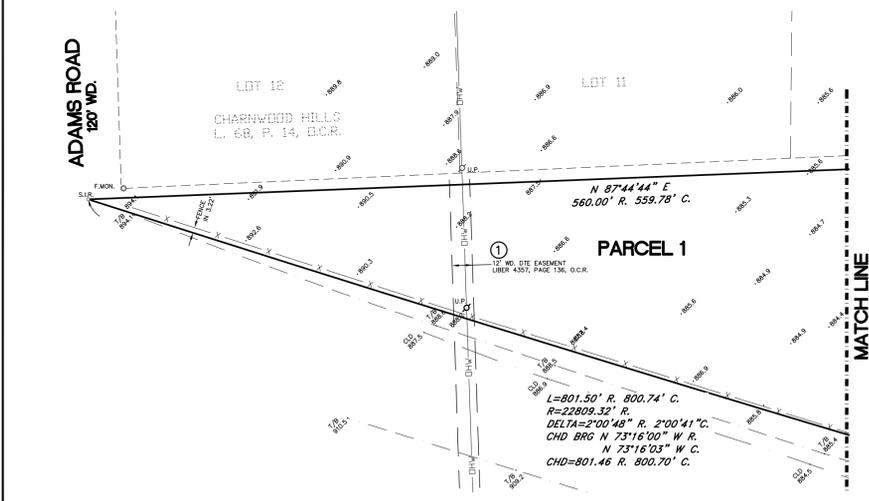
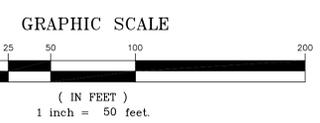
**PARCEL III:** Part of the Southwest 1/4 of Section 6, Town 2 North, Range 11 East, described as: beginning at a point that is North 01 degrees 52 minutes 28 seconds West, 45.11 feet along the North-South 1/4 line of Section 6 and North 83 degrees 38 minutes 43 seconds West, 185.32 feet along the Northerly right-of-way line of Square Lake Road, so-called, and continuing North 73 degrees 00 minutes 51 seconds West, 155.59 feet along said right-of-way line and continuing North 58 degrees 15 minutes 20 seconds West, 171.19 feet and continuing North 54 degrees 54 minutes 29 seconds West, 454.81 feet and continuing North 35 degrees 21 minutes 32 seconds East, 49.98 feet from the South 1/4 corner of Section 6; thence continuing along said Northerly right-of-way line of Square Lake Road, so-called, North 54 degrees 54 minutes 29 seconds West, 67.76 feet; thence on a curve to the left, having a radius of 736.62 feet, central angle of 38 degrees 42 minutes 18 seconds, chord bearing and distance of North 74 degrees 15 minutes 38 seconds West, 488.20 feet; thence North 01 degrees 52 minutes 28 seconds West, 61.35 feet; thence North 87 degrees 44 minutes 44 seconds East, 410.41 feet; thence South 01 degrees 52 minutes 28 seconds East, 9.00 feet; thence North 87 degrees 44 minutes 44 seconds East, 140.38 feet; thence South 05 degrees 25 minutes 09 seconds West, 246.46 feet to the point of beginning.

**SITE BENCHMARKS**

- REFERENCE BENCHMARK**  
CITY B.M. 0812 "J" IN JORDAN OF STORM C.B. NORTH SIDE OF SQUARE LAKE ROAD 225' WEST OF BEECH ROAD @ WEST PROPERTY LINE OF HOUSE #2541 ELEV: 871.39 NAVD 88 DATUM
- SITE BENCHMARK #1**  
NAIL IN SOUTH FACE OF 28" OAK @ S.E. SITE CORNER ELEV: 871.39
- SITE BENCHMARK #2**  
NAIL IN SOUTH FACE OF 15" ELM NORTH SIDE OF SQUARE LAKE ROAD 600' EAST OF I-75 ELEV: 885.17
- SITE BENCHMARK #3**  
MAG NAIL IN WEST FACE OF 24" CHERRY ON NORTH PROPERTY LINE 20' SW OF FRAME GARAGE ELEV: 889.07
- SITE BENCHMARK #4**  
MAG NAIL IN SOUTH FACE OF UTILITY POLE 20' NORTH OF NORTH PROPERTY LINE 550' WEST OF N.E. CORNER ELEV: 900.20

**LEGEND**

- R. RECORD
- M. MEASURED
- C. CALCULATED
- F.I.R. FOUND IRON ROD
- F.M.ON. FOUND MONUMENT
- S.I.R. SET IRON ROD
- S.P.K. SET P.K. NAIL
- T/C. TOP OF CURB
- G. GUTTER
- FF. FINISHED FLOOR
- T/W. TOP OF WALL
- T/P. TOP OF PIPE
- T/B. TOP OF BANK
- B/B. BOTTOM OF BANK
- CLD. CENTERLINE OF DITCH
- C.B. CATCH BASIN
- U.P. UTILITY POLE
- M.H. MANHOLE
- C.O. CLEAN OUT
- L.P. LIGHT POLE
- GWV. GATE VALVE AND WELL
- WSV. WATER STOP VALVE
- HYD. FIRE HYDRANT
- SIGN. SIGN
- S.P. STEEL POST
- TELEPHONE BOOTH
- GUY WIRE
- M.W. MONITORING WELL
- FENCE
- SANITARY/COMBINED SEWER
- STORM SEWER
- WATERMAIN
- GAS MAIN
- OVERHEAD UTILITY LINES



**BOUNDARY AND TOPOGRAPHIC SURVEY**  
CITY OF TROY, OKLAND COUNTY, MICHIGAN

DATE:	BY:	REVISIONS:	DATE:	BY:	REVISIONS:

SURVEY BY: T.S.  
DRAWN BY: J.M.C.  
CHECKED BY: G.J.J.R.  
APPROVED BY: G.J.J.R.

**GEORGE JEROME & CO.**  
CONSULTING MUNICIPAL & CIVIL ENGINEERS  
28304 HAYES  
ROSELLE, MI 48066  
www.GeorgeJerome.com

ORDER NO. 25-506  
FIELD BOOK 1379 Pg 36-44  
DATE 1-30-13  
DRAWING FILE NO.

