

**GENOA CHARTER TOWNSHIP  
PLANNING COMMISSION  
PUBLIC HEARING  
JUNE 9, 2014  
6:30 P.M.  
AGENDA**

CALL TO ORDER:

PLEDGE OF ALLEGIANCE:

APPROVAL OF AGENDA:

CALL TO THE PUBLIC:

**OPEN PUBLIC HEARING #1...** Review of site plan application and impact assessment for an 8,000 square feet Medical Building, located at a vacant lot on Grand River, Brighton, Parcel # 4711-14-200-023, south of Grand River between Hubert and Grand Beach. The request is petitioned by Howard Lipkin.

**Planning Commission disposition of petition**

- A. Recommendation of Environmental Impact Assessment.
- B. Disposition of Site Plan.

**OPEN PUBLIC HEARING #2...** Review of sketch plan application and sketch plan for a 276 square foot addition, located at 5000 Grand River, Brighton, Parcel # 4711-10-300-007. The request is petitioned by Stan Shafer on behalf of Champion Chevrolet.

**Planning Commission disposition of petition**

- A. Disposition of Sketch Plan.

**Review of the Zoning Board of Appeals 2013 Annual Report**

**Administrative Business:**

- *Staff report*
- *Approval of April 14, 2014 Planning Commission meeting minutes*
- *Member discussion*
- *Adjournment*



**GENOA CHARTER TOWNSHIP**  
**Application for Site Plan Review**

**GENOA TOWNSHIP**  
**APR 30 2019**

**TO THE GENOA TOWNSHIP PLANNING COMMISSION AND TOWNSHIP BOARD:**

APPLICANT NAME & ADDRESS: Dr. Howard Lipkin, 3172 Interlaken St., W. Bloomfield, MI 48323  
*If applicant is not the owner, a letter of Authorization from Property Owner is needed.*

OWNER'S NAME & ADDRESS: Dr. Howard Lipkin, 3172 Interlaken St., W. Bloomfield, MI 48323

SITE ADDRESS: Grand River Ave. PARCEL #(s): 4711-14-200-023

APPLICANT PHONE: (810 ) 220-4422 OWNER PHONE: (810 ) 220-4422

OWNER EMAIL: marysuederm@gmail.com

LOCATION AND BRIEF DESCRIPTION OF SITE: Located on the south side of Grand River Ave. between Remax Platinum and Kil's Tae Kwon Do. The property is flat and open along Grand River Ave. with scattered trees on the back third.

BRIEF STATEMENT OF PROPOSED USE: Proposed medical office building with associated parking and required storm water management system. Project is proposed in two phases.

THE FOLLOWING BUILDINGS ARE PROPOSED: 8,000 s.f. medical office building in first phase with an additional 8,000 s.f. building in the second phase towards the back of the property.

**I HEREBY CERTIFY THAT ALL INFORMATION AND DATA ATTACHED TO AND MADE PART OF THIS APPLICATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.**

BY: Thom Dumond / Boss Engineering


ADDRESS: 3121 E. Grand River Ave., Howell, MI 48843

**Contact Information** - Review Letters and Correspondence shall be forwarded to the following:

1.) Thom Dumond of Boss Engineering at thom@bosseng.com  
Name Business Affiliation E-mail Address

**FEE EXCEEDANCE AGREEMENT**

As stated on the site plan review fee schedule, all site plans are allocated two (2) consultant reviews and one (1) Planning Commission meeting. If additional reviews or meetings are necessary, the applicant will be required to pay the actual incurred costs for the additional reviews. If applicable, additional review fee payment will be required concurrent with submittal to the Township Board. By signing below, applicant indicates agreement and full understanding of this policy.

SIGNATURE:  DATE: 4/30/14  
PRINT NAME: Dr. Howard Lipkin PHONE: 810-220-4422  
ADDRESS: 3172 Interlaken St., West Bloomfield, MI 48323



Engineers • Surveyors • Planners • Landscape Architects

May 22, 2014

GENOA TOWNSHIP  
MAY 23 2014

Mr. Brian V. Borden, AICP  
306 S. Washington Ave. Suite 400  
Royal Oak, Michigan 48067

Re: Lipkin Medical Office Building, Genoa Township, Livingston County, Michigan  
Boss File No. 13-285

Dear Mr. Borden,

We have received your review letter for the above referred project dated May 14, 2014, and offer the following comments.

1. The building height has been reduced to be a maximum of 20 feet.
2. The building materials have been label on the elevations.
3. The material calculations have been added to the building elevations.
4. A building rendering has been added to this submittal package.
5. Dr. Lipkin currently has an office in Genoa Township near this site. His current office has an issue with parking. On a regular basis, his patients have found it difficult to find a parking space. Therefore, we are proposing the number of spaces we have determined would adequately service the needs of his patients.
6. It is noted on the site plan that all deliveries will be by UPS or similar vehicles at the main entrance of the building. Therefore, no loading zone has been provided.
7. Additional landscape plantings have been added along the east property to bring the design into ordinance compliance.
8. The minor discrepancies in the landscape plan have been corrected.
9. A sign design has been added to the building elevations.

If you should have any questions, feel free to contact us at any time.

Regards,

BOSS ENGINEERING COMPANY

A handwritten signature in black ink, appearing to read "Thomas H. Dumond".

Thomas H. Dumond, R.L.A., LEED AP,  
Vice President Planning and Landscape Architect

CC: G:\13-285\docs\13-285I4.doc





# BOSS ENGINEERING

3121 E. Grand River  
Howell, Michigan 48843

engineers  
surveyors  
planners  
landscape  
architects

GENOA TOWNSHIP  
MAY 23 2014

May 22, 2014

Mr. Gary Markstrom, P.E.  
Tetra Tech  
401 South Washington Square  
Suite 100  
Lansing, MI 48933

Re: Lipkin Medical Office Building, Genoa Township, Livingston County, Michigan  
Boss File No. 13-293

Dear Mr. Markstrom:

We received the review letter from Tetra Tech for the Lipkin Medical Building dated May 14, 2014. Below is a list of the revisions and additions we have made to the site plan based on the comments.

## SITE PLAN

1. The proposed contours have been shown on the green space areas of the grading plan. The grades in the area of the north entrance have been corrected and supplemented to show intended drainage.
2. Existing public utilities and sizes have been labeled on the plan.
3. The proposed 5' wide sidewalk along the Grand River Ave. frontage has been moved southerly to 1' outside the Road Commission right-of-way to align better with the existing walks on each side of the our side lot lines. A 7' wide sidewalk easement has been added to the plan.
4. Cross section details have been added to the site plan showing the proposed Phase 1 and Phase 2 butt joint construction at the southern edge of pavement. The proposed edge of asphalt has been moved 2' to the south, to allow a proper future butt joint which will serve as a break point for the overall parking lot drainage. Refer to Sheet 8 which now shows interim drainage and erosion control in the Phase 2 portion of the site.
5. A SESC inlet protection device was inadvertently omitted and added to the existing adjacent catch basin west of the south driveway.

## UTILITY PLAN

1. An 8"x8" Tapping Sleeve note has been added to the Utility Plan and the 12" reference on the profile sheet has been revised to show 8" water main in street. The relocated hydrant at the driveway entrance has been removed from the drawing, since the existing location does not interfere with the newly relocated sidewalk.

2. Lengths and dimensions have been revised on the Utility Plan. Also, refer to the profile for additional utility lengths.
3. The water main notes have been revised to show that the water main is at least 21.0' away from the corner of the building (ie. 20' from the footing).
4. We have confirmed with Tetra Tech that the water flow rate in the existing 8" water main in Grand River Ave. is 130GPM at an average pressure of 60psi, which should be sufficient for domestic service to the two buildings since they will not incorporate an internal fire suppression system.
5. Construction plans will be submitted to MHOG for review and permitting.

### **RETENTION AND HYDRAULICS PLAN**

1. Storm sewer labels have been added to the plan view, to match the pipe schedule.
2. As confirmed by Tetra Tech on May 21, 2014, minimum storm sewer pipe slopes shown on the plans are acceptable as is, since the official revised Genoa Engineering Design Standards are not yet ready for issue.
3. Drainage patterns have been revised due corrections in the grading at the north entrance.
4. Roof runoff will be directed to building downspout leads and a 10" PVC perimeter collection system which will drain into catch basin #7.

### **WATER MAIN PROFILE**

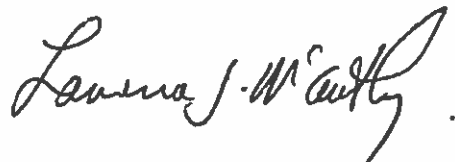
1. Existing 8" pipe and tapping sleeve reference has been relabeled.
2. Two 45° vertical bends are needed and labeled on the profile.

### **MHOG SANITARY SEWER DETAILS**

1. The interior drop connection has been omitted and the "Install Vertical Drop" note has been changed to correctly identify the need for two 45° vertical bends for a riser.

Feel free to contact us should you have any questions, or if you are in need of any additional information.

Sincerely,  
BOSS ENGINEERING COMPANY



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Lawrence McCarthy, P.E.  
Project Manager



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Thomas H. Dumond, R.L.A., LEED AP  
Director of Planning and Landscape Architect



Engineers • Surveyors • Planners • Landscape Architects

May 22, 2014

GENOA TOWNSHIP  
MAY 23 2014

Mr. Michael Evans, EFO, CFPS  
615 W. Grand River Ave.  
Brighton, MI 48116

Re: Lipkin Medical Office Building, Genoa Township, Livingston County, Michigan  
Boss File No. 13-285

Dear Mr. Evans,

We have received your review letter for the above referred project dated May 8, 2014, and offer the following comments.

1. The address of this property has not been assigned yet.
2. The location of the address has been added to the monument sign.
3. The parking lot has been modified to meet the emergency vehicle turning requirements.

If you should have any questions, feel free to contact us at any time.

Regards,

BOSS ENGINEERING COMPANY

A handwritten signature in black ink, appearing to read "Thomas H. Dumond".

Thomas H. Dumond, R.L.A., LEED AP,  
Vice President Planning and Landscape Architect

CC: G:\13-285\docs\13-285I5.doc



May 29, 2014

Planning Commission  
Genoa Township  
2911 Dorr Road  
Brighton, Michigan 48116

<b>Attention:</b>	Mike Archinal, AICP Township Manager
<b>Subject:</b>	Lipkin Medical Office Building – Site Plan Review #2
<b>Location:</b>	Grand River Avenue – south side of Grand River, west of Hubert Road
<b>Zoning:</b>	NSD Neighborhood Services District

Dear Commissioners:

At the Township's request, we have reviewed the revised site plan (dated 5/21/14) proposing development of a new 8,000 square foot medical office building on a vacant 3-acre site. We have reviewed the proposal in accordance with the applicable provisions of the Genoa Township Zoning Ordinance and provide the comments below for your consideration.

**A. Summary**

1. The combination of both buildings will exceed 15,000 square feet; therefore, development of Phase 2 will require special land use approval in addition site plan review/approval.
2. The Planning Commission has approval authority over the building elevations.
3. Planning Commission approval is needed for the amount of parking proposed (137.5% of that required). The submittal notes that the proposed overage is due to parking demands seen at the doctor's current practice.
4. A dedicated loading space is not provided; however, the applicant notes that small truck (UPS, FedEx) deliveries will be made at the main entrance of the building without disrupting traffic. The Planning Commission has discretion to modify the size requirements of the loading area.
5. There are minor labeling issues on the landscape plan that should be corrected.

**B. Proposal/Process**

The applicant requests site plan review and approval for development of an 8,000 square foot medical office building on the vacant 3-acre site. Table 7.02 lists medical offices with up to 15,000 square feet of gross floor area as a permitted use in the NSD.

As a side note, the project identifies a future phase with another 8,000 square foot building. At such time as Phase 2 is submitted for review, the applicant will also need to obtain special land use approval given the total square footage of medical office proposed.

Because Phase 1 entails a permitted use, Planning Commission has review and approval authority over the site plan, although the Environmental Impact Assessment will be subject to review and approval by the Township Board (following a recommendation by the Planning Commission).



*Aerial view of site and surroundings (looking south)*

**C. Site Plan Review**

**1. Dimensional Requirements.** As described in the table below, the project complies with the dimensional standards of the NSD:

District	Lot Size		Minimum Setbacks (feet)				Max. Height
	Lot Area (acres)	Width (feet)	Front Yard	Side Yard	Rear Yard	Parking	
NSD	1	100	35	10	40	10 side/rear	20'
Proposal	2.8	202	40.75	13.3 (E) 35.6 (W)	490	11.6 side (E) 45.2 side (W)	19'

**2. Building Materials and Design.** Proposed elevations, including colors and materials, are subject to review and approval by the Planning Commission. The submittal includes elevation views of each side of the building and a color rendering. In accordance with Table 12.01.03, the submittal includes a table of building materials, however the percentages include door and window glass. As the building is proposed to be predominantly brick and limestone, the painted sheet metal accents appear to be below the 25% maximum allowed.

**3. Parking.** In accordance with Section 14.04, medical offices require 1 parking space for each 200 square feet of gross floor area. Based upon the size of the proposed building, 40 spaces are required for Phase 1, while 55 spaces are provided.

In accordance with Section 14.02.06, Planning Commission approval is required since the amount parking proposed exceeds the minimum requirement by more than 20%. In this instance, the amount of parking represents an overage of 37.5%. In response, the applicant has indicated that the amount of parking proposed is consistent with the demand seen at Dr. Lipkin’s current practice elsewhere in the Township.

The parking spaces, drive aisles and number of barrier free spaces all meet or exceed the requirements of Article 14. In fact, several of the drive aisles are 6-foot wider than required, although it appears the additional space is needed for fire truck maneuverability around the site.

**Lipkin Medical Office Building**

Site Plan Review #2

Page 3

4. **Pedestrian Circulation.** Section 12.05 requires a 5-foot wide concrete sidewalk for properties along Grand River east of the 141 interchange. The site plan includes the required sidewalk along Grand River, as well as connections between the building entrances and public sidewalk and between the parking lot and building.
5. **Vehicular Circulation.** Vehicular access to the site is proposed via a shared driveway with the developed property to the west. The site plan identifies a 40-foot wide ingress/egress easement centered on the common side lot line. The drive also aligns properly with the drive across Grand River.
6. **Loading.** Given the size of the proposed building, Section 14.08.08 requires 1 loading space. Such spaces are to contain 500 square feet of area and be located in a rear or side yard not directly visible to a public street.

The revised submittal notes that “all deliveries will be by UPS or similar vehicles at the main entrance of the building. Therefore no loading zone has been provided.” There appears to be adequate room for a small delivery truck to temporarily park near the main entrance adjacent to the landscape islands without disrupting traffic. The Planning Commission has discretion to modify the 500 square foot size requirement as indicated in Section 14.08.06.

7. **Landscaping.** The following table is a summary of the landscaping required by Section 12.02:

Location	Requirements	Proposed	Comments
Front yard greenbelt	6 canopy trees 20' width	6 canopy trees 35-foot width	Requirements met
Detention pond	12 canopy OR evergreen trees 120 shrubs	12 trees 120 shrubs	Requirements met
Parking lot	6 canopy trees 550 s.f. of landscaped area	6 canopy trees 635 s.f. of landscaped area	Requirements met
Buffer Zone “B” (rear)	7 canopy trees 7 evergreen trees 27 shrubs 6' wall OR 3' berm 20' width	34 existing evergreen trees 22' width	PC may allow preservation of existing trees in lieu of new plantings
Buffer Zone “C” (E side)	30 trees OR 118 shrubs OR combination thereof 10' width	11 trees 78 shrubs 11' width (minimum)	Landscaping provided is above minimum requirement
Buffer Zone “C” (W side)	32 trees OR 128 shrubs OR combination thereof 10' width	21 trees 48 shrubs 15' width (minimum)	Landscaping provided is above minimum requirement

There are two minor discrepancies between the landscape plan and table on Sheet C5. Specifically, the table notes 10 Red Sunset Maple, which are accounted for; however, there appears to be an errant label on the westerly parking lot island for an additional 3 trees. Additionally, the 14 Aurea Juniper label appears to be hidden behind the water main label on the same landscape island.

8. **Waste Receptacle and Enclosure.** The site plan identifies a waste receptacle and enclosure on the east side of the site. The proposed placement is essentially centered on the two buildings, which will allow for convenient use of a common dumpster area in the future.

Sheet C10 provides details including the required concrete base pad and masonry enclosure.

**Lipkin Medical Office Building**

Site Plan Review #2

Page 4

- 9. Exterior Lighting.** Sheet C6 proposes 4 light poles in the parking lot and 7 bollards along the south side of the building. Pole height and light intensity readings comply with Section 12.03. Sheet C11 includes a fixture detail, which notes the use of downward directed, cut off fixtures, as required.
- 10. Signs.** A monument sign is proposed to be incorporated into a brick wall extending from the west façade. The placement of the monument sign is indicated on the architectural plans as extending 22 feet from the edge of the building. This placement results in a setback of approximately 20 feet, but this should be shown on the site plan with the setback noted. Materials noted are consistent with those used for the building and its dimensions comply with the Ordinance.

A wall sign is also proposed for the west elevation. As noted in the table below, both signs comply with the standards of Article 16:

Type of Sign	Requirements	Proposed
Wall Sign	Area – 10% of front facade	6%
Monument Sign	Max. Area – 72 sq. ft. Max. Height – 6 ft. Min. Setback – 10 ft.	Area – 28 sq. ft. Height – 6 ft. Setback – approx. 20 ft.

If approved, the applicant will need to obtain a sign permit prior to construction.

- 11. Impact Assessment.** The submittal includes a revised Impact Assessment (dated 5/21/14), which notes that the proposed project is not expected to adversely impact natural features, public services/utilities, surrounding land uses or traffic.

Should you have any questions concerning this matter, please do not hesitate to contact our office. I can be reached by phone at (248) 586-0505, or via e-mail at [borden@lsplanning.com](mailto:borden@lsplanning.com).

Sincerely,

**LSL PLANNING, INC.**



Brian V. Borden, AICP  
Senior Planner



May 30, 2014

Mr. Mike Archinal  
Genoa Township  
2911 Dorr Road  
Brighton, MI 48116

**Re: Lipkin Medical Building  
Site Plan Review #2**

Dear Mr. Archinal:

We have reviewed the updated site plan documents from Boss Engineering Inc. dated May 21, 2014. The plans were revised to address our comments in our initial review. There are several items remaining to be addressed which we have noted below.

### **IMPACT ASSESSMENT**

1. *The following issue was not addressed through revision or note of acceptance by the Township.* Section G – Genoa Township has recently updated their Commercial REU evaluation on May 7, 2014, and the category “Medical Office Building” is no longer listed. The new appropriate category this development would fall under is “Doctor’s Offices”, and is measured at 0.6 REU/1,000 sq. ft.

### **UTILITY PLAN**

1. The developer has indicated that there will be no fire suppression system in either building, only 2-inch water service connections. Please label the size of the future water main beyond the proposed 6" cap. As the minimum diameter for a public main is 8-inches, it is recommended to install an 8-inch by 6-inch tee at the hydrant. If a 2-inch service is the only piping planned for building 2, then a plug could be installed with a 2-inch threaded opening for the future 2-inch shutoff valve. This would eliminate the need for a 6-inch gate valve.

### **RETENTION AND HYDRAULICS PLAN**

1. Indicate if roof runoff for proposed building 2 will be directed to one of the catch basins, or directly to the proposed forebay.




**WATER MAIN PROFILE**

1. The proposed 8-inch gate valve and box have been moved several feet off the tapping sleeve to place the valve box outside the sidewalk. The tapping sleeve and valve is a unit and as such cannot be separated. The valve box and valve need to be correctly shown adjacent to the main being tapped.


The petitioner should provide the necessary clarification and updated information above. Given the minor nature of the comments we suggest the plans be revised prior to being submitted to the Board for final approval.

Please call if you have any questions.

Sincerely,



Gary J. Markstrom, P.E.  
Unit Vice President



Joseph C. Siwek, P.E.  
Project Engineer

copy: Boss Engineering



# BRIGHTON AREA FIRE AUTHORITY

615 W. Grand River Ave.  
Brighton, MI 48116  
o: 810-229-6640 f: 810-229-1619

June 2, 2014

Kelly VanMarter  
Genoa Township  
2911 Dorr Road  
Brighton, MI 48116

RE: Lipkin Medical Building  
Grand River – E. of Kellogg  
Site Plan Review – Phase I

Dear Kelly:

The Brighton Area Fire Department has reviewed the above mentioned site plan. The plans were received for review on May 1, 2014 and the drawings are dated April 30, 2014. The project is based on a new 8,000 square foot building (business use). The plan review is based on the requirements of the International Fire Code (IFC) 2012 edition.

This submittal is recommended for approval with the following items being corrected.

1. Future project submittals shall include the address and street name of the project in the title block. **No address assigned as of review.**  
**IFC 105.4.2**
2. The building shall include the building address on the building. The address shall be a **minimum of 6"** high letters of contrasting colors and be clearly visible from the street. The location and size shall be verified prior to installation and field verified.  
**IFC 505.1**
3. Access around building and parking lot shall provide emergency vehicles with a turning radius up to 50' front of curb. This submittal appears to be deficient of this requirement.  
**(COMPLETE)**  
**IFC 503.2.4**

Additional comments will be given during the building plan review process (specific to the building plans and occupancy). If you have any questions about the comments on this plan review please contact me at 810-229-6640.

Cordially,

A handwritten signature in black ink, appearing to read "R. Boisvert".

Rick Boisvert  
Captain – Fire Inspector

**GENOA TOWNSHIP**  
**MAY 23 2014**

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**IMPACT ASSESSMENT  
FOR  
SITE PLAN PETITION  
“LIPKIN MEDICAL OFFICE BUILDING”  
GENOA TOWNSHIP, LIVINGSTON COUNTY  
MICHIGAN**

Prepared for:

**DR. HOWARD LIPKIN  
3172 INTERLAKEN STREET  
WEST BLOOMFIELD, MI 48323  
(248) 680-9900**

Prepared by:

**BOSS ENGINEERING COMPANY  
3121 E. GRAND RIVER  
HOWELL, MI 48843  
(517) 546-4836**

May 21, 2014

**13-293EIA**

## INTRODUCTION

The purpose of this Impact Assessment (IA) report is to show the effect that this proposed development may have on various factors in the general vicinity of the project. The format used for presentation of this report conforms to the *Submittal Requirements For Impact Assessment* guidelines in accordance with Section 18.07 of the published Zoning Ordinance for Genoa Township, Livingston County, Michigan.

### DISCUSSION ITEMS

**A. Name(s) and address(es) of person(s) responsible for preparation of the impact assessment and a brief statement of their qualifications.**

Prepared By :  
BOSS ENGINEERING COMPANY  
Civil Engineers, Land Surveyors, Landscape Architects and Planners  
3121 E. Grand River  
Howell, MI 48843  
(517) 546-4836

Prepared For :  
Dr. Howard Lipkin  
3172 Interlaken Street  
West Bloomfield, MI 48323  
(248) 680-9900

**B. Map(s) and written description / analysis of the project site including all existing structures, manmade facilities, and natural features. The analysis shall also include information for areas within 10 feet of the property. An aerial photograph or drawing may be used to delineate these areas.**

The site is located on the south side of Grand River Avenue, approximately 900 feet east of the Kellogg Road intersection. The property has 202 feet of frontage along Grand River, the entire width of the site. Immediately west of the site is office use, east is general commercial use and to the south is residential. To the north, on the opposite side of Grand River Avenue, is a new dental office currently under construction. The subject property is currently undeveloped, and zoned Neighborhood Services District (NSD).

**C. Impact on natural features: A written description of the environmental characteristics of the site prior to development and following development, i.e., topography, soils, wildlife, woodlands, mature trees (eight inch caliper or greater), wetlands, drainage, lakes, streams, creeks or ponds. Documentation by a qualified wetland specialist shall be required wherever the Township determines that there is a potential regulated wetland. Reduced copies of the Existing Conditions Map(s) or aerial photographs may accompany written material.**

The total site area is 3.03 acres. There are 0.23 acres of right-of-way for Grand River Avenue leaving a total of 2.80 acres of buildable space. There are no wetlands on the property. The site gradually slopes north towards Grand River Avenue at approximately 0.3%. Most of the trees are located on the southern 1/3 of the site. The remainder of the site is open area with about 5 sporadic trees. Most of the trees are box elder and American elm. Most of the trees on the site will need to be removed for the placement of the proposed retention basin, forebay and medical buildings. A row of 8 to 12 inch pines along the south property line will remain to provide an evergreen buffer to the residence to the south. The USDA Soil Conservation Service soil classification for the site is Miami-Loam 6-12% slopes.

**D. Impact on storm water management: Description of measures to control soil erosion and sedimentation during grading and construction operations and until a permanent ground cover is established. Recommendations for such measures may be obtained from County Soil Conservation Service.**

Surface runoff during periods of construction will be controlled by proper methods set forth by the Livingston County Drain Commissioner, including silt fence, pea stone filters, inlet protection devices, and seed and mulch. A meeting was held with the Livingston County Drain Commissioner to address stormwater management. Their primary recommendation is to maintain the existing drainage patterns as closely as possible.

At the time of construction, there may be some temporary dust, noise, vibration and smoke, but these conditions will be of relatively short duration and shall be controlled by applying appropriate procedures to minimize the effects, such as watering if necessary for dust control.

The Site Plan documents show the proposed locations of all site improvements along with detailed soil erosion control information. The plans will be reviewed by the Livingston County Drain Commissioner's office for compliance with their regulations prior to issuance of a Soil Erosion Control permit.

**E. Impact on surrounding land use: Description of the types of proposed uses and other man made facilities, including any project phasing, and an indication of how the proposed use conforms or conflicts with existing and potential development patterns. A description shall be provided of any increases of light, noise or air pollution which could negatively impact adjacent properties.**

In two phases, the applicant is planning on constructing two 8,000 square foot medical office buildings, totaling 16,000 square feet. Phase I includes Building #1 closest to Grand River Avenue, required parking, pedestrian circulation and site access. Phase I also includes construction of the retention and forebay storm water management system, sized for the final built out of the overall site. Phase II will be constructed at a later date, which includes the Building #2, and final build out of the required parking and pedestrian walkways.

With the proposed use being office, most of the activity on the property would be weekdays 8 AM to 5 PM. Unlike a commercial use, there would be limited evening or weekend traffic.

The increase in light, noise or air pollution would be far less than what is typically associated with a commercial development. Developing a single small office building on the property will have minimal impact on surrounding properties.

**F. Impact on public facilities and services: Description of number of expected residents, employees, visitors, or patrons, and the anticipated impact on public schools, police protection and fire protection.**

**Letters from the appropriate agencies may be provided, as appropriate.**

There will be very little impact on residents to the south of the site, as there will be a 22 feet wide undisturbed evergreen buffer and a new 100 feet wide green space retention basin, separated by a restrictive fence. The anticipated daily occupancy of 80 employees, visitors, and patients will have very little negative impact to nearby properties, but may even help the neighboring businesses with additional subsidiary patronage.

There is no expected impact on Brighton Area Schools and very minimal impact on the police and fire departments.

**G. Impact on public utilities: Description of the method to be used to service the development with water and sanitary sewer facilities, the method to be used to control drainage on the site and from the site, including runoff control during periods of construction. For sites service with sanitary sewer, calculations for pre- and post development flows shall be provided in equivalents to a single family home. Where septic systems are proposed, documentation or permits from the Livingston County Health Department shall be provided.**

The development will be served by both public water and sanitary sewer, both located within the Grand River Avenue right-of-way. The public water is provided by MHOG Sewer and Water Authority, where the sanitary sewer collection is provided by the G-O Sewer Authority. Both utilities are serviced from the west of the site.

The pre-development sanitary flow from this site is zero. Post-development flows based on MHOG sewer standards for a medical office building is equivalent to 9 REU's.

Medical Office Building =  $1.0 + 0.5/\text{exam room} \times (16 \text{ exam rooms}) = 9 \text{ REU's}$

With regards to storm water management, the project will be required to meet all local, county and state storm water and erosion control requirements. All of the required information is included in the Site Plan documents. Most storm water runoff will be remain on site and directed to the proposed forebay and retention basin at the rear of the site.

**H. Storage or handling of any hazardous materials: Description of any hazardous substances expected to be used, stored or disposed of on the site. The information shall describe the type of materials, location within the site and method of containment. Documentation of compliance with federal and state requirements, and a Pollution Incident Prevention Plan (PIPP) shall be submitted, as appropriate.**

There will be no hazardous materials used or disposed of on this site. Gas cans, striping paint, etc.

**i. Impact on traffic and pedestrians: A description of the traffic volumes to be generated based on national reference documents, such as the most recent edition of the Institute of Transportation Engineers Trip Generation Manual, other published studies or actual counts of similar uses in Michigan.**

According to the Institute of Transportation Engineers Trip Generation 6th addition, the number of trips generated by this development would be an average of 28 trips per hour (3.46 trips per unit per 1,000sf) trips per hour during the AM peak hours, and 31 trips per hour during the PM peak hours. This is based on a Medical-Dental Office Building.

**J. A detailed traffic impact study shall be submitted for any site over ten (10) acres in size which would be expected to generate 100 directional vehicle trips (i.e. 100 inbound or 100 outbound trips) during the peak hour of traffic of the generator or on the adjacent streets.**

The anticipated number of directional vehicle trips during the peak hour of traffic is 31. Therefore a detailed traffic impact study is not necessary.

**K. Special Provisions: General description of any deed restrictions, protective covenants, master deed or association bylaws.**

None at this time.

**L. A list of all sources shall be provided.**

Genoa Township's *Submittal Requirements For Impact Assessment*

Genoa Township Zoning Ordinances

Soil Survey of Livingston County, Michigan, U.S.D.A. Soil Conservation Service

National Wetland Inventory Plan, United States Department of the Interior, Fish and Wildlife Service

Trip Generation manual, 6<sup>th</sup> edition, Institute of Transportation Engineers







# SITE PLAN FOR LIPKIN MEDICAL OFFICE BUILDING

## PART OF N.E. 1/4, SEC. 14, T.2N., R.5E. GENOA TOWNSHIP, LIVINGSTON COUNTY, MI

### PROPERTY DESCRIPTION:

LEGAL DESCRIPTION PER SELECT TITLE COMPANY (AGENT FOR NORTH AMERICAN TITLE INSURANCE COMPANY), COMMITMENT NO: 21140 REVISION 1, WITH AN EFFECTIVE DATE OF OCTOBER 2, 2012 @ 3:00 PM

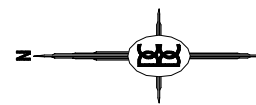
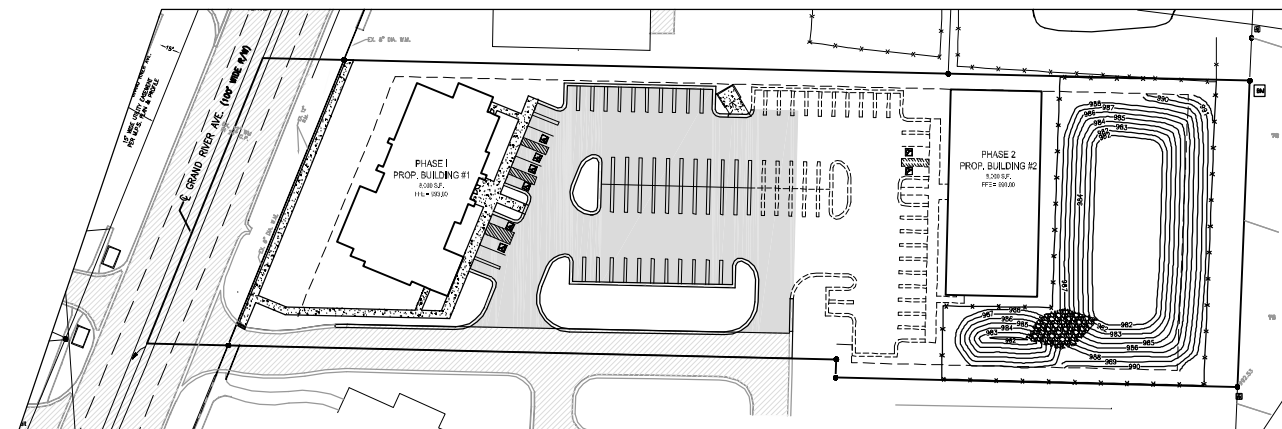
Land situated in the Township of Genoa, County of Livingston, State of Michigan is described as follows:

PARCEL B  
Commencing at the East 1/4 corner of Section 14, T2N, R5E, Genoa Township, Livingston County, Michigan; thence North 02 degrees 26'01" East 876.38 feet (876.50 feet recorded) along the East line of said section and the centerline of Hubert Road; thence North 87 degrees 41'06" West 818.14 feet along the Northerly line of Grand Beach No. 3, according to the plat thereof as recorded in Liber 16 of Plats, pages 9 and 10, Livingston County Records for a Place of Beginning; thence continuing North 87 degrees 41'06" West 200.88 feet along said Northerly line; thence North 01 degree 18'47" East 263.96 feet; thence South 87 degrees 41'06" East 12.00 feet; thence North 01 degree 18'47" East 452.86 feet; thence South 67 degrees 53'54" East 202.00 feet along the centerline of Grand River Avenue; thence South 01 degree 18'47" West 648.43 feet to the Place of Beginning. Being a part of the Northeast 1/4 of Section 14, T2N, R5E, Genoa Township, Livingston County, Michigan.

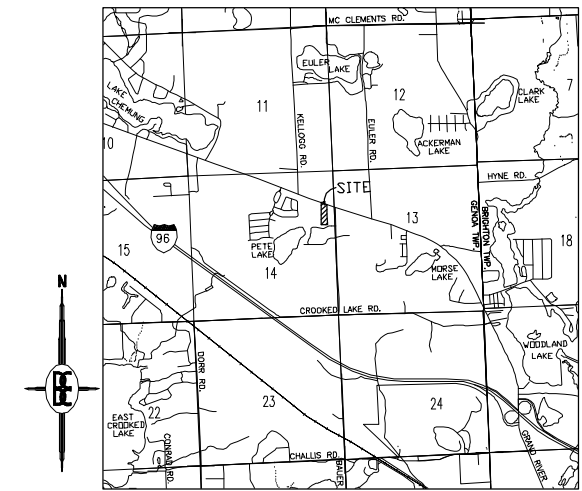
TOTAL SITE AREA IS 3.03 ACRES, WHEREBY 0.23 ACRES IS WITHIN THE GRAND RIVER AVENUE RIGHT-OF-WAY AND 2.80 ACRES IS BUIDABLE SPACE.

### CONSTRUCTION NOTES

- THE CONTRACTOR SHALL COMPLY WITH THE FOLLOWING NOTES AND ANY WORK INVOLVED SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
1. THE CONTRACTOR SHALL HOLD HARMLESS THE DESIGN PROFESSIONAL, MUNICIPALITY, COUNTY, STATE AND ALL OF ITS SUB CONSULTANTS, PUBLIC AND PRIVATE UTILITY COMPANIES, AND LANDOWNERS FOR DAMAGES TO INDIVIDUALS AND PROPERTY, REAL OR OTHERWISE, DUE TO THE OPERATIONS OF THE CONTRACTOR AND/OR THEIR SUBCONTRACTORS.
  2. DO NOT SCALE THESE DRAWINGS AS IT IS A REPRODUCTION AND SUBJECT TO DISTORTION.
  3. A GRADING PERMIT FOR SOIL EROSION-SEDIMENTATION CONTROL SHALL BE OBTAINED FROM THE GOVERNING AGENCY PRIOR TO THE START OF CONSTRUCTION.
  4. IF DUST PROBLEM OCCURS DURING CONSTRUCTION, CONTROL WILL BE PROVIDED BY AN APPLICATION OF WATER, EITHER BY SPRINKLER OR TANK TRUCK.
  5. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH LOCAL MUNICIPAL STANDARDS AND SPECIFICATIONS.
  6. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED TOWNSHIP, COUNTY, AND STATE OF MICHIGAN PERMITS.
  7. PAVED SURFACES, WALKWAYS, SIGNS, LIGHTING AND OTHER STRUCTURES SHALL BE MAINTAINED IN A SAFE, ATTRACTIVE CONDITION AS ORIGINALLY DESIGNED AND CONSTRUCTED.
  8. ALL BARRIER-FREE FEATURES SHALL BE CONSTRUCTED TO MEET ALL LOCAL, STATE AND A.D.A. REQUIREMENTS.
  9. ANY DISCREPANCY IN THIS PLAN AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE DESIGN ENGINEER PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL SETBACKS, EASEMENTS AND DIMENSIONS SHOWN HEREON BEFORE BEGINNING CONSTRUCTION.
  10. THE CONTRACTOR SHALL CONTACT ALL OWNERS OF EASEMENTS, UTILITIES AND RIGHTS-OF-WAY, PUBLIC OR PRIVATE, PRIOR TO THE START OF CONSTRUCTION.
  11. THE CONTRACTOR SHALL COORDINATE WITH ALL OWNERS TO DETERMINE THE LOCATION OF EXISTING LANDSCAPING, IRRIGATION LINES & PRIVATE UTILITY LINES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING LANDSCAPING, IRRIGATION LINES, AND PRIVATE UTILITY LINES.
  12. THE CONTRACTOR SHALL REMOVE ALL TRASH AND DEBRIS FROM THE SITE UPON COMPLETION OF THE PROJECT.
  13. THE CONTRACTOR SHALL MAINTAIN THE SITE IN A MANNER SO THAT WORKMEN AND PUBLIC SHALL BE PROTECTED FROM INJURY, AND ADJOINING PROPERTY PROTECTED FROM DAMAGE.
  14. THE CONTRACTOR SHALL KEEP THE AREA OUTSIDE THE "CONSTRUCTION LIMITS" BROOM CLEAN AT ALL TIMES.
  15. THE CONTRACTOR SHALL CALL MISS DIG A MINIMUM OF 72 HOURS PRIOR TO THE START OF CONSTRUCTION.
  16. ALL EXCAVATION UNDER OR WITHIN 3 FEET OF PUBLIC PAVEMENT, EXISTING OR PROPOSED SHALL BE BACKFILLED AND COMPACTED WITH SAND (MOT CLASS II).
  17. ALL PAVEMENT REPLACEMENT AND OTHER WORKS COVERED BY THESE PLANS SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE TOWNSHIP, INCLUDING THE LATEST MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT) SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
  18. THE CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE TO EXISTING UTILITIES.
  19. NO ADDITIONAL COMPENSATION WILL BE PAID TO THE CONTRACTOR FOR ANY DELAY OR INCONVENIENCE DUE TO THE MATERIAL SHORTAGES OR RESPONSIBLE DELAYS DUE TO THE OPERATIONS OF SUCH OTHER PARTIES DOING WORK INDICATED OR SHOWN ON THE PLANS OR IN THE SPECIFICATION OR FOR ANY REASONABLE DELAYS IN CONSTRUCTION DUE TO THE ENCOUNTERING OR EXISTING UTILITIES THAT MAY OR MAY NOT BE SHOWN ON THE PLANS.
  20. DURING THE CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL NOT PERFORM WORK BY PRIVATE AGREEMENT WITH PROPERTY OWNERS ADJACENT TO THE PROJECT.
  21. IF WORK EXTENDS BEYOND NOVEMBER 15, NO COMPENSATION WILL BE DUE TO THE CONTRACTOR FOR ANY WINTER PROTECTION MEASURES THAT MAY BE REQUIRED BY THE ENGINEER.
  22. NO TREES ARE TO BE REMOVED UNTIL MARKED IN THE FIELD BY THE ENGINEER.
  23. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE PROPERTY BEYOND THE CONSTRUCTION LIMITS INCLUDING BUT NOT LIMITED TO EXISTING FENCE, LAWN, TREES AND SHRUBBERY.
  24. ALL AREAS DISTURBED BY THE CONTRACTOR BEYOND THE NORMAL CONSTRUCTION LIMITS OF THE PROJECT SHALL BE SODDED OR SEEDED AS SPECIFIED OR DIRECTED BY THE ENGINEER.
  25. ALL ROOTS, STUMPS AND OTHER OBJECTIONABLE MATERIALS SHALL BE REMOVED AND THE HOLE BACKFILLED WITH SUITABLE MATERIAL. WHERE GRADE CORRECTION IS REQUIRED, THE SUBGRADE SHALL BE CUT TO CONFORM TO THE CROSS-SECTION AS SHOWN IN THE PLANS.
  26. TRAFFIC SHALL BE MAINTAINED DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL SIGNS AND TRAFFIC CONTROL DEVICES. FLAG PERSONS SHALL BE PROVIDED BY THE CONTRACTOR IF DETERMINED NECESSARY BY THE ENGINEER. ALL SIGNS SHALL CONFORM TO THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AT NO COST TO THE TOWNSHIP. NO WORK SHALL BE DONE UNLESS THE APPROPRIATE TRAFFIC CONTROL DEVICES ARE IN PLACE.
  27. ALL DEMOLISHED MATERIALS AND SOIL SPOILS SHALL BE REMOVED FROM THE SITE AT NO ADDITIONAL COST, AND DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.
  28. AFTER REMOVAL OF TOPSOIL, THE SUBGRADE SHALL BE COMPACTED TO 95% OF ITS UNIT WEIGHT.
  29. ALL GRADING IN THE PLANS SHALL BE DONE AS PART OF THIS CONTRACT. ALL DELETERIOUS MATERIAL SHALL BE REMOVED FROM THE SUBGRADE PRIOR TO COMPACTING.
  30. NO SEEDING SHALL BE DONE AFTER OCTOBER 15 WITHOUT APPROVAL OF THE ENGINEER.
  31. ANY EXISTING APPURTENANCES SUCH AS MAN-HOLES, GATE VALVES, ETC. SHALL BE ADJUSTED TO THE PROPOSED GRADE AND SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
  32. SOIL EROSION MEASURES SHALL BE MAINTAINED BY THE CONTRACTOR UNTIL VEGETATION HAS BEEN RE-ESTABLISHED.
  33. ALL PERMANENT SIGNS AND PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST REVISION OF THE MICHIGAN MUTCD MANUAL AND SHALL BE INCIDENTAL TO THE CONTRACT.



**OVERALL SITE MAP**  
NO SCALE



**LOCATION MAP**  
NO SCALE

### SHEET INDEX

SHEET NO.	DESCRIPTION
C1	COVER SHEET
C2	SITE PLAN
C3	GRADING, DRAINAGE & SOIL EROSION CONTROL PLAN
C4	UTILITY PLAN
C5	LANDSCAPE PLAN
C6	LIGHTING PLAN
C7	RETENTION & HYDRAULICS PLAN
C8	WATER MAIN PROFILE AND INTERIM GRADING PLAN
C9	EXISTING CONDITIONS & DEMOLITION PLAN
C10	CONSTRUCTION DETAILS
C11	CONSTRUCTION DETAILS
C12	MHOG SANITARY SEWER DETAILS
C13	MHOG WATER MAIN DETAILS
DRAWINGS PREPARED BY ARCHITECT	
SOUTH (ENTRY) ELEVATION	
NORTH (GRAND RIVER) ELEVATION	
EAST AND WEST ELEVATIONS	
MAIN LEVEL FLOOR PLAN	
BUILDING RENDERING	

## LIPKIN MEDICAL OFFICE BUILDING

PREPARED FOR:

DR. HOWARD LIPKIN  
3172 INTERLAKEN STREET  
WEST BLOOMFIELD, MI 48323  
PHONE: 810-220-4422

ARCHITECT:

DESROSIERS ARCHITECTS  
36330 WOODWARD AVENUE, SUITE 100  
BLOOMFIELD HILLS, MI 48304  
PHONE: 248-642-7771

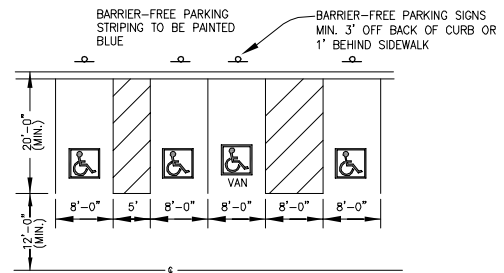
CIVIL ENGINEER/SITE PLANNER:

**BOSS ENGINEERING**  
ENGINEERS • SURVEYORS • PLANNERS  
LANDSCAPE ARCHITECTS  
(E-MAIL: bob@bosseng.com)  
3121 E. GRAND RIVER AVE.  
HOWELL, MI 48843  
(800) 246-6735 FAX (517) 548-1670

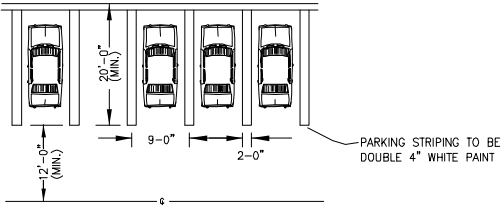
### INDEMNIFICATION STATEMENT

THE CONTRACTOR SHALL HOLD HARMLESS THE DESIGN PROFESSIONAL, MUNICIPALITY, COUNTY, STATE AND ALL OF ITS SUB CONSULTANTS, PUBLIC AND PRIVATE UTILITY COMPANIES, AND LANDOWNERS FOR DAMAGES TO INDIVIDUALS AND PROPERTY, REAL OR OTHERWISE, DUE TO THE OPERATIONS OF THE CONTRACTOR AND/OR THEIR SUBCONTRACTORS.

<b>1</b>			
1	LM	PER TOWNSHIP REVIEW	5/21/14
NO	BY	REVISION	DATE
			ISSUE DATE: 4-30-14
			JOB NO. 13-293



TYPICAL BARRIER FREE PARKING SPACE (NO SCALE)



TYPICAL PARKING SPACE (NO SCALE)

**BENCHMARKS:**  
 SITE BENCHMARKS (NGVD29 DATUM):  
 BM #201, NE BOLT HYDRANT, ELEV.=989.58  
 BM #202, RR SPIKE S/S P. POLE, ELEV.=989.48  
 BM #203, BOSS TAG/NAIL SET W/S 10" OAK TREE, ELEV.=991.73  
 BM #204, TOP OF CAPPED ROD, ELEV.=990.79

**SITE DATA**

	EXISTING/REQUIRED	PROPOSED
ZONING	NEIGHBORHOOD SERVICE (NSD)	NEIGHBORHOOD SERVICE (NSD)
AREA (GROSS)	1 ACRES	3.03 ACRES
AREA (NET)	1 ACRES	2.80 ACRES
LOT WIDTH	100'	202.00'
USE	VACANT	MEDICAL OFFICE BUILDING
SETBACKS		
FRONT	35'	40.75'
SIDE	10'	13.31'
REAR	40'	490'
PARKING	10'	11.63'
MAX. LOT COVERAGE	35% BLDG. 60% IMPERVIOUS	12.1% 44.6%

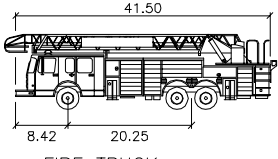
PARKING - 1 SPACE PER 200 S.F. OF GROSS FLOOR AREA (16,000 S.F.) = 80 SPACES (INCLUDES 4 BARRIER-FREE SPACE)  
 PARKING PROVIDED: PHASE 1 = 55 SPACES, PHASE 2 = 40 SPACES TOTAL = 95 SPACES (INCLUDES 8 BARRIER-FREE)

LOADING SPACE - ALL DELIVERIES ARE BY UPS/FED EX TYPE TRUCKS LOADING/UNLOADING AT WALK AT FRONT OF BUILDING.

SOILS (PER U.S.D.A. SOIL SURVEY):  
 MIAMI LOAM - WELL-DRAINED, NEARLY LEVEL TO VERY STEEP SOILS ON TILL PLAINS AND MORAINES. SURFACE LAYER IS DARK GRAYISH BROWN LOAM 9 INCHES THICK. THE SUBSURFACE LAYERS ARE FROM FRIBLE LIGHT CLAY LOAM TO BROWN LOAM. PERMEABILITY IS MODERATE.

**BUILDING & LOT COVERAGE**

BUILDING COVERAGE:	16,000SF
PARKING COVERAGE:	31,740SF
SIDEWALK/CURB/PAD COVERAGE:	1,081SF
TOTAL NEW IMPERVIOUS:	48,821SF
ADD: PRE-EXISTING IMPERVIOUS ON-SITE AREA (REMAX DRWY):	5,633SF
FINAL ESTIMATED IMPERVIOUS AREA:	54,454SF
TOTAL SITE AREA (INCL R.O.W.):	132,081SF
LESS R.O.W. AREA:	10,100SF
NET SITE AREA (EXCL ROW):	121,981SF
PHASE ONE LOT COVERAGE (%): (48,821SF/121,981SF)	40.0%
FINAL LOT COVERAGE (%): (54,454SF/121,981SF)	44.6%



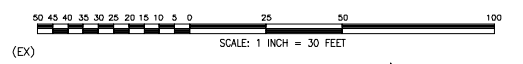
**FIRE TRUCK** feet  
 Width : 8.00  
 Track : 8.00  
 Lock to Lock Time : 6.00  
 Steering Angle : 33.00

**LEGEND**

PROPOSED (PR)	EXISTING (EX)	
FF	+922.08	CONTOUR
FC	FC	STORM DRAINAGE FLOW
T/A	T/A	SPOT ELEVATION
T/W	T/W	FINISHED FLOOR ELEVATION
F/L	F/L	FINISHED GRADE ELEVATION
T/P	T/P	TOP OF ASPHALT
RIM	RIM	TOP OF CURB / CONCRETE
INV	INV	TOP OF WALK
MH	MH	FLOW LINE
IN	IN	TOP OF PIPE
CB	CB	RIM ELEVATION
ES	ES	INVERT ELEVATION
GV	GV	MANHOLE STRUCTURE
HY	HY	INLET STRUCTURE
UP	UP	CATCHBASIN STRUCTURE
SN	SN	END-SECTION
SL	SL	GATEVALVE STRUCTURE
FM	FM	HYDRANT
ST	ST	UTILITY POLE
WM	WM	SANITARY SEWER
WL	WL	SANITARY LEAD
OH	OH	FORCE MAIN
C	C	STORM SEWER
E	E	WATER MAIN
G	G	WATER LEAD
T	T	OVERHEAD WIRE
		CABLE
		ELECTRIC
		GAS
		TELEPHONE

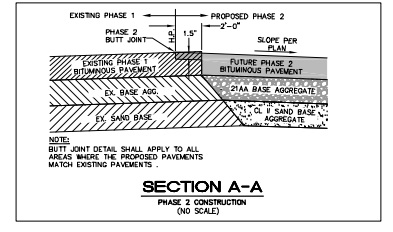
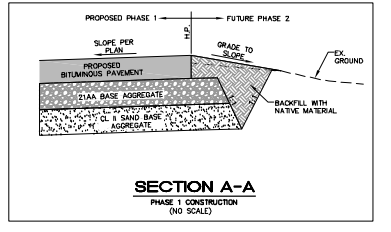
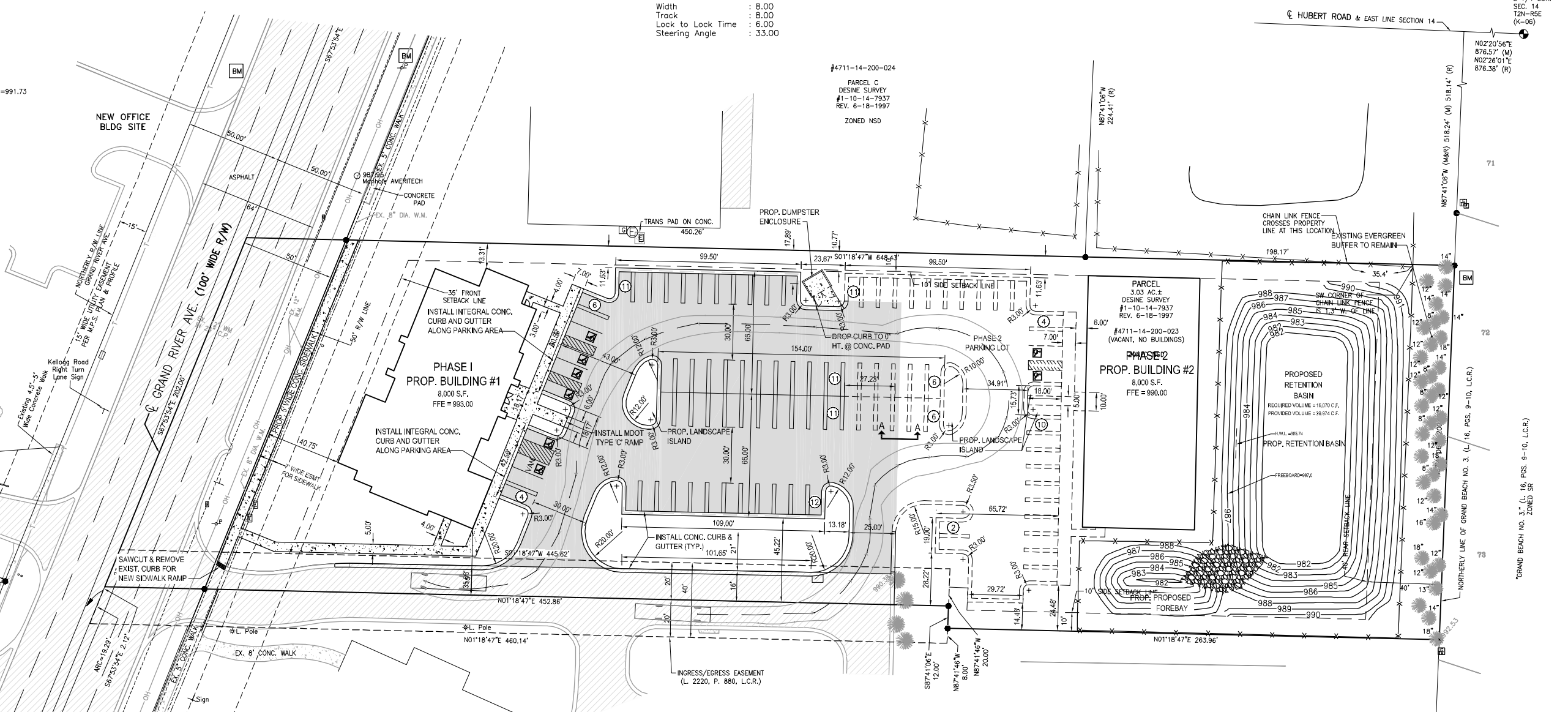
**LEGEND**

PROPOSED (PR)	EXISTING (EX)	
MANHOLE	MANHOLE	MANHOLE
INLET / CATCHBASIN	INLET / CATCHBASIN	INLET / CATCHBASIN
FLARED END-SECTION	FLARED END-SECTION	FLARED END-SECTION
GATE VALVE	GATE VALVE	GATE VALVE
HYDRANT	HYDRANT	HYDRANT
UTILITY POLE	UTILITY POLE	UTILITY POLE
FENCE SIGN	FENCE SIGN	FENCE SIGN
SANITARY SEWER LABEL	SANITARY SEWER LABEL	SANITARY SEWER LABEL
STORM SEWER LABEL	STORM SEWER LABEL	STORM SEWER LABEL
WATER MAIN LABEL	WATER MAIN LABEL	WATER MAIN LABEL
SOIL EROSION CONTROL MEASURE (P=PERMANENT, T=TEMPORARY)	SOIL EROSION CONTROL MEASURE (P=PERMANENT, T=TEMPORARY)	SOIL EROSION CONTROL MEASURE (P=PERMANENT, T=TEMPORARY)
SILT FENCE	SILT FENCE	SILT FENCE
LIMITS OF GRADING/CLEARING	LIMITS OF GRADING/CLEARING	LIMITS OF GRADING/CLEARING
WETLAND BOUNDARY	WETLAND BOUNDARY	WETLAND BOUNDARY
CONCRETE	CONCRETE	CONCRETE
ASPHALT	ASPHALT	ASPHALT
MODIFIED CURB	MODIFIED CURB	MODIFIED CURB
'NO PARKING FIRE LANE' SIGNS	'NO PARKING FIRE LANE' SIGNS	'NO PARKING FIRE LANE' SIGNS
PROPOSED SOIL BORING LOCATION	PROPOSED SOIL BORING LOCATION	PROPOSED SOIL BORING LOCATION



THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS PLAN ARE BASED ON THE RECORD DRAWINGS OF EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE ENGINEER HAS CONDUCTED A VISUAL SURVEY OF THE UTILITIES LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES AND HAS FOUND THEM TO BE IN SUBSTANTIAL AGREEMENT WITH THE RECORD DRAWINGS. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ANY UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY UNEXPECTED UTILITIES ARE FOUND AT THE LOCATION OF OR DEPTH DIFFERS FROM THAT SHOWN ON THIS PLAN.

BOSS ENGINEERING  
 LANDSCAPE ARCHITECTS  
 3172 INTERLAKEN STREET  
 WEST BLOOMFIELD, MI 48323  
 (800) 248-9735 FAX (517) 548-1870



- NOTES:**
1. THE ADDRESS OF THE BUILDING SHALL BE A MINIMUM OF 6" HIGH LETTERS OF CONTRASTING COLORS AND BE CLEARLY VISIBLE FROM THE STREET. LOCATION AND SIZE TO BE VERIFIED PRIOR TO INSTALLATION.
  2. THE LOCATION OF A KEY BOX WILL BE LOCATED ADJACENT TO THE FRONT DOOR OF THE STRUCTURE.
  3. SIDEWALK RAMPS AT THE DRIVEWAY APPROACH WILL BE CONSTRUCTED IN COMPLIANCE WITH ADA REQUIREMENTS.
  4. DOME STRIPS WILL NOT BE INSTALLED ON SIDEWALK RAMPS AT DRIVEWAY APPROACH.
  5. DELIVERIES WILL BE BY UPS OR SIMILAR VEHICLES AT THE MAIN ENTRANCE TO THE BUILDING. THEREFORE, NO LOADING SPACE IS NEEDED FOR THIS DEVELOPMENT.

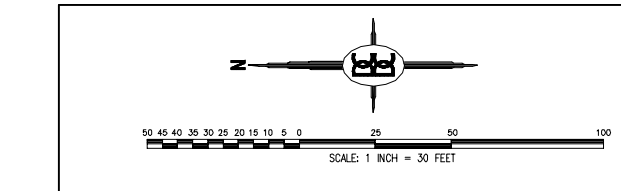
PROJECT: **LIPKIN MEDICAL OFFICE BUILDING**

PREPARED FOR: **DR. LIPKIN**  
 3172 INTERLAKEN STREET  
 WEST BLOOMFIELD, MI 48323

TITLE: **SITE PLAN**

NO	BY	TOWNSHIP REVIEW	DATE
1	LM	PER	5/21/14
		REVISION PER	
		NO BY	

DESIGNED BY: TD  
 DRAWN BY: TD  
 CHECKED BY:  
 SCALE: 1" = 30'  
 JOB NO. 13-293  
 DATE 4-30-14  
 SHEET NO.



**BENCHMARKS:**  
 SITE BENCHMARKS (NOV029 DATUM):  
 BM #201, NE BOLT HYDRANT, ELEV.=989.58  
 BM #202, RR SPIKE S/S P. POLE, ELEV.=989.48  
 BM #203, BOSS TAG/NAIL SET W/S 10" OAK TREE, ELEV.=991.73  
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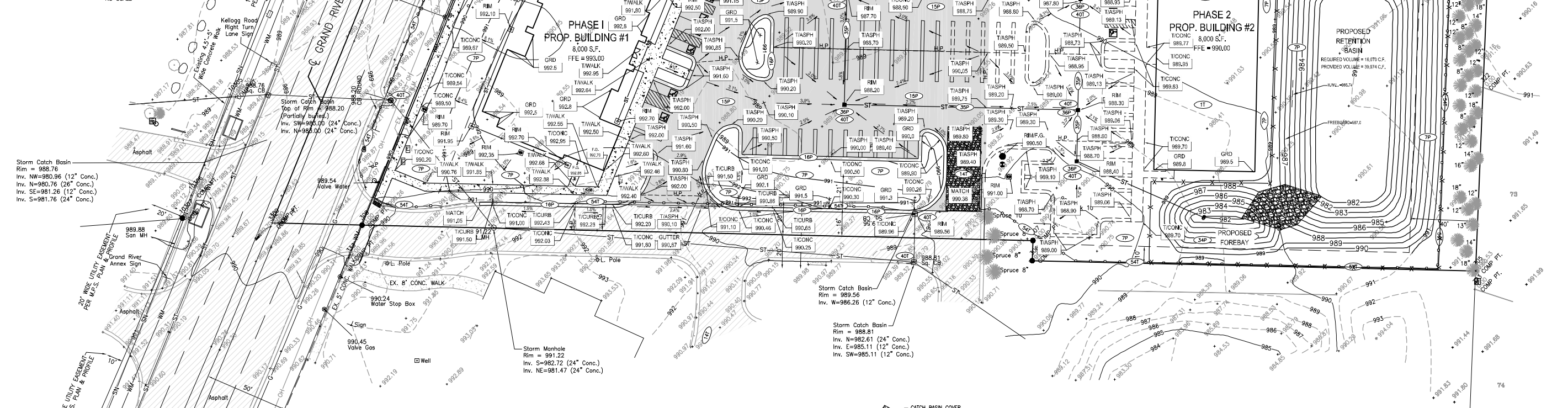
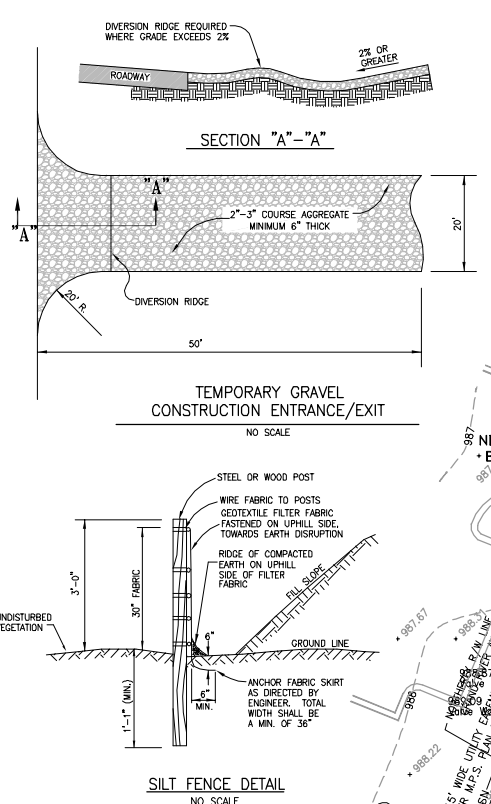
**SOIL EROSION CONTROL MEASURES**

1	STRIPPIG & STOCKPIILING TOPSOIL	TOPSOIL MAY BE STOCKPILED ABOVE BARRIERS TO ACT AS A DIVERSION STOCKPILE SHOULD BE TEMPORARILY SEEDED
7	HYDRO SEEDING	EFFECTIVE ON LARGE AREAS MUCH FASTER THAN CONSTRUCTION TRAFFIC IN ADVERSE WEATHER SHOULD INCLUDE PREPARED TOPSOIL BED
14	AGGREGATE COVER	STABILIZES SOIL SURFACE, THIS MINIMIZING EROSION PERMITS CONSTRUCTION TRAFFIC IN ADVERSE WEATHER MAY BE USED AS PART OF PERMANENT BASE CONSTRUCTION OF PAVED AREAS
15	PAVING	PROTECTS AREAS WHICH CANNOT OTHERWISE BE PROTECTED, BUT INCREASES RAINFALL VELOCITY REGULAR SURFACE WILL HELP SLOW VELOCITY
16	CURB & GUTTER	KEEPS HIGH VELOCITY RAINFALL ON PAVED AREAS FROM LEAVING PAVED SURFACE COLLECTS AND CONDUCTS RAINFALL TO ENCLOSED DRAINAGE SYSTEM OR PREPARED DRAINAGE
34	SEDIMENT BASK	TRAPS SEDIMENT RELEASES RAINFALL AT NON-EROSIVE RATES CONTROLS RAINFALL AT SYSTEM OUTLETS ON THE SLOPE
35	SEDIMENT TRAP	SYSTEM REMOVES COLLECTED RAINFALL FROM SITE, PARTICULARLY FROM PAVED AREAS ON ACCEPT LARGE CONCENTRATIONS OF RAINFALL CONDUCTS RAINFALL TO MANHOLE, DRAIN SYSTEM OR STABILIZED OUTFALL LOCATION USE CATCH BASINS TO COLLECT SEDIMENT
36	CATCH BASIN, DRAIN INLET	COLLECTS HIGH VELOCITY CONCENTRATED RAINFALL MAY USE FILTER CLOTH OVER INLET
40	INLET SEDIMENT FILTER	EASY TO SHAKE COLLECTS SEDIMENT MAY BE CLEANED AND EXPANDED AS NEEDED
54	SEDIMENT BASK	USES GEOTEXTILE FABRIC AND POST OR POLES. EASY TO CONSTRUCT AND LOCATE AS NECESSARY. (SEE DETAIL THIS SHEET)

**LEGEND**

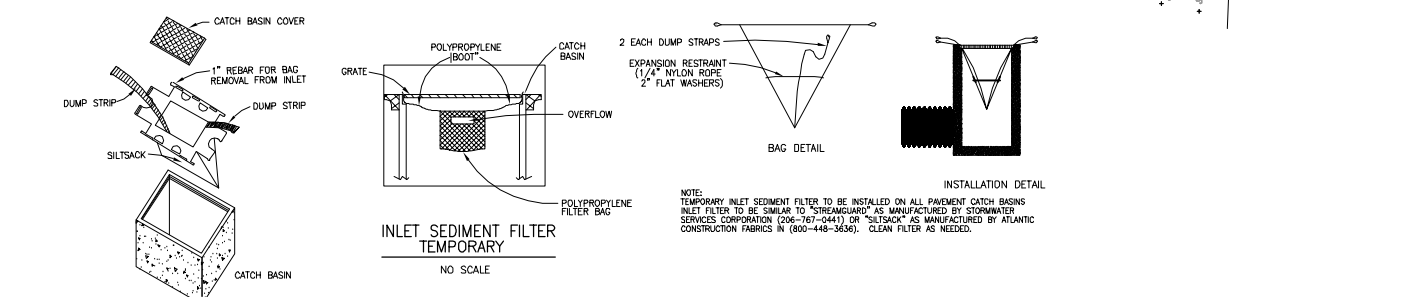
PROPOSED (PR)	EXISTING (EX)	DESCRIPTION
FF	+922.08	CONTOUR
FG		STORM DRAINAGE FLOW
T/A		SPOT ELEVATION
T/C		FINISHED FLOOR ELEVATION
T/W		TOP OF ASPHALT
F/L		TOP OF CURB / CONCRETE
T/P		TOP OF WALK
RIM		FLOW LINE
INV		TOP OF PIPE
MH		RIM ELEVATION
IN		INVERT ELEVATION
CB		MANHOLE STRUCTURE
ES		INLET STRUCTURE
GV		CATCHBASIN STRUCTURE
HY		END-SECTION
UP		GATEVALVE STRUCTURE
SN		HYDRANT
SL		UTILITY POLE
FM		SANITARY SEWER
ST		STORM SEWER
WL		WATER MAIN
OH		WATER LEAD
C		OVERHEAD WIRE
E		CABLE
T		ELECTRIC
		GAS
		TELEPHONE

P = PERMANENT, T = TEMPORARY  
 TOTAL DISTURBED AREA = 2.62 ACRES



**CONSTRUCTION SEQUENCE**  
 THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT EROSION IS MINIMIZED AND THAT COMPLIANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS, REGULATIONS, AND ORDINANCES IS MAINTAINED THROUGHOUT EXECUTION OF THIS PROJECT.

1 DAY	1. INSTALL SILT FENCE & INLET FILTERS AS SHOWN ON PLANS.
5 DAYS	2. SAWCUTTING & REMOVING ASPHALT AS SHOWN ON PLANS.
10 DAYS	3. ROUGH GRADE AND CONSTRUCT RETENTION BASIN.
10 DAYS	4. INSTALL SANITARY SEWERS/LEADS, WATER MAIN, & STORM SEWERS.
180 DAYS	5. START BLDG. CONSTRUCTION
4 DAYS	6. INSTALL CURB & GUTTER
4 DAYS	7. INSTALL PAVEMENT
1 DAY	8. INSTALL SIDEWALKS
1 DAY	9. FINE GRADE AROUND BUILDING, SPREAD TOPSOIL, SEED OR SOD AS APPLICABLE.
1 DAY	10. REMOVE ALL EROSION CONTROL STRUCTURES.
1 DAY	11. REMOVE ACCUMULATED SILT FROM ALL EXISTING DRAINAGE.