SHT. NO. **1** OF **2**





DATE: March 8, 2013

TO: Planning Commission

FROM: R. Brent Savidant, Planning Director

SUBJECT: PUBLIC HEARING - SPECIAL USE AND PRELIMINARY SITE PLAN REVIEW (File Number SU 402) – Proposed Gypsum Supply Company, East side of John R, North of Fourteen Mile Road (651 Robbins), Section 36, Currently Zoned IB (Integrated Industrial and Business) District

The petitioner Gypsum Supply Company submitted the above referenced Special Use Approval and Preliminary Site Plan Approval application for a proposed outdoor storage area for an existing industrial facility.

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

Attachments:

1. Maps
2. Report prepared by Carlisle/Wortman Associates, Inc.

cc: Applicant  
File/ SU 402

G:\SPECIAL USE\SU 402 Gypsum Supply Company Section 36\PC Memo 03 12 2013.docx

## PROPOSED RESOLUTION

PUBLIC HEARING - SPECIAL USE AND PRELIMINARY SITE PLAN REVIEW (File Number SU 402) – Proposed Gypsum Supply Company, East side of John R, North of Fourteen Mile Road (651 Robbins), Section 36, Currently Zoned IB (Integrated Industrial and Business) District

**Resolution # PC-2013-03-**

Moved by:

Seconded by:

**RESOLVED**, That Special Use Approval and Preliminary Site Plan Approval for the Proposed Gypsum Supply Company, East side of John R, North of Fourteen Mile Road (651 Robbins), Section 36, Currently Zoned IB (Integrated Industrial and Business) District, be granted, subject to the following:

1. Provide additional information related to the types of materials to be stored outdoors.
2. Provide Fire Department with Knox Box on gate.
3. Indicate on the site plan a general storage layout plan.
4. Provide number of employees on largest shift to provide accurate required parking calculation.
5. Add additional parking on site, reconfigure outdoor storage location to provide adequate parking, or request a deviation from parking standards.

Yes:

No:

Absent:

**MOTION CARRIED / FAILED**

# 651 Robbins

City of Troy Planning Department



Legend

686 0 343 686Feet

Scale 1: 4,118

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

Printed: 2/18/2013



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



**CARLISLE/WORTMAN ASSOCIATES, INC.**  
*Community Planners /Landscape Architects*

605 S. Main, Suite 1  
Ann Arbor, MI 48104  
734-662-2200  
fax 734-662-1935

6401 Citation Drive, Suite E  
Clarkston, MI 48346  
248-625-8480  
fax 248-625-8455

Date: February 24, 2012

## **Special Use Review For City of Troy, Michigan**

**Applicant:** Horizon Engineering

**Project Name:** Gypsum Supply Company

**Plan Date:** February 5, 2013

**Location:** 651 Robbins Dr. – north and immediately east of Elliot Ave.  
between John R and Dequindre

**Zoning:** IB, Integrated Business District

**Action Requested:** Special Use Approval

**Required Information:** Deficiencies noted

### **PROJECT AND SITE DESCRIPTION**

We are in receipt of a special land use application which includes a site plan demonstrating both existing and proposed site conditions related to the addition of an outdoor storage area.

The applicant is proposing to utilize a portion of their existing parking area as an outdoor storage area. The site is located at 651 Robbins Drive at the existing Gypsum Supply Company. The site is zoned IB, Integrated Business District. Outdoor storage facilities are listed as a special use in the IB district.

The applicant indicates that they propose to store building framing materials (steel studs, etc), however this should be confirmed and/or the applicant should provide additional information related to the types of materials to be stored outdoors.

**Figure 1. – Aerial Photograph**



Location of Subject Property:

The property is located on the north cul-de-sac of Robbins Drive, east of Elliot Avenue between John R and Dequindre.

Size of Subject Property:

The parcel is 2.618 acres in area.

Proposed Uses of Subject Parcel:

The applicant proposes to modify a portion of the existing northern parking area as outdoor storage.

Current Use of Subject Property:

The subject property currently maintains a 43,078 s.f. industrial building that contains an office/sales area (11,454 s.f.) and warehouse/storage area (31,624 s.f.).

Current Zoning:

The property is zoned IB, Integrated Business District.

Zoning Classification of Adjacent Parcels and Current Land Use:

	<b>Zoning</b>	<b>Use</b>
North	MR, Multi-Family Residential	Canterbury Square Apartments
South	IB, Integrated Business District	Robbins Executive Park

East	IB, Integrated Business District	Robbins Executive Park
West	CB, Community Business (across Elliot Ave.)	Home Goods store
	GB, General Business District	Chuck E. Cheese

**NATURAL RESOURCES**

The existing site currently is improved with a 43,078 s.f. Gypsum Supply Company industrial building and other site improvements. No natural features exist; therefore the proposed site improvements will not impact any protected natural features.

*Items to be Addressed: None.*

**BUILDING LOCATION / SITE ARRANGEMENT / CIRCULATION**

The existing building is located at the center of the site, with the parking in the rear (north) and side (east). The proposed outdoor storage area will be located within a portion of the northern parking area, and will be enclosed by the existing concrete screen wall along the north property line and proposed 6-foot chain-link fencing with vinyl slats. There are two proposed gates; one along the southern and one along the eastern fence line.

The outdoor storage yard fence encloses a fire hydrant. The Fire Department notes that the applicant will need to put a Knox Box on the fence gate. Furthermore, the Fire Department notes that no material can block access to the fire hydrant.



In order to ensure proper circulation and ensure that the fire hydrant is accessible, the applicant should indicate on the site plan a general storage layout plan.