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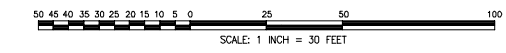
3171 E. GRAND PRAIRIE AVE.  
 WEST BLOOMFIELD, MI 48323  
 (E-MAIL: bosseng.com) (800) 246-0735 FAX (517) 448-1670

PROJECT: LIPKIN MEDICAL OFFICE BUILDING  
 PREPARED FOR: DR. LIPKIN  
 3172 INTERLAKEN STREET  
 WEST BLOOMFIELD, MI 48323

TITLE: GRADING, DRAINAGE & SESC PLAN

NO	BY	REVISION PER	DATE
1	LM	PER TOWNSHIP REVIEW	5/21/14

DESIGNED BY: AEB  
 DRAWN BY: AEB  
 CHECKED BY:  
 SCALE: 1" = 30'  
 JOB NO. 13-293  
 DATE 4-30-14  
 SHEET NO. C3



**BENCHMARKS:**  
 SITE BENCHMARKS (NGVD29 DATUM):  
 BM #201, NE BOLT HYDRANT, ELEV.=989.58  
 BM #202, RR SPIKE S/S P. POLE, ELEV.=989.48  
 BM #203, BOSS TAG/NAIL SET W/S 10" OAK TREE, ELEV.=991.73  
 BM #204, TOP OF CAPPED ROD, ELEV.=990.79

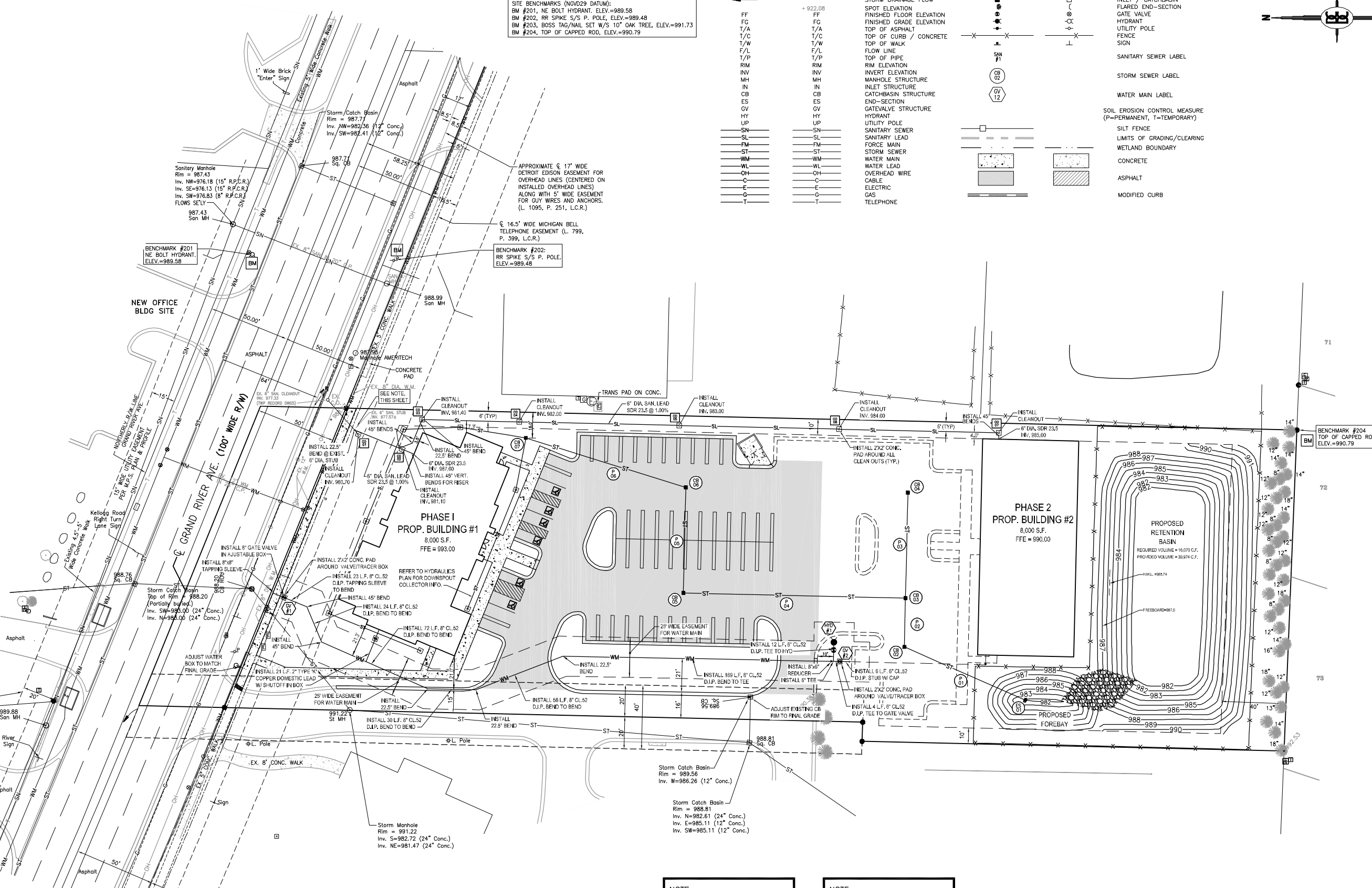
PROPOSED (PR)	EXISTING (EX)
FF	FF
FG	FG
T/A	T/A
T/C	T/C
T/W	T/W
F/L	F/L
T/P	T/P
RIM	RIM
INV	INV
MH	MH
IN	IN
CB	CB
ES	ES
GV	GV
HY	HY
UP	UP
SL	SL
FM	FM
ST	ST
WM	WM
WL	WL
OH	OH
C	C
E	E
G	G
T	T

LEGEND	SYMBOL
CONTOUR	—
STORM DRAINAGE FLOW	—
SPOT ELEVATION	○
FINISHED FLOOR ELEVATION	(
FINISHED GRADE ELEVATION	—
TOP OF ASPHALT	—
TOP OF CURB / CONCRETE	—
TOP OF WALK	—
FLOW LINE	—
TOP OF PIPE	—
RIM ELEVATION	—
INVERT ELEVATION	—
MANHOLE STRUCTURE	—
INLET STRUCTURE	—
CATCHBASIN STRUCTURE	—
END-SECTION	—
GATEVALVE STRUCTURE	—
HYDRANT	—
UTILITY POLE	—
SANITARY SEWER	—
SANITARY LEAD	—
FORCE MAIN	—
STORM SEWER	—
WATER MAIN	—
WATER LEAD	—
OVERHEAD WIRE	—
CABLE	—
ELECTRIC	—
GAS	—
TELEPHONE	—

MANHOLE / CATCHBASIN  
 FLARED END-SECTION  
 GATE VALVE  
 HYDRANT  
 UTILITY POLE  
 FENCE  
 SIGN  
 SANITARY SEWER LABEL  
 STORM SEWER LABEL  
 WATER MAIN LABEL  
 SOIL EROSION CONTROL MEASURE  
 (P=PERMANENT, T=TEMPORARY)  
 SILT FENCE  
 LIMITS OF GRADING/CLEARING  
 WETLAND BOUNDARY  
 CONCRETE  
 ASPHALT  
 MODIFIED CURB

THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS SHEET ARE BASED ON RECORD DRAWINGS AND FIELD SURVEY. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ANY UTILITIES NOT SHOWN ON THIS SHEET PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY UNEXPECTED UTILITIES ARE ENCOUNTERED DURING CONSTRUCTION.

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 317 E. GRAND AVENUE  
 WEST BLOOMFIELD, MI 48323  
 (800) 248-9735 FAX (517) 548-1670



**NOTE:**  
 REFER TO HYDRAULICS PLAN SHEET 7 FOR ALL STORM, SANITARY, AND WATER MAIN STRUCTURE AND PIPE SCHEDULES.

**NOTE:**  
 CONTRACTOR SHALL FIELD VERIFY THE SIZE, LOCATION AND ELEVATION OF THE EXISTING SANITARY SEWER INVERT AND THE EXISTING WATER MAIN INVERT AT GRAND RIVER AVE. PRIOR TO CONSTRUCTION.

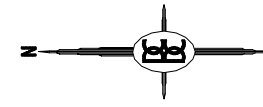
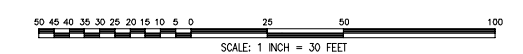
**PROJECT:** LIPKIN MEDICAL OFFICE BUILDING  
**PREPARED FOR:** DR. LIPKIN  
 3172 INTERLAKEN STREET  
 WEST BLOOMFIELD, MI 48323

**TITLE:** UTILITY PLAN

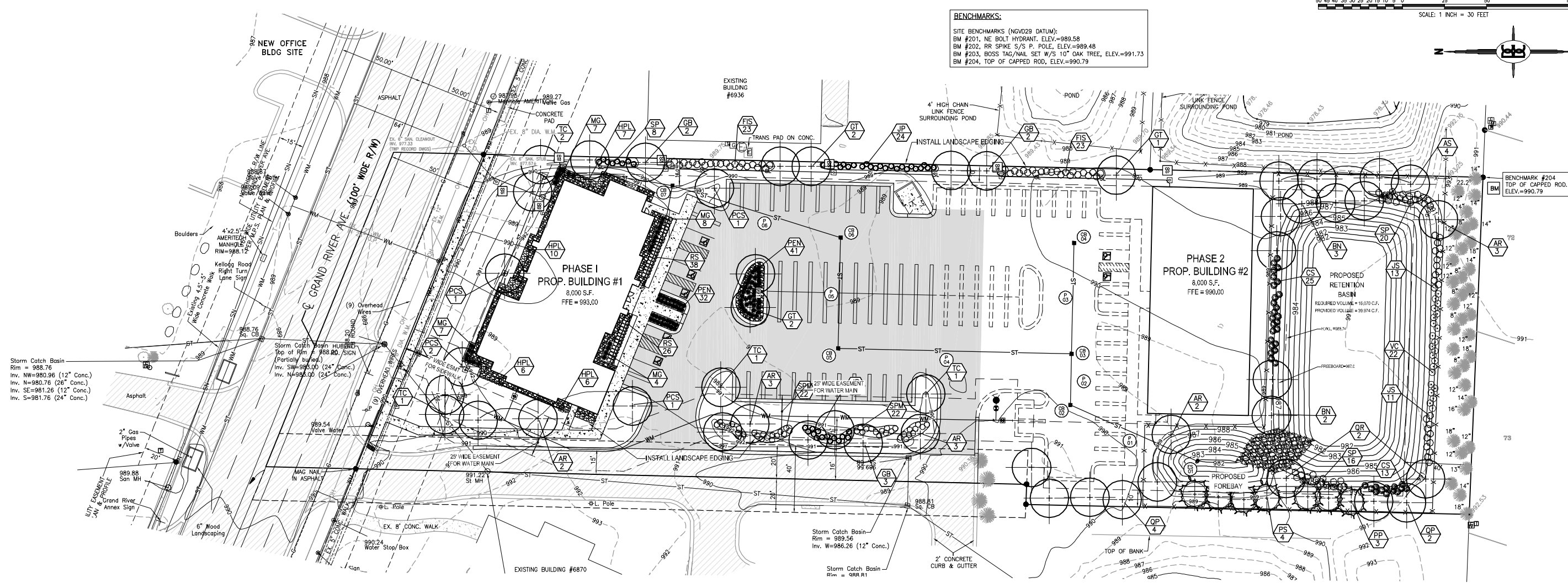
NO	BY	REVISION	DATE
1	LM	PER TOWNSHIP REVIEW	5/21/14

**DESIGNED BY:** AEB  
**DRAWN BY:** AEB  
**CHECKED BY:**  
**SCALE:** 1" = 30'  
**JOB NO.:** 13-293  
**DATE:** 4-30-14  
**SHEET NO.:** C4





**BENCHMARKS:**  
 SITE BENCHMARKS (NGVD29 DATUM):  
 BM #201, NE BOLT HYDRANT, ELEV.=989.58  
 BM #202, RR SPIKE S/S P. POLE, ELEV.=989.48  
 BM #203, BOSS TAG/NAI SET W/S 10" OAK TREE, ELEV.=991.73  
 BM #204, TOP OF CAPPED ROD, ELEV.=990.79



Storm Catch Basin  
 Rim = 988.76  
 Inv. NW=980.96 (12" Conc.)  
 Inv. N=980.76 (24" Conc.)  
 Inv. SE=981.26 (12" Conc.)  
 Inv. S=981.76 (24" Conc.)

Storm Catch Basin HUB  
 Top of Rim = 988.00  
 Inv. SW=985.00 (24" Conc.)  
 Inv. N=985.00 (24" Conc.)

Storm Catch Basin  
 Rim = 989.56  
 Inv. W=986.26 (12" Conc.)

Storm Catch Basin  
 Rim = 988.81

**LANDSCAPE REQUIREMENTS**

- STREET FRONTAGE**  
 -REQUIRED - 1 TREE PER 40 L.F. OF FRONTAGE (202 L.F. / 40 = 6 TREES)  
 -PROVIDED - 6 TREES
- BUFFER ZONES**  
 ADJACENT TO NCS  
 -REQUIRED - 10 FEET WIDE, 1 TREE OR 4 SHRUBS PER 20 L.F. (1,147 L.F. / 20 = 57 TREES)  
 -PROVIDED - 10 FEET WIDE WITH 32 TREES AND 136 SHRUBS  
 ADJACENT TO RESIDENTIAL  
 -REQUIRED - 20 FEET WIDE, 1 CANOPY TREE, 1 EVERGREEN TREE AND 4 SHRUBS PER 30 L.F. (200 L.F. / 30 = 7 CANOPY TREES, 7 EVERGREEN TREES AND 27 SHRUBS)  
 -PROVIDED - 20 FEET WIDE WITH 34 EXISTING PINES 8" TO 18" IN DIA.
- PARKING AREA LANDSCAPING**  
 -REQUIRED - 1 CANOPY TREE AND 100 S.F. OF LANDSCAPED AREA PER 10 SPACES (55 SPACES / 10 = 6 & 600 S.F.)  
 -PROVIDED - 6 TREES & 635 S.F.
- DETENTION BASIN LANDSCAPING**  
 -REQUIRED - 1 TREE AND 10 SHRUBS PER 50 L.F. OF BASIN PERIMETER  
 DETENTION BASIN - 598 L.F. = 12 TREES & 120 SHRUBS  
 PROPOSED - 12 TREES & 120 SHRUBS

**PLANT LIST**

KEY	QUAN.	BOTANICAL NAME	COMMON NAME	SIZE	REMARK
<b>TREES</b>					
AS	4	Acer saccharum 'Legacy'	Legacy Sugar Maple	2 1/2" cal.	B-B
AR	10	Acer rubrum 'Red Sunset'	Red Sunset Maple	2 1/2" cal.	B-B
BN	5	Betula nigra	River Birch	2 1/2" cal.	B-B
GT	7	Ginkgo biloba	Ginkgo	2 1/2" cal.	B-B, Male Only
GB	5	Oledia triacanthos var. inermis	Thornless Honey Locust	2 1/2" cal.	B-B
PCS	5	Pyrus calleryana 'Cleveland Select'	Cleveland Select Pear	2 1/2" cal.	B-B
PP	3	Picea pungens var. 'Glauca'	Colorado Blue Spruce	6'-8" ht.	B-B
PS	4	Pinus strobus	Eastern White Pine	6'-8" ht.	B-B
QP	6	Quercus palustris	Pin Oak	2 1/2" cal.	B-B
QR	2	Quercus rubra	Red Oak	2 1/2" cal.	B-B
TC	5	Tilia cordata 'Greenspire'	Greenspire Linden	2 1/2" cal.	B-B
<b>SHRUBS</b>					
CS	38	Cornus sericea	Redosier Dogwood	24"-36" ht.	B-B
FIS	46	Forsythia x intermedia 'Spring Glory'	Spring Glory Forsythia	24"-36" ht.	B-B
HPL	29	Hydrangea paniculata 'Limelight'	Limelight Hydrangea	24" ht.	Cont.
JP	38	Juniperus chinensis 'Pfitzeriana Aurea'	Aurea Juniper	24" sprd.	B-B
JS	24	Juniperus chinensis var. sargentii	Sargent Juniper	24"-36" sprd.	B-B
RS	64	Rosa RADtko	Double Red Knockout	Cont.	B-B
SP	44	Salix purpurea	Purpleosier Willow	24"-36" ht.	B-B
SPM	44	Syringa patula 'Miss Kim'	Miss Kim Dwarf Lilac	24"-36" ht.	B-B
VC	22	Viburnum carlesii 'Compactum'	Comp. Koreanspice Vib.	24"-36" ht.	B-B
<b>PERENNIALS</b>					
MG	26	Miscanthus sinensis 'Gracillimus'	Gracillimus Maiden	Cont.	B-B
PEN	73	Pennisetum alopecuroides 'Hameln'	Hameln Fountain Grass	Cont.	B-B

**LEGEND**

PROPOSED (PR)	EXISTING (EX)	DESCRIPTION
900	900	CONTOUR
FF	+ 922.08	SPOT ELEVATION
FG	FF	FINISHED FLOOR ELEVATION
T/A	T/A	TOP OF ASPHALT
T/C	T/C	TOP OF CURB / CONCRETE
T/W	T/W	TOP OF WALK
F/L	F/L	FLOW LINE
T/P	T/P	TOP OF PIPE
RM	RM	RIM ELEVATION
INV	INV	INVERT ELEVATION
MH	MH	MANHOLE STRUCTURE
IN	IN	INLET STRUCTURE
CB	CB	CATCHBASIN STRUCTURE
ES	ES	END-SECTION
GV	GV	GATEVALVE STRUCTURE
HY	HY	HYDRANT
UP	UP	UTILITY POLE
SN	SN	SANITARY SEWER
SL	SL	SANITARY LEAD
FM	FM	FORCE MAIN
ST	ST	STORM SEWER
WM	WM	WATER MAIN
WL	WL	WATER LEAD
OH	OH	OVERHEAD WIRE
C	C	CABLE
E	E	ELECTRIC
G	G	GAS
T	T	TELEPHONE
○	○	MANHOLE
□	□	INLET / CATCHBASIN
▭	▭	FLARED END-SECTION
⊕	⊕	GATE VALVE
⊙	⊙	HYDRANT
⊙	⊙	UTILITY POLE
⊙	⊙	FENCE SIGN
—	—	SANITARY SEWER LABEL
—	—	STORM SEWER LABEL
—	—	WATER MAIN LABEL
—	—	SOIL EROSION CONTROL MEASURE (P=PERMANENT, T=TEMPORARY)
—	—	SILT FENCE
—	—	LIMITS OF GRADING/CLEARING
—	—	WETLAND BOUNDARY
—	—	CONCRETE
—	—	ASPHALT
—	—	MODIFIED CURB

THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES AS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETION OF THIS PROJECT IS THE RESPONSIBILITY OF THE CLIENT. THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY CONFLICTS ARE APPARENT OR IF THE LOCATION OR DEPTH DIFFERS SIGNIFICANTLY FROM THE RECORD DRAWINGS.

3. BEFORE MOU DIG  
 1-800-442-7171  
 1-800-442-7171

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3172 INTERLAKEN STREET  
 WEST BLOOMFIELD, MI 48323  
 (E-MAIL: bosseng.com)  
 (800) 246-0735 FAX (517) 548-1670

PROJECT: **LIPKIN MEDICAL OFFICE BUILDING**

PREPARED FOR: **DR. LIPKIN**  
 3172 INTERLAKEN STREET  
 WEST BLOOMFIELD, MI 48323

TITLE: **LANDSCAPE PLAN**

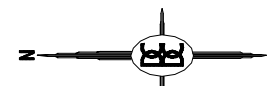
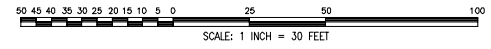
NO	BY	REVISION PER	DATE
1	LM	PER TOWNSHIP REVIEW	5/21/14

DESIGNED BY: \_\_\_\_\_  
 DRAWN BY: AEB

CHECKED BY: \_\_\_\_\_

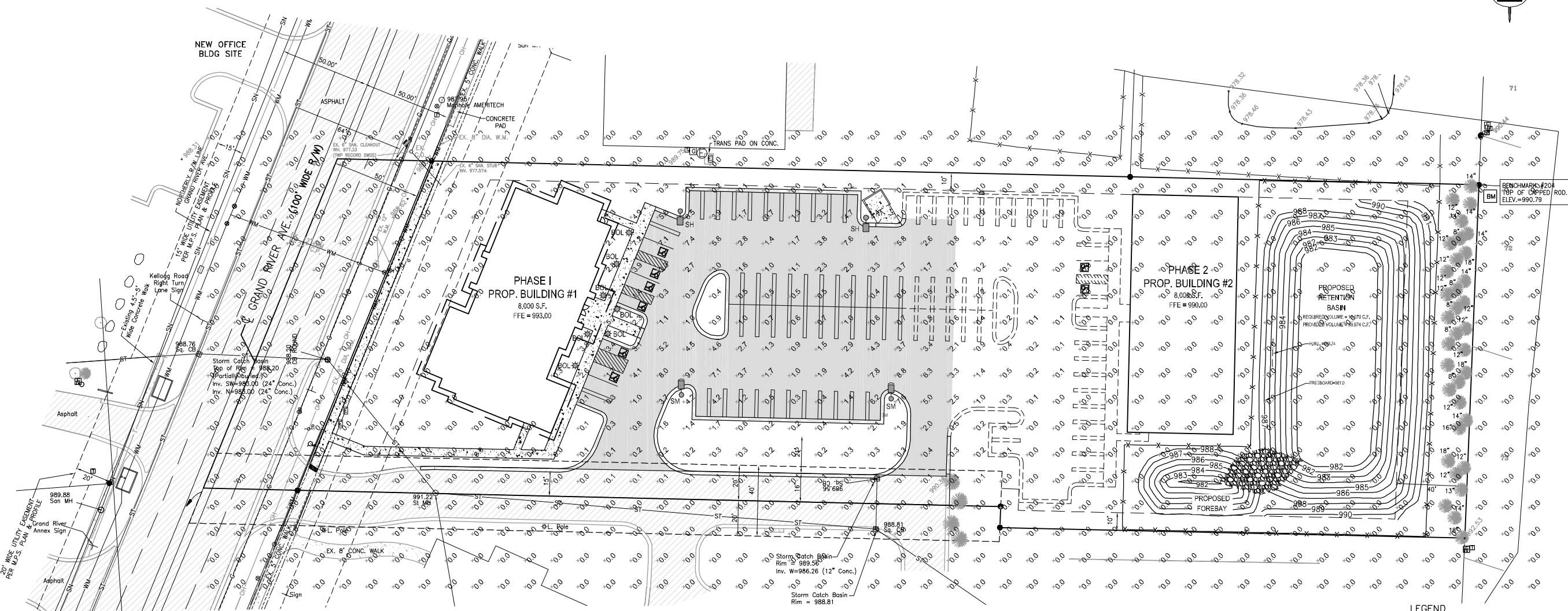
SCALE: 1" = 30'  
 JOB NO. 13-293  
 DATE 4-30-14  
 SHEET NO. **C5**

**BENCHMARKS:**  
 SITE BENCHMARKS (NGVD29 DATUM):  
 BM #201, NE BOLT HYDRANT, ELEV.=989.58  
 BM #202, RR SPIKE S/S P. POLE, ELEV.=989.48  
 BM #203, BOSS TAG/NAIL SET W/S 10" OAK TREE, ELEV.=991.73  
 BM #204, TOP OF CAPPED ROD, ELEV.=990.79



THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS PLAN ARE BASED ON RECORD DRAWINGS AND FIELD SURVEY. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ANY UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO UTILITIES DURING CONSTRUCTION. THE CONTRACTOR SHALL MAINTAIN THE LOCATION OF ALL UTILITIES AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO UTILITIES DURING CONSTRUCTION. THE CONTRACTOR SHALL MAINTAIN THE LOCATION OF ALL UTILITIES AT ALL TIMES.

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 LANDSCAPE ARCHITECTS  
 3172 INTERLAKEN STREET  
 WEST BLOOMFIELD, MI 48323  
 (734) 885-1100  
 (800) 248-0735 FAX (517) 248-1870



**SITE LIGHTING SUMMARY**  
 LIGHTING LEVELS ARE SHOWN IN FOOT CANDLES AT 5' ABOVE GRADE

**GENERAL LIGHTING NOTES**

1. THE LIGHTING PATTERN REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY APPROVED METHODS. ACTUAL PERFORMANCE OF ANY MANUFACTURER'S LUMINAIRE MAY VARY DUE TO VARIATION IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, AND OTHER VARIABLE FIELD CONDITIONS.
2. ALL POLES ARE TO BE MOUNTED ON CONCRETE PEDESTALS 2' ABOVE GRADE IN PARKING LOTS AS SHOWN IN DETAIL.
3. ALL POLES LOCATED OUTSIDE OF THE PARKING AREA SHALL BE LOCATED 3' FROM BACK OF CURB OR EDGE OF SIDEWALKS.
4. SHOP DRAWINGS FOR THE ELECTRICAL WIRING OF THE POLES NEED TO BE SUBMITTED TO THE ENGINEER FOR COORDINATION OF UNDERGROUND CONDUIT AND APPROVAL OF LAYOUT.

**LEGEND**

PROPOSED (PR)	EXISTING (EX)	DESCRIPTION
900	900	CONTOUR
FF	FF	SPOT ELEVATION
FG	FG	FINISHED FLOOR ELEVATION
T/A	T/A	TOP OF ASPHALT
T/C	T/C	TOP OF CURB / CONCRETE
T/W	T/W	TOP OF WALK
F/L	F/L	FLOW LINE
T/P	T/P	TOP OF PIPE
RIM	RIM	RIM ELEVATION
INV	INV	INVERT ELEVATION
MH	MH	MANHOLE STRUCTURE
IN	IN	INLET STRUCTURE
CB	CB	CATCHBASIN STRUCTURE
ES	ES	END-SECTION
GV	GV	GATEVALVE STRUCTURE
HY	HY	HYDRANT
UP	UP	UTILITY POLE
SN	SN	SANITARY SEWER
SL	SL	SANITARY LEAD
FM	FM	FORCE MAIN
ST	ST	STORM SEWER
WM	WM	WATER MAIN
WL	WL	WATER LEAD
OH	OH	OVERHEAD WIRE
C	C	CABLE
E	E	ELECTRIC
G	G	GAS
T	T	TELEPHONE
○	○	MANHOLE
□	□	INLET / CATCHBASIN
⊥	⊥	FLARED END-SECTION
⊥	⊥	GATE VALVE
⊥	⊥	HYDRANT
⊥	⊥	UTILITY POLE
⊥	⊥	FENCE
⊥	⊥	SIGN
—	—	SANITARY SEWER LABEL
—	—	STORM SEWER LABEL
—	—	WATER MAIN LABEL
—	—	SOIL EROSION CONTROL MEASURE (P=PERMANENT, T=TEMPORARY)
—	—	SILT FENCE
—	—	LIMITS OF GRADING/CLEARING
—	—	WETLAND BOUNDARY
—	—	CONCRETE
—	—	ASPHALT
—	—	MODIFIED CURB

LUMINAIRE SCHEDULE

SYMBOL	LABEL	QTY.	DESCRIPTION	CATALOG NUMBER	LAMP	FILE	LUMENS	LLF	POLE DESCRIPTION	POLE HEIGHT	BASE HEIGHT	TOTAL HEIGHT
SM	SM	2	DSX2 LED W/2 LARGE & 2 SMALL LIGHT ENGINES, (2) 1050mA DRIVERS, 4000K LED, TYPE T3M OPTICS	LITHONIA DSX2 LED 80C 1000 40K T3M MVOLT DNAXD	LED	DSX2_LED_80C_1000_40K_T3_M_MVOLT.IES	ABSOLUTE	0.95	RTA T20 DM19 FBC BA	18'	2'	20'
SH	SH	2	DSX2 LED W/2 LARGE & 2 SMALL LIGHT ENGINES, (2) 1050mA DRIVERS, 4000K LED, TYPE T3M OPTICS, WITH HOUSE SIDE SHIELD	LITHONIA DSX2 LED 80C 1000 40K T3M MVOLT HS DNAXD	LED	DSX2_LED_80C_1000_40K_T3_M_MVOLT_HS.IE	ABSOLUTE	0.95	RTA T20 DM19 FBC BA	18'	2'	20'
BOL	BOL	7	D-SERIES BOLLARD WITH 16 3000K LEDS OPERATED AT 530mA AND SYMMETRIC	LITHONIA DSXB LED 16C 530 30K SYM DNAXD	LED	DSXB_LED_16C_530_30K_SYM.IES	ABSOLUTE	0.95	RTA T20 DM19 FBC BA	36"	0'	36"

PROJECT: **LIPKIN MEDICAL OFFICE BUILDING**

PREPARED FOR: **DR. LIPKIN**  
 3172 INTERLAKEN STREET  
 WEST BLOOMFIELD, MI 48323

TITLE: **LIGHTING PLAN**

DESIGNED BY: \_\_\_\_\_  
 DRAWN BY: **AEB**

CHECKED BY: \_\_\_\_\_

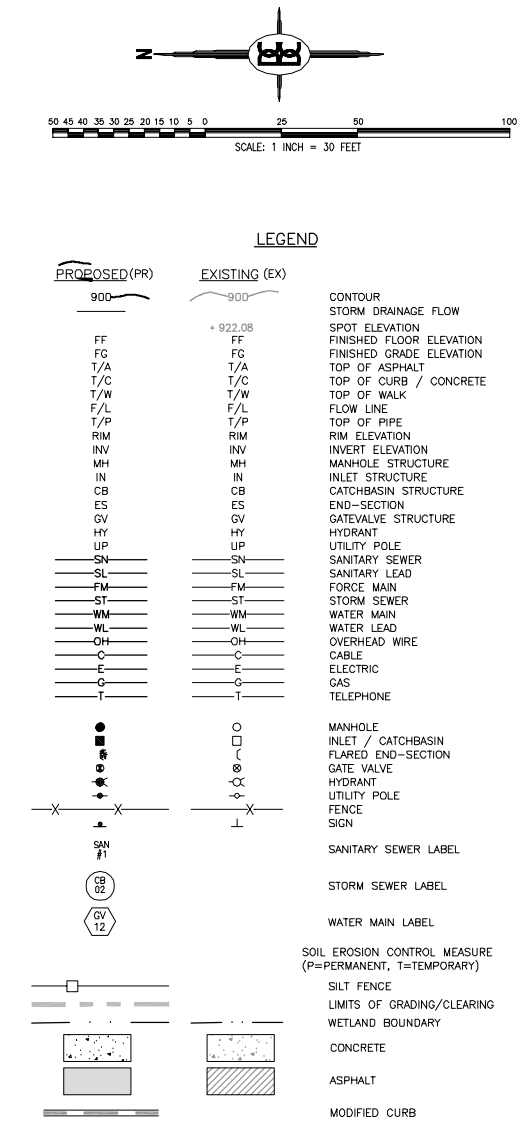
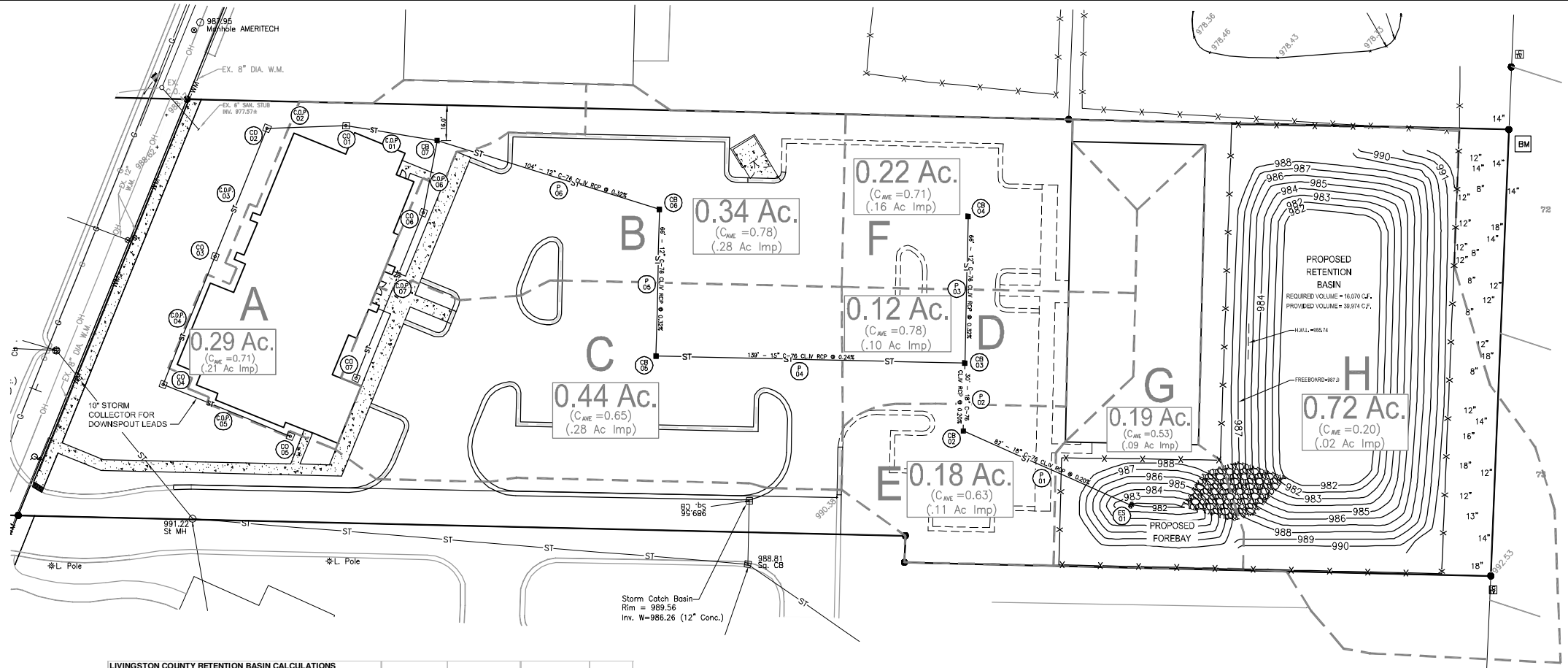
SCALE: 1" = 30'

JOB NO. 13-293

DATE 4-30-14

SHEET NO. **C6**

NO	BY	REVISION	DATE
1	LM	PER TOWNSHIP REVIEW	5/21/14



**LIVINGSTON COUNTY RETENTION BASIN CALCULATIONS**  
 PROJECT: LIPKIN MEDICAL OFFICE BUILDING  
 Retention Basin # 1 Location: GENOA TOWNSHIP  
 Date: 4/30/2014 Designer: LJM  
 Rev:

RETENTION PONDS ARE TO BE SIZED FOR EITHER 2 CONSECUTIVE 100-YEAR STORMS OR 2" OF RUNOFF OVER THE ENTIRE DRAINAGE AREA

AREA (ACRES)	IMPERVIOUS FACTOR	ACRE IMPERVIOUS	
0.00	1.0	0.00	Ponds
1.13	0.9	1.02	ImperVIOUS Surfaces
1.36	0.2	0.27	PerVIOUS Surfaces

COMPOUND C:	0.52
TOTAL DRAINAGE AREA:	2.49 ACRES

K1 = AxC (Design Constant) = 1.289  
 Q<sub>0</sub> = OUTFLOW (CFS / ACRE) = 0 FOR RETENTION 0 CFS

DURATION MINUTES	DURATION SECONDS	INTENSITY (IN/HR)	INCHES	INFLUX VOLUME (GAL)	OUTFLOW (GAL)	STORAGE VOLUME (GAL)
5	300	9.17	2751	3546	0	3546
10	600	7.86	4716	6079	0	6079
15	900	6.88	6192	7981	0	7981
20	1200	6.11	7332	9451	0	9451
30	1800	5.00	9000	11601	0	11601
60	3600	3.24	11664	15035	0	15035
90	5400	2.39	12906	16636	0	16636
120	7200	1.90	13680	17634	0	17634
180	10800	1.34	14472	18654	0	18654

REQUIRED 100 YEAR DETENTION VOLUME = 18654 CF  
 VOLUME OF TWO CONSECUTIVE 100-YEAR STORMS = 37309 CF

REQUIRED STORAGE VOLUME (2" RUNOFF OVER ENTIRE DRAINAGE AREA):  
 0.99 x 43660 x 2/12 = 18077 CF  
 USING THE LARGEST OF ABOVE NUMBERS =  
 REQUIRED RETENTION POND VOLUME = 37309 CF

**STORAGE PROVIDED**

ELEV.	AREA (FT <sup>2</sup> )	DEPTH (FT)	VOLUME (FT <sup>3</sup> )	TOTAL VOLUME (FT <sup>3</sup> )	
987	12333	1	11,669	51,643	FREEBOARD = 987
986	11005	1	10,369	39,974	DESIGN HIGH WATER ELEVATION = 985.74
985	9732	1	9,119	29,606	
984	8505	1	7,930	20,487	
983	7354	1	6,801	12,568	
982	6248	1	5,757	5,757	
981	5265	0	0	0	

**LIVINGSTON COUNTY FOREBAY CALCULATIONS**  
 PROJECT: LIPKIN MEDICAL OFFICE BUILDING  
 Retention Basin # 1 Location: GENOA TOWNSHIP  
 Date: 4/30/2014 Designer: LJM  
 Rev:

AREA (ACRES)	IMPERVIOUS FACTOR	ACRE IMPERVIOUS	
0.00	1	0.00	Ponds
1.13	0.9	1.02	ImperVIOUS Surfaces
1.36	0.2	0.27	PerVIOUS Surfaces

COMPOUND C:	0.52
TOTAL DRAINAGE AREA:	2.49 ACRES

K1 = AxC (Design Constant) = 1.289  
 Q<sub>0</sub> = OUTFLOW (CFS / ACRE) = 0 FOR RETENTION 0 CFS