**Items to be Addressed:** 1). Provide Fire Department with Knox Box on gate; and 2). Indicate on the site plan a general storage layout plan

**AREA, WIDTH, HEIGHT, SETBACKS**

Required and Provided Dimensions:

Section 4.15.C establishes the dimensional requirements for the IB District. The layout of the site, excepting the northern parking area will not be impacted by the addition of the outdoor storage area. The requirements and the proposed dimensions are as follows:

	<u>Required:</u>	<u>Provided:</u>	<u>Compliance:</u>
Front (east/Robbins)	30 feet	51.8 feet (Robbins) / 80.7 feet (east property line)	Complies
Rear (north)	20 foot	69.5 feet	Complies
Front (Elliot)	30 feet	80.8 feet	Complies
Side (south)	10 feet	23.1 feet	Complies
Building Height	Maximum 4 stories, 50 feet	1 story, 23 feet	Complies
Maximum Percent Lot Area Covered by Buildings	40%	37.8%	Complies

**Items to be Addressed:** None.

## **PARKING**

### Parking:

Currently, 70 parking spaces are provided along the east and north property lines. The area proposed to house the outdoor storage area would eliminate 38 existing parking spaces north of the existing building.

	<u>Required</u>	<u>Provided</u>
Office = 1 space per 550 s.f. (11,454) – 21 spaces	$11,454 / 550 = 21$ spaces	32 spaces
Warehouse = 1 space per 1,500 s.f. + 1 space for each employee on largest shift	$31,624 / 1,500 = 21$ spaces	
<b>Total</b>	<b>42 spaces + employees on largest shift required</b>	

The elimination of parking spaces to accommodate the outdoor storage area reduces the site's available parking spaces. The site is deficient in the required number as set forth in Table 13.06 A of the Zoning Ordinance.

Section 13.06 F.2. provides that the Planning Commission may grant deviations from off-street parking requirements based upon a finding that such deviations will provide sufficient number of spaces to accommodate the use in question. The applicant is required to specifically request a deviation from the standards of the Ordinance for review.

**Items to be Addressed:** 1) Provide number of employees on largest shift to provide accurate required parking calculation; and 2) Add additional parking on site, reconfigure outdoor storage location to provide adequate parking, or request a deviation from parking standards.

## SITE ACCESS

### Vehicular access:

The site will be accessed via the existing driveway from Robbins Drive. No modifications regarding site access are proposed.

### Pedestrian access:

There are no existing public sidewalks along Robbins Drive.

**Items to be Addressed:** None.

## LIGHTING

No additional lighting is proposed as part of the proposed outdoor storage area. If lighting is proposed, such lighting shall comply with 13.05 of the Zoning Ordinance.

**Items to be Addressed:** None.

## LANDSCAPING

A landscaping plan has not been provided. The proposed outdoor storage area will not impact any existing landscaping, and it doesn't appear that any additional landscaping is required or proposed.

**Items to be Addressed:** None.

## SPECIAL USE

In the IB District, outdoor storage facilities are permitted as a special use. For any special use, according to Section 9.02.D, the Planning Commission shall *"...review the request, supplementary materials either in support or opposition thereto, as well as the Planning Department's report, at a Public Hearing established for that purpose, and shall either grant or deny the request, table action on the request, or grant the request subject to specific conditions."*

### **Use Standards**

Section 6.08 provides specific use requirements for outdoor storage facilities. Specifically, outdoor storage facilities are required to be an accessory to the primary use of the property, and shall not be located in any front yard. Furthermore, outdoor storage facilities are required to be enclosed by an opaque fence up to eight (8) feet in height and/or landscape screening meeting the standards set forth in Section 13.02 B.

The site plan provided demonstrates that the outdoor storage area will be located in the northwest corner of the property within the current northern parking area. The area will be screened to the north

by the existing concrete screening wall along the northern property line. In addition, a 6-foot chain-link fence with vinyl slats for opacity will be installed along the east, west and south boundaries of the outdoor storage area. The applicant meets Section 6.08 of the ordinance.

### **Standards of Approval**

Section 9.03 states that before approving any requests for Special Use Approval, the Planning Commission shall consider:

- 1. Compatibility with Adjacent Uses. The Special Use shall be designed and constructed in a manner harmonious with the character of adjacent property and the surrounding area. In determining whether a Special Use will be harmonious and not create a significant detrimental impact, as compared to the impacts of permitted uses. **The proposed outdoor storage area will immediately border a multi-family residential area to the north. The applicant should provide a detail listing of the types of materials to be stored and layout plan to ensure the adjacent residential use will not be impacted.***
- 2. Compatibility with the Master Plan. The proposed Special Use shall be compatible and in accordance with the goals and objectives of the City of Troy Master Plan and any associated sub-area and corridor plans. **The Master Plan designates the subject site and the surrounding area as 21<sup>st</sup> Century Industrial. The 21<sup>st</sup> Century Industrial future land use classification encourages a variety of industrial uses; specifically, light industrial uses with no outdoor storage or external nuisances are especially encouraged. However, because this is an existing use, and provided the applicant can make the noted site plan changes, the proposed use can be compatible with the City of Troy Master Plan.***
- 3. Traffic Impact. The proposed Special Use shall be located and designed in a manner which will minimize the impact of traffic, taking into consideration: pedestrian access and safety; vehicle trip generation (i.e. volumes); types of traffic, access location, and design, circulation and parking design; street and bridge capacity and, traffic operations at nearby intersections and access points. Efforts shall be made to ensure that multiple transportation modes are safely and effectively accommodated in an effort to provide alternate modes of access and alleviate vehicular traffic congestion. **The addition of an outdoor storage area within the existing development site would not require additional vehicular trips.***
- 4. Impact on Public Services. The proposed Special Use shall be adequately served by essential public facilities and services, such as: streets, pedestrian or bicycle facilities, police and fire protection, drainage systems, refuse disposal, water and sewage facilities, and schools. Such services shall be provided and accommodated without an unreasonable public burden. **We do not expect any additional impact on other public services, such as police or utilities, beyond what would normally be experienced for other uses in the district.***
- 5. Compliance with Zoning Ordinance Standards. The proposed Special Use shall be designed, constructed, operated and maintained to meet the stated intent of the zoning districts and shall comply with all applicable ordinance standards. **Several items need to be addressed, as noted herein, to meet this requirement.***