DURATION MINUTES	DURATION SECONDS	INTENSITY (IN/HR)	INCHES	INFLUX VOLUME (GAL)	OUTFLOW (GAL)	STORAGE VOLUME (GAL)
5	300	9.17	2751	3546	0	3546
10	600	7.86	4716	6079	0	6079
15	900	6.88	6192	7981	0	7981
20	1200	6.11	7332	9451	0	9451
30	1800	5.00	9000	11601	0	11601
60	3600	3.24	11664	15035	0	15035
90	5400	2.39	12906	16636	0	16636
120	7200	1.90	13680	17634	0	17634
180	10800	1.34	14472	18654	0	18654

REQUIRED 100 YEAR RETENTION VOLUME = 18654 CF

**FOREBAY VOLUME**  
 V(F) = 5% OF THE 100-YEAR STORM VOLUME BASED ON THE AREA TRIBUTARY TO THE INLET  
 V(F) = (0.05)(V100)  
 V(F) = 933 CF  
 STORAGE VOLUME REQUIRED: 933 CF

ELEV.	AREA (FT <sup>2</sup> )	VOLUME (FT <sup>3</sup> )	TOTAL VOLUME (FT <sup>3</sup> )	
988	2243	1982	5719	= Storage Volume Provided
987	1720	1489	3738	
986	1257	1056	2249	
985	854	685	1194	H.G. ELEV. = 984.62
984	516	373	509	
983	235	133	133	
982	31	0	0	

**STRUCTURE SCHEDULE**

ES	DESCRIPTION	INV.	ELEV.
ES 01	FLARED END SECTION W/RIP RAP	18.00	982.00
CB 02	4" DIA. MANHOLE, COVER "A"		
	RIM	988.40	
	INV. SW	18.00	982.16
	INV. E	18.00	982.16
	2' SUMP		
CB 03	4" DIA. MANHOLE, COVER "A"		
	RIM	988.30	982.22
	INV. W	18.00	982.22
	INV. N	15.00	982.42
	INV. E	12.00	982.42
	2' SUMP		
CB 04			
	RIM	987.80	
	INV. W	12.00	982.64
	2' SUMP		
CB 05			
	RIM	988.20	
	INV. S	15.00	982.76
	INV. E	12.00	982.96
	2' SUMP		
CB 06			
	RIM	987.70	
	INV. W	12.00	983.17
	INV. NE	12.00	983.17
	2' SUMP		
CB 07			
	RIM	988.70	
	INV. NE	10.00	983.70
	INV. SW	12.00	983.50
	INV. W	10.00	983.70
	2' SUMP		

**STORM CLEANOUT SCHEDULE (FOR DOWNSPOUT COLLECTOR)**

CO	DESCRIPTION	INV.	ELEV.	
CO 01	10" DIA. CLEAN OUT			
	RIM	990.80		
	INV. SW	10.00	985.37	
	INV. N	10.00	985.37	
CO 02	10" DIA. CLEAN OUT			
	RIM	991.00		
	INV. S	10.00	985.72	
	INV. NW	10.00	985.72	
CO 03	10" DIA. CLEAN OUT			
	RIM	992.10		
	INV. SE	10.00	986.34	
	INV. NW	10.00	986.34	
CO 04	10" DIA. CLEAN OUT			
	RIM	991.95		
	INV. SE	10.00	986.96	
	INV. SW	10.00	986.96	
CO 05	10" DIA. CLEAN OUT			
	RIM	992.70		
	INV. NE	10.00	987.70	
CO 06	10" DIA. CLEAN OUT			
	RIM	992.50		
	INV. E	10.00	984.04	
	INV. W	10.00	984.04	
CO 07	10" DIA. CLEAN OUT			
	RIM	992.70		
	INV. E	10.00	987.70	

**STORM PIPE SCHEDULE**

PIPE	LENGTH	SIZE	TYPE	SLOPE
P1	82	18	RCP C-76 M	0.20%
P2	30	18	RCP C-76 M	0.20%
P3	66	12	RCP C-76 M	0.32%
P4	139	15	RCP C-76 M	0.24%
P5	66	12	RCP C-76 M	0.32%
P6	104	12	RCP C-76 M	0.32%

**CLEAN OUT COLLECTOR PIPE SCHEDULE**

PIPE	LENGTH	SIZE	TYPE	SLOPE
COP-1	41	10	SDR 26	4.06%
COP-2	35	10	SDR 26	1.00%
COP-3	62	10	SDR 26	1.00%
COP-4	62	10	SDR 26	1.00%
COP-5	62	10	SDR 26	1.20%
COP-6	33	10	SDR 26	1.01%
COP-7	80	10	SDR 26	4.58%

**STORM SEWER DESIGN COMPUTATIONS**

PROJECT: LIPKIN MEDICAL OFFICE BUILDING																DATE: 5/22/2014							
LOCATION: GENOA TOWNSHIP																DESIGNER: LJM							
FROM	TO	DRAIN AREA	AREA ACRES	AREA IMPERV	RUNOFF COEFF	EQUIV. AREA A * C	INTEN-SITY I	TIME OF CONC. Tc	ADDL. RUNOFF Q	RUNOFF (CFS) Q	PIPE LENGTH (LF)	PIPE DIA. (IN)	VELOCITY FULL (FPS)	HYDRAULIC GRADIENT SLOPE %	ACTUAL SLOPE USED	MANNING FLOW CAPACITY	MANNING'S VELOCITY (FT/SEC)	TIME (MIN)	HG ELEV. UPPER END	HG ELEV. LOWER END	RIM ELEV. UPPER	INVERT UPPER END	INVERT LOWER END
CB7	CB6	A	0.29	0.21	0.08	0.71	0.205	4.38	15.00	0.90	104	12	1.14	0.06%	0.32%	2.02	2.57	0.67	985.41	985.34	988.70	983.50	983.17
CB6	CB5	B	0.34	0.28	0.06	0.78	0.264	4.30	15.67	2.03	66	12	2.59	0.32%	0.32%	2.02	2.57	0.43	985.34	985.13	987.70	983.17	982.96
CB5	CB3	C	0.44	0.28	0.16	0.65	0.284	4.26	16.10	3.24	139	15	2.64	0.25%	0.24%	3.17	2.59	0.90	985.13	984.78	988.20	982.76	982.42
CB3	CB2	D	0.12	0.1	0.02	0.78	0.094	4.17	17.00	3.63	30	18	2.06	0.12%	0.20%	4.71	2.67	0.19	984.78	984.74	988.30	982.22	982.16
CB2	ES1	E	0.18	0.11	0.07	0.63	0.113	4.15	17.18	4.10	82	18	2.32	0.15%	0.20%	4.71	2.67	0.51	984.74	984.62	988.40	982.16	982.00
CB4	CB3	F	0.22	0.16	0.06	0.71	0.156	4.38	15.00	0.68	66	12	0.87	0.04%	0.32%	2.02	2.57	0.43	984.80	984.78	987.80	982.64	982.42

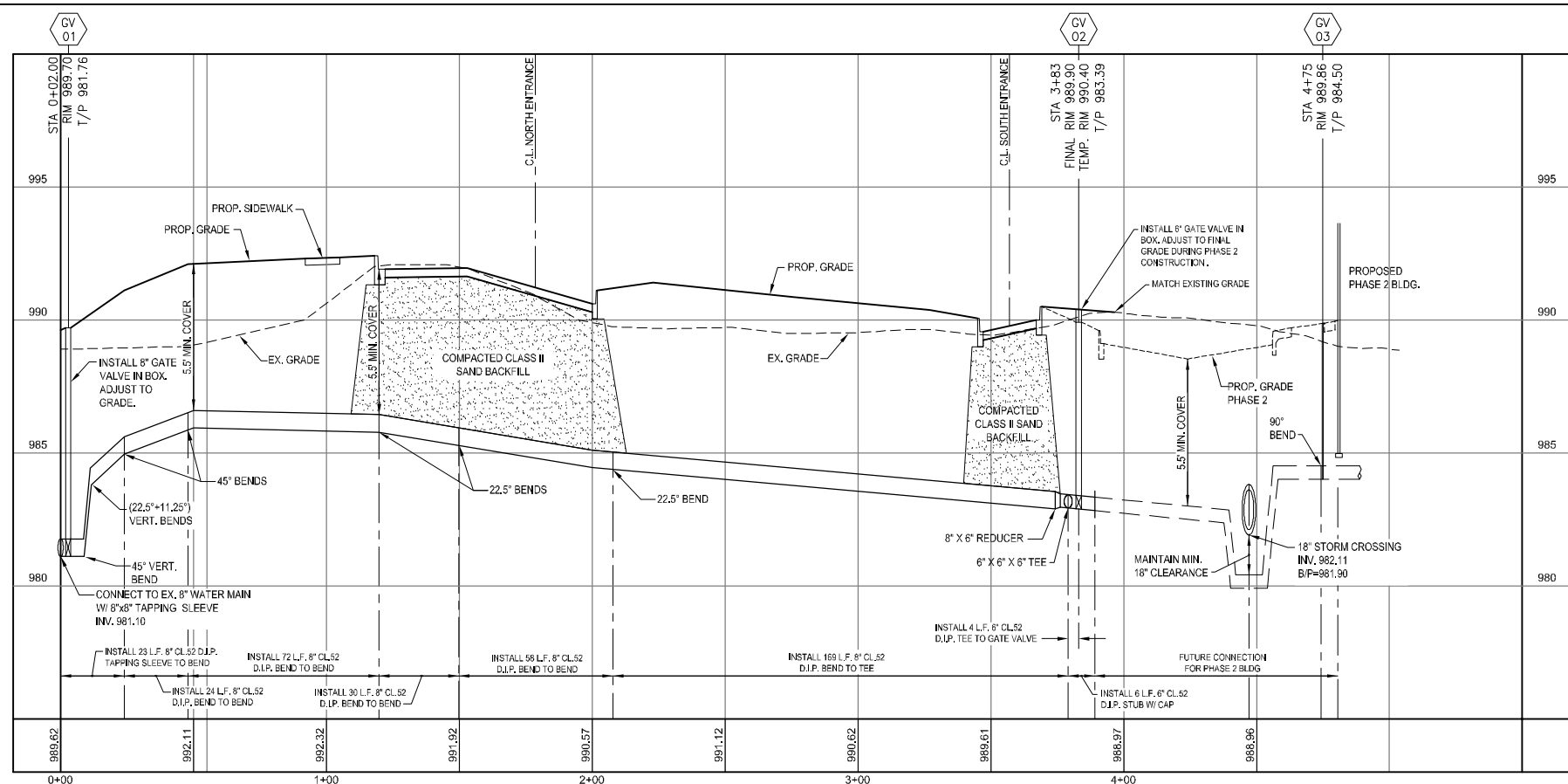
**BOSS ENGINEERING**  
 ENGINEERS • SURVEYORS • PLANNERS  
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317 E. GRAND AVENUE  
 WEST BLOOMFIELD, MI 48323  
 (800) 246-0735 FAX (517) 548-1870

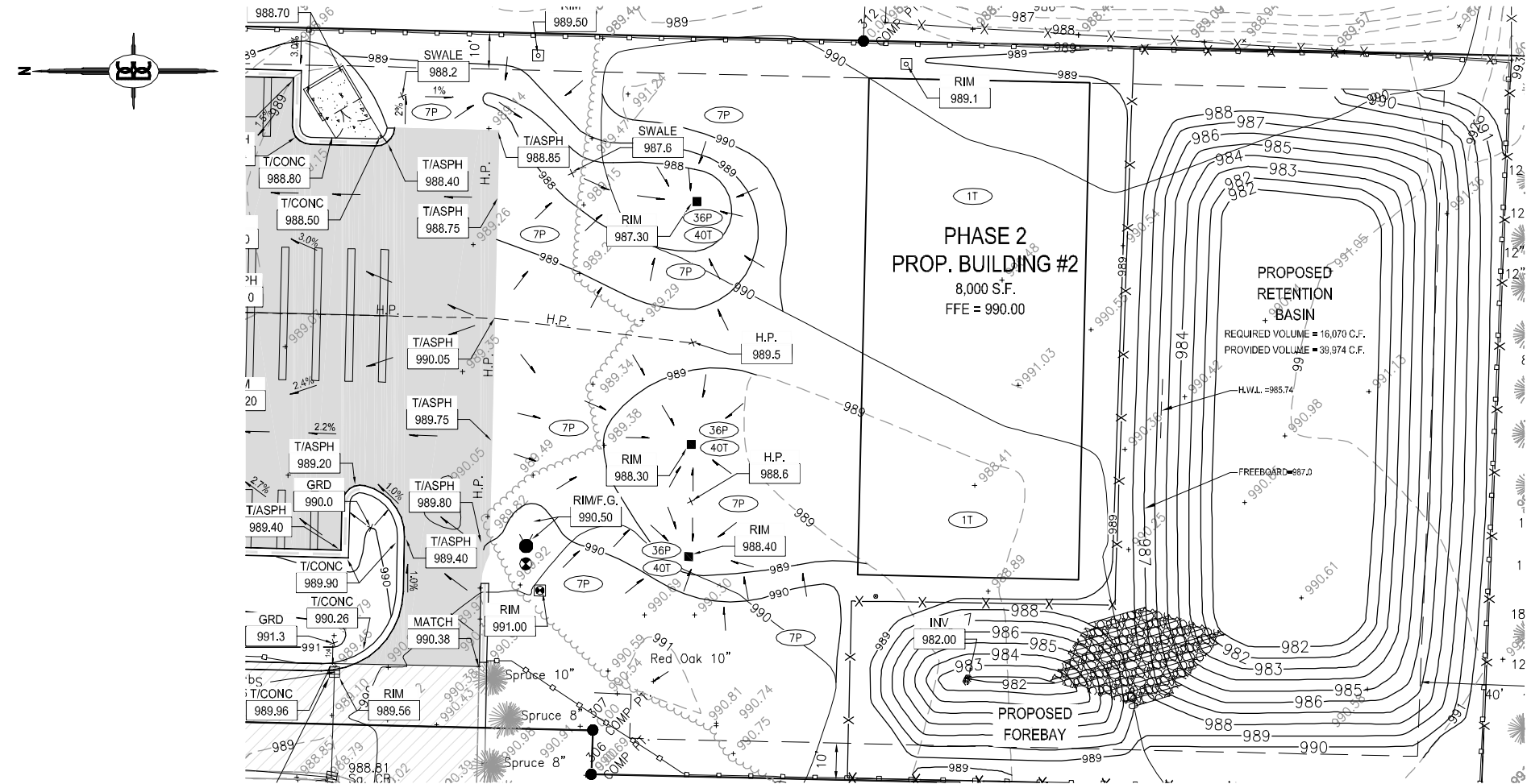
PROJECT: LIPKIN MEDICAL OFFICE BUILDING  
 PREPARED FOR: DR. LIPKIN  
 3172 INTERLAKEN STREET WEST BLOOMFIELD, MI 48323  
 TITLE: RETENTION & HYDRAULICS PLAN

NO BY DATE

DESIGNED BY: AEB  
 DRAWN BY: AEB  
 CHECKED BY:  
 SCALE: 1" = 30'  
 JOB NO. 13-293  
 DATE 4-30-14  
 SHEET NO. C7



**WATER MAIN PROFILE**  
SCALE: 1" = 30'



**INTERIM GRADING PLAN**  
SCALE: 1" = 20'

THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS PLAN ARE BASED ON RECORD DRAWINGS, FIELD SURVEY, AND OTHER SOURCES. THE ENGINEER HAS CONDUCTED VISUAL INSPECTIONS OF THESE UTILITIES AND HAS FOUND THEM TO BE IN ACCORDANCE WITH THE RECORD DRAWINGS AND FIELD SURVEY. THE ENGINEER HAS NOT CONDUCTED ANY TESTS OR VERIFICATION OF THE LOCATION OR DEPTH OF ANY UTILITIES. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ANY UTILITIES BEFORE CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO UTILITIES CAUSED BY CONSTRUCTION. THE CONTRACTOR SHALL MAINTAIN THE LOCATION OF ANY UTILITIES FOUND DURING CONSTRUCTION.

BEFORE YOU DIG  
CALL 811  
1-800-482-7171  
www.beforeyoudig.com

**BOSS ENGINEERING**  
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LANDSCAPE ARCHITECTS

3172 INTERLAKEN STREET  
WEST BLOOMFIELD, MI 48323  
(E-MAIL: bosseng.com)  
(800) 248-0735 FAX (517) 548-1670

PROJECT: LIPKIN MEDICAL OFFICE BUILDING  
PREPARED FOR: DR. LIPKIN  
3172 INTERLAKEN STREET  
WEST BLOOMFIELD, MI 48323  
TITLE: WATER MAIN PROFILE AND INTERIM GRADING PLAN

NO.	BY	REVISION	PER	DATE
1	LM	PER TOWNSHIP REVIEW		5/21/14

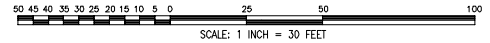
DESIGNED BY: LJM  
DRAWN BY: LJM  
CHECKED BY:  
SCALE: 1" = 30'  
JOB NO. 13-293  
DATE 4-30-14  
SHEET NO.



LEGEND

- POWER POLE
HYDRANT
GATE VALVE
MANHOLE
STORM CATCH BASIN (BEEHIVE)
STORM CATCH BASIN (SQUARE)
TELEPHONE RISER
U.G. TELEPHONE MARKER
GAS RISER
U.G. GAS MARKER
ELECTRICAL RISER
U.G. ELECTRIC MARKER
CABLE TV RISER
U.G. CABLE TV MARKER
LIGHT POLE
SIGN
IRON SET
IRON FOUND
SECTION CORNER
WATER MAIN
GAS MAIN
OVERHEAD WIRES
FENCE
SANITARY SEWER
STORM SEWER
ELECTRIC
TELEPHONE
CONC. CONCRETE
SANITARY MANHOLE
CENTERLINE
LIBER
PAGE
L.C.R. LIVINGSTON COUNTY RECORDS
(R&M) RECORD AND MEASURED
BM BENCHMARK SYMBOL

BENCHMARKS:
SITE BENCHMARKS (NGVD29 DATUM):
BM #201, NE BOLT HYDRANT, ELEV.=989.58
BM #202, RR SPIKE S/S P. POLE, ELEV.=989.48
BM #203, BOSS TAG/NAIL SET W/S 10" OAK TREE, ELEV.=991.73
BM #204, TOP OF CAPPED ROAD, ELEV.=990.79



GENERAL SURVEY NOTES:

- 1. CURRENT ZONING: NSD (NEIGHBORHOOD SERVICES DISTRICT)
2. MINIMUM SETBACK REQUIREMENTS: FRONT = 70 FEET; 35 FEET IF NO PARKING IN FRONT YARD SIDES = 10 FEET REAR = 40 FEET
3. BEARINGS WERE ESTABLISHED FROM A PREVIOUS SURVEY BY DESINE INC., JOB NO. 7937, REVISED 06-18-1997.
4. SUBSURFACE UTILITIES NOT LOCATED FOR THIS SURVEY MAY EXIST. IT IS THE RESPONSIBILITY OF THE OWNER OF THE RESPECTIVE UTILITY TO ACCURATELY LOCATE SUCH UTILITIES.
5. EASEMENTS OR RESTRICTIONS OF RECORD NOT DEPICTED ON THIS DRAWING MAY EXIST.
6. ELEVATIONS WERE ESTABLISHED FROM A PREVIOUS SURVEY BY BOSS ENGINEERING, JOB NO. 12-183, DATED 8-25-2012 AND 13-026, DATED 3-11-13. (NGVD29 DATUM)
7. THE LOCATION OF WATER MAIN, AS SHOWN ON THIS DRAWING IS BASED ON PAINT MARKINGS, VALVES AND HYDRANTS FIELD LOCATED BY SURVEYOR AT THE TIME OF THIS SURVEY.
8. OWNER OF SUBJECT PROPERTY AT THE TIME OF THIS SURVEY: ZVONKO PETROVSKI
9. ALL WORK SHALL BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE MUNICIPALITY, THE COUNTY, AND THE STATE OF MICHIGAN.
10. ALLOW THREE WORKING DAYS BEFORE YOU DIG, CALL MISS DIG TOLL FREE 1-800-482-7171.

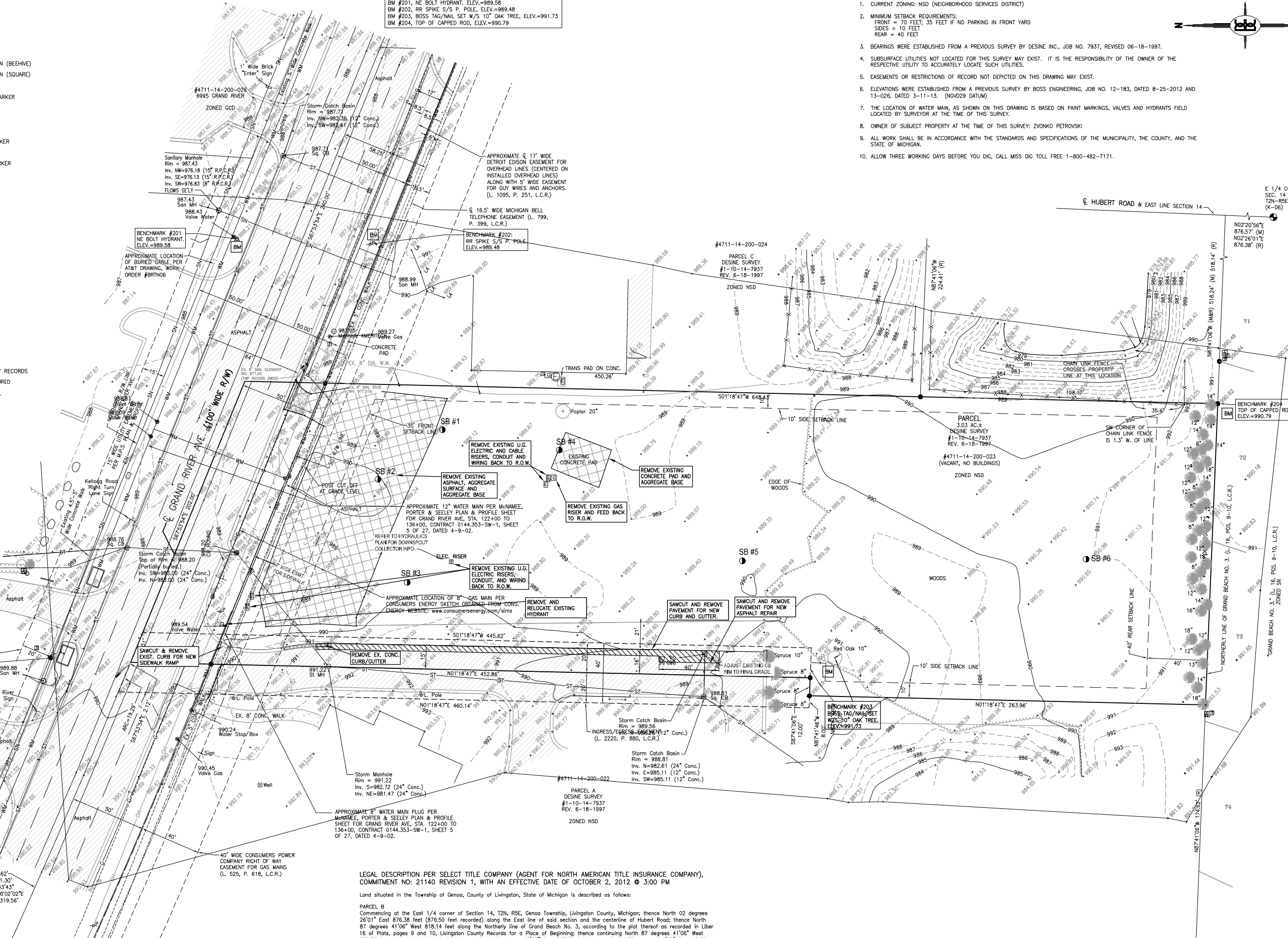
THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE BASED ON RECORD DRAWINGS AND FIELD SURVEY. THE LOCATION AND ELEVATION OF EXISTING UTILITIES IS NOT GUARANTEED BY BOSS ENGINEERING ARCHITECTS. THE CONTRACTOR SHALL VERIFY THE LOCATION OF UTILITIES PRIOR TO ANY CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY UTILITIES ARE FOUND AT A LOCATION OR DEPTH DIFFERS FROM THE RECORD DRAWINGS.

BOSS ENGINEERING
ENGINEERS • SURVEYORS • PLANNERS
LANDSCAPE ARCHITECTS
3172 INTERLAKEN STREET
WEST BLOOMFIELD, MI 48323
(800) 248-0735 FAX (517) 548-1870

PROJECT: LIPKIN MEDICAL OFFICE BUILDING
PREPARED FOR: DR. LIPKIN
3172 INTERLAKEN STREET
WEST BLOOMFIELD, MI 48323
TITLE: EXIST. CONDITIONS & DEMOLITION

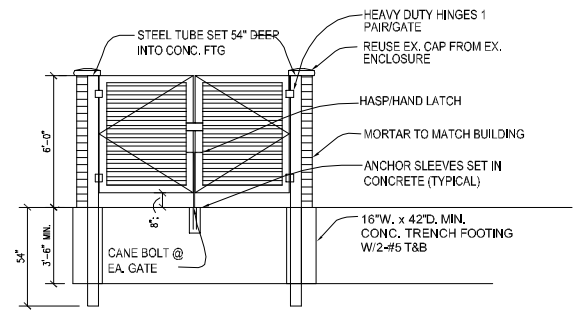
Table with columns: NO, BY, REVISION PER, DATE. Row 1: 1, LM PER, TOWNSHIP REVIEW, 5/21/14.

DESIGNED BY:
DRAWN BY: AEB
CHECKED BY:
SCALE: 1" = 30'
JOB NO. 13-293
DATE 4-30-14
SHEET NO.

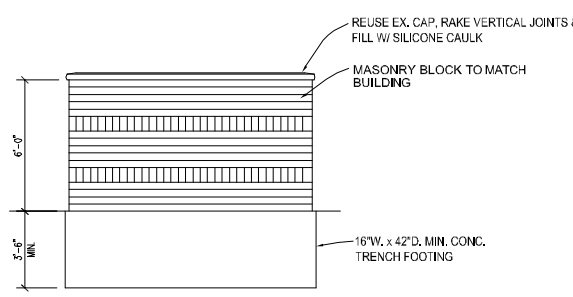


LEGAL DESCRIPTION PER SELECT TITLE COMPANY (AGENT FOR NORTH AMERICAN TITLE INSURANCE COMPANY), COMMITMENT NO: 21140 REVISION 1, WITH AN EFFECTIVE DATE OF OCTOBER 2, 2012 @ 3:00 PM

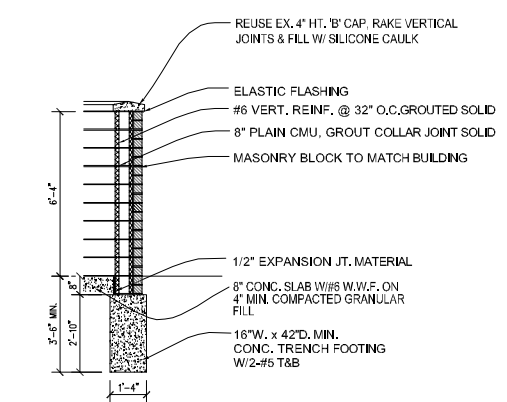
Land situated in the Township of Genoa, County of Livingston, State of Michigan is described as follows:
PARCEL B
Commencing at the East 1/4 corner of Section 14, T2N, R5E, Genoa Township, Livingston County, Michigan; thence North 02 degrees 26'01" East 876.38 feet (876.50 feet recorded) along the East line of said section and the centerline of Hubert Road; thence North 87 degrees 41'06" West 818.14 feet along the Northerly line of Grand Beach No. 3, according to the plat thereon as recorded in Liber 16 of Plats, pages 9 and 10, Livingston County Records for a Piece of Beginning; thence continuing North 87 degrees 41'06" West 200.88 feet along said Northerly line; thence North 01 degree 18'41" East 283.96 feet; thence South 87 degrees 41'06" East 12.00 feet; thence North 01 degree 18'47" East 452.86 feet; thence South 67 degrees 53'54" East 202.00 feet along the centerline of Grand River Avenue; thence South 01 degree 18'47" West 648.43 feet to the Place of Beginning. Being a part of the Northeast 1/4 of Section 14, T2N, R5E, Genoa Township, Livingston County, Michigan.



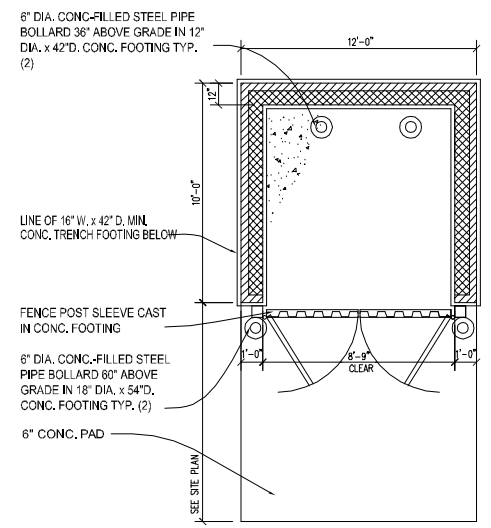
REFUSE ENCLOSURE FRONT ELEVATION  
NO SCALE



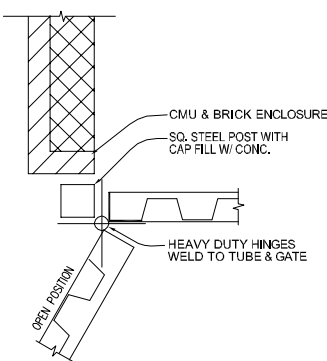
REFUSE ENCLOSURE REAR ELEVATION  
NO SCALE



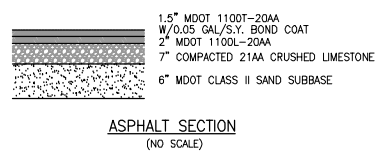
REFUSE ENCLOSURE WALL SECTION  
NO SCALE



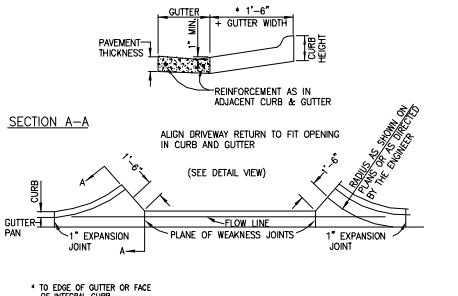
REFUSE ENCLOSURE PLAN  
NO SCALE



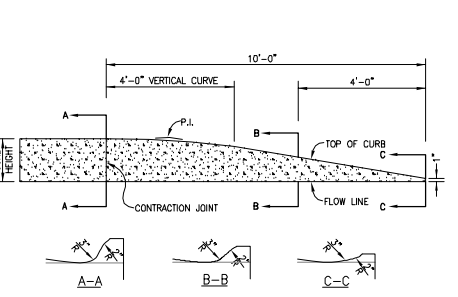
GATE POST DETAIL  
NO SCALE



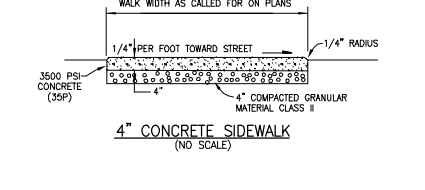
ASPHALT SECTION  
NO SCALE



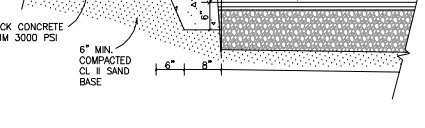
SECTION A-A  
NO SCALE



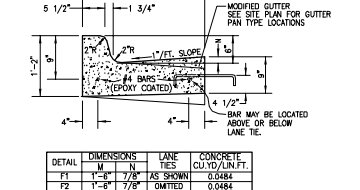
CONCRETE DRIVEWAY OPENING -  
MDOT STANDARD II-42, DETAIL 'M'  
NO SCALE



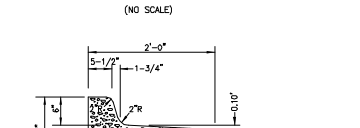
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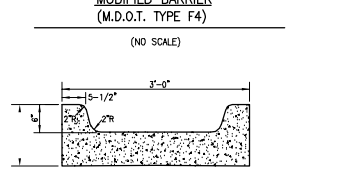
INTEGRAL CONCRETE WALK / CURB DETAIL  
NO SCALE



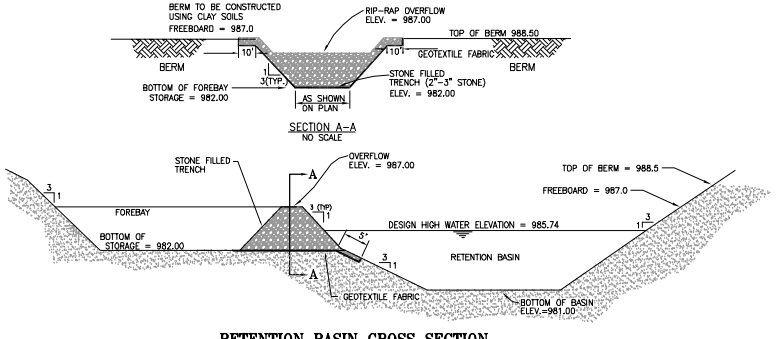
CONCRETE CURB & GUTTER TYPE F  
ON-SITE & GRAND RIVER  
NO SCALE



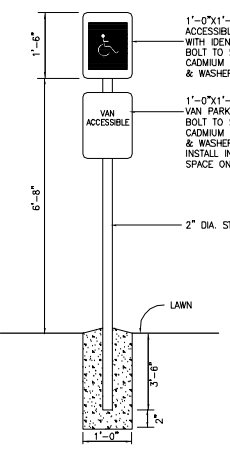
MODIFIED BARRIER  
(M.D.O.T. TYPE F4)  
NO SCALE



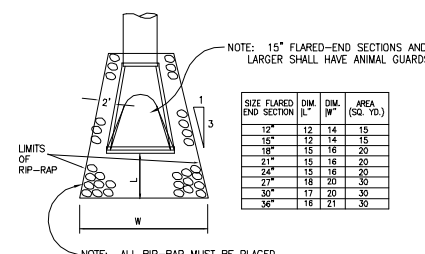
CONC. SPILLWAY DETAIL  
NO SCALE



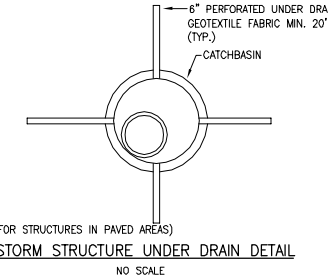
RETENTION BASIN CROSS SECTION  
NOT TO SCALE



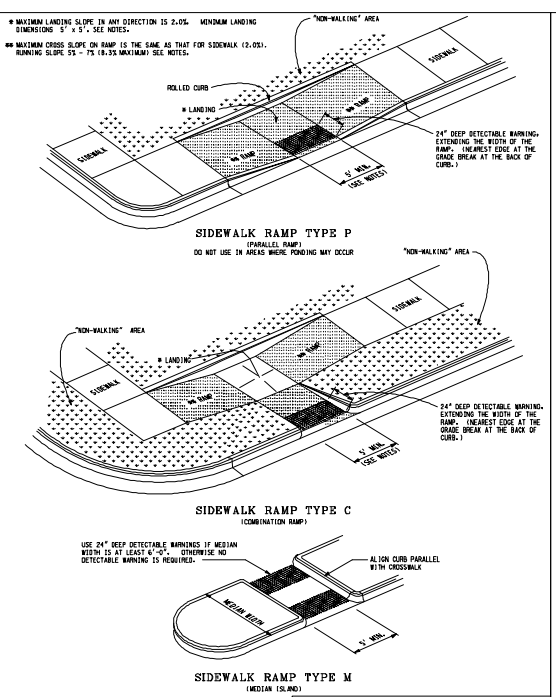
HANDICAP PARKING SIGN DETAIL  
NO SCALE



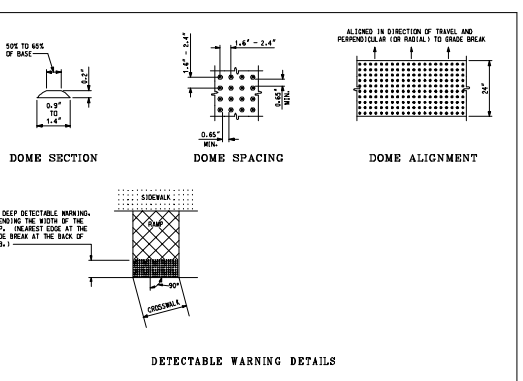
TYPICAL RIP-RAP DETAIL  
(SCALE: NONE)



STORM STRUCTURE UNDER DRAIN DETAIL  
NO SCALE



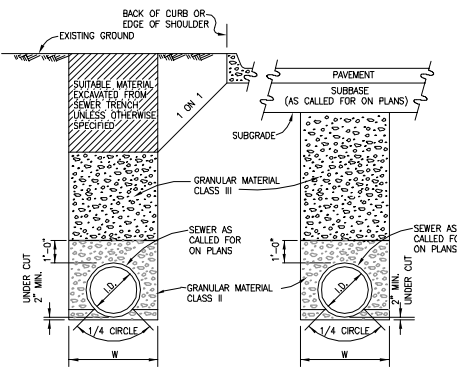
MICHIGAN DEPARTMENT OF TRANSPORTATION  
SIDEWALK RAMP AND  
DETECTABLE WARNING DETAILS



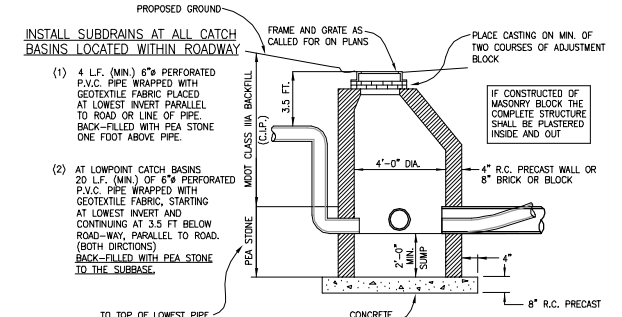
DETECTABLE WARNING DETAILS

NOTES:  
1. DETAILS SPECIFIED ON THIS PLAN APPLY TO ALL CONSTRUCTION, RECONSTRUCTION, OR ALTERATION OF STREETS, CURBS, OR SIDEWALKS BY ALL PUBLIC AGENCIES AND BY ALL PRIVATE ORGANIZATIONS CONSTRUCTING FACILITIES FOR PUBLIC USE.  
2. SIDEWALK RAMP TYPE P (PARALLEL RAMP) SHALL BE PROVIDED AT ALL CORNERS OF AN INTERSECTION WHERE THERE IS EXISTING OR PROPOSED SIDEWALK AND CURB. RAMP SHALL ALSO BE PROVIDED AT WALL LOCATIONS IN RECREATION FACILITIES, HOSPITALS, MEDICAL CENTERS, AND LARGE ATHLETIC FACILITIES.  
3. SURFACE TEXTURE OF THE RAMP SHALL BE THAT OBTAINED BY A COURSE SIDEWALK. OTHER REMOVAL EQUIPMENT NORMALLY USED BY THE MUNICIPALITY.  
4. RAMP WIDTH SHALL BE INCREASED, IF NECESSARY, TO ACCOMMODATE SIDEWALK. OTHER REMOVAL EQUIPMENT NORMALLY USED BY THE MUNICIPALITY.  
5. PROVIDE LANDINGS WHERE PEDESTRIAN TURNING MOVEMENTS ARE REQUIRED.  
6. WHEN 4\"/>

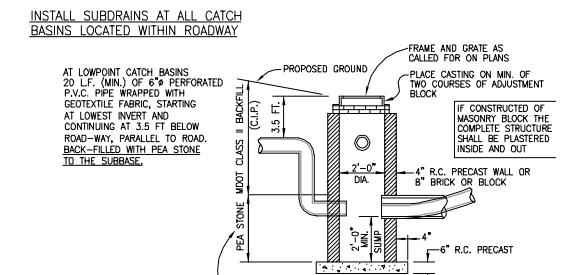
MICHIGAN DEPARTMENT OF TRANSPORTATION  
SIDEWALK RAMP AND  
DETECTABLE WARNING DETAILS



SEWER UNDER ROADBED OR WITHIN  
INFLUENCE OF ROADBED  
NO SCALE



INSTALL SUBDRAINS AT ALL CATCH  
BASINS LOCATED WITHIN ROADWAY  
NO SCALE



INSTALL SUBDRAINS AT ALL CATCH  
BASINS LOCATED WITHIN ROADWAY  
NO SCALE

THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETION OF THIS PROJECT. THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY CONFLICTS ARE FOUND PRIOR TO THE LOCATION OR DEPTH DIFFERS SIGNIFICANTLY FROM THE RECORD DRAWINGS.  
BOSS ENGINEERING, INC.  
3172 INTERLAKEN STREET  
WEST BLOOMFIELD, MI 48323  
(800) 248-0735 FAX (517) 248-1870

**BOSS ENGINEERING**  
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LANDSCAPE ARCHITECTS  
3172 INTERLAKEN STREET  
WEST BLOOMFIELD, MI 48323  
(800) 248-0735 FAX (517) 248-1870

PROJECT: LIPKIN MEDICAL OFFICE BUILDING  
PREPARED FOR: DR. LIPKIN  
3172 INTERLAKEN STREET  
WEST BLOOMFIELD, MI 48323  
TITLE: CONSTRUCTION NOTES & DETAILS

NO.	BY	REVISION PER	DATE
1	LM	TOWNSHIP REVIEW	5/21/14

DESIGNED BY: TD  
DRAWN BY: TD  
CHECKED BY:  
SCALE: 1" = 30"  
JOB NO. 13-293  
DATE 4-30-14  
SHEET NO. C10



LIVINGSTON COUNTY SOIL EROSION PERMIT TEMPLATE  
TEMPORARY CONTROLS AND SEQUENCE

- NOTIFY LIVINGSTON COUNTY DRAIN COMMISSIONER'S OFFICE 24 HOURS PRIOR TO START OF GRADE WORK.
- IN ACCORDANCE WITH PUBLIC ACT NO. 53, OF 1974 THE PERMIT HOLDER SHALL CALL MISS DIG FOR STAKING AND LOCATING OF UTILITIES, AT LEAST 72 HOURS IN ADVANCE OF THE START OF ANY WORK.
- PERMITTING STANDARDS**
- (IMPORTANT NOTICE) RETENTION/DETENTION PONDS SHALL BE EXCAVATED, TOPSOILED, SEEDED, MULCHED AND TACKED PRIOR TO THE START OF MASSIVE EARTH DISRUPTION. INGRESS/EGRESS MUST HAVE LARGE CRUSHED ROCK TO REDUCE THE TRACKING OF SOIL ONTO THE PUBLIC TRAFFIC AREAS. SEE DETAIL ITEMS BELOW.
- 36" M.D.O.T SPECIFICATION TYPE SILT FABRIC FENCE AS SHOWN ON PLANS SHALL BE PLACED AND MAINTAINED ALONG PERIMETER ON ALL LOW LYING AREAS OF THE CONSTRUCTION SITE TO FILTER RUNOFF BEFORE LEAVING PROJECT SITE.
- ALL TEMPORARY EROSION CONTROL DEVICES AS NOTED ON PLANS SHALL BE INSTALLED PRIOR TO THE START OF MASSIVE EARTH DISRUPTION.
- PLAN DOES DENOTE A DETAILED EROSION CONTROL DEVICE TO RESTRICT TRACKING OF MATERIAL ONTO THE HIGHWAY. STONE DIAPERS SHALL BE INSTALLED AT ALL INGRESS/EGRESS AREAS OF THE SITE PRIOR TO THE START OF MASSIVE EARTH DISRUPTION. DIAPERS SHALL BE OF CRUSHED STONE AND SHALL HAVE A MINIMUM LENGTH OF 100' LINEAL FEET.
- RETENTION PONDS**
- RETENTION/DETENTION/SEDIMENTATION PONDS SHALL BE EXCAVATED, TOPSOILED, SEEDED, MULCHED AND TACKED PRIOR TO THE START OF MASSIVE EARTH DISRUPTION.
- DETENTION POND OUTLETS SHALL BE OF THE STANDPIPE AND STONE FILTER SYSTEM WITH TRASH SCREEN. OUTLET FLOW SHALL NOT EXCEED 0.20 CUBIC FEET OF WATER PER SECOND/PER ACRE. POND DIKES SHALL HAVE A MINIMUM OF ONE (1) FOOT OF FREEBOARD. AN EMERGENCY SPILLWAY SHALL BE CONSTRUCTED WITHIN THE FREEBOARD LEVEL.
- THE EMERGENCY SPILLWAY FROM THE DETENTION POND SHALL BE SODDED AND PEGGED, OR RIP RAPPED, 15 FEET PAST THE TOE OF THE SLOPE OF THE BERM.
- DIKES AND BERMS SHALL BE FREE OF ALL ORGANIC MATTER.
- RETENTION/DETENTION PONDS SHALL BE FENCED WITH A 4' CHAIN LINK FENCE, INCLUDING A 12' ACCESS GATE FOR MAINTENANCE UNLESS MINIMUM 3 FT. HORIZONTAL TO 1 FT VERTICAL SIDE SLOPES ARE PROVIDED. THE FENCE SHALL BE INSTALLED AT THE OUTER PORTION OF THE BERM, TO ALLOW FOR MAINTENANCE WORK TO BE DONE INSIDE THE FENCE.
- ALL UNIMPROVED DISTURBED AREAS SHALL BE STRIPPED OF TOPSOIL WHICH WILL BE STORED ON SITE DURING THE EXCAVATING STAGE. TOPSOIL SHALL BE SEEDED AND MULCHED, OR MATTED WITH STRAW IN THE NON-GROWING SEASON, IMMEDIATELY AFTER THE STRIPPING PROCESS IS COMPLETED, TO PREVENT WIND AND WATER EROSION.
- SOIL EROSION CONTROLS SHALL BE MONITORED DAILY BY THE ON-SITE ENGINEER, OR CONTRACTOR, WHICHEVER CASE APPLIES.

SLOPES AND DITCHES

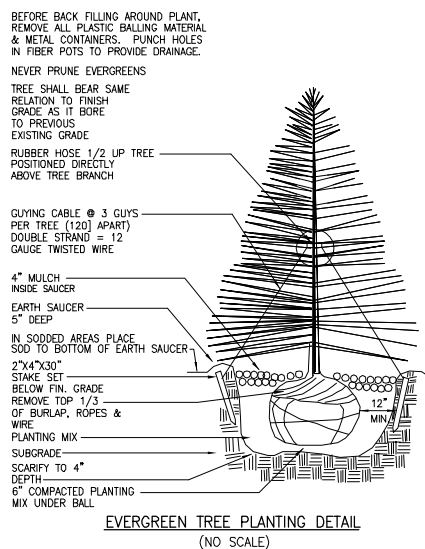
- ON SITE DITCHES SHALL BE OF THE FLAT BOTTOM TYPE MINIMUM WIDTH OF 2' WITH A MINIMUM OF 3 HORIZONTAL TO 1 VERTICAL SIDE SLOPES, 3:1.
- DITCHES WITH STEEP SLOPES WILL NEED FLOW CHECKS TO PREVENT SCOURING OF THE DITCH BOTTOM. THESE SHALL BE INSTALLED AS DIRECTED BY THE ENGINEER OR INSPECTOR.
- SLOPES IN EXCESS OF 3 HORIZONTAL TO 1 VERTICAL SHALL NOT BE USED EXCEPT WITH A MECHANICAL DEVICE SUCH AS A RETAINING WALL, TERRACING, OR OTHER PRIOR APPROVED DEVICE.
- STORM DRAINS
- ALL STORM WATER STRUCTURES, CATCH BASINS AND/OR MANHOLES, IF BLOCK, SHALL BE PLASTERED ON BOTH THE INSIDE AND OUTSIDE OF THE STRUCTURES. GROUTING AND POINTING WILL BE NECESSARY AT THE CASTING AND STRUCTURE JOINT TO PREVENT LEAKAGE AND THE RESULTING SOIL MOVEMENT, AROUND THE STRUCTURE.
- STORM WATER INLETS SHALL HAVE AS A TEMPORARY CONTROL A STRAW BALE BARRIER AND STONE FILTER INSTALLED AROUND THE INLET DURING CONSTRUCTION. AS AN ALTERNATIVE TO THE STRAW BALE BARRIER, A BURLAP AND PEA STONE FILTER MAY BE USED. THREE LAYERS OF BURLAP FIBER AND A FILTER OF PEA STONE MINIMUM 1 FT. IN DEPTH CAN BE USED. DUE TO THE POROSITY OF THE BURLAP FILTER THE MINIMUM OF 1 FT. OF STONE IS VERY IMPORTANT. THE CONTROL SHALL BE INSTALLED AS SOON AS THE STRUCTURE IS BUILT AND INSPECTED DAILY.
- BURLAP AND PEA STONE FILTERS WILL NEED TO BE CHANGED AFTER EACH RAINFALL.
- COUNTY CODE REQUIRES A MINIMUM PIPE SIZE OF 12" IN DIAMETER. IF SMALLER PIPE IS NEEDED FOR OUTLET PURPOSES THE 12" CAN BE BAFLED TO THE CORRECT SIZE. ALL PIPE SHALL MEET THE 12"
- ALL STORM DRAIN OUTLETS 15" IN DIAMETER OR LARGER SHALL HAVE ANIMAL GUARDS INSTALLED TO PREVENT ENTRANCE TO THE SYSTEM.

- ALL STORM DRAINAGE PIPE 30" IN DIAMETER OR LARGER SHALL BE POINTED, AT THE JOINTS ON THE INSIDE WITH MORTAR, AFTER BACKFILLING.
- ALL STORM DRAIN OUTLETS THAT DO NOT EMPTY INTO THE RETENTION/DETENTION POND SHALL HAVE A TEMPORARY 5'x10'x3" SUMP INSTALLED AT THE TERMINATION OF THE STORM SEWER. UPON COMPLETION OF THE STABILIZATION WORK THE SUMP AREA SHALL BE FILLED AND RIP RAPPED WITH COBBLE STONE. SILT TRAPS SHALL BE INSPECTED AFTER EACH STORM.
- STORM WATER OUTLETS DO DENOTE RIP RAP. ALL OUTLETS SHALL BE RIP RAPPED OVER KEYED FILTER FABRIC WITH A MINIMUM OF 15 SQ. YARDS OF 6" OR LARGER COBBLE STONE.
- RIP RAP AS NOTED ON THE PLAN SHALL BE OF A FUNNEL SHAPE CONSTRUCTION, WIDTH SHALL INCREASE AS DISTANCE FROM THE OUTLET POINT INCREASES AT A 3:1 RATIO.
- RIP RAP SHALL BE OF COBBLE STONE, 6" IN DIAMETER OR LARGER. GROUTING MAY BE NECESSARY, AND SHALL BE A MINIMUM OF 6" IN DEPTH WITH THE COBBLE SET IN THE GROUT SLURRY.
- STORM WATER OUTLET IS IN NEED OF A SPLASH BLOCK WHICH IS NOT NOTED ON THE PLAN. INSTALL SPLASH BLOCK IF SLOPE OF THE PIPE IS 4% OR GREATER.
- IT WILL BE NECESSARY FOR THE DEVELOPER TO HAVE THE STORM DRAINAGE LINES CLEANED PRIOR TO FINAL INSPECTION BY THE LIVINGSTON COUNTY DRAIN COMMISSIONER'S OFFICE. IF REQUIRED, THIS WORK SHALL BE DONE BY A PROFESSIONAL SEWER CLEANING FIRM AND CERTIFIED IN WRITING BY THE PROJECT ENGINEER. ALL SUMPS AND TEMPORARY SILT TRAPS SHALL ALSO BE CLEANED AT THIS TIME.
- STABILIZATION
- ALL UNIMPROVED DISTURBED AREAS SHALL BE RE-TOP SOILED, WITH A MINIMUM OF 3" OF MATERIAL, SEEDED, MULCHED AND TACKED WITHIN 15 DAYS OF THE COMPLETION OF THE MASSIVE EARTH DISRUPTION. IN THE NON-GROWING SEASON STRAW MATTING WILL SUFFICE. HYDROSEEDING WILL BE AN ACCEPTABLE ALTERNATE FOR MULCHING. EXTREME CARE SHOULD BE EXERCISED IN SPRING AND FALL PERIODS AS A FROST WILL BREAK THE BIND OF THE HYDROSEEDING, WHICH WILL AFFECT THE EFFECTIVENESS OF THIS PROCEDURE.
- IN THE NON-GROWING SEASON, TEMPORARY STABILIZATION OF MASSIVELY EXPOSED AREAS FOR WINTER STABILIZATION SHALL BE DONE WITH STRAW MATTING.
- PERMIT FEES DURING THE WINTER PERIOD OF NON-CONSTRUCTION, (DECEMBER 1 THROUGH MARCH 31), SHALL NOT BE IMPOSED IF THE PERMIT HOLDER TEMPORARILY STABILIZES THE EXPOSED AREAS WITH STRAW MATTING, AND OTHER APPROVED CONTROLS, AND OBTAINS A WINTER STABILIZATION CERTIFICATE FROM THIS OFFICE.
- PERIODIC INSPECTIONS WILL BE MADE THROUGHOUT THE COURSE OF THE PROJECT. IT WILL BE THE RESPONSIBILITY OF THE MANAGERS OF THE PROJECT TO CONTACT THIS OFFICE FOR THE FINAL INSPECTION AT THE END OF THE PROJECT.
- THIS COMMERCIAL PERMIT IS VALID FOR THE MASS EARTH MOVEMENT, THE INSTALLATION OF ROADS, DRAINS, AND UTILITIES AND IS NOT FOR ANY SINGLE FAMILY RESIDENCE. ALL RESIDENTIAL BUILDERS WILL NEED TO SECURE WAIVERS AND OR PERMITS AS NECESSARY FOR EACH LOT IN THIS DEVELOPMENT AT THE TIME APPLICATION FOR SINGLE FAMILY RESIDENCE IS MADE.
- THE ISSUING BUILDING DEPARTMENT SHALL NOT ISSUE THE CERTIFICATE OF OCCUPANCY UNTIL THE FINAL INSPECTION LETTER FROM THE LIVINGSTON COUNTY DRAIN COMMISSIONER'S OFFICE HAS BEEN OBTAINED.
- PER THE LIVINGSTON COUNTY DRAIN COMMISSIONER THE SEEDING, FERTILIZER AND MULCH MINIMUM QUANTITIES SHALL BE AS FOLLOWS:  
TOP-SOIL 3" IN DEPTH 218 LBS. PER ACRE  
GRASS SEED 150 LBS. PER ACRE  
FERTILIZER 3" IN DEPTH 1.5 TO 2 TONS PER ACRE (ALL MULCHING MUST HAVE A TIE DOWN, SUCH AS TACKIFIER, NET BINDING, ETC.)  
STRAW MULCH HYDRO-SEEDING HYDRO-SEEDING IS NOT ACCEPTABLE FOR SLOPES EXCEEDING 1%, IN SUCH CASES STABILIZATION SHALL BE DONE WITH SEED AND STRAW MULCH WITH A TACKIFIER.

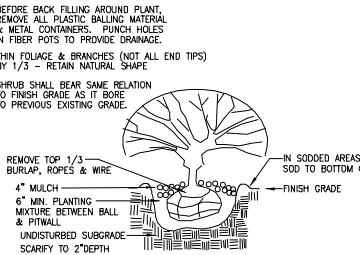
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MAINTENANCE SCHEDULE FOR SOIL EROSION CONTROLS

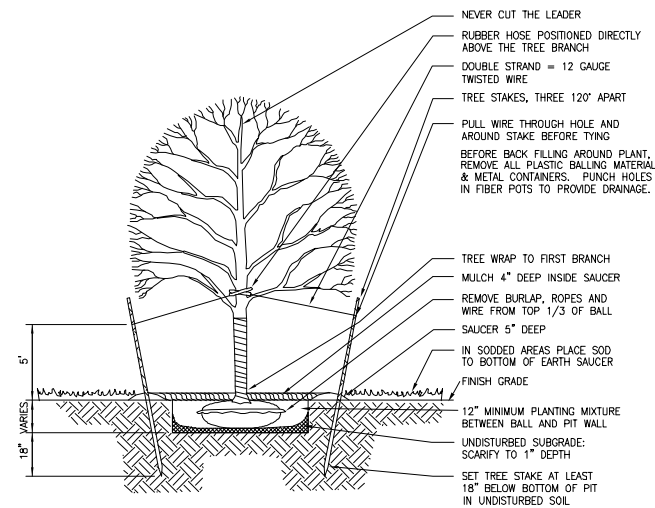
- SILT FENCE SHALL BE INSPECTED WEEKLY AND AFTER EACH MAJOR STORM EVENT. MAINTENANCE SHALL INCLUDE REMOVAL OF ACCUMULATED SILT AND REPLACEMENT OF TORN SECTIONS. SILT FENCE SHALL BE REMOVED WHEN ALL CONTRIBUTING AREAS HAVE BEEN STABILIZED.
- TRACKING PAD SHALL BE INSPECTED MONTHLY FOR ACCUMULATED DIRT. TRACKING PAD SHALL BE REPLACED WHEN THE STONES ARE CHOKED WITH DIRT. TRACKING PAD SHALL BE REMOVED IMMEDIATELY PRIOR TO THE FIRST COURSE OF ASPHALT BEING LAID.
- DETENTION/RETENTION POND SHALL BE INSPECTED QUARTERLY ON A PERMANENT BASIS. MAINTENANCE SHALL INCLUDE SEDIMENT REMOVAL, EMBANKMENT STABILIZATION AND MAINTAINING THE OUTLET STRUCTURE IN GOOD CONDITION. NO TREES SHALL BE ALLOWED TO GROW ON THE EMBANKMENT.
- CATCH BASINS SHALL BE INSPECTED ANNUALLY FOR ACCUMULATION OF SEDIMENT. ALL SEDIMENT MUST BE REMOVED AND DISPOSED OF PROPERLY WHEN THE SUMP IS FULL.
- COMMON AREAS SHALL BE STABILIZED NO LATER THAN 15 DAYS AFTER GRADE WORK, PURSUANT TO RULE 1709 (5).



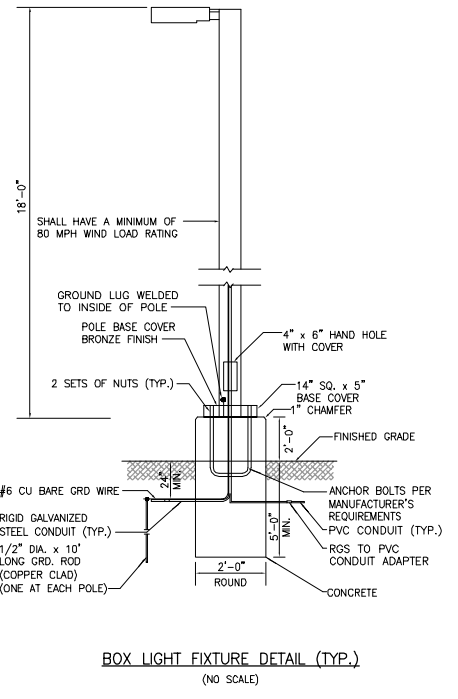
EVERGREEN TREE PLANTING DETAIL (NO SCALE)



SHRUB PLANTING DETAIL (NO SCALE)



DECIDUOUS TREE PLANTING DETAIL (NO SCALE)



BOX LIGHT FIXTURE DETAIL (TYP.) (NO SCALE)

**D-Series Size 2 LED Area Luminaire**

**Specifications**

Spec	Value
Finish	White
Length	48 in
Width	24 in
Height	12 in
Weight	15 lbs

**Ordering Information**

Code	Description	Quantity	Unit Price	Total Price
DSK2	DSK2 LED BOC 1000-40K T4M MVOLT SFA CDBX3D	1		

**Notes**

- Verify all dimensions and specifications of the luminaire and components.
- Verify the luminaire is suitable for the intended application and environment.
- Verify the luminaire is suitable for the intended mounting height and location.
- Verify the luminaire is suitable for the intended power supply and voltage.
- Verify the luminaire is suitable for the intended mounting hardware and fasteners.
- Verify the luminaire is suitable for the intended mounting surface and structure.
- Verify the luminaire is suitable for the intended mounting orientation and angle.
- Verify the luminaire is suitable for the intended mounting clearance and spacing.
- Verify the luminaire is suitable for the intended mounting alignment and leveling.
- Verify the luminaire is suitable for the intended mounting stability and security.
- Verify the luminaire is suitable for the intended mounting durability and longevity.
- Verify the luminaire is suitable for the intended mounting compliance and regulations.

TREE PROTECTION NOTES:

- THE LANDSCAPE ARCHITECT SHALL SUPERVISE THE TAGGING OF TREES TO BE TRANSPLANTED, TREES TO REMAIN, AND TREES TO BE REMOVED. FOR IDENTIFICATION OF PROPOSED ACTION FOR EXISTING TREES, THE FOLLOWING METHODS WILL BE USED: AN ORANGE PAINTED "X" FOR TREES TO BE REMOVED; YELLOW FLAGGING FOR TREES TO BE TRANSPLANTED; AND SNOW FENCE PROTECTION AS SHOWN IN THE DETAIL FOR TREES TO REMAIN.
- EXISTING TREES WITHIN FIFTEEN FEET (15') OF BUILDINGS ARE TO BE PRUNED AFTER CONSTRUCTION BY A PROFESSIONAL TREE CONTRACTOR AS SPECIFIED BY THE LANDSCAPE ARCHITECT.
- NO DAMAGING ATTACHMENTS SUCH AS WIRES (OTHER THAN CABLE WIRES FOR TREES) SIGNS, OR PERMITS MAY BE FASTENED TO ANY TREE PROTECTED BY THE ORDINANCE.
- FOR TREES TO BE SAVED, A FOUR FOOT (4') HIGH SNOW FENCE SHALL BE ERRECTED AROUND THE TREE DRIP LINE PRIOR TO LAND CLEARING AND CONSTRUCTION AND MAINTAINED THROUGHOUT SITE DEVELOPMENT. NO CUTTING, FILLING, OR TRESPASSING SHALL OCCUR INSIDE THE FENCED AREA WITH OUT APPROVAL OF THE CITY/TOWNSHIP. THE SNOW FENCING SHALL REMAIN IN ITS APPROVED LOCATION UNTIL SUCH TIME AS IT IS AUTHORIZED TO BE REMOVED BY THE CITY OR ISSUANCE OF A FINAL CERTIFICATE OF OCCUPANCY.
- NO ACTIVITY SHALL BE CONDUCTED WITHIN THE DRIP LINE OF ANY TREE DESIGNATED TO BE RETAINED, INCLUDING BUT NOT LIMITED TO THE PLACING OF ANY SOLVENTS, MATERIAL, CONSTRUCTION MACHINERY, OR SOIL WITHIN SUCH DRIP LINE.
- THE DEVELOPER AND/OR THE BUILDER SHALL ERECT SIGNS THROUGHOUT THE PROJECT THAT ARE CLEARLY VISIBLE STATING WORDS TO THE EFFECT THAT ALL SUBCONTRACTORS, SUPPLIERS AND TRADESMEN ARE TO HELP MAINTAIN THE TREES AND WILL BE HELD RESPONSIBLE FOR ANY UNAUTHORIZED DAMAGE TO TREES AND WOODLANDS.
- ALL PURCHASED REPLACEMENT TREES SHALL SATISFY AMERICAN ASSOCIATION OF NURSERYMAN STANDARDS, SUCH AS:  
A. NURSERY GROWN;  
B. STATE DEPARTMENT OF AGRICULTURE INSPECTED;  
C. NO. 1 GRADE WITH STRAIGHT, UNSCARRED TRUNK AND WELL DEVELOPED UNIFORM CROWN (PARK GRADE TREES WILL NOT BE ACCEPTED);  
D. STAKED, WRAPPED, WATERED AND MULCHED IN ACCORDANCE WITH STANDARD PLANTING PRACTICES;  
E. GUARANTEED FOR ONE (1) YEAR, INCLUDING LABOR, TO REMOVE AND DISPOSE OF DEAD MATERIALS.

GENERAL LANDSCAPE NOTES:

- ALL PLANT MATERIAL SHALL CONFORM TO THE REQUIREMENTS AND SPECIFICATIONS OF THE GOVERNING MUNICIPALITY AND SHALL BE NURSERY GROWN. ALL SIZES AND MEASUREMENTS SHALL CONFORM TO THE AMERICAN ASSOCIATION OF NURSERYMAN STANDARDS. ALL PLANT MATERIAL SHALL BE OF SELECTED SPECIMEN QUALITY AND HAVE A NORMAL HABIT OF GROWTH. ALL PLANT MATERIAL IS SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT.
  - ALL PLANT MATERIALS SHALL BE BALLED AND BURLAPPED STOCK OR CONTAINER STOCK. NO BARE ROOT STOCK IS PERMITTED. ALL PLANT BALLS SHALL BE FIRM, INTACT AND SECURELY WRAPPED AND BOUND.
  - ALL PLANT BEDS SHALL BE EXCAVATED AT ALL BUILDING MATERIALS AND OTHER EXTRANEOUS OBJECTS AND POOR SOILS TO A MINIMUM DEPTH OF 12 INCHES AND BACKFILLED TO GRADE WITH PLANTING MIX (SEE BELOW).
  - PLANTING MIXTURE SHALL CONSIST OF 4 PARTS TOPSOIL FROM ON SITE, 1 PART PEAT, AND 5 POUNDS OF SUPERPHOSPHATE PER CUBIC YARD OF MIX. INGREDIENTS SHALL BE THOROUGHLY BLENDED TO A UNIFORM CONSISTENCY.
  - ALL PLANT BEDS AND INDIVIDUAL PLANTS SHALL BE MULCHED WITH A 4 INCH LAYER OF SHREDDED BARK MULCH.
  - ALL PLANTS AND PLANT BEDS SHALL BE THOROUGHLY WATERED UPON COMPLETION OF PLANTING AND STAKING OPERATIONS.
  - THE CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIALS FOR A PERIOD OF 1 YEAR FROM THE DATE THE WORK IS ACCEPTED, IN WRITING, BY THE LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL REPLACE, WITHOUT COST TO THE OWNER, WITHIN A SPECIFIED PERIOD TIME, ALL DEAD PLANTS, AND ALL PLANTS NOT IN A VIGOROUS, THRIVING CONDITION, AS DETERMINED BY THE LANDSCAPE ARCHITECT DURING AND AT THE END OF THE GUARANTEE PERIOD. REPLACEMENT STOCK SHALL CONFORM TO THE ORIGINAL REQUIREMENTS.
  - EDGING, WHERE NOTED ON THE PLANS, SHALL BE BLACK ALUMINUM EDGING, 3/16" x 4". INSTALL PER MANUFACTURER'S INSTRUCTIONS. ALL EDGING SHALL BE INSTALLED IN STRAIGHT LINES OR SMOOTH CURVES WITHOUT IRREGULARITIES.
  - SOD SHALL BE DENSE, WELL ROOTED TURF, FREE OF WEEDS. IT SHALL BE COMPOSED OF A BLEND OF AT LEAST TWO KENTUCKY BLUEGRASSES AND ONE FESCUE. IT SHALL HAVE A UNIFORM THICKNESS OF 3/4 INCH, AND CUT IN UNIFORM STRIPS NOT LESS THAN 10 INCHES BY 18 INCHES. SOD SHALL BE KEPT MOIST AND LAID WITHIN 36 HOURS AFTER CUTTING.
  - IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH A DENSE LAWN OF PERMANENT GRASSES, FREE OF LUMPS AND DEPRESSIONS. ALL SODDED AREAS THAT BROWN OUT OR HAVE NOT FIRMLY KNITTED TO THE SOIL BARE WITHIN A PERIOD OF ONE MONTH SHALL BE REPLACED BY THE CONTRACTOR, AT NO COST TO THE OWNER.
  - ALL AREAS OF THE SITE THAT BECOME DISTURBED DURING CONSTRUCTION AND ARE NOT TO BE PAVED, STONED, LANDSCAPED, OR SODDED SHALL BE SEEDED AND MULCHED.
- SEED MIXTURE SHALL BE AS FOLLOWS:
- | Species  | Percentage |
|--|------------|
| KENTUCKY BLUEGRASS (CHOOSE 3 VARIETIES: ADELPHI, RUGBY, GLADE OR PARADE) | 30%        |
| RUBY RED OR DAWSON RED FINE FESCUE                                       | 30%        |
| ATLANTA RED FESCUE   | 20%        |
| PENNFINE PERENNIAL RYE   | 20%        |
- THE ABOVE SEED MIXTURE SHALL BE SOWN AT A RATE OF 250 POUNDS PER ACRE, PRIOR TO SEEDING, THE TOPSOIL LAYER SHALL BE FERTILIZED WITH A COMMERCIAL FERTILIZER WITH A 10-0-10 ANALYSIS:
- 10% NITROGEN: A MINIMUM OF 25% FROM A UREA-FORMALDEHYDE SOURCE  
0% PHOSPHATE  
10% POTASH: SOURCE TO BE POTASSIUM SULFATE OR POTASSIUM NITRATE.
- THE FIRST FERTILIZER APPLICATION SHALL BE AT A RATE OF 10 POUNDS OF BULK FERTILIZER PER 1000 SQUARE FEET.

- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH A DENSE LAWN OF PERMANENT GRASSES, FREE OF LUMPS AND DEPRESSIONS. ANY PART OF THE AREA THAT FAILS TO SHOW A UNIFORM GERMINATION SHALL BE RESEEDED AND SUCH RESEEDING SHALL CONTINUE UNTIL A DENSE LAWN IS ESTABLISHED. DAMAGE TO SEEDED AREAS RESULTING FROM EROSION SHALL BE REPAIRED BY THE CONTRACTOR.
- ALL AREAS OF THE SITE SCHEDULED FOR SEEDING OR SODDING SHALL FIRST RECEIVE A 4 INCH LAYER OF CLEAN, FRIABLE TOPSOIL. THIS SOIL SHALL BE DISCED AND SHALL BE GRADED IN CONFORMANCE WITH THE GRADING PLAN.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION OF ALL UTILITIES AND TO INFORM THE LANDSCAPE ARCHITECT OF ANY CONFLICTS PRIOR TO COMMENCING LANDSCAPING.
- ALL PLANT MATERIALS SHALL BE FREE OF WEEDS, INSECTS AND DISEASE.

THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES AS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND ELEVATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY CONFLICTS OR INTERFERENCE OCCUR AT THE LOCATION OF OR NEAR DEPTH DIFFERS FROM THE INFORMATION PROVIDED BY THE OWNER.