The Planning Commission is also required to generally consider the following for any special use application:

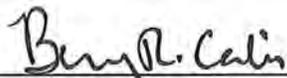
1. *The nature and character of the activities, processes, materials, equipment, or conditions of operation; either specifically or typically associated with the use. **See above. We believe that with conditions, the proposed use may be permissible.***
2. *Vehicular circulation and parking areas. **A general layout plan will ensure that safe fire access and circulation is provided. In addition, due to the elimination of parking spaces to accommodate the outdoor storage area, on-site parking will need to be re-evaluated.***
3. *Outdoor activity, storage and work areas. **The special requirements (Section 6.08) related to outdoor storage facilities have been met.***
4. *Hours of operation. **The addition of the outdoor storage area will not impact the existing businesses current hours of operation.***
5. *Production of traffic, noise vibration, smoke, fumes odors, dust, glare and light. **We do not anticipate any additional impact in this regard.***

**Items to be addressed:** Address Ordinance compliance issues noted herein.

## RECOMMENDATIONS

Prior to the granting of the special use request and preliminary site plan application, we recommend that the applicant resubmit the following items:

1. Provide additional information related to the types of materials to be stored outdoors.
2. Provide Fire Department with Knox Box on gate.
3. Indicate on the site plan a general storage layout plan.
4. Provide number of employees on largest shift to provide accurate required parking calculation.
5. Add additional parking on site, reconfigure outdoor storage location to provide adequate parking, or request a deviation from parking standards.



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

*Gypsum Supply Company*  
*February 25, 2013*

225-02-1307

February 5, 2013

Planning Department  
City of Troy  
500 West Big Beaver Road  
Troy, Michigan 48084

Re: Special Use Request for Outdoor Storage  
#651 Robbins Drive, "Gypsum Supply Co."  
Section 36, City of Troy

Dear City of Troy Planning Department:

Attached to this letter please find the following items:

- One (1) Special Use Request Application.
- One (1) Special Use Approval Initial Submittal Checklist.
- One (1) Certified Existing Conditions (Boundary) Survey.
- Two (2) Site Plans.
- One (1) CD containing PDF copies of the above items.
- Two (2) checks (\$1,800 Special Use Approval Fee and \$1,500 Escrow Fee).

These materials are being submitted for your review pursuant to placement on a Planning Commission agenda for a Special Use Request to allow Outdoor Storage for Gypsum Supply Co.

The subject property is located at #651 Robbins Drive and consists of an existing 43,078 square-foot industrial building, a portion of which is office/sales area and the majority being warehouse/storage area. The property is located in the Integrated Industrial and Business District (IB).

The Applicant, Gypsum Supply Co., desires to designate a portion of the property for purposes of Outdoor Storage, which is permissible within the IB district subject to Special Use Approval. Said storage area is to be located across a portion of the paved lot at the northwest corner of the property as indicated on the Site Plan.

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February 5, 2013  
Planning Department, City of Troy  
Re: Special Use Request for #651 Robbins Drive

All of the conditions of Ordinance Section 6.08 (Contractor's Yard/Outdoor Storage Facilities) are met. A concrete screen wall exists along the northerly boundary of the property, and the remaining sides of the Outdoor Storage area shall be enclosed with chain link fence including vinyl slats for opaqueness. Materials stored within the enclosure are expected to consist of building framing materials (steel studs, etc.). These materials are generally stacked at ground level on pallets and their height shall not exceed the height of the screen wall or fence enclosure.

We feel that the proposed Special Use Request is perfectly compatible with the zoning district and use of the property and is consistent with other storage yards located elsewhere within the City.

Your consideration of our request is greatly appreciated. Please do not hesitate to contact me if you have any questions or concerns.

Sincerely,

Nathan P. Robinson, P.E.  
*President*  
*nrobinson@horizoneng.net*

cc.: Ben Rouster, Gypsum Supply Co.

attachments

# EXISTING CONDITIONS PLAN

CERTIFIED TO: GYPSUM SUPPLY CO.

## PROPERTY DESCRIPTION: (AS FURNISHED BY CLIENT)

PARCEL NO. 20-36-302-008  
 LOT 36, "ROBBINS EXECUTIVE PARK EAST NO. 2", EXCEPT THE SOUTH 20 FEET, PART OF THE  
 SOUTHWEST 1/4 OF SECTION 36, TOWN 2 NORTH, RANGE 11 EAST, CITY OF TROY, OAKLAND  
 COUNTY, MICHIGAN AS RECORDED IN LIBER 137, PAGES 26 AND 27 OF OAKLAND COUNTY  
 RECORDS.

## PARKING

BARRIER-FREE PARKING = 5 PAINTED STALLS  
 STANDARD PARKING = 65 PAINTED STALLS

## PARCEL AREA

TOTAL = 114,019.3 SQUARE FEET = 2.62 ACRES

## BASIS OF BEARING

NORTH 00°57'55" EAST, BEING THE WESTERLY  
 SUBDIVISION LINE OF, "ROBBINS EXECUTIVE PARK  
 EAST NO. 2", AS PLATTED AND AS MONUMENTED  
 IN FIELD.

## FLOOD NOTE

SUBJECT PARCEL LIES WITHIN ZONE X. AREAS  
 DETERMINED TO BE OUTSIDE OF THE 0.2%  
 ANNUAL CHANCE (500 YEAR) FLOOD PLAIN AS  
 SHOWN ON FLOOD INSURANCE RATE MAP  
 NUMBER 26125026510, DATED JANUARY 16,  
 2009, PUBLISHED BY THE FEDERAL EMERGENCY  
 MANAGEMENT AGENCY.