BEFORE MOVING  
3171 E. GRAND AVENUE  
COLUMBIANA, MISSISSIPPI 39305  
TEL: (662) 873-3311 FAX: (662) 873-3312

**BOSS ENGINEERING**  
ENGINEERS • SURVEYORS • PLANNERS  
LANDSCAPE ARCHITECTS

3171 E. GRAND AVENUE  
COLUMBIANA, MISSISSIPPI 39305  
(662) 248-9735 FAX (662) 548-1670

PROJECT: LIPKIN MEDICAL OFFICE BUILDING  
PREPARED FOR: DR. LIPKIN  
3172 INTERLAKEN STREET  
WEST BLOOMFIELD, MI 48323

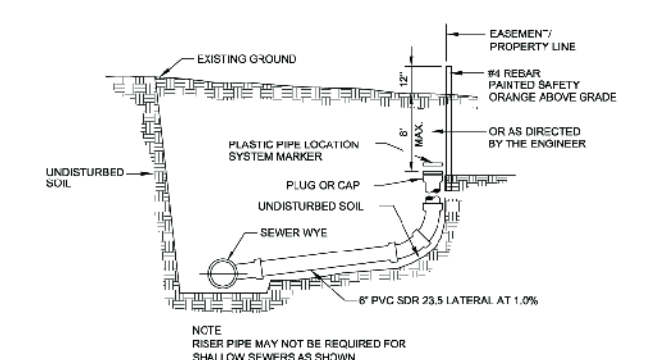
TITLE: CONSTRUCTION NOTES & DETAILS

NO.	BY	REVISION PER	DATE
1	LM	PER TOWNSHIP REVIEW	5/21/14

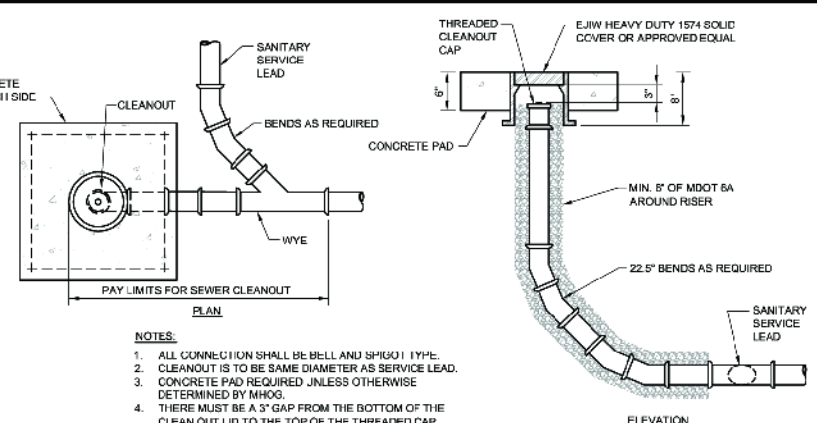
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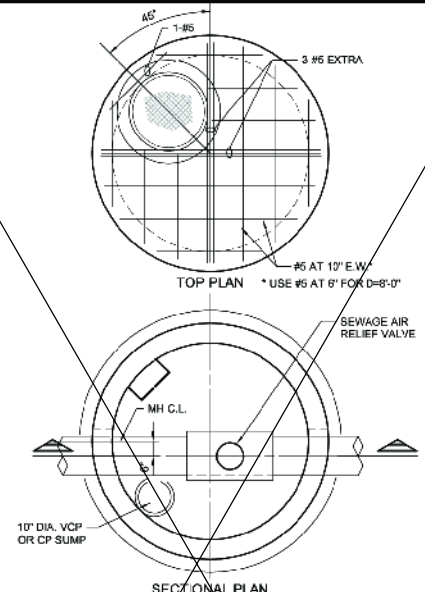
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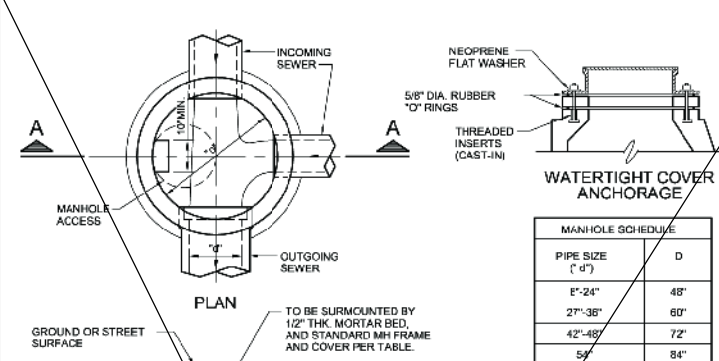
**SANITARY SEWER LATERAL**



**SEWER CLEANOUT DETAIL**

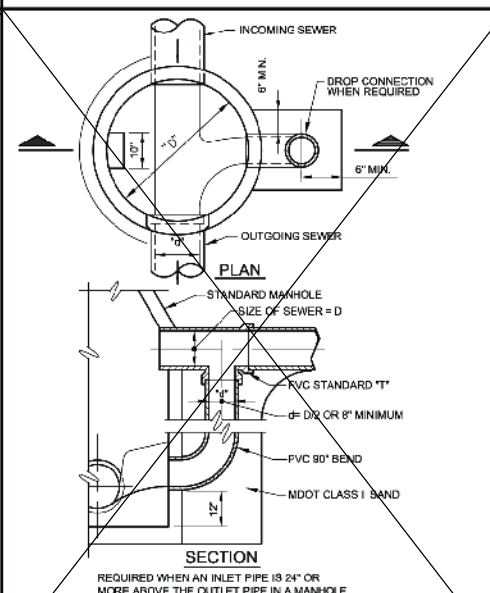


**AIR RELIEF STRUCTURE**

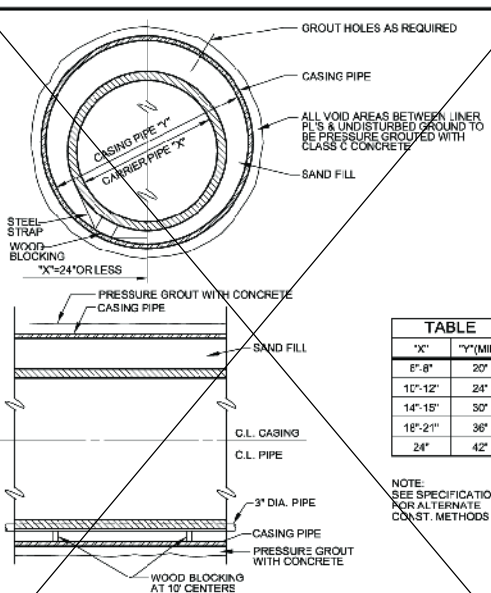


**WATERTIGHT COVER ANCHORAGE**

PIPE SIZE (\"/>
6\"/>
8\"/>
10\"/>
12\"/>
15\"/>
18\"/>
24\"/>



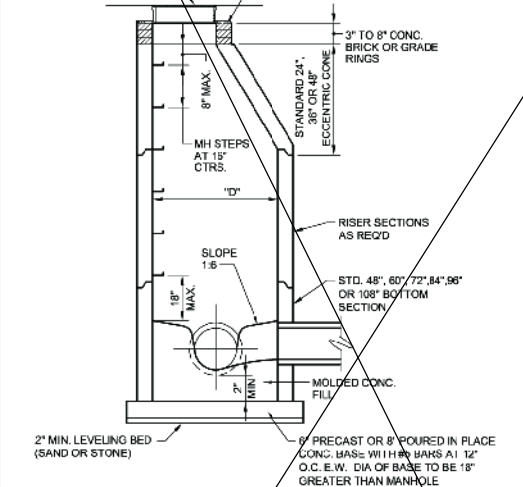
**DROP CONNECTION**



**CASING PIPE**

"X"	"Y"(MIN)
6\"/>	
10\"/>	
12\"/>	
14\"/>	
18\"/>	
24\"/>	

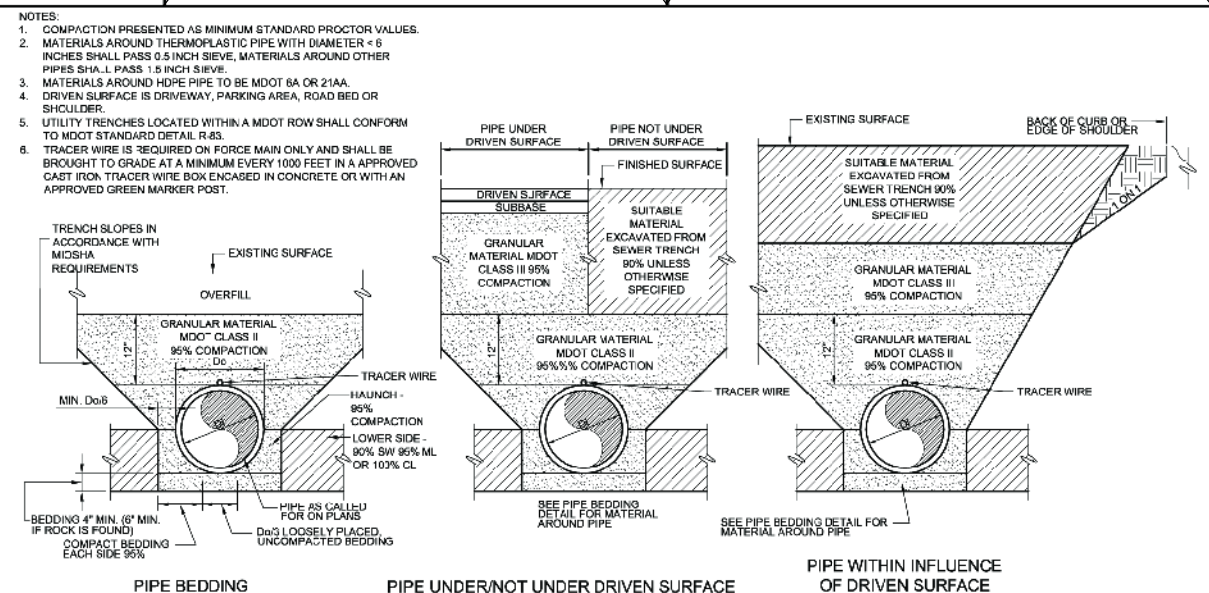
NOTE: SEE SPECIFICATIONS FOR ALTERNATE CONST. METHODS



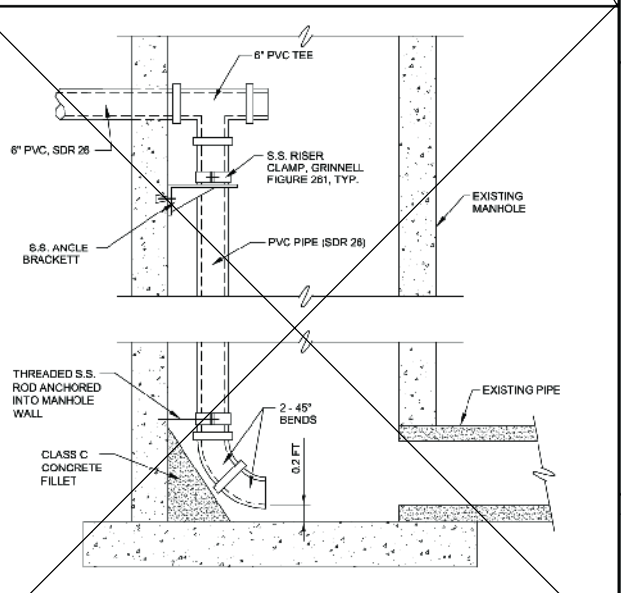
**STANDARD MANHOLE**

- NOTES:
1. ALL SANITARY MANHOLES TO BE PRECAST REINFORCED CONCRETE WITH PREMIUM JOINTS. SEE SPECIFICATIONS FOR BASE SLAB AND PIPE OPENINGS AND CONNECTIONS.
  2. MANHOLE CONES SHALL BE THE ECCENTRIC TYPE.
  3. PROVIDE 6\"/>
  4. FORCE MAINS CONNECT DIRECTLY TO A MANHOLE SHALL BE INSTALLED SO THAT THE ELEVATION OF THE PIPE CROWNS MATCH. THE FORCE MAIN SHALL BE DIRECTED DOWNWARD INTO THE FLOW CHANNEL.
  5. FOR SANITARY SEWERS ALL PIPES SHALL ENTER MANHOLE THROUGH RUBBER BOOTED CONNECTION.

FRAME & COVER FOR SANITARY SEWER MANHOLES			
MANUFACTURER OR EQUAL			
TYPE	TYPE OF COVER	EAST JORDAN	NEENAH
MH	SANITARY - SOLID SELF-SEALING	1040.0000	R-1642
MH	SANITARY - SOLID WATERTIGHT	1040-APT	R-1916-F
CO	SOLID	1574A	R-1973-A



**TRENCH EXCAVATION & PIPE BEDDING**



**INTERIOR SEWER LATERAL DROP CONNECTION**



**GENOA OCEOLA**  
Sewer and Water Authority

**SANITARY SEWER STANDARD DETAILS**

Scale: NONE  
Issued Date: JANUARY 2014

PROJECT: **LIPKIN MEDICAL OFFICE BUILDING**  
PREPARED FOR: **DR. LIPKIN**  
3172 INTERLAKEN STREET  
WEST BLOOMFIELD, MI 48323  
TITLE: **MHOG SANITARY SEWER DETAILS**

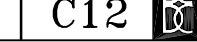
NO	BY	REVISION PER	DATE
1	LM	PER TOWNSHIP REVIEW	5/21/14

DESIGNED BY:  
DRAWN BY: TD  
CHECKED BY:  
SCALE: 1" = 30"  
JOB NO. 13-293  
DATE 4-30-14  
SHEET NO.

**C12**

THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE BASED ON RECORD DRAWINGS AND FIELD SURVEY. THE LOCATION AND ELEVATION OF EXISTING UTILITIES SHOWN ON THIS DRAWING ARE NOT TO BE CONSIDERED AS A GUARANTEE OF ACCURACY. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ANY UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY UTILITIES ARE FOUND TO BE DIFFERENT FROM THE RECORD DRAWINGS.

BOSS ENGINEERING  
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3172 INTERLAKEN STREET  
WEST BLOOMFIELD, MI 48323  
(517) 448-1670  
(800) 248-0235 FAX (517) 448-1670  
E-MAIL: info@bosseng.com

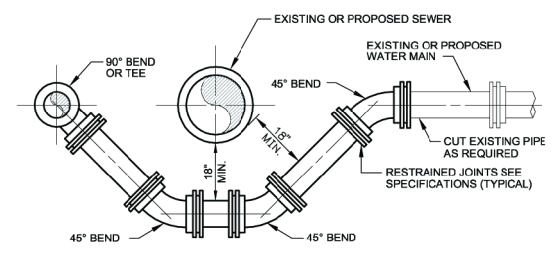


**PIPE RESTRAINT SCHEDULE**

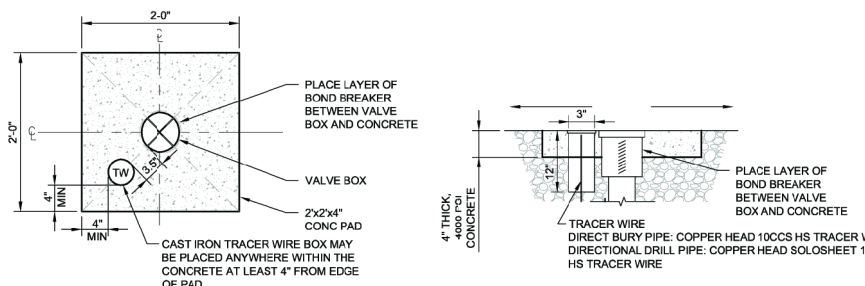
GROUND BURIED PRESSURE PIPE - POLYETHYLENE ENCASED DUCTILE IRON PIPE

PIPE DIAMETER	TEES, 90° BENDS	45° BENDS	22-1/2° BENDS	11-1/4° BENDS	DEAD ENDS	REDUCERS (ONE SIZE REDUCTION)*	REDUCERS (TWO SIZE REDUCTION)*
4	13	5	3	1	40	-	-
6	19	8	4	2	58	31	-
8	24	10	5	2	75	30	70
12	34	14	7	3	107	57	116
16	43	18	9	4	139	59	137
20	52	22	10	5	169	59	134
24	61	25	12	6	199	60	132
30	73	30	15	7	242	65	168
36	84	35	17	8	281	64	168

- LENGTHS OF PIPE RESTRAINT ARE GIVEN IN FEET.
  - IF REQUIRED PIPE DIAMETER IS NOT LISTED IN THIS TABLE, THE NEXT LARGEST PIPE DIAMETER SHALL BE USED.
  - THIS TABLE IS BASED ON A TEST PRESSURE OF 180 PSI (OPERATING PRESSURE PLUS WATER HAMMER. FOR OTHER TEST PRESSURES, ALL VALUES TO BE INCREASED OR DECREASED PROPORTIONALLY.
  - THE VALUES PROVIDED OF RESTRAINT LENGTH ARE IN EACH DIRECTION FROM THE POINT OF DEFLECTION OR TERMINATION EXCEPT FOR TEES, AT WHICH ONLY THE BRANCH IN THE DIRECTION OF THE STEM.
  - IF THE RODS ARE USED, USE FOUR RCDS MINIMUM AND ADD 1/8-INCH TO BAR DIAMETER AS CORROSION ALLOWANCE.
- \* SIZE REDUCTION IS BASED UPON THE PIPE DIAMETER SHOWN IN THIS TABLE.
- BASED UPON: INTERNAL PRESSURE: 180  
PIPE DEPTH: 5  
BEDDING CLASS: TYPE 4  
SOIL TYPE: GOOD SAND  
SAFETY FACTOR: 2

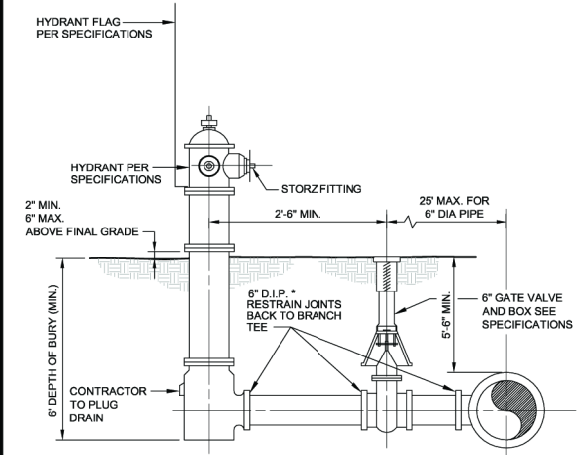


**WATER MAIN UTILITY OFFSET**

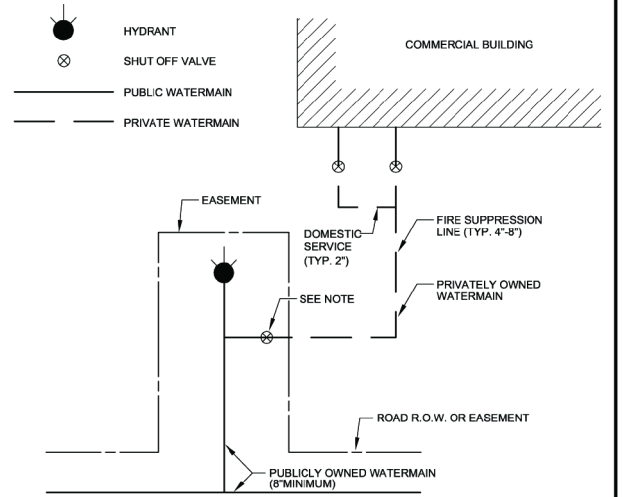


- NOTE: ALL BOXES & ADJOINING TW BOXES SHALL BE ENCASED IN A CONC. PAD UNLESS OTHERWISE DETERMINED BY MHOG.
- NOTE:
- TRACER WIRE BOXES LOCATED WITHOUT A VALVE BOX ONLY REQUIRE AN 18" X 18" CONCRETE PAD.
  - TRACER WIRE BOX SHALL HAVE A LOCKING LID W/STANDARD AWWA PENTAGON KEY.

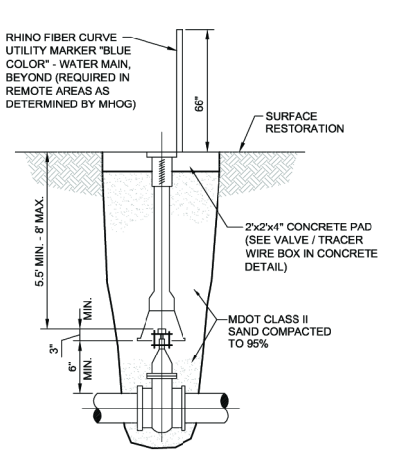
**VALVE/TRACER WIRE BOX IN CONCRETE DETAIL**



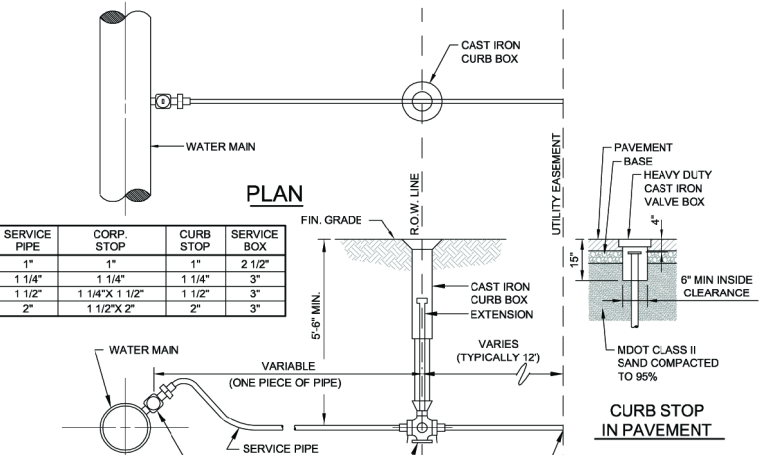
**FIRE HYDRANT ASSEMBLY**



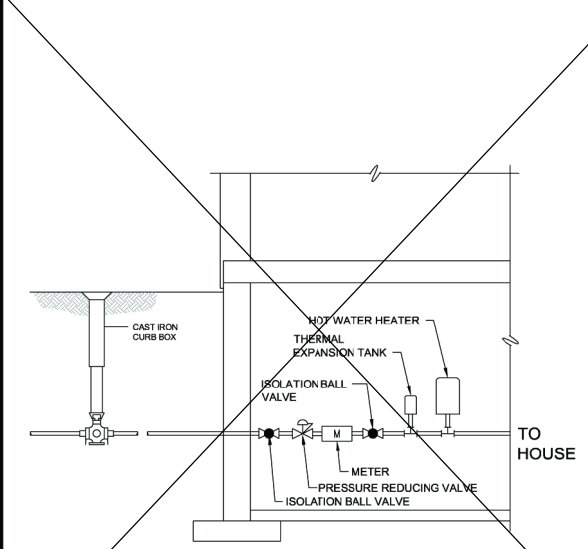
**COMMERCIAL BUILDING WATER SERVICE LAYOUT**



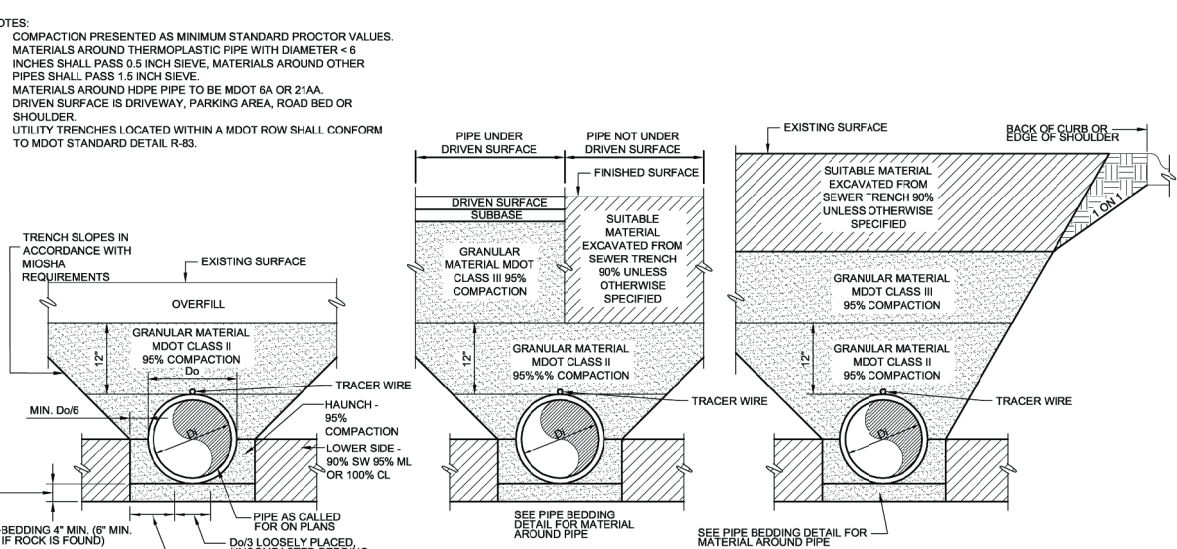
**GATE VALVE AND BOX**



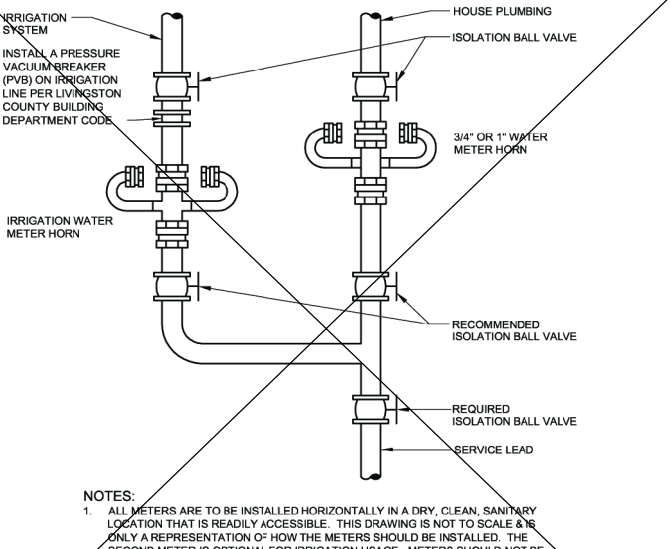
**SECTION WATER SERVICE LATERAL**



**PRIVATE RESIDENCE PRESSURE REDUCING VALVE (PRV)**



**PIPE BEDDING TRENCH EXCAVATION & PIPE BEDDING**



- NOTES:
- ALL METERS ARE TO BE INSTALLED HORIZONTALLY IN A DRY, CLEAN, SANITARY LOCATION THAT IS READILY ACCESSIBLE. THIS DRAWING IS NOT TO SCALE & IS ONLY A REPRESENTATION OF HOW THE METERS SHOULD BE INSTALLED. THE SECOND METER IS OPTIONAL FOR IRRIGATION USAGE. METERS SHOULD NOT BE INSTALLED IN LINE (ONE RIGHT AFTER THE OTHER).
  - PROPERTIES DESIGNATED "HIGH HAZARD" PER THE MHOG CROSS CONNECTION RULES MANUAL WILL REQUIRE THE INSTALLATION OF A REDUCED PRESSURE ZONE (RPZ) BACK FLOW PREVENTION DEVICE.

**TYPICAL METER HORN INSTALLATION**



**MARION HOWELL OCEOLA GENOA**  
Sewer and Water Authority

Scale: NONE  
Issued Date: JANUARY - 2014

**WATER MAIN STANDARD DETAILS**

PROJECT: **LIPKIN MEDICAL OFFICE BUILDING**  
PREPARED FOR: **DR. LIPKIN**  
3172 INTERLAKEN STREET  
WEST BLOOMFIELD, MI 48323

NO.	BY	REVISION PER	DATE
1	LM	PER TOWNSHIP REVIEW	5/21/14

DESIGNED BY: TD  
DRAWN BY: TD  
CHECKED BY:  
SCALE: 1" = 30'  
JOB NO.: 13-293  
DATE: 4-30-14  
SHEET NO.:

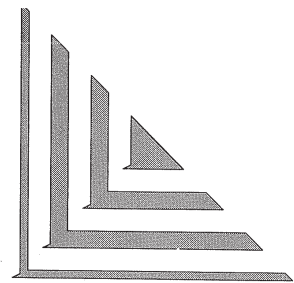
THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF EXISTING UTILITIES BY CONDUCTING A UTILITY LOCATING SURVEY PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY CONFLICTS ARE FOUND OR IF THE LOCATION OR DEPTH DIFFERS SIGNIFICANTLY FROM THE AS SHOWN.

BEFORE YOU DIG  
1-800-482-7171  
www.beforeyoudig.com

**BOSS ENGINEERING**  
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3172 INTERLAKEN AVE.  
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(800) 248-0735 FAX (517) 448-1670

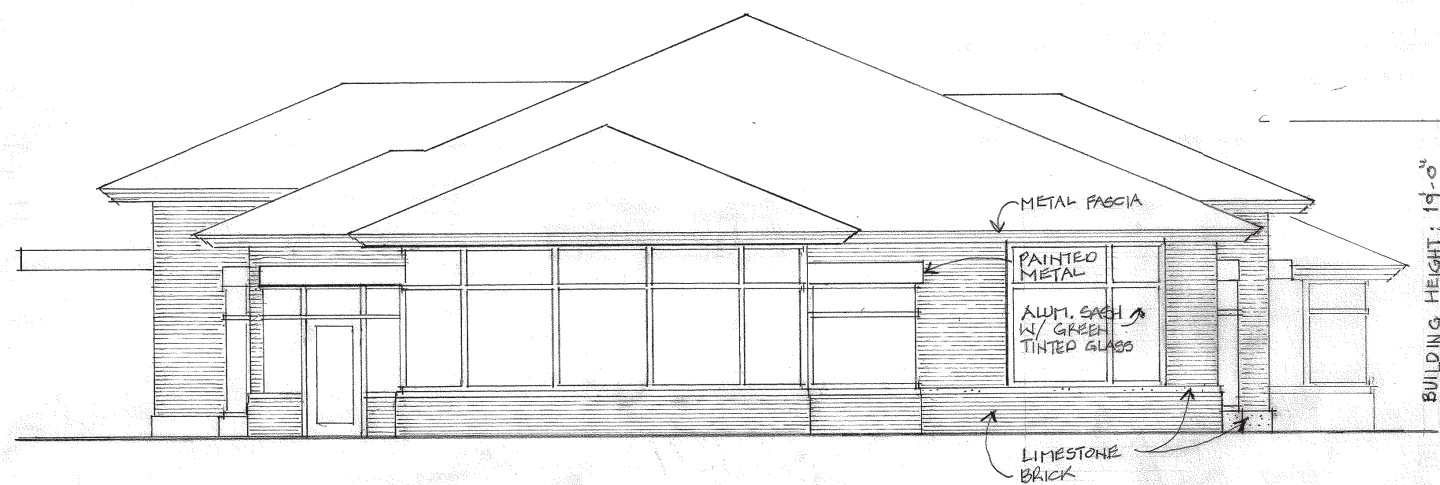




# DesRosiers Architects

36330 Woodward Avenue  
Bloomfield Hills, MI 48304  
248 / 642-7771  
www.desarch.com

**Brighton Dermatology**  
Lipkin Medical Office Building  
Grand River Ave  
Genoa Township, MI

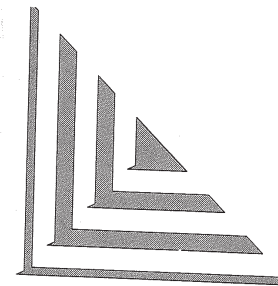


East (Side) Elevation



South (Entry) Elevation  
Scale: 3/16" = 1'-0" May 21, 2014

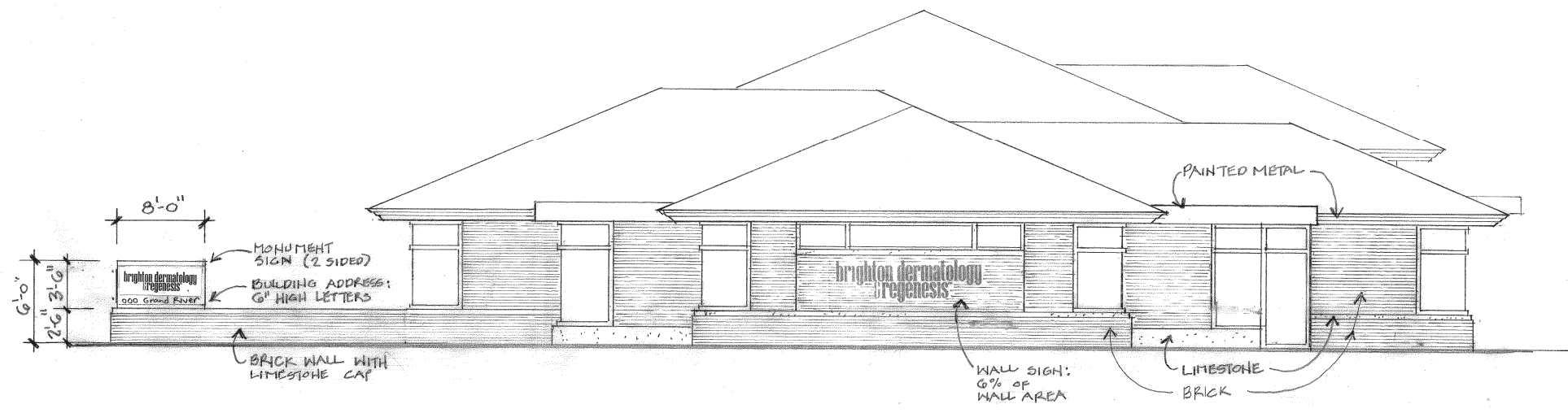
EXTERIOR WALL MATERIALS:  
GLASS (LIGHT GREEN TINT) - 45%  
BRICK (TAN, SAND MOLD) - 41%  
LIMESTONE - 7%  
SHEET METAL (FACTORY PAINTED) - 7%



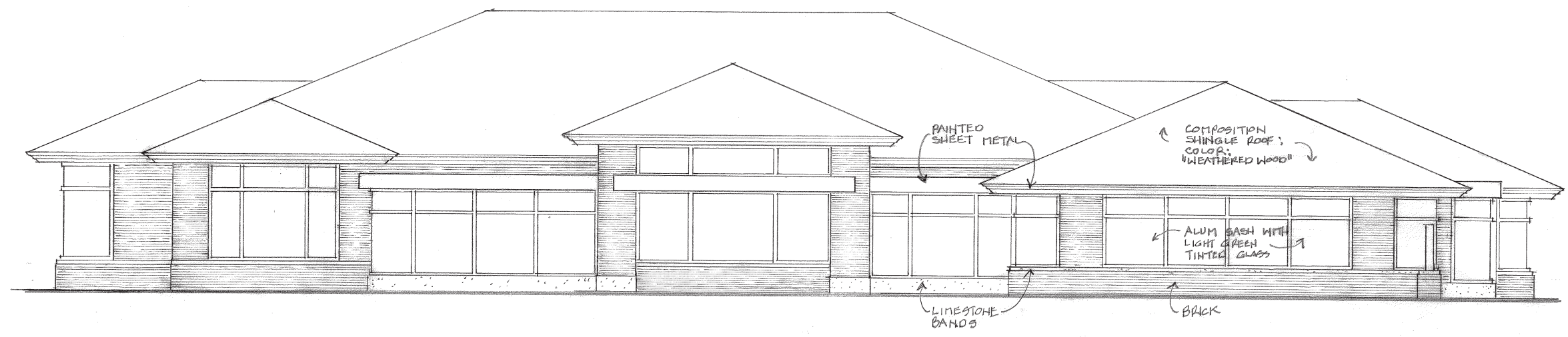
**DesRosiers  
Architects**

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**Brighton Dermatology**  
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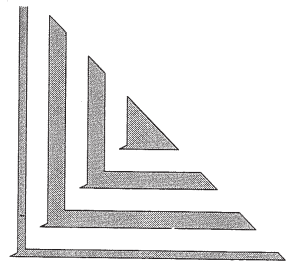


West (Side) Elevation



North (Grand River) Elevation  
Scale: 3/16" = 1'-0" May 21, 2014

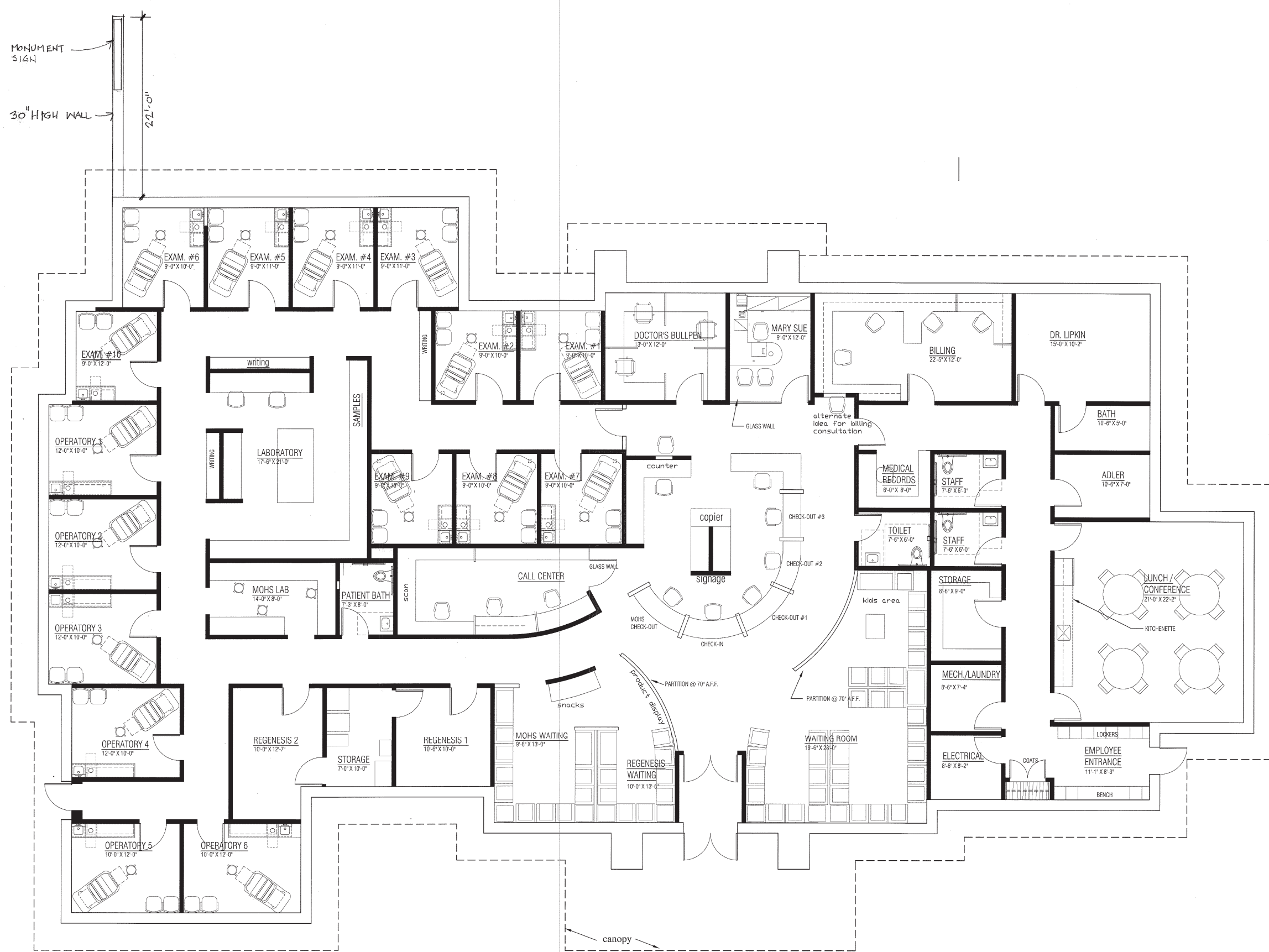
**EXTERIOR WALL MATERIALS:**  
GLASS (LIGHT GREEN TINT) - 45%  
BRICK (TAN, SAND MOLD) - 41%  
LIMESTONE (SMOOTH) - 7%  
SHEET METAL (FACTORY PAINTED) - 7%



# DesRosiers Architects

36330 Woodward Avenue  
Bloomfield Hills, MI 48304  
248 / 642-7771  
www.desarch.com

Brighton Dermatology  
Lipkin Medical Office Building  
Grand River Ave  
Genoa Township, MI



## MAIN LEVEL FLOOR PLAN

Scale: 3/16" = 1'-0" May 21, 2014

8160 SQ. FT.





**GENOA CHARTER TOWNSHIP APPLICATION**  
**Sketch Plan Review**

GENOA TOWNSHIP  
MAY 23 2017

**TO THE GENOA TOWNSHIP PLANNING COMMISSION:**

APPLICANT NAME & ADDRESS: Stan Schaffer 150 N. First St. Brighton 48116  
*If applicant is not the owner, a letter of Authorization from Property Owner is needed.*

OWNER'S NAME & ADDRESS: Len Nadolski 5000 E Grand River Howell 48843

SITE ADDRESS: 5000 E Grand River PARCEL #(s): 11-10-300-007

APPLICANT PHONE: (517) 304-1124 OWNER PHONE: (517) 545-8800

LOCATION AND BRIEF DESCRIPTION OF SITE: The addition will be on the S.E. corner of the Service Dept.

BRIEF STATEMENT OF PROPOSED USE: The are expanding the carwash for a new drive thru car wash

THE FOLLOWING IMPROVEMENTS ARE PROPOSED: A 16' long x 17'4" wide x 15'5 1/2 high block building with one (1) o.H. Door

**I HEREBY CERTIFY THAT ALL INFORMATION AND DATA ATTACHED TO AND MADE PART OF THIS APPLICATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.**

BY: Stanley J. Schaffer

ADDRESS: 150 N. First St. Brighton MI 48116

**Contact Information** - Review Letters and Correspondence shall be forwarded to the following:  
1.) \_\_\_\_\_ of \_\_\_\_\_ at \_\_\_\_\_  
Name Business Affiliation Email Address

**FEE EXCEEDANCE AGREEMENT**  
All sketch plans are allocated one (1) consultant review and one (1) Planning Commission meeting. If additional reviews or meetings are necessary, the applicant will be required to pay the actual incurred costs for the additional reviews. If applicable, additional review fee payment will be required concurrent with submittal for a Land Use Permit. By signing below, applicant indicates agreement and full understanding of this policy.  
SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_  
PRINT NAME: \_\_\_\_\_ PHONE: \_\_\_\_\_



May 30, 2014

Planning Commission  
Genoa Township  
2911 Dorr Road  
Brighton, Michigan 48116

<b>Attention:</b>	Mike Archinal, AICP Township Manager
<b>Subject:</b>	Champion Chevrolet – Sketch Plan Review
<b>Location:</b>	5000 E. Grand River Avenue – south side of Grand River, just east of the 141 interchange ramp
<b>Zoning:</b>	GCD General Commercial District

Dear Commissioners:

As requested, we have reviewed the sketch plan (dated 5/25/14) proposing a minor expansion to the rear of the existing Champion Chevrolet dealership building. Specifically, the applicant proposes a 277 square foot addition at the rear corner of the existing building. The stated purpose of the addition is to accommodate a drive through car wash.

The proposed project has been reviewed in accordance with the Genoa Township Zoning Ordinance and we provide the comments below for your consideration.

**A. Summary**

1. The project is eligible for sketch plan review (as opposed to a full site plan) and is considered a minor amendment to an existing special land use; therefore, a new special land use is not required.
2. We request the applicant provide building coverage calculations.
3. Building materials and colors are subject to review and approval by the Township. The Planning Commission has discretion to permit materials and colors that match the existing building.
4. The Township may wish to request details of existing landscaping and/or lighting. If deficiencies are found, the Township may require improvements to bring the site closer to compliance with current standards.
5. Review of aerial photos indicates a larger parking/vehicle storage area than shown on the plan. If this is accurate, the plan should be revised to include details. This area also appears to cross over a parcel boundary, in which case consideration should be given to a parcel combination.

**B. Proposal/Process**

The applicant requests sketch plan approval for a relatively minor building expansion (277 square feet), which is intended for use as a drive through car wash. Typically, car washes require special land use approval; however, the proposal is viewed as an accessory use that is customarily incidental to the principal use (auto dealership). The caveat to this approach is that the applicant should be made aware that if the auto dealership closes, then the car wash (and any other accessory use) must also cease.

Given the scope of the project, it is eligible for sketch plan review (as opposed to full site plan review) in accordance with Article 18 of the Township Zoning Ordinance. Furthermore, although automobile dealerships are special land uses in the GCD, the project qualifies as a minor amendment to an existing special land use. As such, Section 19.06.02 does not require a new review of the special land use at this time.



*Aerial view of site and surroundings (looking north)*

### C. Sketch Plan Review

1. **Dimensional Requirements.** With respect to the dimensional requirements of Section 7.03, the only applicable standards are the rear yard setback, building height and building coverage ratio. The proposed addition complies with the setback and height requirements; however, no information is provided with respect to building coverage. Given the relatively large size of the property, this standard is likely met, although we request the applicant provide an updated calculation to ensure full compliance.

2. **Building Materials and Design.** The proposed elevations, including colors and materials, are subject to review and approval by the Planning Commission. Based upon the submittal, the relatively small building addition will match the existing building in terms of materials, color and design.

While painted concrete block is not necessarily a material that would be encouraged in the GCD, Section 12.01.08 allows the Planning Commission to permit building expansions where the design and materials match the existing building.

3. **Parking.** Given its relatively small size, the intended use and the overall size of the property, the proposed building addition is not expected to have an impact on parking for the site.

4. **Vehicular Circulation.** While the turning movement to enter the car wash for vehicles traveling east to west may be somewhat awkward, there appears to be sufficient room for vehicles to make this turn without disrupting traffic circulation throughout the site.

5. **Landscaping.** The Township may wish to request details of existing landscaping to determine compliance with current standards (Section 12.02). If current landscaping is not in compliance, the Township may wish to require some amount of improvement as part of this project.

6. **Exterior Lighting.** The Township may wish to request details of existing site lighting to determine compliance with current standards (Section 12.03). If current lighting is not in compliance, the Township may wish to require some amount of improvement as part of this project.

7. **Impact Assessment.** Impact Assessments are not generally required as part of a sketch plan review; however, the Township may require one if deemed necessary for their review.
8. **Additional Considerations.** The submittal indicates that the site is comprised of 3 separate parcels. Aside from an existing fence, the plan does not show that exterior site improvements cross over a parcel line; however, review of aerial photos identifies an expanded parking/vehicle storage area that crosses the boundary of Parcel 1 and 2A.

It is important to note that the aerial photo may not be a current reflection of site conditions; however, if it is, the plan should be amended to show details and consideration should be given to a parcel combination if improvements do in fact cross over a parcel boundary.

Should you have any questions concerning this matter, please do not hesitate to contact our office. I can be reached by phone at (248) 586-0505, or via e-mail at [borden@lsplanning.com](mailto:borden@lsplanning.com).

Sincerely,

**LSL PLANNING, INC.**



Brian V. Borden, AICP  
Senior Planner



June 3, 2014

Mr. Mike Archinal  
Genoa Township  
2911 Dorr Road  
Brighton, MI 48116

**Re: Champion Chevrolet Addition  
Sketch Plan Review**

Dear Mr. Archinal:

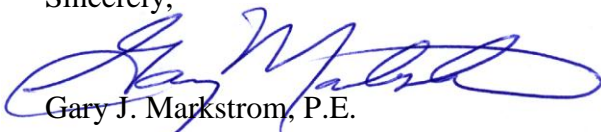
We have reviewed the updated sketch plan submittal from Boss Engineering Inc. dated May 22, 2014. The petitioner is proposing to construct a 16' x 17' 4" block building addition on the southern side of an existing building on the property. The expansion will allow for the conversion of an existing car wash facility into a drive-thru car wash.


Our review found no engineering-related impacts to the existing site from the proposed addition as illustrated on the sketch plan. Therefore, we have no objections to the proposed addition.

When filing a site plan review application, the petitioner should be sure to review the May 2014 MHOG Commercial REU Schedule for the difference in water usage and applicable connection fees between a standard and production-line style car wash.

Please call if you have any questions.

Sincerely,

  
Gary J. Markstrom, P.E.  
Unit Vice President

  
Joseph C. Siwek, P.E.  
Project Engineer

copy: Boss Engineering



# BRIGHTON AREA FIRE AUTHORITY

615 W. Grand River Ave.  
Brighton, MI 48116  
o: 810-229-6640 f: 810-229-1619

---

June 3, 2014

Kelly VanMarter  
Genoa Township  
2911 Dorr Road  
Brighton, MI 48116

RE: Champion Chevrolet addition  
5000 E. Grand River Ave.  
Site Plan Review

Dear Kelly:

The Brighton Area Fire Department has reviewed the above mentioned site plan. The plans were received for review on May 23, 2014 and the drawings are dated May 22, 2014. The project is based on a small 17'4" x 16' addition to an existing S-1 use car dealership and repair garage. The plan review is based on the requirements of the International Fire Code (IFC) 2012 edition.

1. The building shall include the building address on the building. The address shall be a **minimum of 6"** high letters of contrasting colors and be clearly visible from the street. The location and size shall be verified prior to installation. **(COMPLETE)**  
**IFC 505.1**
2. The access road into the site shall be a minimum of 26' wide. With a width of 26' wide, one side of the street shall be marked as a fire lane. Include the location of the proposed fire lane signage and include a detail of the fire lane sign in the submittal. Access roads to site shall be provided and maintained during construction. Access roads shall be constructed to be capable of supporting the imposed load of fire apparatus weighing at least 75,000 pounds. **(COMPLETE)**  
**IFC D 103.6**  
**IFC D 103.1**  
**IFC D 102.1**  
**IFC D 103.3**
3. Access around building shall provide emergency vehicles with a turning radius up to 55' wall to wall and a minimum vertical clearance of 13 ½ feet. **(COMPLETE)**
4. The location of a key box (Knox Box) shall be indicated on future submittals. The Knox box will be located adjacent to the front door of the structure. **(Verify location of knox box)**  
**IFC 506.1**



June 3, 2014

Page 2

Champion Chevrolet Addition

5000 E. Grand River Ave.

Site Plan Review

5. Provide names, addresses, phone numbers, emails of owner or owner's agent, contractor, architect, on-site project supervisor.

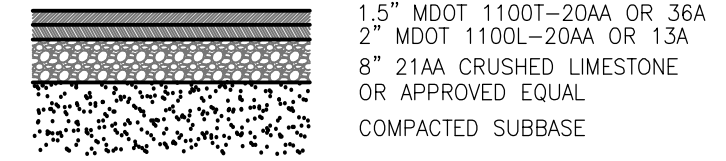
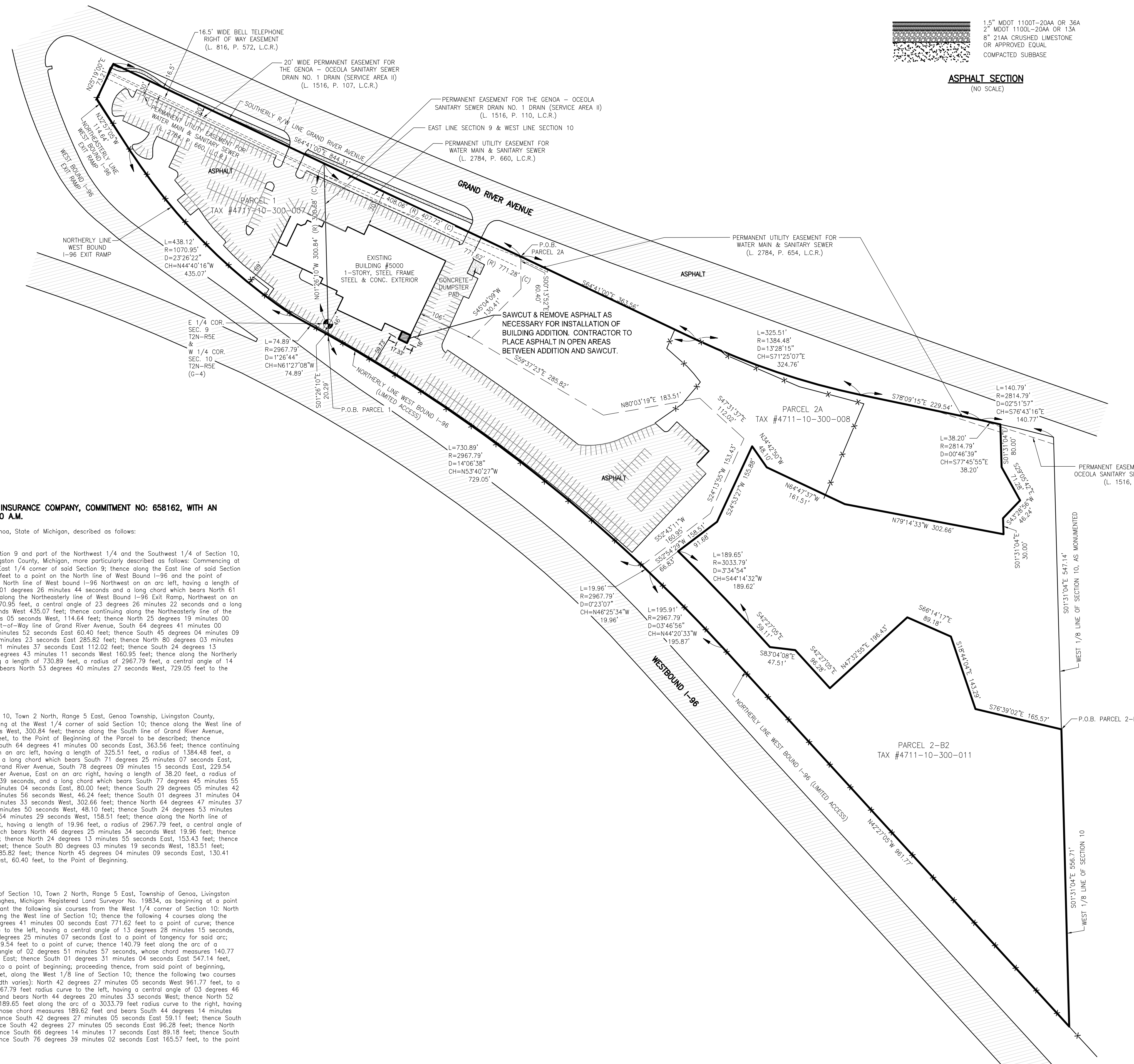
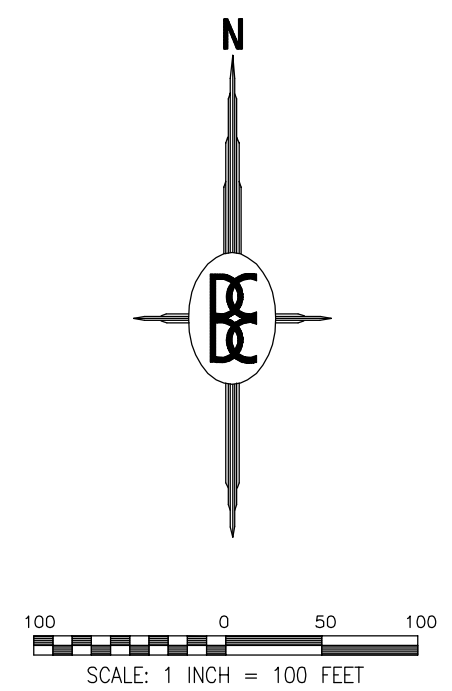
Additional comments will be given during the building plan review process (specific to the building plans and occupancy). If you have any questions about the comments on this plan review please contact me at 810-229-6640.

Cordially,

A handwritten signature in black ink, appearing to read "Michael Evans".

Michael Evans  
Deputy Fire Chief





**ASPHALT SECTION**  
(NO SCALE)

**GENERAL NOTES:**

- BEARINGS WERE ESTABLISHED FROM A PREVIOUS SURVEY BY BOSS ENGINEERING, JOB NO. 94335, AS RECORDED IN LIBER 1955, PAGE 175, LIVINGSTON COUNTY RECORDS.
- SUBSURFACE UTILITIES NOT LOCATED FOR THIS SURVEY MAY EXIST. IT IS THE RESPONSIBILITY OF THE OWNER OF THE RESPECTIVE UTILITY TO ACCURATELY LOCATE SUCH UTILITIES.
- EASEMENTS OR RESTRICTIONS OF RECORD NOT DEPICTED ON THIS DRAWING MAY EXIST.
- NO CHANGES ARE PROPOSED TO THE EXISTING UTILITIES.
- THERE IS NO INCREASE IN THE AMOUNT OF IMPERVIOUS SURFACE.

**LEGEND**

- 900 PROPOSED CONTOUR
- 900 EXISTING CONTOUR
- 92.00 EXISTING SPOT ELEVATION
- STORM DRAINAGE FLOW
- POWER POLE
- GUY WIRE
- HYDRANT
- GATE VALVE
- WATER MANHOLE
- MANHOLE
- STORM CATCH BASIN (BEEHIVE)
- STORM CATCH BASIN (SQUARE)
- STORM INVERT
- WELL
- TRANSFORMER PAD
- TELEPHONE RISER
- U.G. TELEPHONE MARKER
- GAS METER
- GAS RISER
- U.G. GAS MARKER
- ELECTRICAL RISER
- U.G. ELECTRICAL MARKER
- CABLE TV RISER
- U.G. CABLE TV MARKER
- MAILBOX
- AIR CONDITIONING UNIT
- LIGHT POLE
- ORNAMENTAL LIGHT
- SIGN
- DECIDUOUS TREE
- CONIFEROUS TREE
- SOIL BORING
- IRON SET
- IRON FOUNDRY
- MONUMENT
- SECTION CORNER
- MARSH SYMBOL
- SANITARY SEWER
- WATER MAIN
- STORM SEWER
- GAS MAIN
- ELECTRIC
- TELEPHONE
- OVERHEAD WIRES
- FENCE
- GAS PUMP
- ANTENNA
- SATELLITE DISH
- NEWSPAPER BOX
- PARKING METER
- PHONE BOOTH
- PUMP CHAMBER
- CONC. CONCRETE
- SAN MH SANITARY MANHOLE
- ST MH STORM MANHOLE
- ℄ CENTERLINE
- ℄ LIBER
- P. PAGE
- L.C.R. LIVINGSTON COUNTY RECORDS
- (R&M) RECORD AND MEASURED
- P.O.B. POINT OF BEGINNING
- ☐ HANDICAP SYMBOL
- ☐ HUB
- ☐ WOOD LATH SET

**LEGAL DESCRIPTION PER FIRST AMERICAN TITLE INSURANCE COMPANY, COMMITMENT NO: 658162, WITH AN EFFECTIVE DATE OF FEBRUARY 25, 2014 @ 8:00 A.M.**

Land situated in the County of Livingston, Township of Genoa, State of Michigan, described as follows:

**PARCEL 1:**  
Part of the Northeast 1/4 and the Southeast 1/4 of Section 9 and part of the Northwest 1/4 and the Southwest 1/4 of Section 10, all in Town 2 North, Range 5 East, Genoa Township, Livingston County, Michigan, more particularly described as follows: Commencing at the West 1/4 corner of said Section 10, also being the East 1/4 corner of said Section 9; thence along the East line of said Section 9, South 01 degrees 26 minutes 10 seconds East 202.29 feet to a point on the North line of West Bound I-96 and the point of beginning of the parcel to be described; thence along the North line of West Bound I-96 Northwest on an arc left, having a length of 74.89 feet, a radius of 2967.79 feet, a central angle of 01 degrees 26 minutes 44 seconds and a long chord which bears North 61 degrees 27 minutes 08 seconds West 74.89 feet; thence along the Northeastly line of West Bound I-96 Exit Ramp, Northwest on an arc right, having a length of 438.12 feet, a radius of 1070.95 feet, a central angle of 23 degrees 26 minutes 22 seconds and a long chord which bears North 44 degrees 40 minutes 16 seconds West 435.07 feet; thence along the Southerly Right-of-Way line of Grand River Avenue, South 64 degrees 41 minutes 00 seconds East 844.31 feet; thence South 00 degrees 13 minutes 52 seconds East 60.40 feet; thence South 45 degrees 04 minutes 09 seconds West, 130.41 feet; thence South 59 degrees 37 minutes 23 seconds East 285.82 feet; thence North 80 degrees 03 minutes 19 seconds East 183.51 feet; thence South 47 degrees 31 minutes 37 seconds East 112.02 feet; thence South 24 degrees 13 minutes 55 seconds West 153.43 feet; thence South 52 degrees 43 minutes 11 seconds West 160.95 feet; thence along the Northerly line of West Bound I-96, Northwest on an arc left, having a length of 730.89 feet, a radius of 2967.79 feet, a central angle of 14 degrees 06 minutes 38 seconds and a long chord which bears North 53 degrees 40 minutes 27 seconds West, 729.05 feet to the point of beginning.

Tax ID No. 4711-10-300-007

**PARCEL 2A:**  
Part of the Northwest 1/4 and Southwest 1/4 of Section 10, Town 2 North, Range 5 East, Genoa Township, Livingston County, Michigan, more particularly described as follows: commencing at the West 1/4 corner of said Section 10; thence along the West line of said Section 10, North 01 degrees 26 minutes 10 seconds West, 300.84 feet; thence along the South line of Grand River Avenue, South 64 degrees 41 minutes 00 seconds East, 408.06 feet, to the Point of Beginning of the Parcel to be described; thence continuing along said South line of Grand River Avenue, South 64 degrees 41 minutes 00 seconds East, 363.56 feet; thence continuing along said South line of Grand River Avenue, Southeast on an arc left, having a length of 325.51 feet, a radius of 1384.48 feet, a central angle of 13 degrees 28 minutes 15 seconds, and a long chord which bears South 71 degrees 25 minutes 07 seconds East, 324.76 feet; thence continuing along said South line of Grand River Avenue, South 78 degrees 09 minutes 15 seconds East, 229.54 feet; thence continuing along said South line of Grand River Avenue, East on an arc right, having a length of 38.20 feet, a radius of 2814.79 feet, a central angle of 00 degrees 43 minutes 39 seconds, and a long chord which bears South 77 degrees 45 minutes 55 seconds East, 38.20 feet; thence South 01 degrees 31 minutes 04 seconds East, 80.00 feet; thence South 29 degrees 05 minutes 42 seconds East, 71.28 feet; thence South 43 degrees 28 minutes 56 seconds West, 46.24 feet; thence South 01 degrees 31 minutes 04 seconds East, 30.00 feet; thence North 79 degrees 14 minutes 33 seconds West, 302.66 feet; thence North 84 degrees 47 minutes 37 seconds West, 161.51 feet; thence North 34 degrees 42 minutes 50 seconds West, 48.10 feet; thence South 24 degrees 53 minutes 27 seconds West, 155.88 feet; thence South 52 degrees 54 minutes 29 seconds West, 158.51 feet; thence along the North line of Westbound I-96 (Limited Access) Northwest on an arc left, having a length of 19.96 feet, a radius of 2967.79 feet, a central angle of 00 degrees 23 minutes 07 seconds and a long chord which bears North 46 degrees 25 minutes 34 seconds West 19.96 feet; thence North 52 degrees 43 North 11 seconds East, 160.95 feet; thence North 24 degrees 13 minutes 55 seconds East, 153.43 feet; thence North 47 degrees 31 minutes 37 seconds West, 112.02 feet; thence South 80 degrees 03 minutes 19 seconds West, 183.51 feet; thence North 59 degrees 37 minutes 23 seconds West, 285.82 feet; thence North 45 degrees 04 minutes 09 seconds East, 130.41 feet; thence North 00 degrees 13 minutes 52 seconds West, 60.40 feet, to the Point of Beginning.

Tax Item No. 4711-10-300-008

**PARCEL 2-B2:**  
A parcel of land in the West 1/2 of the Southwest 1/4 of Section 10, Town 2 North, Range 5 East, Township of Genoa, Livingston County, Michigan, more particularly described by Darrell Hughes, Michigan Registered Land Surveyor No. 19354, as being a point on the West 1/8 line of Section 10, said point being distant the following six courses from the West 1/4 corner of Section 10: North 01 degrees 26 minutes 10 seconds West 300.84 feet, along the West line of Section 10; thence the following 4 courses along the Southerly right of way for Grand River Road, South 64 degrees 41 minutes 00 seconds East 771.62 feet to a point of curve; thence 325.51 feet along the arc of a 1384.48 foot radius curve to the left, having a central angle of 13 degrees 28 minutes 15 seconds, whose chord measures 324.76 feet and bears South 71 degrees 25 minutes 07 seconds East to a point of tangency for said arc; thence South 78 degrees 09 minutes 15 seconds East 229.54 feet to a point of curve; thence 140.77 feet along the arc of a 2814.79 foot radius curve to the right, having a central angle of 02 degrees 51 minutes 57 seconds, whose chord measures 140.77 feet and bears South 76 degrees 43 minutes 16 seconds East; thence South 01 degrees 31 minutes 04 seconds East 547.14 feet, along the West 1/8 line of Section 10, as monumented, to a point of beginning; proceeding thence, from said point of beginning, South 01 degrees 31 minutes 04 seconds East 556.71 feet, along the West 1/8 line of Section 10; thence the following two courses along the Northerly right-of-way for Interstate 96 (width varies): North 42 degrees 27 minutes 05 seconds West 961.77 feet, to a point of curve; thence 195.91 feet along the arc of a 2967.79 foot radius curve to the left, having a central angle of 03 degrees 46 minutes 56 seconds, whose chord measures 195.87 feet and bears North 44 degrees 20 minutes 33 seconds West; thence North 52 degrees 54 minutes 29 seconds East 66.83 feet; thence 189.65 feet along the arc of a 3033.79 foot radius curve to the right, having a central angle of 03 degrees 34 minutes 54 seconds, whose chord measures 189.62 feet and bears South 44 degrees 14 minutes 32 seconds East, to a point of tangency for said arc; thence South 42 degrees 27 minutes 05 seconds East 59.11 feet; thence North 83 degrees 04 minutes 08 seconds East 47.51 feet; thence South 42 degrees 27 minutes 05 seconds East 96.28 feet; thence North 47 degrees 32 minutes 55 seconds East 196.43 feet; thence South 66 degrees 14 minutes 17 seconds East 89.18 feet; thence South 18 degrees 44 minutes 04 seconds East 143.29 feet; thence South 76 degrees 39 minutes 02 seconds East 165.57 feet, to the point of beginning.