## SURVEYOR'S NOTES

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

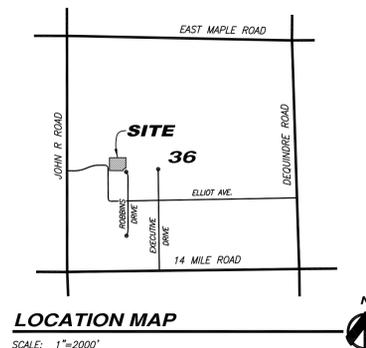
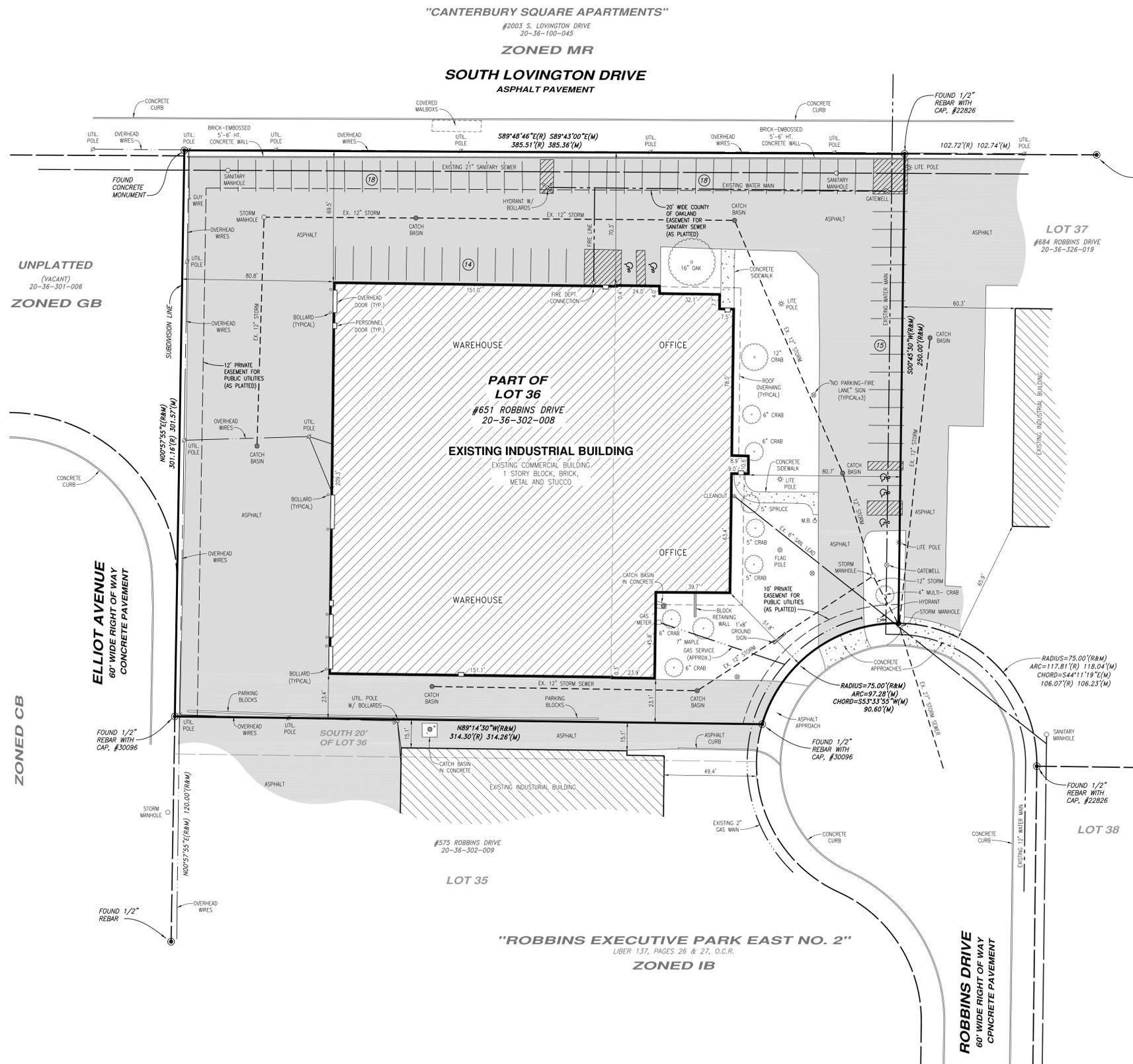
2. A CURRENT TITLE POLICY HAS NOT BEEN FURNISHED AT TIME OF SURVEY, THEREFORE  
 EASEMENTS AND/OR ENCUMBRANCES AFFECTING SUBJECT PARCEL MAY NOT BE SHOWN.

## CONTRACTOR'S NOTE

The locations of existing underground utilities  
 are shown in an approximate way only. The  
 contractor shall determine the exact location  
 of all existing utilities before commencing  
 work. He agrees to be fully responsible for  
 any and all damages which might be  
 occasioned by his failure to exactly locate  
 and preserve any and all underground utilities.

3 WORKING DAYS  
**BEFORE YOU DIG**  
 CALL MISS DIG  
 1-800-482-3171  
 (TOLL FREE) for the location  
 of underground utilities.

The contractor shall be responsible for adhering to all applicable local, state,  
 and federal standards, specifications, and guidelines for construction.



LEGEND	
○	FOUND MONUMENT AS NOTED
⊕	SET 1/2" REBAR WITH CAP #46724
⊙	UTILITY POLE
⊕	GUY ANCHOR
⊕	FIRE HYDRANT/FIRE DEPT. CONNECTION
⊕	GATEWELL/WATER SHUTOFF
⊕	GAS METER/SHUTOFF
⊕	MANHOLE (AS NOTED)
⊕	CLEANOUT
⊕	MAIL BOX
⊕	ROUND CATCH BASIN
⊕	SIGN
⊕	BOLLARD
⊕	LIGHT POLE
⊕	FLAG POLE
⊕	BARRIER-FREE PARKING STALL
⊕	PARKING STALL COUNT
⊕	EXISTING TREE & SIZE
—	PARCEL BOUNDARY
—	ADJACENT PARCEL
—	EXISTING BUILDING
—	EXISTING WALL
—	OVERHEAD LINES
—	EXISTING PAVEMENT AS NOTED
—	EASEMENT LINE
—	LANDSCAPE BERM
—	EXISTING SANITARY LINE
—	EXISTING STORM LINE
—	EXISTING WATER LINE
—	EXISTING GAS LINE

**SURVEYOR'S CERTIFICATION**  
 I HEREBY CERTIFY THAT I HAVE SURVEYED THE PROPERTY HEREIN DESCRIBED AND  
 THE DRAWING HEREON DELINEATED IS A CORRECT REPRESENTATION OF THE SAME.