Tax Item No. 4711-10-300-011

**BOSS ENGINEERING**  
ENGINEERS • SURVEYORS • PLANNERS  
LANDSCAPE ARCHITECTS

1121 E. GRAND RIVER AVE.  
BRIGHTON, MI 48843  
(800) 246-6735 FAX (517) 546-4670

PROJECT: **CHAMPION CHEVROLET BUILDING ADDITION**  
PREPARED FOR: **SCHAFER CONSTRUCTION**  
150 NORTH FIRST STREET  
BRIGHTON, MI 48116  
810-220-0296

TITLE: **SKETCH PLAN**

NO.	BY	REVISION PER	DATE

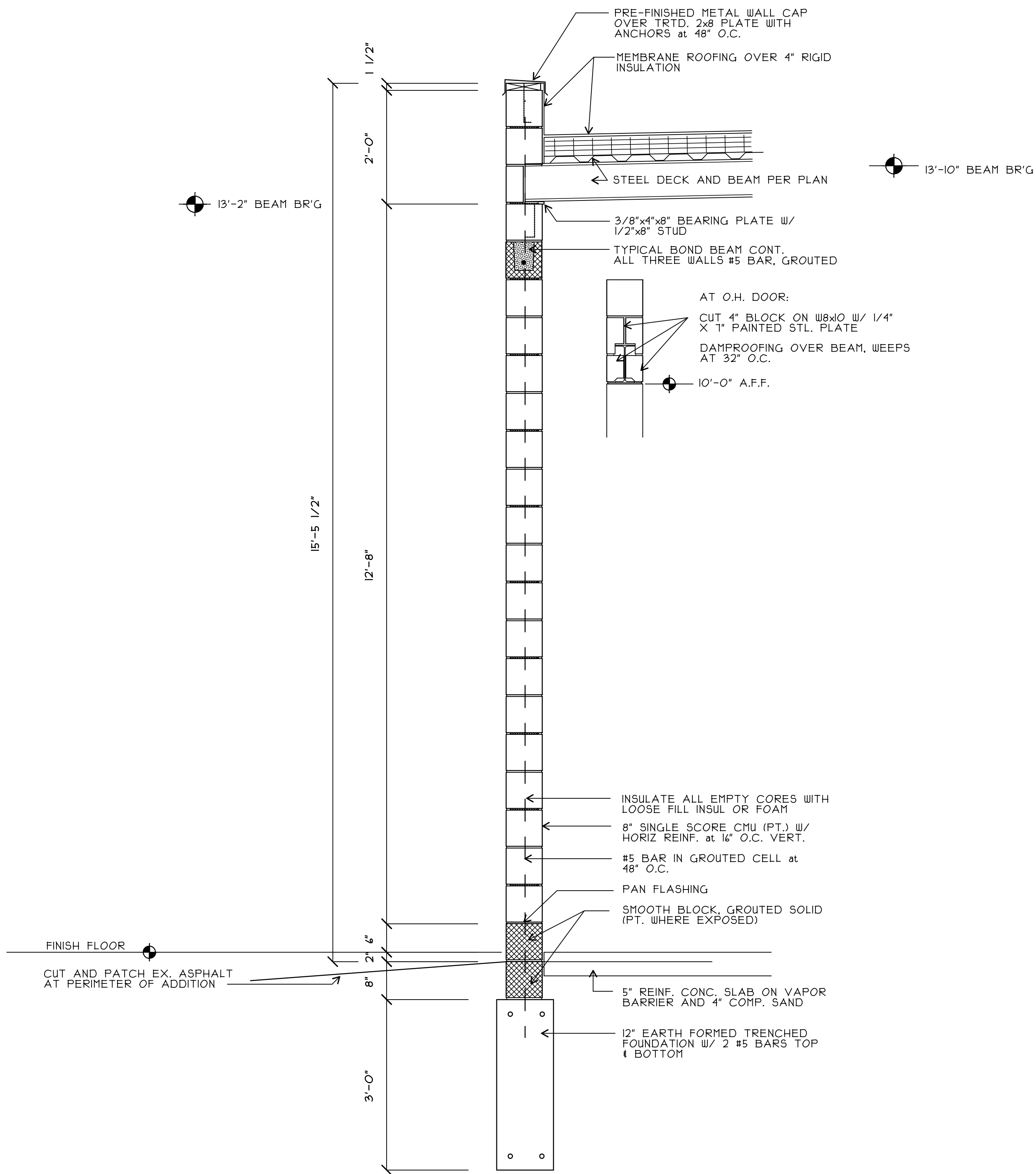
DESIGNED BY: **TD**  
DRAWN BY: **TD**  
CHECKED BY: **TD**

SCALE: **1" = 100'**  
JOB NO.: **14-059**  
DATE: **05-22-14**

SHEET NO.: **1**

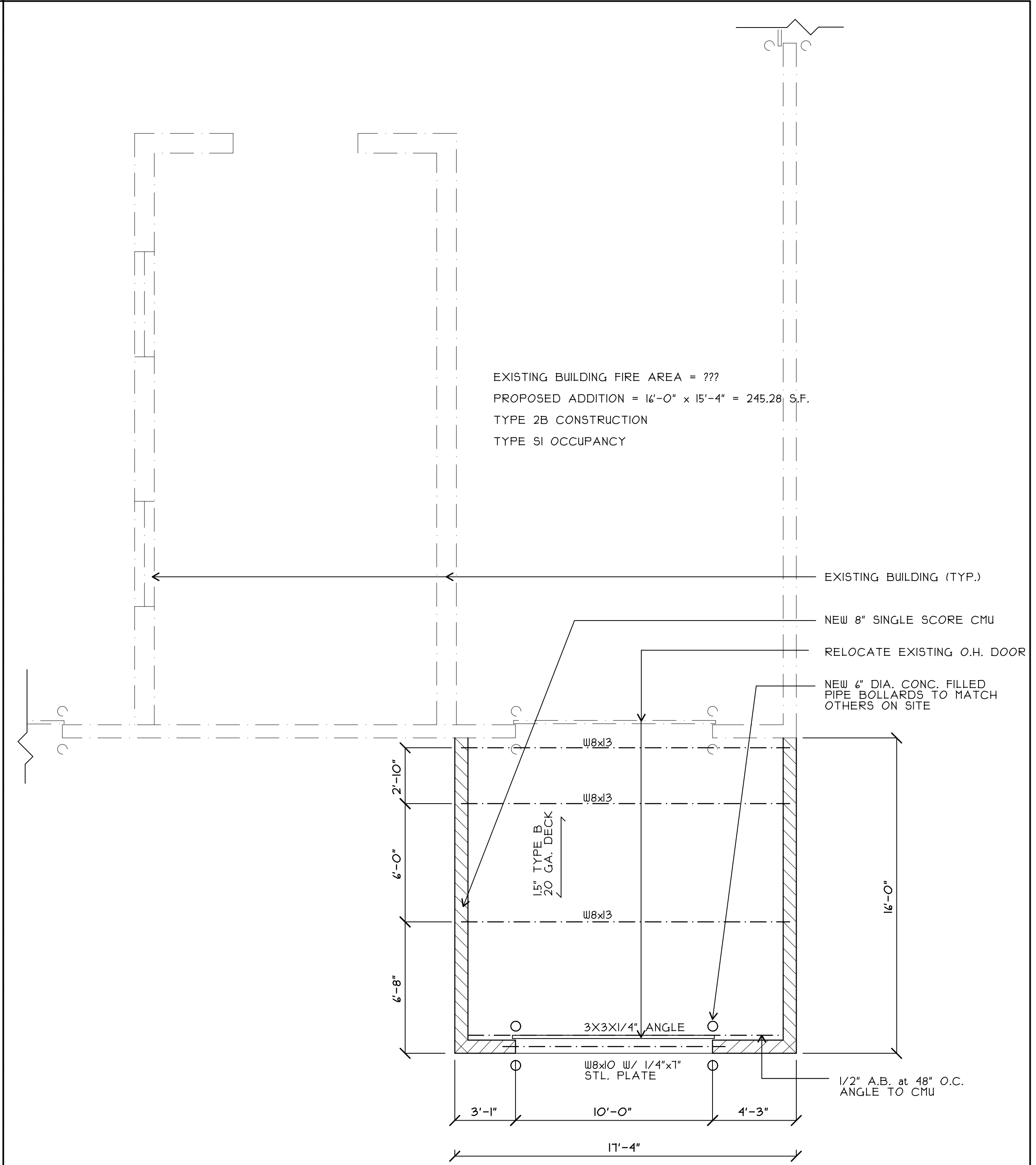






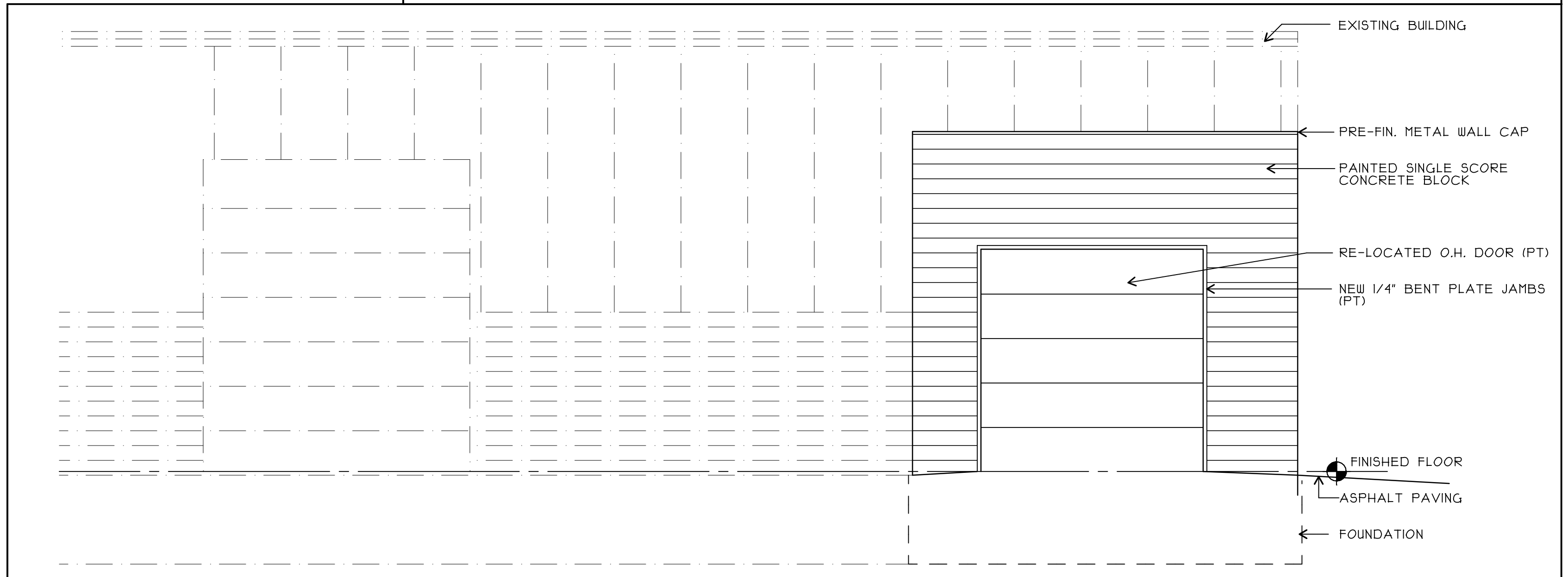
WALL SECTION

3/4" = 1'-0"



FLOOR AND FRAMING PLAN

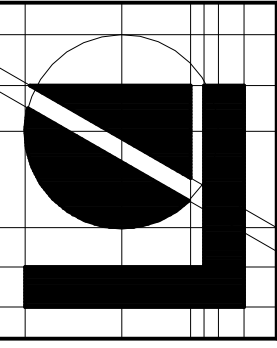
1/4" = 1'-0"



SOUTH ELEVATION

1/4" = 1'-0"

EXISTING BUILDING FIRE AREA = ???  
PROPOSED ADDITION = 16'-0" x 15'-4" = 245.28 S.F.  
TYPE 2B CONSTRUCTION  
TYPE S1 OCCUPANCY



**Lindhout Associates**  
architects aia pc  
10465 citation drive  
www.lindhout.com  
Brighton, Michigan 48116-9510  
phone: (810)227-5668 fax: (810)227-5855



PROGRESS PLOT issued for

5-14-2014 date  
PULL PULL PULL PULL  
app'd: XXXX  
ck'd: XXXX  
dr: XXXX

CHAMPION CHEVERLET ADDITION  
**SCHAFER CONSTRUCTION**  
GENOA TOWNSHIP, MICHIGAN  
PLANS, ELEVATIONS, SECTIONS

A1  
13XX





CHAMPION CHEVROLET  
EXISTING AERIAL



## MEMORANDUM

**TO:** Planning Commission  
**FROM:** Ron Akers, Zoning Official  
**DATE:** 5-22-14  
**RE:** 2013 Zoning Board of Appeals Annual Report

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2911 Dorr Road  
Brighton, MI 48116  
810.227.5225  
810.227.3420 fax  
genoa.org

Please find attached to this memo the 2013 ZBA annual report. The purpose of this report is to make the Planning Commission aware of the activities of the Zoning Board of Appeals, including the amount and types of variances that have been granted over the year. Making the Planning Commission aware of the different types of variances that were granted over the past year can help to identify potential issues with the Zoning Ordinance and create points of discussion during updates to the Zoning Ordinance. This year-end report is not a statutory requirement, but we felt that it was appropriate in order to maintain effective communication between the two boards. Should any member have additional questions please feel free to contact me at Township Hall.

### **SUPERVISOR**

Gary T. McCririe

### **CLERK**

Paulette A. Skolarus

### **TREASURER**

Robin L. Hunt

### **MANAGER**

Michael C. Archinal

### **TRUSTEES**

H. James Mortensen

Jean W. Ledford

Todd W. Smith

Linda Rowell



2911 Dorr Road  
Brighton, MI 48116  
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genoa.org

## 2013 Zoning Board of Appeals Annual Report

### Summary:

The purpose of the Zoning Board of Appeals (ZBA) Annual report is to summarize and identify the activities completed by the ZBA over the calendar year. Identifying the number and types of variances that were granted over the year can provide guidance to the Planning Commission and Township Board of Trustees when making future land use decisions. The primary activities that were handled by the Zoning Board of Appeals in 2013 were hearing variance requests and drafting and adopting Rules of Procedure.

### Variances

During 2013 the Zoning Board of Appeals heard twenty-eight (28) requests for variances. These can be broken down as follows:

- 28 Total Variance Requests
  - 21 Approved, 6 Denied, 1 Variance Not Required
- 13 Variance on Properties with Lake Frontage
  - 12 Approved, 1 Denied
- Breakdown by Type
  - 6: New Single Family Homes
    - 6 Approved, 0 Denied
    - 5 Lake Front
  - 4: Residential Addition
    - 4 Approved, 0 Denied
    - 4 Lake Front
  - 5: Detached Accessory Buildings
    - 1 Approved, 4 Denied
    - 1 Lake Front
  - 2: Commercial Additions
    - 2 Approved, 0 Denied
  - 6: Signs
    - 5 Approved, 1 Denied
  - 1: Fence
    - 1 Variance Not Needed
  - 2: Improvements to Non-Conforming Structure in Excess of 10%
    - 1 Approved, 1 Denied (Same property)
    - 2 Lake Front
  - 2: Decks
    - 2 Approved, 0 Denied
    - 1 Lake Front

Please see attached case summaries for more information about specific cases.

### Rules of Procedure

The purpose of the rules of procedure is similar to the Planning Commission By-laws. They establish guidelines for the procedural aspects of the ZBA including membership, election of officers, public hearing rules, responsibilities of township staff and members of the ZBA and they establish guidelines for handling conflict of interest. This document was adopted in January of 2014 and is available for review.

### SUPERVISOR

Gary T. McCririe

### CLERK

Paulette A. Skolarus

### TREASURER

Robin L. Hunt

### MANAGER

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## 2013 ZBA Case Summaries

### JANUARY

**Variance: 1**

**Case: 13-01**

**Applicant Name:** Christian and Damian Karch

**Address:** 5400 Brady Road

**Type of Variance:** Construction of a detached accessory building in front yard

**Lakefront:** No

**Decision:** Denied

**Why? Conditions?** Ample room on the lot; no practical difficulty.

**Variance: 2**

**Case: 13-02**

**Applicant Name:** Champion Buick GMC

**Address:** 7885 W. Grand River

**Type of Variance:** Front yard variance to construct an addition to a non-conforming building

**Lakefront:** No

**Decision:** Approved

**Why? Conditions?** Variance of 13.7 feet with a Grand River side setback of 56.3 feet granted. The finding of fact is the building was non-conforming after the Zoning Ordinance changed.

**Variance: 3**

**Case: 13-03**

**Applicant Name:** Genoa Charter Township

**Address:** 2911 Dorr Road

**Type of Variance:** Sign

**Lakefront:** No

**Decision:** Approved

**Why? Conditions?** An 8-foot variance with a 14 foot height and a 257 foot area variance amount for a sign area of 329 feet. The finding of fact is the configuration of the property and the ability to not be able to place a sign on the exit ramp.

**Variance: 4**

**Case: 13-04**

**Applicant Name:** Blair Bowman

**Address:** 4252 Highcrest

**Type of Variance:** Front yard and waterfront

**Lakefront:** Yes

**Decision:** Approved

**Why? Conditions?** Front yard variance of 15 feet with a setback of 20 feet and a waterfront variance of 2 feet with a setback of 73 feet. The finding of fact is the topography and conditions of the lot.



**Variance: 5**

**Case: 12-27**

**Applicant Name: Joe Aguis**

**Address: 5311 Brighton Road**

**Type of Variance: Sign variance**

**Lakefront: No**

**Decision: Approved**

**Why? Conditions?** A 1-foot variance for a 7-foot-tall sign. The finding of fact is the sight distance and visibility from the road.

#### **FEBRUARY**

**Variance: 6**

**Case: 13-06**

**Applicant Name: Angela Nieves-Valentine**

**Address: 3837 E. Coon Lake Road**

**Type of Variance: Height variance for a fence**

**Lakefront: No**

**Decision: Variance not needed**

**Why? Conditions?** The ZBA interprets the fence is built in the side yard.

#### **MARCH**

**Variance: 7**

**Case: 13-05**

**Applicant Name: Brett Gierak**

**Address: 921 Sunrise Park**

**Type of Variance: Side and rear yard variance for an addition**

**Lakefront: Yes**

**Decision: Approved**

**Why? Conditions?** The finding of fact is the lack of zoning predated the construction of the house. The practical difficulty is due to the location of the utility lines and the sewer line.

**Variance: 8**

**Case: 13-07**

**Applicant Name: Charles Horan**

**Address: 1828 Hughes Road**

**Type of Variance: Front, waterfront and side yard variance to construct a garage addition and a second story addition**

**Lakefront: Yes**

**Decision: Approved**

**Why? Conditions?** Allowed to construct a second story that will match the existing footprint with a 4-foot-4-inch side yard extension. Conditions: Must remove the garage from the plans and the addition must have gutters and downspouts. The finding of the fact is the narrowness of the lot and pre-existing house where it is built in regards to the current zoning.

## April

**Variance: 9**

**Case: 13-08**

**Applicant Name: Champion Buick**

**Address: 7885 W. Grand River**

**Type of Variance: Sign**

**Lakefront: No**

**Decision: Approved**

**Why? Conditions?** Additional sign allowed with the square footage being less than two allowed per the Township Ordinance. The practical difficulty is it will improve the visibility and sign distance of the site. Conditioned upon the following:

1. The drawings provided indicate that the "Champion" and "Certified Service" signs will be channel letters and the "Buick GMC" sign will be a unibody sign. The letters themselves will be black or white in color.
2. The plans indicate that the signs require circuits and will be lit.
3. The wall signs will be allowed to project up to 1-foot beyond the face of the wall.

**Variance: 10**

**Case: 13-10**

**Applicant Name: Jeff Gontarski**

**Address: 4401 Filbert**

**Type of Variance: Front yard variance to build a new home**

**Lakefront: Yes**

**Decision: Approved**

**Why? Conditions?** Front yard variance of 25 feet with a setback of 10 feet approved. Conditioned upon the home being guttered. The practical difficulty is the topography of the land.

**Variance: 11**

**Case: 13-11**

**Applicant Name: Art Van Furniture**

**Address: 4101 E. Grand River**

**Type of Variance: Sign**

**Lakefront: No**

**Decision: Denied**

**Why? Conditions?** No practical difficulty.

## MAY

**Variance: 12**

**Case: 13-09**

**Applicant Name: Leo and Karen Mancini**

**Address: 4057 Homestead Road**

**Type of Variance: Two side yard variances to construct an attached garage**

**Lakefront: Yes**

**Decision: Approved**

**Why? Conditions?** Given a 5-foot-6-inch variance on both sides with a 4-foot-6-inch setback on both sides. Conditioned upon the garage being guttered. The practical difficulty is the narrowness of the lot.

**Variance:** 13  
**Case:** 13-12  
**Applicant Name:** Robert Morrison  
**Address:** 3699 Nixon Road  
**Type of Variance:** Pole barn on a vacant lot  
**Lakefront:** No  
**Decision:** Denied  
**Why? Conditions?** No practical difficulty.

## JUNE

**Variance:** 14  
**Case:** 13-13  
**Applicant Name:** Curt Brown  
**Address:** 4010 Homestead  
**Type of Variance:** Front yard variance and a waterfront variances to replace an existing garage  
**Lakefront:** Yes  
**Decision:** Approved  
**Why? Conditions?** Given a 25-foot shoreline variance with a 15-foot setback, front yard variance of 27 feet with an 8-foot setback, an accessory building size variance of 442 feet from the 900 feet allowed and an accessory building height variance of 6-foot-6-inches from the 14 feet allowed. Conditioned upon the structure being guttered and having downspouts and any grading issues should be addressed and satisfactorily dealt with by the petitioner. The practical difficulty is the topography of the lot and the difficulty to construct on the lot.

**Variance:** 15  
**Case:** 13-15  
**Applicant Name:** Ronald Socia  
**Address:** 3950 Highcrest Drive  
**Type of Variance:** Home improvements/modernization to non-conforming structures in excess of 10% of its replacement value  
**Lakefront:** Yes  
**Decision:** Approved  
**Why? Conditions?** Can make improvements and modifications on the interior and exterior of the home to a nonconforming structure. Conditioned upon the structures including gutters and downspouts, no improvements shall be made to increase the footprint or height of the structures and the structure shall not be used as rentals. The practical difficulty is the uniqueness of the property.

**Variance:** 16  
**Case:** 13-16  
**Applicant Name:** Janine and James Exline  
**Address:** 4009 Highcrest Drive  
**Type of Variance:** Side yard  
**Lakefront:** Yes  
**Decision:** Approved  
**Why? Conditions?** Given a 2.25-foot side yard setback with a 2.75-foot variance and an 8.15-foot setback on the west side with a 1.85-foot variance. Conditioned upon the structure including gutters and

downspouts. The practical difficulty is the narrowness of the lot and the continuing narrowness toward the road side.

## JULY

**Variance:** 17

**Case:** 13-17

**Applicant Name:** Thomas and Diana Fleming

**Address:** 4049 Homestead

**Type of Variance:** Side yard

**Lakefront:** Yes

**Decision:** Approved

**Why? Conditions?** Approved a side yard setback variance of 5 feet and a waterfront setback variance of 16.5 feet for the construction of a new home. Conditions placed on the approval are that the structure is to have gutters and downspouts installed and that any grading and drainage issues should be addressed and satisfactorily dealt with by the petitioner. The practical difficulty is the topography and narrowness of the lot.

**Variance:** 18

**Case:** 13-18

**Applicant Name:** Mary Dean and Jeff Barringer

**Address:** 5359 Wildwood Drive

**Type of Variance:** Front yard setback variance and a water front setback variance for the construction of a single family home

**Lakefront:** Yes

**Decision:** Approved

**Why? Conditions?** Approved a 19.9 foot front yard setback variance and a 17.7-foot waterfront setback variance for the construction of a new home. Based on the practical difficulty of a small building envelope and the narrowness of the platted subdivision. Conditioned upon the structure having gutters and downspouts, grading or drainage issues should be addressed and satisfactorily dealt with by the petitioner. If there is damage to the fence and arborvitae plants, they are to be replaced by the expense of the petitioner.

## AUGUST

**Variance:** 19

**Case:** 13-19

**Applicant Name:** Bob Maxey Ford

**Address:** 2798 E. Grand River

**Type of Variance:** Front yard setback and parking lot

**Lakefront:** No

**Decision:** Approved

**Why? Conditions?** Approved a front yard setback variance of 5 feet and parking lot variance of 7 feet on the rear property line based on the following finding of facts:

1. Strict compliance with the front yard setback requirement would limit the ability of the property owner to construct an addition which maintains a consistent front building line with the existing main building;
2. The area within the rear lot line parking lot setback is already developed as a parking area and the proposed 6-foot masonry screening wall will adequately mitigate the impact the proposed changes to the site plan will have on the adjacent residential properties;
3. The need for the variance is not self-created;

4. According to the Planner's Report, the proposed variance will not impair public safety or welfare;
5. There will be little if any impact on the surrounding neighborhood. The front yard variance will provide for a consistent appearance on the Grand River corridor and the proposed 6-foot masonry screening wall will mitigate the impacts of the extended parking lot.

**Variance: 20**

**Case: 13-20**

**Applicant Name: Zion Restoration**

**Address: 6518 Catalpa**

**Type of Variance: Side yard for an addition**

**Lakefront: No**

**Decision: Approved**

**Why? Conditions?** Approved a 14-foot side yard variance due to the addition having little impact on the adjacent properties. The addition will be the same distance from the side property line as the attached garage.

The hardship is the property is zoned LDR (Low Density Residential) and was created under less strict zoning requirements. The lot size and building were made non-conforming by the current zoning requirements. The pie shaped lot has limitations. The variance is not self-created.

Conditioned upon the home and garage being guttered.

**Variance: 21**

**Case: 13-21**

**Applicant Name: Thomas and Donna Phelps**

**Address: 4470 Clifford Road**

**Type of Variance: Side yard setback and deck extension**

**Lakefront: Yes**

**Decision: Approved**

**Why? Conditions?** Approved a 2-foot side yard variance and a 3-foot variance from the rear distance line.

The Finding of Fact is the side yard variance will comply with the current building and is not self-created.

The proposed deck will reduce the non-conformity of the deck.

## **SEPTEMBER**

**Variance: 22**

**Case: 13-23**

**Applicant Name: Charles Denning**

**Address: Parcel ID 4711-10-301-029 on East Grand River**

**Type of Variance: Add a carport to property without a principle building**

**Lakefront: No**

**Decision: Denied**

**Why? Conditions?** ZBA based decision on the finding of fact that there is no allowance for additional structures on properties without principle buildings.

**Variance: 23**

**Case: 13-24**

**Applicant Name: Bob Maxey Ford**

**Address: 2798 E. Grand River**



**Type of Variance:** To increase allowable wall sign square footage from 150 square feet to 169 square feet and to install two (2) additional wall signs which will exceed the maximum number of allowable wall signs by three (3) for a total of five (5) wall signs on the building

**Lakefront:** No

**Decision:** Approved

**Why? Conditions?** Approved a variance of 19 square feet of allowable wall sign area and for two additional wall signs with the finding of fact that the length of the building and the speed of traffic on Grand River Avenue requires additional signage to safely guide traffic in and out of the property.

**Variance:** 24

**Case:** 13-25

**Applicant Name:** Jane and Randy Evans

**Address:** 4444 Glen Eagles Court

**Type of Variance:** Variance from the deck setback requirement between condominium units to extend an existing deck

**Lakefront:** No

**Decision:** Approved

**Why? Conditions?** Given a 4-foot variance to extend a deck which is located between two condominium units based on the findings of fact that the condominium was built in 1996 and at the time did not meet the standard set forth in Section 11.04.02(b), the need for the variance was not self-created by the applicant, the layout and design of the building created a need for the variance. Granting this variance will make the property consistent with other properties in the area.

#### **OCTOBER**

**Variance:** 25

**Case:** 13-27

**Applicant Name:** Robert Socia

**Address:** 3950 Highcrest

**Type of Variance:** Wanted modification of the variance granted on June 18, 2013 in order to remove the condition that limits the applicant's ability to increase the height of the structure

**Lakefront:** Yes

**Decision:** Denied

**Why? Conditions?** ZBA denied request due to the existing condition stipulated in prior approval on June 18, 2013 for case #13-15 which limited the applicant's ability to increase the height of the structure.

#### **NOVEMBER**

**Variance:** 26

**Case:** 13-26

**Applicant Name:** Oren and Jill Lane

**Address:** 623 Sunrise Park

**Type of Variance:** Both side yard setbacks, the front yard setback, the shoreline setback, and the maximum building height

**Lakefront:** Yes

**Decision:** Approved

**Why? Conditions?** Given a front yard variance of 25 feet with a 10-foot setback, 3-foot variance on both sides with 7-foot setback on both sides, 2-foot height variance and a 4-foot waterfront variance.

Conditioned upon the new home having gutters with downspouts. The finding of fact is the narrowness of the lot; the variances are not self-created and the topography of the lot.

**DECEMBER**

**Variance: 27**

**Case: 13-28**

**Applicant Name: Steve Gronow**

**Address: 3800 Chilson Road**

**Type of Variance: Maximum allowable size of a detached accessory building**

**Lakefront: No**

**Decision: Denied**

**Why? Conditions? No finding of practical difficulty**

**Variance: 28**

**Case: 13-29**

**Applicant Name: Steve Schenck**

**Address: 4072 E. Grand River; other street addresses at this property include: 4050, 4072, 4080, 4084, 4092, 4096, 4104, 4116, 4128, 4132, 4140, 4144, 4148, and 4160.**

**Type of Variance: Temporary sign and exceed time sign is allowed and number of time sit is used.**

**Lakefront: No**

**Decision: Approved**

**Why? Conditions? The finding of fact is that the location of this is a busy location where traffic is very fast. So those passing cannot see the services advertised. It is a seasonal business and therefore, very limited. This does not injure or affect the safety or welfare of the public or neighborhood.**

**GENOA CHARTER TOWNSHIP  
PLANNING COMMISSION  
PUBLIC HEARING  
APRIL 14, 2014  
6:30 P.M.  
MINUTES**

CALL TO ORDER: The meeting of the Genoa Charter Township Planning Commission was called to order at 6:30 p.m. Present were Barbara Figurski, Eric Rauch, Jim Mortensen, John McManus, Diana Lowe and Chairman Doug Brown. Also present were Kelly VanMarter, Township Assistant Manager and Community Development Director, and Brian Borden of LSL Planning.

PLEDGE OF ALLEGIANCE: The Pledge of Allegiance was recited.

APPROVAL OF AGENDA: **Motion** by Barbara Figurski to approve the agenda as submitted. The motion was supported by Diana Lowe. **Motion carried unanimously.**

CALL TO THE PUBLIC: Chairman Brown made a call to the public for the audience to address non-agenda items. There was no response.

**OPEN PUBLIC HEARING #1...** Public Hearing for the purpose of considering Zoning Ordinance Text Amendments to Articles 7 and 25 regarding Temporary Outdoor Sales and Events.

Brian Borden addressed the Planning Commission. The ordinance as it exists does not currently address weekend sales, events, etc., very clearly. He reviewed the language proposed by Kelly VanMarter and has no technical concerns with it.

Kelly VanMarter addressed the Planning Commission. She gave a history of the issue beginning with Art Van's inquiry one year ago. Both Art Van and the Chamber of Commerce have written letters to the Township. The proposed changes would permit events (not sales) a total of 28 days per calendar year. In addition, there would be 28 days permitted for tent sales. Chairman Brown inquired whether other businesses have requested increases in time or if other businesses have tent sales. Kelly VanMarter reported that there are some that have tent events.

John McManus inquired whether there should be a distinction drawn between restaurants and businesses that sell material goods. He asked if the 28 days are consecutive or broken up. Jim Mortensen believes that should be left up to the retailer.

Chairman Brown inquired as to how parking would be policed. Kelly VanMarter advised that the Township is well aware of what businesses would have parking issues if a tent sale were held in their lot. The permit would be terminated under item 8 if parking issues were to develop. The permit may not even be issued if a known problem exists.

Mr. Kennedy from Art Van was present. Chairman Brown asked what would happen if the parking lot became full. Mr. Kennedy advised there is additional parking along the side of the building and behind the building.

Chairman Brown inquired what would happen if the Zoning Administrator was not available to inspect a site. Kelly VanMarter advised that any of the Township Administrators could address the issue, including herself.

Chairman Brown suggested that language should be inserted to provide that any agency such as the fire department could inspect premises in addition to the Township.

Chairman Brown asked about the noise ordinance language as proposed. He asked who would be responsible for taking the readings for decibel output and what output would be considered excessive. Kelly VanMarter indicated that the language as proposed was what was recommended.

Chairman Brown inquired whether a definition for vendor and outside vendor should be provided in the ordinances. Kelly VanMarter agreed those definitions should be added.

Chairman Brown inquired about a smaller business wishing to have a tent sale on the premises of a larger business. That is not permitted by this ordinance as proposed. They could have small pop-up canopies or something else that could be agreed upon with the Township staff. Kelly VanMarter believes this is how it should be regulated.

Chairman Brown asked whether food wagons would be permitted at the outdoor events. This is not permitted under the ordinance unless the vendor is a lessee of the premises. Diana Lowe indicated street food is becoming popular and may need to be addressed in the future.

Eric Rauch asked if every one-day event would be required to go through land use permits, etc. Kelly VanMarter indicated that the land use permit is required, but they can apply for various dates in the same permit. The Township does try to be flexible and allow amending permits often without an additional fee.

Jim Mortensen suggested that 25A should be expanded to add the limitation that the materials offered for sale should be consistent with those offered for sale inside the building.

Larry Horton addressed the Planning Commission. He provided a scenario of a classic car show on a weeknight. They run from 5-8 p.m. from mid-May until the end of September. People sit in their chairs and listen to the DJ play oldies. He advised that's all they are asking.

### **Planning Commission disposition of petition**

A. Recommendation of Zoning Ordinance Text Amendments.



**Motion** by Jim Mortensen to recommend to the Township Board approval of the changes to Zoning Ordinance 7.02 regarding outdoor sales and outdoor events to allow such activities to occur for 28 days in a calendar year subject to the following changes:

- A. Paragraph 7.02.02V, item 5, would be amended to include any other governmental agencies listed, as well as the Livingston County Drain Commission;
- B. The definitions on page 25-26 shall be modified to be consistent with the definitions on page 7-15 with regard to the requirement that the goods offered for sale outside must be for consistent with those offered inside the business establishment;
- C. Add a definition for vendor.

Support by Diana Lowe. **Motion carried unanimously.**

**OPEN PUBLIC HEARING #2...** Review of sketch plan application and sketch plan for building renovation, parking lot improvements, and signage for Northridge Church, located at 7555 Brighton Rd, Brighton, Parcel # 4711-25-300-037. The request is petitioned by Jim King on behalf of Northridge Church.

Brent LaVanway of Boss Engineering and Jim King of Northridge Church addressed the Planning Commission.

Brent LaVanway gave a brief overview of the proposal. A 4' ribbon of asphalt will be added to the entrance onto Grand River. This has been approved by the Road Commission. The small parking lot will be removed and a drop off driveway will be created in that location. A dumpster enclosure will be built. The steps in back will be reconstructed as concrete steps. The existing monument sign will be deconstructed east of the entrance and a new one is proposed for west of the entrance.

David Williams addressed the Planning Commission. He is with Hobbs and Black, the architects. He gave an overview of the building plan and presented a proposed sample board. The goal is to provide an open feeling to the building and the façade was opened to provide as much natural light as possible. The slope of the roof was to anchor the building to the earth.

Jim Mortensen indicated he feels the rendering is a radical departure for an area that is zoned residential. He feels the building materials should be toned down. Brian Ammon of Northridge Church indicated that the rendering is incorrect in that it's a white roof rather than the color it would actually be. The roofing will not be light as in the rendering.

Jonathon Pearn addressed the Planning Commission and answered various questions about the rendering. David Williams reviewed various interior renderings to describe some of the reasons they are exploring methods to draw more outside light. They would be willing to explore bringing cultured stone to the façade of the building in an effort to tie in the look with Pine Ridge across the street.

Jim Mortensen asked about the front of the building, if it would be brick. The petitioner indicated it would be brick. The color of the brick is negotiable. Since it is under the overhang, there will be some shadowing which would alter the color's appearance.

Barbara Figurski asked about the roof. The pitched roofs will remain. The existing color will remain the same.

Brian Borden addressed the Planning Commission. Churches are special land uses in residential districts. There are some existing condition problems with the parking lot. The northwestern parking aisle is a few feet deficient in minimum width. The things to be considered are whether it's an existing condition and whether there is a planned reconfiguration and re-striping of the lot. The petitioner will delete the two perpendicular parking spaces. Parking lot landscaping could be utilized conceivably, to help direct traffic in this area, but it would be costly. The petitioner will be getting rid of the pews and is hoping to have seating capacity at 480. There are 12 spaces above minimum requirements. Mr. LaVanway indicated there is a significant elevation change in the parking lot area.

Brian Borden addressed the lighting in the parking lot. There is a light pole on the back wood stairs that has flood lights that are directed outward. That will be removed with the new stairway construction. The wall sign will be addressed by the Zoning Board of Appeals. The set back from Brighton Road for the proposed monument sign is 10' from the right-of-way. Jonathan Pearn said they are approximately 50' from the road. The drawing is to scale, but overlaid onto an aerial photo. A sign permit will be required, so all of that information will be provided at that time.

The outdoor gathering space was not addressed in the sketch plan and it should be added. The staff can verify that is done. Mr. Ammon said this will be used as an outdoor patio for coffee, not group discussions, studies, etc. The building in back was intended to be a youth building or storage of equipment. It is the petitioner's intention to use it for storage only.

Eric Rauch asked if the sidewalk would be tied to the church from Brighton Rd. Mr. Ammons indicated they would consider that. Kelly VanMarter indicated it would be beneficial.

Kelly VanMarter indicated the Township Engineer had no issues with the sketch plan. The Road Commission and Fire Department provided letters for review. The petitioner will comply with the points addressed in the Fire Department letter and Road Commission letter.

Brian Borden indicated there is no requirement for interior parking lot landscaping. Jonathan Pearn indicated there was a landscaped island included in the plan.

Eric Rauch asked about wall-mounted lighting. There would be some under the canopy to light the area there.

## Planning Commission disposition of petition

A. Disposition of Sketch Plan.

**Motion** by John McManus to recommend approval of the sketch plan dated 3/28/14, subject to:

- A. Façade renovations, construction of the new drop-off area, demolition of the small parking lot and the re-paving of the existing parking lot;
- B. The wall sign will need approval by ZBA;
- C. The sign set-back and dimensions will comply with the ordinance and be reviewed by staff;
- D. The sketch plan should reflect outdoor activity renditions for approval by staff;
- E. The sidewalk along Brighton Rd. will be tied to the building;
- F. Compliance with the Fire Department letter and Road Commission letters;
- G. The flood light at the rear of the property will be removed;
- H. The building material color samples will become Township property;
- I. The petitioner will remove the two back parking spaces to comply with the drive aisle width requirement and there will be double striping there.

Support by Jim Mortensen. **Motion carried unanimously.**

### **Administrative Business:**

- *Staff report. Kelly VanMarter had nothing to report.*
- *Approval of March 10, 2014 Planning Commission meeting minutes. **Motion** by Barbara Figurski to approve the minutes as submitted amended. Support by Jim Mortensen. **Motion carried unanimously.***
- *Member discussion. The Board of Trustees has approved a raise to the Planning Commission to \$168.00 and the Chairman's premium has been raised to \$10.00.*
- *Adjournment. **Motion** by John McManus to adjourn the meeting at 8:11 p.m. Support by Diana Lowe. **Motion carried unanimously.***