SHANE P. AZBELL, P.S.  
 PROFESSIONAL SURVEYOR  
 MICHIGAN LICENSE NO. 46724

**AZTEC**  
 LAND SURVEYORS INC.  
 PHONE: 566-306-1259  
 FAX: 480-287-8799  
 P.O. BOX 959  
 HOLLY, MI 48442

CLIENT: GYPSUM SUPPLY CO.  
 651 ROBBINS DRIVE  
 TROY, MI 48063  
 (248) 250-7775

PROJECT: EXISTING CONDITIONS SURVEY

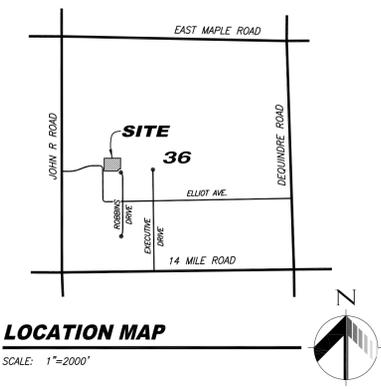
JOB NO: 13-014  
 DATE: 2/5/13  
 DRAWN BY: S.A.  
 CHECKED BY: S.A.

REVISIONS:  
 SCALE:

SHEET  
**1**  
 OF 1

MUNICIPAL REVIEW NUMBERS:

**"CANTERBURY SQUARE APARTMENTS"**  
 #2003 S. LOVINGTON DRIVE  
 20-36-100-045  
**ZONED MR**  
**SOUTH LOVINGTON DRIVE**  
 ASPHALT PAVEMENT



**LOCATION MAP**

SCALE: 1"=2000'

**PROPERTY DESCRIPTION**

PARCEL NO. 20-36-302-008  
 LOT 36, "ROBBINS EXECUTIVE PARK EAST NO. 2", EXCEPT THE SOUTH 20 FEET, PART OF THE SOUTHWEST 1/4 OF SECTION 36, TOWN 2 NORTH, RANGE 11 EAST, CITY OF TROY, OAKLAND COUNTY, MICHIGAN AS RECORDED IN LIBER 137, PAGES 26 AND 27 OF OAKLAND COUNTY RECORDS.

**SITE CRITERIA**

- PARCEL SUMMARY:**  
 ADDRESS: 651 ROBBINS DRIVE  
 PARCEL ID NO.: 20-36-302-008  
 EXISTING ZONING: IB (INTEGRATED INDUSTRIAL AND BUSINESS DISTRICT)  
 ADJACENT ZONINGS: CB, GB, MR & IB  
 GROSS AND NET SITE AREA: 114,019 S.F. (2.618 ACRES)
- BUILDING & USE SUMMARY:**  
 EXISTING USE: INDUSTRIAL WAREHOUSE & OFFICE.  
 PROPOSED USE: INDUSTRIAL WAREHOUSE & OFFICE WITH OUTDOOR STORAGE.  
 GROSS BUILDING AREA:  
 OFFICE: 11,454 S.F.  
 WAREHOUSE: 31,624 S.F.  
 TOTAL: 43,078 S.F.  
 BUILDING HEIGHT ALLOWED: 4 STORIES, 50'  
 BUILDING HEIGHT EXISTING: 1 STORY, APPROX. 23'  
 LOT COVERAGE ALLOWED: 40% x 114,019 = 45,608 S.F.  
 LOT COVERAGE EXISTING: 43,078 S.F. / 114,019 S.F. = 37.8%
- SETBACK SUMMARY:**  

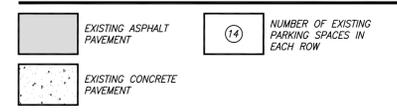
BUILDING:	REQUIRED:	EXISTING:
FRONT:	30'	51.8'
REAR:	20'	69.5' MIN.
SIDE (MIN.):	10'	23.1'
SIDE (TOTAL):	20'	103.8' MIN.
- PARKING SUMMARY:**  

SPACES REQUIRED:	OFFICE:	WAREHOUSE:	TOTAL:
	11,454 S.F./500 = 23 SPACES	31,624 S.F./1500 = 21 SPACES	44 SPACES REQUIRED
SPACES PROVIDED:	70 SPACES (INCLUDES 5 BARRIER-FREE SPACES).		

**GENERAL NOTES**

- SURVEY AND TOPOGRAPHIC INFORMATION SHOWN IS AS PERFORMED BY AZTEC LAND SURVEYORS INC., JOB NO. 13-014, DATED 2-5-2013.
- UNDERGROUND UTILITY INFORMATION IS SHOWN AS DETERMINED FROM FIELD SURVEY WORK AND AVAILABLE RECORDS FROM THE CITY OF TROY. NO GUARANTEE IS GIVEN TO THE COMPLETENESS OR ACCURACY THEREOF. OWNER AND/OR CONTRACTOR SHALL FIELD VERIFY EXISTING UTILITIES PRIOR TO ANY SITE WORK BEING PERFORMED, IF ANY.
- A CURRENT TITLE POLICY HAS NOT BEEN FURNISHED AT TIME OF SURVEY, THEREFORE EASEMENTS AND/OR ENCUMBRANCES AFFECTING SUBJECT PARCEL MAY NOT BE SHOWN.

**LEGEND**

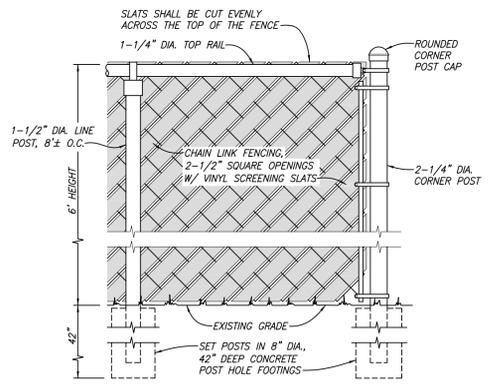
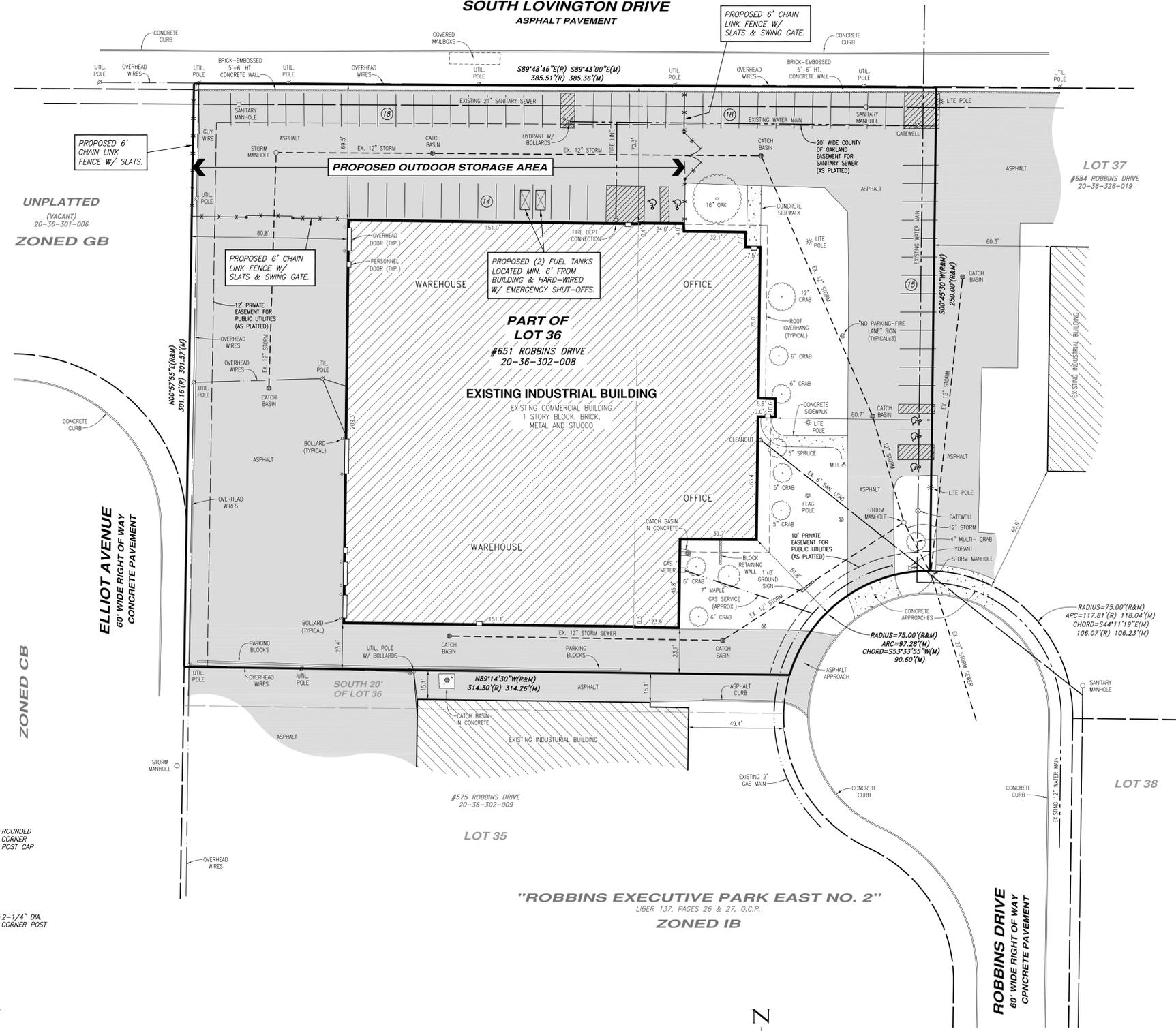


**CONTRACTOR'S NOTE**

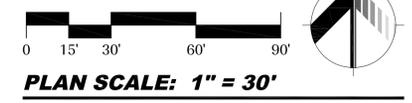
The locations of existing underground utilities are shown in an approximate way only. The contractor shall determine the exact location of all existing utilities before commencing work. He agrees to be fully responsible for any and all damages which might be occasioned by his failure to exactly locate and preserve any and all underground utilities.

**3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG**  
 1-800-482-7171  
 (TOLL FREE) for the location of underground utilities

The contractor shall be responsible for adhering to all applicable local, state, and federal standards, specifications, and guidelines for construction.



**CHAIN LINK FENCE SCREENING DETAIL**  
 (NO SCALE, REFER TO FENCE CONTRACTOR SPECIFICATIONS)  
 NOTE: ALL FENCE MATERIALS TO BE GALVANIZED STEEL.



REVISIONS:  
 CLIENT: MELVIN ROEBSTER  
 GYPSUM SUPPLY CO.  
 651 ROBBINS DRIVE  
 TROY, MI 48068  
 (248) 254-7775

SEAL:  
**HORIZON**  
 ENGINEERING LLC  
 CIVIL ENGINEERING, SITE PLANNING & LAND DEVELOPMENT CONSULTING  
 P.O. Box 182158, Shelby Township, Michigan 48318  
 Phone 586.453.8097 Fax 586.580.0053

PROJECT:  
**Gypsum Supply Co.**  
 #651 ROBBINS DRIVE  
 PARCEL NO. 20-36-302-008  
 PART OF THE SOUTHWEST 1/4 OF SECTION 36,  
 T.2N., R.1E., CITY OF TROY, OAKLAND COUNTY, MICHIGAN

PLAN:  
**SITE PLAN for SPECIAL USE REQUEST**

SHEET:  
**1** OF **1**  
 MUNICIPAL REVIEW NUMBERS:

DATE: March 8, 2013  
TO: Planning Commission  
FROM: R. Brent Savidant, Planning Director  
SUBJECT: ZONING ORDINANCE TEXT AMENDMENT (File Number ZOTA 245) – Sober Living Facilities

An organization, Great Lakes Recovery Community, is interested in using a property in Troy as a sober living facility. The use is presently not permitted in the City of Troy. The Planning Commission identified the need for this type of facility and initiated the process to amend the Zoning Ordinance to permit this use. A text amendment is applicable to all similarly-zoned properties in Troy.

To assist the Planning Commission in making an informed decision, members were invited to tour a similar operating facility in Shelby Township on January 17. The Planning Commission discussed this issue conceptually at the January 22, 2013 Special/Study meeting and then again at the February 12, 2013 Regular meeting.

The attached memo prepared by Carlisle/Wortman Associates, Inc. summarizes the item and includes proposed Zoning Ordinance provisions. In an effort to keep this item moving forward, a Public Hearing was scheduled for this item on March 26, 2013.

Please be prepared to discuss this matter at the March 12, 2013 Planning Commission Regular meeting.

Attachments:

1. Report prepared by CWA
2. Minutes from February 12, 2013 Planning Commission Regular meeting (excerpt)

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9. ZONING ORDINANCE TEXT AMENDMENT (File Number ZOTA 245) – Sober Living Facility

Mr. Carlisle presented a report on this item, including draft provisions regulating sober living facilities.

There was general discussion on the item.

David Lord, representative from Great Lakes Recovery Community, addressed questions related to sober living facilities.

Planning Commission determined that it would be appropriate to limit sober living facilities to adults, 18 years of age and above.

Staff informed Planning Commission next steps would be to present a revised draft based on feedback.



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## MEMORANDUM

**TO:** R. Brent Savidant, AICP, Planning Director

**FROM:** Ben Carlisle, AICP

**DATE:** March 8, 2013

**RE:** Sober Living Zoning Ordinance Amendments

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On February 12, the Planning Commission first considered zoning language regarding sober living facilities. The revised language below considers the comprehensive discussion between staff and the Planning Commission, as well as input from a Sober Living facility provider. Changes to the zoning ordinance language since the February 12 consideration is either underlined or ~~struckthrough~~ accordingly.

Please remember that since persons recovering from alcohol and drug addiction are considered to be disabled, they have certain protections under the Americans with Disabilities Act and the Federal Fair Housing Act. Thus, any regulation that treats sober living homes less favorably than similar uses may be considered exclusionary and difficult to justify. See our February 6, 2013 memo for more details regarding project background and zoning best practices.

If the Planning Commission agrees with the following Zoning Ordinance language, a public hearing will be scheduled.

### **TROY ZONING AMENDMENT:**

Based on the direction of the Planning Commission and review of best practices, we recommend adding the following definition and zoning provisions:

#### **Definition:**

*Sober Living Facility Recovery Center: A temporary residential living arrangement for seven (7) or more adult persons leaving an institutional setting recovering from drug or alcohol addiction and in need of a supportive living arrangement in order to readjust to living outside the institution. These are persons who are receiving therapy and counseling from licensed or certified professional staff and trained non-professional or paraprofessional support staff who are present when residents are present, to help them recuperate from the effects of drug or alcohol addiction. Recovery center may provide limited supportive services to residents only, including:*

*mental health services; clinical rehabilitation services; social services; financial management services; legal services; and other similar supportive services. Residency is limited to a specific number of weeks or months, typically 24 months or less. This definition does not constitute halfway houses for those released from prison or a homeless situation.*

The intent of the definition is to distinguish between sober living facility and more service-intensive, government-licensed housing facilities occupied by residents with a higher level of dependence, and to reduce the existing lack of clarity about what constitutes a “legitimate” sober living facility. This definition would not include dwelling units occupied by six (6) or less residents, which are covered by the standard definition of family, and by-right in single-family residential.

**Use Table:**

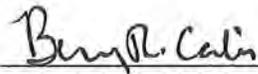
	R1A-R1E	RT	MR	UR	MHP	CF	EP	CB	GB	IB	O	OM	RC	PV	P
Recovery Center	S	S	S	S	NP	NP	NP	NP	NP	S	NP	S	NP	NP	NP
<b>For Comparison Purposes only</b>															
Senior assisted/independent living	P	P	P	P	NP	P	NP	P	P	P	NP	P	NP	NP	NP
Multiple-family dwellings (2-8 stories)	NP	NP	P	P	NP	NP	NP	NP	NP	P	NP	NP	NP	NP	NP
Convalescent centers	NP	NP	S	S	NP	P	NP	P	P	P	P	P	NP	NP	NP
Adult foster care, family home	P	P	P	P	P	P	NP								
Adult foster care, Small group home	S	S	S	S	S	S	NP								
Adult foster care, large group home	S	S	S	S	S	S	NP								
Adult foster care, congregate facility	S	S	S	S	S	S	NP								

**Specific Use Provisions:**

*Recovery Center:*

- A. Recovery Center serving six (6) persons or less. A Recovery Center serving six (6) persons or less shall be considered a single-family use of property.
- B. Recovery Center Adult serving between seven (7) or more adult persons.

1. A site plan, prepared in accordance with Article 8 shall be required to be submitted.
  2. All residents must be eighteen (18) years of age or older.
  3. Frontage on either a major or minor arterial street shall be required.
  4. Parking: 1 space for each 1 per bed and (1) off-street parking space per employee and/or caregiver at largest shift shall be provided.
  5. Appropriate licenses with the State of Michigan shall be maintained.
  6. The subject parcel shall meet the minimum lot area requirements for the zoning district in which it is located provided there is a minimum site area of twenty-five hundred (2,500) square feet per adult, excluding employees and/or caregivers.
  7. Facility may include ancillary facilities are allowed such as multi-purpose recreational rooms and meeting rooms.
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**CARLISLE/WORTMAN ASSOC., INC.**  
**Benjamin R. Carlisle, LEED AP, AICP**